



ServiceMax User Guide

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INTRODUCTION

SERVICEMAX SPRING '14

WHAT'S NEW FOR SERVICEMAX SPRING '14 (MARCH 2014)

The ServiceMax Spring '14 release consists of the following new features and enhancements for ServiceMax Suite, ServiceMax Mobile for Laptops, ServiceMax Spring '14 for iPad, and the new ServiceMax Spring '14 for iPhone app. If you would like to see the list of new features in the previous release Winter '14, go here: [What's New for Winter 14?](#)

ServiceMax Suite

Spring '14 features and enhancements for the ServiceMax Suite application are described below.

QuickBooks Export

ServiceMax customers can now extract ServiceMax data easily and import into QuickBooks™, without using a middleware tool. The ServiceMax QuickBooks Export feature enables export of work orders that are ready to be billed in IIF format, which is a proprietary QuickBooks format. The exported data can be directly imported into QuickBooks for billing.

For more information about this feature see, [QuickBooks Export](#).

Reports and Analytics Enhancements

24 new reports have been added for the most common business scenarios. These reports have been organized under new folders by purpose.

For more information about this enhancement see, [Dashboards and Reports](#).

Scheduled SFM

The Scheduled SFM feature enables automatic execution of SFM Transactions at defined intervals for qualifying records, without any manual intervention. This is useful when automatic execution is required for a large volume of records frequently.

For more information about this feature see, ["Scheduled SFM" on page 363](#).

SFM Designer Enhancements

- Qualifying Criteria and Mapping sections have been repositioned as horizontal tabs, for more effective utilization of screen area
- Field and Value Maps show only the Mapped fields by default, with option to toggle between Mapped fields and All the fields

SFM Search Delivery Enhancements

SFM Search is now delivered with a new look and feel using a UI based on HTML5. Some of the salient aspects of the new UI are as follows:

- Search results can be viewed in horizontal tabs or vertical tabs, with option to toggle between these views
- When a search result is selected, the applicable SFM Wizards are also delivered using HTML5
- Option provided to find the required SFM Search(es) through keyword search
- Inline sorting of results on clicking the column header and freezing of columns is now possible

Dispatch Console Map Enhancements (Pre-release)

Dispatch Console uses The Google Maps API for Flash for plotting routes of technicians and locations of work orders and technicians. As The Google Maps API for Flash has been deprecated and will work only until September 2, 2014, Dispatch Console Map is being enhanced to use Google Maps JavaScript API v3.

Dispatch Console Map enhancements are related to the phased migration from Flash-based map (referred to as Flash Map) to JavaScript-based map (referred to as JS Map) starting from the Spring '14 release of ServiceMax.

Following is the list of enhancements implemented in JS Map, which are not available in Flash Map:

- Personalization of map width
- Option to select traffic as an overlay option
- Show Route enhancements including sequential numbering of stops for better visualization of technician route and plotting the route for the rest of the day

For more information about this feature enhancement, see [**"JavaScript Map View" on page 941.**](#)

Community Support

The following additional features are available for Partner and Customer Community users: SFM Transactions of all types except Output Documents, Stock Lookup feature, and all the custom Salesforce buttons and links included in the ServiceMax package.

ServiceMax Mobile for Laptops

Spring '14 features and enhancements for ServiceMax Mobile for Laptops are described below.

Translation Workbench

ServiceMax Spring 14 for iPad application now supports the ServiceMax Translation Workbench. With this, translations defined in server for titles, description, and validation messages configured for SFM Transactions, SFM Wizards, and SFM Search are displayed in the Laptop App after configuration sync.

For more information about this feature, see [**"ServiceMax Translation Workbench" on page 497.**](#)

Attachment and Sync UI Enhancements

Attachment handling and Sync UI are enhanced in ServiceMax Spring '14 Mobile for Laptops. Attachment support includes displaying additional file attributes in the Attachments tab, the option to delete attachments, and an error message that displays when a user tries to upload files that exceed 5MB. Sync UI enhancements consist of an enhanced status bar (Progress indicator and status messages) and the ability to stop and resume data and config sync.

ServiceMax Spring '14 for iPad

Spring '14 features and enhancements for ServiceMax Spring '14 for iPad are described below.

Translation Workbench

ServiceMax Spring 14 for iPad application now supports the ServiceMax Translation Workbench. With this, translations defined in server for titles, description, and validation messages configured for SFM Transactions, SFM Wizards, and SFM Search are displayed in the iPad App after configuration sync.

For more information about this feature, see ["ServiceMax Translation Workbench" on page 497](#).

iPad Memory Optimization

With optimized memory handling, initial sync for complex implementations now gets completed successfully in 512 MB RAM iPads, without any issues related to insufficient memory. This is true for both iPad 2 and iPad Mini.

Configurable Signature Size

This enhancement to Smart Documents enables configuration of signature size in Output Documents Designer in the server, and rendering the signatures as per the configured size in the iPad Mobile App. If not configured, the default values considered for height and width are 186px and 350px respectively.

Data Purging

This feature enables purging of old records in the local database at regular intervals from the iPad App, to ensure that the database stores only the relevant data and does not keep growing in size, taking up space on the device. Till this release, the only way to purge old data from the app's local database was to do a Reset App.

For more information about the configuration options for this feature, see ["Mobile Configuration" on page 514](#).

New App: ServiceMax Spring '14 for iPhone

With the release of the new ServiceMax Spring 14 for iPhone app, ServiceMax support for Smart Phones is now being introduced, starting with iPhones. This is a "lite" application that includes these key features: Initial sync, Calendar View with Day View and Month View, Viewing records and related records, Work Order Summary View including integration with native iOS features SMS, Phone, and Map, Rescheduling events, and Aggressive and Manual incremental sync. Server configuration for iPhone App is similar to that for iPad App, and is achieved using the [**"Mobile Configuration" on page 514**](#) screen. This is a fully native iOS app, which is supported on iPhones with iOS versions 7 and above.

SERVICEMAX SPRING '14 (MARCH 2014)

About ServiceMax Suite

ServiceMax Suite is the first and only complete on-demand solution for post-sales service, field service, and strategic service chain management. Built and delivered as a native Force.com cloud application, the product gives you complete functionality to accurately control, monitor, and track all the activities a field service organization performs. With ServiceMax Suite, you are up and running quickly with a simple pay-as-you-go software-as-a-service (SaaS) model. Visit [ServiceMax](#) to learn more about the modules and features of ServiceMax Suite.

Language Support

ServiceMax Suite offers language support for Chinese (Simplified), French, Portuguese (Brazilian), Chinese (Traditional), German, Japanese, Korean, Spanish, Italian, and Dutch. To activate the language translation for one of the languages mentioned above, your administrator must enable the Salesforce Translation Workbench and activate support for the desired language.

About this Document

This document is intended to be a complete reference for administrators and end users of ServiceMax Suite. End users include service desk operators, service managers, technicians, and service partners. This document details the standard functionality of all ServiceMax features. Please contact ServiceMax professional services or your ServiceMax administrator to learn about any custom functionality built during your ServiceMax rollout. Typically, custom functionality includes workflow rules, approval processes, and custom screens and fields specific to your business.



Note: ServiceMax makes every effort to ensure the accuracy of the information contained within this documentation, but assumes no responsibility or liability for any errors or inaccuracies that may appear. If you do find any errors or inaccuracies, please send your feedback to docfeed-back@servicemax.com.

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SERVICEMAX SUITE INSTALLATION

Getting Started

Signing Up

In order to register as a ServiceMax user, your organization must first sign up for an appropriate edition of the Salesforce application. You can also sign up for a trial edition of ServiceMax that is valid for a stipulated period. Please note that features included in your Trial Edition may not be available in the ServiceMax Edition you select to purchase. To learn about how to manage your Trial Edition data and users, see the Salesforce application user guide on [Salesforce.com](https://www.salesforce.com).

Logging In

Your Salesforce administrator must first add you as a Salesforce standard user and grant access to you to ServiceMax features. When your Salesforce profile is set up, you will receive an initial e-mail with your user name and password. The password must be changed upon your first login.

Prerequisites

In order to use ServiceMax modules effectively, familiarity with the standard capabilities of the Salesforce application would be an added advantage, including navigation, creating/updating/deleting records, creating reports, using dashboards. To become familiar with the Salesforce environment, visit [Salesforce.com](https://www.salesforce.com) education on the web (select Services, then Training) and use the interactive introductory online presentations.

Using the Application

Since ServiceMax is a native application (built and hosted entirely on the Force.com platform), with the Salesforce web-based interface, you can enter and find data at various points. As a ServiceMax user, typically you start at the Home tab and preview your day's events and tasks, and also view your critical activities such as Down Customers. You can select one of the tabs to add, edit or review information, from the Home tab.

Entering Data

Entering data in ServiceMax is much like entering data in any web page or in the standard Salesforce application. Required fields are marked in Red. All other fields are optional and may be left blank. If in doubt about the impact of leaving a field blank, see the User Guide section that describes the specific application module.

Accessing Data

Your administrator can customize many different areas to secure your data. Additionally, users in Salesforce Professional, Enterprise, Unlimited, and Developer edition organizations can control the access that other users have to their data, by sharing records individually with colleagues. See the online documentation on [Salesforce.com](https://www.salesforce.com) to understand the levels of permission required for various types of accessibility.

Navigating

You can navigate between pages and select options using standard text and button links. On individual pages, you can also edit or update information using standard text fields, picklists, and popup menus. The Case and Installed Product modules have special navigation capabilities that are described in detail in the respective sections.

Using the Salesforce Help & Training Window

The Salesforce Help & Training window includes the resources you need to be successful with the Salesforce application. You can find answers to your questions by typing keywords in the search area or by navigating through the index on the left. You can also download Tip sheets and best practice guides from the Help & Training window.



Note: ServiceMax assumes no responsibility or liability for any errors or inaccuracies that may appear in the Salesforce Help & Training window. If you do find any errors, please send your feedback to docfeedback@salesforce.com.

SERVICEMAX PROCESSES

To maximize the benefits from the ServiceMax implementation, your support and service organization is required to have a good understanding of the business processes supported by ServiceMax. Once you have purchased ServiceMax, one or more of the following processes are available to use:

Installed Base (IB), Warranty, and Service/Maintenance Contracts

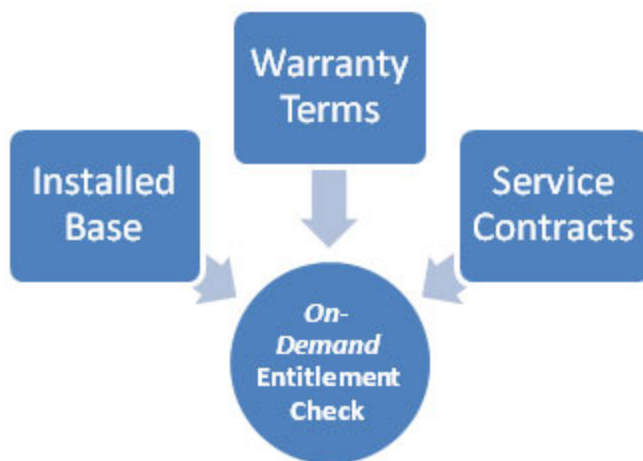


Figure 1: IB, Warranty Terms, and Service Contracts Processes

ServiceMax offers multiple ways to create and manage information about Installed Products providing on-demand Entitlement Checks.

1. Configure a back-office Enterprise Resource Planning (ERP) application, like Oracle or SAP to send processed shipment information at regular intervals to ServiceMax.
2. Configure Installed Products with ServiceMax's easy-to-use and rich user interface.
3. Locate IB data in [Salesforce](#). Installed Product information is displayed in a hierarchical tree-structure so that users have a snapshot view of the product's configuration and status of every component in the tree.

Warranty Terms can be linked to individual part numbers or a group of products identified by Product Family or Product Line. When an Installed Product record is created, warranty is calculated automatically based on the warranty terms defined.

The Service/Maintenance Contracts module can be used to manage extended Service Agreements for Serial or Lot, tracked as well as non-tracked items. Coverage in Service/Maintenance Contracts can be based on a group of Products (identified by product family or product line), Part Numbers, Installed Products, Customer Contacts, Locations, and Service Types. An existing contract can also be renewed easily by a click of a button. At renewal stage, users can retain all coverage details as is or modify some or all of the coverage details.

ServiceMax Entitlement Verification is an intelligent collaboration of automation and informed decision-making. After the product and customer are identified on a support case, all available warranties and Service/Maintenance Contracts are displayed to the user in a grid format. Users can then select the relevant warranty or service/maintenance contract to entitle the customer.

The complete history of Service entitlements made to customers is tracked automatically in ServiceMax. With the help of the powerful dashboards and reports, management users can quickly learn the history of customer entitlements, grouped by products, regions, customers and contacts.

Parts Orders

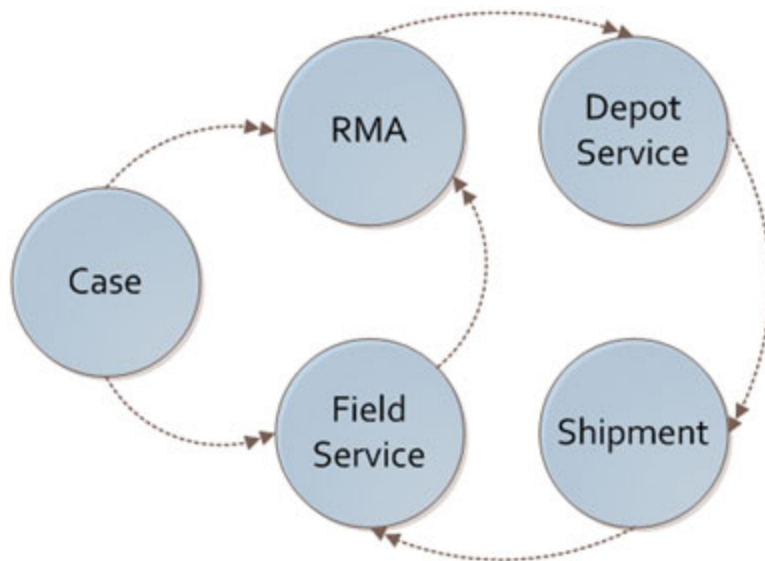
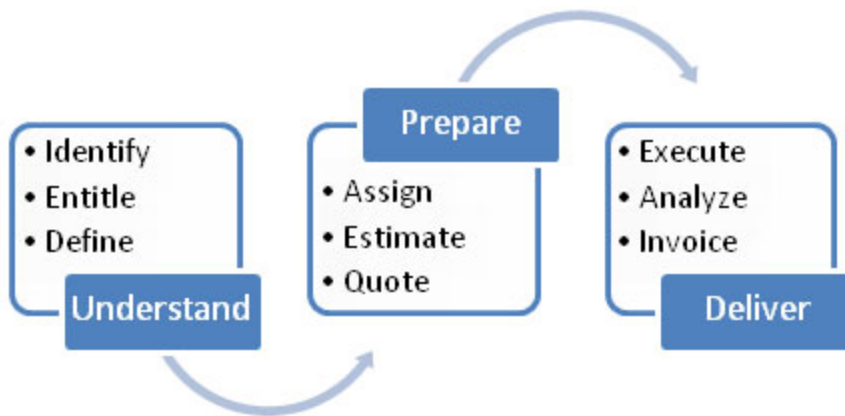


Figure 2: Parts Orders Process

Returned Material Authorization (RMA) is an important transaction to authorize inbound receipt of products returned by customers. RMA can be triggered from a support case when a customer requests the return of a product for service/repair, or from a Work Order when a field service engineer concludes that a product needs to be returned for factory or depot repair. The RMA document can be printed using a configurable template, and can be attached to the Case or Work Order in ServiceMax. When the returned products are received at the factory or warehouse, ServiceMax users can process each RMA item manually or complete an entire RMA with the click of a button.

Shipment Orders are required for all outbound products. A shipment transaction can be initiated when a customer requests a loaner or demo product, when a replacement product is sent during the repair life cycle, or when a repaired/serviced product is ready to be sent back to the customer. Similar to the RMA, shipment orders can be printed using configurable templates. When products are ready for shipping, ServiceMax users can process each shipment item manually or complete an entire shipment with the click of a button.

Work Orders

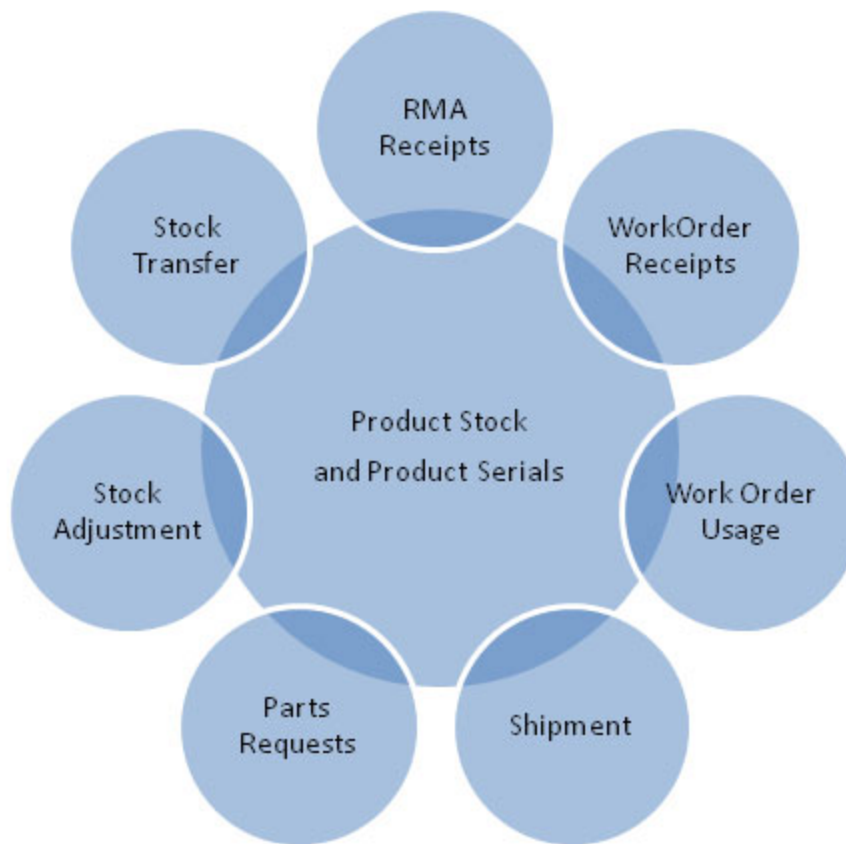


Work Orders Process

A Work Order is used to plan, execute, and manage Service events for Field and Depot service activities. Service order creation can be triggered from a Case or an existing service order can be cloned to manage related service events such as field and depot activities for the same product. Service delivery in ServiceMax consists of many sub-processes:

- First, the Service order is assigned to a service group or a group member.
- Second, depending upon the customer entitlement, the service engineer can prepare an estimate of parts, time and expenses, and submit a quotation to the customer.
- Third, the service engineer can request one or more parts and receive them (if required).
- Fourth, during the course of service, the engineer can record the actual usage/-consumption of parts, labor and expenses.
- Finally, the Work Order is closed by capturing details of service activity as well as analytical information.

Inventory



Inventory Process

Inventory provides end-to-end field or warehouse inventory management. It supports stock adjustment, stock transfer, parts requests & receipts, and maintains the complete history of stock transactions of items across multiple locations. This module also provides interactive stock lookup tools.

ServiceMax inventory enables capturing, monitoring and automatic updates of parts inventory. In order to track inventory in a warehouse, repair center or field location, a stockable **Location** must be defined. With ServiceMax, you also have the option of tracking product inventory with serial numbers. Stock can also be tracked based on status such as **Available**, **In Transit**, and **Consumed**. The inventory is updated automatically based on user actions in various transactions such as RMA, Shipment, Work Order, or Stock Transfer.

TRAINING

Overview

ServiceMax offers monthly webinars for administrators and end users for all major features of the ServiceMax Suite application. We also can provide you with individual training sessions specific to your configuration, process, and branding.

For more information about webinars and training services for your company, contact training@servicemax.com.

SERVICEMAX CUSTOMER COMMUNITY

Overview

The ServiceMax Customer Community is an integral part of ServiceMax and will host all essential training materials, product documentation, and support solutions. The community is an online destination for all of our customers to connect with other ServiceMax customers, share ideas, and best practices.

To log into the community, click the "Customer Community" link in the left sidebar of your ServiceMax home page. If you do not see the link, please contact your ServiceMax Administrator and direct him or her to the following install instructions: <http://www.servicemax.com/community/install.html>. If you have any questions about installation or using the community, contact community@servicemax.com.

SERVICEMAX PRIVACY POLICY

Overview

ServiceMax Inc. complies with the U.S. EU Safe Harbor Framework and the U.S.-Swiss Safe Harbor Framework as set forth by the U.S. Department of Commerce regarding the collection, use, and retention of personal information from European Union member countries and Switzerland.

For more information about the Safe Harbor Privacy Principles and to view the complete privacy policy statement for ServiceMax Inc., visit <http://www.servicemax.com/privacy.html>.

SETUP

SERVICEMAX SUITE INSTALLATION

INSTALL SERVICEMAX PACKAGE

ServiceMax Package

ServiceMax functionality is delivered through an AppExchange package named **ServiceMax**. This is a Managed-Released (MR) package built on the Force.com platform and is installed using the standard AppExchange user interface for installing/upgrading packages. Visit [AppExchange](#) to learn more about how to install or upgrade packages.

Installation Link

Once you have subscribed to ServiceMax and you have a valid Salesforce login, the **ServiceMax technical support** team will send the installation links to you by email. An example of this email is shown below:

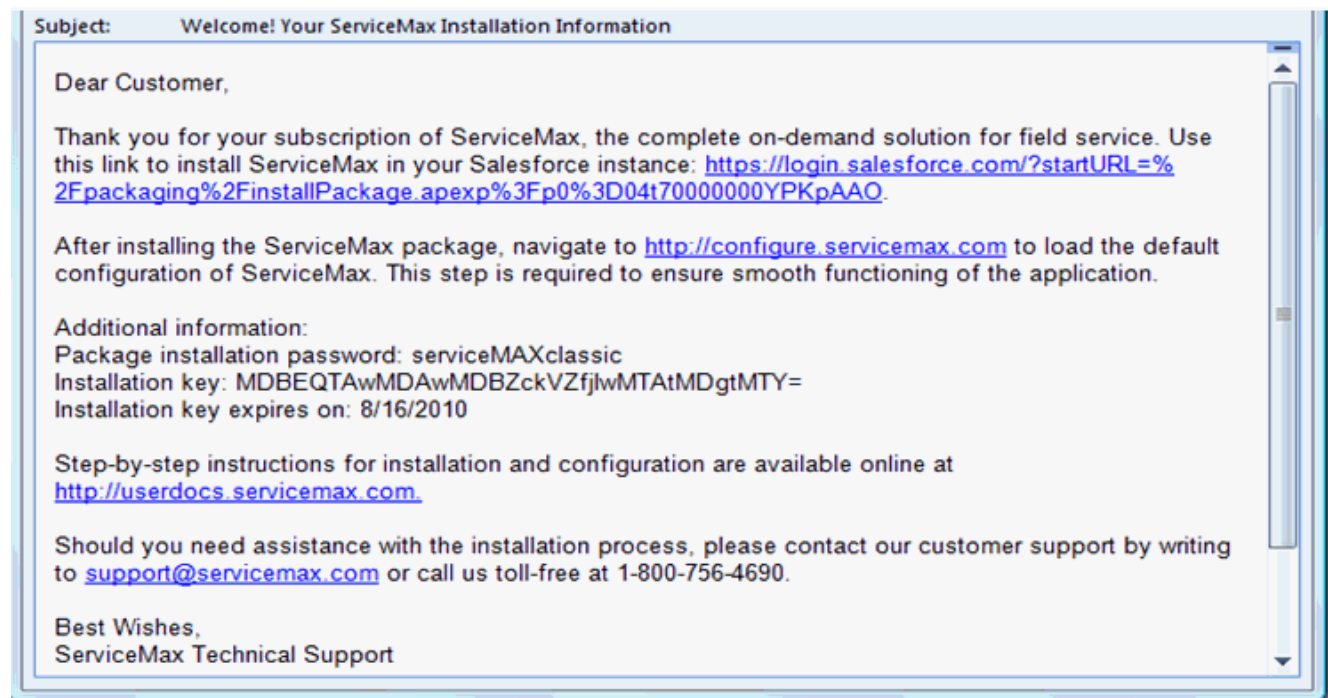


Figure 1: Sample Email with Installation Link

Installation Steps



Note: The steps listed below are examples only. Since Force.com continues to optimize and enhance the installation experience, the actual steps you would see may vary. See the online package installation guide at www.appexchange.com.

1. Open an internet browser. To learn if your browser is compatible with Salesforce, click the **Help** link within the Salesforce application and search for Supported Browsers.
2. Copy and paste the installation link into the browser's URL.
3. Enter your login credentials.
4. In the Package Installation Details screen, click **Continue**.

Package Installation Details Help for this Page ?

Package Name	ServiceMax
Version Name	Summer 11
Version Number	7.50000.1
Publisher	ServiceMax Inc
Description	ServiceMax Suite is the only complete on-demand solution for post-sales service, field service, and strategic service chain management. Built and delivered on the force.com platform, with the world class reliability and flexibility Salesforce customers have come to expect, the product gives you complete field service functionality.

[Continue](#) [Cancel](#)

Package Components

▼ Code (434)

Action	Component Name	Parent Object	Component Type	Installation Notes
Create	WORD_Trigger1	Service_Order__c	Apex Trigger	This is a brand new component.
Create	PORD_CreateShipmentFromRMA_UT		Apex Class	This is a brand new component.

Figure 2: Package Installation Details Screen

5. The following dialog box appears. Check the **Yes, grant access to these third-party web sites** checkbox and then click **Continue** to view the next screen.

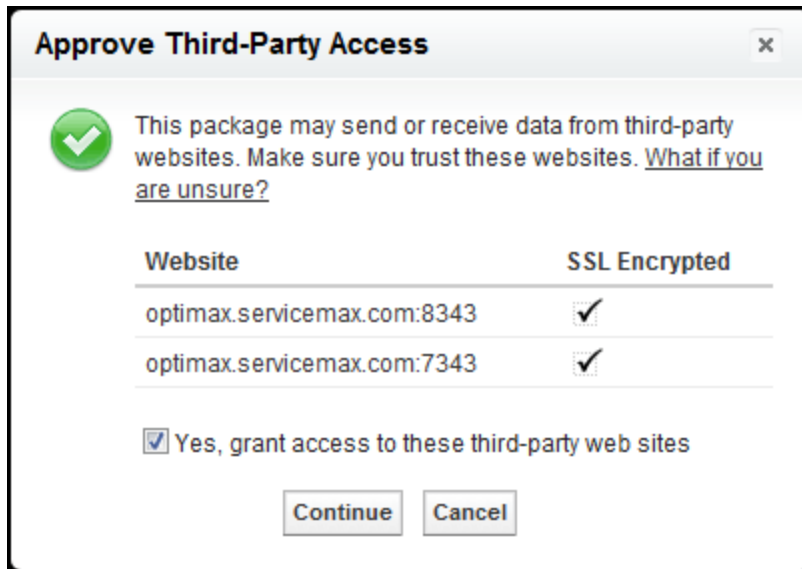


Figure 3: Approve Third-Party Access Pop-Up

6. The next screen shows Package API access for standard objects. Click **Next** to proceed.

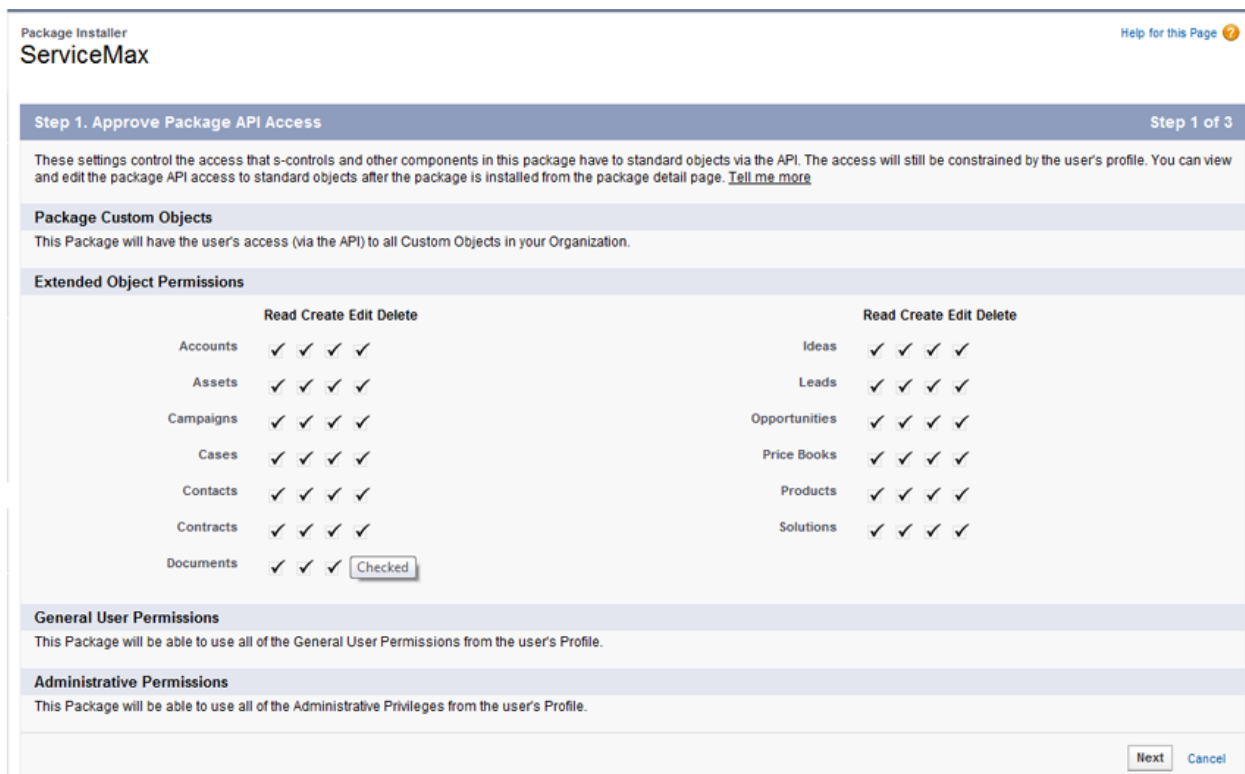
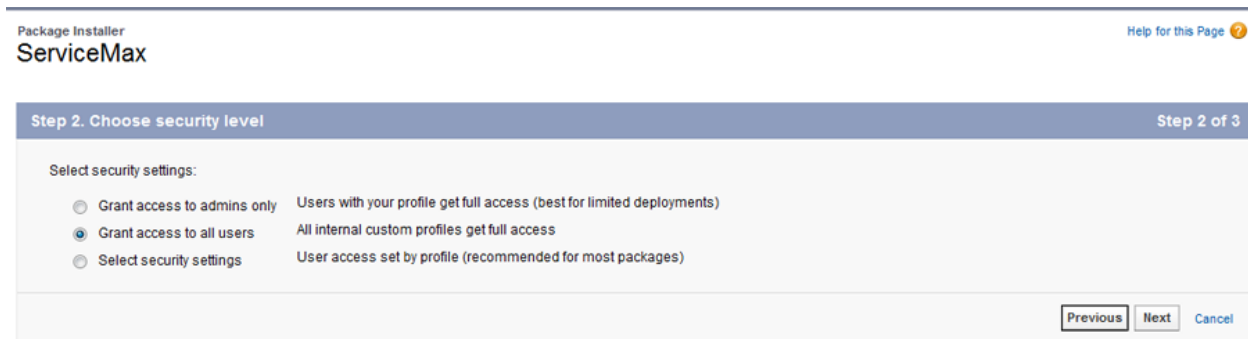


Figure 4: Package API Access Screen

7. In the next screen, click the **Grant access to all users** option in the Select Security settings section and then click **Next** to proceed.



Package Installer
ServiceMax

Help for this Page ?

Step 2. Choose security level Step 2 of 3

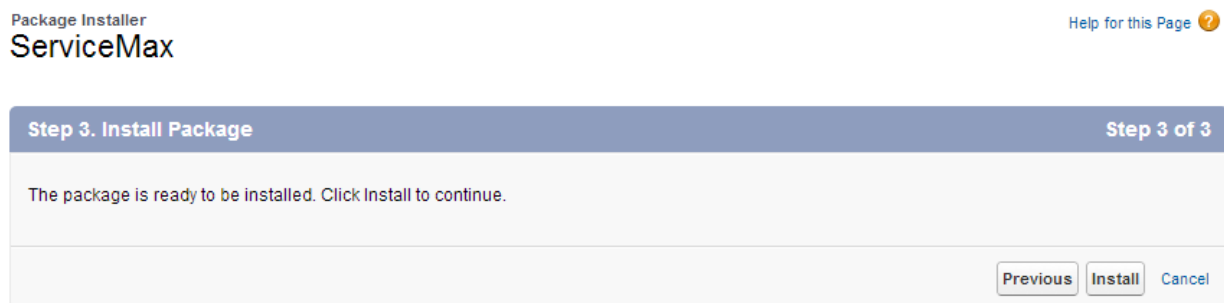
Select security settings:

<input type="radio"/> Grant access to admins only	Users with your profile get full access (best for limited deployments)
<input checked="" type="radio"/> Grant access to all users	All internal custom profiles get full access
<input type="radio"/> Select security settings	User access set by profile (recommended for most packages)

Previous Next Cancel

Figure 5: Security Settings Screen

8. Click **Install**. This process may take a few minutes to complete. You will either be notified via email or the screen will be refreshed to indicate the completion of installation.



Package Installer
ServiceMax

Help for this Page ?

Step 3. Install Package Step 3 of 3

The package is ready to be installed. Click Install to continue.

Previous Install Cancel

Figure 6: Install Package Screen

9. After installing all the packages successfully, navigate to **Setup > App Setup > Installed Packages**. The **ServiceMax** installed package appears in the list of

installed packages as shown below:

Installed Packages

[Help for this Page](#)

On Force.com AppExchange you can browse, test drive, download, and install pre-built apps and components right into your salesforce.com environment. [Learn More about Installing Packages.](#)

Apps and components are installed in packages. Any custom apps, tabs, and custom objects are initially marked as "In Development" and are not deployed to your users. This allows you to test and customize before deploying. You can deploy the components individually using the other features in setup or as a group by clicking Deploy.

Depending on the links next to an installed package, you can take different actions from this page.

To remove a package, click **Uninstall**. To manage your package licenses, click **Manage Licenses**.



Installed Packages									
Action	Package Name	Publisher	Version Number	Namespace Prefix	Status	Allowed Licenses	Used Licenses	Expiration Date	Install Date
Uninstall	Salesforce for Google AdWords	SFGA Build	1.2	SFGA	Active	Unlimited	0	Does not Expire	10/1/2013 6:11 AM
Description: Salesforce for Google AdWords allows online marketers to track the effectiveness of Google advertising campaigns and website lead generation activity....									
Uninstall Configure Manage Licenses	ServiceMax	ServiceMax Inc	13.0.2	SVMXC	Active	10	0	2/24/2015	10/1/2013 6:11 AM
Description: ServiceMax Suite is the only complete on-demand solution for post-sales service, field service, and strategic service chain management. Built and deli...									
Uninstall	ChatterVolume	Chatter	1.5		N/A	N/A	N/A	N/A	10/1/2013 6:11 AM
Uninstall Configure	Servicemax Tech Route	ServiceMax	2.5		N/A	N/A	N/A	N/A	10/1/2013 6:11 AM


Figure 7: Installed Packages Screen

10. Unless you have unlimited licenses, add your user account to the ServiceMax package license. To add your user account:
 - a. Click the **Manage Licenses** link for the ServiceMax package to view the following screen:

Package Details		Help for this Page	
ServiceMax		Back to Previous Page	
Package Name	ServiceMax	Publisher	ServiceMax Inc
Status	Active	Allowed Licenses	10
Expiration Date	2/23/2015	Used Licenses	0
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other All			
Licensed Users		Add Users	Remove Multiple Users
Full Name ↑	Role	Active	Profile
No records to display.			

Figure 8: Package Details Screen

- b. Click **Add Users** to view the Add Users screen as shown below:

Add Users
ServiceMax Help for this Page 

View: All ▼ [Create New View](#) <Previous Page | Next Page>

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other **All**

Available Users [Select Shown](#) [Deselect Shown](#) [Deselect All](#) [Add All Users](#)

Action	Full Name ↑	Role	Active	Profile
<input type="checkbox"/>	Admin, Primary	Director IT	✓	System Administrator
<input type="checkbox"/>	Black, Michael	Field Service Representative	✓	Field Technician
<input type="checkbox"/>	Chiever, David A.	CEO	✓	System Administrator
<input type="checkbox"/>	Fraser, Eric	Customer Support Representative	✓	System Administrator
<input type="checkbox"/>	Huntington, Bill		<input type="checkbox"/>	ServiceMax Customer Portal

Show me ▼ more records per list page

Selected Users

Action	Full Name
No rows selected	

[Add](#) [Cancel](#)

Figure 9: Add Users Screen

- c. Check the **Action** checkbox next to your user account, and then click **Add** to add the user account.

See Also:

[Loading Default Configuration and Page Layouts](#)

[Verifying Installation](#)

[PM Scheduler](#)

[OptiMax Authentication](#)

[Installing Offline Client](#)

[Troubleshooting Installation Issues](#)

[Next Steps after Installation](#)

LOAD DEFAULT CONFIGURATION AND PAGE LAYOUTS

Purpose

Most ServiceMax functionality is driven by configuration parameters. This ensures scalability of architecture and deployment of multiple service processes within an organization. When ServiceMax is installed or upgraded, the set of configuration parameters should be loaded to ensure smooth functioning of all modules. Loading of page layouts accelerates the configuration process and aids in better user adoption. It automatically creates Salesforce profiles for a typical service organization and sets up their access rights to recommended levels. It optimizes the ServiceMax page layouts for use by these profiles. Additionally, it loads some sample Visual Force templates that can be used for generating Salesforce Reports.



Note: This applies to Production and Sandbox installations. If you create a configuration-only sandbox for development/testing purposes, ServiceMax configuration data is not copied automatically to the sandbox. You must load the configuration data in Sandbox as described in the process steps below.

Prerequisites

In order to run successfully, the deployment configurator requires certain default values to be set in your Salesforce profile.

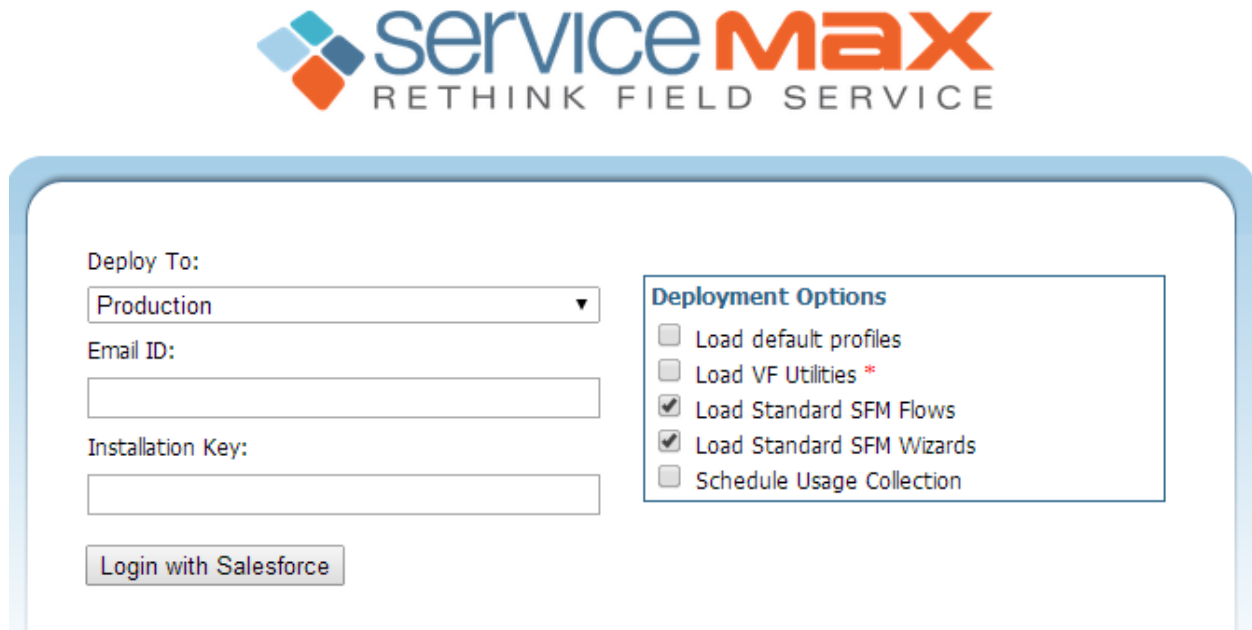
In **Settings > Company Profile > Company Information**, edit the following values.

- Default Locale – Set it to English (United States)
- Default Language – English
- Default Timezone – (GMT-08:00)Pacific Standard Time(America/Los_Angeles)

If your settings are different from the above mentioned values, you should change them before running the configurator. You can change them back once the configurator completes successfully.

To load default configuration and page layouts:

1. Click the configuration link from the ServiceMax welcome email, or copy and paste it into an internet browser's URL. The following screen appears:



The image shows the ServiceMax Configuration screen. At the top is the ServiceMax logo with the tagline 'RETHINK FIELD SERVICE'. Below the logo is a light blue rounded rectangle containing the configuration form. The form has three input fields: 'Deploy To:' with a dropdown menu showing 'Production', 'Email ID:' with a text box, and 'Installation Key:' with a text box. Below these fields is a 'Login with Salesforce' button. To the right of the input fields is a box titled 'Deployment Options' containing five checkboxes: 'Load default profiles' (unchecked), 'Load VF Utilities *' (unchecked), 'Load Standard SFM Flows' (checked), 'Load Standard SFM Wizards' (checked), and 'Schedule Usage Collection' (unchecked).

Figure 1: ServiceMax Configuration Screen

2. In the ServiceMax Configuration screen:
 - a. Select the type of Salesforce instance in **Deploy To** picklist: (**Production**, **Sandbox**, or **I have a custom Salesforce domain**). If you selected **I have a custom Salesforce domain**, enter the custom domain in the field below.
 - b. Under **Deployment Options**:
 - i. To install the preconfigured user profiles and page layouts for field service, check the **Load default profiles** checkbox. To install the preconfigured document templates for Service Report, Parts Order, RMA, and so on, check the **Load VF Utilities** checkbox. Use extreme caution when using these two options on an existing ServiceMax installation. If you have modified the preconfigured profiles, page layouts, or document templates in your installation (not recommended), they will be completely overwritten.
 - ii. To load the preconfigured SFM transactions and wizards, check the **Load Standard SFM Transactions** and **Load Standard SFM Wizards** checkboxes

respectively. These options are available to preserve the limited space available for Sandbox instances. If you leave the checkboxes unchecked, none of the standard SFM transactions and wizards will be functional.

- iii. Leave the **Check Schedule Usage Collection** checkbox unchecked.
 - c. Enter a valid **Email ID**. At the end of processing, the configurator will send an email to this email ID with the detailed status.
 - d. Enter the ServiceMax **Installation Key**.
3. Click the **Login with Salesforce** button. The Salesforce Login screen appears:



Figure 2: Salesforce Login Screen

4. Enter your Salesforce **User Name** and **Password**, and then click the **Log in to Salesforce** button. The following screen appears:

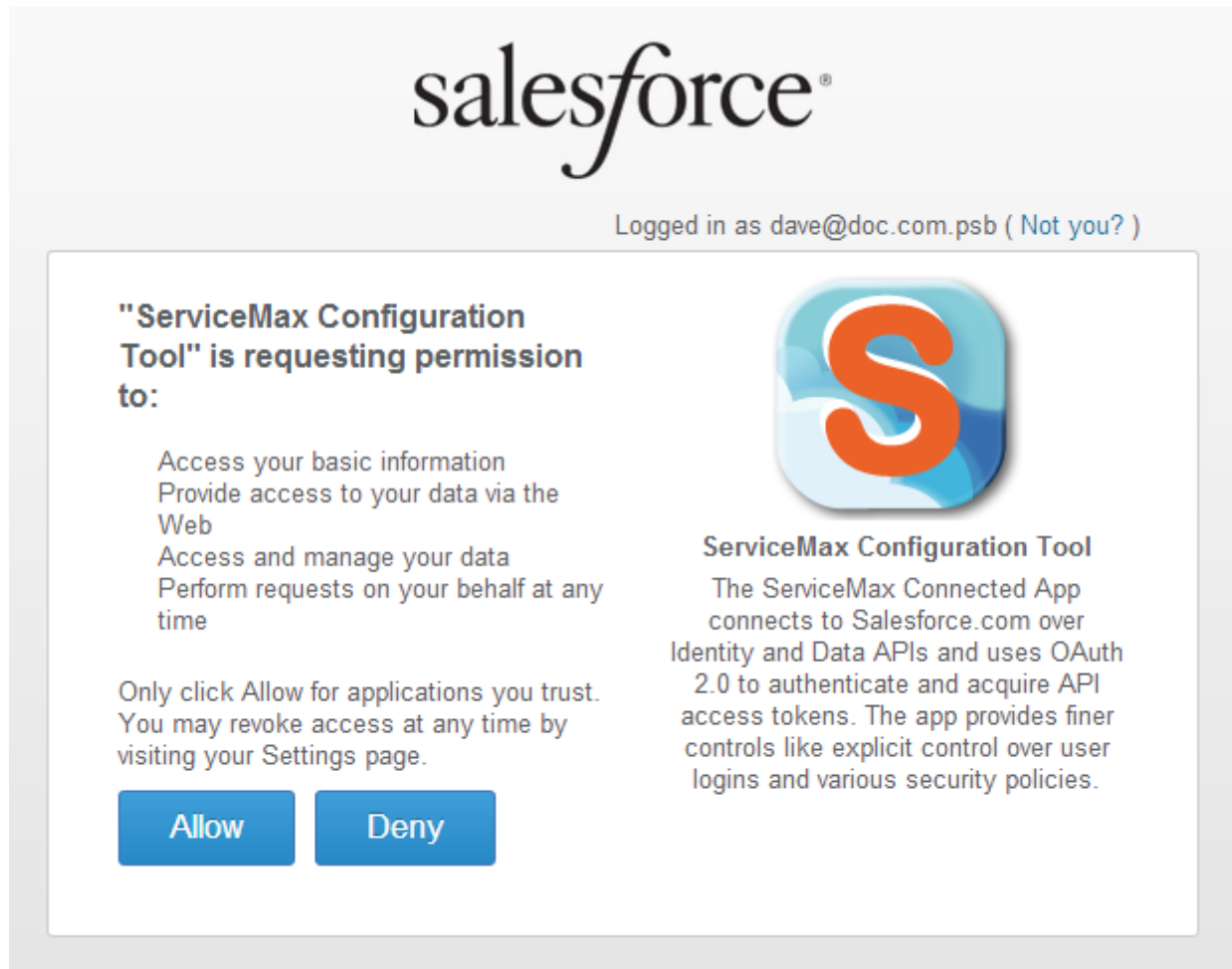


Figure 3: Salesforce Requesting Permission Screen

5. Click **Allow**.
6. The following message appears while the processing is in progress. You can either close the browser window or navigate to any other page. Upon completion of the pro-

cess, you will receive an email with the status of processing.



Your request is in progress. You can either close this window or navigate to any other URL. You will receive an email upon completion of your request.

Figure 4: ServiceMax Configuration In Progress Message

See Also:

[Installing Packages](#)

[Verifying Installation](#)

[PM Scheduler](#)

[OptiMax Authentication](#)

[Installing Offline Client](#)

[Troubleshooting Installation Issues](#)

[Next Steps after Installation](#)

VERIFY INSTALLATION

Purpose

Before you start to configure and extend ServiceMax application to your organization's specific requirements, you must make sure the vanilla application has been installed successfully.

To verify installation:

1. Log into Salesforce.
2. Navigate to **Setup > App Setup > Customize > Home > Home Page Layouts**.
3. In the Home Page Layouts screen:
 - a. Click **Page Layout Assignment**.
 - b. Click **Edit Assignment**.
 - c. Assign **Sys Admin Home** to the **System Administrator** profile, and then click **Save**. This allows you to access the ServiceMax Setup Console from your home page.



Note: To see **Sys Admin Home**, the preconfigured user profiles and page layouts must have been installed by checking the **Load default profiles** checkbox in the deployment configurator. See [Load Default Configuration and Page Layouts](#).

4. Click **ServiceMax** from the application list on the top-right.
5. Click the **ServiceMax Setup** link from the left side pane. You will see the Setup Home page as shown below. Click any of the group buttons such as **App Administration** or **Service Organization**, click any of the options such as **Modules** or **Sub-modules**, and then click the **Go** button to make sure you are redirected to the

appropriate screen.



Figure 1: ServiceMax Setup Home



Note: This step is required to ensure the configuration data was loaded successfully.

6. Click the **Accounts** tab, click **New** and enter sample account data, and then click **Save**. Click the **Products** tab, click **New** and enter sample product data, and then click **Save**. Click the **Installed Products** tab, click **New** and enter sample data, and then click **Save**. On the Installed Products screen, click **Create Child**. You should be able to see the screen below. Enter a product name and serial number and then click

Create Child.

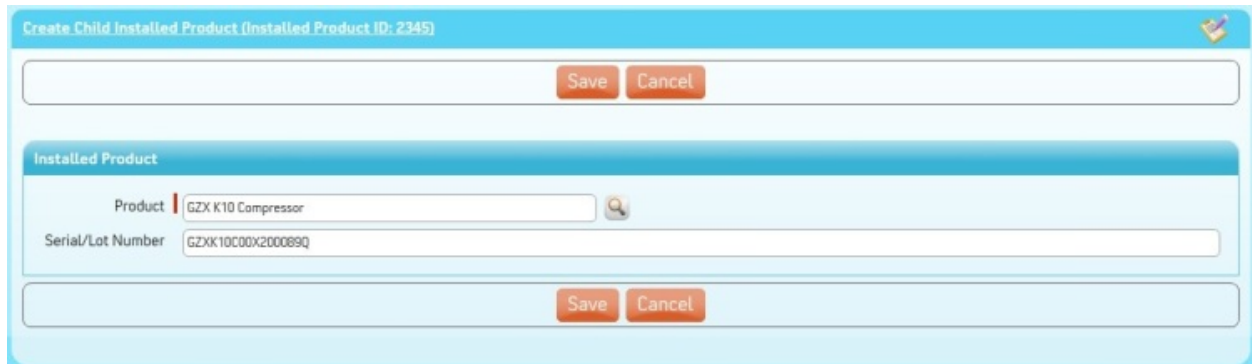


Figure 2: Create Child Screen



Note: This step is required to verify that the default ServiceMax Profile was automatically associated with the System Administrator profile, and that ServiceMax features are using the default configuration settings.

See Also:

[Installing Packages](#)

[Loading Default Configuration and Page Layouts](#)

[PM Scheduler](#)

[OptiMax Authentication](#)

[Installing Offline Client](#)

[Troubleshooting Installation Issues](#)

[Next Steps after Installation](#)

PM SCHEDULER

Purpose

If your organization plans to use the Preventive Maintenance feature of ServiceMax, you must set up a schedule to run the ServiceMax process that creates PM Work Orders automatically.

To set up a schedule to run the ServiceMax process:

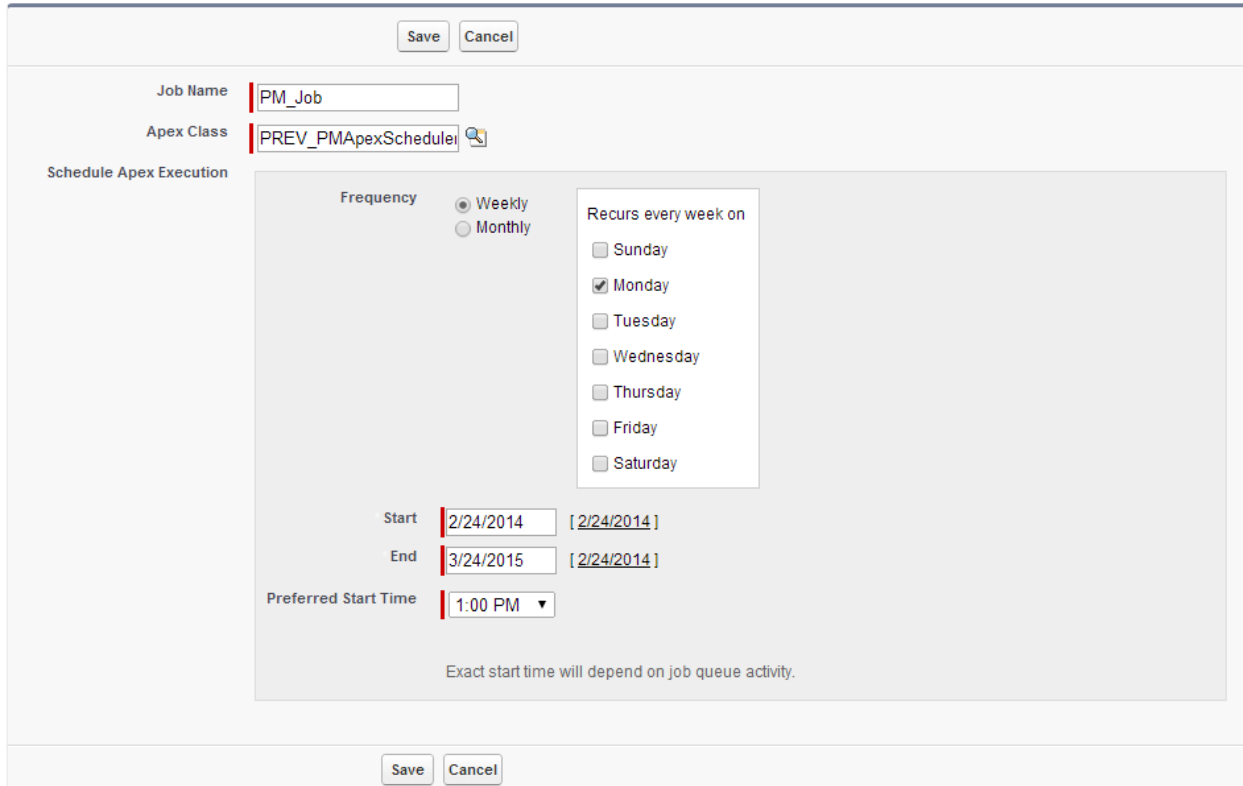
1. Log into Salesforce.
2. Navigate to **Setup > App Setup > Develop > Apex Classes > Schedule Apex**.
The Schedule Apex screen appears.
3. In the Schedule Apex screen:
 - a. Enter **Job Name** as **PM_Job**.
 - b. Select **Apex Class** as **PREV_PMApexScheduler**.
 - c. Click the **Weekly** option for **Frequency** and then select all the weekday options.

- d. Select the appropriate values for **Start**, **End**, and **Preferred Start Time**, and then click **Save**.

Schedule Apex

[Help for this Page](#)

Schedule an Apex class that implements the 'Schedulable' interface to be automatically executed on a weekly or monthly interval.



The screenshot shows the 'Schedule Apex' configuration window. At the top are 'Save' and 'Cancel' buttons. Below them are input fields for 'Job Name' (containing 'PM_Job') and 'Apex Class' (containing 'PREV_PMApexScheduler' with a search icon). The 'Schedule Apex Execution' section contains a 'Frequency' group with 'Weekly' selected and 'Monthly' as an option. To the right of 'Weekly' is a list 'Recurs every week on' with checkboxes for days of the week: Sunday, Monday (checked), Tuesday, Wednesday, Thursday, Friday, and Saturday. Below this are date pickers for 'Start' (2/24/2014) and 'End' (3/24/2015), each with a calendar icon. A 'Preferred Start Time' dropdown is set to '1:00 PM'. A note at the bottom states 'Exact start time will depend on job queue activity.' At the bottom of the window are 'Save' and 'Cancel' buttons.

Figure 1: Schedule Apex Screen

See Also:

[Installing Packages](#)

[Loading Default Configuration and Page Layouts](#)

[Verifying Installation](#)

[OptiMax Authentication](#)

[Installing Offline Client](#)

[Troubleshooting Installation Issues](#)

[Next Steps after Installation](#)

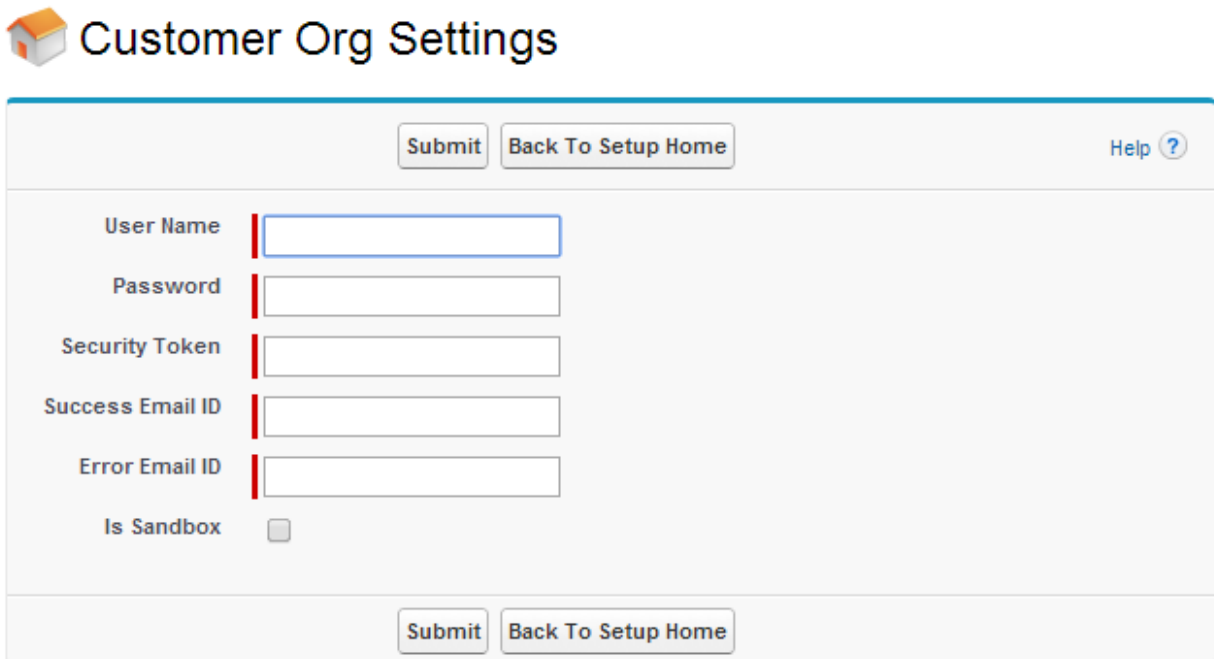
OPTIMAX AUTHENTICATION

Purpose

If your organization plans to use OptiMax for advanced dispatch optimization capabilities, you must store the OptiMax login credentials within ServiceMax for authentication. This is used when dispatch processes are created or updated in ServiceMax.

To store the OptiMax login credentials with ServiceMax:

1. Log into Salesforce.
2. Click **ServiceMax** from the application list on top-right.
3. Click the **ServiceMax Setup** link from the left side pane.
4. In the ServiceMax Setup Home page, click **Dispatch Console > OptiMax Settings**.
The following screen appears:



The screenshot shows the 'Customer Org Settings' page in Salesforce. At the top left is a house icon. The title 'Customer Org Settings' is in the top left. The top right has a 'Help ?' link. Below the title bar are two buttons: 'Submit' and 'Back To Setup Home'. The main content area contains five text input fields, each with a red vertical bar to its left: 'User Name', 'Password', 'Security Token', 'Success Email ID', and 'Error Email ID'. Below these fields is a checkbox labeled 'Is Sandbox'. At the bottom of the form are two more buttons: 'Submit' and 'Back To Setup Home'.

Figure 1: Customer Org Settings Screen

5. Enter the **User Name**, **Password**, and **Security Token**. This login must be a System Administrator in Salesforce.
6. Enter the **Success Email ID** to receive notifications regarding successful OptiMax runs. To ensure scalability, use a distribution list instead of a specific user's email ID.
7. Enter the **Error Email ID** to receive notifications regarding any failures encountered in OptiMax runs. To ensure scalability, use a distribution list instead of a specific user's email ID.
8. If this is a Sandbox instance, check the **Is Sandbox** checkbox.
9. Click **Submit** to save your changes.

The above steps will ensure that ServiceMax will be able to connect to the OptiMax engine successfully.

See Also:

[Installing Packages](#)

[Loading Default Configuration and Page Layouts](#)

[Verifying Installation](#)

[PM Scheduler](#)

[Installing Offline Client](#)

[Troubleshooting Installation Issues](#)

[Next Steps after Installation](#)

TROUBLESHOOTING INSTALLATION ISSUES

This section outlines some of the typical problems you may encounter while installing ServiceMax.

Problem	Solution
I do not have the ServiceMax Installation links.	Please contact ServiceMax technical support or your account executive. Please have your 15-digit Salesforce Org ID ready.
I don't have the installation password or the installation password does not work in AppExchange.	The installation password is sent in the email with installation links. Note that this password is case-sensitive and cannot contain spaces. If you continue to have problems in AppExchange installation, contact ServiceMax technical support .
I did not get an email confirming the package installation. I don't see any ServiceMax in the Installed Packages section either.	The time it takes to install a package may vary anywhere between a few seconds to several minutes. Try installing the package again. If the problem persists, contact Salesforce Customer Support.
The Installation key I received in the email has expired.	The installation key is normally valid for 30 days. Please contact your account executive or ServiceMax technical support to get a new installation key.
I get an error that the installation key is not valid for this instance.	The installation key can be used only on a specific Salesforce instance uniquely identified by an Org ID. Note that Production and Sandbox are considered as separate instances since they have different Org IDs.
No licenses are available to assign to users.	Your trial period may have expired. Contact your ServiceMax account executive for further action.
I am unable to see ServiceMax listed in the applications.	You may not have deployed the ServiceMax packages after installation. See Install ServiceMax Packages for instructions.

Problem	Solution
When I click ServiceMax setup home, an error appears: 'Installation is incomplete'.	In order for ServiceMax features to function properly, you must load the default configuration data. This is not an optional step. See Load Default Configuration and Page Layouts for more information.
Can I install this Offline application on a Mac?	ServiceMax offline client runs on Microsoft Windows operating systems only. See Offline Client System Requirements for more information.
I am unable to deactivate an offline profile I created.	The offline profile must not be linked to any Salesforce profile. Edit the offline profile and remove all Salesforce profiles associated with it before deactivating it.
I am unable to delete an offline profile I created.	The offline profile must not be linked to any Salesforce profile. Edit the offline profile and remove all Salesforce profiles associated with it before deleting it.
I am unable to generate Parts Order reports.	The following objects should be included the Offline Profile: Parts Order as direct object, Location as direct object, and Account, Contact, and Product as related objects.
I am unable to generate Work Order reports.	The following objects should be included in the Offline Profile: Work Order as direct object and Account Contact, and Product as related objects.

NEXT STEPS AFTER INSTALLATION

See ServiceMax Configuration for a detailed description of various configuration options available and how you can deploy ServiceMax for optimum use in your organization.

See ServiceMax Customization to learn how you can take advantage of the meta-data driven architecture of ServiceMax and build custom extensions using VisualForce, Apex, and other tools, yet retain the flexibility of out-of-the-box functionality.

SERVICEMAX MOBILE FOR LAPTOPS INSTALLATION

SERVICEMAX MOBILE FOR LAPTOPS INSTALLATION

System Requirements and Limitations

The following sections describe the system requirements and limitations for the ServiceMax Mobile for Laptops application.

Requirements

The list below represents the minimum requirements for running the ServiceMax Mobile for Laptops application.

- Operating System: Windows 7 and 8, 32 and 64 bit
- Disk Space: At least 250 MB + space for offline data
- Processor: Recommended 1 GHz Pentium processor or equivalent
- RAM: Recommended 2 GB
- Display Resolution: Recommended 1024 x 768 high-color, 32 bit
- Other Requirement: Microsoft .NET Framework 4.0

Prerequisites

ServiceMax Mobile for Laptops includes the following limitations:

- When installing the application, you must select "Run as Administrator."
- If you cannot log in, install Visual C++ 2010 runtime (Redistributable Package). For more information visit: <http://www.microsoft.com/en-in/-download/details.aspx?id=5555>
- Requires ServiceMax server package Summer '13

INSTALLING THE APPLICATION

Follow the instructions below to install the ServiceMax Mobile for Laptops application.

To install the ServiceMax Mobile for Laptops application:

1. On your computer, double-click the **setup.exe** file you downloaded.
2. If you are installing the application, right-click **setup.exe** and select **Run as Administrator**.
3. If you are upgrading from a previous version, click **Yes** to continue installation, and then click **Next** to resume installation.
4. Click **Run** when prompted.

The ServiceMax Mobile for Laptops Setup application prepares the InstallShield Wizard. Wait for this process to finish. If you need to cancel this process, click **Cancel**.

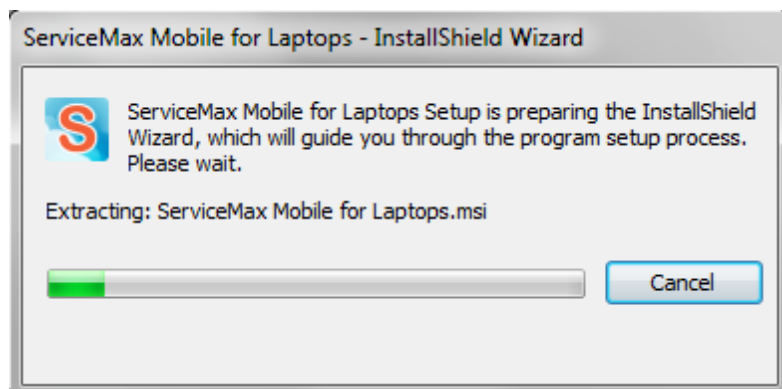


Figure 1: ServiceMax Mobile for Laptops - InstallShield Wizard

When the setup is complete, the ServiceMax Mobile for Laptops installer displays, as shown below.

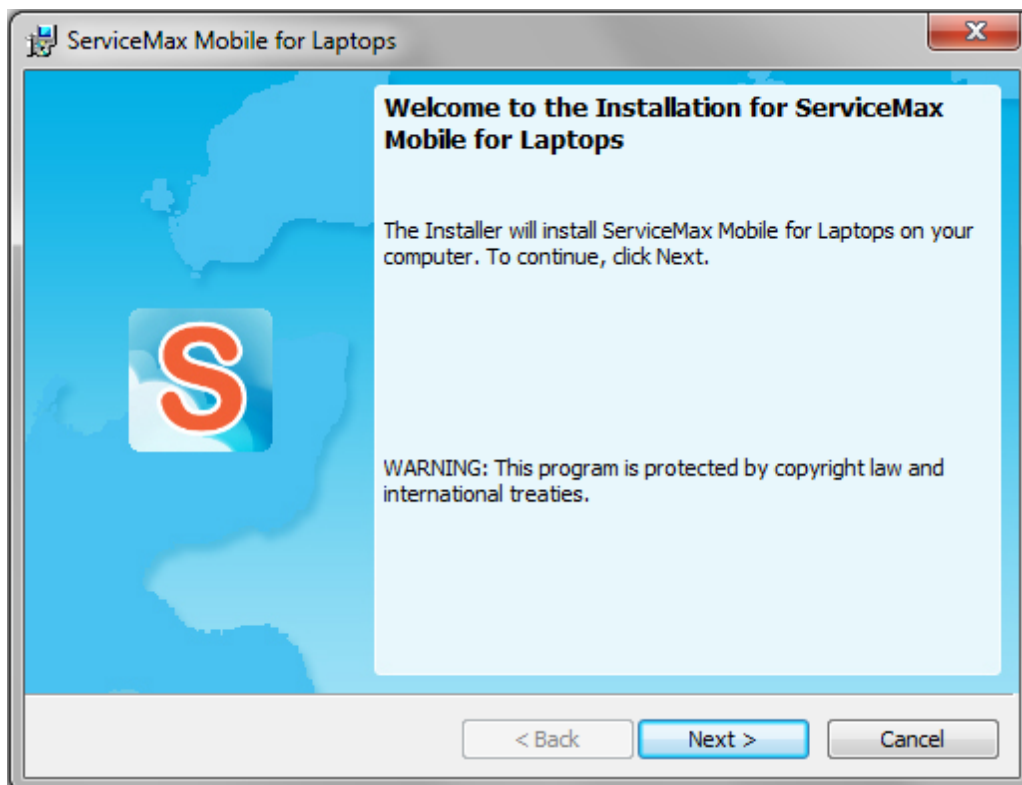


Figure 2: ServiceMax Mobile for Laptops Installer

5. Click **Next** (if you need to cancel the installation process, click **Cancel**).

6. Read the ServiceMax Mobile for Laptop Binary Code License Agreement, select the option to accept the terms in the license agreement, and then click **Next**.

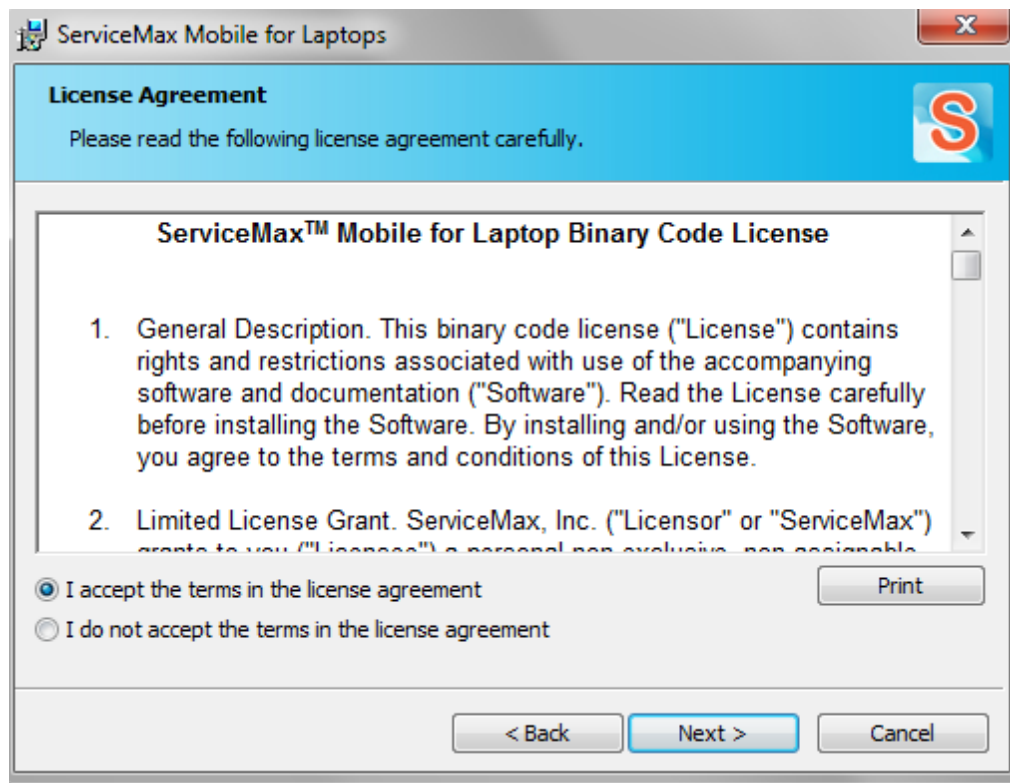


Figure 3: ServiceMax Mobile for Laptop Binary Code License Agreement

7. In the Destination Folder dialog box, click **Next** to install the application in the designated folder.

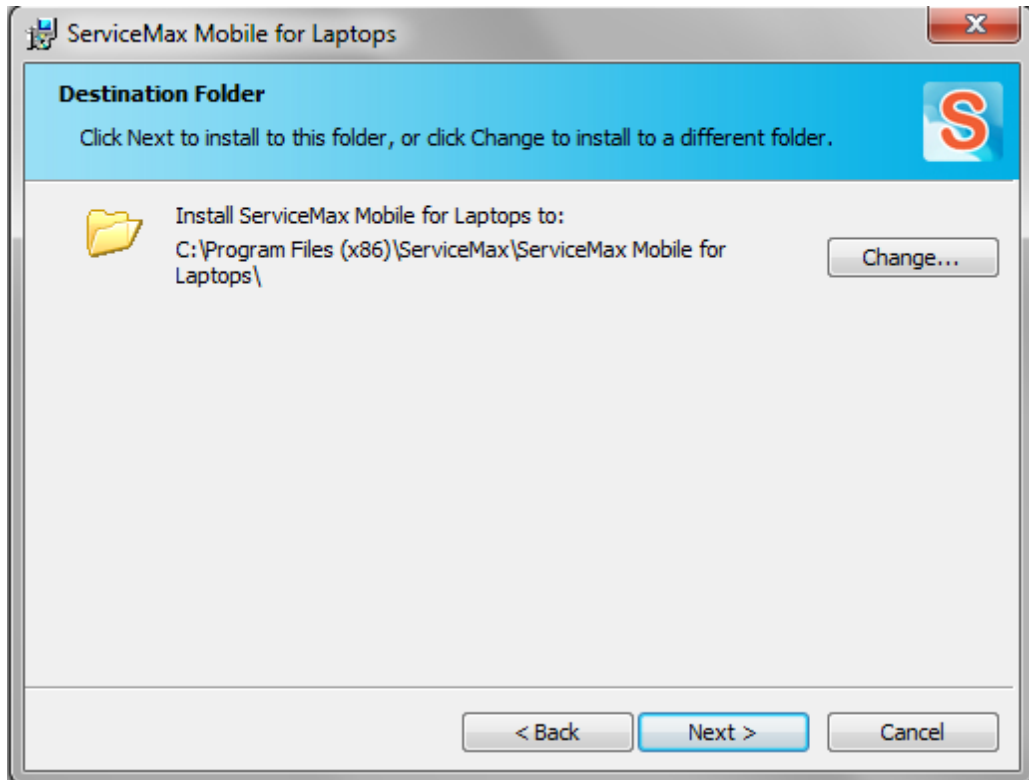


Figure 4: ServiceMax Mobile for Laptops Destination Folder

8. To change the destination of the application, click **Change**. Browse for or create a new folder, and then click **OK**.

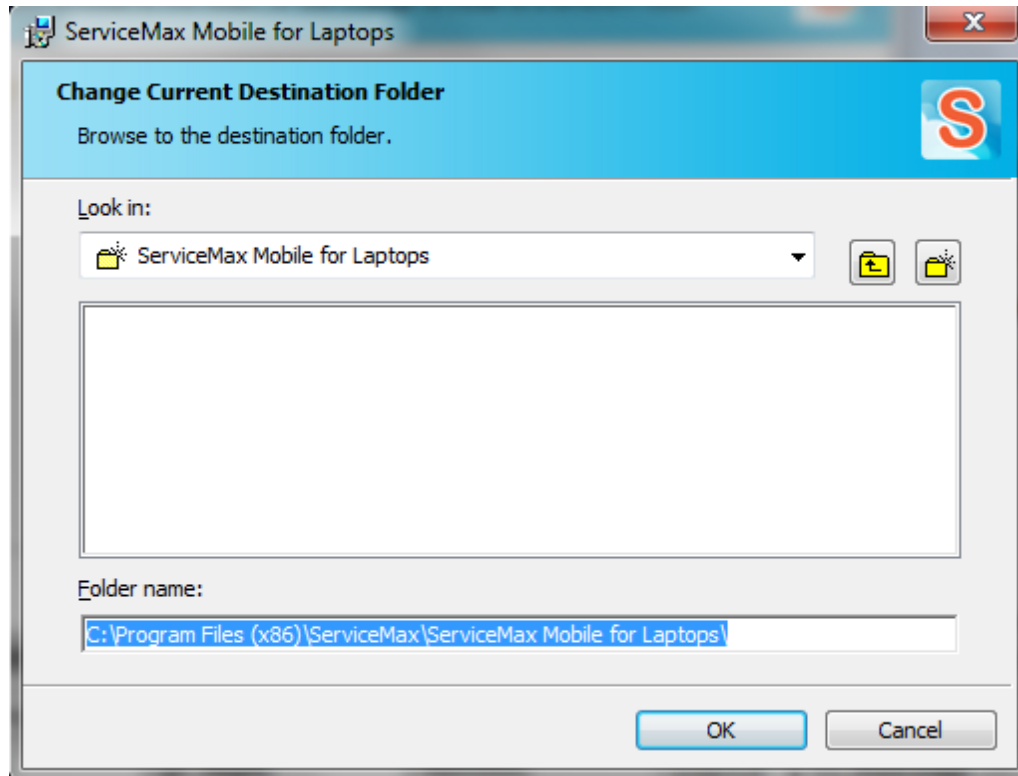


Figure 5: ServiceMax Mobile for Laptop Binary Code License Agreement

9. Click **Install** to install the ServiceMax Mobile for Laptops program.

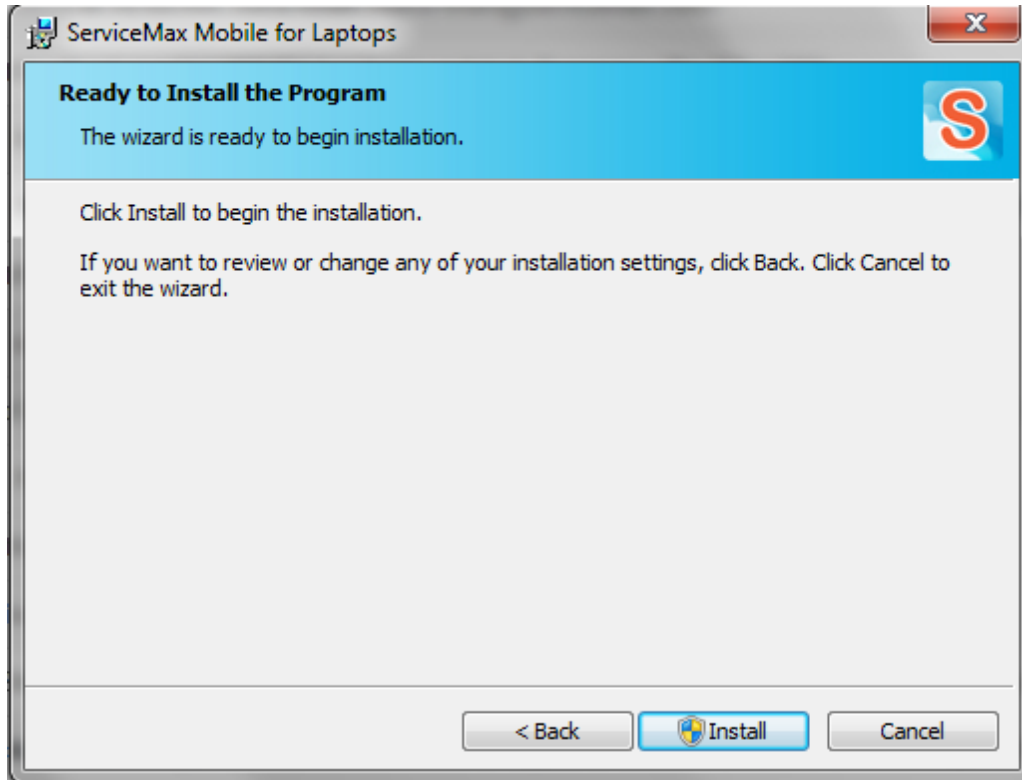


Figure 6: ServiceMax Mobile for Laptops Ready to Install the Program

10. Click **Finish** to complete installation.

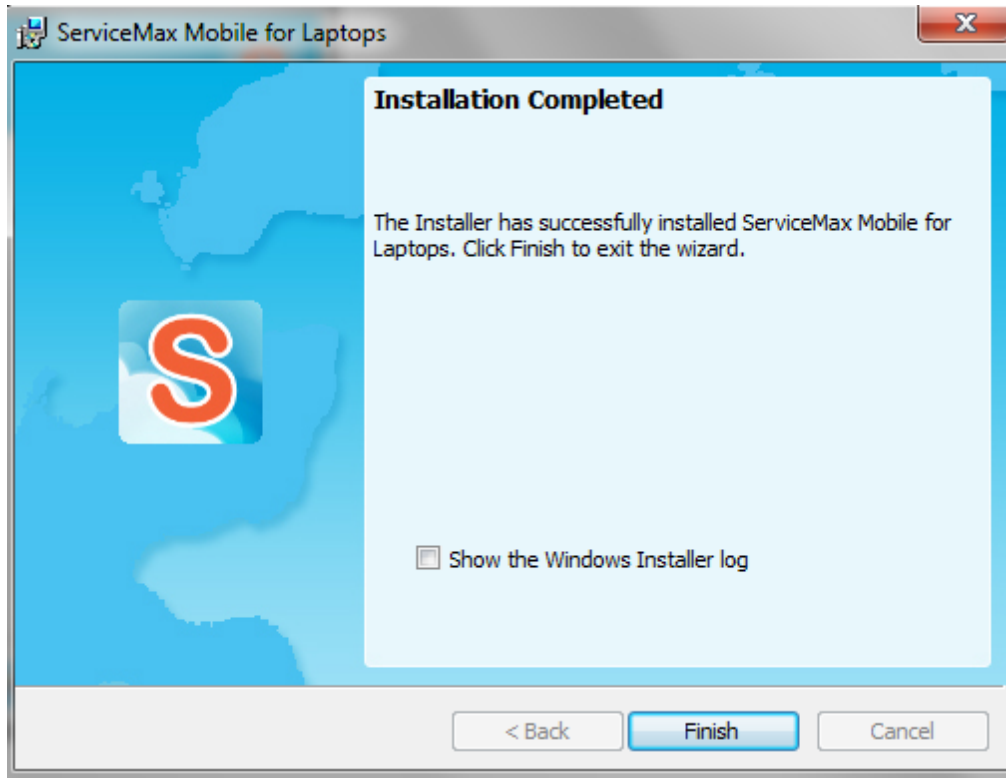


Figure 7: ServiceMax Mobile for Laptops Installation Completed

SERVICEMAX MOBILE FOR IPAD INSTALLATION

SERVICEMAX MOBILE FOR LAPTOPS SYSTEM REQUIREMENTS

System Requirements

The following sections describe the system requirements and limitations for the ServiceMax Mobile for iPad app.

Device Requirements

The ServiceMax iPad client will work with all models of iPad except iPad 1. The minimum configuration is iOS v4.2. Internet connectivity is required, either through 3G or Wi-Fi. If there is a proxy or firewall in your network, the iPad must be configured to get the appropriate access to salesforce.com.

INSTALLING A SERVICEMAX iPad APP

Follow the instructions below to install a ServiceMax iPad app.

To install a ServiceMax iPad app:

1. On your iPad, tap the **App Store** app to launch Apple's App Store.
2. Tap the **Search** box on the top right and enter **servicemax** using the iPad keyboard.
3. Tap **Search** on the iPad keyboard.

All ServiceMax apps appear as shown below.

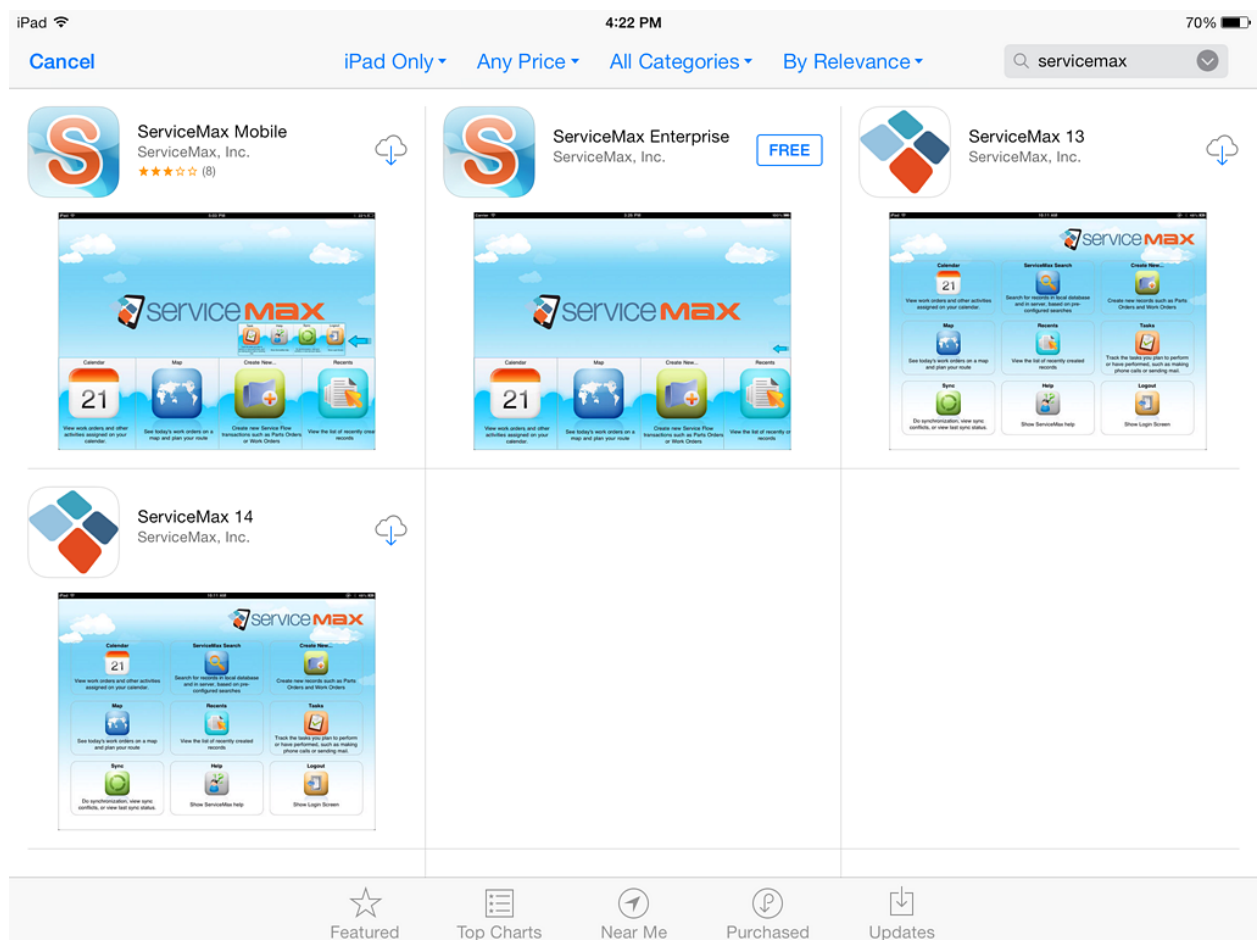


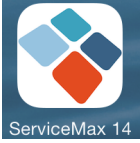


Figure 1: ServiceMax Apps

4. Tap the Download  icon next to the ServiceMax app you want to download.
When the download completes, an Open button appears.

5. Tap the Open  button on this screen or the ServiceMax app  icon on the iPad Home Screen to launch the app.

SERVICEMAX OFFLINE CLIENT INSTALLATION

OFFLINE CLIENT INSTALLATION

System Requirements

Components	Specifications
Operating System	Windows Server 2003 Windows Server 2008 Windows 7 Windows XP with Service Pack 2 or higher
Disk Space	At least 250 MB + space for your offline data
Processor	Minimum: 400 MHz Pentium processor or equivalent Recommended: 1 GHz Pentium processor or equivalent
Memory	Minimum: 96 MB Recommended: 256 MB
Display Resolution	Minimum: 800x600 256 Colors Recommended: 1024x768 high-color, 32-bit
Other Requirements	Microsoft .NET framework 3.5 with Service Pack 1 or higher

Installation Steps



Note: ServiceMax offline client is a Windows-based installation program. Depending upon your organization's IT distribution infrastructure, this program may be remotely installed or pushed through a silent-installer or your organization may require you to install the Offline client manually on your desktop. Please contact your Salesforce/ServiceMax administrator for installation details relevant to your organization. The instructions given below can be used for manual download and installation of ServiceMax offline client.

1. If your administrator has made ServiceMax client available through your Salesforce system, login to [Salesforce.com](https://www.salesforce.com) using your login and password. Navigate to

Documents > ServiceMax Documents > ServiceMax Offline Client. The following screen appears. In this screen, click **Click here** to view this file link.



The screenshot shows a document detail page for 'ServiceMax Offline Client'. It includes a header with a document icon and the title. Below the header is a table with document properties. At the top right of the table are buttons for 'Edit Properties', 'Delete', 'Replace Document', and 'Email Document'. The table contains the following information:

Document Name	ServiceMax Offline Client
Document Unique Name	ServiceMax_Offline_Client
Namespace Prefix	SVMXO
Internal Use Only	<input checked="" type="checkbox"/>
Document Content Searchable	<input type="checkbox"/>
Folder	ServiceMax Documents
Author	ServiceMax Offline Edition [Change]
File Extension	exe
MIME Type	application/x-msdos-program
Size	456KB
Description	ServiceMax Offline Client installation program
Keywords	ServiceMax Offline
	Click here to view this file
Created By	ServiceMax Offline Edition, 8/4/2009 1:20 AM
Modified By	

Figure 1: ServiceMax Offline Client Document Screen

2. When prompted, save the file locally on your computer.
3. If your administrator has not made the installer available within Salesforce as shown in Step 1, download the [ServiceMax Offline client installer](#).
4. In Windows Explorer, navigate to the folder where you saved the zip file and unzip the contents into the same folder.



Note: If installing on Windows 7, ensure that User Account Control and Windows Firewall are turned off and your system is restarted to make the changes effective.

5. Double-click **setup.exe**.
 - a. If MySQL is not already installed, the following window displays for installing MySQL. Click **Install** to proceed with installing Offline client.

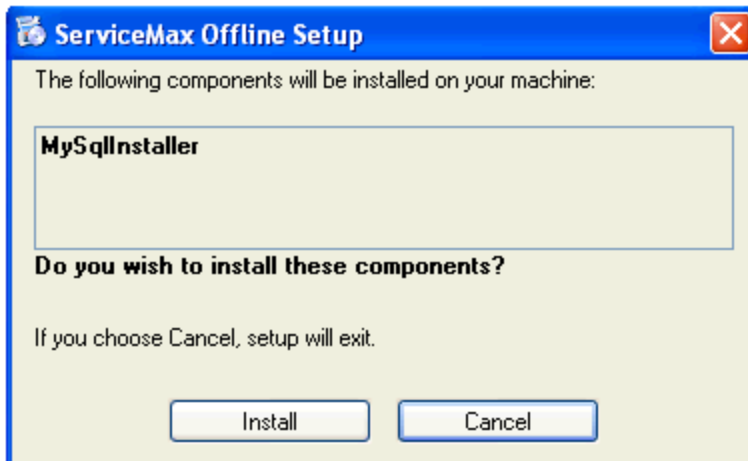


Figure 2: *MySQL Installer Window*

- b. If the operating system is a 64-bit operating system, the following window displays for installing the prerequisites.

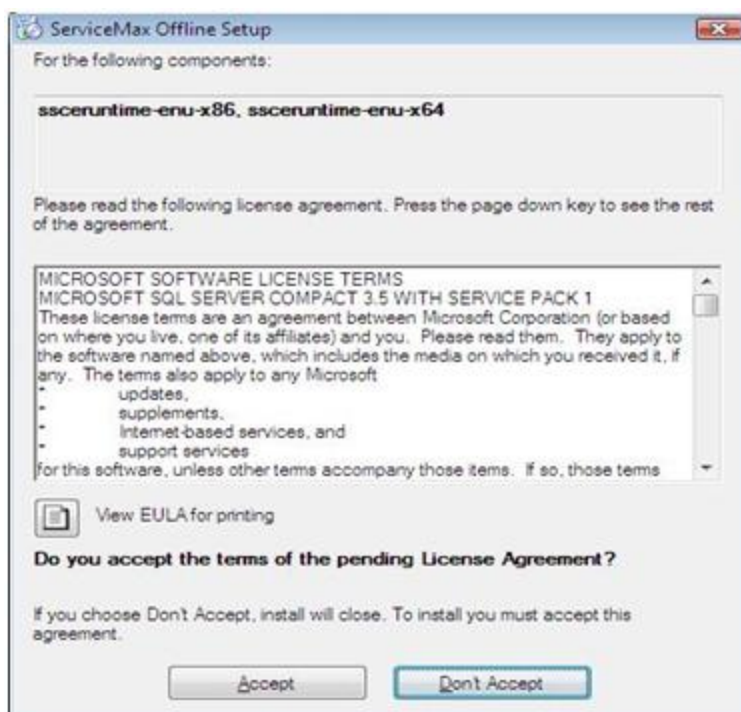


Figure 3: *Installing Prerequisites Screen*

6. Click **Accept**. The ServiceMax Offline client installation begins with the Welcome to the ServiceMax Offline Setup Wizard as shown below.

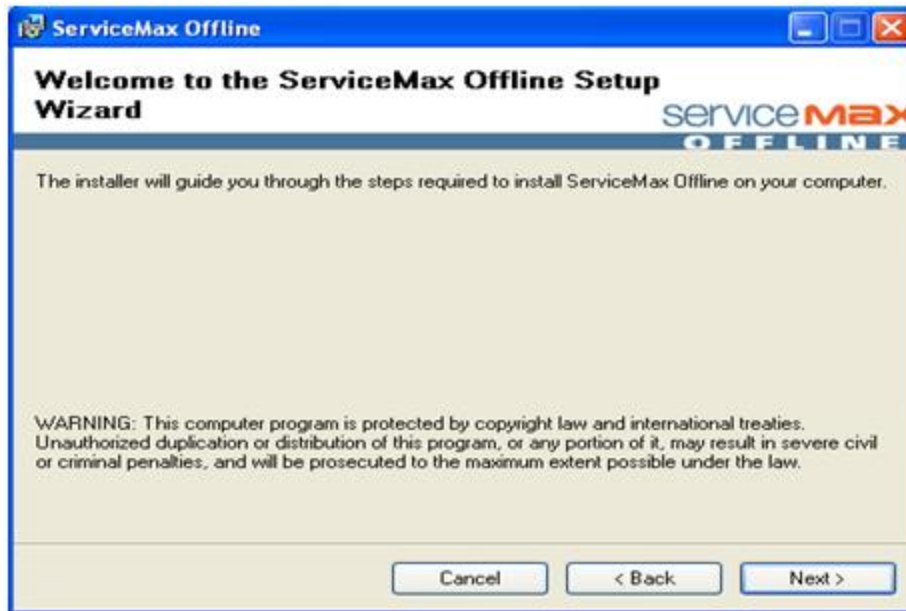


Figure 4: ServiceMax Offline Installation screen - Initial Window

7. Click **Next**. The License Agreement window appears as shown in the figure below.



Figure 5: License Agreement Window

8. To proceed with the installation, select **I Agree**, and then click **Next**. The Select Installation Folder window appears as shown below.



Figure 6: Select Installation Folder Window

9. Select an installation folder on your computer by clicking **Browse**, and then click **Next** to view the Programs Menu window.

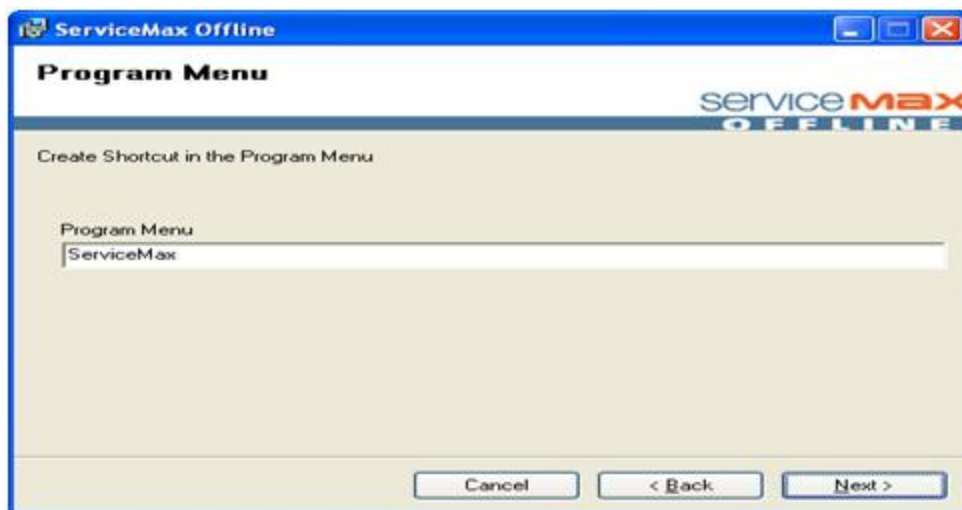


Figure 7: Program Menu Window

10. Enter the name of the shortcut in the Program Menu window, as shown in the figure above.

11. Click **Next** to view the Shortcuts window as shown below.

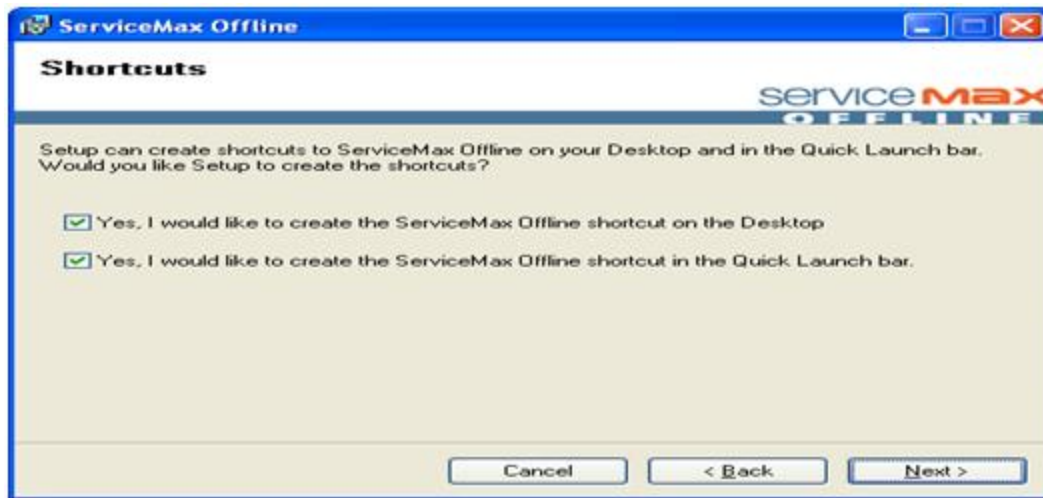


Figure 8: Shortcut Window

12. Check whether you would like to have shortcuts to ServiceMax Offline added to your Windows desktop and/or to the Quick Launch bar, and then click **Next** to view the Confirm Installation window as shown in the figure below.



Figure 9: Confirm Installation Window

13. Click **Next**. ServiceMax Offline client installs. A window indicating the installation progress displays as shown below.

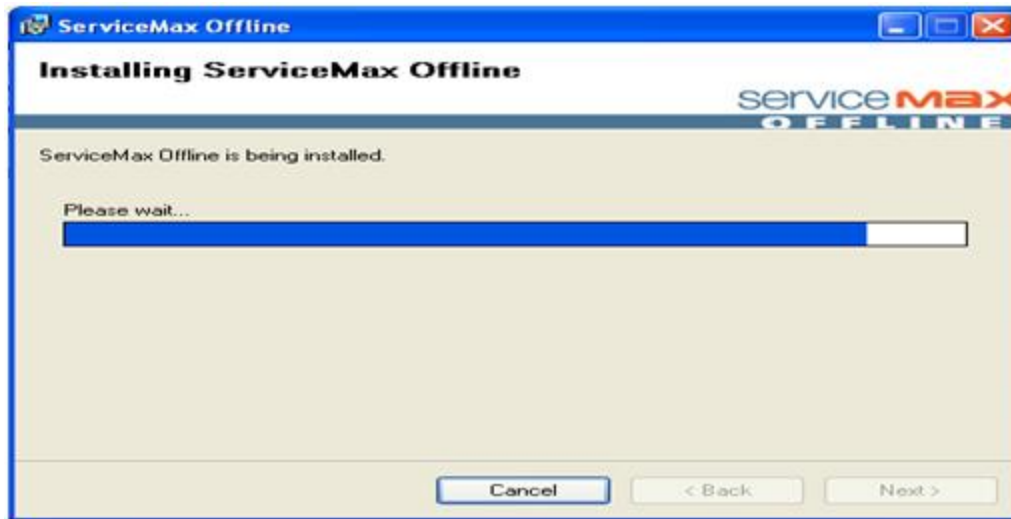


Figure 10: *Installation Progress Screen*

Upon successful completion, the Installation Complete window appears as shown below.

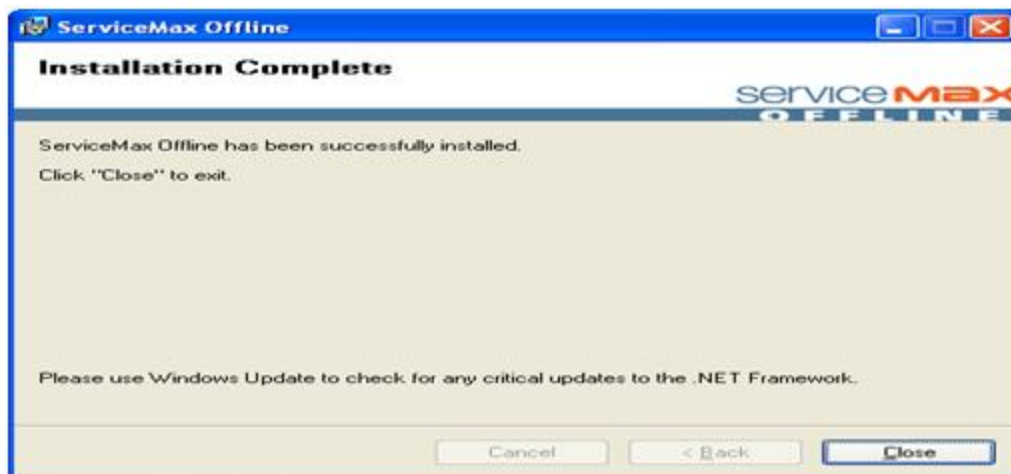


Figure 11: *Installation Complete Window*

14. Click **Close** to close the window.
15. To run ServiceMax offline, click the shortcut on your Windows desktop or select **ServiceMax Offline** from the Windows Start menu. The Login to ServiceMax Offline dialog box appears indicating that ServiceMax offline client is installed and ready for use,

as shown below.

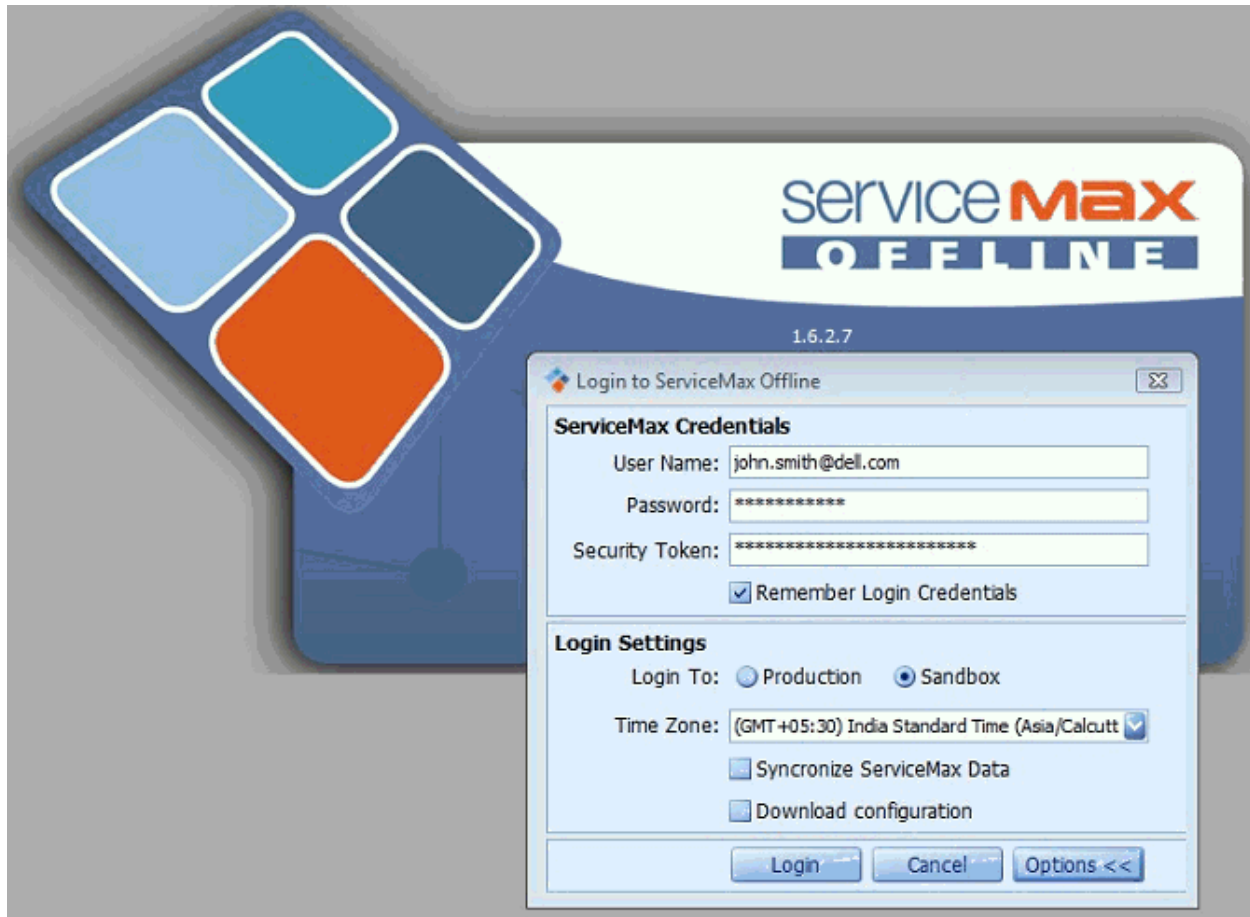


Figure 12: ServiceMax Offline Login Screen

16. Enter your **ServiceMax Credentials** and **Login Settings**.
17. Click **Login**.

See Also:

[Installing Packages](#)

[Loading Default Configuration and Page Layouts](#)

[Verifying Installation](#)

[PM Scheduler](#)

[OptiMax Authentication](#)

[Troubleshooting Installation Issues](#)

TROUBLESHOOTING

Troubleshooting ServiceMax Offline Installation

If you receive the following error message when installing the ServiceMax Offline Client (see figure below), download the Microsoft Visual C++ 2005SP1 Redistributable Package (x86) to install the required missing runtime components at:

<http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=5638>

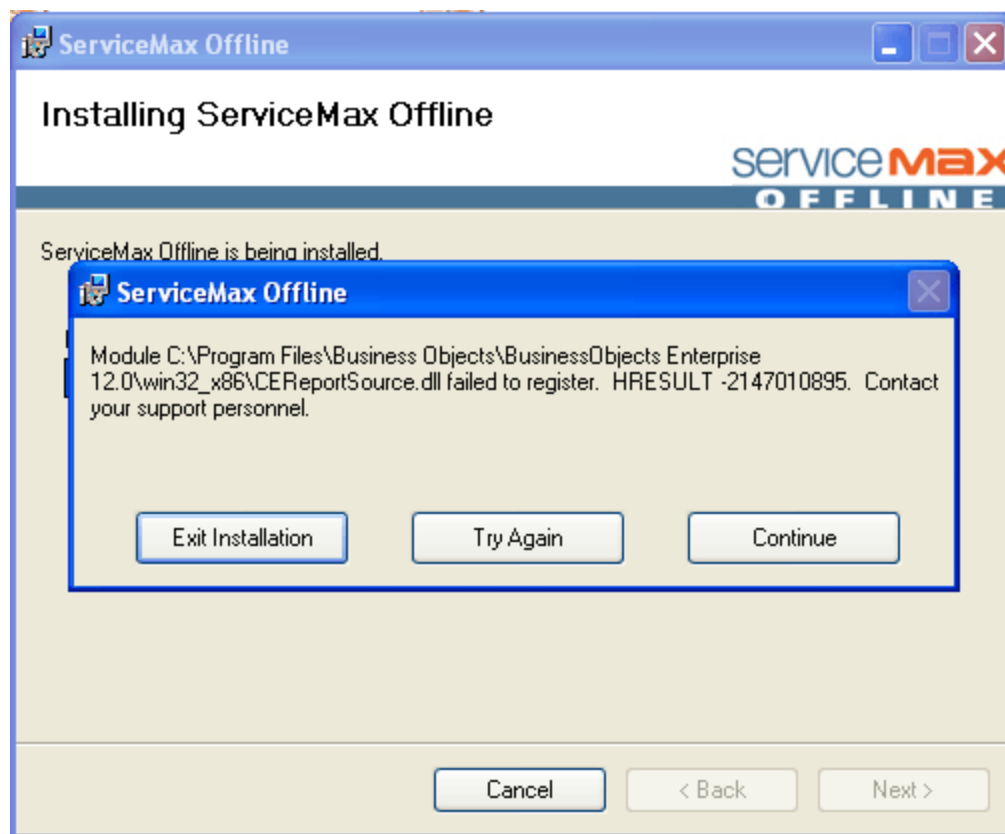


Figure 1: ServiceMax Offline Installation Error Message

Troubleshooting Application Launch for Windows 7 Users

If you are running Windows 7 and you are unable to launch the ServiceMax Offline Client application, follow the steps below.

1. From your desktop, right-click the ServiceMax Offline client shortcut, and then click **Properties** (see figure below).

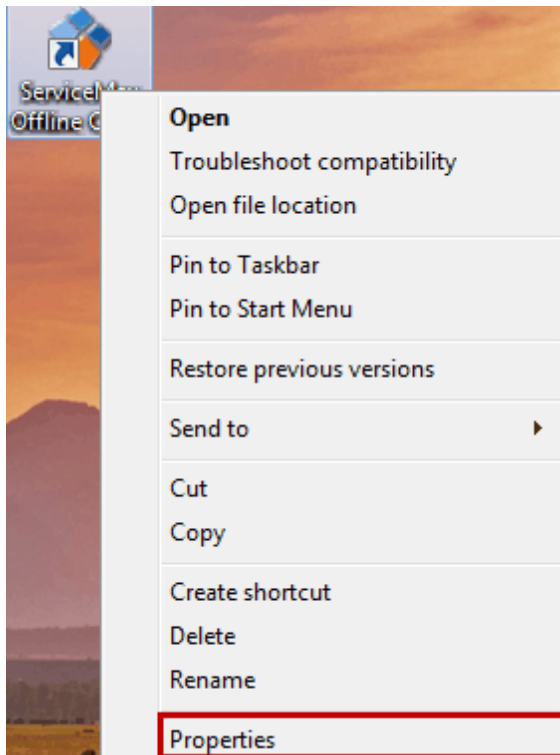


Figure 2: Right-click Menu Options

The ServiceMax Offline Client Properties dialog box appears.

2. From the ServiceMax Offline Client Properties dialog box, click the **Compatibility** tab.

3. In the Compatibility mode area, check the checkbox titled, **Run this program in compatibility mode for**. See figure below.

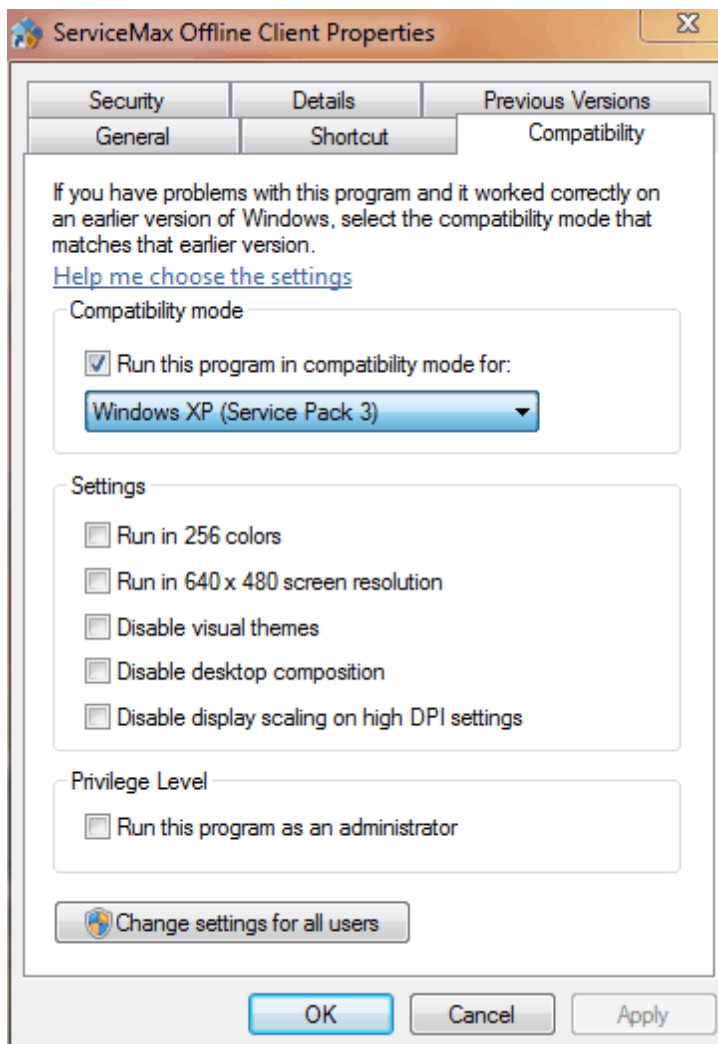


Figure 3: *Compatibility Mode Area*

4. In the Compatibility mode area, select **Windows XP (Service Pack 3)** from the pick-list as shown in the figure below.

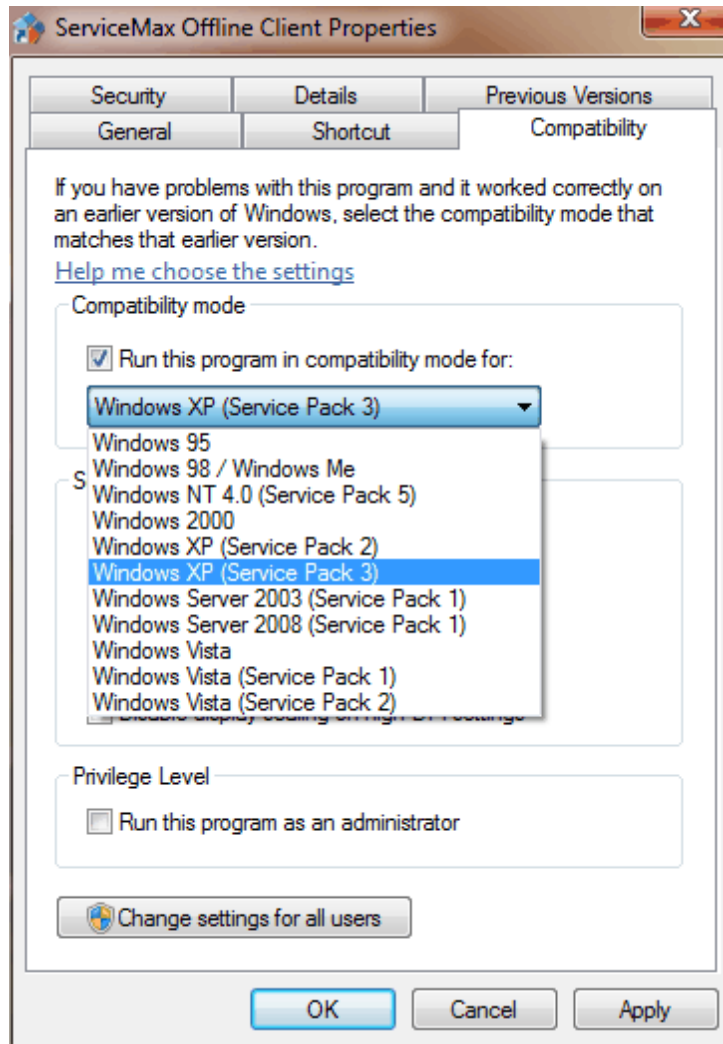


Figure 4: Select Windows XP (Service Pack 3)

5. In the Privilege Level area, check the **Run this program as an administrator** checkbox.
6. Click **Apply**.
7. Click **OK**.
8. Launch the ServiceMax Offline Client application.

Troubleshooting Report Launch for Windows 8 Users

If you are running Windows 8 and you are unable to launch the Crystal Report, follow the steps below.

1. On Windows 8 OS, download the Microsoft Visual C++ 2005SP1 Redistributable Package (as per the system type for 32-bit OS and 64-bit OS) to install the required missing runtime components. This must be installed prior to the Offline installation as described in [Troubleshooting ServiceMax Offline Installation](#).
2. Extract the Offline Client zip file to a new folder.
3. To install MySQL database and generate the crystal report, run setup.exe with administrator privileges by right-clicking **setup.exe** and selecting **Run as administrator** (see figure below).

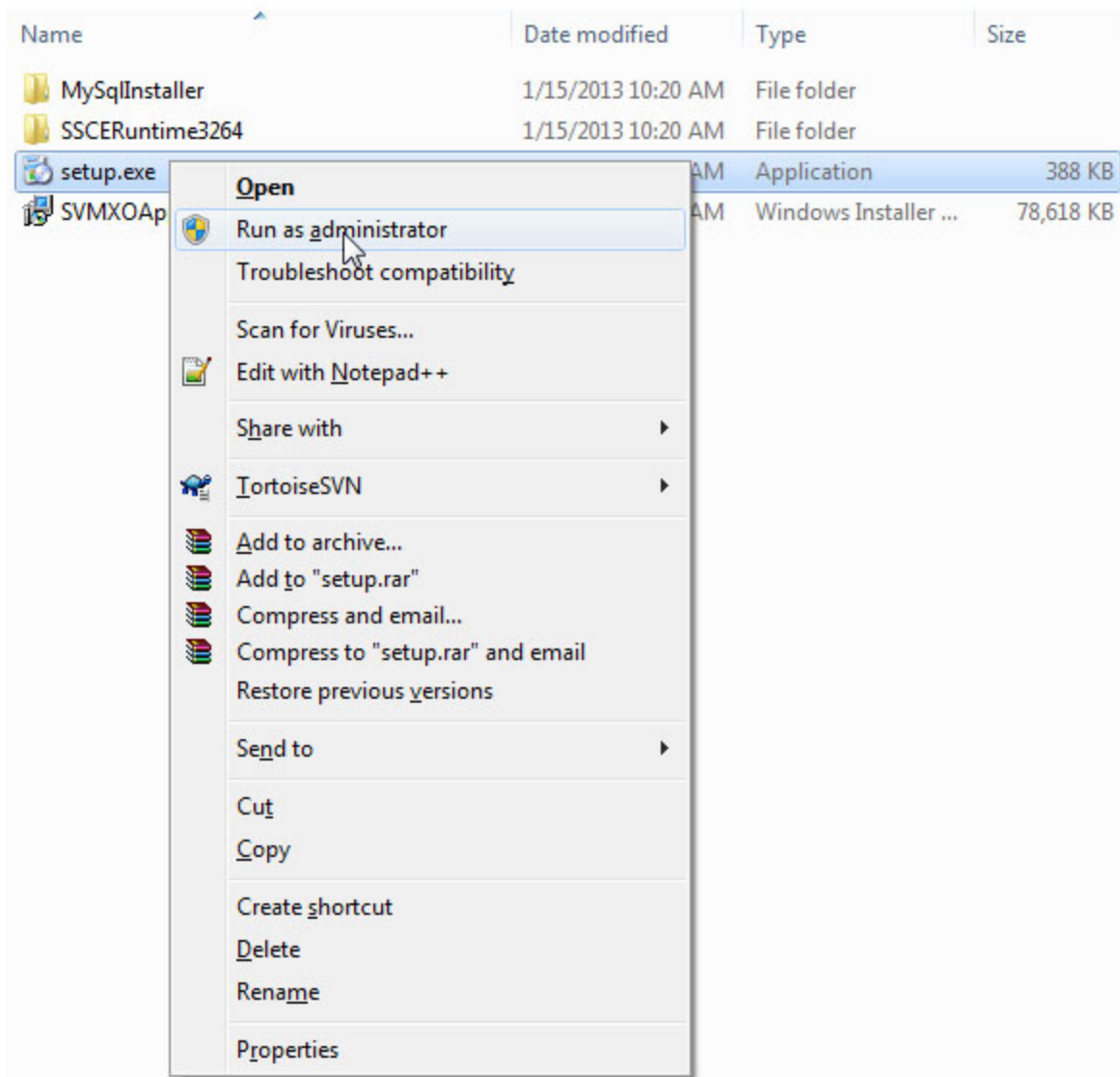
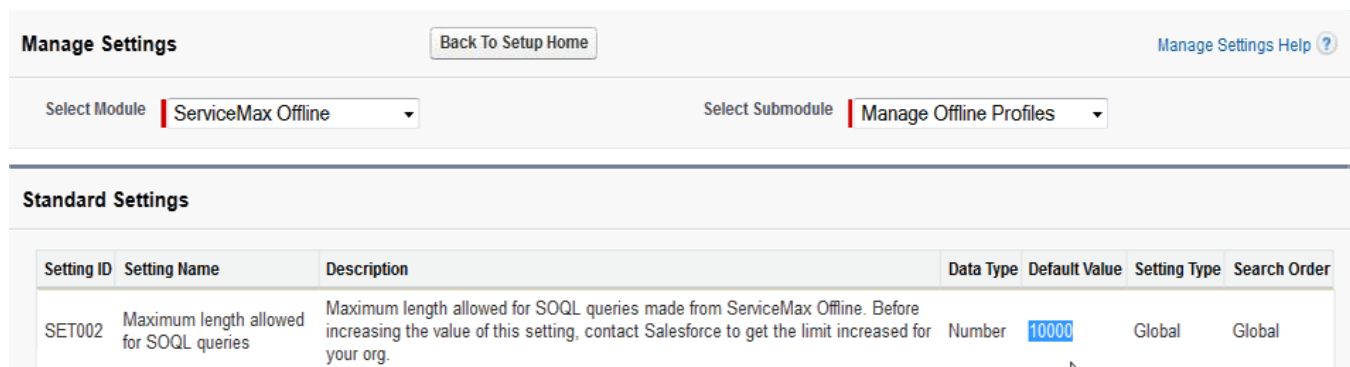


Figure 5: Select Run as administrator

"MALFORMED_QUERY: SOQL statements cannot be longer than 10000 characters."

If the number of field names in an object exceeds 20,000, then querying the records for these fields results in an error message indicating that the limit supported for SOQL statements has been exceeded. SOQL statements cannot exceed 10,000 characters in length. You can increase the limit size via Global Setting SET002 under Module ServiceMax Offline under SubModule Manage Offline Profile. See figure below.



The screenshot shows the 'Manage Settings' interface. At the top, there is a 'Back To Setup Home' button and a 'Manage Settings Help' link. Below this, there are two dropdown menus: 'Select Module' set to 'ServiceMax Offline' and 'Select Submodule' set to 'Manage Offline Profiles'. The main section is titled 'Standard Settings' and contains a table with the following data:

Setting ID	Setting Name	Description	Data Type	Default Value	Setting Type	Search Order
SET002	Maximum length allowed for SOQL queries	Maximum length allowed for SOQL queries made from ServiceMax Offline. Before increasing the value of this setting, contact Salesforce to get the limit increased for your org.	Number	10000	Global	Global

Figure 6: SET002 Setting

If your Org is not upgraded to the Winter'13 package and you cannot find this setting, you can set the increased limit (up to 20,000) in the "SVMXOfflineApplication.exe.config" file as value for the key "MaxSOQLQueryLimit" under the appSettings section in the ServiceMax folder in the Offline Client application.

PROXY DETAIL CONFIGURATION STEPS

If the Offline Client application has to connect to Salesforce through a proxy, use one of the following two options to specify the proxy server details.

Option 1 – Using Internet Explorer:

1. Open Internet Explorer and go to the **Tools > Internet Options** menu.
2. In the Connections tab, click the **LAN settings** button.
3. In the Proxy Server section, check the checkbox **Use a proxy server for your LAN**, and provide the Address and Port information.

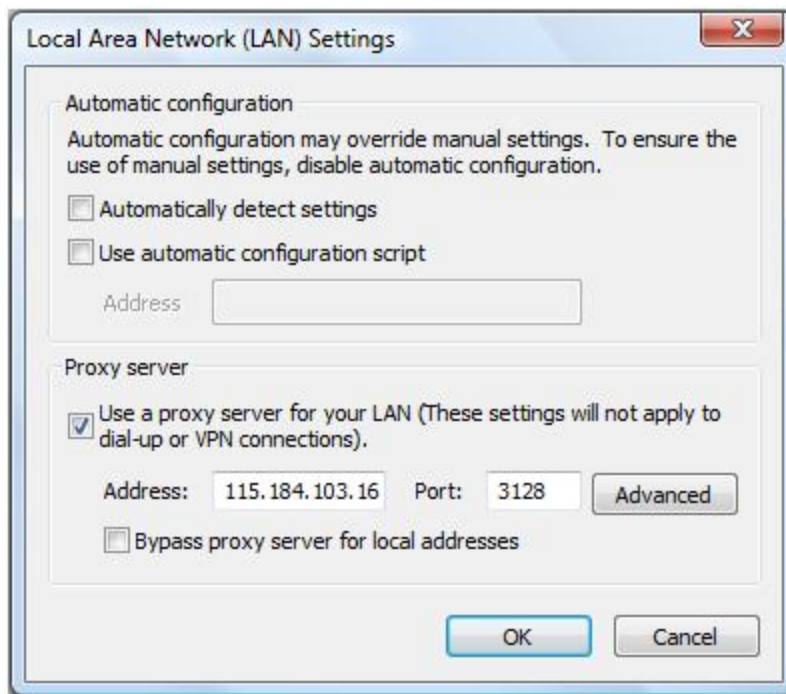


Figure 1: LAN Settings Screen

Option 2 – Using Configuration XML file:

1. Go to the Windows folder where ServiceMax Offline application is installed (by default it will be C:\Program Files\ServiceMax\ServiceMax Offline).

2. Open the file **SVMXProxySettings.xml**.
3. Provide the Address and Port of the Proxy Server.
4. If the Proxy requires authentication, provide the user name and password.

Example:

```
<?xml version="1.0" encoding="utf-8" ?>

<ProxySettings>

    <Username>admin</Username>

    <Password>admin123</Password>

    <IPAddress>115.184.103.16</IPAddress>

    <Port>3128</Port>

</ProxySettings>
```

NEXT STEPS AFTER INSTALLATION

See the ServiceMax Offline Help launched from the Offline application for detailed description of all the functionality in ServiceMax offline client.

Talk to your ServiceMax administrator to learn about how ServiceMax offline client has been configured for your field service processes, and for instructions on how to maximize it for your organization's success.

SERVICEMAX SUITE CONFIGURATION

GETTING STARTED

Prerequisites

In order to maximize your benefits from this document, the following prerequisites must be met:

- You must be well-acquainted with Salesforce administrative tasks and navigation and familiar with Force.com's AppExchange.
- All the ServiceMax [Installation Steps](#) have been successfully completed and verified. You now have access to a vanilla ServiceMax application.
- You have a valid Salesforce login that is setup as a System Administrator.
- You are familiar with ServiceMax functionality.

Configuration Building Blocks

The picture below depicts the architecture of ServiceMax configuration and how functionality is delivered to end users.

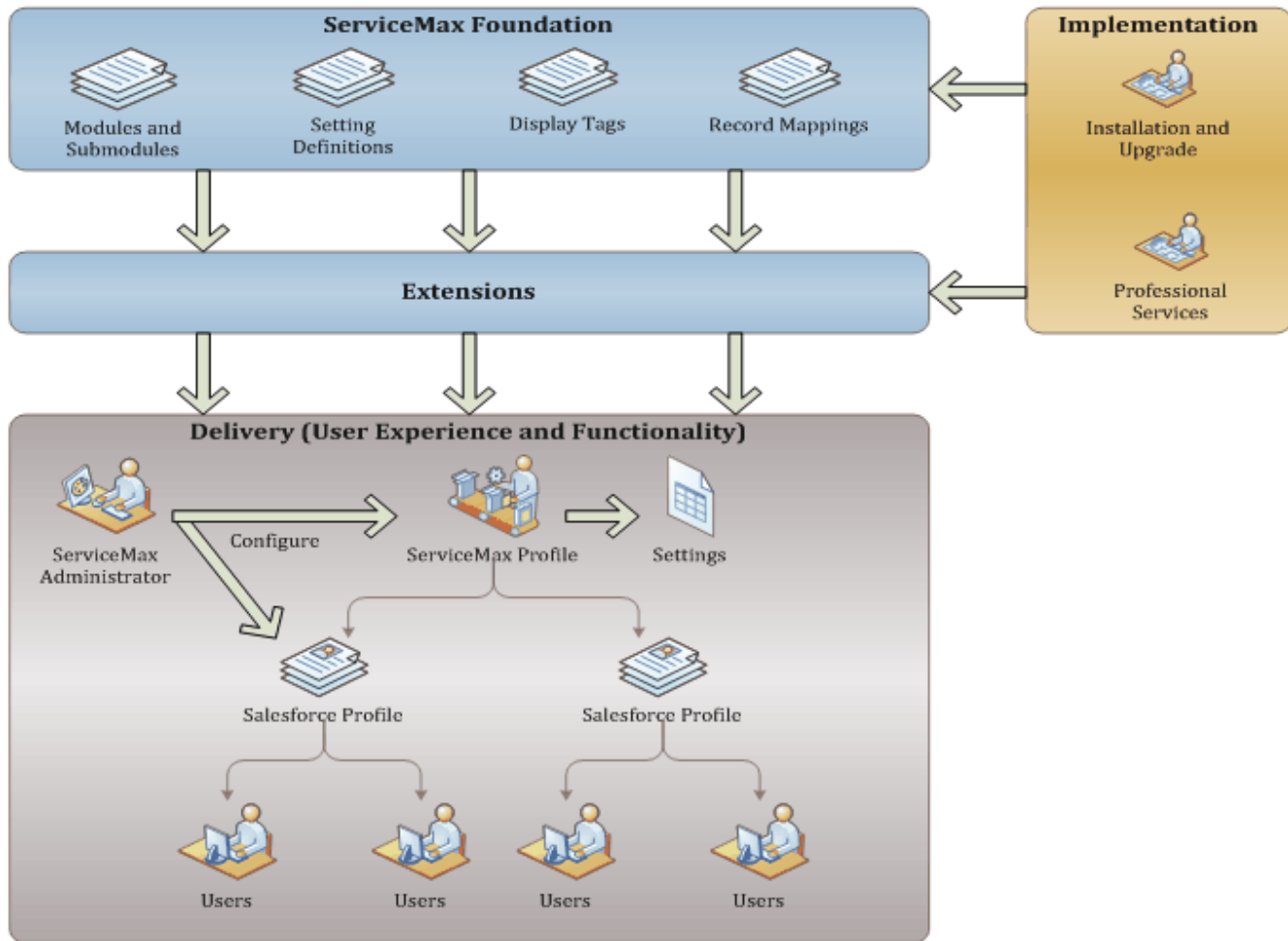


Figure 1: ServiceMax Configuration Architecture

Found- ation	ServiceMax foundation is made up of many meta-data constructs such as Modules, Submodules, Settings, and so on. See the See Also section for more information on these meta-data constructs.
Extensions	During ServiceMax implementations, some features may be built to meet specific business requirements. These extensions, typically built by professional services teams, still follow the core architecture of ServiceMax for scalability and extensibility.

Delivery	<p>Since ServiceMax is built entirely on the Force.com platform, end users of ServiceMax are always linked to a Salesforce user profile. Multiple Salesforce profiles can be linked to one ServiceMax profile, which is a collection of settings. With this flexible architecture, an end user's experience of ServiceMax features can be easily managed and controlled by customer administrators.</p>
-----------------	---

Configuration Model

A clear understanding of various configuration constructs in ServiceMax helps you configure the application more efficiently. The picture below illustrates the relationship between various logical entities involved in ServiceMax configuration and how they drive end user experience. Note that these are logical, not physical entities.

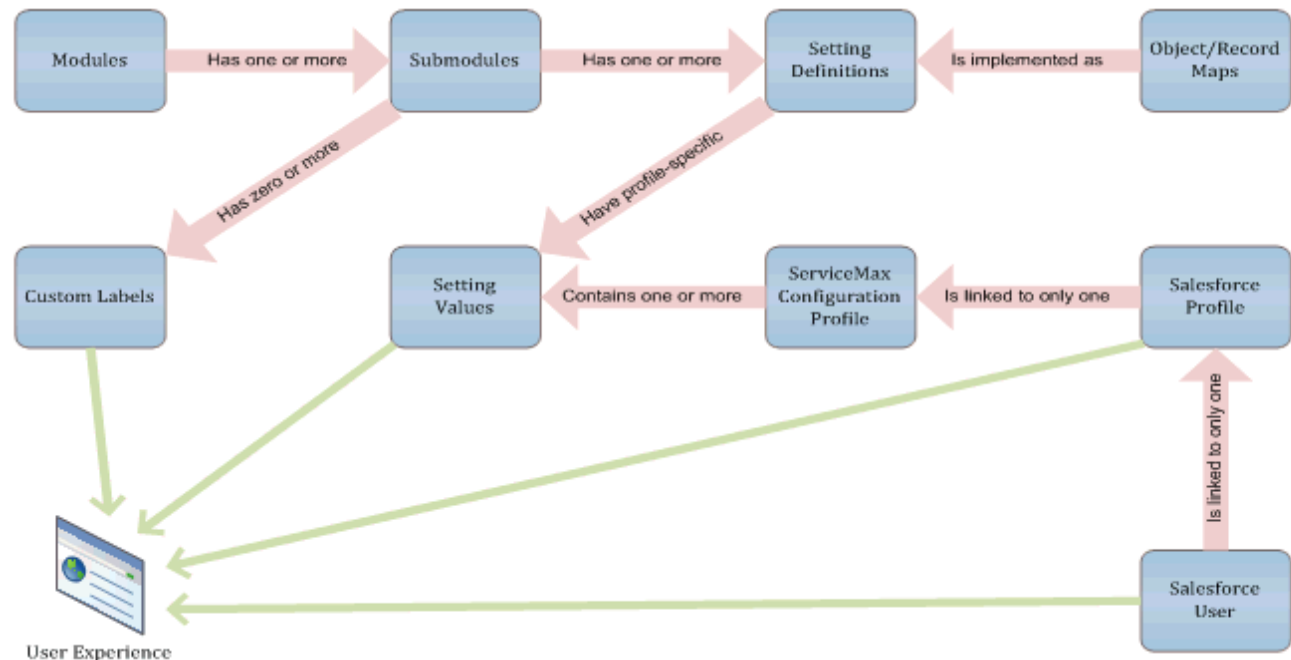


Figure 2: ServiceMax Configuration Model

Configuration Types

Configuring ServiceMax can be categorized as:

- Basic Configuration.
- Advanced Configuration.

Basic configuration includes adjusting picklist values, page layouts, field labels, and profiles. These activities require familiarity with Salesforce administration tasks.

Advanced configuration involves adjusting settings to influence the behavior of the ServiceMax application for your end users. In order to manage ServiceMax configuration, you must be a System Administrator in Salesforce.

To launch the advanced configuration of ServiceMax, click **Home > ServiceMax Setup**. The following page will be displayed. Using this screen, you can configure ServiceMax functionality for your end users.



Figure 3: ServiceMax Setup Home



Note: ServiceMax configuration is not the same as the Salesforce setup. The Salesforce setup typically involves setting up user profiles, sharing rules, role hierarchy, page layouts, and so on. Topics related to Salesforce setup are not covered in this document.

Standard Profiles

The following is a list of all the standard profiles installed with ServiceMax. Page layout definitions and permissions such as object access, tab visibility, Apex class access, and Visual Force page access are preconfigured for these profiles in ServiceMax.

- ServiceMax Administrator
- ServiceMax Call Center User
- ServiceMax Contracts User
- ServiceMax Dispatcher
- ServiceMax Service User
- ServiceMax Service Manager
- ServiceMax Inventory User
- ServiceMax Inventory Manager



Note: Do not modify the above profiles. These are available for reference only. When you upgrade ServiceMax, the above profiles are overwritten completely by the upgrade process and restored to factory defaults. As a result, any changes you have made to the standard ServiceMax profiles will be completely lost. To avoid any such loss, it is strongly recommended that you clone the standard ServiceMax profiles into your own custom profiles.

See Also:

[Advanced Configuration: Modules](#)

[Advanced Configuration: Submodules](#)

[Advanced Configuration: Display Tags](#)

[Advanced Configuration: Object/Record Map](#)

[Advanced Configuration: Configuration Profile](#)

[Advanced Configuration: Auto-Entitlement Rules](#)

[Advanced Configuration: Counter Rules](#)

[Advanced Configuration: Inventory Process](#)

[Advanced Configuration: Dispatch Process](#)

[Basic Configuration](#)

[Troubleshooting Configuration Issues](#)

[Standard Configuration Settings](#)

BASIC CONFIGURATION

Overview

Basic configuration includes adjusting picklist values, page layouts, field labels, and profiles. These activities require familiarity with Salesforce administration tasks.

Configuration Guidelines

- Field Labels of ServiceMax fields can be changed using the Salesforce translation workbench.
- Organization Wide Defaults for ServiceMax objects can be adjusted to suit your security requirements.
- When ServiceMax is installed, a few profiles are automatically created for ease of adoption. Settings of these profiles can be modified to meet specific requirements.
- ServiceMax also contains several standard reports and dashboards. You can reorganize report/dashboard locations to suit your organization's requirements. To modify the standard ServiceMax reports, clone and modify your copies.
- Custom fields can be added to ServiceMax objects. Also, you can create lookup references to ServiceMax objects in other objects.
- Page layouts of ServiceMax can be modified to suit your presentation needs. However, consult with ServiceMax Professional services before removing fields from page layouts or making fields optional. Some ServiceMax functionality may expect data to be present on required fields. Hence making fields optional may result in errors or unpredictable behavior.
- There are several formula fields in ServiceMax such as RMA Age Bucket, Days To Warranty Expiry, and so on. They are available for reference purposes only and cannot be modified. Using these as a reference, you can create new formula fields to suit your organization's reporting requirements.

Page Layout Assignments

ServiceMax is deployed with pre-configured ready-to-use profiles and page layouts that are available for your organization's use. See [Standard Profiles](#) for more information about preconfigured profiles. While the assignment of ServiceMax page layouts to these profiles is automatic, assignment of Home page layout and standard object page layouts must be done manually.

Object	Page Layout	Assign To
Home	Sys Admin Home	System Administrator
	SVMX Home - Admin	ServiceMax Admin
	SVMX Home - Call Center	ServiceMax Call Center User
	SVMX Home - Contracts	ServiceMax Contracts User
	SVMX Home - Dispatcher	ServiceMax Dispatcher
	SVMX Home - Inv Manager	ServiceMax Inventory Manager
	SVMX Home - Inv User	ServiceMax Inventory User
	SVMX Home - Svc Manager	ServiceMax Service Manager
	SVMX Home - Svc User	ServiceMax Service User



Note: For ServiceMax Standard Read Only Profiles, clone the ServiceMax read only profile, and make the necessary profile adjustments for non-ServiceMax objects. You can assign these profiles to non service users to implement read only licensing requirements.

Configurable Picklists

The table below lists the standard picklist values in ServiceMax objects. These picklists can be modified to suit your organization's requirements. ServiceMax picklist names not listed here should not be modified since it may affect functionality.

Object	Picklist Name	Standard Values
Applicable Products	Product Line	None
	Product Family	None
Available Services	Service Type	None
Case	Billing Type	Contract, Empowerment, Loan, Paid, Warranty, Courtesy
	SLA Clock Pause Reason	Customer Not Available
Covered Products	Product Family	None
	Product Line	None
Included Services	Service Type	None
Installed Product	Status	Engineering, QA, Inventory, Shipped, Installed, Deinstalled, In-Transit-Return, Scrap
	Country	All country names
Location	Country	All country names
Locations Covered	Country	All country names

Object	Picklist Name	Standard Values
Parts Order	Billing Type	Contract, Empowerment, Loan, Paid, Warranty, Courtesy
	Bill To	Sender, Receipt, Third Party
	Delivery Option	AM, PM, Two Day, Saturday
	Destination Country	All country names
	Order Status*	Open, Closed, Canceled
	Priority	High, Medium, Low
	Shipping Terms	EXW, FCA, FAS, FOB, CFR, CIF, CIP, DAF, DES, DEQ, DDU, DDP
	Source Country	All country names
Parts Order Line	Disposition	Scrap, Repair, Salvage, Restock
	Expected Condition	Good/Working, Defective, Shipping Damage
	Line Status*	Open, Processing, Completed, Canceled
	Returned Condition	As Expected, Shipping Damage
Parts Request	Status*	Open, Completed, Canceled
Parts Request Line	Line Status*	Open, Completed, Canceled
Preventive Maintenance Plan	Status*	Active, Suspended, Canceled, Expired
Process Bottlenecks	Issue Area	Case, Work Order, ERP, Customer, Documentation, Process
	Issue Category	Missing Information, Wrong Information, Need Review, Need Approval

Object	Picklist Name	Standard Values
Product	Product Line	None
	Unit of Measure	Each, Gallon, Box, Pounds, Liter, Dozen, Kilogram, Ton
Products Serviced	Product Family	None
	Product Line	None
Quote	Status	Draft, Presented, Accepted, Rejected, Revised
Service/Maintenance Contract	Billing Schedule	Full Upfront, Annual, Semi Annual, Quarterly, Monthly, Other
Service Team	Group Type	Internal, Partner, Both
Skill	Skill Area	Field Service, Depot Repair, Sales
	Skill Category	None
Stock Adjustment	Adjustment Type	Damaged, Excess, Expired, Missing, Physical Inventory, Scrap
Team Labor Cost	Cost Category	Straight, Double Time, Time and a Half, After Hours, On Call, Travel
Technician/Equipment	Role	Planner, Service Engineer, Support Engineer, Service Manager, Support Manager, Sales Engineer, Sales Manager, Repair Center Engineer, Repair Center Manager, Partner Engineer, Partner Manager, Technician, R&D Engineer, Consultant
Territory Coverage	Type*	Zip, City, State, Country

Object	Picklist Name	Standard Values
Work Order	Billing Type	Contract, Empowerment, Loan, Paid, Warranty, Courtesy
	Failure Location	Field, Floor
	Failed Assembly	None
	How Fixed	None
	Order Status*	Open, Closed, Canceled
	Order Type	Advance Replacement, Depot Repair, Replenishment, Return For Credit, Return Only, Return Replacement, Field Service
	Priority	High, Medium, Low
	Purpose of Visit	Installation, Deinstallation, Repair, Maintenance, Training, Courtesy
	Root Cause	None
	Symptom	None
	SLA Clock Pause Reason	Customer Not Available
Work Details	Activity Type	Service, Calibration, Repair, Installation, Cleanup
	Cost Category	Straight, Double Time, Time and a Half, After Hours, On Call, Travel
	Expense Type	Parts, Lodging, Airfare, Rental Car, Food - Breakfast, Food - Lunch, Food - Dinner, Phone, Entertainment, Mileage, Gas, Parking, Tolls, Miscellaneous
	Line Status*	Open, Completed, Canceled
	Log Against	Service Team, Technician/Equipment

* New values can be added but the existing values should not be deleted.



Note: Fields related to some standard objects such as Cases and Opportunities are available for use in setting picklist values only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

See Also:

[Standard Configuration Settings](#)

[Troubleshooting Configuration Issues](#)

MODULE

Overview

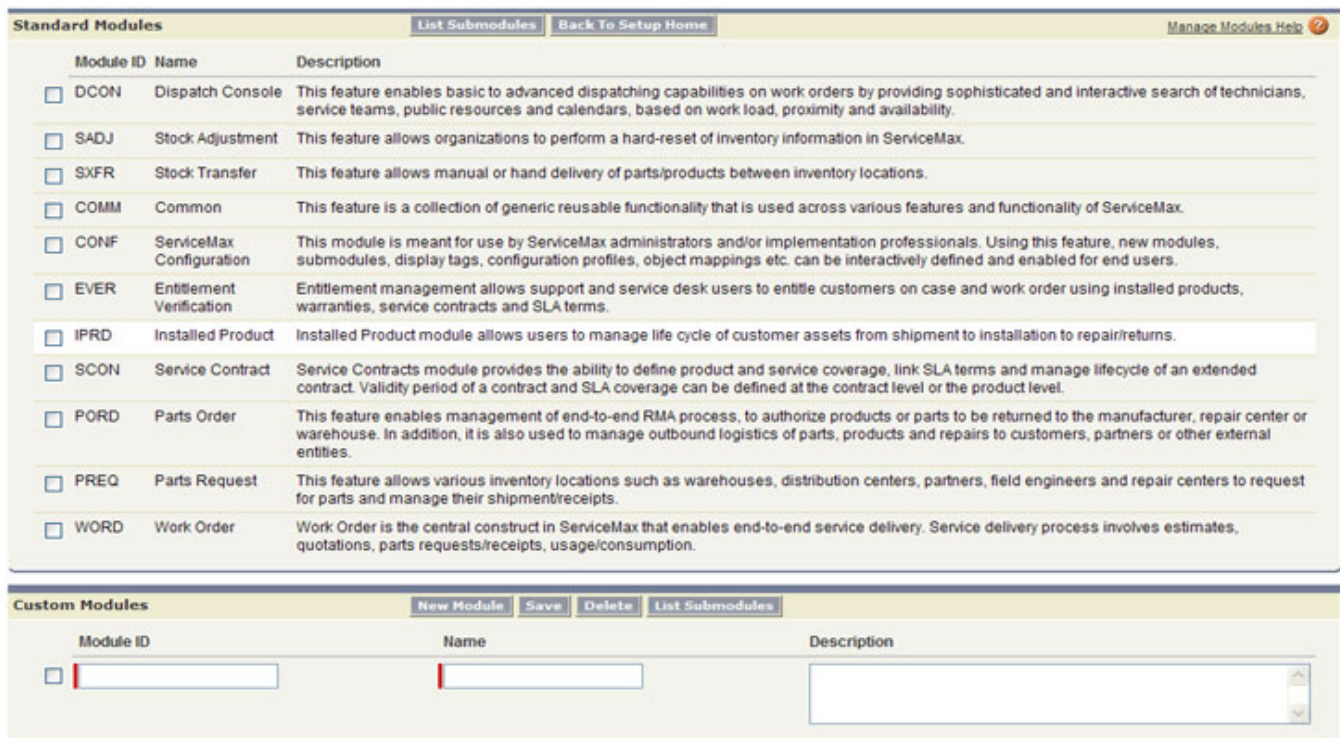
Module is a logical grouping of related functionality in ServiceMax. A module's functionality may be implemented using both standard Salesforce objects and custom objects. Functionality in a module may be implemented using many technical components such as Visual Force, Apex (Triggers & Classes), Flex, S-Controls, and so on. Some examples of standard modules are:

- Entitlement Verification
- Installed Products
- Service Contracts

Access and Permissions

Actions	User Permissions Needed
To view modules:	"Read" on ServiceMax Processes
To create or edit modules:	"Create" and "Update" on ServiceMax Processes
To delete modules:	"Delete" on ServiceMax Processes
To view submodules:	"Read" on ServiceMax Processes

Click **Home > ServiceMax Setup > App Administration > Modules** to view the Modules home page as shown below:



Module ID	Name	Description
<input type="checkbox"/> DCON	Dispatch Console	This feature enables basic to advanced dispatching capabilities on work orders by providing sophisticated and interactive search of technicians, service teams, public resources and calendars, based on work load, proximity and availability.
<input type="checkbox"/> SADJ	Stock Adjustment	This feature allows organizations to perform a hard-reset of inventory information in ServiceMax.
<input type="checkbox"/> SXFR	Stock Transfer	This feature allows manual or hand delivery of parts/products between inventory locations.
<input type="checkbox"/> COMM	Common	This feature is a collection of generic reusable functionality that is used across various features and functionality of ServiceMax.
<input type="checkbox"/> CONF	ServiceMax Configuration	This module is meant for use by ServiceMax administrators and/or implementation professionals. Using this feature, new modules, submodules, display tags, configuration profiles, object mappings etc. can be interactively defined and enabled for end users.
<input type="checkbox"/> EVER	Entitlement Verification	Entitlement management allows support and service desk users to entitle customers on case and work order using installed products, warranties, service contracts and SLA terms.
<input type="checkbox"/> IPRD	Installed Product	Installed Product module allows users to manage life cycle of customer assets from shipment to installation to repair/returns.
<input type="checkbox"/> SCON	Service Contract	Service Contracts module provides the ability to define product and service coverage, link SLA terms and manage lifecycle of an extended contract. Validity period of a contract and SLA coverage can be defined at the contract level or the product level.
<input type="checkbox"/> PORD	Parts Order	This feature enables management of end-to-end RMA process, to authorize products or parts to be returned to the manufacturer, repair center or warehouse. In addition, it is also used to manage outbound logistics of parts, products and repairs to customers, partners or other external entities.
<input type="checkbox"/> PREQ	Parts Request	This feature allows various inventory locations such as warehouses, distribution centers, partners, field engineers and repair centers to request for parts and manage their shipment/receipts.
<input type="checkbox"/> WORD	Work Order	Work Order is the central construct in ServiceMax that enables end-to-end service delivery. Service delivery process involves estimates, quotations, parts requests/receipts, usage/consumption.

Module ID	Name	Description
<input type="checkbox"/> <input type="text"/>	<input type="text"/>	<input type="text"/>

Figure 1: Modules Screen

In the Modules screen:

- The top section shows the standard modules available in Service.
- The bottom section shows custom modules built as extensions to meet customer-specific requirements.
- Click **Back To Setup Home** to return to the ServiceMax Setup Home page.

Module Fields

Fields	Description
Module ID	Unique ID of the module
Module Name	User-friendly name of the module
Description	Detailed description of the module

Creating/Editing Custom Modules

To create a new module:

1. Click **New Module** in the Modules screen. An empty record is created at the bottom of the list of records in the Custom Modules section. You can also modify information in the existing custom module records.
2. Enter a unique ID for the module. When naming a Module ID, remember the following:
 - Module ID must be alphanumeric.
 - Module ID must be at least 8 characters long.
 - Module ID should not contain spaces.
 - Module ID should not contain special characters.
5. Enter the module name. For example, "Preventive Maintenance or Labor Costing."
6. Enter a detailed description of the module.
7. To add more modules, click **New Module**.
8. Click **Save**. The changes are saved and the module list is refreshed.

Deleting Custom Modules

To delete one or more modules:

1. Check the checkbox adjacent to the module(s) which you want to delete.
2. Click **Delete** and then click **OK** when prompted for confirmation. The selected modules are deleted and the module list is refreshed.



Note: Standard modules cannot be deleted.

Viewing Submodules in a Module

To view submodules in a module:

1. Select one of the modules by checking the checkbox adjacent to it.
2. Click **List Submodules**. You will be redirected to the Manage Submodules page. The module is preselected in the list.

See Also:

[Submodules](#)

[Display Tags](#)

[Object/Record Map](#)

[Configuration Profile](#)

[Auto-Entitlement Rules](#)

[Basic Configuration](#)

[Troubleshooting Configuration Issues](#)

[Standard Configuration Settings](#)

SUBMODULE

Overview

Submodule is a specific functionality within a module. A submodule may be implemented using one or more technologies such as Visual Force, Apex (Triggers & Classes), Flex, S-Controls, and so on. Depending upon the functionality implemented, a submodule may or may not have a user interface. Optionally, submodules may also use their own settings, display tags and/or record maps as required. See the [See Also](#) section to know more about these constructs.

For example, in the Service Contracts module, Activation, Cancellation and Renewal are submodules that perform specific functions using Visual Force and Apex. In the Installed Product module, automatic creation of warranty is a submodule implemented using an Apex trigger. Similarly, Stock Lookup is a common submodule built as an S-control.

Access and Permissions

Actions	User Permissions Needed
To view submodules:	"Read" on ServiceMax Processes
To create or edit submodules:	"Create" and "Update" on ServiceMax Processes
To delete submodules:	"Delete" on ServiceMax Processes
To view settings:	"Read" on ServiceMax Processes

Click **Home > ServiceMax Setup > App Administration > Submodules** to view the submodules home page as shown below:

Manage Submodules
[Back to Setup Home](#)
[Manage Submodules Help](#)

Select Module

Installed Product

Standard Submodules
[List Settings](#)

Submodule ID	Name	Description
<input type="checkbox"/> IPRD001	Create child installed product	Create child installed product
<input type="checkbox"/> IPRD002	Create warranty for IB (Automatic)	This feature automatically creates warranty records for installed product based on the warranty terms defined. This feature can be configured to create warranty either during installed product insert or update or both.
<input type="checkbox"/> IPRD003	Create Case from IB	Create Case from Installed Product
<input type="checkbox"/> IPRDSC1	Installed Product Features	This module displays the full hierarchy of an installed product tree, and highlights the installed product node from which the view was launched. This also provides interactive creation of warranty by showing a list of warranty terms, calculating warranty start/end dates based on the warranty terms definition.

Custom Submodules
[New Submodule](#)
[Save](#)
[Delete](#)
[List Settings](#)

Submodule ID	Name	Description
<input type="checkbox"/>		

Figure 1: Manage Submodules Screen

Alternatively, click **List Submodules** from the Modules page to view the submodules home page. The module is automatically selected, if the submodule page is launched from the Modules page.

In the Submodules screen:

- The top section shows the standard submodules in the selected module. This information is not editable.
- The bottom section shows the custom submodules built as extensions to meet customer-specific requirements.
- Click **Back To Setup Home** to return to the ServiceMax setup home page.
- To view the list of standard and custom submodules in a module, select the module name from the **Select Module** picklist at the top.

Submodule Fields

Fields	Description
Submodule ID	Globally unique ID of the submodule. A submodule ID may not repeat under any module.
Submodule Name	User-friendly name of the submodule.
Description	Detailed description of the submodule.

Creating/Editing Custom Submodules

To create or edit a submodule:

1. Click **New Submodule**. An empty record is created at the bottom of the list of records in the Custom Submodules section. Alternatively, you can also modify the existing custom submodules record.
2. Enter a unique ID for the submodule. When naming a submodule, remember the following:
 - Submodule ID must be alphanumeric.
 - Submodule ID must be at least 8 characters long.
 - Submodule ID should not contain spaces.
 - Submodule ID should not contain special characters.
3. Enter a detailed description for the module.
4. To add more submodules, click **New Submodule**.
5. Click **Save**. The changes are saved and the submodules list is refreshed.

Deleting Custom Submodules

To delete one or more submodule(s):

1. Select the submodules record you want to delete by checking the checkbox adjacent to it.

2. Click **Delete** and then **OK** when prompted for confirmation. The selected records are deleted and the submodules list will be refreshed.



Note: Standard Submodules cannot be deleted.

Viewing Settings in Submodules

To view settings in submodules:

1. Select one of the submodule by checking the checkbox in the submodules home page list.
2. Click **Setting**. You will be redirected to the Manage Settings page. The module and submodule are preselected in the list.

See Also:

[Settings](#)

[Display Tags](#)

[Object/Record Map](#)

SETTING

Overview

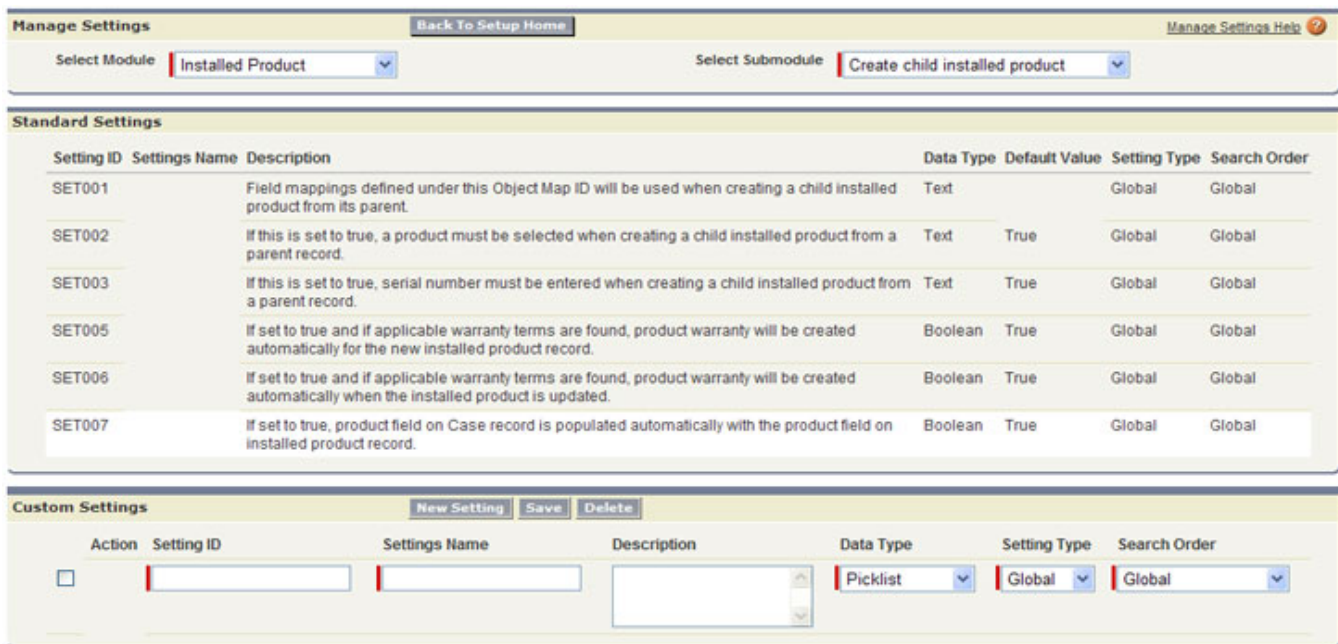
Setting is a configurable parameter in a submodule that can influence behavior of the submodule in runtime. Implementing a submodule with as many configurable settings as practically possible is very useful since it eliminates effort in coding and requires much less maintenance. When user requirements change in the future, the administrator simply has to change the setting values, and not the code itself. In addition, using configurable settings allows greater flexibility in rolling out varied flavors of processes for different sets of users.

For example, it is not always required to create product warranties when an installed product record is created or updated. To achieve this, the submodule **Create Warranty for Installed Product** uses two settings called **Create Warranty Upon IB Create** and **Create Warranty Upon IB Update**. Depending upon a customer requirement, these parameters can be switched on or off.

Access and Permissions

Action	User Permissions Needed
To view Settings:	"Read" on ServiceMax Processes
To create or edit Settings:	"Create" and "Update" on ServiceMax Processes
To delete Settings:	"Delete" on ServiceMax Processes

Click **Home > ServiceMax Setup > App Administration > Settings** to view Manage Settings page, as shown below:



Manage Settings [Back To Setup Home](#) [Manage Settings Help](#)

Select Module: **Installed Product** Select Submodule: **Create child installed product**

Setting ID	Settings Name	Description	Data Type	Default Value	Setting Type	Search Order
SET001		Field mappings defined under this Object Map ID will be used when creating a child installed product from its parent.	Text		Global	Global
SET002		If this is set to true, a product must be selected when creating a child installed product from a parent record.	Text	True	Global	Global
SET003		If this is set to true, serial number must be entered when creating a child installed product from a parent record.	Text	True	Global	Global
SET005		If set to true and if applicable warranty terms are found, product warranty will be created automatically for the new installed product record.	Boolean	True	Global	Global
SET006		If set to true and if applicable warranty terms are found, product warranty will be created automatically when the installed product is updated.	Boolean	True	Global	Global
SET007		If set to true, product field on Case record is populated automatically with the product field on installed product record.	Boolean	True	Global	Global

Custom Settings [New Setting](#) [Save](#) [Delete](#)

Action	Setting ID	Settings Name	Description	Data Type	Setting Type	Search Order
<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Picklist	Global	Global

Figure 1: Manage Settings Screen

Alternatively, you can also click **List Settings** in the submodules page to view the Manage Settings page. The module and submodule are automatically selected, if the Manage Settings page is launched from the submodules page.

In the Manage Settings screen:

- The top section shows the standard settings in the selected submodule. This information is not editable.
- The bottom section shows custom settings built as extensions to meet customer-specific requirements.
- Click **Back To Setup Home** to return to ServiceMax Setup home page.

Setting Fields

Fields	Description
Settings ID	Unique ID of the setting within a submodule.


Fields	Description
Setting Name	User-friendly name of the setting.
Description	Detailed description of the submodule.
Data Type	Type of data stored in this setting. List of values are: Text , Number , Boolean , Picklist , Date , User , Account , Contact , Service Team , Technician , and Location .
Setting Type	The granularity at which this setting can be applied at run time. Global indicates this setting applies to all users. Group is when this setting applies to more than one user. User is when this setting can vary for each user.
Search Order	This is used to resolve conflicts if a setting has values specified in more than one level. This is applicable only for Group and User level settings.
List of Values	A list of values if the setting type is picklist.
Default Value	Default value for this setting.

Creating/Editing Custom Settings

To create or edit custom settings:

1. Click **New Settings** in the Manage Setting screen. An empty record is created at the bottom of the list of records in the Custom Setting section. You can also modify the existing custom setting records.
2. Enter unique ID for the setting. When naming a Setting ID, remember the following:
 - Settings ID must be alphanumeric.
 - Settings ID must be at least 8 characters long.
 - Settings ID should not contain spaces.
 - Setting ID should not contain special characters.
3. Enter the setting name. For example, **Default Support Type** or **Show Closed Orders**.
4. Enter a detailed description for the setting.
5. Enter the setting type and search order.

6. To add more setting records, click **New Settings**.
7. Click **Save**. The changes are saved and the setting list is refreshed.
8. To specify the list of values and/or default value for a setting, click the **Add/Edit** link on the record. This link appears only for saved records. A popup window will appear in which you can enter the list and default values. When specifying a list of values of a picklist, use the value separator string carefully. The value separator is **Carat, Pipe** and **Carat**. For example, to indicate A, B, and C as valid values, the text must be **A~|~B~|~C**.



The screenshot shows a 'Standard Setting Values' dialog box. It has a title bar with 'Standard Setting Values', 'Submit', 'Close', and a help icon. The form contains the following fields:

- Settings Name:** TEST00001
- Description:** TEST00000001
- Data Type:** Picklist
- Default Value:** An empty text box with up and down arrow buttons.
- Values:** An empty text box with up and down arrow buttons.

At the bottom, a note states: 'Please use ~|~ as seperators while adding value.'

Figure 2: Standard Setting Values Screen

Deleting Custom Settings

To delete one or more setting(s):

1. Check the checkbox adjacent to the setting record(s) which you want to delete in the custom settings list.
2. Click **Delete** and then click **OK** when prompted for confirmation.



Note: Standard settings cannot be deleted.

See Also:

[Modules](#)

[Submodules](#)

[Display Tags](#)

[Object/Record Map](#)

[Configuration Profile](#)

[Auto-Entitlement Rules](#)

[Counter Rules](#)

[Inventory Process](#)

[Dispatch Process](#)

[Basic Configuration](#)

[Troubleshooting Configuration Issues](#)

[Standard Configuration Settings](#)

DISPLAY TAG

Overview

Display Tags are language-specific translatable text used in ServiceMax screens. Also referred to as Tags, these are used on buttons, labels and error/information/warning messages. Tags are translatable into any language supported by Salesforce.

Access and Permissions

Actions	User Permissions Needed
To view tags:	"Read" on ServiceMax Tags
To create or edit tags:	"Create" and "Update" on ServiceMax Tags
To delete tags:	"Delete" on ServiceMax Tags
To manage translation:	"Create" and "Update" on ServiceMax Tags

Click **Home > ServiceMax Setup > App Administration > Display Tags** to view the manage display tags home page, as shown below:

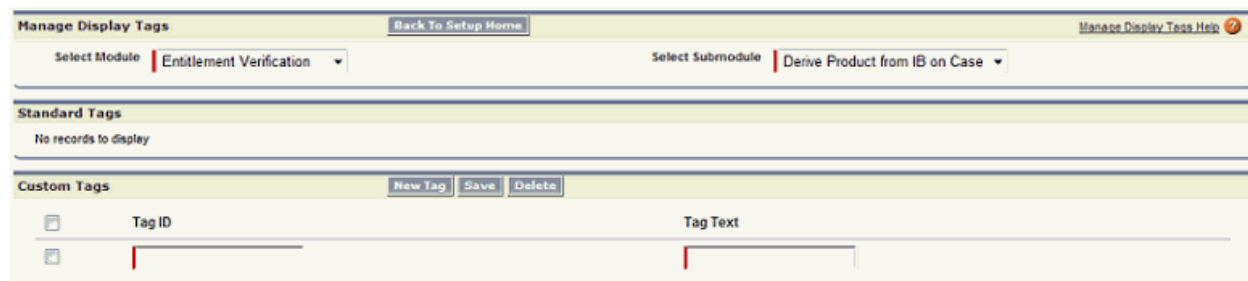


Figure 1: Manage Display Tags Screen

In the Manage Display Tags screen:

- Select a module from the **Select Module** picklist.
- Select a submodule from the **Select Submodule** picklist.
- The top section shows the standard display tags in the selected submodule. This information is not editable.
- The bottom section shows the custom display tags built as extensions to meet customer-specific requirements.
- Click **Back To Setup Home** to return to the ServiceMax Setup home page.

Display Tag Fields

Fields	Description
Tag ID	Unique ID of the tag within the submodule
Tag Text	The text displayed when this tag is used

Creating/Editing Custom Display Tags

To create or edit a custom display tag:

1. Click **New Tag** in the Manage Display Tags screen. An empty record is created at the bottom of the list of records in the Custom Tags section. You can also modify the existing custom display tag record.
2. Enter the unique ID for the tag. When naming a Tag ID, remember the following:
 - Tag ID must be alphanumeric.
 - Tag ID must be at least 8 characters long.
 - Tag ID should not contain special characters.
 - Tag ID should not contain spaces.
3. Enter the tag text. This is the master text that will be used if no language-specific translation is available for this tag.
4. To add more display tags, click **New Tag**.
5. Click **Save**. The changes are saved and the tag list is refreshed.

Deleting Custom Display Tags

To delete one or more tag(s):

1. Select the tags by checking the checkbox adjacent to the tag records that you want to delete in the custom tags list.
2. Click **Delete** and then click **OK** when prompted for confirmation.

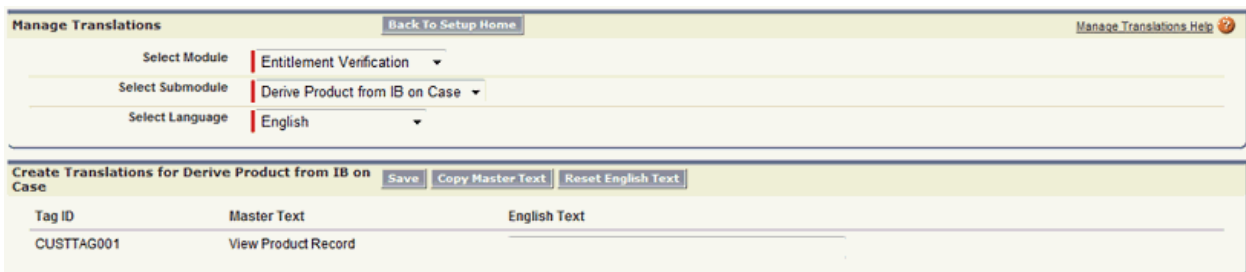


Note: Standard Display Tags cannot be deleted.

Managing Translations for Display Tags

To manage translations:

1. Click **Home > ServiceMax Setup > App Administration > Translations** link to view Manage Translations screen.



Tag ID	Master Text	English Text
CUSTTAG001	View Product Record	

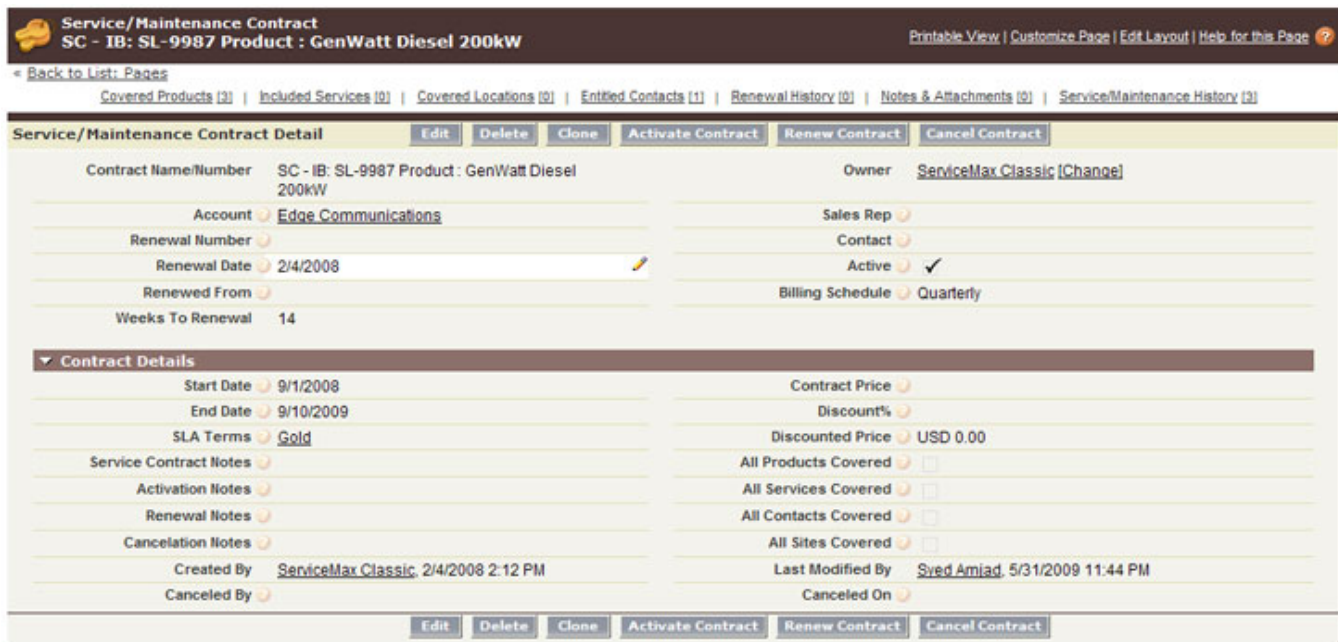
Figure 2: Manage Translations Screen

2. Select the module from the **Select Module** picklist.
3. Select the submodule from the **Select Submodule** picklist.
4. Select a language from the **Select Language** picklist. All the display tags for the selected module, submodule, and language appear.
5. Enter the translation text for each row. Blank rows will be skipped.
6. To copy the master text as default translation for all tags, click **Copy Master Text**. This provides an easy starting point to enter translations, especially for English. Alternatively, to undo this, click **Reset <Language> Text**, where <Language> is the currently selected language.

7. Click **Save**.
8. Repeat the above steps for as many combinations of module, submodule, and languages as required.

It is important to note that the Manage Translations screen in ServiceMax is different from the Translation Workbench and Custom Labels provided by Salesforce. Use the translation workbench to translate standard Salesforce constructs such as fields, sections, picklists, buttons, links, and so on. Use the New Local Translations/Overrides functionality available for Salesforce Custom Labels to translate constructs such as labels of buttons and text displayed in standard ServiceMax VF pages. The Manage Translations screen provided by ServiceMax applies only to custom ServiceMax functionality built on top of standard ServiceMax functionality.

To demonstrate this with an example, see the Service Contracts screen figure below. This is a standard Salesforce page layout that has fields, standard buttons, and custom buttons.



Service/Maintenance Contract
 SC - IB: SL-9987 Product : GenWatt Diesel 200kW

Printable View | Customize Page | Edit Layout | Help for this Page

Back to List: Pages

Covered Products (3) | Included Services (0) | Covered Locations (0) | Entitled Contacts (1) | Renewal History (0) | Notes & Attachments (0) | Service/Maintenance History (3)

Service/Maintenance Contract Detail Edit Delete Clone Activate Contract Renew Contract Cancel Contract

Contract Name/Number SC - IB: SL-9987 Product : GenWatt Diesel 200kW Owner ServiceMax Classic [Change]

Account Edge Communications Sales Rep

Renewal Number Renewal Date 2/4/2008 Contact

Renewed From Active

Weeks To Renewal 14 Billing Schedule Quarterly

Contract Details

Start Date 9/1/2008 Contract Price

End Date 9/10/2009 Discount%

SLA Terms Gold Discounted Price USD 0.00

Service Contract Notes All Products Covered

Activation Notes All Services Covered

Renewal Notes All Contacts Covered

Cancellation Notes All Sites Covered

Created By ServiceMax Classic, 2/4/2008 2:12 PM Last Modified By Syed Amjad, 5/31/2009 11:44 PM

Canceled By Canceled On

Edit Delete Clone Activate Contract Renew Contract Cancel Contract

Figure 3: Service/Maintenance Contract Screen

When you click the **Renew Contract** button, the Renew Service/Maintenance Contract as shown in the screen below. This is a standard ServiceMax Visual Force page layout.

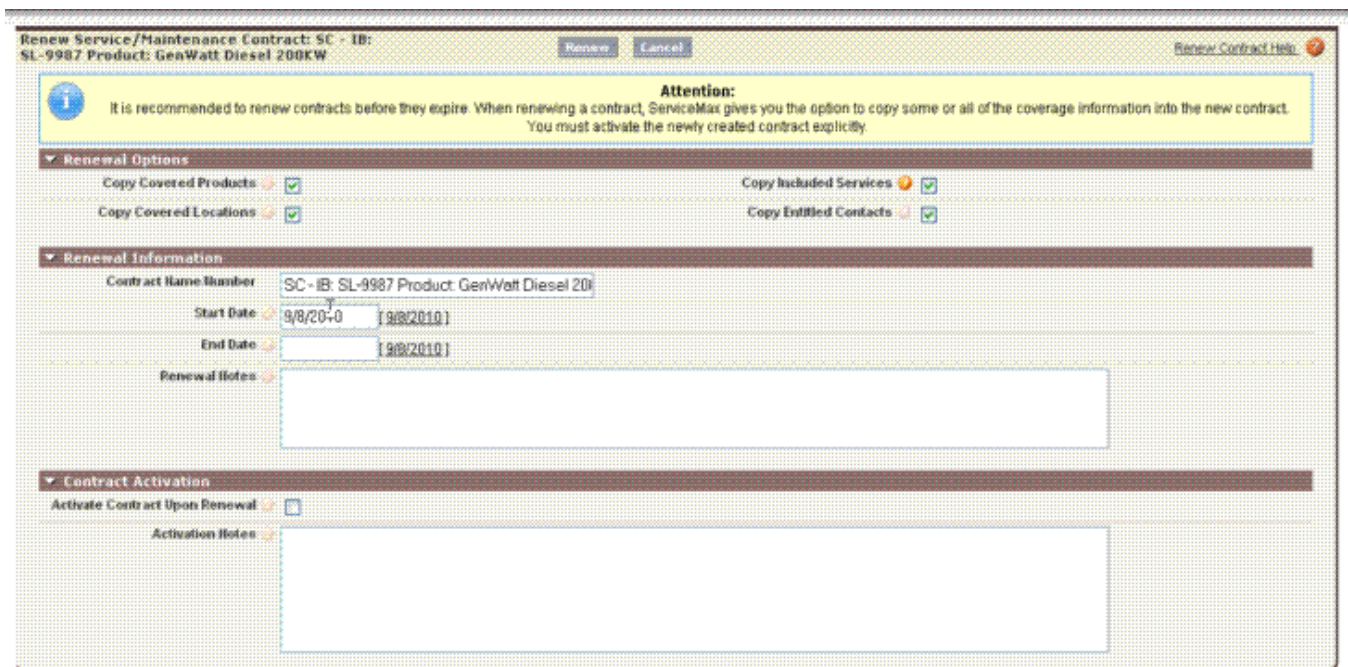


Figure 4: Renew Service/Maintenance Contract Screen

Use the Salesforce translation workbench to change the label of the **Renew Contract** button on the standard page layout.

Use the New Local Translations/Overrides functionality to change the labels of buttons and text displayed in the Renew Contracts page.

To access the New Local Translations/Overrides functionality:

1. Enable Translation Settings by navigating to **Setup > Administration Setup > Translation Workbench**.
2. Click the **New Local Translations/Overrides** button by navigating to **Setup > App Setup > Create > Custom Labels** and then click the specific custom label name link.

Use ServiceMax Manage Translations page to change the labels of buttons and text displayed in new custom Visual Force pages built as an extension for ServiceMax.

See Also:

[Modules](#)

[Submodules](#)

[Setting](#)

[Object/Record Map](#)

[Configuration Profile](#)

[Auto-Entitlement Rules](#)

[Counter Rules](#)

[Inventory Process](#)

[Dispatch Process](#)

[Basic Configuration](#)

[Troubleshooting Configuration Issues](#)

[Standard Configuration Settings](#)

OBJECT/RECORD MAP

Overview

There are many instances when information is exchanged between two processes, for example scenario would be when the call center creates a case and initiates a Work Order, RMA, or Shipment. In such scenarios, the exchanged information comprise completely different objects/records in Salesforce, and are accessed by different sets of users. However, it will be very productive and useful if the target record is automatically populated with information that is already captured on the Case. This also helps in maintaining a high quality of data. In addition, the scope of such copying should include any custom fields added to the Case and other objects.

An Object Map provides the ability to define field mapping between source and target object records. The mapping defined is maintainable interactively by administrators and applied at runtime when records are actually created.

See [ServiceMax Customization](#) for detailed instructions on how to use the Object Maps in the new custom functionality you want to build.

Access and Permissions

Actions	User Permissions Needed
To view object maps:	"Read" on ServiceMax Processes and ServiceMax Config Data
To create or edit object maps:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data
To delete object maps:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Click **Home > ServiceMax Setup > App Administration > Object Mapping** to view the Manage Object Mapping screen, as shown below:

Pre-configured Mappings			View	Clone	Back to Home	Manage Object Mapping Help ?
Map ID	Name	Description				
<input type="checkbox"/> MAP001	Installed Product To Installed Product	Field mapping defined between two installed product records. This is used when child records are created from a parent				
<input type="checkbox"/> MAP002	Service Contract To Service Contract	Field mapping defined between two service contract records. This is used when a service contract is renewed				
<input type="checkbox"/> MAP003	Covered Products To Covered Products	Field mapping defined between two Covered Products records. This is used when a service contract is renewed				
<input type="checkbox"/> MAP004	Included Services To Included Services	Field mapping defined between two Included Services records. This is used when a service contract is renewed				
<input type="checkbox"/> MAP005	Covered Locations To Covered Locations	Field mapping defined between two Covered Locations records. This is used when a service contract is renewed				
<input type="checkbox"/> MAP006	Entitled Contacts To Entitled Contacts	Field mapping defined between two Entitled Contacts records. This is used when a service contract is renewed				
<input type="checkbox"/> MAP007	Case To RMA	Field mapping to be used when an RMA is created from Case				
<input type="checkbox"/> MAP008	Work Order To RMA	Field mapping to be used when an RMA is created from Work Order				
<input type="checkbox"/> MAP009	Case To Shipment	Field mapping to be used when Shipment is created from Case				
<input type="checkbox"/> MAP010	Work Order To Shipment	Field mapping to be used when Shipment is created from Work Order				
<input type="checkbox"/> MAP011	RMA To Shipment	Field mapping to be used when Shipment is created from RMA				

Figure 1: Manage Object Mapping Screen

In the Manage Object Mapping screen:

- A list of all the standard and custom maps are displayed. Though ServiceMax supports two types of maps, Field Map and Value Map, only field maps are listed here. Value maps can be created/edited using Service flow designer only.
- Click **View** to see field mapping details of an existing map.
- Click **New** to create a custom map between Salesforce objects.
- Click **Clone** to create a copy of an existing map.
- Click **Edit** to edit the field mapping details of an existing map.
- Click **Back To Home** to return back to the ServiceMax Setup home page.

Object Map Fields

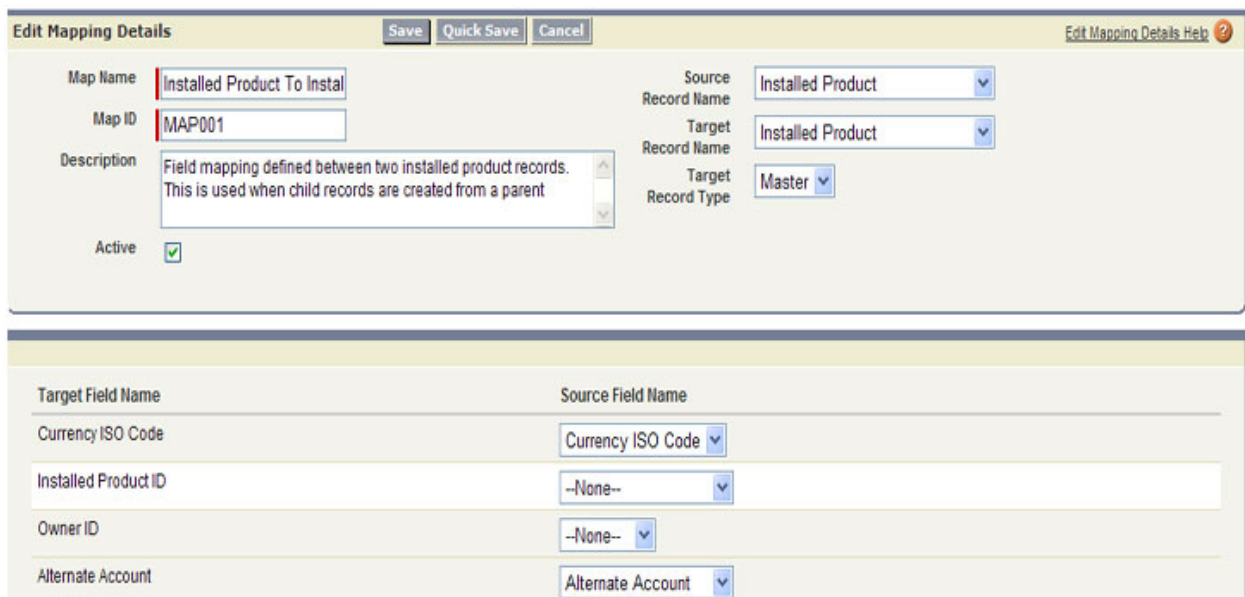
Fields	Description
Map ID	Globally unique ID of the map.
Map Name	Name of the map. Indicates how/where the map is used.
Description	Detailed description of how this map is used.

Fields	Description
Source Record Name	Source object/record name. It can be Account, Contact, Product, Case, or any custom object.
Target Record Name	Target object/record name. It can be Account, Contact, Product, Case, or any custom object.
Target Record Type	The record type of the target object, if applicable.
Source Field Name	Name of the field from the source record.
Target Field Name	Name of the field from the target record.

Creating/Editing Custom Object Maps

To create custom map objects:

1. Click **New** in the Custom Mapping section in the Manage Object Mapping screen.



Edit Mapping Details [Save] [Quick Save] [Cancel] [Edit Mapping Details Help](#)

Map Name:

Map ID:

Description:

Active: ☒

Source Record Name:

Target Record Name:

Target Record Type:

Target Field Name	Source Field Name
Currency ISO Code	<input type="text" value="Currency ISO Code"/>
Installed Product ID	<input type="text" value="--None--"/>
Owner ID	<input type="text" value="--None--"/>
Alternate Account	<input type="text" value="Alternate Account"/>

Figure 2: Edit Mapping Details Screen

2. Enter unique ID for the map. When naming a map ID, remember the following:

- Map ID must be alphanumeric.
 - Map ID must be at least 8 characters long.
 - Map ID should not contain special characters.
 - Map ID should not contain spaces.
3. Enter **Map Name** and **Description**.
 4. Select the source object.
 5. Select the target object.
 6. Select the target record type, if available. List of fields from the target object are listed with a possible list of matches against each field. This is automatically determined by the data type of each field.
 7. Select appropriate mapping for each field. If you do not want the field to be copied, leave it blank or select **None** from the list.
 8. Click **Quick Save** to save your entries and continue to make changes.
 9. Click **Save** to save all your entries and return to the previous screen.



Note: Fields related to some standard objects such as Cases and Opportunities are available for use in setting picklist values only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Deleting Custom Object Maps

To delete one or more object map(s):

1. Check the **Delete** checkbox in the custom object map list.
2. Click **Save**. The selected rows are deleted and the object maps list is refreshed.



Note: Standard Object Maps cannot be deleted.

See Also:

[Advanced Configuration: Modules](#)

[Advanced Configuration: Submodules](#)

[Advanced Configuration: Display Tags](#)

[Advanced Configuration: Configuration Profile](#)

[Advanced Configuration: Auto-Entitlement Rules](#)

[Advanced Configuration: Counter Rules](#)

[Advanced Configuration: Inventory Process](#)

[Advanced Configuration: Dispatch Process](#)

[Basic Configuration](#)

[Troubleshooting Configuration Issues](#)

[Standard Configuration Settings](#)

CONFIGURATION PROFILE

Overview

Configuration Profile represents a collection of all the settings and their values, and is thus central to optimizing end user experience and functionality in ServiceMax. A profile contains values for standard and custom settings. ServiceMax has two types of configuration profiles:

- **Org-wide Profile:** Org-wide profile contains configuration values for *all* settings, irrespective of the setting type.
- **Group Profile:** Group profiles hold configuration values for settings of the type **Group** or **User**.

See [ServiceMax Customization](#) for detailed instructions on how to use configuration profiles and setting values using ServiceMax API methods.

Access and Permissions

Actions	User Permissions Needed
To view Configuration Profile:	"Read" on ServiceMax Processes and ServiceMax Config Data
To create or edit Configuration Profile:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data
To delete Configuration Profile:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Click **Home > ServiceMax Setup > App Administration > Configuration Profiles** to view the Configuration Profiles screen, as shown below:

Org-wide Configuration Settings				Manage Configuration Profiles Help ?
<input type="checkbox"/>	Profile Name	Status	Last Modified By	Last Modified Date
<input type="checkbox"/>	Default	Active	shyam.svmxc@servicemax.com	6/18/2009 7:39 AM

Group-wide Configuration Settings			
<input type="checkbox"/>	Profile Name	Status	Last Modified By
<input type="checkbox"/>	Default Group Profile	Active	shyam.svmxc@servicemax.com

Figure 1: Configuration Profiles Screen

In the Configuration Profiles screen:

- The top section shows org-wide configuration profiles. The bottom section displays group-wide profiles.
- Click **Activate** to make an org-wide profile available for use, and deactivate all other org-wide profiles.
- Click **Clone** to create a copy of an existing configuration profile with all its settings.
- Click **Edit** to edit setting values in an existing configuration profile.
- Click **Back To Setup Home** to return to the ServiceMax Setup home page.

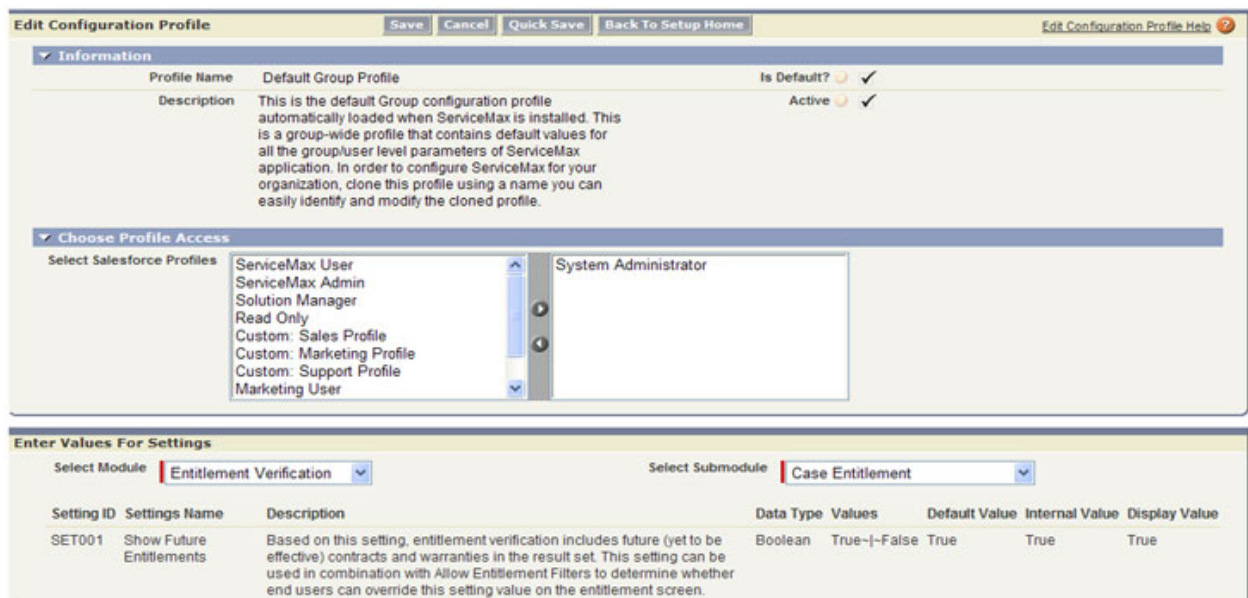
Configuration Profile Fields

Fields	Description
Profile Name	Name of the configuration profile.
Description	Detailed description of the configuration profile.
Is Default	Indicates if this is the default configuration profile.
Active	Indicates if this profile is active or not. Only active ServiceMax profiles can be linked to Salesforce users.

Creating/Editing Custom Configuration Profiles

To create a new configuration profile:

1. Select an existing group-wide or org-wide configuration profile by checking the **Select** checkbox in the list.
2. Click **Clone**. Alternatively, to edit an existing configuration profile, select the profile and then click **Edit**. Clone and Edit Modes display the same screen.



The screenshot shows the 'Edit Configuration Profile' window. It has a title bar with 'Save', 'Cancel', 'Quick Save', and 'Back To Setup Home' buttons. The main content is divided into two sections: 'Information' and 'Choose Profile Access'.

Information Section:

Profile Name	Description	Is Default?	Active
Default Group Profile	This is the default Group configuration profile automatically loaded when ServiceMax is installed. This is a group-wide profile that contains default values for all the group/user level parameters of ServiceMax application. In order to configure ServiceMax for your organization, clone this profile using a name you can easily identify and modify the cloned profile.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Choose Profile Access Section:

Select Salesforce Profiles:

- ServiceMax User
- ServiceMax Admin
- Solution Manager
- Read Only
- Custom: Sales Profile
- Custom: Marketing Profile
- Custom: Support Profile
- Marketing User

System Administrator

Enter Values For Settings Section:


Select Module: **Entitlement Verification** | Select Submodule: **Case Entitlement**

Setting ID	Settings Name	Description	Data Type	Values	Default Value	Internal Value	Display Value
SET001	Show Future Entitlements	Based on this setting, entitlement verification includes future (yet to be effective) contracts and warranties in the result set. This setting can be used in combination with Allow Entitlement Filters to determine whether end users can override this setting value on the entitlement screen.	Boolean	True-False	True	True	True

Figure 2: Edit Configuration Profile Screen

- The Information section at the top is used to capture general information about the profile. The bottom section shows all applicable settings in the selected module and submodule.

- If you are creating or editing an **org-wide** profile:
 - All settings are displayed in the bottom section.
 - The Profile Access section is hidden.
 - If you are creating or editing a **group-wide** profile:
 - Settings of the type **Global** are not displayed.
 - The **Active** checkbox is always to set to true and disabled.
 - The Profile Access section is visible.
 - If the profile is **custom**, the **Default** checkbox will be disabled.
3. Enter a unique profile name. Profile name must be alphanumeric and can contain spaces.
 4. Enter the profile description.
 5. For **group-wide** profiles, select the Salesforce profiles that need access to this ServiceMax profile. See [ServiceMax Configuration Architecture](#) to understand the relationship between the Salesforce profile and the ServiceMax profile.
 6. To configure submodules, select a module from the picklist and then select a submodule. All configurable settings applicable to the module are displayed.
 7. Click **Edit** to edit the setting value. A popup window as shown below appears. Depending upon the setting's data type, this screen will automatically capture the appropriate value. For example, if the setting data type is **Boolean**, this screen will show an option to select **True** or **False**.



Settings Name	Show Future Entitlements
Description	Based on this setting, entitlement verification includes future (yet to be effective) contracts and warranties in the result set. This setting can be used in combination with Allow Entitlement Filters to determine whether end users can override this setting value on the entitlement screen.
Data Type	Boolean
Choose Option	<input checked="" type="radio"/> True <input type="radio"/> False

Figure 3: Standard Setting Values Screen

8. Repeat the above step for settings in each submodule.
9. Click **Save**.

Deleting Custom Configuration Profiles

To delete one or more configuration profile(s):

1. Check the **Select** checkbox in the org-wide or group-wide profiles list.
2. Click **Delete** and then click **OK** when prompted for confirmation. The selected records are deleted and the profiles list is refreshed.



Note: Default or Active configuration profiles cannot be deleted. Also, configuration profiles that are linked to Salesforce profiles cannot be deleted.

See Also:

[Modules](#)

[Submodules](#)

[Display Tags](#)

[Settings](#)

[Object/Record Map](#)

[Auto-Entitlement Rules](#)

[Counter Rules](#)

[Inventory Process](#)

[Dispatch Process](#)

[Basic Configuration](#)

[Troubleshooting Configuration Issues](#)

[Standard Configuration Settings](#)

AUTO-ENTITLEMENT RULES

Overview

Auto-entitlement rules enable your organization to perform entitlements for Cases and Work Orders automatically when the cases or work orders meet your pre-defined qualification criteria. This saves significant time during call center interactions with customers and avoids errors caused by end users. Moreover, ServiceMax allows you to define multiple rules to meet the automatic entitlement needs of various groups within your organization.

One of the most significant benefits of deploying auto-entitlement rules is that customers are automatically entitled when they log cases from the ServiceMax customer portal. This enables your organization to take the corrective action on the Cases or Work Orders directly without having to spend time in customer interaction cycles.

To understand how the auto-entitlement rules are used dynamically, see the section on [Case](#) and [Work Orders](#).



Note: The auto-entitlement feature is available only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Access and Permissions

Actions	User Permissions Needed
To view auto-entitlement rules:	"Read" on ServiceMax Processes, ServiceMax Config Data, and Case
To create or edit auto-entitlement rules:	"Create" and "Update" on ServiceMax Processes, ServiceMax Config Data "Read" on Case
To delete auto-entitlement rules:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Click **Home > ServiceMax Setup > Installed Base & Entitlement > Auto-Entitlement Rules-Case** to view the auto-entitlements home page as shown below. Use this feature to define rules based on Case information to perform automatic entitlement for cases created.

New RuleEdit RuleDelete RuleSaveCancelRule SequenceBack To Setup HomeHelp ?

In this screen, you can create one or more advanced formulas based on Case information to configure the automatic entitlement of Cases.

<input type="checkbox"/>	Rule Name	Description
<input type="checkbox"/>	Sample Entitlement Rule	
<input type="checkbox"/>	Sample Priority Cases - Service Contract	
<input type="checkbox"/>	High Priority Cases Bestcom	High Priority Cases from Bestcom Corporation.

Figure 1: Auto-Entitlements-Case Screen

Click **Home > ServiceMax Setup > Installed Base & Entitlement > Auto-entitlement Rules-Work Order** to view the auto-entitlements home page. Use this feature to define rules based on Work Order information to perform automatic entitlement for Work Orders created.

New RuleEdit RuleDelete RuleSaveCancelRule SequenceBack To Setup HomeHelp ?

In this Screen, you can create one or more advanced formulas based on Work Order information to configure the automatic entitlement of Work Orders.

<input type="checkbox"/>	Rule Name	Description
<input type="checkbox"/>	High Priority Work Orders	

Figure 2: Auto-entitlements -Work Order Screen

In the auto-entitlement screens (Cases and Work Orders):

- Considering the unique nature of auto-entitlement rules, the ServiceMax installation does not create any pre-configured rules. All auto-entitlement rules must be created based on your organization's requirements.
- To create a new auto-entitlement rule, click **New Rule**.
- To edit an existing auto-entitlement rule, select the rule from the list and then click **Edit Rule**.
- To remove an auto-entitlement rule, select the rule from the list and then click **Delete Rule**.
- Click the **Save** button to save the rule.
- Click the **Cancel** button to cancel the rule.
- Click the **Rule Sequence** button to change the order sequence of the rules.
- Click **Back To Setup Home** to return to the ServiceMax Setup home page.

Auto-Entitlement Rule Fields

Fields	Description
Rule Name	Name of the rule. For example, Entitlement for A-Rated Customers.
Description	Detailed description of the rule.
Entry Criteria	An expression based on Case or Work Order Field values that defines the qualification/entry criteria for a Case to be considered by this auto-entitlement rule.
Match Account	Indicates if the account on the service contract should mandatorily be matched with the account on the Case or Work Order.
Match Contact	Indicates if the contact on the Case or Work Order must be matched with the list of entitled contacts under a service contract.
Match Location	Indicates if the location on the Case or Work Order must be matched with the covered locations under a service contract.
Consider Top-Level	When checking entitlements for a component, this flag extends the scope to check for coverage based on the top-level installed product for the component.
Consider Parent	When checking entitlements for a component, this flag extends the scope to check for coverage based on the parent installed product for the component.

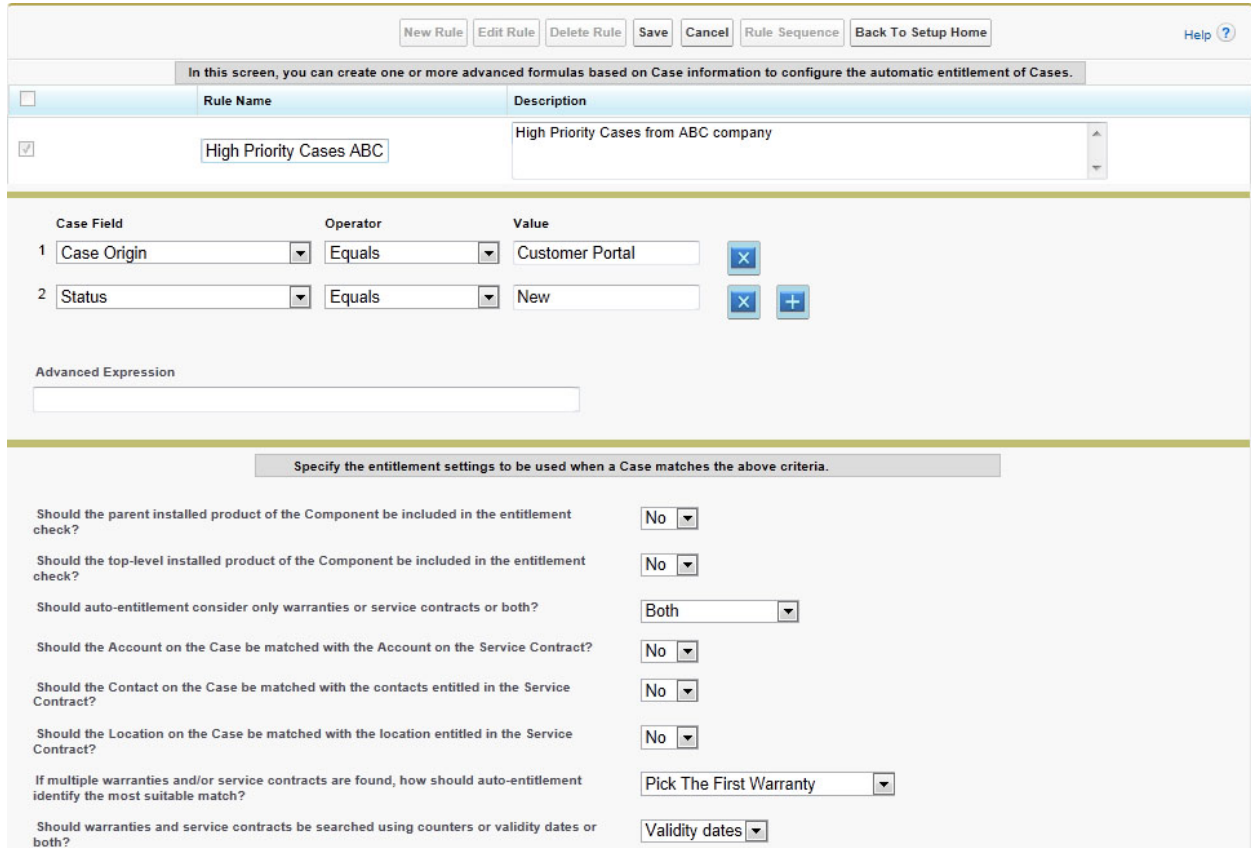
Fields	Description
Scope of Entitlement	Indicates if the entitlement check should include warranties, service contracts or both.
Validation Criteria	Indicates if the entitlement check should be performed based on the validity dates (start & end dates of warranties/service contracts), counters or both.
Counter Vs. Date Rule	If the entitlement check is done based on both validity dates and counters, this field dictates whether both should be valid or one of them should be valid to qualify the entitlement.
Tie-breaker Rule	If the entitlement check yields more than one valid service contract and warranty for a Case or a Work Order, this field defines which entitlement to use. Options are to use the first warranty or the first service contract.

Creating/Editing Auto-Entitlement Case Rules

To create a new auto-entitlement rule for a Case:

1. Click **New Rule** in the Auto-Entitlements screen. A sample Auto-Entitlement rule screen appears below. Alternatively, select the rule and then click **Edit** to edit an

existing rule. Clone and Edit modes display the same screen.



The screenshot shows the 'Auto-Entitlement Rule for Cases' configuration screen. At the top, there are buttons for 'New Rule', 'Edit Rule', 'Delete Rule', 'Save', 'Cancel', 'Rule Sequence', and 'Back To Setup Home'. A 'Help' link is also present. Below these buttons is a header bar with the text: 'In this screen, you can create one or more advanced formulas based on Case information to configure the automatic entitlement of Cases.'

The main section is divided into two parts. The top part is for defining the rule criteria. It includes a table with columns 'Rule Name' and 'Description'. The first rule listed is 'High Priority Cases ABC' with the description 'High Priority Cases from ABC company'. Below this, there is a section for defining the rule criteria. It consists of a table with columns 'Case Field', 'Operator', and 'Value'. The first row shows 'Case Origin' with the operator 'Equals' and the value 'Customer Portal'. The second row shows 'Status' with the operator 'Equals' and the value 'New'. There are buttons to remove (X) and add (+) conditions. Below this table is an 'Advanced Expression' field.

The bottom part of the screen is for specifying the entitlement settings. It includes a header bar with the text: 'Specify the entitlement settings to be used when a Case matches the above criteria.' Below this, there are several questions with dropdown menus for answers:

- Should the parent installed product of the Component be included in the entitlement check? (No)
- Should the top-level installed product of the Component be included in the entitlement check? (No)
- Should auto-entitlement consider only warranties or service contracts or both? (Both)
- Should the Account on the Case be matched with the Account on the Service Contract? (No)
- Should the Contact on the Case be matched with the contacts entitled in the Service Contract? (No)
- Should the Location on the Case be matched with the location entitled in the Service Contract? (No)
- If multiple warranties and/or service contracts are found, how should auto-entitlement identify the most suitable match? (Pick The First Warranty)
- Should warranties and service contracts be searched using counters or validity dates or both? (Validity dates)

Figure 3: Auto-Entitlement Rule for Cases Screen

2. In the Auto-Entitlement Rule for Cases screen:

- Enter the rule name. Make sure this name distinctly identifies the purpose of the rule and is readable. For example "High priority cases from ABC company."
- Enter a detailed description of the rule.
- Using the combination of Case field name, operator and value, enter the applicable entry criteria for this rule. Only those Cases that match the criteria will be entitled using the rule. Make sure the entry criteria are exclusive to each rule. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use the Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
- When entering values in the expressions, in addition to literal values, you can use the predefined values listed below for certain field types:

Field Data Type	Literal*	Effect
Date	TODAY	Match date to today's date
Date	TOMORROW	Match date to today + 1
Date	YESTERDAY	Match date to today - 1
Date	THIS_WEEK	Check if date is in the current week
Date	THIS_MONTH	Check if date is in the current month
Date	NEXT_WEEK	Check if date is in the next week
Date	NEXT_MONTH	Check if date is in the next month
Date	LAST_WEEK	Check if date is in the last week
Date	LAST_MONTH	Check if date is in the last month
Date	NEXT_90_DAYS	Check if date is in (tomorrow + 90)
Date	LAST_90_DAYS	Check if date is in (yesterday - 90)
Date	NEXT_N_DAYS:N	Check if date is in (tomorrow + N)
Date	LAST_N_DAYS:N	Check if date is in (yesterday - N)
Lookup (User)	SVMX.CURRENTUSER	Use login user's ID

* Literals are case-sensitive.

3. Enter your preferences for various auto-entitlement parameters:

- Match Accounts
- Match Contacts
- Match Locations
- Consider Top-Level
- Consider Parent
- Find Warranties, Service Contracts, or both
- Use Validity Dates, Counter, or Both, and their concurrent validity requirements
- Tie-breaker rule

4. Click **Save**.

5. If you want to cancel the rule, click the **Cancel** button.

6. If editing a rule, click the **Rule Sequence** button to rearrange the order of rules.
7. Click the **Return to Setup Home** button to return to the Setup Home page.

Creating/Editing Auto-Entitlement Work Order Rules

To create a new auto-entitlement rule for a Work Order:

1. Click **New Rule** in the Auto-Entitlements screen. A sample Auto-Entitlement rule screen appears below. Alternatively, select the rule and then click **Edit** to edit an existing rule. Clone and Edit modes display the same screen.

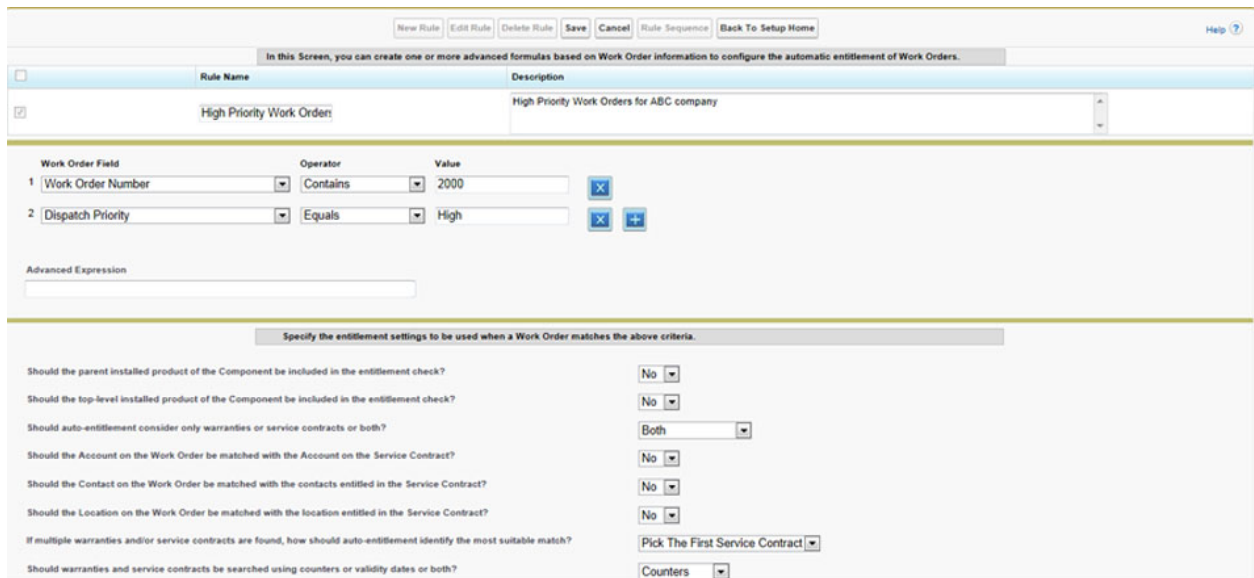


Figure 4: Auto-Entitlement Rule for Work Orders Screen

2. In the Auto-Entitlement rule for Work Orders screen:

- Enter the rule name. Make sure this name distinctly identifies the purpose of the rule and is readable. For example “High priority work orders from ABC company.”
 - Enter a detailed description of the rule.
 - Using the combination of Work Order field name, operator and value, enter the applicable entry criteria for this rule. Only those Work Orders that match the criteria will be entitled using the rule. Make sure the entry criteria are exclusive to each rule. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use the Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
 - When entering values in the expressions, in addition to literal values, you can use the pre-defined values listed in the table above for certain field types.
3. Enter your preferences for various auto-entitlement parameters:
- Match Accounts
 - Match Contacts
 - Match Locations
 - Consider Top-Level
 - Consider Parent
 - Find Warranties, Service Contracts, both
 - Use Validity Dates, Counters or Both, and their concurrent validity requirements
 - Tie-breaker rule
4. Click **Save**.
5. If you want to cancel the rule, click the **Cancel** button.
6. If editing a rule, click the **Rule Sequence** button to rearrange the order of rules.
7. Click the **Return to Setup Home** button to return to the Setup Home page.

Deleting Auto-Entitlement Rules

To delete one or more auto-entitlement Case or Work Order rule (s):

1. Select the rule(s) to be deleted by checking the **Select** checkbox adjacent to the rule (s).
2. Click **Delete Rule** and then click **OK** when prompted for confirmation. The selected rows are deleted and the rules list is refreshed.

See Also:

[Modules](#)

[Submodules](#)

[Display Tags](#)

[Configuration Profile](#)

[Counter Rules](#)

[Inventory Process](#)

[Dispatch Process](#)

[Basic Configuration](#)

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COUNTER RULES

Overview

Counter rules are used to define various readings to be captured on installed products, and subsequently to use the readings to define coverage in warranties and service contracts, and finally to entitle customers on Cases. Counter rules are defined using Product attributes, for example, fields available on the Product object that include standard ServiceMax fields as well as any custom fields created by your organization.

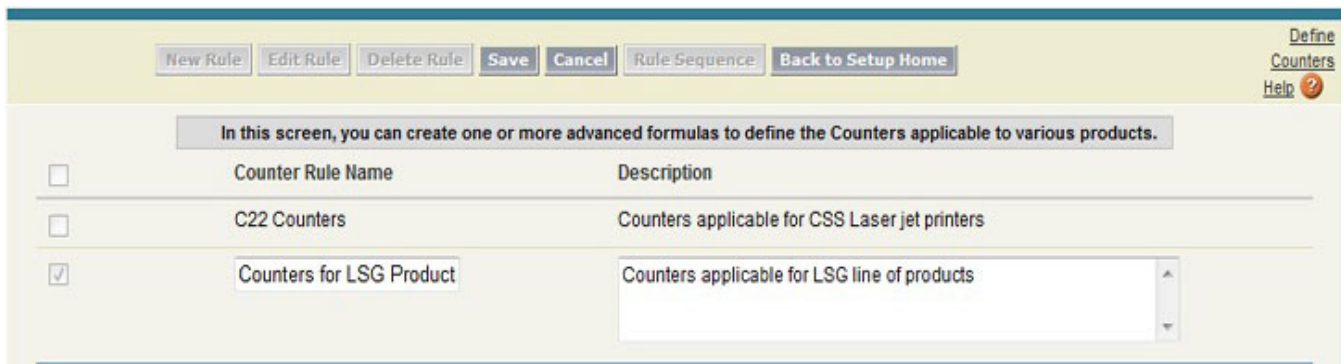
ServiceMax supports unlimited numbers of counter definitions.

See [Service Contracts](#), [Warranty Terms](#) and [Installed Products](#) to learn about how counter rules are used to define counter-based coverage and to capture current product readings.

Access and Permissions

Actions	User Permissions Needed
To view counter rules:	"Read" on ServiceMax Processes, ServiceMax Config Data, and Product
To create or edit counter rules:	"Create" and "Update" on ServiceMax Processes, ServiceMax Config Data "Read" on Product
To delete counter rules:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Click **Home > ServiceMax Setup > Installed Base & Entitlement > Counter Rules** to view the counter rules home, as shown below:



The screenshot shows the 'Counter Rules Home' interface. At the top, there are buttons: 'New Rule', 'Edit Rule', 'Delete Rule', 'Save', 'Cancel', 'Rule Sequence', and 'Back to Setup Home'. On the right, there are links for 'Define Counters', 'Help', and a question mark icon. Below the buttons, a message states: 'In this screen, you can create one or more advanced formulas to define the Counters applicable to various products.' A table lists existing rules:

	Counter Rule Name	Description
<input type="checkbox"/>	C22 Counters	Counters applicable for CSS Laser jet printers
<input checked="" type="checkbox"/>	Counters for LSG Product	Counters applicable for LSG line of products

Figure 1: Counter Rules Home

Considering the unique nature of counter rules, ServiceMax installation does not create any pre-configured rules. All counter rules must be created based on your organization's requirements.

In the Counter Rules home screen:

- To create a new counter rule, click **New Rule**.
- To edit an existing counter rule, select the rule from the list and then click **Edit Rule**.
- To remove a counter rule, select the rule and then click **Delete Rule**.
- Click **Back To Setup Home** to return to the ServiceMax Setup home page.

Counter Rule Fields

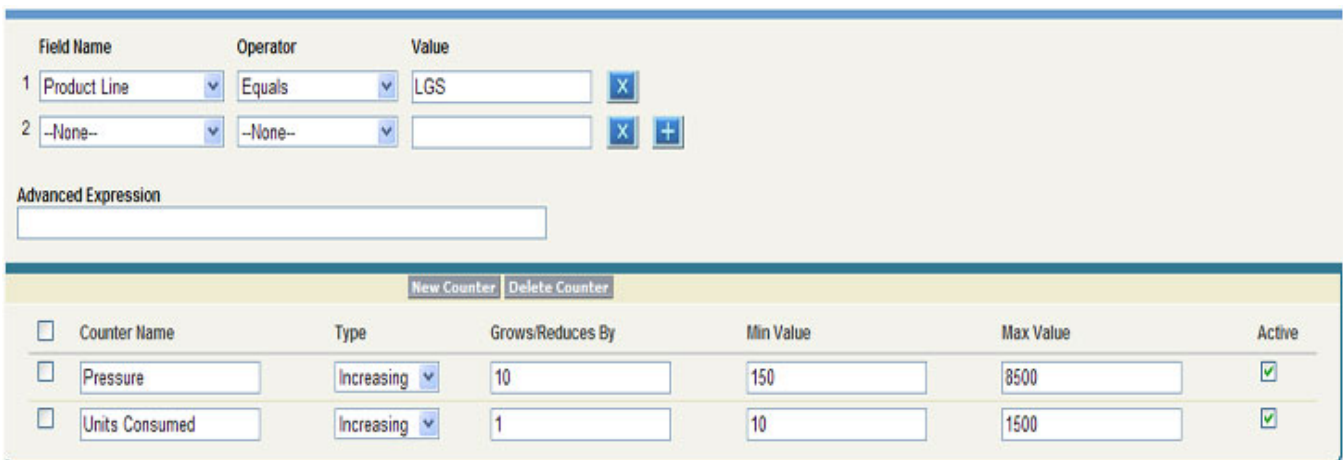
Fields	Description
Rule Name	Name of the rule. For example, "Counters for XYZ line of Products".
Description	Detailed description of the rule.
Entry Criteria	An expression based on Product Field values that defines the criteria from which a product's counters are determined when defining coverage or capturing readings.
Counter Name	Name of the counter. For example, "Revolutions" or "Kilometers".

Fields	Description
Type	The order in which the counter reading works. Options are Increasing and Decreasing .
Grows/Reduces by	The number of units by which the counter value grows or reduces. In this release, no functionality is driven by this setting.
Min Value	Minimum allowed value for the counter. Installed product readings that use this counter cannot go below this value.
Max Value	Maximum allowed value for the counter. Installed product readings that use this counter cannot go above this value.
Active	Indicates if this counter is actively used or not. Inactive counters will be ignored in warranty/contracts coverage, readings and entitlement checks.

Creating/Editing Counter Rules

To create a new rule:

1. Click **New Rule**. Alternatively, to edit an existing rule, select the rule from the list and then click **Edit Rule**. Clone and Edit modes display the same screen. A sample counter rule screen is shown below.



The screenshot shows the 'Counter Rule Screen' interface. At the top, there are three columns: 'Field Name', 'Operator', and 'Value'. Below these, there are two rows of input fields. Row 1 has 'Product Line' in the Field Name, 'Equals' in the Operator, and 'LGS' in the Value. Row 2 has '-None-' in the Field Name, '-None-' in the Operator, and an empty Value field. To the right of each row are buttons: 'X' for row 1, and 'X' and '+' for row 2. Below these fields is an 'Advanced Expression' section with a text input field. At the bottom, there is a table with columns: 'Counter Name', 'Type', 'Grows/Reduces By', 'Min Value', 'Max Value', and 'Active'. The table has two rows of data. The first row is 'Pressure' with 'Increasing' type, '10' grows/reduces by, '150' min value, '8500' max value, and 'Active' checked. The second row is 'Units Consumed' with 'Increasing' type, '1' grows/reduces by, '10' min value, '1500' max value, and 'Active' checked. Above the table are buttons for 'New Counter' and 'Delete Counter'.

Figure 2: Counter Rule Screen

2. In the above screen:

- Enter the rule name. Make sure this name distinctly identifies the purpose of the rule and is readable. For example "Readings For XYZ Model of Electricity Meters".
 - Enter a detailed description for the rule.
- Using the combination of Product field name, operator and value, enter the applicable entry criteria for this rule. When defining counter-based coverage in warranty terms and service contracts, all products that match this expression will be considered. Make sure the entry criteria are exclusive to each rule. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use the Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
- When entering values in the expressions, in addition to literal values you can use the predefined values listed below for certain field types:

Field Data Type	Literal*	Effect
Date	TODAY	Match date to today's date
Date	TOMORROW	Match date to today + 1
Date	YESTERDAY	Match date to today - 1
Date	THIS_WEEK	Check if date is in the current week
Date	THIS_MONTH	Check if date is in the current month
Date	NEXT_WEEK	Check if date is in the next week
Date	NEXT_MONTH	Check if date is in the next month
Date	LAST_WEEK	Check if date is in the last week
Date	LAST_MONTH	Check if date is in the last month
Date	NEXT_90_DAYS	Check if date is in (tomorrow + 90)
Date	LAST_90_DAYS	Check if date is in (yesterday - 90)
Date	NEXT_N_DAYS:N	Check if date is in (tomorrow + N)
Date	LAST_N_DAYS:N	Check if date is in (yesterday - N)
Lookup (User)	SVMX.CURRENTUSER	Use login user's ID

* Literals are case-sensitive.

- Enter **Counter Name**. Though not mandatory, ensure the counter name does not conflict with counters used by other groups of products.
 - Enter **Counter Type, Grows/Reduces by, Minimum Value, and Maximum Value**.
 - Check the **Active** checkbox.
3. To add a new Counter for the rule, click **New Counter**. An empty row will be inserted at the bottom of the counter list.
 4. To delete one or more existing counters, check the left-most checkbox on the rows to be deleted, and then click **Delete Counter**. Click **OK** when prompted for confirmation.
 5. Click **Save**.



Note: Fields related to some standard objects such as Cases and Opportunities are available for use in setting picklist values only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Deleting Counter Rules

To delete one or more counter rules:

1. Select the rule(s) to be deleted by checking the **Select** checkbox adjacent to the rule from the list.
2. Click **Delete Rule** and then click **OK** when prompted for confirmation. The selected rows are deleted and the rules list is refreshed.

See Also:

[Standard Configuration Settings](#)

[Defining Counter Rules in Service/Maintenance Contracts](#)

[Defining Counter Rules in Installed Product](#)

[Defining Counter Rules in Warranty Terms](#)

Troubleshooting Configuration Issues

INVENTORY PROCESS

Overview

The Inventory Process is a collection of configurable settings used by the ServiceMax inventory engine in the specific context of an inventory-related transaction such as Stock Transfer, RMA, or Parts Order. Examples of inventory processes are **Posting of Stock Transfer to Inventory** and **Processing Receipts in an RMA**. Inventory processes can be enabled on standard ServiceMax objects as well as custom objects. When users run an inventory process, product stock will be updated depending upon how the process is configured.

See [Sample Inventory Processes](#) for examples of creating and deploying custom inventory processes.

The following is a list of preconfigured inventory processes provided in ServiceMax.

Object	Record Type	Process Name
Parts Order	RMA	Process Receipts
Parts Order	Shipment	Process Shipments - Basic
Parts Order	Shipment	Process Shipments - Advanced
Work Order	Usage/Consumption	Post Usage to Inventory
Work Details	Request/Receipt	Process Receipts
Parts Request	N/A	Process Receipts From Internal Locations
Parts Request	N/A	Process Receipts From Suppliers
Stock Transfer	N/A	Post To Inventory
Stock Adjustment	N/A	Post To Inventory

Steps in Creating an Inventory Process

The following picture depicts the complete flow involved in setting up an inventory process and deploying it to end users. The key to successful rollout of an inventory process is

identifying *all* the process rules and needs for your organization (first 6 steps listed below) before defining the process using ServiceMax screens. It is recommended to use an Excel workbook to capture answers to all the configurable parameters of an inventory process.

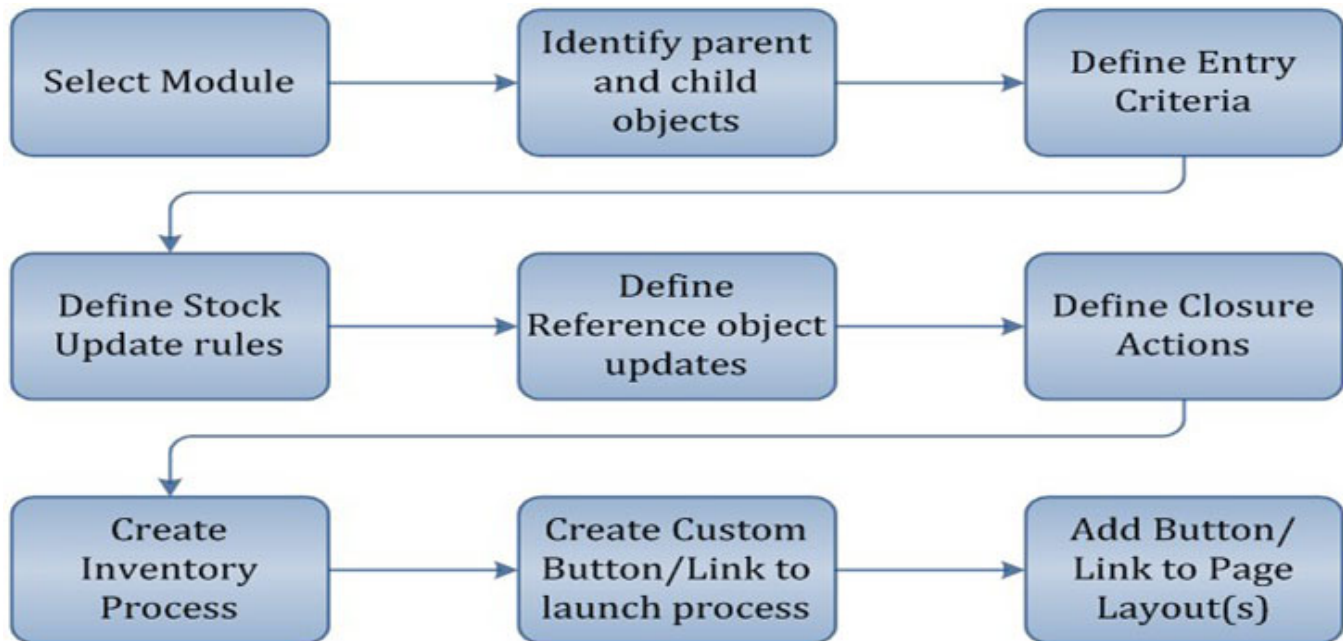


Figure 1: Inventory Process Steps

Access and Permissions

Actions	User Permissions Needed
To view Inventory Processes:	"Read" on ServiceMax Processes and ServiceMax Config Data
To create or edit Inventory Processes:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data
To delete Inventory Processes:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Click **Home > ServiceMax Setup > Service Flow Manager > Inventory Process** to view the standard inventory process screen, as shown below.

Standard Inventory Processes			View	Clone	Back To Setup Home	Inventory Processes Help
Process ID	Name	Description				
<input type="checkbox"/> PORD007	Process Shipments (Basic) for Shipment Order	This functionality displays a list of pending items to be shipped on a shipment order, allows user to enter ship quantity and/or short-close remaining lines.				
<input type="checkbox"/> PORD008	Process Shipments (Advanced) for Shipment Order	This functionality displays a list of pending items to be shipped on a shipment order, allows user to enter ship quantity and/or short-close remaining lines. Based on the stock attributes of the products and locations, inventory updates are made and/or serial number information is captured.				
<input type="checkbox"/> PORD009	Process Receipts (Advanced) for RMA	This functionality displays a list of pending lines in an RMA, allows user to enter quantity received and/or short-close remaining requests. Based on the stock attributes of the products and locations, inventory updates are made and/or serial number information is captured.				
<input type="checkbox"/> WORD010	Post to Inventory - Work Order Usage	This functionality performs inventory updates for usage lines in a work order. Depending upon stock attributes of the location and product, serial number information is also captured.				
<input type="checkbox"/> WORD011	Receive Parts for a Work Order	This functionality displays a list of pending part requests in a work order, allows user to enter quantity received and/or short-close remaining requests. Based on the stock attributes of the products and locations, inventory updates are made and/or serial number information is captured.				
<input type="checkbox"/> PREG004	Receive Parts from Supplier / Warehouse for a Parts Request	This functionality displays a list of pending lines in a standalone part request, allows user to enter quantity received and/or short-close remaining requests. Based on the stock attributes of the products and locations, inventory updates are made and/or serial number information is captured.				
<input type="checkbox"/> SADJ001	Post to Inventory - Stock Adjustment	This functionality performs inventory updates for a stock adjustment transaction. Depending upon stock attributes of the location and product, serial number information is also captured.				
<input type="checkbox"/> SXFR001	Post to Inventory - Stock Transfer	This functionality performs inventory updates for a stock transfer transaction. Depending upon stock attributes of the location and product, serial number information is also captured.				
			View	Clone	Back To Setup Home	

Custom Inventory Processes			New	Edit	Clone	Delete	Inventory Processes Help
Process ID	Name	Description					
			New	Edit	Clone	Delete	

Figure 2: Standard Inventory Process Screen

In the Standard Inventory Process screen:

- The top section shows standard (pre-configured) inventory processes. The bottom section shows custom inventory processes.
- Select a standard process and then click **View** to see the details of the preconfigured process. Standard inventory processes cannot be modified.
- To create a custom inventory process from scratch, click **New**.
- To create a custom inventory process from an existing standard or custom process, select the process and then click **Clone**.
- To edit a custom inventory process, select the process from the list and click **Edit**.
- To remove a custom inventory process, select the process from the list and click **Delete**.
- Click **Back To Setup Home** to return to the ServiceMax Setup home page.

Inventory Process Fields

Fields	Description
ServiceMax Module	The ServiceMax module this inventory process is related to.
Inventory Process ID	A unique ID to identify the inventory process.
Process Name	Name of the process. For example, "Process RMA Receipts."
Description	Detailed description of the inventory process.
Parent Object Name	Name of the parent/main object on which this inventory process is used. Examples are Parts Order, Work Order and Parts Request.
Is Multiline Transaction?	Indicates if this inventory transaction involves only one product (in the main/-header object) or if it involves multiple line items (typically in a child/related object).
Child Object Name	Name of the child/related object if it is a multiline transaction.
Child Record Type	Name of the record type to filter the child records.
Error Message for Parent	Error message to be displayed if the header record does not meet the entry criteria for the process. For example, if an RMA is Closed or Canceled.
Error Message for Child	Error message to be displayed if no line records meet the entry criteria for the process. Example, all lines in a Parts Request have been received fully or closed.
Product Field	The Product field (in header or line object) to be considered for the inventory process.
Product Attribute	Product attribute to be displayed by the inventory engine for this process. Example: Model Number, Name or Description.
Original Quantity Field	Name of the field in the header or line object that indicates the original transaction quantity. For example, in a parts request, it will be the Requested Quantity .
Is Actual Quantity Entered	Indicates if users are allowed to enter an Actual Quantity against the expected quantity. This is typically set to false in 'Post to inventory' transactions like Work Order Usage or Stock Transfer.
Actual Quantity Field	Name of the field in the header or line object that indicates the actual transaction quantity. For example, in a parts request, it will be the Received Quantity .

Fields	Description
Allow Excess Quantity	Flag indicates if users should be allowed to enter an actual quantity more than the expected quantity.
Allow Partial Quantity	Flag indicates if users should be allowed to enter an actual quantity less than the expected quantity.
Close Partial Lines	Flag indicates if users can close a line after entering a partial actual quantity.
Serial Selection Required	Indicates if this inventory process requires selection of serial numbers.
Serial Number Uniqueness	Indicates the level of enforcement required on uniqueness of serial numbers. Options are Do Not Enforce , Soft (Warning only) and Strict (Do not allow duplicates) .
Number of Stock Locations	Number of stock locations used/impacted by this process. Can be None , One or Two .
First Location Field	Name of the field in the header or line object that indicates the source (first) location. For example, in a stock transfer, it will be Source Location .
First Location Stock Status	Stock status to be used to locate the stock records from the source (first) location.
First Location Stock Action	Action to be performed on stock records from the source (first) location. Options are Increase , Decrease , or Set .
Second location Field	Name of the field in the header or line object that indicates the target (second) location. For example, in a stock transfer, it will be Destination Location .
Second Location Stock Status	Stock status to be used to locate the stock records from the target (second) location.
Second Location Stock Action	Action to be performed on stock records from the target (second) location. Options are Increase , Decrease , or Set .
Non-Stockable Locations	Indicates which, if any, of the two locations are required to be stockable. Options are Location 1 Non-Stockable , Location 2 Non-Stockable , and Both are Stockable .

Fields	Description
Notify on Negative Stock	Email ID to which notifications regarding negative stock are sent for this inventory process.
Send Email to Location Owner	Flag indicates if negative stock alerts must be sent to the stock location's owner in addition to the above email ID.
Stock History Required	Indicates if this inventory process is required to post a history record.
History Tracking Level	Level of history tracking required for this inventory process. Options are Stock History , Serial History and Both .
Stock History Header Field	Name of the field in ServiceMax Stock History object that points to the header/parent object.
Stock History Line Field	Name of the field in ServiceMax Stock History object that points to the line/child object.
Related Object Name	Name of the related object on which updates should be performed as part of this inventory process. For example, when a shipment is initiated for a parts request, the parts request line could be updated with the 'initiated quantity.'
Related Object Field Name	Name of the Quantity field to be updated in the related object.
Related Object Field Action	Type of action to be performed on the related object quantity field. Options are Increase , Decrease , and Set .
Closure Action Field Name	Name of the field in the header or child object that should be updated when the header/child no longer meets the entry criteria as a result of user's inputs. For example, when a parts request line is fully received, the line status could be set to Closed .
Closure Action Field Value	Value to be set in the header or child object field.

Creating/Editing Custom Inventory Processes

To create a new inventory process:

1. Select an existing standard or custom process by checking the **Select** checkbox in the list and then click **Clone**. Alternatively, to edit an existing inventory process, select the process from the list and then click **Edit**. Note that Clone and Edit modes display the same screen. A sample ServiceMax Processes screen appears when the Process Information tab is selected as shown below:

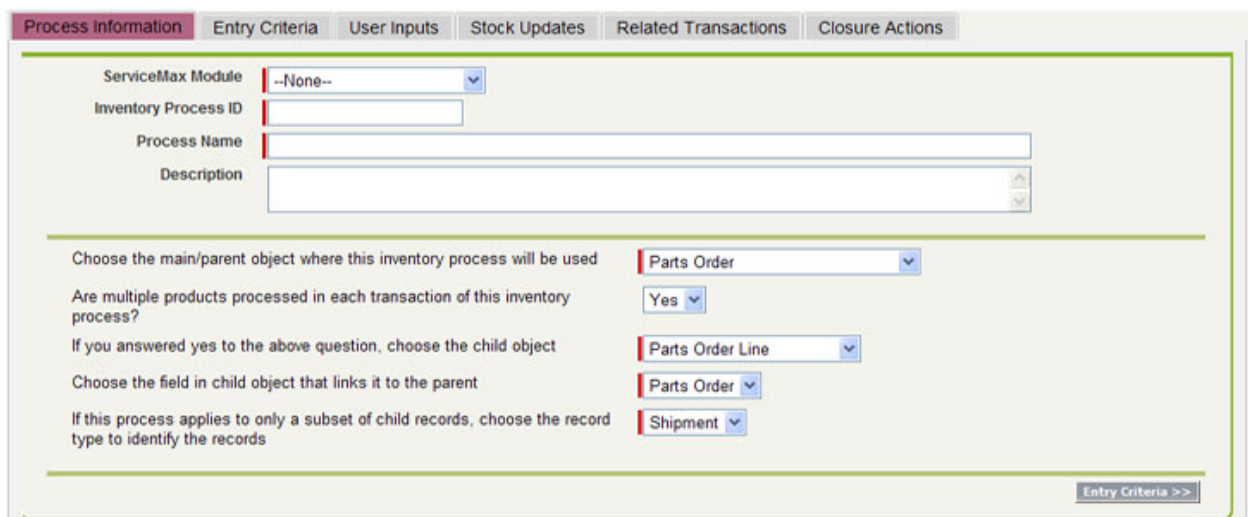


Figure 3: Process Information Screen

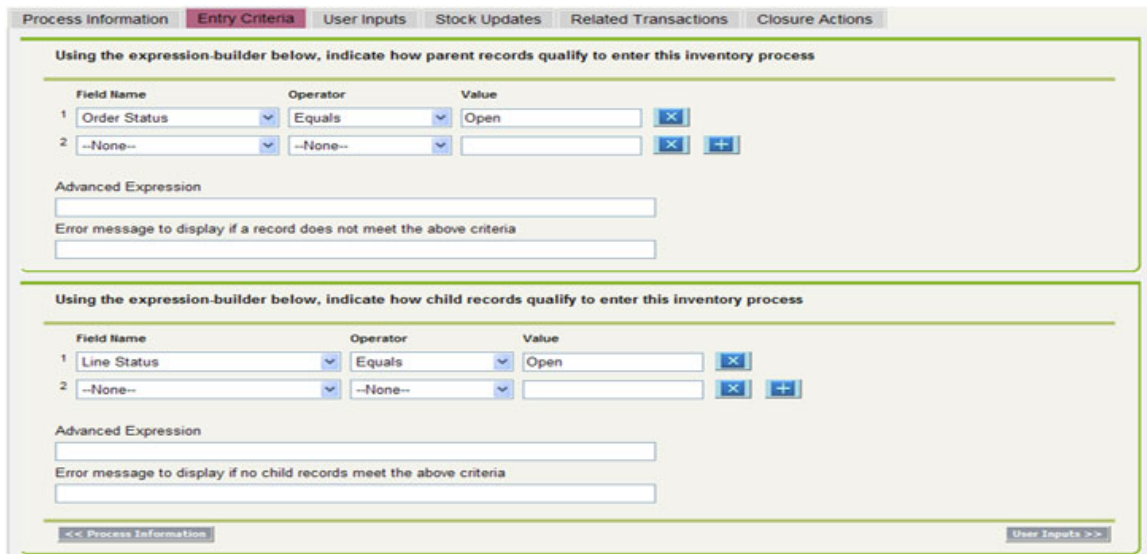
2. In the **Process Information** tab:

- Select the ServiceMax module to which this process is linked.
- Enter a unique ID for this process. ServiceMax automatically creates a submodule with the same ID.
- Enter the process name. The name entered here appears on the ServiceMax Inventory Processing screen when the user launches the process.
- Enter a detailed description of the process.
- Select the main or parent object for this inventory process. This can be a standard ServiceMax object or a custom Salesforce object created in your implementation of ServiceMax.
- Inventory processes can be configured for the standard Salesforce object 'Quote' and any other standard Salesforce object depending on the ServiceMax license.



Note: Fields related to some standard objects such as Cases and Opportunities are available for use in setting picklist values only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

- Indicate if this process involves multiple line records. This is true for most transactions that involve processing of more than one product.
- If this is a multi-line process, select the child object that contains the line information. For example, if the main/parent object for this process is Stock Transfer, the child will be Stock Transfer Line.
- If the child object contains only one lookup field to the parent object, it is selected automatically. However, in some cases, it is possible that the child object may have more than one reference to the parent object. In such cases, select the specific field that links the child to the parent.
- If this process applies to only a subset of child records, select the record type to filter the child records.
- Click the **Entry Criteria** or **Entry Criteria** tab. An Entry Criteria screen appears as shown below.



Process Information **Entry Criteria** User Inputs Stock Updates Related Transactions Closure Actions

Using the expression-builder below, indicate how parent records qualify to enter this inventory process

	Field Name	Operator	Value
1	Order Status	Equals	Open
2	--None--	--None--	

Advanced Expression

Error message to display if a record does not meet the above criteria

Using the expression-builder below, indicate how child records qualify to enter this inventory process

	Field Name	Operator	Value
1	Line Status	Equals	Open
2	--None--	--None--	

Advanced Expression

Error message to display if no child records meet the above criteria

<< Process Information User Inputs >>

Figure 4: Entry Criteria Tab

3. In the **Entry Criteria** tab:

- Using the combination of field name, operator and value, enter the applicable entry criteria for the main/parent object. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use the Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
- When entering values, in addition to literal values you can use the predefined values listed below for certain field types:

Field Data Type	Literal*	Effect
Date	TODAY	Match date to today's date
Date	TOMORROW	Match date to today + 1
Date	YESTERDAY	Match date to today - 1
Date	THIS_WEEK	Check if date is in the current week
Date	THIS_MONTH	Check if date is in the current month
Date	NEXT_WEEK	Check if date is in the next week
Date	NEXT_MONTH	Check if date is in the next month
Date	LAST_WEEK	Check if date is in the last week
Date	LAST_MONTH	Check if date is in the last month
Date	NEXT_90_DAYS	Check if date is in (tomorrow + 90)
Date	LAST_90_DAYS	Check if date is in (yesterday - 90)
Date	NEXT_N_DAYS:N	Check if date is in (tomorrow + N)
Date	LAST_N_DAYS:N	Check if date is in (yesterday - N)
Lookup (User)	SVMX.CURRENTUSER	Use login user's ID

* Literals are case-sensitive.

- When a user initiates this process, the Inventory screen appears only if the originating record matches the entry criteria. You can specify the error message to display to the end users if the record does not match criteria.
- Similar to the header entry criteria, you must also qualify the line records for this inventory process. Enter the appropriate line criteria and the error message.
- Using the ServiceMax translation workbench, you can enter various language translations for the header and line error messages. To do so:
 - Navigate to **Home > ServiceMax Setup > Translations**.
 - Select the module you entered in the Process Information tab for this inventory process.
 - Select the submodule name that matches this inventory process name.
- Click the **User Inputs** or **User Inputs** tab. The User Inputs screen appears as shown in the image below.

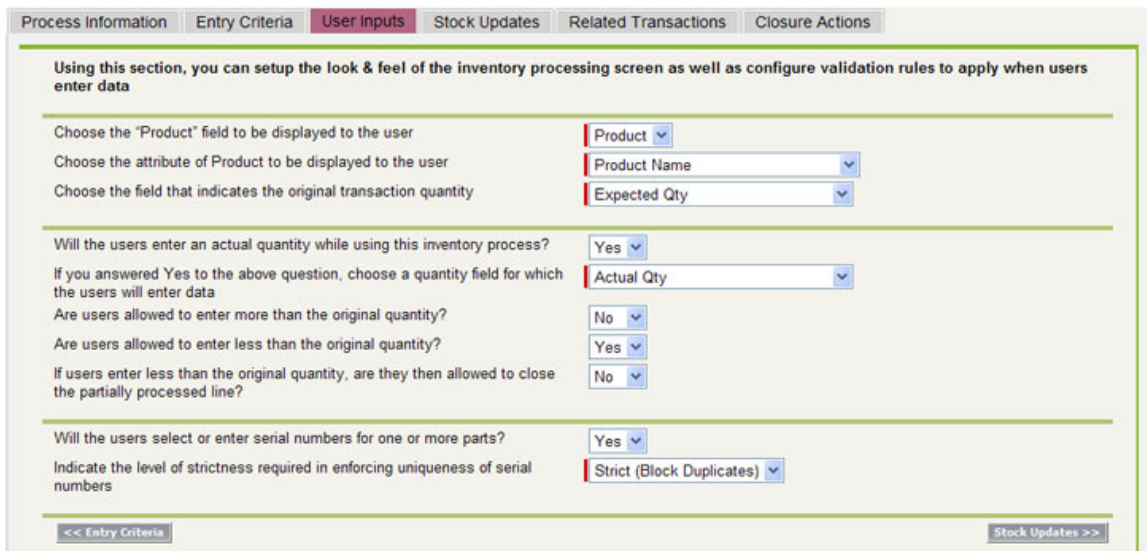


Figure 5: User Inputs Screen

4. The **User Inputs** tab is used to define rules related to capturing information when this process is initiated by users. In the User Inputs tab:

- If the header or child objects contain only one reference to the Product object, it is selected automatically. However, in some cases, it is possible that the header or child objects may have more than one reference to the Product. In such cases, select the specific Product field that should be used by the inventory screen. If this is a multi-line process, only the Product fields from the line object appear.
- Select the Product attribute you want the end users of this process to see in the inventory screen. If you want a combination of Product Name and model number, you can create a formula field in the Product object and select it here.
- Select the quantity field that should be considered by the inventory screen as the original quantity. If this is a multi-line process, all Number fields from the line object appear.
- If this process requires the users to enter an actual quantity against the original quantity, indicate the same. Some processes may not require this capability. For example, when posting Work Order usage to inventory, the used quantity is already captured in the Work Details screen.
- In the above case, select the actual quantity field. The inventory screen will prompt the user to enter a valid quantity for this field.
- Indicate if this process allows the actual quantity to be more than the original quantity.
- Indicate if this process allows the actual quantity to be less than the original quantity.
- If the process allows the actual quantity to be less than the original quantity, indicate if the users can short-close the lines when the quantity is less. The Inventory screen will show/enable the **Close Line** checkbox only if this feature is enabled.
- Indicate if this process requires capturing of serial numbers for the products. While there could be exceptions, it is recommended that this feature be used consistently across all the inventory processes.
- If serial numbers are captured, indicate how you want ServiceMax to enforce uniqueness of serial numbers. To ensure high quality of data, **Strict** (Block Duplicates) is the recommended setting. If you select **Soft** (Warning only), a warning message appears about duplicate serial numbers but users will be allowed to complete the transaction.
- Click the **Stock Updates** button or the **Stock Updates** tab. The Stock Updates

screen appears as shown in the figure below:

Figure 6: Stock Updates Screen

5. The **Stock Updates** tab is used to configure how stock information is retrieved and saved by the ServiceMax inventory screen. In the Stock Updates tab:
 - If no stock updates are needed for this inventory process, select **None** in the number of locations. If the inventory process updates stock in only one stock location, select **One**. If the inventory process updates stock in two stock locations, select **Two**.



Note: Stock location is a combination of location and status. Even if the inventory process deals with only one location, you must select **Two** if the stock moves from one status to another. For example, when posting Work Order usage to inventory, stock is consumed from only one location but it moves from **Available** to **Consumed** status. Hence it is configured to use two locations.

- Indicate if the first location is in the header or child object. Depending on this, all Location lookup fields from the corresponding object are displayed for selection.
- Select the first location, status and type of stock update action to be performed on the first location.
- Indicate if the second location is in the header or child object.
- Select the second location, status and type of stock update action to be performed on the second location.
- Select the stockability requirements for the process. For example, when shipping parts to a customer or receiving parts from a supplier, you may not want to track stock in the customer or supplier location. If the inventory process requires both locations to be stockable, select **Both Are Always Stockable**. If either location 1 or location 2 can be a non-stockable location, select the appropriate value. Note that one of the locations must be a stockable location.
- If your organization does not block transactions that result in negative stock, you can get email notifications after inventory is updated. Enter an email ID to receive negative stock alerts. To avoid ongoing maintenance, it is recommended to use a distribution list or group email ID.
- In addition to the above email ID, indicate if you want the location record's owner to receive negative stock alerts. This can be useful to enforce process discipline.
- Indicate if you want ServiceMax to automatically post a history record for this inventory process.
- If you select to track history, indicate the level of granularity required in history tracking. Stock History maintains history at the product and location level. Serial History maintains history at the serial number level, resulting in more history records to be created. Stock & Serial History will result in creating both types of history records. One of the key factors to consider when choosing this is the volume of inventory transactions and the average number of serial numbers in each transaction. This will directly impact the space usage in Salesforce.
- If you enabled history tracking, select the fields in the Stock History object that points to the parent and child objects, as applicable.

- Click the **Related Transactions** button or the **Related Transactions** tab. The Related Transaction screen appears as shown in the figure below:

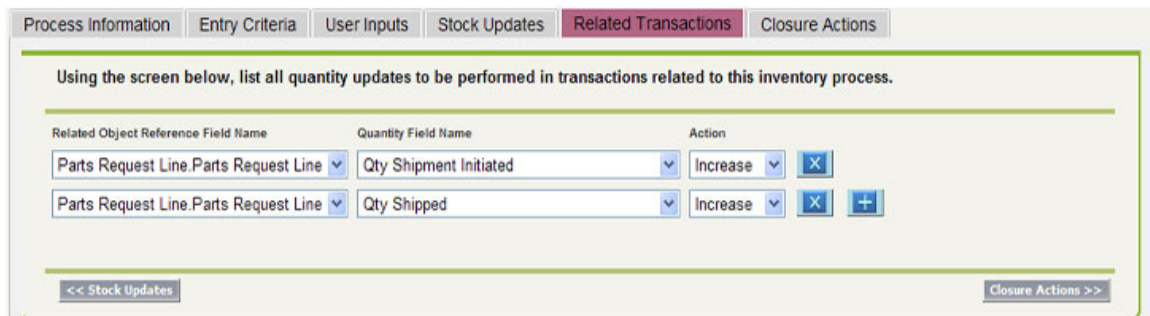


Figure 7: Related Transactions Screen

- The **Related Transactions** tab is used to configure automatic quantity updates in related transactions. For example, when a shipment is processed against a parts request, the shipped quantity in the parts request can be increased to provide better visibility to the requestors. In the Related Transactions tab:
 - Select the related object that requires an update.
 - Select the quantity field that needs to be updated.
 - Select the action to be performed on the quantity field. Increase or Decrease will result in the quantity field being increased/decreased by the actual quantity entered by the user.
 - Add or remove as many field updates as you require using the buttons marked with + and x.
 - Click the **Closure Actions** button or the **Closure Actions** tab. The Closure Actions screen appears as shown in the figure below.

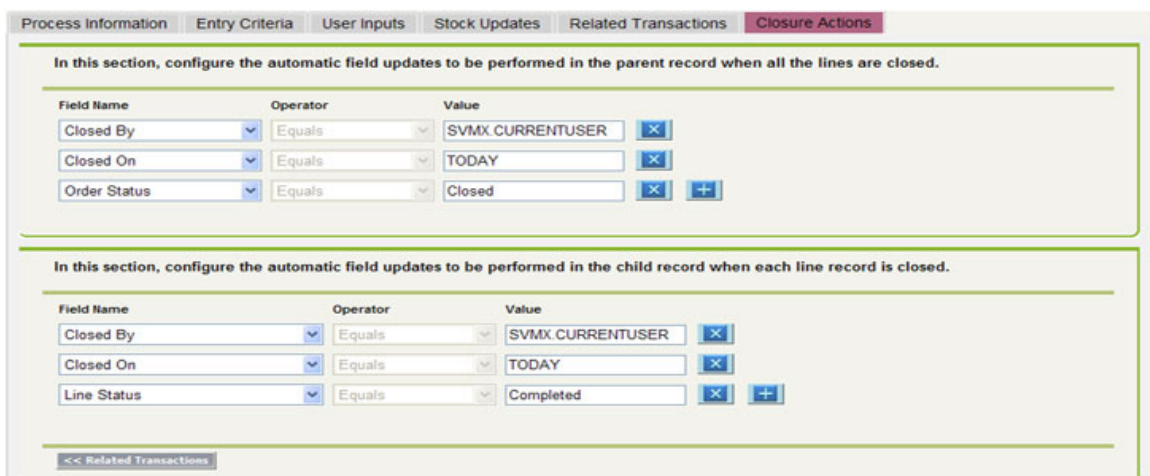


Figure 8: Closure Actions Screen

7. In the **Closure Actions** tab, you can specify the field updates required on the parent and child records when the user completes the inventory transaction. In the Closure Actions tab:

- Select the field name to be updated.
- Enter the value to assign to the field. In addition to literal values, you can use the predefined values listed below for certain field types.

Field Data Type	Literal*	Effect
Date	TODAY	Set to today's date
Date	TOMORROW	Set to today + 1
Date	YESTERDAY	Set to today - 1
Date	NEXT_Nth_DAYS: N	Set to Tomorrow + N
Date	LAST_Nth_DAYS: N	Set to Yesterday - N
Lookup (User)	SVMX.OWNER	Set to ID of the record owner
Lookup (User)	SVMX.CURRENTUSER	Set to ID of the login user

* Literals are case-sensitive.

- Add or remove as many field updates as you require using the buttons marked with **+** and **x**.
- ServiceMax automatically performs the line closure actions when:
- The actual quantity entered is greater than equal to the expected quantity.
- When the user explicitly closes the line.



Note: ServiceMax automatically performs the header closure actions when none of the lines match the entry criteria specified in the Entry Criteria tab. If you have specified any header-level closure actions, you **MUST** specify line level entry criteria. Header closure actions will be ignored otherwise.

8. Click **Save**.

Deleting Custom Inventory Process

To delete one or more inventory process:

1. Check the **Select** checkbox adjacent to the process you want to delete in the custom processes list.
2. Click **Delete** and then click **OK** when prompted for confirmation. The selected rows are deleted and the process list is refreshed.



Note: Standard ServiceMax inventory processes cannot be deleted.

Deploying Inventory Process

Once you have defined a custom inventory process, follow the steps below to enable and deploy it.

1. Navigate to **Setup > App Setup > Create > Objects**.
2. Click the main object for which you have built the inventory process. For example, if you have created a custom Process Shipments process that works on the Parts Order object, select **Parts Order**.
3. Navigate to the **Custom Buttons and Links** section and then click **New**.
4. In the **New Button** or **Link** screen:
 - a. Enter a name for the button or link.
 - b. Select the applicable **Display** type.
 - c. In **Behavior**, select **Display** in the existing window without sidebar or header.
 - d. In **Content Source**, select **URL**.
 - e. In the content, enter the following link: **/apex/SVMXI_INVNT_SmartEngine?h-drId={ObjectId}&SMid={InventoryProcessID}**
 - f. Select the text **{Object Id}** and insert the field name of the Id field from the object. For example, if the process is set up on Parts Order object, insert: **{!SVMXP__RMA_Shipment_Order__c.Id}**

- g. Select the text **{Inventory Process Id}** and replace it with the inventory process ID.
 - h. Click **Save**.
5. Add the above button/link to the applicable page layouts.

See Also:

[Modules](#)

[Submodules](#)

[Display Tags](#)

[Configuration Profile](#)

[Auto-Entitlement Rules](#)

[Counter Rules](#)

[Inventory Process](#)

[Dispatch Process](#)

[Basic Configuration](#)

[Troubleshooting Configuration Issues](#)

[Standard Configuration Settings](#)

MANAGE PM PROCESS

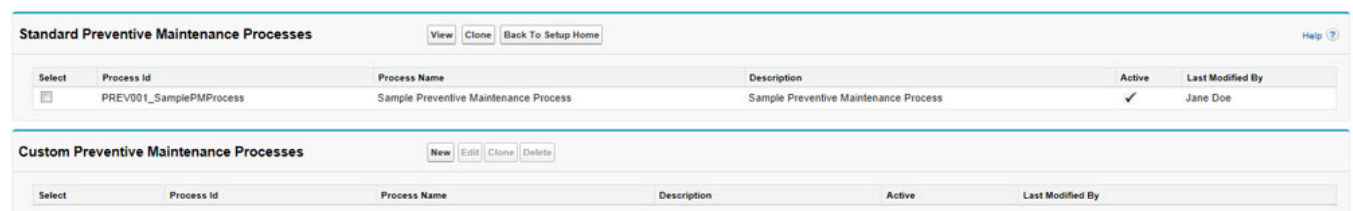
Overview

Use this option to qualify Preventive Maintenance (PM) Plans for processing and configuring rules for creating work orders and cases. You can also setup the process(es) to run automatically on a schedule.

Access and Permissions

Actions	User Permissions Needed
To view PM Processes:	"Read" on ServiceMax Processes and ServiceMax Config Data.
To create or edit PM Processes:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data.
To delete PM Processes:	"Delete" on ServiceMax Processes and ServiceMax Config Data.

Click **Home > ServiceMax Setup > Service Contracts > Manage PM Process** to view the Preventive Maintenance Process screen as shown below.



Select	Process Id	Process Name	Description	Active	Last Modified By
<input type="checkbox"/>	PREV001_SamplePMPProcess	Sample Preventive Maintenance Process	Sample Preventive Maintenance Process	✓	Jane Doe

Select	Process Id	Process Name	Description	Active	Last Modified By
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Figure 1: Standard/Custom Preventive Maintenance Processes

Standard Preventive Maintenance Process

As shown in Figure 1, in the Standard Preventive Maintenance Process area you can:

- View a standard preventive maintenance process.
- Clone a standard preventive maintenance process.
- Return to the Setup Home screen.

Viewing a Standard Preventive Maintenance Process

To view a pre-configured map:

1. In the Standard Preventive Maintenance Process area, click the **View** button.
2. View the process in the appropriate window.

Cloning a Standard Preventive Maintenance Process

To clone a pre-configured map:

1. In the Standard Preventive Maintenance Process area, click the **Clone** button.
2. In the next screen, edit the necessary fields.

Custom Preventive Maintenance Process

As shown in Figure 1, in the Custom Preventive Maintenance Process area, you can:

- Create a new custom preventive maintenance process.
- Edit a custom preventive maintenance process.
- Clone a custom preventive maintenance process.
- Delete a custom preventive maintenance process.

Creating/Editing Custom Preventive Maintenance Processes

To create a new custom preventive maintenance process:

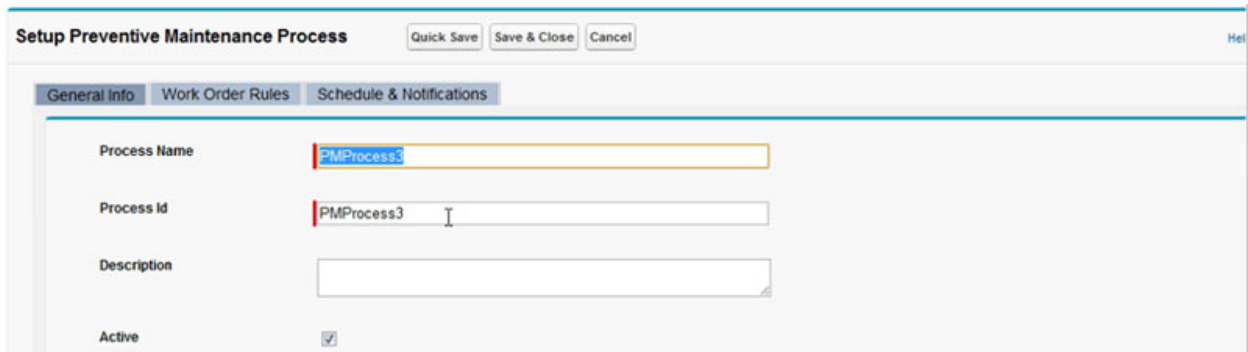
1. In the Custom Preventive Maintenance Process area, click the **New** button.
2. Alternatively, to edit an existing preventive maintenance process, select the process and then click **Edit**.
3. In the General Info area, enter the **Process Name**, **Process Id**, and a **Description**

of the process.

4. Check the **Active** checkbox to make the process active.



Note: The PM Process engine will only consider processes that are active.



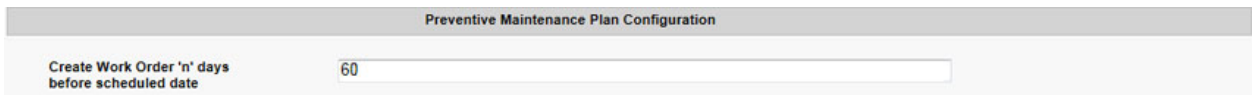
The screenshot shows the 'Setup Preventive Maintenance Process' form. It has three tabs: 'General Info', 'Work Order Rules', and 'Schedule & Notifications'. The 'General Info' tab is selected. The form contains the following fields:

- Process Name:** PMPProcess3
- Process Id:** PMPProcess3
- Description:** (empty text area)
- Active:** ☒

Buttons at the top right: Quick Save, Save & Close, Cancel.

Figure 2: Setup Preventive Maintenance Process

5. In the Preventive Maintenance Plan Configuration area, enter the number of days you want the process engine to create the work order prior to the scheduled date in the field titled, **Create Work Order 'n' days before scheduled date** (see figure below).



The screenshot shows the 'Preventive Maintenance Plan Configuration' form. It contains the following field:

- Create Work Order 'n' days before scheduled date:** 60

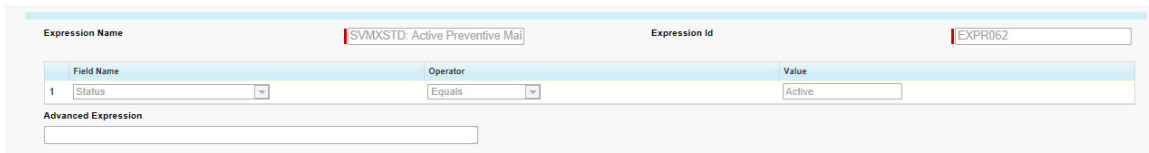
Figure 3: Plan Configuration Area



Note: The **scheduled date** represents the date you have scheduled the process engine to run to create the preventive maintenance process.

6. Use the expression builder to select the criteria to determine how the PM plan records will qualify when creating Work Orders (see figure below). Select one of the options below.
 - a. Select an option from the **Use Existing Criteria** picklist.
 - i. Click the **View/Edit** link to view the existing criteria.

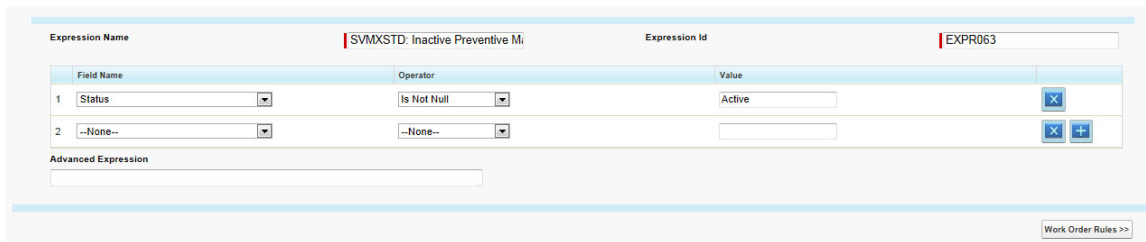
- ii. Edit the criteria by entering an **Advanced Expression** (see figure below).



The screenshot shows the 'Expression Builder' interface for editing an existing criteria. At the top, the 'Expression Name' is 'SVMXSTD: Active Preventive Mail' and the 'Expression Id' is 'EXPR062'. Below this is a table with three columns: 'Field Name', 'Operator', and 'Value'. The table contains one row with 'Status' in the Field Name, 'Equals' in the Operator, and 'Active' in the Value. Below the table is an 'Advanced Expression' text field.

Figure 4: Expression Builder (Use Existing Criteria)

7. Create new criteria by clicking the **Create New** link (see figure below).
 - a. In the **Expression Name** field, enter an expression name.
 - b. In the **Expression Id** field, enter an expression Id.
 - c. In the **Field Name** picklist, select a field name.
 - d. Select an operator in the **Operator** picklist.
 - e. Enter a value in the **Value** field.
 - f. Use the **+/-** icons to add or delete expressions.
 - g. If applicable to your process, enter an **Advanced Expression**.

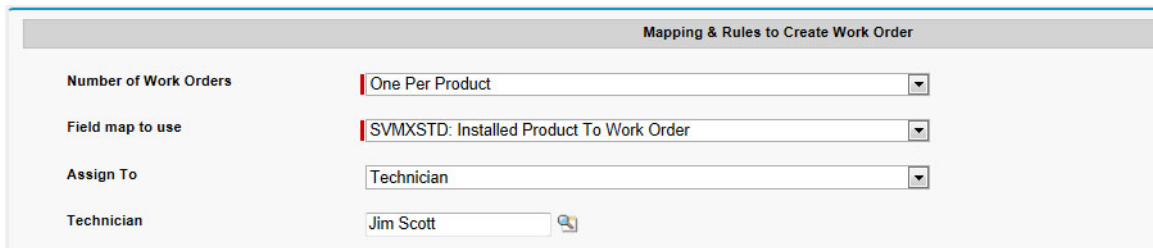


The screenshot shows the 'Expression Builder' interface for creating a new criteria. At the top, the 'Expression Name' is 'SVMXSTD: Inactive Preventive Mail' and the 'Expression Id' is 'EXPR063'. Below this is a table with three columns: 'Field Name', 'Operator', and 'Value'. The table contains two rows. Row 1 has 'Status' in the Field Name, 'Is Not Null' in the Operator, and 'Active' in the Value. Row 2 has '--None--' in the Field Name, '--None--' in the Operator, and an empty Value field. To the right of the table are icons for adding (+) and deleting (-) rows. Below the table is an 'Advanced Expression' text field. At the bottom right, there is a 'Work Order Rules >>' link.

Figure 5: Expression Builder (Create/New)

8. Click the **Work Order Rules** tab to set up the work order rules.
9. In the **Mapping & Rules to Create Work Order** area (see figure below):
 - a. Select the number of Work Orders you want created in the **Number of Work Orders** picklist.
 - b. Chose the field map from the **Field map to use** picklist.
 - c. Assign the work order (**Technician, Queue, Dispatcher**) in the **Assign To** picklist.

- d. Based on your **Assign To** picklist selection, select a name from the appropriate picklist.



Mapping & Rules to Create Work Order

Number of Work Orders: One Per Product

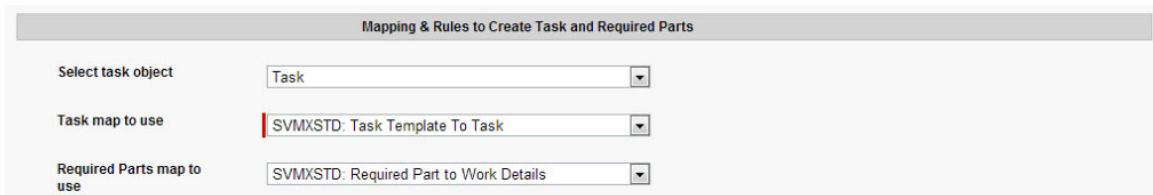
Field map to use: SVMXSTD: Installed Product To Work Order

Assign To: Technician

Technician: Jim Scott

Figure 6: Mapping & Rules to Create Work Order Area

10. In the **Mapping & Rules to Create Task and Required Parts** area (see figure below):
 - a. Select a task object from the **Select task object** picklist.
 - b. Select a task map from the **Task map to use** picklist.
 - c. Select a required parts map from the **Required Parts map to use** picklist.



Mapping & Rules to Create Task and Required Parts

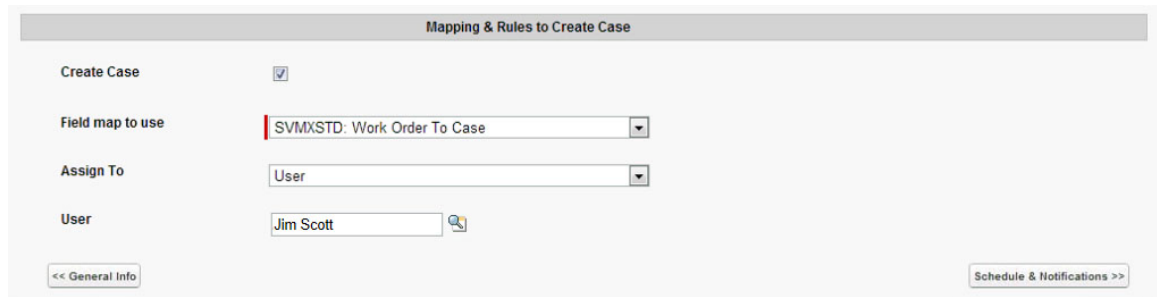
Select task object: Task

Task map to use: SVMXSTD: Task Template To Task

Required Parts map to use: SVMXSTD: Required Part to Work Details

Figure 7: Mapping & Rules to Create Task and Required Parts

11. In the **Mapping & Rules to Create Case** area (see figure below):
 - a. Check the **Create a Case** checkbox to create a case.
 - b. If you checked the **Create a Case** checkbox:
 - i. Select a field map for it in the **Field map to use** picklist.
 - ii. Assign the case by choosing a name from the **Assign To** picklist.



Mapping & Rules to Create Case

Create Case: ☒

Field map to use: SVMXSTD: Work Order To Case

Assign To: User

User: Jim Scott

<< General Info

Schedule & Notifications >>

Figure 8: Mapping & Rules to Create Case

12. Click the **Schedule & Notifications** tab.
13. In the appropriate area, select the time and day you want your process to run (see figure below).
 - a. From the **Run At** picklist, select the time you want your process to run.
 - b. Select **Day of the Week** from the appropriate picklist.
 - c. From the picklist titled, **On these days**, select the days you want the process to run.
 - i. Select a day from the Available list.
 - ii. Click the **Add** arrow to move the day from the available list to the **Chosen** list.
 - iii. To remove a day from the **Chosen** list, select the day and click the **Remove** arrow to move the day from the **Chosen** list to the **Available** list.
14. You can set up your process to run at multiple days/times. Use the **+/-** icons to add or delete process runs.
15. Select your time zone from the **Time zone** picklist.



Note: The **Chosen** list represents the days you want your process to run.

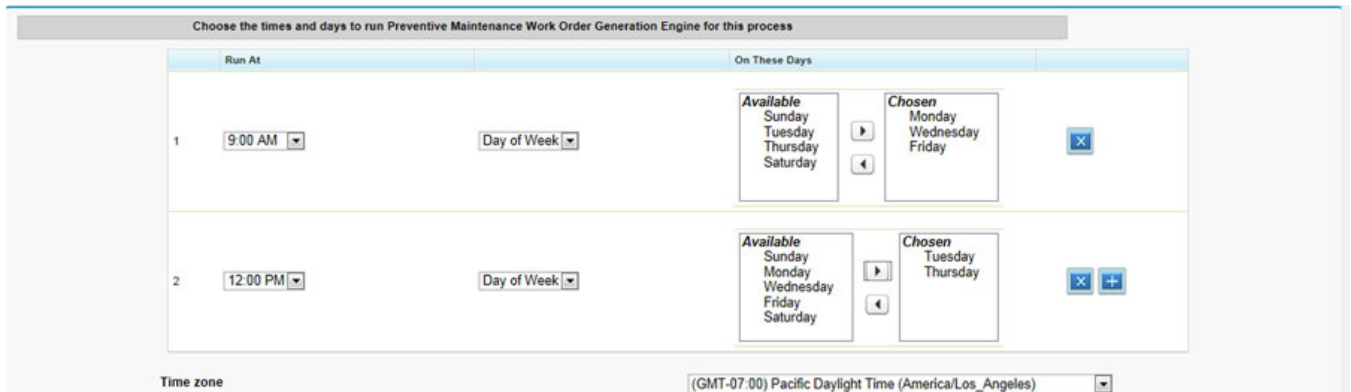


Figure 9: Day/Time Schedule

16. In the **Specify recipients of notifications and alerts** area (see figure below):
 - a. Enter an email address for successful notifications in the appropriate text field.
 - b. Enter an email address for error notifications in the appropriate text field.

- c. Check the **Enable Login** checkbox.
- d. Check the **Create an activity in the PM plan upon successful execution** checkbox if applicable.
- e. Check the **Create an activity in the PM plan if errors occur in execution** checkbox if applicable.
17. Click any of the previous tabs (**Work Order Rules**, **General Info**) to make any changes.
18. Click the **Quick Save** button to save the process and keep the process open.
19. Click the **Save and Close** button to save and close the process.
20. Click the **Cancel** button to cancel the process.



Note: You cannot retrieve processes after you have canceled them.

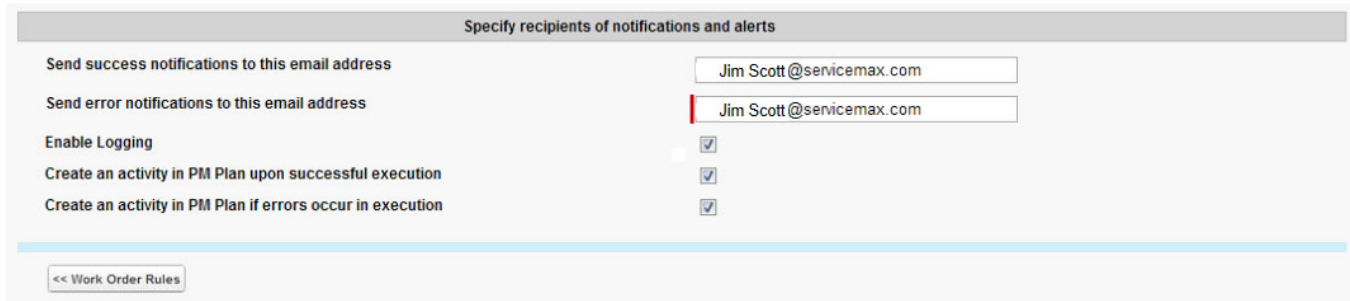


Figure 10: Notifications and Alerts

Cloning a Custom Preventive Maintenance Process

To clone a custom preventive maintenance process:

1. Select a process and click the **Clone** button.
2. In the General Info area, change the **Process Name** and **Process Id**.
3. Make any necessary changes to the **Work Order Rules** and the **Schedule & Notifications**.
4. Click the **Quick Save** button to save the process and keep it open. Click the **Save & Close** button to save and close the process.



Note: When cloning a process, you must change the following fields: **Process Name** and **Process Id**.

Deleting a Preventive Maintenance Process

To delete a custom preventive maintenance process:

1. Select a process and click the **Delete** button.
2. Confirm that you want to delete the process.



Note: You cannot retrieve a process once you have deleted it.

PM PLAN TEMPLATES

Overview

Use this option for creating preventive maintenance plans. The template includes definitions for products, schedules, and tasks to be performed as part of Preventive Maintenance. You must create the work templates you want associated with your PM plan prior to setting up your PM Plan template.

Access and Permissions

Objects	Read	Create	Update/Modify	Delete
PM Plan Template	Yes	Yes	Yes	Yes
PM Schedule Template	Yes	Yes	Yes	Yes
PM Applicable Products	Yes	Yes	Yes	Yes

You can access the PM Plan template screen by either clicking the **PM Plan Template** link from the Home Page or via the following path: **Home > ServiceMax Setup > Installed Base & Entitlement > PM Plan Template**. The PM Plan Templates screen appears as shown below.



Note: You must set up your Work/Task Template prior to setting up your PM template.

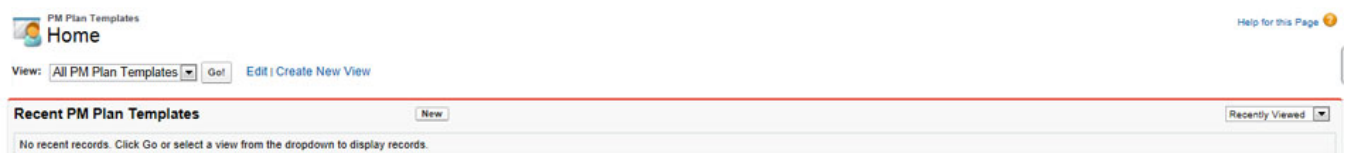


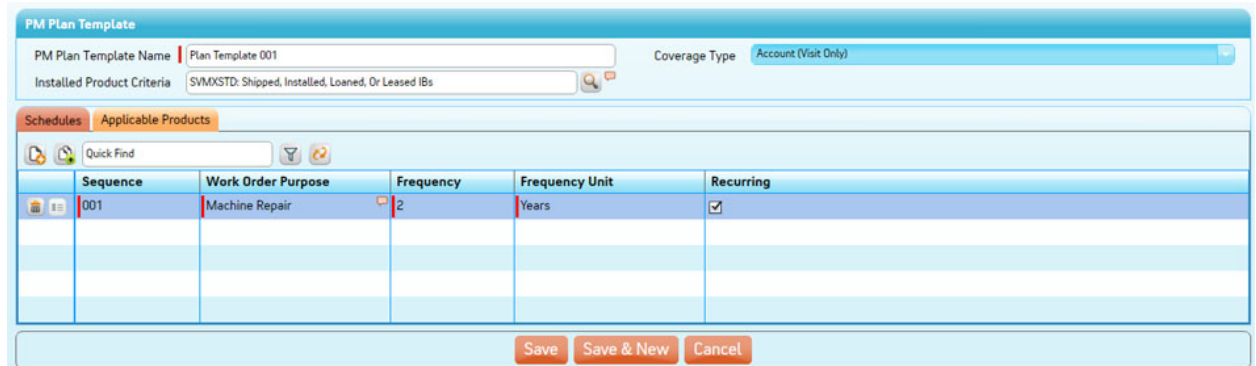
Figure 1: PM Plan Template Home Page

Creating/Editing PM Plan Templates

To create a new PM plan template:

1. Click the **New** button in the PM Plan Template screen. If updating an existing PM plan template, click a link from the **Recent PM Plan Templates** area. All recent PM Plans will display in this area.
2. Enter the PM Plan Template name in the appropriate text box. See figure below.
3. Enter or use the Lookup feature to enter the **Installed Product Criteria**.
4. Select one of three options for the coverage type (**Account**, **Product**, and **Location**) from the **Coverage Type** picklist.
 - a. **Account** (Visit Only). If you select Account, you will not have install product information. You can use the template in Accounts and in Service Contracts.
 - b. **Product** (Must Have IB). If you select a Product, you must have an Installed Based (IB) product. You can use the template in IB or in Service Contracts if it has a covered product.
 - c. **Location** (Must Have Location). If you select Location, you must have a location. You can use the template for Locations or Service Contracts with a covered location.
5. Create the schedule for the PM plan in the **Schedules** tab (see figure below):
 - a. Enter the sequence number in the **Sequence** field. (The sequence field is for those non reoccurring PM templates. It designates when a particular PM template plan.
 - b. In the **Work Order Purpose** field, enter the task template or use the Lookup search tool to find it. (You must set up your Work/Task Template prior to setting up your PM template).
 - c. Enter the **Frequency** number.
 - d. Select a frequency unit (**Years**, **Months**, **Weeks**) in the **Frequency Unit** picklist.
 - e. Check the **Recurring** checkbox. If you do not check the **Recurring** checkbox, the sequence only occurs once.

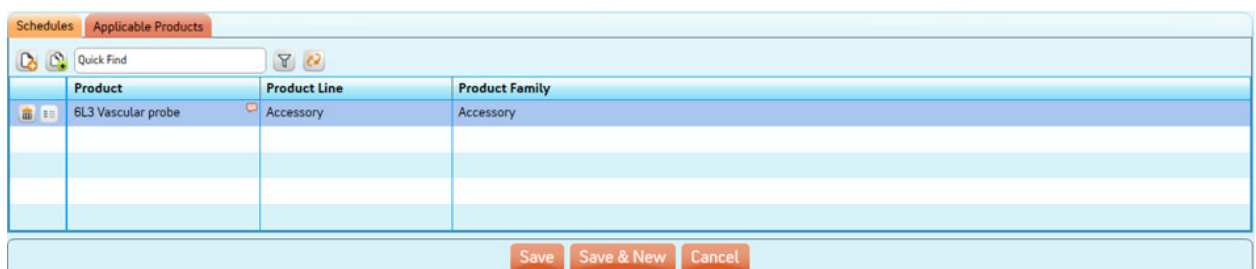
- f. To add a row in the grid, click the **Add a row** icon. Add data to the required files in the row.
- g. To delete a row in the grid, click the **Delete** icon next to the row you want to delete.



Sequence	Work Order Purpose	Frequency	Frequency Unit	Recurring
001	Machine Repair	2	Years	<input checked="" type="checkbox"/>

Figure 2: PM Plan Template Screen (Schedules Tab)

6. Click the **Applicable Products** tab. In the Applicable Products tab (see figure below):
 - a. In the **Product** field, enter a product name or use the Lookup tool to search for the product.
 - b. In the **Product Line** picklist, select a product line (**Accessory**, **Network**, **Software**, and so on).
 - c. In the **Product Family** picklist, select a product family.
 - d. To add a row in the grid, click the **Add a row** icon. Add data to the required files in the row.
 - e. To delete a row in the grid, click the **Delete** icon next to the row you want to delete.



Product	Product Line	Product Family
6L3 Vascular probe	Accessory	Accessory

Figure 3: PM Plan Template Screen (Applicable Products Tab)

7. Click the **Save** button to save the plan template and remain in the PM plan template screen.
8. Click the **Save & New** button to save the PM plan template and create a new one.
9. Click the **Cancel** button to cancel the PM plan template.

DISPATCH PROCESS

Overview

Dispatch process is a collection of configurable settings used by ServiceMax dispatch engine to queue, assign or schedule Work Orders. Dispatch processes are used to automatically route inbound Work Orders to dispatchers or technicians. A dispatch process can be based on simple assignment rules or on the OptiMax engine's use of weighted constraints to assign Work Orders to technicians and perform route optimization. Depending on your organization's dispatching needs you can create and deploy a combination of simple (Immediate dispatch) and advanced (Optimized Batch) dispatch processes. ServiceMax also allows you to deploy unlimited dispatch processes for various service territories.

If your organization uses advanced dispatch management using OptiMax, it is important that all the prerequisite information is set up properly. Successful dispatching relies on the following information:

- Service Teams and technicians with product specialization, expertise and geographic codes
- Territories with adjacency and coverage
- MTTS (Mean-Time-To-Service) Rules
- Territory Matching Rules

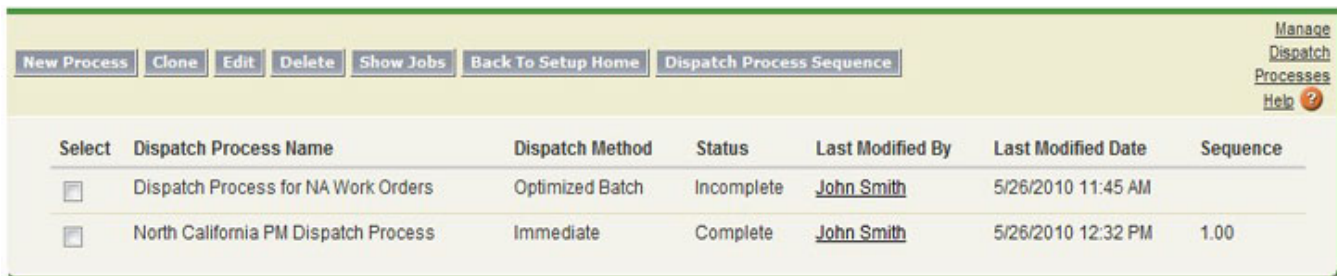
See [MTTS Rules](#) and [Territory Matching Rules](#) to learn more about MTTS Rule and Territory Matching Rules. To learn more about setting up ServiceMax territories, service teams and technicians, see the appropriate topic in the [See Also](#) section.

In addition, see [Dispatch Optimization Using OptiMax](#) for more information regarding OptiMax functionality.

Access and Permissions

Actions	User Permissions Needed
To view dispatch processes:	"Read" on ServiceMax Processes, ServiceMax Config Data, Technician, Territory, and Work Order
To create or edit dispatch processes:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data "Read" on Technician, Territory, and Work Order
To delete dispatch processes:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Click **Home > ServiceMax Setup > Dispatch Management > Dispatch Processes** to view the Dispatch Processes screen as shown in the figure below.



New Process	Clone	Edit	Delete	Show Jobs	Back To Setup Home	Dispatch Process Sequence	Manage	Dispatch Processes	Help
Select	Dispatch Process Name	Dispatch Method	Status	Last Modified By	Last Modified Date	Sequence			
<input type="checkbox"/>	Dispatch Process for NA Work Orders	Optimized Batch	Incomplete	John Smith	5/26/2010 11:45 AM				
<input type="checkbox"/>	North California PM Dispatch Process	Immediate	Complete	John Smith	5/26/2010 12:32 PM	1.00			

Figure 1: Dispatch Processes Screen

Considering the unique nature of dispatch processes, there is no sample or standard pre-configured process available with the ServiceMax installation. All dispatch processes must be created based on your organization's requirements.

In the Dispatch Processes screen:

- To create a new dispatch process, click **New Process**.
- To create a dispatch process from an existing process, select the process from the list and click **Clone**.
- To edit a dispatch process, select the process from the list and click **Edit**.
- To remove a dispatch process, select the process from the list and click **Delete**.
- To view the history of OptiMax jobs for a dispatch process, select the process from the list and click **Show Jobs**. The bottom section of the screen shows the list of jobs for the process, both completed and scheduled as shown in the figure below.

Run Job Now

ServiceMax Jobs Job Details

Select	Job Number	Territory	Type	Start Time	End Time	Job Status
<input type="radio"/>	SJ-00000045	North California	Full	2/4/2011 10:30 AM	2/4/2011 10:30 AM	Success
<input type="radio"/>	SJ-00000041	North California	Full	2/3/2011 10:30 AM	2/3/2011 10:30 AM	Success
<input type="radio"/>	SJ-00000039	North California	Full	2/2/2011 10:30 AM	2/2/2011 10:30 AM	Success
<input type="radio"/>	SJ-00000036	North California	Full	1/31/2011 10:30 AM	1/31/2011 10:30 AM	Success

Figure 2: Show Jobs list

- Click a job number to see its details in the Job Details tab. This information is typically used in the troubleshooting of jobs. The screen will indicate if there were any errors and also statistics returned by the OptiMax engine.

ServiceMax Jobs **SJ-00000441**

ServiceMax Job Detail

Job Number	SJ-00000441	OptiMax Message	Completed
SVMX Process	PN-0000002774	Territory	TEST Territory
Start Time	5/28/2010 12:55 AM	End Time	5/28/2010 12:59 AM
Number Of Sent Work Orders	2	Number Of Sent Resources	12

▼ List of work orders sent for rescheduling and the related events

Message a0dA0000000RsJeIAK-[00UA0000002IEKHMA2

ServiceMax Job Stats [ServiceMax Job Stats Help](#)

Action	Stats Name	Type	Units	Value
Edit Del	Break Time			4.80
Edit Del	Driving Time			2.41
Edit Del	Idle Time			0.00
Edit Del	List Of Unassigned Resources			
Edit Del	List Of Unassigned WorkOrders			a0dA0000000QK6MIAS

[Show 5 more »](#) | [Go to list \(10\) »](#)

[^ Back To Top](#) Always show me [▼ more](#) records per related list

Figure 3: Job Details Screen

- If any of the jobs had failed, it will be indicated in the Job Status field. Depending upon the type of error, you may want to simply re-run the job without having waiting for the next scheduled run. To do so, select the job entry from the list and click **Run Job Now**. Once the job starts, a new entry will appear in the jobs list. Use this option with extreme caution as it may interfere with other jobs that may be running and may impact performance.
- To avoid conflicts between Work Order dispatch rules, you must define the sequence in which the rules must be processed. The first matching rule will be considered for a Work Order. To define this, click **Dispatch Process Sequence**. In the popup screen (sample below), arrange the dispatch processes as needed and then click **Save**.

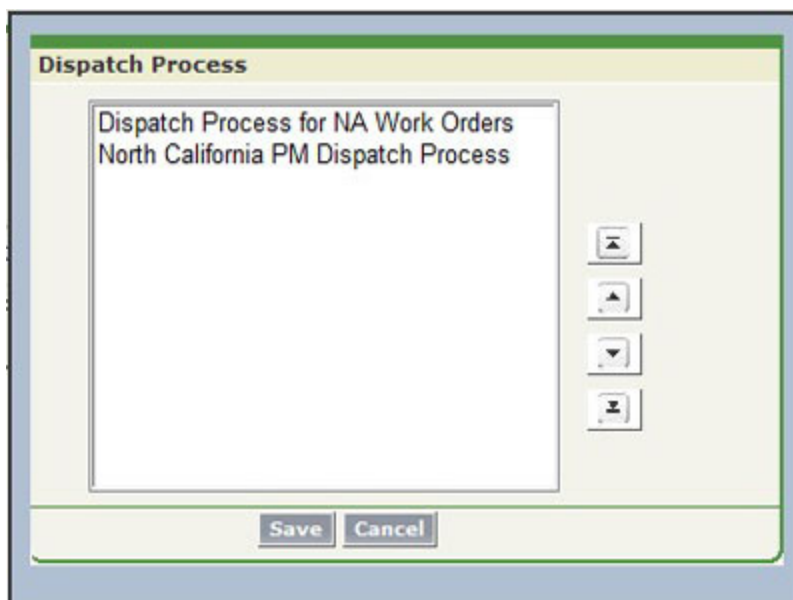


Figure 4: Dispatch Process Lists Screen

- Click **Back To Setup Home** to return to the ServiceMax setup home page.

Dispatch Process Fields

Fields	Description
Process Name	Name of the process. For example "North America Automatic Dispatch – Field Service."
Description	Detailed description of the dispatch process.

Fields	Description
Dispatch Method	Indicates the method of dispatch to be used when a Work Order matches the entry criteria for this process. Options are Immediate Dispatch that uses assignment rules and Optimized Batch that uses OptiMax dispatch optimization engine.
Entry Criteria	An expression based on Work Order Field values that defines the qualification/entry criteria for Work Orders to be processed using this dispatch process.
Assignment Rule Name	Name of the simple assignment rule. Applicable for Immediate Dispatch. For example, "California PM Work Orders."
Description	Detailed description of the simple assignment rule. Applicable for Immediate Dispatch.
Rule Criteria	An expression based on Work Order Field values that defines the qualification/entry criteria for Work Orders to be processed by this assignment rule.
Assign Work Order To	Type of the target recipient of the Work Order if the assignment rule criteria are met. Options are Technician, Dispatcher or Queue.
Technician	The technician to assign the Work Order to. This is a lookup to an existing technician record in ServiceMax. Applicable for Immediate Dispatch.
Queue	Name of the Salesforce Queue to assign the Work Order to. Applicable for Immediate Dispatch.
Dispatcher	The dispatcher to assign the Work Order to. This is a lookup to an existing Salesforce user. Applicable for Immediate Dispatch.
Assign Work Order To (Exception)	Type of target recipient if the Work Order does not match any simple assignment rule criteria. Options are Technician, Dispatcher or Queue.
Territory	Name of the territories that use this dispatch process. This is a lookup to an existing territory in ServiceMax.
Prioritization Rule Name	Name of the prioritization rule. Set automatically to four predefined buckets as P1, P2, P3 and P4. P1 indicates the highest priority.
Prioritization Rule Description	Detailed description of the prioritization rule.
Consider Expertise/Product Specialization	Indicates if OptiMax should consider the technician's expertise or product specialization to schedule a Work Order.

Fields	Description
Consider Preferred Technician	Indicates if OptiMax should consider the technician's status as a preferred technician to schedule a Work Order.
Route Type	Type of route to be applied when performing route optimization. Closed Route results in a circular route with technicians returning to the home base at the end of the day. Open Route does not return the technician to home base.
Retain Appointment	Flag indicates if OptiMax should try to honor existing Work Order appointments on technician calendars.
Retain Assignment	Flag indicates if OptiMax should try to honor existing Work Order assignments to technicians.
Time Window Cost/Weight	On a scale of 1 to N, indicates the relative weight or cost of adherence to Work Order time windows. Work Order time windows are dictated by booking window, SLA or access hours. Use a higher value to achieve higher levels of conformance to time window commitments.
Total Distance Cost/Weight	On a scale of 1 to N, indicates the relative weight or cost of total distance traveled by a technician. Use a higher value to reduce the average total distance traveled.
Route Distance Cost/Weight	On a scale of 1 to N, indicates the relative weight or cost of distance of any given route of a technician on a given day. Use a higher value to reduce the average route distance.
Route Time Cost/Weight	On a scale of 1 to N, indicates the relative weight or cost of time taken by a route. Higher value will ensure the maximum time is not exceeded while scheduling.
Expertise/Product Cost/Weight	On a scale of 0 to N, indicates the relative weight or cost of expertise and product specialization required for a Work Order.
Overtime Tolerance	Number of minutes to extend past technician's working hours to accommodate scheduling.
Schedule Days	Days of the week during which the OptiMax job should run.
Time zone	The time zone in which the scheduled jobs must run.
Start Date	Date on which the OptiMax job for this process should go into effect.
Type of run	Full or Incremental. Indicates the scope of work orders to be considered for the job run. Full applies the broader entry criteria for the dispatch process, Incremental applies additional criteria to select a narrow set of work orders.

Fields	Description
Run at	Schedule time for the OptiMax job in the given time zone.
End Date	Expiry date for the OptiMax job.
Planning horizon lead time	Amount of time to be skipped from now when scheduling work orders on technician calendars.
Lead-time type	Unit of measure for lead-time: Hours or Days.
Planning Horizon Start	Earliest day on which Work Orders can be scheduled by OptiMax. 0 indicates today, 1 indicates today + 1 and so on.
Planning Horizon End	Starting from the planning horizon start, number of days for which technician capacity is calculated.
Success Email	Email ID to send notifications of successful completion of OptiMax jobs.
Error Email	Email ID to send notifications regarding errors occurred in OptiMax jobs.

Steps in Creating Dispatch Processes

The following picture depicts the complete flow involved in setting up and deploying a dispatch process. The key to the successful rollout of a dispatch process is documenting the scope, end-to-end workflow and dispatch priorities for your organization before starting to enter data on ServiceMax screens. It is recommended to use an Excel workbook to cap-

ture answers to all the configurable parameters of a dispatch process.

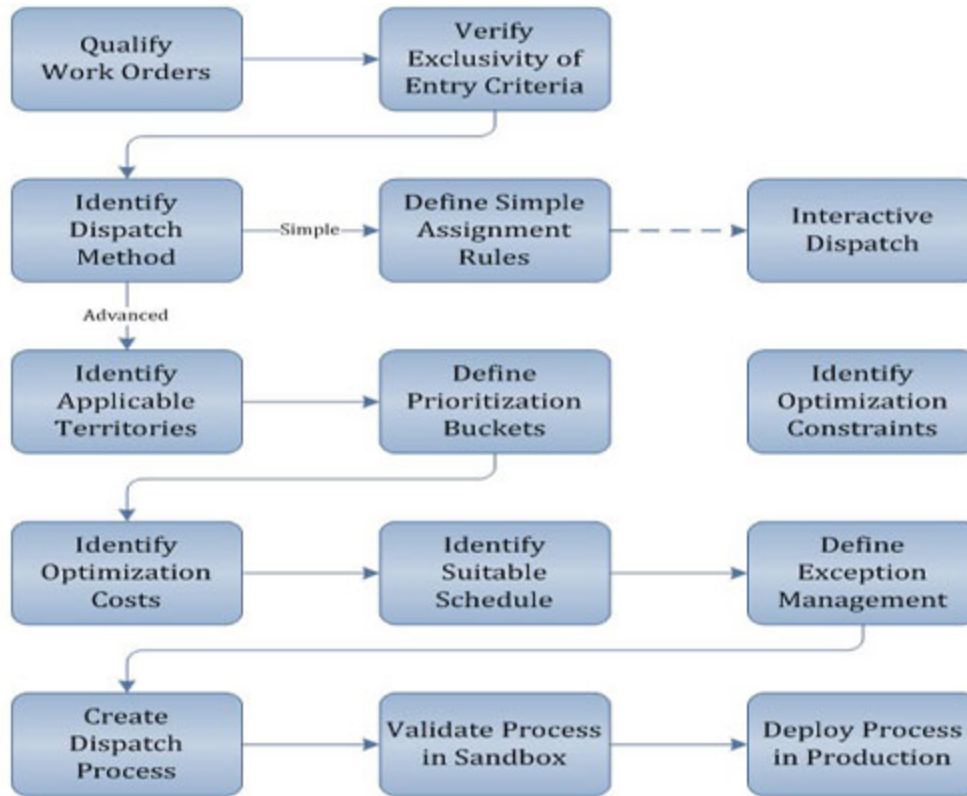


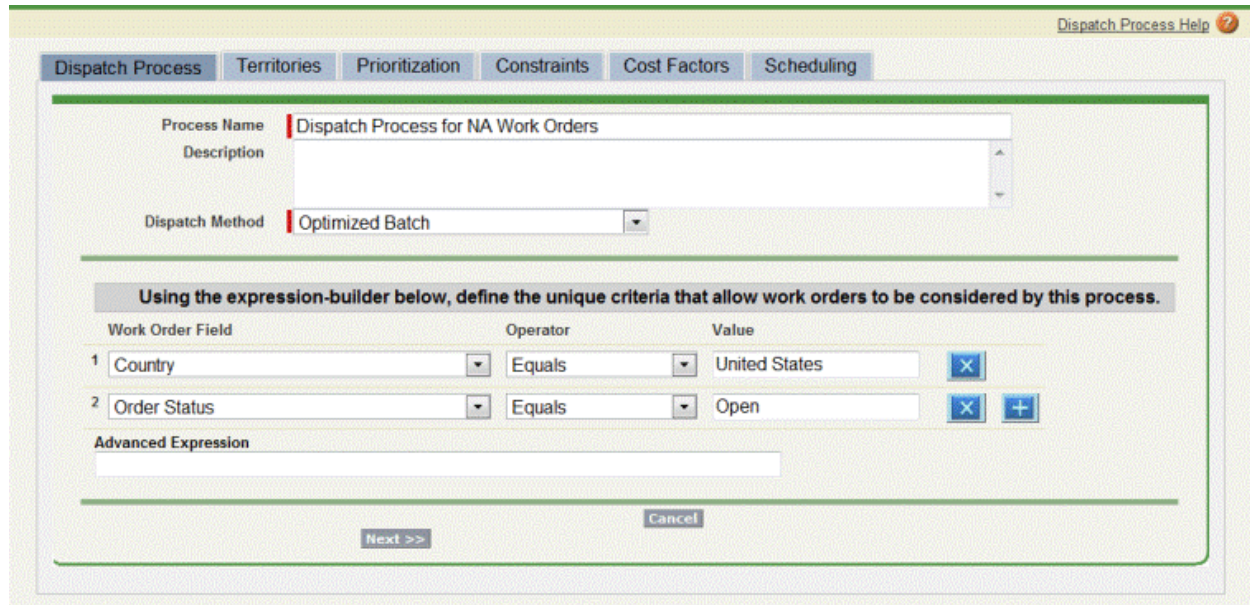
Figure 5: Dispatch Processes Steps

Creating/Editing Dispatch Processes

To create a new dispatch process:

1. Click **New Process**. Alternatively, to edit an existing process, select the process from the list by checking the checkbox adjacent to it and then click **Edit**. Clone and

Edit modes display the same screen. A Dispatch Process tab appears as shown below:



The screenshot shows the 'Dispatch Process' tab in a software interface. The tab is active, and the 'Dispatch Process' sub-tab is selected. The interface includes a 'Process Name' field with the text 'Dispatch Process for NA Work Orders', a 'Description' field, and a 'Dispatch Method' dropdown menu set to 'Optimized Batch'. Below these fields is a section titled 'Using the expression-builder below, define the unique criteria that allow work orders to be considered by this process.' This section contains a table with columns for 'Work Order Field', 'Operator', and 'Value'. Two criteria are listed: 1. 'Country' equals 'United States', and 2. 'Order Status' equals 'Open'. Each criterion has a blue 'x' button to remove it and a blue '+' button to add more. Below the table is an 'Advanced Expression' field. At the bottom of the form are 'Next >>' and 'Cancel' buttons.

Figure 6: Dispatch Process Tab

2. In the **Dispatch Process** tab:

- Enter the dispatch process name. Make sure this name distinctly identifies the purpose of the process and is readable. For example "Northern California PM Dispatch Process".
- Enter a detailed description of the process.
- Select the dispatch method. Select **Immediate Dispatch** if this process will use simple assignment rules based on which Work Orders will be assigned directly. If your organization has subscribed to OptiMax and if this process requires using the OptiMax dispatch optimization engine, select **Optimized Batch**.
- Using the combination of Work Order field name, operator and value, enter the applicable entry criteria for this process. Only those Work Orders that match the criteria will be dispatched using the definition of this process. Ensure the entry criteria are exclusive to this dispatch process. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
- When entering values in the expressions, in addition to literal values, you can use the predefined values listed below for certain field types:

Field Data Type	Literal*	Effect
Date	TODAY	Match date to today's date
Date	TOMORROW	Match date to today + 1
Date	YESTERDAY	Match date to today - 1
Date	NEXT_NTH_DAY:N	Check if date is in (tomorrow + N)
Date	LAST_N_DAY:N	Check if date is in (yesterday - N)
Date Time	SVMX.NOW	Match date and time to current date time
Lookup (User)	SVMX.CURRENTUSER	Use login user's ID

* Literals are case-sensitive.

3. Click **Next >>**.

If you selected **Immediate Dispatch** as the dispatch method, the Assignment Rules tab as shown below appears. Alternatively, if you selected **Optimized Batch** as the dispatch method, continue from Step 5.

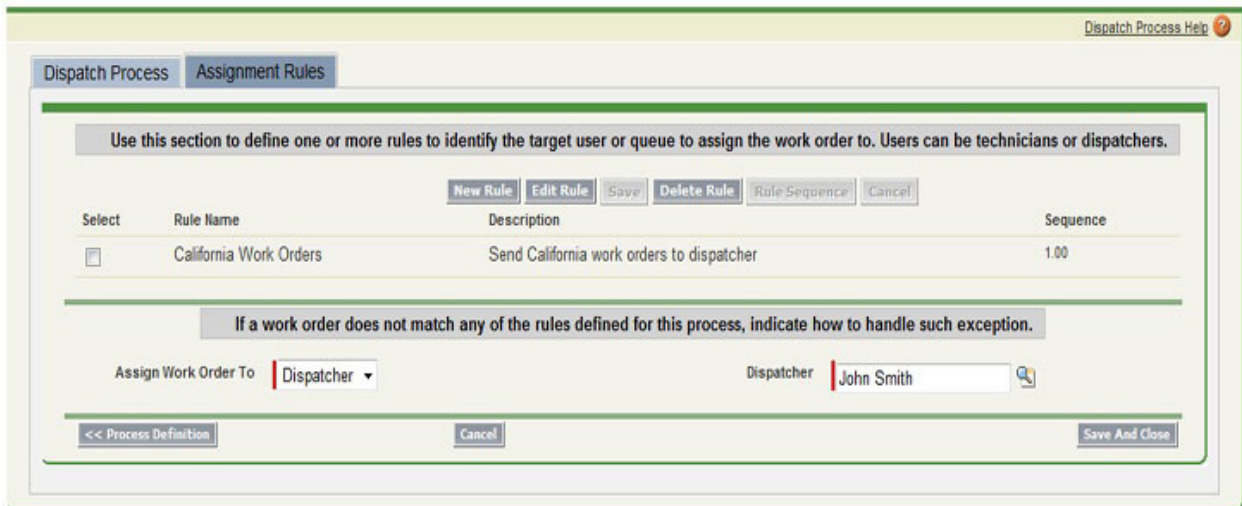


Figure 7: Assignment Rules Tab

4. In the **Assignment Rules** tab:

- If you are in **Edit** mode, all existing assignment rules in this dispatch process are displayed.
- To edit an existing rule, check the **Select** checkbox against the rule and then click **Edit**.
- To delete an existing rule, check the **Select** checkbox against the rule and click **Delete**.
- To create a new assignment rule, click **New Rule**.
 - Enter a rule name. Make sure the rule name is readable and indicates the purpose of the assignment. For example "San Francisco Work Order Assignment".
 - Enter a detailed description of the rule.
 - Using the combination of Work Order field name, operator and value, enter the qualification criteria for this rule. Make sure the criteria are exclusive between each rule.
 - Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.



Note: Since the dispatch process entry criteria have already been applied on the Work Orders, it is not required to repeat the criteria for assignment rules. For example, if the process entry criteria is "State = California", the assignment rules do not have to include a condition on State. The rules can be based simply on the next level of filtering (City, for example).

5. In the **Assign Work Order To** field:

- Select Queue to assign the Work Order to a Salesforce queue. Any queues enabled for the Work Order object are displayed in a list.
- Select the appropriate queue name from the list. Select Dispatcher to assign the Work Order to a specific Salesforce user. Select a Dispatcher name using the Salesforce user lookup.
- Select **Technician** to assign the Work Order to a technician. Select a technician name using the **Technician** lookup.
- To schedule the Work Order on the technician's calendar in the next available slot, check the **Schedule an Event** checkbox. The next available slot is automatically determined based on MTTs (service duration) and the technician's working hours.
- After you have created or edited each rule, click **Save**.
- If no matching assignment rules are found for a Work Order use the **Assign Work Order To** field at the bottom of the screen as a catch-all mechanism.
- To dictate the sequence in which these rules are processed, click **Rule Sequence**. In the popup screen (sample below), arrange the rules as needed.



Figure 8: Rule Sequence Popup



Note: The first matching rule in the list will be applied. If you have hierarchical rules, you must keep the most granular rules at the top. For example, if Rule1 is "State = California" and Rule2 is "State = California and Product = Laptop", Rule2 must be moved before Rule1. Otherwise, Rule2 will never be considered for Work Orders with State as California.

- To return to dispatch processes home without saving any changes, click **Cancel**.
- To save the rules and return to dispatch processes home, click **Save and Close**.
- If you selected **Optimized Batch** as the dispatch method, the Territories tab as shown below appears:

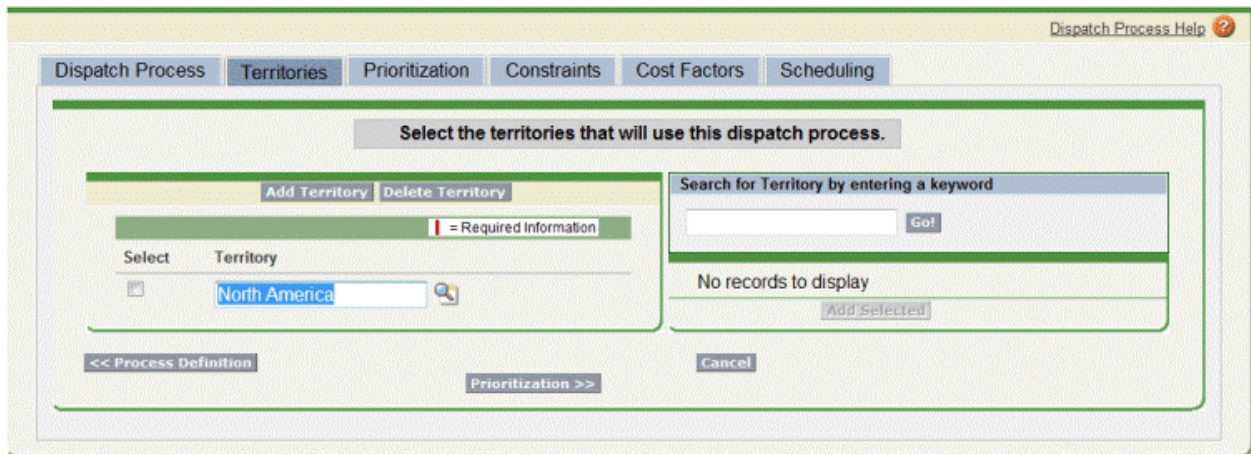


Figure 9: Territories Tab

6. The **Territories** tab is used to select the territories that will use this dispatch process. In the Territories screen:

- To add a territory, click **Add Territory**. A blank row will be inserted to the list on the left. Select the territory using the **Lookup** icon.
- To add multiple territories, enter a keyword on the right and click **Go!**. The matching territories will be listed at the bottom of the search. Select the territories from the result set and then click **Add Selected**.
- To remove territories selected already, select the territories by checking the **Select** checkbox and then click **Delete Territory**.
- Click **Prioritization** or the **Prioritization** tab to view the Prioritization screen as shown below:

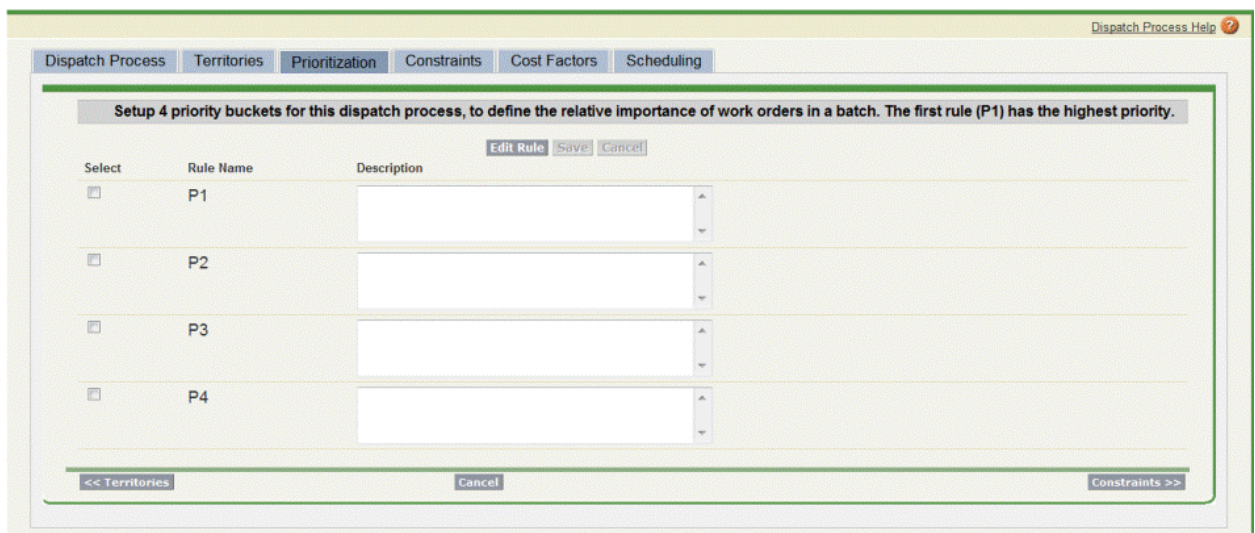
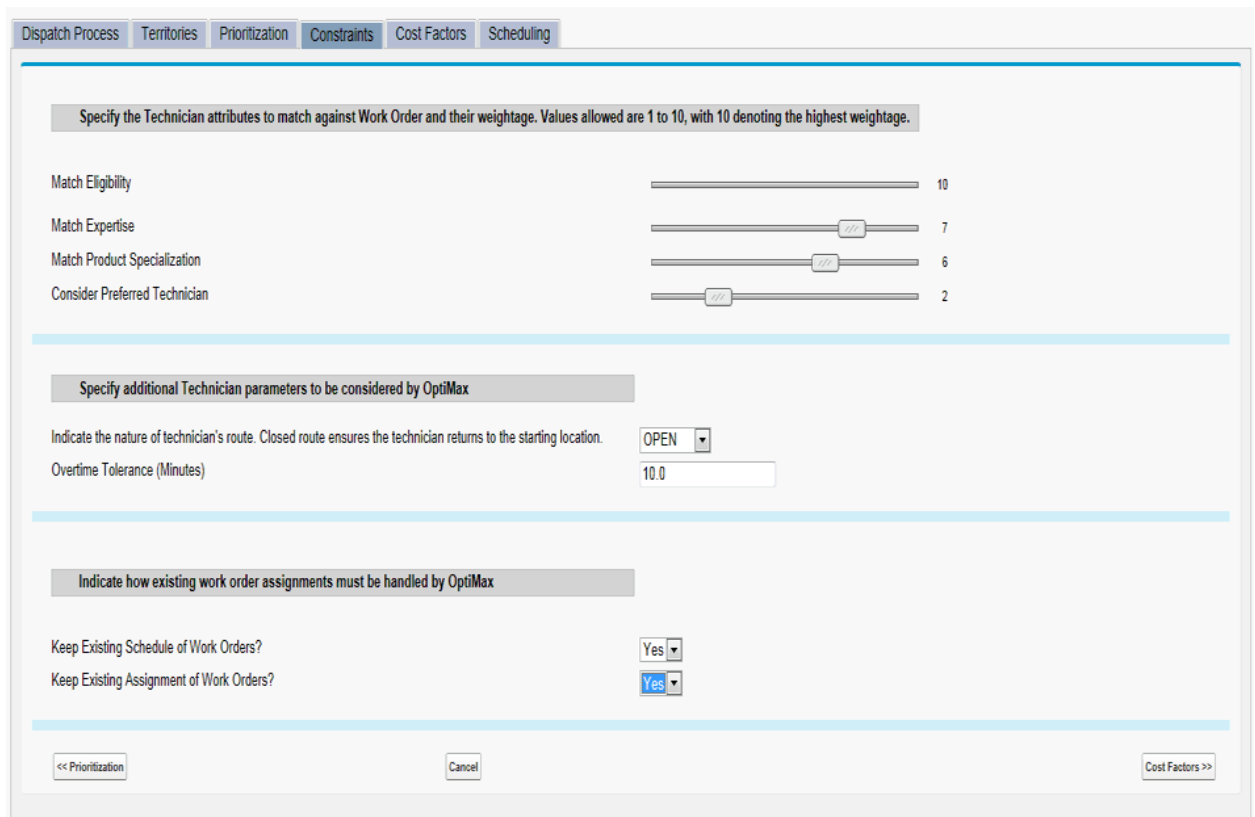


Figure 10: Prioritization Tab

7. The **Prioritization** tab is used to define up to 4 prioritization rules to sort the list of qualified Work Orders. In the Prioritization screen:

- It is not required to use all the 4 prioritization rules.
- If you are in **Edit** mode, all existing prioritization rules in this dispatch process are displayed.
- To edit an existing rule, check the **Select** checkbox against the rule and then click **Edit**.
- Enter the sorting order in ascending order. The prioritization rule with the lowest order value will be processed first.
- Enter the Rule Name. Make sure the rule name is readable and indicates the purpose of the prioritization. For example "Premier Accounts And Down Situations".
- Enter a detailed description of the rule.
- Using the combination of Work Order field name, operator and value, enter the prioritization criteria for each rule. Ensure the criteria are exclusive between each rule. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
- After you have created or edited each rule, click **Save**. Alternatively, to undo any changes you have made, click **Cancel**.

- Click **Constraints** or the **Constraints** tab. A Constraints screen appears as shown below:



Dispatch Process Territories Prioritization **Constraints** Cost Factors Scheduling

Specify the Technician attributes to match against Work Order and their weightage. Values allowed are 1 to 10, with 10 denoting the highest weightage.

Attribute	Weightage
Match Eligibility	10
Match Expertise	7
Match Product Specialization	6
Consider Preferred Technician	2

Specify additional Technician parameters to be considered by OptiMax

Indicate the nature of technician's route. Closed route ensures the technician returns to the starting location.

Overtime Tolerance (Minutes)

Indicate how existing work order assignments must be handled by OptiMax

Keep Existing Schedule of Work Orders?

Keep Existing Assignment of Work Orders?

<< Prioritization Cancel Cost Factors >>

Figure 11: Constraints Tab

- The **Constraints** tab indicates the constraints OptiMax should use when dispatching Work Orders. In the Constraints screen:

- Assign a weight value to Technician attributes to be mapped against Work Orders. Select a weight value from 1 to 10, with 10 being the highest weight. Move your cursor along the sliding weight scale to assign a value (from 1 to 10) to the following attributes: (see figure below).
 - Match Eligibility
 - Match Expertise
 - Match Product Specialization
 - Consider Preferred Technician
- Indicate if a technician's expertise or product specialization should be considered as a factor. If you select **No Match Required**, the skill and product specified in the Work Order will be ignored and will not be a factor when finding suitable technicians.
- Specify any additional Technician parameters to be considered by OptiMax.
 - Indicate if the nature of the Technician's route should be **Open** or **Closed**. (Use the appropriate picklist to specify the route parameters). A closed route ensures the Technician returns to the starting location. Select **Closed Route** if technicians are expected to return to their home base after the day's Work Order assignments. Select **Open Route** if technicians do not return to home base.
 - Enter any Overtime Tolerance minutes in the appropriate text box.
- Indicate how OptiMax should handle existing Work Orders assignments.
 - Select **Yes** or **No** (via picklist) to answer the question, "Keep existing Schedule of Work Orders?" If you select **Yes**, technicians that are designated as Preferred at the Work Order's Component, Service Contract or Account level will be given a higher preference for scheduling than other technicians.
 - Select **Yes** or **No** (via picklist) to answer the question, "Keep existing assignment of Work Orders?"

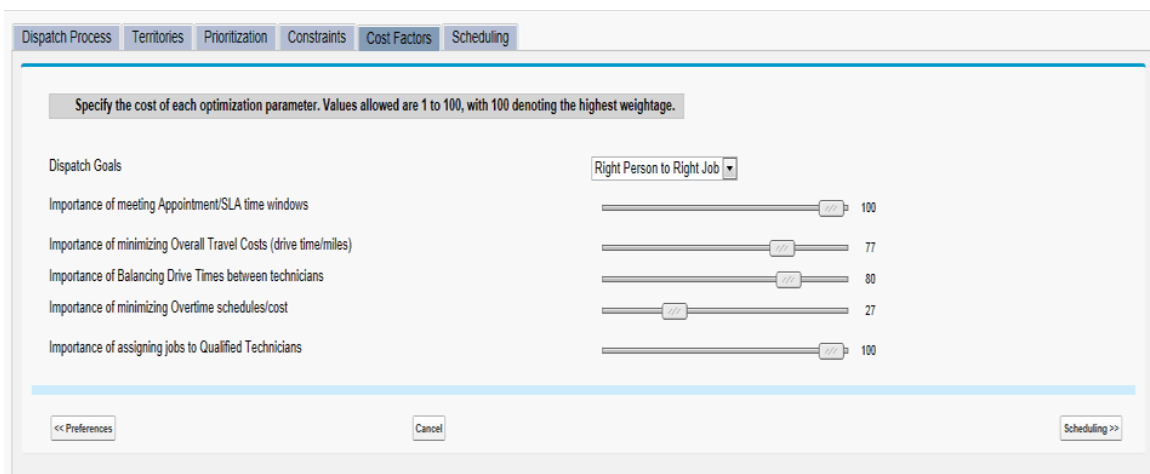


Note: If you select a zero from the 1-10 sliding scale, no weightage will be given to the attribute. OptiMax will not consider it.



Note: Quality of location data on Work Order and technician records is extremely critical for successful and effective assignment, routing and optimization. In order to obtain high quality output from OptiMax, make sure the location data is maintained diligently in ServiceMax. Avoid using PO Box and Suite numbers in addresses since they are normally rejected by mapping services.

- The options at the bottom of the screen indicate how OptiMax must process existing Work Order appointments on a technician’s calendar. Though not guaranteed always, OptiMax will attempt to accommodate these preferences as much as possible considering all other constraints and costs.
- To allow Work Orders to extend into a technician’s overtime hours, enter the amount of tolerance in minutes allowed for overtime processing. This provides an additional cushion for you to accommodate high priority Work Orders without compromising customer commitments.
- If a Work Order should be kept in its current schedule (as practically as possible), select **Yes** in the **Retain Appointment** field.
- If the Work Order’s technician assignment must also be retained, select **Yes** in the **Retain Assignment** field.
- Click **Cost Factors** or the **Cost Factors** tab. The Cost Factors screen appear as shown below:



Dispatch Process Territories Prioritization Constraints **Cost Factors** Scheduling

Specify the cost of each optimization parameter. Values allowed are 1 to 100, with 100 denoting the highest weightage.

Dispatch Goals Right Person to Right Job

Dispatch Goal	Value
Importance of meeting Appointment/SLA time windows	100
Importance of minimizing Overall Travel Costs (drive time/miles)	77
Importance of Balancing Drive Times between technicians	80
Importance of minimizing Overtime schedules/cost	27
Importance of assigning jobs to Qualified Technicians	100

<< Preferences Cancel Scheduling >>

Figure 12: Cost Factors Tab

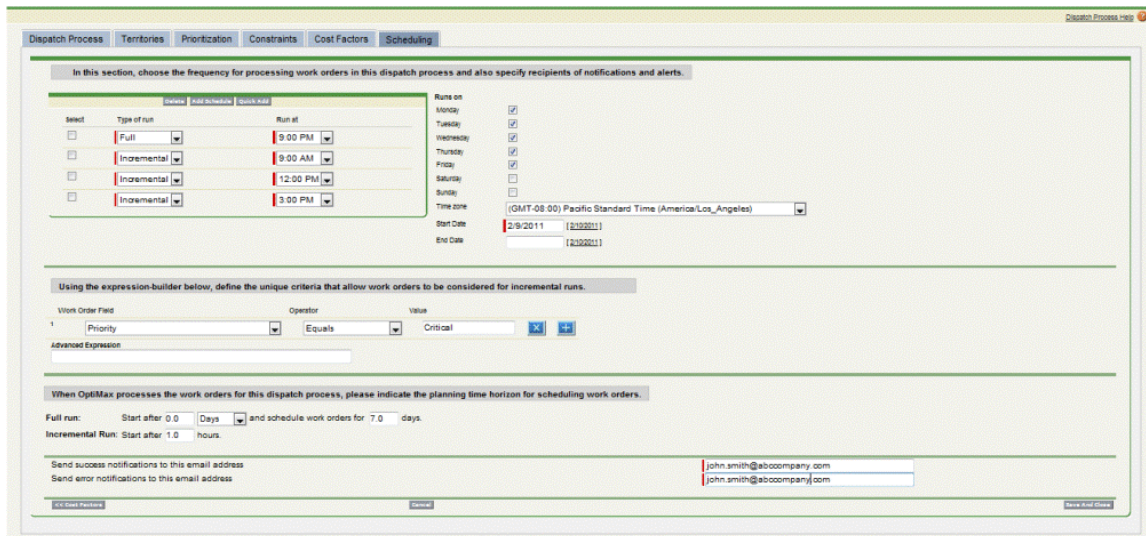
9. In the **Cost Factors** screen you can fine tune the relative cost/weight of various factors that influence the choice of the technician for a Work Order and also the appropriate slot in the technician's calendar. In the Cost Factors screen:



Note: When the Slider is dragged to 100, the handle of the slider will not be visible. Click anywhere on the slider area to view the handle.

- Adjust the slider value between **1** and **100** to set the weight of Work Order time windows. This indicates how important it is for your organization to adhere to the time window commitments indicated on a Work Order. Work Order time windows are dictated by booking window, SLA or access hours in that order. Use a higher value to achieve higher levels of conformance to time window commitments.
- Adjust the slider value between **1** and **100** to set the weight of total distance for all technicians in a given optimization run. A higher value will force the optimizer to keep the total distance covered by all the technicians in the given optimization run to the minimum possible.
- Adjust the slider value between **1** and **100** to set the weight of Route Distance for a technician. When set to a higher value, the total distance traveled by a technician is kept within the maximum distance limit configured for the technician or territory (whichever is available).
- Adjust the slider value between **1** and **100** to set the weight of time taken by a route. When set to a higher value, the total time spent by a technician traveling and servicing Work Orders will be kept within the maximum time limit configured for the technician or territory (whichever is available).
- Adjust the slider value between **1** and **100** to set the relative weight of matching qualified technicians required for a Work Order. By considering the qualifying technicians, OptiMax considers the skills, eligibility, and product specialization required for the Work Order.
- The relative values of the above parameters determine what takes precedence. For example, if the first 4 parameters have the same weight, say 100 (the maximum value allowed), then the Work Orders will be scheduled in such a way that:
 - All Work Order time windows will be adhered to.
 - Then, the total distance is kept to the minimum.
 - Then, the route distance will be kept within the specified limits.
 - Then, the route time will be kept within the specified limits.
- When running dispatch optimization in **non-STRICT** mode, if a constraint has to be violated, the optimizer will allow the violation of route time constraint first, route distance constraint next, total distance constraint next, and finally the Work Order time window.

- Click **Scheduling** or the **Scheduling** tab. The Scheduling tab appears as shown below:



The screenshot shows the 'Scheduling' tab of the 'Dispatch Process' application. The interface includes a navigation bar with tabs: Dispatch Process, Territories, Prioritization, Constraints, Cost Factors, and Scheduling. The main content area is titled 'In this section, choose the frequency for processing work orders in this dispatch process and also specify recipients of notifications and alerts.' It features a table for scheduling runs with columns for 'select', 'Type of run', and 'Run at'. Below this is a section for defining criteria for incremental runs using an expression builder. At the bottom, there are fields for planning time horizon and email notifications.

select	Type of run	Run at
<input type="checkbox"/>	Full	9:00 PM
<input type="checkbox"/>	Incremental	9:00 AM
<input type="checkbox"/>	Incremental	12:00 PM
<input type="checkbox"/>	Incremental	3:00 PM

Run on: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday. Time zone: (GMT-08:00) Pacific Standard Time (America/Los_Angeles). Start Date: 2/9/2011, End Date: 12/30/2011.

Using the expression-builder below, define the unique criteria that allow work orders to be considered for incremental runs. Work Order Field: Priority, Operator: Equals, Value: Critical.

When OptiMax processes the work orders for this dispatch process, please indicate the planning time horizon for scheduling work orders. Full run: Start after 0.0 Days and schedule work orders for 7.0 days. Incremental Run: Start after 1.0 hours.

Send success notifications to this email address: john.smith@abocompany.com. Send error notifications to this email address: john.smith@abocompany.com.

Figure 13: Scheduling Tab

- In the **Scheduling** tab, you can specify the schedule for running the OptiMax jobs for this dispatch process. You can configure jobs to run at different times of the day. Jobs can be of two types: **Full** and **Incremental**. Full run considers all work orders that match the entry criteria for the dispatch process. Incremental run applies additional criteria to narrow the scope of work orders considered for dispatching. Typically full runs are scheduled less frequently (once a day for example), and incremental runs are scheduled in a higher frequency between two full runs. The purpose of incremental runs is to process *critical* work orders that need to be dispatched during the working hours by rearranging the active schedule of technicians. In the Scheduling screen:

- Use the top left section to specify the job schedule:
 - If you know the specific times at which a job must run, click **Add Schedule**. A blank record will be inserted at the bottom of the job list. Select **Type of run** and the time the job must run.
 - If you like to create multiple job records in one go, click **Quick Add**. A popup screen appears. Select **Start Time**, **End Time**, and **Type of run**. Enter the frequency of job and click **Add**. Multiple job records will be created between the start time and end time in the specified frequency.
- Select the days on which the OptiMax jobs should run and the time zone in which the job times are specified. This applies to all types of jobs, full and incremental.
- Enter a start date, which is mandatory. This allows you to setup a process ahead of time and deploy it in the future in alignment with your organizational readiness.
- Enter an end date. To leave the process perpetually running, leave the end date blank. Enter a valid date only if you expect to revisit the process later or for trial deployments.
- If the schedule involves incremental runs, define the criteria using the expression builder. In order to be considered for incremental runs, a work order must qualify the entry criteria for the dispatch process and the additional criteria specified here.
- Enter your planning horizon for full runs. Planning horizon has two elements: Lead-time and Number Of Days to plan.
 - Lead-time can be specified as **Hours** or **Days**. Use **Hours** when you have more than one full run within a day and need more immediate scheduling impact.
 - For example, to plan for the next week excluding the current day, enter 1 and 5 in the start and number of days. OptiMax calculates the resource capacity based on this entry.
 - It is strongly recommended to provide adequate capacity in order to accommodate your peak work volumes.
- If applicable, enter the lead-time as number of hours to be used for incremental runs.
- Enter an email ID to receive email notifications regarding successful completion of OptiMax jobs. While this is optional, it is recommended to use this field to receive

notifications in the initial stages of a process deployment. In addition, to avoid ongoing maintenance, use a distribution list or group email ID.

- Enter an email ID to receive email notifications regarding any errors encountered from OptiMax jobs. Besides ServiceMax administrators, it is recommended to include the owners of this dispatch process (service managers) as recipients of this email. This allows them to resolve any data related issues immediately.

11. Click **Save And Close**. Saving dispatch process definition might take some time since the screen connects to the OptiMax engine to perform the necessary validations before saving. See [Manage OptiMax Credentials](#) below.



Note: Fields from some standard objects such as Cases and Opportunities are available for use in Dispatch processes only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Deleting Dispatch Processes

To delete one or more dispatch processes:

1. Check the **Select** checkbox adjacent to the dispatch process records you want to delete.
2. Click **Delete** and then click **OK** when prompted for confirmation.



Note: Dispatch processes referred to in other dispatch processes cannot be deleted.

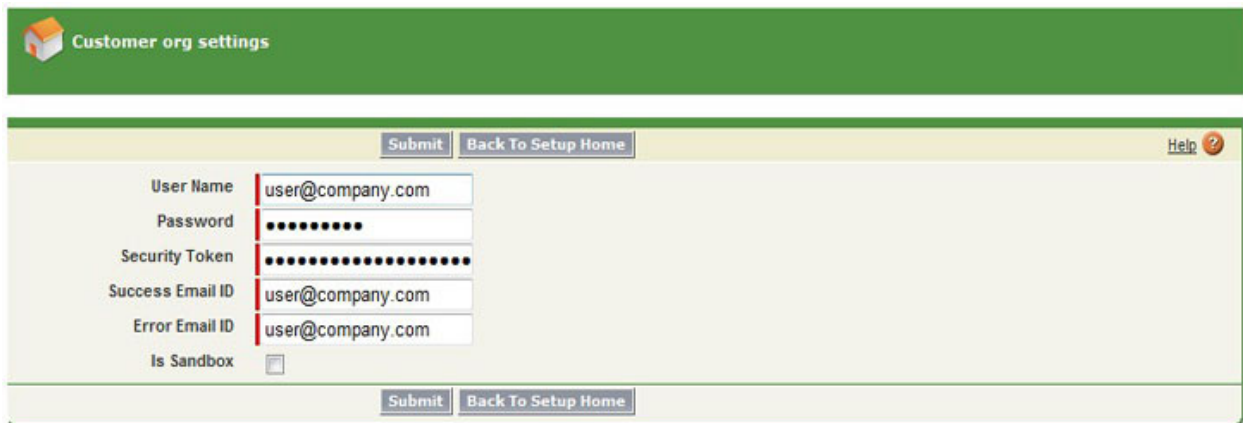
Manage OptiMax Credentials

When OptiMax was provisioned and enabled for your organization, one of your Salesforce user logins with System Administrator privileges would have been configured as the **OptiMax User**. The purpose of this login is to enable ServiceMax to authenticate with OptiMax, as well as for the OptiMax engine to connect to ServiceMax to perform dispatch optimization.

Whenever the password or security token for the OptiMax user changes, you must *immediately* publish the change to OptiMax. Not doing so in a timely fashion will result in failure of OptiMax jobs.

To update OptiMax login credentials and success/error notification settings for OptiMax:

1. Click **Home > ServiceMax Setup > Dispatch Management > OptiMax Settings**. The OptiMax Credentials screen appears:



The screenshot shows the 'Customer org settings' page for OptiMax. It features a green header bar with the ServiceMax logo and the text 'Customer org settings'. Below the header is a yellow bar containing 'Submit' and 'Back To Setup Home' buttons, and a 'Help' icon. The main content area is white and contains several input fields: 'User Name' (filled with 'user@company.com'), 'Password' (masked with dots), 'Security Token' (masked with dots), 'Success Email ID' (filled with 'user@company.com'), 'Error Email ID' (filled with 'user@company.com'), and 'Is Sandbox' (a checkbox). At the bottom of the form is another yellow bar with 'Submit' and 'Back To Setup Home' buttons.

Figure 14: OptiMax Credentials Screen

2. Enter the user name, password, and security token.
3. Enter the email ID to receive notifications regarding successful OptiMax runs. To ensure scalability, use a distribution list instead of a specific user's email ID.
4. Enter the email ID to receive notifications regarding any failures encountered in OptiMax runs. To ensure scalability, use a distribution list instead of a specific user's email ID.
5. Check **Is Sandbox** if your Org type is Sandbox.
6. Click **Submit** to save your changes.

Configuring MTTS Rules

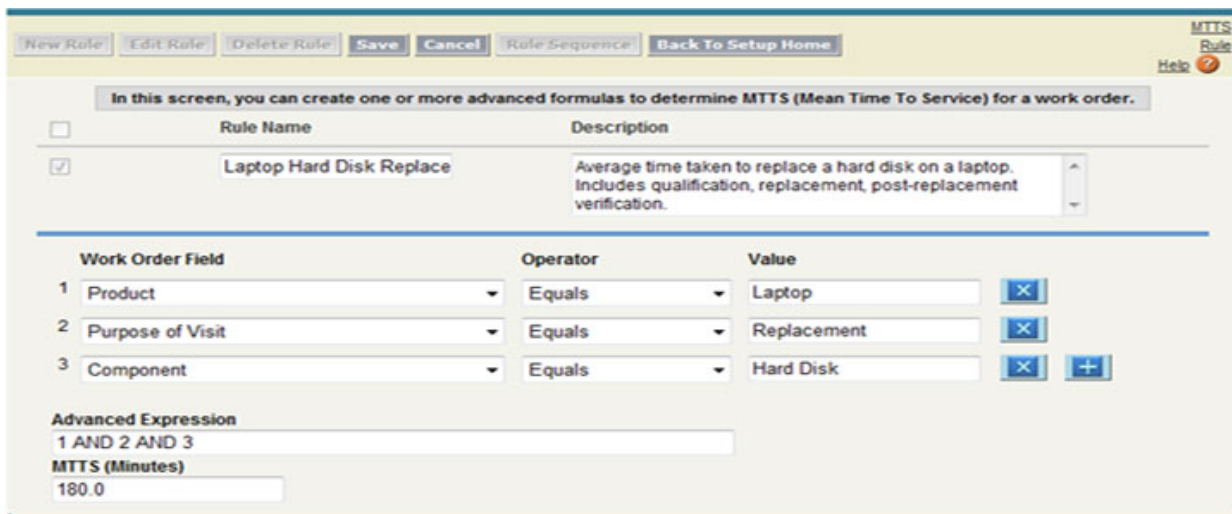
MTTS (Mean Time To Service) is a combination of the industry standard terms MTTR and MTTI.

- **MTTR** is an abbreviation for Mean Time To Recovery or Mean Time To Repair which represents the average time taken to put a defective component or system back in working order.
- **MTTI** is an abbreviation for Mean Time To Install.

MTTS is represented in minutes in ServiceMax and is used by the OptiMax engine to schedule an appropriate duration on a technician's calendar.

To set up MTTS rules in ServiceMax:

Click **Home > ServiceMax Setup > Dispatch Management > MTTS Rules**. The MTTS Rules screen appears with the list of all existing MTTS rules.



New Rule Edit Rule Delete Rule Save Cancel Rule Sequence Back To Setup Home

MTTS Rule Help

In this screen, you can create one or more advanced formulas to determine MTTS (Mean Time To Service) for a work order.

	Rule Name	Description
<input checked="" type="checkbox"/>	Laptop Hard Disk Replace	Average time taken to replace a hard disk on a laptop. Includes qualification, replacement, post-replacement verification.

	Work Order Field	Operator	Value	
1	Product	Equals	Laptop	X
2	Purpose of Visit	Equals	Replacement	X
3	Component	Equals	Hard Disk	X +

Advanced Expression

1 AND 2 AND 3

MTTS (Minutes)

180.0

Figure 15: MTTS Rules Screen

In the **MTTS Rules** screen:

- To edit an existing rule, check the **Select** checkbox against the rule and then click **Edit Rule**.
- To delete an existing rule, check the **Select** checkbox against the rule and click **Delete Rule**.
- To create a new MTTS rule, see the section below.

To create a new MTTTS rule:

1. From the MTTTS Rules screen, click **New Rule**.
2. Enter Rule Name. Ensure the rule name is readable and indicates the purpose of the MTTTS rule. For example "Hard Disk Replacement On Dell Notebooks."
3. Enter a detailed description of the rule.
4. Using the combination of Work Order field name, operator and value, enter the criteria for each rule. Make sure the criteria are exclusive between each rule. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use the Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
5. Enter MTTTS in minutes.
6. Click **Save**. Alternatively, to undo your changes and return to the list view, click **Cancel**.
7. To dictate the sequence in which these rules are processed, click **Rule Sequence**. In the MTTTS Rules list popup screen (sample below), arrange the rules as needed.

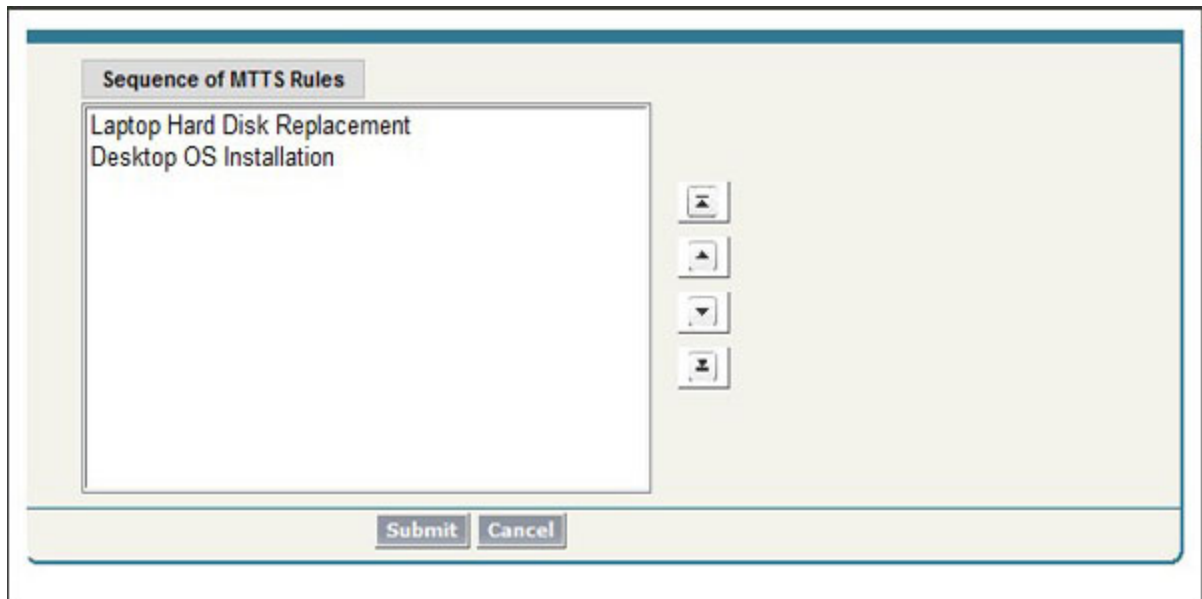


Figure 16: MTTTS Rules List

8. Note that the first matching rule in the list will be applied. If you have hierarchical rules, you must keep the most granular rules at the top. For example, if Rule1 uses City only, and Rule2 uses Zip and City, Rule2 must be moved before Rule1. Otherwise,

Rule2 will never be considered for determining MTTS of a Work Order.

9. Click **Back To Setup Home** to return to the ServiceMax setup home page.



Note: Fields from some standard objects such as Cases and Opportunities are available for use in MTTS rules only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Configuring Territory Matching Rules

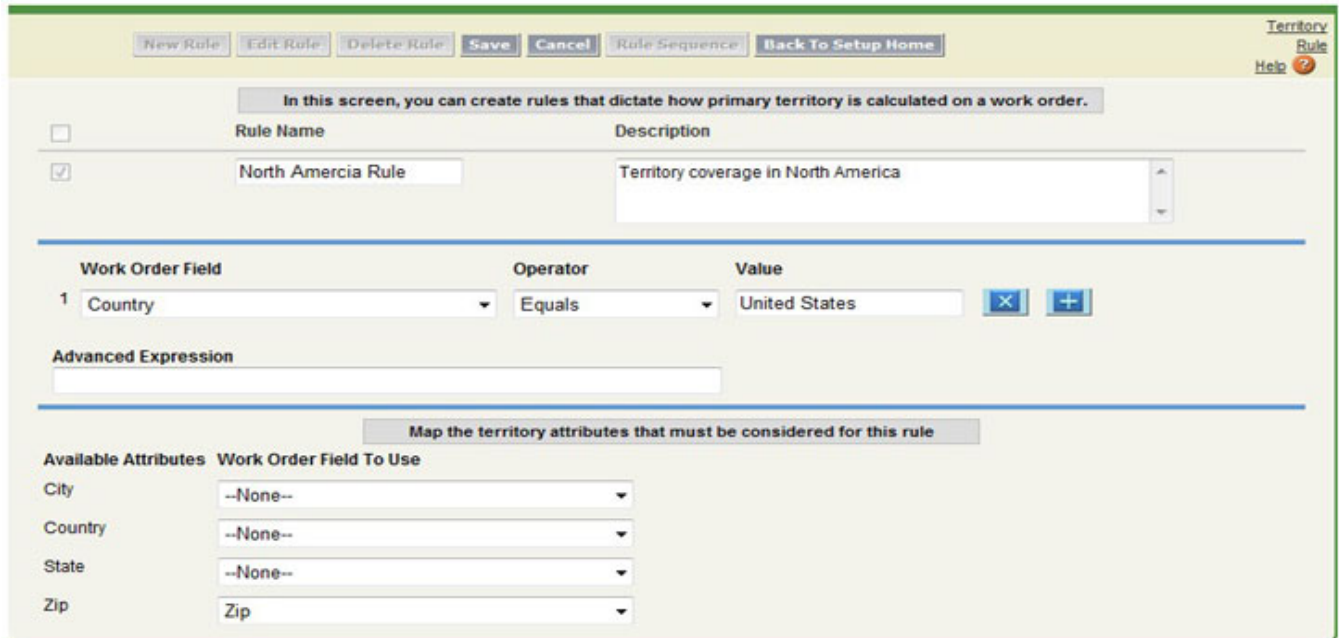
Since ServiceMax provides a flexible way of defining territory coverage, an organization can potentially use multiple ways of territory coverage for different territories. For example, a global organization could use Zip codes to define territory coverage in North America, Country to define territory coverage in Europe, and a combination of Country and Product to define coverage in Asia-Pacific.

One of the key first steps in dispatching is to identify the Primary Territory of a Work Order. If your organization uses varying flavors of territory coverage, you must define Territory Matching Rules to indicate the specific territory coverage attributes to be used for various Work Orders. In the above example, we must define three rules that say:

- Use Zip for all North America Work Orders.
- Use Country for all Europe Work Orders.
- Use Country and Product for all Asia-Pacific Work Orders.

To set up Territory Matching rules in ServiceMax:

Click **Home > ServiceMax Setup > Territory Matching Rules**. The list of all existing territory match rules is displayed in Territory Matching Rules screen as shown below:



The screenshot shows the 'Territory Matching Rules' screen. At the top, there are buttons: 'New Rule', 'Edit Rule', 'Delete Rule', 'Save', 'Cancel', 'Rule Sequence', and 'Back To Setup Home'. A 'Territory Rule' header is in the top right corner. Below the buttons, a message states: 'In this screen, you can create rules that dictate how primary territory is calculated on a work order.' There is a table with two columns: 'Rule Name' and 'Description'. The first row has a checked checkbox, 'North America Rule', and 'Territory coverage in North America'. Below this is a section for defining the rule with three columns: 'Work Order Field', 'Operator', and 'Value'. The first row shows 'Country', 'Equals', and 'United States'. There are 'x' and '+' buttons next to the value. Below this is an 'Advanced Expression' field. At the bottom, there is a section titled 'Map the territory attributes that must be considered for this rule' with a table of 'Available Attributes' and 'Work Order Field To Use'. The attributes are City, Country, State, and Zip. The 'Work Order Field To Use' column has dropdown menus for each attribute, with 'City' and 'Country' set to '--None--' and 'State' and 'Zip' set to 'Zip'.

Figure 17: Territory Matching Rules Screen

In the **Territory Matching Rules** screen:

- To edit an existing rule, check the **Select** checkbox against the rule and then click **Edit Rule**.
- To delete an existing rule, check the **Select** checkbox against the rule and then click **Delete Rule**.
- To create a new territory match rule, see the section below.

To create a new Territory Match rule:

1. From the Territory Matching Rules screen, click **New Rule**.
2. Enter Rule Name. Make sure the rule name is readable and indicates the purpose of the territory match rule. For example "Zip Based Territories In United States".
3. Enter a detailed description of the rule.
4. Using the combination of Work Order field name, operator and value, enter the criteria for each rule. Make sure the criteria are exclusive between each rule. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use the Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
5. All available territory coverage attributes are displayed in the bottom section. Against

each applicable coverage attribute, select the corresponding Work Order field to use. Leave the unused coverage attributes blank. For example, if North America uses Zip to define territory coverage, select the Zip field from Work Order and leave City, Country and State blank.

6. To dictate the sequence in which these rules are processed, click **Rule Sequence**. In the Territory Rule Sequence screen (sample below), arrange the rules as needed.

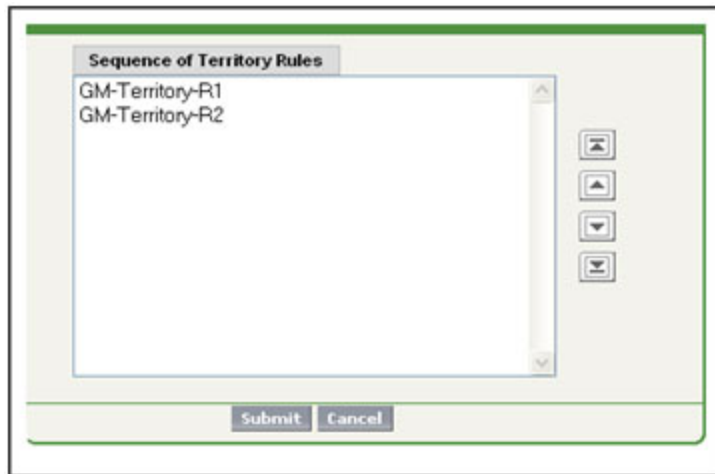


Figure 18: Territory Rule Sequence Screen

7. Note that the first matching rule in the list will be applied. If you have hierarchical rules, you must keep the most granular rules at the top. For example, if Rule1 uses City only, and Rule2 uses Zip and City, Rule2 must be moved before Rule1. Otherwise, Rule2 will never be considered for Territory Matching Rule.
8. Click **Save**. Alternatively, to undo your changes and return to the list view, click **Cancel**.
9. Click **Back To Setup Home** to return to the ServiceMax setup home page.



Note: Fields from some standard objects such as Cases and Opportunities are available for use in Territory Match rules only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Configuring Event Hover

When the mouse is moved on a calendar event in Dispatch Console, relevant information about the event and the corresponding Work Order is displayed as a hover. Fields used to display the hover information can be fully configured in ServiceMax.

To set up Hover rules in ServiceMax, click **Home > ServiceMax Setup > Event Hover Rules**. The list of all existing hover rules appears. A hover rule lists Work Order fields to be used in the hover display.

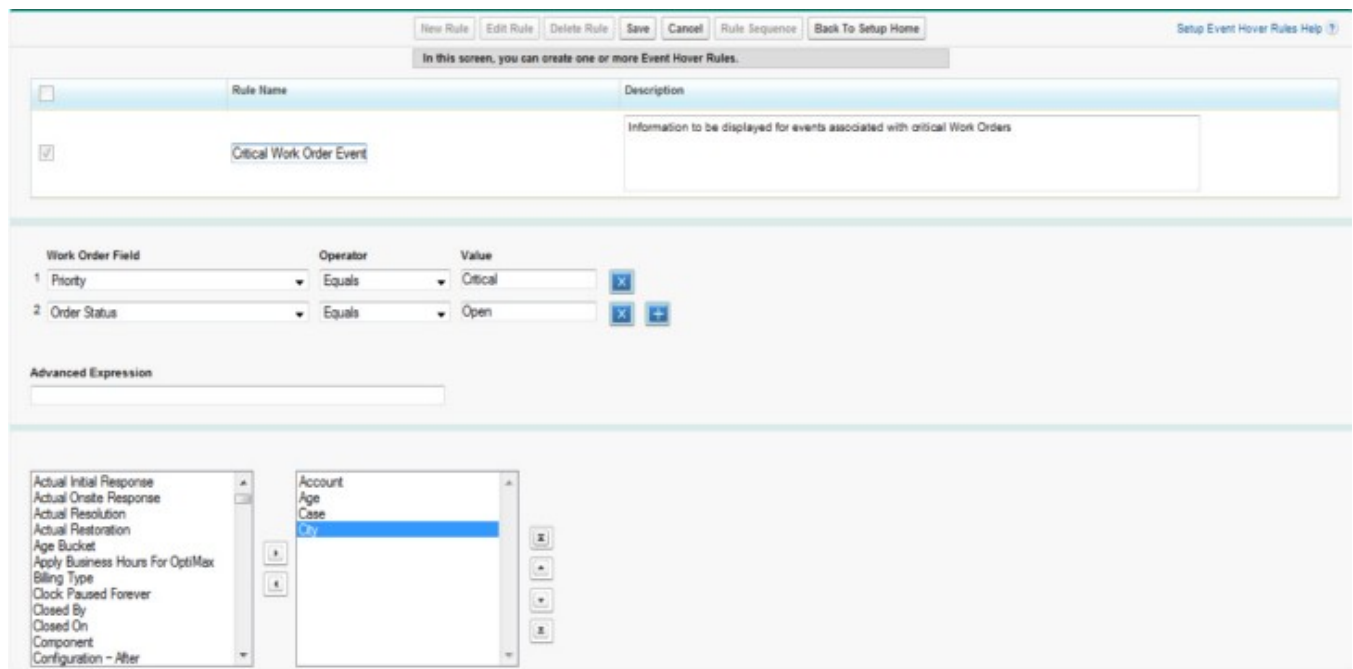


Figure 19: Event Hover Rules Screen

In the **Event Hover Rules** screen:

- To edit an existing rule, check the **Select** checkbox against the rule and then click **Edit Rule**.
- To delete an existing rule, check the **Select** checkbox against the rule and then click **Delete Rule**.
- To create a new rule, see the section below.

To create a new Event Hover rule:

1. In the Event Hover Rules screen, click **New Rule**.
2. Enter Rule Name. Make sure the rule name is readable and indicates the purpose of the hover rule. For example "Critical Work Orders".
3. Enter a detailed description of the rule.
4. Using the combination of Work Order field name, operator and value, enter the criteria for each rule. Make sure the criteria are exclusive between each rule. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use the Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
5. Select the relevant Work Order fields from the list on the left and move them to the right. Use the Up and Down buttons to set the display order of the selected fields in the hover.
6. Click **Save**. Alternatively, to undo your changes and return to the list view, click **Cancel**.
7. To dictate the sequence in which these rules are processed, click **Rule Sequence**. In the Event Hover Rule Sequence screen (sample below), arrange the rules as needed.

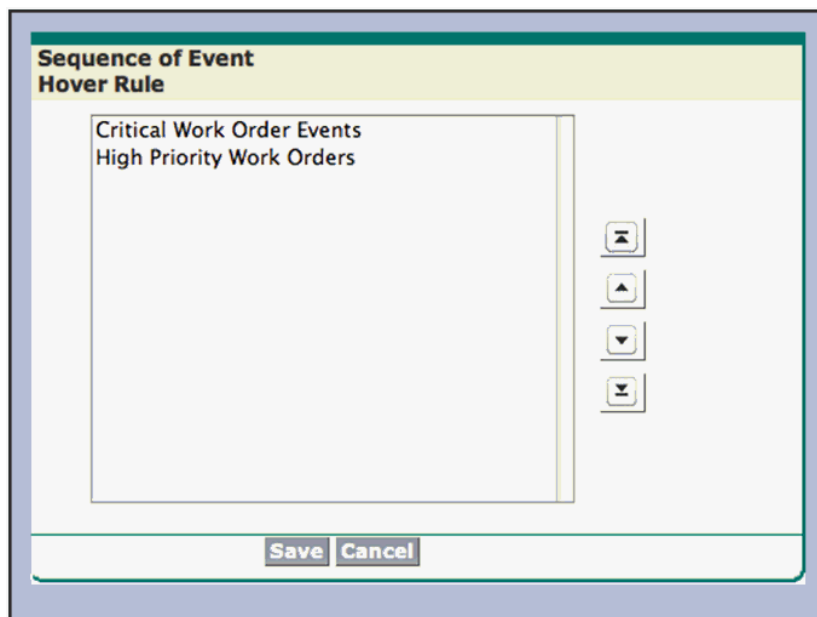


Figure 20: Events Hover Rule Sequence Screen

8. Note that the first matching rule in the list will be applied. If you have hierarchical rules, you must keep the most granular rules at the top. For example, if Rule1 uses City only, and Rule2 uses Zip and City, Rule2 must be moved before Rule1. Otherwise, Rule2 will never be considered for determining MTTs of a Work Order.
9. Click **Back To Setup Home** to return to the ServiceMax setup home page.

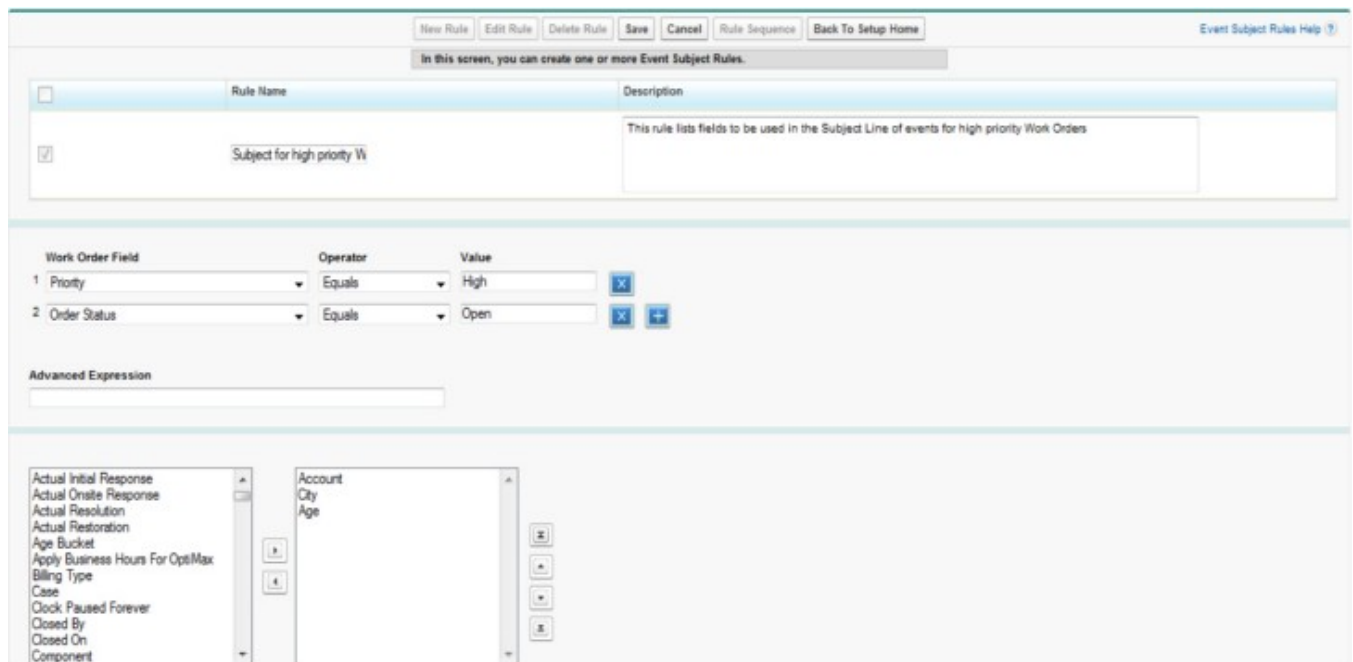


Note: Fields from some standard objects such as Cases and Opportunities are available for use in event hover rules only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Configuring Event Subject

When a new event is created in Dispatch Console either by clicking **New Event** or by drag 'n' drop of the Work Order into the calendar, the default value for the event's Subject is fully configurable.

To set up Event Subject rules in ServiceMax, click **Home > ServiceMax Setup > Event Subject Rules**. The list of all existing subject rules appear. A subject rule lists the work order fields to be used in the subject.



The screenshot shows the 'Event Subject Rules' configuration page. At the top, there are buttons for 'New Rule', 'Edit Rule', 'Delete Rule', 'Save', 'Cancel', 'Rule Sequence', and 'Back To Setup Home'. Below these is a header bar with 'Rule Name' and 'Description' columns. A table lists existing rules, with one rule 'Subject for high priority W' selected. Below the table, there is a section for creating a new rule. It includes a 'Work Order Field' dropdown, an 'Operator' dropdown, and a 'Value' dropdown. The first rule is 'Priority' equals 'High'. The second rule is 'Order Status' equals 'Open'. There is an 'Advanced Expression' field below this. At the bottom, there are two lists of available fields: 'Actual Initial Response', 'Actual Onsite Response', 'Actual Resolution', 'Actual Restoration', 'Age Bucket', 'Apply Business Hours For OptiMax', 'Billing Type', 'Case', 'Clock Paused Forever', 'Closed By', 'Closed On', 'Component', 'Account', 'City', and 'Age'. There are also buttons for adding and removing fields from the rule.

Figure 21: Event Subject Rule Screen

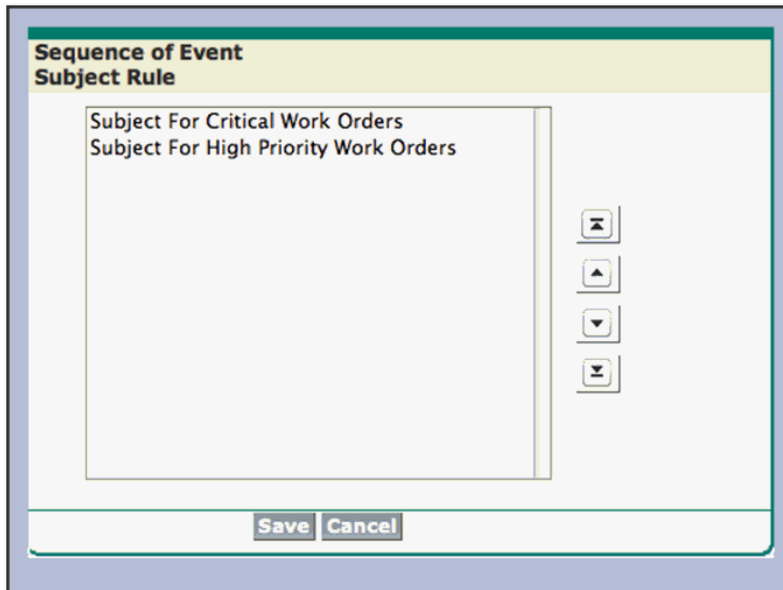
In the **Event Subject Rule** screen:

- To edit an existing rule, check the **Select** checkbox against the rule and then click **Edit Rule**.
- To delete an existing rule, check the **Select** checkbox against the rule and then click **Delete Rule**.
- To create a new rule, see the section below.

To create a new Event Subject rule:

1. In the Event Subject Rule screen, click **New Rule**.
2. Enter Rule Name. Make sure the rule name is readable and indicates the purpose of the hover rule. For example "Critical Work Orders."
3. Enter a detailed description of the rule.
4. Using the combination of Work Order field name, operator and value, enter the criteria for each rule. Make sure the criteria are exclusive between each rule. Use the buttons marked with **x** and **+** to remove and add conditions respectively. If required, use the Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
5. Select the relevant Work Order fields from the list on the left and move them to the right. Use the Up and Down buttons to set the display order of the selected fields in the subject. Value from the selected fields will appear in the Event Subject separated by a semi-colon in the dispatch console.
6. Click **Save**. Alternatively, to undo your changes and return to the list view, click **Cancel**.
7. To dictate the sequence in which these rules are processed, click **Rule Sequence**. In the Event Subject Rule Sequence screen (sample below), arrange the rules as

needed.



The screenshot shows a web interface titled "Sequence of Event Subject Rule". It features a text area containing two lines of text: "Subject For Critical Work Orders" and "Subject For High Priority Work Orders". To the right of the text area are four small icons for editing: a plus sign, an up arrow, a down arrow, and a trash can. At the bottom of the interface are "Save" and "Cancel" buttons.

Figure 22: Event Subject Rule Sequence Screen

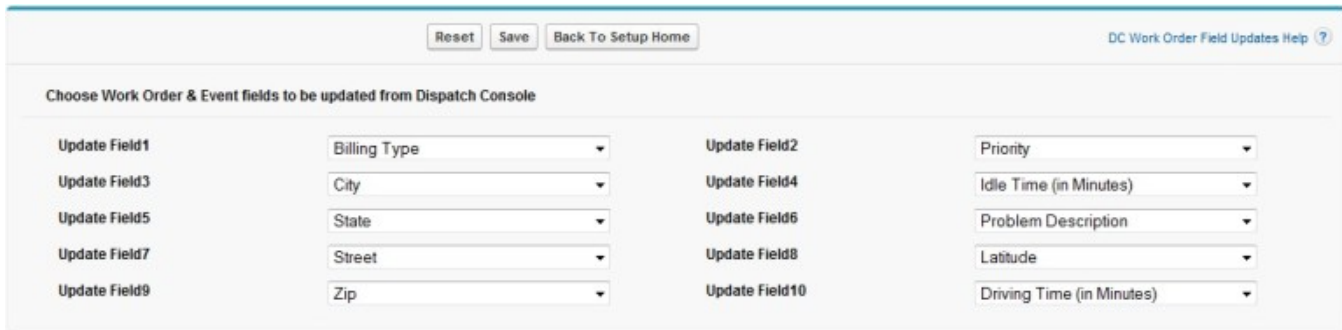
8. Note that the first matching rule in the list will be applied. If you have hierarchical rules, you must keep the most granular rules at the top. For example, if Rule1 uses City only, and Rule2 uses Zip and City, Rule2 must be moved before Rule1. Otherwise, Rule2 will never be considered for determining the default subject for an event.
9. Click **Back To Setup Home** to return to the ServiceMax setup home page.



Note: Fields from some standard objects such as Cases and Opportunities are displayed in Event Subject rules only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Configuring DC Field Updates

Click **Home > ServiceMax Setup > Dispatch Management > Dispatch Console field updates** to launch the screen as shown below:



Reset Save Back To Setup Home DC Work Order Field Updates Help ?

Choose Work Order & Event fields to be updated from Dispatch Console

Update Field1	Billing Type	Update Field2	Priority
Update Field3	City	Update Field4	Idle Time (in Minutes)
Update Field5	State	Update Field6	Problem Description
Update Field7	Street	Update Field8	Latitude
Update Field9	Zip	Update Field10	Driving Time (in Minutes)

Figure 23: Configure Work Order & Event Fields Screen

In this screen, you can configure up to ten Work Order and Event fields to be updated from Dispatch Console. Standard Event fields cannot be configured. Fields configured here will appear in the Create/Edit Event screen in Dispatch Console. Even if work order fields are configured here, they will appear only for work order-related events.

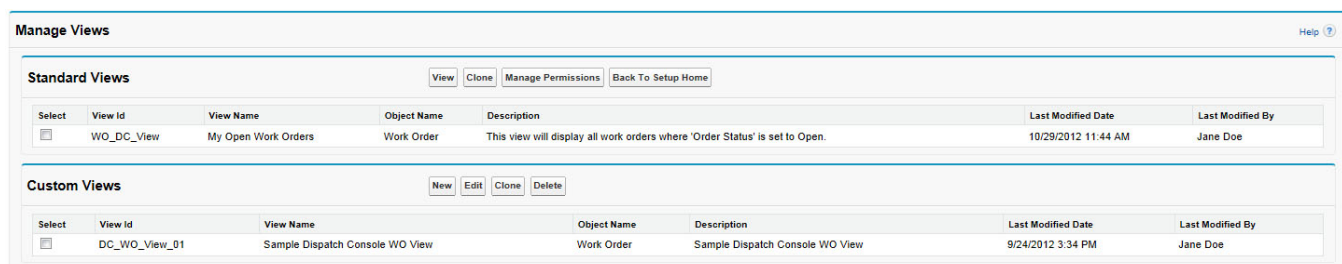
- Click **Save** to save the changes made.
- Click **Reset** to discard your changes and continue stay on the same page to make further changes.
- Click **Back to Setup Home** to return to the ServiceMax setup home page.



Note: Rich text, Rollup, and Lookup text fields are not supported.

Configuring Work Order Custom Views

Click **Home > ServiceMax Setup > Dispatch Management > Work Order Views** to launch the screen as shown below:



Manage Views Help ?

Standard Views View Clone Manage Permissions Back To Setup Home

Select	View Id	View Name	Object Name	Description	Last Modified Date	Last Modified By
<input type="checkbox"/>	WO_DC_View	My Open Work Orders	Work Order	This view will display all work orders where 'Order Status' is set to Open.	10/29/2012 11:44 AM	Jane Doe

Custom Views New Edit Clone Delete

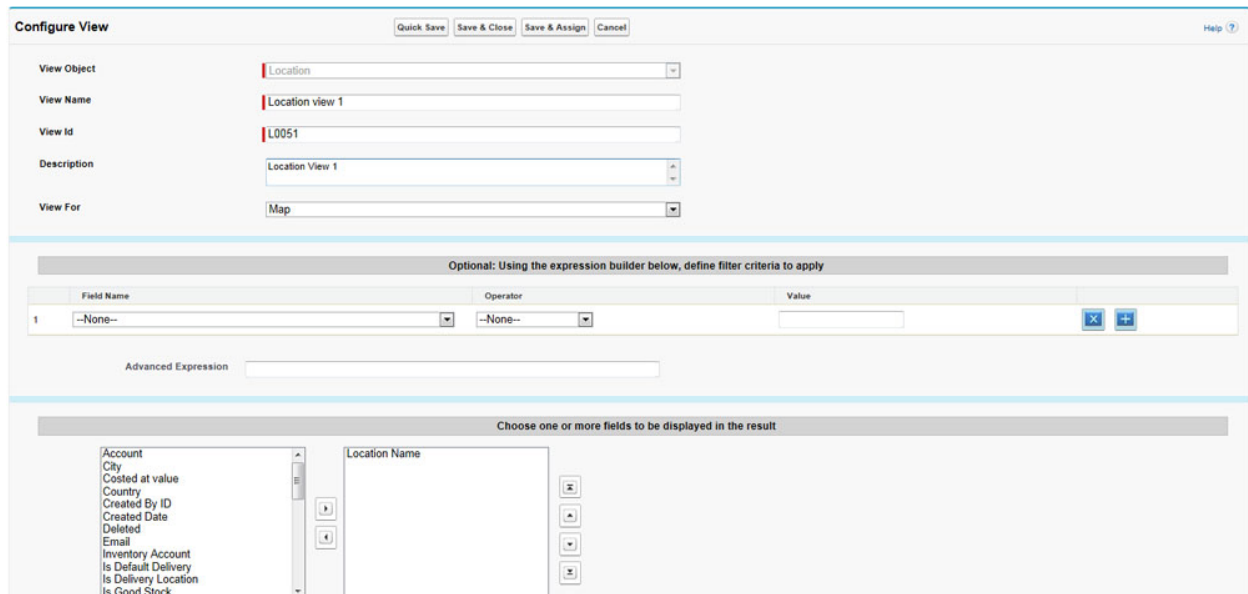
Select	View Id	View Name	Object Name	Description	Last Modified Date	Last Modified By
<input type="checkbox"/>	DC_WO_View_01	Sample Dispatch Console WO View	Work Order	Sample Dispatch Console WO View	9/24/2012 3:34 PM	Jane Doe

Figure 24: Manage Views Screen

In this screen you can view standard Work Order Views or create custom Work Order Views. The View definition includes prefilter conditions, filter by owner and options for display result.

To create a new Custom View:

1. Click the **New** button. The Configure View screen displays.
2. Enter the **View Name**, **View Id**, and **Description** in the appropriate text fields. See figure below.
The View Object field defaults to Work Order.
3. Select the filter (**User's Records** or **All Records**) from the **Filter By Owner** picklist.
4. Use the expression builder, and if necessary, the Advanced Expression builder to define filter criteria for Work Order records.
5. Select one or more fields that will be displayed in the Work Order results.



The screenshot shows the 'Configure View' interface. At the top, there are buttons for 'Quick Save', 'Save & Close', 'Save & Assign', and 'Cancel'. Below these are input fields for 'View Object' (set to 'Location'), 'View Name' (set to 'Location view 1'), 'View Id' (set to 'L0051'), 'Description' (set to 'Location View 1'), and 'View For' (set to 'Map').

Below the input fields is a section titled 'Optional: Using the expression builder below, define filter criteria to apply'. It contains a table with columns 'Field Name', 'Operator', and 'Value'. The first row shows '1', '--None--', and '--None--'. There are also buttons for 'x' and '+'. Below this table is an 'Advanced Expression' input field.

At the bottom, there is a section titled 'Choose one or more fields to be displayed in the result'. It contains two lists of fields. The left list includes: Account, City, Costed at value, Country, Created By ID, Created Date, Deleted, Email, Inventory Account, Is Default Delivery, Is Delivery Location, and Is Good Stock. The right list includes: Location Name. There are buttons for adding and removing fields between the lists.

Figure 25: Configure View Screen

See Also:

Troubleshooting Configuration Issues

Standard Configuration Settings

ServiceMax Territories

Service Teams and Technician

DISPATCH CONSOLE VIEWS

Overview

Use the Dispatch Console Views option to view standard or custom Work Order, Location, and Account views. View definition includes the filter criteria including advanced expression if any, and the fields to be displayed in the result. You can also assign these views for Service Teams and Territories. These views can be filtered by ownership, preconditions, and display results.

Access and Permissions

Actions	User Permissions Needed
To view Dispatch Console Views:	"Read" on ServiceMax Processes, ServiceMax Config Data and Work Order.
To create or edit Dispatch Console Views:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data.
To delete Dispatch Console Views:	"Delete" on ServiceMax Processes and ServiceMax Config Data.
To view Dispatch Console Views Permissions:	"Read" on ServiceMax Processes, ServiceMax Config Data, Service Team and Territory.
To create or edit Dispatch Console Views Permissions:	"Create" and "Update" on ServiceMax Config Data.
To delete Dispatch Console Views Permissions:	"Delete" on ServiceMax Config Data.

Click **Home > ServiceMax Setup > Dispatch Management > Dispatch Console Views > Go** to launch the screen as shown below.

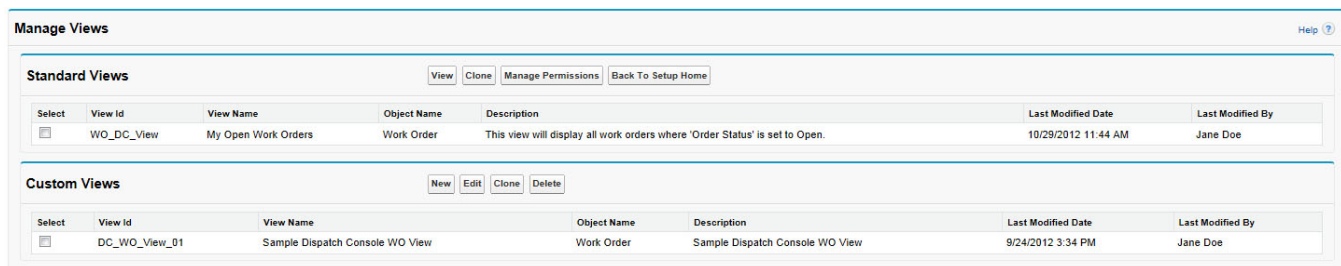


Figure 1: Manage Views Screen

In the Manage Views screen:

- You can view and clone standard Work Order, Location, and Account views.
- Create a new custom view (Work Order, Location, Account).
- Edit an existing custom view (Work Order, Location, Account).
- Clone a view.
- Delete a view.
- Manage view permissions.
- Return to Setup Home.

Creating a New View

To create a new view:

1. Click the **New** button.
2. In the Configure View screen, select a View Object (**Account**, **Location**, or **Work Order**). See figure below. (The View Object defaults to **None**).
3. Enter the **View Name**, **View Id**, and **Description** in the appropriate text boxes.
4. In the **View For** text box, select one of the following: **Grid**, **Map**, or **Grid And Map**.
5. Select the ownership (**User's Records**, **All Records**) in the **Filter By Owner** pick-list.

6. Use the expression builder, and if necessary, the Advanced Expression builder, to define filter criteria for the Object (**Account**, **Location**, or **Work Order**) records.
7. To add or delete an expression, click the **Add** or **Delete** buttons.
8. Select one or more fields that will be displayed in the Object (**Account**, **Location**, or **Work Order**) results.

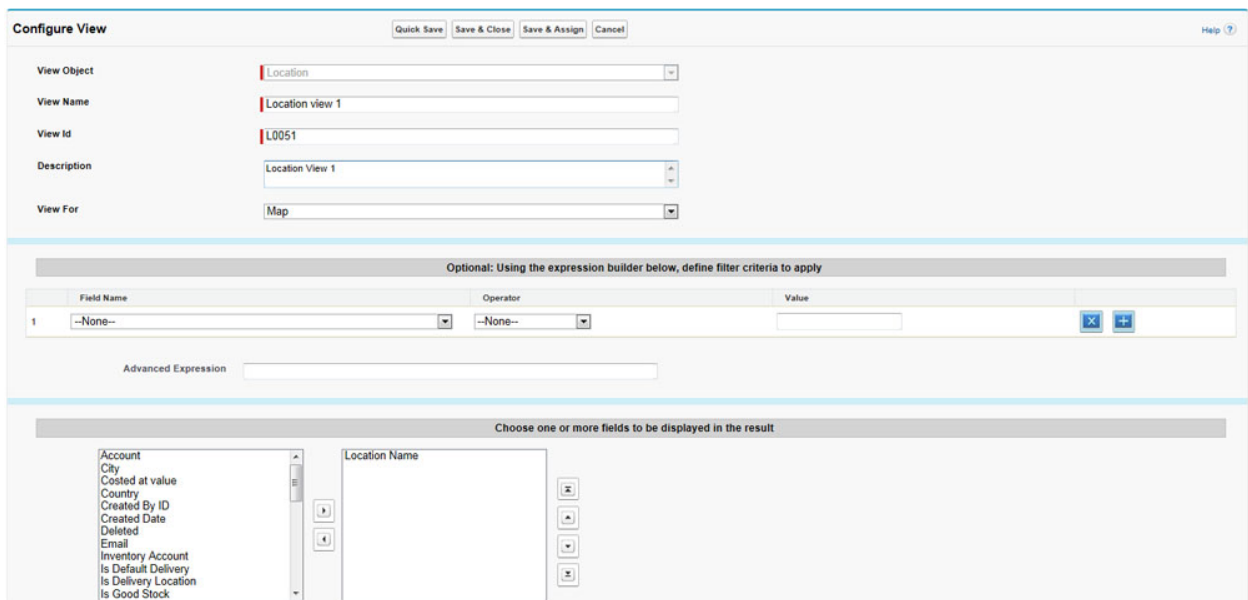


Figure 2: Configure View Screen

9. Click the **Save & Assign** button to assign the view to a Service Team or Territory.
 - a. In the Manage View Permissions screen, select a view from the **Select View** pick-list. See figure below.
 - b. Assign the selected view to a **Service Team** or **Territory**.
10. To assign a view to a Service Team:
 - a. Click the **Service Team** tab in the Manage View Permissions screen.
 - b. Add a team by clicking the **Add Team** button. See figure below.
 - c. In the **Service Team** text box, enter the name of team or search for a team using the **Lookup** icon.
 - d. Assign the view to either a **Dispatcher**, **Technician**, or **All**.

- e. If you want to conduct a keyword search for a service team, enter a keyword and click the **Go** button in the **Search for Territories by entering a keyword** text box.
- f. Click the **Add Selected** button to add the team to the Service Team tab area. Click **Cancel** to remove the service team from the search area.
- g. To delete a team, check a team from the **Service Team** checkbox, and click the **Delete** button. A popup window displays and asks you, "Are you sure?". Click **OK** to delete the view. Click **Cancel** to cancel the deletion.

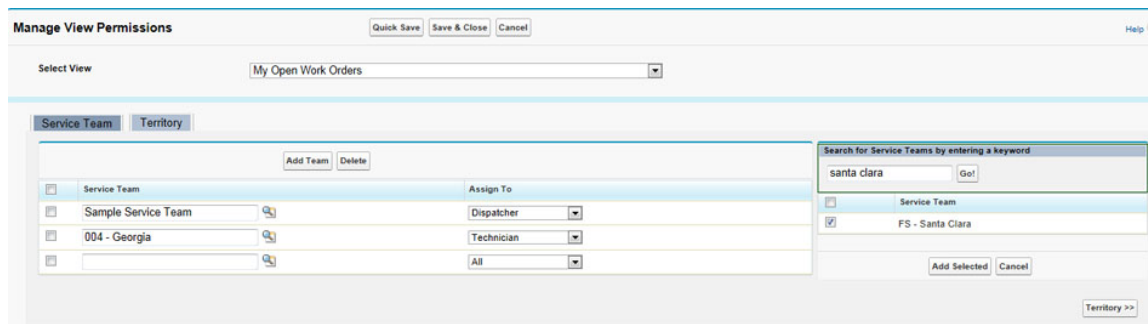


Figure 3: Manage View Permissions (Service Team)

11. To assign a view to a Territory:
 - a. Click the **Territory** tab in the Manage View Permissions screen. See figure below.
 - b. Add a territory by clicking the **Add Territory** button.
 - c. In the **Territory** text box, enter the name of territory or search for one using the **Lookup** icon.
 - d. Assign the view to either a **Dispatcher**, **Technician**, or **All**.
 - e. If you want to conduct a keyword search for a territory, enter a keyword and click the **Go** button in the **Search for Service Teams by entering a keyword** text box.
 - f. Click the **Add Selected** button to add the team to the Territory tab area. Click **Cancel** to remove the territory from the search area.
 - g. To delete a territory, check one from the **Territory** checkbox, and click the **Delete** button. A popup window displays and asks you, "Are you sure?". Click **OK**

to delete the view. Click **Cancel** to cancel the deletion.

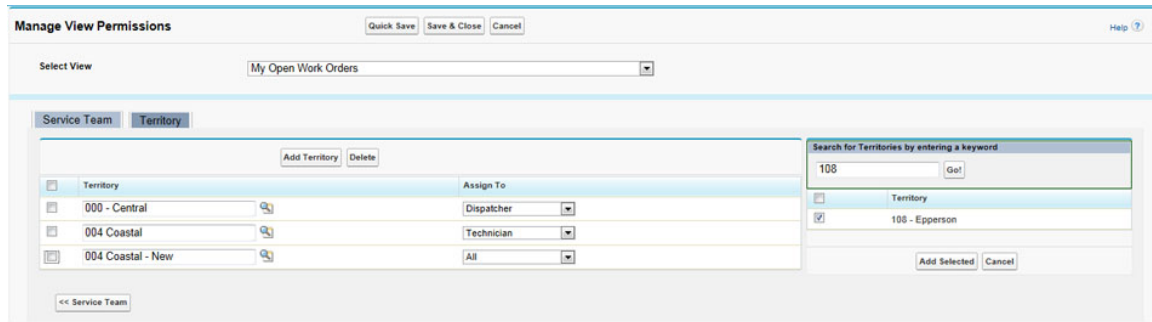


Figure 4: Manage View Permissions (Territory)

12. Click the **Quick Save** button to save the view and remain in the Custom View screen.
13. Click the **Save & Close** button to save the view and close the Manage View Permissions Screen.
14. Click the **Cancel** button if you want to cancel the permission.

Editing a View

To edit a view:

1. Check the **Select** checkbox of the view you would like to edit.
2. Click the **Edit** button.
3. In the Configure View screen, update the **View Name**, **View Id**, and **Description** in the appropriate text boxes if necessary. (The View Object defaults to **Work Order**). See figure below.
4. Make changes to the **Field Name**, **Operator**, and **Value** in the expression builder if necessary. Add or delete expressions as necessary.
5. Use the Advanced Expression builder to define filter criteria for Work Order records.
6. Select one or more fields that will be displayed in the Work Order results.
7. If you need to update the view permissions, click the **Save & Assign** button. See [Manage View Permissions](#) for steps on how to update this section.
8. Click the **Quick Save** button to save the view and remain in the Custom View screen.

9. Click the **Save & Close** button to save the view and close the Custom View Screen.
10. Click the **Cancel** button if you want to cancel the view.

Cloning a View

To clone a view:

1. Check the **Select** checkbox of the view you would like to clone.
2. Click the **Clone** button.
3. In the Configure View screen, select a new **View Name**, **View Id**, and **Description**.
4. If necessary, update the view permissions, click the **Save & Assign** button. For more information about updating view permissions, see [Managing View Permissions](#).
5. Click the **Quick Save** button to save the view and remain in the Custom View screen.
6. Click the **Save & Close** button to save the view and close the Custom View Screen.
7. Click the **Cancel** button if you want to cancel the view.

Deleting a View

To delete a view:

1. Check the **Select** checkbox of the view you would like to delete.
2. Click the **Delete** button.
3. A popup window displays and asks you, "Are you sure?".
 - a. Click **OK** to delete the view.
 - b. Click **Cancel** to cancel the deletion.

Managing View Permissions

To assign a view permissions:

1. Check the **Select** checkbox of the view you would like to assign permissions.
2. Click the **Manage Permissions** button.

3. In the Manage View Permissions screen, select a view from the **Select View** picklist.
4. Assign the selected view to a **Service Team** or a **Territory**.
5. To assign a view to a Service Team:
 - a. Click the **Service Team** tab in the Manage View Permissions screen.
 - b. Add a team by clicking the **Add Team** button.
 - c. In the **Service Team** text box, enter the name of team or search for a team using the **Lookup** icon.
 - d. Assign the view to either a **Dispatcher**, **Technician**, or **All**. If you assign the view to a technician, see figure below.

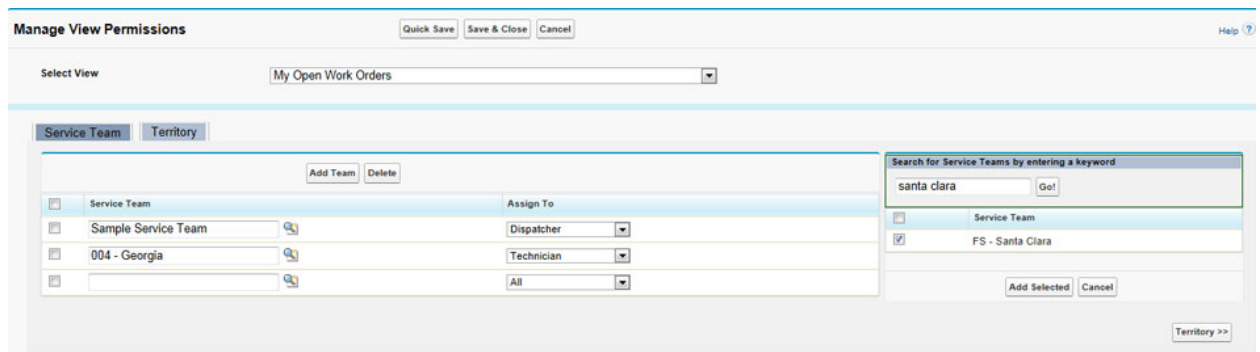
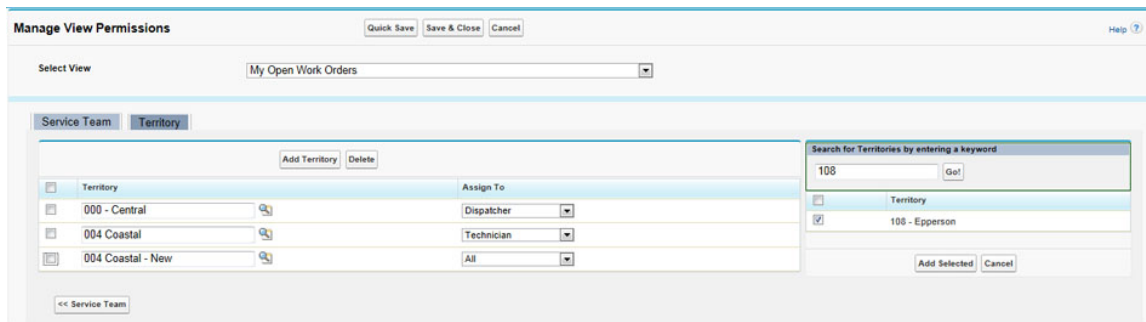


Figure 5: Manage View Permissions - Assign the View to a Technician

- e. If you want to conduct a keyword search for a service team, enter a keyword and click the **Go** button in the **Search for Service Teams by entering a keyword** text box.
 - f. Click the **Add Selected** button to add the team to the Service Team tab area. Click **Cancel** to remove the service team from the search area.
 - g. To delete a team, check a team from the **Service Team** checkbox, and click the **Delete** button. A popup window displays and asks you, "Are you sure?". Click **OK** to delete the view. Click **Cancel** to cancel the deletion.
2. To assign a view to a Territory:
 - a. Click the **Territory** tab in the Manage View Permissions screen. See figure below.
 - b. Add a territory by clicking the **Add Territory** button.

- c. In the **Territory** text box, enter the name of territory or search for one using the **Lookup** icon.
- d. Assign the view to either a **Dispatcher**, **Technician**, or **All**.
- e. If you want to conduct a keyword search for a territory, enter a keyword and click the **Go** button in the **Search for Territories by entering a keyword** text box.
- f. Click the **Add Selected** button to add the team to the Territory tab area. Click **Cancel** to remove the territory from the search area.



The screenshot shows the 'Manage View Permissions' window with the 'Territory' tab selected. At the top, there are buttons for 'Quick Save', 'Save & Close', and 'Cancel', along with a 'Help' link. Below this is a 'Select View' dropdown menu currently set to 'My Open Work Orders'. The main area is divided into two sections. On the left, under the 'Territory' tab, there is a table with columns for 'Territory' and 'Assign To'. The table contains three rows: '000 - Central' assigned to 'Dispatcher', '004 Coastal' assigned to 'Technician', and '004 Coastal - New' assigned to 'All'. Above the table are 'Add Territory' and 'Delete' buttons. Below the table is a '<< Service Team' button. On the right, there is a search box titled 'Search for Territories by entering a keyword' with the text '108' entered and a 'Go!' button. Below the search box is a list of search results showing 'Territory' and '108 - Epperson' with a checkbox next to it. At the bottom of the search results are 'Add Selected' and 'Cancel' buttons.

Figure 6: Manage View Permissions (Territory)

TECHNICIAN ELIGIBILITY RULES

Overview

This feature enables your organization to define criteria for finding eligible technicians for work orders. The list of technicians found using Technician Eligibility Rules is used while OptiMax assigns a technician to a work order.

Access and Permissions

Actions	User Permissions Needed
To view Technician Eligibility Rule	'Read' permission on Objects: ServiceMax Processes, ServiceMax Config Data, Technician, Work Order
To create Technician Eligibility Rule	'Create' permission on Objects: ServiceMax Processes, ServiceMax Config Data 'Read' permission on Objects: ServiceMax Processes, ServiceMax Config Data, Technician, Work Order
To edit Technician Eligibility Rule	'Edit' permission on Objects: ServiceMax Processes, ServiceMax Config Data 'Read' permission on Objects: ServiceMax Processes, ServiceMax Config Data, Technician, Work Order
To delete Technician Eligibility Rule	'Delete' permission on Objects: ServiceMax Processes, ServiceMax Config Data 'Read' permission on Objects: ServiceMax Processes, ServiceMax Config Data, Technician, Work Order

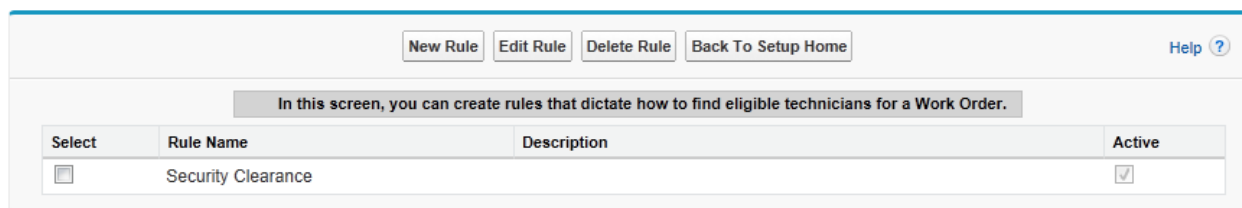
Click **Home > ServiceMax Setup > Dispatch Management > Technician Eligibility Rules** to view the Technician Eligibility Rules screen.

Creating a Technician Eligibility Rule

You create rules that determine how to find eligible technicians for a Work Order.

To create a technician eligibility rule:

1. Click **Home > ServiceMax Setup > Dispatch Management > Technician Eligibility Rules**.
2. In the Technician Eligibility Rules screen, click the **New Rule** button at the top of the screen (see figure below).



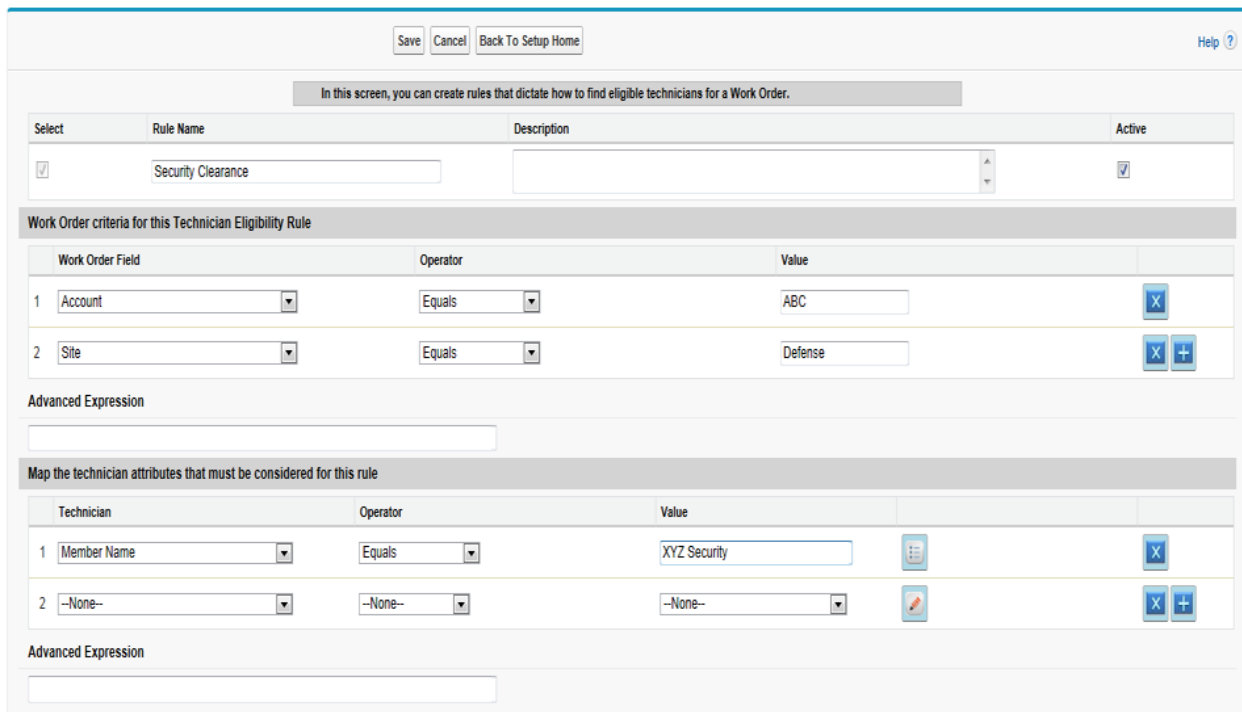
New Rule Edit Rule Delete Rule Back To Setup Home Help ?

In this screen, you can create rules that dictate how to find eligible technicians for a Work Order.

Select	Rule Name	Description	Active
<input type="checkbox"/>	Security Clearance		<input checked="" type="checkbox"/>

Figure 1: Technician Eligibility Rules Screen

The following Technician Eligibility Rules screen displays (see figure below).



Save Cancel Back To Setup Home Help ?

In this screen, you can create rules that dictate how to find eligible technicians for a Work Order.

Select	Rule Name	Description	Active
<input checked="" type="checkbox"/>	Security Clearance		<input checked="" type="checkbox"/>

Work Order criteria for this Technician Eligibility Rule

	Work Order Field	Operator	Value	
1	Account	Equals	ABC	X
2	Site	Equals	Defense	X +

Advanced Expression

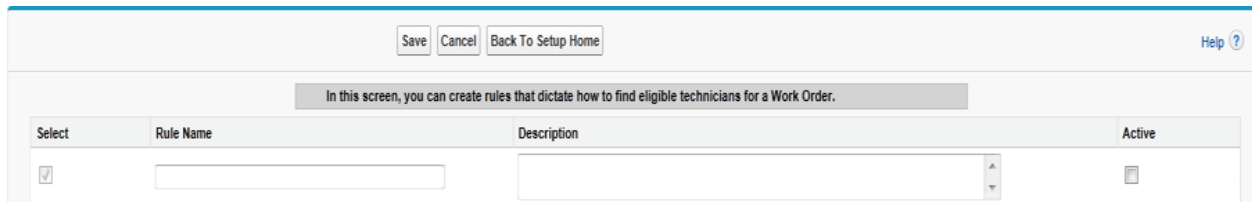
Map the technician attributes that must be considered for this rule

	Technician	Operator	Value	
1	Member Name	Equals	XYZ Security	X
2	--None--	--None--	--None--	X +

Advanced Expression



Figure 2: Creating a New Technician Eligibility Rule

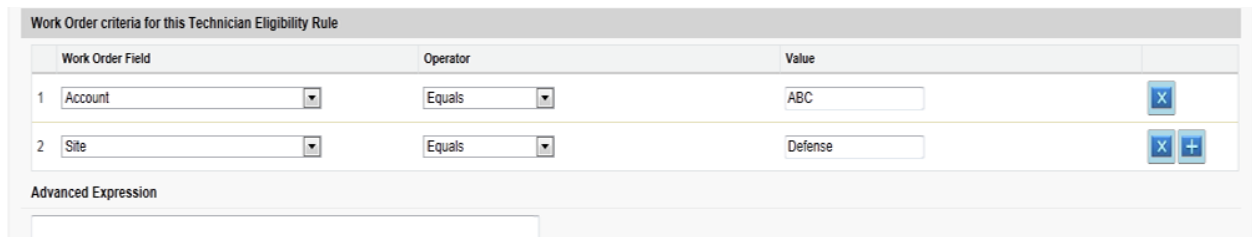
3. In the **Rule Name** text box, enter the name of the rule you want to create (see figure below).
4. If necessary, enter a description for your rule in the **Description** text box.
5. Check the **Active** checkbox to make the rule active.



The screenshot shows a web form for creating a rule. At the top, there are buttons for 'Save', 'Cancel', and 'Back To Setup Home', along with a 'Help ?' link. Below these is a grey instruction bar: 'In this screen, you can create rules that dictate how to find eligible technicians for a Work Order.' The main form area has a table with four columns: 'Select', 'Rule Name', 'Description', and 'Active'. The 'Select' column has a checkbox with a checkmark. The 'Rule Name' column has a text input field. The 'Description' column has a text area with up and down arrows. The 'Active' column has a checkbox.


Figure 3: Rule Name and Description



6. In the Work Order criteria section, select a field from the **Work Order Field** picklist (see figure below).
7. From the **Operator** picklist, select an operator.
8. Enter the value in the **Value** text box.
9. To delete a Work Order criteria, click the  button.
10. To add an additional Work Order criteria, click the  button.
11. If necessary, enter an advanced expression in the **Advanced Expression** text box.



The screenshot shows a form titled 'Work Order criteria for this Technician Eligibility Rule'. It contains a table with three columns: 'Work Order Field', 'Operator', and 'Value'. There are two rows of criteria. Row 1: 'Account' (dropdown), 'Equals' (dropdown), 'ABC' (text input). Row 2: 'Site' (dropdown), 'Equals' (dropdown), 'Defense' (text input). To the right of each row are buttons for deleting (X icon) and adding (+ icon) criteria. Below the table is an 'Advanced Expression' text input field.

Figure 4: Work Order Criteria for Eligibility Rule

12. In the Map the technician attributes section, select a technician from the **Technician** picklist (see figure below for all steps).
13. From the **Operator** picklist, select an operator.
14. Enter the value in the **Value** text box. Click the **Edit**  icon to select an item from the **Value** picklist. The Work Order fields are available from the picklist.
15. If necessary, enter an advanced expression in the **Advanced Expression** text box.

16. To delete a technician attribute, click the  icon.
17. To add an additional technician attribute, click the  icon.

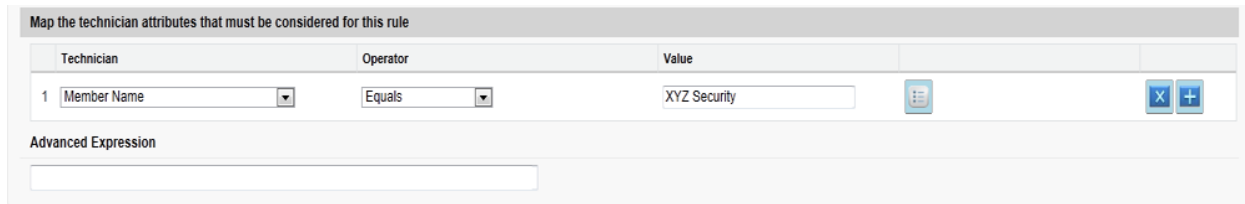


Figure 5: Technician Attributes

18. Click the **Save** button to save the Technician Eligibility Rule.
19. Click the **Delete** button to delete the Technician Eligibility Rule.
20. Now that you have created your technician eligibility rule, you can edit it by clicking the **Edit Rule** button. Make sure the rule is checked in the **Select** checkbox.

Editing a Technician Eligibility Rule

To edit a technician eligibility rule:

1. Click **Home > ServiceMax Setup > Dispatch Management > Technician Eligibility Rules**.
2. Select the rule name you want to edit (see figure below).

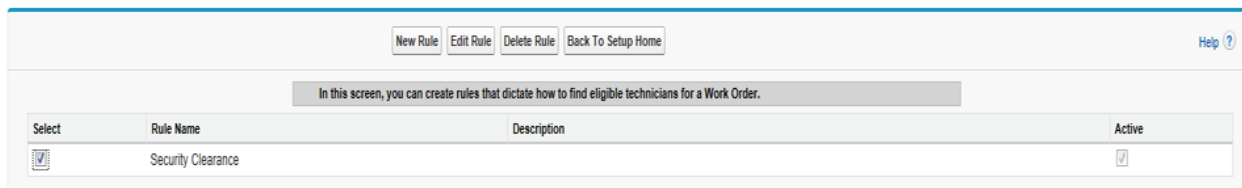


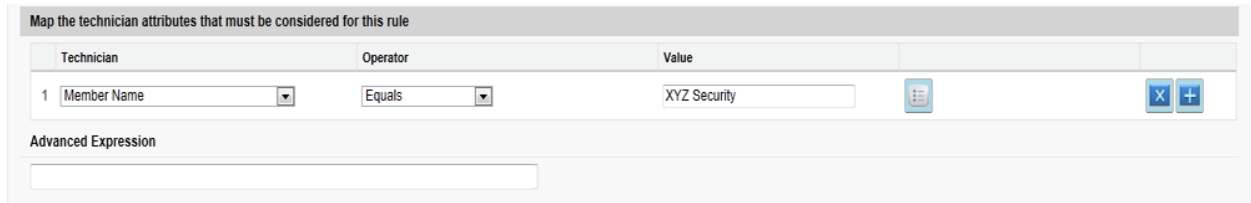


Figure 6: Select Eligibility Rule



The Technician Eligibility Rules screen displays.

3. If necessary, update the description for your rule in the **Description** text box.
4. Check or uncheck the **Active** checkbox to make the rule active or inactive.
5. In the Work Order criteria section, select a field from the **Work Order Field** picklist (see figure below).
6. From the **Operator** picklist, select an operator.

7. If necessary, enter a different value in the **Value** text box.
8. To delete a Work Order criterion, click the  button.
9. To add an additional Work Order criterion, click the  button.
10. If necessary, update the advanced expression in the **Advanced Expression** text box.



Map the technician attributes that must be considered for this rule

Technician	Operator	Value	
1 Member Name	Equals	XYZ Security	 

Advanced Expression

Figure 7: Select Eligibility Rule

11. Click the **Save** button to save the changes you made to your Technician Eligibility Rule.

Deleting a Technician Eligibility Rule

To delete a technician eligibility rule:

1. Select the rule name you want to delete by checking the rule via the **Select** checkbox.
2. Click the **Delete Rule** button. Click **OK** when prompted to confirm deletion, or click **Cancel** to cancel deletion. The selected rules are deleted and the rule list is refreshed.

SKILL MATCH RULES

Overview

This feature enables your organization to define mandatory and optional skills required to complete work orders. The list of technicians with the most appropriate skills found using Skill Match Rules is used while OptiMax assigns a technician to a work order.

Access and Permissions

Actions	User Permissions Needed
To view Skill Match Rule	'Read' permission on Objects: ServiceMax Processes, ServiceMax Config Data, Technician, Work Order, Skills.
To create Skill Match Rule	'Create' permission on Objects: ServiceMax Processes, ServiceMax Config Data 'Read' permission on Objects: ServiceMax Processes, ServiceMax Config Data, Technician, Work Order, Skills
To edit Skill Match Rule	'Edit' permission on Objects: ServiceMax Processes, ServiceMax Config Data 'Read' permission on Objects: ServiceMax Processes, ServiceMax Config Data, Technician, Work Order, Skills
To delete Skill Match Rule	'Delete' permission on Objects: ServiceMax Processes, ServiceMax Config Data 'Read' permission on Objects: ServiceMax Processes, ServiceMax Config Data, Technician, Work Order, Skills

Click **Home > ServiceMax Setup > Dispatch Management > Skill Match Rules** to view the Skill Match Rules screen.

Creating a Skill Match Rule

You can create rules that determine how to find technicians with matching skills for a Work Order.

To define a skill match rule:

1. Click **Home > ServiceMax Setup > Dispatch Management > Technician Eligibility Rules**.
2. In the Skill Match Rules screen, click the **New Rule** button at the top of the screen (see figure below).

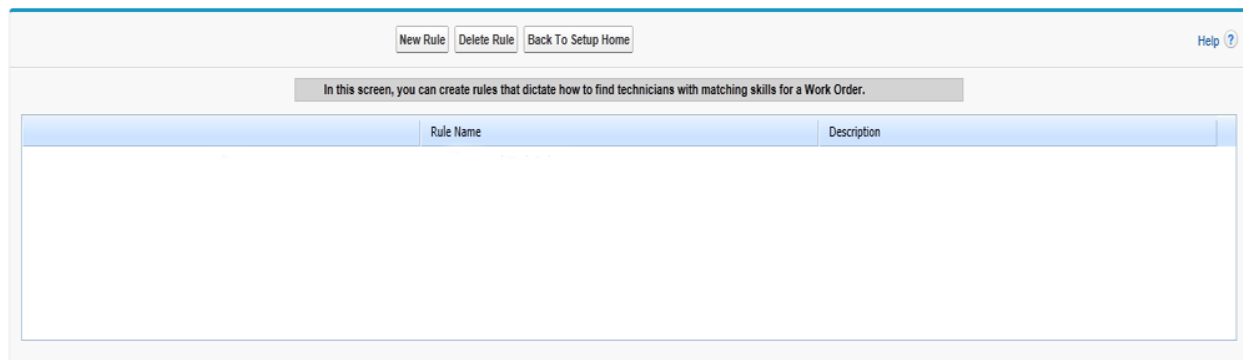


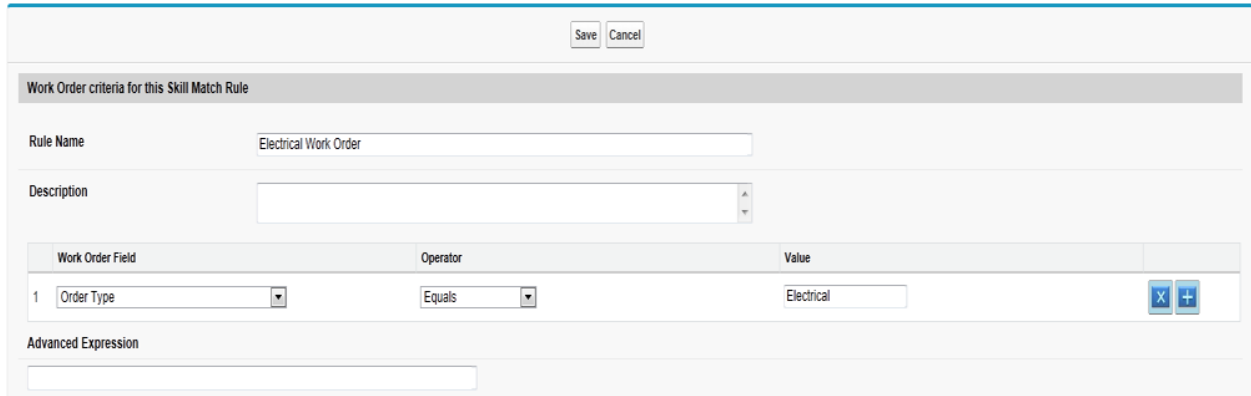

 The screenshot shows the 'Skill Match Rules' interface. At the top, there are three buttons: 'New Rule', 'Delete Rule', and 'Back To Setup Home'. A 'Help ?' link is also present. Below these buttons is a grey instruction bar that reads: 'In this screen, you can create rules that dictate how to find technicians with matching skills for a Work Order.' Underneath this bar is a table with two columns: 'Rule Name' and 'Description'. The table is currently empty.

Figure 1: Skill Match Screen: New Rule Button

The Skill Match Rules screen displays.

3. In the Work Order criteria area, enter the name of the rule you want to create in the **Rule Name** text box (see figure below).
4. If necessary, enter a description for your rule in the **Description** text box.
5. In the Work Order Field area, select an order type from the **Work Order Field** picklist. (See figure below).
6. From the **Operator** picklist, select an operator.
7. Enter the value in the **Value** text box.
8. To delete a Work Order criteria, click the  button.
9. To add an additional Work Order criteria, click the  button.

10. If necessary, enter an advanced expression in the **Advanced Expression** text box.



Save Cancel

Work Order criteria for this Skill Match Rule



Rule Name: Electrical Work Order

Description:

Work Order Field	Operator	Value
1 Order Type	Equals	Electrical

Advanced Expression:

Figure 2: Work Order Criteria for Skill Match Rule

11. In the **Skill Category** picklist, select a Skill Category (for example, Installation, Upgrade, Configuration, and so on), and then click the **Search** button
12. The available skills for the selected category display in the Available Skills text box area.
13. Select a skill in the Available Skills area, and click the  icon to move skills from the Available Skills text box area to the Applicable Skills area.
14. If you want to move an applicable skill to the Available Skills area, check the skill using the checkbox next to the **Skill Name**, and click the  arrow.
15. Check the **Required?** checkbox to indicate whether or not the skill should be required when matching a skill with a technician.

- In the Applicable Skills area, indicate the Minimum skill level the technician should have.

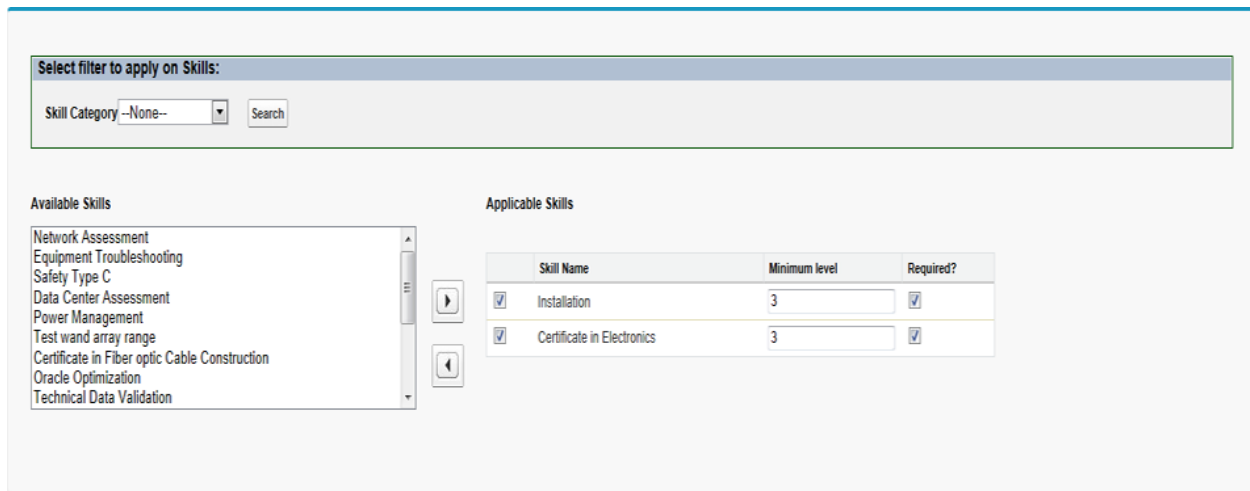


Figure 3: Select Filter for Skills

Editing a Match Skill Rule

To edit a match skill rule:

- Click **Home > ServiceMax Setup > Dispatch Management > Technician Eligibility Rules**.
- Select the rule name you want to edit (see figure below).

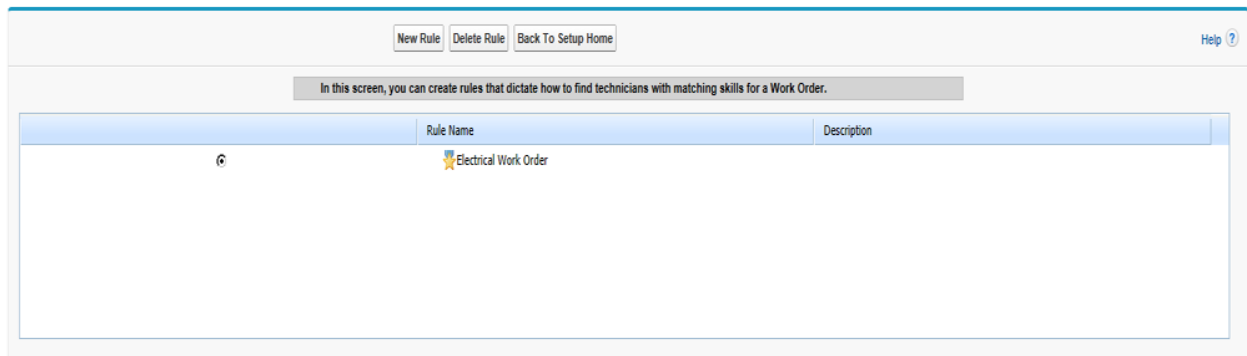




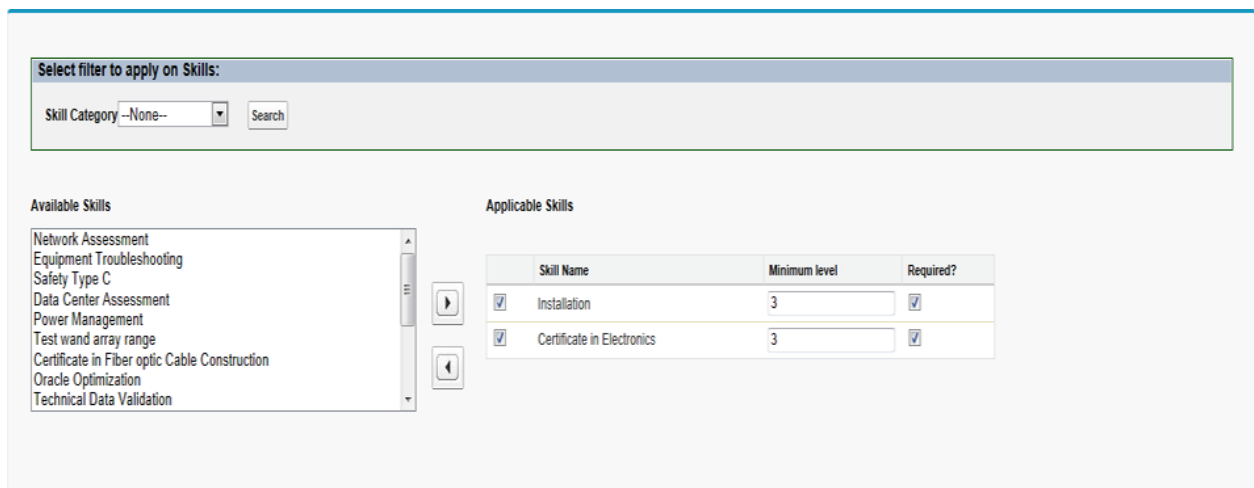
Figure 4: Select Match Skill Rule

The Skill Match Rules screen displays. Update following the steps below.

- In the Work Order criteria area, update the description for your rule in the **Description** text box.

4. In the Work Order Field area, change the order type from the **Work Order Field** picklist (see figure below).
5. From the **Operator** picklist, select a different operator if necessary.
6. Enter a different value in the **Value** text box if necessary.
7. To delete a Work Order criteria, click the  button.
8. To add an additional Work Order criteria, click the  button.
9. If necessary, update the advanced expression in the **Advanced Expression** text box.
10. In the **Skill Category** picklist, select a Skill Category (for example, Installation, Upgrade, Configuration, and so on), and then click the **Search** button.

The available skills for the selected category display in the Available Skills text box area (see figure below).



Select filter to apply on Skills:

Skill Category: --None-- Search



Available Skills

- Network Assessment
- Equipment Troubleshooting
- Safety Type C
- Data Center Assessment
- Power Management
- Test wand array range
- Certificate in Fiber optic Cable Construction
- Oracle Optimization
- Technical Data Validation

Applicable Skills

Skill Name	Minimum level	Required?
<input checked="" type="checkbox"/> Installation	3	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Certificate in Electronics	3	<input checked="" type="checkbox"/>

Figure 5: Select Filter for Skills

11. Select a skill in the Available Skills area, and click the  icon to move skills from the Available Skills text box area to the Applicable Skills area.
12. If you want to move an applicable skill to the Available Skills area, check the skill using the checkbox next to the **Skill Name**, and click the  arrow.

13. Check the **Required?** checkbox to indicate whether or not the skill should be required when matching a skill with a technician.
14. In the Applicable Skills area, indicate the Minimum skill level the technician should have.

Deleting a Match Skill Rule

To delete a matching skill rule:

1. Select the rule name you want to delete.
2. Click the **Delete Rule** button. Click **OK** when prompted to confirm deletion, or click **Cancel** to cancel deletion. The selected rules are deleted and the rule list is refreshed.

DC MAP HOVER

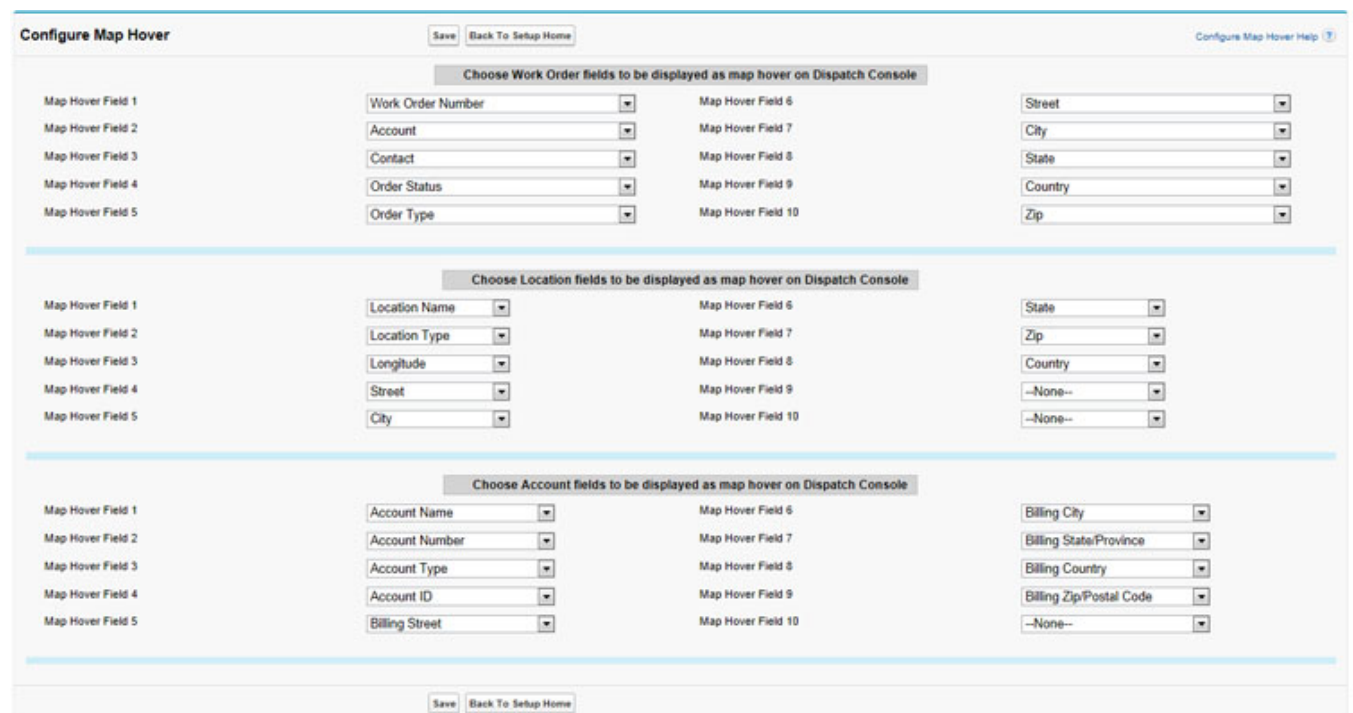
Overview

Use the DC Map Hover option to configure what field criteria will hover over the map view in the Dispatch Console. You can select Work Order, Location, and Account field criteria to display as Map Hover in the Dispatch Console Map view.

Access and Permissions

Object	Read	Create	Edit	Delete
ServiceMax Process	Yes	Yes	Yes	Yes
ServiceMax Config Data	Yes	Yes	Yes	Yes

Click **Home > ServiceMax Setup > Dispatch Management > DC MAP Hover > Go** to launch the screen as shown below.



Configure Map Hover [Save] [Back To Setup Home] Configure Map Hover Help ?

Choose Work Order fields to be displayed as map hover on Dispatch Console

Map Hover Field 1	Work Order Number	Map Hover Field 6	Street
Map Hover Field 2	Account	Map Hover Field 7	City
Map Hover Field 3	Contact	Map Hover Field 8	State
Map Hover Field 4	Order Status	Map Hover Field 9	Country
Map Hover Field 5	Order Type	Map Hover Field 10	Zip

Choose Location fields to be displayed as map hover on Dispatch Console

Map Hover Field 1	Location Name	Map Hover Field 6	State
Map Hover Field 2	Location Type	Map Hover Field 7	Zip
Map Hover Field 3	Longitude	Map Hover Field 8	Country
Map Hover Field 4	Street	Map Hover Field 9	--None--
Map Hover Field 5	City	Map Hover Field 10	--None--

Choose Account fields to be displayed as map hover on Dispatch Console

Map Hover Field 1	Account Name	Map Hover Field 6	Billing City
Map Hover Field 2	Account Number	Map Hover Field 7	Billing State/Province
Map Hover Field 3	Account Type	Map Hover Field 8	Billing Country
Map Hover Field 4	Account ID	Map Hover Field 9	Billing Zip/Postal Code
Map Hover Field 5	Billing Street	Map Hover Field 10	--None--

[Save] [Back To Setup Home]

Figure 1: *Configure Map Hover Screen*

In the Configure Map Hover screen:

- You can select Work Order field criteria (up to ten) to display as Map Hover on Dispatch Console.
- You can select Location field criteria (up to ten) display as Map Hover on Dispatch Console.
- You can select Account field criteria (up to ten) to display as Map Hover on Dispatch Console.
- Return to Setup Home.

Configuring Map Hover Field Criteria

To configure map hover field criteria:

1. In the Map Hover Field 1 picklist for **Work Orders**, select an item to display on the map in Dispatch Console. You can select up to ten fields (Map Hover Field1 to Map Hover Field 10).
2. In the Map Hover Field 1 picklist for **Locations**, select an item to display on the map in Dispatch Console. You can select to ten fields (Map Hover Field 1 to Map Hover Field 10).
3. In the Map Hover Field 1 picklist for **Accounts**, select an item to display on the map in Dispatch Console. You can select to ten fields (Map Hover Field 1 to Map Hover Field 10).
4. Click the **Save** button.

SFM CUSTOM ACTIONS

Overview

Using this feature, ServiceMax administrators can configure URL-based actions that can be launched from SFM wizard on a record. The URL can be configured to pass data from one or more fields in the record.

Access and Permissions

Actions	User Permissions Needed
To view SFM Custom Actions:	"Read" on ServiceMax Processes, ServiceMax Config Data
To create or edit SFM Custom Actions:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data
To delete SFM Custom Actions:	"Delete" on ServiceMax Processes and ServiceMax Config Data

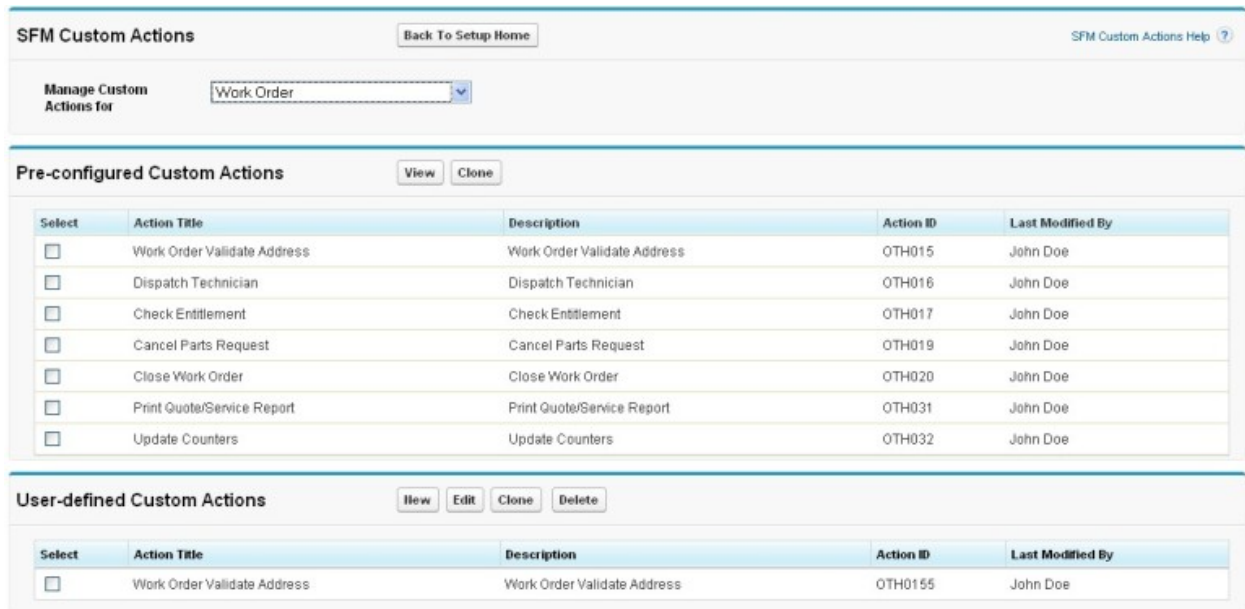
SFM Custom Action Fields

Fields	Description
Object	Name of the Object. For example: Installed product, Case.
Action Title	Name of the Action.
Action ID	Unique identification of the Action.
Description	Detailed description of the SFM Custom Action. Details entered here are displayed in the manage actions screen, when the action is selected.
Open URL in	Launch the Action in New Window or Existing window.
Open URL to Launch	The URL to launch the Action.

Fields	Description
Window Height	The Height of new window to be launched for the Action.
Window Width	The Width of new window to be launched for the Action.
Open As Full Window	Checkbox that indicates action will be launched in full window.
Is Active	Checkbox that indicates if the Action is currently active and available for use.
Show Scroll-bars	Checkbox that indicates scrollbars enabled when launch new window
Parameter Name	Name of the parameter for the Action.
Parameter Value Type	Select Field Name or Value as the Parameter Value type for the Action.
Parameter Value	If Value Type is Field Name, then the Parameter value will be a map of fields in object else the default value to be used for that field.

Steps In Creating a Custom Action

1. Click **Home > ServiceMax Setup > Service Flow Manager > SFM Custom Actions** to view the SFM Custom Actions screen. Select the object that you want to create/edit an action. The following screen will display.



SFM Custom Actions [Back To Setup Home](#) [SFM Custom Actions Help](#)

Manage Custom Actions for: Work Order

Pre-configured Custom Actions [View](#) [Clone](#)

Select	Action Title	Description	Action ID	Last Modified By
<input type="checkbox"/>	Work Order Validate Address	Work Order Validate Address	OTH015	John Doe
<input type="checkbox"/>	Dispatch Technician	Dispatch Technician	OTH016	John Doe
<input type="checkbox"/>	Check Entitlement	Check Entitlement	OTH017	John Doe
<input type="checkbox"/>	Cancel Parts Request	Cancel Parts Request	OTH019	John Doe
<input type="checkbox"/>	Close Work Order	Close Work Order	OTH020	John Doe
<input type="checkbox"/>	Print Quote/Service Report	Print Quote/Service Report	OTH031	John Doe
<input type="checkbox"/>	Update Counters	Update Counters	OTH032	John Doe

User-defined Custom Actions [New](#) [Edit](#) [Clone](#) [Delete](#)

Select	Action Title	Description	Action ID	Last Modified By
<input type="checkbox"/>	Work Order Validate Address	Work Order Validate Address	OTH0155	John Doe

Figure 1: SFM Custom Actions - Standard Actions & Custom Actions Screen

2. The list under Pre-configured Actions displays the predefined Actions of ServiceMax for the particular object selected.
3. Any custom actions appear under the **User-defined Custom Actions** section.
4. Pre-configured actions cannot be modified. However, you can clone them to create User-defined actions.
5. In the SFM Custom Actions screen:
 - To create an action from an existing action, select the action from the list and click **Clone**.
 - To create a new action, click **New**.
 - To delete an existing action, select the action from the list and click **Delete**.



Caution: Use Extreme Caution when deleting custom actions since the effect is immediate and irreversible. You will not be warned if the custom action is used in an SFM wizard.

Creating/Editing Actions

In the User-defined Actions section, click **New** to create a new custom action or select an existing action from the list and click **Edit**. You can create custom actions for the following **Action Types: URL**, and **Web Service**. See figure below.

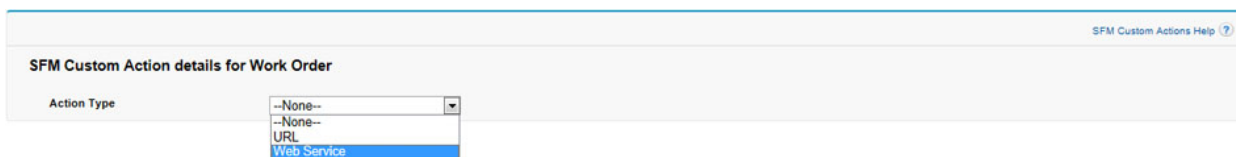
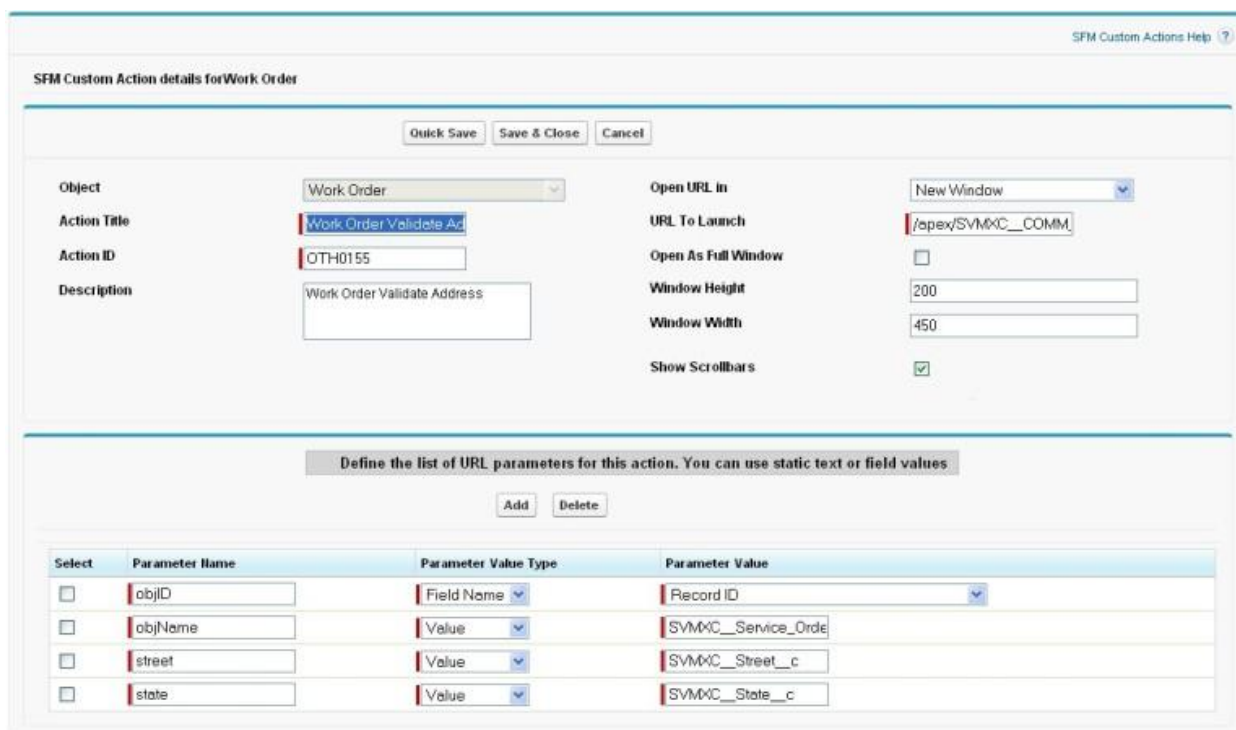


Figure 2: SFM Action Types

If you select **URL**, the following SFM Custom Action screen appears.



Define the list of URL parameters for this action. You can use static text or field values

Select	Parameter Name	Parameter Value Type	Parameter Value
<input type="checkbox"/>	objID	Field Name	Record ID
<input type="checkbox"/>	objName	Value	SVMXC_Service_Order
<input type="checkbox"/>	street	Value	SVMXC_Street_c
<input type="checkbox"/>	state	Value	SVMXC_State_c

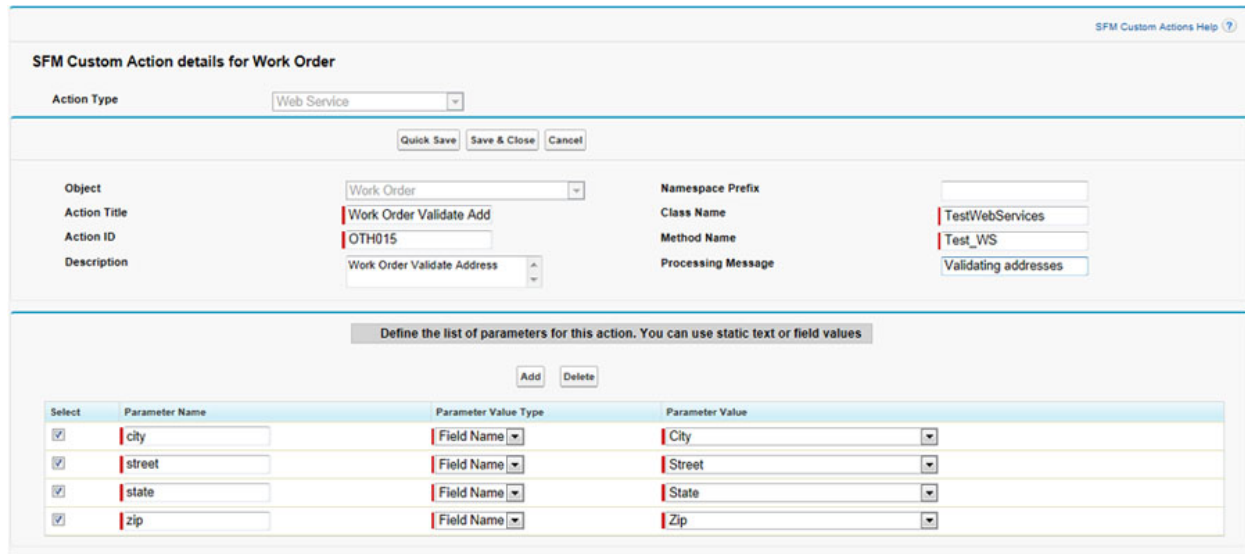
Figure 3: SFM Custom Actions - Create New Action for URL

Follow the steps below to create a custom action for a URL.

To Create a Custom Action for a URL:

1. Enter a user-friendly **Title** for the Action. This will be used as the default title when this action is placed in a wizard.
2. Enter a unique **ID** and description for the SFM custom action. The description entered here will be used as the default when this action is used in a wizard.
3. Indicate if the URL should be launched in the same window or in a new window.
4. Enter the URL to be launched.
5. If the URL should be launched in a new window, check **Open In Full Window** if the new window should be opened in full mode. Leaving this checkbox unchecked will open the URL as a popup window. You must then specify the height and width of the popup window.
6. If you check the **Show Scrollbars** checkbox, the new window will display horizontal and vertical scrollbars when launched.
7. In the Parameters section at the bottom, create one or more URL parameters. The parameter name cannot contain spaces. A parameter value can either be a constant or data from any field in the record. To configure a static parameter value, select **Value** in the **Parameter Value Type** picklist and enter any static text in the **Parameter Value** field. To configure a dynamic parameter value, select **Field Name** in the **Parameter Value Type** picklist and select a field name in the **Parameter Value** picklist.
8. At anytime during the SFM custom action creation process, you can click **Quick Save** button to save the SFM custom action even if it is incomplete, and continue to edit/create the action.
9. To save the SFM custom action and return to the ServiceMax Setup Home page, click the **Save & Close** button at the top.
10. To cancel any changes made to the action and return to ServiceMax Setup Home, click the **Cancel** button at the top. Any changes saved while building the SFM custom action will not be rolled back.

If you select **Web Service**, the following SFM Custom Action screen appears.



SFM Custom Action details for Work Order

Action Type: Web Service

Quick Save Save & Close Cancel

Object: Work Order

Action Title: Work Order Validate Add

Action ID: OTH015

Description: Work Order Validate Address

Namespace Prefix:

Class Name: TestWebServices

Method Name: Test_WS

Processing Message: Validating addresses

Define the list of parameters for this action. You can use static text or field values

Add Delete

Select	Parameter Name	Parameter Value Type	Parameter Value
<input checked="" type="checkbox"/>	city	Field Name	City
<input checked="" type="checkbox"/>	street	Field Name	Street
<input checked="" type="checkbox"/>	state	Field Name	State
<input checked="" type="checkbox"/>	zip	Field Name	Zip

Figure 4: SFM Custom Actions - Create New Action for Web Service

Follow the steps below to create a custom action for Web Service.

To Create a Custom Action for Web Service:

1. Enter a user-friendly **Action Title** for the custom action. This will be used as the default title when this action is placed in a wizard.
2. Enter a unique **Action ID** and **Description** for the SFM custom action. The description entered here will be used as the default when this action is used in a wizard.
3. Enter the **Namespace Prefix** in the appropriate text box.
4. Enter the **Class Name** in the appropriate text box.
5. Enter the method name in the **Method Name** text box.
6. In the **Processing Message** text box, enter a custom message that will display to end users during processing.
7. In the parameters section at the bottom, create one or more Web Service parameters. The parameter name cannot contain spaces. The parameter value can either be a constant or data from any field in the record. To configure a static parameter value, select **Value** in the **Parameter Value Type** picklist and enter any static text in the **Parameter Value** field. To configure a dynamic parameter value, select **Field**

Name in the **Parameter Value Type** picklist and select a field name in the **Parameter Value** picklist.

8. At anytime during the SFM custom action creation process, you can click the **Quick Save** button to save the SFM custom action even if it is incomplete, and continue to edit/create the action.
9. To save the SFM custom action and return to the ServiceMax Setup Home page, click the **Save & Close** button at the top.
10. To cancel any changes made to the action and return to ServiceMax Setup Home, click the **Cancel** button at the top. Any changes saved while building the SFM custom action will not be rolled back.

Sample SFW Action (Web Service)

Follow the instructions below to setup a SFW Action to invoke the Apex Web Service.

To Setup a SFW Action to Invoke the Apex Web Service:

1. Create Apex Web Service.

```
// This is sample service to update ownership of given Work order record

global class SVMX_SampleSFWEvent {

    webservice static SVMXC.INTF_WebServicesDef.INTF_Response takeWOOwnership(SVMXC.INTF_WebServicesDef.INTF_Response request)

    {

        SVMXC.INTF_WebServicesDef.INTF_Response obj = new SVMXC.INTF_WebServicesDef.INTF_Response
        (); // Response object declaration

        try

        {

            String recordId; //Declare variable to hold Work Order record id

            // Iterate request's valueMap member to get Key-Value pairs

            for(SVMXC.INTF_WebServicesDef.SVMXMap objSVXMMMap : request.valueMap)

            {
```

```
// Default Key : SVMX_RECORDID is always available in request it contains source record
Id from where SFW Action is initiated

// Other Keys : <Custom keys as configured in Custom Action>

// Add your logic here to get values for custom keys...


// ..... In this example we take Work Order id from Default key and assign it to a local
variable

if(objSVXMap.key == 'SVMX_RecordId'){

recordId = objSVXMap.value;

}

}

// Custom Logic for the Service Goes here....

// ..... In this example we retrieve Work Order record and update it's ownership

SVMXC__Service_Order__c objWO = [Select Id, OwnerId from SVMXC__Service_Order__c where
Id=:recordId];

objWO.OwnerId = UserInfo.getUserId();

Update objWO;

// Construct Success response, Update response object members

obj.message = 'Work Order update successfully';

obj.success = true;

obj.messageType = 'INFO';

return obj; // Return should be of INTF_Response type and

}

catch(Exception ex)

{

// Construct Failure response, Update response object members

obj.message = ex.getMessage();

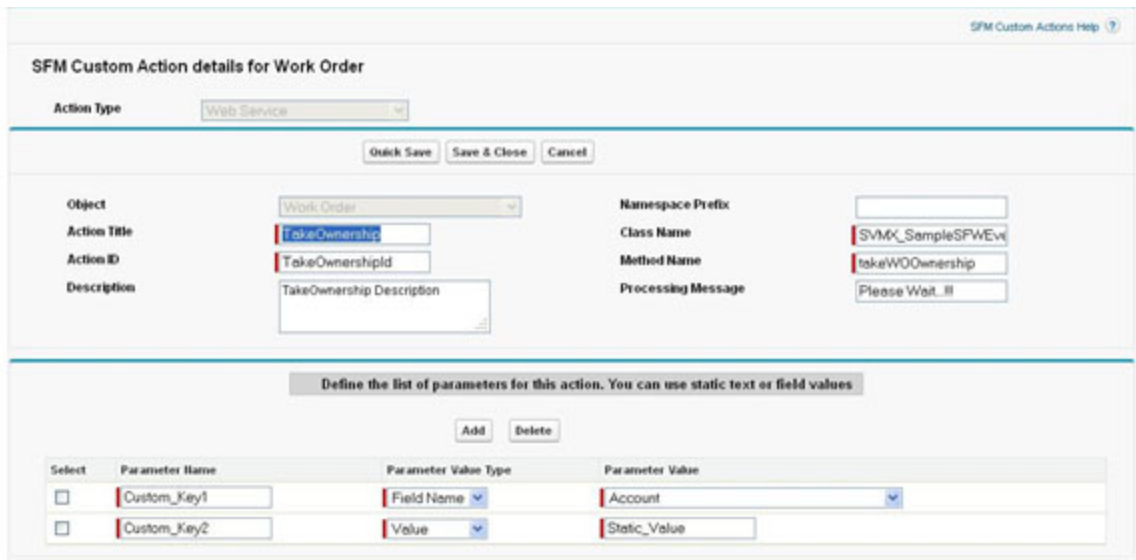
obj.success = false;

obj.messageType = 'ERROR';
```



```
return obj;
}
}
}
```

2. Create Custom Action of type **Web Service** as shown in the figure below.



The screenshot shows the 'SFM Custom Action details for Work Order' form. The 'Action Type' is set to 'Web Service'. The 'Object' is 'Work Order'. The 'Action Title' is 'TakeOwnership'. The 'Action ID' is 'TakeOwnershipId'. The 'Description' is 'TakeOwnership Description'. The 'Namespace Prefix' is empty. The 'Class Name' is 'SVMX_SampleSFWEv'. The 'Method Name' is 'takeWOOwnership'. The 'Processing Message' is 'Please Wait...!!'. Below the form, there is a section to 'Define the list of parameters for this action. You can use static text or field values'. It contains a table with two parameters:

Select	Parameter Name	Parameter Value Type	Parameter Value
<input type="checkbox"/>	Custom_Key1	Field Name	Account
<input type="checkbox"/>	Custom_Key2	Value	Static_Value

Figure 5: SFM Custom Action Details for Work Order (Sample)

3. Go to any Work Order and click the SFW Button: **Take Ownership** button.

Deleting Actions

To delete an SFM Custom Action:

1. Select the name of the custom action under the User-defined Actions section.
2. Click **Delete**.



Note: Pre-configured Actions of ServiceMax cannot be deleted.

SFM TRANSACTION DESIGNER

Overview

Service Flow Manager (SFM) is the central engine in ServiceMax that facilitates flow of information between all service and related processes. The end-to-end service delivery normally requires flow of information through various stages such as support call, entitlement verification, dispatch, estimation, forward & reverse logistics, parts consumption, call resolution, and so on. Service Flow manager helps maintain the accuracy of such information throughout the service delivery cycle but also helps reduce the time spent in each step. Examples of ServiceMax standard flows deployed using SFM are Create RMA/Shipment from Case, Create Work Order from Installed Product, and Work Order T&M Lines. The following picture demonstrates the typical use-case and flow of SFM.

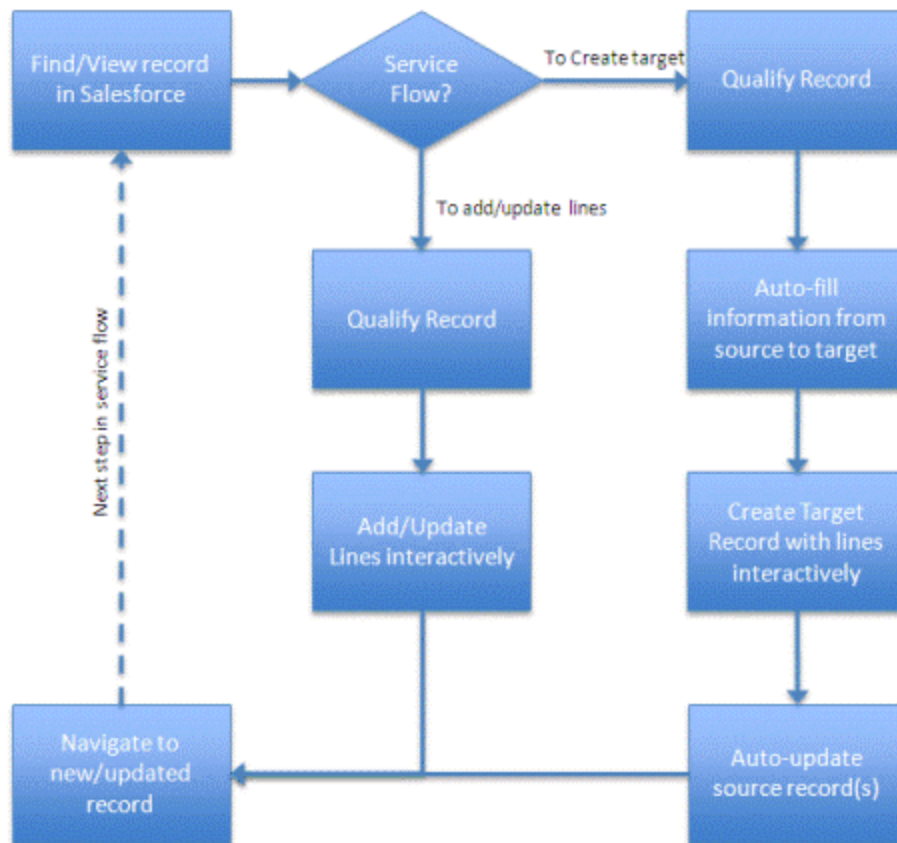


Figure 1: SFM Transaction Manager Overview

SFM Transaction Engine has two major components as explained below:

- SFM Transaction Designer provides an interactive wizard-like interface to define SFM transaction, rules and end-user interface.
- SFM Transaction Delivery delivers the configured SFM transaction to end users using a rich and advanced user interface.



Note: SFM Transactions are sometimes interchangeably referred to as Processes or Service Processes in this document.

Access and Permissions

Actions	User Permissions Needed
To view SFM Transactions:	"Read" on ServiceMax Processes, ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event, Code Snippet Manifest, Code Snippet, Doc Template, Doc Template Details, Function Definition
To create or edit SFM Transactions:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event, Code Snippet Manifest, Code Snippet, Doc Template, Doc Template Details
To delete SFM Transactions:	"Delete" on ServiceMax Processes and ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event

SFM Transaction Designer Fields

Fields	Description
Name	Name of the SFM Transaction. Example: Create RMA from Case.
ID	Unique ID of the SFM Transaction. Used in deployment of the process. Spaces and special characters are not allowed in this. Examples of valid SFM transaction ID are CASETORMA001 and WO_TO_SHIP_001.
Description	A detailed description of this SFM Transaction.
Status	Configuration status of the SFM Transaction. Determined automatically based on the completeness of flow definition. Incomplete flows cannot be deployed.

Fields	Description
Purpose of Transaction	Indicates if the transaction is used to create a new target record from the source record, add new child records to an existing target record, or to edit the source record & its lines in a stand-alone mode.
Use Data From	Name of the source object and its child objects.
To Create Records For	Name of the target object and its child objects.
Create Target As	A user-friendly label for the target object. Useful if the target object is used for multiple business purposes. For example, the same Parts Order object can be used for Sales Orders, Spare Parts Shipments, or Defect Return flows.
Filter Name	Name of the predefined filter to be used as filter/qualification criteria on the source object.
Save filter as	User-friendly name for the filter criteria. Used when creating new filters.
Filter ID	Unique ID for the filter criteria. Used when creating new filters.
Filter Criteria	An expression based on source object field values that defines the qualification/entry criteria. For source header records, this is considered as the qualification criteria, that is, the SFM Transaction will be allowed only if the source record matches the criteria. For source child records, it is considered as filter criteria, that is, the SFM Transaction will proceed even if the filter criteria does not yield any matching child records.
Error Message	Error message to be displayed to end user when the source record does not match the filter criteria.
Field Map	A map of fields in source and target objects. Not applicable for stand-alone SFM Transactions.
Value Map	List of default values to be used for target object fields. Applicable when new records are created without a source record. Also used when existing records are being updated.
Map Name	Name of the pre-defined field or value map to be used between source and target objects.
Save Map As	User-friendly name for the map. Used when creating new maps.
Map ID	Unique ID for the map. Used when creating new maps.
Target Field	Name of the field from the target object.

Fields	Description
Value	Name of the field from the source object or a valid value.
Additional Mapping	Two alternate mapping field names to be considered if the source field is blank/null.
Update Field Name	Name of the field in the source object to be updated.
Update Operation	Type of update operation to be performed on the source object field. Allowed values are Increase, Decrease and Set.
Update From	Name of the target object whose field value to use in the update operation.
Update Value	Name of the field from the selected target object or a valid value to be assigned to the source object field.
Page Layout Name	Name of the pre-defined page layout to be used for delivering the SFM Transaction.
Save Page Layout As	User-friendly name for the page layout. Used when creating new layouts.
Page Layout ID	Unique ID for the page layout. Used when creating new layouts.
On Load	Name of the web service to be called just before the page is displayed to the end user but after data is retrieved from Salesforce.
Before Save/Insert Event Type	Type of method to be called Before Insert/Save. Applicable values are Web service or JavaScript.
Before Save/Insert Method	Name of the web service or JavaScript method to be called before inserting the target header record. Applies to source-to-target processes only.
After Save/Insert Event Type	Type of method to be called After Insert/Save. Applicable values are Web service or JavaScript.
After Save/Insert Method	Name of the web service or JavaScript method to be called after inserting the target header and child records. Applies to source-to-target processes only.
Before Save/Update Event Type	Type of method to be called before updating the record. Applicable values are Web service or JavaScript.

Fields	Description
Before Save/Update Method	Name of the web service or JavaScript method to be called before updating the header record. Applies to standalone edit processes only.
After Update/Save	Name of the web service or JavaScript method to be called after updating the header and child records. Applies to standalone edit processes only.
Help URL	Name of the URL to be launched when user clicks on the Help icon.
Help text	A brief help on how to use the page. Displayed as a bubble when user clicks on the process name.
Title	Title of the custom button or section.
On Click	Name of the web service or JavaScript method to be called when the end user clicks on the custom button.
On Click Event Type	Type of method to be called on clicking the button. Applicable values are Web Service or JavaScript.
Number of Columns	Number of display columns in the section. Maximum of 2 is allowed in this release.
Required	Indicates if the field is Required or optional.
Read Only	Indicates if the field is editable or read only.
On Exit Event Type	Type of method to be called when end user exits the field after entering data. Applicable values are Web Service or JavaScript.
On Exit	Name of the web service to be called when the end user exits the field after entering data.
On Change Event Type	Type of method to be called when an end user changes the field value. Applicable values are Web Service or JavaScript.
On Change	Name of the web service to be called when the end user changes the field value.
Lookup Context	Controlling lookup for the current field. Applies to only lookup fields. For example, if the page layout has two lookups, Account and Contact, Account lookup can be defined as the Context for Contact lookup so the end user can only select contacts that belong to the account.
Override Context	Indicates if the end user can override the pre-defined context for this lookup. If unchecked, the lookup will always apply the context.

Fields	Description
Matching Field	Name of the field that should be used for matching the current lookup and the context lookup records. In the above example where Account is the controlling lookup for Contact lookup, Contact, Account Id will be the matching field.
No of rows	Number of rows of display. Applies to long text fields only.
Allow New	Indicates if the end user can create new records in this child section.
Allow Delete	Indicates if the end user can delete existing records in this child section.
Action on Zero Lines	Action to be taken when the user tries to save with no records in this child section. Valid actions are Allow, Disallow or Warn.
Allow Multi-add Using	Name of the lookup in the Child section to be used for facilitating multi-add feature.
Lookup Name	Name of the pre-defined lookup to be used for the lookup field.
Save Lookup As	User-friendly name for the lookup. Used when creating new lookups.
Lookup ID	Unique ID for the lookup. Used when creating new lookups.
Fields to use in search	One or more fields to be searched when querying the lookup object.
Fields to use in results	One or more fields to be displayed in the lookup result set.
Fields to use in bubble	One or more fields to be displayed in the lookup bubble for the selected record.
Display Field	Name of the field whose value will be displayed in the lookup field. Default is the Name field of the object.
No of records	Number of records to display in the result set. Allowed values are 10, 20, 30, 40 and 50.
Make this default lookup	Indicates if this lookup configuration must be used as the default wherever this object is used in a page layout and when no other lookup configuration is available.

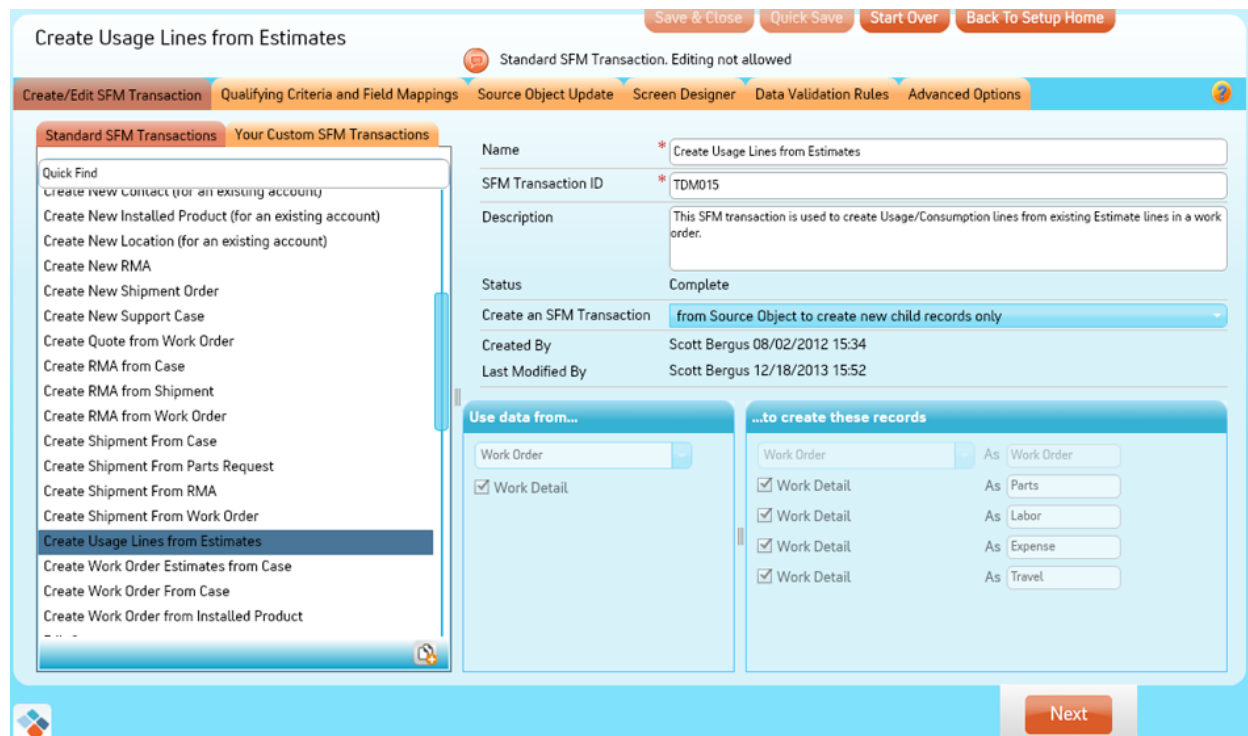
Steps In Creating an SFM Transaction

Click **Home > ServiceMax Setup > Service Flow Manager > SFM Transaction Designer** to view the SFM Transaction Designer screen.

In the SFM Transaction Designer screen, the tabs across the top left of the screen are the steps to define an SFM transaction:

- [Create/Edit SFM Transaction Tab](#)
- [Qualifying Criteria and Mapping Tab](#)
- [Source Object Update Tab](#)
- [Screen Designer Tab](#)
- [Data Validation Rules Tab](#)
- [Advanced Options Tab](#)

On the **Create/Edit SFM Transaction** tab, the **Standard SFM Transactions** tab lists all the standard transactions available. Standard SFM transactions cannot be modified. However, you can clone standard transactions to create custom SFM transactions, then use the **Your Custom SFM Transaction** tab to create your own transactions.



The screenshot shows the 'Create Usage Lines from Estimates' transaction in the SFM Transaction Designer. The interface includes a top navigation bar with buttons: 'Save & Close', 'Quick Save', 'Start Over', and 'Back To Setup Home'. Below this is a tabbed interface with the following tabs: 'Create/Edit SFM Transaction', 'Qualifying Criteria and Field Mappings', 'Source Object Update', 'Screen Designer', 'Data Validation Rules', and 'Advanced Options'. The 'Create/Edit SFM Transaction' tab is active, showing a list of 'Standard SFM Transactions' on the left and a form for 'Your Custom SFM Transactions' on the right. The form includes fields for 'Name' (Create Usage Lines from Estimates), 'SFM Transaction ID' (TDM015), 'Description' (This SFM transaction is used to create Usage/Consumption lines from existing Estimate lines in a work order), 'Status' (Complete), 'Create an SFM Transaction' (from Source Object to create new child records only), 'Created By' (Scott Bergus 08/02/2012 15:34), and 'Last Modified By' (Scott Bergus 12/18/2013 15:52). Below these fields are two sections: 'Use data from...' and '...to create these records'. The 'Use data from...' section has a dropdown for 'Work Order' and a checkbox for 'Work Detail'. The '...to create these records' section has a dropdown for 'Work Order' and checkboxes for 'Work Detail', 'Parts', 'Labor', 'Expense', and 'Travel'. A 'Next' button is located at the bottom right of the form.

Figure 2: SFM Transaction Designer Screen

In the **Create/Edit SFM Transaction** tab on the SFM Transaction Designer screen:

- To create a custom SFM transaction from a standard SFM transaction, click a standard SFM transaction from the **Standard SFM Transaction** tab, and click the **Clone** button.
- To create a new custom SFM transaction, click the **Your Custom SFM Transaction** tab, and click the **New** button.
- To create a custom SFM transaction from another custom SFM transaction, click the **Your Custom SFM Transaction** tab, click a custom SFM transaction to select it, and click the **Clone** button.
- To delete a custom SFM transaction, click a custom SFM transaction name and click the **Delete** icon on the bottom right-side of the custom SFM panel.



Caution: Use Extreme Caution when deleting SFM transactions since the effect is immediate and irreversible.

Creating/Editing SFM Transactions

Follow the sections and steps below to create/edit an SFM Transaction.

Create/Edit SFM Transaction Tab

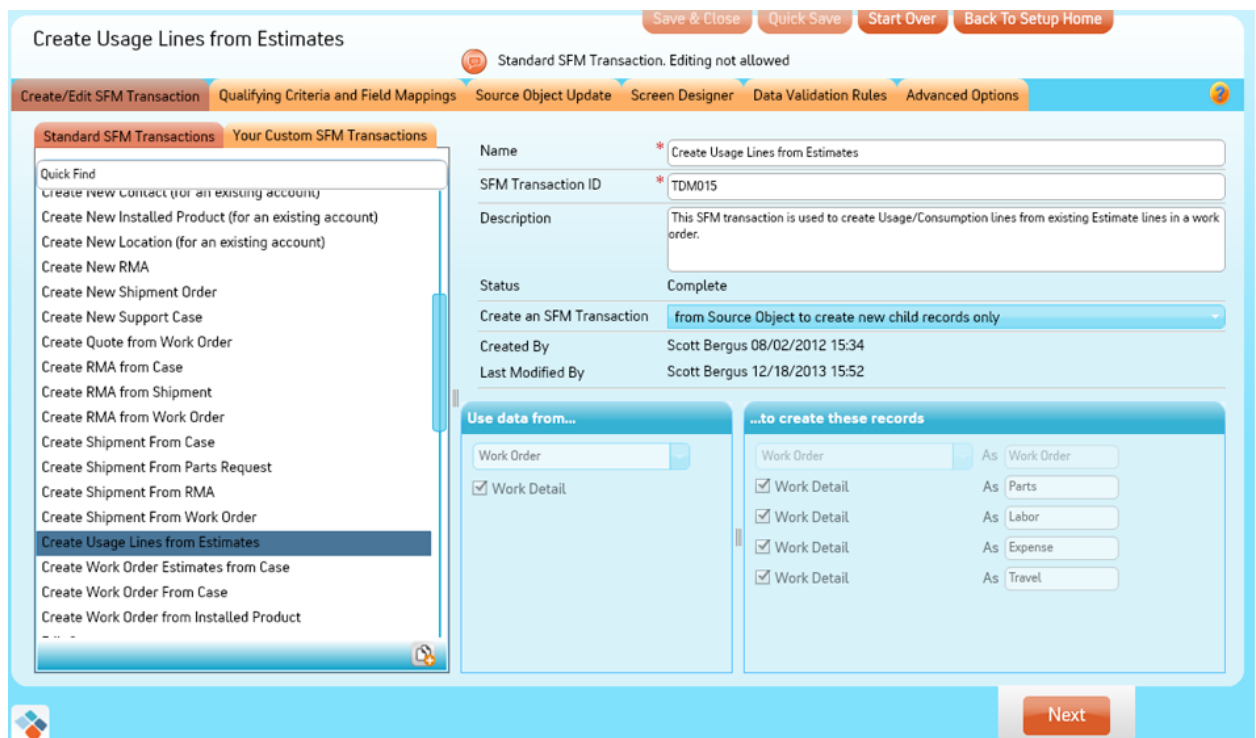
1. On the **Create/Edit SFM Transaction** tab of the SFM Transaction Designer screen, click an SFM Transaction from **Standard SFM Transactions** list (for example, "Create Usage Lines from Estimates").



Note: Standard SFM transactions cannot be modified. However, you can clone standard transactions to create custom SFM transactions, then use the **Your Custom SFM Transactions** tab to create your own transactions.



Note: If you have created custom SFM Transactions, you can select a transaction from the list in the **Your Custom SFM Transactions** tab. For existing custom or standard SFM Transactions, you can enter a name in the **Quick Find** text box to automatically locate the transaction.



The screenshot shows the 'Create Usage Lines from Estimates' transaction in the SFM Transaction Designer. The interface includes a top navigation bar with tabs: 'Create/Edit SFM Transaction', 'Qualifying Criteria and Field Mappings', 'Source Object Update', 'Screen Designer', 'Data Validation Rules', and 'Advanced Options'. The 'Create/Edit SFM Transaction' tab is active, showing a list of transactions on the left and a form on the right. The form includes fields for Name, SFM Transaction ID, Description, Status, and a dropdown for 'Create an SFM Transaction'. The 'Quick Find' text box is empty, and the 'Your Custom SFM Transactions' tab is selected. The 'Use data from...' section shows 'Work Order' selected, and the '...to create these records' section shows 'Work Detail' selected. The 'Next' button is visible at the bottom right.

Figure 3: Creating/Editing SFM Transactions

2. Enter a user-friendly name for the SFM transaction. For example: Create Shipment from Case.
3. Enter a unique ID for the SFM transaction. (Special characters are not allowed; underscores are allowed).

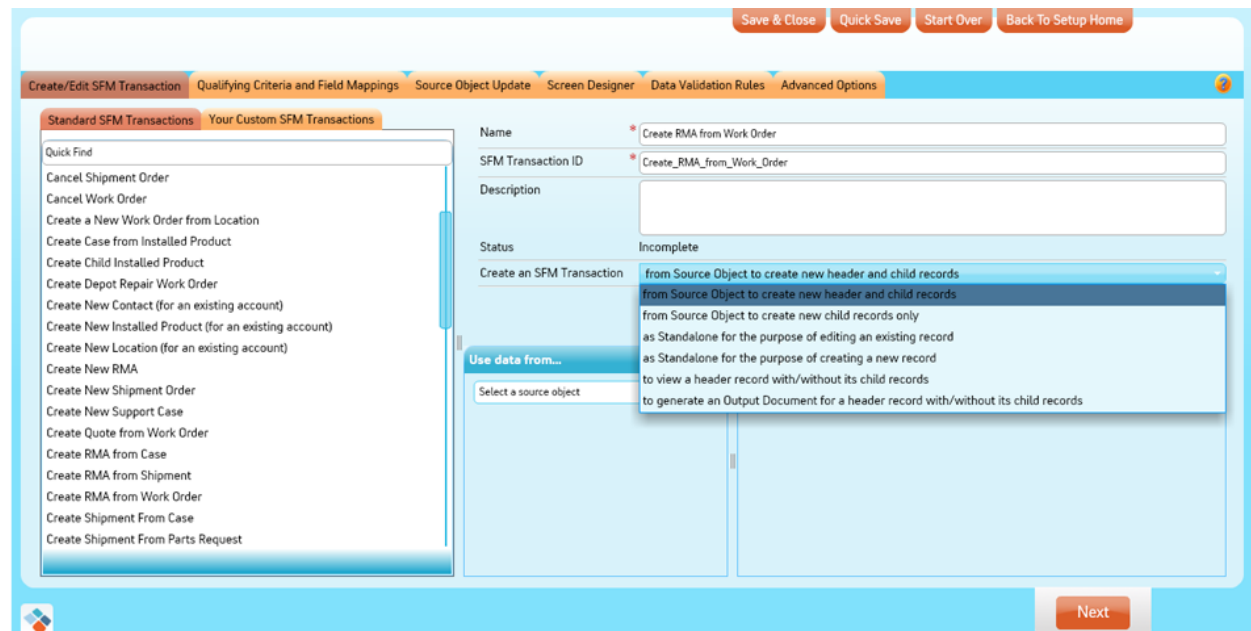


Note: For previous releases, if any Custom SFM transaction IDs contained any special characters (for example, (/,<>?"!@\$%^&*()+{}[]), they will get converted to an underscore.

4. Enter the SFM transaction description in the **Description** text box.

5. Select how SFM transactions will be used by choosing an option from the **Create an SFM Transaction** picklist. For example, they can be used for:

- Creating new target header and child record(s) from a source record.
- Creating only new child records in an existing target record.
- Editing an existing source record with/without child records.
- Creating a new target record with/without child records.
- Viewing a target header record with/without child records.

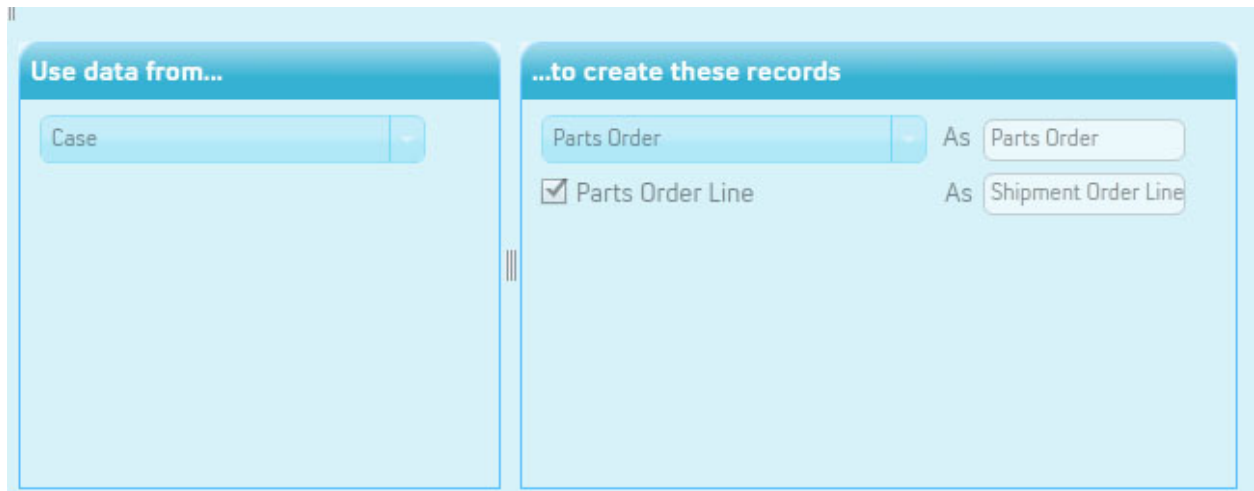


The screenshot shows the 'Create/Edit SFM Transaction' window. On the left is a list of standard transactions. The main area has fields for Name, SFM Transaction ID, Description, and Status. The 'Create an SFM Transaction' picklist is open, showing options like 'from Source Object to create new header and child records' and 'from Source Object to create new child records only'. Below this is the 'Use data from...' section with a 'Select a source object' button. At the bottom right is a 'Next' button.

Figure 4: SFM Transaction Designer

6. Specify Source and Target Objects from the **Use data from** and **to create these records** area picklists. For example, you can specify to "use data from" a **Case** to create a **Parts Order** record, as shown in the figure below.

If applicable, select the source header object from which target records will be created.



The screenshot shows a user interface for specifying source and target objects. It is divided into two main panels. The left panel, titled "Use data from...", contains a dropdown menu with "Case" selected. The right panel, titled "...to create these records", contains two rows of selection. The first row shows "Parts Order" selected in a dropdown, followed by "As" and another dropdown with "Parts Order". The second row shows a checked checkbox next to "Parts Order Line", followed by "As" and a dropdown with "Shipment Order Line".

Figure 5: Specify Source and Target Objects

Any child objects available for the selected header appear. Check the relevant source child objects

7. Select the target header object. Optionally, you can enter a more user-friendly name for the header object. If the purpose of the SFM Transaction is to create new child records only, the target object will be automatically set to the source object and will be disabled.

Any child objects available for the selected target header appear. Check the relevant target child objects. If it is a view transaction, all the objects which have a reference

to the object appear.

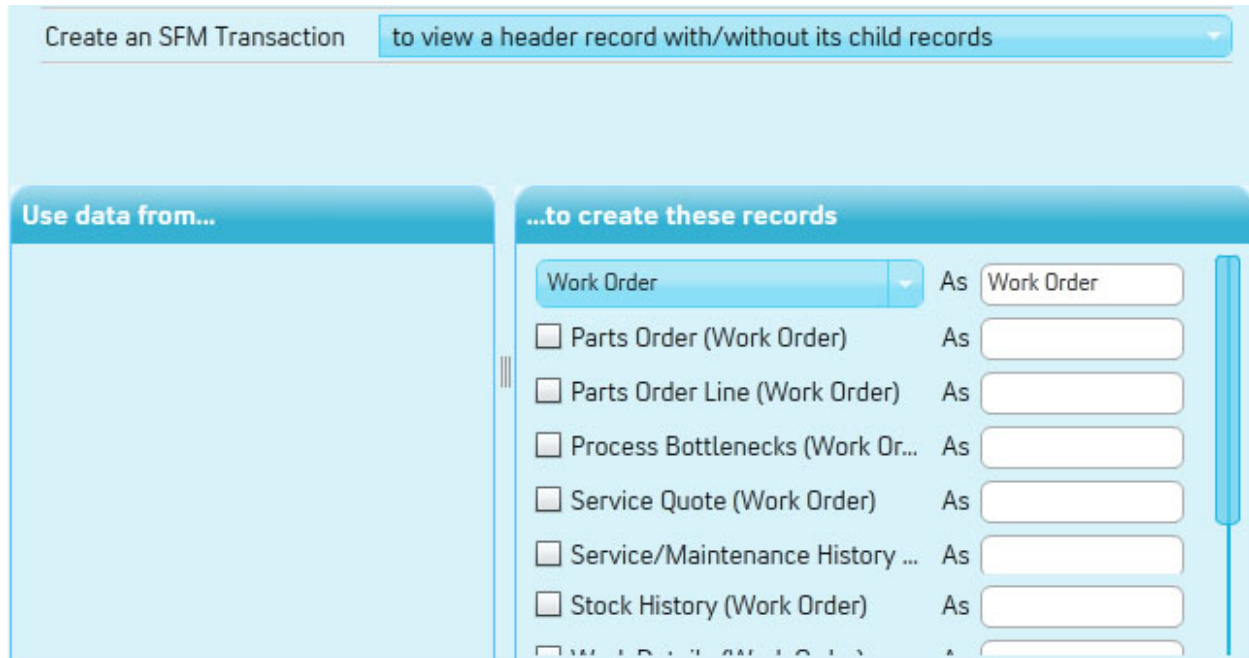


Figure 6: Creating/Editing SFM Transactions

8. To use the same child object more than once as a target, click the **Add** button. To remove an existing child object, click the **Delete** icon adjacent to the record. When using the same child object more than once, you must specify a unique alias for each instance. Once the SFM transaction is saved after choosing the source and target objects, the object selection cannot be modified.
9. When specifying Source and Target Objects, you might see the message below indicating that any changes you make in the **Use data from** picklist will reset the data in the other tabs. Click **OK** to acknowledge the message.



Figure 7: Source and Target Object Message



Note: The SFM Transaction options listed below are available only for iPad and ServiceMax Mobile for Laptops:

- "As a standalone for the purpose of creating a new record."
- "View as a header record with/without its child records."

Qualifying Criteria and Mapping Tab

10. Click **Next** or click the **Qualifying Criteria and Field Mappings** tab.

The Qualifying Criteria and Mapping screen displays as shown below.

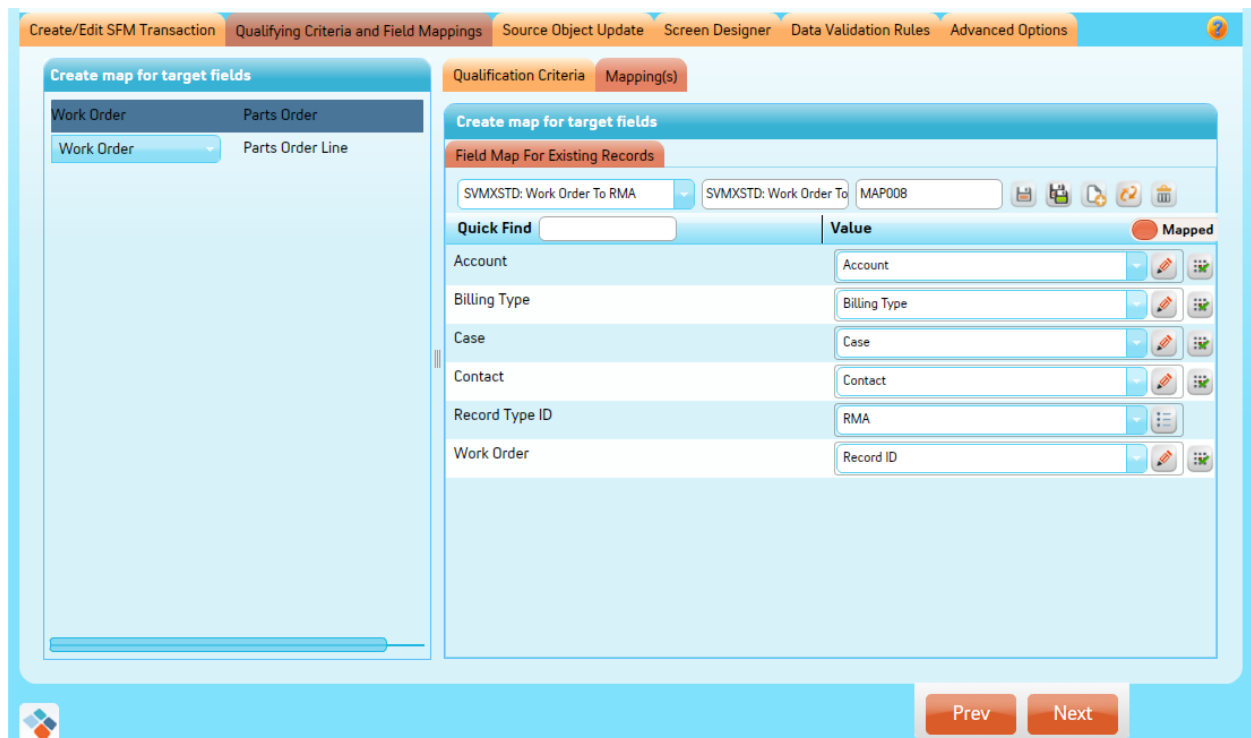


Figure 8: Specify Qualifying Criteria and Field Mappings

11. If the SFM transaction is for source-to-target record creation (both header & child and child-only modes):
 - a. All the target objects (header and child) are listed on the top-left.
 - b. The target header is automatically associated with the source header.
 - c. Select the source object to be used for each target child object.

- d. For each source-to-target association, use the expression builder on the top-right to specify the filter criteria. See [Using the Expression Builder](#) below.
 - e. For each source-to-target association, use the Map Builder on the bottom-right to specify the mapping between source and target records. See [Using the Map Builder](#) below.
12. If the SFM transaction is meant for standalone editing of a record and to manage its lines (child records):
 - a. All the target objects (header and child) are listed on the top-left.
 - b. For each target object, use the Expression Builder on the top-right to specify the filter criteria. See [Using the Expression Builder](#) below.
 - c. For each target child object, use the Map Builder on the bottom-right to specify value maps. See [Using the Map Builder](#) below.
 13. If the SFM transaction is meant for standalone creation of new target object, the target objects (header and child) are listed on the top-left.
 14. If the SFM transaction is for viewing the target header record with/without child records, the Page Layout designer appears with/without child records.
 15. Click **Next**.
 16. If the transaction is a standalone edit/create, the Page Layout designer appears. For source-to-target flows, the Source Object Update screen appears.

Using the Expression Builder



The screenshot shows the 'Expression Builder' window with the title 'Execute service flow if source object meets these conditions...'. It features a toolbar with icons for Save, Save As, New, Refresh, Delete, and Advanced. Below the toolbar, there are two rows of conditions:

Condition ID	Field	Operator	Value
1	Account Name	Equals	Acme Handy Services
2	Account Currency	Equals	USD

Figure 9: Expression Builder

The Expression Builder has a row of icons at the top. From left to right they are **Save**, **Save As**, **New**, **Refresh**, **Delete**, and **Advanced**.

- To view/edit an existing expression, select its name from the picklist. The expression details appear below. ServiceMax standard expressions cannot be modified.
- To remove an existing expression, select the expression from the picklist and click **Delete**. ServiceMax standard expressions cannot be deleted.
- To create a new expression, click the **New** icon.
- Any unsaved changes in the expression area will be lost when you switch between New and Edit modes.
- To insert a new expression record, click the **Add** icon at the end of the row. To remove an existing record, click the **Delete** icon at the end of the row.
- Select a Field name from the list and a relevant Operator.
- Depending upon the type of field, the operand (value) can be specified either as free text or from a list of allowed values. Use the toggle button to switch between the Text and List modes.
- Click the **Advanced** icon to specify an advanced expression such as **1 AND (2 OR 3)**.
- Click the **Save** icon to save the expression.
- To save the expression as new, enter a user-friendly expression name and a unique expression ID, and click the **Save As** button.
- To undo any changes you have made to an existing expression, click the **Refresh** button.
- The filter is considered as the qualification criteria for Header objects. Click the **Advanced** button to enter the error message that will be displayed to the end user if the Header record does not match the criteria.

Using the Map Builder

The Map Builder supports the definition of three types of maps:

- **Field Map for Existing Records** is used when target records are created from Source records. This can be defined for both header and detail records.
- **Value Map for New Records** is used when target records are created from Source records. This can be defined for detail records only.
- **Value Map for Existing Records** is used when header and detail records are being edited. This can be defined for header records only.



Note: **Value for Existing Records** is only available for Spring 12 SP2 onwards.

Based on the type of SFM transaction, the Map Builder displays one or two of the appropriate mapping tabs. The Map Builder has a row of icons at the top. From left to right they are **Save**, **Save As**, **New**, **Refresh** and **Delete**.

- To view/edit an existing map, select its name from the picklist. Map details appear below. Standard maps cannot be modified.
- To remove an existing map, select the map from the picklist and click **Delete**. Standard maps cannot be deleted.
- To create a new map, click the **New** icon.
- Click **Save** to save the map.
- To save the map as new, enter a user-friendly map name and a unique map ID, and click **Save As**.
- To undo any changes you have made to an existing map, click the **Refresh** button.

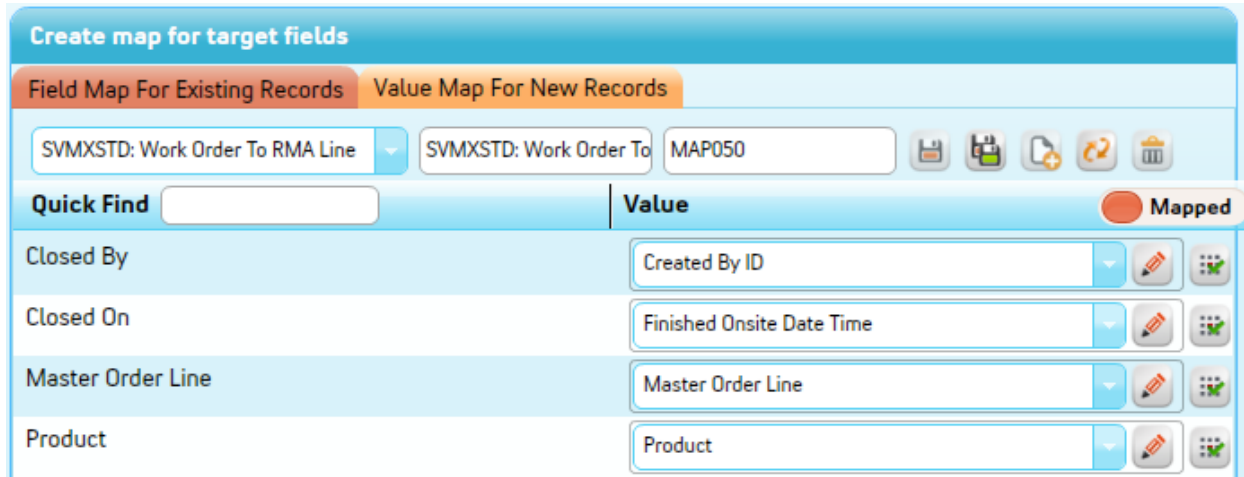


Note: Any unsaved changes in the map area will be lost when you switch between new and edit modes.

When specifying value for a target field, the screen automatically shows a list of values based on the field data type where applicable:

- **Picklist:** List of values defined in Salesforce.
- **Date:** Today, Tomorrow, Yesterday.
- **Checkbox:** True, False.

Defining a **Field Map for Existing Records:** This is applicable when defining a transaction to create new header and child records from source object and mapping is defined for either the header or detail object.



Create map for target fields	
Field Map For Existing Records	Value Map For New Records
SVMXSTD: Work Order To RMA Line	SVMXSTD: Work Order To MAP050
Quick Find	Value
Closed By	Created By ID
Closed On	Finished Onsite Date Time
Master Order Line	Master Order Line
Product	Product

Figure 10: Map Builder - Field Map for Existing Records

For each target field, all compatible fields from the source object appear. If only one field suggestion is available, it is selected automatically. If more than one compatible field is listed, you can select one of the listed fields. In addition, you can select two alternate fields if the primary source field value is blank.

You can also specify a default value for a target field *instead of* mapping it to a source field. This is useful when certain fields cannot be mapped to the source or when fields must be defaulted irrespective of the source value.

Defining a **Value Map for New Records:** This is applicable when defining a transaction to create new header and child records from source object and mapping is defined for detail

objects.

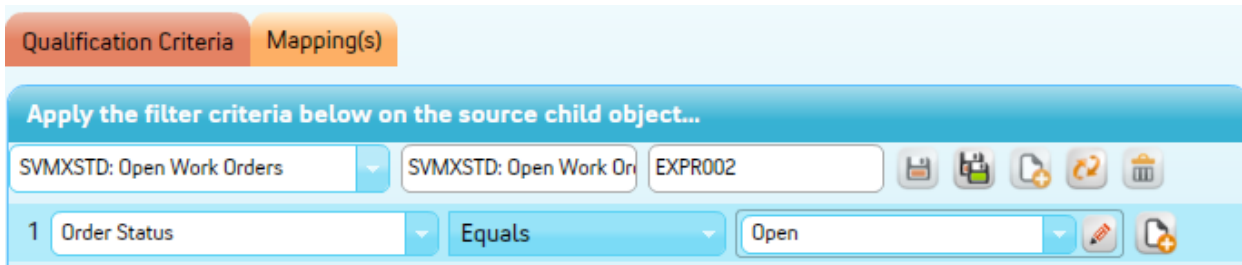


Figure 11: Map Builder - Apply Filter Criteria

Defining a **Value Map for Existing Records**: This is applicable when defining a transaction to edit records and mapping is defined for header object.

To define a new Value Map for Existing Header:

1. In the **Value Map for Existing Records** tab, click the **New** button. See figure below.




Figure 12: Specify Value Maps

2. Enter the name you would like to save the Value Map as in the **Save this map as** text box.
3. Enter the input ID in the **Input ID Here** text box.
4. In the **Value Map for Existing Records** tab for each target field, you can select from a list of allowed values or enter free text depending upon the field data type.
5. When specifying value for a target field, the screen automatically shows a list of values based on the field data type where applicable.

- Click **Save** to save the map. After the value maps are defined, they are applied as soon as a user opens a transaction.

Using the Lookup Configuration

If you are using Spring 12 SP2 onwards, skip this step and see the next section titled: [Using the Lookup Configuration \(Spring 12 SP2 Onwards Only\)](#).

In the **Properties for Field: Component** area of the Lookup section, click the **Configure Lookup** icon.

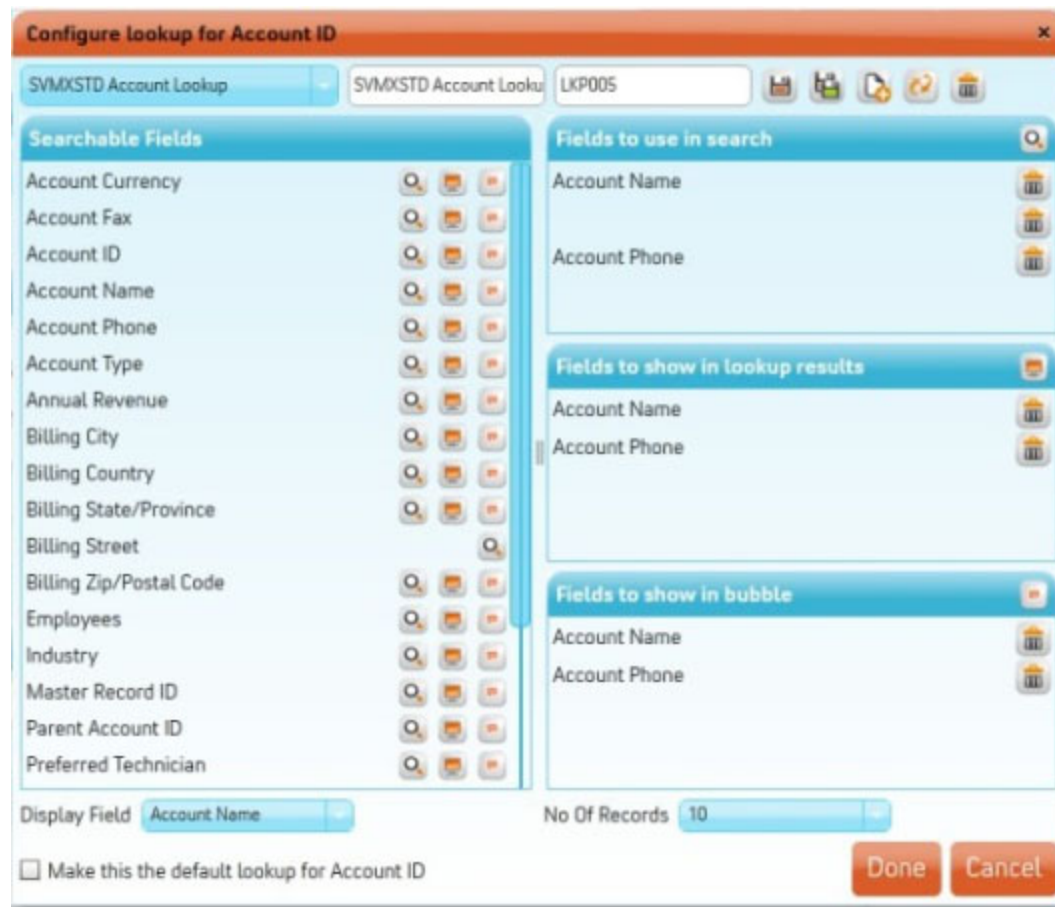


Figure 13: Lookup Configuration Designer (Pre-Spring 12 SP2 Release)

The Lookup Configuration screen has a row of icons at the top. From left to right, they are: **Save, Save As, New, Refresh, and Delete.**

- To view/edit an existing lookup, select its name from the picklist. The lookup details appear below. Standard lookups of ServiceMax cannot be modified.
- To remove an existing lookup, select the lookup from the picklist and click **Delete**. Standard lookups of ServiceMax cannot be deleted.
- To create a new lookup, click the **New** button.
- Any unsaved changes in the lookup area will be lost when you switch between New and Edit modes.
- Icons in the field list on the left indicate where each field can be used: In search, in result set and in bubble. These are determined based on the field's query ability and whether the field will fit in the results/bubble.
- Drag and drop the fields from the list to the appropriate sections on the right.
- To remove a field from the selection, click the **Delete** icon adjacent to the field name.
- Select a display field for the lookup. At run time, the value from this field appears on the screen. In most cases, the **Name** field of the object can be used. For example Account Name, Work Order Number, and so on.



Note: The field selected as the **Display Field** must be included to the list of **Fields to show in lookup results**.

- Select the number of records to be displayed in the result set.
- Indicate if you want the lookup to be considered as the default lookup for this object. At run time, if no lookup configuration is available for a lookup field, the default lookup will be used.
- Click **Save** to save the lookup.
- To save the lookup as new, enter a user-friendly lookup name and a unique Lookup ID, and click **Save As**.
- To undo any changes you have made to an existing lookup, click the **Refresh** icon.
- To return to the page layout designer, click **Done**.
- The page layout designer shows a green indicator adjacent to the **Configure** button after a lookup configuration is successfully associated with a lookup field.



Note: The SFM transaction is not saved when you save a map, expression, lookup configuration, or page layout using the **Save** icon in their bands. The SFM transaction must be explicitly saved using the **Quick Save** or **Save & Close** icons at the top of all tabs.

Using the Lookup Configuration (Spring 12 SP2 Onwards Only)

The following information are new features for Lookup Configuration for Spring 12 SP2 onward.

In the **Properties for Field: Component** area of the Lookup section, click the **Configure Lookup** icon (see figure below).

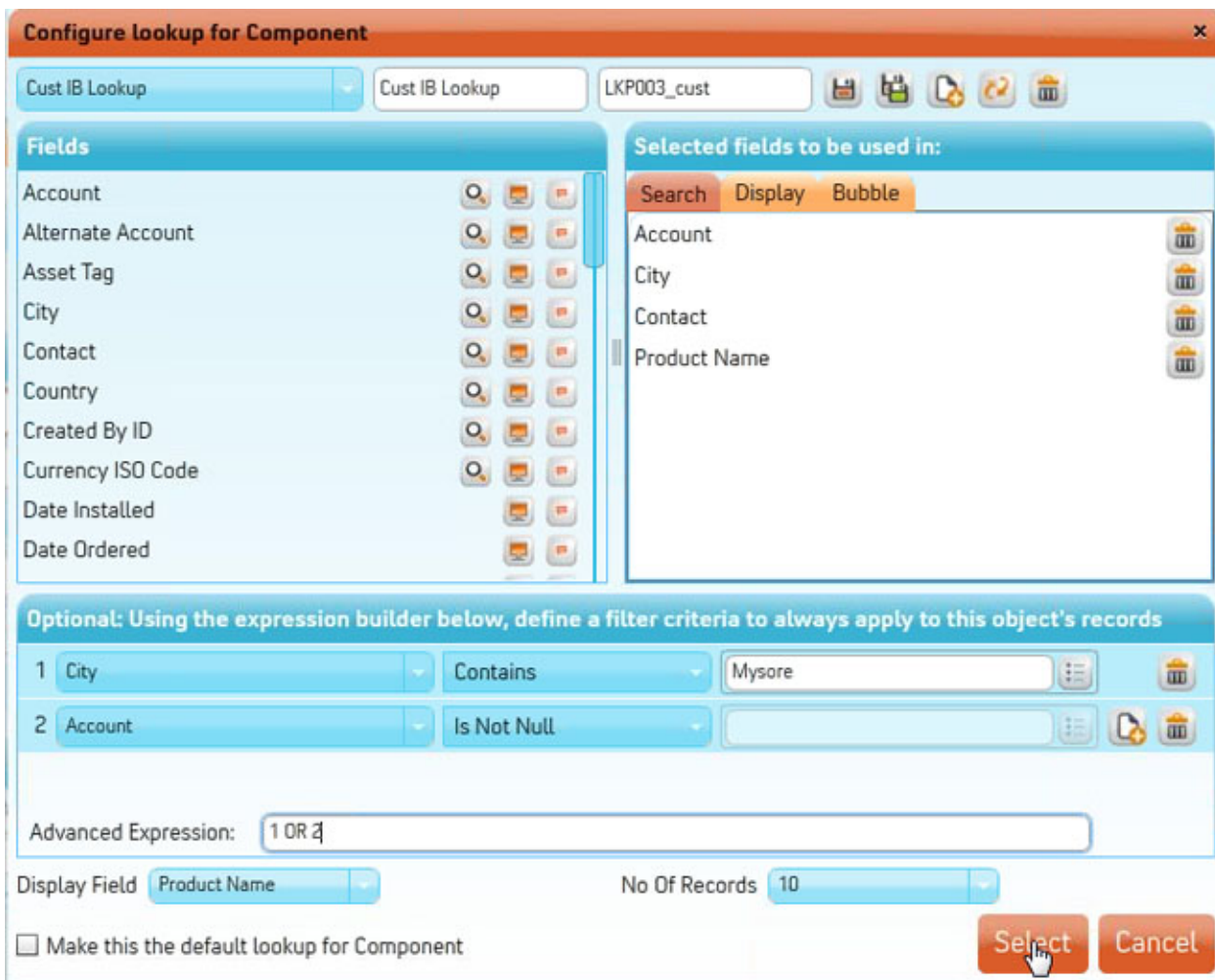


Figure 14: Lookup Configuration Designer (SP2 Only)

The Lookup Configuration screen has a band of buttons at the top of the screen: **Save**, **Save As**, **New**, **Refresh**, and **Delete**. See figure above.

- To view/edit an existing lookup, select its name from the list. The lookup details appear below. Standard lookups of ServiceMax cannot be modified.
- To remove an existing lookup, select the lookup from the list and click **Delete**. Standard lookups of ServiceMax cannot be deleted.
- To create a new lookup, click the **New** button.
- Any unsaved changes in the lookup area will be lost when you switch between New and Edit modes.
- Icons in the field list on the left indicate where each field can be used: In search, in result set and in bubble. These are determined based on the field's query ability and whether the field will fit in the results/bubble.
- Drag and drop fields from the list to the appropriate tabs (Search, Display, Bubble) to the right.
- To remove a field from the selection, click the **Delete** icon adjacent to the field name.
- Using the expression builder, define the filter criteria.
- Click the **Add a row** button if you want to add additional filter criteria.
- Click the **Delete** button to delete a row.
- Use the Advanced Expression text box to enter an advanced expression (for example, **1 or 2**).
- Select a display field for the lookup. At run time, the value from this field appears on the screen. In most cases, the Name field of the object can be used. For example Account Name, Work Order Number, and so on.



Note: The field selected as **Display Field** must be included to the list of **Fields to show in lookup results**.

- Select the number of records to be displayed in the result set.
- Indicate if you want the lookup to be considered as the default lookup for this object. At run time, if no lookup configuration is available for a lookup field, the default lookup will be used.
- Click **Save** to save the lookup.
- To save the lookup as new, enter a user-friendly lookup name and a unique Lookup ID, and click **Save As**.
- To undo any changes you have made to an existing lookup, click **Refresh** button.
- To return to the page layout designer, click the **Select** button.

Source Object Update Tab

Click **Next** or click the **Source Object Update** tab.

The Source Object Update screen displays as shown below.

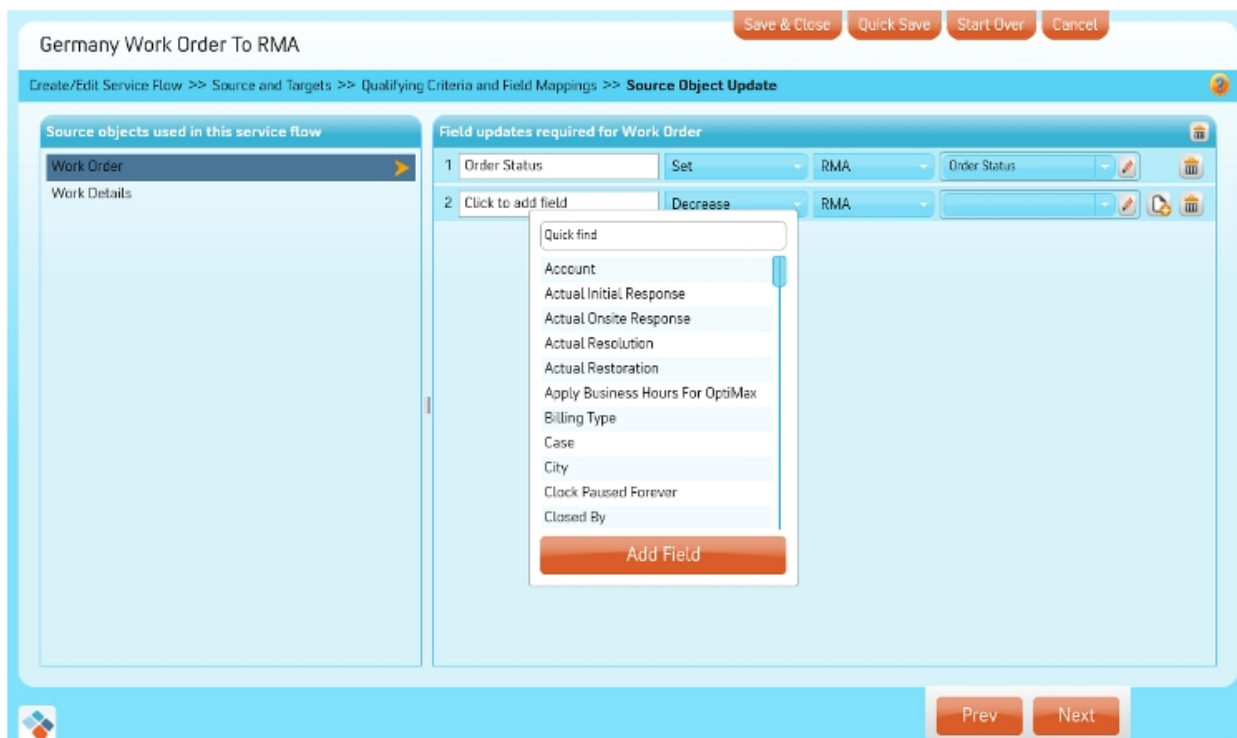


Figure 15: Source Object Update Tab

All source objects (header and child) in the SFM transaction are listed on the left.

- Click an object name to manage updates. All existing field updates for the selected object appear on the right or a blank row is inserted.
- To insert a new source update record, click the **Add** button at the end of the row. To remove an existing record, click the **Delete** button at the end of the row.
- Click the field name area and select the field name to be updated.
- Select the operation to be performed on the selected field. Increase and Decrease are available on numeric fields only.
- Select the target object. It is preselected if there are no target child objects.
- All compatible fields in the target object are displayed in the field list. Select the relevant target field. This field's value will be used to update the source field. Alternatively, you can enter a value instead of choosing from the list of compatible fields.
- Repeat the above for each source object to be updated.



Note: The Source Object update configuration is limited to the following SFM transaction types: "from Source Object to create new header and child records" and "from Source Object to create new child records only."



Note: This is not currently available in the iPad application.

Screen Designer Tab

Click **Next** or click the **Screen Designer** tab. The Screen Designer screen displays as shown below.

Create Usage Lines from Estimates 2013-06-07 18:51:35

Save & Close Quick Save Start Over Back To Setup Home

SFM Transaction saved

Create/Edit SFM Transaction Qualifying Criteria and Field Mappings Source Object Update Screen Designer Business Rules Advanced Options

SVMXSTD: Create Usage from Estim SVMXSTD: Create Usage from Estim PAG015

Save Cancel Get Price Get Price

Work Order

Order Status Billing Type

Click to add a field here Click to add a field here

Parts Associated Target Child: Parts

Covered %	Discount %	Work Description	Is Billable	Billable Qty

Labor Associated Target Child: Labor

Use Price From Pricebook...	Line Qty	Line Price Per Unit	Covered %	Work Description

Expenses Associated Target Child: Expense

Covered %	Work Description	Is Billable	Billable Line Price	Billable Qty

Properties for Page

Page events

On Load

Event Type -None-

Before Save/Update

Event Type JavaScript

Method Code001: Standard Get Price

After Save/Update

Event Type JavaScript

Method Code001: Standard Get Price

General

Hide Quick Save Button ☒

Hide Save Button ☐

Help

Help Text This SFM transaction is used to create Usage/Consumption lines from existing Estimate lines in a work order.

Prev Next

Figure 16: Screen Designer Tab

From the Screen Designer tab, you can:

- Design a page layout
- Create a custom Get Price button
- Configure the Advanced Filter
- Configure the Lookup Form Fill

The Screen Designer screen is described in the bullet points and sections below.

The page layout designer includes the following icons from left to right: **Save**, **Save As**, **New**, **Refresh** and **Delete**.

- The page layout list shows all existing layouts whose objects are an exact match of the SFM transactions target objects.
- To view/edit an existing page layout, select its name from the picklist. The page layout is displayed below. Standard page layouts cannot be modified.
- To remove an existing page layout, select the layout from the list and click the **Delete** icon. Standard page layouts cannot be deleted.
- To create a new page layout, click the **New** icon.
- Click the **Save** button to save the page layout.
- To save the page layout as new, enter a user-friendly page layout name and a unique page layout ID, and click **Save As**.
- To undo any changes you have made to an existing page layout, click the **Refresh** button.
- Any unsaved changes in the page layout area will be lost when you switch between new and edit modes.

The organization of the Screen Designer is described below.

- It contains the header design area at the top, detail design areas at the bottom, and a context-sensitive configuration panel on the right.
- Header design area can contain one or more sections that can be used to logically group fields. Each section can contain one or more fields.
- There will be as many detail design areas as there are target dependent objects in the SFM transaction. Each detail design area can contain one or more fields from the dependent object.
- If you click a field (for example, Create Shipment from Case, Record Type ID) or section (for example, Shipment, Location), data for that field displays and populates in the Properties for Page area on the far right side of the window. If you click a button (for example, Get Price), data for that button displays and populates in the Properties for Page area. The **Save** and **Cancel** buttons are default buttons and do not display or populate data in the Properties for Page area.

The Screen Designer Page level design options are described below.

- The **Save** and **Cancel** buttons appear by default; they cannot be removed.
- To add a custom button, click the **Add** button in the buttons section.
- To remove a custom button, click the **X** mark that appears when your cursor hovers over the button.
- Once a custom button is added, create a button title and select the type of action you want to perform. See the *ServiceMax User Guide* to learn more about integrating web services with button click events.

To create a custom Get Price button for work order price calculations:

1. Click the **Add** button to create a custom button.
2. In the **Properties for Button: Get Price** area, enter a title for the button.
3. In the **Event Type** picklist, select **JavaScript**.
4. In the **Code Snippet** picklist, select **Code001: Standard Get Price**.
5. Check the checkbox **Show in web**.
6. Check the checkbox **Show in iPad**.



Properties for Button: Get Price	
General	
Title	Get Price
On Click	
Event Type	JavaScript
Code Snippet	Code001: Standard Get Price
Show in web	<input checked="" type="checkbox"/>
Show in iPad	<input checked="" type="checkbox"/>

Figure 17: *Properties for Button: Get Price.*

At run time, the standard and custom buttons are displayed at the top and bottom of the page.

7. Click the page layout band at the top of the designer to manage page-level attributes. See the **ServiceMax User Guide** to learn more about integrating web services with page events.
8. You can specify a help URL and help text to guide end users of the screen. The URL will be launched in a new window in run time.
9. You can use the **iPad Options** area to configure how this transaction is deployed in ServiceMax iPad Client. If **Show all sections by default** is checked, the iPad displays all header sections from this page. If the screen contains many sections with numerous fields, it is recommended to leave this checkbox unchecked. You also can hide the **Quick Save** button and the **Save** button in the ServiceMax iPad Client by checking their respective checkboxes in the iPad Options area. By default, the **Quick Save** button and the **Save** button are enabled when viewing transactions.

To design a header layout:

1. To insert a new section, click the **Add** button at the bottom right of the last section. A new section with blank fields will be inserted below.
2. To remove a section, click the **Remove** button at the bottom of the section. All fields placed in the section will be removed as well.
3. To move a section, hold the section title area and drag and drop it to the required location.
4. To change the properties of a section such as Title and so on, click the section title.
5. Click any blank field area to view a popup list of fields. You can search the field list by typing part of the field name. To hide the popup, click anywhere outside of the popup window, or press the **Escape** button.
6. To add a field from the popup, double-click the field name or select the field and click the **Add Field to Page** button.
7. To move a field's placement on the screen, click the field label and drag and drop it to any empty field area.

A new empty field row displays automatically when you fill the last field row of a section.

8. To remove a field, click the **Delete** button in the field area. A field can be added to the page layout only once.
9. Once a field is placed on the page layout, examine the field's attributes on the right side carefully and set them as required. See the *ServiceMax User Guide* to learn more about integrating web services with field events.

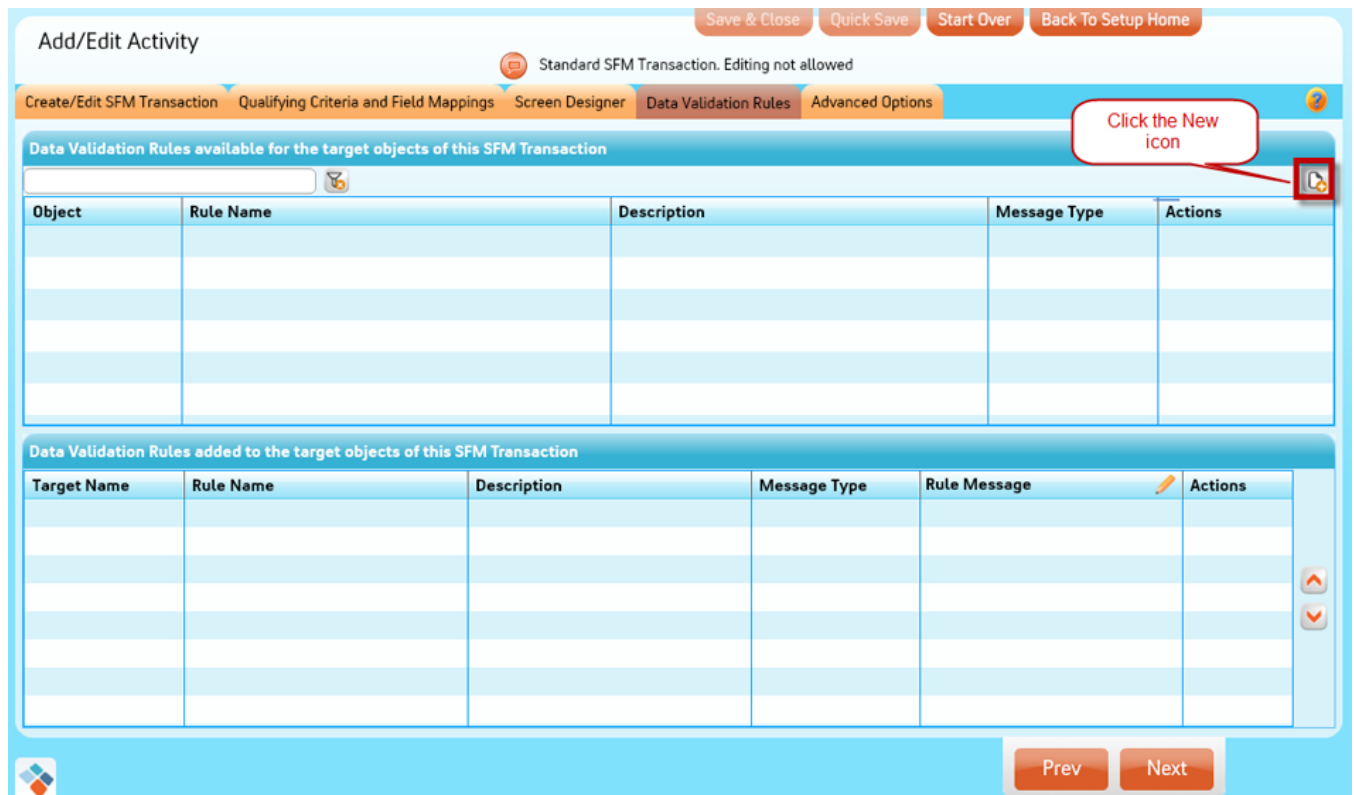
To design a child layout:

1. Click the blank field area to view a popup list of fields. You can search the field list by entering part of the field name. To hide the popup, click anywhere outside or press the **Escape** button.
2. To add a field from the popup, either double-click the field name or select the field and click the **Add Field to Page** button.
3. To move a field's placement within the child section, click the field label, drag and drop it where required.
4. To remove a field, click the **Delete** button in the field area. A field can be added to the child layout only once.
5. Once a field is placed on the child layout, examine the field's attributes on the right side carefully and set them as required. See the *ServiceMax User Guide* to learn more about integrating web services with field events.
6. Because the iPad does not support horizontal scrolling, there is limited space available to display all the child columns. In order to make the child section more readable to iPad users, you can select the first "n" number of columns to be displayed in the child list.
7. To move a child layout within a page, hold the child layout title area, and drag and drop it to the required location. All child layouts must be placed below the header layout.
8. Even though all child sections are listed below one another in the designer, the sections will be painted as tabs for the end user.

Data Validation Rules Tab

Click **Next** or click the **Data Validation Rules** tab. The Data Validation Rules screen displays as shown below.

Configuring Data Validation Rules is available in the Data Validation Rules screen. This screen includes the following areas: **Data Validation Rules available for the target objects of the SFM transaction** and **Data Validation Rules added to the target objects of the SFM transaction**.



Add/Edit Activity

Save & Close Quick Save Start Over Back To Setup Home

Standard SFM Transaction. Editing not allowed

Create/Edit SFM Transaction Qualifying Criteria and Field Mappings Screen Designer Data Validation Rules Advanced Options

Data Validation Rules available for the target objects of this SFM Transaction

Object	Rule Name	Description	Message Type	Actions

Data Validation Rules added to the target objects of this SFM Transaction

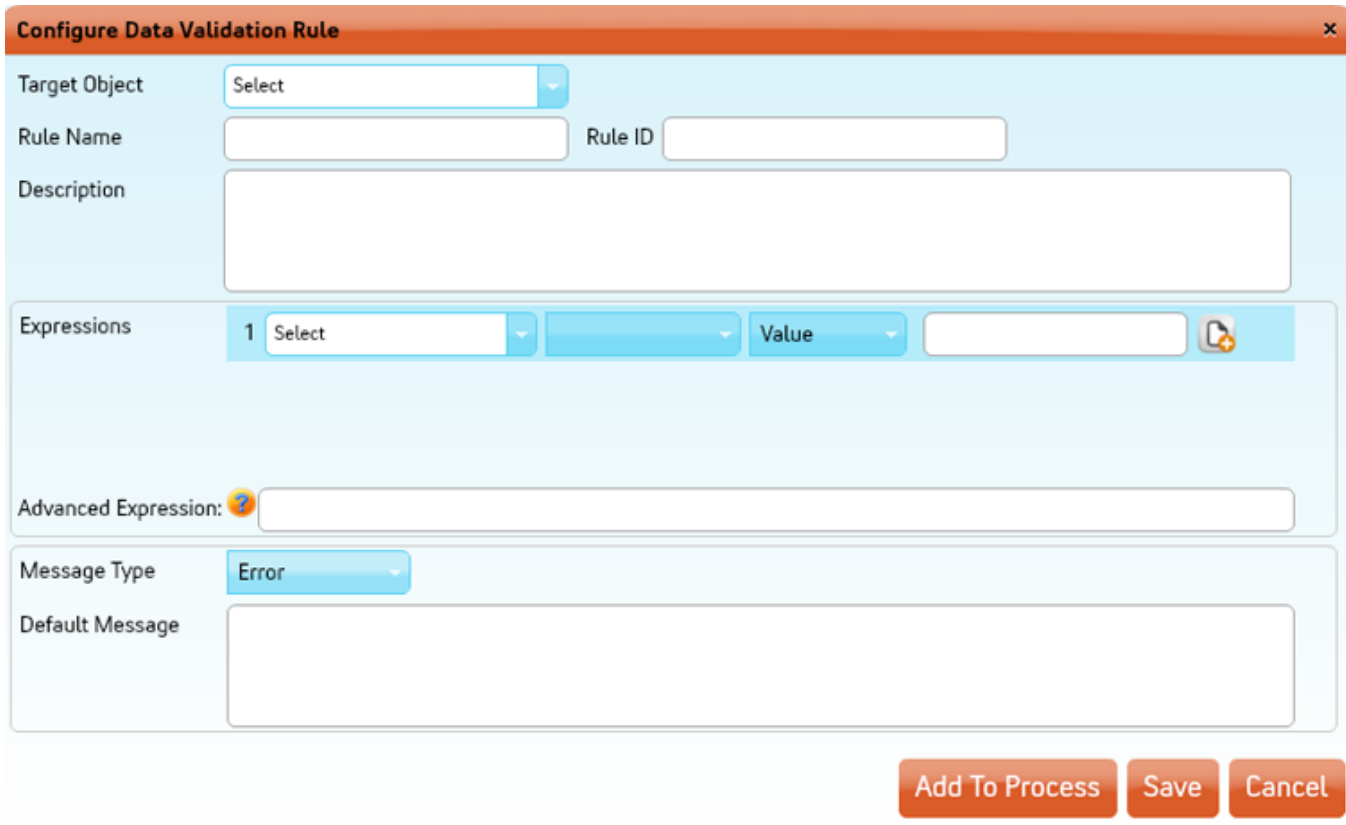
Target Name	Rule Name	Description	Message Type	Rule Message	Actions

Prev Next

Figure 18: Data Validation Rules Screen

Click the **New** icon to create, edit, or view a new Data Validation Rule.

The Configure Data Validation Rules dialog box displays as shown below.



The dialog box is titled "Configure Data Validation Rule" and contains the following fields and controls:

- Target Object:** A dropdown menu with "Select" as the current value.
- Rule Name:** A text input field.
- Rule ID:** A text input field.
- Description:** A large text area for entering a description.
- Expressions:** A section containing a list of expressions. The first expression is numbered "1" and has a dropdown menu with "Select" as the value. To the right of the dropdown is a "Value" dropdown menu and a text input field. There is also a "+" icon to add more expressions.
- Advanced Expression:** A text input field with a question mark icon to the left.
- Message Type:** A dropdown menu with "Error" as the selected value.
- Default Message:** A large text area for entering a default message.

At the bottom right of the dialog box are three buttons: "Add To Process", "Save", and "Cancel".

Figure 19: Configure Data Validation Rule Dialog Box

In the Data Validation Rules dialog box:

1. Select a Target Object from the **Target Object** picklist (see figure below for an illustrated example of the steps below).
2. Enter a name for your rule in the **Rule Name** text field. The Rule ID automatically populates in the **Rule ID** text field. However, you can also enter a different name for your Rule ID if desired.
3. Enter a description for your rule in the **Description** text box.
4. In the **Expressions** area, select an expression for your rule using the available picklists. (Note: Data Validation Rule expressions support the following operands: **Field**, **Value**, and **Functions**).
5. In the **Expression Name** field, enter an expression name.
6. Use the **+/-** icons to add or delete expressions.

7. If applicable to your process, enter an Advanced Expression in the **Advanced Expression** text box.
8. In the **Message Type** picklist, select either **Error** or **Confirmation**.



Note: In the Default Message area, enter the Error or Confirmation message your users will see when they click the **Save** or **Quick Save** button.



Note: The Error or Confirmation Default Message is the message that displays when a user violates the Data Validation Rule that you have configured.

9. Click the **Save** button to save the Data Validation Rule. Click the **Add to Process** button to add your rule to the SFM process.
10. If you click the **Add to Process** button, the **Select Target Children** dialog box displays for SFM Transactions that have more than one child section. Check the target children (for example, Parts, Labor, Expense) checkboxes that you want to add to the rule and then click **OK**.

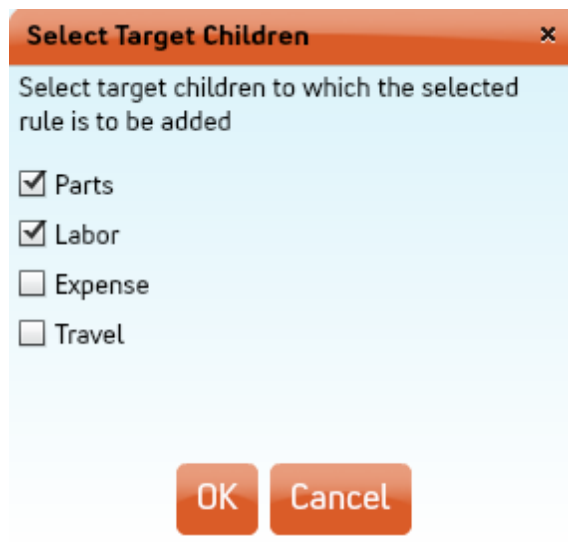
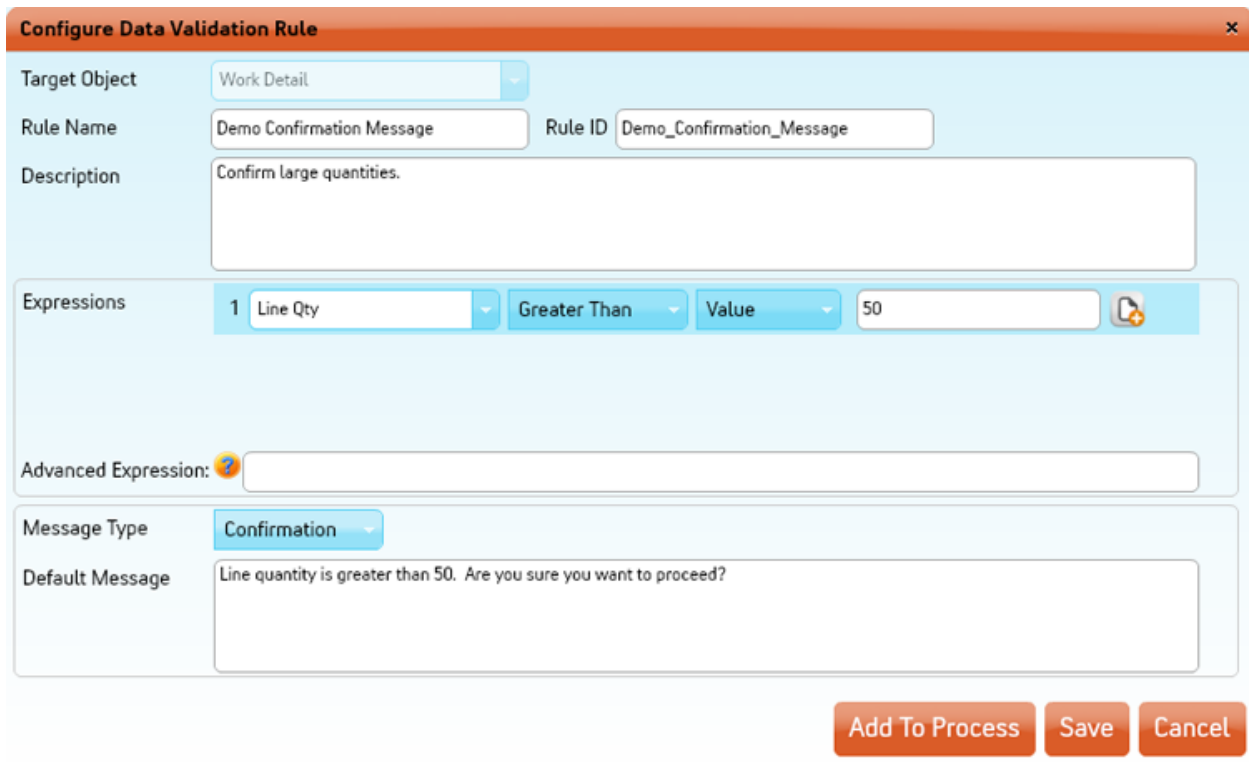


Figure 20: Select Target Children Dialog Box



Note: If you clicked the **Add to Process** button (see Figure 13), your rule is automatically added to the SFM Transaction and displays in the **Business Rules added to the target object of this SFM Transaction** area.



The dialog box is titled "Configure Data Validation Rule". It contains the following fields and controls:

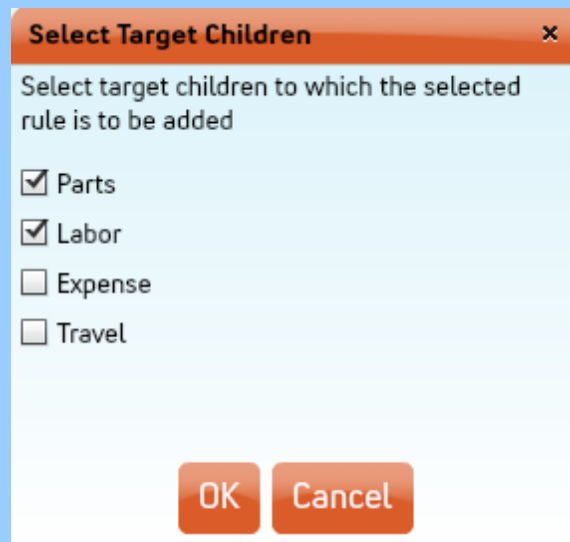
- Target Object:** A dropdown menu with "Work Detail" selected.
- Rule Name:** A text field containing "Demo Confirmation Message".
- Rule ID:** A text field containing "Demo_Confirmation_Message".
- Description:** A text area containing "Confirm large quantities."
- Expressions:** A section containing a list of expressions. The first expression is "1 Line Qty" followed by a dropdown menu showing "Greater Than", then another dropdown menu showing "Value", and finally a text field containing "50". There is a plus icon to the right of the text field.
- Advanced Expression:** A text field with a question mark icon to its left.
- Message Type:** A dropdown menu with "Confirmation" selected.
- Default Message:** A text area containing "Line quantity is greater than 50. Are you sure you want to proceed?".
- Buttons:** At the bottom right, there are three buttons: "Add To Process", "Save", and "Cancel".

Figure 21: Configure Data Validation Dialog Box

The Data Validation Rules configured display in the **Business Rules available for the target objects of this SFM Transaction** area. If you clicked the **Add To Process** button from the **Configure Data Validation Rules** dialog box, your rules will also display in the area titled, **Data Validation Rules added to the target objects**



Note: If you use the drag and drop method to add a rule to a process, the **Select Target Children** dialog box displays for SFM Transactions that have more than one child section as shown in the figure below. Check the target children (for example, Parts, Labor, Expense) checkboxes that you want to add to the rule and click **OK**.



12. To save your rule under a different name, click the **Save As** icon.
13. To edit your existing rule, click the **Edit** icon.
14. To delete a rule, click the **Delete** icon.

The **Data Validation Rules added to the target objects of this SFM Transaction** area lists all of the rules that you have added to your SFM Transaction. This section includes the Target Name, Rule Name, Description, Message Type, Rule Message, and Actions (see figure below).







Target Name	Rule Name	Description	Message Type	Rule Message	Actions
Work Order	WO_Account_Not_Null - WO_Account_Not_Null	Validate_WO_account_field_is_populated		Account_field_must_have_value	
Labor Estimate	Demo_Confirmation_Message - Demo Confirmat	Confirm large quantities.		Line quantity is greater than 50. Are you sur	
Parts Estimate	Demo_Confirmation_Message - Demo Confirmat	Confirm large quantities.		Line quantity is greater than 50. Are you sur	

Figure 24: Data Validation Rules Added to the SFM Transaction Target Objects

15. When there are multiple rules, use the up/down arrows to define the sequence in which rules are applied.
16. To remove a Business Rule from the SFM Transaction, click the **Remove Rule From Process** icon in the Actions area.

Advanced Options Tab

Click **Next** or click the **Advanced Options** tab. The Advanced Options screen displays as shown below.

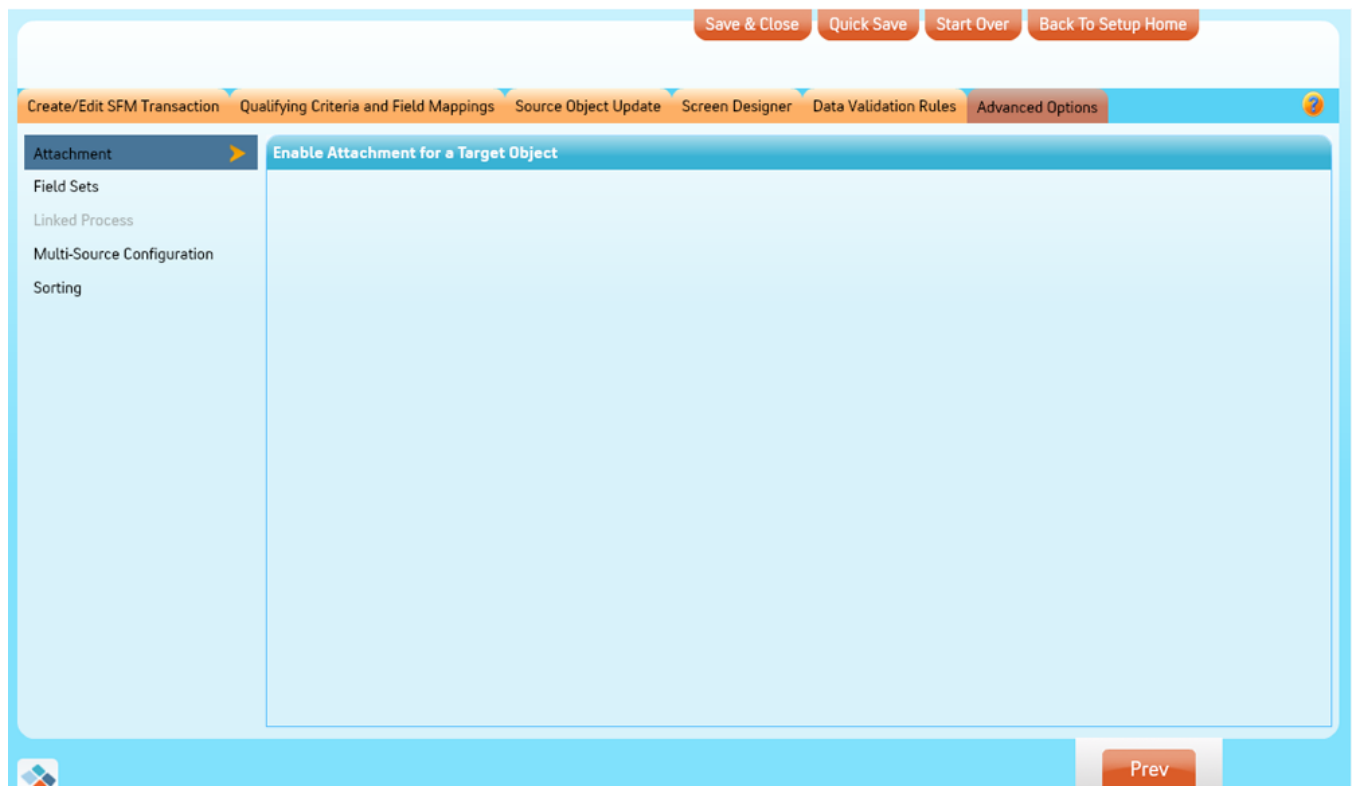


Figure 25: Advanced Options Screen

In the Advanced Options tab you can:

- Enable attachments on mobile devices
- Configure field sets
- Linked processes
- Configure multi source process
- Configure fields for sorting

Configuring iPad Attachments to Records

iPad users can upload photos and videos to a source object (for example, Work Order). Technicians can capture real-time pictures and videos in the ServiceMax 14 for iPad app and attach them to an SFM transaction.

Administrators must configure this feature for each specific SFM before it is available to end users. Attachments are enabled for a target object in the Advanced Options tab of the SFM Transaction Designer.

To configure iPad attachments to records:

1. In the SFM screen, click the **Advanced Options** tab.
2. In the **Enable Attachment for a Target Object** area, check the **Target Object** checkbox as shown in the figure below.
3. Click **Save & Close** to save the transaction and close the screen. Click **Quick Save** to save the transaction and remain on the current screen.

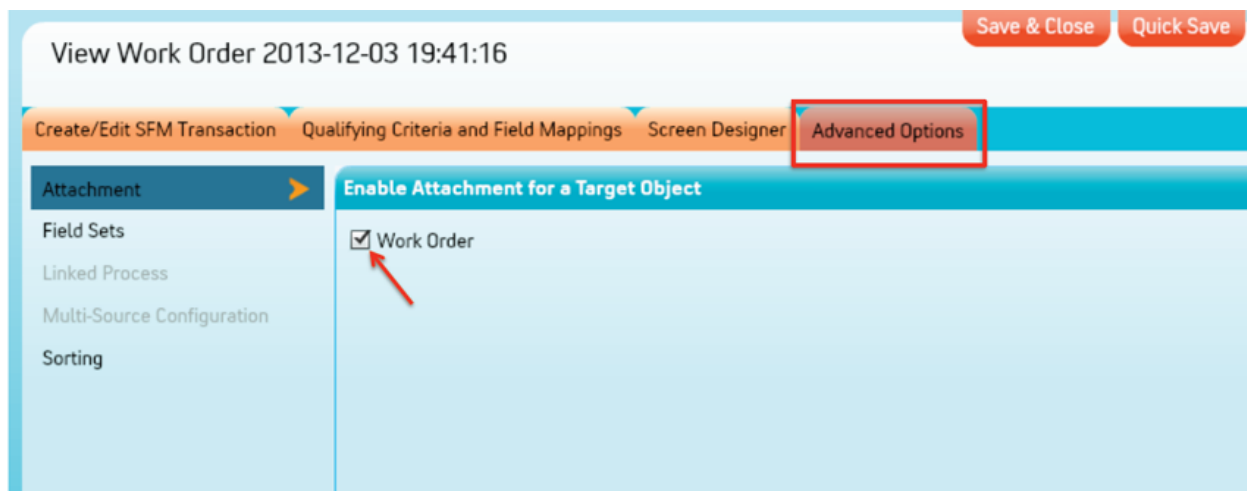


Figure 26: Enabling Attachment for a Target Object





Note: For attachments on mobile devices, there is a Salesforce upload (from end user to server) size limitation of 5 MB per file.

Field Set and Configure Fields for Sorting

Field set and configure fields for sorting are available in the Advanced Options screen as shown in the figure above. This screen includes the following areas: **Field Sets**, **Select Target Object**, **Available Field Sets**, and **Selected Field Sets**.

To configure field sets for sorting:

1. Select a target object from the list of objects in the Select Target Object area.
2. In the Available fields area, select an available field. Use the  arrow to move the available field into the Selected fields area.
3. Move all desired available fields into the Selected fields area.
4. Use the up/down arrows next to the Selected fields area to determine the order of the selected fields.
5. To return a selected field to the Available fields area, select a selected field and click the  arrow.

At anytime during the SFM transaction creation process, you can click the **Quick Save** button to save the SFM transaction (even if it is incomplete) and continue to edit the flow.

To save the SFM transaction and return to the ServiceMax Setup home page, click the **Save & Close** button at the top of the screen.

To cancel any changes you have made to the transaction and return to ServiceMax Setup Home, click the **Cancel** button at the top of the screen. If you cancel, any expressions, maps, page layouts, and lookup configurations saved while building the SFM transaction will not be rolled back.

To undo any changes you made to the flow and start from the first step, click the **Start Over** button at the top of the screen. If you start over, any expressions, maps, page layouts and lookup configurations saved while building the SFM transaction will not be rolled back.

Configuring Multi-Source Processes

You can configure multi-source processes from the Advanced Options tab of the SFM Transaction Designer. The multi-source process feature is useful when information from the

source and dependent records need to be updated in the target record(s). This configuration is applicable for only transactions of the type, "from Source Object to create new header and child records." You must create the SFM Transaction that will be used as the secondary source before configuring the Multi-Source feature.

To configure multi-source processes:

1. In the primary SFM transaction, click the **Advanced Options** tab, as shown in the figure below.

[illegible]

Figure 27: Advanced Options Tab: Multi-Source Configuration

- Click **Multi-Source Configuration** located on the left pane of the screen.

A list of possible Lookup fields from the target object appear in the **Select source field for sub-process** picklist.
- Select a field from the **Select source field for sub-process** picklist, representing the source object of your secondary dataset. A list of SFM Transactions that can be used as a source for the secondary data appear in the Available SFM Processes area.
- Click the radio button next to an SFM Process to select it.
- Click **Save and Close** or **Quick Save**.

Advanced Filter






You can use the Advanced Lookup tab to create advanced filters based on a related object (for example, Product Stock). You must first select the transaction (standard or custom) you want enabled by the advanced filters. The figure below displays an example of the Advanced Filter tab dialog box. The table below provides a description of the text fields and icons in the Advanced Filter tab dialog box.

Configure lookup field: "Part"

SVMXSTD: Product Lookup

SVMXSTD: Product Looku




LKP001

Lookup Attributes

Advanced Filter

Optionally, create a filter based on related objects

Object	Filter Name	Description	Default On	Allow Override	
Product Stock (Pr	SVMXSTD:Limit Iter	Limit Items to My Trunk Stock	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	  

Define filter and its expressions

Object

Select

Description

Default On

☐

Filter Name


Allow Override

☐

1

Select

Value



Advanced Expression:

Add Filter








Select



Cancel

Figure 28: Advanced Filter tab Dialog Box

Advanced Filter Fields and Icons Table

The table below provides a description of text fields and icons of the Advanced Filter tab dialog box as shown in the figure above.

Fields and Icons	Description
Object	Name of an object you want to configure (for example, Product Stock).
Filter Name	Name of a filter.
Description	A description of a filter.
Default On	Checkbox to enable the Advanced Filter as a default. All end user searches performed for that lookup will be on by default.
Allow Override	Checkbox to enable an override of a filter. Use this if you want to allow end users to turn a filter off when they perform the search.
Advanced Expression	Advanced criteria for your rule.
Edit	Clicking this icon enables you to edit your filter Object, Description, and Filter Name in the Define filter and its expressions area.
Create/Reset Filter 	If you have made any changes to the filter, clicking reset will change it back to the saved advanced filter configuration.
Save 	Saves your filter.
Save As 	Saves your filter under a new name that you designate.
New/Add a row 	Adds a new row for you to create a new filter.
Reset 	If you have made any changes to the filter, Reset will delete your current filter configuration and restore your saved advanced filter configuration.
Trash 	Discards your filter.
Add Filter button 	Adds filter to the Lookup configuration after you have defined the filter and its expressions.

Fields and Icons	Description
Select button 	Applies the filter to the Lookup configuration.
Cancel button 	Cancels your filter.

Advanced Filter Configuration

Advanced Filter is used for creating advanced filters based on a related object. A use case scenario for using Advanced Filter is Product Stock. In this example, the administrator creates an advanced filter that limits the parts a technician can record to only those parts that are available in his or her trunk. Creating this type of advanced filter will reduce technician errors. This example is illustrated in the instructions below.

To configure an Advanced Filter:

1. In the Screen Designer tab, click an object's text area and then click the **Configure Lookup** button to open the **Configuration Lookup field** dialog box. See figure below for a procedural illustration.



Note: You can also click an object's **Lookup** icon to open the **Configuration Lookup field** dialog box.

Create/Edit SFM Transaction Qualifying Criteria and Field Mappings **Screen Designer** Data Validation Rules Advanced Options

SVMXSTD: Manage WO Parts Request SVMXSTD: Manage WO Parts Request PAG018 Save Cancel

Work Order

Order Status Billing Type

Click to [icon]

1. Select an object by clicking in the object's text area.

2. Click the Configure Lookup button to open the Configuration Lookup field dialog box.

Parts Request Lines

Part	Requested Qty	Date Required	From Location	To Location
<input type="text"/> [icon]	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

* Note: You can also click an object's Lookup icon to open the Configuration Lookup field dialog box.

Properties for Field: Part

General

Required ☒ Read Only ☐

Field Events

On Exit

Event Type

Lookup

Configure Lookup ✓

Lookup Context

Context Source Parts Request Lines

Override Context ☐

Context

Matching Field

Lookup Form-Fill

Object Mapping

Figure 29: Screen Designer Tab

2. In the **Configuration Lookup field** dialog box, click the **Advanced Filter** tab.

Configure lookup field: "Part"

Use an existing Lookup Input ID Here

Lookup Attributes **Advanced Filter**

Optionally, create a filter based on related objects

Object	Filter Name	Description	Default On	Allow Override

Define filter and its expressions

Object Description Default On ☐



Filter Name Allow Override ☐

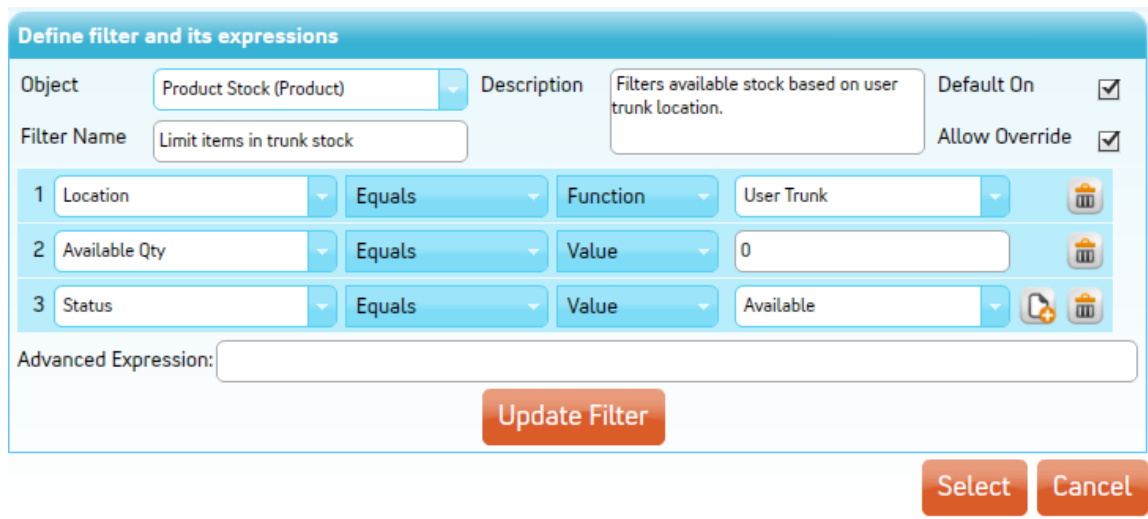
1

Advanced Expression:

Figure 30: Advanced Filter Tab Dialog Box

3. In the area titled, **Define filter and its expressions**:
 - a. Select a related object to configure an advanced filter from the **Object** picklist.
 - b. Enter a description of the filter in the Description text box.
 - c. Enter a name for your filter in the **Filter Name** text box.
 - d. Check the **Default On** checkbox if you want to enable this feature by default. (All searches end users perform for the lookup search will be on by default).
 - e. Check the **Allow Override** checkbox if you want to allow end users to turn this filter off when they perform the search.

4. Determine your filter expressions (criteria): See figure below.
 - a. Select an option from the **Select expressions** picklist.
 - b. Select an operator (for example, Equals, Not Equal, Greater Than) from the appropriate picklist.
 - c. Select **Value** or **Function** from the appropriate picklist. See figure below for an example of a value and function.
 - d. Enter the **Value** or the **Function** in the corresponding picklist.
 - e. To add additional expressions, click the **Add a row**  icon.
 - f. To delete an expression, click the **Delete**  icon.



The dialog box is titled "Define filter and its expressions". It contains the following fields and controls:

- Object:** A dropdown menu with "Product Stock (Product)" selected.
- Description:** A text box containing "Filters available stock based on user trunk location."
- Default On:** A checkbox that is checked.
- Filter Name:** A text box containing "Limit items in trunk stock".
- Allow Override:** A checkbox that is checked.
- Expressions Table:** A table with 3 rows and 5 columns:





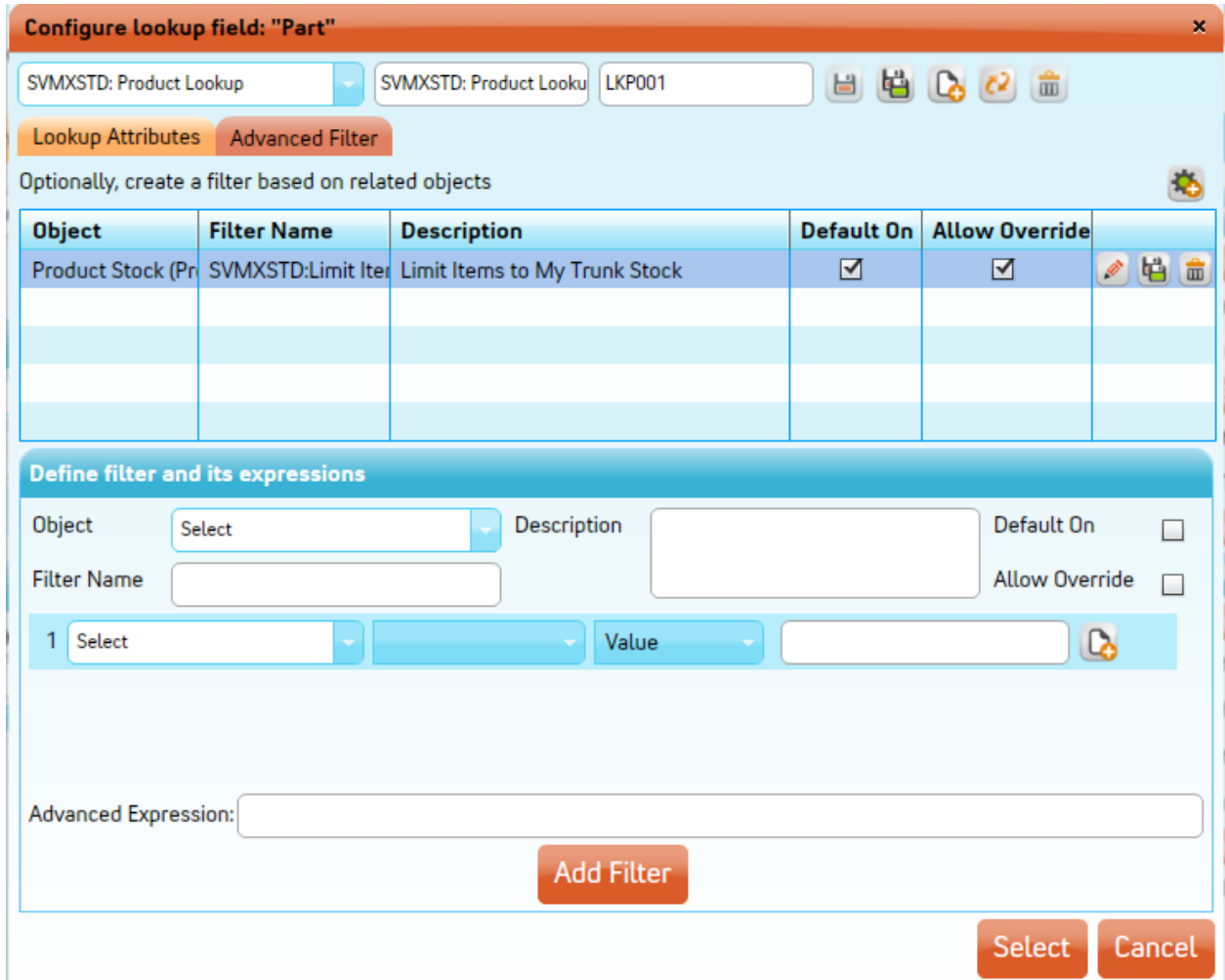
	Field	Operator	Type	Value/Function	Action
1	Location	Equals	Function	User Trunk	
2	Available Qty	Equals	Value	0	
3	Status	Equals	Value	Available	 
- Advanced Expression:** An empty text box.
- Buttons:** "Update Filter" (orange), "Select" (orange), and "Cancel" (orange).

Figure 31: Define Filter and its Expressions Dialog Box

5. In the **Advanced Expression** text box, enter an advanced expression (for example, **1 and 2**) if this applies to your filter.
6. Click the **Add Filter** button to add your filter to the Lookup configuration.



Note: The only function supported is **User Trunk**.



Configure lookup field: "Part"

SVMXSTD: Product Lookup SVMXSTD: Product Looku LKP001

Lookup Attributes Advanced Filter

Optionally, create a filter based on related objects

Object	Filter Name	Description	Default On	Allow Override
Product Stock (Pr	SVMXSTD:Limit It	Limit Items to My Trunk Stock	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Define filter and its expressions

Object Description Default On ☐

Filter Name Allow Override ☐

1 Value

Advanced Expression:

Add Filter

Select Cancel

Figure 32: Advanced Filter Tab Dialog Box

- If you have multiple filters displayed, click the **Select** button to apply the filter configuration to the Lookup filter.
- If you need to cancel your filter, click **Cancel**.

Lookup Form Fill

The Lookup Form Fill feature enables you to configure mapping that copies information from a looked up record to the current record being edited.

To Configure the Lookup Form Fill feature:

1. Edit an SFM Transaction and click the **Screen Designer** tab. See figure below.
2. Click an object's **Lookup** icon.
3. In the **Object Mapping** picklist, select the defined mapping.

For an illustration of the above procedures, see the figure below.

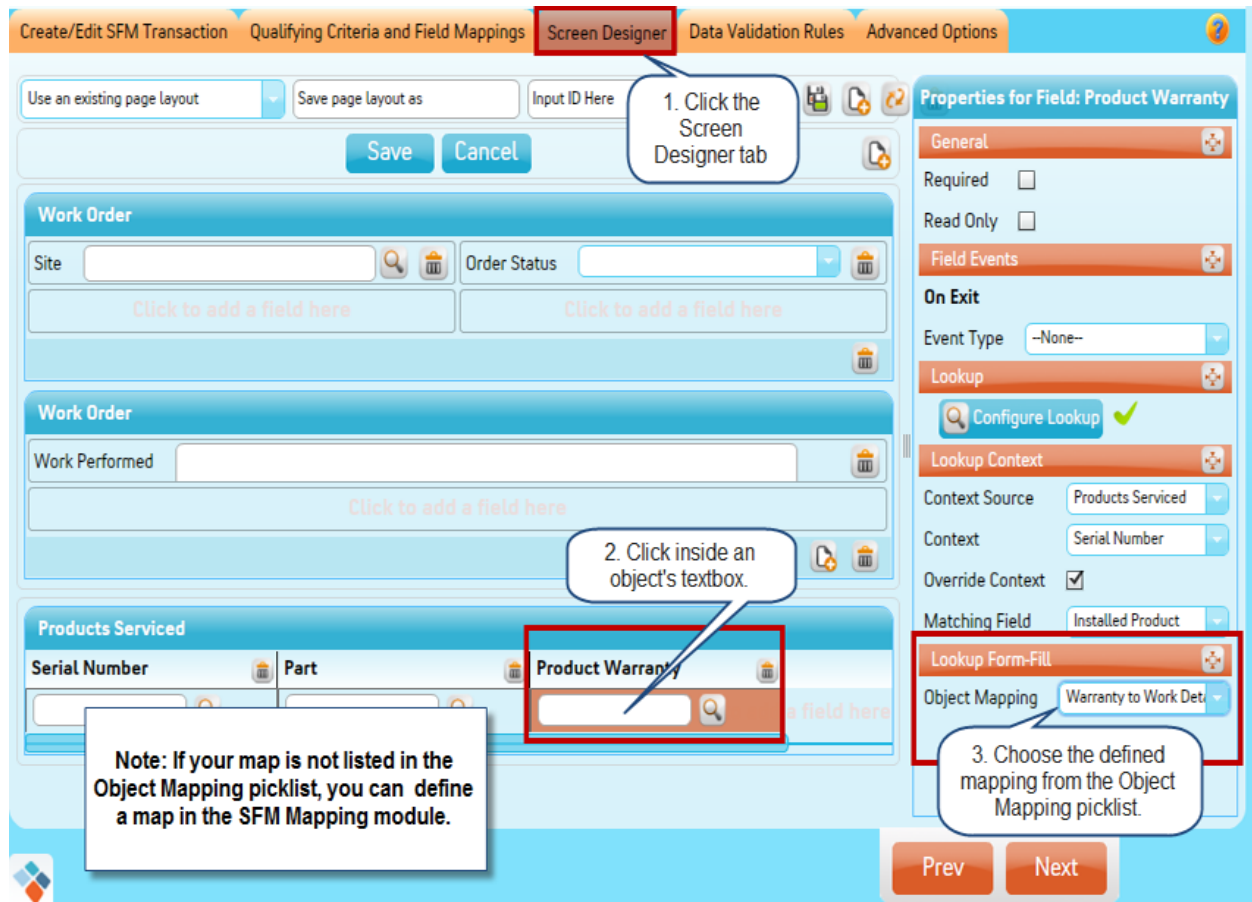


Figure 33: Configure SFM Mapping Window (Form Fill Example)

4. Save the page layout and the transaction. The feature is ready to use in the SFM transaction.



Note: If you do not see your defined map in the **Object Mapping** picklist, you can define a map in the SFM Mapping module. For instructions on how to define an SFM Map, see [Advanced Configuration: SFM Mapping](#).

See also (for Lookup Form Fill):

- For more information about the Screen Designer tab, see: [Screen Designer Tab](#).
- For information on how to define a map, see: [Advanced Configuration: SFM Mapping](#).
- For a use case example of Lookup Form Fill, see: [Lookup Form Fill Use Case](#).
- For more information about Lookup Form Fill, see [Using the SFM Transaction Screen > Lookup Form Fill section](#).

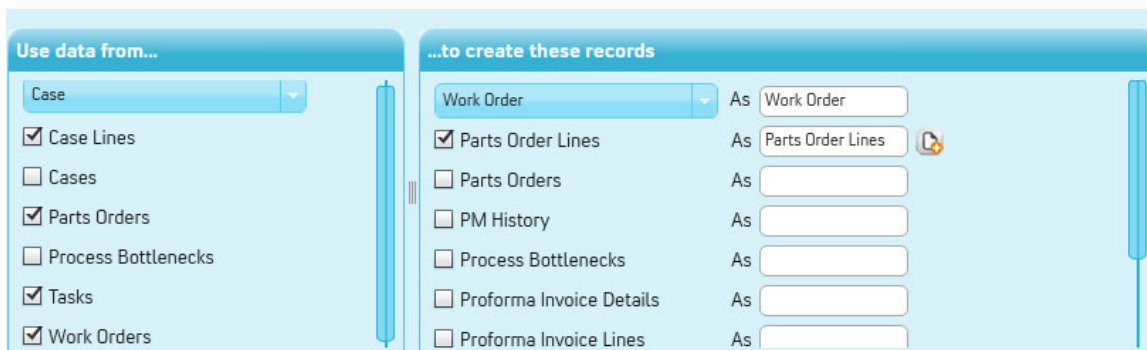
Cloning SFM Transactions

You can make any modification to a cloned SFM transaction. Instructions are described below.

To clone an SFM transaction:

1. Click **Home > ServiceMax Setup > Service Flow Manager > SFM Transaction Designer** to view the SFM Transaction Designer screen.
2. From the **Create/Edit SFM Transaction** tab, click the **Standard SFM Transactions** or **Custom SFM Transactions** tab.
3. Select a standard or custom SFM transaction. For existing custom or standard SFM transactions, you can enter the name in the **Quick Find** text box to automatically locate the transaction.
4. Click the **Clone** button.
5. Specify Source and Target Objects.

- Select the source header object from which target records will be created.
- You can only edit the source and target objects when you create a new transaction for the first time or when you clone a transaction that you have not yet saved.
- All available child and related objects for the selected header are displayed. Select the relevant source child objects.
- Select the target header object. Optionally, you can enter a more user-friendly name for the header object. If the purpose of the SFM Transaction is to create new child records only, the target object will be automatically set to the source object and will be disabled.
- Any child objects available for the selected target header are displayed. Check the relevant target child objects. If it is a view transaction, all the objects which have a reference to the object are displayed.



The screenshot shows two panels in the SFM Transaction Designer. The left panel, titled 'Use data from...', has a dropdown menu set to 'Case'. Below it, a list of child objects is shown with checkboxes: Case Lines (checked), Cases (unchecked), Parts Orders (checked), Process Bottlenecks (unchecked), Tasks (checked), and Work Orders (checked). The right panel, titled '...to create these records', has a dropdown menu set to 'Work Order'. Below it, a list of child objects is shown with checkboxes and an 'As' field: Parts Order Lines (checked, As Parts Order Lines), Parts Orders (unchecked, As), PM History (unchecked, As), Process Bottlenecks (unchecked, As), Proforma Invoice Details (unchecked, As), and Proforma Invoice Lines (unchecked, As). A vertical scrollbar is visible on the right side of the right panel.

Figure 34: Specify Source and Target Objects

6. To use the same child object more than once as a target, click the **Add** button. To remove an existing child object, click the **Delete** icon adjacent to the record. When using the same child object more than once, you must specify a unique alias for each instance.
7. Once SFM transaction is saved after choosing the source and target objects, the object selection cannot be modified.
8. Click **Next** to access the **Qualifying Criteria and Field Mappings** tab (see [Creating/Editing SFM Transactions](#) for complete instructions for **Qualifying Criteria and Field Mappings** tab, **Source Object Update** tab, and the **Screen Designer** tab.)



Note: For complete step-by-step instructions, follow the instructions provided in the above section titled "Creating/Editing SFM Transactions."



Note: You can only edit the source and target objects when you create a new transaction for the first time or when you clone a transaction that you have not yet saved.

Deleting an SFM Transaction

To delete an SFM transaction:

1. Click the name of the custom SFM transaction at the bottom left.
2. Click the **Delete** button.
3. If the transaction has been configured to run from a button or link, you must remove such buttons/links from the page layout and delete the buttons manually.



Note: ServiceMax Standard SFM transactions cannot be deleted.

Deploying an SFM Transaction

Once an SFM transaction is configured, you must explicitly deploy it for use by your end users.

Standalone Edit, Source-to-target Create, and Source-to-target Child Only transactions can be deployed using the SFM Wizard. For more information about SFM Wizards, see [Advanced Configuration: SFM Wizards](#).

Standalone Create and View Record transactions are supported by the ServiceMax iPad client only. To grant access to these transactions, see [Setting Up SFM Permissions for iPad](#).

It is a recommended practice to create/update your SFM transactions on a Sandbox instance and verify them before deploying them to production. Once you have successfully

verified the SFM transactions on the Sandbox, you can migrate them to the production instance using the SFM Migrator tool. See the SFM Migrator for more information.



Note: Picklist values should be restricted by Record types when the Record types are known. Also, dependent picklists are supported in SFM Delivery if all the fields are present. All dependent fields should be present in the Page Layout to support dependent picklists.

Output Documents Overview

Output Documents, also known as Smart Business Documents or Smart Documents, are service reports and business documents that require ServiceMax and Salesforce data (for example, company name, company logo, Work Order details, work performed, billing details, and so on).

You can create templates for your Output Documents in HTML instead of VF pages, which significantly reduces the complexity of creating business document templates. The table below lists all the supported functions for creating Output Documents.

For information on how to create an Output Document/Smart Document, see [Creating an SFM Output/Smart Document](#) below.

SFM Template Designer Functions for Output Documents

The functions in the table below are supported in the Output Documents.

Type	Function Name	Description	Syntax	Example
Conditional	BOOL	Returns True if all the arguments are non-null, false otherwise.	\$F.BOOL(<value>)	\$F.BOOL (\$ D.WorkOrder.Id)
Conditional	IF	Returns truthy if the provided condition is true, false otherwise.	\$F.IF(condition, truthy, falsey)	\$F.IF (\$ D.WorkOrder.Id , 'True', 'False')

Type	Function Name	Description	Syntax	Example
Conditional	ISNULL	Shortcut \$BOOL() to check for null values. Returns True if the value is null, false otherwise.	\$F.ISNULL(<value>)	\$F.ISNULL (\$ <u>D.WorkOrder.Id</u>)
Date	NOW	Returns the current date time.	\$F.NOW()	\$F.NOW()
Date	TODAY	Returns a "today" date.	\$F.TODAY()	\$F.TODAY()
Date	TOMORROW	Returns a "tomorrow" date.	\$F.TOMORROW()	\$F.TOMORROW()
Date	YESTERDAY	Returns a "yesterday" date.	\$F.YESTERDAY()	\$F.YESTERDAY()
LNumber	LNUMBER	Formats a number using the user locale settings.	Syntax : \$F.LNUMBER (<value>)	Example: \$F.LNUMBER(23.45)
Math	ADD	Adds up all the values that are passed as arguments to this function. It is expected that the type of all the values be same. Otherwise, the behavior is undefined.	\$F.ADD(<value1>, [<value2>,...])	\$F.ADD(2,3)
Math	INT	Converts the value to an integer. Returns 0 for invalid values.	\$ <u>F.INT</u> (<value>)	\$ <u>F.INT</u> ('23')
Math	SUMOF	Adds the values for a given column name from the record collection.	\$F.SUMOF (<recordCollection>, '<columnname>')	\$F.SUMOF (\$D.WorkOrderLines, 'SVMXC__Estimated_Quantity2__c')

Type	Function Name	Description	Syntax	Example
Number	ROUND	Limits the decimal places to specified number of digits.	\$F.ROUND (<value>,<no. of digits>)	\$F.ROUND(23.45,1)
Organization	ADDRESS	Returns the address of the Organization.	\$F.ADDRESS()	\$F.ADDRESS()
Organization	LOGO	Shows the document with name LOGO as an image. Note: You must use key word SFM_OUTPUT_DOCUMENT and document unique name LOGO when uploading a new image.	\$F.LOGO()	\$F.LOGO()
String	FORMAT	Function that allows you to pass in a template string (a string that contains placeholders) and some parameters, and it replaces the placeholders from the template string with the parameter values.	\$F.FORMAT (<String>,[<value1>,...])	\$F.FORMAT("Welcome {0}",\$F.USERNAME())
String	TOUPPER	Converts the arguments that have passed to uppercase.	\$F.TOUPPER (<value>)	\$F.TOUPPER (\$ D.WorkOrder.Id)
User	USERNAME	Returns the logged in user name.	\$F.USERNAME()	\$F.USERNAME()

Creating an SFM Output/Smart Document

To create an SFM Output Document:

1. Click **Home > ServiceMax Setup > Service Flow Manager > SFM Transaction Designer** to view the SFM Transaction Designer screen.
2. Click the **Create/Edit SFM Transaction** tab.

Create/Edit SFM Transaction Tab

- Click the **Your Custom SFM Transactions** tab.



Note: You cannot edit an Standard SFM Transaction, but you can clone an SFM Transaction, and then edit it. For more information, see [Cloning SFM Transactions](#).

- Click the **New SFM Transaction** icon located at the bottom right corner of the **Your Custom SFM Transaction** tab (see figure below).

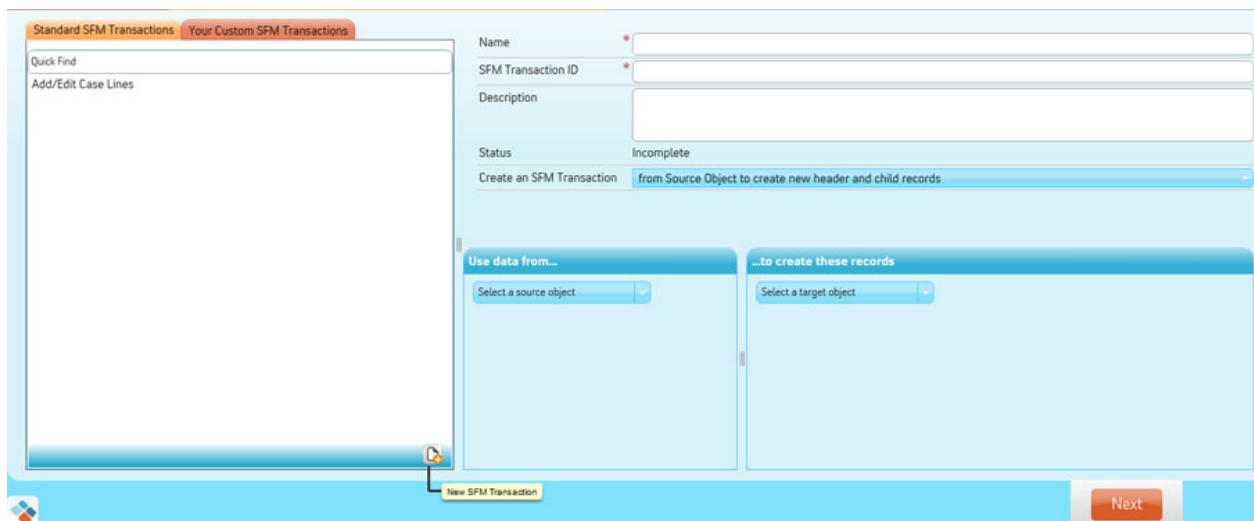


Figure 35: Your Custom SFM Transactions

- Enter a user-friendly name for the SFM transaction. For example, ServiceMax Work Order Service Report.
- Enter the SFM transaction description.
- Select **to generate an Output Document with/without its child records** from the **Create an SFM Transaction** picklist. See figure below.

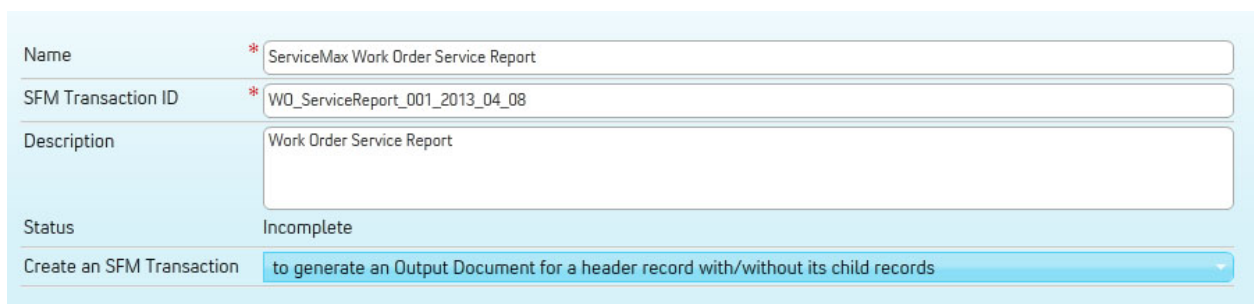


Figure 36: Output Document Description

8. Select the target header object for any object (for example, Work Order) from the area titled **...to create these records**.
9. Select one or more Work Order line items (for example, Labor, Expense, Travel, Parts, and so on) by checking their checkbox. Any child objects available for the selected target header appear. If the **As** text box does not automatically populate, enter a descriptive name in the text box.

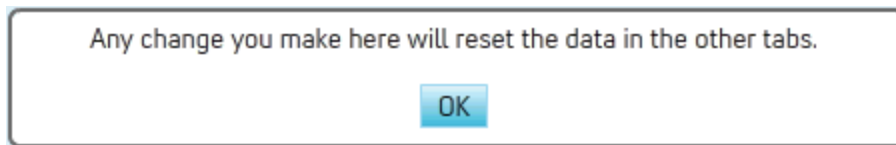


...to create these records	
<input type="checkbox"/> Informa Invoice Line (from Order)	As
<input type="checkbox"/> Service Quote (Work Order)	As
<input type="checkbox"/> Tasks	As
<input checked="" type="checkbox"/> Work Details (Work Order)	As Labor
<input checked="" type="checkbox"/> Work Details (Work Order)	As Expense
<input checked="" type="checkbox"/> Work Details (Work Order)	As Travel
<input type="checkbox"/> Work Details (Work Order)	As
<input checked="" type="checkbox"/> Work Details (Work Order)	As Parts

Figure 37: Select Relevant Target Child Objects

10. To use the same child object more than once as a target, click the **Add** button. To remove an existing child object, click the **Delete** icon adjacent to the record. When using the same child object more than once, you must specify a unique alias for each instance.

When specifying Source and Target Objects, you might see the message below indicating that any changes you make in the **Use data from** picklist will reset the data in the other tabs. Click **OK** to acknowledge the message.



Any change you make here will reset the data in the other tabs.

OK

Figure 38: Source and Target Object Message

11. Click the **Next** button located at the bottom right corner of the screen, or click the **Qualifying Criteria and Field Mappings** tab.

Qualifying Criteria and Field Mappings Tab

12. In the **Create map for target fields** section, select an object by clicking it. See figure below.

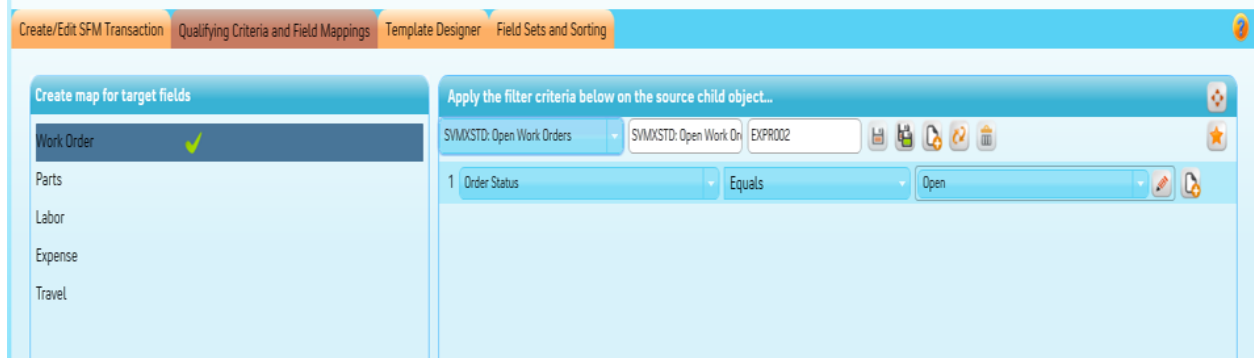


Figure 39: Qualifying Criteria for Output Documents

13. In the **Apply the filter criteria below on the source child object** section.
 - a. Select an existing filter from the **Use an existing filter** picklist. See above figure.
 - b. Use the expression builder for each filter criteria you create. (Follow the instructions below if you are creating more than one filter criteria).
 - i. The expression builder has a band of buttons at the top: **Save**, **Save As**, **New**, **Refresh**, **Delete**, and **Advanced**.
 - ii. To view/edit an existing expression, select its name from the list. The expression details appear below. Standard expressions of ServiceMax cannot be modified.
 - iii. To remove an existing expression, select the expression from the list and click **Delete**. Standard expressions of ServiceMax cannot be deleted.
 - iv. To create a new expression, click the **New** button. Any unsaved changes in the expression area will be lost when you switch between new and edit modes.
 - v. To insert a new expression record, click the **Add** button at the end of the row. To remove an existing expression record, click the **Delete** button at the end of the row.



Note: Field Mapping is not a relevant feature when creating Output Documents.

14. Using the Target Object tab: (Target objects are used only Smart Documents).
15. Click the **Next** button or click the **Template Designer** tab.

Template Designer Tab

The Template Designer screen contains three areas (see figure below):

- **Template Builder** (located on the top of the screen). From the Template Builder, you can use an existing template or create a new template.
- **Content tree** (located on the left side of the screen). The content tree includes the target fields you selected in the Qualifying Criteria and Field Mappings screen and functions. For a description of functions, see [SFM Output Document Guidelines](#). The Content Tree area includes two text fields above the tree: **Field Value** and **Field Label**.
- **HTML editor** (located on the right side of the screen). You can click the **Source** button to view the HTML code (see figure below).

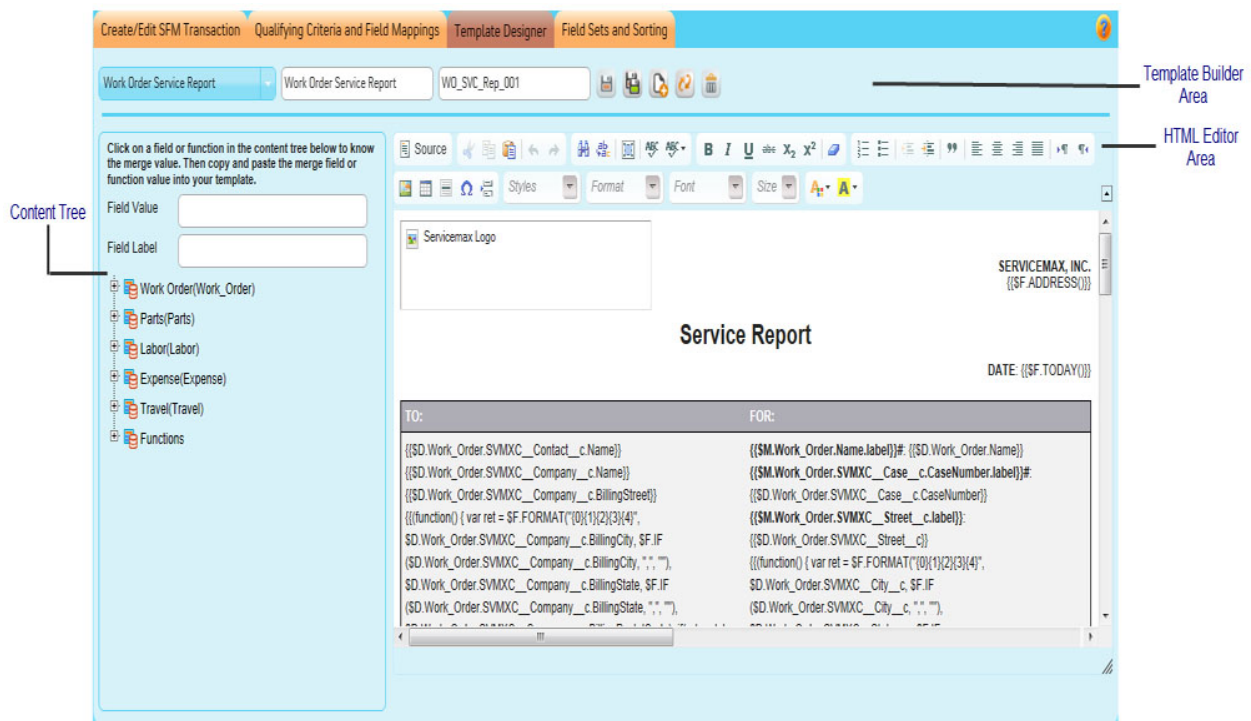


Figure 40: *Template Designer*

16. From the Template Builder area, select a template from the **Use an existing template** picklist. (The **Save template as** field and the **input ID** fields are automatically populated, but you can update these fields by clicking inside the field area and entering new names).
17. If necessary, in the **Save template as** field, enter the name you want to use to save your template.
18. If necessary, update the input ID for your template in the **Input ID Here** field.
19. Click the **Save** button to save the template.



Note: If you try to save the template using an existing ID, an error message displays indicating that you must save the template under a new name (see figure below).



The template ID you have entered already exists. Please enter a unique ID.

Figure 41: *Template Unique ID Message*



Note: If you have cloned your template, your template is already populated, but you can still update this content by clicking anywhere in the content template area.

20. Use data and functions to create your template (see steps below).
21. Add data to your template.
 - a. Open data from the Content Tree. (Click the **+** sign to open data options).
 - b. Select one of the data options. (The **Field Value** text box and the **Field Label** text box automatically populates).
 - c. Select the merge field content from the **Field Label** text box and copy and paste it into your template (see Figure 24 above).
 - d. Select the content from the merge field/**Field Value** text box and copy and paste it into your template (see Figure 24 above).

22. Add functions to your template.

- a. Open a function from the Content Tree. (Click the **+** sign to open the options for a function).
- b. Click one of the options for a given function. The **Field Value** and the **Field Label** populates.
- c. Select the function value content from the **Field Value** text box and copy and paste the function value content into your template.
- d. Select the function value content from the **Field Label** text box and copy and paste the function value content into your template.



Note: For a list of functions and their definitions, see [SFM Output Document Guidelines](#).



Note: To apply style based formatting like italics, bold, and so on, you must set up a font family explicitly (see example below). Otherwise the default font "Unicode MS" will be applied, which does not support formatting.

Example: `<p style="font-family:times new roman,times,serif;">
<u>welcome</u></p>`

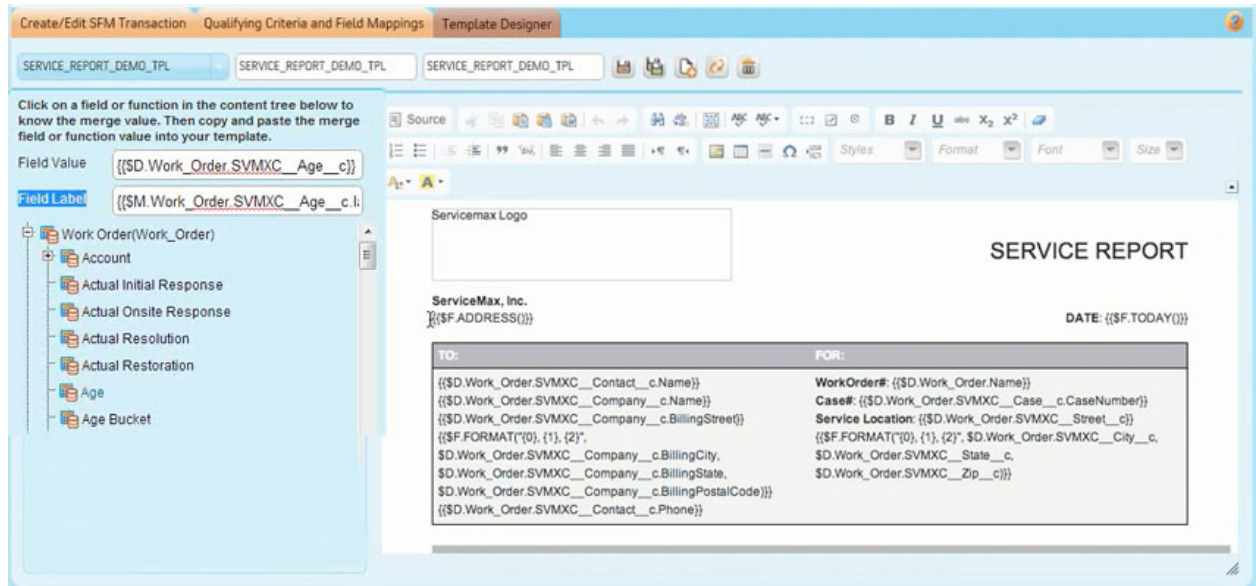



Figure 42: Template Designer

23. Click the **Save** button to save the template.
24. Before you can view your Output Document, you must first create a custom wizard step for the Output Document (see [SFM Wizard Designer](#) for information about how to create a wizard).

A sample Output Document is shown below.



SERVICE REPORT

ServiceMax, Inc.
3875 Hopyard Rd, Suite 300 Pleasanton CA IN 94588

DATE: 20/12/2012

TO:	FOR:
John Doe World, Inc. 3410 Hillview Ave Palo Alto, CA, 94304	WorkOrder#: WO-00213903 Case#: 00114996 Service Location: The Landmark @ One Market San Francisco, CA, 94105

WORK ORDER DETAILS			
Product Served	GM-SN-001	Order Status	Open
Component	10700	Order Type	Field Service
Product	Processor	Billing Type	Paid
Purpose of Visit	Repair	Customer Down	Yes

PROBLEM DESCRIPTION
Air conditioner stopped working. Excessive heat emitted by machine.

WORK PERFORMED
High-pressure limit switch had tripped and coolant was low. Reset the button. Also replaced wiring to prevent future tripping of circuit breaker and recharged coolant.

BILLING DETAILS			
Rate Type	Minimum	Total Billable Amount	1620 USD

PARTS USED

Figure 43: Sample Output Document

SFM Output Document Guidelines

The SFM Output Document Guidelines provide a detailed guideline for using expressions within SFM Output Document Templates. This section includes details on various implementation considerations, including naming conventions and best practices. These guidelines also serve as a rulebook, which **MUST** be followed throughout the implementation cycle.

See the following tables below.



Note: These guidelines are primarily for the developers of the template. However, it can also be used by the template reviewers to validate the templates against the guidelines.



Note: Output Documents are also referred to as Smart Business Documents.

Guideline ID	Guideline Description
OD-DEL-GEN-EXP001	<p>An output document expression MUST always be enclosed between a starting pair of braces and ending pair of braces.</p> <p>Ex. <code>{{ \$D.WO.Id }}</code></p>
OD-DEL-GEN-EXP002	<p>To show a form UI, use a table with required number of columns and rows. Each cell can than hold one or more values.</p>
OD-DEL-GEN-EXP003	<p>All of the standard function are available and MUST be accessed on the namespace \$F.</p> <p>Ex: <code><div svmx-data='{{ \$F.IF(\$D.WO.val > 10, true, false) }}'>WorkOrder Id</div></code></p>

Guideline ID	Guideline Description
OD-DEL-GEN-EXP004	<p>All arithmetic operations are valid to be executed and do not necessarily require any special functions.</p> <p>Ex: <div svmx-data='{{\$D.WO.num1 + \$D.WO.num1}}'>{{\$D.WO.num1 + \$D.WO.num1}}</div></p>
OD-DEL-GEN-EXP005	<p>Avoid using HTML constructs to provide styles. Instead use CSS styles.</p> <p>Example:</p> <p>HTML style: {{\$D.WO.Id }}</p> <p>CSS style: <div svmx-data='{{\$D.WO.Id}}' style='font-weight:bold'>WorkOrder Id</div></p>
OD-DEL-GEN-EXP006	<p>For images, only JPEG, PNG, and GIF images are supported. No other formats will be supported.</p>
OD-DEL-GEN-EXP007	<p>Label expressions should follow the format {{\$M.<Alias Name>.<Field Name>.label}}</p>
OD-DEL-GEN-EXP008	<p>In order to access label of one or more fields of an object, it is required that at least one field from the corresponding object is accessed in the template.</p>

Guideline ID	Guideline Description
OD-DEL-GEN-EXP009	<p>All images that need to be used in the template MUST be uploaded to Documents within SFDC. Further, following information MUST be added for that document:</p> <ul style="list-style-type: none"> a. Document Unique Name: A unique name for this document. b. Keywords: SFM_OUTPUT_DOCUMENT
OD-DEL-GEN-EXP010	<p>To include custom styles OR media queries (typically for header and footer), include a single HTML STYLE tag at the beginning and define all the relevant attributes.</p> <p>Example:</p> <pre><style type="text/css"> @page{ size:A4 landscape; @top-left { color: rgb(255,0,0); content:'{{\$D.Work_Order.Name}}'; font-size:18px;font-color:red;font-weight:bold;text-align:left; } } .table { color: #fff; } </style></pre>

Guideline ID	Guideline Description
OD-DEL-GEN-EXP011	In order to apply style based formatting like italics, bold, and so on, one has to also setup a font family explicitly. Otherwise the default font "Unicode MS" will be applied which will not support formatting.
OD-DEL-GEN-EXP012	<p>In order to apply locale formatting for number one has use the function LNUMBER for the field.</p> <p>Example: <code>{{F.LNUMBER(\$D.Work_Order.SVMXC__Latitude__c)}}</code></p>
OD-DEL-GEN-EXP013	<p>In Style mode, the IMAGE function cannot be nested. The parameter to the function should be a legitimate image name.</p> <p>Example:</p> <pre><style type="text/css"> @page{ size:A4 landscape; @top-left { color: rgb(255,0,0); content:'{{\$D.Work_Order.Name}}'; font-size:18px;font-color:red;font-weight:bold;text-align:left; background-image: url({{\$F.IMAGE('ServiceMaxLogo')}}) } } .table { color: #fff; } </style></pre>

Guideline ID	Guideline Description
OD-DEL-ATT-EXPR001	<p>All the attribute driven data bindings MUST be done against a custom ServiceMax attribute svmx-data.</p> <p>Ex: <div svmx-data='{{\$D.WO.Id}}'>WorkOrder Id</div></p>
OD-DEL-ATT-EXPR002	<p>Whenever a div is used to do attribute based data binding, it is a good practice to keep the div's contents same as the data binding value.</p> <p>Ex: <div svmx-data='{{\$D.WO.Id}}'>{{\$D.WO.Id}}</div></p>
OD-DEL-ATT-EXPR003	<p>When it is required to use string literals as part of the expression, use double-quotes to contain the expression and single-quotes to represent the string literal.</p> <p>Ex: <div svmx-data="'WorkOrder Id:' + {{\$D.WO.Id}}">\$D.WO.Id </div></p>
OD-DEL-ATT-EXPR004	<p>Only following HTML elements are supported for attribute based data binding:</p> <ol style="list-style-type: none"> 01. DIV 02. IMG 03. TABLE 04. TD

Guideline ID	Guideline Description
OD-DEL-ATT-EXPR005	<p>Child lines should follow the below table structure in order to display data:</p> <pre><table svmx-data="{<child object name alias>}"> <thead> <tr> <th svmx-data="{<field name>}"> <Column Label> </th> </tr> </thead> </table></pre> <p>Ex:</p> <pre><table svmx-data="{<\$D.Work_Details__Work_Order__}"> <thead> <tr> <th svmx-data="{SVMXC__Line_Type__c}">Line Type</th> <th svmx-data="{SVMXC__Billable_Quantity__c}">Quantity</th> <th svmx-data="{SVMXC__Billable_Line_Price__c}">Price</th> </tr> </thead> </table></pre>

Guideline ID	Guideline Description
OD-DEL-IL-EXPR001	<p>It is possible to use data binding as part of the content of an HTML element.</p> <p>Ex: <p> Current date is {{\$F.TODAY()}}</p></p>
OD-DEL-IL-EXPR002	<p>Rest of the rules that apply to bindings for the attribute based binding hold good for inline data binding.</p>
OD-DEL-IL-EXPR003	<p>Only the following HTML elements are supported for inline based data binding:</p> <ol style="list-style-type: none"> 01. DIV 02. P 03. PRE 04. B 05. U 06. I 07. H1, H2, H3, H4, H5, H6 08. SPAN 09. STYLE (for Header and Footer) 10. EM 11. STRIKE 12. SUB 13. SUP 14. OL 15. LI 16. UL 17. B

Guideline ID	Guideline Description
OD-DEL-IL-EXPR004	<p>One cascade the supported elements while creating an inline data binding expression.</p> <p>Ex: <p> Current date is {{F.TODAY()}}</p></p>
OD-DEL-IL-EXPR005	<p>It is possible to have more than one data binding in an inline expression.</p> <p>Ex: <p> Current date is {{F.TODAY()}}. User: <i>{{F.CURRENT_USER()}}</i></p></p>
OD-DEL-IL-EXPR006	<p>For labels, all the rules are the same as data bindings.</p>

Guideline ID	Guideline Description				
OD-DEL-PM-EXPR001	Object Permissions for designing Output Documents:				
	Name		Create	Read	Update Delete
	ServiceMax Process	X	X	X	X
	ServiceMax Config Data	X	X	X	X
	Doc Template	X	X	X	X
	Doc Template Details	X	X	X	X
	ServiceMax List	X	X	X	X

Guideline ID	Guideline Description
OD-DEL-PM-EXPR002	Object Permissions for viewing Output Documents:
	NameCreateReadUpdateDelete
	ServiceMax ProcessX
	ServiceMax Config DataX
	Doc TemplateX
	Doc Template DetailsX
	ServiceMax ListX
	X
OD-DEL-PM-EXPR003	Page Permissions:
	OPDOC_Delivery
	OPDOC_DocumentViewer



Note: Server Cache: Any changes made to the Salesforce object model must be explicitly made available to SFM by refreshing server cache. This process is not automatic or optional. The following changes require server cache refresh: picklist field dependencies with other picklists are changed and picklist field dependencies with associated record types are changed. The auto-configurator will build a server cache automatically if it is empty.

For more information about Server Cache, see [Server Cache](#).

SFM Availability Matrix

There are some SFM features that are only available on the ServiceMax Suite and not the ServiceMax Mobile iPad. See the table below for a list of these features.

SFM Feature	Available on ServiceMax Suite	Available on iPad Mobile
Advanced Lookup Configuration	Yes	No
Value Maps for Existing Records	Yes	No
Warning Messages	Yes	No

See Also:

[SFM Literals/Constants/Field Attributes](#)

SFM LITERALS/CONSTANTS/FIELD ATTRIBUTES

Overview

Literals provide a way to set specific information when defining a mapping or expression. For mappings, use literals when you do not have Source to Target mapping capability, or when applying a static or value mapping instance. Literals are also used in defining Expressions, Source Object updates, and Advanced Data Validation.

Literals are used by typing or copying/pasting them into the mapping/expression result field. In some cases, available literals may be selected from a picklist. This is usually reserved for Date Fields.

A description of supported literals are displayed in the table below.

Literal	Description	Note
Today or SVMX.TODAY:	This option is selected from a picklist. If no picklist is available, use SVMX.TODAY	
Tomorrow:	This option is selected from a picklist.	
Yesterday:	This option is selected from a picklist.	
Now or SVMX.NOW:	This option is selected from a picklist. If no picklist is available, use SVMX.NOW	

Literal	Description	Note
SVMX.USERTRUNK:	This populates the Location or Site field. This literal should be available as a pick-list option in advanced lookup filter expressions. At this time, advanced lookup filter expressions are the only supported area for this literal.	
SVMX.CURRENTRECORD.<FieldAPIName>:	This is not a picklist literal. This literal is only available in for Lookup Pre-filter Criteria, Value Mappings, and Field Mappings. This cannot be used to apply Mapping for "Create New Record" type SFMs.	This literal is not supported for Advanced Lookup Filters, Advanced Data Validation, SFM Expressions, or Source Object Updates.
SVMX.CURRENTRECORDHEADER.<FieldAPIName>:	This is not a picklist literal. This literal is only available in for Lookup Pre-filter Criteria, Value Mappings, and Field Mappings. This cannot be used to apply Mapping for "Create New Record" type SFMs.	<p>This literal is not supported for Advanced Lookup Filters, Advanced Data Validation, SFM Expressions, or Source Object Updates.</p> <p>This is the one often used when defining Linked Process value mappings.</p>

Literal	Description	Note
SVMX.OWNER:	This literal is only available for use in VF Page Expressions or Updates. Examples include Inventory or Dispatch processes.	
SVMX.CURRENTUSER:	This literal should be generally available but is not presented as a picklist nor will it display OnLoad or before saving the transaction.	It is important to be aware that this literal returns the Full Name of the User, not the User Id. This may result in discrepancies if there are multiple users with the same name.

The table below shows the supported SFM literals, constants, and field attributes.

Data Type	Literal Name	SFM Mapping	SFM Expression	SF-M Biz Rule	Output Documents	OptiMax (Skill Matching Rules)	Supported by SOQL Query
Date	Yesterday	Yes	Yes	Yes		Yes	Yes
Date	Tomorrow	Yes	Yes	Yes		Yes	Yes
Date	Today	Yes	Yes	Yes		Yes	Yes
Date	SVMX.TODAY	-	-	-			

Data Type	Literal Name	SFM Mapping	SFM Expression	SF-M Biz Rule	Output Documents	OptiMax (Skill Matching Rules)	Supported by SOQL Query
Date Time	Now	Yes	Yes (It works like today only).	Yes		Yes	No (At run time Now is replaced by Today).
Date Time	SVMX.NOW	-	-	-			
Date	THIS_WEEK	No	No	No		Yes	Yes
Date	NEXT_WEEK	No	No	No		Yes	Yes
Date	LAST_WEEK	No	No	No		Yes	Yes
Date	THIS_MONTH	No	No	No		Yes	Yes
Date	NEXT_MONTH	No	No	No		Yes	Yes
Date	LAST_MONTH	No	No	No		Yes	Yes
Date	NEXT_90_DAYS	No	No	No		Yes	Yes
Date	LAST_90_DAYS	No	No	No		Yes	Yes
User	SVMX.CURRENT_USER	No	No	No			
User	SVMX.CURRENTRECORD	Yes	No	No			
User	SVMX.CURRENTHEADER	Yes	No	No			

Linked Processes

A Linked Process provides a method for connecting SFMs to allow the invoking of the linked SFM from within another SFM.

The linked process allows secondary related actions to be carried out. For example, linked process allow Usage/Consumption lines to be added to a Product Service work

details. The Product Serviced work details provides support for one work order to document service of many Installed Products.

Adhere to the following with regard to Linked Processes:

- Make sure you understand the architecture of your processes. The standard Linked Process adding Usage/Consumption lines to a Product Serviced work detail includes a WO (Source) to WD (Target) SFM that invokes a WD (Source) to WD (Target) SFM.
- The SFM type used for a linked process must be "as Standalone for the purpose of editing an existing record."
- If Linked Process SFM adds a child record, the Parent source record must be mapped. (In Product Serviced SFMs, the literal that links the Usage/Consumption to the work order would be SVMX.CURRENTRECORDHEADER.SVMXC__Service_Order__c).
- To Map the IP that the T&M is coming from in the Standard SFM, you will have to Clone and add the Literal for the Serial Number field on WD. (SVMX.CURRENTRECORDHEADER.SVMXC__Serial_Number__c)
- The Linked SFM for the T&M Portion of the standard Product Serviced SFM is "Manage Work Details for Product Serviced" (this is not obvious as they renamed it in the Linked process section of the Add/Edit Product Serviced SFM).
- When Adding Literal Mappings for linked Process, the fields have to be on the Page Layout. With it being an Onload action, it is added on the screen designer.

SCHEDULED SFM

Overview

Some businesses have SFM Transactions that need to be executed automatically for qualifying records without any manual intervention. This feature is useful when automatic execution is required for large volume of records.

Following are the salient aspects of this feature:

- A new configuration option named Scheduled SFM enables definition of schedules
- The SCON Scheduler executes the defined schedules at hourly intervals
- A Scheduled SFM Process is a combination of one or more schedules for one or more SFM Transactions; multiple Scheduled SFM Processes can be defined
- An option is provided to invoke a process interactively to test configurations
- Only Source to Target (child only and header & child) and Standalone Edit type of SFM Transactions, which are Complete, are supported for scheduled execution

Business Context

There are many transactions that are repetitive and do not need manual intervention. Examples could be Service Contract Renewals, creating work orders when RMA's are received, creating shipments when a depot repair work order is completed, creating work orders for qualifying installed products, and so on. When these transactions need to be executed for a large volume of records, customers must either manually perform them or write custom code. This feature helps achieve the requirements related to bulk SFM execution, without custom code or manual intervention.

Detailed Feature Description

The Scheduled SFM feature consists of a configuration screen to define Scheduled SFM Processes and SCON Scheduler that executes the defined schedules.

Scheduled SFM Processes Configuration Screen

- Enables the user to create/edit/clone/delete a Scheduled SFM Process
- Enables the user to manually run a scheduled SFM Process
- The General Info tab enables users to:
 - Define the Process Name, Id, and description for the scheduled SFM process
 - Make the process Active
 - Select one or more SFM Transactions to schedule from the list of available SFM Transactions
 - Only Source to Target (child only and header & child) and Standalone Edit type of SFM Transactions, which are Complete, are supported for scheduled execution
 - Only SFM Transactions that have Qualifying Criteria for the header object are eligible to be scheduled
- The Schedule & Notifications tab enables users to:
 - Select the days and times the process will run in terms of days of the week or dates of the month
 - Schedule processes for multiple days and times
 - Set a time zone for the process
 - Enable status logging in Salesforce in a ServiceMax Job record
 - Select the configured Salesforce user that will receive the email notification message of the scheduled process status

SCON Scheduler

- The SCON Scheduler executes the defined schedules at hourly intervals
- When the scheduler executes an SFM Transaction, it applies the configured SFM Mappings and Source Object Updates
- There is no specific order in which Scheduled SFM Processes, SFM Transactions configured in these processes, and the records that qualify for these processes are picked up by the scheduler
- If the execution fails for any record, an error is captured for that record and execution continues with the next record
- After every execution of a Scheduled SFM Process, the scheduler sends an email notification to the configured Salesforce User with the following details:
 - Scheduled SFM Process Name & Id
 - A count of parent records, successes, and failures per SFM Transaction processed
 - Execution start and end time
 - Name field value and execution status of individual records are included in a text file attached to the email
 - If **Enable Logging** is configured, all the details of the notification along with the attachment are recorded in the ServiceMax Job record of Type Scheduled SFM

Data Model – Key Details

Object Name	Field Name	Remarks
ServiceMax Job	Type	Set to the value Scheduled SFM
ServiceMax Job	Message	Status log messages, including the number of SFM Transactions processed, number of records per transaction, and execution status
ServiceMax Job	Start Time	Time at which scheduler started the execution of scheduled SFM Process

Object Name	Field Name	Remarks
ServiceMax Job	End Time	Time at which scheduler completed the execution of scheduled SFM Process
ServiceMax Job	SVMX Process	Lookup to the Scheduled SFM Process
Object Name	Field Name	Remarks

Access and Permissions

Actions	User Permissions Needed
To create a process:	"Create" on ServiceMax Processes and ServiceMax Config Data
To edit a process:	"Update" on ServiceMax Processes, and "Create" and "Delete" on ServiceMax Config Data
To delete a process:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Configuration

This feature can be fully configured using the Scheduled SFM configuration screen. There are no other configuration options specific to this feature.

How to Configure a Scheduled SFM Process

Prerequisites

- Ensure that the required SFM Transactions have qualifying criteria for the header object
- Ensure that the SCON Scheduler is available and running

Using the Scheduled SFM Configuration Screen

Follow the instructions below to create a new Scheduled SFM Process.

1. Launch the ServiceMax Setup Home screen.
2. Select **Service Flow Manager > Scheduled SFM > Go**.
3. In the Custom Scheduled SFM Processes screen, click the **New** button.
4. In the General Info tab, enter a unique Process Name, Process Id, and process Description in the appropriate text boxes (see figure below).

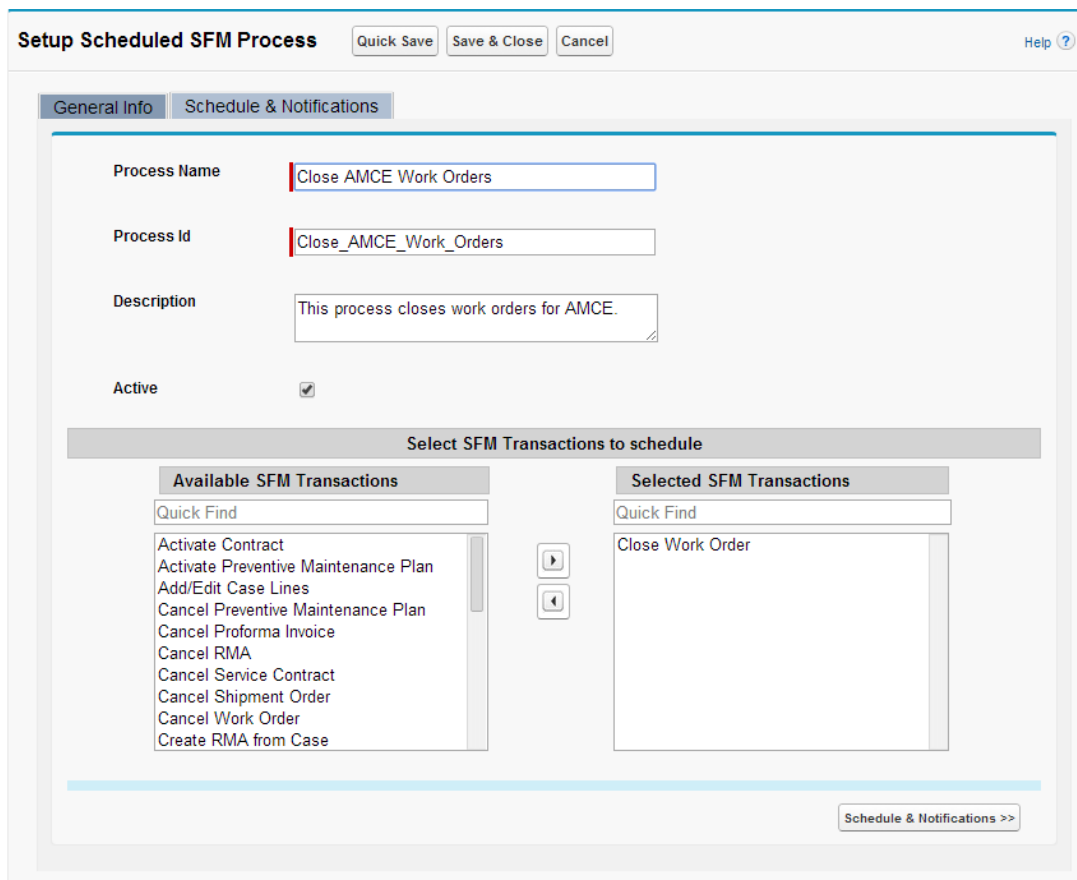
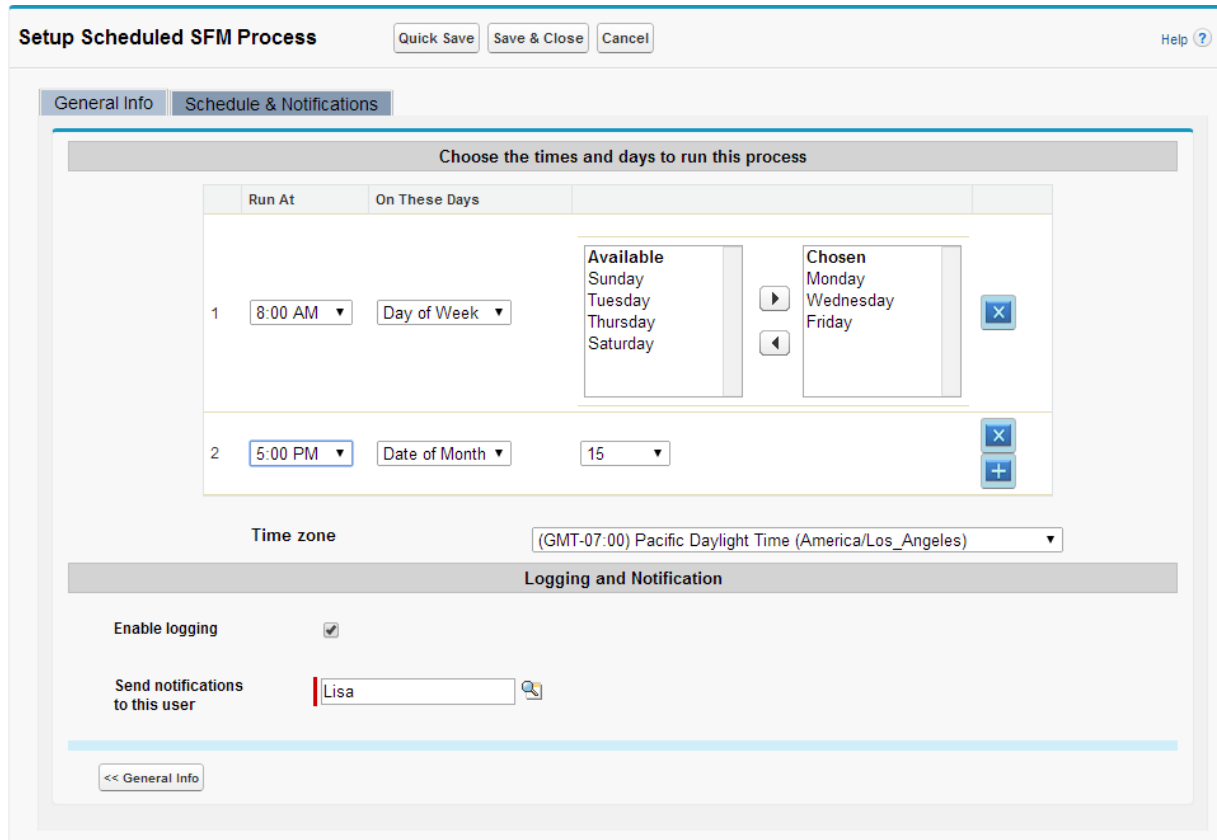


Figure 1: General Info Tab

5. Check the **Active** checkbox to make the Scheduled SFM Process active. SCON Scheduler executes Active processes only.
6. Select one or more SFM Transactions to schedule from the **Available SFM Transactions** multi-picklist, by clicking the required transactions. (You can use the Quick Find feature to search for an SFM Transaction).
7. Click the right arrow to move the selected SFM Transactions to the **Selected SFM Transactions** multi-picklist.

8. Click the **Schedule & Notifications** tab (see figure below).



The screenshot shows the 'Setup Scheduled SFM Process' window with the 'Schedule & Notifications' tab selected. The window has buttons for 'Quick Save', 'Save & Close', 'Cancel', and 'Help'. The 'General Info' tab is also visible.

Choose the times and days to run this process

Run At	On These Days
1 8:00 AM	Day of Week
2 5:00 PM	Date of Month 15

Available

- Sunday
- Tuesday
- Thursday
- Saturday

Chosen

- Monday
- Wednesday
- Friday

Time zone

(GMT-07:00) Pacific Daylight Time (America/Los_Angeles)

Logging and Notification

Enable logging ☒

Send notifications to this user

<< General Info

Figure 2: Schedule & Notifications Tab

9. Select the days and times to run the process in terms of days of the week or dates of the month.
10. From the **Time zone** picklist, select the time zone applicable to the times selected.
11. Check the **Enable logging** checkbox to record details of the notification in the ServiceMax Job record.
12. Specify which Salesforce user will receive the email notification message of the scheduled process execution status.

Manually Running a Scheduled SFM Process

Scheduled SFM Processes should automatically run on the scheduled days and times. You can also run the processes manually by selecting a process, and then clicking the **Run Now** button in the Custom Scheduled SFM Processes screen (see figure below). Only

processes marked Active can be run.

Custom Scheduled SFM Processes						
New Edit Clone Delete Run Now Back To Setup Home Help ?						
Select	Process Id	Process Name	Description	Active	Last Modified By	Last Modified Date
<input checked="" type="checkbox"/>	Close_AMCE_Work_Orders	Close AMCE Work Orders	This process closes work orders for AMCE.	<input checked="" type="checkbox"/>	Lisa Admin Spr14	3/12/2014 3:39 PM
<input type="checkbox"/>	Close_Work_Order	Close Work Order	Process to close a Work Order	<input checked="" type="checkbox"/>	Lisa Admin Spr14	3/12/2014 3:39 PM
<input type="checkbox"/>	Create_Work_Order_From_Case_Process	Create Work Order From Case Process	This process will create a Work Order from a Case.	<input checked="" type="checkbox"/>	Lisa Admin Spr14	3/12/2014 3:40 PM

Figure 3: Custom Scheduled SFM Processes

Verifying the Scheduled SFM Execution Status

An email notification of the Scheduled SFM Process execution status will be sent to the configured Salesforce user's email Id. This email is sent after both automatic and manual execution. A sample screenshot of this system generated email is shown in the figure below.

NOTE: THIS IS A SYSTEM GENERATED EMAIL. PLEASE DO NOT REPLY TO THIS MESSAGE.

Scheduled SFM Process has completed with the following results:
 Scheduled SFM Process Name: Create Work Order From Case Process
 Scheduled SFM Process Id: Create_Work_Order_From_Case_Process

Create Work Order From Case:
 Records to Process: 4
 Success: 4
 Failed: 0

Figure 4: Email Notification

The attachment to the email captures the execution status of individual records. If **Enable logging** is configured, all these details are also recorded in ServiceMax Job record of Type Scheduled SFM.

Performance Considerations

The time it takes to process a large volume of records using the Scheduled SFM Process feature has been benchmarked with a standard SFM Transaction. The average processing times for Scheduled SFM Processes are published below. These are based on tests executed for up to 1000 work orders, with 5 work details for each work order. The standard SFM Transaction Create Shipment From Work Order (TDM007) was used for running the

benchmarks. These benchmarks are for guidance only and actual times may vary depending on service availability.

- Up to about 250 work orders, time taken to process one record is 4 to 5 seconds:
 - Average time taken to process 100 work orders with 500 work detail lines: 8 minutes
 - Average time taken to process 200 work orders with 1000 work detail lines: 15 minutes
- Above 500 work orders, time taken to process one record is 3+ seconds
 - Average time taken to process 500 work orders with 2500 work detail lines: 24 minutes
 - Average time taken to process 1000 work orders with 5000 work detail lines: 54 minutes

Known Issues/Limitations

The Scheduled SFM feature does not support the following:

- All UI-based features such as SFM Data Validation Rules, Lookup Form-Fill, Required-Field check, and so on are not supported
- Apex and JS web service calls are not supported
- Multi-source processes and Linked SFM processes are not supported

Tips for Troubleshooting

Scenario / Issue	Solution
Scheduled SFM Process is not executed automatically at the scheduled time.	Ensure that the SCON Scheduler is available and is running.

Scenario / Issue	Solution
Some SFM Transactions are not listed for selection when configuring Scheduled SFM Process.	<p>Check if the SFM Transactions are of the supported type (source to target and standalone edit).</p> <p>Ensure that the SFM Transactions have qualifying criteria for the header object.</p>
No email notification is received, though the Scheduled SFM Process is executed.	<p>Ensure that the email Id of the Salesforce user configured to receive notifications is valid and active.</p>
ServiceMax Job record is not created capturing the execution status of Scheduled SFM Process, though the process is executed.	<p>Check if Enable logging is checked in the Scheduled SFM Process definition.</p>

SFM DATA VALIDATION RULES

Overview

SFM Data Validation Rules is an administrative module in the ServiceMax application that enables you to view standard SFM Data Validation Rules or to create custom SFM Data Validation Rules. You can design SFM Data Validation Rules to display an error or confirmation message when defined criteria are met. You create the defined criteria using expressions and optional advanced expressions for target object records.

Accessing the Data Validation Rules Module

To access the Data Validation Rules module:

1. Click the **Home** tab.
2. Under the ServiceMax Administration area, click the **ServiceMax Setup** link. See figure below.

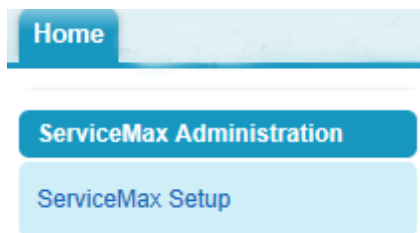


Figure 1: Home Tab and ServiceMax Setup Link

3. Click the **Service Flow Manager** button, and then click the **SFM Data Validation Rules** button. See figure below.



Figure 2: Service Flow Manager and SFM Data Validation Rules Button

- Click the **Go** button as shown in the image below.




Figure 3: Go Button

Access and Permissions

Actions	User Permissions Needed
To view SFM Data Validation Rules:	"Read" on ServiceMax Processes, ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event
To create or edit SFM Data Validation Rules:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data, Read on Page Layout, Read on Page Layout Detail, SFM Event
To delete SFM Data Validation Rules:	"Delete" on ServiceMax Processes and ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event

SFM Data Validation Rules Window Fields

The table below provides descriptions of icons, text boxes, and text fields for the Configure SFM Data Validation Rules Window.


Fields	Description
Select Object	Picklist menu listing available objects for you to select.
Quick Find	Text box for search term.
Clear Filter icon 	Removes your quick search term.
New icon	Opens the Configure Data Validation Rule dialog box.
Rule Name	Name of the data validation rule.
Description	A detailed description of the data validation rule.
Message Type	Displays the type of message, either Confirmation or Error .
Actions	Displays the following available icons: Edit (to edit a rule), Save As (to save your rule under a new name, and Delete (to delete a rule).
Name	Text box for the rule name.

Fields	Description
SFM Transaction ID	The ID for the SFM Process.
Status	Indicates if a transaction is completely or partially defined. The transaction status options are either Complete or Incomplete .

Configuring an SFM Data Validation Rule

Instructions on how to configure an SFM data validation rule are listed below. For a use case example of an SFM data validation rule, see next section titled, [SFM Data Validation Rule Use Case Example](#).

To Configure an SFM Data Validation rule:

1. In the Configure SFM Data Validation Rules window, select an object from the **Select Object** picklist. Use the **Quick Find** text box to search for an existing rule.
2. Click **New**  to open the Configure Data Validation Rule dialog box. See figure below.

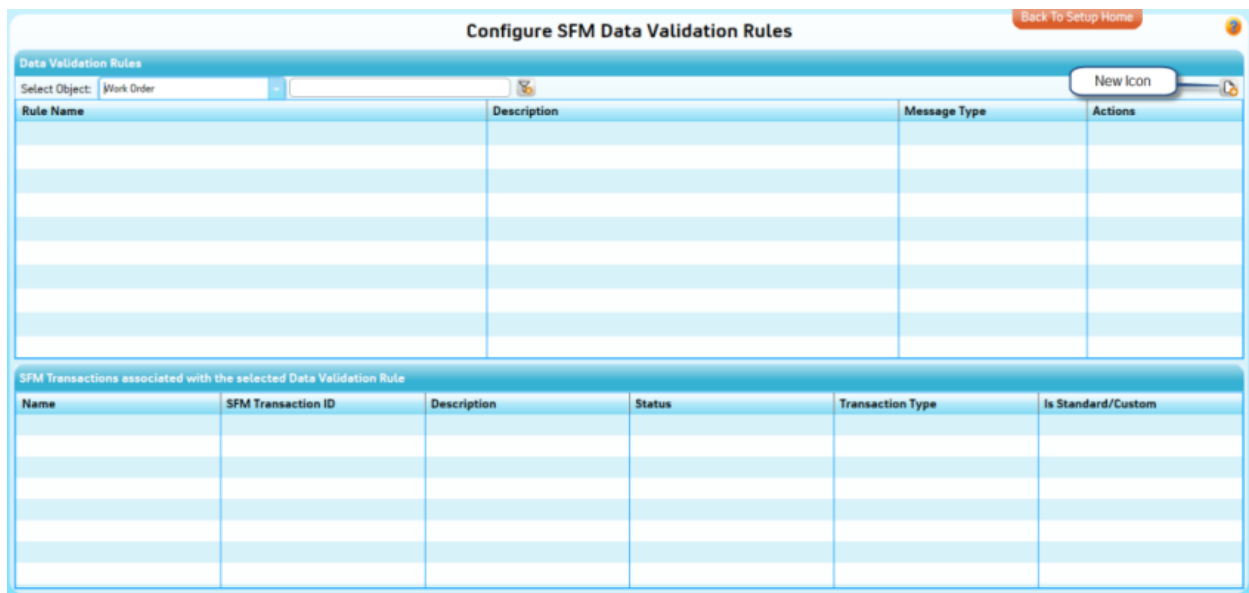
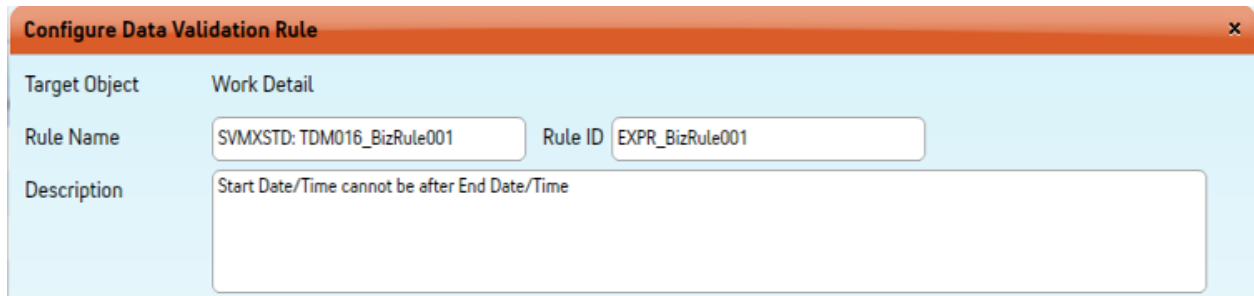


Figure 4: Configure SFM Data Validation Rules Window

3. In the Configure Data Validation Rule dialog box, enter a name, ID, and description for your rule in the respective text boxes (see figure below).

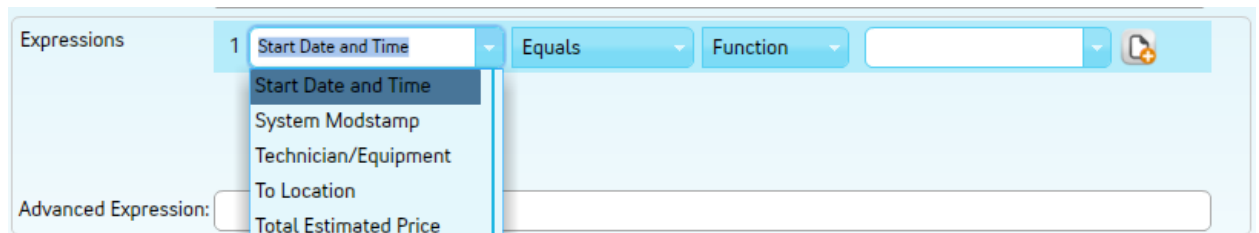


The dialog box is titled "Configure Data Validation Rule". It contains the following fields:

- Target Object:** Work Detail
- Rule Name:** SVMXSTD: TDM016_BizRule001
- Rule ID:** EXPR_BizRule001
- Description:** Start Date/Time cannot be after End Date/Time

Figure 5: Configure Data Validation Rule Dialog Box

4. Create defined criteria for your rule using expressions (**Expressions** and, if necessary, **Advanced Expressions**). Expressions are the filtering criteria for your rule.
 - a. In the Expressions area, select an object from the **Expressions** picklist (see Figure below).Select
 - b. an Operator (for example, **Equals**, Not **Equal**, **Greater Than**, **Greater or Equal**).
 - c. From the relevant picklist, select one of the following: **Field**, **Value**, or **Function**.
 - d. Enter a value in the available text box. Depending upon the type of field, the oper- and (value) can be specified either as free text or from a list of allowed values.



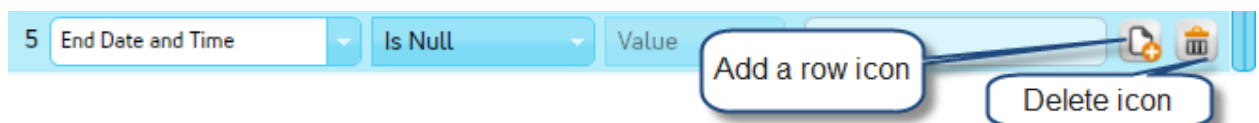
The screenshot shows the "Expressions" section of the rule configuration. It includes a table with the following data:

Expressions	Operator	Function	Value
1 Start Date and Time	Equals	Function	

Below the table, there is an "Advanced Expression:" text box with a dropdown menu showing options: Start Date and Time, System Modstamp, Technician/Equipment, To Location, and Total Estimated Price.

Figure 6: Expressions and Advanced Expressions Area

- e. To create a new expression, click the **Add a row** icon (see image below). To remove an existing expression, select the expression from the list and click **Delete**. ServiceMax standard expressions cannot be deleted.



The screenshot shows the "Expressions" section with a table containing one row:

Expressions	Operator	Function	Value
5 End Date and Time	Is Null	Value	

Callouts point to the "Add a row icon" (a plus sign in a circle) and the "Delete icon" (a trash can icon) located at the end of the row.

Figure 7: Add a New Expression

- f. In the **Advanced Expression** text box, enter an advanced expression, if necessary, such as **1 AND (2 OR 3)**. See figure below for an example of an advanced

expression.

Advanced Expression: ((2 AND 3) AND 1) OR (4 AND 3) OR (2 AND 5)



Figure 8: Advanced Expression Example

5. In the **Message** picklist, select a message type (**Error** or **Confirmation**). See figure below.
6. In the **Default Message** area, enter the message that will be associated with the rule. This is the message end users will see when the rule expression criteria are met. See figure below for a sample message.

Message Type	Error
Default Message	Start Date/Time must be before End Date/Time.

Figure 9: Message Type Picklist and Default Message Text Area

7. Click **Save** to save the expression.

The data validation rule displays in the Configure SFM Data Validation Rules window as shown in the figure below. A  icon displays in the Message Type area to represent Error messages, and a  **Confirmation** icon displays in the Message Type area to represent Confirmation messages.





Configure SFM Data Validation Rules			
Data Validation Rules			
Select Object:	Work Detail		
Rule Name	Description	Message Type	Actions
EXPR_BizRule001 - SVMXSTD: TDM016_BizRule001	Start Date/Time cannot be after End Date/Time		  

Figure 10: Data Validation Rule Example

In the Actions column in the Data Validation Rules area you can:

- Click the **Edit** icon to edit your rule.
- Click the **Save As** icon to save your rule under a new name. (Replace the name in the **Rule Name** text box and click the **Save** button).
- Click the **Delete** icon to delete your rule.

SFM Data Validation Rule Use Case Example

Administrators can set up data validation rules so that Confirmation and Error messages display to the end user when defined criteria are met. An example of a data validation rule is an error message that displays when an end user selects a Start date that is inconsistent with an End date.

In this scenario, the administrator selects an object (such as Work Detail), defines criteria via expressions and advanced expressions, selects **Error** as a message type, and creates a default message. The default message for this example could be: "Start Date/Time must be before End Date/Time." If an end user enters a start date or time that is after an end date or time, the default message would display. This example is visually illustrated in the above section, [Configuring an SFM Data Validation Rule](#).

SERVER CACHE

Overview

Use this option to manage the ServiceMax Server Cache. The cache contains complete definitions of Salesforce objects and fields used in SFM processes. The cache must be manually refreshed using this screen whenever Salesforce object model is changed impacting SFM processes.

Any changes made to the Salesforce object model must be explicitly made available to SFM by refreshing server cache. This process is not automatic or optional. The following changes require server cache refresh: picklist field dependencies with other picklists are changed and picklist field dependencies with associated record types are changed. The auto-configurator will build a server cache automatically if it is empty.

Access and Permissions

Object	Permission			
	Create	Read	Update	Delete
ServiceMax Processes		X		
Page Layout Detail		X		
Object Cache	X	X	X	X
Field Cache	X	X	X	X
Picklist Cache	X	X	X	X

VF Page:

COMM_CreateServerCache

Apex Classes:

COMM_CreateServerCache

COMM_ServerCacheUtils

COMM_Webservices

SVMXDescribeObjectUtils

Refreshing the Server Cache

1. Click **Home > Service Setup > Service Flow Manager > Server Cache** to view the Manage Server Cache screen.

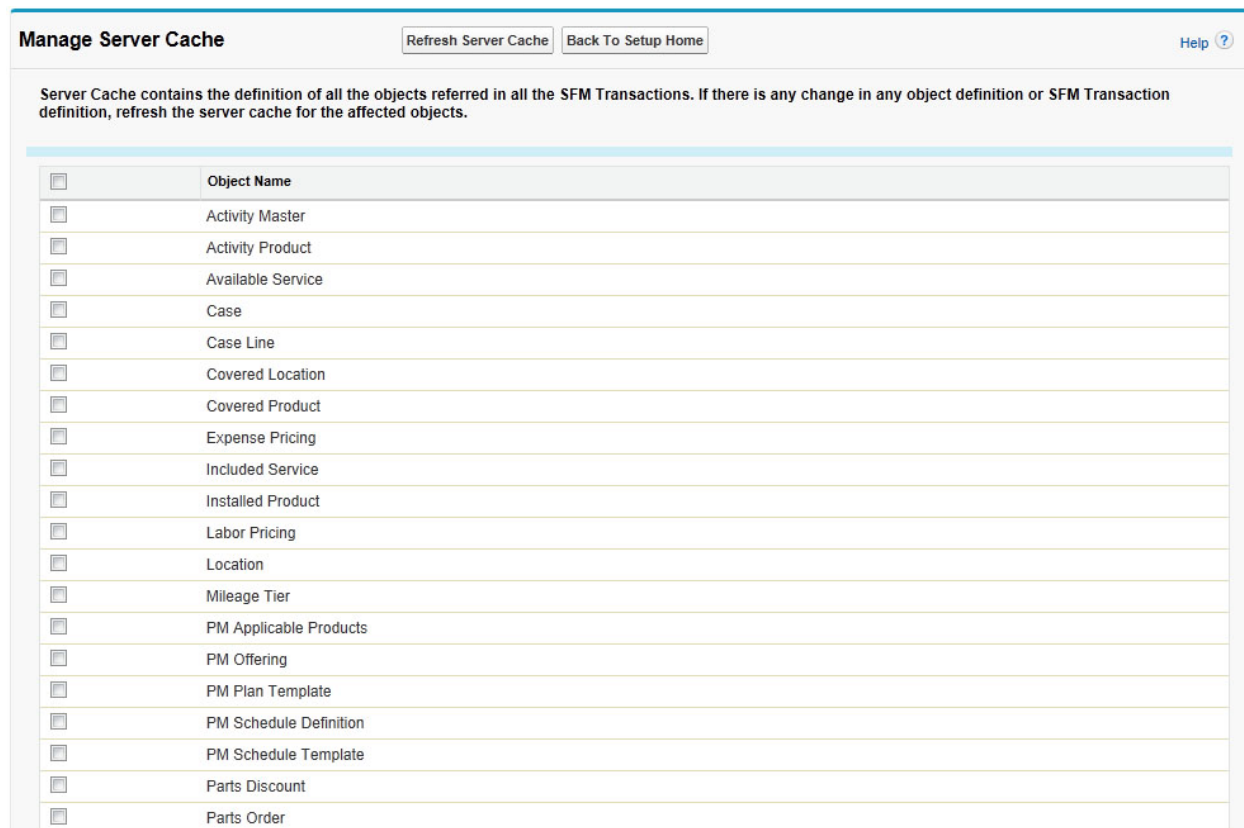


Figure 1: Manage Server Cache Screen

2. Select the object you want to refresh.
3. Click the **Refresh Server Cache** button to refresh the objects.

A server cache message displays indicating that you must remain on the Manage Server Cache screen until the refresh process completes.

4. Click **OK** to continue the server refresh process.

5. Click **Cancel** to cancel the process.

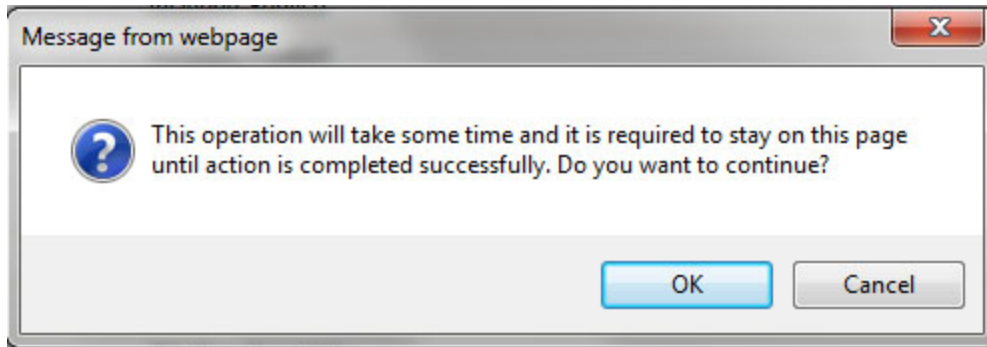


Figure 2: *Server Cache Message*

SFM WIZARD DESIGNER

Overview

Using this feature, ServiceMax administrators can assemble various Service Flow steps to enable wizard-based guided execution of business processes. SFM wizards can be configured to become available on any Salesforce record based on the business process context of each record. For example, all the steps related to Preventive Maintenance business process can be represented as a wizard on Work Order object and can be made available only for PM Work Orders. Multiple wizards can be configured for each object. In addition to enabling/disabling a wizard, specific steps within the wizard can be allowed or disallowed based on the *state* of the record. For example, users can be allowed to perform the **Close Work Order** step only if the Work Order is open.

Access and Permissions

Actions	User Permissions Needed
To view SFM Wizard :	"Read" on ServiceMax Processes, ServiceMax Config Data
To create or edit SFM Wizard :	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data
To delete SFM Wizard :	"Delete" on ServiceMax Processes and ServiceMax Config Data

SFM Wizard Designer Fields

Fields	Description
Object	Name of the object. For Example: Installed product, Case.
Wizard Title	Name of the Wizard.
Wizard ID	Unique identification of the Wizard.
Description	Detailed description of the SFM Wizard.

Fields	Description
Criteria To show Wizard	The qualification criteria i.e. the SFM Wizard will be shown only if it qualifies the criteria defined.
Is Active	Checkbox indicates the wizard is active and available for use.
Sequence	The sequence number is auto populated, however it can be changed using sequence button.
Wizard Step	The Service Flow Wizard Step.
Title	Name of the Wizard Step.
Description for step	Detailed description of the Wizard Step.
Criteria To Enable SFW Action	The qualification criteria i.e. the SFM custom action defined for the wizard will be enabled only if it qualifies the criteria defined.

Steps In Creating a Wizard

1. Click **Home > Service Setup > Service Flow Manager > SFM Wizards** to view the SFM Wizard screen. The list under the Standard SFM Wizards shows the standard preconfigured wizards of ServiceMax. Any Custom SFM wizards are displayed under

the Custom SFM wizards section.

Standard SFM Wizards									
				View	Clone	Layout Configuration	Back To Setup Home	SFM Wizard Home Help ?	
Select	Wizard ID	Wizard Title	Description	Object	Status	Active?	Last Modified By	Last Modified Date	
<input type="checkbox"/>	CS-SFW001	Case Management	Case Management	Case	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	CS-SFW002	Case Toolbox	Case Toolbox	Case	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	CS-SFW003	Case Management - Paid Incidents	Case Management - Paid Incidents	Case	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	CS-SFW004	Case Toolbox	Case Toolbox	Case	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	CS-SFW005	Case Management - Covered Incidents	Case Management - Covered Incidents	Case	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	IB-SFW001	IB Management	IB Management	Installed Product	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	IB-SFW002	IB Toolbox	IB Toolbox	Installed Product	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	LOC-SFW001	Location Management	Location Management	Location	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	PR-SFW001	Requisition From Supplier	Requisition From Supplier	Parts Request	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	PR-SFW002	Internal Requisition	Internal Requisition	Parts Request	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	RMA-SFW001	RMA Process	RMA Process	Parts Order	Complete	✓	Tech Stacy	02/03/2012 16:19	
				View	Clone	Layout Configuration	Back To Setup Home		

Custom SFM Wizards									
				New	Edit	Clone	Layout Configuration	Delete	SFM Wizard Home Help ?
Select	Wizard ID	Wizard Title	Description	Object	Status	Active?	Last Modified By	Last Modified Date	
<input type="checkbox"/>	IB-SFW001 2012-03-06 01:23:20	IB Management-For Demo	IB Management	Installed Product	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	IB-SFW002 2012-03-06 01:24:00	IB Toolbox	IB Toolbox	Installed Product	Complete	✓	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	WO-SFW-008-HND	Installation Process	This process is used to test handover.	Work Order	Complete	<input type="checkbox"/>	Tech Stacy	02/03/2012 16:19	
<input type="checkbox"/>	WO-SFW007-INSTALL	Field Service - Installation	Field Service - Installation Wizard	Work Order	Complete	✓	Tech Stacy	02/03/2012 16:19	
				New	Edit	Clone	Layout Configuration	Delete	

Figure 1: Manage Service Flow Wizards

2. In the SFM Wizard Screen:

- To create a custom wizard from a standard wizard, select the standard service wizard and click the **Clone** button.
- To create a custom wizard, click the **New** button at the top of the custom SFM wizards section.
- To create a custom wizard from another custom wizard, select the custom wizard and click the **Clone** button.
- To delete a custom wizard, select the custom wizard and click the **Delete** button.

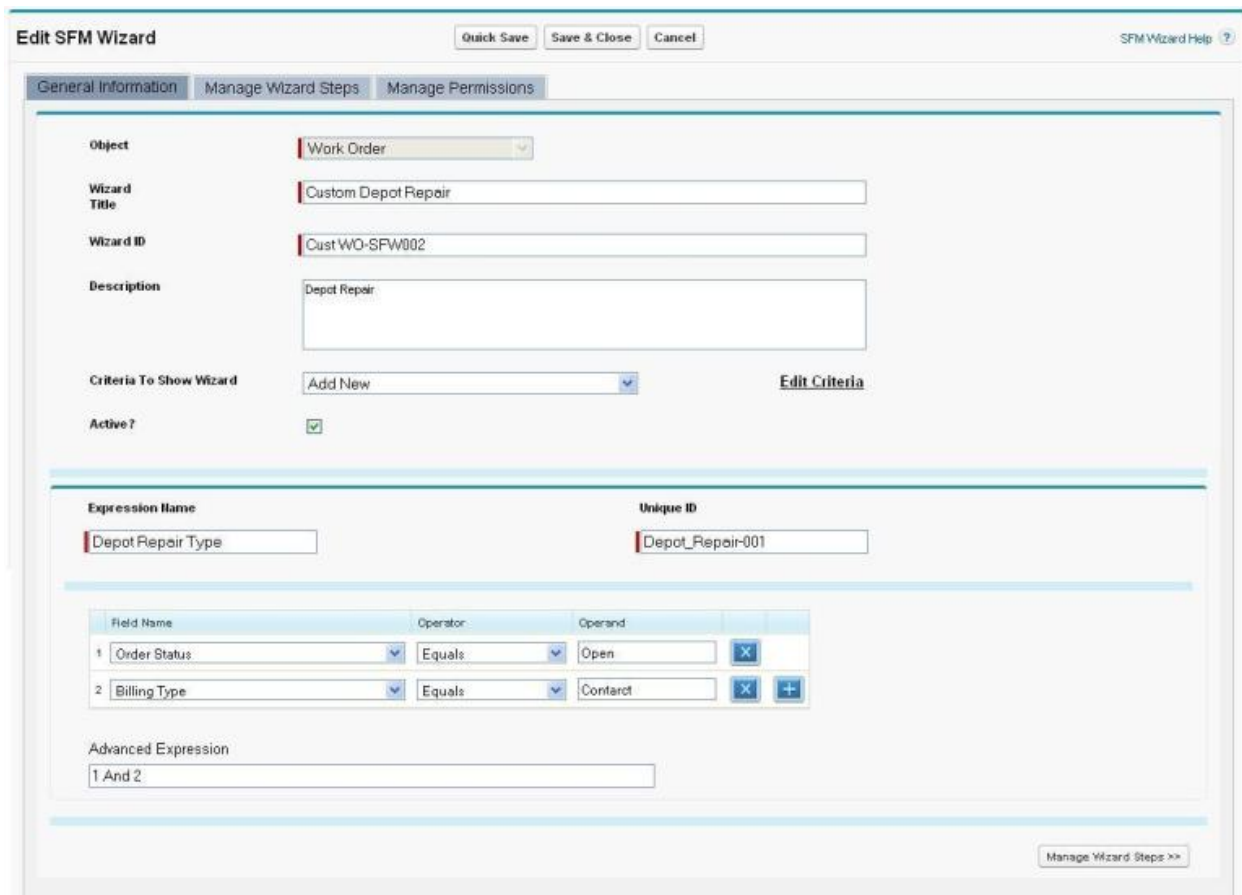


Caution: Use Extreme Caution when deleting wizards since the effect is immediate and irreversible.

Creating/Editing Wizards

To Create or Edit Wizards:

1. In the SFM Wizard screen, click the **New** button or select an existing custom wizard, and click the **Edit** button at the top. The Edit SFM Wizard dialog box displays as shown in the figure below.



The screenshot shows the 'Edit SFM Wizard' dialog box with the 'General Information' tab selected. The dialog has three tabs: 'General Information', 'Manage Wizard Steps', and 'Manage Permissions'. The 'General Information' tab contains the following fields and controls:

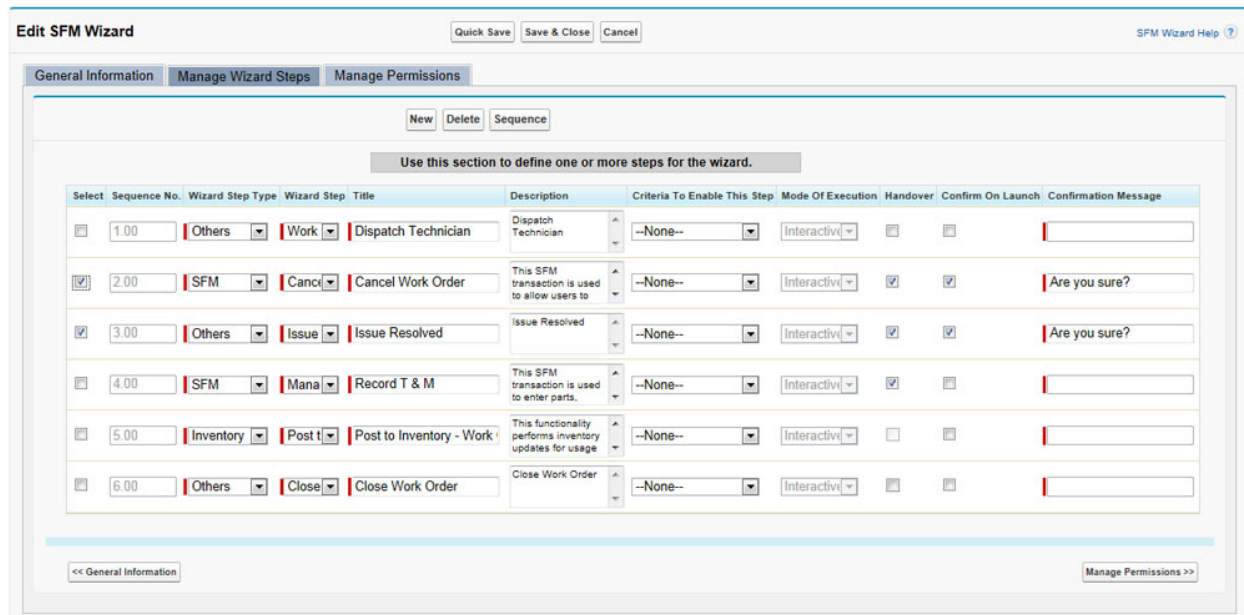
- Object:** A dropdown menu showing 'Work Order'.
- Wizard Title:** A text field containing 'Custom Depot Repair'.
- Wizard ID:** A text field containing 'CustWO-SFW002'.
- Description:** A text area containing 'Depot Repair'.
- Criteria To Show Wizard:** A dropdown menu showing 'Add New' and an 'Edit Criteria' link.
- Active?:** A checkbox that is checked.
- Expression Name:** A text field containing 'Depot Repair Type'.
- Unique ID:** A text field containing 'Depot_Repair-001'.
- Criteria Table:** A table with columns 'Field Name', 'Operator', and 'Operand'.

	Field Name	Operator	Operand	
1	Order Status	Equals	Open	X
2	Billing Type	Equals	Contact	X +
- Advanced Expression:** A text field containing '1 And 2'.
- Buttons:** 'Quick Save', 'Save & Close', 'Cancel', and 'Manage Wizard Steps >>'.

Figure 2: SFM Wizard - General Information Screen

2. In the above screen, the SFM Wizard has three tabs. Click the **General Information** tab.

3. Select the object you want to use to create a Wizard. The list shows only those objects for which SFM Transactions, SFM Custom Action, or Inventory processes are available.
4. Enter a user-friendly title for the wizard. Generally, the wizard title represents the business process (for example, **Paid Repair** or **Warranty Service**).
5. Enter a unique and user-friendly **Expression Name**. For example, **Open Work Orders**.
6. Enter a service wizard description.
7. From the list of available criteria, select the applicable criteria. The wizard will be displayed only if the record meets the selected criteria. You can modify the criteria by clicking **Edit Criteria**. Since criteria can also be re-used by other wizards, use extreme caution when modifying existing criteria.
8. Check **Is Active** to make the wizard available to use.
9. Enter unique **Expression Name** and **ID**. Using the combination of **Field Name**, **Operator**, and **Operand** enter the criteria for each rule. Ensure the criteria is exclusive between each rule.
10. Use the buttons marked with **x** and **+** to remove and add conditions respectively.
11. If required use the **Advanced Expression** to enter conditions such as **(1 AND 2) OR 3**.
12. Click the **Manage Wizard Steps** tab (see figure below). The screen below is used to define one or more steps for the wizard.



Select	Sequence No.	Wizard Step Type	Wizard Step Title	Description	Criteria To Enable This Step	Mode Of Execution	Handover	Confirm On Launch	Confirmation Message
<input type="checkbox"/>	1.00	Others	Work	Dispatch Technician	--None--	Interactive	<input type="checkbox"/>	<input type="checkbox"/>	
<input checked="" type="checkbox"/>	2.00	SFM	Cancel	Cancel Work Order	--None--	Interactive	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Are you sure?
<input checked="" type="checkbox"/>	3.00	Others	Issue	Issue Resolved	--None--	Interactive	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Are you sure?
<input type="checkbox"/>	4.00	SFM	Mana	Record T & M	--None--	Interactive	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	5.00	Inventory	Post t	Post to Inventory - Work	--None--	Interactive	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	6.00	Others	Close	Close Work Order	--None--	Interactive	<input type="checkbox"/>	<input type="checkbox"/>	

Figure 3: SFM Wizard - Manage Wizard Steps

13. Click **New** to add a new wizard step. The new step is added at the end of the wizard. You can rearrange the wizard steps by using the **Sequence** button.
14. For each wizard step, select the applicable action from the list. This list shows all the SFM transactions, Inventory processes, and SFM Custom actions defined for this object. The Action Title and Description is automatically populated. You can overwrite the same if required. The title and description entered here is displayed in the SFM Wizard on the record.
15. From the list of available criteria, select the applicable criteria for the step. The wizard step will be enabled only if the record meets the selected criteria. You can modify the criteria by clicking **Edit Criteria**. Since criteria can be reused by other wizards or wizard steps, use extreme caution when modifying existing criteria.
16. Enable the **Mode Of Execution** by selecting an SFM from the **Wizard Step** picklist.
17. The Mode of Execution is only enabled if you select an SFM from the **Wizard Step Type** picklist.
18. The following SFM transactions are available for Mode of Execution: **from Source Object to create new header and child records** and **as Standalone for the purpose of creating a new record**.

19. Select a **Mode Of Execution**. Two options are available, **Interactive** and **Background**. The default option is Interactive.
20. Background mode performs SFM transactions without displaying the intermediate SFM page. Interactive mode displays the SFM page allowing users to make changes to the record.

In this release, only SFM transactions that create new target Objects from a source Object can run in Background mode.

Handover is available for SFM transactions. When Handover is enabled, the defined SFM process step in the SFM Wizard begins execution. Upon successful completion of the process step, the next process step in the sequence will be seamlessly initiated. See figure above.

21. If applicable, check the **Handover** checkbox.

You can create a custom confirmation message that prompts users to confirm an SFM action step before it is executed. Select this feature by checking the **Confirm on Launch** checkbox, and enter a custom message in the Confirmation Message text box.

- The default question, "Are you sure?" displays after you check the **Confirm on Launch** checkbox. However, you can customize the message to any custom message of your choosing.
- If you check the **Confirm on Launch** checkbox, you must create a custom confirmation message or use the default question, "Are you sure?"
- The custom message you create will display each time an end user performs an SFM action step.

22. Click **Quick Save**.

23. Click **Sequence** to define the sequence in which the steps appear on the SFM Wizard.

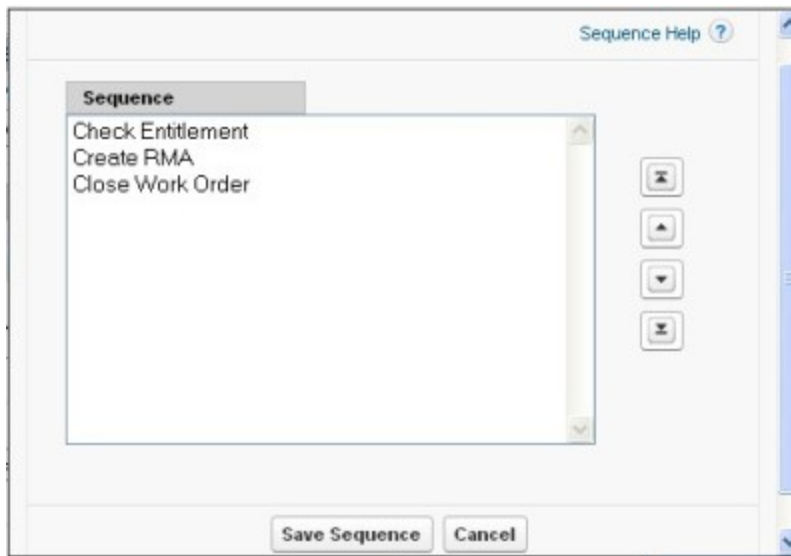


Figure 4: SFM Wizard - Sequence Screen

24. Click **Save Sequence** to save the new sequence.
25. Click **Cancel** to discard the changes made and return back to the Manage Wizard Steps screen.



Note: In this release, only SFM transactions can initiate Handover.

26. Click the **Manage Permissions** tab, the screen as shown below appears. Use this screen to select the ServiceMax user profiles that need access to this wizard. If no pro-

files are selected, all user profiles will have access to the wizard by default.

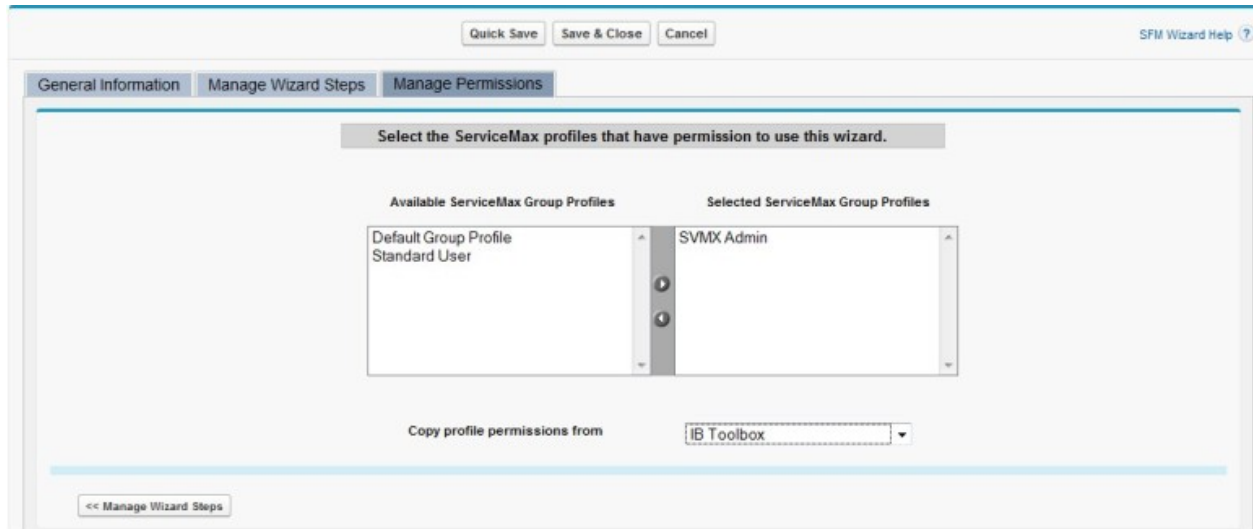


Figure 5: SFM Wizard - Manage Permissions

27. To give permissions to one or more profiles, you can move the applicable profiles from left to right.
28. Alternatively, you can copy permissions from other wizards by choosing the wizard name from the list at the bottom.
29. Anytime during the wizard creation process, you can click the **Quick Save** button at the top to save the service wizard even if it is incomplete and continue to edit the wizard.
30. To save the SFM transaction and return to the ServiceMax Setup home page, click the **Save & Close** button at the top.
31. To cancel any changes made to wizard and return to SFM Wizard screen, click the **Cancel** button at the top.

Deleting Wizards

To delete an SFM Wizard:

1. Select the name of the custom SFM wizard at the bottom.
2. Click **Delete**.



Note: Standard SFM Wizards and Criteria of ServiceMax cannot be modified or deleted. However, standard wizards can be deactivated. You can also adjust profile permissions of standard wizards.

Setting Up Wizard Layout

To configure how all SFM wizards of an object appear on the record layout in relation to each other:

1. Click the **Layout Configuration** button.

Figure 6: SFM Wizard - Layout Configuration Screen

2. Select the object for which you want to configure the wizard layout. All the available wizards are displayed in a two-column format.
3. Select the display size of the wizard. To avoid scrolling, decrease the display size if the number of wizards and steps are more.
4. You can configure the wizard layout by choosing the applicable wizard in each row and column. You can select any wizard only once in a layout. To leave a cell blank, select **None**. Click the **+** button to insert a new row. Blank rows will be ignored when saving the wizard layout.

- Once you have configured the layout, you can preview the layout by clicking the **Preview** button at the top. A sample preview screen is shown below.



Figure 7: SFM Wizard : Preview Layout Configuration

- At anytime during the layout configuration process, you can click the **Quick Save** button at the top to save the layout, even if it is incomplete and continue to edit the layout.
- To save the layout and return back to the SFM wizard screen click the **Save & Close** button at the top.
- To cancel any changes made to the layout and return to SFM wizard screen, click the **Cancel** button.
- Click **Back to Setup Home** to return back to the ServiceMax Setup home.

SFM MAPPING

Overview

SFM Mapping is a ServiceMax Suite configuration module for administrators. SFM mappings include field mappings between source and target object records and value mappings for target object records. You can use SFM Mapping to view standard SFM mappings or to create custom SFM mappings.



Note: Use the SFM Mapping module to create your maps (source objects). Use the Screen Designer from the SFM Transaction Designer and Docs Designer module to define the page layout.

Access and Permissions

Actions	User Permissions Needed
To view SFM Mapping:	"Read" on ServiceMax Processes, ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event
To create or edit SFM Mapping:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data, Read on Page Layout, Read on Page Layout Detail, SFM Event
To delete SFM Mapping:	"Delete" on ServiceMax Processes and ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event

SFM Mapping Screen Fields and Icons

The table below provides a description of text fields and icons associated with the SFM Mapping Screen/Window.

SFM Mapping Fields and Icons

Fields and Icons	Description
Select Source Object	Picklist of available source objects.
Select Target Object	Picklist of available target objects.
Back To Setup Home	Clicking this icon returns you to the Setup Home screen.
Save	Saves a map.
Save As	Saves a map under a new name.
New	Creates a new map.
Delete	Deletes a map.
Quick Find	A text field for conducting a search of an existing map.
Value	An area.
Using an Existing Map	A picklist of available existing maps.
Save this map as	A text field to type the name you would like to save your map as.
Input ID Here	A text field for your map's ID.

SFM Mapping Module

Use this module to view standard SFM mappings or to create custom SFM mappings. In addition, to use the Lookup Form Fill feature you can define your maps in this module and access them from the **Lookup Form Fill Object Mapping** picklist from the SFM Transaction Designer. Instructions on how to access the SFM Mapping module are listed below.

To access the SFM Mapping module:

1. From the **Home** tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Service Flow Manager** button.
3. Click the **SFM Mapping** button.
4. Click the **Go** button.

The Configure SFM Mappings screen displays as shown in the figure below.

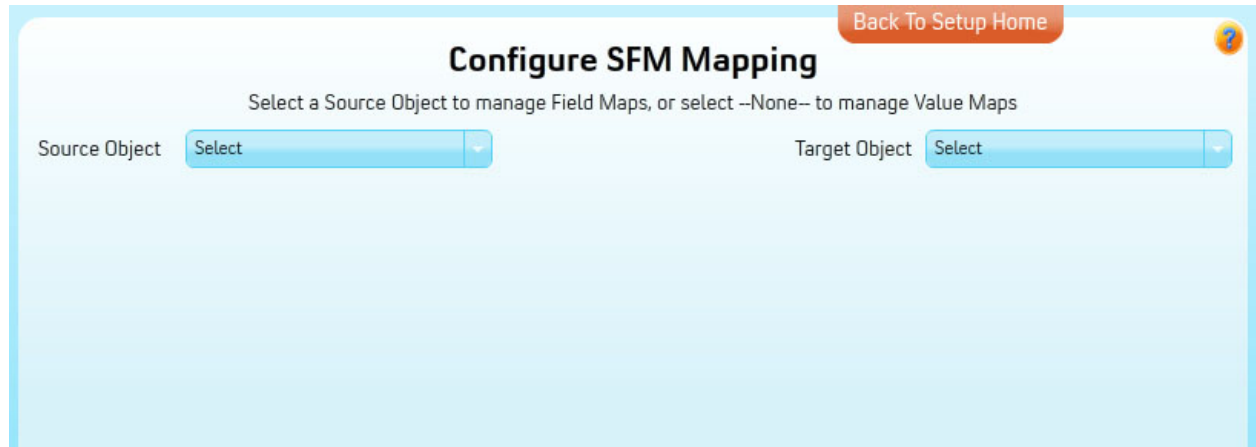


Figure 1: Configure SFM Mappings Screen

Managing Field Maps

Follow the steps below to configure SFM Mapping for field maps.

To configure a new field map:

1. In the **Source Object** picklist, select an available source object (for example, Case) as shown in the figure below.

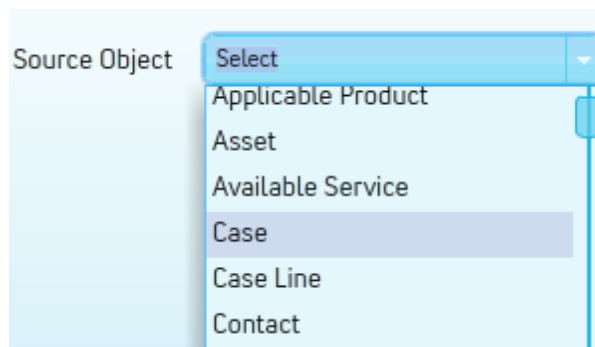


Figure 2: Source Object Picklist

2. In the **Target Object** picklist, select an available target object. The Configure SFM Mapping screen displays the Field Map for Existing Records tab.

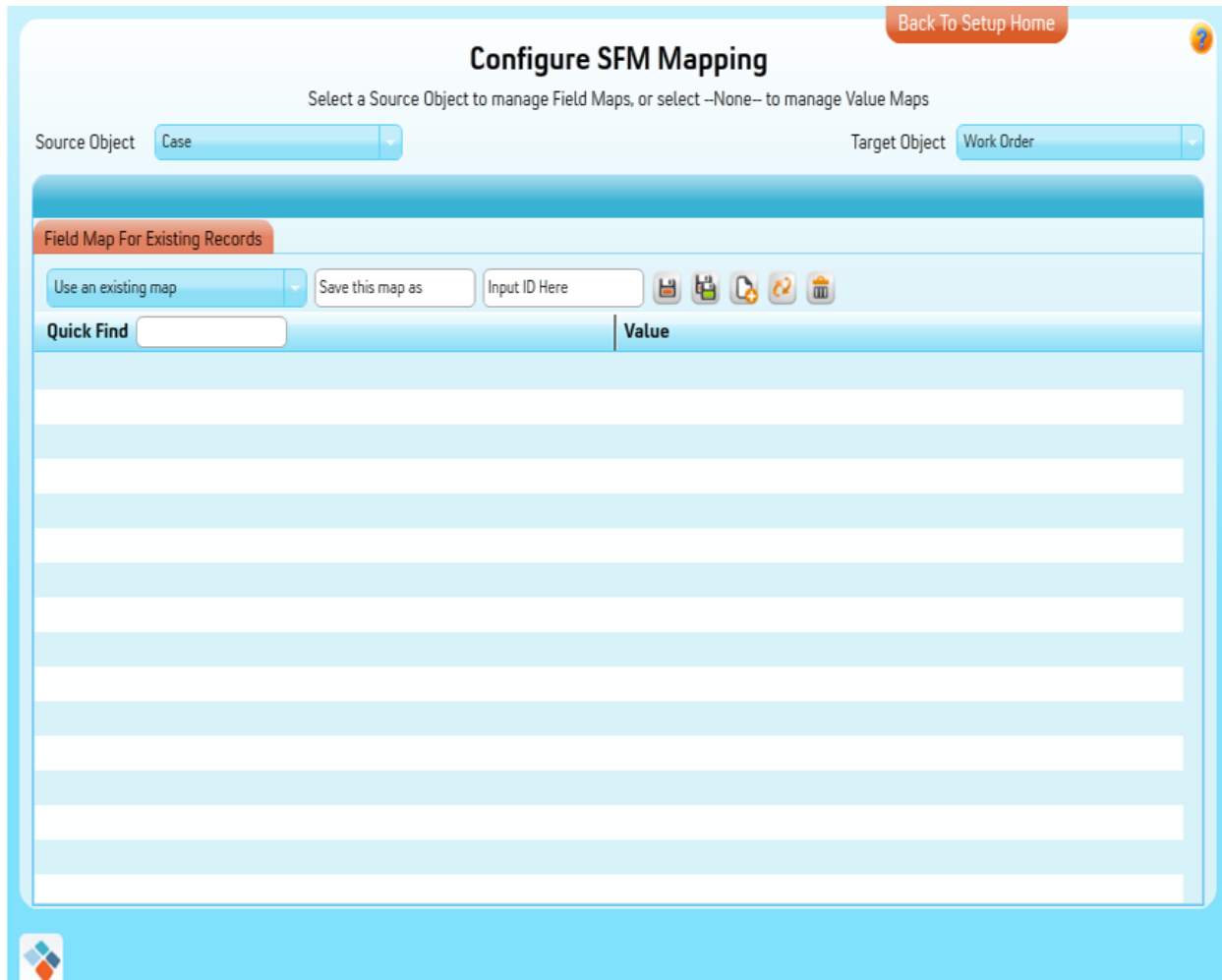



Figure 3: Field Map For Existing Records Tab


3. In the Field Map for Existing Records area, click **New**  to create a new map. The Field Map for Existing Records area populates with available fields.




Field Map For Existing Records

Use an existing map

Save this map as

Input ID Here



Quick Find

Value
















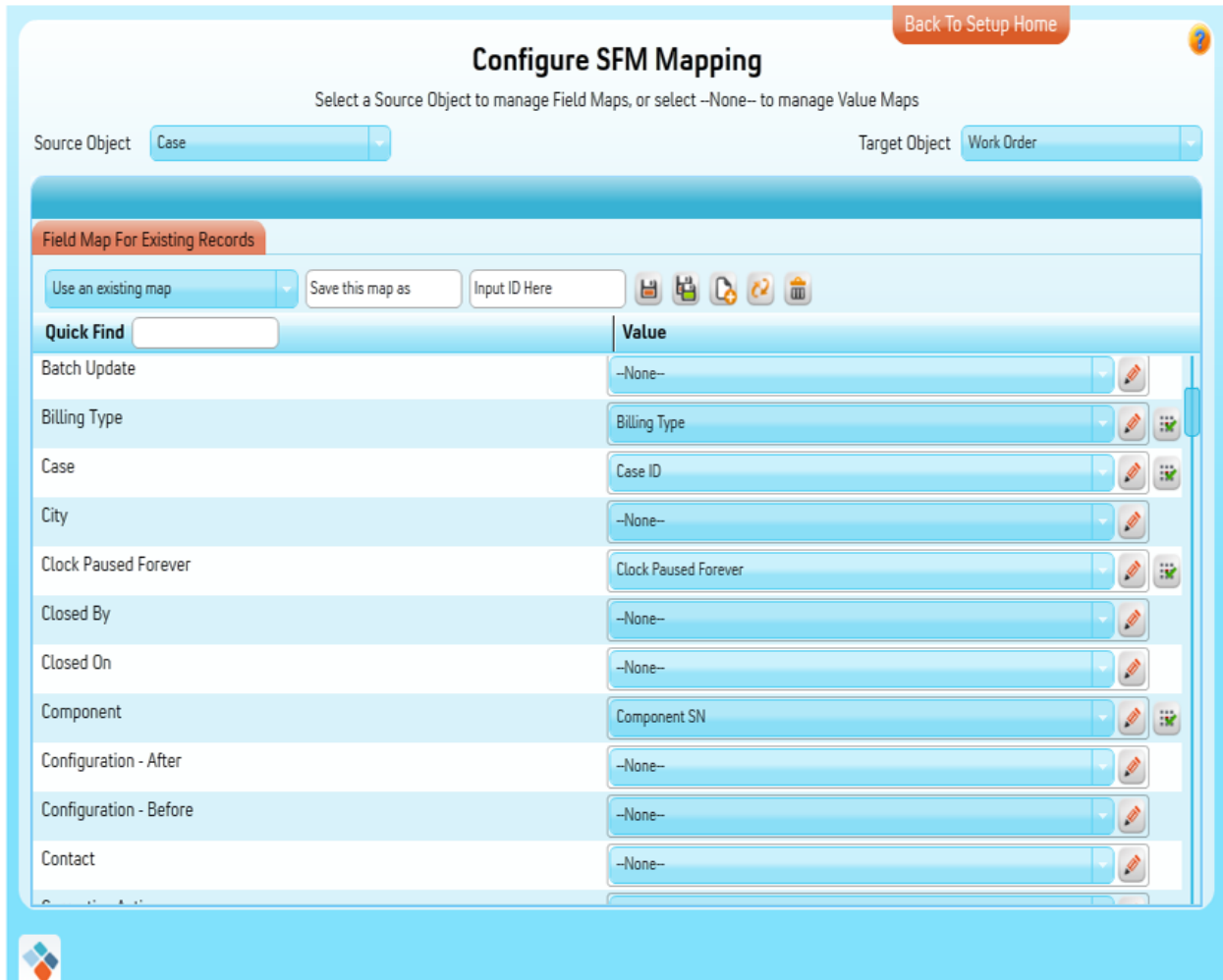
Activity Type	--None--	
Applied Rate Type	--None--	
Billable Line Price	--None--	
Billable Qty	--None--	
Billing Information	--None--	
Canceled By	--None--	
Canceled On	--None--	
Closed By	Closed By	 
Closed On	Closed On	 
Consumed From Location	--None--	
Cost Category	--None--	

Figure 4: Field Map For Existing Records Tab (populated)

4. Select a value for a map field. (For example, Case is a map field and Case ID is its value). There are two options for choosing values:
 - a. **Option 1:** Click  if not already visible and select an option from the **Value** pick-list.


- b. **Option 2:** Click  if not already visible and enter a value in the **Value** text field.




The screenshot shows the 'Configure SFM Mapping' window. At the top, there's a 'Back To Setup Home' button and a help icon. Below the title, it says 'Select a Source Object to manage Field Maps, or select --None-- to manage Value Maps'. The 'Source Object' is set to 'Case' and the 'Target Object' is set to 'Work Order'. The main section is titled 'Field Map For Existing Records'. It has a 'Use an existing map' dropdown, a 'Save this map as' text field, and an 'Input ID Here' text field. Below this is a 'Quick Find' search bar. The main table has two columns: 'Quick Find' and 'Value'. The 'Quick Find' column lists various fields like 'Batch Update', 'Billing Type', 'Case', 'City', 'Clock Paused Forever', 'Closed By', 'Closed On', 'Component', 'Configuration - After', 'Configuration - Before', and 'Contact'. The 'Value' column shows the corresponding mapped values, mostly '--None--'. Some rows have a green plus icon next to the value field, indicating additional mapping options are available for those fields.

Figure 5: Configure SFM Mapping Window



Note: Some values will have an additional mapping feature associated with it. Those values have a  next to it.

5. If you want to select additional mapping for a value, click  to open the Alternate Mapping dialog box. Select an item from the **Option 1** or **Option 2** picklist as show in the figure below. Click **Done** after you have made your selection. Note: If you assign

a value as null, you can use the alternate mapping.

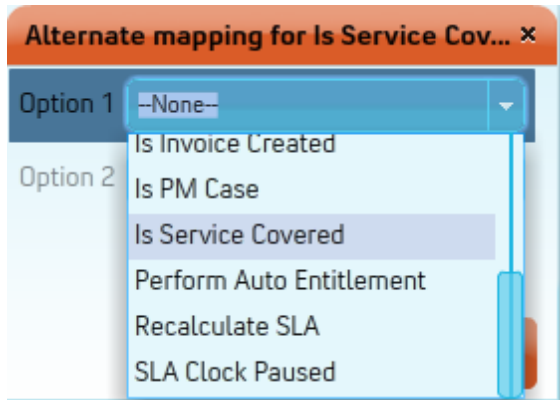


Figure 6: Alternate Mapping Dialog Box

6. In the **Save this map as** text box, enter a name for your map (for example, SVMXSTD: Case To Work Order).
7. In the **Input ID Here** text box, enter an ID for your map (for example, MAP015).
Note: The Map ID should be 8 characters long.
8. Click **Save** to save the map.



Note: If you have an existing map, you can select one from the **Use an existing map** picklist as shown in the figure below. Click **Save As** to save the map under a new name.

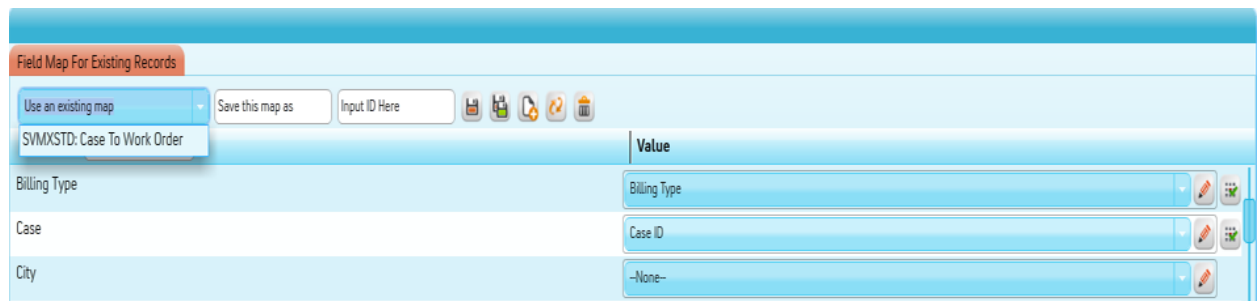




Figure 7: Use An Existing Map Picklist

9. If you need to reset or delete a map, click the **Reset**  or **Delete**  icons.

Managing Value Maps

Follow the steps below to configure a new value map.

To configure a new value map:

1. In the **Source Object** picklist, select **None** as shown in the figure below.
2. In the **Target Object** picklist, select an available target object.

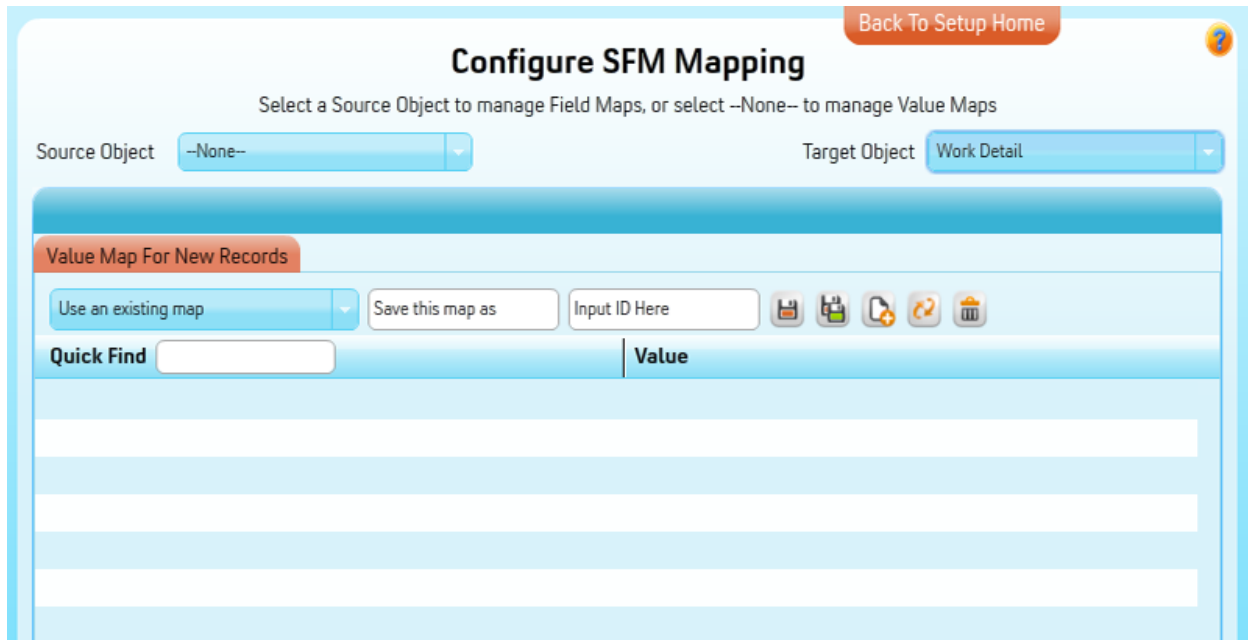





Figure 8: Configure SFM Mapping (Target Object)

3. Click the **New**  icon.
The Configure SFM Mapping screen updates with the Value Map for New Records tab area.
4. In the Value Map for New Records area, click **New**  to create a new map. The Field Map for Existing Records area populates as shown in the figure below.




Quick Find	Value
Activity Type	<input type="text"/>
Applied Rate Type	<input type="text"/>
Billable Line Price	<input type="text"/>
Billable Qty	<input type="text"/>
Billing Information	<input type="text"/>
Canceled By	<input type="text"/>
Canceled On	<input type="text"/>
Closed By	<input type="text"/>
Closed On	<input type="text"/>
Consumed From Location	<input type="text"/>
Cost Category	<input type="text"/>

Figure 9: Value Map For New Records Tab (Populated)

5. Select an object from the available list that you want to map from.
6. Enter a value in the **Value** text field. There are three options for populating the **Value** text field.
 - **Option 1:** Select an option from the **Value** picklist. See figure below. (If necessary, click  and then select an option from the picklist).

Quick Find	Value
Received Zip	<input type="text"/>
Record ID	<input type="text"/>
Record Type ID	<div> --None-- --None-- Estimate Products Serviced Request/Receipt Usage/Consumption </div>
Reference Information	<input type="text"/>
Requested City	<input type="text"/>
Requested Country	<input type="text"/>
Requested Qty	<input type="text"/>

Figure 10: Value Picklist

- **Option 2:** Click  and enter a value in the **Value** text field.
- **Option 3:** Click  to open the search dialog box. Enter a value, click , and then click **Select**. You can also use the scroll bar to search for a value. See figure below.

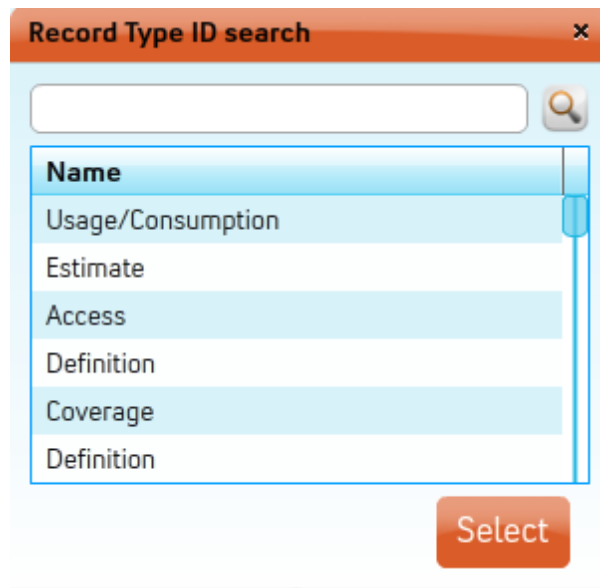


Figure 11: Search Dialog Box

See Figure 5 below for an example of the Value Map For New Records tab area populated with a value.

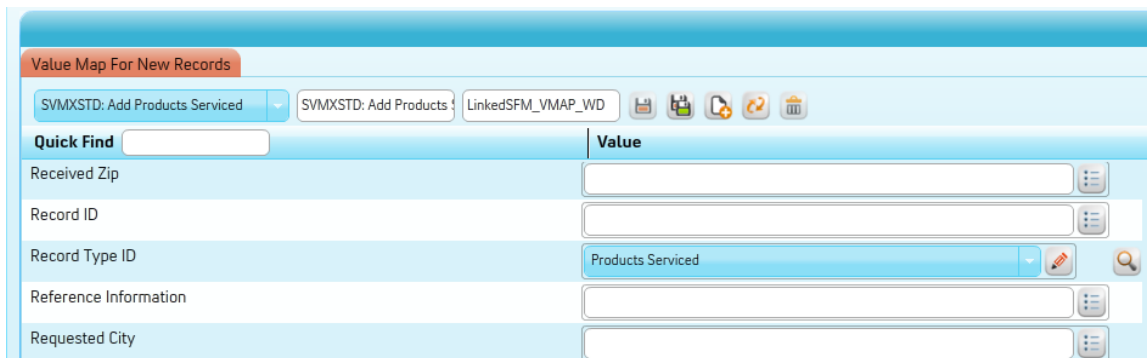




Figure 12: Value Map For New Records Tab (Example)

7. In the **Save this map as** text field, enter the name you want to use to save the map.
8. In the **Input ID Here** text field, enter an ID for the map.



Note: If you have an existing map, you can select one from the **Use an existing map** picklist. Click **Save As** to save the map under a new name.

9. Click **Save** to save the map.
10. To reset or delete the map, click **Reset**  or **Delete** .
11. Click **Save As** to save an existing map under a new name.

See Also:

[SFM Transaction Designer \(Lookup Form Fill section\)](#)

[Lookup Form Fill Use Case](#)

SFM EXPRESSIONS

Overview

Use this option to view standard SFM expressions or to create custom SFM expressions. SFM expressions include the criteria for filtering and advanced expression for the filter criteria.

Access and Permissions

Actions	User Permissions Needed
To view SFM Expressions:	"Read" on ServiceMax Processes, ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event
To create or edit SFM Expressions:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data, Read on Page Layout, Read on Page Layout Detail, SFM Event
To delete SFM Expressions:	"Delete" on ServiceMax Processes and ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event

Click **Home > ServiceMax Setup > Service Flow Manager > SFM Expressions** to view the Configure Expressions screen as shown in the figure below.

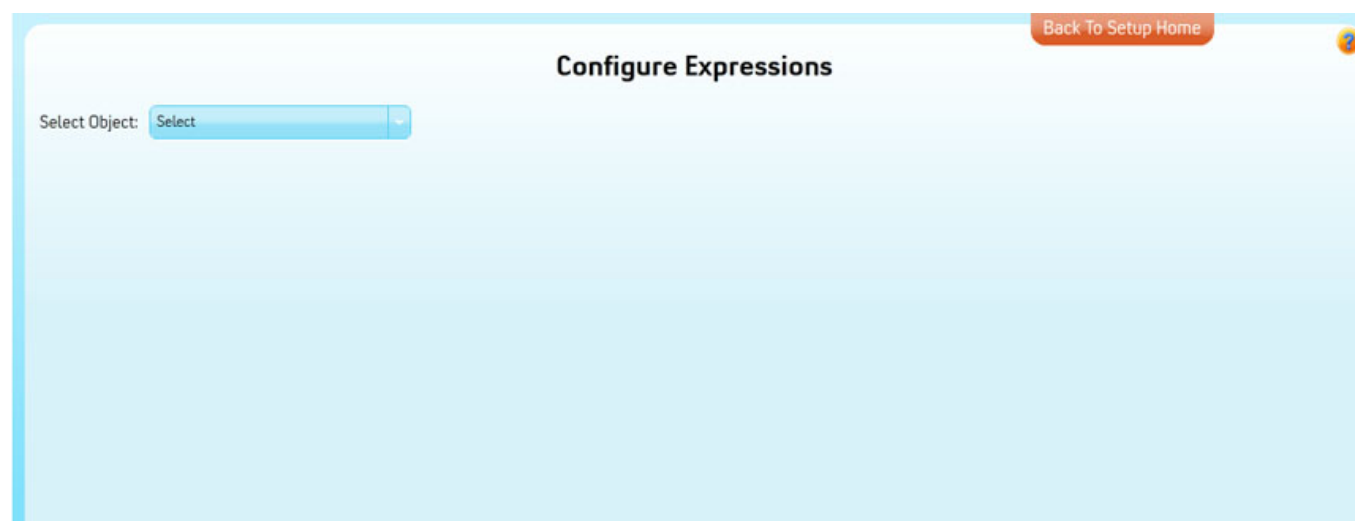


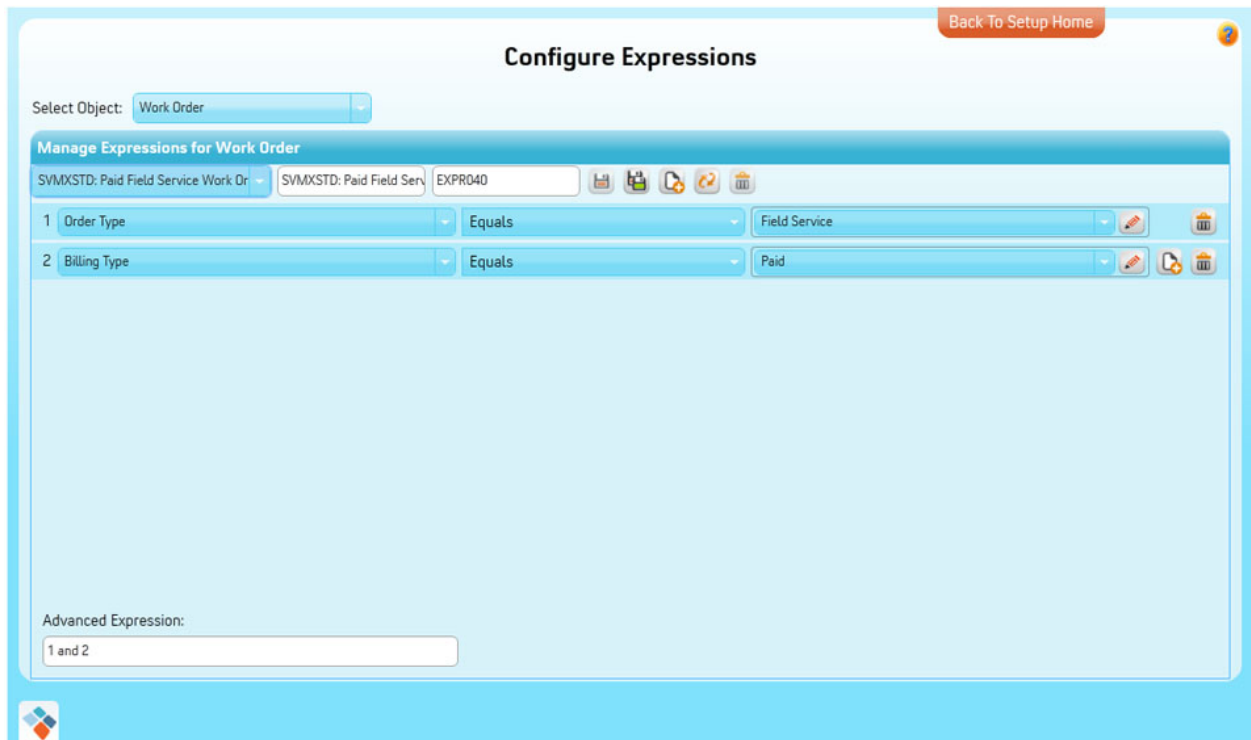
Figure 1: Configure Expressions Screen

Configuring a new SFM Expression

To configure a new SFM Expression (see figure below):

1. In the **Select Object** picklist, select an object.
2. In the Manage Expressions area, select an option from the **Select expression** picklist.
3. Enter an expression name in the **Save expression as** text box.
4. Enter the Input ID in the **Input ID Here** text box.
5. Create an expression:
 - a. Click the **New** icon to create a new row.
 - b. In the **Select** picklist, select an object.
 - c. Select an operator in the **Operator** picklist.
 - d. Select a value in the **value** picklist. (You can also click the icon located next to the picklist to select a field from the list).
 - e. If necessary, click the **New** button to create another row.
 - f. In the Advanced Expression text box, enter an advanced expression (for example, 1 and 2).
6. Click the **Save** icon to save the expression.
7. Click the **Save as** icon to save new expressions with new Input IDs. (Use the **Save** icon to save existing expressions. Use the **Save as** icon for new expressions).
8. To reset the expression, click the **Reset** icon.
9. If you need to delete the expression, click the **Delete** icon.

10. Click the **Back to Setup Home** button to return to the Setup Home page.



Back To Setup Home

Configure Expressions

Select Object: Work Order

Manage Expressions for Work Order

Order Type	Operator	Field Service
1 Order Type	Equals	Field Service
2 Billing Type	Equals	Paid

Advanced Expression:

1 and 2

Figure 2: Configure Expressions (Expression Builder) Screen

SFM MIGRATOR

Overview

This feature allows ServiceMax administrators to migrate new or modified SFM transactions from the current instance (production or sandbox org) to any target (production) instance. All dependent setup within an SFM transaction such as Object mappings, page layouts and expressions are also automatically migrated.

Access and Permissions

Actions	User Permissions Needed
To migrate SFM Transactions:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data, Page Layout, Page Layout Detail, SFM Event

SFM Migrator fields

Fields	Description
Username	Name of target org
Password	Password for the target org, with security token if applicable
SFM transaction ID	Unique ID of the SFM transaction
Name	Name of an SFM transaction
Last Modified date	Last modified date of the transaction
Deployment Status	Status of migration of a transaction

Steps for Deploying

Click **Home > ServiceMax Setup > Service Flow Manager > SFM Migrator**. The screen as shown below appears.

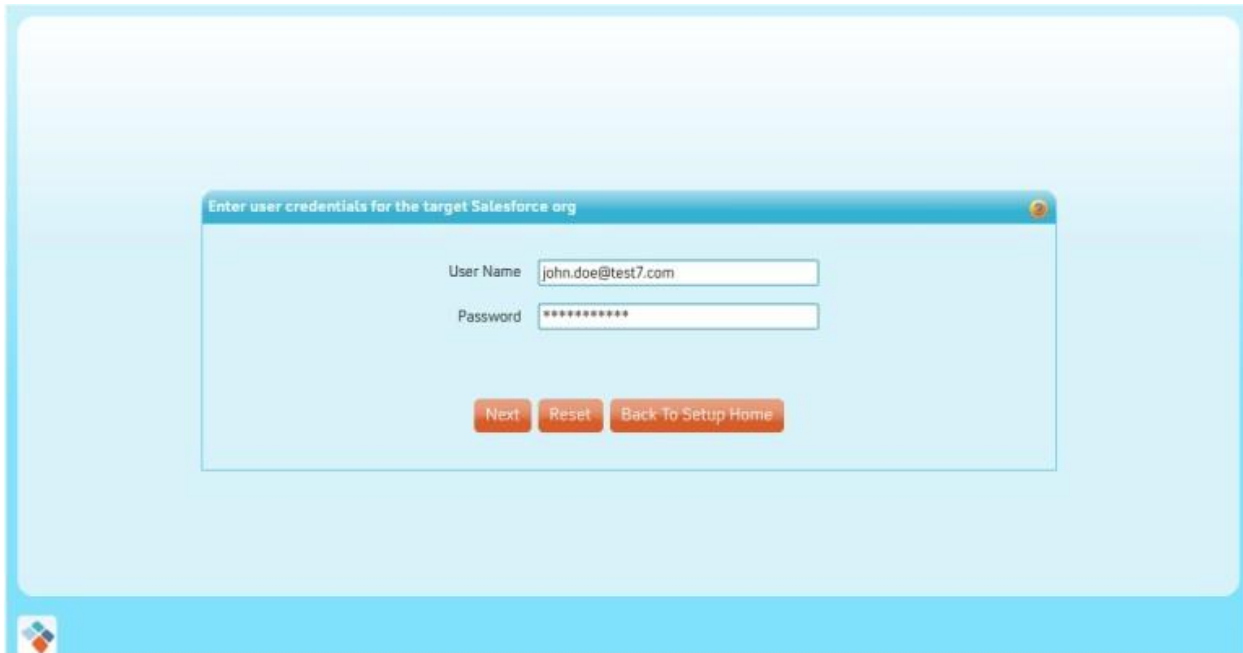


Figure 1: SFM Migrator - Home Screen

In the SFM Migrator home screen:

1. Enter the user name of the target org. The target cannot be a Sandbox instance.
2. Enter the password, with security token if applicable.
3. To clear and reenter the user name and password, click **Reset**.
4. Click **Next** to login to the target org and proceed with migration.
5. To return to the setup home page, click **Back To Setup Home**.
6. In order for the migration to be successful, ServiceMax versions in the source and target orgs must be compatible. If the target instance runs an earlier version of ServiceMax than the source (current) instance, an error is displayed as shown below. The

target instance must be upgraded to avoid this error.

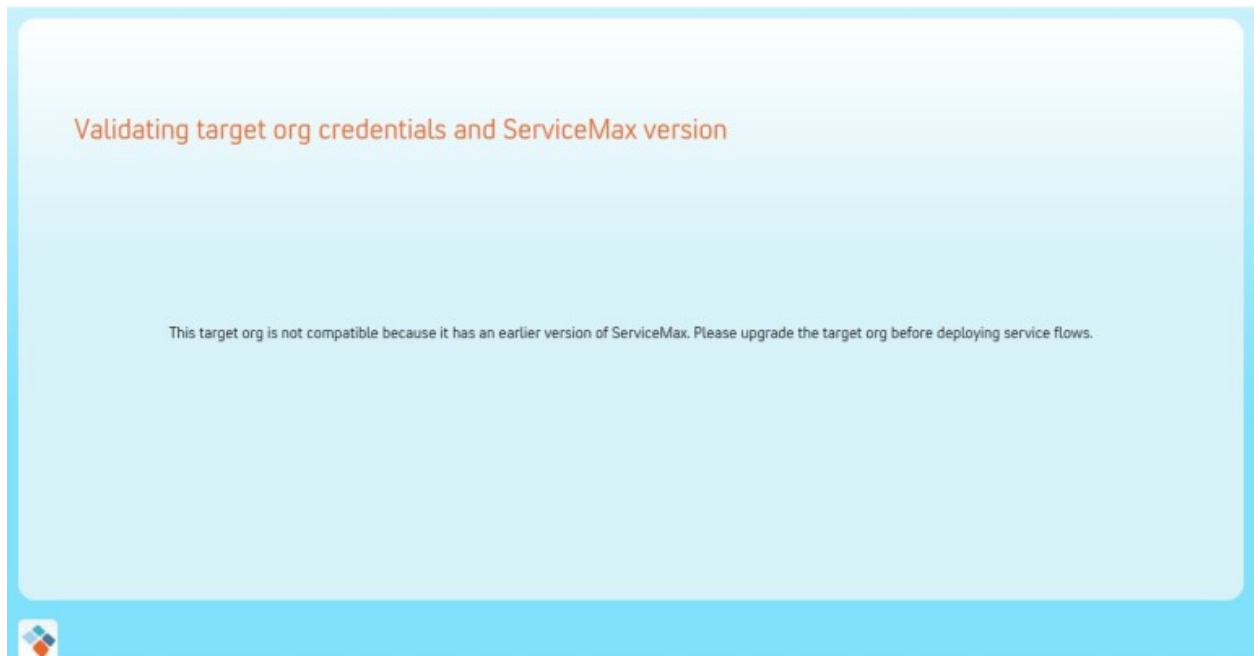


Figure 2: SFM Migrator - Validation Screen

After a successful login and compatibility check, the following screen appears. This screen shows the list of all available SFM transactions in the source instance.



Figure 3: SFM Migrator - Available Service Flows Screen

- The list is sorted by SFM transaction ID by default. Click any column title to apply a new sorting. To switch the sorting order of the currently sorted column, click the column title again.

8. To select or unselect all SFM transactions, check/uncheck the checkbox at the top-left of the list. You can also select specific SFM transactions by checking the checkbox in each row.
9. Once you have selected the SFM transactions to be migrated, click **Deploy** to start the migration.
10. Each SFM transaction will be validated for suitability of migration. This is to ensure that the migrated transactions can run successfully in the target instance. The progress of migration is indicated in each row as shown below.



<input type="checkbox"/>	SFM Transaction ID	Name	Last Modified Date	Deployment status
<input checked="" type="checkbox"/>	TDM002 2011-07-21 11:1	Create Case from Installed Product 2011-07-21 11:12:02	7/21/2011 4:44 PM	Process migrated successfully
<input checked="" type="checkbox"/>	TDM005 2011-07-21 11:1	Create Shipment From Case 2011-07-21 11:12:08	7/21/2011 4:44 PM	Lookup Configuration migrated successfully
<input type="checkbox"/>	TDM009 2011-07-21 11:1	Create Quote from Work Order 2011-07-21 11:12:11	7/21/2011 4:42 PM	
<input type="checkbox"/>	TDM013 2011-07-21 11:1	Manage Stock Transfer Lines 2011-07-21 11:12:17	7/21/2011 4:42 PM	

Figure 4: SFM Migrator - Deployment Status Screen

11. If the migration resulted in any errors, the affected transactions will be highlighted in red. Click the **log** button in the row to see the error details. Once you have resolved the errors, you can attempt to migrate the transactions again.
12. You can also view the log of all the migrations, successful or otherwise, by clicking the **log** button at the top right.
13. The Log appears in a popup screen. See the Deployment Log section below for more details.
14. To return to the login screen, click **Start Over**.

15. To return to ServiceMax setup page, click **Back to Setup Home**.



Figure 5: SFM Migrator - Deployment Status Screen

Deployment Log

1. The log screen (shown below) displays status and errors encountered when migrating SFM transactions.



Figure 6: SFM Migrator - Debug Console

2. To locate log information for a specific SFM transaction, select the transaction name from the **SFM Transaction** picklist.
3. Select the level of details you want to see by using the **Log Level** picklist.

- **All:** Displays all log messages.
- **Error:** Displays errors only.
- **Info:** Displays errors and progress of each major step in migration.
- **Fine:** Displays errors and fine-grained messages most helpful in debugging.

SFM SEARCH

Overview

Use this option to view standard SFM search configurations or to create custom SFM search configurations. SFM Search configurations include the objects in scope, the fields to be searched upon, prefilter conditions and how the results are displayed.

SFM Search Module

To access the SFM Search module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Service Flow Manager** button.
3. Click the **SFM Search** button.
4. Click the **Go** button.

The Standard and Custom Searches screen displays as shown in the figure below.

Standard Searches				
View Clone Manage Permissions Back To Setup Home				
Select	Search Title	Search ID	Description	Last Modified On
Custom Searches				
New Edit Clone Manage Permissions Delete Back To Setup Home				
Select	Search Title	Search ID	Description	Last Modified On
<input type="checkbox"/>	Contact	Contact line		1/2/2012 10:02 PM

Figure 1: Standard and Custom Searches Screen

Standard Searches

As shown in Figure 1, in the Standard Searches area, you can:

- View a standard search.
- Clone a standard search.
- Manage profile access permissions.
- Return to the Setup Home screen.

Custom Searches

As shown in Figure 1, in the Custom Searches area, you can:

- Create a new custom search.
- Edit a custom search.
- Clone a custom search.
- Manage profile access permissions.
- Delete a custom search.
- Return to the Setup Home screen.

Creating a New Custom Search

To create a new custom search:

1. In the Custom Searches area, click the **New** button.

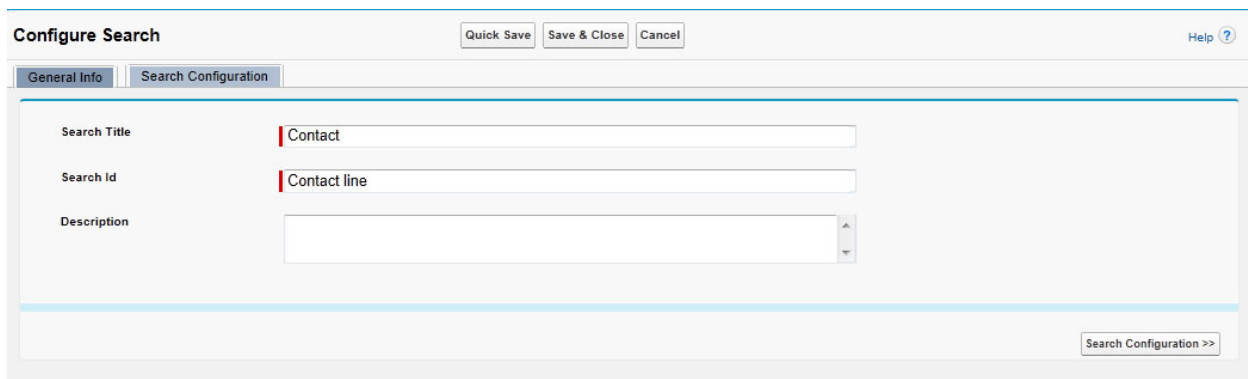






Figure 2: *Configure Search*

2. Enter the **Search Title** and **Search ID** in their respective text boxes.

3. Add a description in the **Description** text box if necessary.
4. Click either the **Search Configuration** tab or the **Search Configuration** button located at the bottom right corner of the screen.
5. Click the **New** button to add one or more objects to be included in the search.
6. In the **Search Object** picklist, select an object to be included in the search.
7. Enter a description for the object in the **Description** text box.
8. As an optional step, use the expression builder to define filter criteria, which will be applied to the object's records (see figure below).
- a. In the **Field** picklist, select a field.
- b. Select an operator from the **Operator** picklist.
- c. Enter a value in the **Value** text box.
- d. Use the  and  buttons to add or delete filter criteria.
- e. Use the **Advanced Expression** text box if necessary.

Optional: Using the expression builder below, define a filter criteria to always apply on this object's records

	Field	Operator	Value	
1	Contact ID	Equals	005	 

Advanced Expression

Figure 3: Optional Expression Builder

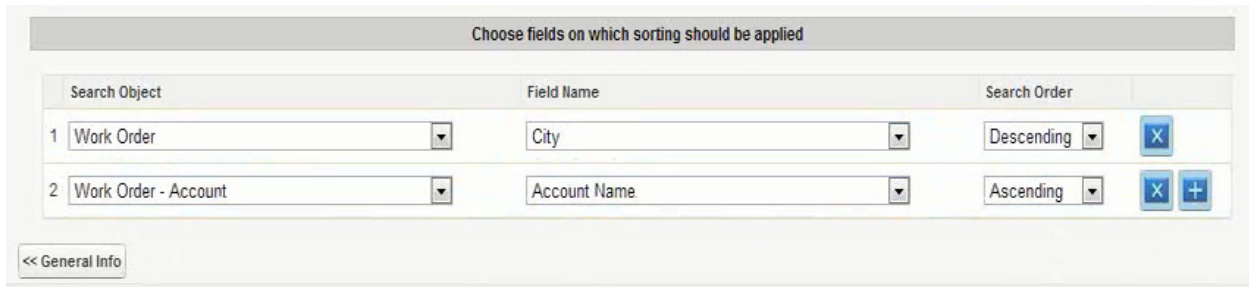
9. Select one or more fields to display in the search result using the Expression Builder.
10. Select an object from the **Search Object** picklist and a field name from the **Field Name** picklist (see figure below).

Choose one or more fields on which search is applied

	Search Object	Field Name	
1	Work Order	Country	 

Figure 4: Select one or more objects and fields for search

11. Select fields for sorting (see figure below).



	Search Object	Field Name	Search Order	
1	Work Order	City	Descending	X
2	Work Order - Account	Account Name	Ascending	X +

<< General Info

Figure 5: Select fields for sorting

- In the Search Object area, select an object.
 - In the Field Name area, select a field from the **Field Name** picklist.
 - Indicate the search order (**Descending** or **Ascending**).
- Click the **Save** button to save the search.

Editing a Custom Search

To edit a custom search:

1. Select a custom search by checking the **Select** checkbox for the appropriate search name.
2. In the Custom Searches area, click the **Edit** button.
3. In the General Info area, update the following if necessary, **Search Title**, **Search ID**, and **Description**.
4. Click either the **Search Configuration** tab or the **Search Configuration** button located at the bottom right corner of the screen.
5. In the Search Configuration area, use the Expression Builder to include one or more objects to be included in the scope of this search.
 - a. In the **Search Object** pick list, select an object.
 - b. Enter a title in the **Results Section Title** text box.
 - c. If required, enter a description in the **Description** text box.
6. Click the **Field Display Sequence** button to change the sequence of the of the fields.

7. Use the up and down arrows to change the sequence of the fields.
8. Click the **Save** button to save your updates.

Clone a Custom Search

To clone a custom search:

1. Select a custom search by checking the **Select** checkbox for the appropriate search name.
2. In the Custom Searches area, click the **Clone** button.
3. In the General Info area, change the following: **Search Title**, **Search ID**, and **Description**.
4. Click either the **Search Configuration** tab or the **Search Configuration** button located at the bottom right corner of the screen.
5. In the Search Configuration area, use the Expression Builder to make changes to the **Search Object**, **Results Section Title**, and **Description**.
 - a. In the **Search Object** picklist, select an object.
 - b. Select a title in the **Results Section Title** text box.
 - c. If required, enter a description in the **Description** text box.
6. Click the **Field Display Sequence** button to change the sequence of the fields.
7. Use the up and down arrows to change the sequence of the fields.
8. Click the **Save** button to save your updates.

Manage Profile Access Permissions

To manage profile access permissions:

1. In the Custom Searches area, click the **Manage Permissions** button.
2. From the **Select Service Max Profile** picklist, select a profile.
3. Use the left and right arrows to move objects from the **Available Searches** area to the **Selected Searches** area.

4. Click the **Quick Save** button to save the profile permission and remain in the Profile Access To Search Configuration screen.
5. Click the **Save & Close** button to save the profile permission and return to the Standard and Custom Searches screen.

SERVICE CONTRACT PROFORMA PROCESS

Overview

Use this option to configure proforma invoice processes for Service Contracts. You can indicate how Service Contracts are consolidated into an invoice, the type of lines to include, and more. You can also setup the process to run automatically on a schedule.

Access and Permissions

Actions	User Permissions Needed
To view Service Contract Proforma Invoice Process:	"Read" on ServiceMax Processes, ServiceMax Config Data, Service/Maintenance Contract
To create or edit Service Contract Proforma Invoice Process:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data
To delete Service Contract Proforma Invoice Process:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Value Map for Proforma Invoice

Service Contract	Performa Invoice
CurrencyIsoCode	CurrencyIsoCode
Account	Account
Account - Billing address	Billing Address

Field Map for Proforma Invoice Detail

Service Contract	Performa Invoice Detail
ID	Service Contract
CurrencyIsoCode	CurrencyIsoCode

Proforma Invoice Lines (Covered Products)

Covered Products	Proforma Invoice Line (Line Type = Covered Products)
ID	Covered Product
Service Contract	Service Contract
CurrencyIsoCode	CurrencyIsoCode
Product	Product
Installed Product	Installed Product
Line Price (If Is Billable field of Covered Product is true)	Price (If Is Billable field of Covered Product is true then)
Line Price (If Is Billable field of Covered Product is true)	Total Line Price (If Is Billable field of Covered Product is true)



Note: Else Price and Total Line Price of Proforma Invoice Line is set to 0 (zero).

Proforma Invoice Lines (Service Contract Sites)

Covered Products	Proforma Invoice Line (Line Type = Covered Products)
ID	Covered Locations
Service Contract	Service Contract
CurrencyIsoCode	CurrencyIsoCode
Location	Location
Notes	Line Notes
Line Price (If Is Billable field of Covered Location is true)	Price (If Is Billable field of Covered Location is true then)
Line Price (If Is Billable field of Covered Location is true)	Total Line Price (If Is Billable field of Covered Location is true)



Note: Else Price and Total Line Price of Proforma Invoice Line is set to 0 (zero).

Proforma Invoice Lines (Line Type= Included Services)

Covered Products	Proforma Invoice Line (Line Type = Covered Products)
ID	Included Services
Service Contract	Service Contract
CurrencyIsoCode	CurrencyIsoCode
Notes	Line Notes
Line Price (If Is Billable field of Included Services is true)	Price (If Is Billable field of Included Services is true then)
Line Price (If Is Billable field of Included Services is true)	Total Line Price (If Is Billable field of Included Services is true)



Note: Else Price and Total Line Price of Proforma Invoice Line is set to 0 (zero).

Proforma Invoice Line (PM Offering)

Covered Products	Proforma Invoice Line (Line Type = Covered Products)
Service Contract	Service Contract
Line Price (If Is Billable field of Included Services is true)	Price (If Is Billable field of Included Services is true then)
Line Price (If Is Billable field of Included Services is true)	Total Line Price (If Is Billable field of Included Services is true)



Note: Else Price and Total Line Price of Proforma Invoice Line is set to 0 (zero).

Service Contract Proforma Processes Screen

Click **Home > ServiceMax Setup > Service Contracts > Service Contract Proforma Process**. The Standard and Custom Service Contract Proforma Processes Screen displays. See figure below.



Note: Scheduler has limitations when creating invoices (from Work Order-/Service Contract) for dates between the 28th to the 1st of a month.

Standard Service Contract Proforma Invoice Processes

View

Clone

Back To Setup Home

Select	Process Id	Process Name	Description	Active
--------	------------	--------------	-------------	--------

Custom Service Contract Proforma Invoice Processes

New

Edit

Clone

Delete

Help ?

Select	Process Id	Process Name	Description	Active	Last Modified By	Last Modified Date
<input type="checkbox"/>	NV-SC-Invoice-Gen	NV-SC-Invoice-Gen		<input type="checkbox"/>	vasu	8/7/2012 5:16 PM
<input type="checkbox"/>	NV-SC-Invoice-Gen01	NV-SC-Invoice-Gen01		<input type="checkbox"/>	vasu	7/12/2012 10:59 AM
<input type="checkbox"/>	NV-SC-Invoice-Gen02	NV-SC-Invoice-Gen02		<input type="checkbox"/>	vasu	7/20/2012 10:53 AM
<input type="checkbox"/>	NV-SC-Invoice-Gencloned	NV-SC-Invoice-Gencloned		<input checked="" type="checkbox"/>	vasu	8/7/2012 11:24 AM
<input type="checkbox"/>	ProcessScon1	ProcessScon1		<input checked="" type="checkbox"/>	vasu	8/6/2012 3:06 PM

Figure 1: Standard and Custom Service Contract Performa Invoice Processes Screen

In the Standard Service Contract Proforma Processes screen:

- To view a standard service contract Proforma invoice process, select a process and click the **View** button.
- To clone a standard process, select a process and click the **Clone** button. Edit the available fields, text boxes, and picklists in the Setup Service Contract Proforma Process screen.
- To return to the Setup Home page, click the **Back To Setup Home** button.

In the Custom Service Contract Proforma Invoice Processes screen:

- Click the **New** button to create a new custom process.
- Click the **Edit** button to edit a custom process.
- Click the **Clone** button to clone a process.
- To delete a process, click the **Delete** button.

Creating/Editing a Custom Service Contract Proforma Invoice Process

To create a custom service contract Proforma invoice process:

1. Click the **New** button in the Custom Service Contract Proforma Invoice Processes screen to create a new process, or select a process and click the **Edit** button to edit an existing process. See figure below.

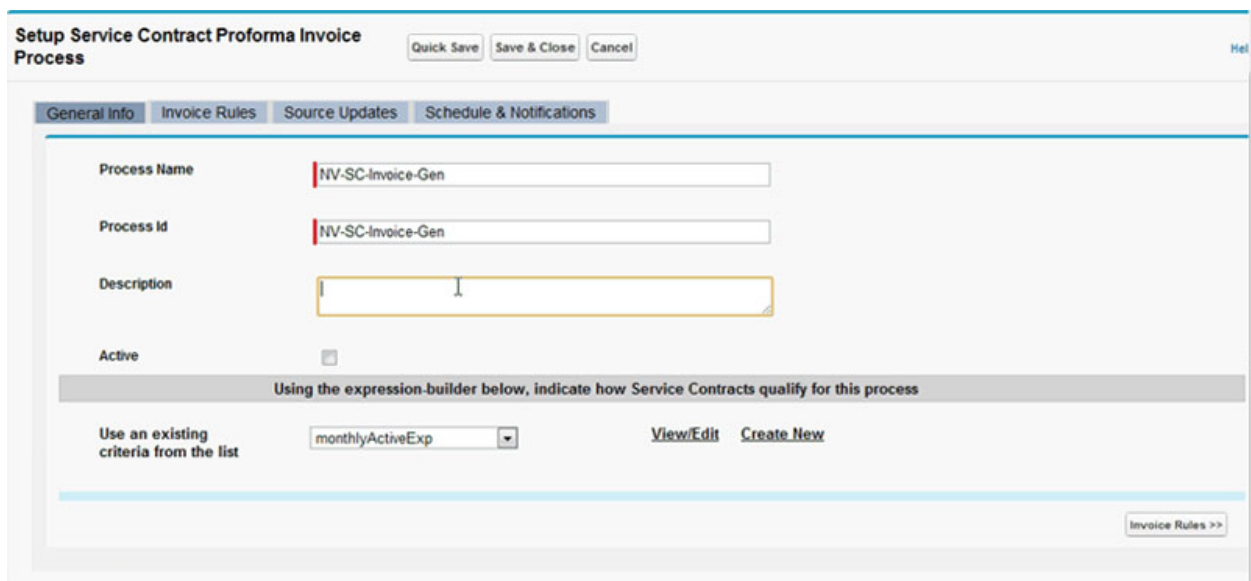


Figure 2: Setup Service Contract Proforma Invoice Process

2. In the General Info Tab:
 - a. Enter the **Process Name**.
 - b. Enter the **Process ID**.
 - c. Enter the **Description**.
 - d. Check the **Active** checkbox to make the process active.



Note: If you do not check the **Active** checkbox, the process will not be activated. Therefore, when the end user clicks the **Generate Invoice** button in the SFW, an error message displays indicating that the Proforma Invoice Process is inactive.

3. If necessary, use the expression builder to indicate how the Service Contracts qualify for the process. See figure below. Select one of the following options:
 - a. Select existing criteria from the picklist.
 - i. Click the **View/Edit** link to view or edit the existing criteria.
 - ii. Make any necessary changes.
 - b. Click the **Create New** link to create new criteria for the process.

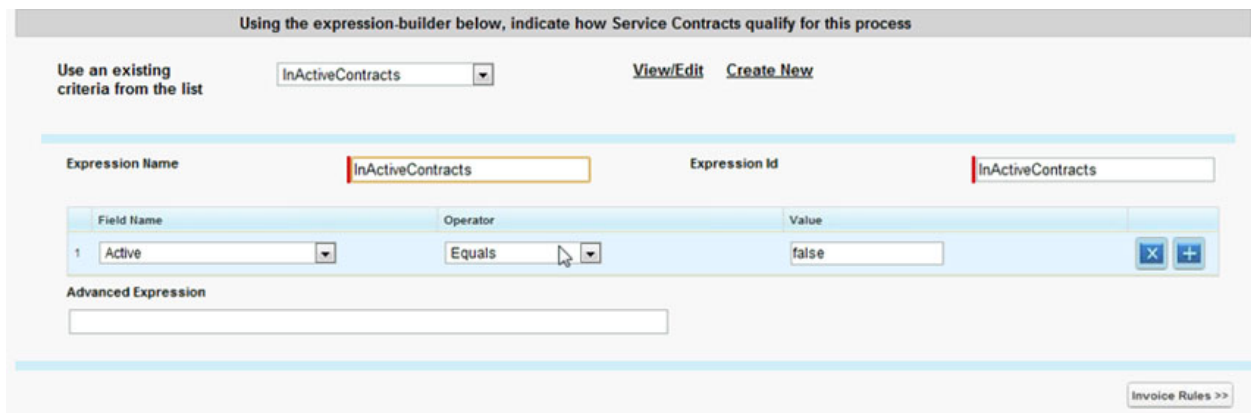
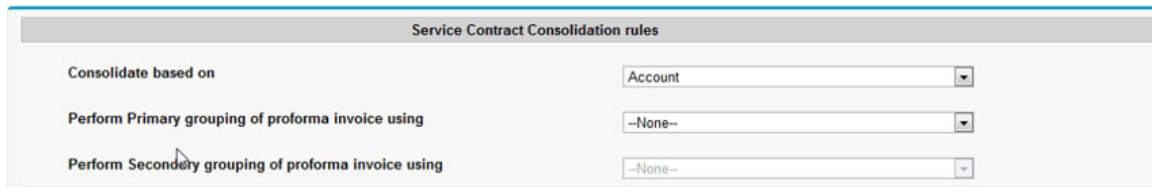


Figure 3: Service Contract Expression Builder

4. Click the **Invoice Rules** tab.
5. In the Invoice Rules tab in the **Service Contracts Consolidation rules** area, define the following Service Contracts Consolidation Rules by making a selection from the following picklists (see figure below):
 - a. Determine what the consolidation is based on (for example, Service Maintenance/Contract, Account).
 - b. Determine what to use for the primary grouping of proforma invoice.

- c. Determine what to use for the secondary grouping of proforma invoice.

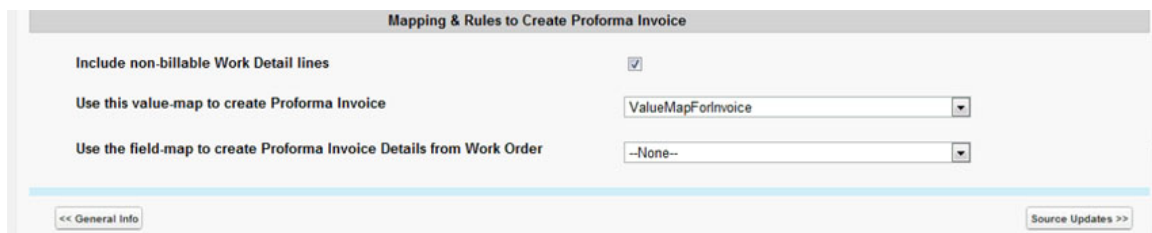


The screenshot shows the 'Service Contract Consolidation rules' window. It contains three rows of settings:

Consolidate based on	Account
Perform Primary grouping of proforma invoice using	--None--
Perform Secondary grouping of proforma invoice using	--None--

Figure 4: Service Contract Consolidation Rules

6. In the **Mapping & Rules to Create Proforma Invoice** area:
 - a. If applicable, check the **non-billable Service Contracts lines** checkbox.
 - b. Select an option from the **Use this value-map to create Proforma Invoice** picklist.
 - c. Select an option from the **Use the field-map to create Proforma Invoice Details from Service Contract** picklist.



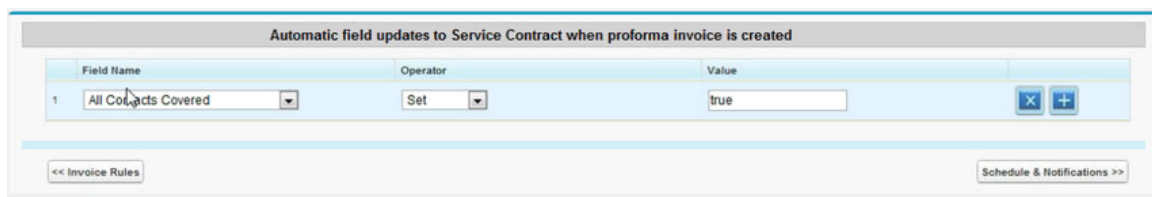
The screenshot shows the 'Mapping & Rules to Create Proforma Invoice' window. It contains three rows of settings:

Include non-billable Work Detail lines	Use this value-map to create Proforma Invoice	Use the field-map to create Proforma Invoice Details from Work Order
<input checked="" type="checkbox"/>	ValueMapForInvoice	--None--

At the bottom, there are two buttons: '<< General Info' and 'Source Updates >>'.

Figure 5: Mapping & Rules to Create Proforma Invoice

7. Click the **Source Updates** tab.
8. In the Automatic field updates to Service Contract when proforma invoice is created area:
 - a. Select the field name in the **Field Name** picklist.
 - b. Select an operator from the **Operator** picklist.
 - c. Enter a value in the **Value** text box.
 - d. Click the **+/-** buttons to add or delete rows.



The screenshot shows the 'Automatic field updates to Service Contract when proforma invoice is created' window. It contains a table with one row:

Field Name	Operator	Value
1 All Contracts Covered	Set	true

At the bottom, there are two buttons: '<< Invoice Rules' and 'Schedule & Notifications >>'.

Figure 6: Automatic field updates

9. Click the **Schedule & Notification** tab (see figure below).
10. In the **Select the times and days to run this process** area:
 - a. Select the time in the **Run At (GMT)** picklist.
 - b. Select the day in the **On These Days** picklist.
 - c. In the **Available** panel, select an available day and using the appropriate arrow, move the day to the **Select** panel. (Use the arrows to move the days from left and right between the **Available** and **Chosen** panels.
 - d. Use the **+/-** buttons to add or delete.
11. In the **Specify recipients of notification and alerts** area:
 - a. Enter the email address for receiving success notifications.
 - b. Enter the email address for receiving error notifications.
 - c. If applicable, check the **Enable Logging** checkbox.

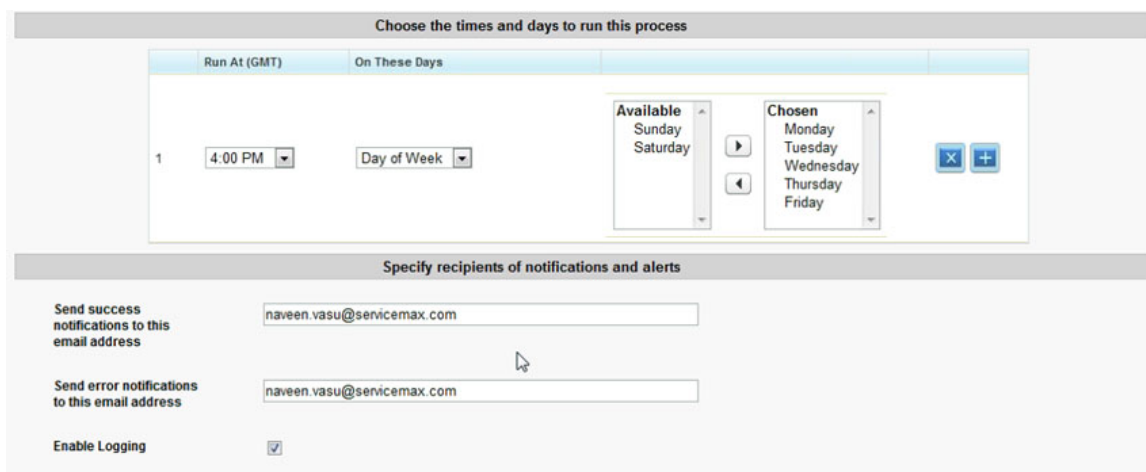


Figure 7: Schedule & Notification Tab

12. Click the **Quick Save** button to save the process and remain in the current tab.
13. Click the **Save & Close** button to save the process and return to the Standard/Custom Service Contract Invoice Process screen.
14. Click the **Cancel** button to cancel the process.

Cloning a Custom Service Contract Proforma Invoice Process

To clone a custom Service Contract proforma invoice process:

1. Select a process to clone, and click the **Clone** button.
2. In the General Info screen, update any of the text boxes.



Note: When cloning a custom service contract Proforma invoice process, you must change the name of the Process ID. The Process ID must be unique.

3. Click the **Invoice Rules** Tab.
4. In the Service Contract Consolidation Rules area, select an option from the **Consolidate based on** picklist.
5. In the Mapping & Rules to Create Proforma Invoice area, update the picklists and/or checkbox if necessary.
6. Click the **Source Update** tab.
7. If necessary, update the **Automatic field updates to Service Contract when proforma invoice is created** area.
8. Click the **Schedule & Notification** tab.
9. Make any changes to the times and days to run the process in the **Run At (GMT)** and **On These Days** areas.
10. If necessary edit the recipients for the notifications and alerts in the **Specify recipients of notification and alerts** area.
11. Click the **Quick Save** button to save the process.
12. Click the **Save & Close** button to save the process and return to the Standard and Custom Service Contract Proforma Invoice Processes screen.
13. Click the **Cancel** button to cancel the process.

Deleting a Custom Service Contract Proforma Invoice Process

To delete a custom Service Contract process:

1. Select a process to delete from the Select Process area.
2. Click the **Delete** button.
3. In the **Message from webpage** dialog box, click **OK** to answer the question Are you sure?

WORK ORDER PROFORMA INVOICE PROCESS

Overview

Use this option to configure proforma invoice processes for Work Orders. You can indicate how Work Orders are consolidated into an invoice, the type of Work Order lines to include, and more. You can also setup the process to run automatically on a schedule.

Access and Permissions

Actions	User Permissions Needed
To view Work Order Proforma Invoice Process:	"Read" on ServiceMax Processes, ServiceMax Config Data, Work Order
To create or edit Work Order Proforma Invoice Process:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data
To delete Work Order Proforma Invoice Process:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Value Map for Proforma Invoice

Work Order	Proforma Invoice
CurrencyIsoCode	CurrencyIsoCode
Account	Account
Account - Billing address	Billing Address

Field Map for Proforma Invoice Detail

Work Order	Proforma Invoice Detail
ID	Work Order

Work Order	Proforma Invoice Detail
CurrencyIsoCode	CurrencyIsoCode
Proforma Invoice Amount	Total Amount

Proforma Invoice Lines

Work Detail	Proforma Invoice Lines
Work Order	Proforma Invoice Detail
ID	Work Order
CurrencyIsoCode	CurrencyIsoCode
Proforma Invoice Amount	Total Amount
Work Order	Proforma Invoice Detail
ID	Work Order
CurrencyIsoCode	CurrencyIsoCode
Proforma Invoice Amount	Total Amount
Work Order	Proforma Invoice Detail
ID	Work Order
CurrencyIsoCode	CurrencyIsoCode
Proforma Invoice Amount	Total Amount
Work Order	Proforma Invoice Detail
ID	Work Order

Work Order Proforma Invoice Processes Screen

Click **Home > ServiceMax Setup > Service Contracts > Work Order Billing Process** to use this option to configure proforma invoice processes for Work Orders. You can indicate how service contracts are consolidated into an invoice, the type of Work Order lines to include and more. You can also setup the process to run automatically on a schedule.



Note: Scheduler has limitations when creating invoices (from Work Order-/Service Contract) for dates between the 28th to the 1st of a month.

The steps to create Work Order billing invoice processes in this section represent the BatchpProcess. For the Work Order Interactive billing process, select **Generate Invoice** from the SFW tool bar. For more information about the Interactive billing process, see the **Creating/Editing Wizards** section in the [Advanced Configuration: SFM Wizard Designer](#).

Standard Work Order Proforma Invoice Processes

ViewCloneBack To Setup Home

Help ?

Select	Process Id	Process Name	Description	Active	Last Modified By	Last Modified Date
<input type="checkbox"/>	PINV001_Work_Order	Sample Work Order Proforma Invoice Process	This process generates one proforma invoice for each closed work order.	<input type="checkbox"/>	Bala	7/27/2012 1:03 PM

Custom Work Order Proforma Invoice Processes

NewEditCloneDelete

Help ?

Select	Process Id	Process Name	Description	Active	Last Modified By	Last Modified Date
<input type="checkbox"/>	MonthlySchedule_GrpByAcc	MonthlySchedule_GrpByAcc		<input type="checkbox"/>	vasu	7/11/2012 5:13 PM
<input type="checkbox"/>	NV-WO-Invoice-Gen	NV-WO-Invoice-Gen		<input checked="" type="checkbox"/>	vasu	8/7/2012 5:19 PM
<input type="checkbox"/>	NV-WO-Invoice-Gen00001	NV-WO-Invoice-Gen00001		<input type="checkbox"/>	vasu	7/12/2012 11:00 AM
<input type="checkbox"/>	PINV001_Work_Order	Sample Work Order Proforma Invoice Process	This process generates one proforma invoice for each closed work order.	<input type="checkbox"/>	Naveen	7/25/2012 2:32 PM

Figure 1: Standard/Custom Work Order Performa Invoice

In the standard Work Order Proforma Invoice Processes screen:

- To view a standard Work Order Proforma invoice process, select a process and click the **View** button.
- To clone a standard Work Order process, select a process and click the **Clone** button. Edit the available fields, text boxes, and picklists in the Setup Work Order Proforma Process screen.
- To return to the Setup Home page, click the **Back To Setup Home** button.

In the custom Work Order Proforma Invoices processes screen:

Click the **New** button to create a new custom Proforma invoice process. Click the **Edit** button to edit a Proforma Invoice Process. Click the **Clone** button to clone a Proforma Invoice Process. Click the **Delete** button to delete a Proforma Invoice Process.

Creating/Editing a Custom Work Order Proforma Invoice Process

To create a custom service contract Proforma invoice process:

1. Click the **New** button in the Custom Work Order Proforma Invoice Processes screen, or select a process and click the **Edit** button to edit an existing process. See figure below.

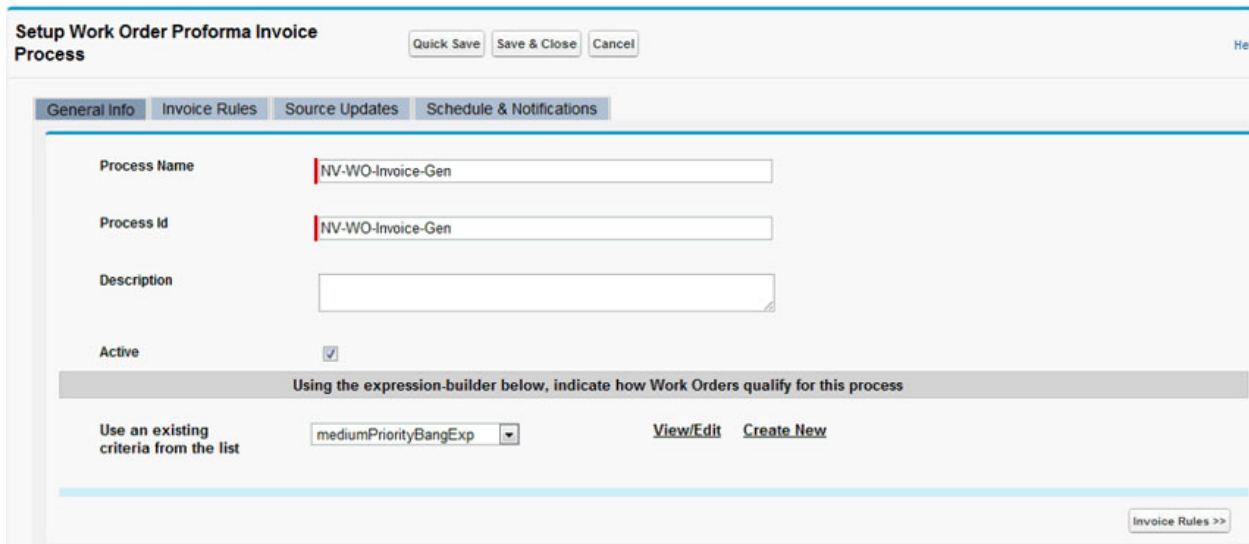


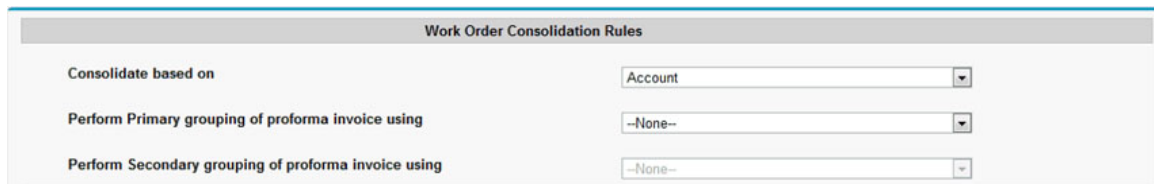
Figure 2: Setup Work Order Proforma Invoice Process

2. In the General Info Tab:
 - a. Enter the **Process Name**.
 - b. Enter the **Process ID**.
 - c. Enter the **Description**.
 - d. Check the **Active** checkbox to make the process active.



Note: If you do not check the **Active** checkbox, the process will not be activated. Therefore, when the end user clicks the **Generate Invoice** button in the SFW, an error message displays indicating that the Proforma Invoice Process is inactive.

3. If necessary, use the expression builder to indicate how Work Orders qualify for the process. See figure above. Select one of the following options:
 - a. Select existing criteria from the picklist.
 - b. If applicable, click the **View/Edit** link to view or edit the existing criteria. Make any necessary changes.
 - c. If applicable, click the **Create New** link to create new criteria for the process.
4. Click the **Invoice Rules** tab.
5. In the **Work Order Consolidation Rules** area (see figure below):
 - a. Determine what the consolidation is based on (for example, Work Order, Account).
 - b. Determine what to use for the primary grouping of proforma invoice.
 - c. Determine what to use for the secondary grouping of proforma invoice.

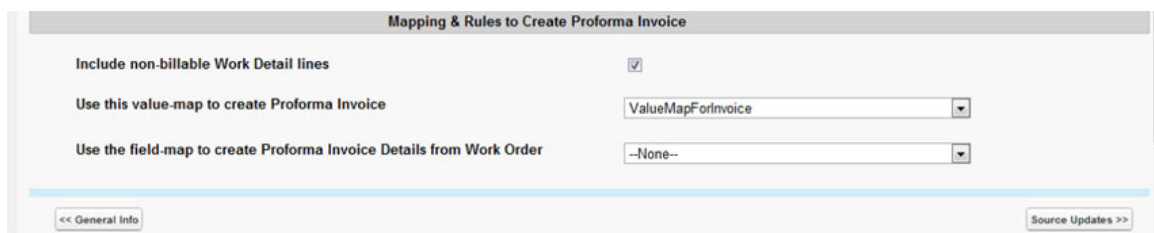


The screenshot shows a configuration window titled "Work Order Consolidation Rules". It contains three rows of settings, each with a label and a dropdown menu:

Work Order Consolidation Rules	
Consolidate based on	Account
Perform Primary grouping of proforma invoice using	--None--
Perform Secondary grouping of proforma invoice using	--None--

Figure 3: Work Order Consolidation Rules area

6. In the **Mapping & Rules to Create Proforma Invoice** area (see figure below):
 - a. Check the **Include non-billable Work Detail lines** checkbox.
 - b. Select a value map from the **Use this value-map to create Proforma Invoice** picklist.
 - c. Select a field map from the **Use the field-map to create Proforma Invoice Details from Work Order** picklist.



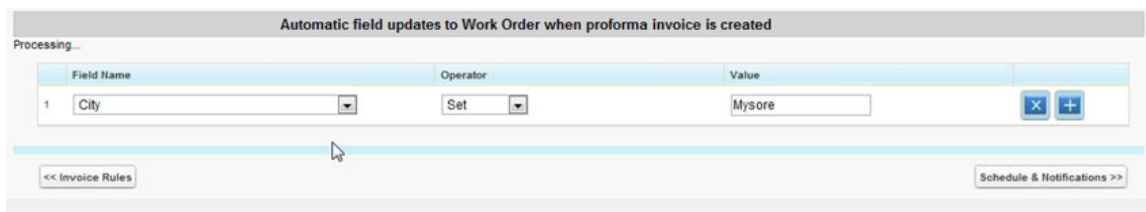
The screenshot shows a configuration window titled "Mapping & Rules to Create Proforma Invoice". It contains three rows of settings:

- Include non-billable Work Detail lines:** A checkbox that is checked.
- Use this value-map to create Proforma Invoice:** A dropdown menu with "ValueMapForInvoice" selected.
- Use the field-map to create Proforma Invoice Details from Work Order:** A dropdown menu with "--None--" selected.

At the bottom of the window, there are two buttons: "<< General Info" on the left and "Source Updates >>" on the right.

Figure 4: Mapping & Rules to Create Proforma Invoice

7. Click the **Source Updates** tab (see figure below).
8. In the **Automatic field updates to Work Order when proforma invoice is created** area:
 - a. Select the field name in the **Field Name** picklist.
 - b. Select an operator from the **Operator** picklist.
 - c. Select a value in the **Value** text box.
 - d. Click the **+/-** buttons to add or delete rows.



	Field Name	Operator	Value	
1	City	Set	Mysore	X +

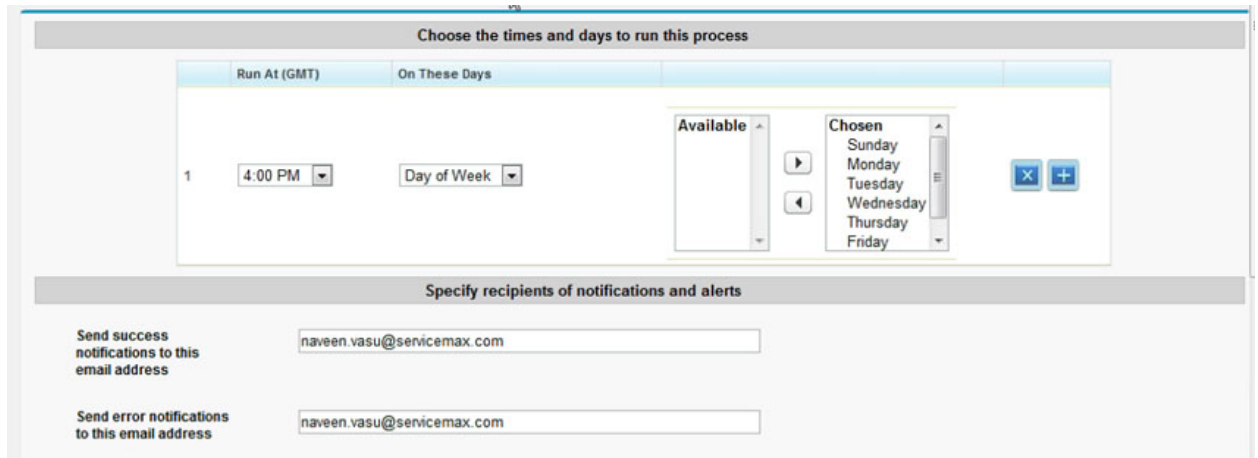
<< Invoice Rules

Schedule & Notifications >>

Figure 5: Automatic Field Updates to Work Order

9. Click the **Schedule & Notification** tab (see figure below).
10. In the **Select the times and days to run this process** area:
 - a. Select the time in the **Run At (GMT)** picklist.
 - b. Select the day in the **On These Days** picklist.
 - c. In the Available panel, select an available day and using the appropriate arrow, move the day to the **Select** panel. (Use the arrows to move the days from left and right between the **Available** and **Chosen** panels.
 - d. Use the **+/-** buttons to add or delete
11. In the **Specify recipients of notification and alerts** area:
 - a. Enter the email address for receiving success notifications.
 - b. Enter the email address for receiving error notifications.

- c. If applicable, check the **Enable Logging** checkbox.



The screenshot shows the 'Schedule & Notification' tab. The top section, 'Choose the times and days to run this process', has two tabs: 'Run At (GMT)' and 'On These Days'. Under 'Run At (GMT)', there is a dropdown for 'Run At (GMT)' set to '4:00 PM' and a 'Day of Week' dropdown. To the right, there are two lists: 'Available' (empty) and 'Chosen' (containing Sunday, Monday, Tuesday, Wednesday, Thursday, Friday). Below these lists are 'X' and '+' buttons. The bottom section, 'Specify recipients of notifications and alerts', has two rows. The first row is 'Send success notifications to this email address' with the value 'naveen.vasu@servicemax.com'. The second row is 'Send error notifications to this email address' with the same value.

Figure 6: Schedule & Notification Tab

Cloning a Custom Work Order Proforma Invoice Process

To clone a custom Work Order proforma invoice process:

1. Select a process to clone, and click the **Clone** button.
2. In the General Info screen, update any of the text boxes.



Note: When cloning a custom Work Order Proforma invoice process, you must change the name of the Process ID. The Process ID must be unique.

3. Click the **Invoice Rules** Tab.
4. In the **Work Order Consolidation Rules** area, select an option from the **Consolidate based on** picklist.
5. In the **Mapping & Rules to Create Proforma Invoice** area, update the picklists and/or checkbox if necessary.
6. Click the **Source Update** tab.
7. If necessary, update the Automatic field updates to Work Order when proforma invoice is created area.
8. Click the **Schedule & Notification** tab.

9. Make any changes to the times and days to run the process in the **Run At (GMT)** and **On These Days** areas.
10. If necessary edit the recipients for the notifications and alerts in the **Specify recipients of notification and alerts** area.
11. Click the **Quick Save** button to save the process.
12. Click the **Save & Close** button to save the process and return to the Standard and Custom Work Order Proforma Invoice Processes screen.
13. Click the **Cancel** button to cancel the process.

Deleting a Custom Work Order Proforma Invoice Process

To delete a custom Work Order process:

1. Select a process to delete from the Select Process area.
2. Click the **Delete** button.
3. In the **Message from webpage** dialog box, click **OK** to answer the question Are you sure?

DISPATCH OPTIMIZATION USING OPTIMAX

Overview

OptiMax is the collection of various functions and features in ServiceMax that delivers optimized dispatch of Work Orders to technicians. OptiMax provides the ability to configure various factors influencing dispatch and also the scope of impact each factor has on the dispatch results. With the scalable architecture and the light footprint of OptiMax, service organizations of all sizes can effectively implement OptiMax to reduce operational costs, increase margins and enhance productivity levels.

OptiMax Architecture

The picture below depicts the high-level functional architecture of OptiMax.

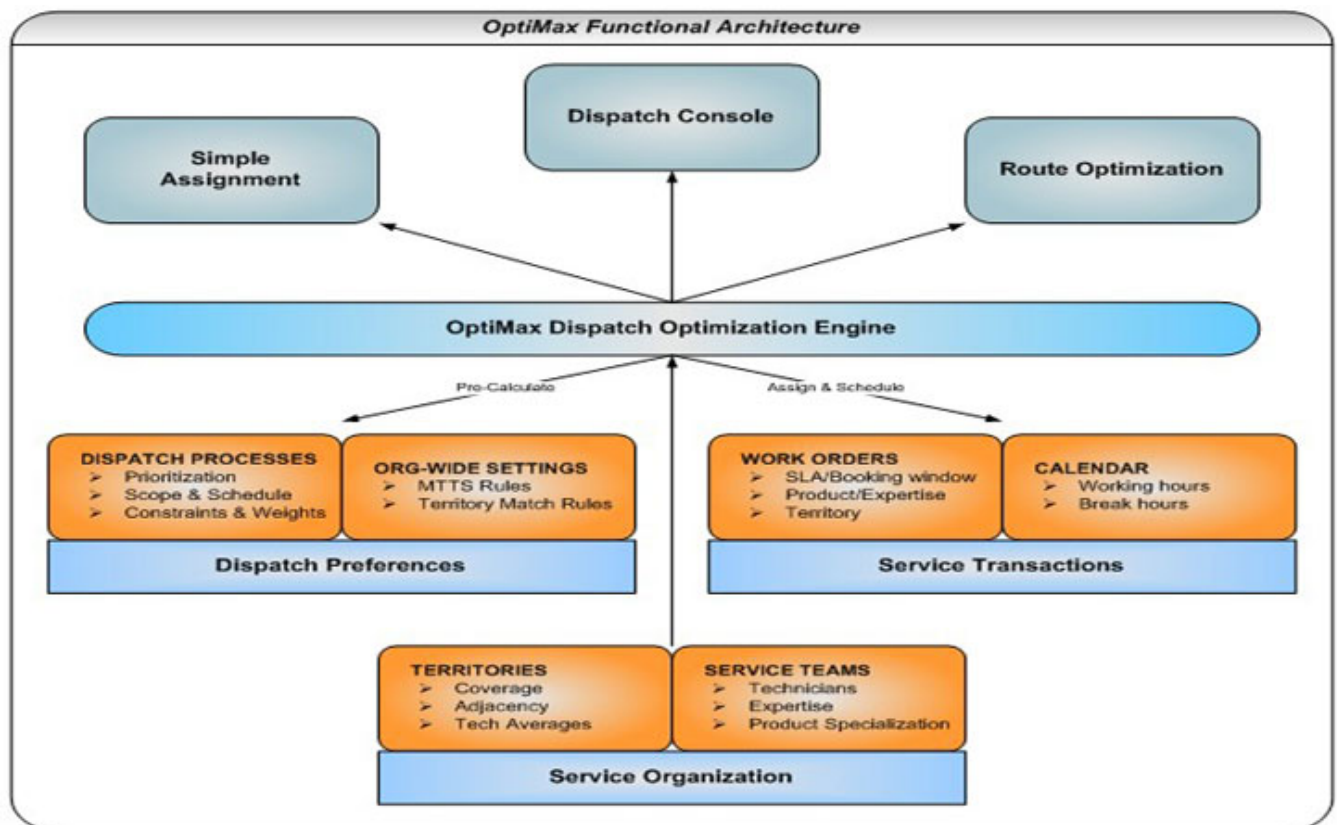


Figure 1: OptiMax – Architecture

Highlights of the above architecture are:

- OptiMax consists of various tools to cater to varying degrees of sophistication needed in dispatch management. The capabilities include:
 - A rules-based assignment engine for direct and immediate assignment of Work Orders to technicians, queues or dispatches.
 - A rich, intuitive and interactive dispatch console to queue, assign or schedule Work Orders to teams or technicians.
 - An advanced optimization engine that delivers automatic scheduling of Work Orders to technicians considering various constraints and preferences.
- Depending upon their readiness and suitability, organizations can deploy any combination of the above tools to meet their dispatching requirements. For example, an organization can select to use simple assignment rules for Work Orders in North America, a combination of simple assignment and interactive dispatch for Work Orders in Europe, and advanced optimization for Work Orders in Australia.
- The most fundamental setup required for OptiMax is a thorough and accurate definition of your service organization. Specifically, the service organization must be represented as service territories and service teams. Dispatch process definition relies upon completeness of service organization setup.

OptiMax Process Flow

OptiMax processes Work Orders in two stages:

1. [Immediate Actions](#)
2. [Batch Actions](#)

Stage 1: Immediate Actions

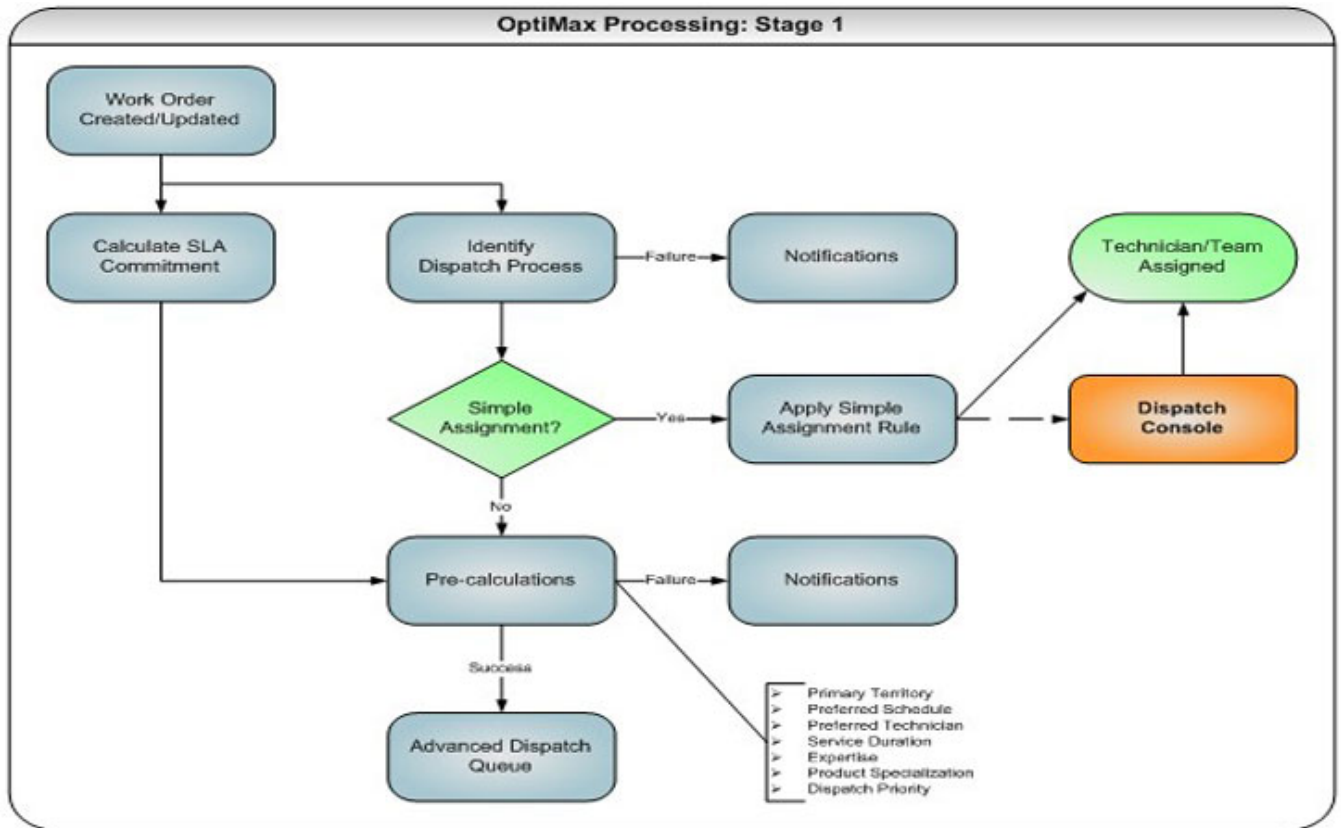


Figure 2: OptiMax Processing – Stage 1

In Stage 1, when a Work Order is created or updated, OptiMax finds the appropriate dispatch process for the Work Order. The dispatch process determines if the Work Order must be dispatched immediately or through the nightly process. If it is configured as simple dispatch, the assignment rules are applied immediately and a suitable recipient is identified. The assignee can be a technician, queue or a dispatcher. If it is configured as an advanced dispatch process, several factors required for dispatch optimization are pre-computed on the Work Order. The factors include:

- Primary territory (using territory match rules)
- Preferred start and end time (using booking window, SLA commitment, access hours or default business hours in that order)
- Preferred technician (configured in Installed Product, service contract or Account in that order)
- Service duration (from MTTS rules)
- Expertise
- Product specialization from Component installed product
- Dispatch priority as defined by the dispatch process

Once all the dispatch factors are calculated successfully, the Work Order is placed in the advanced dispatch queue for the nightly job to pick up.

Stage 2: Batch Actions

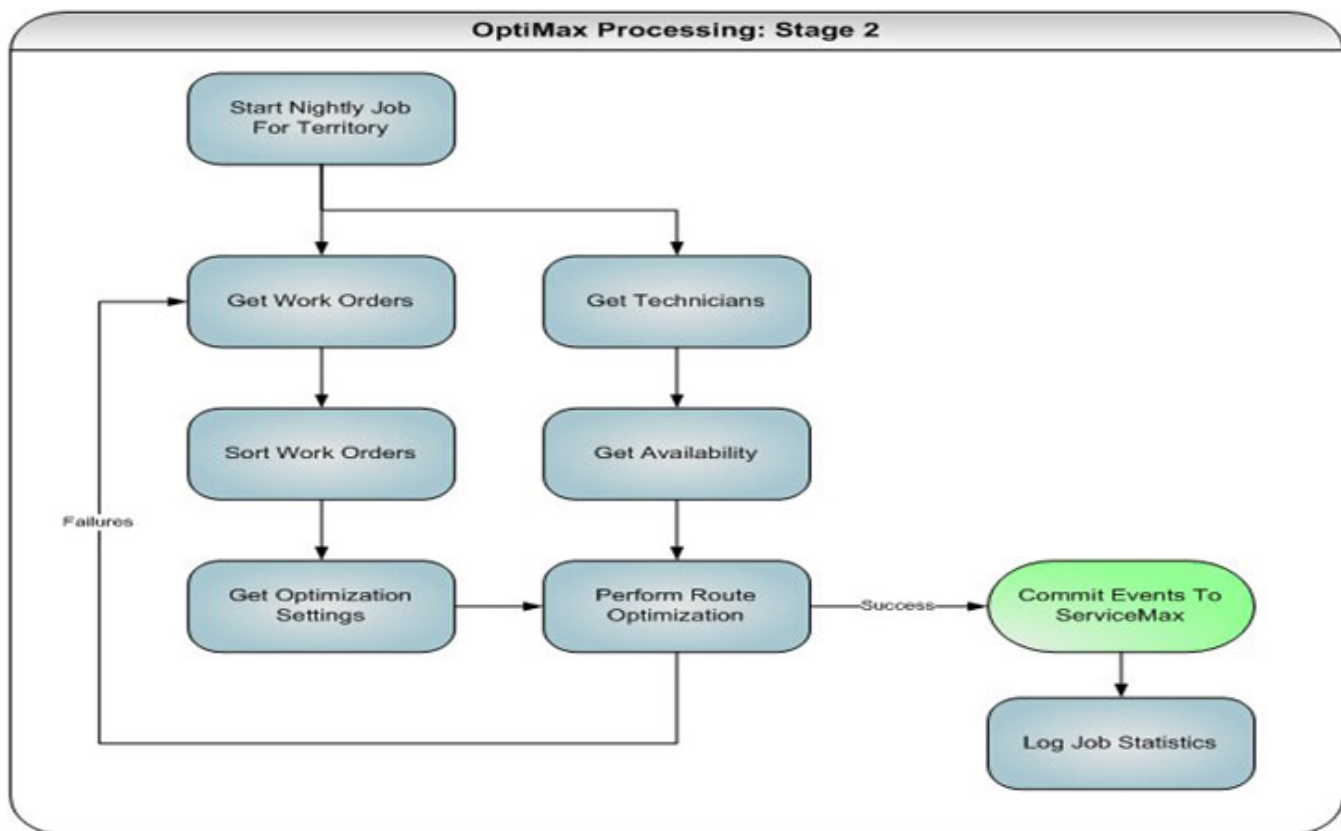


Figure 3: OptiMax Processing – Stage 2

In Stage 2, a batch job wakes up every day at the time designated in the dispatch process. One job runs for each territory in the dispatch process. In each optimization run, the following key steps are involved:

- All unassigned Work Orders are identified. A Work Order can be either new (freshly submitted to the queue) or old (failure from a previous run).
- The preferred time window is set to the next business day for Work Orders that do not have a preferred time window or if the Work Order failed in the previous optimization run.
- Work Order list is sorted as per the prioritization criteria.
- Optimization settings are configured as the territory, technician, dispatch process and organization level are applied.
- Technicians for the given territory and adjacent territories are retrieved.
- Technician availability for the next business day is calculated including break hours.
- A matrix of distances between various Work Orders and technicians is prepared. Currently distance is calculated using the haversine method (aka 'as the crow flies' method). Real-time distance calculations using a mapping service will be implemented in the future.
- Now the process performs several iterations of schedule and route optimization, considering various constraints and preferences (see below to learn more about factors influencing results), and identifies the most suitable route plan for each technician.
- All successful events are saved in ServiceMax. Work Orders are assigned as per the schedule.
- Any failures (unassigned Work Orders) are sent back to the queue for the next nightly run to consider. Currently, the routing of unassigned Work Orders to another dispatch process or to a dispatcher is not supported.

Factors Influencing Optimization Results

Considering the very complex nature of dispatch optimization, several configuration factors as well as quality of transactional data can potentially influence the overall results of optimization. Given below are various factors that could impact the quality of results produced by OptiMax:

Where Configured	Factor	Potential Impact
Global/Org-wide	Distance Type	OptiMax core engine will perform necessary distance conversions between miles and kilometers based on this setting.
	MTTS Rule	The amount of time scheduled for a Work Order on a technician's calendar is calculated based on these rules.
	Territory match rule	This rule influences how the primary territory is calculated for a Work Order. It dictates the mandatory coverage attributes to be used to calculate territory.
Technician	Address	Address with valid geographical codes impacts the accuracy of distance calculations.
	Home Base	Home base with valid geographical codes impacts the accuracy of distance calculations, if configured as Current .
	Working hours & break hours	Availability of the technician on any given day is driven by this.
	Average Speed	Used to identify if the technician will be able to reach a Work Order location on time.
	Max Distance	Limits the distance a technician travels on a route.
	Product specialization	Will result in higher probability of finding the relevant technician for a Work Order.
	Expertise	Will result in higher probability of finding the relevant technician for a Work Order
Territory	Coverage	Proper and complete definition helps in identifying the primary territory of a Work Order without iterations.
	Average Speed	Territory-wide average speed applied if not setup for a technicians.
	Max Distance	Territory-wide maximum distance applied if not setup for a technician.
Account	Access hours	Impacts the preferred scheduling window of a Work Order if not defined at the installed product level.
	Preferred technician	Increases the relative ranking for a technician.

Where Configured	Factor	Potential Impact
Installed Product	Access hours	Impacts the preferred scheduling window of a Work Order.
	Preferred technician	Increases the relative ranking for a technician.
Service Contract	Preferred Technician	Increases the relative ranking for a technician.
Work Order	Service Location	Location with valid geographical codes impacts the accuracy of distance calculations.
	Booking Window	If available, impacts the preferred scheduling window of the Work Order.
	SLA commitment	If available, impacts the preferred scheduling window of the Work Order.
	Product	Increases the probability of finding a suitable technician for the Work Order.
	Skill	Increases the probability of finding a suitable technician for the Work Order.

Where Configured	Factor	Potential Impact
Dispatch process	Entry criteria	Highly granular definition of entry criteria ensures that there are no conflicts between processes, and that the Work Order is picked up by the right process.
	Prioritization Rule	Determines the Work Order's relative priority in a given batch of Work Orders. Proper definition will ensure that critical and high priority Work Orders are considered first with high resource availability.
	Time Window Weight	Has the highest importance. If specified, it ensures the Work Order is scheduled within the given time window.
	Total Distance Weight	Has the second highest importance. If this factor is specified, the optimization engine will compare various 'route plans' and select the plan whose total distance (of all technicians combined) is a relative minimum.
	Route Distance Weight	Has the third highest importance. If this factor is specified, the route distance for each technician is kept within the specified limits.
	Route Time Weight	Has the fourth highest importance. If this factor is specified, the route time for each technician is kept within the specified limits. Idle/break time is not included in this factor.
	Product/Expertise Weight	This is the last in the order of weights. If this factor is specified, Work Orders will be matched to technicians that have the required product specialization or expertise.

See Also:

[Advanced Configuration: Modules](#)

[Advanced Configuration: Submodules](#)

[Advanced Configuration: Display Tags](#)

[Advanced Configuration: Configuration Profile](#)

[Advanced Configuration: Auto-Entitlement Rules](#)

[Advanced Configuration: Counter Rules](#)

[Advanced Configuration: Inventory Process](#)

[Advanced Configuration: Dispatch Process](#)

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SAMPLE INVENTORY PROCESS

Overview

This section demonstrates how to translate requirements for two sample inventory processes into a Salesforce object model and custom inventory processes, and deploy it to end users.

Requirements: Misc Receipts

- Ability to receive and stock parts from suppliers without a source document such as a Parts Request. While most supplier deliveries are handled using parts requests, some parts are delivered ad-hoc or are received on behalf of departments that are not online
- The above receipts are called Miscellaneous Receipts.
- There can be one or more products received in a miscellaneous receipt.
- Some of the products may be serialized.
- Serial numbers must be unique.
- Ability to track the history of all miscellaneous receipt transactions only at the quantity level. History tracking at serial number level is not required.
- Only some users should be allowed to post Miscellaneous receipts.

Requirements: Misc Issues

- Ability to issue parts from a location without a stockable target location and without a source document. This is to manage issuance of parts to departments that are not online
- The above parts are called Miscellaneous Issues.
- There can be one or more products issued in a miscellaneous issue.
- Some of the products may be serialized.
- Serial numbers must be unique.
- Ability to track the history of all miscellaneous issue transactions only at the quantity level. History tracking at serial number level is not required.
- Only some users should be allowed to post Miscellaneous Issues.

Data Model: Misc Receipts

Field Name	Data Type	Description
Field Name	Data Type	Description
Misc Receipt Number	Auto-number	Name field is setup as an auto-number field
Receiving Location	Lookup (Location)	Location where the parts are received
Department	Text (100)	Name of the department on whose behalf the parts are received
Supplier	Lookup (Account)	Name of the supplier who sent the parts
Supplier Reference Number	Text (100)	Reference document number, typically invoice or delivery note from the supplier
Posted To Inventory	Checkbox	Flag indicates if this miscellaneous receipt has been posted to inventory or not

Data Model: Misc Receipt Lines

Field Name	Data Type	Description
Line Number	Auto-number	Name field is setup as an auto-number field
Misc Receipt	Lookup (Misc Receipt)	Reference to miscellaneous receipt. Master-Detail relationship
Product	Lookup (Product)	Name of the product received
Received Quantity	Number (14,4)	Quantity received
Posted To Inventory	Checkbox	Flag indicates if this miscellaneous receipt has been posted to inventory or not

Data Model: Misc Issue

Field Name	Data Type	Description
Misc Issue Number	Auto-number	Name field is setup as an auto-number field
Issued From Location	Lookup (Location)	Location from where the parts are issued
Department	Text (100)	Name of the department to whom the parts are issued
Posted To Inventory	Checkbox	Flag indicates if this miscellaneous receipt has been posted to inventory or not

Data Model: Misc Issue Line

Field Name	Data Type	Description
Line Number	Auto-number	Name field is setup as an auto-number field
Misc Issue	Lookup (Misc. Issue)	Reference to the miscellaneous issue. Master-Detail relationship

Field Name	Data Type	Description
Product	Lookup (Product)	Name of the product issued
Issue Quantity	Number (14,4)	Quantity Issued
Posted To Inventory	Checkbox	Flag indicates that if this miscellaneous issue has been posted to inventory or not

Setup Considerations

- To avoid posting the same transaction more than once, we will maintain a flag to indicate if it has already been posted to inventory.
- Use the flag as entry criteria.
- Update the flag upon successful completion of transaction.

Setup Steps: Misc Receipts

1. Create custom objects **Misc Receipt** and **Misc Receipt Line** as described above. Grant object permissions to profiles that are allowed to use the feature.
2. Create a tab **Misc Receipts**. Give access to this tab to profiles that are allowed to use the feature.
3. Add custom lookup fields in the Stock History object for Misc Receipt and Misc Receipt Line objects.
4. Click **Home > ServiceMax Setup > Modules** and then click **New** in the Custom Modules section.
5. Create a new custom module as shown in the figure below and then click **Save**.



The screenshot shows the 'Custom Modules' interface. At the top, there are buttons for 'New Module', 'Save', 'Delete', and 'List Submodules'. Below these is a table with three columns: 'Module ID', 'Name', and 'Description'. A new module is being added with the following details:

Module ID	Name	Description
<input type="checkbox"/> MISCHINV-MOD	Miscellaneous Inventory	Miscellaneous Inventory Transactions: Includes receipts and issues

Figure 1: Custom Modules Screen

6. Click **Home > ServiceMax Setup > Service Flow Manager > Inventory Process** to view the Manage Inventory Process screen and then click **New** in the Custom

Inventory Process section.

- In the **Process Information** tab, enter the information as shown below:

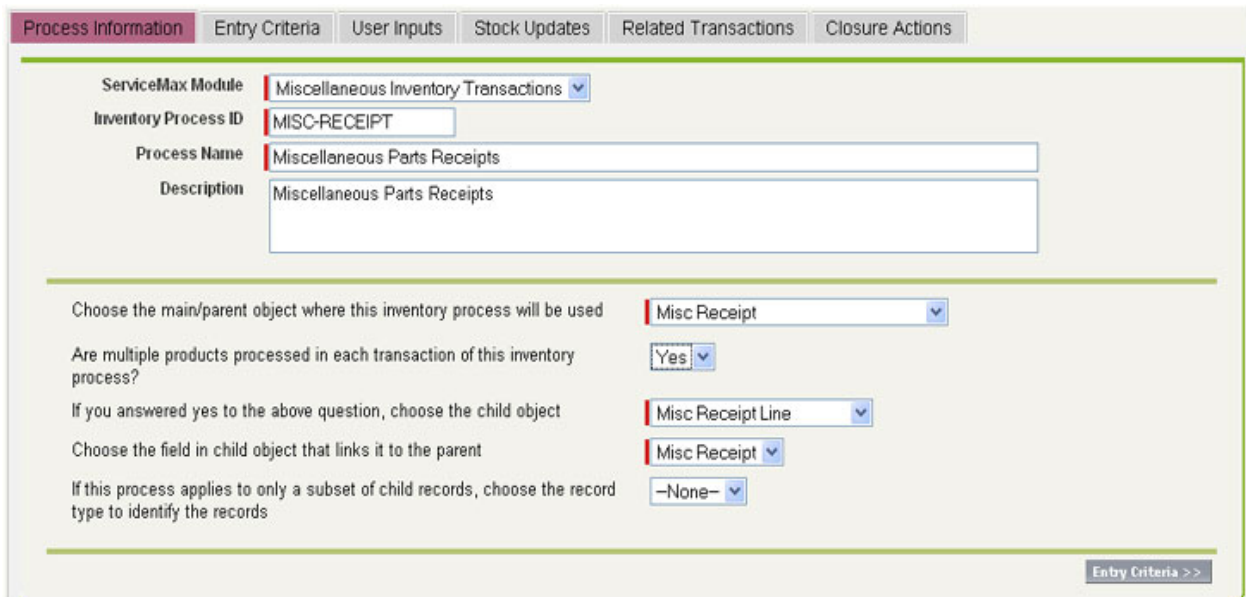


Figure 2: Process Information Tab

- In the **Entry Criteria** tab, enter the information as shown below:

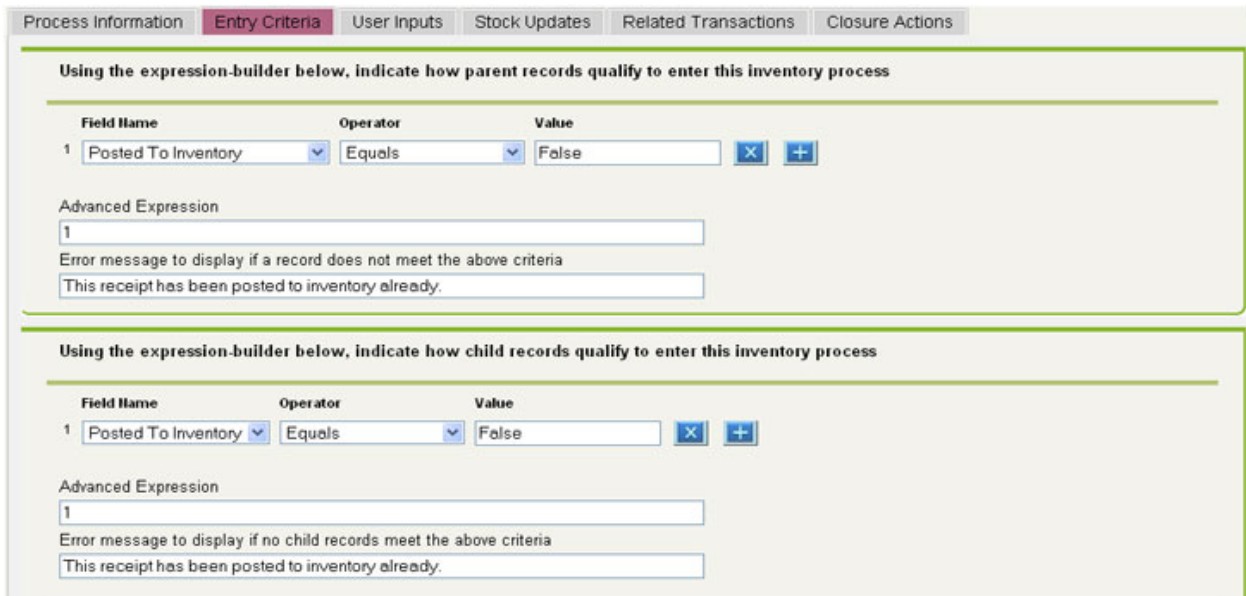
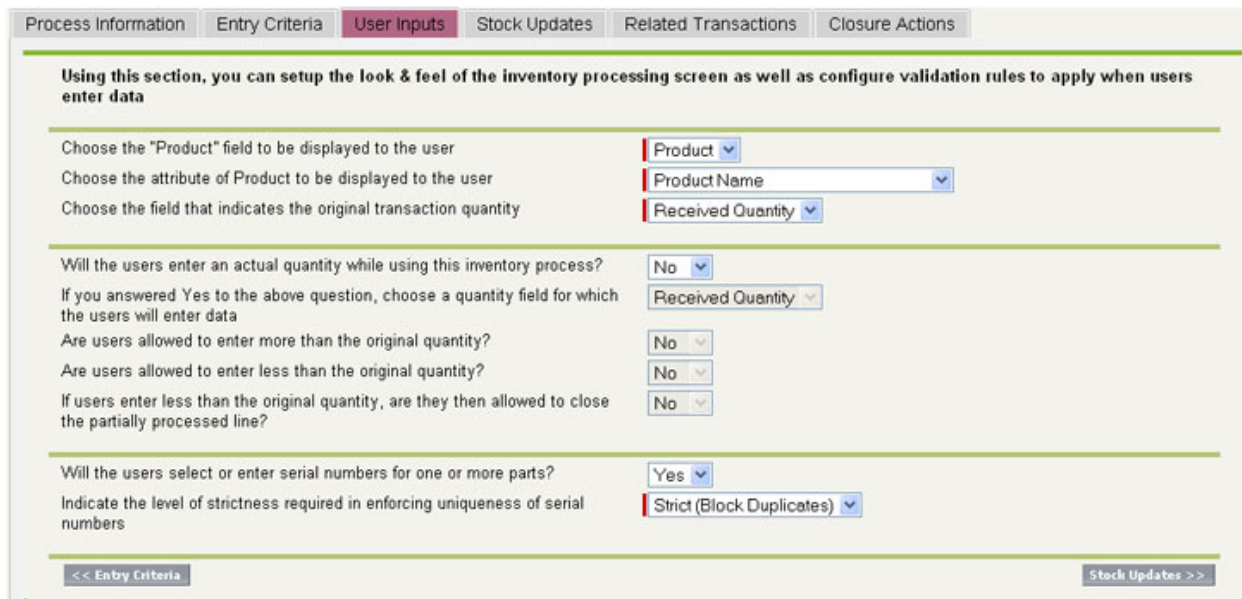


Figure 3: Entry Criteria Tab



Note: No entry criterion is specified for miscellaneous receipt lines. We want to consider all lines as long as the receipt has not been posted to inventory.

9. In the **User Inputs** tab, enter the information as shown below:



The screenshot shows the 'User Inputs' tab of a software interface. At the top, there are tabs: 'Process Information', 'Entry Criteria', 'User Inputs' (selected), 'Stock Updates', 'Related Transactions', and 'Closure Actions'. Below the tabs, a green-bordered box contains the following configuration options:

- Using this section, you can setup the look & feel of the inventory processing screen as well as configure validation rules to apply when users enter data
- Choose the "Product" field to be displayed to the user: **Product** (dropdown)
- Choose the attribute of Product to be displayed to the user: **Product Name** (dropdown)
- Choose the field that indicates the original transaction quantity: **Received Quantity** (dropdown)
- Will the users enter an actual quantity while using this inventory process? **No** (dropdown)
- If you answered Yes to the above question, choose a quantity field for which the users will enter data: **Received Quantity** (dropdown)
- Are users allowed to enter more than the original quantity? **No** (dropdown)
- Are users allowed to enter less than the original quantity? **No** (dropdown)
- If users enter less than the original quantity, are they then allowed to close the partially processed line? **No** (dropdown)
- Will the users select or enter serial numbers for one or more parts? **Yes** (dropdown)
- Indicate the level of strictness required in enforcing uniqueness of serial numbers: **Strict (Block Duplicates)** (dropdown)

At the bottom of the green box, there are two buttons: '<< Entry Criteria' and 'Stock Updates >>'.

Figure 4: User Inputs Tab



Note: Since this is a multi-line transaction, Product is displayed from Misc Receipt Line. Since the Received Quantity is entered when creating the lines, no data entry is required (except serial numbers) when users post the receipts to inventory. We have also selected **Strict** enforcement of uniqueness of serial numbers.

10. In the **Stock Updates** tab, enter the information as shown below:

Process Information Entry Criteria User Inputs **Stock Updates** Related Transactions Closure Actions

Use this section to configure how stock is updated when users click the Save button on inventory processing screen. Stock can be updated in one or two locations in an inventory process

In how many locations does this inventory process update stock?

Is the first location stored in the parent object? If you answer no, all location fields from child object will be displayed.

Choose the first Location field from the parent or child object

Choose the Stock status associated with the first location

Type of stock update required for the first location + status combination

Is the second location stored in the parent object? If you answer no, all location fields from child object will be displayed.

Choose the second Location field from the parent or child object

Choose the Stock status associated with the second location

Type of stock update required for the second location + status combination

Indicate if any non-stockable location is likely to be used in this process. Stock will not be updated for non-stockable locations

If this inventory transaction results in negative stock, specify the email address to which alerts are sent

Do you want negative stock alerts to be sent to the Location owner's email also?

Do you want ServiceMax to maintain history of stock updates from this inventory process?

What level of history tracking is needed for this process?

If you have enabled history tracking, choose the Stock History field linked to Misc Receipt

If you have enabled history tracking, choose the Stock History field linked to Misc Receipt Line

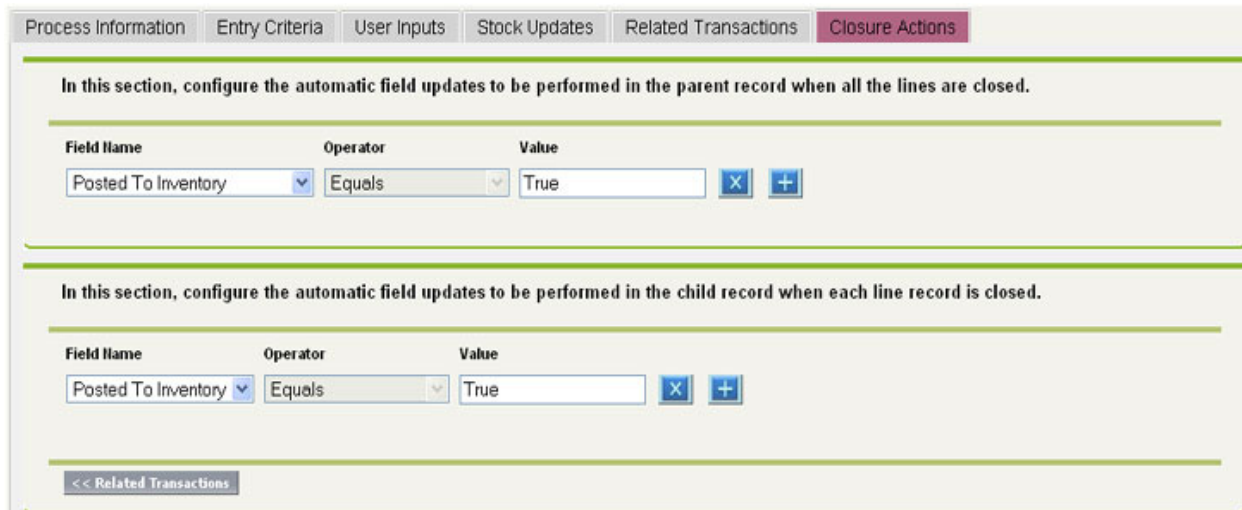
Figure 5: Stock Updates Tab



Note: The expected outcome of miscellaneous receipt is to increase the Available Stock at the Receiving Location. We have also enabled **Stock History** tracking for this process.

11. Since Miscellaneous Receipts is an independent transaction, we will skip the Related Transactions tab.

12. In the **Closure Actions** tab, enter the information as shown below:



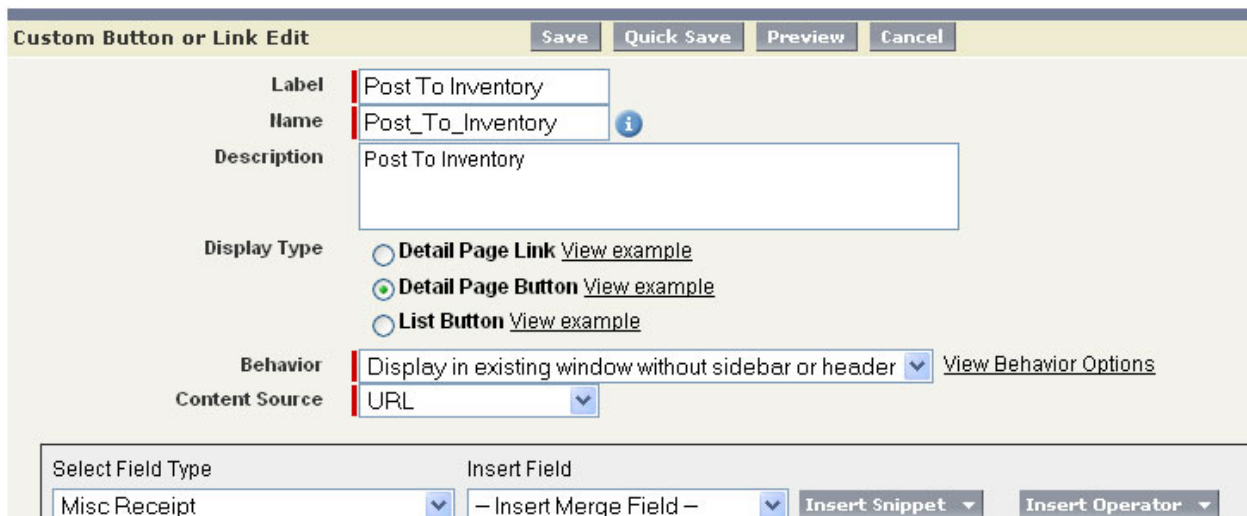
The screenshot shows the 'Closure Actions' tab selected in a software interface. It contains two sections for configuring automatic field updates. The first section is for the parent record, and the second is for the child record. Both sections have a table with columns for Field Name, Operator, and Value. In both sections, 'Posted To Inventory' is selected for the Field Name, 'Equals' for the Operator, and 'True' for the Value. There are also buttons for 'X' and '+' next to the Value field. At the bottom, there is a button labeled '<< Related Transactions'.

Figure 6: Closure Actions Tab



Note: Upon successful completion, we will update the Posted To Inventory flag to true. As a result, the receipt cannot be posted to inventory more than once.

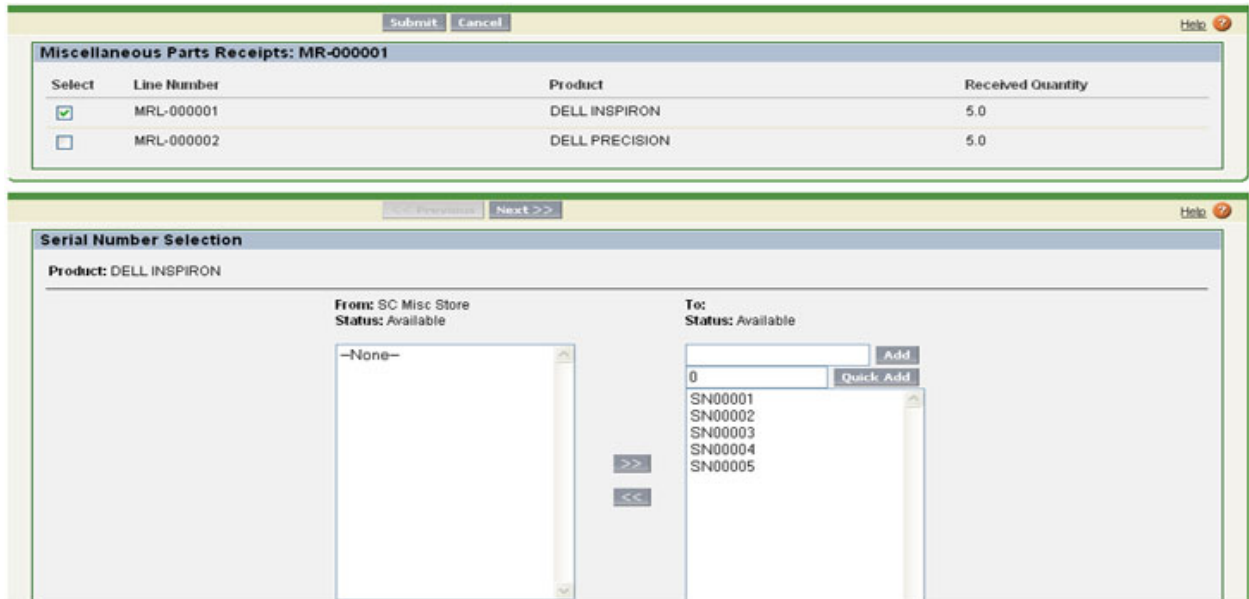
13. Click **Save**.
14. Navigate to Misc. Receipt Object to create a new custom button.
15. Create a button as shown below and then click **Save**.



The screenshot shows the 'Custom Button or Link Edit' screen. It has a top bar with buttons for 'Save', 'Quick Save', 'Preview', and 'Cancel'. The main area contains several fields: 'Label' (Post To Inventory), 'Name' (Post_To_Inventory), 'Description' (Post To Inventory), 'Display Type' (radio buttons for Detail Page Link, Detail Page Button, and List Button), 'Behavior' (a dropdown menu set to 'Display in existing window without sidebar or header'), and 'Content Source' (a dropdown menu set to 'URL'). At the bottom, there is a section for 'Select Field Type' (Misc Receipt) and 'Insert Field' (Insert Merge Field), along with buttons for 'Insert Snippet' and 'Insert Operator'.

Figure 7: Custom Button Screen

16. Edit the page layout named Misc Receipt Layout and add the **Post To Inventory** button to the page layout.
17. After creating a Misc receipt record and adding receipt lines, when users click the **Post To Inventory** button from a Misc Receipt record, the inventory processing screen appears similar to this:



The screenshot displays two windows from the ServiceMax application. The top window, titled "Miscellaneous Parts Receipts: MR-000001", contains a table with the following data:

Select	Line Number	Product	Received Quantity
<input checked="" type="checkbox"/>	MRL-000001	DELL INSPIRON	5.0
<input type="checkbox"/>	MRL-000002	DELL PRECISION	5.0

The bottom window, titled "Serial Number Selection", shows the "Product: DELL INSPIRON". It features two lists for serial number selection:

- From:** SC Misc Store, Status: Available. The list contains "-None-".
- To:** Status: Available. The list contains: 0, SN00001, SN00002, SN00003, SN00004, SN00005.

Navigation buttons include "<< Previous", "Next >>", ">>", and "<<". There are also "Add" and "Quick Add" buttons next to the "To" list.

Figure 8: Inventory Processing Screen

Setup Steps: Misc Issues

1. Create custom objects **Misc Issue** and **Misc Issue Line** as described above. Grant object permissions to profiles that are allowed to use the feature.
2. Create a tab **Misc Issues**. Give access to this tab to profiles that are allowed to use the feature.
3. Add custom lookup fields in Stock History object for Misc Issue and Misc Issue Line objects.
4. Click **Home > ServiceMax Setup > Modules** to view the Manage Modules screen.

- Click **New** in the Custom Modules section. Create a new custom module as shown below and then click **Save**.

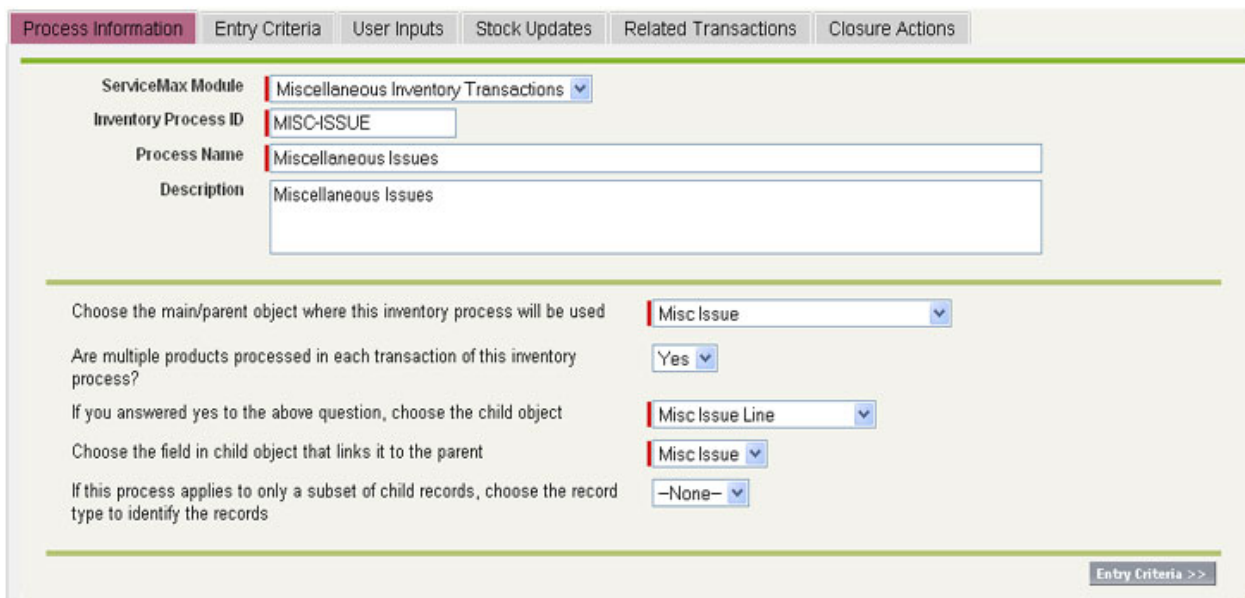


The Custom Modules screen shows a table with the following data:

Module ID	Name	Description
<input type="checkbox"/> MISC-INV-MOD	Miscellaneous Inventory	Miscellaneous Inventory Transactions: Includes receipts and issues

Figure 9: Custom Modules Screen

- Click **Home > ServiceMax Setup Home > Inventory Processes** and then click **New** in the Custom Inventory Processes section.
- In the **Process Information** tab, enter information as shown below:



The Process Information tab shows the following fields and values:

- ServiceMax Module: Miscellaneous Inventory Transactions
- Inventory Process ID: MISC-ISSUE
- Process Name: Miscellaneous Issues
- Description: Miscellaneous Issues

Below the main form, there are several questions and dropdown menus:

- Choose the main/parent object where this inventory process will be used: Misc Issue
- Are multiple products processed in each transaction of this inventory process?: Yes
- If you answered yes to the above question, choose the child object: Misc Issue Line
- Choose the field in child object that links it to the parent: Misc Issue
- If this process applies to only a subset of child records, choose the record type to identify the records: -None-

At the bottom right, there is a button labeled "Entry Criteria >>".

Figure 10: Process Information Tab

8. In the **Entry Criteria** tab, enter the information as shown below:

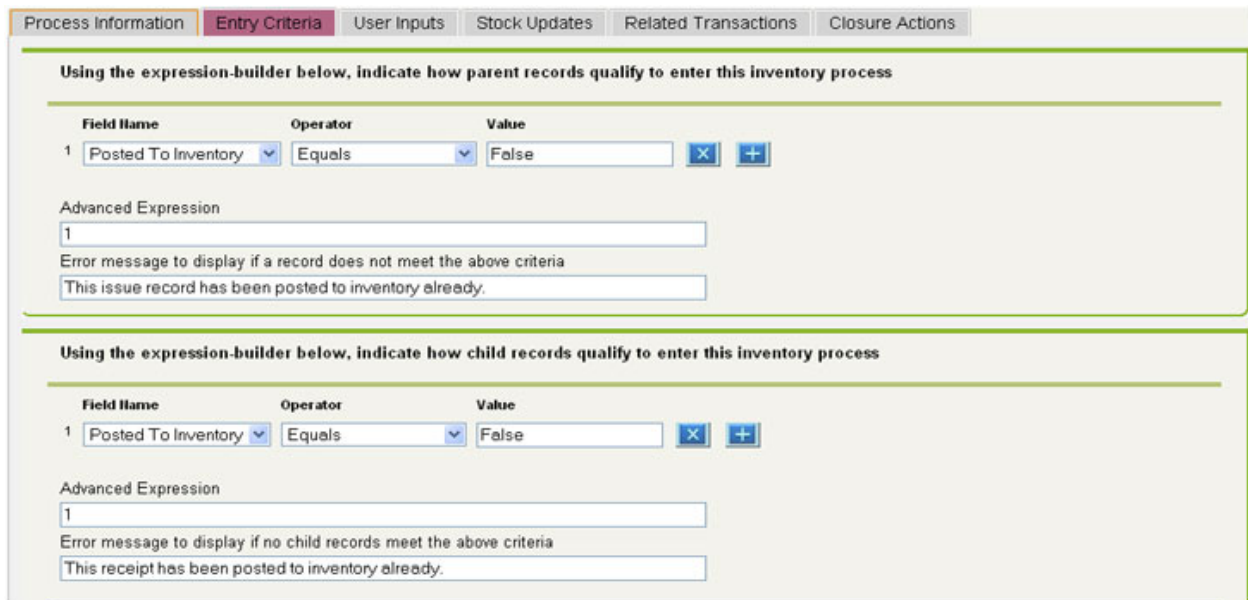


Figure 11: Entry Criteria Tab



Note: No entry criterion is specified for miscellaneous issue lines. We want to consider all lines as long as the issue has not been posted to inventory.

9. In the **User Inputs** tab, enter the information as shown below:

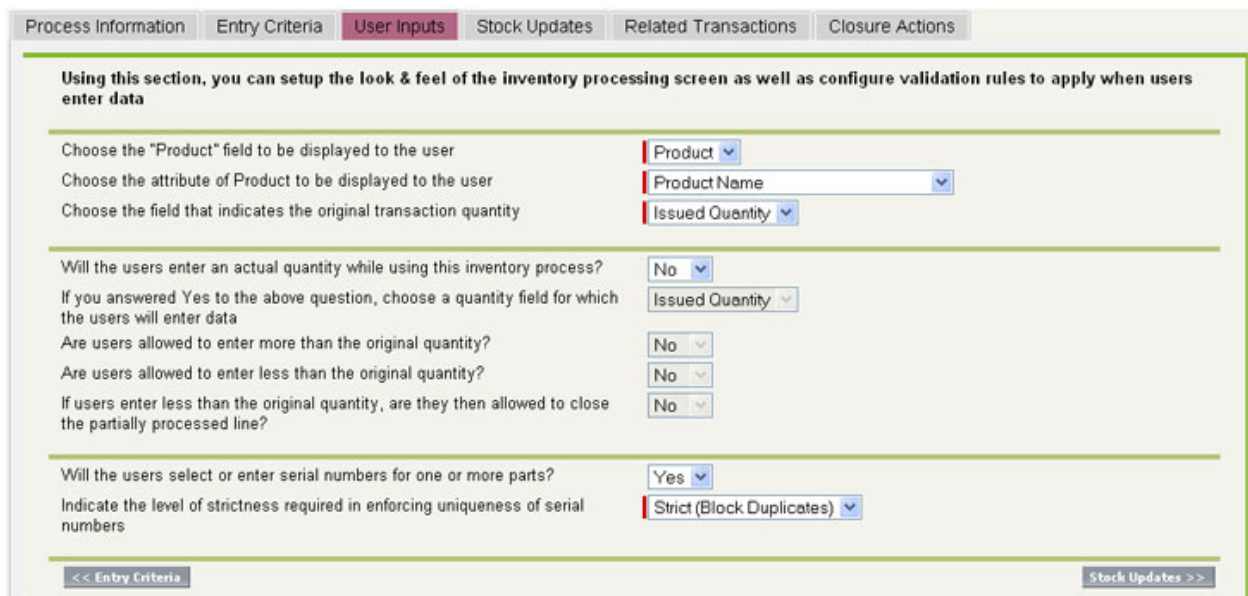


Figure 12: User Inputs Tab



Note: Since this is a multi-line transaction, Product is displayed from Misc Issue Line. Since the Issued Quantity is entered when creating the lines, no data entry is required (except serial numbers) when users post the issues to inventory. We have also selected **Strict** enforcement of uniqueness of serial numbers.

10. In the **Stock Updates** tab, enter the information as shown below:

Process Information	Entry Criteria	User Inputs	Stock Updates	Related Transactions	Closure Actions
<p>Use this section to configure how stock is updated when users click the Save button on inventory processing screen. Stock can be updated in one or two locations in an inventory process</p>					
In how many locations does this inventory process update stock?		Two			
Is the first location stored in the parent object? If you answer no, all location fields from child object will be displayed.		Yes			
Choose the first Location field from the parent or child object		Issued From Location			
Choose the Stock status associated with the first location		Available			
Type of stock update required for the first location + status combination		Decrease			
Is the second location stored in the parent object? If you answer no, all location fields from child object will be displayed.		Yes			
Choose the second Location field from the parent or child object		Issued From Location			
Choose the Stock status associated with the second location		Consumed			
Type of stock update required for the second location + status combination		Increase			
Indicate if any non-stockable location is likely to be used in this process. Stock will not be updated for non-stockable locations		Both Are Always Stockable			
If this inventory transaction results in negative stock, specify the email address to which alerts are sent		hari@servicemax.com			
Do you want negative stock alerts to be sent to the Location owner's email also?		No			
Do you want ServiceMax to maintain history of stock updates from this inventory process?		Yes			
What level of history tracking is needed for this process?		-None-			
If you have enabled history tracking, choose the Stock History field linked to Misc Issue		Misc Issue			
If you have enabled history tracking, choose the Stock History field linked to Misc Issue Line		Misc Issue Line			

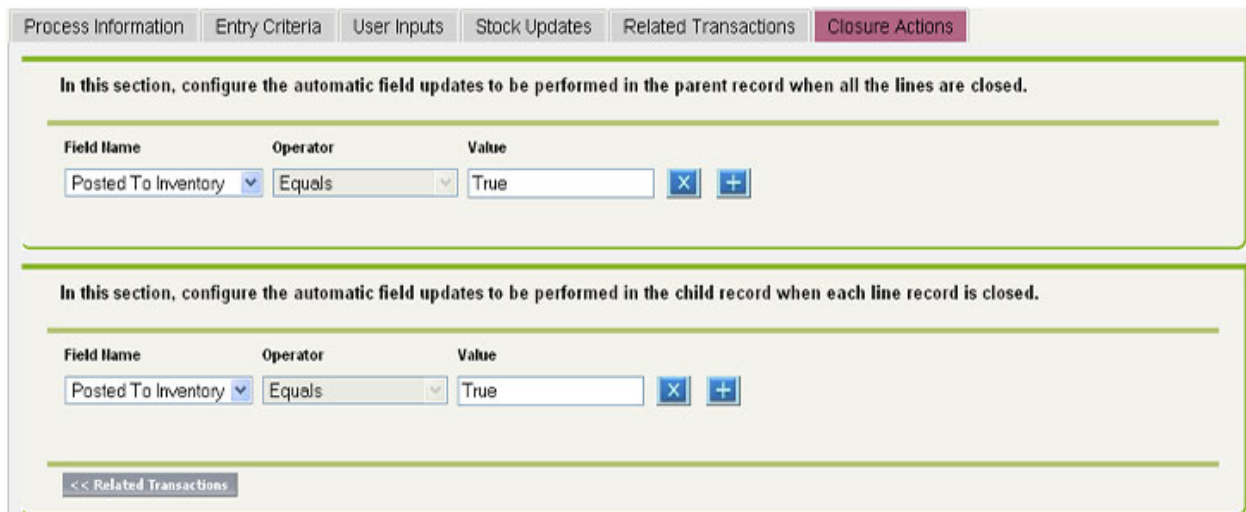
Figure 13: Stock Updates Tab



Note: The expected outcome of miscellaneous issue is to decrease the Available Stock and increase the Consumed stock at the Issuing Location. We have also enabled **Stock History** tracking for this process.

11. Since Miscellaneous Issues is an independent transaction, we will skip the Related Transactions tab.

12. In the **Closure Actions** tab, enter the information as shown below:



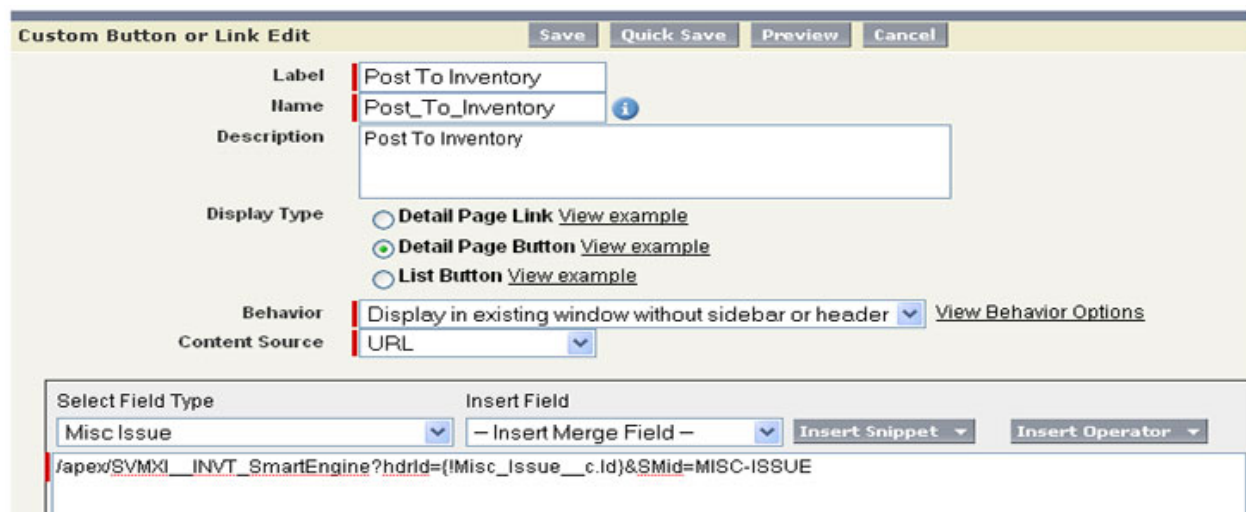
The screenshot shows the 'Closure Actions' tab with two sections for configuring automatic field updates. The first section is for the parent record, and the second is for the child record. Both sections have a table with columns for Field Name, Operator, and Value. In both sections, 'Posted To Inventory' is selected for the Field Name, 'Equals' for the Operator, and 'True' for the Value. There are also buttons for 'X' and '+' next to the Value field. At the bottom, there is a button labeled '<< Related Transactions'.

Figure 14: Closure Actions Tab



Note: Upon successful completion, we will update the Posted To Inventory flag to true. As a result, the issue cannot be posted to inventory more than once.

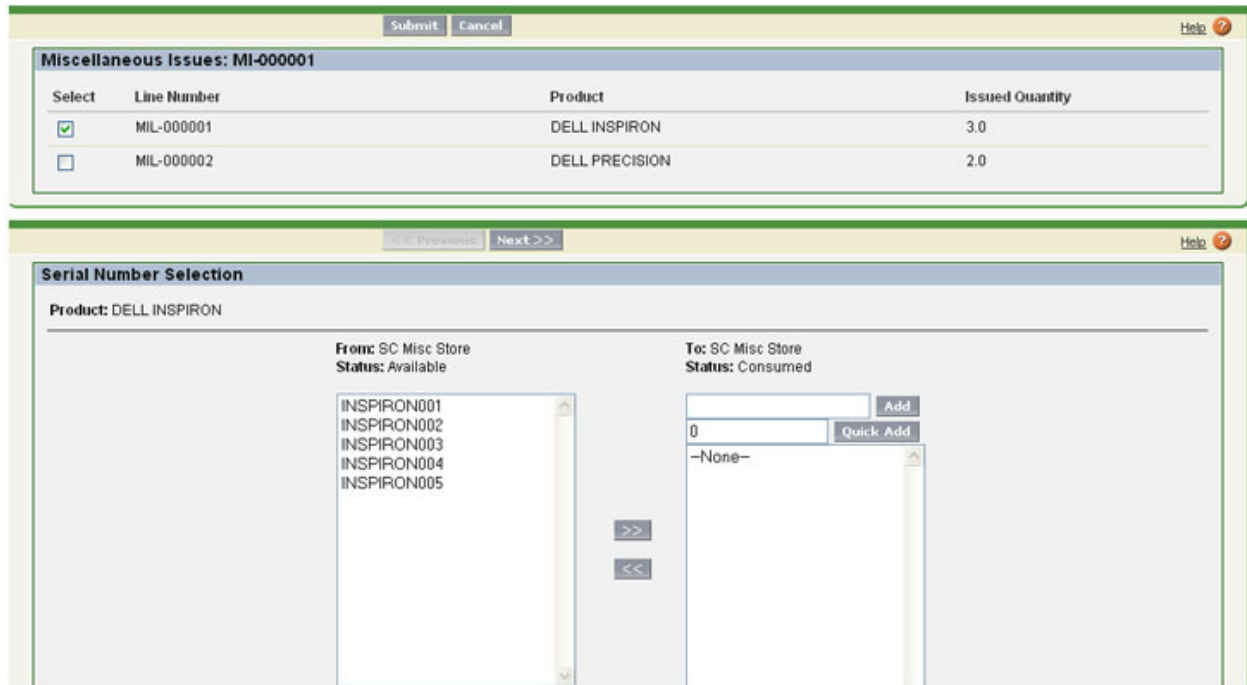
13. Click **Save**.
14. Navigate to Misc Issue object to create a new custom button.
15. Create a custom button as shown below and then click **Save**.



The screenshot shows the 'Custom Button or Link Edit' screen. It has tabs for 'Save', 'Quick Save', 'Preview', and 'Cancel'. The form includes fields for Label, Name, and Description, all set to 'Post To Inventory'. The Display Type is set to 'Detail Page Button' with a 'View example' link. The Behavior is set to 'Display in existing window without sidebar or header' with a 'View Behavior Options' link. The Content Source is set to 'URL'. At the bottom, there is a section for 'Select Field Type' (Misc Issue) and 'Insert Field' (- Insert Merge Field -). Below this, the URL is displayed: /apex/SVMX1__INVT_SmartEngine?hrid={!Misc_Issue__c.Id}&SMid=MISC-ISSUE. There are also buttons for 'Insert Snippet' and 'Insert Operator'.

Figure 15: Custom Button Screen

16. Edit the page layout named **Misc Issue Layout** and add the **Post To Inventory** button to the page layout.
17. After creating a misc issue record and adding issue lines, when users click **Post To Inventory** from a Misc Issue record, the inventory processing screen will appear similar to this:



The screenshot displays two panels from the 'Inventory Processing Screen'.

Top Panel: Miscellaneous Issues: MI-000001

Select	Line Number	Product	Issued Quantity
<input checked="" type="checkbox"/>	MIL-000001	DELL INSPIRON	3.0
<input type="checkbox"/>	MIL-000002	DELL PRECISION	2.0

Bottom Panel: Serial Number Selection

Product: DELL INSPIRON

From: SC Misc Store
Status: Available

- INSPIRON001
- INSPIRON002
- INSPIRON003
- INSPIRON004
- INSPIRON005

>>

<<

To: SC Misc Store
Status: Consumed

Add
Quick Add
 -None-

Figure 16: Inventory Processing Screen

See Also:

[Advanced Configuration: Modules](#)

[Advanced Configuration: Submodules](#)

[Advanced Configuration: Setting](#)

[Advanced Configuration: Display Tags](#)

[Advanced Configuration: Configuration Profile](#)

[Advanced Configuration: Auto-Entitlement Rules](#)

[Advanced Configuration: Counter Rules](#)

[Advanced Configuration: Inventory Process](#)

[Advanced Configuration: Dispatch Process](#)

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APPENDIX A: TROUBLESHOOTING CONFIGURATION ISSUES

Overview

This section outlines some of the typical problems you may encounter while using the ServiceMax Configuration features.

Problem	Solution
I do not see any standard modules or submodules.	You may not have loaded the default configuration data. This process is described in detail in the <i>ServiceMax Installation Guide</i> .
I am trying to create a custom module ID PM for preventive maintenance, but it throws an error.	All custom IDs such as module, submodule, and so on, must be at least 8 characters long. This is enforced to maintain the integrity of the default ServiceMax settings between upgrades.
I created modules, submodules and settings. How do I use them?	See Customizing ServiceMax . It provides guidelines and tools to effectively utilize these constructs in custom functionality.
How do I activate multiple org-wide profiles?	Only one org-wide profile can be active at any time. However, you can have any number of group-wide profiles.
I am unable to remove a setting from a profile.	All settings are automatically linked to all profiles, and cannot be deleted. To alter behavior of a submodule, simply select the appropriate setting value.
I am unable to deactivate an org-wide profile I created.	At least one org-wide profile must be active at any time. To deactivate the currently active org-wide profile, simply activate another profile.
I do not see all the settings in a group-wide profile I created. Why?	Only settings with setting type Group or User are displayed in group-wide profiles. Global settings are displayed in org-wide profiles only.
I get an OptiMax engine error when trying to save a dispatch process.	This could be because the OptiMax user credentials have changed or OptiMax has been disabled for your organization. Please contact ServiceMax support to resolve this.

APPENDIX B: STANDARD SETTINGS

Overview

This section lists all the standard settings for each module in a vanilla installation of ServiceMax.



Note: Modules like Case, Booking Window and their related modules are available for your installation only if allowed by your ServiceMax license. Contact your ServiceMax administrator to know the type of license used by your organization.

Booking Window

Setting Name	Default Value
Default Booking Window Start	TODAY
Default Booking Window Duration	5
Yellow Color Starts From	4
Yellow Color Ends At	15
Maximum Booking Window Duration	10
SLA Timestamp To Use In Booking Window	Onsite Response
Allow Overbooking	False
Use Default Booking Window In Addition To Referenced Booking Windows	False

Dispatch Console

Setting Name	Default Value
Number of days for which events are displayed in calendar	7
Default duration for new events in minutes	60
Initiate search automatically when a Work Order is selected	None
Default tree view (service team or territory)	Team
Default radius on map to find teams or technicians (in Miles)	50
Default dispatch status to be used as a Work Order filter (New, Queued, Assigned, All)	All
Select Work Order automatically if only one Work Order is in a view	True
Change Work Order owner when queued to a team or assigned to a technician	True
Refresh Work Order list when assignment status is changed	False
When Work Order is dropped on calendar, number of minutes to round off the event start time	15
What to do if an event starts outside a technician's working hours	Warn
Whether to retain the lock on a Work Order when it is unassigned	False
Enforce integrity of Work Order start/end times and service duration	True

Setting Name	Default Value
Remove past events on Work Order reassignment	False
Refresh calendar when refreshing work order list	False
Custom fields in Event Edit (1-10)	
Image URL to be used for plotting Work Orders on map	http://maps.google.com/mapfiles/kml/pal4/icon55.png
Image URL to be used for plotting Service Teams on map	http://maps.google.com/mapfiles/kml/pal4/icon53.png
Image URL to be used for plotting Technicians on map	http://maps.google.com/mapfiles/kml/pal2/icon5.png
Auto-Refresh Work Order List on deleting of Work Order Event	True
Auto-Refresh Work Order List on saving of Work Order Event	False
Default event start time for Multi Assign of Work Order	08:00
Allow deploying of settings to other Super Dispatchers	True
Unit of measure for Service Duration and Travel Time	Minutes
Unit of measure to plot Map	Miles
Auto-Refresh Work Order List on deleting of Work Order Event	True
Apply Event Subject Rule for Multi Assign?	False

Dispatch Console Work Order Queues

Scenarios supported for Dispatch Console Work Order Queues:

- Work Order Queue created with Role.
- Work Order Queue created with Public Group and only User associated with Public Group.
- Work Order Queue created with Partner Users.
- Work Order Queue created with Partner Role.

Scenarios **NOT** supported for Dispatch Console Work Order Queues:

- Work Order Queue created Roles and Subordinates.
- Work Order Queue created Role and Internal Subordinates.
- Work Order Queue created Role, Internal and Portal Subordinates.
- Work Order Queue created Public Group and Public Group associated with Role, Role and Subordinate, Partner Users, Portal Roles, Portal Role and Subordinates, and Public Groups.

Entitlement Verification on Case

Setting Name	Default Value
Show Future Entitlements	True
Show Expired Entitlements	True
Default Entitlement Type	Product
Match Account in Entitlement Check	True
Match Contact in Entitlement Check	True
Applicable SLA Coverage Level	Contract
Check Coverage on Parent Product	True
Check Coverage on Top-Level Product	True
Check Coverage on Child Product	True
Check Coverage on Part Number	True
Check Coverage on Product Family	True

Setting Name	Default Value
Check Coverage on Product Line	True
Number of Child Level Iterations	1
Allow Entitlement Filters	True
Go back to Case on Save Entitlement	True
Auto Calculate Billing Type	True

Automatic Entitlement On Case

Setting Name	Default Value
Enable Auto Entitlement	False

Global Settings

Setting Name	Default Value
Setting Name	Default Value
Allow inventory transactions even if sufficient quantity is not available	True
Consider only stockable products for inventory processing	False
Stock Status values to be considered for serial number uniqueness	Available, In Transit
Enable Google Map based features	True

Setting Name	Default Value
Unit of measure for distance. This impacts how various distances are interpreted by OptiMax engine	Mile
Enable Dispatch Optimization. This is to enable or disable any automatic calculations related to OptiMax	True
Enable ServiceMax Partner Portal features	True
Enable ServiceMax Partner Portal inventory features	True
OptiMax Endpoint URL	http://optimaxdev.servicemax.com:8443/optimax/optimization
Size of Attachment in ServiceMax Off-line	2048
Populate product from IB	True
Enable APL Capabilities	False
Email ID To Notify ServiceMax Background Errors	
Default search operator	Contains
SET002	Maximum length allowed for SOQL queries made from ServiceMax Off-line. Before increasing the value of this setting, contact Salesforce to get the limit increased for your Org.

Installed Product

Setting Name	Default Value
Map ID for creating Child IB	MAP001
Required product for Child IB	True
Required Serial Number for Child IB	True
Create Warranty on New Installed Product	True
Create Warranty on Update Installed Product	True
Derive Product from Installed Product on Case	True
Use Today's Date If Warranty Start Date Not Present	False
Map ID for Creating Warranty from Warranty Terms	MAP021
Inherit Parent Warranty	False
Create Warranty From Templates Even After Warranty Inheritance	False
Map ID for creating Case from Installed Product	MAP020
Default Case Record Type to Consider When Creating Case From Installed Product	
Map ID for creating Work Order from Installed Product	MAP023
Perform Auto-Entitlement When Creating Case From Installed Product	False
Derive Product from Installed Product on Work Order	True
Default Record Type to consider when creating work order from Installed Product	

iPad ServiceMax Enterprise

Setting Name	Default Value
Frequency of location tracking (minutes)	30
Enable Location Tracking	False

OptiMax

Setting Name	Default Value
OptiMax.Assisted	True
OptiMax.AssistedMode	MULTIDEPOT
OptiMax.OptimizationRule	WEEKLY
OptiMaxExitCondition.Type	OptiMaxCovergencyCount
OptiMaxExitCondition.Count	1000
OptiMaxExitCondition.OptiMaxCovergencyCount	500
OptiMaxExitCondition.OptiMaxGenerationCount	20000
OptiMaxWeight.Capacity	1
OptiMaxWeight.resourceLoadBalance	1
OptiMax.debug	False
OptiMax.debugMail	
Optimax.CompactingFactor	1000
Zombie Job Minutes	1440
Number of days to maintain job history	7
Default Hourly Labor Cost for Technicians	60
Default Drive Cost Per Unit of Distance (Mile or Kilometer)	1
Default Fixed Overhead Cost per Technician	0
Average Traveling Speed Per Unit of Distance (Mile or Kilometer)	40
Maximum Daily Drive Distance	1000
Maximum Threshold For Calculating Capacity (In Days)	30
Change Owner on Assignment	True
Always calculate Dispatch Process	False
Default Dispatch Priority	1

Setting Name	Default Value
Default Service Duration	60
SLA Timestamp for Work Order scheduling	Onsite Response Customer
Change owner on Assignment	True
Email Address: To send error notifications	
Number of Days To Find Slots In for Immediate Dispatch	5
Average Drive Time For Technicians In Minutes	60
Consider Same Day For Immediate Dispatch	True
Lead Time In Minutes For Immediate Dispatch	60
Default start day for Full run Time Horizon	0
Default Number of days for Capacity Calculation	3
Default start hour for Incremental run Time Horizon	1
Importance of retaining the existing schedule for rescheduled work orders	100
Event time window priority	100
Event owner priority	1000
Default priority for work orders that meet the incremental run filter criteria	100
Event importance	100
Priority for retaining the existing technician assignment for rescheduled work orders	1000
Importance for retaining the existing schedule for externally scheduled work orders	100
Priority for retaining the existing technician assignment for externally scheduled work orders	1000
Attach OptiMax input data to ServiceMax Job record	False
P1 Priority	5
P2 Priority	4

Setting Name	Default Value
P3 Priority	3
P4 Priority	2
Normalization factor for Node Type	1
Normalization factor for Route Distance	100
Normalization factor for Route Time	600
Normalization factor for Time Window	10
Normalization factor for Total Distance	1000
Enable runtime calculation of dispatch process and priority	False
Abort on error during runtime calculation of dispatch process and priority	False
Pre-calc Batch Size	100
Enable runtime calculation of dispatch process and priority	False
Abort on error during runtime calculation of dispatch process and priority.	False
Pre-calc Batch size (number of work orders sent in each batch)	100

Parts Order (RMA and Shipment)

Setting Name	Default Value
Map ID for Create RMA from Case	MAP007
Map ID for Create RMA from Work Order	MAP008
Default RMA Source Address Type	Account Shipping Address
Setting for Default To Location	
Action on Create RMA without Lines	Warn
Action on RMA without Source Location	Warn
Action on RMA without Target Location	Warn

Setting Name	Default Value
Use Product Unit Price from Price Book for Line	True
RMA Line Price Book	Standard Price Book
Map ID to Create RMA Line from Work Order Line	MAP012
Populate Product/Serial Number from Case	True
Populate Product/Serial Number from Work Order	True
Map ID for Create Shipment from Case	MAP009
Map ID for Create Shipment from Work Order	MAP010
Map ID for Create Shipment from RMA	MAP011
Default Shipment Destination Address Type	Account Shipping Address
Setting for Default From Location	
Action on Create Shipment without Lines	Warn
Action on Shipment without Source Location	Warn
Action on Shipment without Target Location	Warn
Use Product Unit Price from Price Book for Line	True
Shipment Line Price Book	Standard Price Book
Map ID to Create Shipment Line from Work Order Line	MAP018
Map ID to Create Shipment Line from RMA Line	MAP019
Record Type for Shipment Order Header	Shipment
Record Type for Shipment Order Line	Shipment
Use Product Unit Price from Price Book for Line	True
Enable Auto price calculation for RMA lines	True
Enable Auto price calculation for Shipment lines	True
Allow adding new shipment lines when creating Shipment from Work Order	True

Parts Request

Setting Name	Default Value
Enable Auto price calculation for Parts Request lines	True
Use Product Unit Price from Price Book for Line	True
Default Price Book for creating Parts Request Line	Standard Price Book

Preventive Maintenance

Setting Name	Default Value
Reset PM Cycle When Frequency Changes	True
Default Task Priority	Normal
Create Task on Work Order	True

Service Contract

Setting Name	Default Value
Activation of Contract without Product coverage	Allow
Activation of Contract without Site coverage	Allow
Activation of Contract without Contact coverage	Allow
Activation of Contract without Services coverage	Allow
Map ID to Map header fields of selected Service Contract	MAP002
Covered Products Map ID	MAP003
Included Services Map ID	MAP004
Covered Locations Map ID	MAP005
Entitled Contacts Map ID	MAP006
Check Entitlement History on Cancellation	Warn
Check Open Transactions on Cancellation	Warn

Service Level Agreement

Setting Name	Default Value
Commitment Type on Case SLA Clock	Customer Commitment
Allow Pause or Restart of SLA Clock on Case	True
SLA Tracking Enabled on Case	True
Change Countdown clock color in case to Yellow at	25
Commitment Type on Work Order SLA Clock	Customer Commitment
Allow Pause or Restart of SLA Clock on Work Order	True
SLA Tracking Enabled on Work Order	True
Change Countdown clock color in Work Order to Yellow at	25

Service Org Setup

Setting Name	Default Value
Enforce Uniqueness of Salesforce User in Technician	False

Stock Transfer

Setting Name	Default Value
Use Product Unit Price from Price Book for Line	True
Default Price Book for creating Stock Transfer Line	Standard Price Book

Work Order

Setting Name	Default Value
Work Order Close Status	Closed
Map ID for create quotes from Estimates	MAP013

Setting Name	Default Value
Map ID for Create Estimate Lines to Quotation Lines	MAP017
Checkbox to Select or Deselect Estimate Records	True
Map ID for Create Usage from Estimates	MAP014
Map ID for Create Work Order from Case	MAP015
Select Default Record Type	True
Estimate/Usage Lines VF Page Name	SVMXP__WORD_CreateWOEstUs-gLines
Parts Request Lines VF Page Name	SVMXP__WORD_CreateWOReqRecLines
Use Price From Price Book for Usage Lines	True
Work Order Usage Price Book	Standard Price Book
Use Price From Price Book for Estimate Lines	True
Work Order Estimate Price Book	Standard Price Book
Use Price From Price Book for Parts Request Lines	True
Work Order Parts Request Price Book	Standard Price Book
Enable Auto price calculation for Usage lines	True
Enable Auto price calculation for Estimate lines	True
Enable Auto price calculation for Parts Request lines	True
Allow Quote Save Without Lines	Allow
Show Work Details Screen After Work Order Is Created From Case	False
Are line items billable always?	True
Billing Types that determine if line items are billable	Warranty, Contract

Entitlement Verification on Work Order

Setting Name	Default Value
Show Future Entitlements	True
Show Expired Entitlements	True
Default Entitlement Type	Product
Match Account in Entitlement Check	True
Match Contact in Entitlement Check	True
Applicable SLA Coverage Level	Contract
Check Coverage on Parent Product	True
Check Coverage on Top-Level Product	True
Check Coverage on Child Product	True
Check Coverage on Part Number	True
Check Coverage on Product Family	True
Check Coverage on Product Line	True
Number of Child Level Iterations	1
Allow Entitlement Filters	True
Go back to Work Order on Save Entitlement	True
Auto Calculate Billing Type	True

QUICKBOOKS EXPORT

Overview

The ServiceMax QuickBooks Export feature enables export of work orders and work details that are ready to be billed, in IIF format, which is a proprietary QuickBooks™ format. The exported data can be directly imported into QuickBooks for billing.

Business Context

QuickBooks is the accounting system of choice for many mid-market customers of ServiceMax. These customers need a quick and easy way to extract completed work orders or other ServiceMax data and import it into QuickBooks to eliminate duplicate data entry, without having to use a full-fledged middleware tool.

Detailed Feature Description

The following are the salient aspects of this feature:

- Provision to define the default org-wide export configuration in a JSON formatted string
- Sample default configuration provided out-of-the-box for cloning and customization
- The following options can be configured in the JSON string:
 - Header and child objects to be exported, default being Work Order and Work Detail
 - Header and child object fields to export
 - Filter condition for qualifying header and child records
 - Date field to filter header records on
 - Header fields to display in the Export screen
 - Sort field (ascending order) for records displayed in the Export screen
 - Header object fields to update after export; for example, to flag exported records

The Export screen enables the user to achieve these capabilities:

- Specify a date range on the configured header date field
- View the qualifying header records in the above date range
- Select all or any of these records for export
- Export the selected records and their qualifying child records in IIF format file
- Download the export file or email it to the logged in user

Data Model – Key Details

Object Name	Field Name	Remarks
ServiceMax Processes	Export Con-figuration	The JSON formatted string containing the configuration details for exporting ServiceMax data to QuickBooks.
ServiceMax Processes	Is Default?	This checkbox, when checked, identifies the particular Export Configuration as the default configuration for the org.
ServiceMax Processes	Name	A descriptive name for the export configuration.

Object Name	Field Name	Remarks
ServiceMax Processes	Process Id	A unique Id for the export configuration, defined using alphabets, numbers, and underscores.
Work Order	Is Exported	This checkbox, when checked identifies that the particular work order has already been exported for QuickBooks. This is checked automatically when the work order is exported using the Export for QuickBooks screen. To re-export a work order that has already been exported, uncheck this checkbox.

Access and Permissions

Actions	User Permissions Needed
To view QuickBooks Export Configuration:	"Read" on ServiceMax Processes
To define QuickBooks Export Configuration:	"Create" on ServiceMax Processes
To edit QuickBooks Export Configuration:	"Update" on ServiceMax Processes
To delete QuickBooks Export Configuration:	"Delete" on ServiceMax Processes
To export work orders based on the sample default configuration:	"Update" on Work Order field Is Exported "Read" on Work Order and Work Detail

Configuration

Configuration for export to QuickBooks includes configuring the various aspects of the Export for QuickBooks screen and the data to be exported. This is done in a JSON formatted string in the **Export Configuration** field in the **ServiceMax Processes** object record of Record Type **Export Configuration**.

The Export Configuration record with the **Is Default?** checkbox checked is the one considered as the default export configuration used by the Export for QuickBooks screen. An org can have only one Export Configuration record with **Is Default?** checked.

ServiceMax provides a sample default configuration for cloning and customization. A partial default Export Configuration field is shown below.

```

Export Configuration {
  "headerObjectAPIName": "SVMXC__Service_Order__c",
  "childObjectAPIName": "SVMXC__Service_Order_Line__c",
  "headerEligibilityCriteriaID": "EXPR076",
  "childEligibilityCriteriaID": "EXPR077",
  "filterDateField": "SVMXC__Closed_On__c",
  "defaultSortingField": "SVMXC__Closed_On__c",
  "sourceUpdate": [
    {
      "field": "SVMXC__Is_Exported__c",
      "operator": "Set",
      "value": "true"
    }
  ],
  "displayFields": [
    "Name",
    "SVMXC__Company__c",
    "SVMXC__Contact__c",
    "SVMXC__Closed_On__c",
    "SVMXC__Total_Billable_Amount__c"
  ],
}

```

Figure 1: Export Configuration Field (Partial list of sample default configuration)

Clone the sample Export Configuration record for editing the default configuration. Check **Is Default?** in the cloned record and uncheck it in the sample record.

Export Configuration Field

The table below describes the configuration parameters of the Export Configuration field.

Configuration Parameters	Description
"headerObjectAPIName": "SVMXC__Service_Order__c"	The API name of the header object from which data is exported. By default, this is the Work Order object.
"childObjectAPIName": "SVMXC__Service_Order_Line__c"	The API name of the child object for which data is exported. By default, this is the Work Detail object.
"headerEligibilityCriteriaID": "EXPR076"	This is the filter applied on the header object and is used to qualify records for export. This is specified as an SFM Expression ID. The default expression filters Closed work orders which have not yet been exported (Expression is Order Status = Closed and Is Exported = False).

Configuration Parameters	Description
"childEligibilityCriteriaID": "EXPR077"	This is the filter applied on the child object. This is specified as an SFM Expression ID. The default expression filters Usage/Consumption work details which have Is Billable = True.
"filterDateField": "SVMXC__Closed_On__c"	The header object date field used for the filter on the Export for QuickBooks screen. By default, Export Configuration is set to filter work order records on the Closed On date.
"defaultSortingField": "SVMXC__Closed_On__c"	The sorting field used for the record list on the Export for QuickBooks screen. By default, it is the Closed On date. The sort order is not configurable, and is always ascending.
"sourceUpdate": ["field": "SVMXC__Is_Exported__c", "operator": "Set", "value": true]	This configuration is used to update fields in the header object after each record has been exported. By default, Is Exported = True, indicating they are not available for export again. If source updates are required to be made to any date or date time fields in the header object, one of the following literals have to be used: Date: Today, Tomorrow, Yesterday Date Time: Now, Today, Tomorrow, Yesterday
"displayFields": ["Name", "SVMXC__Company__c", "SVMXC__Contact__c", "SVMXC__Closed_On__c", "SVMXC__Total_Billable_Amount__c"]	The header object fields set here appear as the columns on the Export for QuickBooks screen (see Figure 2).
Fields in the TRNS section labeled TRNSID, TRNSTYPE, DATE, ACCNT, NAME, CLASS, AMOUNT, DOCNUM, TOPRINT	These fields come from the header object and are the header fields in the exported file. The configuration for fields TRNSID, TRNSTYPE, ACCNT, CLASS, DOCNUM, and TOPRINT should not be changed. The date values are exported in MM/dd/yy format. TRNSID and DOCNUM fields are set to the numeric part of the Work Order Name field value. DATE, NAME, and AMOUNT are set to Closed On, Account Name, and Total Billable Amount field values respectively.

Configuration Parameters	Description
Fields in the SPL section labeled SPLID, TRNSTYPE, DATE, ACCNT, NAME, AMOUNT, DOCNUM	<p>These fields come from the child object and are the child fields in the exported file.</p> <p>The configuration for fields SPLID, TRNSTYPE, ACCNT, NAME, and DOCNUM should not be changed.</p> <p>The date values are exported in MM/dd/yy format.</p> <p>SPLID and DOCNUM fields are set to the numeric part of the Work Detail Name field value.</p> <p>DATE and AMOUNT are set to Closed On and Total Line Price field values respectively.</p>

How to Export to QuickBooks

To show the Export for QuickBooks link in Home page:

1. Create/edit a custom component of type **Links** from Salesforce **Setup > App Setup > Customize > Home > Home Page Components**.
2. Add the custom link **Data_Extract_Console** to the above custom component.
3. Edit the required home page layouts and add the above custom component.

To export Work Order records to QuickBooks:

1. Click the **Export for QuickBooks** link on your home page.

The Export for QuickBooks screen appears, as shown below with the sample default configuration. The work orders meeting the header filter criteria are displayed.

Export for QuickBooks

Filter records by applying this date range (optional) on the configured date field: Closed On

From: 3/1/2014 [3/19/2014]

To: 3/31/2014 [3/19/2014]

Go!

Choose records from list below and click one of the buttons to export

Email As Attachment

Export To File

<input checked="" type="checkbox"/>	Work Order Number	Account	Contact	Closed On	Total Billable Amount
<input checked="" type="checkbox"/>	WO-00000007	Kaiser Hospital	Joe Steffani	3/3/2014 1:34 PM	\$2,500.000
<input checked="" type="checkbox"/>	WO-00000006	Good Samaritan Hospital	Sam Mills	3/5/2014 1:36 PM	\$6,500.000
<input checked="" type="checkbox"/>	WO-00000008	Grand Hotels and Resorts	John Doe	3/7/2014 1:40 PM	\$2,324.920
<input checked="" type="checkbox"/>	WO-00000009	Good Samaritan Hospital	Sam Mills	3/10/2014 1:43 PM	\$345.120
<input checked="" type="checkbox"/>	WO-00000010	Good Samaritan Hospital	Sam Mills	3/11/2014 1:44 PM	\$212.450
<input checked="" type="checkbox"/>	WO-00000002	AMCE	John Doe	3/12/2014 2:10 PM	\$1,500.000
<input checked="" type="checkbox"/>	WO-00000004	Grand Hotels and Resorts	Charles Miller	3/12/2014 2:10 PM	\$5,100.000
<input checked="" type="checkbox"/>	WO-00000005	Grand Hotels and Resorts	Contact 2 XYZ	3/13/2014 2:21 PM	\$1,200.000
<input checked="" type="checkbox"/>	WO-00000003	AMCE	John Doe	3/14/2014 8:00 AM	\$6,500.000
<input checked="" type="checkbox"/>	WO-00000011	Good Samaritan Hospital	Sam Mills	3/17/2014 2:13 PM	\$767.100

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Email As Attachment

Export To File

Figure 2: Export for QuickBooks Screen (Sample default configuration)

2. (Optional) To filter records by a date range, click the **arrow**  icon next to **Filter records by applying this date range (optional) on the configured date field: Closed On**.
 - a. Enter dates in the **From:** and **To:** fields by clicking in the fields to open a popup Calendar where you can select a date. Click today's date to the right of each field to enter today's date.
 - b. Click the **Go!** button to the right of the date fields.

The records filtered by the date range appear below.
3. In the **Choose records from the list below and click one of the buttons to export** section, select records for export by checking their checkboxes in the left column.

How to Export to QuickBooks

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- To select all records, check the top left checkbox in the header row.
 - Use the vertical scroll bar on the right to scroll the record list displayed in the current page.
 - To set the number of records per page, select a number (**100**, **200**, or **500**) from the picklist on the bottom left. 100 is the default value.
 - To move between pages, click the **First**, **Prev**, **Next**, and **Last** icons on the bottom center.
4. Click the **Email As Attachment** button to email the export file as an attachment in an email. The extract will be emailed to the logged in Salesforce user's email account. If successful, a "Data exported successfully" message appears.
 5. Click the **Export To File** button to save the export file to your browser's download location on your computer. If successful, a "Data exported successfully" message appears.



Note: The export file is named with the date of export (for example, QB_Export_03_18_2014.iif). If more than one export is done per day, the files are generated with unique names by appending a running number to the name above. Files are not overwritten.

Performance Considerations

With the default Export Configuration, average time taken to export 500 work orders with 1500 work details (3 work details per work order) is 30 seconds. This is for guidance only and actual times may vary depending on service availability.

Known Limitations

- Only one active Export Configuration, as identified by **Is Default?** checked in the configuration record, is supported per org.
- The Export Configuration has to be specified manually in JSON format; there is no configuration screen for this.
- No data validations are done before creating the IIF format file.

Tips for Troubleshooting

Scenario/Issue	Solution
The Home page does not have the Export for QuickBooks link.	See To show the Export for QuickBooks link in Home page:
The Export for QuickBooks screen displays this error message on launch: "Unable to display data. Default Configuration for export is not available. Please contact your ServiceMax Administrator."	Ensure there is one ServiceMax Processes record of Record Type Export Configuration , with Is Default? checked.
The Export for QuickBooks screen displays this error message on launch: "Unable to display data. More than one active configuration detected. Please contact your ServiceMax Administrator."	Ensure there is one ServiceMax Processes record of Record Type Export Configuration , with Is Default? checked.

SERVICEMAX TRANSLATION WORKBENCH

Overview

ServiceMax Translation Workbench enables administrators to define and manage translations for labels and messages configured in SFM Transactions, SFM Wizards, SFM Search, and Inventory Processes. The benefit of this feature is that it enables administrators to define one SFM Wizard (or SFM Transaction, SFM Search, or Inventory Process) for all supported languages to deliver the wizard (or transaction, search, or inventory process) in any supported language, based on the language of the logged in user.

Detailed Feature Description

ServiceMax Translation Workbench provides the platform to define translations in any supported language for strings configured in the following features:

- SFM Transactions
- SFM Wizard
- SFM Search
- Inventory Processes

The translations are configured using the Manage Translations screen, and these translations are displayed by delivery engines of above features in the online application, depending on the language of the logged in user.

Mobile applications such as the iPad application, which support the ServiceMax Translation Workbench feature, can get the configured translations after doing a configuration sync.

Initial and Incremental Loading of Master Text List

When the Manage Translations screen is launched for the first time in an org by any user, the master list of all the existing translatable strings associated with the above features is loaded into the ServiceMax Tag object. The list of keys associated with these translatable strings is updated in the related ServiceMax Processes object record(s).

Whenever any translatable strings are added/modified, this screen needs to be relaunched to load the newly added /modified strings into the ServiceMax Tag object, and to update the related ServiceMax Processes record. Examples of additions/modifications include creation of a new SFM Transaction, updating of an existing SFM Wizard, and adding objects to an existing SFM Search.



Note: Any master text stored in a field of length up to 255 characters can have only one translation per language, as the master text is used as the key for the translation record (ServiceMax Tag record). For example, if 'Renew And Activate Contract' is used as an SFM Process Name and SFM Wizard Step Name, there is only one translation record per language for these two contexts, with the key being 'Renew_And_Activate_Contract.' There can be only one translation for this label, which displays in both SFM and SFM Wizard delivery screens.

Master text stored in a field of length above 255 characters can technically have more than one translation per language if it is used in two or more contexts. This is because the key used in these cases is the relevant process/page layout ID concatenated with '_DESC' / '_PAGELAYOUT.' For example, if 'Renew And Activate Contract renews an existing contract and activates it' is used as the Page Help Text in an SFM Transaction and also as the SFM Wizard Step Description, there are two translation records per language, one for each occurrence. Therefore, the translation will have to be defined for each of these occurrences.

Search Criteria Section in Manage Translations Screen

The **Language** picklist lists all the fully supported languages of Salesforce.

After choosing a language, translations can be defined for all available strings in all the supported features listed above, or for specific strings. Specific strings can be retrieved by choosing the appropriate **Process Type**, and optionally with a specific **Process Name**. Specific strings can also be retrieved by entering all or part of the translatable string in the **Search For Master Text** field. This search condition can be applied in combination with **Process Type** and **Process Name**.

Clicking the **Get Translations** button loads the matching strings for the defined search criteria. The search for master text is a *contains* search.

Search Results Section in Manage Translations Screen

By default, 50 search results are shown per page. After the search results are displayed, this page size can be changed to 10, 25, or 100, for that search.

Search results can be filtered further on the data displayed in any of the columns, **Context**, **Master Text**, and **Text**, by entering keyword(s) in the text box at the top right of this section. This is an inline filter, that does a *contains* search, and is applied as the keywords are entered. Each space-separated keyword is applied individually on the data displayed in each of the columns. All records containing any keyword in any one of the three columns will be displayed.

The count of search results returned and the page count details appear below the search results table, with provision to navigate to **First**, **Previous**, **Next**, or **Last** page.

Clicking the **Save** button saves the newly entered/updated translated **Text** in all search result pages displayed.

If the translation is blanked out in the **Text** column for any **Master Text**, the existing translation entry is deleted in the ServiceMax Tag object. In this case, as well as in the case of strings for which no translations are defined, the delivery modules of the supported features display the **Master Text**, which is the text defined in the associated process.

Copy Master Text copies the **Master Text** value to the **Text** column. The user is prompted to select if this should be done for all the strings displayed, or only for the strings that do not have a translation, that is, for strings for which the **Text** column is blank. As per the user's choice, the **Master Text** value is copied to the **Text** column in all pages, not just the page being displayed.

Reset rolls back all the unsaved translations entered in the **Text** column for all pages.

Search Results Columns in Manage Translations Screen

The **Master Text** column displays the actual string to be translated. By default, the search results are displayed sorted on this column in ascending order. Clicking this column header toggles the sort order.

The **Text** column displays the translations already defined for the selected language.

The **Context** column indicates the feature area in which a particular translatable string, that is, Master Text, is defined. There can be more than one context for some Master Text values. The following table lists all the possible values for the **Context** column, and provides a brief description about each.

Feature	Context	Master Text
Inventory	Detail Error Message	Inventory Process Configuration screen, Entry Criteria tab, Error message to display if no child records meet the above criteria field
Inventory	Header Error Message	Inventory Process Configuration screen, Entry Criteria tab, Error message to display if a record does not meet the above criteria field
Inventory	Inventory Process Description	Inventory Process Configuration screen, Process Information tab, Description field
Inventory	Inventory Process Title	Inventory Process Configuration screen, Process Information tab, Process Name field
SFM	Data Validation Rule Message	SFM Designer screen, Data Validation Rules tab, value displayed in the Rule Message column.
SFM	Header Error Message	SFM Designer screen, Qualifying Criteria & Field Mappings tab, value displayed in the Error Message field in the Expression Options dialog box displayed by clicking the Expression Options... for the header object expression
SFM	SFM Button Title	SFM Designer screen, Screen Designer tab, value displayed in the Title field (General section) of the Properties pane displayed for an SFM Button
SFM	SFM Link Title	SFM Designer screen, Advanced Options tab, Linked Process vertical tab, value displayed in the Link Title column in the Selected SFM Processes section
SFM	SFM Page Help	SFM Designer screen, Screen Designer tab, value displayed in the Help Text field (Help section) of the Properties pane displayed for an SFM Page Layout
SFM	SFM Process Description	SFM Designer screen, Create/Edit SFM Transaction tab, value displayed in the Description field
SFM	SFM Process Name	SFM Designer screen, Create/Edit SFM Transaction tab, value displayed in the Name field

Feature	Context	Master Text
SFM	SFM Section Title	SFM Designer screen, Screen Designer tab, value displayed in the Title field of the Properties pane displayed for each header and child section in SFM Page Layout (Properties for Section & Properties for Details sections)
SFM Search	Search Result Section Description	SFM Search configuration screen, Search Configuration section, Description column
SFM Search	Search Result Section Title	SFM Search configuration screen, Search Configuration section, Result Section Title column
SFM Search	SFM Search Description	SFM Search configuration screen, General Info tab, Description field
SFM Search	SFM Search Name	SFM Search configuration screen, General Info tab, Search Title field
SFM Wizard	Wizard Description	SFM Wizard configuration screen, General Information tab, Description field
SFM Wizard	Wizard Name	SFM Wizard configuration screen, General Information tab, Wizard Title field
SFM Wizard	Wizard Step Confirmation Message	SFM Wizard configuration screen, Manage Wizard Steps tab, Confirmation Message field
SFM Wizard	Wizard Step Description	SFM Wizard configuration screen, Manage Wizard Steps tab, Description field
SFM Wizard	Wizard Step Name	SFM Wizard configuration screen, Manage Wizard Steps tab, Title field

Data Model – Key Details

Object Name	Field Name	Remarks
ServiceMax Tag	Language	The language identifier for the translation. It is the same as in Salesforce, and is associated with the Language picklist displayed in the Manage Translations screen. More details about this can be found in a later section of this help document.

Object Name	Field Name	Remarks
ServiceMax Tag	Tag Context	Feature area in which a particular string is defined. This is displayed in the Context column of the Manage Translations screen. More details about this can be found in a later section of this help document.
ServiceMax Tag	Tag Text	Automatically set to the first 255 characters of the Tag Value . Used for internal purpose.
ServiceMax Tag	Tag Value	The translation of the string. This is displayed in the Text column of the Manage Translations screen.
ServiceMax Tag	Tag Value	<p>The unique internal identifier for a translatable string. For labels and messages stored in fields of length up to 255 characters (for example, SFM Transaction Name and Inventory Process Name), the label/message itself is used as the key, after replacing the spaces in the message with underscores.</p> <p>For labels and messages stored in fields of length above 255 characters (for example, SFM Transaction Description, SFM Wizard Description, and SFM Page Help Text), the ID of the specific process/page layout is concatenated with '_DESC' / '_PAGEHELP' and the concatenated string is used as the key.</p>
ServiceMax Processes	Tag Keys	List of Tag Keys associated with an SFM Transaction, SFM Wizard, SFM Search, or Inventory Process. The list entries are separated by a semi-colon. This field is updated when the Manage Translations screen is launched.

Access and Permissions

Actions	User Permissions Needed
To view translations:	"Read" on ServiceMax Tag, ServiceMax Processes, ServiceMax Config Data, Page Layout, Page Layout Details
To create translations:	"Create" on ServiceMax Tag and "Update" on ServiceMax Processes
To edit translations:	"Update" on ServiceMax Tag
To delete translations:	"Delete" on ServiceMax Tag

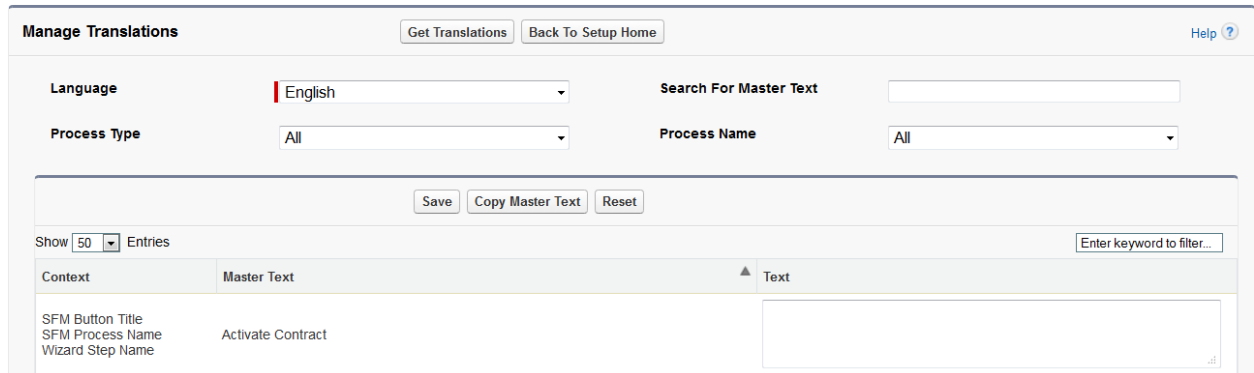
Managing Translations Using Manage Translations Screen

Use the Manage Translations screen to define, update, and delete translations for the required strings interactively.

Sample steps to do these are as follows:

1. Click **Home > ServiceMax Setup > App Administration > Translations > Go**.

The Manage Translations screen displays as shown below.



The screenshot shows the 'Manage Translations' screen. At the top, there are buttons for 'Get Translations', 'Back To Setup Home', and a 'Help' link. Below these are four dropdown menus: 'Language' (set to 'English'), 'Process Type' (set to 'All'), 'Search For Master Text' (empty), and 'Process Name' (set to 'All'). Below the dropdowns are three buttons: 'Save', 'Copy Master Text', and 'Reset'. Below these buttons is a 'Show' dropdown (set to '50') and the text 'Entries'. To the right of this is a text input field labeled 'Enter keyword to filter...'. Below this is a table with two columns: 'Context' and 'Master Text'. The 'Context' column contains the text 'SFM Button Title', 'SFM Process Name', and 'Wizard Step Name'. The 'Master Text' column contains the text 'Activate Contract'. To the right of the table is a large text input field.

Figure 1: *Manage Translations Screen*

2. From the **Language** picklist, select the language for which you want to define translations (for example, French).
3. (Optional) From the **Process Type** picklist, select the required type (for example, SFM Transaction).
4. (Optional) From the **Process Name** picklist, select a process name (for example, Manage Work Order Lines - Usage).
5. (Optional) Enter any required keyword in the **Search For Master Text** field.
6. Click the **Get Translations** button.

The labels and messages matching the search criteria display as shown below.

Language: French Search For Master Text:

Process Type: SFM Transaction Process Name: Manage Work Order Lines - Usage

Show 50 Entries

Context	Master Text	Text
SFM Section Title	Expenses	<input type="text"/>
SFM Button Title	Get Price	<input type="text"/>
Target Name SFM Section Title	Labor	<input type="text"/>
SFM Process Name	Manage Work Order Lines - Usage	<input type="text"/>
SFM Section Title	Parts	<input type="text"/>

Figure 2: SFM Transaction Labels & Messages



Note: When you launch this screen after translations have been defined, the **Text** column will show the existing translations.

7. (Optional) Enter any keyword(s) to filter the search results on the data displayed in any of the columns.
8. (Optional) Select the required page size to display fewer or more records per page.
9. In the **Text** field, enter the translation in the selected language, and then click **Save**.
10. If you want to remove any existing translation(s), blank out the **Text** field, and then click **Save**.
11. If you have updated some translations but not yet saved them, and want to roll back your changes, click **Reset**.

Managing Translations Using Salesforce Dataloader

To define or update in bulk the translations of strings supported by the ServiceMax Translation Workbench for any language, use the Salesforce Dataloader (

<https://dataloader.io>). The following sections describe the procedure for defining and updating translations. The language codes for the languages supported by the ServiceMax application are given in the table below. Use these when defining or updating translations.

Language	Language Code
English	en
German	de
Spanish	es
French	fr
Italian	it
Japanese	ja
Korean	ko
Chinese (Traditional)	zh_TW
Chinese (Simplified)	zh_CN
Portuguese (Brazilian)	pt_BR
Dutch	nl_NL

To define new translations:

1. Export the master list of translatable strings from the ServiceMax Tag object by retrieving **Language**, **Tag Key**, **Tag Text**, and **Tag Value** fields of all records which meet the condition **Language = 'Master'**. Do this by creating a **NEW TASK** of type **EXPORT**.

The SOQL Query for this is given below:

```
SELECT SVMXC__Language__c, SVMXC__Tag_Key__c, SVMXC__Tag_Text__c, SVMXC__Tag_Value__c
FROM SVMXC__ServiceMax_Tags__c WHERE SVMXC__Language__c = 'Master'
```



Note: If you select the fields and the filter condition from the Salesforce Dataloader UI to generate the SOQL Query automatically, select English as the Language field value in filter condition and then edit the SOQL Query to replace English with Master.

If you copy the SOQL Query given above and paste it into the SOQL Query text box in the Salesforce Dataloader UI, delete and retype the single quote surrounding the Language field value Master before proceeding. This is to avoid query error.

The Tag Text field is included in the query for the review of the translation with the master text. This is because the translation needs to be entered in the Tag Value column which stores the master text, and the Tag Text field stores the first 255 characters of the master text.

2. In the exported **.csv** file, replace the value of all the records in the Language column with the language code of the required language, as per the table above. For example, to define new translations for the French language, replace **Master** with **fr**.
3. In the above **.csv** file, enter the translations in the **Tag Value** column, and then save the updated file.
4. Import the saved file, by choosing **Insert** as the **Operation**. Do this by creating a **NEW TASK** of type **IMPORT**.

To update existing translations:

1. Export the existing translations from the ServiceMax Tag object by retrieving **Id**, **Tag Key**, and **Tag Value** fields of all records which meet the condition **Language = '<language code of the required language>'**. Do this by creating a **NEW TASK** of type **EXPORT**.

A sample SOQL Query for retrieving the existing French translations is given below:

```
SELECT Id, SVMXC__Tag_Key__c, SVMXC__Tag_Value__c FROM SVMXC__ServiceMax_Tags__c WHERE SVMXC__Language__c = 'fr'
```




Note: If you select the fields and the filter condition from the Salesforce Dataloader UI to generate the SOQL Query automatically, select the required language as the **Language** field value in the filter condition, and then edit the SOQL Query to replace the language with the language code.

If you copy the SOQL Query given above and paste it into the **SOQL Query** text box in the Salesforce Dataloader UI, delete and re-enter the single quotes surrounding the **Language** field value **fr** before proceeding. This is to avoid a query error.

2. In the exported **.csv** file, update the translations in the **Tag Value** column as required, and then save the updated file.
3. Import the saved file, by choosing **Update** as the **Operation**. Do this by creating a **NEW TASK** of type **IMPORT**.

Known Limitations

1. When search returns more than 1000 translatable strings, only 1000 strings are displayed. So, if the number of strings displayed is 1000 as indicated by the count displayed in the search results section, the search has to be refined to keep the search results returned to less than 1000 strings.
2. When a translatable string, that is, Master Text, stored in a field of length 255 characters or less is updated, the existing translation(s), if any, for the previous string value are not associated with the new string value.

IPAD CONFIGURATION

IPAD CONFIGURATION

Overview

ServiceMax has two applications for iPad, ServiceMax Enterprise App and ServiceMax Mobile App. The ServiceMax Enterprise App works only in connected mode. The ServiceMax Mobile App works in both connected and disconnected modes. Both of these iPad Apps are specialized applications that provide targeted features to technicians on the field.

For both these iPad Apps, you can configure the user permissions for SFM View and Standalone Create transactions, the appearance of the Service Report, and configuration settings. For the ServiceMax Mobile app, you can configure download criteria, frequency of synchronization, and limits that may apply to the size of offline data. These configurations are applicable for iPad users only. Apart from these, you can also configure permissions for SFM Searches.

SFM Search Configuration applies to both ServiceMax Suite and ServiceMax Mobile App and can be found in the section **Setup > Configuration > Advanced Configuration > SFM Search > Custom Searches > Manage Profile Access Permissions**.

Access and Permissions

Actions	User Permissions Needed
Actions User Permissions Needed:	"Read" on ServiceMax Processes and ServiceMax Config Data
To edit iPad Settings:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data

Setting Up SFM Permissions for iPad

This feature is currently applicable only for iPad deployments. Use this feature to define which ServiceMax Group Profiles have access to View and Standalone Create SFM processes.

To set up SFM permissions for iPad:

1. Click **Home > ServiceMax Setup > Mobile & Offline > SFM iPad Permissions**.
The screen as shown below appears.

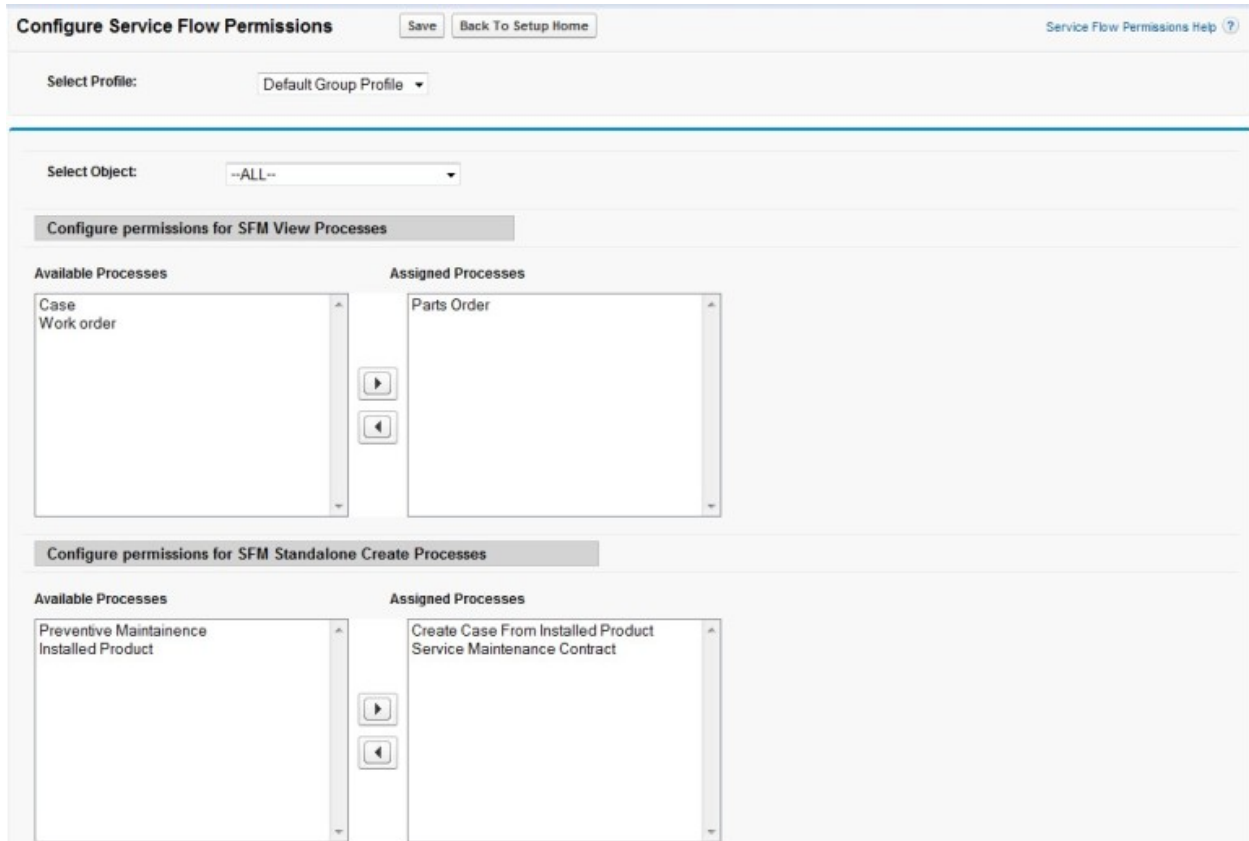


Figure 1: Configure SFM Permission for View & Standalone Processes

2. Select the ServiceMax Group Profile for assigning access to SFM transactions. If required, select an object to list SFM transactions for that object. The default selection—ALL— lists the Standalone Create and View processes of all the objects. Selecting any particular object lists the transactions related only to that object.
3. In the above screen, all the available processes for the selected object appear on the left. The assigned processes are in the right. You can move the applicable transactions from left to right.
4. Click **Save**.
5. Click **Back To Setup Home** to return to the ServiceMax setup home page.

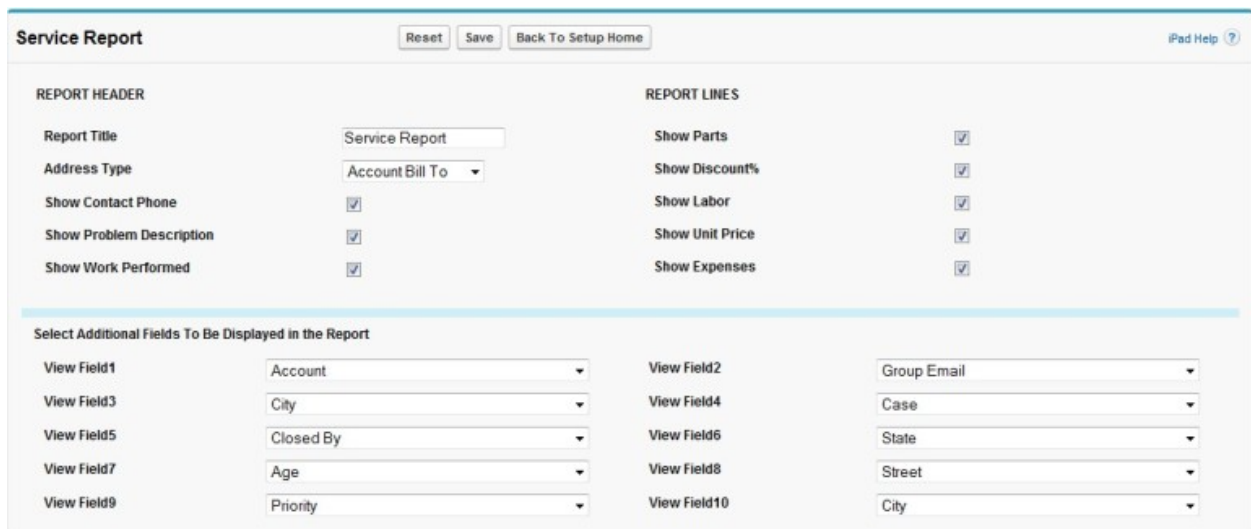


Note: If an SFM View or Standalone Create transaction is not assigned to any ServiceMax Group Profile, all profiles will have access to that SFM transaction.

Setting up iPad Client (Service Report Configuration)

To set up the iPad Client:

1. Click **Home > ServiceMax Setup > iPad Settings** link to launch the Setup iPad Client screen as shown below.



The screenshot shows the 'Service Report' configuration screen. It has a header with 'Reset', 'Save', and 'Back To Setup Home' buttons, and an 'iPad Help' link. The main content is divided into two sections: 'REPORT HEADER' and 'REPORT LINES'.

REPORT HEADER:

- Report Title: Service Report
- Address Type: Account Bill To
- Show Contact Phone: ☒
- Show Problem Description: ☒
- Show Work Performed: ☒

REPORT LINES:

- Show Parts: ☒
- Show Discount%: ☒
- Show Labor: ☒
- Show Unit Price: ☒
- Show Expenses: ☒

Select Additional Fields To Be Displayed in the Report:

View Field	Field Name	View Field	Field Name
View Field1	Account	View Field2	Group Email
View Field3	City	View Field4	Case
View Field5	Closed By	View Field6	State
View Field7	Age	View Field8	Street
View Field9	Priority	View Field10	City

Figure 2: Set Up iPad Client Screen

Under the **Report Header** section:

2. In the **Report Title** field, enter a suitable title for the report.
3. In the **Address Type** field, select the desired address type of the Account to be printed on the report.
4. Checking the **Show Contact Phone** checkbox adds the Contacts business phone number to the report.
5. Checking the **Show Problem Description** and **Show Work Performed** checkboxes adds the respective fields to the report.

Under the **Report Lines** section:

6. Checking the **Show Parts** checkbox adds the details of the parts consumed to service the Work order to the report.
7. The **Show Discount %** checkbox controls if the details of the discount given on the parts consumed should be displayed in the report. This setting works in conjunction with the **Show Parts** setting and the discount details will be shown on the report only if the former's checkbox is also checked.
8. Checking the **Show Labor** checkbox adds the details of the various labor activities undertaken for servicing the Work Order to the report.
9. The **Show Unit Price** checkbox controls if the price information for each unit of parts consumed and the per hour rate for labor are to be displayed on the report. This setting also works in conjunction with the **Show Parts** and **Show Labor** checkboxes and will be effective only if either one of them is checked.

Under the **Select Additional Fields To Be Displayed in the Report** section:

10. You can add up to a maximum of 10 additional fields to be displayed on the report.



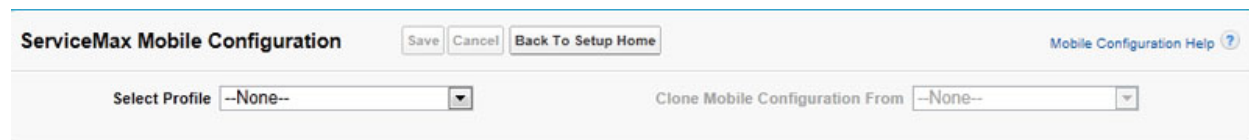
Note: Rich text fields are not supported in the Service Report.

11. Click **Save** to save the changes made.
12. Click **Reset** to discard your unsaved changes and to continue to stay on the same tab to make further changes.
13. Click **Back To Setup Home** to discard your changes and return to the Setup Home page.

Mobile Configuration

Click **Home > ServiceMax Setup > Mobile & Offline > Mobile Configuration**. The ServiceMax Mobile Configuration screen displays (see figure below). Use this feature to configure how your end users will use ServiceMax Mobile Client on iPad.

You can configure data download criteria, frequency of synchronization, limits that may apply to the size of offline data, and more.

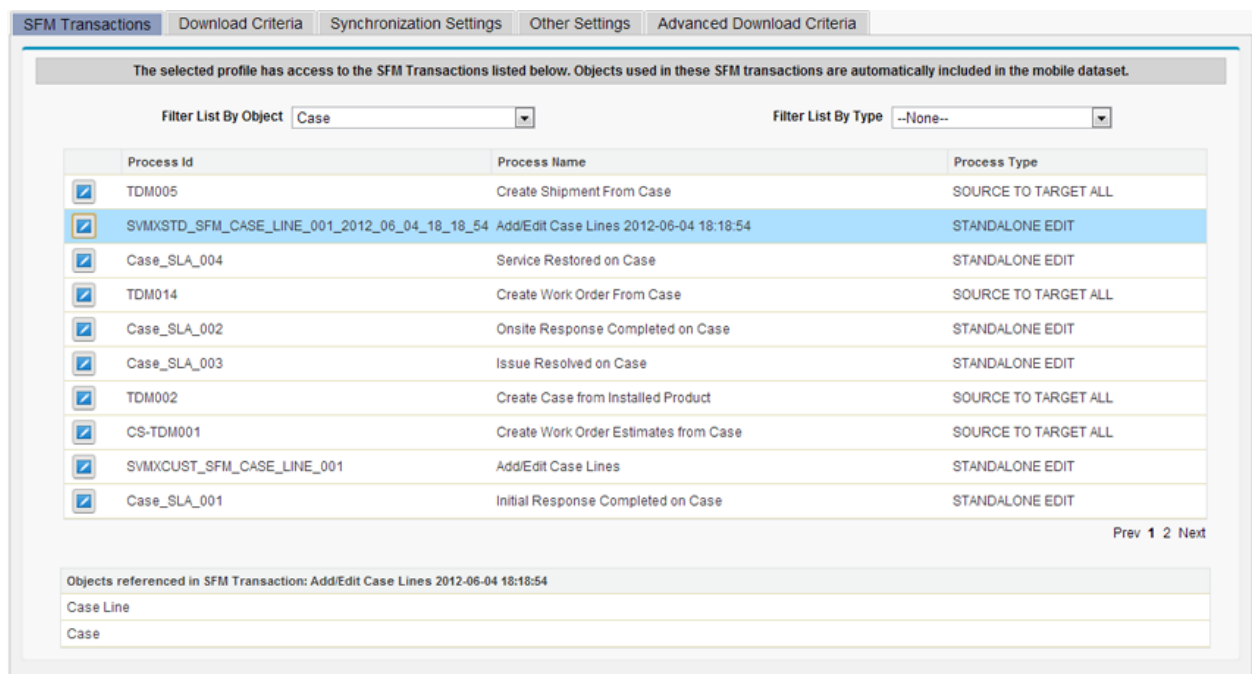


The screenshot shows the 'ServiceMax Mobile Configuration' window. It has a title bar with 'ServiceMax Mobile Configuration', 'Save', 'Cancel', and 'Back To Setup Home' buttons. Below the title bar, there are two dropdown menus: 'Select Profile' (currently set to '--None--') and 'Clone Mobile Configuration From' (also set to '--None--'). A 'Mobile Configuration Help' link is visible in the top right corner.

Figure 3: ServiceMax Mobile Configuration

To configure the options for ServiceMax Mobile:

1. In the ServiceMax Mobile Configuration screen, select a profile from the **Select Profile** picklist.
2. If you want to clone a mobile configuration from a profile, select a profile from the **Clone Mobile Configuration From** picklist.
3. In the **SFM Transactions** tab, select either an Object from the **Filter List By Object** picklist or a Type from the **Filter List By Type** picklist.
4. Click the **Process ID** to display all the objects used in that SFM process (see figure below).



The screenshot shows the 'SFM Transactions' tab in the ServiceMax Mobile Configuration screen. It displays a table of processes with columns for 'Process Id', 'Process Name', and 'Process Type'. The table is filtered by 'Case' under 'Filter List By Object'. The selected process is 'SVMXSTD_SFMCASE_LINE_001_2012_06_04_18_18_54' with the name 'Add/Edit Case Lines 2012-06-04 18:18:54' and type 'STANDALONE EDIT'. Below the table, there is a section titled 'Objects referenced in SFM Transaction: Add/Edit Case Lines 2012-06-04 18:18:54' which lists 'Case Line' and 'Case'.

Process Id	Process Name	Process Type
TDM005	Create Shipment From Case	SOURCE TO TARGET ALL
SVMXSTD_SFMCASE_LINE_001_2012_06_04_18_18_54	Add/Edit Case Lines 2012-06-04 18:18:54	STANDALONE EDIT
Case_SLA_004	Service Restored on Case	STANDALONE EDIT
TDM014	Create Work Order From Case	SOURCE TO TARGET ALL
Case_SLA_002	Onsite Response Completed on Case	STANDALONE EDIT
Case_SLA_003	Issue Resolved on Case	STANDALONE EDIT
TDM002	Create Case from Installed Product	SOURCE TO TARGET ALL
CS-TDM001	Create Work Order Estimates from Case	SOURCE TO TARGET ALL
SVMXCUST_SFMCASE_LINE_001	Add/Edit Case Lines	STANDALONE EDIT
Case_SLA_001	Initial Response Completed on Case	STANDALONE EDIT

Objects referenced in SFM Transaction: Add/Edit Case Lines 2012-06-04 18:18:54

Case Line
Case

Figure 4: Filter List by Object

5. Click the **Download Criteria** tab.
6. In the **Download Criteria** tab area, check the **Select** checkbox and select an Object from the **Object Name** picklist as shown in the figure below.

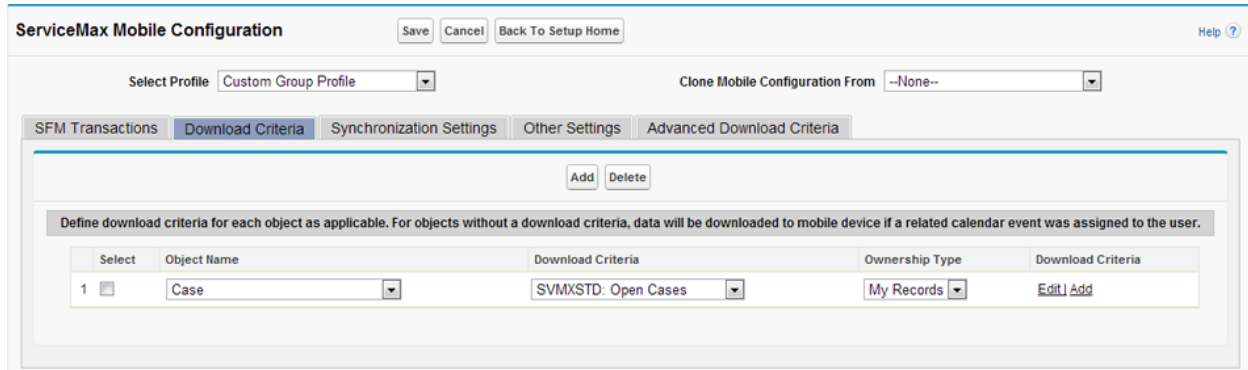


Figure 5: Download Criteria

7. Select criteria from the **Download Criteria** picklist.
8. Select the ownership type from the **Ownership Type** picklist.
9. To add criteria, click the **Add** link in the **Download Criteria** area.
 - a. Using the Expression Builder, enter the **Expression Name** and **Expression ID**.
 - b. Select the **Field Name** and **Operator** from the appropriate picklists.
 - c. Enter a value in the **Value** text box.
 - d. **Add** or **Delete** rows using the appropriate icons.
 - e. If necessary, enter an expression in the **Advanced Expression** text box.
 - f. Click **Save** in the expression section.
 - g. Click **Save** at the top of the page.
10. If necessary, click the **Add** button to add additional objects, and click the **Delete** button to delete objects.
11. To configure synchronization settings, click the **Synchronization Settings** tab (see figure below).



Note: You can configure scheduled sync for Data synchronization in ServiceMax Mobile for Laptops.

SFM Transactions	Download Criteria	Synchronization Settings	Other Settings	Advanced Download Criteria
Synchronization settings for Calendar events and tasks				
Synchronize events, tasks, and related data (iPad only)		Automatically When Online ▼		
Retrieve events and tasks for the next		10 Days		
Delete events and tasks older than		10 Days		
Other Settings				
Synchronize application data once every (includes events, tasks, and related data)		600 Minutes		
Synchronize configuration once every (iPad only)		1200 Minutes		
When there are data synchronization conflicts		Online Takes Precedence ▼		
Purge data once every		168 Hours		
Purge non-event window based data that is older than		10 Days		
<p><i>Note: All events and event related records are purged automatically if they are outside of the event window.</i></p>				

Figure 6: Synchronization Settings Tab



Note: You can configure scheduled sync for Data synchronization in ServiceMax Mobile for Laptops.

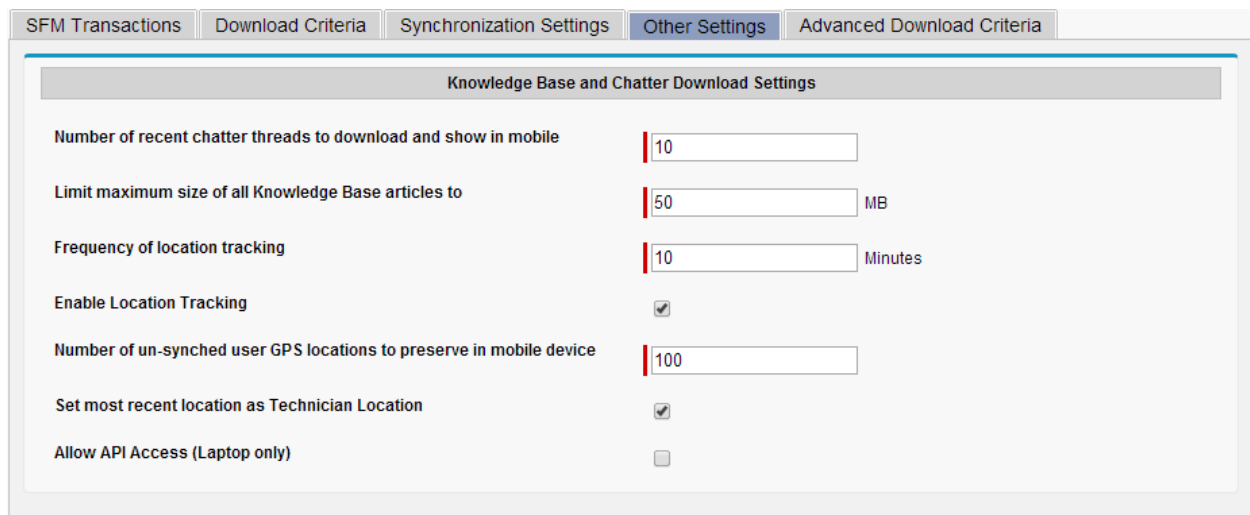
12. In the **Synchronization settings for Calendar events and tasks** section:
 - a. Select when synchronization occurs for events, tasks, and related data for the iPad in the picklist: **Automatically When Online** or **At Regular Intervals**. If you select **At Regular Intervals**, enter the number of interval minutes you want the scheduled synchronization to occur. The default is **Automatically When Online**.
 - b. Enter the number of days to retrieve events and tasks for the next number of days. The default is 10 days.
 - c. Enter the number of days to delete events and tasks older than the number of days. The default is 10 days.
13. In the **Other Settings** section:
 - a. Enter the time interval in minutes to synchronize application data (includes events, tasks, and related data). Set the minutes to **0** to avoid synchronization at regular intervals. If this is done, synchronization has to be manually initiated from

- the Sync screen in the iPad whenever needed. The default is 600 minutes or 10 hours.
- Enter the time interval in minutes to synchronize configuration data for the iPad. The default is 1200 minutes or 20 hours.
 - Select what happens when there are data synchronization conflicts (**Ask User, Online Takes Precedence, Mobile Takes Precedence**) from the picklist. The default is **Online Takes Precedence**.
 - Enter the time interval in hours for the purge data prompt on the iPad in the **Purge data once every** text box. The default is 168 hours or 7 days. If it is set to 0, the user will not be prompted to purge data.
 - Enter the purge criteria for the purge function in non-event window based data older than a number of days. The default is 10 days. If it is set to 0, it is taken as 1 day.



Note: All events and event related records are purged automatically if they are outside of the event window.

- Click the **Other Settings** tab to select **Chatter Download, Knowledge Base, Location Tracking, and API Access for Laptops** settings (see figure below).



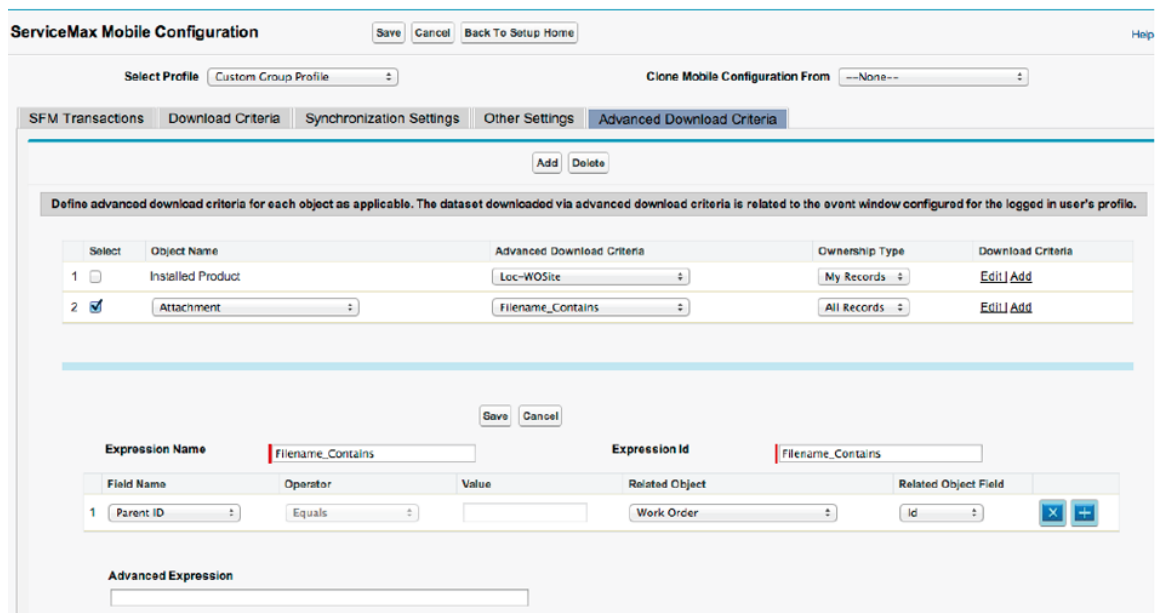
Setting	Value	Unit
Number of recent chatter threads to download and show in mobile	10	
Limit maximum size of all Knowledge Base articles to	50	MB
Frequency of location tracking	10	Minutes
Enable Location Tracking	<input checked="" type="checkbox"/>	
Number of un-synched user GPS locations to preserve in mobile device	100	
Set most recent location as Technician Location	<input checked="" type="checkbox"/>	
Allow API Access (Laptop only)	<input type="checkbox"/>	

Figure 7: Other Settings



Note: Accounts and Products cannot be configured as advanced download criteria.

15. Click the **Advanced Download Criteria** tab to define download criteria for an object. (You can configure which type of attachments are available on a mobile device based on attachment attributes (such as File Name and Content Type)).
16. Define download criteria for each object. See figure below.
17. In the **Object Name** area:
 - a. Select download criteria from the **Advanced Download Criteria** picklist (Filename_contains).
 - b. Select the ownership type (**My Records, All Records**).
 - c. Use the **Edit/Add** links to edit existing criteria or add a row to create additional criteria.



The screenshot shows the 'ServiceMax Mobile Configuration' interface with the 'Advanced Download Criteria' tab selected. At the top, there are buttons for 'Save', 'Cancel', and 'Back To Setup Home'. Below this, there are dropdowns for 'Select Profile' (set to 'Custom Group Profile') and 'Clone Mobile Configuration From' (set to '--None--'). A navigation bar includes 'SFM Transactions', 'Download Criteria', 'Synchronization Settings', 'Other Settings', and 'Advanced Download Criteria'. Below the navigation bar, there are 'Add' and 'Delete' buttons. A message states: 'Define advanced download criteria for each object as applicable. The dataset downloaded via advanced download criteria is related to the event window configured for the logged in user's profile.' Below this is a table with columns: 'Select', 'Object Name', 'Advanced Download Criteria', 'Ownership Type', and 'Download Criteria'. The table has two rows: Row 1 is 'Installed Product' with 'Loc-WOSite' criteria and 'My Records' ownership; Row 2 is 'Attachment' with 'Filename_Contains' criteria and 'All Records' ownership. Below the table, there are 'Save' and 'Cancel' buttons. Below these are fields for 'Expression Name' (set to 'Filename_Contains') and 'Expression Id' (set to 'Filename_Contains'). Below these is a table with columns: 'Field Name', 'Operator', 'Value', 'Related Object', and 'Related Object Field'. The table has one row: 'Parent ID' with 'Equals' operator, an empty 'Value' field, 'Work Order' as the 'Related Object', and 'Id' as the 'Related Object Field'. Below this table is an 'Advanced Expression' field.

Select	Object Name	Advanced Download Criteria	Ownership Type	Download Criteria
<input type="checkbox"/>	Installed Product	Loc-WOSite	My Records	Edit Add
<input checked="" type="checkbox"/>	Attachment	Filename_Contains	All Records	Edit Add

Field Name	Operator	Value	Related Object	Related Object Field
Parent ID	Equals		Work Order	Id

Figure 8: ServiceMax Mobile Configuration



Note: Advanced download criteria only works on records related to events in the event window.

18. Select a field name from the **Field Name** picklist.
19. Select an **Operator** (for example, Equals, Contains).
20. Enter a value (for example, PDF or PNG) in the **Value** text box.
21. Enter an **Advanced Expression** if necessary. For example, (1 AND (2 or 3)).
22. Click **Save**.



Note: The criteria described in the instructions above and shown in the example figure below will download only file extensions that contain "PDF & PNG."

ServiceMax Mobile Configuration Save Cancel Back To Setup Home Help

Select Profile: Custom Group Profile Clone Mobile Configuration From: --None--

SFM Transactions | Download Criteria | Synchronization Settings | Other Settings | **Advanced Download Criteria**

Add Delete

Define advanced download criteria for each object as applicable. The dataset downloaded via advanced download criteria is related to the event window configured for the logged in user's profile.

Select	Object Name	Advanced Download Criteria	Ownership Type	Download Criteria
1 <input type="checkbox"/>	Installed Product	Loc-WOSite	My Records	Edit Add
2 <input checked="" type="checkbox"/>	Attachment	Doc_Download_Expr	All Records	Edit Add

Save Cancel

Expression Name: Doc_Download_Expr Expression Id: Filename_Contains

	Field Name	Operator	Value	Related Object	Related Object Field	
1	Parent ID	Equals		Work Order	Id	X
2	File Name	Contains	PDF	--None--	--None--	X
3	File Name	Contains	PNG	--None--	--None--	X +

Advanced Expression
(1 AND (2 or 3))

Figure 9: ServiceMax Mobile Configuration Screen

These attachments get downloaded only for those records of the configured object which are associated with an Event. For example, if the Advanced Download Criteria condition defined for an Attachment is "Parent Id Equals Work Order Id," attachments will be downloaded for Work Orders which are associated with Events.

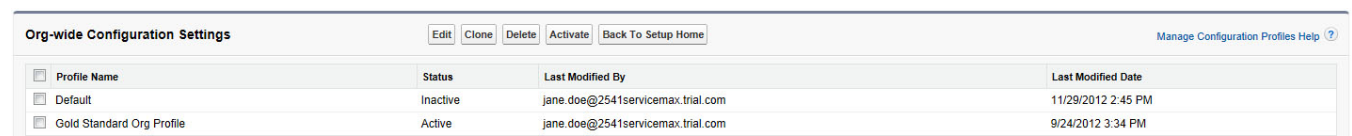
File Names are designated by file extensions. This feature is useful when it is necessary to filter which attachments are available to an end user. Administrators can configure this feature in the **Advanced Download Criteria** tab in the **Mobile Configuration** module. Examples of file extensions are listed in the table below.

File Names and File Extensions

Example File Types	Example File Extensions
Images	jpg, jpeg, bmp, png, tiff, gif, dib, ico, cur, xbm
Video	mov, m4v, mp4, 3gp
Presentations	ppt
PDF	pdf
Documentation	doc, docx
Spreadsheet	xls, xlsx

ServiceMax Enterprise Configuration Settings

Click **Home > ServiceMax Setup > App Administration > Configuration Profiles** to launch the screen below.



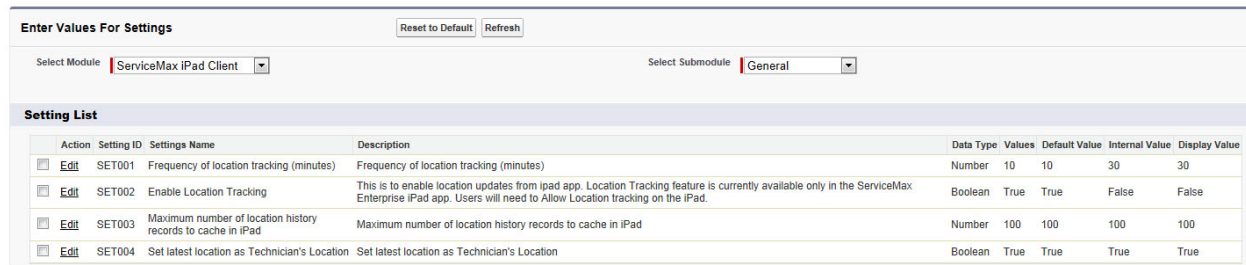
Profile Name	Status	Last Modified By	Last Modified Date
Default	Inactive	jane.doe@2541servicemax.trial.com	11/29/2012 2:45 PM
Gold Standard Org Profile	Active	jane.doe@2541servicemax.trial.com	9/24/2012 3:34 PM

Figure 10: Org-wide Configuration Settings

To configure iPad Client settings for GPS location tracking and frequency:

1. In the **Select Module** picklist, select **ServiceMax iPad Client**.
2. In the **Select Submodule** picklist, select **General**.
3. Select the active org-wide custom profile, and then click **Edit**.

The settings for ServiceMax Enterprise appear as shown in the figure below.



Action	Setting ID	Settings Name	Description	Data Type	Values	Default Value	Internal Value	Display Value
<input type="checkbox"/> Edit	SET001	Frequency of location tracking (minutes)	Frequency of location tracking (minutes)	Number	10	10	30	30
<input type="checkbox"/> Edit	SET002	Enable Location Tracking	This is to enable location updates from iPad app. Location Tracking feature is currently available only in the ServiceMax Enterprise iPad app. Users will need to Allow Location tracking on the iPad.	Boolean	True	True	False	False
<input type="checkbox"/> Edit	SET003	Maximum number of location history records to cache in iPad	Maximum number of location history records to cache in iPad	Number	100	100	100	100
<input type="checkbox"/> Edit	SET004	Set latest location as Technician's Location	Set latest location as Technician's Location	Boolean	True	True	True	True

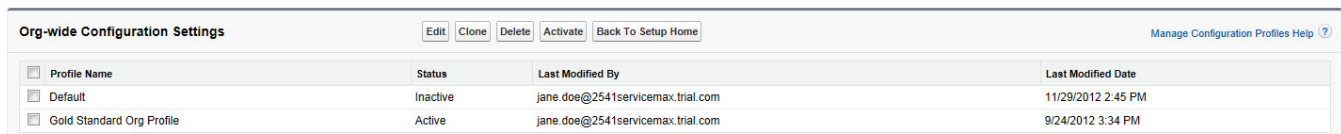
Figure 11: Enter Values For Settings (ServiceMax Enterprise)



Note: Do NOT edit the values of the settings for submodule Service Report using this Edit Configuration Profile–Enter Values For Settings page. The Service Report options need to be configured through the Setup iPad Client page only.

ServiceMax Mobile Configuration Settings

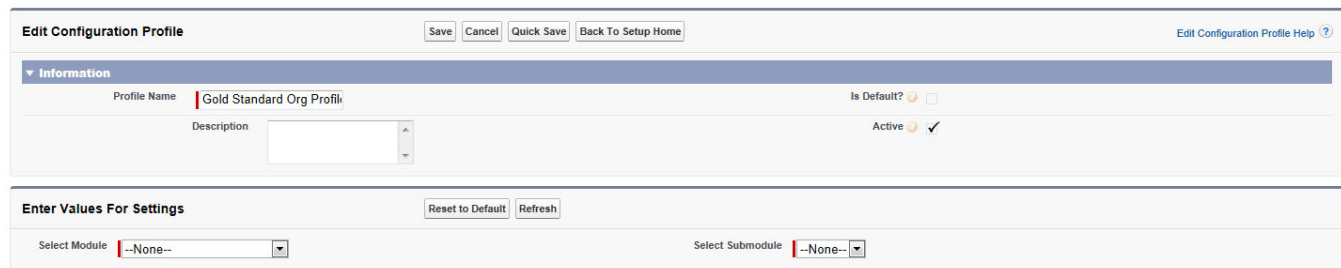
Click **Home > ServiceMax Setup > App Administration > Configuration Profiles** to launch the screen below.



Profile Name	Status	Last Modified By	Last Modified Date
Default	Inactive	jane.doe@2541servicemax.trial.com	11/29/2012 2:45 PM
Gold Standard Org Profile	Active	jane.doe@2541servicemax.trial.com	9/24/2012 3:34 PM

Figure 12: Org-wide Configuration Settings

Select an active profile and click the **Edit** button (see figure below).



Edit Configuration Profile

Profile Name: **Gold Standard Org Profile**

Description:

Is Default?: ☐

Active: ☒

Enter Values For Settings

Select Module: **--None--**

Select Submodule: **--None--**

Figure 13: Edit Configuration Profile

Configuring Calendar Settings

Events shown in the Timeline Calendar for Mobile for Laptops, and in the Schedule of the Calendar for Mobile for iPad, are color-coded. Events with a Work Order or Case attached are color-coded based on their priority (High, Medium, or Low).

To configure iPad Client or ServiceMax Mobile for Laptops settings for Calendar:

1. In the **Select Module** picklist, select **ServiceMax iPad Client**.
2. In the **Select Submodule** picklist, select **Calendar**. The Calendar settings for ServiceMax Mobile are shown in the figure below.

Enter Values For Settings

Reset to Default

Refresh

Select Module

ServiceMax iPad Client

Select Submodule

Calendar

Setting List

Action	Setting ID	Settings Name	Description	Data Type	Values	Default Value	Internal Value	Display Value
<div><div></div><div>Edit</div></div>	SET001	Default color for the WO/Case priority High	Default color for the WO/Case priority High	Text	#F75D59	#F75D59	#F75D59	#F75D59
<div><div></div><div>Edit</div></div>	SET002	Default color for the WO/Case priority Medium	Default color for the WO/Case priority Medium	Text	#ADDFFF	#ADDFFF	#ADDFFF	#ADDFFF
<div><div></div><div>Edit</div></div>	SET003	Default color for the WO/Case priority Low	Default color for the WO/Case priority Low	Text	#C9BE62	#C9BE62	#C9BE62	#C9BE62
<div><div></div><div>Edit</div></div>	SET004	Default color for WO/Case priority other than High, Medium, Low	Default color for WO/Case priority other than High, Medium, Low	Text	#4E8975	#4E8975	#4E8975	#4E8975

Figure 14: Enter Values for Settings (ServiceMax Mobile Calendar)

To configure iPad Client settings for Synchronization:

1. In the **Select Module** picklist, select **ServiceMax iPad Client**.
2. In the **Select Submodule** picklist, select **Synchronization**.

The Synchronization settings for ServiceMax Mobile are shown in the figure below.

Enter Values For Settings Reset to Default Refresh

Select Module ServiceMax iPad Client Select Submodule Synchronization

Setting List









Action	Setting ID	Settings Name	Description	Data Type	Values	Default Value	Internal Value	Display Value
 Edit	SET004	Reference Salesforce Objects to be skipped	Setting defines all the Salesforce Objects that need to be skipped while downloading records.	Text		PartnerNetworkConnection,User,FeedPost,Solution	PartnerNetworkConnection,User,FeedPost,Solution	PartnerNetworkConnection,User,FeedPost,Solution
 Edit	SET001	Background color to indicate sync error for create operation.	Background color to indicate sync errors which occur during creation of new records.	Text	#87AFC7	#87AFC7	#87AFC7	#87AFC7
 Edit	SET002	Background color to indicate sync error for update operation.	Background color to indicate sync errors which occur during update of existing records.	Text	#3EA99F	#3EA99F	#3EA99F	#3EA99F
 Edit	SET003	Background color to indicate sync error for delete operation.	Background color to indicate sync errors which occur during deletion of records.	Text	#B4CFEC	#B4CFEC	#B4CFEC	#B4CFEC
 Edit	SET005	Data batch size	Internal setting used to fetch data in multiple batches. Useful when data volumes are high. Reduce this if the default configuration results in Salesforce governor limit exception.	Number	2500	2500	2500	2500
 Edit	SET006	Record ID batch size	Internal setting used to fetch Record IDs in multiple batches. Useful when data volumes are high. Reduce this if the default configuration results in Salesforce governor limit exception.	Number	35000	35000	35000	35000
 Edit	SET007	Meta data size	Internal setting used to fetch object definition. Useful when objects have large number of custom fields. Increase this if the default configuration results in Salesforce governor limit exception.	Number	50000	50000	50000	50000
 Edit	SET008	Skip inaccessible fields	If this setting value is True, only the fields accessible to the user will be retrieved during synchronization for download to iPad.	Boolean	True- -False	False	False	False

Figure 15: Enter Values For Settings (ServiceMax Mobile Synchronization)



Note: Do NOT edit the values of the settings for submodule Service Report using this Edit Configuration Profile-Enter Values For Settings page. The Service Report options need to be configured through the Setup iPad Client page only.

Service Report Logo Change on the Home Page

To change the logo on a Service Report in Salesforce.com:

1. Create an image file with the following logo.

- Name = ServiceMax_iPad_CompanyLogo.
 - Format = PNG only.
 - Maximum dimensions allowed = 600 (width) x 250 (height).
 - Minimum resolution required = 72 dpi.
2. Upload the file to the **ServiceMax for iPad** folder under **Documents**. Create the folder if it does not already exist.

Setting Up Chatter Feeds

There are three main configuration areas for setting up Chatter feeds on Products in the iPad application as described below: Salesforce settings, Troubleshooting setting, and iPad Chatter settings.

To configure Salesforce settings:

1. Access Salesforce online through a browser.
2. Go to Salesforce **Settings**.
3. Go to **App Setup > Customize > Chatter > Feed Tracking**.
4. From the list of objects, select **Product**.
5. Check the **Enable Feed Tracking** checkbox.
6. Check the checkbox next to any field that you want automatically reported on in the Chatter field when a change occurs in that field.

To configure Troubleshooting settings:

1. Access Salesforce online through a browser.
2. Go to **ServiceMax Setup**.
3. Go to **Service Flow Manager > SFM Transaction & Docs Designer**.
4. Click **Go**.
5. Select work order view transaction under Custom SFM Transactions that is used in your implementation.
6. Go to the **Screen Designer** tab.

7. Click anywhere in the white space around the **Save, Quick Save, New, Reset,** and **Delete** icons (this brings up the Properties for Page settings).
8. Check the checkbox next to **Enable Troubleshooting**.

To configure iPad Chatter settings:

1. Access Salesforce online through a browser.
2. Go to **ServiceMax Setup**.
3. Go to **Mobile & Offline > Mobile Configuration**.
4. Click **Go**.
5. Select the Profile that is used for your mobile user.
6. Click the **Settings** tab.
7. Update the Chatter download settings to meet your needs.

To add your photo to the product chatter feed:

1. In Salesforce, create a new folder under Documents called **ServiceMax for iPad**. Select the **This folder is accessible by all users** setting.
2. Create a new document with name as your fully qualified user name (for example, yourlogin@yourcompany.com).
3. Upload your photo in PNG format. Note that only PNG format is supported.
4. Save it in the folder created in Step 1.

SERVICEMAX OFFLINE CLIENT CONFIGURATION

MANAGE SERVICEMAX OFFLINE PROFILES

Overview

ServiceMax Offline profile represents a collection of datasets and their attributes, and can be associated with one or more Salesforce profiles. An offline profile not only drives the end user experience in ServiceMax Offline Client, but also the type and collection of data that is available to the user in Offline mode. An unlimited number of Offline profiles can be created for an organization.



Note: The default offline profile is configured to only include work orders.

Offline Configuration Model

A clear understanding of various configuration aspects of ServiceMax helps you configure the offline application more efficiently. The picture below illustrates the relationship between various logical entities involved in ServiceMax configuration and how they drive end user experience. Note that these are logical, not physical entities.

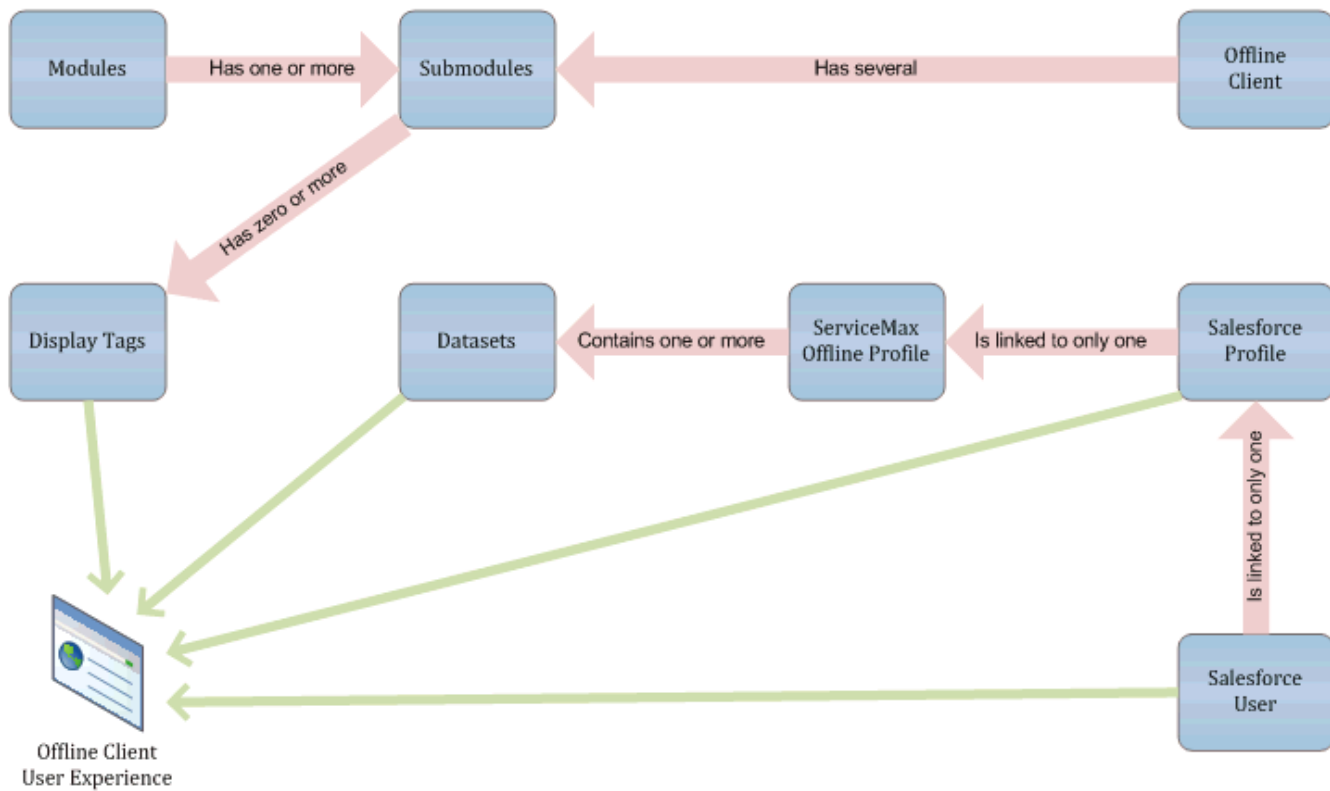


Figure 1: ServiceMax Offline Configuration Model

Access and Permissions

Actions	User Permissions needed
To view offline profiles:	"Read" on ServiceMax Processes and ServiceMax Config. Data
To create or edit offline profiles:	"Create" and "Edit" on ServiceMax Processes and ServiceMax Config. Data
To delete offline profiles:	"Delete" on ServiceMax Processes, ServiceMax Config. Data, Offline Object, Offline Dataset Expression, and Offline View

Offline Client Configuration Settings

Setting Name	Default Value
SET002	Maximum length allowed for SOQL queries made from ServiceMax Offline. Before increasing the value of this setting, contact Salesforce to get the limit increased for your Org.

Click **Home > ServiceMax Setup > Mobile & Offline** in the Manage Offline Profiles area, click the **Go** button to view Offline Profile home page as shown below:

Offline Profiles New Edit Clone Delete Activate Deactivate Back to Setup Home				Offline Profiles Help ?
<input type="checkbox"/> Profile Name	Status	Created By	Last Modified Date	
<input type="checkbox"/> Hardware Technicians	Active	john.smith@dell.com	7/9/2010 2:36 PM	
<input type="checkbox"/> CA Tech	Active	john.smith@dell.com	7/9/2010 2:35 PM	
<input type="checkbox"/> NY Technician	Active	john.smith@dell.com	7/9/2010 2:37 PM	
<input type="checkbox"/> CA Technician (HS)	Active	john.smith@dell.com	7/9/2010 2:37 PM	
<input type="checkbox"/> Default	Active	john.smith@dell.com	6/25/2010 11:06 AM	

Figure 2: Offline Profiles Home Page

In the Offline Profiles screen:

- All the available Offline Profiles are listed.
- Click **New** to create a new offline profile from scratch.
- Click **Edit** to edit datasets in an existing offline profile.
- Click **Clone** to create a copy of an existing offline profile with all its datasets.
- Click **Delete** to delete an offline profile and its datasets.
- Click **Activate** to make an offline profile available for use. You can associate Salesforce profiles with Active offline profiles only.
- Click **Deactivate** to remove an offline profile from use but still keep it for the administrator's reference.
- Click **Back to Setup Home** to return to the ServiceMax home page.

Offline Profile Fields

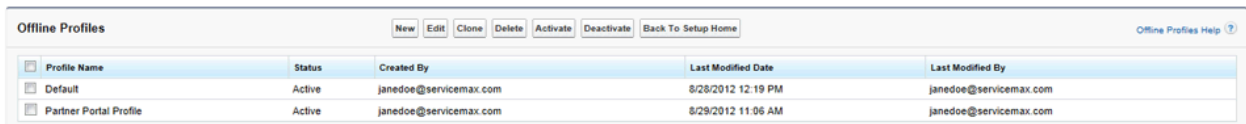
Field	Description
Profile Name	Name of the offline profile.
Description	Detailed description of the offline profile.
Active	Indicates if this profile is Active or not. Users with inactive profiles will not be allowed to login to Salesforce or synchronize data from ServiceMax offline client.
Enable Task	Indicates if users of this profile require the task feature to be enabled in Offline client. If unchecked, task functionality is disabled.
Enable Calendar	Indicates if users of this profile require the calendar feature to be enabled in offline client. If unchecked, calendar functionality is disabled.
Enable Activity Tracking On	List of offline activities that should be tracked automatically for users of this profile.
Access Permission	Salesforce profile linked to the offline profile.
Remove Events and Tasks Older Than	Number of days for removing events and tasks. (Default is 10 days).
Remove Unused Related Records Older Than	Number of days for removing unused related records (other than events and tasks). Default is 30 days.

Field	Description
Validate User Credential Every	Number of days for user credential validation.
Allow API Access	Indicates if users have access to API.
Authentication Key For	Designates an Authentication key for a user.

Creating/Editing Offline Profiles

To create or edit an offline profile:

1. Click **Home > ServiceMax Setup > Mobile & Offline** in the Manage Offline Profiles area, click the **Go** button. The Offline Profile screen displays.

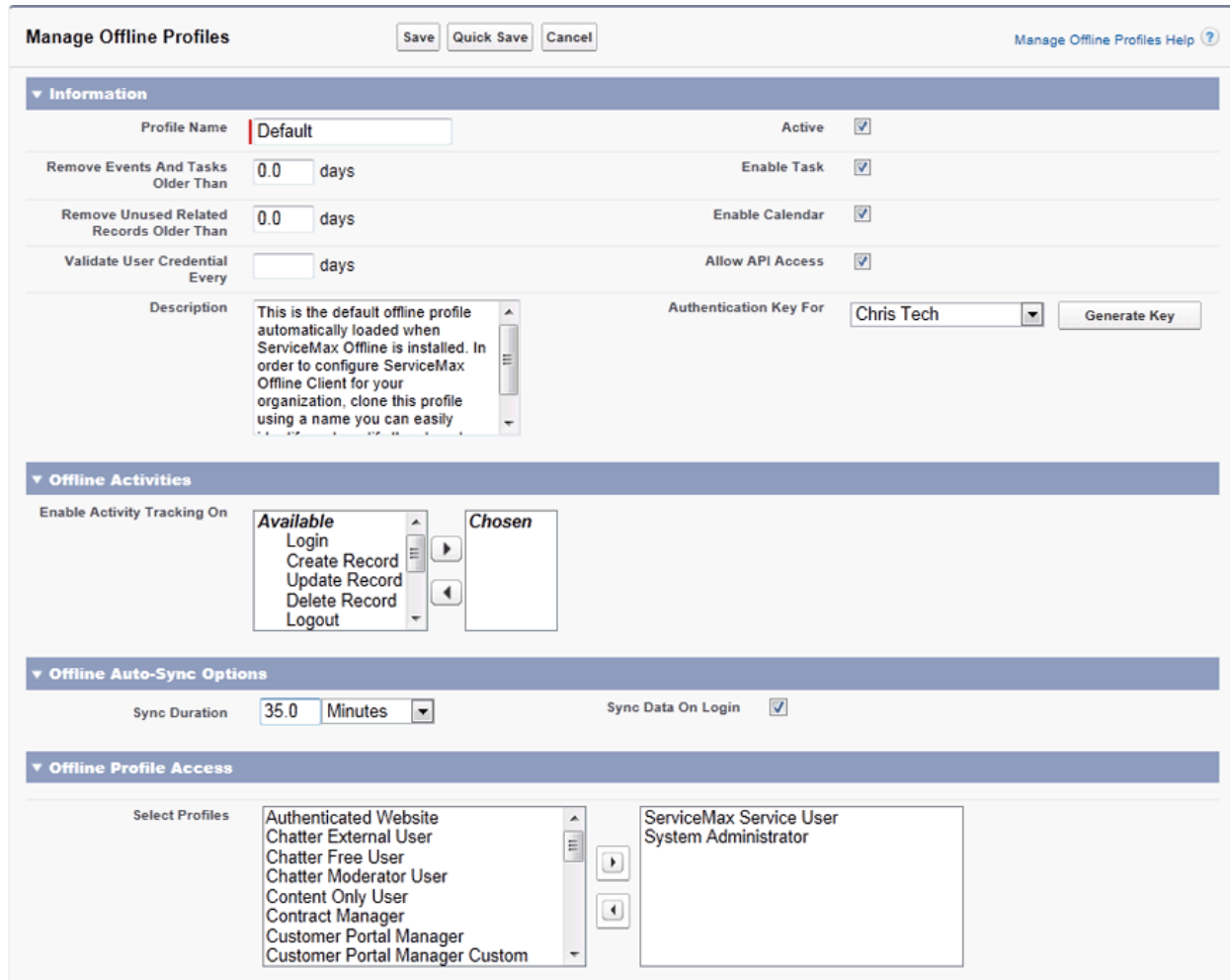


Offline Profiles				
New Edit Clone Delete Activate Deactivate Back To Setup Home				
Offline Profiles Help ?				
<input type="checkbox"/> Profile Name	Status	Created By	Last Modified Date	Last Modified By
<input type="checkbox"/> Default	Active	janedoe@servicemax.com	8/28/2012 12:19 PM	janedoe@servicemax.com
<input type="checkbox"/> Partner Portal Profile	Active	janedoe@servicemax.com	8/29/2012 11:06 AM	janedoe@servicemax.com

Figure 3: Offline Profiles

2. Click **New** or select an existing profile by checking the **Select** checkbox in the list and then clicking **Clone**. Alternatively, to edit an existing profile, select the profile and

then click **Edit**. New and Clone modes display the same screen as shown below.



The screenshot shows the 'Manage Offline Profiles' interface. At the top, there are buttons for 'Save', 'Quick Save', and 'Cancel', along with a 'Manage Offline Profiles Help' link. The interface is divided into several sections:

- Information:** Contains fields for 'Profile Name' (set to 'Default'), 'Active' (checked), 'Remove Events And Tasks Older Than' (0.0 days), 'Enable Task' (checked), 'Remove Unused Related Records Older Than' (0.0 days), 'Enable Calendar' (checked), 'Validate User Credential Every' (blank days), 'Allow API Access' (checked), 'Description' (a text area with a default message), and 'Authentication Key For' (set to 'Chris Tech' with a 'Generate Key' button).
- Offline Activities:** Includes 'Enable Activity Tracking On' and a list of activities (Login, Create Record, Update Record, Delete Record, Logout) that can be moved from 'Available' to 'Chosen'.
- Offline Auto-Sync Options:** Features 'Sync Duration' (35.0 Minutes) and 'Sync Data On Login' (checked).
- Offline Profile Access:** Shows 'Select Profiles' with a list of roles (Authenticated Website, Chatter External User, Chatter Free User, Chatter Moderator User, Content Only User, Contract Manager, Customer Portal Manager, Customer Portal Manager Custom) and a list of users (ServiceMax Service User, System Administrator).

Figure 4: Manage Offline Profiles Screen

3. Enter a unique profile name. Remember that the profile name must be alphanumeric and can contain spaces.
4. Enter a Profile Description.
5. Enter the number of days for removing events and tasks in the **Remove Events And Tasks Older Than** text box. If you do not specify the number of days, the default is 10 days.
6. Enter the number of days for removing unused related records (other than events and tasks) in the **Remove Unused Related Records Older Than** text box. If you do not specify the number of days, the default is 30 days.

7. In the **Validate User Credential Every** text box, enter the number of days a user must validate his or her credential.



Note: You must define the number of days a user will have access to Offline Client application via the **Validate User Credential Every** checkbox. This login validity is required for a user to access the Offline Client after his or her login validity has expired. If you have not set up Validate User Credential for a certain number of days, the default is 9999 days.

8. To activate the profile, check the **Active** checkbox.
9. To activate tasks, check the **Enable Task** checkbox.
10. To enable the calendar, check the **Enable Calendar** checkbox.
11. Check the **Allow API Access** checkbox to enable users to generate an API token. This token allows external applications to use ServiceMax Offline data access API.
12. Obtain an Authentication Key for a user. This is step not needed for setting up an offline profile. This step is required if a user is locked out of the Offline Client application. If such a scenario occurs, he or she must request an Authentication Key from you to login to the Offline Client application. Follow the substeps below to generate an Authentication Key.
 - a. Select a user from the appropriate picklist.
 - b. Click the **Generate Key** button.
 - c. A unique Authentication Key displays in the pop-up window. Click **OK**.
13. In the Offline Activities section, select the activities you want to track for users of this profile.
14. In the Offline Auto-Sync Options area, select an option from the **Sync Duration** picklist (minutes, hours, days) to define the upload and download frequency of synchronization.



Note: The maximum duration is 24 days. If you exceed the maximum number of days, synchronization will still occur, but you will see an error message in the Offline Client application prompting you to change the duration in the ServiceMax Suite application and to download configuration.

15. In the **Sync Duration** text box, enter the number of corresponding minutes, hours, or days you would like the Offline Client to prompt synchronization. The default setting for Sync Duration is one day.
16. Check the **Sync Data On Login** checkbox if you would like the Offline Client to perform synchronization upon launching ServiceMax Offline. If you do not check this checkbox, the ServiceMax Offline Client will not perform an automatic synchronization upon launch. By default, the **Sync Data On Login** checkbox is checked.
17. In the Access Permission section, select the Salesforce profiles whose users will need offline access. A Salesforce profile can be linked to one Offline Profile only. If the selected Salesforce Profile is already linked to a different offline profile, you will get a warning message. Upon saving, the selected Salesforce profile is automatically unlinked from any other offline profiles it is linked to.
18. To save and continue with creation of datasets for the offline profile, click **Quick Save**.
19. To save the offline profile and return to the previous screen, click **Save**. The dataset is displayed in the Edit mode as shown below:

Manage Offline DataSets				
Add Dataset Edit Delete Tab Order				
<input type="checkbox"/> Object Name	Use Object As Home Tab	Allow Tab In Offline?	Allow Upload?	Ownership Limit
<input type="checkbox"/> Contact	<input type="checkbox"/>	✓	✓	All Records
<input type="checkbox"/> Work Order	<input type="checkbox"/>	✓	✓	All Records

Figure 5: Manage Offline DataSets Screen

20. To create a new dataset, click **Add Dataset**.
21. To edit an existing dataset, click **Edit**.
22. To delete one or more datasets from a profile, check the required records using the checkbox and then click **Delete**.
23. To specify the default tab order for users of this profile, click **Tab Order**. In the screen

that follows, use the button to arrange the tab order for the datasets and then click **Done**.

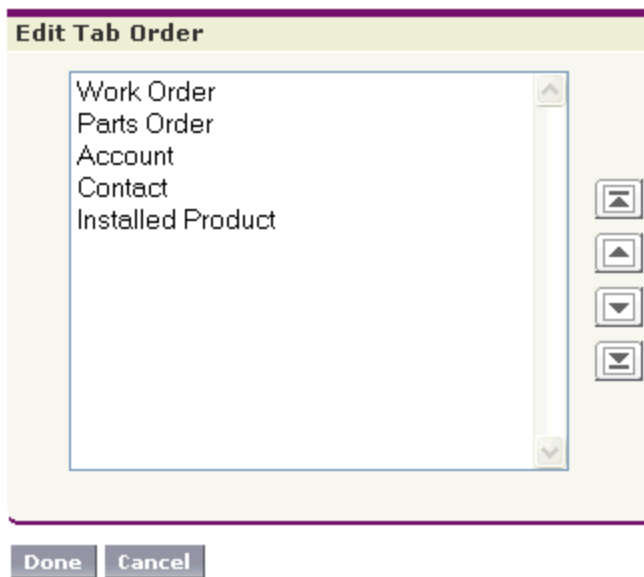


Figure 6: Edit Tab Order Screen

See [Manage Datasets](#) for more information about datasets and their attributes.

Deleting Offline Profiles



Note: Active offline profiles cannot be deleted. Also, offline profiles that are linked to Salesforce profiles cannot be deleted.

To delete one or more profiles:

1. Select the profiles in the profiles list to be deleted by checking their **Select** checkbox.
2. Click **Delete**. The selected rows are deleted and the profiles list is refreshed.

See Also:

[Manage Datasets](#)

[Manage Document Templates](#)

[Sample Offline Configuration](#)

Report Builder

MANAGE DATASET

Overview

A dataset defines the criteria used to download object data for ServiceMax offline users. A dataset typically represents high-level Salesforce objects such as Account, Contact, Work Order, and so on. Datasets can be defined for standard and custom objects.

Access and Permissions

Action	User Permissions needed
To view datasets:	"Read" on ServiceMax Config Data, Offline Object, Offline Dataset Expression, and Offline View
To create or edit datasets:	"Create" and "Edit" on ServiceMax Config Data, Offline Object, Offline Data Expression, and Offline View
To delete data-sets:	"Delete" on ServiceMax Config Data, Offline Object, Offline Data Expression, and Offline View

From the Manage Offline Datasets section of an Offline Profile record, click **Add Dataset** or **Edit** by choosing the existing data set. The Define Dataset screen appears with four sections as described below.

General Information

Define Dataset in Profile: Default

Save

Quick Save

Cancel

Manage Datasets Help ?

Object Name

Account

Ownership Limit

My Records

Allow Upload Data from Offline

☒

Allow Attachments

☐

Allow Tab in Offline

☒

Set as Home Tab

☐

Include Child Objects

☐

Retain old unused Related Records

☐

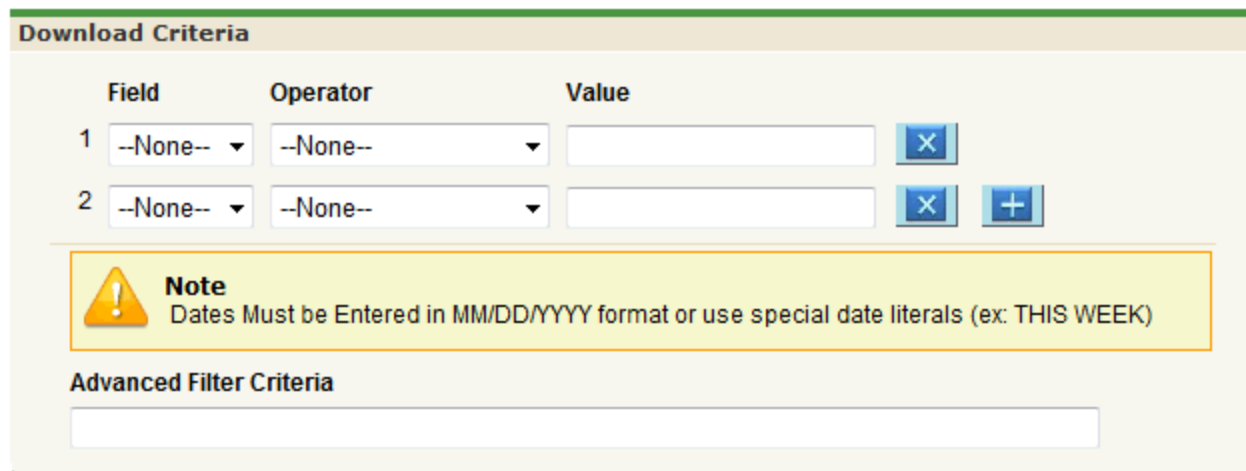
Allow API Access

☒

Figure 1: Define Dataset - General Information Section

The General Information section is used to identify the object for which you intend to define the dataset. All Salesforce object names available for use are displayed including custom objects created for your ServiceMax implementation.

Download Criteria



The screenshot shows the 'Download Criteria' section of a web interface. It features a table with three columns: 'Field', 'Operator', and 'Value'. There are two rows, numbered 1 and 2. Each row has a dropdown menu for 'Field' (currently showing '--None--'), a dropdown menu for 'Operator' (currently showing '--None--'), and a text input field for 'Value'. To the right of each 'Value' field is a blue 'X' button. To the right of the second row's 'Value' field is a blue '+' button. Below the table is a yellow box with a warning icon and the text: 'Note: Dates Must be Entered in MM/DD/YYYY format or use special date literals (ex: THIS WEEK)'. At the bottom of the section is a label 'Advanced Filter Criteria' followed by a long text input field.

	Field	Operator	Value
1	--None--	--None--	<input type="text"/>
2	--None--	--None--	<input type="text"/>

Note
Dates Must be Entered in MM/DD/YYYY format or use special date literals (ex: THIS WEEK)

Advanced Filter Criteria

Figure 2: Define Dataset - Download Criteria Section

In this section, you can enter basic and advanced criteria for selecting data from the object. The criteria can be applied on any field in the object selected above. For date fields, you can also use special date literals such as THIS WEEK or TODAY that are supported by Salesforce query language. In addition, you can use advanced criteria to group the conditions.

Lookup to Related Objects

Related Objects	
Salesforce Object Name	Download Related Record
Account	<input checked="" type="checkbox"/>
Contact	<input checked="" type="checkbox"/>
Group	<input type="checkbox"/>
Installed Product	<input type="checkbox"/>
Location	<input checked="" type="checkbox"/>
Product	<input checked="" type="checkbox"/>

Figure 3: Define Dataset - Related Objects Section

This section lists all the objects referenced by the selected object. When downloading data for this dataset, you can select to include the related records even if the related object does not have a dataset definition or if the related record does not match the dataset download criteria.

Default View in Offline

Default Offline View	
Alternate Account	Account
Asset Tag	City
Created By ID	Contact
Created Date	Country
Currency ISO Code	Product
Date Installed	Serial/Lot Number
Date Ordered	
Date Shipped	

Figure 4: Define Dataset - Default Offline View Section

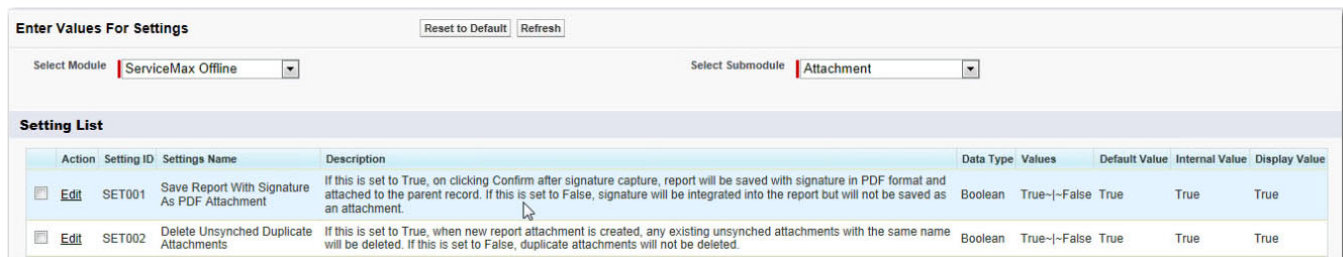
In this section, if the object has a tab enabled, you can select the columns displayed by default in the offline tab.

Configuration Settings

Configuration settings are managed by your ServiceMax administrator using the ServiceMax Setup screens.

Signature Capture Settings

These settings provide options for managing PDF attachments for signature capture reports as listed below. These settings are located under the module, ServiceMax Offline and the sub module, Attachment. See figure below.



Action	Setting ID	Settings Name	Description	Data Type	Values	Default Value	Internal Value	Display Value
<input type="checkbox"/> Edit	SET001	Save Report With Signature As PDF Attachment	If this is set to True, on clicking Confirm after signature capture, report will be saved with signature in PDF format and attached to the parent record. If this is set to False, signature will be integrated into the report but will not be saved as an attachment.	Boolean	True- -False	True	True	True
<input type="checkbox"/> Edit	SET002	Delete Unsynchronized Duplicate Attachments	If this is set to True, when new report attachment is created, any existing unsynchronized attachments with the same name will be deleted. If this is set to False, duplicate attachments will not be deleted.	Boolean	True- -False	True	True	True

Figure 5: Signature Capture Settings

- **Setting ID SET001:** The option to save or not save reports with signatures as PDF attachments.
 - Set this option to **True** if you want the report with the signature saved in PDF format and attached to the parent record.
 - Set this option to **False** if you want the signature integrated into the report, but not saved as an attachment.
- **Setting ID SET002:** The option to delete unsynchronized duplicate attachments.
 - Set this option to **True** to delete any existing unsynchronized attachments (with the same name) when a new attachment is created.
 - Set this option to **False** if you do not want duplicated attachments deleted.

Attachment Size Setting

This setting provides an option to set the maximum size of attachments allowed in the ServiceMax Offline Client. This setting is located under the module, Common and the sub mod-

ule, Global Settings.

GBL012	Size of Attachment in ServiceMax Offline	Max allowed size of attachment in ServiceMax Offline in kilo bytes.	Number	2048	Global	Global
--------	--	---	--------	------	--------	--------

Figure 6: Attachment Size Settings

- **Setting ID GBL012:** The option to set the size limit for attachments in kilo bytes. See figure below.
 - The default size limit for attachments is 2048 KB.

Manage Offline Profiles Settings

This setting indicates the maximum size of the Offline database. See figure below.

Enter Values For Settings

Select Module

ServiceMax Offline

Select Submodule

Manage Offline Profiles

Setting List

Setting ID	Settings Name	Description	Data Type	Values	Default Value	Internal Value	Display Value
SET001	Maximum size of Offline Database	Maximum size of Offline Database (in MB; 0 if unknown)	Number		256	256	256

Figure 7: Manage Offline Profile Settings

- **SET001:** The option to set the maximum size of the Offline Database in MB per your volume of data.
 - The minimum default value is 256 MB.
 - The maximum default value is 4000 MB.

Dataset Fields

Field	Description
Object Name	Name of the Salesforce object this dataset represents.
Ownership Limit	Scope of records to download to ServiceMax offline. My Records will download only records owned by the offline user. All Records will download all the records accessible to the offline user.

Field	Description
Allow Upload Data from Offline	Indicates if data can be modified for this dataset in Offline client and can be uploaded to ServiceMax online. If unchecked, offline users can only view data from this dataset.
Allow Tab in Offline	Indicates if this dataset requires a tab in Offline.
Set as Home Tab	Indicates if this dataset's tab will be the home tab or not. This can be enabled for only one dataset in an Offline profile.
Include Child Objects	Indicates if the objects child objects, if applicable, need to be included in the dataset. Child objects can be included through their parent objects only.
Field	Field from the object to be used in download criteria.
Operator	An expression operator to be applied on the field value. For example, Equals will perform an exact match, Contains will perform a wild card match, and so on.
Value	A specific value to which the field data is matched. For date values, you can use Salesforce special literals such as TODAY, THIS WEEK, NEXT WEEK, and so on.
Advanced Filter Criteria	A logical expression that represents the combination of download criteria. For example, if there are 4 criteria entered, you can use (1 AND 2) OR (3 AND 4) here
Salesforce Object Name	Name of the Salesforce object that is referenced in the selected dataset.
Download Related Record	Indicates if data for this related lookup field must be downloaded into offline along with this dataset.
Retain Old Unused Related Records	Check box for the option of retaining old, unused related records.

Creating/Editing Datasets

To create a new dataset:

1. Click **Add Dataset** from the Manage Datasets section of an offline profile. Alternatively, to edit an existing dataset, check the dataset using the checkbox in the record and then click **Edit**.

2. Select the **Object Name** and **Ownership Limit**. If an object has child objects, you can optionally include the child objects in the dataset by checking the **Include Child Objects** checkbox. Child objects can be included through their parent objects only.
3. Based on the dataset requirements, indicate if this dataset requires a tab in Offline client, if the tab should be set as the **Home** tab, and if data can be uploaded for this dataset from offline.
4. If you want to Allow API access at the object level, check the **Allow API Access** checkbox.
5. If additional download criteria are applicable, enter the criteria in the Download Criteria section. For example, you may want users of this profile to download only Accounts in a certain state or city.
6. To add more criteria rows, click **Add Row**. A new empty row will be appended to the bottom of the criteria list.
7. To delete one of the existing criteria rows, click **Delete Row** corresponding to the row.
8. Use Advanced Filter Criteria to build an advanced expression of download criteria.
9. To retain old, unused related records, check the **Retain Old Unused Related Records** checkbox.
10. In the Related Objects section, select the lookup (reference) records that you wish to download with this dataset. For example, if you are defining a dataset for Work Orders, you may want to include Case, Account, Contact and Installed Product as related records. It is recommended to include any lookup fields that are mandatory in the user's page layout. If Case is a mandatory field on the Work Order page layout, make sure to include Case in the Work Order dataset.
11. If you have enabled an offline tab for this dataset, in the Default Offline View section, select object columns that form the default tab view. If no columns are selected here, the default view in offline will show Name, Created Date, Created By, Last Modified Date, and Last Modified By.
12. To save and continue modifications to the same dataset, click **Quick Save**.
13. To save the dataset and return to the offline profile screen, click **Save**.



Note: Some standard objects such as Cases and Opportunities are available for use in Dataset definition only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Deleting Datasets

To delete one or more datasets:

1. Select the records to be deleted by checking their checkbox.
2. Click **Delete** and then click **OK** when prompted for confirmation. The selected datasets will be deleted and the dataset list will be refreshed.

See Also:

[Manage Datasets](#)

[Manage Document Templates](#)

[Sample Offline Configuration](#)

[Report Builder](#)

MANAGE DOCUMENT TEMPLATES

Overview

ServiceMax client supports the generation of output documents. For example, offline users can generate a Service Report from the Work Order screen or a Customer Parts Order Report from Parts Order screen. The generated documents can be printed, saved in many formats, or emailed. These reports are generated using predefined document templates uploaded to Salesforce by ServiceMax administrators, and distributed to offline users through configuration download.

Building Document Templates

The ServiceMax offline package contains sample templates for Service Report and Customer Report. This can be launched from the Work Order screen and Parts Order Screen in Offline. To customize these template to suit your organization's needs or to build new templates, you need one of the following tools:

- Microsoft Visual Studio 2008 – an Integrated Development Environment (IDE) from Microsoft
- Crystal Report Designer – application used to design and generate reports

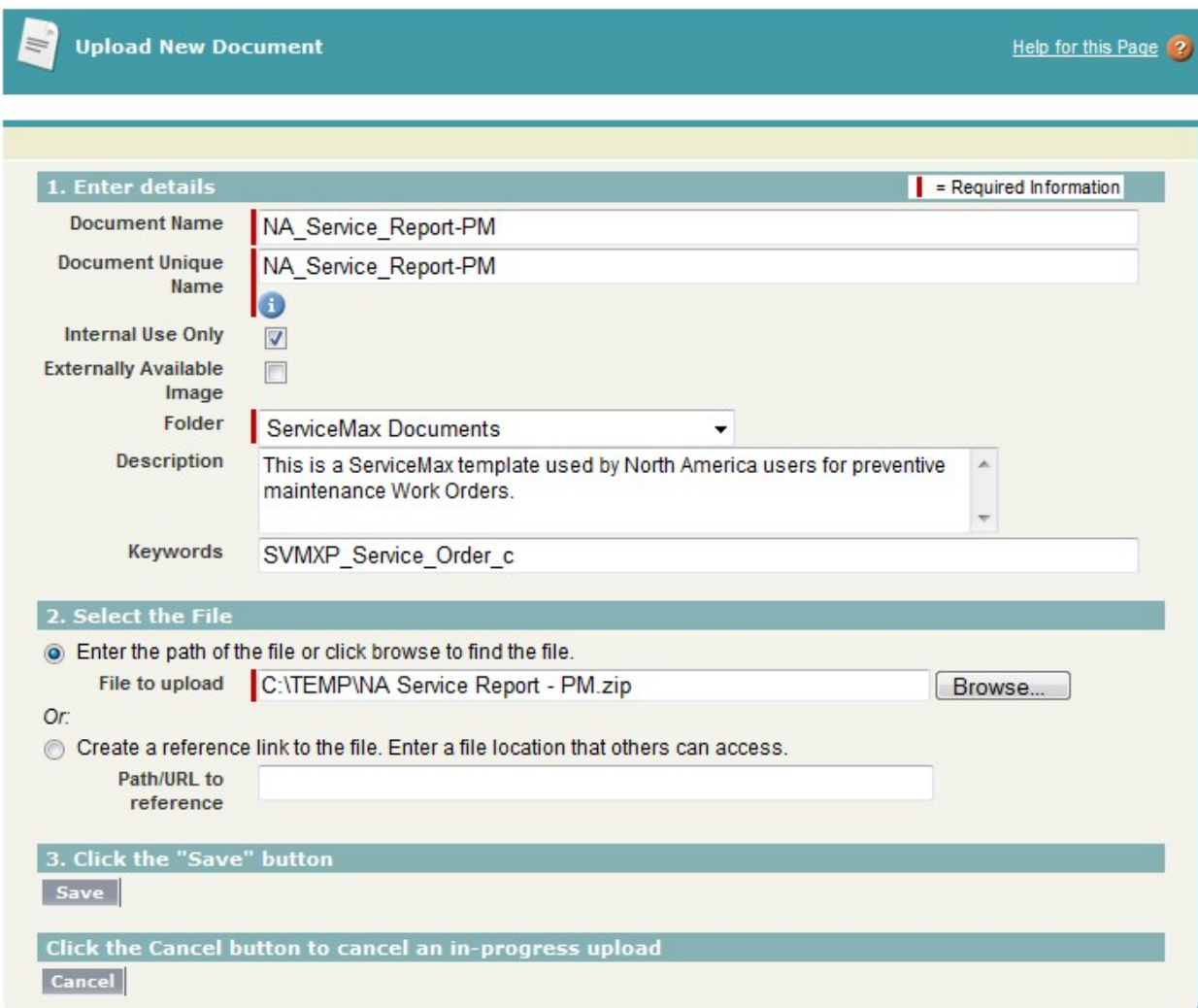
In addition, you also require a good understanding of ServiceMax object model and relationships and a working knowledge of MySql database and SQL (Structured Query Language).

For a quick overview of building the report templates using Visual Studio 2008 or Crystal Report Designer, click [here](#). If you need further assistance or need more information, please contact ServiceMax Professional Services.

Deploying Document Templates

Once you have built a document template and tested it on your offline database, follow these steps to package and deploy it to your users.

1. Create a zip that contains the .rpt file and any other files such as images that the report needs. The name of the zip file should match the display name of the template. For example, if the template name is Germany Service Report, the zip file would be "Germany Service Report.zip".
2. Login to Salesforce online and then click the **Documents** tab.
3. Under the Folder ServiceMax documents, select the folder into which you want to upload your template. If the template will only be used by a subset of your offline users, create a new folder and grant permission to the folder based on Salesforce Role or Public Groups.
4. Click **New Document**. The following screen appears.



Upload New Document [Help for this Page](#)

1. Enter details | = Required Information

Document Name

Document Unique Name

Internal Use Only ☒

Externally Available ☐

Folder

Description

Keywords

2. Select the File

☒ Enter the path of the file or click browse to find the file.

File to upload

Or:

☐ Create a reference link to the file. Enter a file location that others can access.

Path/URL to reference

3. Click the "Save" button

Click the Cancel button to cancel an in-progress upload

Figure 1: Upload New Document Screen

5. Enter the **Document Name**. When users view a record in Offline client, this name appears in the list of available templates.
6. Enter a detailed description.
7. In Keywords, enter the Salesforce API name of the object this template is associated with. For example, if this template generates a service report from Work Order object, enter "SVMXP__Service_Order__c."
8. Click **Browse** and then select the ZIP file you created in Step 1.
9. Click **Save**.
10. To download and use this template, instruct your offline users to check the **Download Configuration** checkbox in the Offline login screen. The template will be downloaded to their desktop. When the users view any record from the object associated with this template, the list of templates appear as shown below.

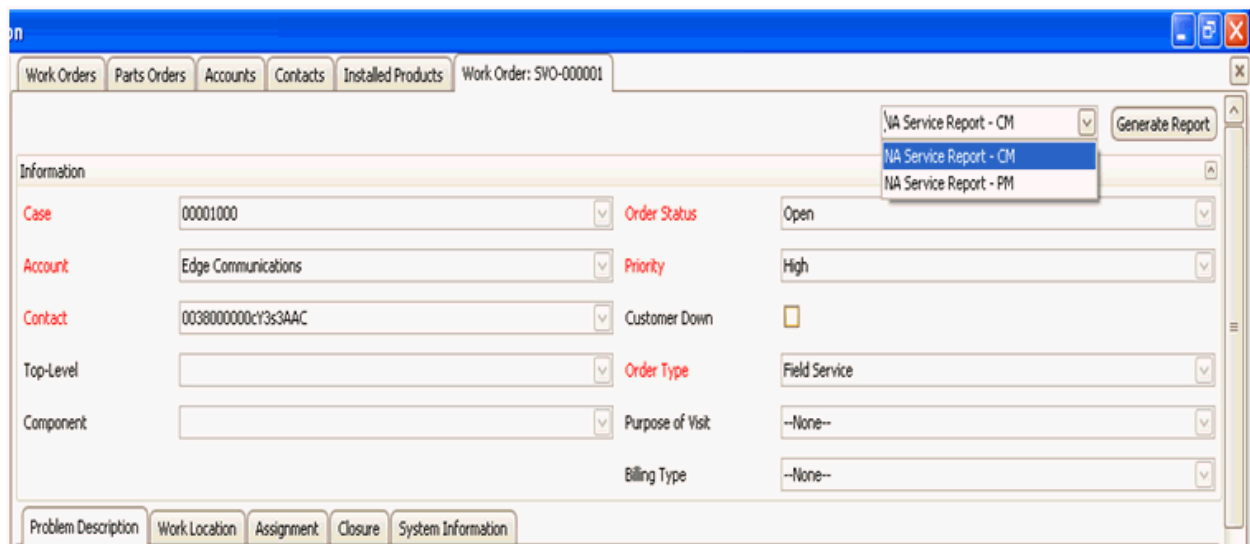


Figure 2: List of Templates

See Also:

[Manage Offline Profiles](#)

[Manage Datasets](#)

[Sample Offline Configuration](#)

[Report Builder](#)

SAMPLE OFFLINE CONFIGURATION

Overview

This section shows an example of how ServiceMax Offline can be configured to meet data-set and access requirements of a sample company ABC, Inc.

Requirements

- ABC has two geographical divisions, Northwest and Northeast
- Within each division, there are teams specializing in laptop and desktop services
- The service management wants Offline access only to the field service technicians
- Team Leads and service managers do not require offline access
- Northwest service manager does not want Laptop technicians to have access to Desktop products
- Northwest service manager wants to know how frequently the technicians login and logout of offline client
- Northeast service manager wants technicians to see all products within the Northeast territory
- Northeast service manager wants to know how frequently the technicians synchronize data from offline client to ServiceMax online

Offline Profile Setup

To meet the above requirements, three ServiceMax offline profiles will be required as shown below. Each profile dictates the scope of data visible to the technicians in the offline

application.

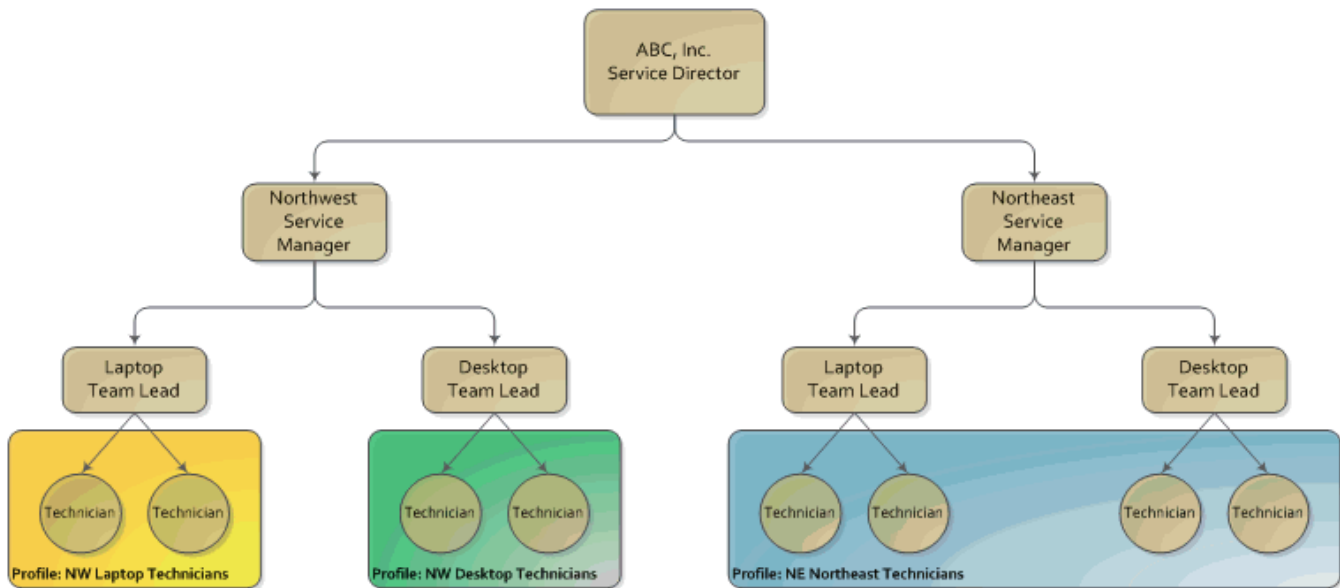


Figure 1: Sample Profile Hierarchy

Offline Datasets

Offline Profile	Datasets	Download Criteria
NW Laptop Technicians	Account	All Records Billing State Equals CA, OR, WA
	Contact	All Records Mailing State Equals CA, OR, WA
	Installed Product	State Equals CA, OR, WA Product Family Equals Laptop
	Work Order	My Records

Offline Profile	Datasets	Download Criteria
NW Desktop Technicians	Account	All Records Billing State Equals CA, OR, WA
	Contact	All Records Mailing State Equals CA, OR, WA
	Installed Product	State Equals CA, OR, WA Product Family Equals Desktop
	Work Order	My Records
NE Northeast Technicians	Account	All Records Billing state equals PA, NY, MA, NJ, NH
	Contact	All Records Contact state equals PA, NY, MA, NJ, NH
	Installed Product	All Records State equals PA, NY, MA, NJ, NH
	Work Order	My Records

Offline Activity Tracking

Offline Profile	Activity Tracking
NW Laptop Technicians	Login Logout
NW Desktop Technicians	Login Logout
NE Northeast Technicians	Start Synch Cancel Synch

Offline Profile Access

Offline Profile	Salesforce Profile
NW Laptop Technicians	NW Laptop Technicians
NW Desktop Technicians	NW Desktop Technicians
NE Northeast Technicians	NE Northeast Technicians



Note: All other ServiceMax users such as service manager, team lead, and director will not have access to ServiceMax offline client.

See Also:

[Manage Offline Profiles](#)

[Manage Datasets](#)

[Manage Document Templates](#)

[Report Builder](#)

REPORT BUILDER

Creating Report Template using Microsoft Visual Studio 2008

This section outlines the high-level steps involved in creating report templates using Microsoft Visual Studio 2008.

To create report templates using Microsoft Visual Studio 2008:

1. Launch Microsoft Visual Studio 2008.
2. Click **File > New Project** to open the New Project window as shown below.

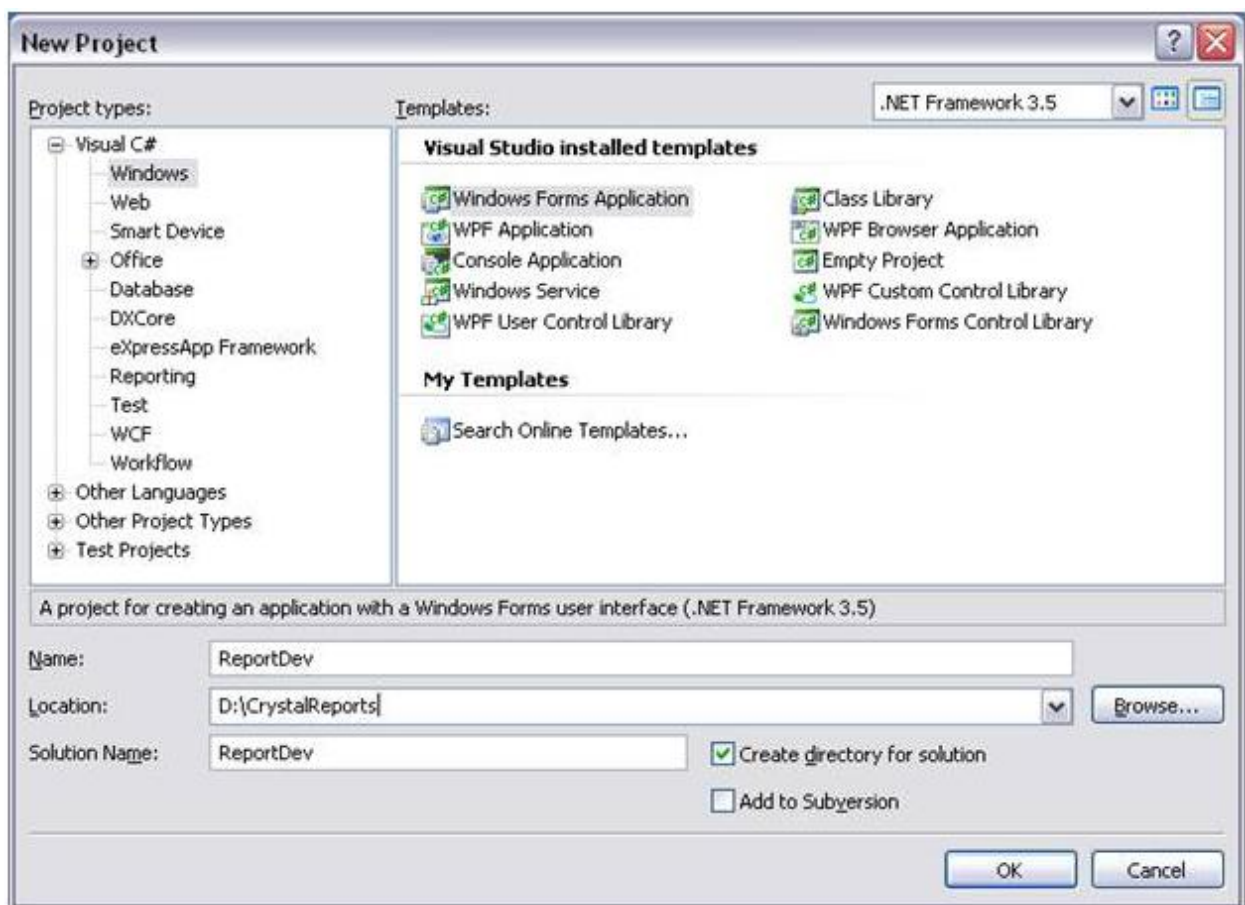


Figure 1: New Project Screen

3. In the Templates section, click **Windows Forms Application**, enter the name of the project and the location of the project in the respective fields, and then click **OK**. This opens the created project.
4. In the Solution Explorer section, right-click the project name, point to **Add** and then click **New Item**. The Add New Item window appears as shown below.

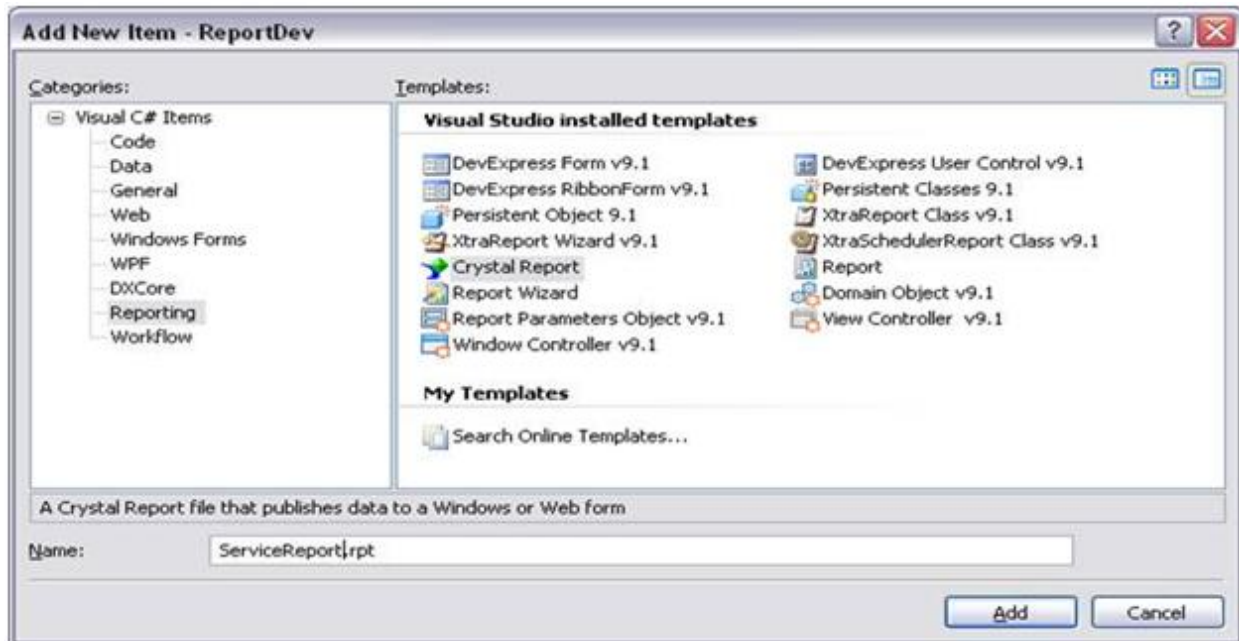


Figure 2: Add New Item Screen

5. If you do not see the Solution Explorer section, on the View menu, click **Solution Explorer** to view it.

6. In the Categories section, click **Reporting** and then click **Crystal Report** in the Templates section. The Crystal Report Gallery window appears.



Figure 3: *Crystal Reports Gallery Screen*

7. Click **As a Blank Project** to go back to the project window.

8. In the Field Explorer section, right-click **Database Fields** and then click **Database Expert**. The Database Expert window appears as shown below.

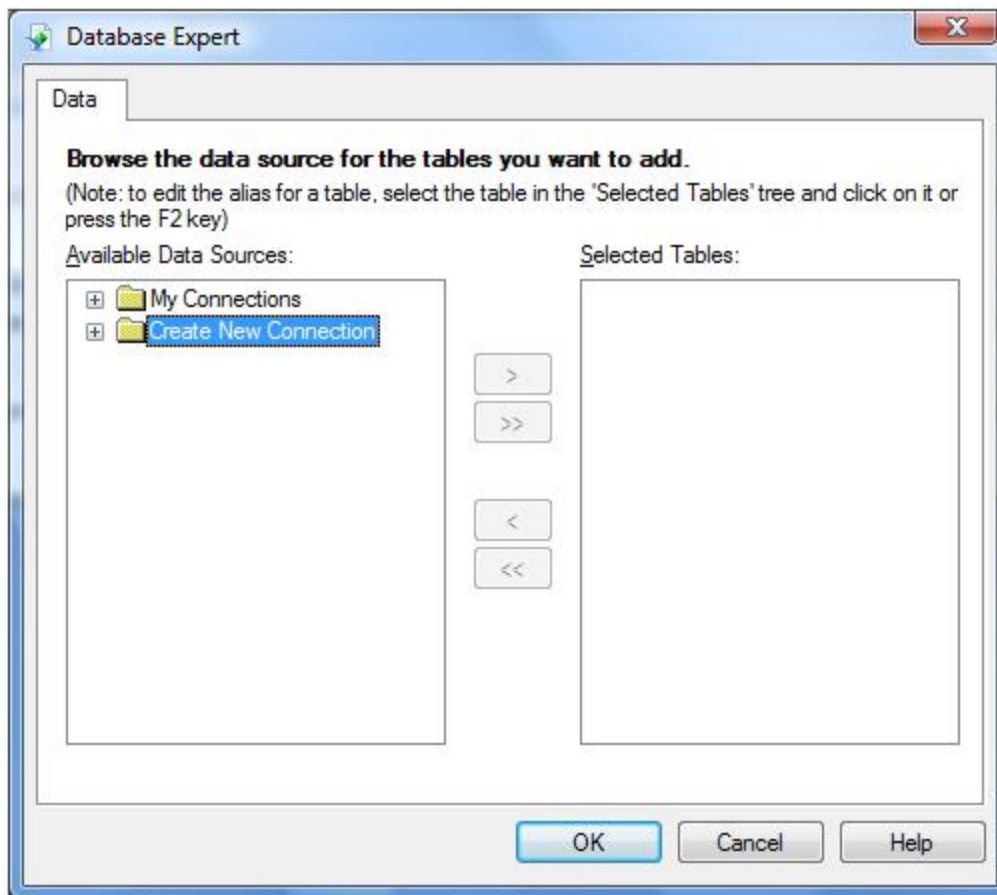


Figure 4: Database Expert Screen

9. If you do not see the Field Explorer section, click the work area to view the Crystal Report menu. In the Crystal Report menu, click **Database Fields** and then click **Database Expert**.
10. Expand the Create New Connection folder by double-clicking it. A list of available connection folders appear.

11. Expand ODBC (RDO) folder by double-clicking it and then double-click **Make New Connection**. The ODBC (RDO) window appears as shown in the figure below.

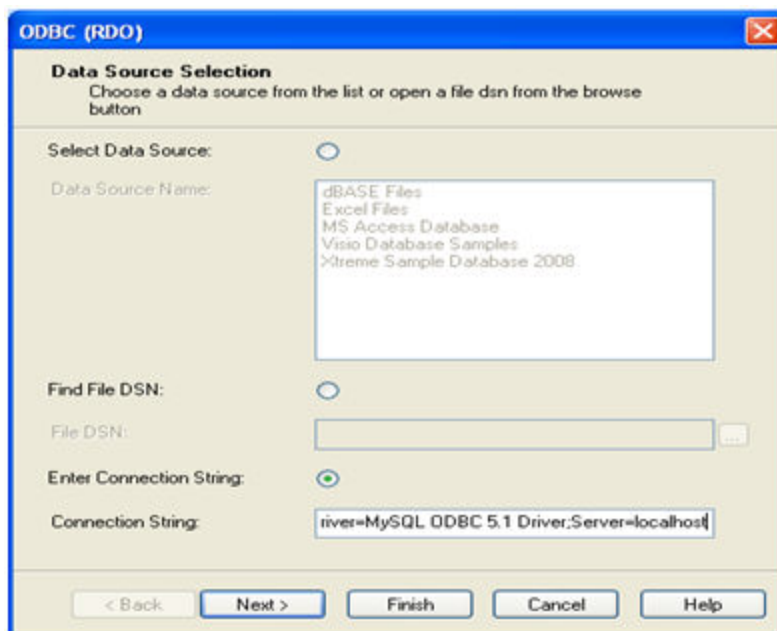


Figure 5: ODBC (RDO) Screen

12. In the ODBC (RDO) window:
 - a. Click **Enter Connection String** to enable the Connection String field.
 - b. In the **Connection String** field, enter **Driver=MySQL ODBC 5.1 Driver;Server=localhost**
 - c. Click **Next** to proceed. The following window appears, with Server and User ID fields pre-populated with the correct values as applicable to your installation of

MySQL.

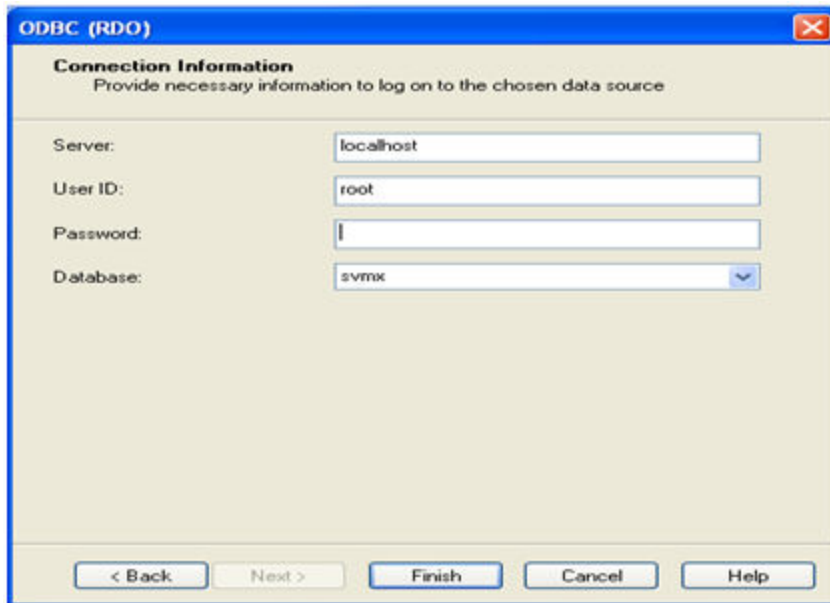


Figure 6: Connection information Screen

- d. Enter the password (this will be **mysql** if MySQL was installed by the ServiceMax Offline application installer, with default values for User ID and password), select **svmx** as the Database, and then click **Finish**.

- 13. Double-click **Add Command** to view the Add Command To Report window.

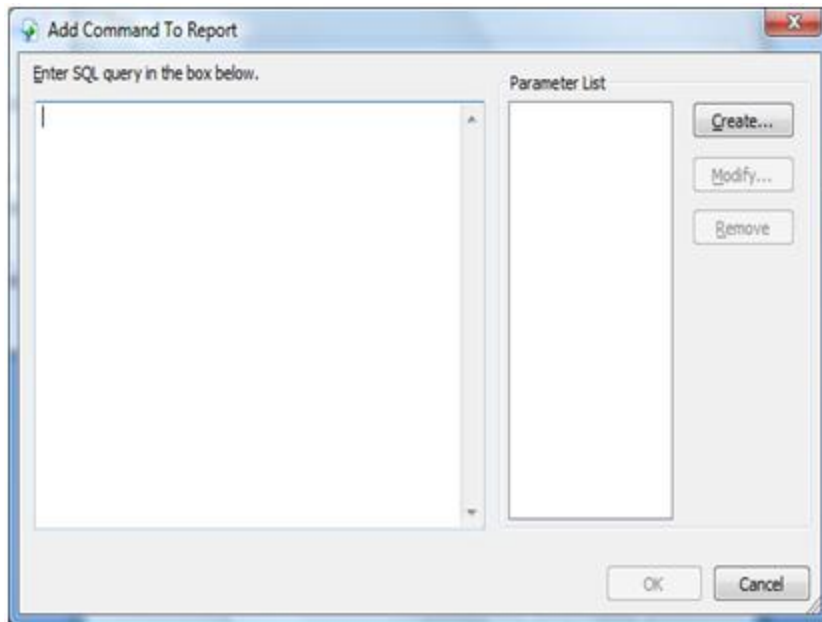



Figure 7: Add Command To Report Screen

14. Write an SQL query to include the fields you want to appear in the report and then click **Create** to open the Command Parameter window. Syntax for querying is given below:

Select <field_names> from <object_name> where <object_name>_Pid={?<Parameter_Name >};



The image shows a 'Command Parameter' dialog box with the following fields and controls:

- Parameter Name:** A text box containing 'accId'.
- Prompting Text:** An empty text box.
- Value Type:** A dropdown menu currently set to 'Number'.
- Default Value:** A text box containing '1'.
- Allows multiple values:** An unchecked checkbox.
- Buttons:** 'OK' and 'Cancel' buttons on the right side.

Figure 8: Command Parameter Screen

15. Enter the **Parameter Name**, select the **Value Type** as **Number** from the picklist, enter a Default Value and then click **OK**. An Enter Values window appears.
16. Enter the **Default Value** and then click **OK** to test the created database connection. If there is any error, the Crystal Report screen appears with error information.
17. Click **OK**.

18. Double-click to open the **Database Fields** folder under Field Explorer in the right navigation pane as shown in the figure below.

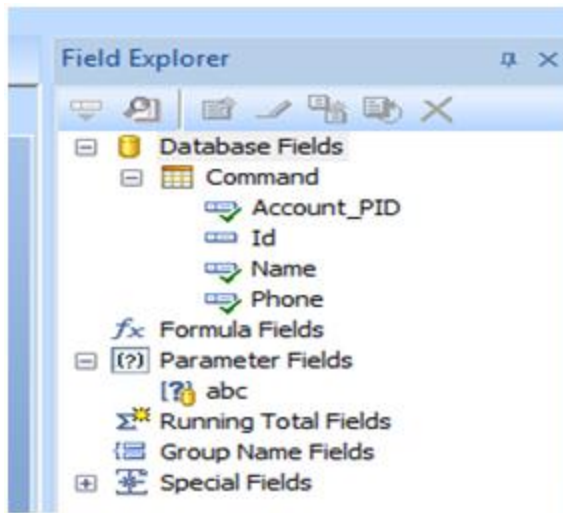


Figure 9: Field Explorer Screen

19. Double-click **Command** to expand it.
20. Drag and drop the fields from Command to the locations like Page Header, Details in the Design mode, where you want the fields to appear in the report.
21. Click the **Main Report Preview** tab to view the created report's preview. Alternatively, you can right-click the report file and then click **Report Preview** to preview the report.
22. Click **File > Save** to save the template in the project folder. Alternatively, you can click **File > Save <report_name> Save As** to save the report in the desired location.

Creating Report Templates Using Crystal Report Designer

This section outlines the high-level steps involved in creating report templates using Crystal Report Designer.

To create report templates using Crystal Report Designer:

1. Start the Crystal Report application and then click **File > New > Blank Report....** A Database Expert window appears as shown in the figure below.

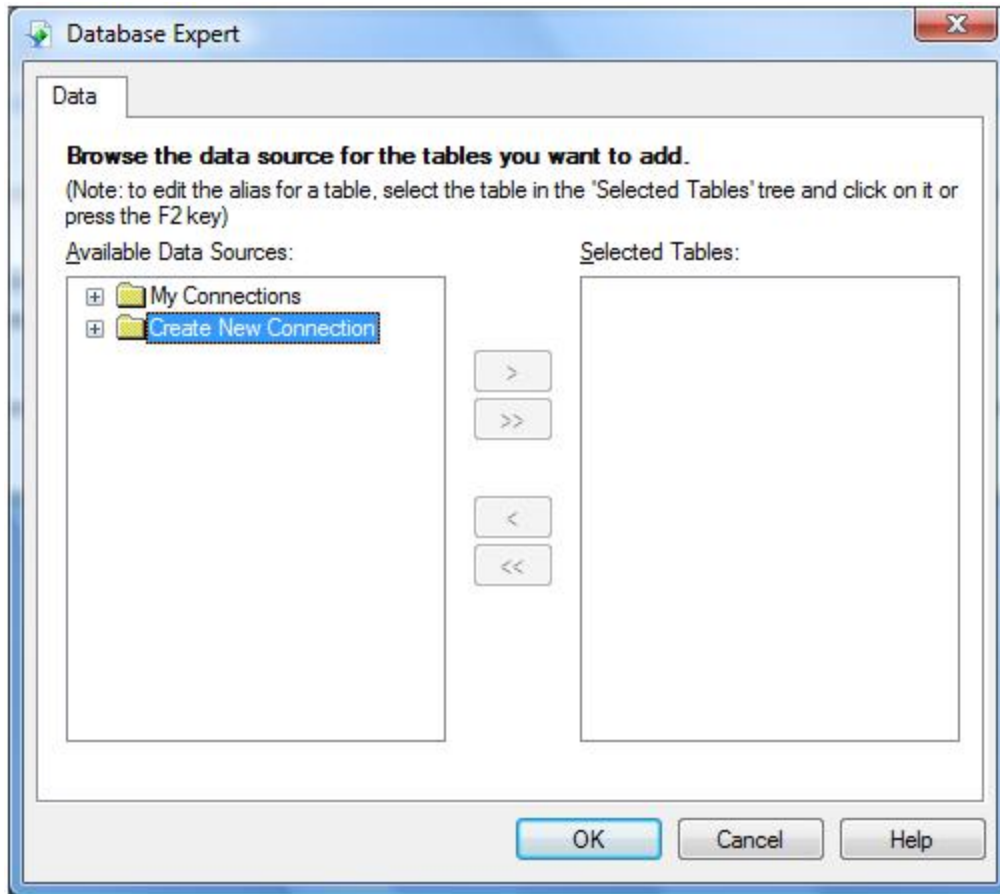


Figure 10: Database Expert Screen

2. Expand the **Create New Connection** folder by double-clicking it. A list of available connection folders appear.

3. Expand the **ODBC (RDO)** folder by double-clicking it and then double-click **Make New Connection**. The ODBC (RDO) window appears as shown in the figure below.

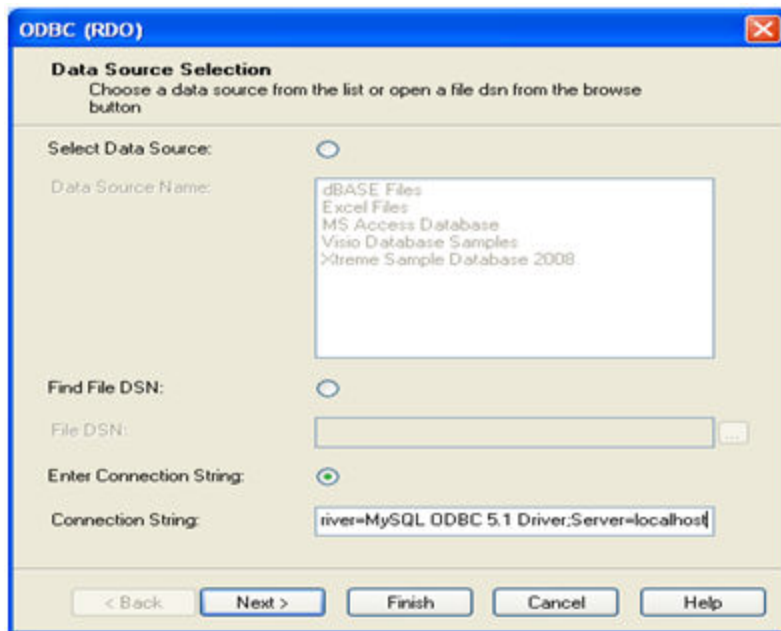


Figure 11: ODBC (RDO) Screen

4. In the ODBC (RDO) window:
 - a. Click **Enter Connection String** to enable the Connection String field.
 - b. In the **Connection String** field, enter, **Driver=MySQL ODBC 5.1 Driver-;Server=localhost**
 - c. Click **Next** to proceed. The following window appears, with Server and User ID fields pre-populated with the correct values as applicable to your installation of

MySql.

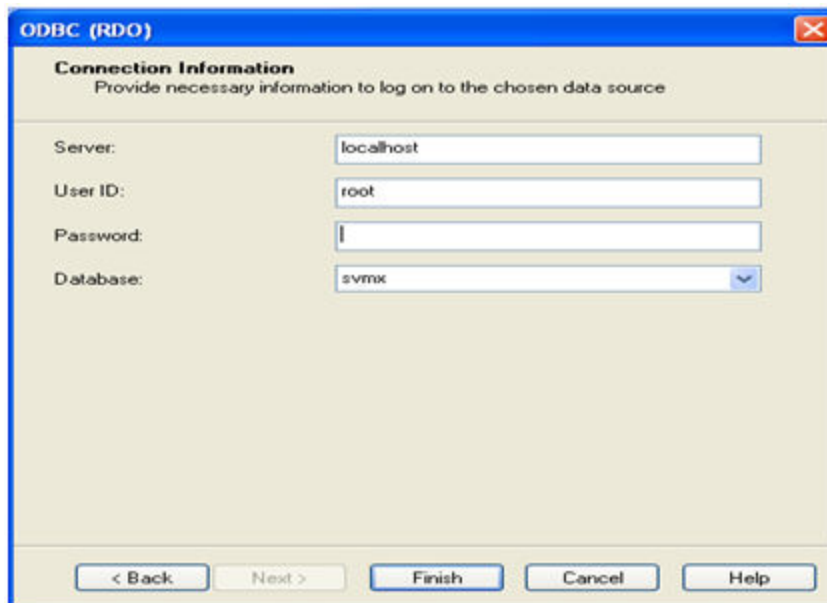


Figure 12: Connection Information Screen

- d. Enter the password (this will be **mysql** if MySql was installed by the ServiceMax Offline application installer, with default values for User ID and password), select **svmx** as the **Database**, and then click **Finish**.
- e. Double-click **Add Command** to view the Add Command To Report window.

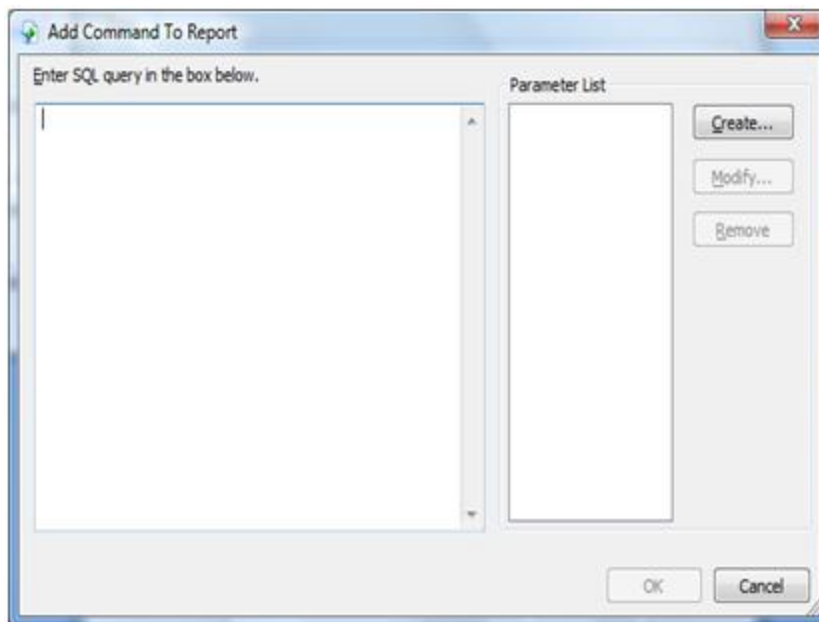


Figure 13: Add Command To Report Screen

5. Write an SQL query to include the fields you want to appear in the report and then click **Create** to open the Command Parameter window. Syntax for querying is given below:

```
Select <field_names> from <object_name> where <object_name>_Pid={?<Parameter_Name >};
```

6. Enter the **Parameter Name**, select the **Value Type** as **Number** from the picklist and then click **OK**. An Enter Values window appears as shown below.

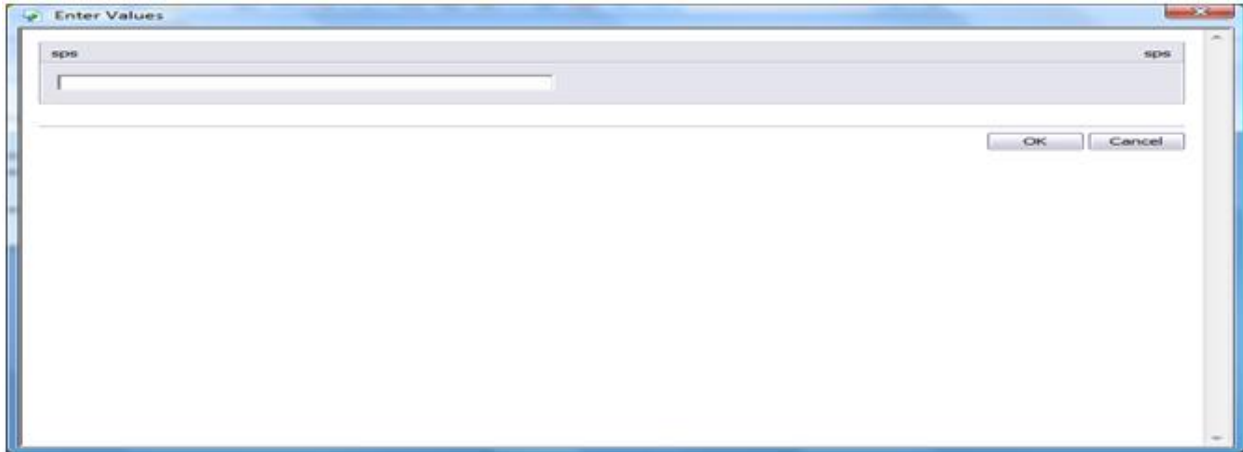


Figure 14: Enter Values Dialog Box

7. Enter a value, say 1, and then click **OK** to test the created database connection. If there is any error, the Crystal Report screen appears with error information.
8. Click **OK**.
9. Double-click to open the **Database Fields** folder under Field Explorer in the right navigation pane as shown in the figure below.

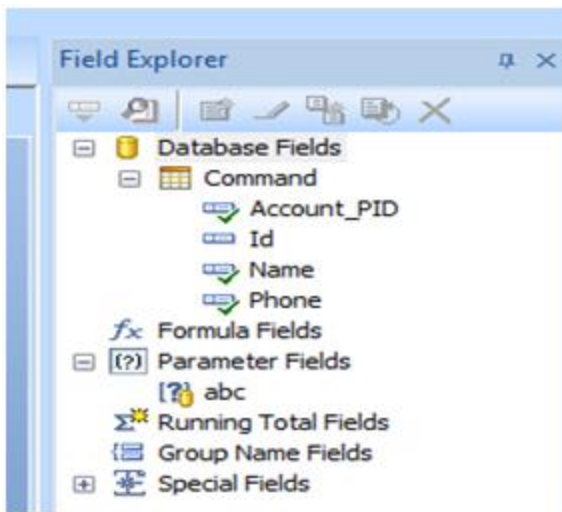


Figure 15: Field Explorer

10. Double-click **Command** to expand it.
11. Drag and drop the fields from Command to the locations like Page Header, Details in the Design mode, where you want the fields to appear in the report.
12. Click **File > Save** to save the report template created.



Note: Change the font of the fields on the Crystal report designer while designing the template to **Arial Unicode MS**. Arial Unicode MS supports the display of characters in all languages.

Adding Signature Capture Fields to the Report Template

Follow the steps below to add Signature and Date Time fields to the Report Template. Use these templates to create offline reports for accepting signatures with the signature capture device in the ServiceMax Offline Client application. Currently, only the Topaz SigLite SL electronic capture device is supported.

To add a signature capture field to the report template:

1. Open the Crystal Report Template in Designer, and select the menu option **Insert**, and then click **OLEObject** (figure 16).

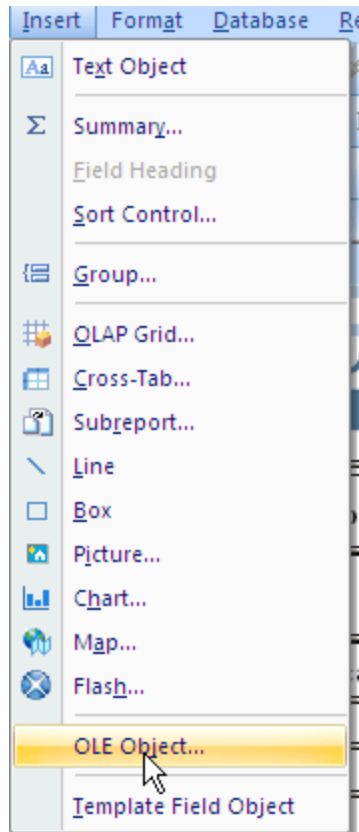


Figure 16: Select OLE Object

2. In the resulting dialog box, select the **Object Type** as **Bitmap Image** or **Paintbrush Picture** and click **OK**. See figure below.

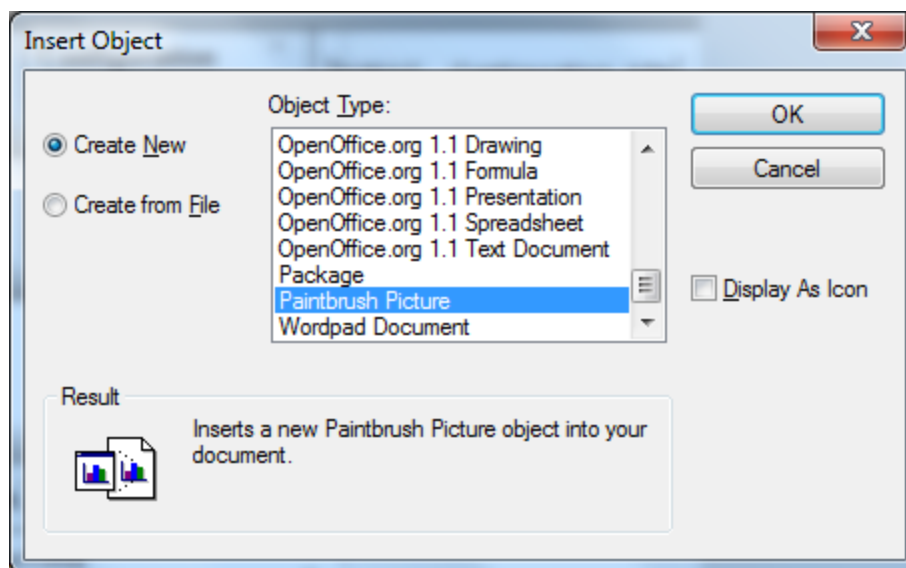


Figure 17: Insert Object Dialog Box

3. In the Field Explorer right navigation pane, right-click **Parameter Fields** and select the **New** menu option as shown in the figure below.

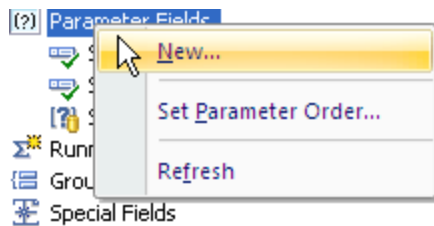


Figure 18: Select Menu Option New

4. Create a new parameter with **Type: String** and **Name: SVMX_Signature** as shown in the figure below.

The 'Create New Parameter' dialog box is shown. It has a title bar with a close button. Below the title bar is a message: 'Create a new parameter and list of values.' The dialog contains several input fields and a table.

Name: SVMX_Signature

Type: String

List of Values: Static

Value Field: (None)

Description Field: (None)

Below the fields are icons for adding, deleting, and moving items, and an 'Actions' dropdown.

Value	Description
Click here to add item	

Value Options:

Option	Setting
Show on (Viewer) Panel	Editable
Prompt Text	Enter SVMX_Signature:
Prompt With Description Only	False
Optional Prompt	False
Default Value	
Allow custom values	True

At the bottom right are buttons for 'OK', 'Cancel', and 'Help'.

Figure 19: Create New Parameter Dialog Box

5. Select the **OLE Object** you added in Step 2, right-click and select the **Format Graphic** menu as shown below.

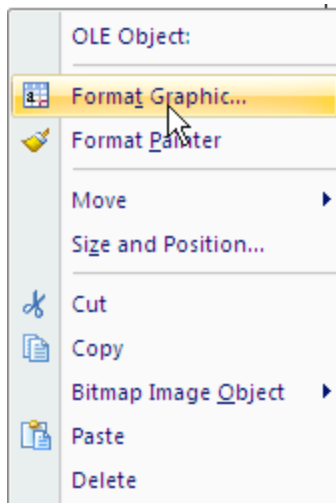


Figure 20: *Format Graphic Menu Option*

6. In the **Format Editor** dialog box, enter **SVMX_Signature** in the **Object Name** field as shown below.

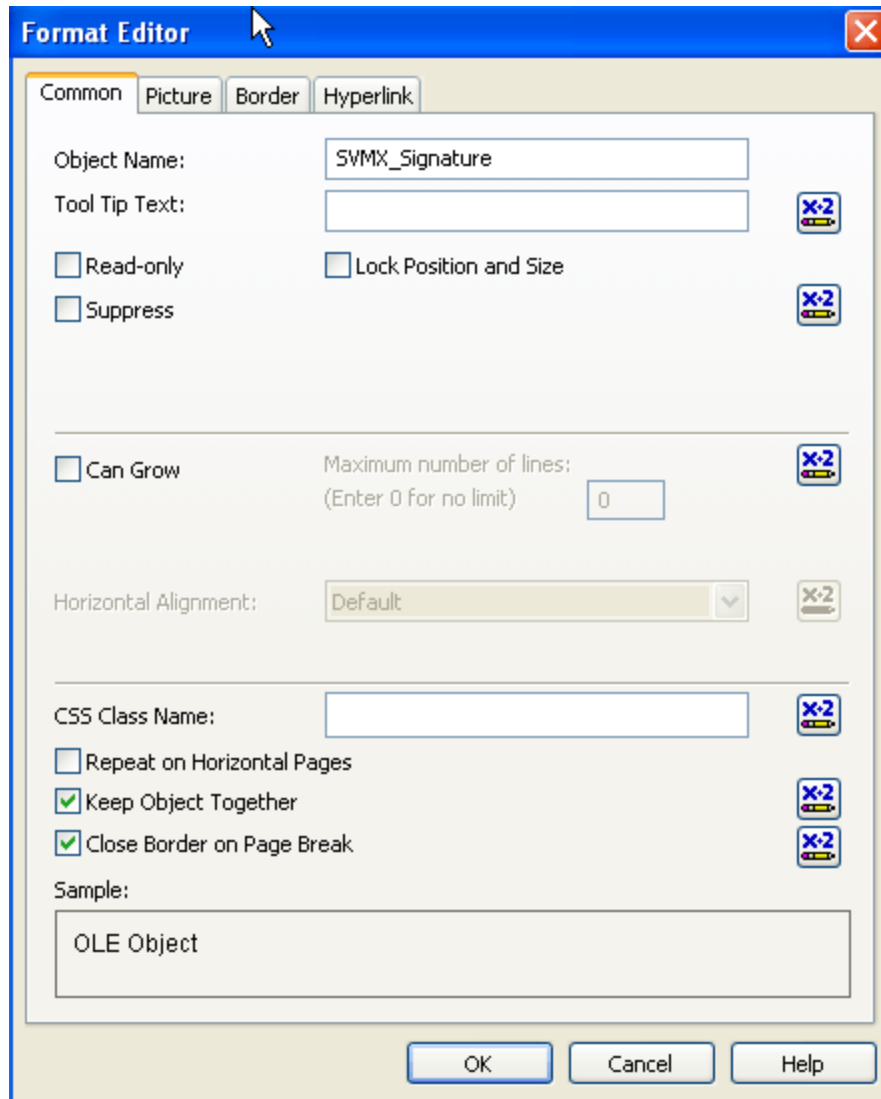


Figure 21: Format Editor Dialog Box

7. In the Format Editor dialog box, click the **Picture** tab, and then click the **Graphic Location** icon. See figure below.

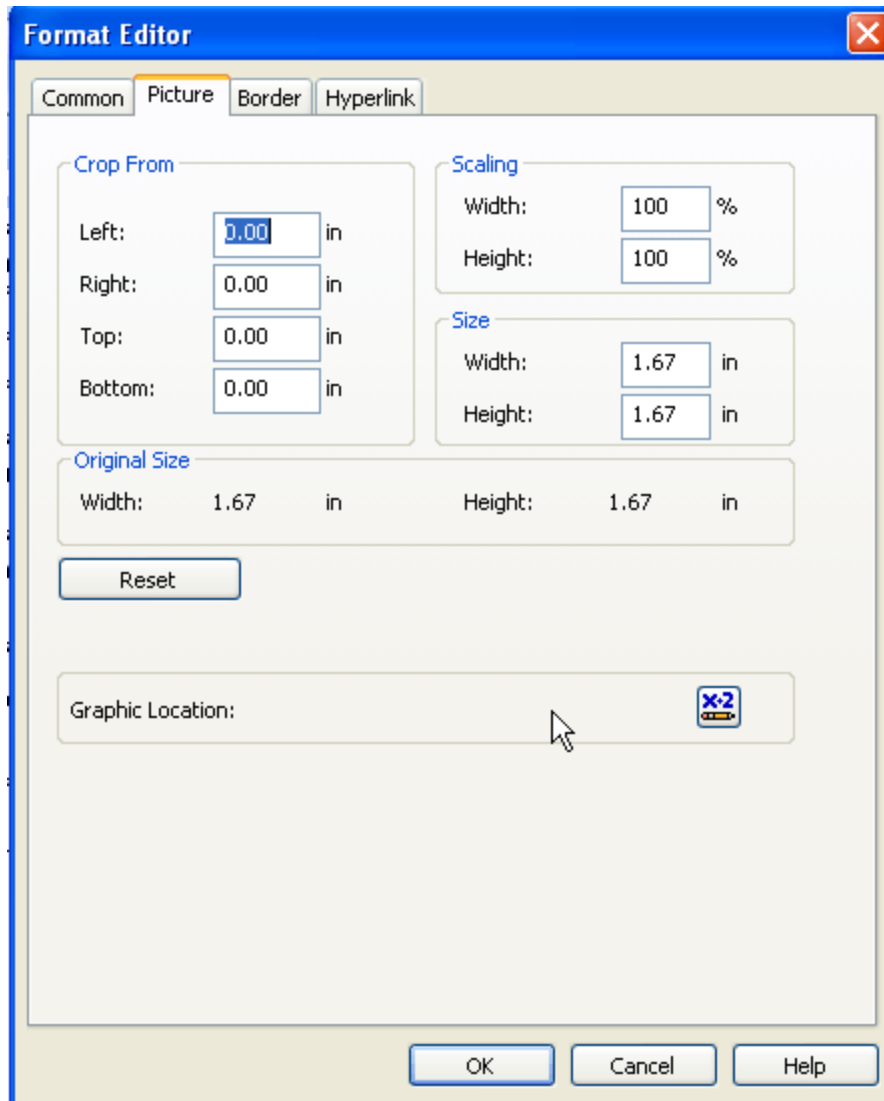


Figure 22: Format Editor Picture Tab

8. In the resulting new dialog box, locate the parameter field **SVMX_Signature** in the first tree in the right pane, drag and drop it to the white box below. It will get dropped

as **(?SVMX_Signature)**. Save and Close it.

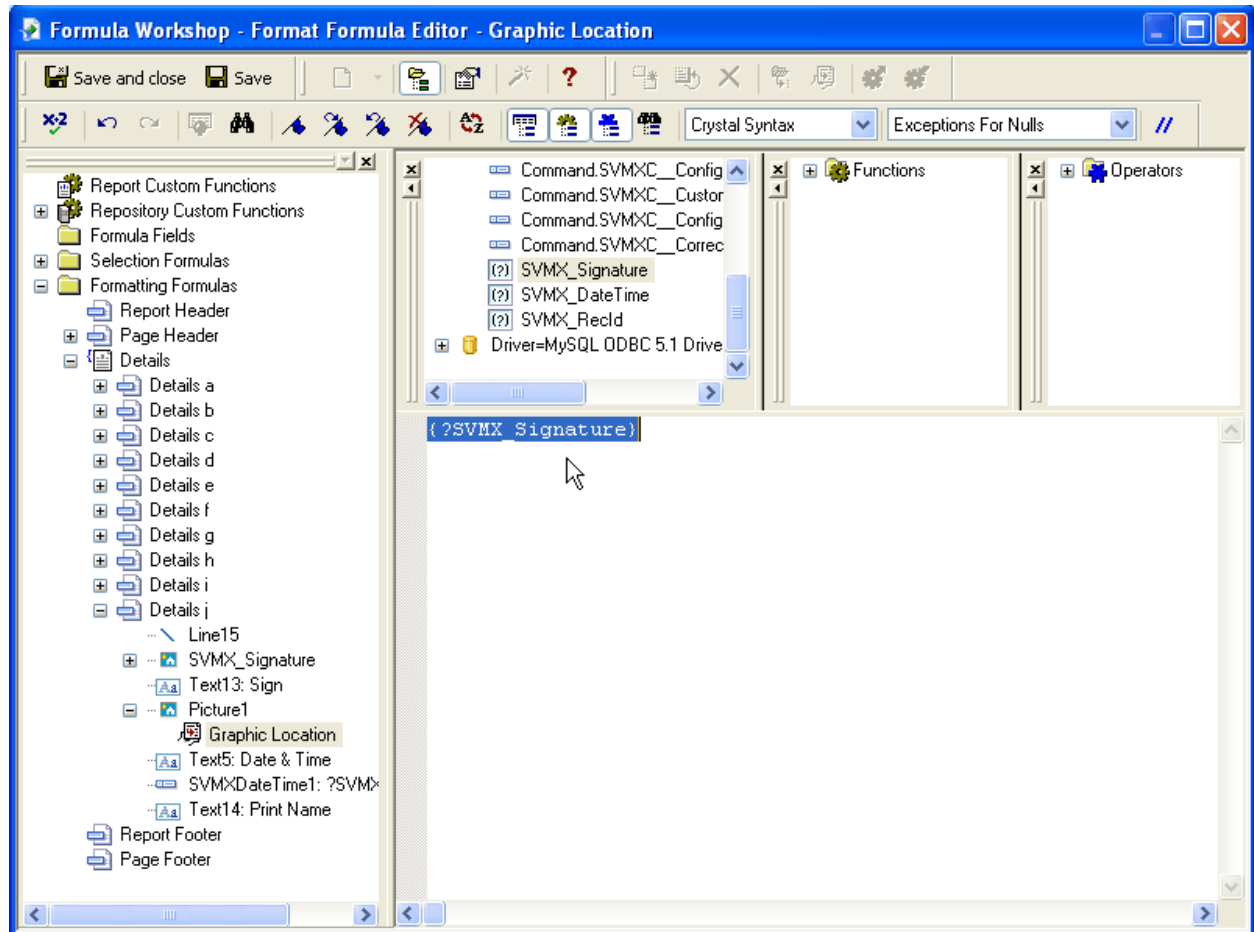
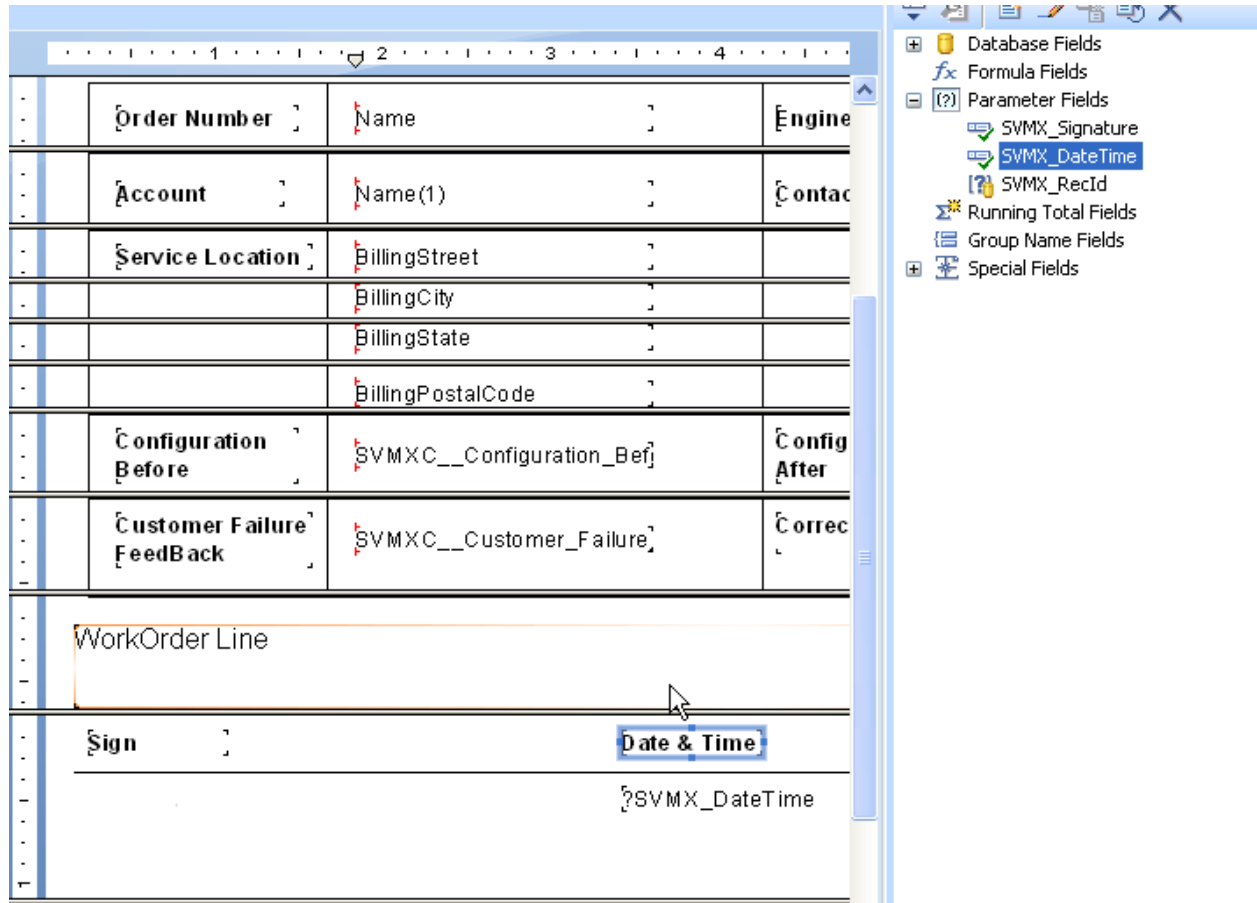


Figure 23: Graphic Location Window

9. To include a date time field in the report that will get auto-populated with the current date time in the Windows system time zone when clicking the **Confirm** button in the Signature Capture section of report, do the following:
 - a. Create a new parameter of type **Date Time** and name **SVMX_DateTime**.
 - b. From the Field Explorer in right navigation pane, drag and drop the above parameter to the place in the report template where you need to capture the date

time. It will get dropped as **?SVMX_DateTime**. See figure below.



The screenshot shows the Report Builder interface. On the left, a report template is displayed with a table structure. The table has columns for 'Order Number', 'Name', 'Engine', 'Account', 'Name(1)', 'Contact', 'Service Location', 'BillingStreet', 'BillingCity', 'BillingState', 'BillingPostalCode', 'Configuration Before', 'SVMXC__Configuration_Bef', 'Config After', 'Customer Failure FeedBack', 'SVMXC__Customer_Failure', 'Correct', and a 'WorkOrder Line' section. Below the table, there is a 'Sign' field and a 'Date & Time' field. The 'Date & Time' field is highlighted with a blue box, and a mouse cursor is pointing at it. Below the 'Date & Time' field, the text '?SVMX_DateTime' is visible. On the right, a pane shows a list of field categories: Database Fields, Formula Fields, Parameter Fields, SVMX_Signature, SVMX_DateTime (highlighted), SVMX_RecId, Running Total Fields, Group Name Fields, and Special Fields.

Figure 24: Report Template

10. If record id (for example, Work Order Number field) is to be included in the report, add it as a string parameter named **SVMX_RecId**.
11. Save the report template.

Adding Multiple Signature Capture Fields to the Report Template

Follow the steps below to add multiple Signature and Date Time fields to the Report Template. Use these templates to create offline reports for accepting signatures with the signature capture device in the ServiceMax Offline Client application. Currently, only the Topaz SigLite SL electronic capture device is supported.

1. Open the Crystal Report Template in Designer, and select the menu option **Insert**, and then click **OLEObject** (see figure below).

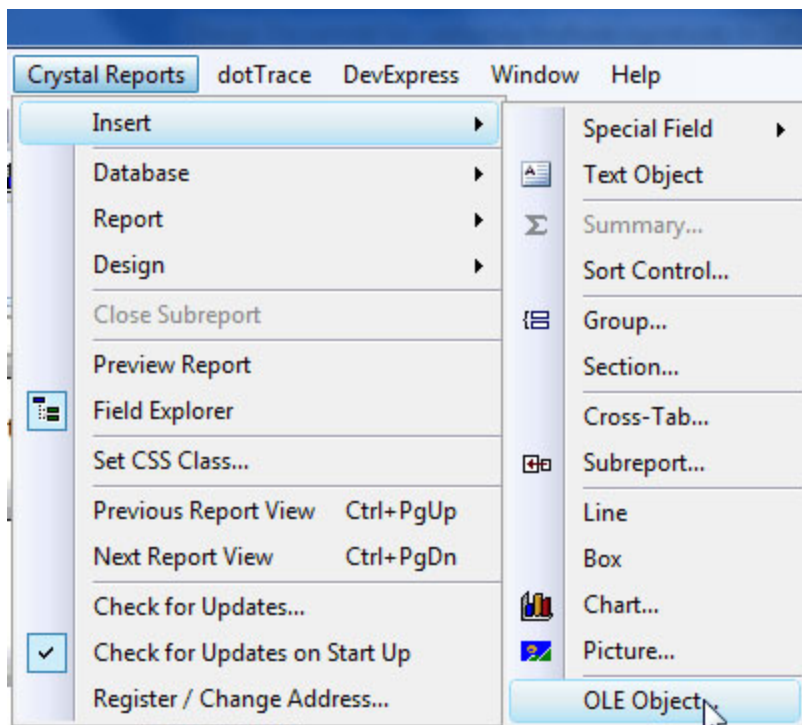


Figure 25: Select OLE Object



Note: You must create an OLE Object for *EACH* signature you want in the report.

2. Right-click and select **Format Object** (see figure below).

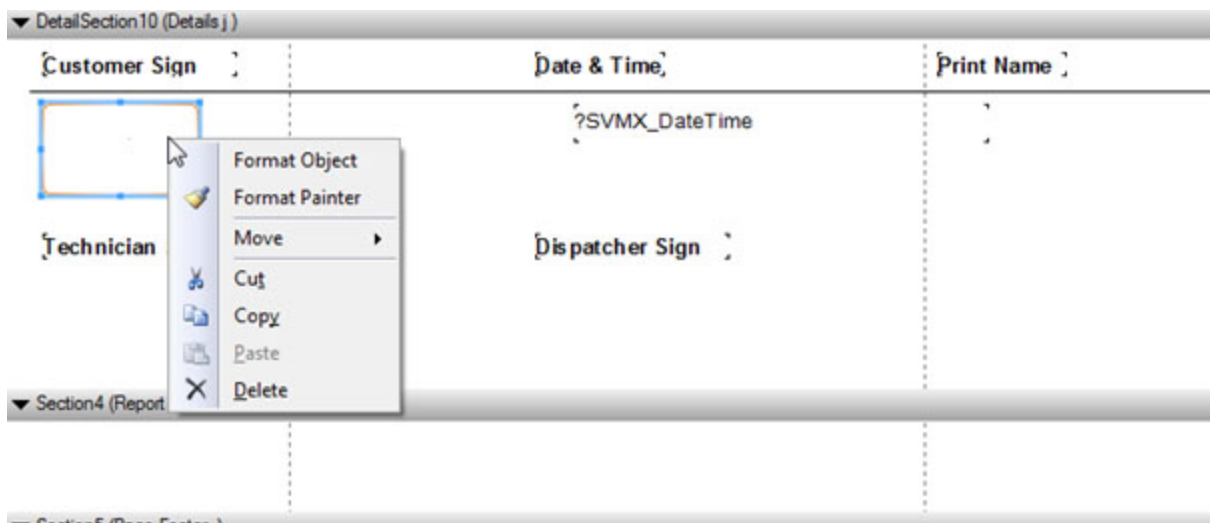


Figure 26: *Format Object*

3. In the Format Editor dialog box, enter the object name in the **Object Name** text box. The Object name for each OLE Object must start with the prefix "SVMX_Signature"
(For example, for a Technician Signature the name should be "SVMX_Signature_Technician_Signature," and for Customer Signature the Object name should be "SVMX_Signature_Customer_Signature." See figure below.

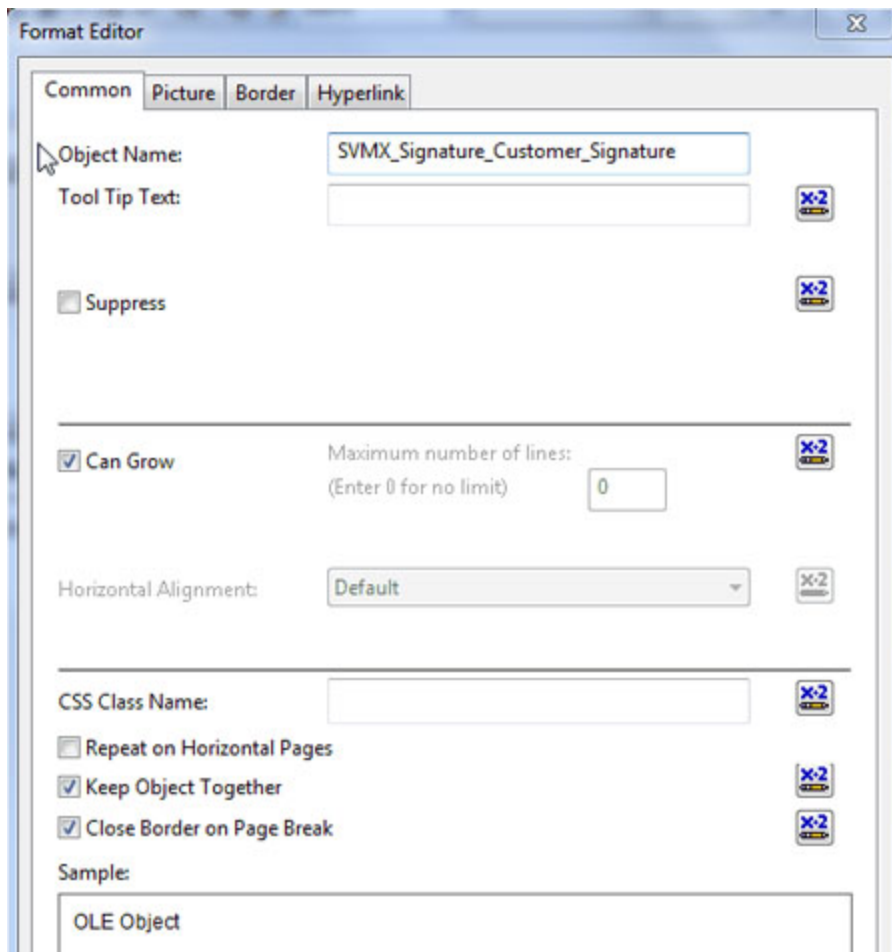
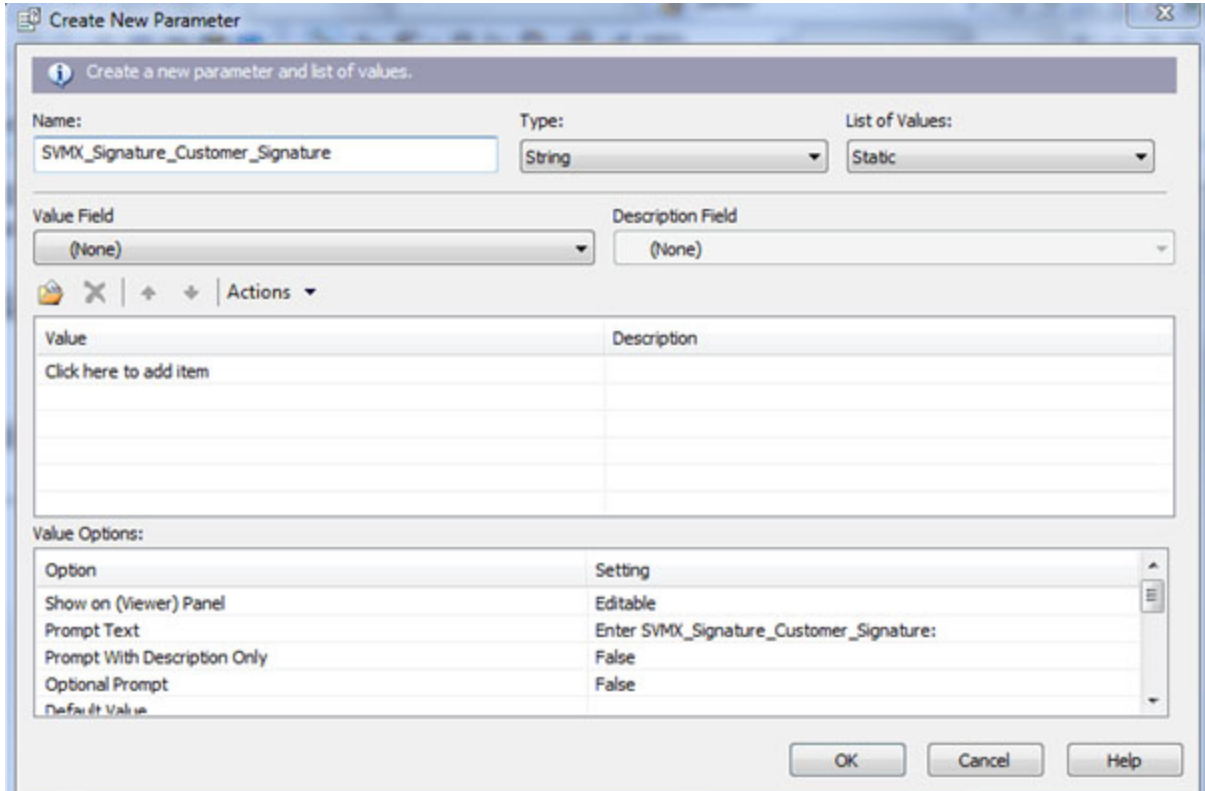


Figure 27: *Format Editor*

4. Create a new parameter for each OLE object:
 - a. Enter the name in the **Name** text box. The name must be the same as that of the OLE Object (for example, SVMX_Signature_Customer_Signature) as shown in the figure below.

- b. From the **Type** picklist, select **String**.



Create a new parameter and list of values.

Name: SVMX_Signature_Customer_Signature Type: String List of Values: Static

Value Field: (None) Description Field: (None)

Value Description

Value	Description
Click here to add item	

Value Options:

Option	Setting
Show on (Viewer) Panel	Editable
Prompt Text	Enter SVMX_Signature_Customer_Signature:
Prompt With Description Only	False
Optional Prompt	False
Default Value	

OK Cancel Help

Figure 28: Create New Parameter Window

5. Link the Parameter Fields to each OLE Objects by dragging and dropping them using the **Graphic Location** icon in the Picture Tab as shown in the two figures below.

6. In the Format Editor dialog box, click the **Picture** tab, and then click the **Graphic Location** icon.

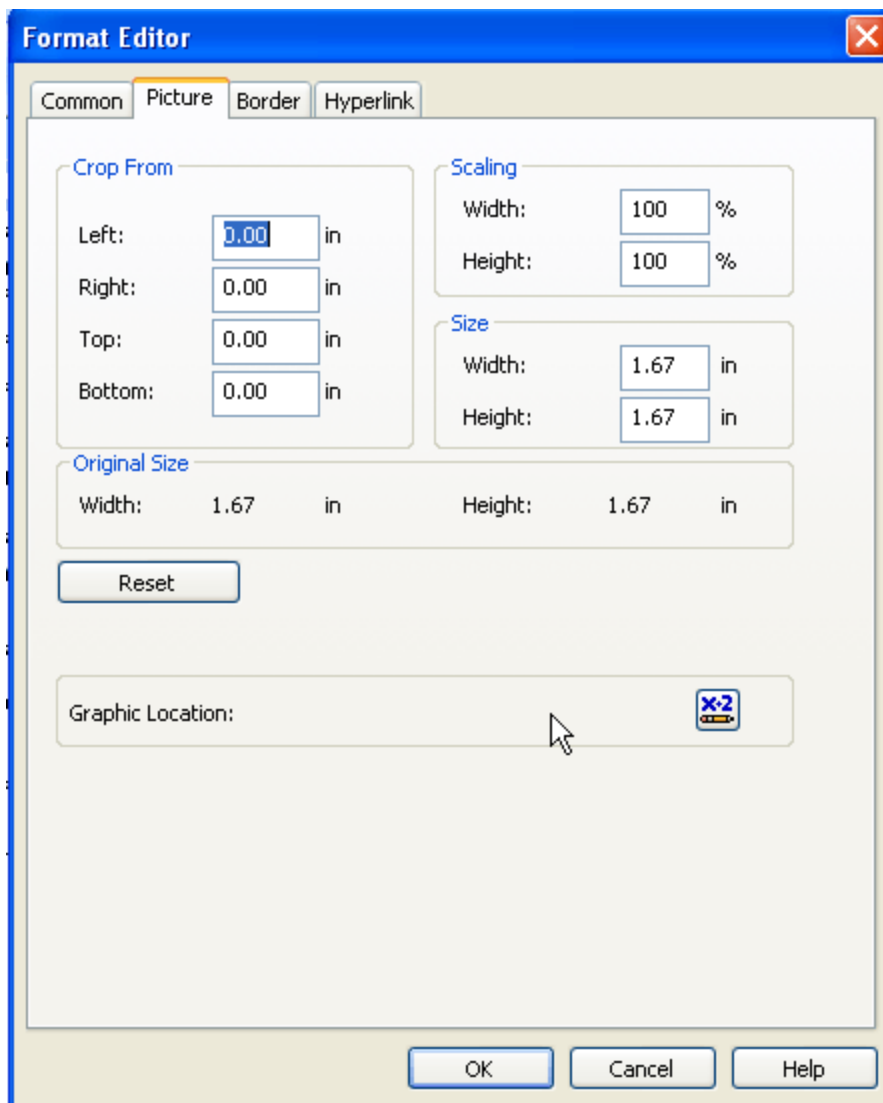


Figure 29: Format Editor

7. From the Field Explorer in the right navigation pane, drag and drop the parameters to the appropriate place in the report template.

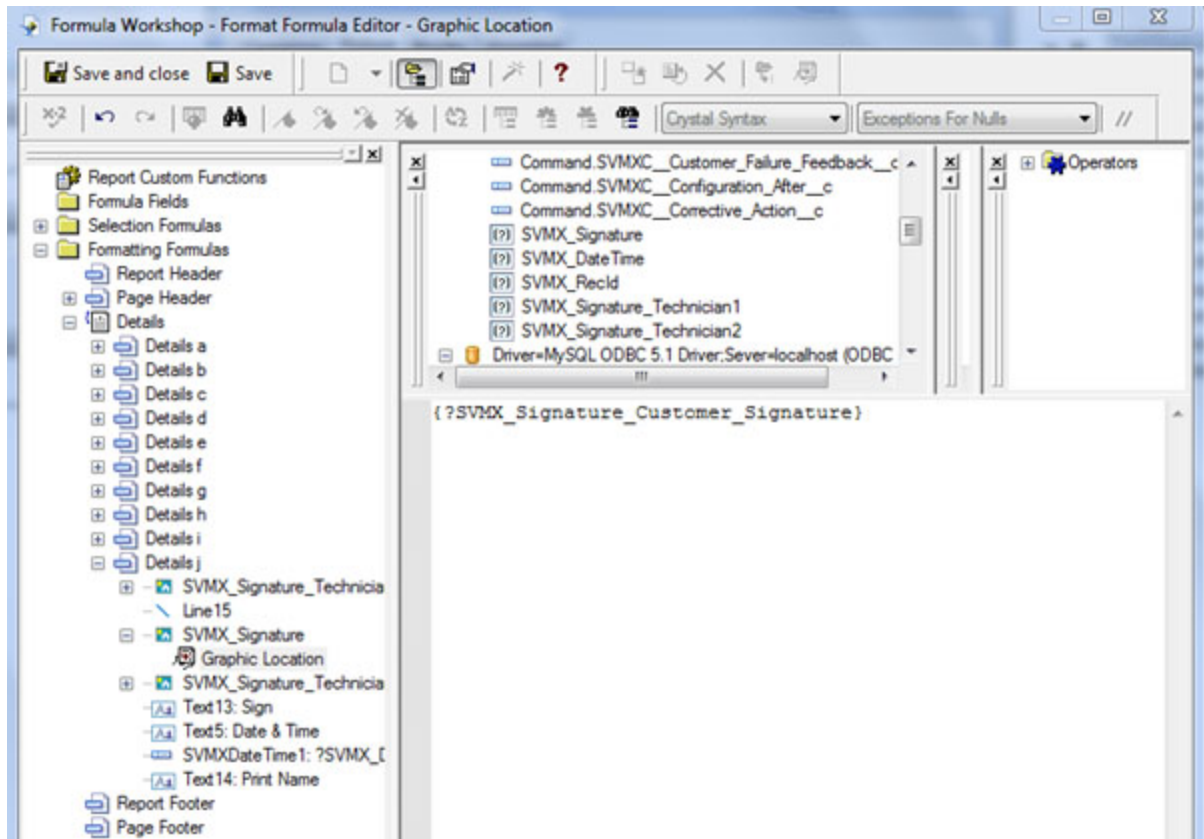


Figure 30: Format Formula Editor -- Graphic Location

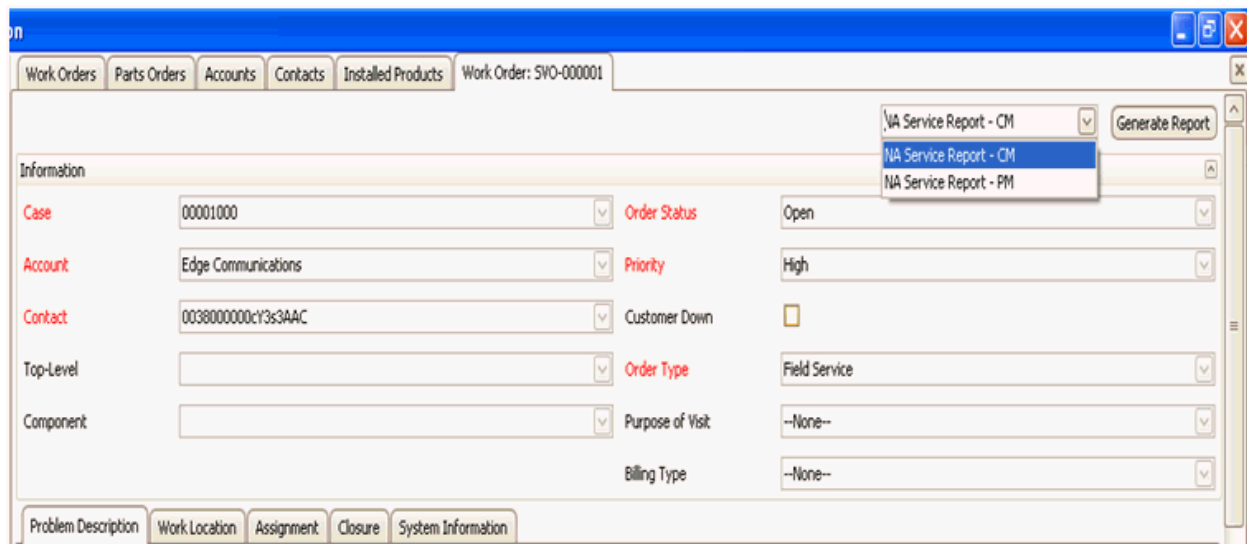
8. Save the report template.

Making the Document Template Available to the Users

To make the uploaded report template available to your ServiceMax Offline user, follow the steps below:

1. Enter your login credentials.
2. Check the **Download Configuration** checkbox in the login screen.
3. Click **Login**. The ServiceMax Offline will synchronize the data from Salesforce and download the template to the user's desktop.

- When the users view any record from the object associated with this template from ServiceMax Offline, the list of templates appear as shown below.



The screenshot shows the ServiceMax 14 Report Builder interface. At the top, there are tabs for Work Orders, Parts Orders, Accounts, Contacts, and Installed Products. The 'Work Orders' tab is selected, and the work order ID 'SVO-000001' is displayed. Below the tabs, there is a 'Generate Report' button and a dropdown menu showing three templates: 'VA Service Report - CM', 'NA Service Report - CM', and 'NA Service Report - PM'. The 'NA Service Report - CM' template is selected. Below the dropdown, there is a form with various fields for case information, including Case, Account, Contact, Top-Level, Component, Order Status, Priority, Customer Down, Order Type, Purpose of Visit, and Billing Type. The form is divided into sections: Information, Problem Description, Work Location, Assignment, Closure, and System Information.

Figure 31: List of Templates

- Click **Generate Report** to generate the report based on the downloaded template.

See Also:

[Manage Offline Profiles](#)

[Manage Datasets](#)

[Manage Document Templates](#)

[Sample Offline Configuration](#)

CUSTOMIZATION

CUSTOMIZING SERVICEMAX

Overview

Customizations are customer-specific features that are not available in the out-of-the-box ServiceMax application. If any functionality built on the Force.com platform that is not readily available in ServiceMax meets the criteria listed below, it will be considered as a ServiceMax customization.

- The functionality uses one or more objects from the ServiceMax package
- The functionality requires some coding involving one or more development tools such as Apex, Visual Force, JavaScript or Flex

For example, a customer requires the tracking of Work Orders closed every week. Since this feature is not covered by the standard ServiceMax application, this may be built as a customization using an Apex Trigger that creates a record in a custom object called Work Order Closure History. Note that this is only an imaginary scenario. Your requirements may vary in complexity and may require ServiceMax implementation professionals to justify the customization needs.

Any changes made to the standard mail-merge templates provided by ServiceMax are also considered customizations. Mail-merge templates include Visual Force pages and their Apex controllers. These can be customized to meet your specific formatting or content requirements.

Due to the nature of customizations, they are not supported by ServiceMax Technical Support, nor are they automatically replaced if/when they become standard features in ServiceMax.

Salesforce administration activities such as adding custom fields to ServiceMax objects, modifying picklist values, changing translations, adjusting page layouts are not considered customizations. See [Configuring ServiceMax](#) for any limitations surrounding these administrative tasks.

Customization Considerations

Since any customizations built specific to customer requirements are not supported by ServiceMax Technical Support, consider the following before you start building custom functionality.

- How critical is the requirement? Is it a must-have or nice-to-have?
- Can a process workaround be found so that you can continue to use standard functionality?
- Can it be built using standard Salesforce point-and-click constructs such as workflow rules, approval processes?
- Is similar functionality already in ServiceMax product road map? If yes, can your requirement wait until it is rolled out?
- How many users will be using this custom functionality? The more the number of users, the more you must consider supportability.
- Do you have enough qualified resources (external or internal) to maintain the functionality through Salesforce platform upgrades?

Building Custom Functionality in ServiceMax

The picture below outlines the flow of building custom functionality in a Sandbox instance and deploying it to the production instance:

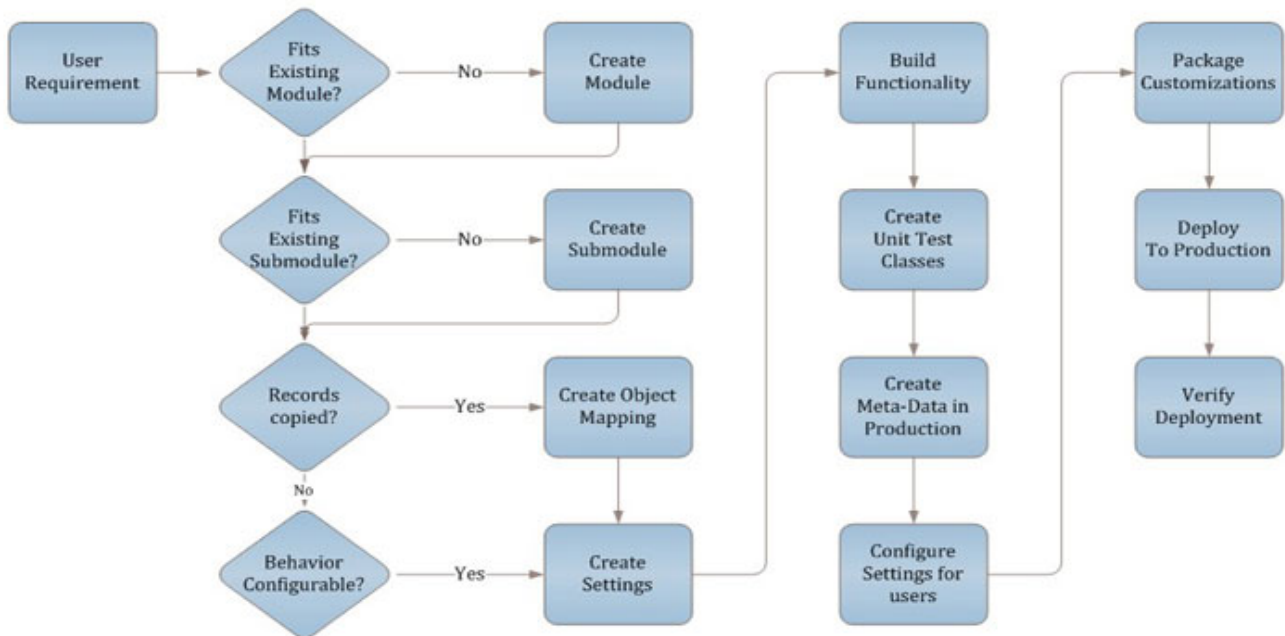


Figure 1: Building Custom Functionality

In order to implement your customizations in a scalable way, it is strongly recommended to adhere to the following guidelines:

- Identify the closest standard module in ServiceMax where this requirement would fit. Create new modules only if none of the standard modules match with your requirement. For example, if the requirement is about capturing billing schedule of a service contract, attach the functionality to the Service Contract module in ServiceMax.
- Identify the standard submodule in ServiceMax where this requirement would fit. If your functionality is similar to one of the existing submodules but slightly different, simply use the existing Submodule ID. Each submodule has its own set of standard settings and tags that you may be able to take advantage of. If the functionality is not supported in any submodule, you can create a new custom submodule.
- Identify all the configurable parameters you like to have. While this is a subjective exercise, a good rule of thumb is to avoid any hard-coding in your code. If you need to provide flexibility either during development or you anticipate end users might change their requirements, it is a good opportunity to make the behavior driven by configurable parameters. Any future coding effort can be avoided by this.
- For each configurable parameter, determine the scope of its impact—org-wide or not. Org-wide (Global) settings impact functionality for all users regardless of their login or profile.
- If your functionality requires new records to be created from existing records, make it configurable using the Object maps in ServiceMax configuration. This provides complete scalability and flexibility for the customer administrator to configure the field mapping between the source and target objects.
- Build the functionality using ServiceMax settings and object maps. See [sample code](#) in ServiceMax API.
- If the code is written in Apex, create unit test cases. While Force.com accepts 75% code coverage, target at least 90% to 95% coverage of your code. This ensures successful migration to production. Avoid hard-coding references data in unit test cases. Since the test cases will fail if data is missing, create any/all data dynamically in unit test cases.
- Before you can deploy the functionality in production, you must create the custom modules, submodules, settings, object maps, and so on, in production first. This is an important step and must be done manually in production using ServiceMax Configuration screens. See [Configuring ServiceMax](#) for details.
- After creating your meta-data in production, adjust the setting values appropriately

in all existing ServiceMax Configuration profiles. Note that when a new setting is created, it is automatically linked to appropriate profiles with its default value.

- Create an unmanaged package of your customizations and deploy to production. While packaging is not mandatory in Force.com, it is a recommended best practice.

Using Product from Opportunity Line in SFM Transactions

Additional customization is required to use the Product field in SFM Transactions. Follow the instructions below.

To use Product from Opportunity Line in an SFM Transaction:

1. In Opportunity Product object, create a field of type Lookup to Product as Opportunity_Product__c (field label: Opportunity Product).
2. Create a trigger as follows for Opportunity Product object:

```
// When a new line item is added to an opportunity,

// this trigger copies the value of the associated product's ID to the record.

trigger PopulateProductLookup on OpportunityLineItem (before insert) {

// For every OpportunityLineItem record, add its associated pricebook
entry

// to a set so there are no duplicates.

Set<Id> pbeIds = new Set<Id>();

for (OpportunityLineItem oli : Trigger.new)

pbeIds.add(oli.pricebookentryid);
```

```
// Query the PricebookEntries for their associated product and place
the results

// in a map.

Map<Id, PricebookEntry> entries = new Map<Id, PricebookEntry>([select
product2.id from pricebookentry where id in :pbeIds]);

// Now use the map to set the appropriate product on every OpportunityLineItem
processed

// by the trigger.

for (OpportunityLineItem oli : Trigger.new)

oli.Opportunity_Product__c = entries.get(oli.pricebookEntryId).product2.id;

}
```

3. If there is a need to populate the Opportunity Product custom field for the existing Opportunity Product records, change the definition of the trigger to (before insert, before update), and update all the existing Opportunity Product records.
4. In the SFM transaction for Opportunity to any target object, map the target object's Product Lookup field to Opportunity Product's Opportunity Product field.

'Consumed From Location' Field Sample Code

Sample code for the 'Consumed From Location' field is displayed below.

```
trigger WORD_Line_UpdateConsumedLocationTrigger on SVMXC__Service_Order_Line__c (before
insert, before update)

{

List<SVMXC__Service_Group_Members__c> lstTechnician = new List<SVMXC__Service_Group_Members__
c>();

lstTechnician = [Select SVMXC__Salesforce_User__c, SVMXC__Inventory_Location__c From SVMXC__
Service_Group_Members__c where SVMXC__Inventory_Location__c != null and SVMXC__Salesforce_
User__c=:UserInfo.getUserId() Limit 1];

if (lstTechnician != null && lstTechnician.size() == 1 && lstTechnician[0].SVMXC__Inventory_
Location__c != null)

{

for(SVMXC__Service_Order_Line__c R : Trigger.new)

{

if(R.SVMXC__Consumed_From_Location__c == null )

R.SVMXC__Consumed_From_Location__c = lstTechnician[0].SVMXC__Inventory_Location__c;

}

}

}
```

Building Custom Service Flow Events

Overview

SFM provides the ability to plug-in custom logic during various stages of user interaction on any SFM screen. Since all custom logic is written as Apex web services, a strong understanding of ServiceMax object model and working knowledge of Apex programming language are essential to create custom logic for SFM screens.

Web Service Syntax

- All SFM web services must adhere to a standard syntax so they can be integrated with SFM screen events
- As required by Apex and Flash toolkit, the web service class must be declared as global so it can be accessed from the SFM screen
- The web service method must accept an input parameter of type SVMXC.SFM_WrapperDef.SFM_TargetRecord
- The web service must be declared with the return data type SVMXC.SFM_WrapperDef.SFM_PageData
- After updating the incoming record, it must be converted to the return data type using a special utility method provided by ServiceMax as shown below

With the above considerations, the structure of an SFM web service would be like this:

```
global class AnyClass {

    webservice static SVMXC.SFM_WrapperDef.SFM_PageData AnyMethod (SVMXC.SFM_WrapperDef.SFM_TargetRecord AnyTarget)

    {

        ...

        ...

        // Your logic goes here...

        ...

        ...

        SVMXC.SFM_buildPageData PageUtil = new SVMXC.SFM_buildPageData();

        return PageUtil.SFM_buildPageData(AnyTarget);

        Apex Exception Handling Block

    }

}
```

- You must also build Apex unit test classes for each SFM web service
- The input and return data types are highly generic and hierarchical in nature to ensure scalability. Hence using and updating the incoming data is a fairly complex process. Refer to the methods in the class SFM_Sample for implementation templates of custom web services

Calling Web Service On Event

The table below lists various events on SFM screens to which web services can be integrated. To call a web service on any of these events, simply use the syntax *ClassName.MethodName*.

Area	Event	When invoked
Page	On Load	Before the screen is displayed to the end user but after filling relevant data in the fields
Page	Before Insert/Save	Before any of the target records are created. Applies only to source-to-target flows
Page	Before Update/Save	Before any of the existing records are updated. Applies only to standalone edit flows
Page	After Insert/Save	After the entire target header and child records are created. Applies only to source-to-target flows
Page	Before Update/Save	After all the existing records are updated. Applies only to standalone edit flows
Button	On Click	When the user clicks on the button
Field	On Exit	When the user leaves a field either by tabbing out or clicking elsewhere
Field	On Change	When the user changes the data in a field and leaves the field either by tabbing out or clicking elsewhere



Note: The web services that are integrated with SFM screen events requires Internet connectivity. The iPad mobile application WILL NOT invoke these web services when there is no Internet connectivity.

Web Service Response Example

Input Parameter:SFM_TargetRecord

Output Parameters:SFM_PageData

Global Class ClassName

```
{

webservice static SVMXC.SFM_WrapperDef.SFM_PageData WSName (SVMXC.SFM_WrapperDef.SFM_Tar-
getRecord sfmtargetrec)

    {

        //Describe all objects

        SVMXC.SFM_WrapperDef.SFM_PageData pagedata = new SVMXC.SFM_WrapperDef.SFM_PageData();

        map<String,Schema.SObjectType> Allobj = new map<String,Schema.SObjectType>();

        map<String, Schema.SObjectType> gd = new Map<String, Schema.SObjectType>();

        gd = Schema.getGlobalDescribe();

        if(gd.size() > 0)

        {

            For(Schema.SObjectType s : gd.values())

            {

                Schema.DescribeSObjectResult

result = s.getDescribe();

                Allobj.put(result.getName(),s);

            }

        }

        SVMXC.SFM_ServicesDef def = new SVMXC.SFM_ServicesDef();

        //Below method will return Header Subject.

        Subject headerSobj =def.SFM_Page_GetHeaderRecord(sfmtargetrec,Allobj);

        //After getting Header Subject process it if required.

        //Below method will return detail Subjects in map (Key --> Tab Id Value --> List of Subjects)

        map<String,List<Subject>> detailSubjectMap = new map<String,List<Subject>>();
```

```

        detailSubjectMap = def.SFM_Page_GetDetailRecords(sfmtargetrec,Allobj);

        // Loop through the map,get the list of Subjects and process it

//Call below method with processes Header Subject and Detail Subjects Map.

pagedata = def.SFM_Page_BuildResponse(sfmtargetrec,headerSobj,detailSubjectMap);

return pagedata;

    }

}

```



Note: Never modify/update input parameter.

Best Practice

- Never modified existing map always update values of the map and create new map with same key and update values. (See example of detail records update).
- Never modified/add values as key-value pair in internal types (for example, SFM_Records). Always use Subject or list of Subject to perform operation.
- SFM Pagedata is overloaded with SFM_Response. Use SFM_Response to communicate if operation is successful or not. Always send success member true/false based on operation is successful or not with message member.

Find the full SFM_Response structure at the end of the document for more information.

Examples of Custom Web Service

Example 1: Sample web service example for header record. After save, if Work Order's Order Status is closed, update Closed On and Closed By fields of the Work Order.

```

Global Class WorkOrderClosure
{

    webservice static SVMXC.SFM_WrapperDef.SFM_PageData closeWorkOrder(SVMXC.SFM_WrapperDef.SFM_
TargetRecord sfmtargetrec)

    {

        //Describe all objects

        SVMXC.SFM_WrapperDef.SFM_PageData pagedata = new SVMXC.SFM_WrapperDef.SFM_PageData();

```

```

map<String,Schema.SObjectType> Allobj = new map<String,Schema.SObjectType>();

map<String, Schema.SObjectType> gd = new Map<String, Schema.SObjectType>();

gd = Schema.getGlobalDescribe();

if(gd.size() > 0)

{

    For(Schema.SObjectType s : gd.values())

    {

        Schema.DescribeSObjectResult result = s.getDescribe();

        Allobj.put(result.getName(),s);

    }

}

SVMXC.SFM_ServicesDef def = new SVMXC.SFM_ServicesDef();

//Below method will return Header Subject.

Subject headerSobj =def.SFM_Page_GetHeaderRecord(sfmtargetrec,Allobj);

SVMXC__Service_Order__c objWO = new SVMXC__Service_Order__c();

objWO = (SVMXC__Service_Order__C ) headerSobj;

if(objWO.SVMXC__Order_Status__c == 'Closed')

{

    objWO.SVMXC__Closed_On__c = system.now();

    objWO.SVMXC__Closed_By__c = userinfo.getuserid();

    try

    {

        update objWO;

        pagedata.response.message = 'Saved Successfully';

        pagedata.response.success = true;

        pagedata.response.messageType = 'SVMX_SUCCESS';

    }

    catch(exception ex)

```



```

{
    Pagedata .response.message = ex.getMessage();

    pagedata.response.success = false;

    pagedata.response.messageType = 'SVMX_ERROR';

    return Pagedata;
}

}

//below method will return detail Subjects in map (Key --> Tab Id Value --> List of
Subjects)

    map<String,List<Subject>> detailSubjectMap = new map<String,List<Subject>>();

    detailSubjectMap = def.SFM_Page_GetDetailRecords(sfmtargetrec,Allobj);

    //Call below method with processes Header Subject and Detail Subjects Map.

    pagedata = def.SFM_Page_BuildResponse(sfmtargetrec, objWO ,detailSubjectMap);

    return pagedata;

}

}

```

Example 2: Sample web service example for detail records on load if activity type's value is service value then it will set discount = 10.

Global Class DiscountOnService

```

{

    webservice static SVMXC.SFM_WrapperDef.SFM_PageData giveDiscount(SVMXC.SFM_WrapperDef.SFM_
    TargetRecord sfmtargetrec)

    {

        SVMXC.SFM_WrapperDef.SFM_PageData pagedata = new SVMXC.SFM_WrapperDef.SFM_PageData();

        //Describe all objects

        map<String,Schema.SObjectType> Allobj = new map<String,Schema.SObjectType>();

        map<String, Schema.SObjectType> gd = new Map<String, Schema.SObjectType>();

        gd = Schema.getGlobalDescribe();

        if(gd.size() > 0)

```

```

{
    For (Schema.SObjectType s : gd.values())
    {
        Schema.DescribeSObjectResult result = s.getDescribe();

        Allobj.put(result.getName(), s);
    }
}

SVMXC.SFM_ServicesDef def = new SVMXC.SFM_ServicesDef();

//Bellow method will return Header Subject.

Subject headerSobj =def.SFM_Page_GetHeaderRecord(sfmtargetrec,Allobj);

//below method will return detail Subjects in map (Key --> Tab Id Value --> List of
Subjects)

map<String,List<Subject>> detailSubjectMap = new map<String,List<Subject>>();

map<String,List<Subject>> newDetailSubjectMap = new map<String,List<Subject>>();

detailSubjectMap = def.SFM_Page_GetDetailRecords(sfmtargetrec,Allobj);

if(detailSubjectMap.size() > 0)
{
    for(String str : detailSubjectMap.keySet())
    {
        list<SVMXC__Service_Order_Line__c> lstWoLines = new list<SVMXC__Service_Order_
Line__c>();

        lstWoLines = detailSubjectMap.get(str);

        if(lstWoLines.size() > 0)
        {
            for(Integer i = 0;i<lstWoLines.size();i++)
            {
                if(lstWoLines[i].SVMXC__Activity_Type__c == 'Service')
                {

```

```

        lstWoLines[i].SVMXC__Discount__c = 10;
    }
}

newDetailSubjectMap.put(str,lstWoLines);
}

}

// Loop through the map,get the list of Subjects and process it
//Call below method with processes Header Subject and Detail Subjects Map.
pagedata = def.SFM_Page_BuildResponse(sfmtargetrec, headerSobj ,newDetailSubjectMap);
return pagedata;
}
}

global class SFM_Response
{
    webservice Boolean success {get;set;}
    webservice String message {get;set;}
    webservice String messageType {get;set;}
    webservice String tagId {get;set;}
    webservice String eventType {get;set;}
    webservice List<SFM_StringMap> stringMap = new List<SFM_StringMap>();
    webservice List<SFM_StringFieldMap> stringFieldMap = new List<SFM_
StringFieldMap>();
    webservice List<SVMX_Debug.SMAX_Debug> logMsg;
    webservice List<String> resultIds = new List<String>();
    webservice List<SFM_StringListMap> StringLstMap = new List<SFM_StringListMap>
();
}

```

```

webservice List<SFM_MapStringMap> MapStringMap = new List<SFM_MapStringMap>();

global SFM_Response( Boolean success,String message,String tagId,List<SFM_
StringMap> stringMap,List<SVMX_Debug.SMAX_Debug> logMsg,List<String> resultIds)//List<SFM_
StringFieldMap> stringFieldMap commented by amar

{

    this.success = success;

    this.message = message;

    this.tagId = tagId;

    this.stringMap = stringMap;

    this.logMsg = logMsg;

    this.resultIds=resultIds;

    //this.stringFieldMap=stringFieldMap;

}

global SFM_Response(){}

global List<SFM_StringMap> getStringMap(){return stringMap;}

global void setstringMap(List<SFM_StringMap> s){stringMap = s ;}

global List<SFM_StringFieldMap> getStringFieldMap(){return stringFieldMap;}

global void setstringFieldMap(List<SFM_StringFieldMap> s){stringFieldMap = s
;

}

global List<SFM_StringListMap> getStringLstMap(){return StringLstMap;}

global void setStringLstMap(List<SFM_StringListMap> s){StringLstMap = s ;}

global List<SFM_MapStringMap> getMapStringMap(){return MapStringMap;}

global void setMapStringMap(List<SFM_MapStringMap> s){MapStringMap = s ;}

}

```

See Also:

[Configuring ServiceMax](#)

ServiceMax Mail Merge

ServiceMax API

SERVICEMAX MAIL MERGE

Overview

Depending upon the modules to which you have subscribed, ServiceMax installation may include several Mail-merge templates for:

- RMA
- Shipment note
- Service Report
- Service Contract
- Quotation

These are templates built using Visual Force and Apex. Create a copy of the template to customize them for your organization's use.

In addition, ServiceMax provides a simple process to publish your custom templates to end users, and a standard screen that allows users to select templates from a list and print them in multiple formats.

Customization

Working knowledge of Visual Force, Apex programming and a thorough understanding of the ServiceMax object model are absolutely necessary to customize/build Visual Force templates.

Based on user requirements, identify the standard ServiceMax template you wish to customize. For example, if the users require a custom Service Contract template, use the ServiceMax Service Contract Template as a starting point.

Each ServiceMax template has three components:

- a Visual Force page
- an Apex controller
- The Apex Unit Test class.

Create a copy of all the three for your customization.

Once you have completed the changes in your Sandbox instance, you must publish the templates in order to use them on an object page. See [Publishing Templates](#) for more information.

After testing the template from an end user experience standpoint, you can package and migrate the template (Visual Force and Apex) to production. You can do this on Eclipse using Force.com IDE.

Publishing Templates

Once a template is created, publishing is a 2-step process:

Step 1: Create a Document Record

1. Click the **Documents** tab and select any folder where you want to save the templates. The default templates of ServiceMax are available in the ServiceMax Documents folder.
2. Click **New Document** to view the Document Edit screen.
3. Enter a user-friendly name for the document. This is the name that will be listed for users to select from.
4. Check the **Internal Use Only** checkbox.
5. Select the appropriate folder.
6. In Description, enter the object name using the format "NamespacePrefix.ObjectName.RecordType." For example, if the template you built corresponds to Shipments, enter "SVMXP.RMA_Shipment_Order.Shipment". This is to make sure that you have the flexibility to define templates for various record types in an object. If your object does not have a record type, use only the Namespace prefix and Object name. For example, to identify a template built on the Stock Transfer object, use "SVMXI.Stock_Transfer".

7. In Keywords, enter the name of the Visual Force page you created.
8. Click **Save**.

Repeat the above steps for as many templates as your organization needs. If you are building templates in more than one language, create separate document folders for each language, and grant folder access to only the appropriate users. A sample document record entry is shown below:

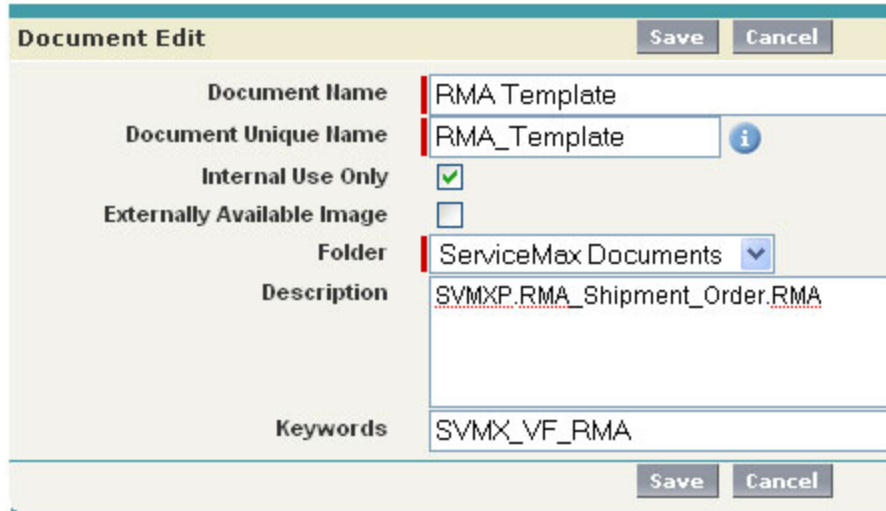


Figure 1: Document Entry Screen

Step 2: Create a custom button or link to launch ServiceMax Mail Merge Page

This must be done for each object, if not already present. To do this:

1. Navigate to **Setup > App Setup > Create > Objects** and then click the object for which you created templates.
2. Create New Custom button/link by following Steps 3 - 10 below.
3. Enter a suitable name for the label. Recommended practice is "Object Name Report (s)". For example, for RMA-related templates, the button/link label could be RMA Report(s.)
4. In the **Behavior** picklist, click **Display in existing window without sidebar or header**.
5. Select **URL** for Content Source.

6. For the button content, use the syntax given below. The area highlighted must be used exactly as shown here: /apex/SVMX_Select_VF_Template?id=YourObjectId&ObjName=Namespace.ObjectName.RecordType
7. Specify the Salesforce merge variable name for the id parameter.
8. Specify the Document description for the ObjName parameter.
9. For example, the URL for RMA reports will be: /apex/SVMX_Select_VF_Template?id={!SVMXP__RMA_Shipment_Order__c.Id}&ObjName=SVMXP.RMA_Shipment_Order.RMA
10. Click **Save**.
11. Add the custom button/link to the page layout. A sample custom link is shown here:

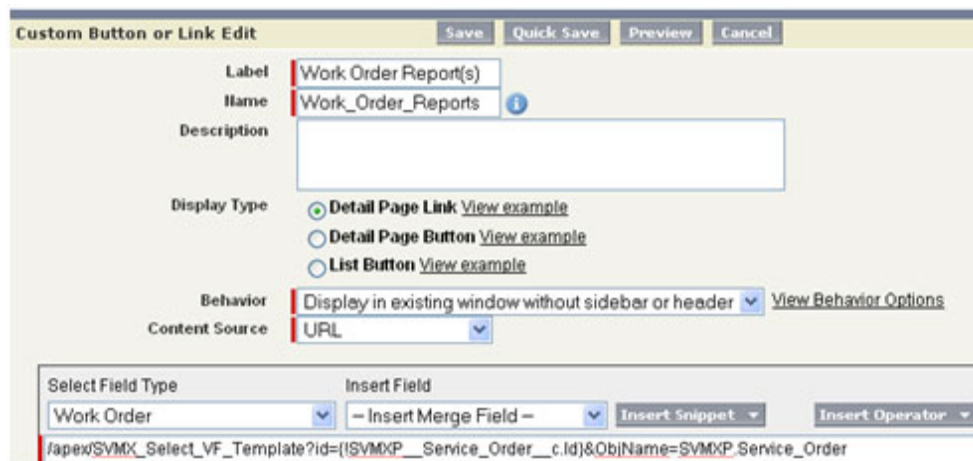


Figure 2: Custom Button or Link Edit Screen

Testing Created Templates

To test a template:

1. Go to the detail page of any record.

2. Click the custom button/link you created. You will see the Templates Selection screen that lists all the templates you created for the given object.

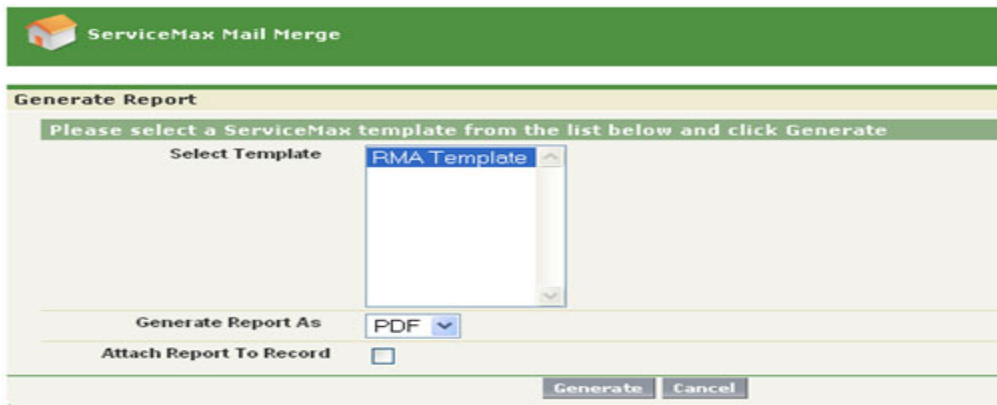


Figure 3: ServiceMax Template Selection Screen

3. If you do not see your template listed in this screen, verify that:
 - a. The Document description has the exact same data as specified in the ObjName parameter of the button.
 - b. You have access to the documents folder in which the document record was created.

SERVICEMAX API

Overview

This section lists the syntax and usage of various Apex utilities made available in ServiceMax for public use.

Class: SVMXC.COMM_Utils_ManageSettings

1. SVMX_getSettingList(String SubmoduleId)

Returns the values of all settings in the given submodule ID as a Map<String,String>.

Example: To retrieve all setting values for Case Entitlement submodule (Submodule ID EVER001):

```
YourClass(...)
{
    Your code...

    // Initialize the constructor

    SVMXC.COMM_Utils_ManageSettings commUtilSettings = new SVMXC.COMM_Utils_ManageSettings();

    Map<String, String> mySettings = settings.SVMX_getSettingList('EVER001');

    // Your code to use the settings

    String valSet001 = mySettings.get('SET001');
}
```

2. SVMX_getSettingList(String SubmoduleId, String SettingId)

Returns the values of the given setting in the given submodule ID as a Map<String,String>.

Example: To retrieve the value of the setting Show Future Entitlements in Case Entitlement submodule:

```
YourClass(...)  
  
{  
  
    Your code...  
  
    // Initialize the constructor  
  
    SVMXC.COMM_Utils_ManageSettings commUtilSettings = new SVMXC.COMM_Utils_ManageSettings();  
  
    Map<String, String> mySettings = settings.SVMX_getSettingList('EVER001', 'SET001');  
  
    // Your code to use the settings  
  
    String valSet001 = mySettings.get('SET001');  
  
}
```

3. SVMX_getSettingList(String SubmoduleId, List<String> SettingList)

Returns the values of the given setting in the given submodule ID as a Map<String,String>.

Example: To retrieve the value of multiple settings for Case Entitlement submodule:

```
YourClass(...)  
  
{  
  
    Your code...  
  
    // Initialize the constructor  
  
    SVMXC.COMM_Utils_ManageSettings commUtilSettings = new SVMXC.COMM_Utils_ManageSettings();  
  
    // Create a list of setting IDs  
  
    List<String> listOfSettings = new List<String>();  
  
    listOfSettings .add('SET001');  
  
    listOfSettings .add('SET002');  
  
    listOfSettings .add('SET003');  
  
    Map<String, String> mySettings = settings.SVMX_getSettingList('EVER001', listOfSettings);  
  
    // Your code to use the settings  
  
    String valSet001 = mySettings.get('SET001');
```

```
}
```

4. SVMX_getFieldMapping(String MapId)

Returns the source to target field mapping configured for the given object Map ID as an array of records from SVMXC__ServiceMax_Config_Data__c object.

Example: This retrieves field mapping between two sample objects, Source_Object__c and Target_Object__c, and copies field values between the two objects using the mappings.

```
YourClass(...)

{

// Initialize the constructor

SVMXC.COMM_Utills_ManageSettings commUtilSettings = new SVMXC.COMM_Utills_ManageSettings();

// Get the field mapping for a given map ID

SVMXC__ServiceMax_Config_Data__c[] FieldMap = commUtilSettings.SVMX_getFieldMapping('MAP001');

Target_Object__c TObj = new Target_Object__c();

// Use your code to select data from Source_Object__c

// Assuming you have the source record in SObj

//Populate fields and corresponding values using fieldMap

    for (SVMXC__ServiceMax_Config_Data__c fld : FieldMap)

    {

        String targetFieldName = fld.SVMXC__Target_Field_Name__c;

        String sourceFieldName = fld.SVMXC__Source_Field_Name__c;

        Object sourceFldVal = SObj.get(sourceFieldName);

        if(sourceFldVal != null)

        {

            TObj.put(targetFieldName, sourceFldVal);

        }

    }

}
```

Class: SVMXC. COMM_Utils_ManageTags

1. SVMX_getTagList(String SubmoduleId)

Returns all the display tags for the given submodule as a Map<String,String>. It considers the login user's language settings in Salesforce.

Example: To retrieve all display tags for Case Entitlement page:

```
YourClass(...)  
  
{  
  
    Your code...  
  
    // Initialize the constructor  
  
    SVMXC.COMM_Utils_ManageTags commUtilTags = new SVMXC.COMM_Utils_ManageTags();  
  
    Map<String, String> myTags = settings.SVMX_getTagList ('EVER001');  
  
}
```

In the above example, once the tags are available in myTags, you can apply the tag text in a VisualForce page on buttons, labels etc. The following example uses 3 tags, one each for page title, label of the Help URL and Cancel button label.

VisualForce page snippet:

```
<apex:pageBlock id="mainBlock" title="{!TAG001}" helpTitle="{!TAG002}" helpUrl=  
l="http://www.servicemax.com" />  
  
<apex:commandButton action="{!Cancel}" value="{!TAG003}" id="theCancelButton"/>  
  
... other page elements  
  
</apex:pageBlock>
```

Getter methods for the display tags in Controller class:

```
public String getTAG001()  
  
{  
  
    return myTags.containsKey('TAG001') ? myTags.get('TAG001') : '';  
  
}
```



```
public String getTAG002()
{
    return myTags.containsKey('TAG002') ? myTags.get('TAG002') : '';
}

public String getTAG003()
{
    return myTags.containsKey('TAG003') ? myTags.get('TAG003') : '';
}
```


SERVICEMAX OFFLINE DATA ACCESS API

Overview

The ServiceMax Offline Data Access API is an overview of the ServiceMax Data Access API for the Offline application and its implementation details. This content will allow third party applications access to the ServiceMax Offline dataset through a well defined interface respecting all security requirements.

Implementation Details

The SVMXDataAccess DLL component will be deployed and registered as part of the offline installation and will be made available for third party integration/access. Through this component, third party applications can perform CRUD operations against the local offline database. During offline synchronization, data manipulated through this API is synchronized and made available in online SFDC.

Access to database objects (tables) and fields depends on the configuration and permissions assigned to the offline logged in user. The user profile should have the following configuration defined/assigned for successful CRUD operation through the API in Manage Offline Profiles (SFDC).

- Allow API access property set to True for generating an API access key in Offline client.
- Allow API access property set to True for the objects that are part of Offline data set definition.
- API access is allowed only for a predefined duration without data synchronization through Offline application.
- The database can be accessed only from the machine where Offline client is installed.

CRUD operations via SVMXDataAccess DLL is achieved via the following function/method calls. See table below.

Method/Function Name	Parameters	Description
executeInsert	DARRequest	Allows inserting new records into offline local database.
executeUpdate	DARRequest	Allows updating of existing records in offline local database.
executeDelete	DARRequest	Allows deleting of existing records in offline local database.
executeQuery	DARRequest	Allows querying data from the existing offline local database.
getDbObjects	DARRequest	Provides the list of objects the logged in user has access to for CRUD operations.
getDbObjectFields	DARRequest	Provides the list of fields for a given object with its permissions, data type, and so on.

All the functions/methods takes one parameter, an object of DARRequest type, which may consume other custom objects as its properties. The following objects are used during method invocation for CRUD operation.

- DARRequest
- FieldData
- CriteriaData
- DARResponse

DARRequest

All the exposed functions/methods in SVMXDataAccess API take DARRequest as its input parameter, which contain all the required information for a successful execution of the exposed function/method. The following table provides the properties that are available and its usage.

Property Name	Data Type	Data Flow	Description
UserName	String	Input	The Offline application login user name (SFDC login).
APIKey	String	Input	Unique API key generated via offline application.

Property Name	Data Type	Data Flow	Description
ObjectName	String	Input	Object name against which the CRUD operation will be executed.
FieldNames	ArrayList of FieldData object	Input	ArrayList with FieldData objects as its items. FieldData object holds the field information required for CRUD operation.
Criteria	ArrayList of CriteriaData object	Input	ArrayList of CriteriaData objects as it items. CriteriaData object holds the information required for CRUD operation.
AdvancedExpression	String	Input	Order and condition criteria (SQL Operators).
OrderBy	String	Input	Order by field names for query execution.
DAResponse	DAResponse object	Output	Object holding the response returned by the executed API function/method.
Source Location	String	Input	Location of file to be attached when object is Attachment and operation is Insert.
Destination Location	String	Input	Location where file to be copied when object is Attachment and operation is executequery.
Reference Object Name	String	Input	Reference object name against which the object Attachment is called.
Response	String	Output	It contains all the response in JSON format.

FieldData

The object is used within the DAREquest object, and the FieldNames array list values in the DAREquest object should be of this type. This object is responsible for holding field information during CRUD operation. The field information includes the field name, type, and its value. The following table provides the properties that are available and its usage.

Property Name	Data Type	Data Flow	Description
FieldName	String	Input	Name of the database object field.
FieldValue	String	Input	Value used for insertion or updates.
FieldType	String	Input	Data type of the field value.

CriteriaData

This object represents SQL where the condition for the executing query and Criteria array list values in DAREquest object should be of this type. The criteria information includes the field name, value, and the expression (=, <, >, <>, NOT IN, IN, and so on). The following table provides the properties that are available and its usage.

Property Name	Data Type	Data Flow	Description
FieldName	String	Input	Name of the database object field.
FieldValue	String	Input	Value used in the criteria for this field.
Operator	String	Input	Supported SQL operators.
ParentId	String	Input	Contains ParentId. This is used when object is Attachment only.

DAResponse

This object represents the response returned by the executed function/method. All the functions/methods supported by the API can access this object for response information. The properties of this object and its usage are provided in the following table.

Property Name	Data Type	Data Flow	Description
ObjectName	String	Output	Name of the object against which the CRUD operation is performed.
ResponseCode	Integer	Output	Response code can be 0 or 1. 1-representing success, 0-representing error.
ResponseMsg	String	Output	Response message. This is an information message.
ObjectData	String	Output	Holds query results in JSON format.
ErrorId	String	Output	Holds the error code. Used for debugging.
ErrorMsg	String	Output	Custom Error Message.
ErrorDescription	String	Output	Actual error description retrieved from the exception.
exStackTrace	String	Output	Complete exception stack trace.

API Function/Method and its Parameter Matrix

The following matrix provides the mandatory, optional parameters and its applicability. Use this matrix during implementation.

Property Name	executeInsert	executeUpdate	executeDelete	executeQuery	getDbObjects	getDbObjectFields
UserName	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
APIKey	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
ObjectName	Mandatory	Mandatory	Mandatory	Mandatory	NA	Mandatory
FieldNames	Mandatory	Mandatory	NA	Optional	Mandatory	Mandatory
Criteria	Optional	Optional	Optional	Optional	Optional	Optional
SourceLocation	Mandatory (For Attachment only)	NA	NA	NA	NA	NA
DestinationLocation	NA	NA		Mandatory (For Attachment only)	NA	NA
AdvancedExpression	Optional	Optional	Optional	Optional	Optional	Optional
OrderBy	NA	NA	NA	Optional	Optional	Optional
DAResponse	Output	Output	Output	Output	Output	Output
Response	Output	Output	Output	Output	Output	Output

Function/Method Signature With Example

Consider the following before executing any of the function/method exposed via SVMXDataAccess API.

- Make sure the required parameter values are provided in the DAREquest object as per the function parameter matrix specification.
- Use getDbObjects and getDbObjectFields to know more about the object and its fields.
- Attachments cannot be updated. To update attachments, delete the existing attachment that you intent to update and insert again by calling executeDelete and executeInsert function calls.

executeInsert (DAREquest *daRequest*)

This function will insert new records to the local offline database including attachments.

- Function Signature: executeInsert(DAREquest *daRequest*)
- Function Name: executeInsert
- Parameter: DAREquest
- Sample Code:

```
DAREquest objDAREq = new DAREquest();

objDAREq.UserName = "techuser@acme.com";

objDAREq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDAREq.ObjectName = "Account";

objDAREq.SourceLocation = "";

objDAREq.DestinationLocation="";

objDAREq.ReferenceObjectName="";

ArrayList arrFD = new ArrayList();
FieldData objFD = new FieldData();
objFD.setName = ("Name");
objFD.setValue = ("Burlington");
objFD.setType= ("nvarchar") ;
arrFD.Add(objFD);
objFD = new FieldData();
objFD.setName = ("Type");
objFD.setValue = ("Other");
objFD.setType= ("nvarchar");
arrFD.Add(objFD);
```



```
objFD = new FieldData();
objFD.setName = ("BillingStreet");
objFD.setValue = ("Main Street");
objFD.setType= ("nvarchar");
arrFD.Add(objFD);
objDAREq.FieldNames = arrFD;

objDAREq.Criteria = null;

        objDAREq.AdvanceExpression = "";

        objDAREq.OrderBy = "";

        objDAREq.SourceLocation = "";

        objDAREq.DestinationLocation = "";

        objDAREq.ReferenceObjectName = "";

if (SVMXDataAccessAPI.SVMXDataAccessAPI.executeInsert(objDAREq) == 1 )

        txt1.Text = objDAREq.Response;

else

txt1.Text = objDAREq.Response;
```

- Sample code in case of Attachment Record insertion:

```
DARquest objDAREq = new DARquest();

objDAREq.UserName = "techuser@acme.com";

        objDAREq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDAREq.ObjectName = "Attachment";

objDAREq.SourceLocation = "d:/test.doc";

objDAREq.DestinationLocation="";

objDAREq.ReferenceObjectName="SVMXC__Service__Order__c";


        ArrayList arrFD = new ArrayList();
```

```

FieldData objFD = new FieldData();

objFD.setName = ("Body");

objFD.setValue = ("test.doc");

objFD.setType = ("File") ;

arrFD.Add(objFD);


FieldData objFD = new FieldData();

objFD.setName = ("ParentId");

objFD.setValue = ("a0vZ0000000eM4bIAE");

objFD.setType = ("=") ;

arrFD.Add(objFD);

objDAREq.FieldNames = arrFD;


CriteriaData objCD = null;

objDAREq.AdvanceExpression = "";

objDAREq.OrderBy = "";

if (SVMXDataAccessAPI.SVMXDataAccessAPI.executeInsert(objDAREq) == 1 )

txt1.Text = objDAREq.Response;

else

txt1.Text = objDAREq.Response;

```

executeUpdate (DAREquest *daRequest*)

This function will update existing records to the local offline database excluding attachments.

- Function Signature: executeUpdate(DAREquest *daRequest*)
- Function Name: executeUpdate
- Parameter: DAREquest
- Sample Code:

```
DARquest objDAReq = new DARquest();

    objDAReq.UserName = "techuser@acme.com";

    objDAReq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

    objDAReq.ObjectName = "Account";

    objDAReq.SourceLocation = "";

    objDAReq.DestinationLocation="";

    objDAReq.ReferenceObjectName="";


ArrayList arrFD = new ArrayList();

FieldData objFD = new FieldData();

objFD.setName = ("Name");

objFD.setValue = ("Burlington");

objFD.setType = ("nvarchar") ;

arrFD.Add(objFD);

objFD = new FieldData();

objFD.setName = ("Type");

objFD.setValue = ("Other");

objFD.setType= ("nvarchar");

arrFD.Add(objFD);

objFD = new FieldData();

objFD.setName = ("BillingStreet");

objFD.setValue = ("Main Street");

objFD.setType= ("nvarchar");

arrFD.Add(objFD);

objDAReq.FieldNames = arrFD;


ArrayList arrCD = new ArrayList();

CriteriaData objCD = new CriteriaData();
```

```
objCD.setName = "Account_PID";  
objCD.setValue = "1";  
objCD.setOperator = "=" ;  
arrCD.Add(objCD);  
  
objCD = new CriteriaData();  
objCD.setName = "OwnerId";  
objCD.setValue = "3";  
objCD.setOperator = "=" ;  
arrCD.Add(objCD);  
objDReq.Criteria = arrCD;  
  
objDReq.AdvanceExpression = "1 AND 2";  
  
objDReq.OrderBy = "";  
objDReq.SourceLocation = "";  
objDReq.DestinationLocation = "";  
objDReq.ReferenceObjectName = "";  
  
if (SVMXDataAccessAPI.SVMXDataAccessAPI.executeUpdate(objDReq) == 1 )  
    txt1.Text = objDReq.Response;  
  
else  
    txt1.Text = objDReq.Response;
```

executeDelete (DRequest *daRequest*)

This function is used to delete existing records from the local offline database including attachments.

- Function Signature: `executeDelete(DARequest daRequest)`
- Function Name: `executeDelete`
- Parameter: `DARequest`
- Sample Code:

```
DARequest objDAReq = new DARequest();

objDAReq.UserName = "techuser@acme.com";

objDAReq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDAReq.ObjectName = "SVMXC__Service_Order_Line__c";

objDAReq.SourceLocation = "";

        objDAReq.DestinationLocation="";

        objDAReq.ReferenceObjectName="";


objDAReq.FieldNames = null;


ArrayList arrCD = new ArrayList();

CriteriaData objCD = new CriteriaData();

objCD.setName = "SVMXC__Service_Order_Line__c_PID";

objCD.setValue = "1";

objCD.setOperator = "=" ;

arrCD.Add(objCD);

objDAReq.Criteria = arrCD;


objDAReq.AdvanceExpression = "";

objDAReq.OrderBy = "";

objDAReq.SourceLocation = "";

objDAReq.DestinationLocation = "";

objDAReq.ReferenceObjectName = "";
```

```

if (SVMXDataAccessAPI.SVMXDataAccessAPI.executeDelete(objDReq) == 1 )
{
    txt1.Text = objDReq.Response;
}
Else
{
    txt1.Text = objDReq.Response;
}

```

executeQuery (DAResult *daRequest*)

This function is used to query existing records from the local offline database including attachments.

- Function Signature: executeQuery(DAResult *daRequest*)
- Function Name: executeQuery
- Parameter: DAResult
- Sample Code:

```

DAResult objDReq = new DAResult();

objDReq.UserName = "techuser@acme.com";

objDReq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDReq.ObjectName = "SVMXC__Installed_Product__c";

objDReq.SourceLocation = "";

objDReq.DestinationLocation="";

objDReq.ReferenceObjectName="";


ArrayList arrFD = new ArrayList();

FieldData objFD = new FieldData();

objFD.setName = "SVMXC__Installed_Product__c_PID";

arrFD.Add(objFD);

```

```
objFD.setName = "Id";

arrFD.Add(objFD);

objFD.setName = "OwnerId";

arrFD.Add(objFD);

objFD.setName = "Name";

arrFD.Add(objFD);

objDAREq.FieldNames = arrFD;


ArrayList arrCD = new ArrayList();

CriteriaData objCD = new CriteriaData();

objCD.setName = "SVMXC__Product_Name__c";

objCD.setValue = "'RASINHS'";

objCD.setOperator = "LIKE" ;

arrCD.Add(objCD);

objCD = new CriteriaData();

objCD.setName = "SVMXC__Serial_Lot_Number__c";

objCD.setValue = "NULL";

objCD.setOperator = "<>" ;

arrCD.Add(objCD);

objDAREq.Criteria = arrCD;


objDAREq.AdvanceExpression = "1 OR 2";

objDAREq.OrderBy = "Name DESC";

objDAREq.SourceLocation = "";

objDAREq.DestinationLocation = "";

objDAREq.ReferenceObjectName = "";


if (SVMXDataAccessAPI.SVMXDataAccessAPI.executeQuery(objDAREq) == 1 )
```

```
{  
    txt1.Text = objDAREq.Response;  
}  
  
Else  
  
{  
    txt1.Text = objDAREq.Response;  
}
```

getDbObjects (DAREquest *daRequest*)

This function is used to get the list of objects the user is allowed for CRUD operation from the local offline database.

- Function Signature: `getDbObjects(DAREquest daRequest)`
- Function Name: `getDbObjects`
- Parameter: `DAREquest`
- Sample Code:

```
DAREquest objDAREq = new DAREquest();  
  
objDAREq.UserName = "techuser@acme.com";  
  
objDAREq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";  
  
objDAREq.ObjectName = "";  
  
objDAREq.SourceLocation = "";  
  
objDAREq.DestinationLocation="";  
  
objDAREq.ReferenceObjectName="";  
  
  
ArrayList arrFD = new ArrayList();  
  
FieldData objFD = new FieldData();  
  
objFD.setName = "*";  
  
arrFD.Add(objFD);  
  
objDAREq.FieldNames = arrFD;
```



```
objDAReq.Criteria = null;

objDAReq.AdvanceExpression = "";

objDAReq.OrderBy = "Name DESC";

objDAReq.SourceLocation = "";

objDAReq.DestinationLocation = "";

objDAReq.ReferenceObjectName = "";

if (SVMXDataAccessAPI.SVMXDataAccessAPI.getDbObjects(objDAReq) == 1 )
{
    txt1.Text = objDAReq.Response;
}

Else
{
    txt1.Text = objDAReq.Response;
}
```

getDBObjectFields (DARquest *daRequest*)

This function is used to get the list of fields for a given object from the local offline database with its permissions and data type.

- Function Signature: getDBObjectFields (DARquest *daRequest*)
- Function Name: getDBObjectFields
- Parameter: DARquest
- Sample Code:

```
DARquest objDAReq = new DARquest();

objDAReq.UserName = "techuser@acme.com";

objDAReq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDAReq.ObjectName = "Account";
```

```
objDReq.SourceLocation = "";

objDReq.DestinationLocation="";

objDReq.ReferenceObjectName="";


ArrayList arrFD = new ArrayList();

FieldData objFD = new FieldData();

objFD.setName = "*";

arrFD.Add(objFD);

objDReq.FieldNames = arrFD;


objDReq.Criteria = null;

objDReq.AdvanceExpression = "";

objDReq.OrderBy = "Name DESC";

objDReq.SourceLocation = "";

objDReq.DestinationLocation = "";

objDReq.ReferenceObjectName = "";


if (SVMXDataAccessAPI.SVMXDataAccessAPI.getDBObjectFields(objDReq) == 1 )
{

    txt1.Text = objDReq.Response;

}

Else

{

    txt1.Text = objDReq.Response;
```

SERVICEMAX LAPTOP DATA ACCESS API

Overview

The ServiceMax Laptop Data Access API enables offline data to be directly accessed by third party applications. This content provides an integration detail that helps third party applications access the ServiceMax Laptop Offline dataset through a well-defined interface, respecting all security requirements.

Implementation Details

The LaptopMobile.DataAccessAPIDLL is deployed in GAC as part of the offline Laptop Mobile installation and is made available for third party integration/access. Additionally, third party applications need to add a reference to System.Data.SQLite.dll, SQLite.Interop.dll, which is available in the DataAccessAPI folder in the Laptop Mobile installed directory.

Third party applications can perform CRUD operations against the local offline database. During synchronization, data manipulated through this API is synchronized and made available in online SFDC.

Access to perform CRUD operation on database objects (tables) and fields depends on the configuration and permissions assigned to the logged in user. The user profile should have the following configuration defined/assigned for successful CRUD operation through the API.

- Allow API Access property should be checked in the Other Settings tab under Mobile Configuration.
- Necessary permissions for transactional objects, on which API operations are performed, should be provided in SFDC.
- The database can be accessed only from the machine where the Laptop Client is installed.

CRUD operations via LaptopMobile.DataAccessAPIDLL are achieved through the following function/method calls listed in the table below.

Method/Function Name	Parameters	Description
executeInsert	DAResult	Allows inserting new records into the local database.
executeUpdate	DAResult	Allows updating of existing records in the local database.
executeDelete	DAResult	Allows deleting of existing records in the local database.
executeQuery	DAResult	Allows querying data from the existing local database.
getDbObjects	DAResult	Provides the list of objects available in the local database along with the permissions.
getDBObjectFields	DAResult	Provides the list of fields for a given object with its permissions, data type, and so on.

All the functions/methods accept one parameter, an object of DAResult type, as input.

DAResult

All the exposed functions/methods in Data Access API take DAResult as input, which contains all the required information for a successful execution. The following table provides the properties that are available and its usage.

Property Name	Data Type	Data Flow	Description
UserName	String	Input	The Laptop application login user name (SFDC login).
APIKey	String	Input	Unique API key generated via offline application.
ObjectName	String	Input	Object name from which the CRUD operation will be executed.
FieldNames	ArrayList of FieldData object	Input	ArrayList with FieldData objects as its items. FieldData object holds the field information required for CRUD operation.
Criteria	ArrayList of CriteriaData object	Input	ArrayList of CriteriaData objects as its items. CriteriaData object holds the information required for CRUD operation.

Property Name	Data Type	Data Flow	Description
AdvancedExpression	String	Input	Order and condition criteria (SQL Operators).
OrderBy	String	Input	Order by field names for query execution.
DAResponse	DAResponse object	Output	Object holding the response returned by the executed API function/method.
Source Location	String	Input	Location of file to be attached when object is Attachment and operation is Insert.
Destination Location	String	Input	Location where file to be copied when the object is Attachment and operation is executequery.
Reference Object Name	String	Input	Reference object name from which the object Attachment is called.
Response	String	Output	It contains all the responses in JSON format.
mandatoryCheckDisabled	Bool	Input	Disables mandatory check for Insert / Update Operation if set to 'true.'

FieldData

This object is responsible for holding field information during CRUD operation. The object is used within the DAResponse object, and the FieldNames array list values in the DAResponse object should be of this type. The following table provides the properties that are available and its usage.

Property Name	Data Type	Data Flow	Description
FieldName	String	Input	Name of the database object field.
FieldValue	String	Input	Value used for insertion or updates.
FieldType	String	Input	Data type of the field value.

CriteriaData

This object represents SQL where the condition for the executing query and Criteria array list values in DARequest object should be of this type. The criteria information includes the field name, value, and the expression (=, <, >, <>, NOT IN, IN, and so on) The following table provides the properties that are available and its usage.

Property Name	Data Type	Data Flow	Description
FieldName	String	Input	Name of the database object field.
FieldValue	String	Input	Value used in the criteria for this field.
Operator	String	Input	Supported SQL operators like =, <, >, <>, NOT IN, IN.
ParentId	String	Input	Contains ParentId. This is used when the object is 'Attachment Only.'

DAResponse

This object represents the response returned by the executed function/method. This is available as an attribute in the DARequest object and the client methods can access this for retrieving response information. The properties of this object and its usage are provided in the following table.

Property Name	Data Type	Data Flow	Description
ObjectName	String	Output	Name of the object against which the CRUD operation is performed.
ResponseCode	Integer	Output	Response code can be 0 or 1. 1-representing success, 0-representing error.
ResponseMsg	String	Output	Response message. This is an information message.
ObjectData	String	Output	Holds query results in JSON format.
ErrorId	String	Output	Holds the error code. Used for debugging.
ErrorMsg	String	Output	Custom Error Message.

Property Name	Data Type	Data Flow	Description
ErrorDescription	String	Output	Actual error description retrieved from the exception.
exStackTrace	String	Output	Complete exception stack trace.

API Function/Method and its Parameter Matrix

The following matrix provides the mandatory, optional parameters and its applicability. Use this matrix during implementation.

Property Name	executeInsert	executeUpdate	executeDelete	executeQuery	getDbObjects	getDbObjectFields
UserName	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
APIKey	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
ObjectName	Mandatory	Mandatory	Mandatory	Mandatory	NA	Mandatory
FieldNames	Mandatory	Mandatory	NA	Optional	Mandatory	Mandatory
Criteria	Optional	Optional	Optional	Optional	Optional	Optional
SourceLocation	Mandatory (For Attachment only)	NA	NA	NA	NA	NA
DestinationLocation	NA	NA		Mandatory (For Attachment only)	NA	NA
AdvancedExpression	Optional	Optional	Optional	Optional	Optional	Optional

Property Name	executeInsert	executeUpdate	executeDelete	executeQuery	getDbObjects	getDbObjectFields
OrderBy	NA	NA	NA	Optional	Optional	Optional
mandatoryCheckDisabled	Optional	Optional	NA	NA	NA	NA
DAResponse	Output	Output	Output	Output	Output	Output
Response	Output	Output	Output	Output	Output	Output

Function/Method Signature with Example

Consider the following before executing any of the function/method exposed via Laptop Data Access API.

- Make sure the required parameter values are provided in the DARequest object as per the function parameter matrix specification.
- Use getDbObjects and getDbObjectFields to know more about the object and its fields.
- Attachments cannot be updated. To update attachments, delete the existing attachment that you intend to update and insert again by calling executeDelete and executeInsert function calls.

executeInsert(DARequestdaRequest)

This function will insert new records to the local offline database including attachments.

- Function Signature: executeInsert(DARequestdaRequest)
- Function Name: executeInsert
- Parameter: DARequest
- Sample Code:

```
DARequest objDAReq = new DARequest();

objDAReq.UserName = "techuser@acme.com";

objDAReq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDAReq.ObjectName = "Account";
```



```
        objDReq.SourceLocation = "";

        objDReq.DestinationLocation="";

        objDReq.ReferenceObjectName="";

        ArrayList arrFD = new ArrayList();
        FieldData objFD = new FieldData();
        objFD.setName = ("Name");
        objFD.setValue = ("Burlingame");
        objFD.setType= ("nvarchar") ;
        arrFD.Add(objFD);
        objFD = new FieldData();
        objFD.setName = ("Type");
        objFD.setValue = ("Other");
        objFD.setType= ("nvarchar");
        arrFD.Add(objFD);
        objFD = new FieldData();
        objFD.setName = ("BillingStreet");
        objFD.setValue = ("Main Street");
        objFD.setType= ("nvarchar");
        arrFD.Add(objFD);
        objDReq.FieldNames = arrFD;

        objDReq.Criteria = null;

        objDReq.AdvanceExpression = "";

        objDReq.OrderBy = "";

        objDReq.SourceLocation = "";

        objDReq.DestinationLocation = "";

        objDReq.ReferenceObjectName = "";

        LaptopMobile.DataAccessAPI.DataAccessAPI objDAAPI = new LaptopMobile.DataAc-
        cessAPI.DataAccessAPI();

        if (objDAAPI.executeInsert(objDReq) == 1 )

            txt1.Text = objDReq.Response;

        else
```

```
txt1.Text = objDAREq.Response;
```

- **Sample code in case of Attachment Record insertion:**

```
DARquest objDAREq = new DARquest();

objDAREq.UserName = "techuser@acme.com";

objDAREq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDAREq.ObjectName = "Attachment";

objDAREq.SourceLocation = "d:/test.doc";

objDAREq.DestinationLocation="";

objDAREq.ReferenceObjectName="SVMXC__Service__Order__c";


ArrayList arrFD = new ArrayList();

FieldData objFD = new FieldData();

objFD.setName = ("Body");

objFD.setValue = ("test.doc");

objFD.setType = ("File") ;

arrFD.Add(objFD);


FieldData objFD = new FieldData();

objFD.setName = ("ParentId");

objFD.setValue = ("a0vZ00000000eM4bIAE");

objFD.setType = ("=") ;

arrFD.Add(objFD);

objDAREq.FieldNames = arrFD;


CriteriaData objCD = null;

objDAREq.AdvanceExpression = "";

objDAREq.OrderBy = "";
```

```
LaptopMobile.DataAccessAPI.DataAccessAPI objDAAPI = new LaptopMobile.DataAc-
cessAPI.DataAccessAPI();

        if (objDAAPI.executeInsert(objDAREq) == 1 )

            txt1.Text = objDAREq.Response;

        else

            txt1.Text = objDAREq.Response;
```

executeUpdate(DARequestdaRequest)

This function will update existing records to the local offline database excluding attachments.

- Function Signature: executeUpdate(DARequestdaRequest)
- Function Name: executeUpdate
- Parameter: DARequest
- Sample Code:

```
DARequest objDAREq = new DARequest();

        objDAREq.UserName = "techuser@acme.com";

        objDAREq.APIKey = "95757CQrHzBhvIf1lZtX47HNL+nxUMscZY8sk";

        objDAREq.ObjectName = "Account";

        objDAREq.SourceLocation = "";

        objDAREq.DestinationLocation="";

        objDAREq.ReferenceObjectName="";

        ArrayList arrFD = new ArrayList();

        FieldData objFD = new FieldData();

        objFD.setName = ("Name");

        objFD.setValue = ("Burlington");

        objFD.setType = ("nvarchar") ;

        arrFD.Add(objFD);
```

```
objFD = new FieldData();

objFD.setName = ("Type");

objFD.setValue = ("Other");

objFD.setType= ("nvarchar");

arrFD.Add(objFD);

objFD = new FieldData();

objFD.setName = ("BillingStreet");

objFD.setValue = ("Main Street");

objFD.setType= ("nvarchar");

arrFD.Add(objFD);

objDReq.FieldNames = arrFD;


ArrayList arrCD = new ArrayList();

CriteriaData objCD = new CriteriaData();

objCD.setName = "Account_PID";

objCD.setValue = "1";

objCD.setOperator = "=" ;

arrCD.Add(objCD);

objCD = new CriteriaData();

objCD.setName = "OwnerId";

objCD.setValue = "3";

objCD.setOperator = "=" ;

arrCD.Add(objCD);

objDReq.Criteria = arrCD;


objDReq.AdvanceExpression = "1 AND 2";


objDReq.OrderBy = "";
```

```
objDReq.SourceLocation = "";

objDReq.DestinationLocation = "";

objDReq.ReferenceObjectName = "";


LaptopMobile.DataAccessAPI.DataAccessAPI objDAAPI = new LaptopMobile.DataAc-
cessAPI.DataAccessAPI ();

if (objDAAPI.executeUpdate(objDReq) == 1 )

    txt1.Text = objDReq.Response;

else

    txt1.Text = objDReq.Response;
```

executeDelete(DARequest daRequest)

This function is used to delete existing records from the local offline database including attachments.

- Function Signature: executeDelete(DARequest daRequest)
- Function Name: executeDelete
- Parameter: DARequest
- Sample Code:

```
DARequest objDReq = new DARequest ();

objDReq.UserName = "techuser@acme.com";

objDReq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDReq.ObjectName = "SVMXC__Service_Order_Line__c";

objDReq.SourceLocation = "";

    objDReq.DestinationLocation="";

    objDReq.ReferenceObjectName="";


objDReq.FieldNames = null;
```

```

ArrayList arrCD = new ArrayList();

CriteriaData objCD = new CriteriaData();

objCD.setName = "SVMXC__Service_Order_Line__c_PID";

objCD.setValue = "1";

objCD.setOperator = "=" ;

arrCD.Add(objCD);

objDReq.Criteria = arrCD;


objDReq.AdvanceExpression = "";

objDReq.OrderBy = "";

objDReq.SourceLocation = "";

objDReq.DestinationLocation = "";

objDReq.ReferenceObjectName = "";


    LaptopMobile.DataAccessAPI.DataAccessAPI objDAAPI = new LaptopMobile.DataAc-
cessAPI.DataAccessAPI();


if (objDAAPI.executeDelete(objDReq) == 1 )
{

    txt1.Text = objDReq.Response;

}

Else

{

txt1.Text = objDReq.Response;

}

```

executeQuery(DARequest daRequest)

This function is used to query existing records from the local offline database including attachments.

- Function Signature: executeQuery(DARequest daRequest)
- Function Name: executeQuery
- Parameter: DARequest
- Sample Code:

```
DARequest objDReq = new DARequest();

objDReq.UserName = "techuser@acme.com";

objDReq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDReq.ObjectName = "SVMXC__Installed_Product__c";

objDReq.SourceLocation = "";

        objDReq.DestinationLocation="";

        objDReq.ReferenceObjectName="";


ArrayList arrFD = new ArrayList();

FieldData objFD = new FieldData();

objFD.setName = "SVMXC__Installed_Product__c_PID";

arrFD.Add(objFD);

objFD.setName = "Id";

arrFD.Add(objFD);

objFD.setName = "OwnerId";

arrFD.Add(objFD);

objFD.setName = "Name";

arrFD.Add(objFD);

objDReq.FieldNames = arrFD;


ArrayList arrCD = new ArrayList();

CriteriaData objCD = new CriteriaData();

objCD.setName = "SVMXC__Product_Name__c";

objCD.setValue = "'RASINHS'";
```

```

objCD.setOperator = "LIKE" ;

arrCD.Add(objCD);

objCD = new CriteriaData();

objCD.setName = "SVMXC__Serial_Lot_Number__c";

objCD.setValue = "NULL";

objCD.setOperator = "<>" ;

arrCD.Add(objCD);

objDReq.Criteria = arrCD;


objDReq.AdvanceExpression = "1 OR 2";

objDReq.OrderBy = "Name DESC";

objDReq.SourceLocation = "";

objDReq.DestinationLocation = "";

objDReq.ReferenceObjectName = "";

    LaptopMobile.DataAccessAPI.DataAccessAPI objDAAPI = new LaptopMobile.DataAc-
cessAPI.DataAccessAPI();


if (objDAAPI.executeQuery(objDReq) == 1 )
{
    txt1.Text = objDReq.Response;
}

Else
{
    txt1.Text = objDReq.Response;
}

```

getDbObjects(DARequest daRequest)

This function is used to get the list of objects the user is allowed for the CRUD operation from the local offline database.

- Function Signature: `getDbObjects(DARequest daRequest)`
- Function Name: `getDbObjects`
- Parameter: `DARequest`
- Sample Code:

```
DARequest objDReq = new DARequest();

objDReq.UserName = "techuser@acme.com";

objDReq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";

objDReq.ObjectName = "";

objDReq.SourceLocation = "";

objDReq.DestinationLocation="";

objDReq.ReferenceObjectName="";


ArrayList arrFD = new ArrayList();

FieldData objFD = new FieldData();

objFD.setName = "*";

arrFD.Add(objFD);

objDReq.FieldNames = arrFD;


objDReq.Criteria = null;

objDReq.AdvanceExpression = "";

objDReq.OrderBy = "Name DESC";

objDReq.SourceLocation = "";

objDReq.DestinationLocation = "";

objDReq.ReferenceObjectName = "";


LaptopMobile.DataAccessAPI.DataAccessAPI objDAAPI = new LaptopMobile.DataAccessAPI.DataAccessAPI();


if (objDAAPI.getDbObjects(objDReq) == 1 )
```

```
{  
  
    txt1.Text = objDAReq.Response;  
  
}  
  
Else  
  
{  
  
    txt1.Text = objDAReq.Response;  
  
}
```

getDBObjectFields (DARquest daRequest)

This function is used to get the list of fields for a given object from the local offline data-base with its permissions and data type.

- Function Signature: getDBObjectFields(DARquest daRequest)
- Function Name: getDBObjectFields
- Parameter: DARquest
- Sample Code:

```
DARquest objDAReq = new DARquest();  
  
objDAReq.UserName = "techuser@acme.com";  
  
objDAReq.APIKey = "95757CQrHzBhvIfI1ZtX47HNL+nxUMscZY8sk";  
  
objDAReq.ObjectName = "Account";  
  
objDAReq.SourceLocation = "";  
  
objDAReq.DestinationLocation="";  
  
objDAReq.ReferenceObjectName="";  
  
  
ArrayList arrFD = new ArrayList();  
  
FieldData objFD = new FieldData();  
  
objFD.setName = "*";  
  
arrFD.Add(objFD);  
  
objDAReq.FieldNames = arrFD;
```

```
objDReq.Criteria = null;

objDReq.AdvanceExpression = "";

objDReq.OrderBy = "Name DESC";

objDReq.SourceLocation = "";

objDReq.DestinationLocation = "";

objDReq.ReferenceObjectName = "";

LaptopMobile.DataAccessAPI.DataAccessAPI objDAAPI = new LaptopMobile.DataAccessAPI.DataAccessAPI();

if (objDAAPI.getDBObjectFields(objDReq) == 1 )
{
    txt1.Text = objDReq.Response;
}
Else
{
    txt1.Text = objDReq.Response;
}

'>
```


API MESSAGES

Overview

The following tables describe the information and error messages used in the ServiceMax Offline Client for API.

Information Messages

Message Number	Description
MSG-001	Field information for the given object retrieved successfully.
MSG-002	Object information for the given object retrieved successfully.
MSG-003	Record(s) updated successfully. Number of rows updated.
MSG-004	Record(s) deleted successfully. Number of rows deleted.
MSG-005	Record(s) inserted successfully. Number of rows inserted.
MSG-006	Record(s) retrieved successfully. Number of rows queried.
MSG-007	No records found.

Error Messages

Error Number	Description
ERR-001	Invalid Request: API key not found or invalid.
ERR-002	Object name cannot be null.
ERR-003	Invalid database credentials.
ERR-004	Error inserting records. Permission denied. Verify object and field level permissions.

Error Number	Description
ERR-005	Error updating records. Permission denied. Verify object and field level permissions.
ERR-006	Error deleting records. Permission denied. Verify object and field level permissions.
ERR-007	User's credentials have expired. Login to SVMX Offline application and validate the user.
ERR-008	Error inserting records. File not found. Verify file exists at source location.
ERR-009	Error inserting records. Parent ID is null. Verify Parent ID exists if object is Attachment.
ERR-010	Error inserting records. Data type mismatch.
ERR-011	Error inserting records. Reference column value is not present in parent table.
ERR-012	Error inserting records. Permission denied. Verify object level permissions.
ERR-013	Error updating records. Permission denied. Verify object level permissions.
ERR-014	Error deleting records. Permission denied. Verify object level permissions.
ERR-015	Error accessing API. Permission denied. Verify user level permissions.
ERR-016	Error inserting records. File size is greater than maximum size limit.

USING THE APPLICATION

ACCOUNTS / COMPANIES

Overview

Account is a standard feature in Salesforce. In ServiceMax, an account is interchangeably referred to as a Company. Accounts are organization's customers, partners, suppliers, and service providers. Each account stores information such as name, address, and phone numbers for which you can store related information such as opportunities, cases, service/maintenance contracts, installed products and Work Orders.

To learn about how to create, edit and manage account information in Salesforce, see the online help from the Accounts tab on [Salesforce.com](https://www.salesforce.com).

See Also:

[Case](#)

[Installed Product](#)

[Service/Maintenance Contract](#)

[Work Order](#)

CONTACT

Overview

Contacts are individuals associated with business accounts that you need to track in Salesforce. You can store information for a contact such as phone numbers, addresses, titles, and roles in a deal. The Contacts tab displays a home page that enables you to create and locate contacts quickly. You can also sort and filter contacts using standard and custom list views. For each contact, you can store and track related information such as cases reported, installed products, service/maintenance contracts, Work Orders and other service activities.

To learn about how to create, edit and manage contact information in Salesforce, see the online help from the Contacts tab on [Salesforce.com](https://www.salesforce.com).

See Also:

[Case](#)

[Installed Product](#)

[Service/Maintenance Contract](#)

[Work Order](#)

PRODUCT

Overview

Product is a standard feature in Salesforce. Products are the individual items that you sell on your opportunities and any item that you need to keep track of from a service delivery standpoint. You can create a product and create multiple instances of Installed Products for each product in ServiceMax.

You can also associate products with Service/Maintenance Contracts and Warranty Terms, and use them in various service transactions such as Customer Entitlement on Case, RMA, Shipment, and Work Orders. To learn about how to create, edit, and manage product information in Salesforce, see the online help from the Products tab on [Salesforce.com](https://www.salesforce.com).

Custom Product Fields

Fields	Description
Product Line	Product line to which the product belongs. This list will be specific to your business. For example, a computer manufacturer may have Laptop, Desktop, and Server as available values.
Inherit Parent Warranty	This checkbox indicates if this part number will automatically inherit its parent product's warranty when used in an Installed Product configuration. If this checkbox is selected, the parent product's warranty is copied automatically to the child product.
Tracking	Indicates how this product is tracked when shipped to customers. Serialized products will have serial numbers, Lot/Batch Tracked products will have a batch number and Non-Tracked products will not have either of the above.
Unit of Measure	The unit of measure used to determine the product quantity. There is no functionality associated with this field. This field can be included in reports that show product quantities for better readability.
Stockable	This checkbox indicates if this product is stockable. ServiceMax does not maintain inventory of non-stockable products.

Fields	Description
Enable Serialized Tracking of Stock	This checkbox indicates if stock information for this product is tracked at the serial number level. If this flag is selected and if serialized tracking of inventory is enabled for your organization, serial number information will be captured in all ServiceMax inventory transactions.
Product Cost	Product cost in the default currency for your organization. Used for computing inventory value in ServiceMax.

See Also:[Case](#)[Returned Material Authorization \(RMA\)](#)[Service/Maintenance Contract](#)[Shipment Order](#)[Work Order](#)

LOCATION

Overview

Location is unique information that is identified by a name and address. It is especially beneficial in service scenarios when accurate information about the physical location of a product is crucial to the timely delivery of service. ServiceMax uses location to track warehouse and field inventory locations.

Access and Permissions

Actions	User Permissions Needed
Actions	User Permissions Needed
To view the Location tab:	"Read" on Location
To view locations:	"Read" on Location
To create or clone locations:	"Create" on Location
To change locations:	"Edit" on Location
To delete locations:	"Delete" on Location
To validate locations address:	"Read" and "Edit" on Location

Click the **Locations** tab to display the Locations home page.



Caution: Remember that when deleting a Location record, you will not be warned if the location is used in a related record. Since locations are related to numerous ServiceMax records such as installed product, RMA, Shipment, Work Order, inventory, and so on, review and make sure the location record is not used in any related records.

Location Fields

Field Name	Description
Location Name	Name of the location. It is not required to be unique.
Street	"Street" part of the location's address.
City	"City" part of the location's address.
State	"State/Province" part of the location's address.
Zip	"Zip/Postal code" part of the location's address.
Country	"Country" part of the location's address.
Location Type	Indicates the type of location, such as Manufacturing unit, headquarters, warehouse, field location, or branch office.
Account	The company to which this location belongs. Note that you can maintain your own organization's locations in which case you will create an Account record for your company.
Phone	Main phone number of the location (if available).
Fax	Main fax number of the location (if available).
Web site	Website URL for the location (if available).
Service Engineer	Service Engineer (ServiceMax user) associated with this location. Applicable to locations of type Field Location only.
Costed At Value	Flag indicates if inventory in this location is priced using price book value or priced at zero. Clear this flag for scrap locations.
Inventory Account	Inventory account number for this location. Used for costing/accounting purposes.
Stocking Location	Flag indicates if this is a stocking location or not. ServiceMax does not perform inventory updates on non-stocking locations.
Latitude	Geographical code for this location. This is calculated automatically using the Validate Address feature.
Longitude	Geographical code for this location. This is calculated automatically using the Validate Address feature.
Email	Email address of the location (if available).

Validating Location Address

To validate a created location:

1. Navigate to the location record from the **Locations** tab.
2. Click **Validate Address**. A dialog appears indicating the validation process.
 - If the address is *valid*, a message indicating the same appears and the location record will be refreshed. The latitude and longitude fields are populated on the screen.
 - If the address is *invalid*, an error message appears and you will be returned to the location record.



Note: An address could become invalid because of spelling mistakes or if the address contains PO Box or Suite numbers. Since this functionality uses the Google Maps engine, ability to validate an address depends upon the level of coverage for countries provided by Google.

See Also:

[Case](#)

[Parts Request](#)

[Returned Material Authorization \(RMA\)](#)

[Service/Maintenance Contract](#)

[Shipment Order](#)

[Stock Adjustment](#)

[Stock Transfer](#)

[Work Order](#)

AVAILABLE SERVICES

Overview

Service is an activity which is performed during service delivery. For example, a service provider for modems may list installation, configuration, troubleshooting, and on site repair as various services. Service definition is used in Service Contracts to define the coverage for a customer.

Access and Permissions

Actions	User Permissions Needed
To view the Available Services:	"Read" on Available Services
To create or clone Available Services:	"Create" on Available Services
To change Available Services:	"Edit" on Available Services
To delete Available Services:	"Delete" on Available Services

Click **Home > ServiceMax Setup > Services** to view the Available Services home page.



Caution: Remember that when you are deleting Available Services record(s), you will not be warned if the service is used in a related record. Since services are related to other ServiceMax records such as service/maintenance contract and service team, review and make sure the service record is not used in any related records.

Available Services Fields

Fields	Description
Service Name	Name of the service. When naming the service be as specific and granular as possible. For example, instead of Windows OS Installation, you can enter Windows Vista Installation for Intel Laptops.
Effective Date	Date from which this service is available to your customers. This is an optional field.
Data Type	Type of data to be captured as Commitment when using a service in an SLA Terms record. Options are: Text , Number , Frequency , and Boolean .
Service Type	Indicates the type of service. This helps in grouping similar types of services for reporting purposes. Your system administrator is responsible for configuring this list for your organization's requirements.
Active	Checkbox that indicates if this service is currently active and available for use.

Available Services Screen

Click the **Available Services** tab to display the Available Services page. See figure below.



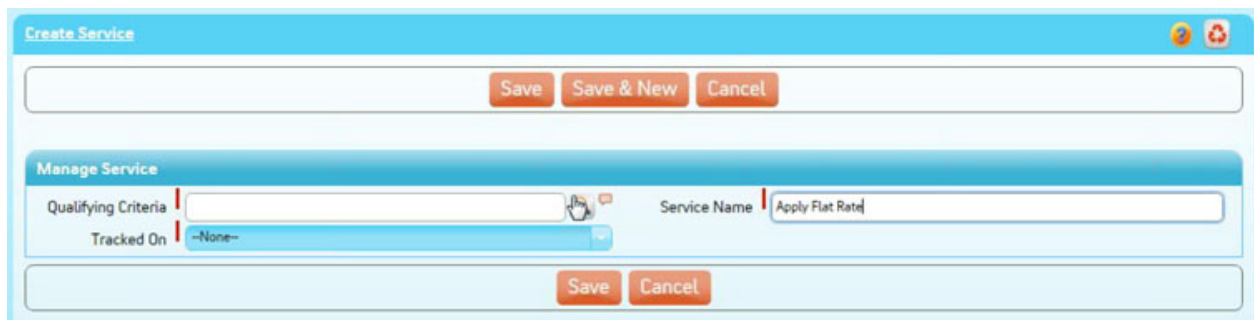
Figure 1: Recent Available Services Screen

Creating a New Available Service

To create a new Available Service:

1. Click the **New** button in the Recent Available Services screen. See figure above.
2. In the Manage Service area:
 - a. Enter or search for the **Qualifying Criteria**.

- b. Enter the **Service Name**.
- c. In the **Tracked On** picklist, select **Work Order** or **Case**.
3. In Service Pricebook Entry Lines area, select an **Activity Master** by entering the name in the text field, using the **Quick Find** search feature, or clicking the bubble icon to search for the Activity Master. See figure below.



The screenshot shows the 'Create Service' window. At the top, there's a title bar 'Create Service' with a help icon and a refresh icon. Below the title bar is a large text input field with three buttons: 'Save', 'Save & New', and 'Cancel'. Below this is a 'Manage Service' section. It contains two rows of fields: 'Qualifying Criteria' with a text input field and a bubble icon, and 'Tracked On' with a picklist menu showing '-None-'. To the right of these is a 'Service Name' field with the text 'Apply Flat Rate'. At the bottom of the 'Manage Service' section are 'Save' and 'Cancel' buttons.

Figure 2: Create Services Screen

4. Click **Save** to save the Available Service.
5. Click **Save & New** to save the Available Service and create a new Available Service.
6. Click **Cancel** to cancel the Available Service.

See Also:

[Service/Maintenance Contracts](#)

[SLA Terms](#)

SLA TERMS

Overview

Service Level Agreement (SLA) Terms indicate the details of coverage a customer is entitled to receive in a service/maintenance contract or a service-level agreement. For example, a Bronze level coverage might be used to provide a response within a maximum of 24 hours whereas a Platinum level coverage can be used for response within 4 hours. Service level can also be used to indicate exceptions, and coverage based on time-of-the-day (8 or 24) and day-of-the-week (5 or 7) support eligibility of a customer.

SLA Terms consists of the following blocks of information:

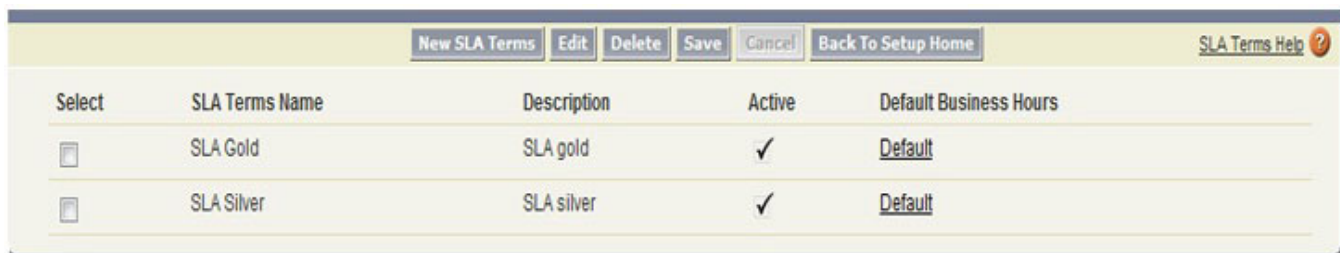
- **General Information:** Name, description, and so on.
- **Initial Response:** Rules based on Case/Work Order Type and Priority to indicate how to calculate initial response time when entitled by an SLA Term.
- **Onsite Response:** Rules based on Case/Work Order Type and Priority to indicate how to calculate onsite response time when entitled by an SLA Term
- **Restoration:** Rules based on Case/Work Order Type and Priority to indicate how to calculate restoration time when entitled by an SLA Term.
- **Resolution:** Rules based on Case/Work Order Type and Priority to indicate how to calculate resolution time when entitled by an SLA Term.
- **Services:** List of services and commitments provided as part of the SLA Terms.

Once SLA Terms are defined and when advanced SLA management is enabled for your organization, the ServiceMax SLA engine calculates commitment times automatically on Case and Work Order. Based on the calculated timestamps, the Case and the Work Order screens will display a countdown clock on various time commitments.

Access and Permissions

Actions	User Permissions Needed
To view SLA Term:	"Read" on SLA Terms and SLA Detail
To create SLA Term:	"Create" on SLA Terms and SLA Detail "Read" on Case and Work Order
To change SLA Term:	"Update" on SLA Terms and SLA Detail "Read" on Case and Work Order
To delete SLA Term:	"Delete" on SLA Terms and SLA Detail

Click **Home > ServiceMax Setup > SLA Terms** to view the SLA Terms home page.



New SLA Terms Edit Delete Save Cancel Back To Setup Home SLA Terms Help				
Select	SLA Terms Name	Description	Active	Default Business Hours
<input type="checkbox"/>	SLA Gold	SLA gold	✓	Default
<input type="checkbox"/>	SLA Silver	SLA silver	✓	Default

Figure 1: SLA Terms Home Page



Caution: Starting from ServiceMax 3.0 release, ServiceMax SLA Terms provides the ability to define advanced commitments such as initial response, onsite response, restoration, resolution and services. Considering the data integrity requirements to maintain such advanced rules, the above specialized screen has been introduced in ServiceMax. Hence, SLA Terms should not be created or updated using the standard screens of Salesforce.

SLA Terms Fields

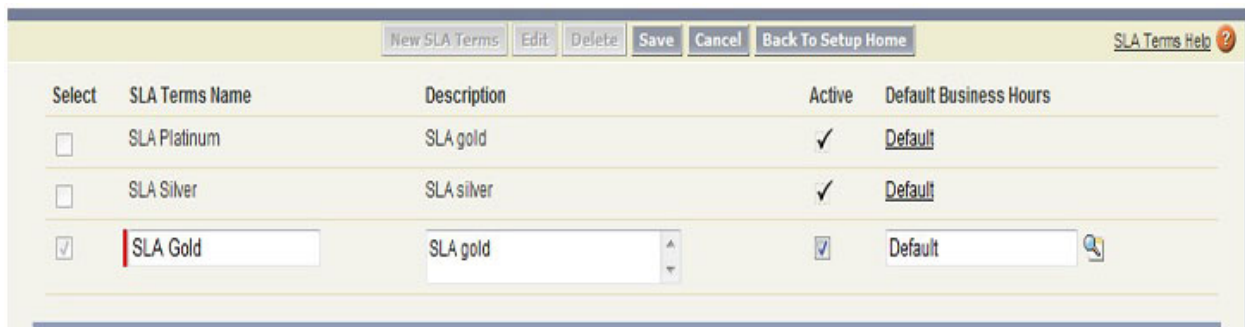
Fields	Description
SLA Terms Name	Name of the service level. Example Gold, Silver, Basic, and Premier.
Description	Detailed description of the service level. Details entered here are displayed in the Case / Work Order Entitlement Screens when a service/maintenance contract is selected.
Active	Checkbox that indicates if the service level is currently active and available for use.
Effective Date	Date from which this service level is available for offering to customers through service contracts.
Default Business Hours	Business hours to be used when applying the SLA Terms on Case or Work Orders. This is a lookup to an existing Salesforce business hours record.
Initial Response Tracked On	Indicates if initial response is tracked on Case or Work Order if a Case/Work Order is entitled using these SLA Terms.
Onsite Response Tracked On	Indicates if onsite response is tracked on Case or Work Order if a Case/Work Order is entitled using these SLA Terms.
Restoration Tracked On	Indicates if restoration time is tracked on Case or Work Order if a Case/Work Order is entitled using these SLA Terms.
Resolution Tracked On	Indicates if resolution time is tracked on Case or Work Order if a Case/Work Order is entitled using these SLA Terms.
Type	Case/Work Order type.
Priority	Case/Work Order priority.
Clock Starts From	Case or Work Order timestamp from which the SLA clock starts for the type of commitment.
Internal Goal	Internal goal in minutes for meeting the type of commitment, if different from customer commitment.
Customer Commitment	Commitment made to customer in minutes for response, restoration, or resolution.

Fields	Description
Business Hours Type	Indicates which business hours to be used to calculate the SLA commitment on Case/Work Order when entitled by these SLA Terms. Options are Account, Product (Installed Product), Service Contract, SLA, or Custom.
Business Hours	Business hours to be used to calculate SLA commitments on Case or Work Order when entitled by these SLA Terms. Used only if Business Hour Type is Custom.

Creating SLA Terms

To create a new SLA Term:

1. Click **New SLA Terms** in the SLA Terms home page. A new SLA Term record appears below the existing records as shown below:



The screenshot shows a web interface for creating a new SLA Term. At the top, there are buttons: 'New SLA Terms', 'Edit', 'Delete', 'Save', 'Cancel', and 'Back To Setup Home'. On the right, there is a link 'SLA Terms Help' with a question mark icon. Below the buttons is a table with the following columns: 'Select', 'SLA Terms Name', 'Description', 'Active', and 'Default Business Hours'.

Select	SLA Terms Name	Description	Active	Default Business Hours
<input type="checkbox"/>	SLA Platinum	SLA gold	✓	Default
<input type="checkbox"/>	SLA Silver	SLA silver	✓	Default
<input checked="" type="checkbox"/>	SLA Gold	SLA gold	<input checked="" type="checkbox"/>	Default

Figure 2: New SLA Term Record Screen

2. Enter a unique SLA Term name in the **SLA Terms Name** field.
3. Enter a detailed description of the SLA Term in the **Description** field.
4. Check the **Active** checkbox, if this service level is available for use.
5. Enter the default business hour or select the default business hours applicable by clicking the **Lookup** icon in the **Default Business Hours** field. This could be used to calculate response, restoration and resolution times for Cases and Work Orders that are entitled by this SLA Terms.



Note: The SLA commitments can be tracked on Case only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Creating Initial Response Commitment

To provide initial response commitment to your customers:

1. Click **Initial Response** tab to view the Initial Response screen as shown below:

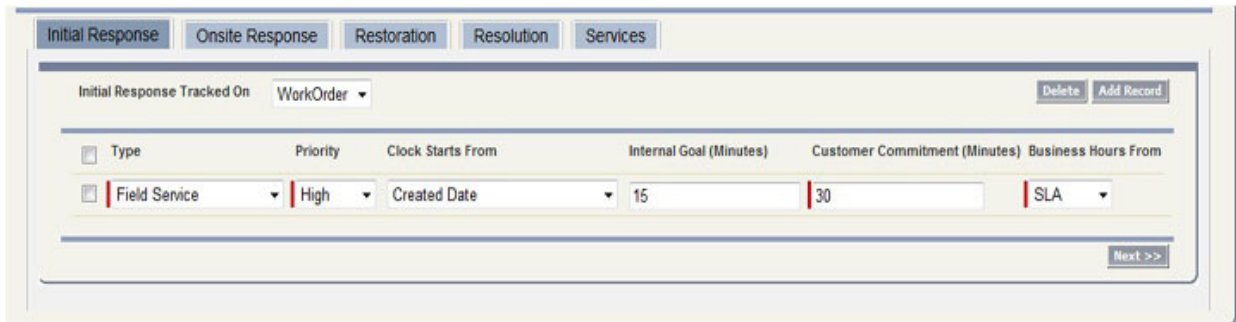


Figure 3: SLA Terms - Initial Response Screen

2. Click **Case** or **Work Order** from the **Initial Response Tracked On** picklist. Depending on the selected value, the **Type**, **Priority**, and **Clock Starts From** fields will display the applicable values from the Case or Work Order.
3. Click **Add Record** to add a new initial response commitment record. If **Initial Response Tracked On** is selected as **None**, then clicking **Add Record** will not include any values under any fields for selecting.
4. Select a valid value for **Type**, **Priority**, and **Clock Starts From** in the appropriate fields.
5. Enter the **Internal Goals** in minutes, if your internal SLA goals are different from customer commitment.
6. Select the appropriate value from the **Business Hours From** picklist. If you want to use created business hours, click **Custom** and then locate the record using the **Lookup** icon.
7. Click **Save** on the top section of the SLA Terms screen to save your changes.
8. Click **Next** to view the Onsite Response tab.

Creating Onsite Response Commitment

To provide onsite response commitment to your customers:

1. Click the **Onsite Response** tab to view the Onsite Response screen as shown below:

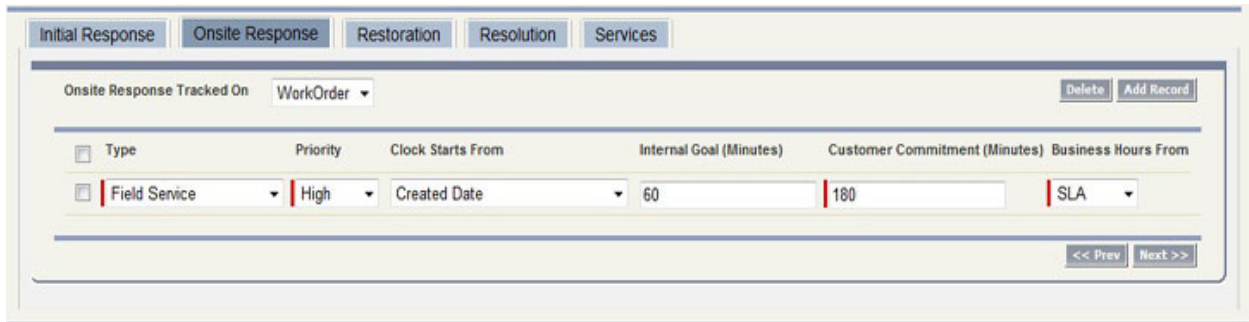


Figure 4: SLA Terms - Onsite Response Screen

2. Click **Case** or **Work Order** from the **Onsite Response Tracked On** picklist. Depending on the selected value, the **Type**, **Priority**, and **Clock Starts From** fields will display the applicable values from the Case or Work Order.
3. Click **Add Record** to add a new onsite response commitment record. If **Onsite Response Tracked On** is selected as **None**, then clicking the **Add Record** will not include any values under any fields for selecting.
4. Select a valid value for **Type**, **Priority**, and **Clock Starts From**.
5. Enter the **Internal Goals** field in minutes, if your internal SLA goals are different from customer commitment.
6. Select the appropriate value from the **Business Hours From** picklist. If you want to use created business hours, click **Custom** and then locate the record using the **Lookup** icon.
7. Click **Save** on the top section of the SLA Terms screen to save your changes.
8. Click **Next** to view the Restoration tab.

Creating Restoration Commitment

To provide restoration commitment to your customers:

1. Click the **Restoration** tab to display the Restoration screen as shown below:

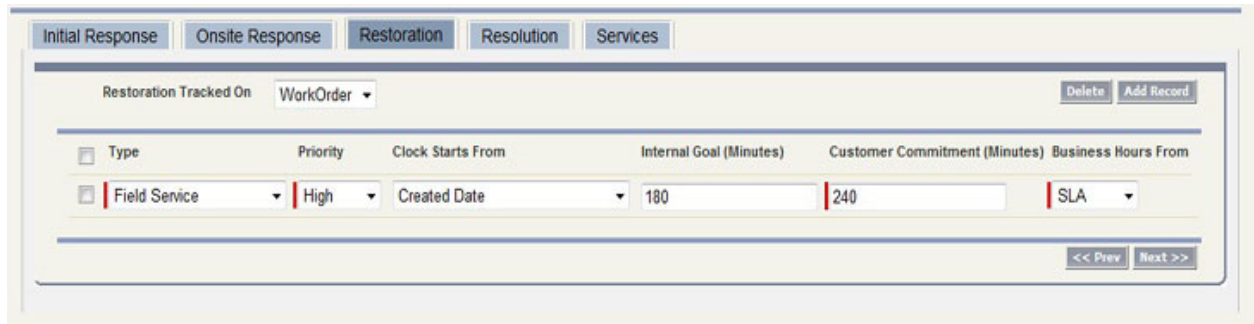


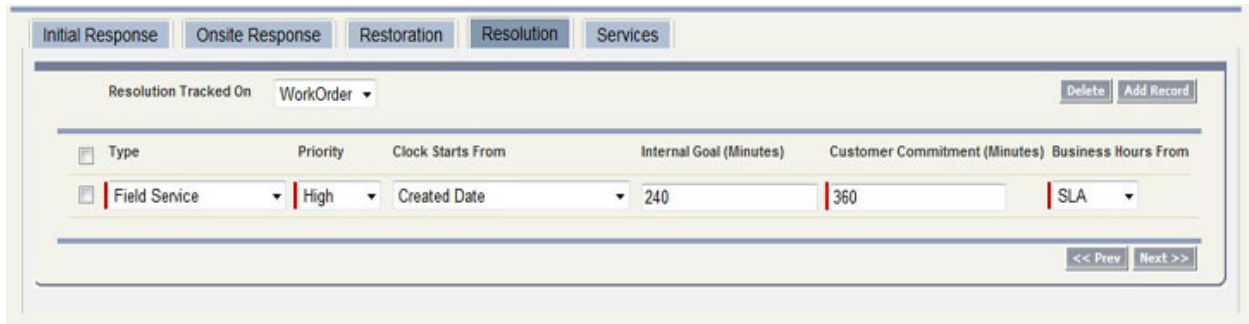
Figure 5: SLA Terms - Restoration Screen

2. Click **Case** or **Work Order** from the **Restoration Tracked On** picklist. Depending on the selected value, the **Type**, **Priority**, and **Clock Starts From** fields will display the applicable values from the Case or Work Order.
3. Click **Add Record** to add a new restoration commitment record. If **Restoration Tracked On** is selected as **None**, then clicking **Add Record** will not include any values under any fields for selecting.
4. Select the valid value for **Type**, **Priority**, and **Clock Starts From**.
5. Enter the **Internal Goals** field in minutes, if your internal SLA goals are different from customer commitment.
6. Select the appropriate value from the **Business Hours From** list. If you want to use created business hours, click **Custom** and then locate the record using the **Lookup** icon.
7. Click **Save** on the top section of the SLA Terms screen to save your changes.
8. Click **Next** to view the Resolution tab.

Creating Resolution Commitment

To provide resolution commitment:

1. Click the **Resolution** tab to view the resolution screen as shown below:



The screenshot shows the 'Resolution' tab selected in a software interface. At the top, there are tabs for 'Initial Response', 'Onsite Response', 'Restoration', 'Resolution', and 'Services'. Below the tabs, there is a section titled 'Resolution Tracked On' with a dropdown menu set to 'WorkOrder'. To the right of this are 'Delete' and 'Add Record' buttons. Below this is a table with columns: 'Type', 'Priority', 'Clock Starts From', 'Internal Goal (Minutes)', 'Customer Commitment (Minutes)', and 'Business Hours From'. The first row of the table has the following values: 'Field Service' (with a dropdown arrow), 'High' (with a dropdown arrow), 'Created Date' (with a dropdown arrow), '240', '360', and 'SLA' (with a dropdown arrow). At the bottom right of the table are '<< Prev' and 'Next >>' buttons.

Figure 6: SLA Terms - Resolution Screen

2. Click **Case** or **Work Order** from the **Resolution Tracked On** picklist. Depending on the selected value, the **Type**, **Priority**, and **Clock Starts From** fields will display the applicable values from the Case or Work Order.
3. Click **Add Record** to add a new resolution commitment record. If **Resolution Tracked On** is selected as **None**, then clicking **Add Record** will not include any values under any fields for selecting.
4. Select the valid value for **Type**, **Priority**, and **Clock Starts From**.
5. Enter the **Internal Goals** field in minutes, if your internal SLA goals are different from customer commitment.
6. Select the appropriate value from the **Business Hours From** picklist. If you want to use created business hours, click **Custom** and then locate the record using the **Lookup** icon.
7. Click **Save** on the top section of the SLA Terms screen to save your changes.
8. Click **Next** to view the Services tab.

Creating Services

To define the services and commitment level on each service covered by this SLA Terms:

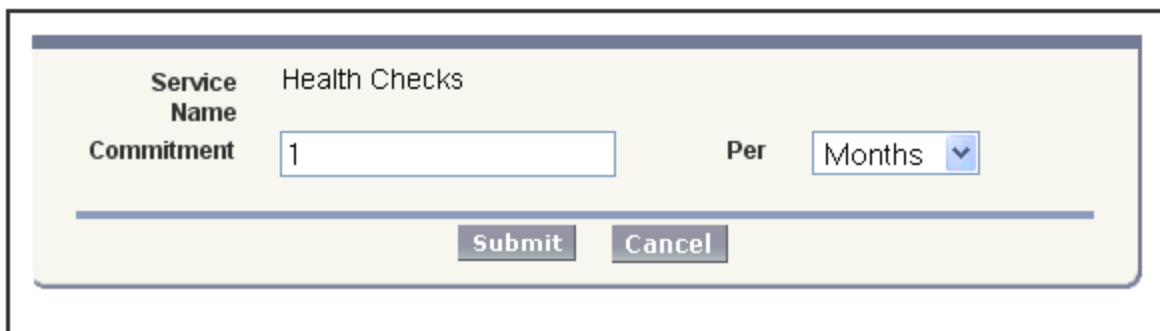
1. Click the **Services** tab to view the Services screen as shown below:



The screenshot shows the 'Services' tab selected in the top navigation bar. Below the navigation bar, there are tabs for 'Initial Response', 'Onsite Response', 'Restoration', 'Resolution', and 'Services'. The 'Services' tab is active. On the left, there is a table with columns: 'Select', 'Service Name', 'Click link to set', and 'Commitment'. The table contains two rows: 'Fortnightly Call' with a commitment of 'true', and 'Health Checks' with a commitment of '4.00 Per Years'. Each row has an 'Edit Commitment' link. To the right of the table, there is a search box with the text 'Search services by entering a keyword' and a 'GO' button. Below the search box, there is a 'Select' column and a 'Service Name' column. The 'Service Name' column contains 'Monthly CSI Report'. Below the search box, there is an 'Add Selected' button. At the bottom left, there is a '<< Prev' button.

Figure 7: SLA Terms - Services Screen

2. Click **Add Service**. A new service commitment record appears.
3. Enter a service name or select a valid service using the **Lookup** in the **Service Name** field. When a valid service name is selected, the **Edit Commitment** link is enabled.
4. Click the **Edit Commitment** link to enter a commitment for the service. The screen will show appropriate fields based on the Data Type of the service. See [Available Services](#) to learn more about the supported data types for service.



The screenshot shows the 'Edit Commitment' screen. It has a 'Service Name' field with the value 'Health Checks'. Below it, there is a 'Commitment' field with the value '1'. To the right of the 'Commitment' field, there is a 'Per' label and a dropdown menu with the value 'Months'. At the bottom, there are 'Submit' and 'Cancel' buttons.

Figure 8: Edit Commitment Screen

5. Click **Save** on the top section of the SLA Terms screen to save your changes.

To add multiple services, follow the steps below:

1. Enter a keyword in the Search services field and then click **Go!**. A list of available services which are not added to the left section appears.
2. Select one or more services using the checkbox available before the service name.
3. Click **Add Selected** to add the selected services.

Editing SLA Terms

To edit an existing SLA Terms record:



Note: Creating a new SLA Terms record or editing an existing record displays the same screen.

1. Check the checkbox against the record to be edited and then click **Edit** in the SLA Terms home page. The SLA Terms record screen appears for editing with all the existing values.
2. Edit the fields such as **name** and **description** to suit your needs.
3. Edit the appropriate commitments available to your customers by clicking the appropriate commitment tabs.
4. Click **Save** to save the changes.

Deleting SLA Terms



Note: When deleting an SLA Term, you will not be warned if the SLA Term is referenced in Cases, Work Orders, or Entitlement History.

To delete existing SLA Terms record(s):

1. Check one or more checkboxes against the SLA Terms record(s) you want to delete in the SLA Terms home page.
2. Click **Delete** and then click **OK** to confirm the deletion.

See Also:

[Cases](#)

[Service Level Agreement Settings](#)

[Work Order](#)

WARRANTY TERMS

Overview

Warranty Terms is a template that allows organizations to define and standardize their warranty offering and apply it to a range of products automatically. The template can be used to define the type and scope of coverage in a warranty such as parts, labor and expenses, and can then be associated with one or more products. When installed product records are created in ServiceMax, warranty will be calculated automatically based on the pre-defined warranty template associated with the product.

Access and Permissions

Actions	User Permissions Needed
To view the Warranty Terms tab:	"Read" on Warranty Terms
To view the Warranty Terms:	"Read" on Warranty Terms
To create or clone Warranty Terms:	"Create" on Warranty Terms
To change Warranty Terms:	"Edit" on Warranty Terms
To delete Warranty Terms:	"Delete" on Warranty Terms
To view applicable products:	"Read" on Applicable Products and Warranty Terms
To create applicable products:	"Create" on Applicable Products
To edit applicable products:	"Edit" on Applicable Products

Actions	User Permissions Needed
To delete applicable products:	"Delete" on Applicable Products
To define coverage by Counters:	"Read" on Applicable Products, Warranty Terms, ServiceMax Process, and ServiceMax Config Data "Read", "Create", and "Update" on Counter Details

Click the **Warranty Terms** tab to display the Warranty Terms home page.



Caution: Remember that when deleting a warranty terms record, you will not be warned if the warranty terms are used in a related record. Since warranty terms are strongly tied to installed products and entitlements, review and make sure the warranty terms record is not used in any related records.

Warranty Terms Fields

Fields	Description
Template Name	Name of the warranty terms template.
Template Type	Indicates if this template is used for warranty calculation or referred to in service/maintenance contracts. When creating warranty for installed products, only templates with type Warranty are considered.
Material % Covered	A number between 1 and 100 indicating the percentage of coverage on parts. If Material coverage % is specified, duration and unit of time should be specified too.
Duration of Material Coverage	A number indicating the duration of coverage for parts.
Unit of Time for Material Coverage	A value that qualifies the material coverage duration in days, weeks, months or years.
Labor % Covered	A number between 1 and 100 indicating the percentage of coverage on labor. If Labor coverage % is specified, duration and unit of time should be specified too.

Fields	Description
Duration of Labor Coverage	A number indicating the duration of coverage for labor.
Unit of Time for Labor Coverage	A value that qualifies the labor coverage duration in days, weeks, months or years.
Expenses % Covered	A number between 1 and 100 indicating the percentage of coverage on expenses. If Expenses coverage % is specified, duration and unit of time should be specified too.
Duration of Expenses Coverage	A number indicating the duration of coverage for expenses.
Unit of Time for Expenses Coverage	A value that qualifies the expenses coverage duration in days, weeks, months or years.
RMA Required	Flag indicates if an RMA is always required or an RMA is implied when this warranty is used to entitle a customer. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Shipment Allowed	Flag indicates if customer shipments are covered by the warranty. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Transferable	Flag indicates if this warranty is transferable to other products under special circumstances. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Walk-in Allowed	Flag indicates if the customer is authorized to walk into a service center for service. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Onsite Repair	Flag indicates if customer is eligible for onsite repair when entitled by this warranty. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Loaner Provided	Flag indicates if customer is given a temporary replacement product when the covered product is under repair. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Invoice Required	Flag indicates if an invoice is always raised at the end of service delivery. This flag does not drive any functionality in ServiceMax and is for informational purposes only.

Fields	Description
Exclusions	A free format text to define any exceptions not covered by the standard coverage of the template.
Coverage Effective From	Identifies how to calculate the warranty start date for installed products. It can be any Date field on the installed product record. See Configuring Coverage Start Date for more information.
All Products Covered	Flag indicates if all products involved in the repair will be covered by this warranty. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
All Services Covered	Flag indicates if all services performed will be covered by this warranty. This flag does not drive any functionality in ServiceMax and is for informational purposes only.

Configuring Coverage Start Date

Warranty can be configured to start from any event (date) on an installed product. This includes standard ServiceMax fields such as Ship Date, Install Date, Order Date or any custom date field created in Installed Product for your implementation of ServiceMax.

To configure the applicable start date for a warranty terms record:

1. Locate the warranty terms record from the Warranty Terms tab and then click the warranty terms record. The warranty term record information screen appears.
2. Click **Configure Start Date**. The Define Warranty Coverage Start Date screen as shown below appears:

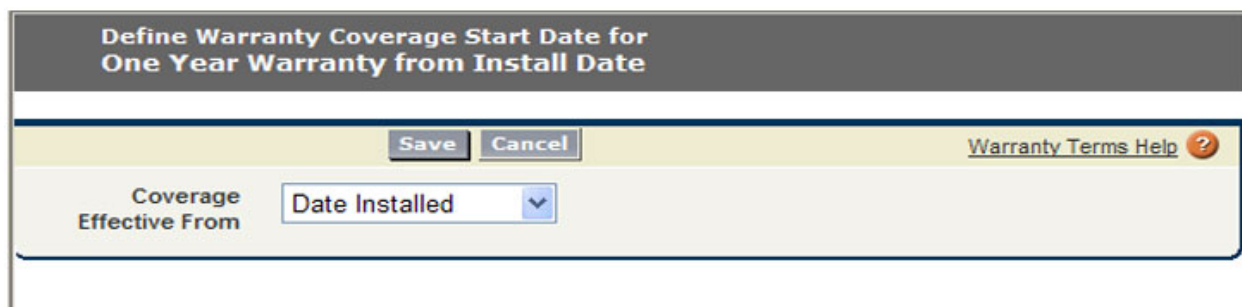


Figure 1: Define Warranty Coverage Start Date Screen



Note: The **Coverage Effective From** picklist shows the name of all the Date fields available in installed product such as **Date Installed, Date Ordered, Date Shipped, Last Activity Date, and Last Date Shipped.**

3. Select an applicable date from the **Coverage Effective From** picklist, and then click **Save**. A success message appears.
4. Click **Close** to close the Configure Start Date screen.

Including Applicable Products

You can add a product(s), product line, or product family to a warranty term record by using the Applicable Product section.

Applicable Products Fields

Field-s	Description
Warranty Terms	Name of the warranty terms. This is a lookup to the existing warranty terms record in ServiceMax.
Product Family	Product family covered by this template. Your system administrator is responsible for configuring this list for your organization's requirement.
Product	Product covered by the template. This is a lookup to an existing Product in Salesforce.
Product Line	Product Line covered by the template. Your system administrator is responsible for configuring this list for your organization's requirement.

Adding Product(s) to Warranty Terms

To add a product or products to an existing warranty template:

1. Locate the warranty terms record by searching in the sidebar or from a list view in the Warranty Terms tab and then click the warranty term to display the selected record information.
2. Click the **New Applicable Product** in the Applicable Products section. The Applicable Products Edit screen appears with the warranty term's name auto-populated.

- a. Enter the product in the **Product** field, if the template covers a specific part number. You can also search for the product by clicking the **Lookup** icon.
 - b. Select the appropriate value from the **Product Family** or the **Product Line** pick-list, if the template covers all the products in a product family or product line.
3. Click **Save**.



Note: Each warranty terms record can cover an unlimited number of products, families or lines. Repeat the above steps for each product you want to associate with the terms. You can also click **Save & New** after creating a new Applicable product record.

Defining Counters-based Coverage

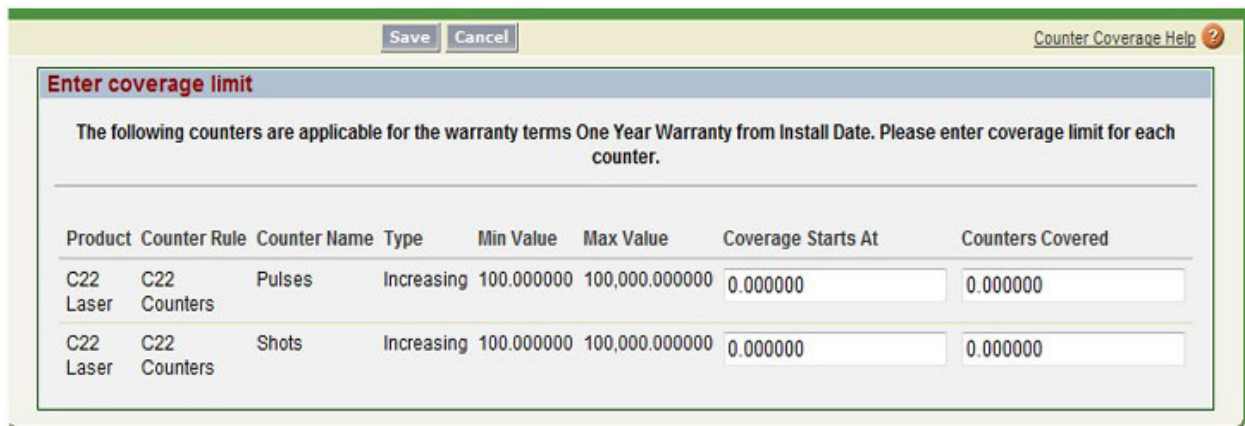
If your products have ongoing readings that are measured using embedded or external devices, and if those readings impact customer entitlements, you can define such coverage in warranty terms. Coverage defined using counters can be applied in auto-entitlement in Cases. Interactive entitlement does not support counter-based coverage in this release. Counters applicable to various products in your organization must be defined before using this feature. Talk to your ServiceMax administrator if you are unable to view all the relevant counters while defining coverage.

When warranty is created for an installed product, Counters-based coverage is not copied from Warranty Terms into Product Warranty. The warranty always refers to the counters-based coverage in warranty terms. Any change made in counters-based coverage in a warranty terms record will impact all product warranties created from it.

To define Counters-based Coverage:

1. Locate the warranty terms record by searching in the sidebar or from a list view in the Warranty Terms tab and then click the warranty term to display the selected record's information.

2. Click **Coverage By Counters**. The Enter Coverage Limit screen appears with all applicable counters covered by the warranty terms.



Product	Counter Rule	Counter Name	Type	Min Value	Max Value	Coverage Starts At	Counters Covered
C22 Laser Counters	C22	Pulses	Increasing	100.000000	100,000.000000	0.000000	0.000000
C22 Laser Counters	C22	Shots	Increasing	100.000000	100,000.000000	0.000000	0.000000

Figure 2: Enter Coverage Limit Screen

3. For products that require counters-based coverage:
 - a. Enter the starting reading in the **Coverage Starts At** field, from which the coverage starts. For example, if the product is a car with 100 miles on the odometer at the time of sale, enter 100.
 - b. Enter the number of counters supported by this warranty term in **Counters Covered** field. For example, to indicate 3000-mile service, enter 2900.
4. Skip the products that do not require counter-based coverage by leaving the **Coverage Start At** and the **Counters Covered** fields as **zero**.
5. Click **Save**. You will be redirected to the warranty terms record. Alternatively, click **Cancel** to return to the warranty terms without saving.

See Also:

[Product](#)

[RMA](#)

[Shipment Order](#)

[ServiceMax Processes](#)

INSTALLED PRODUCT

Overview

Installed Product represents one or a collection of product units delivered to a customer and installed at the customer's location(s). Depending upon the tracking needs of an organization, Installed Products are tracked using a serial number, a lot/batch number, or simply by the product number. In ServiceMax, Installed Product record drives entitlement, material movement, and service delivery activities.

Access and Permissions

Actions	User Permissions Needed
To view the Installed Products tab:	"Read" on Installed Products
To view the Installed Products:	"Read" on Installed Products, Account, Contact, Location, and Product
To create or clone Installed Products:	"Create" on Installed Products "Read" on Account, Contact, Location, and Product
To change Installed Products:	"Edit" on Installed Products "Read" on Account, Contact, Location, and Product.
To delete Installed Products:	"Delete" on Installed Products
To create child Installed Products:	"Create" on Installed Product "Read" on Account, Contact, Location and Product
To validate Installed Products address:	"Read" and "Edit" on Installed Products

Actions	User Permissions Needed
To capture Counter Reading:	"Read" on Installed Product, ServiceMax Process, and ServiceMax Config data "Read", "Create", and "Update" on Counter Details
To view warranties:	"Read" on Installed Product and Product Warranty
To create warranties:	"Create" on Installed Product and Product Warranty
To change product warranties:	"Edit" on Product Warranty
To delete product warranties:	"Delete" on Product Warranty
To create a case from Installed Products:	"Read" on Account, Contact, Installed Product, and Product "Create" on Case
To create a Work Order from Installed Products:	"Read" on Account, Contact, Installed Product, and Product "Create" on Work Order

Click the **Installed Products** tab to view the Installed Products home page.



Caution: Since installed products are strongly connected to most ServiceMax transactions, review and make sure the installed product record is not used in any related records. When you are deleting an Installed Product, you will not be warned if the installed product is used in a related record. Instead of deleting an installed product, it is always recommended to change the status to **Scrap**.

Installed Products Fields

Fields	Description
Product	Name of the product. This is a lookup to an existing Salesforce Product record.
Serial/Lot Number	Unique identification of the product. This information is required if the product's tracking is Serialized or Lot/Batch tracked in the product record.

Fields	Description
Parent	Serial/Lot number of the parent product in the Installed Product hierarchy. This is a lookup to an existing Installed Product record.
Parent Product	This appears automatically when a parent serial/lot number is selected and is read-only.
Top-level	Serial/Lot number of the top-most product in the Installed Product hierarchy.
Top-level Product	This appears automatically when the top-level serial/lot number is selected and is read-only .
Asset Tag	Another way to identify the Installed Product. Typically asset tags are assigned by your customers. This will be a time saver when your customer calls for support and identifies the product by their asset tag instead of trying to locate your serial number on the product.
Account/Company	Name of the customer for the Installed Product. This is a lookup to an existing Salesforce Account record.
Contact	Name of the primary contact for this Installed Product at the customer's location. This is a lookup to an existing Salesforce Contact record.
Alternate Account	Free text to indicate if another contact is involved with this product but is not an existing customer record.
Distributor Account	Name of the distributor account (if applicable).
Distributor Contact	Name of the distributor contact (if applicable).
Sales Order Number	Sales order reference (typically from the ERP application).
Status	Current status of the Installed Product.
Date Ordered	Date on which the product is ordered by the customer.
Date Shipped	Date on which the product was shipped to the customer originally.
Last Date Shipped	If this product was shipped multiple times, date of the most recent shipment. Multiple shipments are possible if the product is returned for depot repair or service.
Date Installed	Date on which the product was installed at the customer location.
Location	Current physical location of the product. This is a lookup to an existing Location record.

Fields	Description
Street	"Street" part of the physical location address.
City	"City" part of the physical location address.
State	"State" part of the physical location address.
Zip	"Zip or Postal Code" part of the physical location address.
Country	"Country" part of the physical location address.
Installation Notes	Any technical information relevant for the service organization. This is normally supplied by field service engineers upon completion of installation.
Latitude	Geographical code for this Installed Product's address. This is calculated automatically using the Validate Address feature.
Longitude	Geographical code for this Installed Product's address. This is calculated automatically using the Validate Address feature.
Preferred Technician	Name of the technician. This is a lookup to an existing ServiceMax Technician/Equipment record.
Access Hours	Time period during which this installed product can be accessed for service. Reference to an existing Business Hours record in Salesforce.

Building Installed Product Hierarchy

The illustration below is a sample product configuration with four levels in the hierarchy. The table illustrates how you can represent that configuration in ServiceMax. There is no limit to the number of levels in the ServiceMax Installed Product hierarchy.

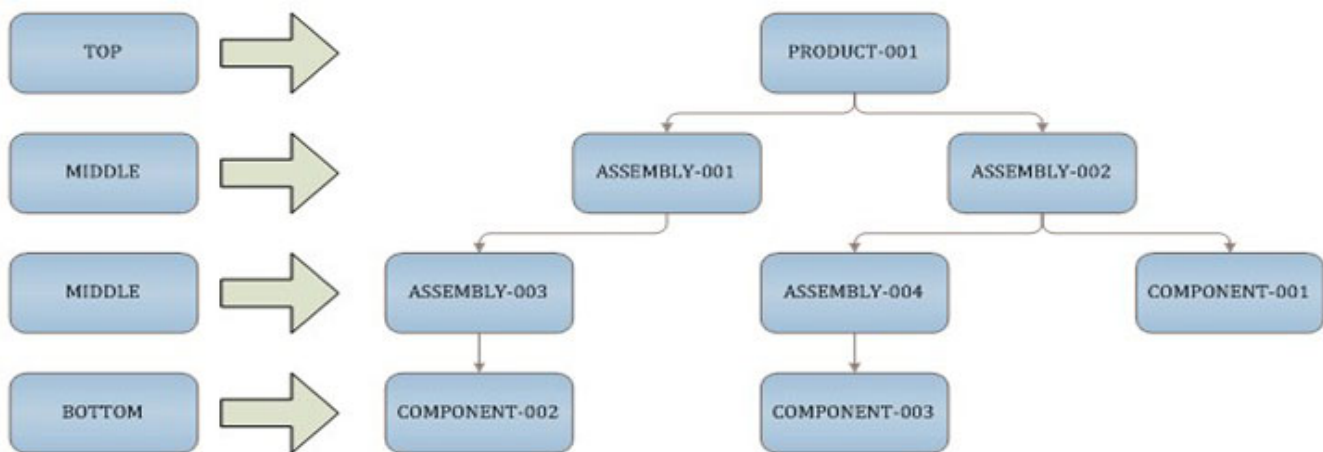


Figure 1: Installed Product Hierarchy

Level	Product Serial Number	Parent Serial Number	Top-level Serial Number
1 (Top)	PRODUCT-001	<Blank>	<Blank>
2 (Middle)	ASSEMBLY-001	PRODUCT-001	PRODUCT-001
	ASSEMBLY-002	PRODUCT-001	PRODUCT-001
3 (Middle)	ASSEMBLY-003	ASSEMBLY-001	PRODUCT-001
	ASSEMBLY-004	ASSEMBLY-002	PRODUCT-001
	COMPONENT-001	ASSEMBLY-002	PRODUCT-001
4 (Bottom)	COMPONENT-002	ASSEMBLY-003	PRODUCT-001
	COMPONENT-003	ASSEMBLY-004	PRODUCT-001

Creating a Child Installed Product from a Parent

To create a child product:

1. Navigate to an existing Installed Product record and then click **Create Child**. The Create Child screen appears for the selected record.

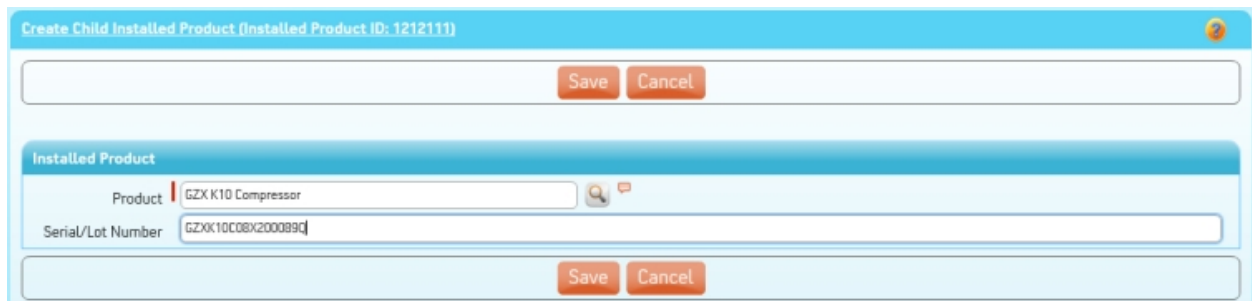


Figure 2: Installed Products - Create Child Screen

2. Enter the following details:
 - **Product** – Select a valid product using the **Lookup** icon.
 - **Serial Number** – Enter the serial number.
3. Click **Save** to create a child product record. You will now be directed to the newly created record.

Most of the information from the parent record is copied to the child record automatically. The fields to be copied between the records are configured by your ServiceMax administrator. This configuration may include your organization's custom fields on Installed Product as well.



Note: Product warranty is not cloned, but calculated based on the warranty terms of the newly cloned product.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Validating Installed Product Address

To validate the address on an installed product record:

1. Navigate to the Installed Product record.
2. Click **Validate Address**. A dialog appears indicating the validation process.
 - If the address is *valid*, a message indicating the same is displayed and the installed product record will be refreshed. The latitude and longitude fields are populated on the screen.
 - If the address is *invalid*, an error message will be displayed and you will be returned to the installed product record. An address could become invalid because of spelling mistakes or if the address contains PO Box or Suite numbers. Since this functionality uses the Google Maps engine, ability to validate an address depends upon the level of coverage for countries provided by Google.

Capture Counter Reading

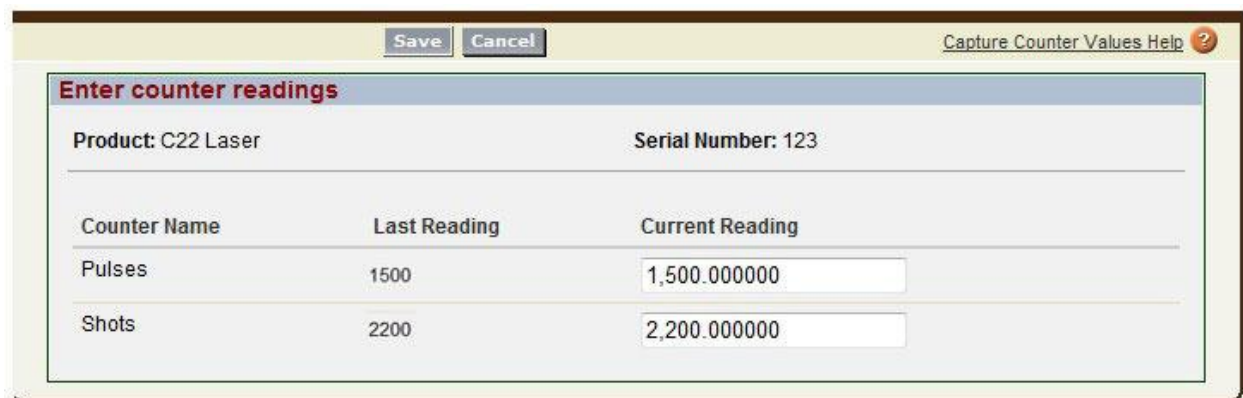
If your products have ongoing readings that are measured using embedded or external devices, and if those readings impact customer entitlements, you must define such

coverage in a service contracts and/or warranty terms, and also capture the current readings at regular intervals. Coverage defined using counters can be applied in auto-entitlement in Cases. Interactive entitlement does not support counter-based coverage in this release.

Counters applicable to various products in your organization must be defined before using this feature. Please contact your ServiceMax administrator if you are unable to view all the relevant counters while entering current readings.

To capture counter reading:

1. Locate to the Installed Product by searching in the sidebar or from a list view in the **Installed Products** tab. Click the Installed Product name for which you want to capture current readings.
2. Click **Update Counters**. The Enter counter readings screen with the current reading for each counter appears as shown below.



Counter Name	Last Reading	Current Reading
Pulses	1500	1,500.000000
Shots	2200	2,200.000000

Figure 3: Enter Counter Reading Screen

3. Enter the latest reading for each counter.
4. Click **Save**. You will be directed to the Installed Product record. Alternatively, you can click **Cancel** to return to the Installed Product without saving.

The above feature to capture Counter readings can also be launched from Case and Work Order screens.

Creating a Case from Installed Product

To create a case from the Installed Product:

1. Navigate to an existing Installed Product record and then click **Create Case**. A Create Case screen appears for the selected record as shown below.

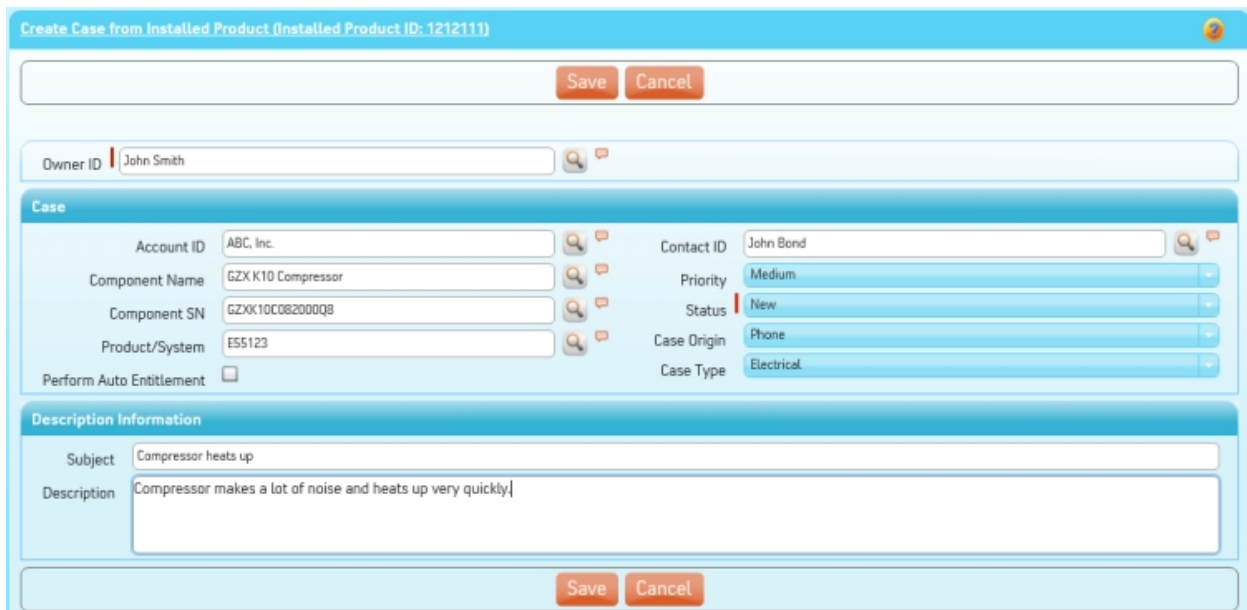


Figure 4: Installed Products - Create Case Screen

Relevant information from the Installed Product record will be automatically copied and displayed.

2. Enter **Subject**, **Description**, and other required fields.
3. Click **Save** to create a new Case record. You will now be redirected to the newly created record.

Most of the information from the Installed Product record is copied to the Case record automatically. The fields to be copied between the records are configured by your ServiceMax administrator. This configuration may include your organization's custom fields on Installed Product and Case as well.



Note: Cases can be created from Installed Products only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Creating a Work Order from Installed Product

To create a Work Order from the Installed Product:

1. Navigate to an existing Installed Product record and then click **Create Work Order**. A Create Work Order screen appears for the selected record as shown below.

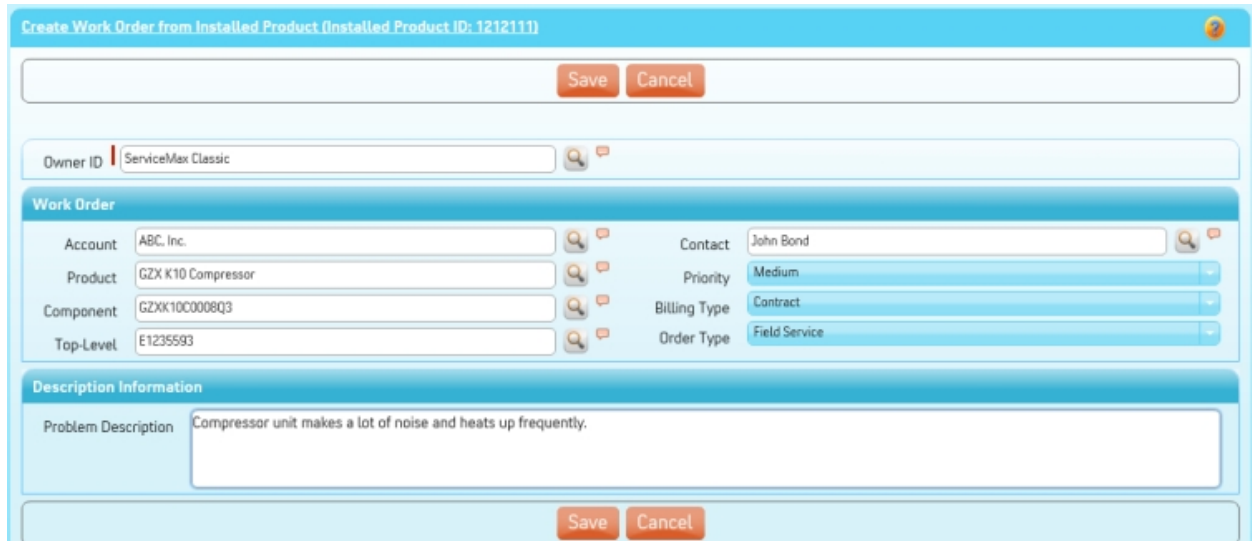


Figure 5: Installed Products - Create Work Order Screen

Relevant information from the Installed Product record will be automatically copied and displayed.

2. Enter **Subject**, **Description**, and other required fields.
3. Click **Save** to create a new Work Order record. You will now be redirected to the newly created record.

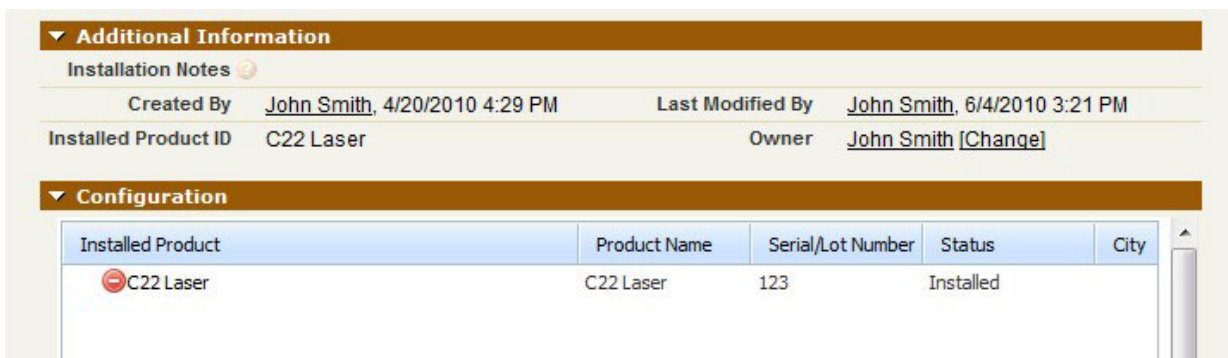
Most of the information from the Installed Product record is copied to the Work Order record automatically. The fields to be copied between the records are configured by your ServiceMax administrator. This configuration may include your organization's custom fields on Installed Product and Work Order as well.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Installed Product: Configuration

The Installed Product configuration shows the tree view of all Installed Products in a hierarchy from the top-most product. Your administrator may have enabled this view either in the embedded mode or popup mode or both. In the embedded mode, the tree view is displayed from all Installed Product records as shown below:




Installed Product	Product Name	Serial/Lot Number	Status	City
 C22 Laser	C22 Laser	123	Installed	

Figure 6: Installed Product Configuration Screen

To view Installed Product configuration as a popup window:

1. Click **Configuration** in the Installed Product screen. You can also click any node in the tree to open the Installed Product in a new window. Shown below is a sample

Installed Product configuration tree in popup mode.

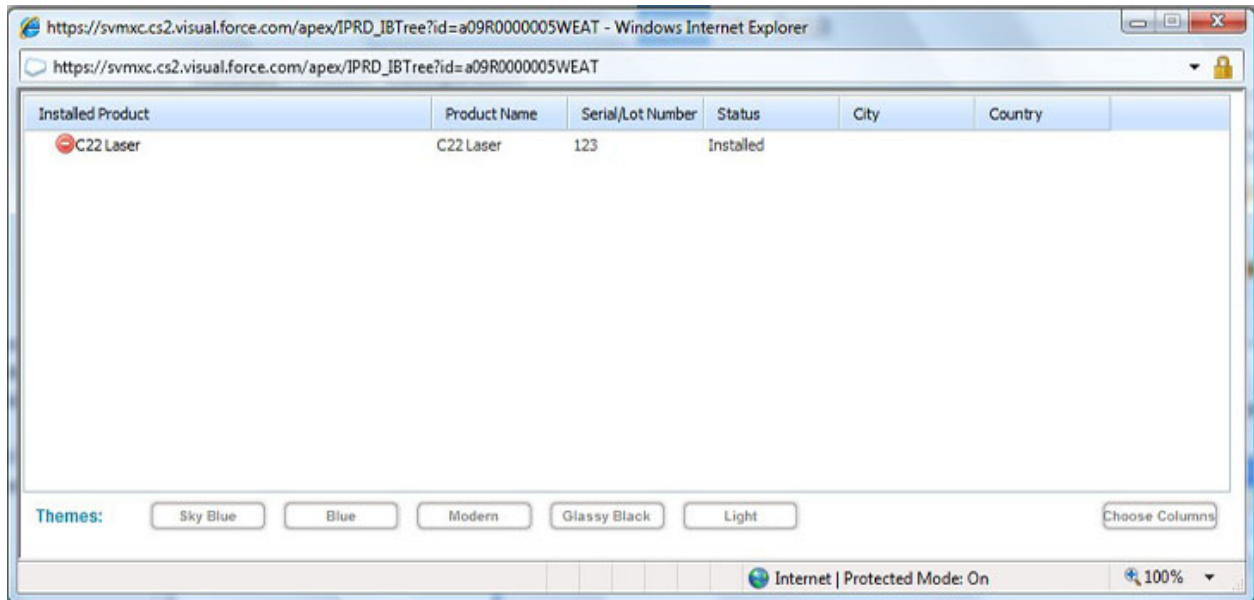


Figure 7: Configuration Tree Popup Screen

- You can configure the columns displayed in the Installed Product tree by clicking **Select Columns**. A popup screen appears as follows.

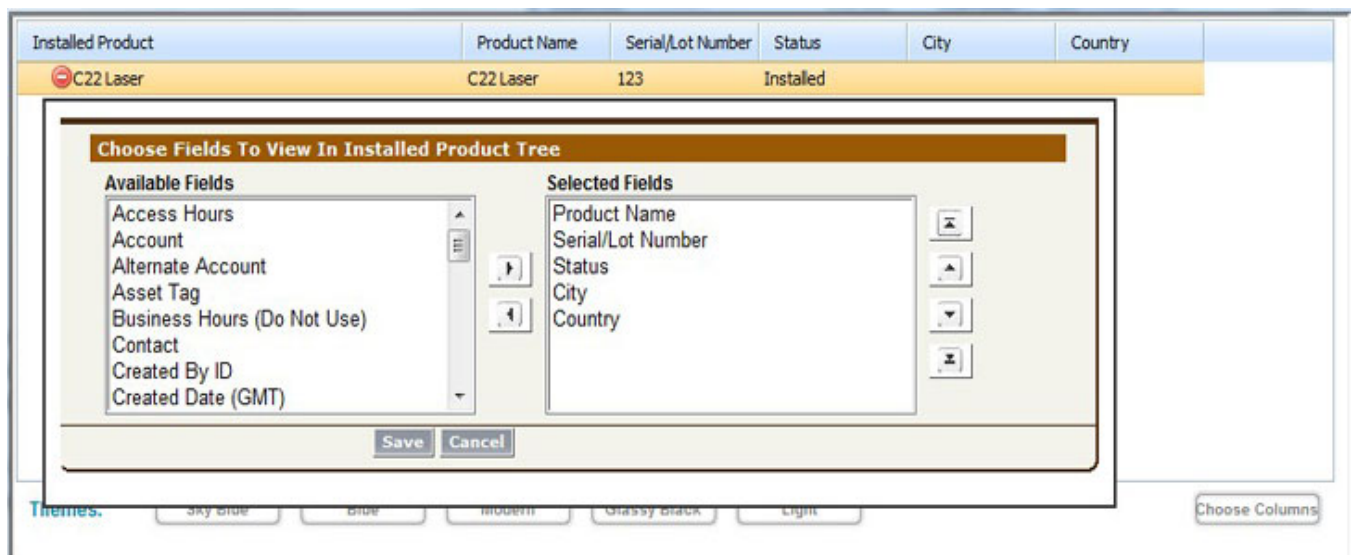








Figure 8: Select Fields Screen

- In the above screen, the list of all available fields in Installed Product appears on the left. Fields currently in the view appear on the right. The table below lists various operations you can perform on this popup screen:

Actions	Result
Click field name	Field name is selected.
CTRL - Click field name	Multiple fields are selected.
Click 	Fields selected from the left-side are moved to the right-side.
Click 	Fields selected from the right-side are moved to the left-side.
Click 	The selected fields are moved to the top of the list.
Click 	The selected fields are moved to the bottom of the list.
Click 	The selected fields are moved one position above.
Click 	The selected fields are moved one position below.

4. Click **Save**. The Installed Product tree view will be refreshed with the columns you have selected. Alternatively, click **Cancel** to discard your changes.



Note: The columns you have selected are saved locally on your browser using cookies. Clearing your browser's cache will reset the installed product tree to use default columns.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Installed Product - Warranty

Product Warranty Fields

Fields	Description
Installed Product	Product name of the current Installed Product. This is a read-only field.
Warranty Terms	Name of the service/warranty template used to create a warranty. This is a lookup field to an existing warranty terms record.
Warranty Records	A table that shows the list of warranties for this Installed Product.
Start Date	Warranty start date.
End Date	Warranty end date.
Time % Covered	Percentage of the labor cost covered by the warranty.
Material % Covered	Percentage of the material cost covered by the warranty.
Expenses % Covered	Percentage of other expenses covered by the warranty.
End Date Time Covered	Date on which the labor coverage ends.
End Date Material Covered	Date on which the parts coverage ends.
End Date Expense Covered	Date on which the expenses coverage ends.
All Products Covered	Flag indicates if all products involved in the repair will be covered by this warranty. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
All Services Covered	Flag indicates if all services performed will be covered by this warranty. This flag does not drive any functionality in ServiceMax and is for informational purposes only.

Fields	Description
RMA Required	Flag indicates if an RMA is always required or an RMA is implied when this warranty is used to entitle a customer. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Shipment Allowed	Flag indicates if customer shipments are covered by the warranty. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Invoice Required	Flag indicates if an invoice is always raised at the end of service delivery. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Loaner Provided	Flag indicates if customer is given a temporary replacement product when the covered product is under repair. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Walk-in Allowed	Flag indicates if the customer is authorized to walk into a service center for service. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Transferable	Flag indicates if this warranty is transferable to other products under special circumstances. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Onsite Repair	Flag indicates if customer is eligible for onsite repair when entitled by this warranty. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Exclusions	A free format text to define any exceptions specifically applicable to this Installed Product.

Creating Warranty on Installed Product – Automatically

When an Installed Product record is saved, a warranty is created automatically based on all warranty terms that:

- Cover the specific product number specified in the Installed Product, or
- Cover the product family of the product specified in the Installed Product, or
- Cover the product line of the product specified in the Installed Product.



Note: Your ServiceMax administrator can configure the event upon which warranty is created. Warranty can be created when new installed products are created, or when existing installed product records are updated or both.

Warranty start date is calculated based on the **Warranty Starts From** setting in the warranty terms. See [Configuring Coverage Start Date](#) for more information. Warranty can be configured to start from any date on Installed product. For example, if this setting is **Ship Date**, the warranty start date will be set to **Date Shipped** on Installed Product record; If the setting is **Install Date**, the warranty start date will be set to **Date Installed** on Installed Product record and so on.

If the date field configured as warranty start date is not filled (blank) in the Installed Product record, your administrator can configure ServiceMax either not to create warranty or to create warranty using today's date as the warranty start date.

Warranty components such as parts, labor and expenses can have different end dates based on the duration of their respective coverage. The overall warranty end date is set to the highest of the end dates of parts, labor and expenses coverage end dates.

For child Installed Products (that are linked to a parent Installed Product), warranty is created if all of the following conditions are met:

- The parent has a valid warranty.
- The **Inherit Parent Warranty** checkbox is checked in the child's product record.
- Your administrator has enabled warranty inheritance for your organization.

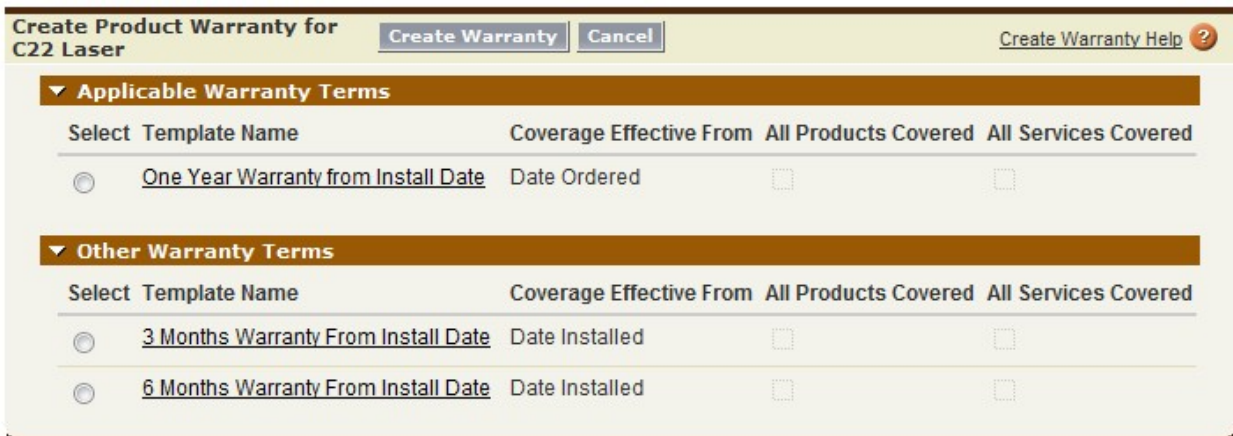
When inheriting parent warranty, if the child product is also linked to one or more warranty terms, ServiceMax can be configured to create additional warranties using warranty terms. If enabled by your administrator, warranty for child products will be created by inheriting from parent and by using the applicable warranty terms.

When inheriting a parent record's warranty, the start date of the child's warranty is always set to current date. Expired warranties are not inherited.

Creating Warranty on Installed Product – Manually

To create a warranty manually:

1. Locate the Installed Product by searching in the sidebar or from a list view in Installed Products tab and click the **Installed Product ID** to which you want to add warranties.
2. Click **New Product Warranty** from the Product Warranty related list section of the Installed Product screen. The list of warranty terms applicable to the product and all other warranty terms is displayed in two separate lists. A sample warranty terms screen is shown here.



Select	Template Name	Coverage Effective From	All Products Covered	All Services Covered
<input checked="" type="radio"/>	<u>One Year Warranty from Install Date</u>	Date Ordered	<input type="checkbox"/>	<input type="checkbox"/>

Select	Template Name	Coverage Effective From	All Products Covered	All Services Covered
<input type="radio"/>	<u>3 Months Warranty From Install Date</u>	Date Installed	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	<u>6 Months Warranty From Install Date</u>	Date Installed	<input type="checkbox"/>	<input type="checkbox"/>

Figure 9: Create Product Warranty Screen

3. Select the appropriate warranty terms from the list. ServiceMax does not validate if the template covers the current Installed Product. You can select to use any available warranty terms to apply to an Installed Product. Manual creation of warranty also overrides the **Inherit Parent Warranty** setting of the product.
4. Click **Create Warranty**. Product warranty will be created based on the terms. The newly created product warranty record appears.

There is no limit to the number of warranty records an Installed Product can have. Repeat the above steps as many times as required.



Note: When creating warranty manually or automatically, the mapping of fields between Warranty Terms and Product Warranty is configurable by your ServiceMax administrator. This also includes your organization's custom fields.

Editing Warranty on Installed Product

To edit a warranty on an Installed Product:

1. Locate the Installed Product by searching in the sidebar or from a list view in the Installed Products tab. Click the **Installed Product ID** in which you want to make warranty changes.
2. Click the **Edit** link next to the warranty record from the Product Warranty related list.
3. Make the necessary changes to the warranty record. You cannot change the warranty terms of an existing warranty record. In order to effect new warranty terms, simply delete the old warranty record and create a new warranty record using the appropriate warranty terms.
4. Click **Save**. The warranty information will be updated.

Deleting Warranty from Installed Product



Caution: Since warranty information is used in entitlement, it is strongly recommended not to delete warranty records. An alternative is to "*expire*" the warranty by changing the warranty **End Date**. Before proceeding to delete warranty, make sure the warranty record is not used in any existing entitlements.

To delete a warranty record:

1. Locate the Installed Product by searching in the sidebar or from a list view in the Installed Products tab. Click the **Installed Product ID** from which you want to delete warranties.
2. Click the **Del** link next to the warranty record you want to delete in the Product Warranty related list, and then click **OK** when prompted for confirmation.

See Also:

[Account](#)

[Contacts](#)

[Installed Product Settings](#)

[Location](#)

[Product](#)

[ServiceMax Processes](#)

SERVICE/MAINTENANCE CONTRACT

Overview

The Service/Maintenance Contract documents the details of entitlement provided to a customer for the products bought. Usually shipped/delivered products are covered for a pre-defined period through a basic warranty. If customers wish to get coverage for repairs beyond the normal warranty period, they normally purchase extended Service/Maintenance Contracts. Service contract is interchangeably referred to as a service agreement as well. Service/Maintenance Contract is also referred to as Service Contract in ServiceMax.

Access and Permissions

Action	User Permissions Needed
To view the Service/Maintenance Contract tab:	"Read" on Service/Maintenance Contract
To view Service/Maintenance Contracts:	"Read" on Service/Maintenance Contract, Account, Contact, and SLA Terms
To create or clone Service/Maintenance Contracts:	"Create" on Service/Maintenance Contract "Read" on Account, Contact and SLA Terms
To change Service/Maintenance Contracts:	"Edit" on Service/Maintenance Contract "Read" on Account, Contract and SLA Terms
To delete Service/Maintenance Contracts:	"Delete" on Service/Maintenance Contract
To view covered products:	"Read" on Covered Products, Service/Maintenance Contract, Installed Product, and Product
To create covered products:	"Create" on Covered Products "Read" on Installed Products, and Product

Action	User Permissions Needed
To change covered products:	"Edit" on Covered Products "Read" on Installed Products, and Product
To delete covered products:	"Delete" on Covered Products
To define coverage by counters:	"Update" on Covered Products "Read" on ServiceMax Process, and ServiceMax config data "Read", "Create", "Update" on Counter Details
To view entitled contacts:	"Read" on Entitled Contacts, and Service/Maintenance Contract
To create entitled contacts:	"Create" on Entitled Contacts "Read" on Contacts
To change entitled contacts:	"Edit" on Entitled Contacts "Read" on Contacts
To delete entitled contacts:	"Delete" on Entitled Contacts
To view covered locations:	"Read" on Covered Locations, and Service/Maintenance Contract
To create covered locations:	"Create" on Covered Locations "Read" on Location
To change covered locations:	"Edit" on Covered Locations "Read" on Location
To delete covered locations:	"Delete" on Covered Locations
To view included services:	"Read" on Included Service, and Service/Maintenance Contracts
To create included services:	"Create" on Included Services "Read" on Available Services
To change included services:	"Edit" on Included Services "Read" on Available Services

Action	User Permissions Needed
To delete included services:	"Delete" on Included Services
To activate Service/Maintenance Contracts:	"Edit" on Service/Maintenance Contract
To renew Service/Maintenance Contracts:	"Edit" on Service/Maintenance Contract
To cancel Service/Maintenance Contracts:	"Edit" on Service/Maintenance Contract

Click the **Service/Maintenance Contracts** tab to view the Service/Maintenance Contracts home page.



Caution: Since parts requests are strongly tied to the inventory module you are not allowed to delete a Parts Requests. Instead you can *cancel* a Parts Request.

Service/Maintenance Contract Fields

Fields	Description
Contract Name/Number	Name of the Service/Maintenance Contract. This is the document number that is shared with the customer as well.
Account	Customer to whom this Service/Maintenance Contract is sold. This is a lookup to an existing Salesforce account record.
Renewal Number	Renewal number for this contract. Incremented automatically when a contract is renewed.
Renewal Date	Date on which the contract was renewed.
Renewal From	The original Service/Maintenance Contract from which this contract was renewed. This is populated automatically when a Service/Maintenance Contract is renewed.
Sales Rep	Name of the internal sales representative responsible for or involved in selling this contract. This is a lookup to a valid Salesforce user.

Fields	Description
Contact	Name of the contact person from the customer account associated with this contract. This is a lookup to an existing Salesforce Contact record.
Active	Flag indicating if this contract is currently active or not. This flag is checked automatically when you activate a contract.
Billing Schedule	Indicates the frequency of how the customer prefers to be invoiced for the contract amount.
Business Hours	This is a lookup to an existing Salesforce business hours record.
Start Date	Start date of the Service/Maintenance Contract. Service Contract should have a valid start date.
End Date	End date of the Service/Maintenance Contract. Service Contract should have a valid end date. End date should be greater or equal to Start date.
SLA Terms	Service level the customer is entitled to by this contract. This is a lookup to an existing SLA Terms record.
Service/Maintenance Contract Notes	Free text that shows any exceptions or conditions that apply when entitling the customer based on this contract.
Contract Price	Total price of the Service/Maintenance Contract before discount.
Discount %	Percentage discount to be applied on the contract price.
Discounted Price	Contract Price minus discount. Calculated automatically.
All Products Covered	Flag that indicates if this contract covers all products purchased by this customer. See Checking Entitlement in Case and Work Order.
All Contacts Covered	Flag that indicates if all contacts from this customer are entitled to support. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
All Sites Covered	Flag that indicates if all customer locations are covered by this contract. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
All Services Covered	Flag that indicates if the customer is entitled to all types of services offered. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Default Service Groups	Name of the service group to whom the Work Orders can be assigned by default when a case is entitled using this contract.

Fields	Description
Default Group Member	Name of the service group member to whom the Work Orders can be assigned by default when a case is entitled using this contract.
Canceled by	Name of the Salesforce user that canceled this Service/Maintenance Contract.
Canceled on	Date/time on which this Service/Maintenance Contract was canceled.
Primary Technician	Primary technician for this service contract. Reference to an existing Technician record in ServiceMax.
Activation Notes	Service/Maintenance Contract Activation Notes.
Cancellation Notes	Service/Maintenance Contract Cancellation Notes.
Renewal Notes	Service/Maintenance Contract Renewal Notes.
Weeks to Renewal	Number of weeks before the contract expires. This is calculated automatically.

Activating Service/Maintenance Contract

Activating a Service/Maintenance Contract makes it available for use in entitlements. In order for a Service/Maintenance Contract to be available for entitlement, the contract dates must also be current.

To activate a Service/Maintenance Contract:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and then click the contract name that you want to activate. When a Service/Maintenance Contract is activated, all previous instances of the contract will be automatically deactivated and will not be available for entitlement in the future.
2. In the Service Flow Wizard (SFW) Manage Contract Tool bar, click **Activate Contract**. Depending on how your administrator has configured this feature, some validations may be performed to see if the contract qualifies for activation. The validations include:

- Product coverage is entered
- Services coverage is entered
- Entitled contacts are entered
- Location coverage is specified

If the contract qualifies for activation, the Activate Contract screen appears as shown below.

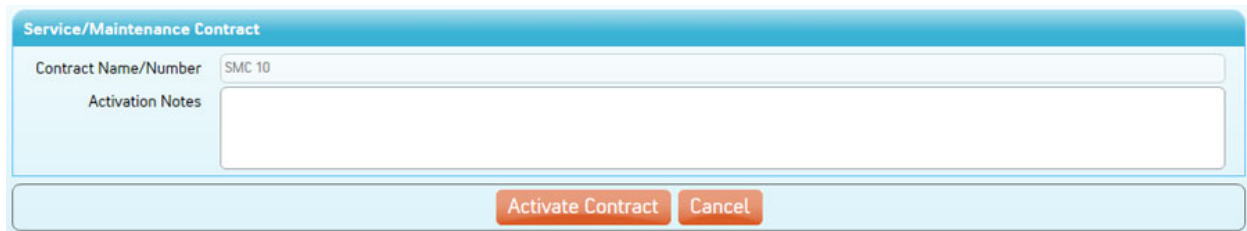
The screenshot shows a web interface titled "Service/Maintenance Contract". It contains two input fields: "Contract Name/Number" with the value "SMC 10" and "Activation Notes" which is empty. At the bottom right, there are two buttons: "Activate Contract" and "Cancel".

Figure 1: Activate Contract Screen

5. Enter **Activation Notes** and then click **Activate**. The contract will be activated and you will be returned to the Service Contract screen.

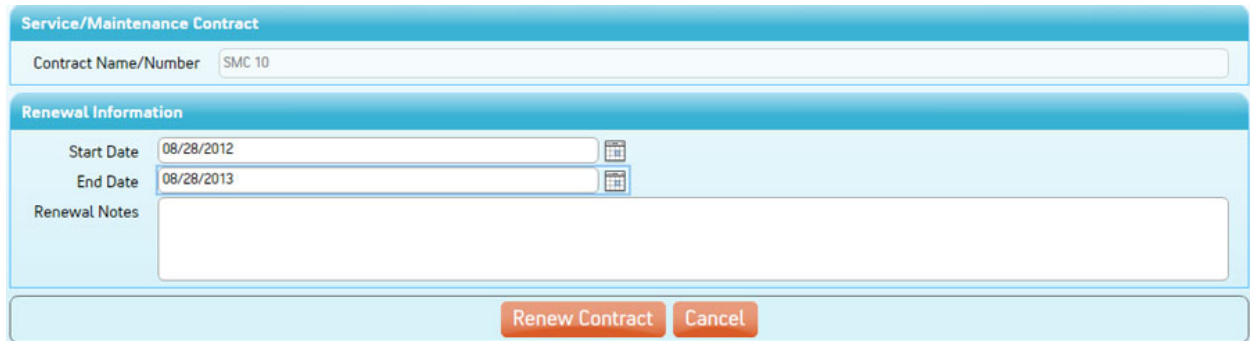
Renewing Service/Maintenance Contract

When a Service/Maintenance Contract is renewed, all coverage details will be automatically copied to the renewed contract: the renewal number and date will be set in the new contract. Depending upon your organization's settings, the renewed contract may not be activated automatically. In such instances, you must explicitly activate the renewed contract.

To renew a Service/Maintenance Contract:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and then click the contract name to renew.

2. Click **Renew Contract**. If the contract qualifies for renewal, the Contact Renewal screen appears as shown below:



The screenshot shows a web form titled "Service/Maintenance Contract". At the top, there is a field for "Contract Name/Number" with the value "SMC 10". Below this is a section titled "Renewal Information". Inside this section, there are two date fields: "Start Date" with the value "08/28/2012" and "End Date" with the value "08/28/2013". Below the date fields is a large text area labeled "Renewal Notes". At the bottom of the form, there are two buttons: "Renew Contract" and "Cancel".

Figure 2: Contract Renewal Screen

3. In the Renewal Information section, enter contract number, start and end dates for the new contract. Though not required in ServiceMax, it is a recommended practice that contract numbers are unique and indicate the number of renewals.
4. Click **Renew Contract**. A new contract will be created. All the selected information such as products and services will be copied to the new contract. Depending upon the activation settings, the renewed contract will be automatically activated. You will be returned to the newly created contract.



Note: Renewal instructions, default renewal options and activation settings are configurable by your administrator.



Note: A new contract is created upon renewal. The fields to be copied between the original and new contracts are configurable by your ServiceMax administrator. This configuration may also include your organization's custom fields on Service Contract.

Canceling Service/Maintenance Contract

When a Service/Maintenance Contract is canceled, the contract becomes inactive immediately. The Service/Maintenance Contract will not be available for future entitlements.

To cancel a Service/Maintenance Contract:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and then click the contract name to cancel.
2. Click **Cancel Contract**. Depending upon how your administrator has configured this feature, some validations may be performed to see if the contract qualifies for cancellation. The validations include:
 - No cases or Work Orders have been entitled using this contract.
 - Any cases or Work Orders entitled using this contract are not currently open.

If the contract qualifies, the cancellation screen appears as shown below.

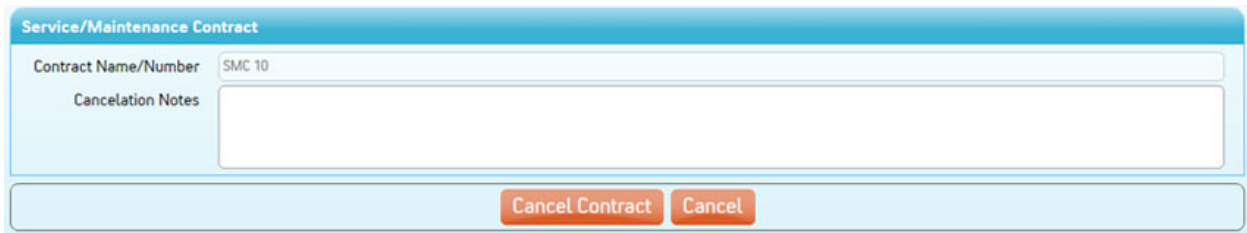


Figure 3: *Cancel Contract Screen*

3. Click **Cancel Contract**. The contract becomes inactive and you are returned to the contract screen.



Note: Cancellation instructions and validations to be applied are configurable by your administrator.

Adding Covered Products

Covered Product Fields

Fields	Description
Service/Maintenance Contract	Name of the Service/Maintenance Contract. This is a lookup to an existing Service/Maintenance Contract in ServiceMax.

Fields	Description
Installed Product	ID of the installed product covered by the Service/Maintenance Contract. This is a lookup to an existing installed product record in ServiceMax.
Product	Name of the product covered by Service/Maintenance Contract. This is a lookup to an existing Salesforce product record.
Product Family	Product Family covered by this Service/Maintenance Contract. Your system administrator is responsible for configuring this list for your organization's requirements.
Product Line	Product Line covered by this Service/Maintenance Contract. Your system administrator is responsible for configuring this list for your organization's requirements.
Start Date	Coverage start date for this product in the Service/Maintenance Contract.
End Date	Coverage end date for this product in the Service/Maintenance Contract.
SLA Terms	Service level the customer is entitled to by this contract for this product. This is a lookup to an existing SLA Terms record.

Adding Products to a Service/Maintenance Contract

To add products to an existing Service/Maintenance Contract:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and then click the contract name to which you want to add products.
2. Click **New** in the Covered Products Related List section. The Service/Maintenance Contract name is automatically populated in the screen.
3. Enter the **Installed Product ID** or **Product Name**, if the contract covers a specific installed product or a part number. You can also use the **Lookup** icon to locate the installed product or product.
4. Select the appropriate value from the **Product Family** or **Product Line**, if the contract covers all the products in a Product Family or Product Line.
5. Click **Save**. A new product record is added to this Service/Maintenance Contract.



Note: A Service/Maintenance Contract can have an unlimited number of products. Repeat the above steps for each product (or family or line) you want to associate with the service/maintenance contract. You can also click **Save & New** after creating a new service/maintenance contract product record.

Editing Products from a Service/Maintenance Contract

To edit a product information:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and then click the contract name in which you want to make product changes.
2. In the related list Covered Products, click **Edit** next to the product record you want to edit.
3. Make necessary changes to the Service/Maintenance Contract product record.
4. Click **Save** to save the changes done. Alternatively, click **Cancel** to discard the changes.

Deleting Products from a Service/Maintenance Contract

To delete a product from Service/Maintenance Contract:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and then click the contract name from which you want to delete products.
2. In the Covered Products Related List section, click **Del** next to the product record you want to delete and then click **OK** when prompted for confirmation.

Defining Counter-based Coverage

If your products have ongoing readings that are measured using embedded or external devices, and if those readings impact customer entitlements, you can define such coverage in warranty terms. Coverage defined using counters can be applied in auto-entitlement in Cases. Interactive entitlement does not support counter-based coverage in this release. Counters applicable to various products in your organization must be defined

before using this feature. Please talk to your ServiceMax administrator if you are unable to view all the relevant counters while defining coverage. View [Defining Counter-based Coverage](#) to define the counters for the products.

Adding Entitled Contacts

Entitled Contact Fields

Fields	Description
Service/Maintenance Contract	Name of the Service/Maintenance Contract. This is a lookup to an existing Service/Maintenance Contract in ServiceMax.
Contact	Name of the contact. This is a lookup to an existing contact record in ServiceMax.
Number of Work Orders	Maximum number of Work Orders this customer contact is allowed when entitled by this Service/Maintenance Contract.
Notes	Any additional information about entitlement on this contact.

Adding Contacts to a Service/Maintenance Contract

To add contacts:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab. Click the contract name to which you want to add contacts.
2. In the Entitled Contacts Related List section, click **New**. The Service/Maintenance Contract name is automatically populated in the screen.
3. Enter the contact name. You can also use the **Lookup** icon to find the contact record.
4. Enter Number of Work Orders (if applicable).
5. Enter any additional Notes (if applicable).
6. Click **Save** to add the contact information.



Note: A Service/Maintenance Contract can support an unlimited number of contact records. Repeat the above steps for each contact you want to associate with the service/maintenance contract. You can also click **Save & New** after creating a new service/maintenance contract contact record.

Editing Contacts from a Service/Maintenance Contract

To edit contact information:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab. Click the relevant contract name.
2. In the Entitled Contacts Related List section, click **Edit** next to the contact record you want to edit.
3. Make the necessary changes to the Service/Maintenance Contract contact record.
4. Click **Save** to save the changes.

Deleting Contacts from a Service/Maintenance Contract

To delete a contact from the contract:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and click the relevant contract name.
2. In the Entitled Contacts Related List section, click **Del** next to the contact record you want to delete and then click **OK** when prompted for confirmation.

Adding Covered Locations

Covered Locations Fields

Fields	Description
Service/Maintenance Contract	Name of the Service/Maintenance Contract. This is a lookup to an existing Service/Maintenance Contract in ServiceMax.

Fields	Description
Location	Name of the location. This is a lookup to an existing location record in ServiceMax.
Number of Work Orders	Maximum number of Work Orders this customer location is allowed when entitled by this Service/Maintenance Contract.
Notes	Any additional information about entitlement on this location.

Adding Locations to Service/Maintenance Contract

To add a location to the contract:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and click the relevant contract name.
2. In the Covered Location Related List section, click **New**. The Service/Maintenance Contract name is automatically populated in the screen.
3. Enter the location name. You can also use the **Lookup** icon to find the location record.
4. Enter Number of Work Orders (if applicable).
5. Enter any additional Notes (if applicable).
6. Click **Save** to add the location information.



Note: A Service/Maintenance Contract can support an unlimited number of location records. Repeat the above steps for each location you want to associate with the service/maintenance contract. You can also click **Save & New** after creating a new service/maintenance contract location record.

Editing Locations from a Service/Maintenance Contract

To edit a location information:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and click the relevant contract name.
2. In the Covered Locations Related List section, click **Edit** next to the location record.

3. Make the necessary changes to the Service/Maintenance Contract location record and then click **Save**.

Deleting Locations from a Service/Maintenance Contract

To delete a location:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and click the relevant contract name.
2. In the Covered Locations Related List section, click **Del** next to the location record you want to delete and then click **OK** when prompted for confirmation.

Adding Included Services

Included Services Fields

Fields	Description
Service/Maintenance Contract	Name of the Service/Maintenance Contract. This is a lookup to an existing Service/Maintenance Contract in ServiceMax.
Service	Name of the service. This is a lookup to an existing service record in ServiceMax.
Service Type	Type of service covered by the Service/Maintenance Contract. Your system administrator is responsible for configuring this list for your organization's requirements.
Notes	Any additional information about entitlement on this service.

Adding Services to a Service/Maintenance Contract

To add services to a contract:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and click the relevant contract name.
2. In the Included Services Related List section, click **New**. The Service/Maintenance Contract name is automatically populated in the screen.
3. If the customer is entitled for specific services only, enter the service name. You can also use the **Lookup** icon to find the service record.

4. If the customer is entitled for all services of a service type, simply select the service type.
5. Enter **Additional Notes** if applicable and then click **Save**.



Note: A Service/Maintenance Contract can support an unlimited number of service records. Repeat the above steps for each service you want to associate with the service/maintenance contract. You can also click **Save & New** after creating a new service/maintenance contract service record.

Editing Services from a Service/Maintenance Contract

To edit services:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and click the relevant contract name.
2. In the Included Services Related List section, click **Edit** next to the service record you want to edit.
3. Make the necessary changes to the Service/Maintenance Contract service record and then click **Save**.

Deleting Services a from Service/Maintenance Contract

To delete services:

1. Locate the Service/Maintenance Contract by searching in the sidebar or from a list view in Service/Maintenance Contracts tab and click the relevant contract name.
2. In the Included Services Related List section, click **Del** next to the service record and then click **OK** when prompted for confirmation.

See Also:

[Creating a New Service Plan](#)

[Creating a Service Contract from a Service Plan](#)

[Account](#)

Contacts

Location

Product

Installed Product

ServiceMax Processes

Service Contracts - Standard Settings

ACTIVITY MASTERS

Overview

Activity Master is used to define the different labor activities performed by your technicians as a part of service. You can also associate applicable products with these activities.

From the Home page, click the **Activity Masters** tab to display the Activity Masters page. See figure below.

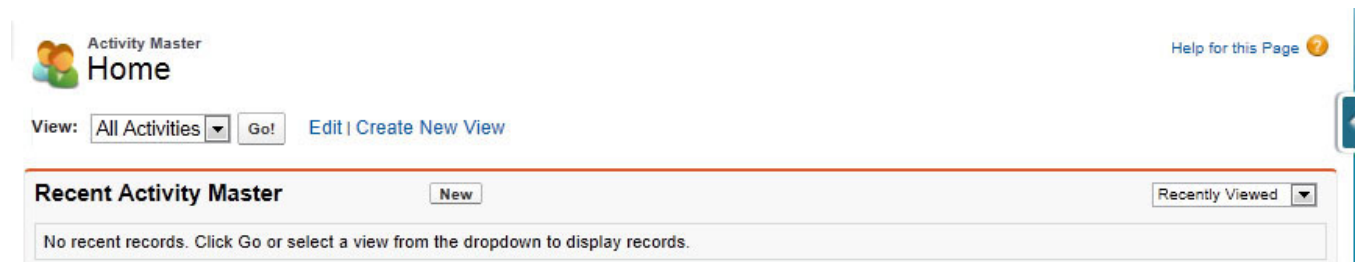


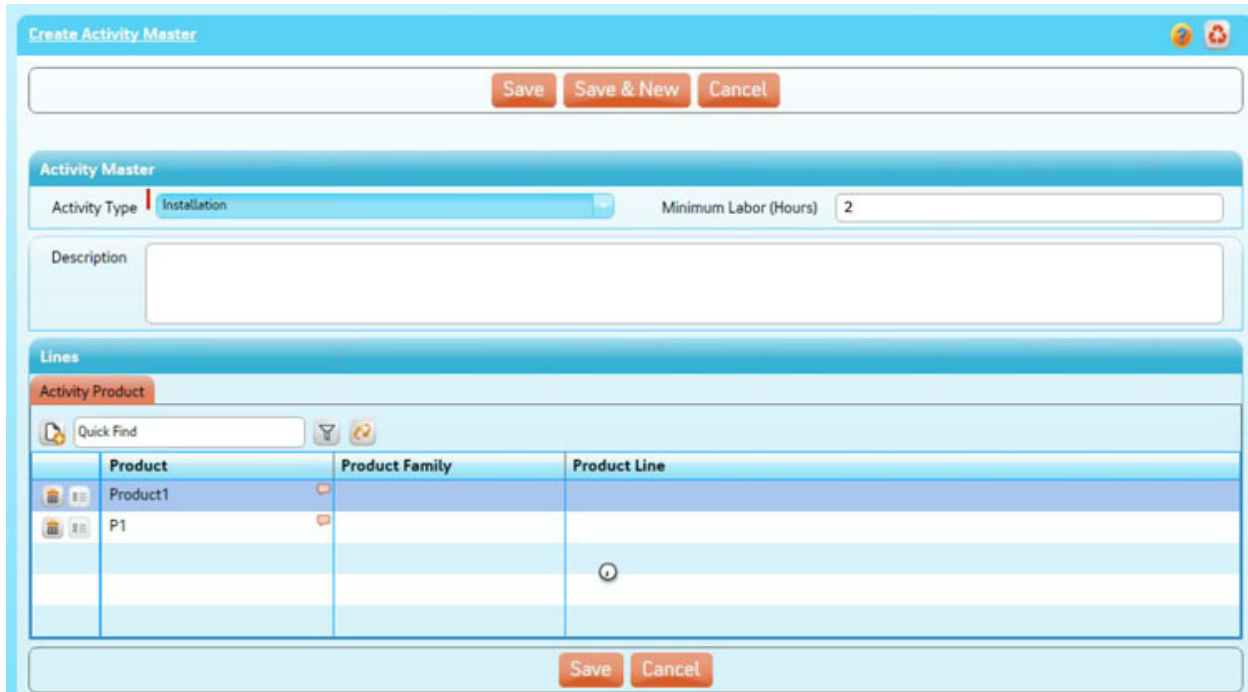
Figure 1: Recent Activity Master Screen

Creating an Activity Master

To create a new Activity Master:

1. Click the **New** button in the Recent Activity Master screen. See figure above.
2. In the Create Activity Master screen:
 - a. Select the **Action Type**.
 - b. Enter the minimum number of labor hours.
 - c. Enter a description of the activity.
3. In Activity Product Lines area, select a product by entering the product name in the text field, using the **Quick Find** search feature, or clicking the bubble icon to search for the product. See figure below.
4. Click **Save** to save the Activity Master.

5. Click **Save & New** to save the Activity Master and create a new Activity Master.
6. Click **Cancel** to cancel the activity.

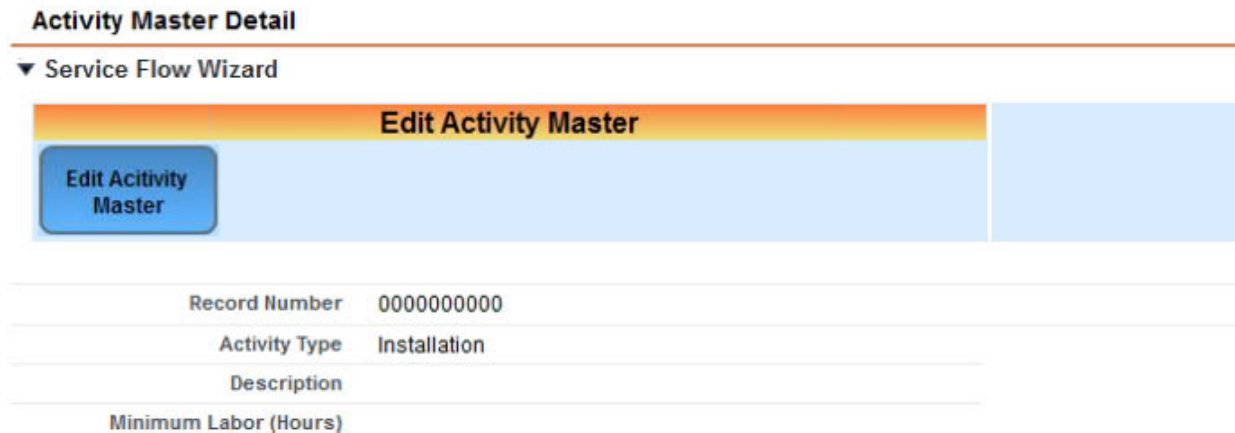


The screenshot shows the 'Create Activity Master' window. At the top, there are three buttons: 'Save', 'Save & New', and 'Cancel'. Below this is the 'Activity Master' section with a dropdown for 'Activity Type' set to 'Installation' and a text field for 'Minimum Labor (Hours)' set to '2'. There is also a 'Description' text area. The 'Lines' section contains a table with columns 'Product', 'Product Family', and 'Product Line'. The table has two rows: 'Product1' and 'P1'. Below the table are 'Save' and 'Cancel' buttons.

Figure 2: Create Activity Master Screen

The Service Flow Wizard (SFM) Activity Master Detail updates.

7. Click the **Edit Activity Master** button to edit your activity master. See figure below.



The screenshot shows the 'Activity Master Detail' screen. It has a header 'Activity Master Detail' and a sub-header 'Service Flow Wizard'. Below this is a large orange button labeled 'Edit Activity Master'. To the left of this button is a smaller blue button labeled 'Edit Activity Master'. Below these buttons is a table with the following data:

Record Number	0000000000
Activity Type	Installation
Description	
Minimum Labor (Hours)	

Figure 3: Activity Master Detail

See Also:

[Service Pricebook](#)

[Service Plans](#)

SERVICE PRICEBOOK

Overview

Click the **Service Pricebook** tab to display the Service Pricebook page. See figure below.



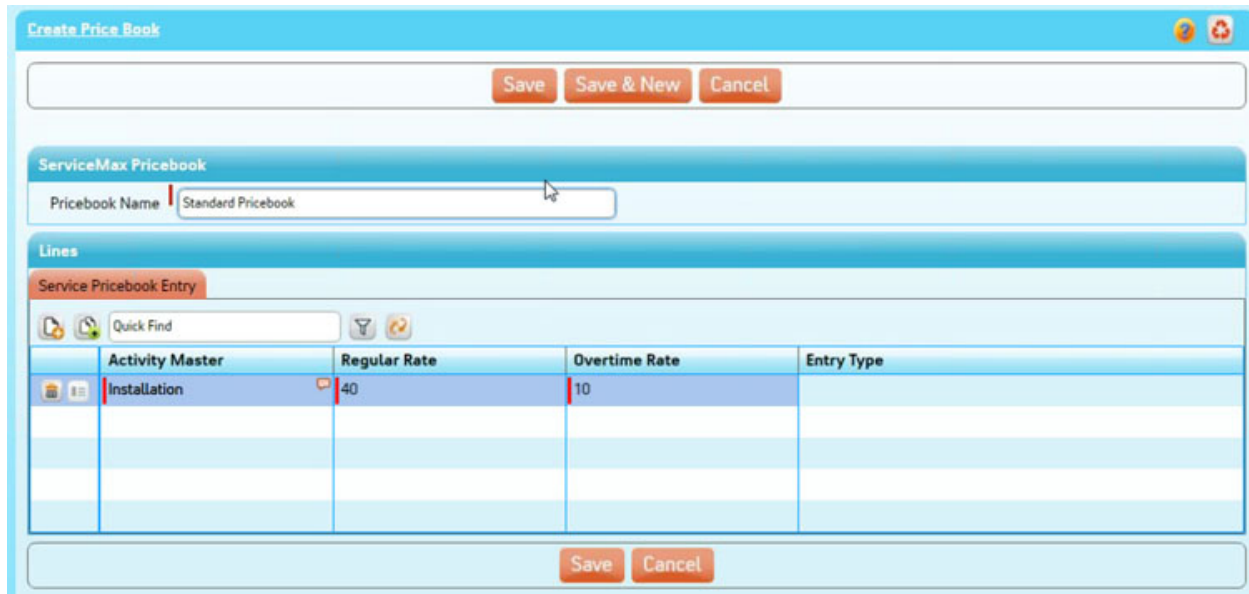
Figure 1: Recent Service Pricebooks Screen

Creating a New Service Pricebook

To create a new Service Pricebook:

1. Click the **New** button in the Recent Service Pricebooks screen. See figure above.
2. In the Create Activity Master screen, enter the name of the Pricebook.
3. In **Service Pricebook Entry Lines** area, select an Activity Master by entering the name in the text field, using the **Quick Find** search feature, or clicking the bubble icon to search for an Activity Master. See figure below.
4. Click **Save** to save the Service Pricebook.
5. Click **Save & New** to save the Service Pricebook and create a new Service Pricebook.

- Click **Cancel** to cancel the Service Pricebook.



The screenshot shows the 'Create Price Book' window. At the top, there are three buttons: 'Save', 'Save & New', and 'Cancel'. Below this is a section titled 'ServiceMax Pricebook' with a 'Pricebook Name' field containing 'Standard Pricebook'. Underneath is a 'Lines' section with a 'Service Pricebook Entry' tab. It features a 'Quick Find' search bar and a table with the following data:

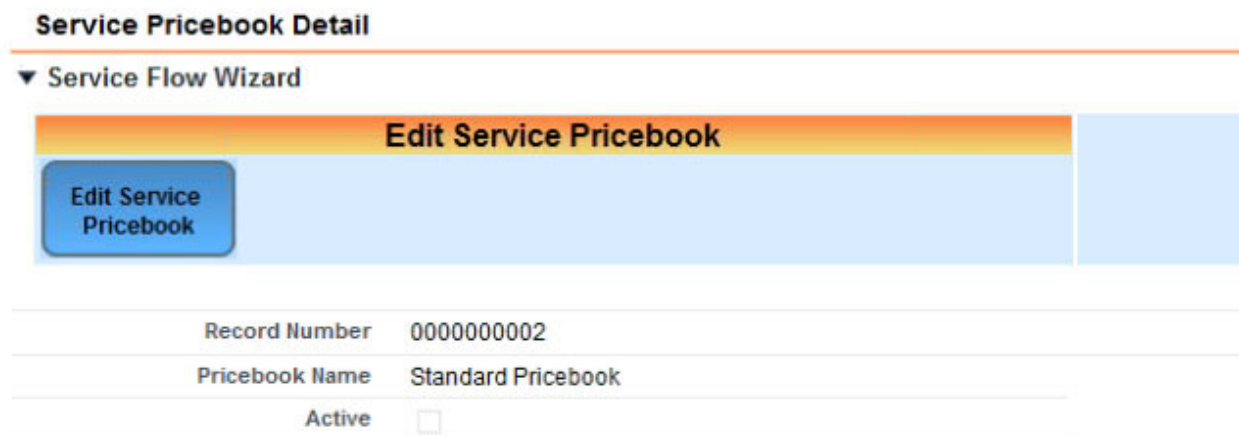
Activity Master	Regular Rate	Overtime Rate	Entry Type
Installation	40	10	

At the bottom of the window are 'Save' and 'Cancel' buttons.

Figure 2: Create Price Book Screen

The Service Flow Wizard (SFM) Service Pricebook Detail updates.

- Click the **Edit Service Pricebook** button to edit your Service Pricebook.



The screenshot shows the 'Service Pricebook Detail' page. It has a section titled 'Service Flow Wizard' with a dropdown arrow. Below this is a large orange button labeled 'Edit Service Pricebook'. Underneath the button is a table with the following details:

Record Number	0000000002
Pricebook Name	Standard Pricebook
Active	<input type="checkbox"/>

Figure 3: Service Pricebook Detail

SERVICE PLANS

Overview

Service Plans are templates that you can use when you create service maintenance contracts. When you create a Service Plan, you can set criteria for: Pricing Rules, Parts Pricing, Labor Pricing, Expense Pricing, and Travel Pricing.

Click the **Service Plans** tab to display the Service Plans Home page. See figure below.

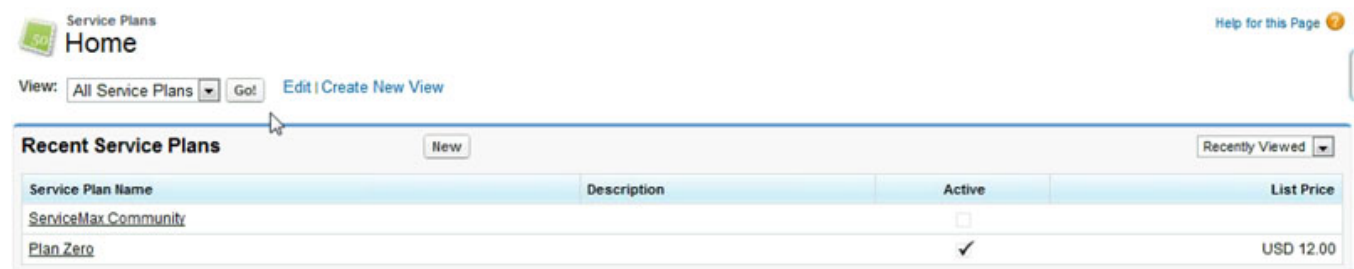


Figure 1: Recent Service Plans Screen

Creating a New Service Plan

To create a new Service Plan:

1. In the Recent Service Plans screen, click the **New** button.
2. In the Information area of the New Service Plan screen:
 - a. Enter the **Service Plan Name**.
 - b. Enter the **Default Parts Price Book** in the appropriate text box.
 - c. Select the price type from the **Price Type** picklist.
 - d. Enter the SLA terms in the **SLA Terms** text box or use the **Lookup** feature to find it.
 - e. Enter a **List Price** in the appropriate text box.
 - f. Click the **Save** button.

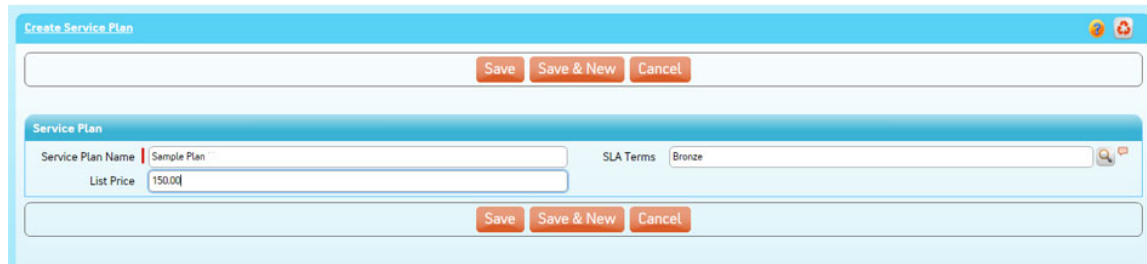
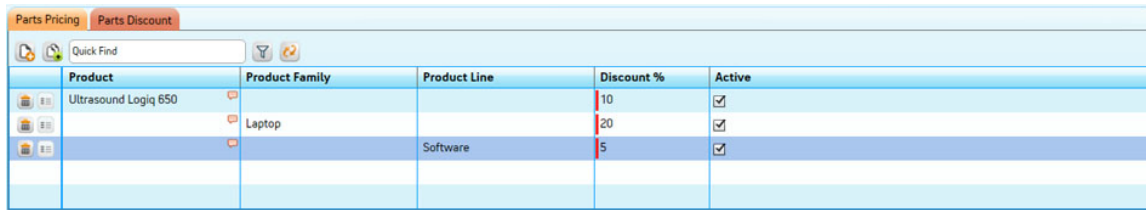


Figure 2: *New Service Plan Screen*

3. In the Service Plan Detail area, click the appropriate tabs in the Service Plan Pricing SFW (Service Flow Wizard) area for your new service plan (**Pricing Rule, Parts Pricing, Labor Pricing, Expense Pricing, Travel Policy, Service Offering**). See steps below for an example.
4. In the Service Plan area, enter a **Parts Price Book** or use the **Lookup** feature button to find it (for example, Standard Pricebook).
5. Click the **Pricing Rule** tab in the Service Plan Pricing SFW area:
 - a. In the **Pricing Rule** area, click the **Add a row** button and enter the Service Type or use the **Lookup** feature button to find the Service Type.
 - b. You can also use the Quick find feature text box to quickly find a Service Type. Enter the text and click the **Filter** button. Click the **Reset Filter** button to reset the filter.
 - c. You can also click the **Search and Add** button to search for the Service Type.
 - i. In the **Pricing Rule** dialog box, select a search filter (**Contains, Starts With, Ends With, Exact Match**). See figure below.
 - ii. Enter the **Service Type** in the appropriate text field.
 - iii. Click the **Lookup** feature button.
 - iv. The Service Name area updates to include your filtered search criteria.
 - v. Select the Service Name you want to add.
 - vi. Click the **Add Selected** button.



Product	Product Family	Product Line	Discount %	Active
Ultrasound Logiq 650			10	<input checked="" type="checkbox"/>
	Laptop		20	<input checked="" type="checkbox"/>
		Software	5	<input checked="" type="checkbox"/>

Figure 3: Pricing Rule Dialog Box

6. In the **Rate Type** field, select a rate type (**Fixed, NTE, Minimum, Surcharge**).
7. Enter a rate in the **Rate** field.
8. Click the **Save** button.

The Pricing Rule area updates with your data in the Service Plan Detail screen. See figure below.

9. Click the **Parts Pricing** tab in the SFW area.
 - a. In the Parts Pricing area, click the **Add a row** button and enter the Product or use the **Lookup** feature button to find the Product.
 - b. You can also use the Quick find feature text box to quickly find a Product. Enter the text and click the **Filter** button. Click the **Reset Filter** button to reset the filter.
 - c. You can also click the **Search and Add** button to search for the Product.
10. In the Product search dialog box, select a search filter (**Contains, Starts With, Ends With, Exact Match**). See figure below.
 - a. Enter a Product in the appropriate text field or click the **Lookup** feature button to search for it.
 - b. The Product area updates to include your filtered search criteria.
 - c. Select the Product you want to add.
 - d. Click the **Add Selected** button.



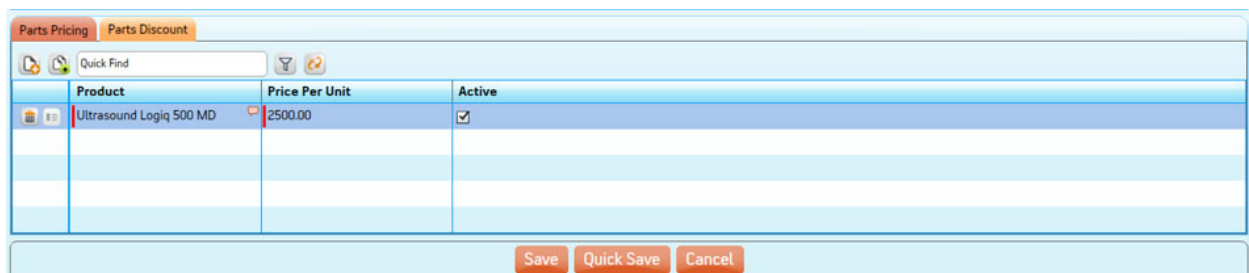
Product search

Contains

Product Name	Product Code	Product Family
Ultrasound Logiq	Logiq500MD	Radiology
Ultrasound Logiq	Logiq650	Radiology
Ultrasound Logiq	Logiq200	Radiology

Figure 4: Product Search

11. In the **Price Per Unit** area, enter the price for the product. See figure below.
12. Check the **Active** checkbox to activate the parts pricing.



Parts Pricing | Parts Discount

Quick Find

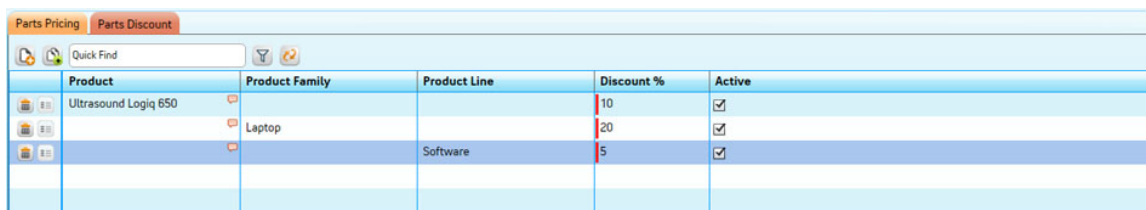
Product	Price Per Unit	Active
Ultrasound Logiq 500 MD	2500.00	<input checked="" type="checkbox"/>

Save Quick Save Cancel

Figure 5: Parts Pricing Tab

13. Click the **Quick Save** button to save the parts pricing and remain in the Parts Pricing area.
14. Click the **Parts Discount** tab to apply discounts to Products, Product Families, and Product Lines (see figure below).
 - a. Assign individual discounts to Products, Product Families, and Product Lines on one line each for each part (see figure below for example).
 - b. For Product discounts:
 - i. Enter the Product in the appropriate text field or use the **Lookup** feature button to search for it.

- ii. Enter a discount percentage in the **Discount %** area.
- iii. Check the **Active** checkbox to activate the discount.
- c. For Product Family discounts:
 - i. In the **Product Family** field, select a product family from the picklist.
 - ii. Enter a discount percentage in the **Discount %** area.
 - iii. Check the **Active** checkbox to activate the discount.
- d. For Product Line discounts:
 - i. Select a product line from the **Product Line** field picklist.
 - ii. Enter a discount percentage in the **Discount %** area.
 - iii. Check the **Active** checkbox to activate the discount.
- e. Click the **Save** button to save the Parts Discount and return to the Service Plan Detail area.



Product	Product Family	Product Line	Discount %	Active
Ultrasound Logiq 650			10	<input checked="" type="checkbox"/>
	Laptop		20	<input checked="" type="checkbox"/>
		Software	5	<input checked="" type="checkbox"/>

Figure 6: Parts Discount Tab



Note: If you assign more than one item in the discount (Product, Product Family, Product Line), you will receive an error message indicating that you can only apply one discount to one item at a time. See above figure.

15. Click the **Labor Pricing** button in the SFW Service Plan Pricing Toolbar.
16. In the **Labor/Overtime Rounding Rules** area (see figure below):
 - a. In the **Round Labor to the Nearest (Mins)** text box, enter the number in minutes only.
 - b. In the **Minimum Labor (Mins)** text box, enter the number in minutes only.

- c. In the **Rounding Type (Labor)** picklist, select a type (**Round Up, Round Down, Actuals**).
17. In the **Labor Pricing** tab (see figure below):
 - a. Click the **Add a row** button to add a row.
 - b. In the **Activity** text field, enter the labor activity or use the **Lookup** feature button to find it.
 - c. In the **Activity Product** area, enter the product for the activity or use **Lookup** feature button to find it.
 - d. In the **Unit** area, select **Flat Rate** or **Per Hour** from the picklist.
 - e. Enter the minimum number of labor minutes in the **Minimum Labor** area.
 - f. In the **Regular Rate** area, enter the rate.

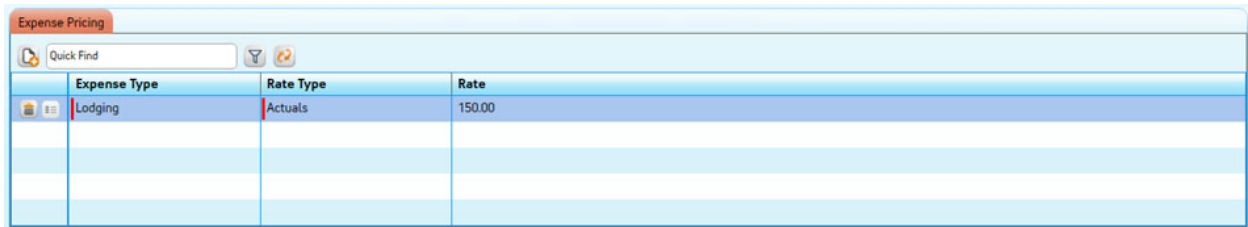


The screenshot shows the 'Labor/Overtime Rounding Rules' and 'Labor Pricing' tabs. The 'Labor/Overtime Rounding Rules' tab has fields for 'Round Labor To Nearest (Mins)' set to 10.00 and 'Minimum Labor (Mins)' set to 60.00. The 'Rounding Type (Labor)' picklist is set to 'Actuals'. The 'Labor Pricing' tab is active, showing a table with columns: Activity, Activity Product, Unit, Minimum Labor, and Regular Rate. The first row contains 'Repair' for Activity, 'Ultrasound' for Activity Product, 'Flat Rate' for Unit, 60.0000 for Minimum Labor, and 75.0000 for Regular Rate. There are also 'Quick Find' and 'Add a row' buttons at the top of the table.

Activity	Activity Product	Unit	Minimum Labor	Regular Rate
Repair	Ultrasound	Flat Rate	60.0000	75.0000

Figure 7: Labor Pricing Tab

18. Click the **Save** button to save the parts pricing and return to the Service Plan Detail area.
19. Click the **Expense Pricing** tab in the SFW Service Plan Pricing Toolbar.
20. In the **Expense Pricing** tab (see figure below):
 - a. Click the **Add a row** button to add a row.
 - b. In the Expense Type area, select an **Expense Type** from the picklist.
 - c. Select a **Rate Type** from the picklist.
 - d. Enter the rate amount in the **Rate** area.



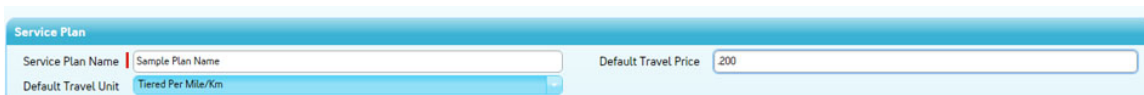
Expense Type	Rate Type	Rate
Lodging	Actuals	150.00

Figure 8: Expense Pricing Tab

21. Click the **Travel Policy** button from the SFW Service Plan Pricing Toolbar.

a. In the **Service Plan** area:

- i. In the **Default Travel Unit** picklist, select a travel unit.
- ii. Enter a price in the **Default Travel Price** text box.



Service Plan

Service Plan Name | Sample Plan Name

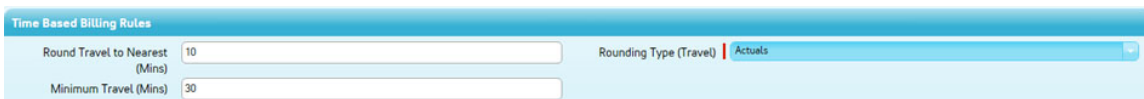
Default Travel Unit | Tiered Per Mile/Km

Default Travel Price | 200

Figure 9: Travel Policy

b. In the **Time Based Billing Rules** area:

- i. Enter the number of minutes in the **Round Travel to Nearest (Mins)** text box.
- ii. Enter the minimum travel minutes in the **Minimum Travel (Mins)** text box.
- iii. Select a rounding type from the **Rounding Type (Travel)** picklist.



Time Based Billing Rules

Round Travel to Nearest (Mins) | 10

Minimum Travel (Mins) | 30

Rounding Type (Travel) | Actuals

Figure 10: Time Based Billing Rules Area

c. In the **Travel Policy** tab:

- i. Click the **Add a row** button or the **Search and Add** button.
- ii. In the **Service Type** area, enter a service or use the **Lookup** feature button.
- iii. In the **Unit** area, select a type from the picklist.
- iv. Enter a rate in the **Rate** area.
- v. Click the **Quick Save** button.

Travel Policy		
Quick Find		
Service Type	Unit	Rate
Onsite Laptop Repair	Per Hour	75.00

Figure 11: Travel Policy Tab

- d. Click the **Mileage Tier** tab (see figure below).
 - i. Click the **Add a row** button or double-click in a one of the grid lines.
 - ii. In the **Tier Name** area, enter a name for the mileage tier.
 - iii. In the **Minimum** area, enter the minimum number of miles.
 - iv. In the **Maximum** area, enter the maximum number of miles.
 - v. From the **Unit** picklist, select a unit type.
 - vi. Enter the rate per mile or the flat rate in the **Rate** area.

Travel Policy

Mileage Tier

Zone Pricing

Quick Find



	Tier Name	Minimum	Maximum	Unit	Rate
	Thirty Mile Tier	10.0000	30.0000	Per Mile/Km	0.200
	Hundred Mile Tier	50.0000	100.0000	Flat Rate	50.000

Figure 12: Mileage Tier Tab

- e. Click the **Add a row** button or double-click in a one of the grid lines.
 - i. In the **Zone** area, select a zone from the picklist.
 - ii. In the **Rate** area, enter a flat rate for the zone.

Travel Policy

Mileage Tier

Zone Pricing

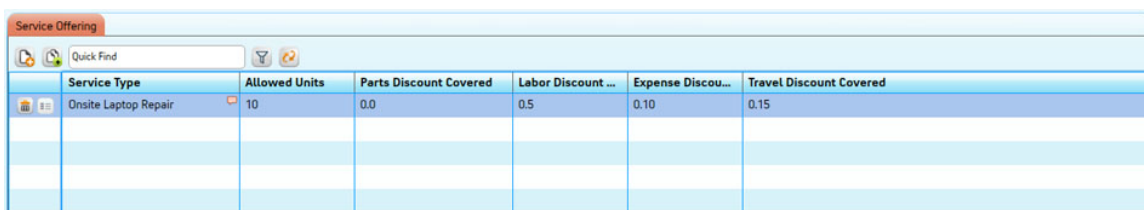
Quick Find

	Zone	Rate
<div><div></div><div></div></div>	Zone 1	75.00

Figure 13: Zone Pricing Tab

22. Click the **Service Offering** button in the SFW Service Plan Pricing Toolbar.
 In the **Service Offering** tab:

- Click the **Add a row** button or the **Search and Add** button.
- In the **Service Type** area, enter a service or use the **Lookup** feature button to search for it.
- Enter the number of allowed units in the **Allowed Units** text box.
- Enter the discount for the **Parts Discount Covered** in the appropriate area.
- Enter a discount for labor in the **Labor Discount Covered** text box.
- For expense discounts, enter the amount in the **Expense Discount Covered** text box.
- Enter discounts for travel in the **Travel Discount Covered** text box.



Service Type	Allowed Units	Parts Discount Covered	Labor Discount Covered	Expense Discount Covered	Travel Discount Covered
Onsite Laptop Repair	10	0.0	0.5	0.10	0.15

Figure 14: Service Offering Tab

Creating a Service Contract from a Service Plan

After creating a Service Plan, you can create a service contract from a service plan.

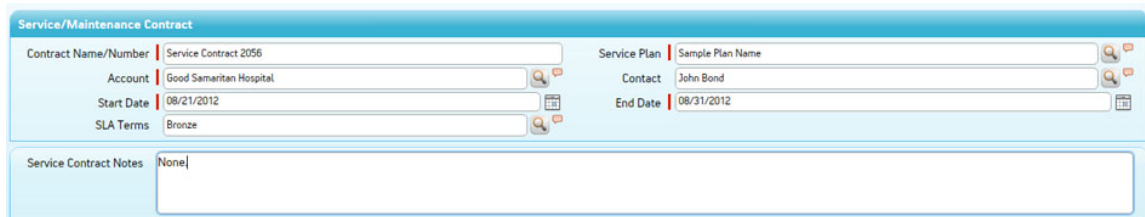
To create a service contract from a service plan (see figure below):

- In the Service Plan Detail area, click the **Create a Contract** button SFW (Service Flow Wizard) in the Other Actions toolbar.

In the **Service/Maintenance Contract** area:

- Enter the contract name in the **Contract Name/Number** text box.
- In the **Account** text box, enter the account name or use the **Lookup** feature button to search for it.
- Enter the **Start Date** or use the **Calendar icon** button to select a date.
- In the **SLA Terms** text box, enter the SLA terms (**Gold, Silver, Bronze**) or use the **Lookup** feature button to find it.

- e. Enter the name of the service plan you want to use in the **Service Plan** text box. Use the **Lookup** feature button to find it if necessary.
- f. Enter the contact name in the **Contact** text box or find it using the **Lookup** feature button.
- g. Enter an **End Date** or use the **Calendar icon** button to select a date.
- h. If there are any notes, enter them in the **Service Contract Notes** section.



The screenshot shows the 'Service/Maintenance Contract' form. It includes fields for Contract Name/Number (Service Contract 2056), Account (Good Samaritan Hospital), Start Date (08/21/2012), SLA Terms (Bronze), Service Plan (Sample Plan Name), Contact (John Bond), and End Date (08/31/2012). There is also a 'Service Contract Notes' section with the text 'None'.

Figure 15: Service/Maintenance Contract Screen

2. Click the **Save** button to save the service contract.



Note: Many of the terms and coverages listed in the Terms & Coverages tool bar in the SFW area of the Service/Maintenance Contract Detail screen have already been updated via the Service Plan.

3. Activate the contract by clicking the **Active** button in the SFW (Generates the PM Schedules).



Note: You can activate service contract from the account as well.

Service Contract Reports

To generate a Service Contract report:

1. From the Service Contract Detail screen, in the SFW Manage Contract tool bar, click the **Activate Contract** button.
 - a. In the Generate Report screen, select a template from the **Select Template** area.

- b. Select a format for the report in the **Generate Report As** picklist.
- c. If applicable, check the **Attach Report To** checkbox.
- d. Click the **Generate** button to generate the report. The service report generates.

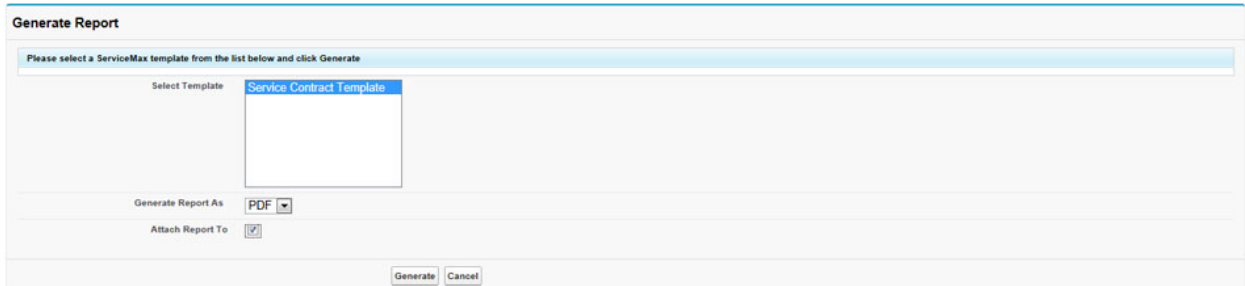


Figure 16: *Generate Report Screen*

2. From the Service Contract Detail screen, in the SFW Manage Contract tool bar, click the **Activate Contract** button.
3. In the Service/Maintenance Contract area, enter any **Activation Notes** in the appropriate area.
4. Click the **Activate Contract** button.

Creating a Service Contract from an Account

To renew a Service Contract:

1. From the Service Contract Detail screen, in the SFW Manage Contract tool bar, click the **Renew Contract** button.
2. In the Renewal Information area, enter the **Start Date** in the appropriate text box or use the **Calendar icon** button to select the start date.
3. Enter the end date in the **End Date** text box or use the **Calendar icon** button to select the end date.
4. Enter any notes in the **Renewal Notes** area.

To cancel a Service Contract:

1. From the Service Contract Detail screen, in the SFW Manage Contract tool bar, click the **Cancel Contract** button.

2. Enter any notes in the **Cancellation Notes** area.
3. Click the **Cancel Contract** button.



Note: Clicking the **Cancel** button will cancel any changes you have made to the service contract.

BOOKING WINDOWS

Overview

A booking window is a *named* time period of any day. Some examples of booking windows are, **Peak Hours** (10am to 12pm), **Late Afternoon** (3pm to 5pm), and **After Hours** (7pm to 9pm). Customer commitments for field service are made based on technician availability during a booking window. Once booking windows are defined, ServiceMax allows your call center users to select an appropriate booking window on a Case. The booking window is subsequently propagated to the Work Order. If your organization uses OptiMax for dispatch optimization, booking window commitments can be honored when scheduling Work Orders to Technicians.

Booking windows carries two sets of information organized by record type:

- **Definition:** Contains basic information about a booking window such as the name, time period, and display order.
- **Access:** Lists the call center users who have access to a booking window. Since an organization can have multiple booking windows across geographies, **access** enables display of only those booking windows that are applicable for a local region.

Access and Permissions

Actions	User Permissions Needed
To view the Booking Windows:	"Read" on Booking Window
To create or clone Booking Windows:	"Create" on Booking Window
To change Booking Windows:	"Edit" on Booking Window
To delete Booking Windows:	"Delete" on Booking Window

Click **Home > ServiceMax Setup > Booking Windows** to view the Booking Windows home page.



Caution: Remember that when deleting a booking window you will not be warned if the booking window is used in a related record. Since booking windows are related to other ServiceMax records such as Cases, Work Orders and booking window access, review and make sure the booking window record is not used in any related records.

Booking Windows Fields

Fields	Description
Booking Window Name	A user-friendly name for the booking window. For example: Peak Hour Slot or After Hours.
Booking Definition	Name of the booking window to which the user has access. Reference to an existing booking window record in ServiceMax.
Start Time	Time when the booking window starts on any day. Represented in increments of 30 minutes.
End Time	Time when the booking window ends on any day. Represented in increments of 30 minutes.
Display Order	Order in which this booking window should be relative to other booking windows in the Case Booking Window selection screen.
Average Slots	Number of service slots per technician that can be committed in this time period. This information is used to show the number of available slots on the Booking Window selection screen.
IsDefault	Indicates if this booking window can be displayed in the Booking Window selection screen for all users if the current user is not explicitly given access to any booking window records.
User	Name of the Salesforce user who has access to a booking window. Applicable only if the record type is Access .

See Also:

[Case](#)

[Booking Windows Settings](#)

Dispatch Optimization using OptiMax

WORK TEMPLATES

Overview

A Work Template, also known as a Task Template, is a reusable collection of predefined tasks. Work templates are primarily used in the Preventive Maintenance (PM) module of ServiceMax. When a task template is associated with a preventive maintenance plan, tasks listed in the template are automatically created and assigned to technicians in the PM Work Orders. See [Preventive Maintenance](#) for more details.

A task template contains two sets of information:

- **Template:** High level information about the template itself such as name and description.
- **Work:** List of tasks that are linked to a template.

Access and Permissions

Actions	User Permissions Needed
To view the Work Templates tab:	"Read" on Task Templates
To view Work Templates:	"Read" on Task Templates
To create or clone Work Templates:	"Create" on Task Templates
To change Work Templates:	"Edit" on Task Templates
To delete Work Templates:	"Delete" on Task Templates

Click **Home > ServiceMax Setup > Task Templates** to view the home page.

Alternatively, you can also click the **Task Templates** tab to view the Task Template home page.

Templates Fields

Fields	Description
Template Name	Name of the template. For example, Installation Checklist for HP9000 Series Servers.
Description	Detailed description of the template.
Template Type	Type of the template. Currently only one value is applicable: Preventive Maintenance .

Task Fields

Fields	Description
Priority	Priority of the task. Uses the same priority values of Salesforce tasks.
Task Title	A brief summary of the task to be performed.
Description	Detailed description of the task to be performed.
Task Template	The template to which the task is linked.

Creating a New Work Template

To create a new work template (also known as task template):

1. Navigate to the Task Templates Home page by clicking the **Task Templates** in the ServiceMax Home page. (You can also access Work Tasks Templates from the following path: **Home > ServiceMax Setup > Service Organization > Task Templates**)
2. Click the **New Task Template** button in the **Tasks** related list.
3. Select the record type **Templates** and click **Continue** (see figure below).



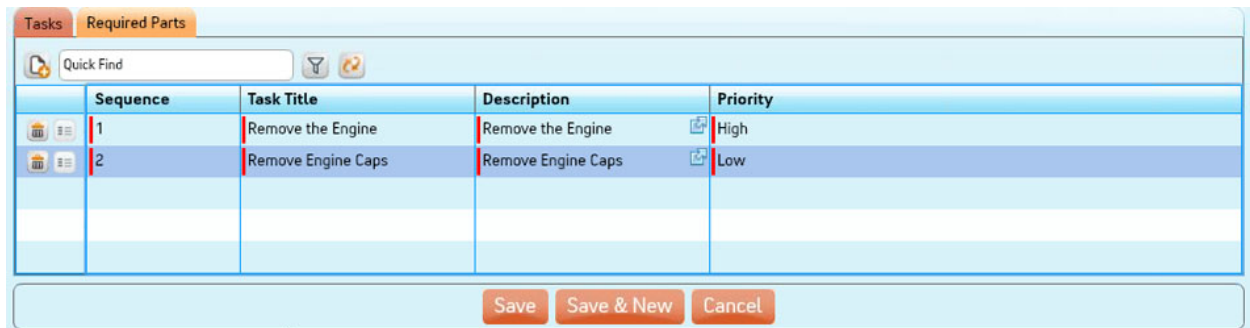
Select Task Template Record Type

Record Type of new record: Templates ▼

Continue Cancel

Figure 1: Select Task Template Record Type

4. In the Create Work Template screen, enter a name for your template in the Work Order Purpose area.
5. Include a description for the template in the **Description** area.
6. To add tasks: click the **Tasks** tab to add work tasks to the template (see figure below).
 - a. Enter the sequence number in the **Sequence** text field.
 - b. Enter the title name in the **Task Title** text field.
 - c. Provide a description of the tab in the **Description** text field.
 - d. From the **Priority** picklist, select a task priority (**High**, **Medium**, **Low**).
7. To add tasks to the Task grid, click the **Add a row** icon. (Enter the **Sequence**, **Task Title**, and **Description**) fields and select a priority.
8. To delete a task, click the **Delete** icon for the appropriate task.



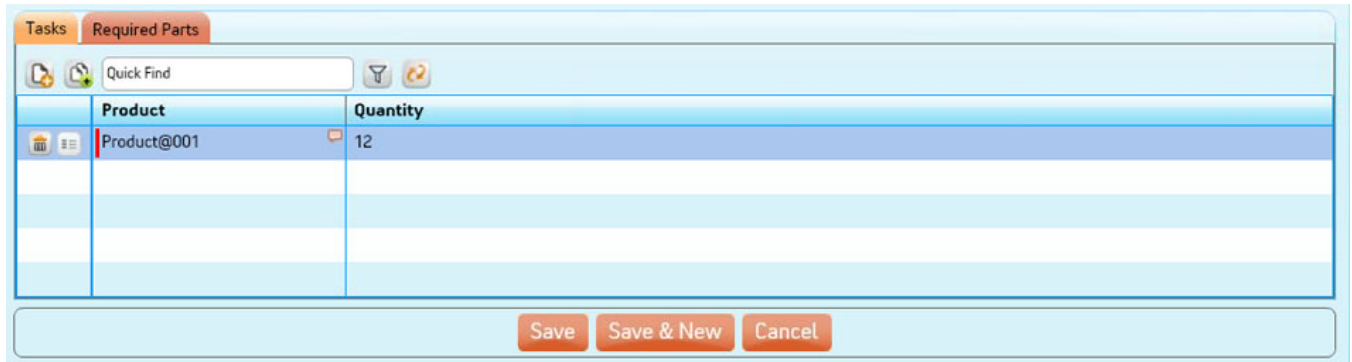
Sequence	Task Title	Description	Priority
1	Remove the Engine	Remove the Engine	High
2	Remove Engine Caps	Remove Engine Caps	Low

Figure 2: Tasks Tab



Note: You can use the Quick Find/Lookup feature to search for tasks or required parts.

9. To add required parts: click the **Required Parts** tab to add required parts to the task. See figure below.
 - a. Enter the product name in the **Product** field.
 - b. Enter the quantity in the **Quantity** field.



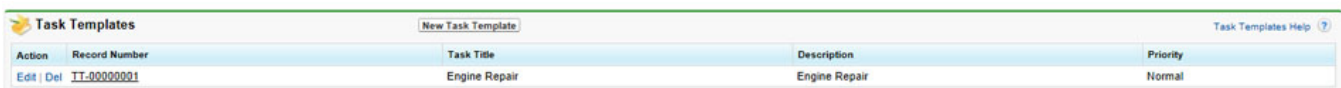
Product	Quantity
Product@001	12

Save Save & New Cancel

Figure 3: Required Parts Tab

- Click the **Save** button to save the template and remain in the Create Work Template screen.
- Click the **Save & New** button to save the template and create a new one.
- Click the **Cancel** button to cancel the work template.

The Task Template Detail screen displays your newly created template in the Task Templates area (see figure below).



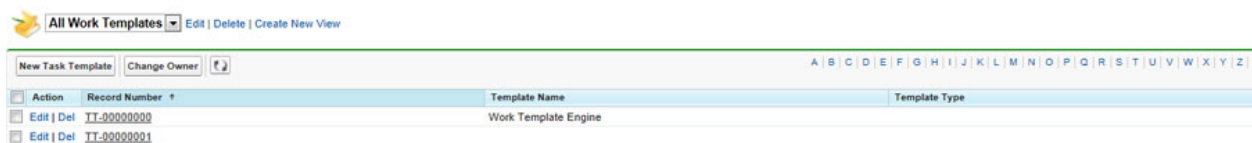
Action	Record Number	Task Title	Description	Priority
Edit Del	TT-00000001	Engine Repair	Engine Repair	Normal

Figure 4: Task Templates Area

Editing/Cloning a Work Template

To edit a work template (also known as task template):

- Navigate to the Task Templates Home page by clicking **Task Templates** in the ServiceMax Home page. (You can also access Work Tasks Templates from the following path: **Home > ServiceMax Setup > Service Organization > Task Templates**
- A recent list of Work Orders display. Click the record number link of the template you want to edit (see figure below).



Action	Record Number	Template Name	Template Type
Edit Del	TT-00000001	Work Template Engine	

Figure 5: All Work Templates List



Note: By default, the "All Work Templates" view displays. Click the **Create New View** link to create a new view (based on number, type, name, and so on) for your work templates.

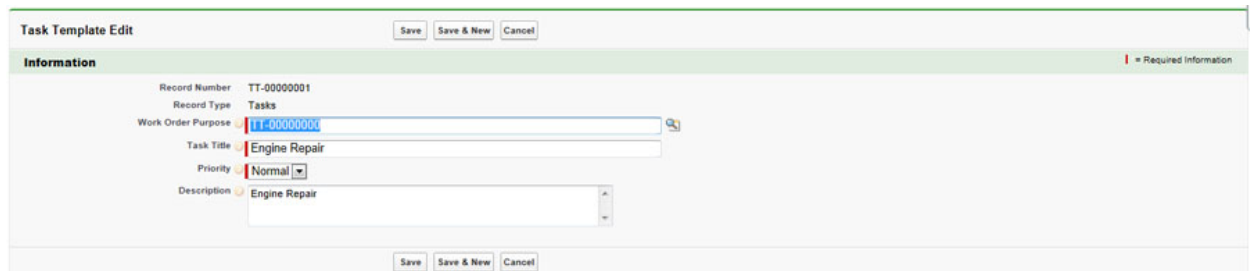
- The Task Template Detail screen displays your template in the Task Templates area. Click the appropriate template record number in the Task Templates area. (See figure below).



Action	Record Number	Task Title	Description	Priority
Edit Del	TT-00000003	Remove the Engine	Remove the Engine	High
Edit Del	TT-00000004	Remove Engine Caps	Remove Engine Caps	Low

Figure 6: Task Templates List

- Your template displays in the Task Template Detail area. Click the **Edit** button to edit the template. Click the **Clone** button to clone the template.
- In the Task Template Edit screen, edit the **Work Order Purpose**, **Task Title**, **Priority**, or **Description**.



Task Template Edit

Save Save & New Cancel

Information

Record Number TT-00000001

Record Type Tasks

Work Order Purpose

Task Title

Priority

Description

Save Save & New Cancel

Figure 7: Task Template Edit Screen



Note: For cloning templates, you must edit the "Work Order Purpose" and "Task Title" in order to save the template successfully.

- Click the **Save** button to save the template and remain in the Task Template Detail area.
- Click the **Save & New** button to save the template and create a new one.
- Click the **Cancel** button to cancel the template.



Caution: Remember that when deleting a task template, you will not be warned if the template is used in a related record. Since task templates are used in preventive maintenance, review and make sure the task template is not used in any related records.

See Also:

Preventive Maintenance

PREVENTIVE MAINTENANCE

Overview

The Preventive Maintenance (PM) feature in ServiceMax enables your organization to define and execute preventive maintenance plans for your installed products based on a service contract. PM Plans can be used to create Work Orders and cases, and assign tasks to the Work Order owners automatically. To address various maintenance needs of products, a service contract can have unlimited number of preventive maintenance plans with varying frequencies and coverage. In order to successfully utilize this powerful feature, your ServiceMax administrator must have installed and configured [**ServiceMax PM Scheduler**](#).

How does ServiceMax PM Work?

The following picture depicts the flow of ServiceMax PM Module:

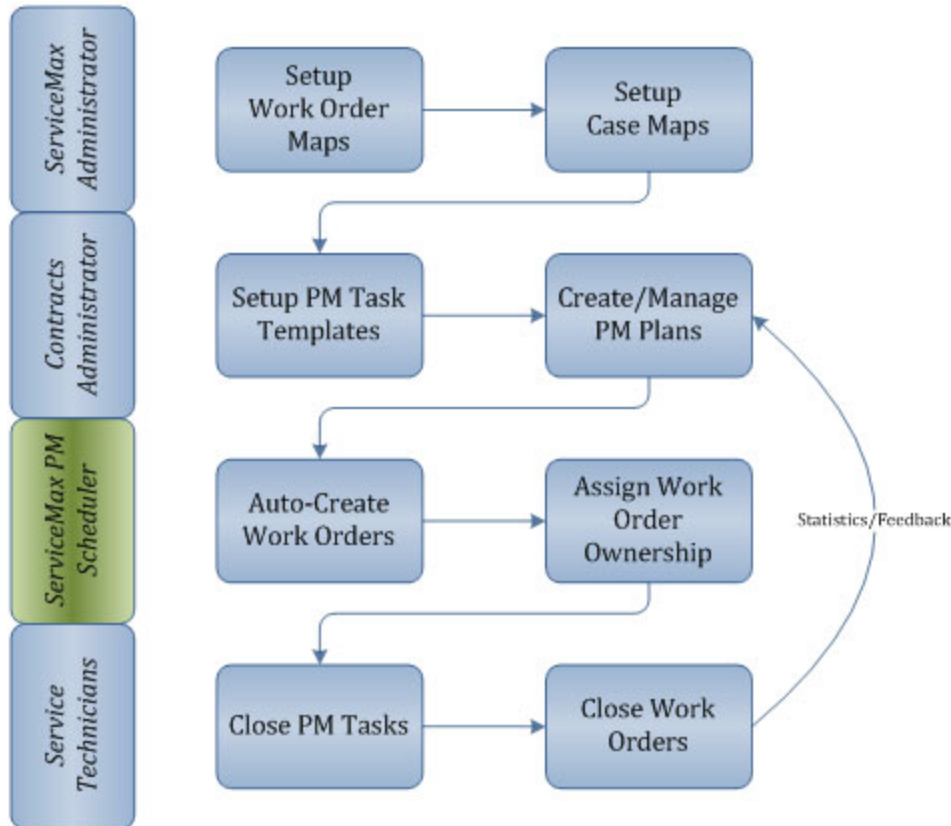


Figure 1: Work Flow of ServiceMax PM

Once the PM feature is installed and configured for your organization, your ServiceMax administrator will define the field mapping required for automatic creation of PM Work Orders and cases. The type of field mappings defined depends on your organization's requirements. If your organization requires one PM Work Order for *all* products covered in a PM Plan, you would require a field mapping between **Service Contract** and **Work Order** fields. Similarly, you would need a mapping between **Installed Product** and **Work Order** fields, if your organization needs one PM Work Order for *each* installed product. If you prefer to create PM Cases for PM Work Orders, appropriate field mappings must be defined for Cases as well. Field mappings could include standard ServiceMax fields as well as any custom fields your organization may have created. Please work with your ServiceMax administrator to setup these maps. Note that you will not be able to create and execute PM plans without any field maps.

If execution of your PM Work Orders is aided by a predefined checklist of tasks, you can take advantage of the **Task Template** feature in ServiceMax. See [Task Templates](#) for more information. Once task templates are created, contract administrators can attach the templates to PM Plans. When a technician is assigned to a Work Order, tasks listed in the template are created and assigned to the technician automatically.

The PM Scheduler runs at regular intervals based on the frequency configured by your ServiceMax administrator. For plans that are due as per the schedule, PM Scheduler creates Work Orders and cases as defined in the PM Plan. The Work Orders and cases are assigned to users or queues as configured in the plan.

When a PM Work Order is assigned to a technician and if a task template is associated with its PM Plan, tasks from the template are automatically created and assigned to the technician. The technician can then close out the tasks using the standard Salesforce task screen. Upon successful completion of the Work Order, when the Work Order is closed, statistical information is automatically posted to the PM Plan.

Access and Permissions

Actions	User Permissions Needed
To manage Preventive Maintenance Plans:	<p>"Read" on Service/Maintenance Contract, Installed Product, Product, Work Order, Case, and Task Template.</p> <p>"Edit" and "Delete" on Preventive Maintenance Plan, and Preventive Maintenance Coverage.</p>

To create or edit PM Plans, click the **Define PM Plans wizard** on any service contract record. A screen with all existing PM Plans for the service contract appears as shown

below.

Preventive Maintenance Plans For Service Contract SMC 10						
New PM Plan Edit Clone Delete Back To Service Contract Preventive Maintenance Help						
Select	PM Plan Name	Description	Status	Start Date	End Date	Next PM Date
<input type="checkbox"/>	0200		Active	1/1/2010	12/31/2010	12/1/2010
<input type="checkbox"/>	0300		Active	1/1/2010	12/31/2010	12/1/2010
<input type="checkbox"/>	0400		Active	1/1/2010	12/31/2010	12/1/2010
<input type="checkbox"/>	0500		Active	1/1/2010	12/31/2010	12/1/2010
<input type="checkbox"/>	0600		Active	1/1/2010	12/31/2010	12/1/2010

Figure 2: PM Plans Screen

Preventive Maintenance Fields

Fields	Description
PM Plan Name	Name of the PM Plan.
Description	Detailed description about the PM Plan.
Status	Current status of the PM Plan.
Start Date	Date on which the Plan will go into effect.
End Date	Date on which the Plan will end.
Schedule Type	Type of the schedule. Always set to Time Based .
SLA Terms	SLA Terms. Defaulted from the service contract.
Last PM Date	Date on which this Plan was executed last. Automatically set by the PM Scheduler.
Next PM Date	Date on which this Plan will be executed next as per the frequency.
Frequency	Frequency by which the Plan is executed. Number of days/-months/years.
Frequency Unit	Unit of measure for the frequency.

Fields	Description
Create Work Order 'n' days before scheduled date	Number of days in advance the PM Work Orders should be created for this Plan.
Number of Work Orders	Indicates how many Work Orders should be created for this plan: One Per Plan or One Per Product included in the Plan.
Field map to use	Name of the Field Map to be used to create Work Orders.
Task Template	Name of the Task Template. Line items listed under this template will be used to create Work Order tasks.
Assign To	Indicates who the Work Order should be assigned to: User , Queue , or the Primary Technician listed in the service contract.
Create Case	Flag to indicate if Cases should be created for this PM Plan.
Field map to use	Name of the Field Map to be used to create Cases.
Number of cases	Indicates how many Cases should be created for this Plan: One Per Plan or One Per Work Order .
Assign To	Indicates who the Case should be assigned to: User or Queue .
Email ID for success notifications	Email ID to which PM Scheduler should send notifications upon successful execution of the Plan.
Email ID for error notifications	Email ID to which PM scheduler should send notifications about errors encountered during execution of the Plan.
Create Activity upon Successful execution	Flag to indicate if an Activity record should be created automatically upon successful execution of the Plan.
Create Activity for Errors	Flag to indicate if an Activity record should be created automatically if errors occur during execution of the Plan.
Product Name	Name of the product covered by the Plan. This is a lookup to an existing product record.
Installed Product	Installed product covered by the Plan. This is a lookup to an existing installed product record.

Creating a PM Plan

To create a new PM Plan:

1. Click **Preventive Maintenance** on any service contract. A PM Plan screen with all the existing PM Plans for the service contract appears as shown above.
2. Click **New PM Plan**. The new PM Plan screen appears with the appropriate service contract information as shown below.

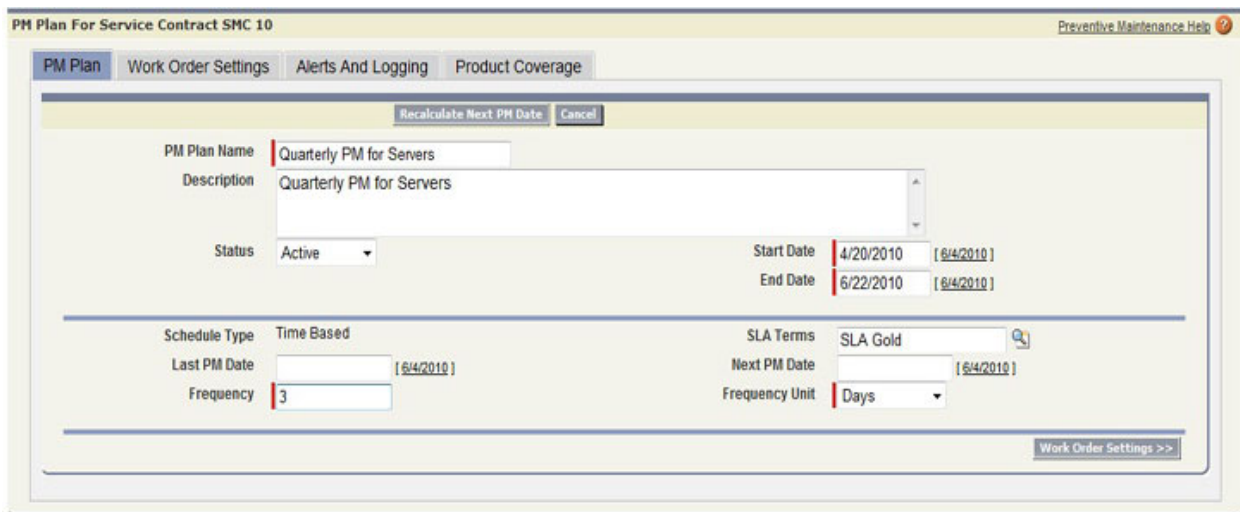


Figure 3: New/Edit PM Plan Screen

3. In the **New/Edit PM Plan** screen:
 - a. Enter a unique name for the PM Plan. For example, "Annual Maintenance of Desktops."
 - b. Enter a detailed description of the Plan.
 - c. Select the appropriate status of the Plan.
 - To temporarily suspend an active Plan, select **Suspended** in **Status**.
 - To cancel an active PM Plan, select **Canceled** in **Status**.
 - **Status** value **Expired** is used for internal purposes only.
 - For all the active Plans, select **Active** in **Status**.
 - d. Enter the **Start Date** and **End Date** for the Plan. This must be a future date for new plans.

- e. Enter **Frequency** as a number and select the **Frequency Unit**. For example, if you are creating a quarterly Plan, select 3 and Months for the fields respectively.
 - f. If you are creating a PM Plan that is already in effect, enter the **Last PM Date**. This can be used to calculate the Next PM Date based on the frequency.
 - g. If you are creating a PM Plan that is already in effect, enter the **Next PM Date**. If you like this date to be calculated automatically, click **Recalculate Next PM Date**.
4. Click the **Work Order Settings** tab to display the following screen:

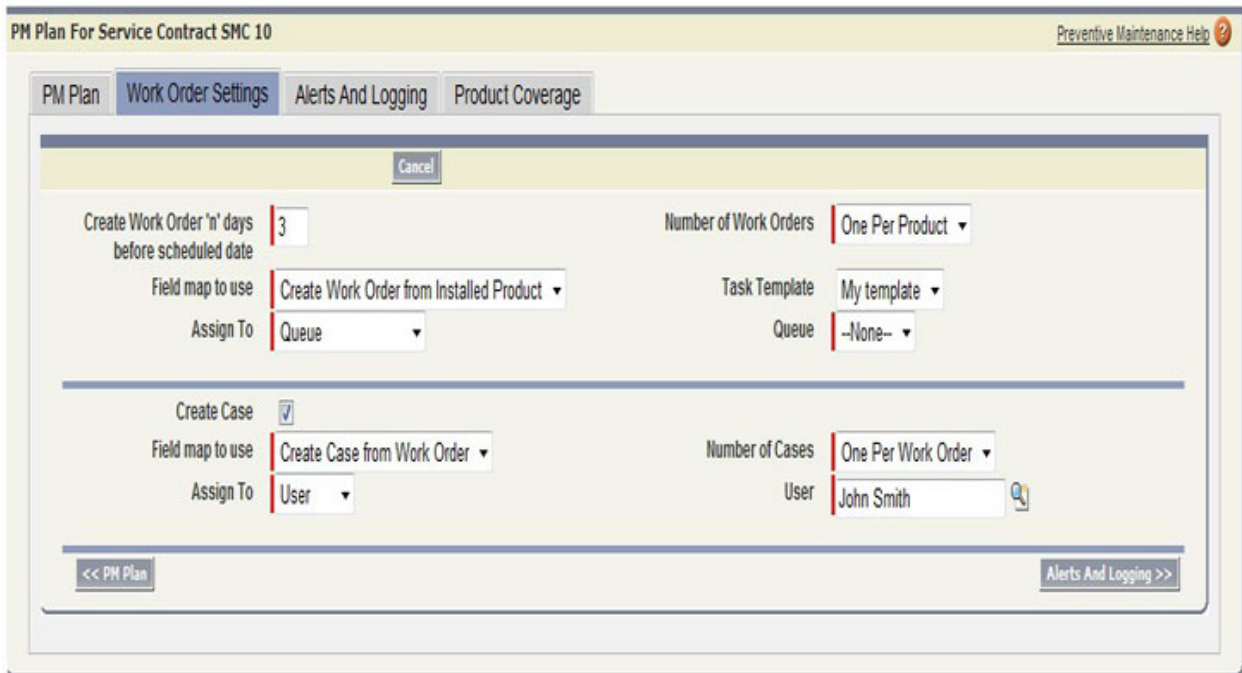


Figure 4: Work Order Settings Screen

5. In the **Work Order Settings** screen:
 - a. Enter the number of days in advance PM Work Orders should be created. This should be at least **1**.
 - b. Select the appropriate value for **Number of Work Orders**. If the PM plan requires one Work Order for each product covered, select **One Per Product** or **One Per Plan**.
 - c. Select the **Field map to use** for creating Work Orders. The available options in this list are determined by Number of Work Orders. If you selected to create one

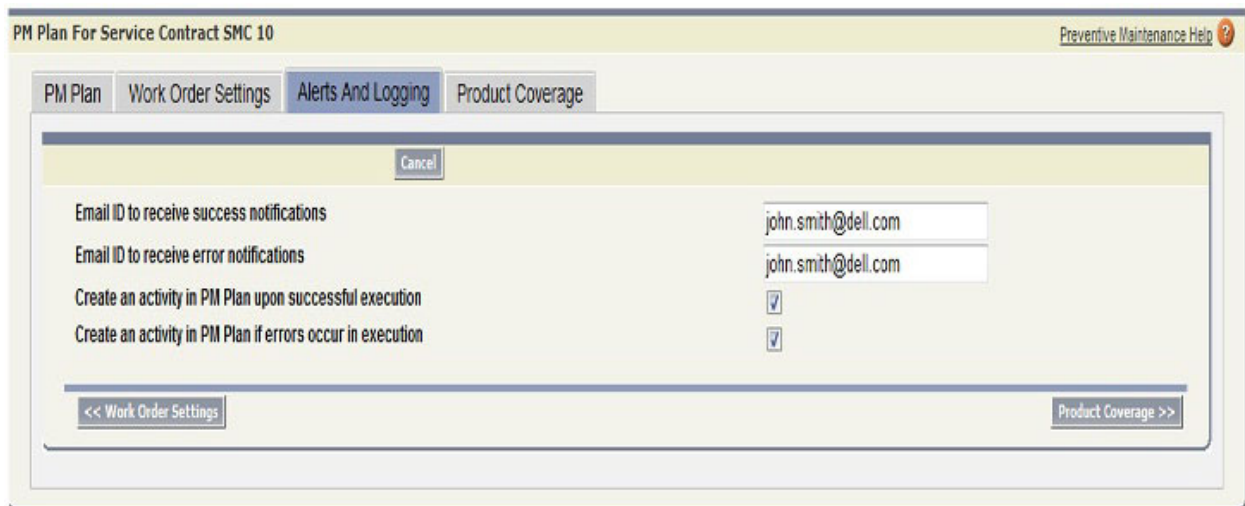
Work Order per product, the field map will show all available field maps from service contracts and installed products to Work Orders. If you selected to create one Work Order per Plan, the field map will show field maps from service contracts to Work Orders only.

- d. If you want tasks to be created automatically, select the applicable **Task Template**.
- e. Select **Assign To** for the Work Order. If you select **User** from this list, select a user using the **Lookup** icon. If you select **Queue** from the list, select from the list of available queues for Work Order. If the Work Orders should be assigned to the primary technician defined in the service contract, select **Primary Technician**.
- f. If you want Cases to be created for this PM Plan, check the checkbox **Create Case**.
- g. Select the appropriate value for **Number of Cases**. If you would like all the PM Work Orders from this Plan to be tracked on one Case, select **One Per Plan** or **One Per Work Order**.
- h. Select the **Field map to use** for creating Cases. This list shows all available field maps from service contracts and Work Orders to Cases.
- i. Select **Assign To** for the Case. If you select **User** from this list, select a user using the **Lookup** icon. If you select **Queue** from the list, select from the list of available queues for the Case.



Note: Cases can be created from PM Plans only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

6. Click the **Alerts and Logging** tab. The Alerts and Logging screen appears:



PM Plan For Service Contract SMC 10 Preventive Maintenance Help ?

PM Plan Work Order Settings **Alerts And Logging** Product Coverage

Cancel

Email ID to receive success notifications

Email ID to receive error notifications

Create an activity in PM Plan upon successful execution ☒

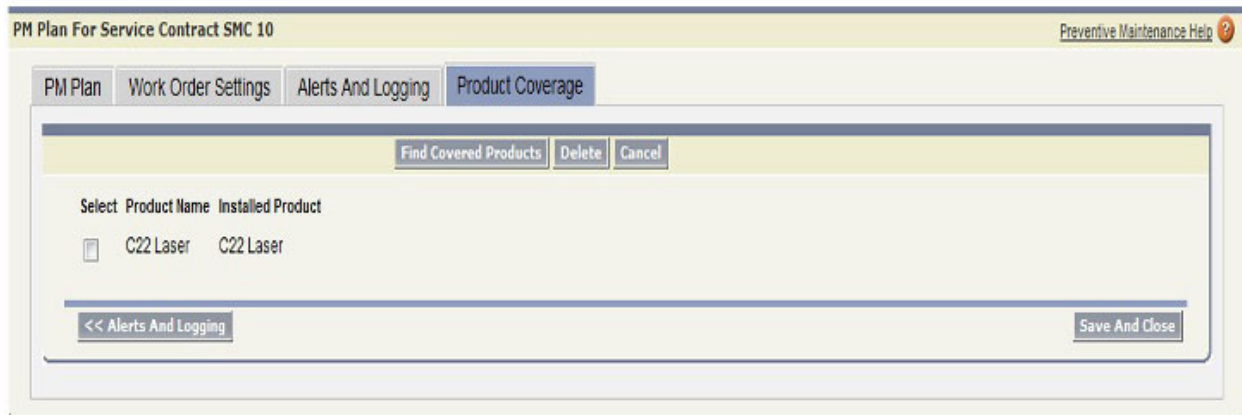
Create an activity in PM Plan if errors occur in execution ☒

<< Work Order Settings Product Coverage >>

Figure 5: Alerts and Logging Details Screen

7. In the **Alerts and Logging** screen:
 - a. Enter an e-mail ID to receive success notifications. To avoid dependency on individuals, it is strongly recommended to create e-mail aliases or distribution lists for PM Plan notifications.
 - b. Enter an e-mail ID to receive error notifications.
 - c. At the end of every successful execution of this PM Plan, if you want the ServiceMax PM Scheduler to automatically create a historical record, check the **Create activity upon successful execution** checkbox.
 - d. If the execution of this PM Plan encounters errors and if you want ServiceMax PM scheduler to automatically create a historical record of the errors, check the **Create activity if errors occur in execution** checkbox.

8. Click the **Product Coverage** tab. All covered products from the service contract are automatically displayed in the list as shown in the following screen.



PM Plan For Service Contract SMC 10

Preventive Maintenance Help ?

PM Plan Work Order Settings Alerts And Logging **Product Coverage**

Find Covered Products Delete Cancel

Select Product Name Installed Product

<input type="checkbox"/>	C22 Laser	C22 Laser
--------------------------	-----------	-----------

<< Alerts And Logging Save And Close

Figure 6: Product Coverage Details Screen

9. In the **Product Coverage** screen:
- To delete any products not covered by this PM Plan, select the products from the list and then click **Delete**.
 - To find and add more covered products from the service contract, click **Find Covered Products**. The following popup screen appears.



Enter keyword to search products covered in this service contract

VO Go! Filter By Product Family ☐ Filter By Product Line ☐

Select	Product Name	Installed Product	Product Family	Product Line
<input type="checkbox"/>	VOLVO BUS	VOLVO BUS_10	Family2	
<input type="checkbox"/>	VOLVO BUS	VOLVO BUS_11	Family2	

Add Selected Cancel

Figure 7: Products Covered Search Screen

- In the above screen, enter a keyword and then click **Go**.

- If **Filter by Product Family** is selected, the keyword is matched with the product family of installed products covered by the service contract.
 - If **Filter by Product Line** is selected, the keyword is matched with the product line of installed products covered by the service contract.
 - If **Filter by Product Family** and **Filter by Product Line** are both cleared, the keyword is matched with the installed product name or product name linked to the installed product. Only installed products that are covered in the service contract are displayed.
 - Select one or more records from the result set and then click **Add Selected**. The selected records will be added to the Product Coverage list in the PM Plan and the popup window closes.
10. Click **Save And Close** to save the PM Plan and return to the PM Plans list. Alternatively, click **Cancel** to discard your changes and return to the PM Plans list.

Editing a PM Plan

To edit an existing PM Plan:

1. Check the checkbox against PM Plan record in the PM Plan list and then click **Edit**. The New/Edit PM Plan screen appears.
2. Click the **PM Plan** tab to edit the Plan details.
3. Click the **Work Order Settings** tab to edit the Work Order settings information.
4. Click the **Alerts and Logging** tab to edit any alert or notification details.
5. Click the **Product Coverage** tab to edit the product details for this PM Plan.
6. Click **Save And Close** in the Product Coverage screen to save the changes.

Deleting a PM Plan

To delete an existing PM Plan record or records:

1. Check the checkbox against the PM Plan record or records that you want to delete.
2. Click **Delete** and then click **OK** when prompted for confirmation.

See Also:

[Scheduling PM Jobs](#)

[Cases](#)

[Installed Products](#)

[Service/Maintenance Contracts](#)

[Task Templates](#)

[Work Order](#)

SKILLS

Overview

Skill record defines the expertise required during service delivery. For example, a Computer Telephone Integration (CTI) product company may define Network Assessment, CISCO router setup as various skills. Skill definition is used in service team definition and can be used when assigning a Work Order to a service team or technician considering their skill levels.

Access and Permissions

Actions	User Permissions Needed
To view the Skills tab:	"Read" on Skills
To view Skills:	"Read" on Skills
To create or clone Skills:	"Create" on Skills
To change Skills:	"Edit" on Skills
To delete Skills:	"Delete" on Skills

Click **Home > ServiceMax Setup > Skills** to view the skills home page.



Caution: Remember that when you are deleting a skill, you will not be warned if the skill is used in a related record. Since skills are related to other ServiceMax records such as service team, review and make sure the skill record is not used in any related records.

Skills Fields

Fields	Description
Skill Name	Name of the Skill. Be specific and granular when naming a Skill. For example, instead of DSL Installation, you can enter DSL <Model> Installation.
Description	Detailed description of the Skill.
Active	Checkbox to indicate if this Skill is currently active and available for use.
Skill Category	Indicates the type of Skill. This helps in grouping similar types of Skills for reporting purposes. Your system administrator is responsible for configuring this list for your organization's requirements.
Skill Area	Indicates where this Skill is applicable, in the field or depot or both .
Skill Level - Low	Benchmark for the minimum level of proficiency for this Skill.
Skill Level - Medium	Benchmark for the average level of proficiency for this Skill.
Skill Level - High	Benchmark for the maximum level of proficiency for this Skill.

See Also:

[Dispatch Optimization using OptiMax](#)

[Dispatch Process](#)

[Service Teams](#)

[Work Order](#)

SERVICE TEAM

Overview

Service Team enables definition of your entire service organization. Service Team definition includes details of technicians, equipment, products in which the team specializes, the expertise of the team, typical service delivery costs as well as geographies covered by the team. Work orders are queued to a service team and assigned to technicians. At the time of assignment, all the above parameters can be considered by the support center engineer(s) to select the most suitable team that can address the customer problem.

There are two ways to manage Service Team information in ServiceMax:

- Using the standard user Salesforce interface of tabs and screens.
- Using [Service Team Management Console](#), which is a more streamlined way to manage your service teams and technicians in a tree view.

Access and Permissions

Actions	User Permissions Needed
To view the Service Teams tab:	"Read" on Service Team
To view Service Teams:	"Read" on Service Team
To create or clone Service Teams:	"Create" on Service Team
To change Service Teams:	"Edit" on Service Team
To delete Service Teams:	"Delete" on Service Team
To validate Service Teams address:	"Read" and "Edit" on Service Team
To view technicians/equipment:	"Read" on Technician/Equipment and Service Team
To create technicians/equipment:	"Create" on Technician/Equipment
To change technicians/equipment:	"Edit" on Technician/Equipment

Actions	User Permissions Needed
To delete technicians/equipment:	"Delete" on Technician/Equipment
To validate technicians address:	"Read" and "Edit" on Technician/Equipment
To view products serviced:	"Read" on Products Serviced, Service Team and Product
To create products serviced:	"Create" on Products Serviced "Read" on Product
To change products serviced:	"Edit" on Products Serviced "Read" on Product
To delete products serviced:	"Delete" on Products Serviced
To view the team labor costs:	"Read" on Team Labor Costs and Service Team
To create team labor costs:	"Create" on Team Labor Costs
To change team labor costs:	"Edit" on Team Labor Costs
To delete team labor costs:	"Delete" on Team Labor Costs
To view expertise:	"Read" on Expertise and Service Team
To create expertise:	"Create" on Expertise "Read" on Skills
To change expertise:	"Edit" on Expertise "Read" on Skills
To delete expertise:	"Delete" on Expertise
To view locations covered:	"Read" on Locations Covered and Service Team
To create locations covered:	"Create" on Location Covered "Read" on Location
To change locations covered:	"Edit" on Locations Covered "Read" on Location
To delete service team locations:	"Delete" on Locations Covered

Click the **Service Teams** tab to display the Service Team home page.



Caution: When you are deleting a Service Team, you will not be warned if the Service Team is used in a related record. Since Service Teams are strongly tied to service contracts and Work Orders, review and make sure the Service Team record is not used in any related records.

Service Team Fields

Fields	Description
Service Team Name	Name of the Service Team.
Group Type	Indicates if this is a group Internal to your organization, a partner company providing the services on your behalf, or a combination of Both.
Description	Description of the group.
Group Code	Any internal (typically, financials) code your organization uses to refer the group.
Email	Email ID of the Service Team. This email ID is used to notify the team when Work Orders are queued to the team.
Active	Flag indicates if this group is active and available for Work Order assignments. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Phone	Primary telephone number for the Service Team.
Street	"Street" part of the Service Team's address.
City	"City" part of the Service Team's address.
State	"State" part of the Service Team's address.
Zip	"Zip or Postal Code" part of the Service Team's address.
Country	"Country" part of the Service Team's address.
Latitude	Geographical code for this Service Team address. This is calculated automatically using the Validate Address feature.
Longitude	Geographical code for this Service Team address. This is calculated automatically using the Validate Address feature.

Validating Service Team Address

To validate the address:

1. Navigate to the Service Team record.
2. Click **Validate Address**. A popup window appears indicating the validation process.
 - If the address is *valid*, a message indicating the same appears and the location record refreshes. The latitude and longitude fields are populated on the screen.
 - If the address is *invalid*, an error message appears and you will be returned to the location record.



Note: An address could become invalid because of spelling mistakes or if the address contains PO Box or Suite numbers. Since this functionality uses the Google Maps engine, ability to validate an address depends upon the level of coverage for countries provided by Google.

Managing Technician/Equipment

Technician/Equipment Fields

Fields	Description
Member Name	Full name of the technician/equipment.
Service Team	Name of the Service Team. This is a lookup to an existing Service Team in ServiceMax.
Active	Flag indicates that if this member is active and available for Work Order assignments. This flag drives the functionality in both Dispatch Console and OptiMax.
Member Information	Additional information about the member relevant to service delivery.
Role	Role of the member in the group. Your system administrator is responsible for configuring this list for your organization's requirements.

Fields	Description
Salesforce User	Name of the Salesforce user associated with the technician. Applicable only for Technicians. This is a link to an existing Salesforce user.
Street	"Street" part of the technician or equipment address.
City	"City" part of the technician or equipment address.
State	"State" part of the technician or equipment address.
Zip	"Zip or Postal Code" part of the technician or equipment address.
Country	"Country" part of the technician or equipment address.
Phone	Telephone number of the technician.
Email	Email ID of the technician. This is used to notify the technician when Work Orders are assigned.
Third Party	Flag indicates whether this technician is an employee or a third-party service provider.
Latitude	Geographical code for this technician address. This is calculated automatically using the Validate Address feature.
Longitude	Geographical code for this technician address. This is calculated automatically using the Validate Address feature.
Average Speed	Average speed in which the technician travels on the road. Used in dispatch optimization.
Max Distance	Distance in miles if the technician cannot travel beyond this limit on a given route. Used in dispatch optimization.
Per Mile Cost	Average travel cost per mile for the technician. Used in dispatch optimization.
Per Hour Cost	Average cost of technician time. Used in dispatch optimization.
Fixed Cost	Any fixed costs associated with the technician for each day of Work Order activity. Used in dispatch optimization.
Enable Scheduling	Indicates if the technician's calendar must be managed by ServiceMax. Applies to third-party technicians and equipment that are not linked to a Salesforce user.
Inventory Location	Technician's inventory location.

Fields	Description
Service Territory	Service territory to which this technician belongs. Reference to an existing Territory record in ServiceMax.
Working Hours	Working Hours applicable to the technician. Reference to an existing Business Hours record in Salesforce.
Overtime Hours	Overtime hours applicable to the technician. Reference to an existing Business Hours record in Salesforce.
Break Hours	Break hours applicable to the technician. Reference to an existing Business Hours record in Salesforce.
Break Duration	Duration of technician's break in minutes.
Break Type	Type of break: Fixed or Time Window.

Adding Technician/Equipment to Service Team

To add a technician/equipment:

1. Locate the Service Team by searching in the sidebar or from a list view in Service Teams tab and then click the team name to which you want to add members.
2. In the Technician/Equipment related list, click **New**. The Service Team name appears.
3. Enter the technician or equipment's full name.
4. Enter the relevant details. See [Technician/Equipment Fields](#) for more information about the available fields.
5. Click **Save** to add the technician/equipment.



Note: A Service Team can have an unlimited number of members. Repeat the above steps for each member you want to associate with the group. You can also click **Save & New** after creating a new Service Team member record.

Editing Technician/Equipment in a Service Team

To edit a technician/equipment information:

1. Locate the Service Team by searching in the sidebar or from a list view in the Service Teams tab and click the relevant group name.
2. In the Technician/Equipment related list, click **Edit** next to the member record.
3. Make necessary changes to the record.
4. Click **Save** to save the changes.

Deleting Technician/Equipment in Service Team

Since technicians/equipment are referenced in other ServiceMax records such as Work Orders, it is strongly recommended to deactivate the member instead of deleting him or her. If you must delete a technician/equipment record, make sure the record is not referred to in any ServiceMax record.

To delete a technician/equipment record:

1. Locate the Service Team by searching in the sidebar or from a list view in Service Teams tab and then click the relevant group name.
2. In the Technical/Equipment related list, Click **Del** next to the record and then click **OK** to confirm the deletion.

Validating a Technician Address

To validate the address:

1. Navigate to the record for which you want to validate the address.
2. Click **Validate Address**. A popup window appears indicating the validation process.
 - If the address is *valid*, a message indicating the same is displayed and the location record will be refreshed. The latitude and longitude fields are populated on the screen.
 - If the address is *invalid*, an error message will be displayed and you will be returned to the location record.

Managing Products Serviced

Products Serviced Fields

Fields	Description
Service Team	Name of the Service Team. This is a lookup to an existing Service Team in ServiceMax.
Product Family	Product family supported by this group. Your system administrator is responsible for configuring this list for your organization's requirements.
Product	Product supported by the group. This is a lookup to an existing product in Salesforce.
Product Line	Product Line supported by this group. Your system administrator is responsible for configuring this list for your organization's requirements.

Adding Products Serviced to a Service Team

To add a product to the Service Team:

1. Locate the Service Team by searching in the sidebar or from a list view in Service Teams tab. Click the relevant team name.
2. In the Products Serviced related list, click **New**. The Service Team name appears.
3. If the team supports the specific part number, enter the product. You can also lookup the product using the **Lookup** icon.
4. If the team supports all products in a Product Family or Product Line, select the appropriate value from the **Product Family** or **Product Line** list.
5. Click **Save** to add the product.



Note: Service team can support an unlimited number of products, families or lines. Repeat the above steps for each product you want to associate with the group. You can also click **Save & New** after creating a new Service Team product record.

Editing Products in a Service Team

To edit a product information:

1. Locate the Service Team by searching in the sidebar or from a list view in Service Teams tab and then click the team name in which you want to make the product changes.
2. In the Products Serviced related list, click **Edit** next to the product record.
3. Make necessary changes to the record.
4. Click **Save** to save the changes.

Deleting Products Serviced from a Service Team

To delete a product record:

1. Locate the Service Team by searching in the sidebar or from a list view in Service Teams tab and then click the relevant team name.
2. In the Products Serviced related list, click **Del** next to the product record and then click **OK** to confirm the deletion.

Managing Team Labor Costs

Team Labor Costs Fields

Fields	Description
Service Team	Name of the Service Team. This is a lookup to an existing Service Team in ServiceMax.
Technician/Equipment	Name of the technician/equipment. This is a lookup to an existing technician/equipment record in ServiceMax.
Cost Category	Type of cost defined by this record. Your system administrator is responsible for configuring this list for your organization's requirements.
Hourly Cost	Average internal cost of service for this group or member.
Billable Cost	Average billable cost of service for this group or member.

Adding Labor Cost to a Service Team

To add labor costs to a Service Team:

1. Locate the Service Team by searching in the sidebar or from a list view in Service Teams tab and then click the relevant team name.
2. In the Labor Costs related list, click **New**. The Service Team name appears.
3. If the cost is applicable to the entire team, leave the **Technician/Equipment** field blank.
4. If the cost is specific to a team member, enter the technician/equipment name. You can also use the **Lookup** icon to find the member record.
5. Select the applicable **Cost Category**.
6. Enter **Hourly** and **Billable Cost**.
7. Click **Save** to add the labor cost.



Note: A Service Team can support an unlimited number of cost records. Repeat the above steps for each cost factor you want to associate with the team. You can also click **Save & New** after creating a new Service Team cost record.

Editing Labor Costs in a Service Team

To edit a labor cost:

1. Locate the Service Team by searching in the sidebar or from a list view in Service Teams tab and then click the relevant team name.
2. In the Labor Costs related list, click **Edit** next to the cost record.
3. Make the necessary changes to the record and then click **Save** to save the changes.

Deleting Labor Costs from a Service Team

To delete a labor cost:

1. Locate the Service Team by searching in the sidebar or from a list view section in Service Teams tab and then click the team name.
2. In the Labor Costs related list, click **Del** next to the cost record and then click **OK** to confirm the deletion.

Managing Expertise

Expertise Fields

Fields	Description
Service Team	Name of the Service Team. This is a lookup to an existing Service Team in ServiceMax.
Skill	Name of the Skill. This is a lookup to an existing Skill record in ServiceMax.
Availability Start Date	Date from which the Skill is available in this group.
Technician/Equipment	Name of the Service Team member. This is a lookup to an existing technician/equipment in ServiceMax.
Skill Level	Proficiency level at which the Skill is available.
Availability End Date	Date up to which this Skill is available to this group.

Adding Expertise to a Service Team

To add expertise:

1. Locate the Service Team by searching in the sidebar or from a list view in Service Teams tab and then click the relevant team name.
2. In the Expertise related list, click **New**. The Service Team name appears.
3. Enter the Skill name. You can also use the **Lookup** icon to find the Skill record.

4. If the Skill is applicable to the entire team, leave the **Technician/Equipment** field blank.
5. If the Skill is specific to a technician, enter the technician's name. You can also use the **Lookup** icon to find the member record.
6. Enter the **Availability Start Date** and **Availability End Date**.
7. Enter the **Skill Level**. If a technician is not available, you can enter an average Skill level available in the group.
8. Click **Save** to add the expertise.



Note: A Service team can support an unlimited number of expertise records. Repeat the above steps for each expertise you want to associate with the group. You can also click **Save & New** after creating a new expertise record.

Editing Expertise from a Service Team

To edit expertise:

1. Locate the Service Team by searching in the sidebar or from a list view in the Services Teams tab and then click the relevant team name.
2. In the Expertise related list, click **Edit** next to the record.
3. Make necessary changes to the record and then click **Save** to save the changes.

Deleting Expertise from a Service Team

To delete an expertise record:

1. Locate the Service Team by searching in the sidebar or from a list view in Service Teams tab and then click the relevant team name.
2. In the Expertise related list, click **Del** next to the record and then click **OK** to confirm the deletion.

Managing Locations Covered

Locations Covered Fields

Fields	Description
Service Team	Name of the Service Team. This is a lookup to an existing Service Team in ServiceMax.
Location	Name of the Location. This is a lookup to an existing location record in ServiceMax.

Adding Locations to Service Team

To add a Location to a Service Team:

1. Locate the Service Team by searching in the sidebar or from a list view in the Services Team tab and then click the relevant team name.
2. In the Locations Covered related list, click **New**. The service team name appears.
3. Enter the location name. You can also use the **Lookup** icon to find the location record.
4. Click **Save** to add the location.



Note: A Service Team can support an unlimited number of location records. Repeat the above steps for each location you want to associate with the group. You can also click **Save & New** after creating a new Service Team location record.

Editing Locations Covered in a Service Team

To edit locations covered information:

1. Locate the Service Team by searching in the sidebar or from a list view in the Services Team tab and then click the relevant team name.
2. In the Locations Covered related list, click **Edit** next to the record.
3. Make the necessary changes and then click **Save** to save the changes.

Deleting Locations Covered from a Service Team

To delete a location covered record:

1. Locate the Service Team by searching in the sidebar or from a list view in the Services Team tab and then click the relevant team name.
2. In the Locations Covered related list, Click **Del** next to the record and then click **OK** to confirm the deletion.

Managing Team Dispatchers

Team Dispatchers Fields

Fields	Description
Service Team	Name of the Service Team. This is a lookup to an existing Service Team in ServiceMax.
Dispatcher Name	Name of the dispatcher user. This is a reference to an existing Salesforce user record.

Adding Dispatchers to a Service Team

To add a dispatcher:

1. Locate the Service Team by searching in the sidebar or from the list view in Service Teams tab and then click the relevant team name.
2. In the Dispatchers related list, click **New**. The Service Team name appears.
3. Enter the dispatcher user name. You can also use the **Lookup** icon to find the Salesforce user record.
4. Click **Save** to add the dispatcher.



Note: A Service Team can support an unlimited number of dispatcher records. Repeat the above steps for each dispatcher you want to associate with the team. You can also click **Save & New** after creating a new dispatcher record.

Editing Dispatchers from a Service Team

To edit a dispatcher information:

1. Locate the Service Team by searching in the sidebar or from the list view in Service Teams tab and then click the relevant team name.
2. In the Dispatchers related list, click **Edit** next to the record.
3. Make necessary changes to the record and then click **Save** to save the changes.

Deleting Dispatchers from a Service Team

To delete a dispatcher:

1. Locate the Service Team by searching in the sidebar or from the list view in Service Teams tab and then click the relevant team name.
2. In the Dispatcher related list, click **Del** next to the record and then click **OK** to confirm the deletion.

Managing Home Base

Home Base Fields

Fields	Description
Technician/Equipment	Name of the Technician/Equipment. This is a lookup to an existing Technician/Equipment record in ServiceMax.
Street	"Street" part of the home base address.
City	"City" part of the home base address.
State	"State" part of the home base address.
Zip	"Zip" part of the home base address.
Country	"Country" part of the home base address.
Current Home Base	Indicates if this address is the current home base for this technician. Only one home base can be designated as the current home base.

Adding Home Base to a Technician

To add home base to a technician:

1. Locate the technician by searching in the sidebar or from the list view in the Technician tab and then click the relevant technician name.
2. In the Home Bases related lists, click **New**. The technician name appears.
3. Enter all the address fields as applicable.
4. Check the **Current Home Base** checkbox, if this address is the current home base for the technician.
5. Click **Save**.

When setting the current home base for a home base record, you must explicitly uncheck the checkbox on any other home base address associated with the technician. This is not done automatically.



Note: Technician can support an unlimited number of home base records. Repeat the above steps for each home base address you want to associate with the technician. Remember to leave only his *current* home based checked. You can also click **Save & New** after creating a new technician home base address record.

Editing Home Base in a Technician

To edit a home base:

1. Locate the technician by searching in the sidebar or from the list view in the Technicians tab and then click the relevant technician name.
2. In the Home Bases related lists, click **Edit** next to the home base record.
3. Make the necessary changes to the record and then click **Save**.

Deleting Home Base from a Technician

To delete home base:

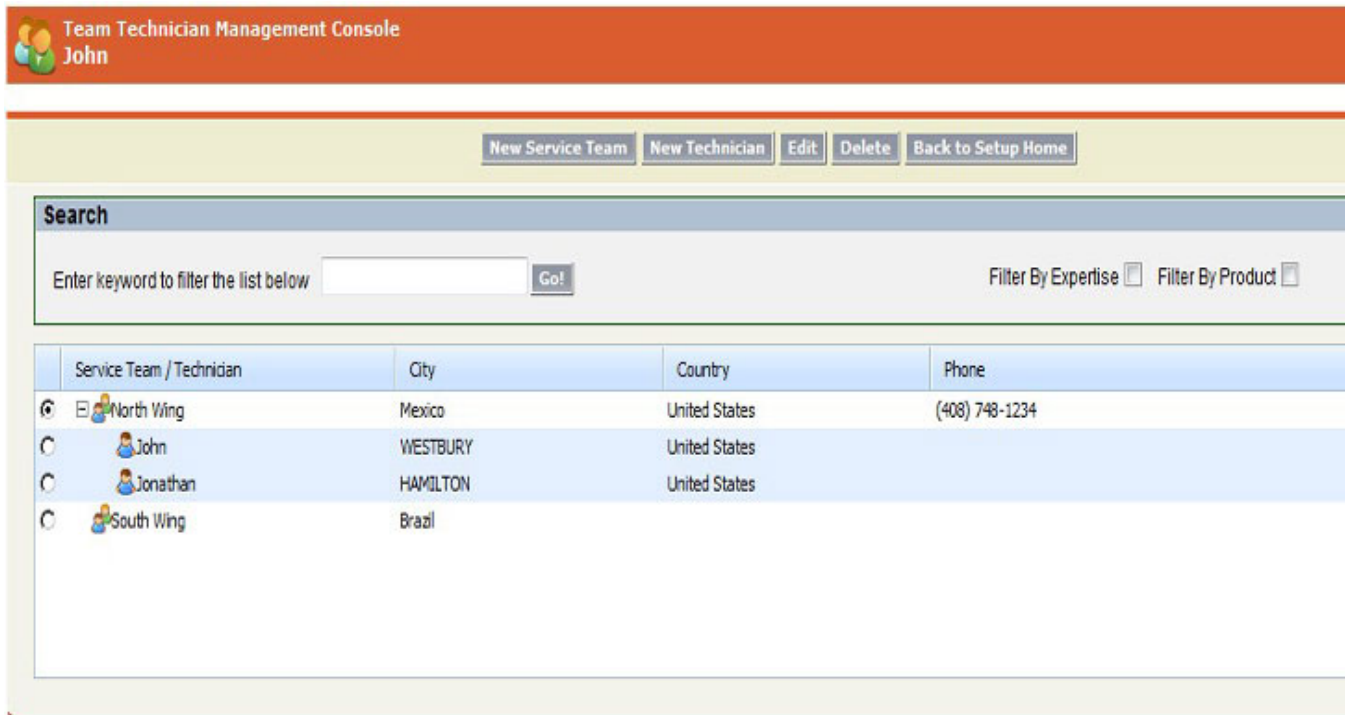
1. Locate the technician by searching in the sidebar or from the list view in the Technicians tab and then click the relevant technician name.
2. In the Home Bases related list, click **Del** next to the home base record you want to delete and then click **OK** when prompted for confirmation.

Service Team Management Console

This feature provides a streamlined way to manage your service organization. Using this screen, you can create or edit Service Teams and manage technicians, expertise, product specializations, labor cost, home base and team dispatchers. While all this information can also be entered using the standard Salesforce screens, it is strongly recommended to use this console to manage service team and technician information. This screen enforces several data integrity rules and performs automatic calculations of data which are not done when you enter information using the standard Salesforce page layout.

Click **Home > ServiceMax Setup > Manage Service Org**, and the Team Technician Management Console screen appears with all existing service teams and technician records in a tree view as shown below. Alternatively, you can also reach this screen by nav-

igating to a technician record and then clicking **Manage Technicians**.



Service Team / Technician	City	Country	Phone
North Wing	Mexico	United States	(408) 748-1234
John	WESTBURY	United States	
Jonathan	HAMILTON	United States	
South Wing	Brazil		

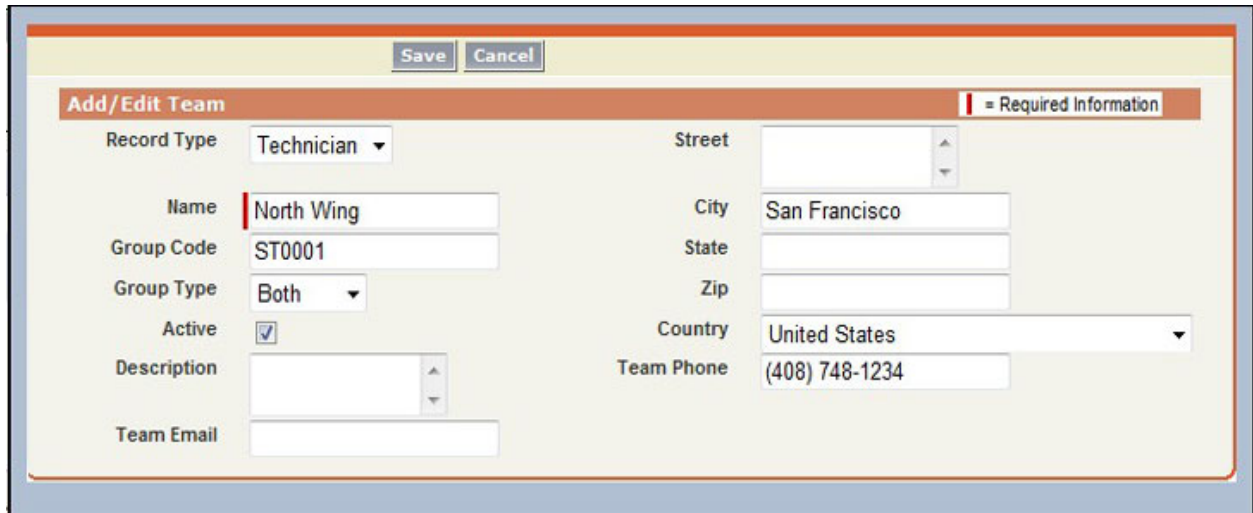
Figure 1: Team Technician Management Console Screen

To filter the team/technician tree view to locate specific teams or technicians:

1. Enter a keyword and then click **Go!**.
 - If **Filter By Expertise** and **Filter By Product** are cleared, the teams and technicians whose names match the keyword display.
 - If **Filter By Expertise** is selected, all teams and technician with the skill name that matches the keyword display.
 - If **Filter By Product** is selected, all teams and technicians with the product name that matches the keyword display.
 - An error appears if no teams or technicians are found that match the keyword.

Creating a Service Team

1. To create a new team, click **New Service Team**. The following screen appears.



The screenshot shows the 'Add/Edit Team' form. At the top, there are 'Save' and 'Cancel' buttons. Below them is a title bar 'Add/Edit Team' with a legend ' = Required Information'. The form is divided into two columns. The left column contains: 'Record Type' (Technician), 'Name' (North Wing), 'Group Code' (ST0001), 'Group Type' (Both), 'Active' (checked), 'Description' (empty), and 'Team Email' (empty). The right column contains: 'Street' (empty), 'City' (San Francisco), 'State' (empty), 'Zip' (empty), 'Country' (United States), and 'Team Phone' ((408) 748-1234). A red bar is visible in the 'Name' field, indicating it is a required field.

Figure 2: New/Edit Team Screen

2. Select **Technician** in the **Record Type** if you want to define a group of technicians. To define a group of equipment, select **Equipment** in the **Record Type**.
3. Enter a unique name for the Service Team. For example, "NA East Laptop Field Service."
4. Select the **Group Type**.
5. Enter a detailed description about the team.
6. Enter any internal code your organization might use to refer the team.
7. Check the **Active** checkbox, if this group is active and available for Work Order assignments.
8. Enter valid address information in the appropriate fields.
9. Enter the team telephone number and email ID.
10. Click **Save**. If you entered an invalid address, an error appears. An address could become invalid because of spelling mistakes or if the address contains PO Box or Suite numbers. Since this functionality uses the Google Maps engine, the ability to validate an address depends upon the level of coverage for countries provided by Google.

Editing a Service Team

To edit an existing service team information:

1. Click the radio button adjacent to the service team and then click **Edit**.
2. Make the necessary changes and then click **Save** to save the changes.

Deleting a Service Team

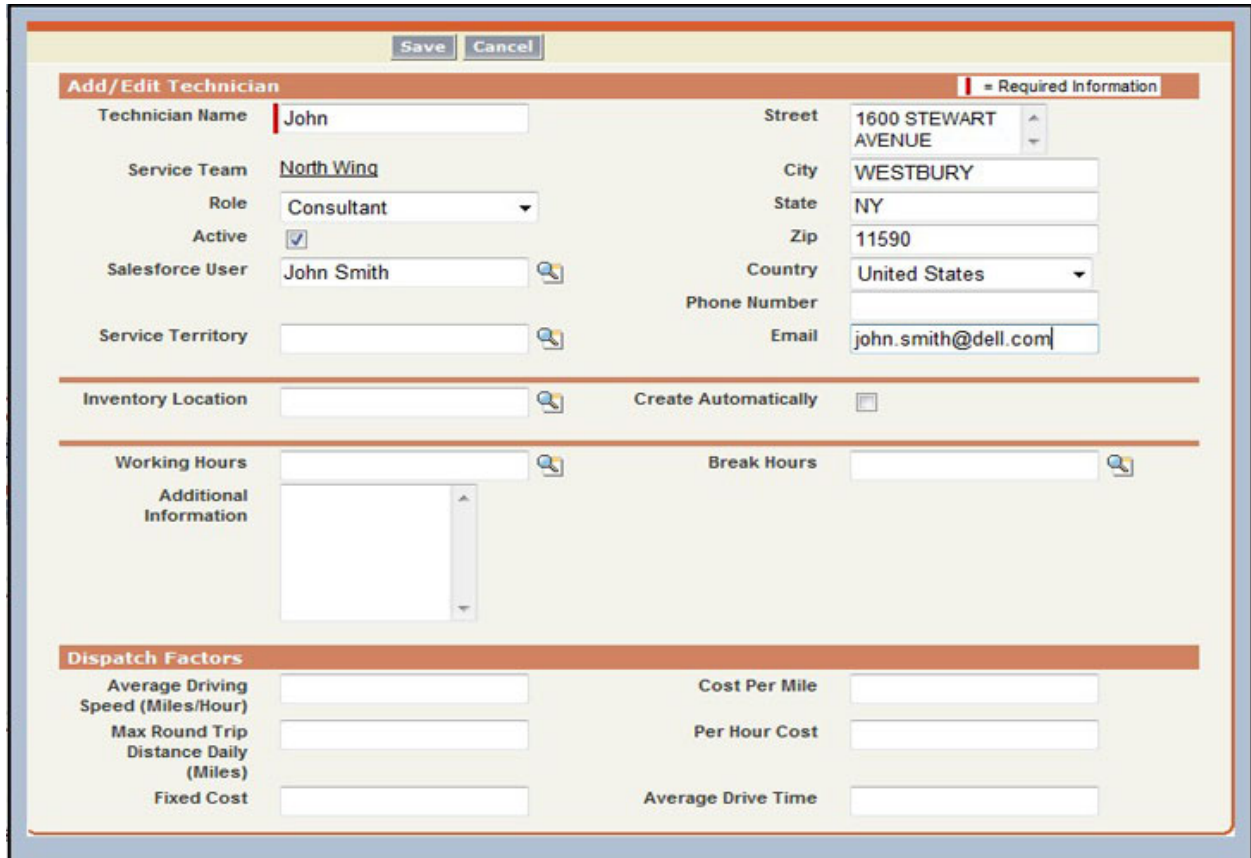
To delete an existing Service Team:

1. Click the radio button to select the Service Team and then click **Delete**.
2. Click **OK** when prompted for confirmation. The selected team and all the associated technicians, expertise, product, and cost records will be deleted permanently.

Adding a Technician/Equipment to a Service Team

To create a new technician or equipment in a team:

1. Click the radio button to select the service team and then click **New Technician** to display the following screen:



Add/Edit Technician ! = Required Information

Technician Name: John

Service Team: North Wing

Role: Consultant

Active: ☒

Salesforce User: John Smith

Service Territory:

Street: 1600 STEWART AVENUE

City: WESTBURY

State: NY

Zip: 11590

Country: United States

Phone Number:

Email: john.smith@dell.com

Inventory Location:

Create Automatically: ☐

Working Hours:

Break Hours:

Additional Information:

Dispatch Factors

Average Driving Speed (Miles/Hour):

Max Round Trip Distance Daily (Miles):

Fixed Cost:

Cost Per Mile:

Per Hour Cost:

Average Drive Time:

Figure 3: Add/Edit Technician Screen

2. Enter the technician name.
3. Select the technician's role in the team.
4. Select the **Salesforce User** associated with the technician. If this is a third party technician without a login or if it is equipment, leave the **Salesforce User** field blank. If you prefer to track calendar assignments for this resource, select **Enable Scheduling**.
5. Select the **Service Territory** this resource belongs to.
6. Enter a valid street address for the resource.
7. Enter the email and telephone number.
8. If this resource is linked to an inventory location in which ServiceMax stock is managed, select the location using the **Lookup** icon. For new records, if you prefer to create an inventory location automatically using the resource name, check the **Create Automatically** checkbox.

9. Select the business hours for **Working Hours**, **Break Hours**, and **Overtime Hours**.
10. Enter **Break duration** in minutes.
11. Select the break type. Select **Time Window** if the break hours indicates a wider range of time, or select **Fixed** if the resource is not available for the entire duration of the break hours.
12. Enter any additional information regarding the resource.
13. In the Dispatch Factors section, enter any constraints the technician may have. These factors will be used by OptiMax, the dispatch optimization engine in ServiceMax when dispatching Work Orders to this technician. If no information is provided for the technician, any such information defined for the technician's territory will be considered.
14. Click **Save**. If you entered an invalid address, an error appears. An address could become invalid because of spelling mistakes or if the address contains PO Box or Suite numbers. Since this functionality uses the Google Maps engine, the ability to validate an address depends on the level of coverage for countries provided by Google.

Editing Technician/Equipment in a Service Team

To edit an existing technician/equipment record:

1. Select the record by checking the checkbox adjacent to it and then click **Edit**. The Add/Edit Technician screen appears.
2. Make the necessary changes and then click **Save** to save the changes.

Deleting Technician/Equipment from a Service Team

To delete an existing technician:

1. Click the radio button adjacent to the technician's record which you want to delete and then click **Delete**.
2. Click **OK** when prompted for confirmation. The selected technician and all the associated expertise, product and cost records will be deleted permanently.

Managing Expertise of Service Team or Technician

To manage expertise of a service team or technician:

1. Click the radio button adjacent to the service team or technician record. Any existing expertise records associated with the selected record appear at the bottom in the Expertise tab as shown below:

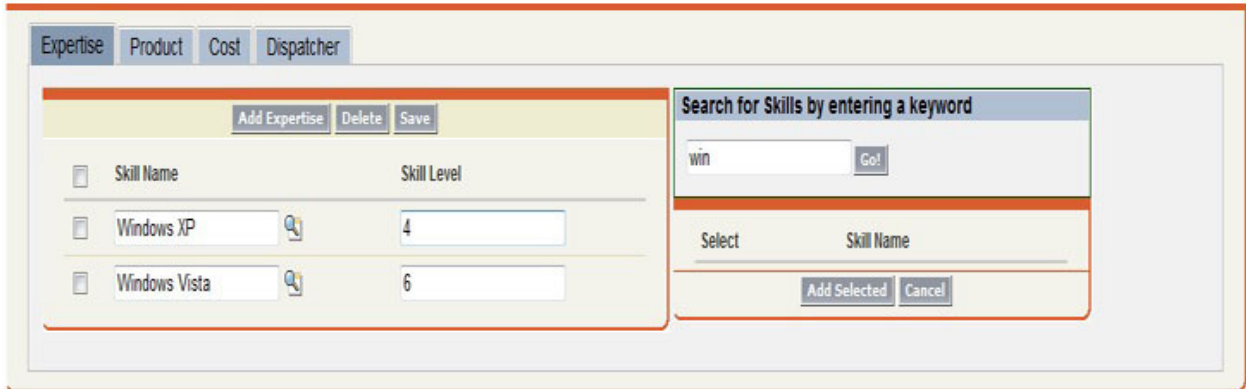


Figure 4: Expertise tab in Service Team Console

2. To add one expertise record, click **Add Expertise**. Select the Skill using the **Lookup** icon.
3. Enter **Skill Level**.
4. To add more than one expertise record, enter a keyword to search for Skills and click **Go**. All Skill records matching the keyword appear. Select one or more records from the resulting set and then click **Add Selected**. The selected records will be added to the list on the left, if not already added .
5. Click **Save**. Alternatively, to delete one or more records check the checkbox against the records, click **Delete** and then **OK** when prompted for confirmation.
6. To return to the setup home page, click **Back To Setup Home** on the Top section.

Managing Product Specialization of a Service Team or Technician

To manage Product Specialization of a Service Team or technician:

1. Click the radio button adjacent to the Service Team or technician record. Any existing Product records associated with the selected record appear at the bottom in the

Product tab as shown below:

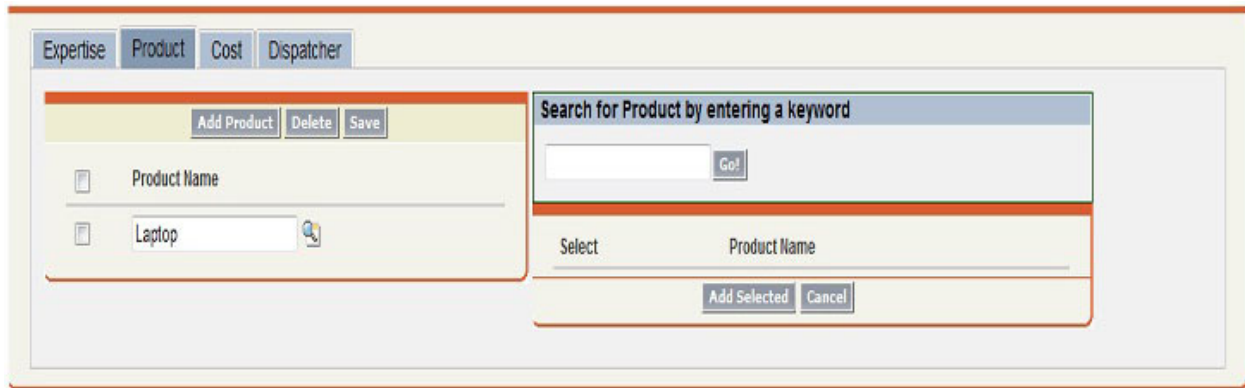


Figure 5: Product tab in Service Team Console

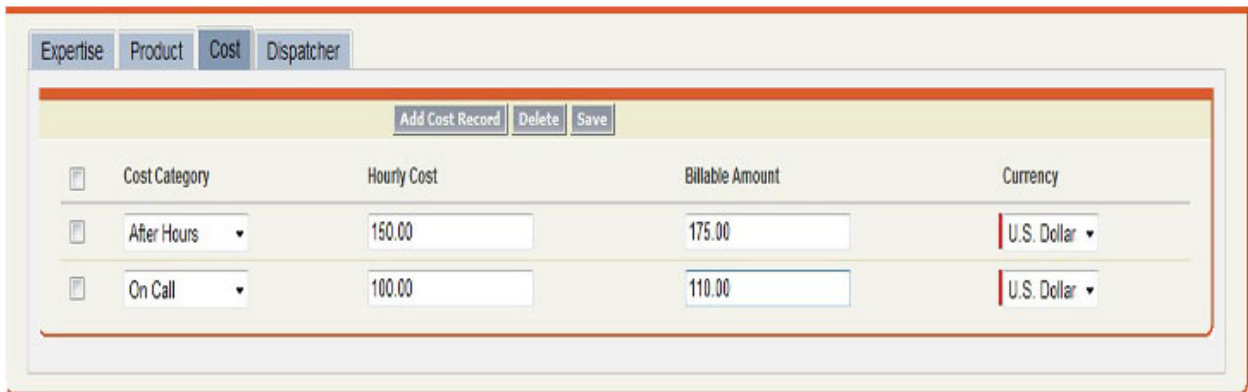
2. To add one product record, click **Add Product**. Select the product using the **Lookup** icon.
3. To add more than one product record, enter a keyword to search for products and click **Go**. All product records matching the keyword appear. Select one or more records from the resulting set and then click **Add Selected**. The selected records are added to the list on the left, if not already added.
4. Click **Save**. Alternatively, to delete one or more product records from the team/- technician, check the checkbox against the records, click **Delete** and then **OK** when prompted for confirmation.
5. To return to the setup home page, click **Back To Setup Home** on the Top section.

Managing Labor Costs of a Service Team or Technician

To manage Labor Cost of a Service Team or technician:

1. Click the radio button adjacent to the Service Team or technician record. Any existing cost records associated with the selected record appear at the bottom in the Cost tab

as shown below:



Cost Category	Hourly Cost	Billable Amount	Currency
After Hours	150.00	175.00	U.S. Dollar
On Call	100.00	110.00	U.S. Dollar

Figure 6: Cost tab in Service Team Console

- To add a cost record, click **Add Cost Record**. A blank record is added to the bottom of the list.
- Select **Cost Category**.
- Enter **Hourly Cost** and **Billable Cost**.
- Select **Currency**.
- Click **Save**. Alternatively, to delete one or more cost records from the team/-technician, check the checkbox against the records, click **Delete** and then **OK** when prompted for confirmation.
- To return to the setup home page, click **Back To Setup Home** on the Top section.

Managing Dispatchers for a Service Team

To manage dispatchers for a service team:

- Click the radio button adjacent to the service team record. The Dispatcher tab will be visible. Note that this tab will be hidden automatically when you select a technician record. Any existing dispatcher records associated with the selected Service Team

appear at the bottom in the Dispatcher tab as shown below:

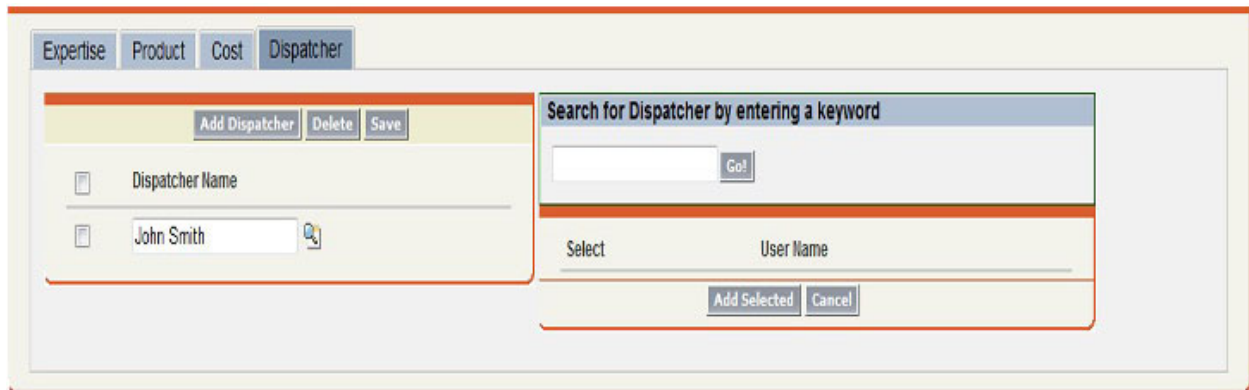


Figure 7: Dispatcher tab in Service Team Console

2. To add one dispatcher record, click **Add Dispatcher**. Select the Salesforce user using the **Lookup** icon.
3. To add more than one dispatcher record, enter a keyword to search for Salesforce users and click **Go**. All Salesforce user records matching the keyword appear. Select one or more records from the resulting set and then click **Add Selected**. The selected records are added to the list on the left, if not already added.
4. Click **Save**. Alternatively, to delete one or more dispatcher records from the team, check the checkbox against the records, click **Delete** and then **OK** when prompted for confirmation.
5. To return to the setup home page, click **Back To Setup Home** on the Top section.

Managing Home Bases for Technician

To manage Home Bases for a technician:

1. Click on the radio button adjacent to the technician record. The Home Base tab will be visible. Note that this tab will be hidden automatically when you select a service team record. Any existing home base records associated with the selected technician

appear at the bottom in the Home Base tab as shown below:



Street	City	State	Country	Zip	Current Home Base?
<input type="checkbox"/> 870 E El Camino Real	Sunnyvale	CA	United States	94087	<input type="checkbox"/>
<input type="checkbox"/> 1255 Orleans Dr	Sunnyvale	CA	United States	94089	<input type="checkbox"/>
<input type="checkbox"/> 2560 Mission College Bl	Santa Clara	CA	United States	95054	<input type="checkbox"/>

Figure 8: Home Base Tab

- To add a home base record, click **Add Home Base**. A blank record is added to the bottom of the list.
- Enter all the address fields.
- If the record is the current home base for the technician, check the **Current Home Base** checkbox. Only one record can be the current home base for a technician.
- Click **Save**. Alternatively, to delete one or more home base records from the technician, check the checkbox on the records, click **Delete** and then **OK** when prompted for confirmation.
- To return to the setup home page, click **Back To Setup Home** on the Top section.

See Also:

[Locations](#)

[Product](#)

[Service Team Management Console](#)

[Skills](#)

[Territory](#)

TERRITORY

Overview

Territory, also referred to as Service Territory, is used in ServiceMax to align one or more Service Teams and technicians to a logical grouping based on geographical dimensions such as postal code, city, country and/or virtual dimensions such as product and industry. Territory management is crucial to achieve work load balancing, and to reach optimum levels of service resource utilization. ServiceMax provides an interactive tree-based hierarchical system to manage service territories along with the scope of coverage for each territory. Once territory hierarchy is defined, technicians can be associated with the appropriate territories.

Access and Permissions

Actions	User Permissions Needed
To view Territories:	"Read" on Territory and Territory Coverage
To create or clone Territories:	"Create" on Territory and Territory Coverage
To change Territories:	"Edit" on Territory and Territory Coverage
To delete Territories:	"Delete" on Territory and Territory Coverage
To view Territory Coverage:	"Read" on Territory and Territory Coverage
To create Territory Coverage:	"Create" on Territory and Territory Coverage
To change Territory Coverage:	"Edit" on Territory and Territory Coverage
To delete Territory Coverage:	"Delete" on Territory Coverage

Click **Home > ServiceMax Setup > Manage Territories** to view the Territory home page. Alternatively, you can search and navigate to a Territory record and then click **Manage Territories** to view the Territory home page.

Territory Fields

Fields	Description
Territory Name	Name of the Territory.
Description	Description of the Territory.
Territory Code	Any internal (typically financials) code your organization uses to refer to this Territory.
Active	Flag indicates if this group is active and available for Work Order assignments. This flag does not drive any functionality in ServiceMax and is for informational purposes only.
Parent Territory	Parent Territory a Territory rolls up to. This is a lookup to an existing Territory in ServiceMax.
Average Driving Speed (Miles/Hours)	Average speed in which the technicians of this Territory travel on road. Used in dispatch optimization.
Max Round Trip Distance Daily (Miles)	Distance in miles if the technicians in this Territory cannot travel beyond this limit on a given route. Used in dispatch optimization.
Max Daily Hours	Limits on number of hours of Work Order activity per day. Though this option is available, it is recommended to use technician business hours and break hours to indicate technician's availability. Used in dispatch optimization.
Max Hours	Limits on number of hours of Work Order activity.
Cost Per Mile	Average travel cost per mile for this Territory. Used in dispatch optimization.
Per Hour Cost	Average cost of technician's time for this Territory. Used in dispatch optimization.
Fixed Cost	Any fixed costs associated with the technicians in this Territory for each day of Work Order activity. Used in dispatch optimization.
Break Hours	Indicates the duration of time a technician can take during his daily working hours as breaks. This is a lookup to Salesforce Business Hours.
Territory's Business Hours	Indicate the general operating time of a Territory. This is a lookup to Salesforce Business Hours.

Territory Coverage Fields

Fields	Description
Territory Name	Name of the Territory. This is a lookup to an existing Territory in ServiceMax.
Attribute	Type of coverage. Standard values include Zip, City, State, and Country.
Value	Value for the coverage depending upon the coverage type. For example, if coverage type is Zip, Value will contain a zip/postal code.

Territory Dispatcher Fields

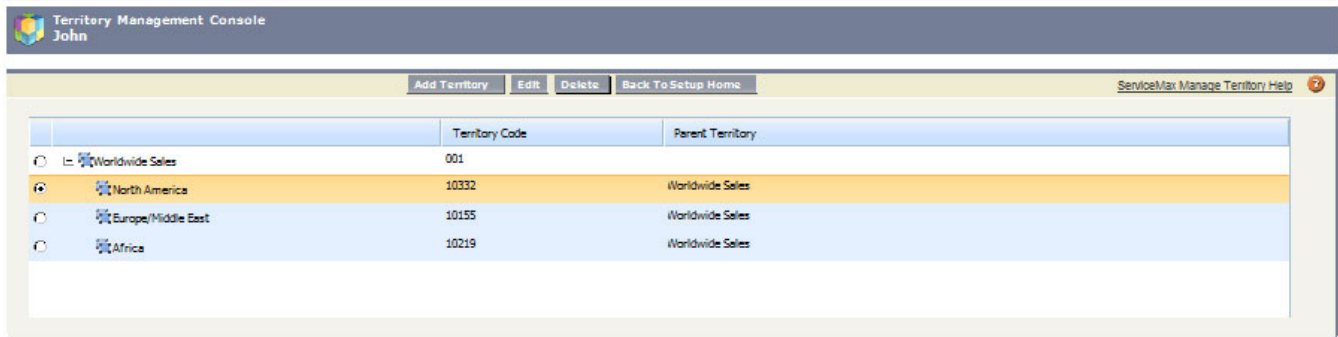
Fields	Description
Territory Name	Name of the Territory. This is a lookup to an existing Territory in ServiceMax.
Dispatcher Name	Name of the dispatcher user. This is a reference to an existing Salesforce user record.

Territory Management Console

This feature provides a streamlined way to manage your service territories. Using this screen, you can create or edit Territories, Territory coverage, and territory dispatchers. While all this information can also be entered using the standard Salesforce page layouts, it is strongly recommended to use this console to manage Territory information. This screen enforces several data integrity rules and performs automatic calculations of data which are not done when you enter information using the standard Salesforce page layout.

Click **Home > ServiceMax Setup > Manage Territories** to view the following screen with all the existing Territory displayed in tree view. Alternatively, you can search and navigate to a Territory record and then click **Manage Territories** to view the Territory Man-

agement Console.



The screenshot shows the 'Territory Management Console' for a user named John. It features a table with columns for Territory Code and Parent Territory. The table lists four territories: Worldwide Sales (001), North America (10332), Europe/Middle East (10155), and Africa (10219). The 'North America' row is highlighted. Above the table are buttons for 'Add Territory', 'Edit', 'Delete', and 'Back To Setup Home'. A 'ServiceMax Manage Territory Help' link is in the top right.

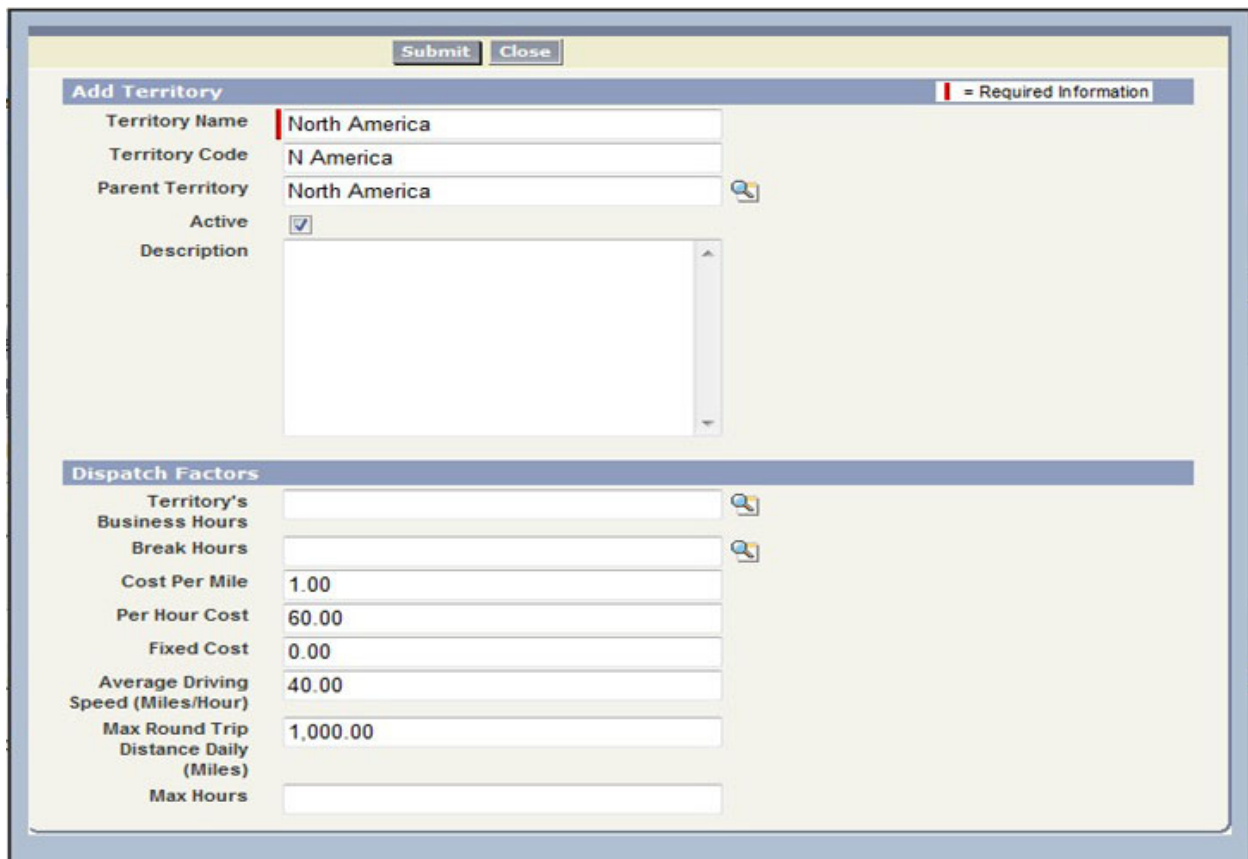
	Territory Code	Parent Territory
<input type="radio"/> Worldwide Sales	001	
<input checked="" type="radio"/> North America	10332	Worldwide Sales
<input type="radio"/> Europe/Middle East	10155	Worldwide Sales
<input type="radio"/> Africa	10219	Worldwide Sales

Figure 1: Territory Management Console

Creating a New Territory

To create a territory:

1. Click **Add Territory**. The following screen appears:



The screenshot shows the 'Add Territory' form. It has a 'Submit' and 'Close' button at the top. The form is divided into two sections: 'Add Territory' and 'Dispatch Factors'. The 'Add Territory' section includes fields for 'Territory Name' (North America), 'Territory Code' (N America), 'Parent Territory' (North America), 'Active' (checked), and 'Description'. The 'Dispatch Factors' section includes fields for 'Territory's Business Hours', 'Break Hours', 'Cost Per Mile' (1.00), 'Per Hour Cost' (60.00), 'Fixed Cost' (0.00), 'Average Driving Speed (Miles/Hour)' (40.00), 'Max Round Trip Distance Daily (Miles)' (1,000.00), and 'Max Hours'.

Add Territory = Required Information

Territory Name: North America
Territory Code: N America
Parent Territory: North America
Active: ☒
Description:

Dispatch Factors

Territory's Business Hours:
Break Hours:
Cost Per Mile: 1.00
Per Hour Cost: 60.00
Fixed Cost: 0.00
Average Driving Speed (Miles/Hour): 40.00
Max Round Trip Distance Daily (Miles): 1,000.00
Max Hours:

Figure 2: Add Territory Screen

2. Enter the details of the new Territory:
 - a. Enter a unique name for the Territory. For example "Western United States".
 - b. Enter any internal code your organization might use to refer to the Territory, if applicable.
 - c. Select the parent Territory if this is a child Territory. This will be automatically populated if you clicked **Add Territory** after choosing an existing Territory record.
 - d. Check the **Active** checkbox if this Territory is active.
 - e. Enter a description for the Territory.
 - f. In the Dispatch Factors section, enter any constraints the technicians in this Territory may have. These factors will be used by [OptiMax](#), the dispatch optimization engine in ServiceMax when dispatching Work Orders for this Territory. If these values vary by each technician, you can enter the same on the technician screen as well. See [Service Team Management Console](#) for more information. Information entered on technician screen will override the dispatch factors entered at the Territory level.
3. Click **Save** to save the Territory.

Editing a Territory

To edit an existing Territory:

1. Click the radio button adjacent to the Territory name and then click **Edit**. The Add Territory screen appears with selected Territory information.
2. Make the necessary changes to the Territory record.
3. Click **Save** to save the changes.

Deleting a Territory

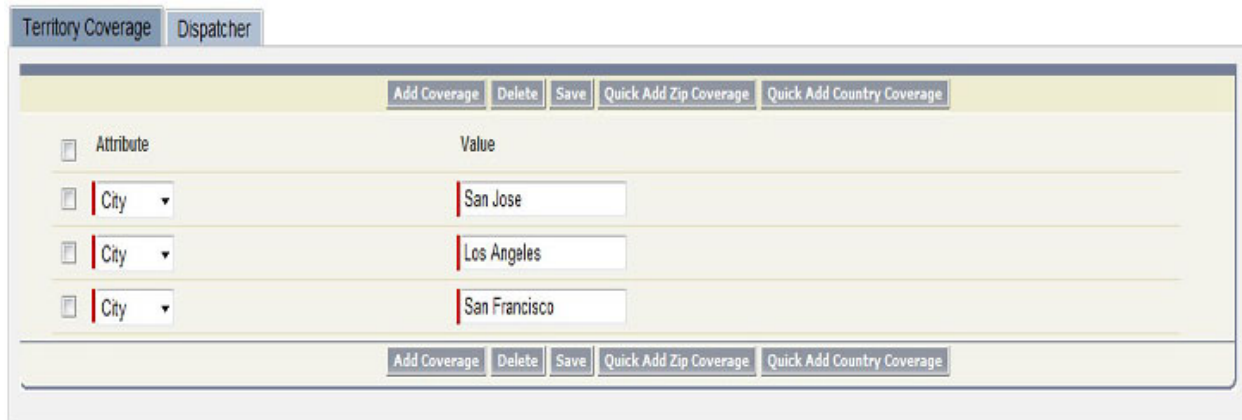
To delete an existing Territory:

1. Click the radio button adjacent to the Territory to select it and then click **Delete**.
2. Click **OK** when prompted for confirmation. The selected Territory and all the child Territories as well as coverage records will be deleted permanently.

Managing Coverage for a Territory

To manage coverage for a Territory:

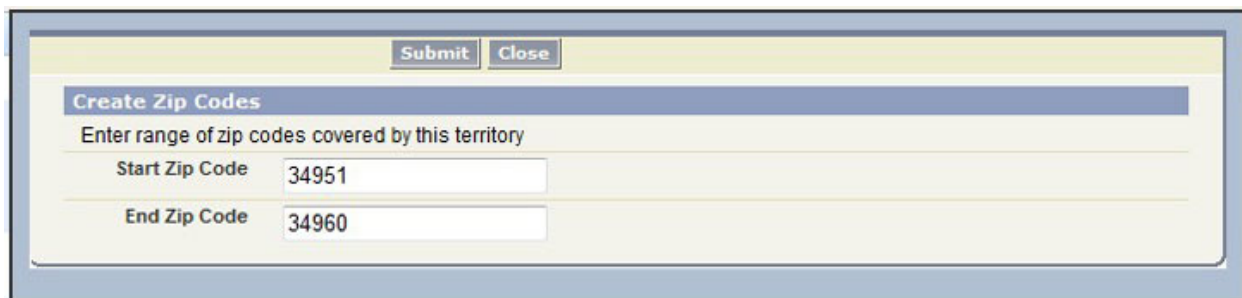
1. Click the radio button adjacent to the Territory record. Any existing coverage records associated with the selected Territory appear at the bottom in the Territory Coverage tab as shown below:



Attribute	Value
City	San Jose
City	Los Angeles
City	San Francisco

Figure 3: Territory Coverage Tab

2. Click **Add Coverage** to add a new coverage record.
3. Select attribute and the corresponding coverage value.
4. Click **Quick Add Zip Coverage**, to add coverage based on a range of zip codes. A popup window appears as shown below:



Create Zip Codes

Enter range of zip codes covered by this territory

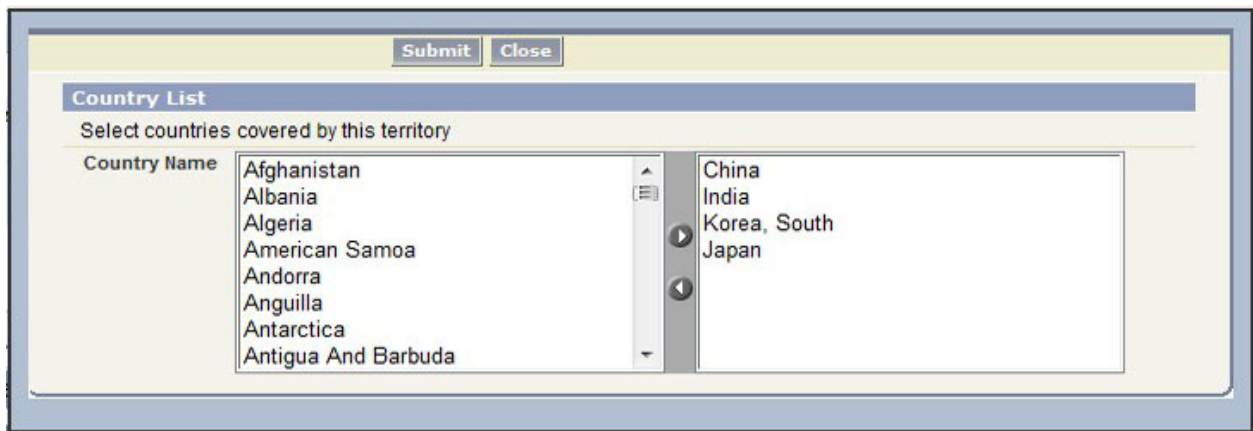
Start Zip Code 34951

End Zip Code 34960

Figure 4: Coverage Based on Zip Codes Screen

5. Enter the **Start Zip Code** and **End Zip Code** and then click **Submit**. All zip codes between the start and end zip codes will be added as individual coverage records.

- Click **Quick Add Country Coverage** to add coverage based on countries. A popup window appears as shown below:



Country List

Select countries covered by this territory

Country Name		
Afghanistan		China
Albania		India
Algeria		Korea, South
American Samoa		Japan
Andorra		
Anguilla		
Antarctica		
Antigua And Barbuda		

Figure 5: Coverage based on Country Screen

- In the above window, select the countries from the list on the left, move them to the right and then click **Submit**. All selected countries are added as individual coverage records.
- Click **Save**. Alternatively, to delete one or more records, check the checkbox against the record, click **Delete** and then **OK** when prompted for confirmation.
- To return to the setup home page from the Territory Management Console, click **Back To Setup Home**.

Managing Dispatchers for a Territory

To manage dispatchers for a Territory:

- Click the radio button adjacent to the Territory record. Any existing dispatcher records associated with the selected Territory appear at the bottom in the Dispatcher tab as shown below:



Territory Coverage **Dispatcher**

Add Dispatcher **Delete** **Save**

Select	Dispatcher Name	User Name
<input type="checkbox"/>	John Smith	

Search for Dispatcher by entering a keyword

Go!

Add Selected **Cancel**

Figure 6: Dispatcher Tab

2. Click **Add Dispatcher** to add a new dispatcher record. Select the Salesforce user using the **Lookup** icon.
3. Click **Save**. Alternatively, to delete one or more coverage records from the Territory, check the checkbox against the records, click **Delete** and then **OK** when prompted for confirmation.
4. To return to the setup home page from the Territory Management Console, click **Back To Setup Home**.

To add more than one dispatcher record:

1. Enter a keyword to search for Salesforce users and then click **Go!**. All Salesforce user records matching the keyword appear.
2. Select one or more records from the resulting set and then click **Add Selected**. The selected records are added to the list on the left, if not already added.

See Also:

Case

Dispatch Optimization using OptiMax

Dispatch Process

Service Team Management Console

Work Order

CASE

Overview

A Case is a detailed description of a customer's feedback, problem, or question. Your organization can use Cases to track and solve your customer issues. You can enter Cases manually in the Cases tab, or your administrator can set up Web-to-Case and Email-to-Case to gather customer feedback from your company's website and customer emails. Your customers can also create and submit new Cases on your Self-Service portal.

The Cases tab displays a home page that lets you quickly create and locate Cases. You can also sort and filter Cases using standard and custom list views. In addition, the Cases tab lets you view and edit detailed information on all Cases. Optionally, Salesforce Professional, Enterprise, Unlimited, and Developer Edition organizations can enable the console to find, view, and edit Cases and their associated records quickly on one screen.

ServiceMax extends the standard capabilities of the Salesforce Case screen to capture product information and perform entitlement checks using warranty and service contracts. In addition, other service transactions such as Returned Material Authorization (RMA), Shipment, or Work Order can be launched from the Case screen.



Note: The Case module is available only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Access and Permissions

Actions	User Permissions Needed
To create RMA from Case:	<p>"Read" on Cases, Account, Contact, Location, Installed Product, and Product</p> <p>"Create" on Parts Order and Parts Order Line</p>

Actions	User Permissions Needed
To create Shipment from Case:	"Read" on Cases, Contact, Account, Location, and Product "Create" on Parts Order and Parts Order Line
To create Work Order from Case:	"Read" on Cases, Account, Contact, Installed Product, and Product "Create" on Work Order and Work Details
To perform Case Entitlement:	"Edit" on Case "Read" on Account, Contact, Installed Product, Service Contract, Covered Products, Entitled Contacts, Warranty Terms, Product Warranty, and Product "Create" on Entitlement History
To select Booking Window for a Case:	"Edit" on Case "Read" on Territory, Expertise, Product, Product Serviced, Technician, Service Team, and Booking Window

Click the **Cases** tab to view the Cases home page.

Custom Case Fields

Fields	Description
Product	The component's product number for which the customer is seeking support. This is a lookup to an existing Salesforce Product record.
Component Serial Number	Serial number of the component for which the customer is seeking support. This is a lookup to an existing installed product record in ServiceMax.
Top-level Serial Number	Serial number of the top-level installed product to which the component belongs. This is a lookup to an existing installed product record in ServiceMax. This is a read-only field.
RMA Requested	Flag indicates if the customer has requested an RMA. This field does not drive any functionality in ServiceMax and is for informational purposes only.

Fields	Description
Replacement Requested	Flag indicates if the customer has requested a replacement. This field does not drive any functionality in ServiceMax and is for informational purposes only.
Entitlement Notes	Information entered by the support center engineer at the time of entitling the customer for the requested services
Entitlement Records	List of available entitlement records: warranties and service/maintenance contract.
SLA Terms	Read-only field that displays the service level description from the service/maintenance contract.
Service/Maintenance Contract Notes	This is a read-only field that displays notes from service/maintenance contract.
Billing Type	Whether the billing is covered by an agreement or this is a paid shipment.



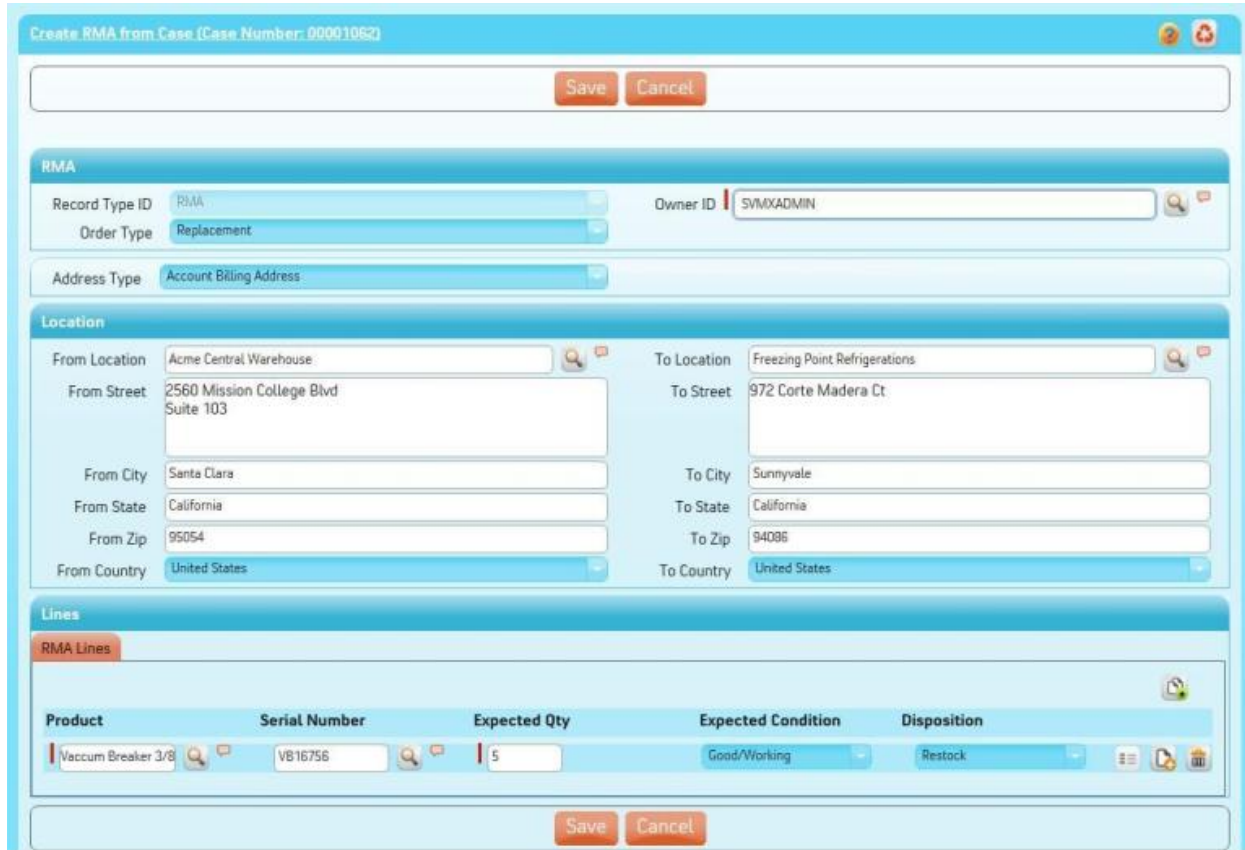
Note: When a Component serial number is entered on the Case, the Component's Product can be automatically derived. However, in the interest of effective troubleshooting of the problem, some organizations do not opt for automatic derivation but prefer to capture product and serial number as separate fields. Your ServiceMax administrator can enable or disable the automatic derivation of product from the serial number record.

Create RMA from Case

To create an RMA from a Case:

1. Locate the Case by searching in the sidebar or from a list view in the Cases tab. Click the Case number from which you want to initiate an RMA.

- Click **Create RMA**. The Create RMA screen appears as shown below:



Create RMA from Case (Case Number: 00001062)

Save Cancel

RMA

Record Type ID: RMA Owner ID: SVMXADMIN

Order Type: Replacement

Address Type: Account Billing Address

Location

From Location: Acme Central Warehouse To Location: Freezing Point Refrigerations

From Street: 2560 Mission College Blvd Suite 103 To Street: 972 Corte Madera Ct

From City: Santa Clara To City: Sunnyvale

From State: California To State: California

From Zip: 95054 To Zip: 94086

From Country: United States To Country: United States

Lines

RMA Lines

Product	Serial Number	Expected Qty	Expected Condition	Disposition
Vaccum Breaker 3/8	VB16756	5	Good/Working	Restock

Save Cancel

Figure 1: Create RMA Screen

- Select the appropriate **Header Record Type** and **Line Record Type**. The default record type is **RMA**. If your administrator has set up custom record types for header and lines, they appear at the top.
- Select the owner of the RMA in the **Owner ID** field by using **Lookup**. Owner ID is usually the ServiceMax user who will be processing this RMA upon receipt. By default, it is set to your user name.
- Select **Order Type** as applicable.
- In the **From Location** section:
 - Select an address type from **Address Type**. This automatically populates the selected address and disables the address field.
 - If you select a location using **Lookup**, the address fields are populated automatically. Alternatively you can also enter the address information manually by entering appropriate values in their respective fields.

7. Select an existing location using **Lookup** or enter the address in the **To Location** section.
8. In the **RMA Lines** section:
 - The product and serial number entered on the Case automatically appear in the first RMA line.
 - Enter a product and/or serial number using **Lookup**. Note that when the installed product is selected, the product is not automatically calculated.
 - Enter **Expected Qty**, **Expected Condition**, and **Disposition**.
 - Click the **Add** button to add more product returns. To delete one or more products entered, click **Delete** beside each record.
9. Click **Save** to save the created RMA for a Case.

Below are the configurable options available for this screen. These settings can be adjusted by your ServiceMax administrator.

- Default address type.
- Whether the Case product and serial number should be automatically included as an RMA line.
- **Use Pricebook** should be checked by default or not.
- Mapping of fields between Case and RMA. This includes your organization's custom fields too.

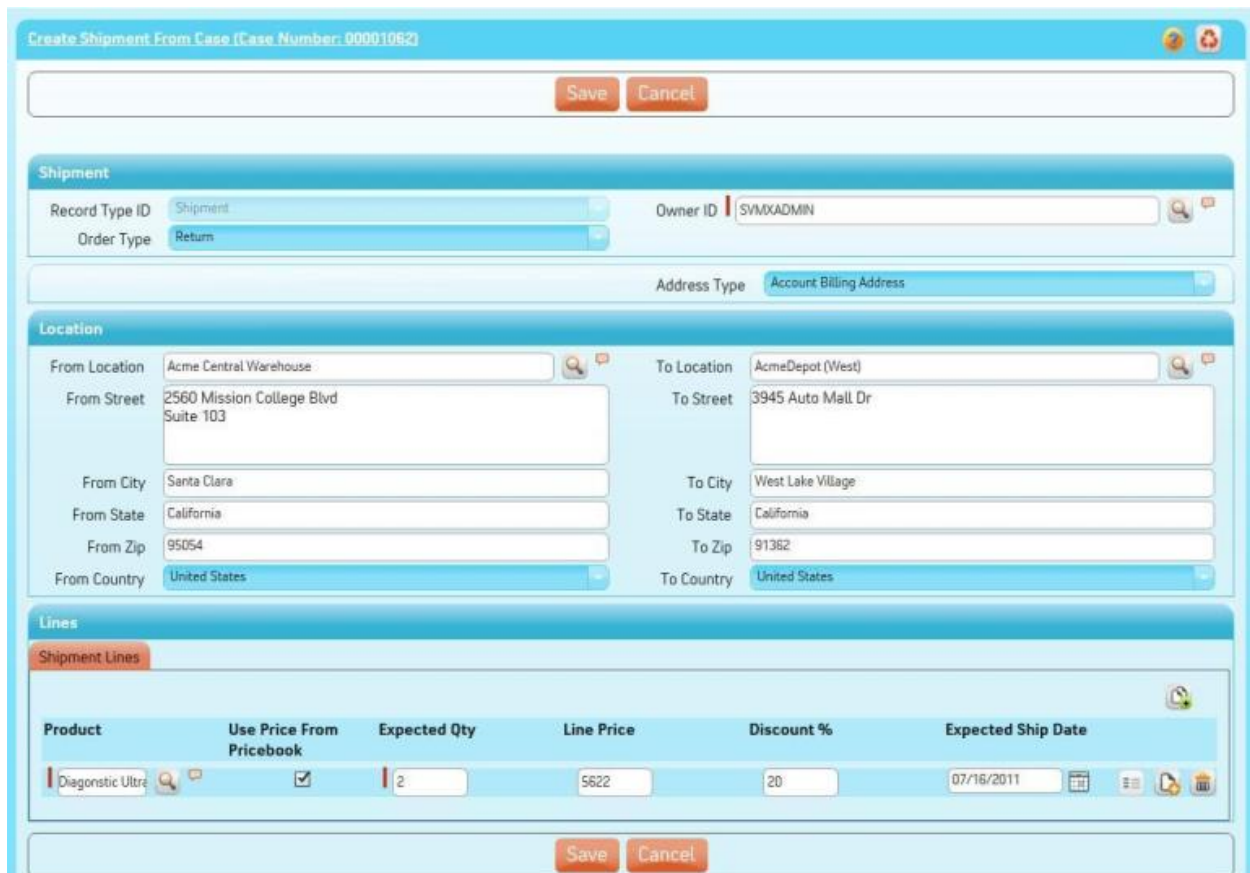


Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Create Shipment from Case

To create a Shipment from a Case:

1. Locate the Case by searching in the sidebar or from a list view in the Cases tab. Click the Case number from which you want to initiate a shipment order.
2. Click **Create Shipment Order**. The Create Shipment screen appears as shown below:



Create Shipment From Case (Case Number: 00001062)

Save Cancel

Shipment

Record Type ID: Shipment
 Order Type: Return
 Owner ID: SVMXADMIN
 Address Type: Account Billing Address

Location

From Location: Acme Central Warehouse
 From Street: 2560 Mission College Blvd Suite 103
 From City: Santa Clara
 From State: California
 From Zip: 95054
 From Country: United States

To Location: AcmeDepot (West)
 To Street: 3945 Auto Mall Dr
 To City: West Lake Village
 To State: California
 To Zip: 91362
 To Country: United States

Lines

Shipment Lines

Product	Use Price From Pricebook	Expected Qty	Line Price	Discount %	Expected Ship Date
Diagnostic Ultra	<input checked="" type="checkbox"/>	2	5622	20	07/16/2011

Save Cancel

Figure 2: Create Shipment Order Screen

3. Select the owner of the Shipment in the **Owner ID** field by using **Lookup**. Owner ID is usually the ServiceMax user who will be processing this shipment in logistics. By default, it will be set to your user name.
4. Select **Order Type** as applicable.
5. In the **From Location** section:

- Select an address type from **Address Type**. This will automatically populate the selected address and disables the address field.
 - If you select a location using **Lookup**, the address fields are populated automatically. Alternatively you can also enter the address information manually by entering appropriate values in their respective fields.
6. Select an existing location using **Lookup** or enter the address in the **To Location** section.
 7. In the **Order Lines** section:
 - Click **Add Lines** to add more product returns. Alternatively, to delete one or more products entered, check the records using the checkbox and then click **Delete Lines**.
 - Enter a product using **Lookup**.
 - Enter **Expected Quantity**.
 - Click **Add** button to add more product shipments. To delete one or more products entered, click **Delete** beside each record.
 - Check the **Use Price Book** checkbox and then click **Get Price** to automatically calculate the price of a product. Note that the price is calculated only if a valid price book is configured for shipments. To enter a price manually, uncheck the **Use Price Book** checkbox.
 8. Click **Save** to save the created shipment order.

Given below are the configurable options available for this screen. These settings can be adjusted by your ServiceMax administrator.

- Default address type.
- **Use Pricebook** should be checked by default or not.
- Mapping of fields between Case and Shipment. This includes your organization's custom fields too.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Create Work Order from Case

To create a Work Order from a Case:

1. Locate the Case by searching in the sidebar or from a list view in the Cases tab. Click the Case number from which you want to initiate a new Work Order.
2. Click **Create Work Order**. The Create Work Order screen appears as shown below:

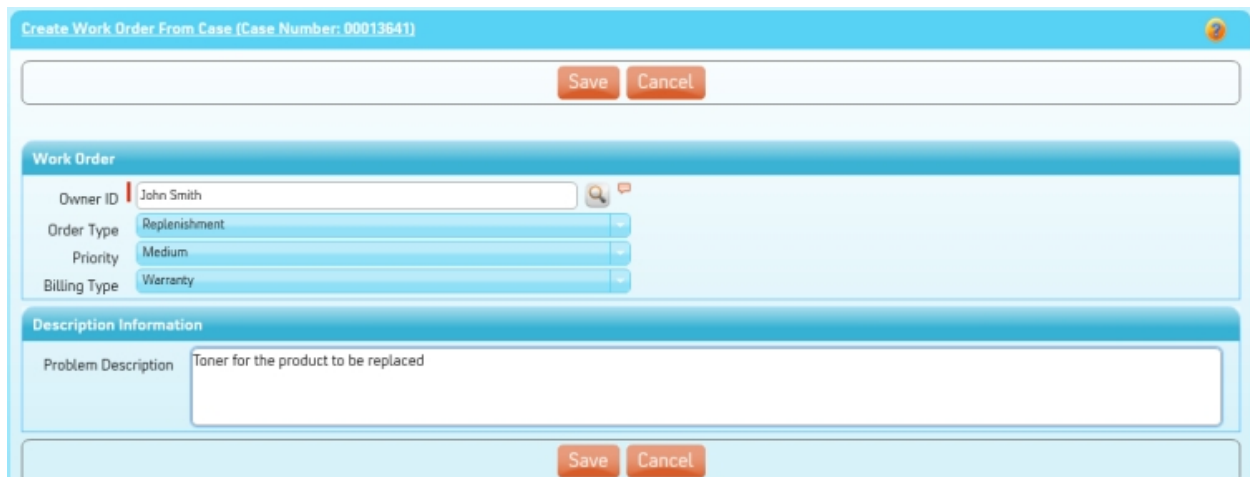


Figure 3: Create Work Order Screen

3. Select the **Record Type** of the Work Order to be created. The Record Type field appears if the Work Order types are defined and available to you.
4. Enter the **Order Type**, **Billing Type** and **Problem Description**. These are defaulted and/or copied from the Case.
5. Click **Save**. A new Work Order is created by copying the relevant information from the case.
6. Once the work order is created, you will be redirected to the newly created work order

record. You can then use the appropriate links on the work order screen to create estimates, parts requests or usage lines.



Note: The mapping of fields between Case and Work Order is configurable by your ServiceMax administrator. This includes your organization's custom fields.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Case Entitlements: Interactive

The entitlement feature utilizes advanced user interface capabilities to deliver a rich interactive experience to users.

To initiate an entitlement check on a Case, click **Entitlement**. The Entitlement section has three tabs:

- **Settings:** The default entitlement options are as shown below. See various [Entitlement options](#) for more information.

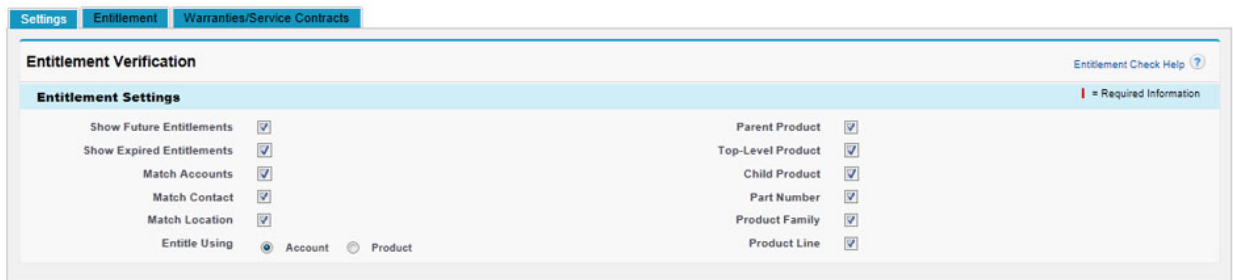


Figure 4: Entitlement Options Screen

- **Entitlement:** To perform entitlement verification on the Case. In the Product Information section at the top-left, information from the Case record displays. If the Case is already entitled using a warranty or service contract, it appears at the bottom section.



The screenshot shows the 'Entitlement' tab in the ServiceMax interface. At the top, there are tabs for 'Settings', 'Entitlement', and 'Warranties/Service Contracts'. Below these are buttons for 'Check Entitlement', 'Save Entitlement', and 'Back to Case', along with a help icon. The main section is titled 'Product Information' and includes a legend indicating that a red bar means 'Required Information'. The form contains the following fields:

Case Number	00001005	Component Name	C22 Laser
Account Name	John Smith	Component SN	C22 Laser
Contact Name	Paul Smith	Entitlement Notes	

Below the product information, there are expandable sections for 'Warranties' and 'Service Contracts', both currently collapsed.

Figure 5: Case Entitlement Screen

- **Warranties/Service Contract:** To view the details for warranty or service contract records as shown below:



The screenshot shows the 'SMC 10' tab in the ServiceMax interface. The main section is titled 'Service/Maintenance Contract Detail'. It displays the following information:

Contract Name/Number	SMC 10	Owner	John Smith (Change)
Account	John Smith	Sales Rep	
Renewal Number		Contact	
Renewal Date		Active	✓
Renewed From		Billing Schedule	
Weeks To Renewal	2	Business Hours	

Below this, there is a 'Contract Details' section with the following fields:

Start Date	4/20/2010	Contract Price	
End Date	6/22/2010	Discount%	
SLA Terms	SLA Platinum	Discounted Price	USD 0.00
Service Contract Notes		Primary Technician	

Figure 6: Warranty or Service Contract Screen

If the **Service Based Entitlement** setting is enabled (set as **True**), you can include available services for service contracts.

Entitlement Options

Option	Purpose
Show Future Entitlements	Include any warranties and service contracts that are yet to be effective.
Show Expired Entitlements	Include warranties and service contracts that have expired.
Match Account	Enforce matching of Account on service contracts with Account on the Case. This is relevant when a service contract is purchased by your customer but the end customer of the product is different.
Match Contact	Enforce matching of Contact given in the Case to the list of entitled contacts in the service contract. This is useful when some contact person from your customer organizations are authorized to contact your support centers.
Match Location	Enforce matching of Location in the Case to the list of covered locations in the service contract.
Entitle Using	This indicates if the product or the installed product is considered in entitlement at all. If Account-based entitlement is selected, all the valid service contracts for the given account appear, irrespective of the product. If Product-based entitlement is selected, only those warranties and service contracts that provide the coverage appear.
Parent	Consider the entitlement coverage of the product's immediate parent (in the installed product tree) also. This is useful when your organization implements the installed product hierarchy.
Top-Level	Consider the entitlement coverage of the product's top most product (in the installed product tree) also. This is useful when your organization implements the installed product hierarchy.
Child	Consider the entitlement coverage of the child installed products of the given product. Your administrator can also configure the number of levels to traverse in the product hierarchy.
Part Number	Consider the entitlement coverage of the part number associated with the given installed product.
Line	Consider the entitlement coverage of the product line of the part number associated with the given installed product.
Family	Consider the entitlement coverage of the product family of the part number associated with the given installed product.



Note: Entitlement Criteria such as **Parent, Top-Level, Child, Part Number, Family** and **Line** are applicable only for Product-based entitlements.



Note: Depending upon your organization's requirements, the default values for the above options can be set up by your administrator. If you find the entitlement options disabled, your administrator may have prevented overriding of the settings by end users.

Case Entitlement Process

In order to entitle the customer to the requested support/services, the Case must be created first with the account information. Once you create the Case, locate the Case by searching the sidebar or from a list view in the Cases tab and then click the Case number for which you want to perform entitlement verification.

1. Enter the part or full serial number in the component serial/lot number field and then click the **Lookup** icon to find if the serial number exists. Select the applicable serial number for the product.
2. Click **Check Entitlement** to view the coverage available for the product. ServiceMax will find all the matching warranties and service contracts based on the entitlement option selected. The matching warranties and service contracts appear at the bottom of the screen as shown below:

Warranties					
Select	Name	Start Date	End Date	Installed Product	Warranty Terms
<input type="checkbox"/>	WN-000003	10/15/2007	4/14/2008	SN1-P1	6 Months Warranty from Install Dt
<input type="checkbox"/>	WN-000004	10/1/2007	3/31/2008	SN1-AutoCreate-Warr	6 Months Warranty from Install Dt
<input type="checkbox"/>	WN-000022	12/26/2007	4/14/2008	S1-111	6 Months Warranty from Install Dt
<input type="checkbox"/>	WN-000023	12/26/2007	4/14/2008	SL-112	6 Months Warranty from Install Dt
<input type="checkbox"/>	WN-000026	12/29/2007	5/28/2008	SL-1133	6 Months Warranty from Install Dt
<input type="checkbox"/>	WN-000027	12/26/2007	4/14/2008	SL-1	6 Months Warranty from Install Dt
<input type="checkbox"/>	WN-000037	10/15/2007	4/14/2008	IW1	6 Months Warranty from Install Dt
Service Contracts					
Select	Contract Name/Number	Start Date	End Date	Covered By	SLA Terms
<input type="checkbox"/>	SC - IB: SL-9987 Product : GenWatt Diesel 200kW	9/1/2008	9/10/2009	Product Line	Gold
<input type="checkbox"/>	SC - IB: SL-9987 Product : GenWatt Diesel 200kW	9/1/2008	9/10/2009	Part	Gold
<input type="checkbox"/>	EV SC For ProdFamilyAccessory	5/25/2009	5/25/2009	Product Family	Platinum

Figure 7: Matching Warranties and Service Contracts Screen

- Click the **Warranty**, **Service Contract**, or **SLA Terms** link to see more details about a warranty, a service contract or an SLA Term, respectively. This displays the corresponding records in the Warranties/Service Contracts tab.
- Check the checkbox against the relevant entitlement record and then click **Save Entitlement**. This action means you have selected to entitle the customer based on the conditions outlined in the selected warranty or service/maintenance contract. Only one record can be selected from the entitlement list. The case screen is refreshed with the details.

If you are not sure about choosing the proper entitlement or if you wish to account for data corrections and not to lose the product information, enter entitlement notes and then click **Save Entitlement**. This saves only the product information and allows you to return to the Case later to complete the entitlement check.

Case Included Services

To select available contract services to entitle, the Service Based Entitlement setting (SET022) must be enabled.

- Click the **Service Contract** tab.
- Click the **Check Entitlement** button.
- Click the **Select a Service** link for a contract that has services available. See figure below.

Select	Contract Name/Number	Start Date	End Date	Covered By	SLA Terms	Selected Service	
<input type="checkbox"/>	123	8/31/2011	9/4/2012	Part	Gold		No Services Available
<input type="checkbox"/>	CContract-United-Cloned	12/26/2012	6/30/2013	Installed Product	NV SLA	Break Fix Available Units: 7	Select a Service
<input type="checkbox"/>	NV 12345	8/31/2011	9/4/2012	Product Family	Gold		No Services Available
<input type="checkbox"/>	SCONIS1	12/31/2012	12/31/2013	Installed Product	NV SLA	SCONIS Available Units: 3	Select a Service
<input type="checkbox"/>	SCONIS2	12/31/2012	12/31/2013	Installed Product	NV SLA	SCONIS Available Units: Unlimited	Select a Service

Figure 8: Select Available Services

- Select an available service for the contract. In the **Included Services** dialog box, select the services you want to include for the contract, or click **None** if you do not

want to include any services. See figure below.

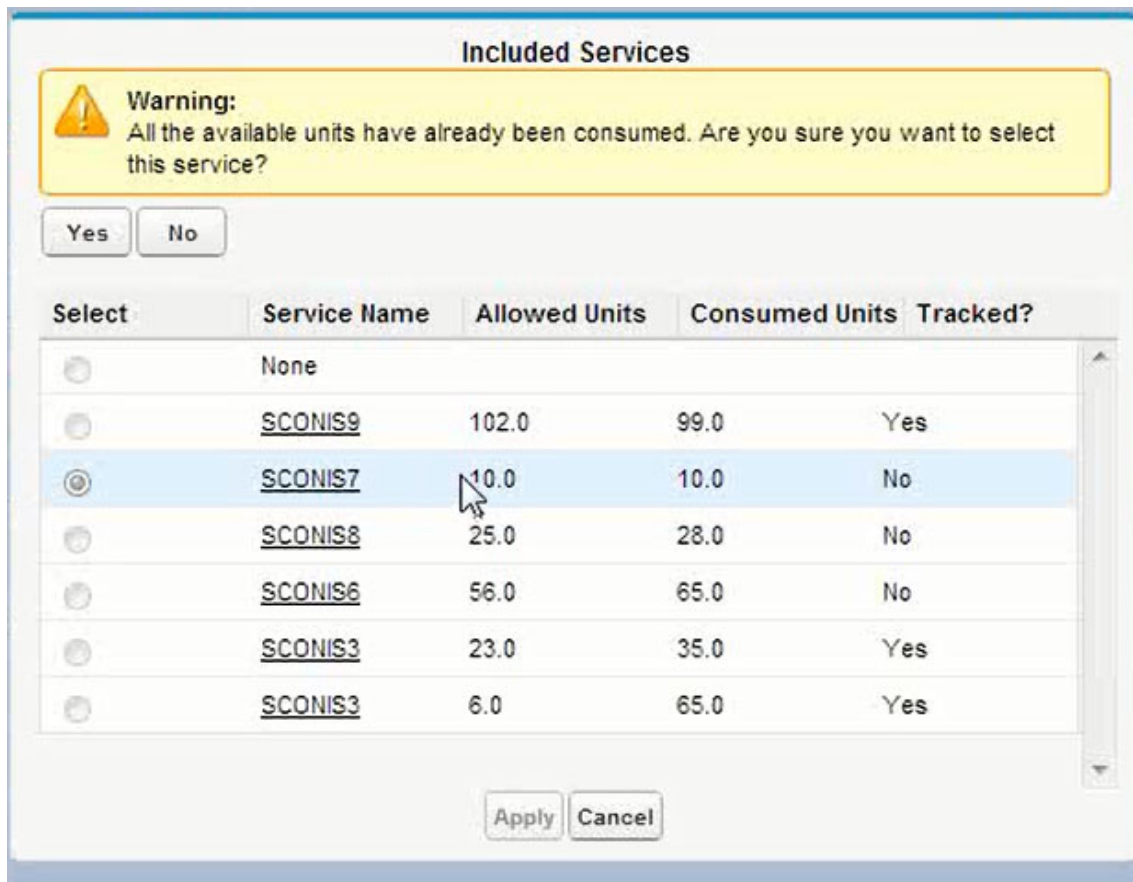


Select	Service Name	Allowed Units	Consumed Units	Tracked?
<input type="radio"/>	None			
<input checked="" type="radio"/>	<u>SCONIS9</u>	102.0	99.0	Yes
<input type="radio"/>	<u>SCONIS7</u>	10.0	10.0	No
<input type="radio"/>	<u>SCONIS6</u>	25.0	28.0	No
<input type="radio"/>	<u>SCONIS6</u>	56.0	65.0	No
<input type="radio"/>	<u>SCONIS3</u>	23.0	35.0	Yes
<input type="radio"/>	<u>SCONIS3</u>	6.0	65.0	Yes

Apply Cancel

Figure 9: Included Services

If you exceed the available units for a service, you will see a warning message asking you to confirm your selection. Click **Yes** to confirm. See figure below.



Included Services

Warning:
All the available units have already been consumed. Are you sure you want to select this service?

Yes No

Select	Service Name	Allowed Units	Consumed Units	Tracked?
<input type="radio"/>	None			
<input type="radio"/>	SCONIS9	102.0	99.0	Yes
<input checked="" type="radio"/>	SCONIS7	10.0	10.0	No
<input type="radio"/>	SCONIS8	25.0	28.0	No
<input type="radio"/>	SCONIS6	56.0	65.0	No
<input type="radio"/>	SCONIS3	23.0	35.0	Yes
<input type="radio"/>	SCONIS3	6.0	65.0	Yes

Apply Cancel

Figure 10: Included Services Warning Message

- Click the **Apply** button.
- Click the **Save Entitlement** button.

Case Entitlement: Automatic

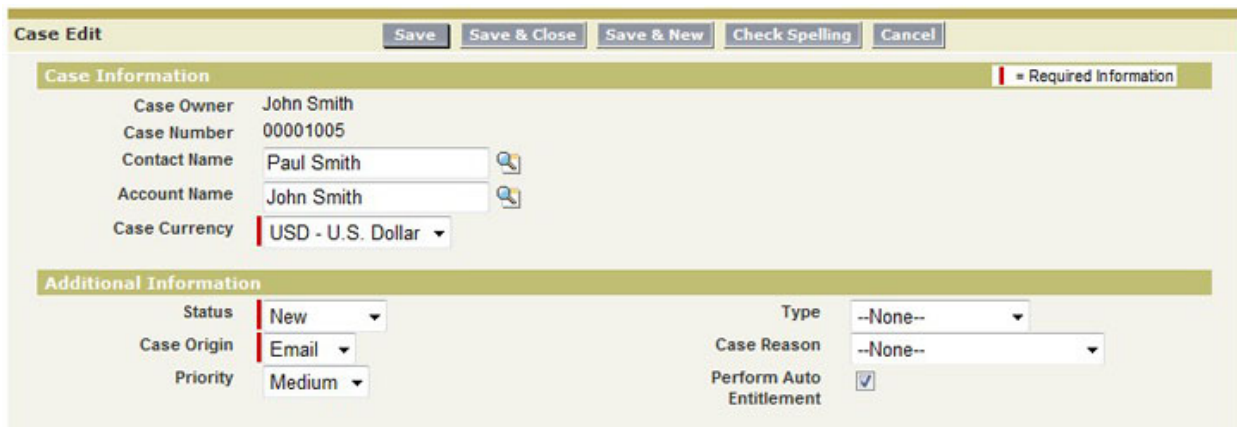
If applicable, you can enable automatic entitlement for all or some of your Cases. This is achieved by configuring auto entitlement rules based on Case attributes. When the Cases meet the predefined qualification criteria, ServiceMax automatically verifies existing entitlements and selects the appropriate entitlement (service contract or warranty) for the Case. Auto entitlement saves significant time during call center interactions with customers and avoids end user errors in entitlement.

In addition, one of the most significant benefits of enabling automatic entitlement on Cases is that the customers are entitled automatically when they log Cases from the ServiceMax customer portal. This enables your organization to take the corrective action directly on the Cases without having to spend time in customer interaction cycles.

If auto entitlement is enabled and configured for your organization, the Case screen will display a checkbox called **Perform Auto Entitlement**. Depending on your Salesforce profile, you may or may not be able to edit this checkbox on the Case screen. Please contact your ServiceMax administrator or subject matter expert to understand if and how auto entitlement is used by your organization.

To perform auto entitlement:

1. Locate the Case by searching in the side bar or from the view list of the Case tab. Click the Case number and then click **Edit** to perform the automatic entitlement.
2. Check the **Perform Auto Entitlement** checkbox as shown in the figure below:



The screenshot shows the 'Case Edit' form in ServiceMax. At the top, there are buttons: 'Save', 'Save & Close', 'Save & New', 'Check Spelling', and 'Cancel'. The form is divided into two main sections: 'Case Information' and 'Additional Information'. In the 'Case Information' section, fields include Case Owner (John Smith), Case Number (00001005), Contact Name (Paul Smith), Account Name (John Smith), and Case Currency (USD - U.S. Dollar). In the 'Additional Information' section, fields include Status (New), Case Origin (Email), Priority (Medium), Type (--None--), Case Reason (--None--), and Perform Auto Entitlement (checked checkbox). A red vertical bar on the right side of the 'Case Information' section indicates required information.

Figure 11: Perform Auto Entitlement - Selected

3. Click **Save** to perform auto entitlement. Alternatively, click **Cancel** to return to the Case record without performing auto entitlement.

When you perform the auto entitlement:

- If information on the Case matches any Active auto entitlement rule set up by your ServiceMax administrator, the entitlement engine of ServiceMax will perform the necessary validations and conflict resolutions, and apply the most applicable entitlement on the Case.
- Any errors encountered during the entitlement process will appear on the screen.
- The service contract, warranty and SLA Terms fields on the Case screen will be refreshed with the results of the entitlement process.
- Depending upon your profile setup, the Case screen will display Auto Entitlement Status. If this field shows **Failed**, indicating a problem, try performing auto entitlement status again. If the problem persists, report it to your ServiceMax administrator.



Note: If the auto entitlement feature does not produce results due to setup issues, as an interim workaround you can use the interactive entitlement feature if enabled by your administrator.

Select Booking Windows Slots

This feature allows you to find available slots in various booking windows in a territory and select an appropriate slot for the Case. In order to use this feature effectively, the following information should be set up effectively in ServiceMax:

- Your service organization's Territory structure
- Technicians linked to Territories
- Expertise for technicians
- Product specialization for technicians
- SLA Terms
- Booking window definitions
- Booking window access, if your organization has exclusive regional booking windows

In addition, if you like to restrict booking window commitments within the SLA commitment, you must also perform an entitlement check automatically or manually before using this feature.

To initiate booking window selection on a Case, click **Book Appointment**. The following screen appears:

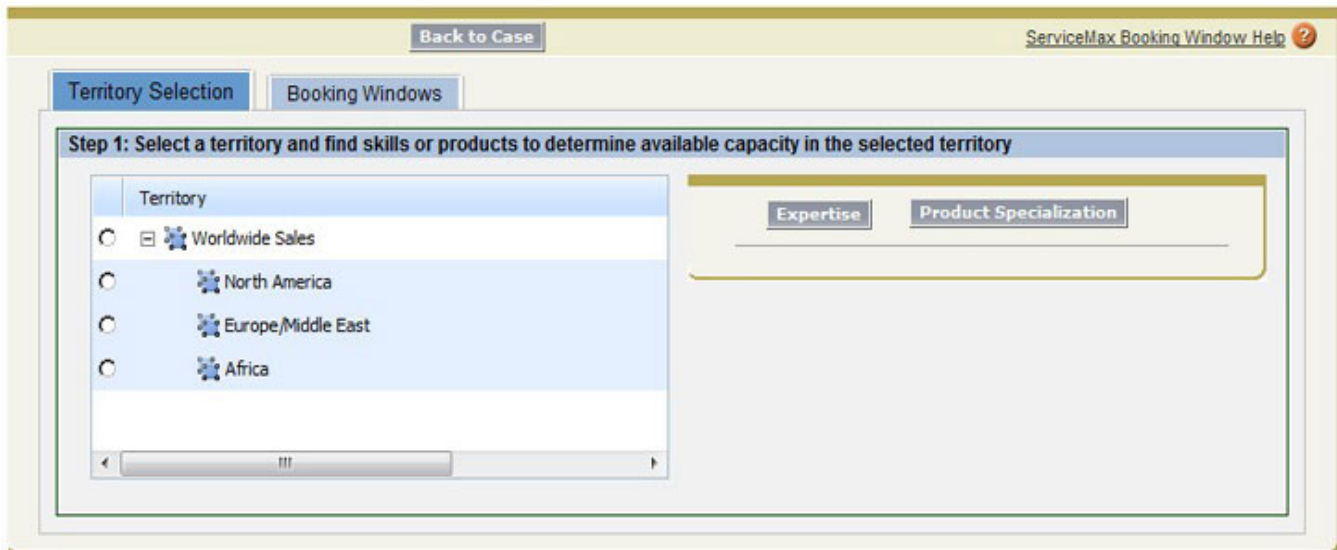


Figure 12: *Booking Windows Screen in Case*

The Booking window screen has two tabs:

- **Territory Selection:** Enables you to identify the technicians whose availability must be considered for booking window selection. See below for more information.
- **Booking Windows:** Enables you to find the number of available slots in the given territory for a range of dates, and select a suitable slot for the Case. See [To Select Booking Windows](#) for more information.

To select a Territory:

1. Click the **Territory Selection** tab to view the territory tree on the left as shown below:



Figure 13: Territory Tree Screen

2. Click the radio button against the Territory where you want to find the technician availability.
3. Click **Expertise** if you want to limit the technician availability based on expertise. All the available expertise of technicians in the Territory appear as shown below. Select as many expertise records from the list by checking their checkboxes.

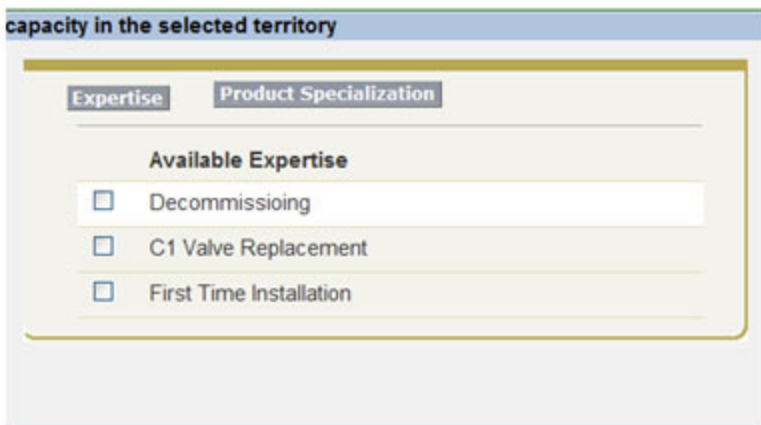


Figure 14: Expertise Options Screen

4. Click **Product** if you want to limit the technician availability based on product specialization. All the products specialized by technicians in the territory appear as shown below. Select as many product specialization records from the list by checking

their checkboxes.

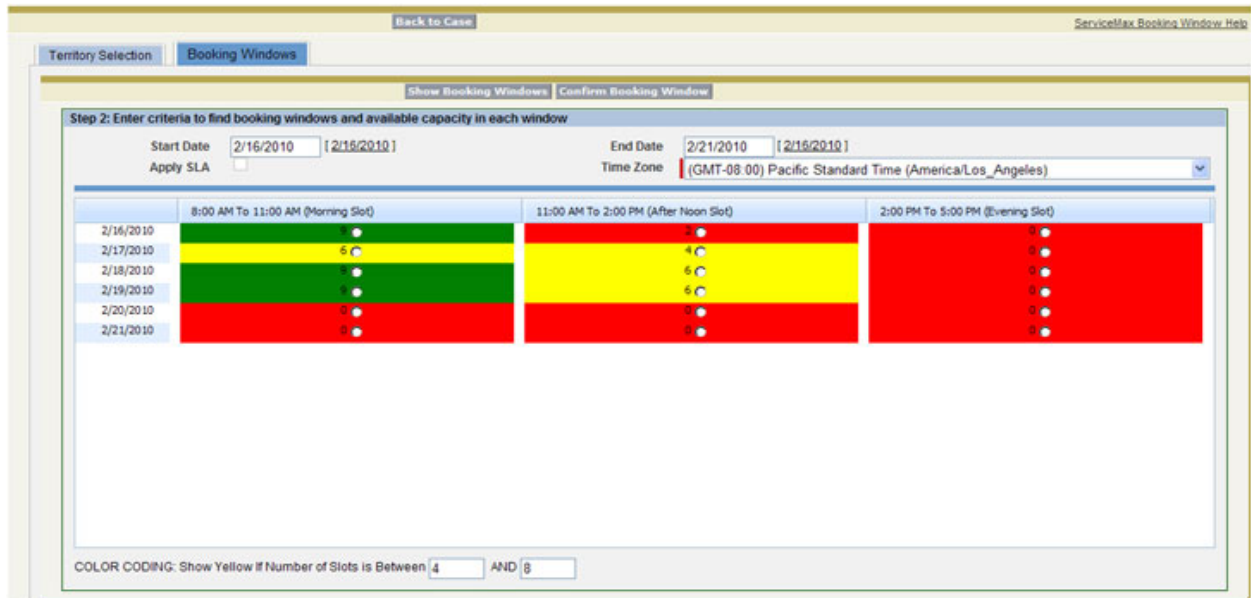


Figure 15: Product Specialization Options

To select Booking Windows:

1. Click the **Booking Windows** tab to display the number of available slots in the given Territory for a range of dates, and select a suitable slot for the Case.
2. Enter the **Start Date** and **End Date**. The date range is automatically populated based on your ServiceMax configuration. In addition, the number of days allowed in the range is also based on ServiceMax configuration settings. If you would like to change the default date range or the allowed limit, please contact your ServiceMax administrator.
3. Check the **Apply SLA** checkbox if you would like to see the booking windows within the SLA commitment on the Case.
4. The time zone is automatically filled with your time zone. If you would like to view the results in a different time zone, select the applicable name from the list.
5. Configure how the results should be color-coded at the bottom tab. The booking window results appear in three colors:
 - **Red:** If the number of available slots are below a threshold, indicating a densely committed slot.
 - **Green:** If the number of available slots are above a limit, indicating a highly available slot.
 - **Yellow:** For all the available slots between Red and Green. These are moderately booked slots.

- Click **Show Booking Windows**. The results appear as shown below:



Back to Case

Territory Selection Booking Windows

Show Booking Windows Confirm Booking Window

Step 2: Enter criteria to find booking windows and available capacity in each window

Start Date 2/16/2010 [2/16/2010] End Date 2/21/2010 [2/21/2010]

Apply SLA ☐ Time Zone (GMT-08:00) Pacific Standard Time (America/Los_Angeles)

	8:00 AM To 11:00 AM (Morning Slot)	11:00 AM To 2:00 PM (After Noon Slot)	2:00 PM To 5:00 PM (Evening Slot)
2/16/2010	5	4	0
2/17/2010	5	4	0
2/18/2010	5	4	0
2/19/2010	5	4	0
2/20/2010	0	0	0
2/21/2010	0	0	0

COLOR CODING: Show Yellow if Number of Slots is Between 4 AND 5

Figure 16: Booking Windows Slots

- Select the applicable slot. Talk to your Subject Matter Experts or ServiceMax administrator for guidance on how to select an appropriate slot.
- Click **Confirm Booking Windows**. The selected booking window will be saved on the Case and you will be redirected to the Case record. Alternatively, click **Back To Case** to return to the Case record without choosing a booking window.

View/Manage SLA Clocks on Case

When advanced SLA management is enabled for your organization, the ServiceMax SLA engine calculates commitment times automatically on a Case where applicable. Depending on the SLA definition, none, some, or all of the following commitments are tracked on a Case:

- Initial Response Time
- Onsite Response Time
- Restoration Time
- Resolution Time

If any of the above timestamps are tracked on a Case, a countdown of the remaining time on each clock displays embedded in the Case screen as shown below:



Figure 17: Clock in the Case Screen

- In the above screen, the remaining time is displayed in the format "Days : Hours : Minutes : Seconds".
- The clock appears in various color-codes depending on the time left:
 - **Red:** If no time is left on the clock, the clock appears in Red.
 - **Yellow:** If less than 25% of time is left, the clock appears in Yellow.
 - **Green:** If more than 25% of time is left, the clock appears in Green.

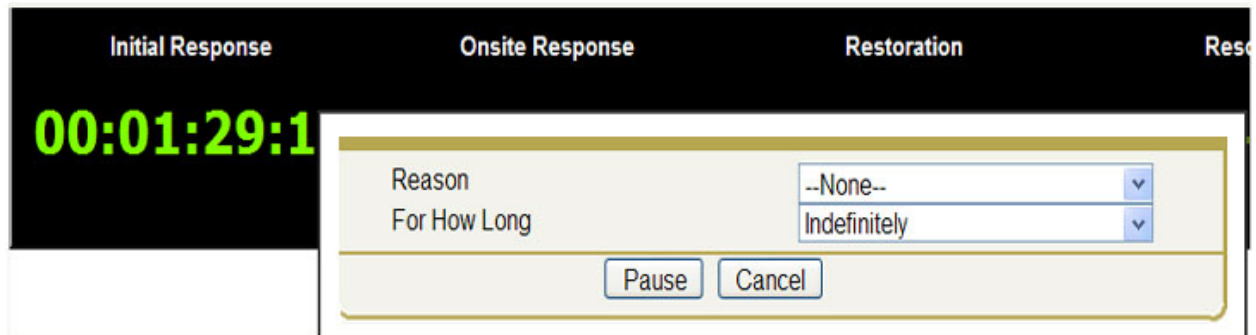
Pausing the SLA Clock

The Pause feature allows you to suspend the SLA clock for as long as you select. This can be used when the SLA commitment cannot be met due to unforeseen circumstances not caused by internal factors, and when the customer is in agreement with the delay.



Note: If your ServiceMax administrator has disabled the ability for you to pause the clock, the **Pause** and **Resume** buttons will be disabled.

To pause the SLA clock, click **Pause**. A popup screen appears as shown below:



The screenshot shows a web interface with a dark header containing tabs: "Initial Response", "Onsite Response", "Restoration", and "Reso". On the left, a large green digital clock displays "00:01:29:1". To the right of the clock is a light gray popup form. The form has two dropdown menus: "Reason" with "--None--" selected, and "For How Long" with "Indefinitely" selected. At the bottom of the form are two buttons: "Pause" and "Cancel".

Figure 18: *Pause Clock Screen*

In the above screen:

- Select a reason for pausing the clock. The reasons listed are fully configurable. Please contact your ServiceMax administrator if the relevant reasons are not listed.
- Click **Pause** to pause the SLA Clock. The popup screen closes and the Case screen refreshes to show the paused clock. Note that all active SLA clocks on the Case are paused.
- To cancel without pausing the clock, click **Cancel**.

Resuming the SLA Clock

To resume a paused SLA clock, click **Resume**. A message appears indicating the amount of time elapsed since the clock was paused.

- Click **Yes** if you would like to extend the SLA commitment with the elapsed time.
- Click **No** if you would like to keep the SLA commitment as is.
- Click **Cancel** if you do not want to resume the clock.



Note: When you answer **Yes** or **No** to the above question, all paused SLA clocks on the Case will be resumed.

Setting SLA Time Commitments

To set the different SLA time commitments on Case(s), scroll down to the Custom Links section:

- Click the **Initial Response Completed** link to update the actual response time to the current date and time.
- Click the **Onsite Response Completed** link to update the actual onsite response time to the current date and time.
- Click the **Service Restored** link to update the actual restoration time to the current date and time.
- Click the **Issue Resolved** link to update the actual resolution time to the current date and time.

See Also:

[Account](#)

[Booking Windows](#)

[Contacts](#)

[Installed Product](#)

[Location](#)

[Product](#)

[Service Team](#)

[Service/Maintenance Contract](#)

[Warranty Terms](#)

RETURNED MATERIAL AUTHORIZATION (RMA)

Overview

Returned Material Authorization (RMA) is a document that authorizes products or parts to be returned to the manufacturer/repair center/warehouse.

There are two steps in the RMA process:

1. The RMA is initiated by a support center engineer or field engineer, along with instructions for handling the returned products. A copy of the RMA document is given to the customer to be used as a reference in their shipment.
2. The RMA is processed or closed at the receiving location when the products actually arrive.

ServiceMax uses Parts Orders as a home for RMA and Shipment Orders. See [Shipment Order](#) for more information.

Access and Permissions

Actions	User Permissions Needed
To view the Parts Order tab:	"Read" on Parts Order
To view RMAs:	"Read" on Parts Order, Parts Order Line, Account, Contact, Location, Installed Product, and Product
To create or clone RMAs:	"Create" on Parts Order, Parts Order Line "Read" on Account, Contact, Location, Installed Product, and Product
To change RMAs:	"Edit" on Parts Order and Parts Order Line "Read" on Account, Contact, Location, Installed Product, and Product
To delete RMAs:	"Delete" on Parts Order and Parts Order Line

Actions	User Permissions Needed
To create RMA products:	"Create" on Parts Order Line "Read" on Installed Products and Product
To change RMA products:	"Edit" on Parts Order Line "Read" on Installed Product and Product
To delete RMA products:	"Delete" on Parts Order Line
To process/complete an RMA:	"Edit" on Parts Order and Parts Order Line
To process receipts for an RMA:	"Edit" on Parts Order and Parts Order Line "Read" on Product and Location "Create", "Edit", "Delete" on Product Stock, Stocked Serial, and Stock History

Click the **Parts Order** tab to display the Parts Order home page and then click **New** in the Recent Parts Order section. Select the **Record Type** for a new record as **RMA** and then click **Continue**. The New Parts Order screen appears with the **Record Type** as **RMA**.



Caution: Remember that when you are deleting an RMA record, you will not be warned if the RMA is used in a related record. Since RMAs are strongly tied to Cases, installed products and Work Orders, review and make sure the RMA record is not used in any related records.



Note: Fields related to some standard objects such as Cases and Opportunities are available for use in RMA only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

RMA Fields

Fields	Description
Record Type	Indicates whether this is an RMA or Shipment.
Case	Support Case from which the RMA is originated. This is a lookup to the existing Salesforce Case record.
Work Order	Work Order related to this RMA. This is a lookup to the existing Work Order record in ServiceMax.
Account	Company initiating this RMA. This is a lookup to an existing Salesforce account record.
Contact	Name of the contact person for the customer account for this RMA. This is a lookup to the existing Salesforce contact record.
Parts Order Reference	Reference to another parts order number within ServiceMax.
Order Status	Current status of the RMA.
Priority	Priority of the RMA.
Expected Receipt Date	Date when the products are expected at the receiving dock. Useful for planning and allocating resources.
Receiving Courier	Name of the courier company the customer used to ship the product. This is a lookup to the existing Salesforce account record.
Tracking Number	Tracking number given by the courier company.
Service Engineer	Name of the service engineer who initiated the RMA from the field. This is a lookup to the existing Salesforce user record.
From Location	Name of the customer location from where the products are shipped. This is a lookup to the existing location record in ServiceMax.
From Street	"Street" part of the source address.
From City	"City" part of the source address.
From State	"State/Province" part of the source address.
From Zip	"Zip/Postal Code" part of the source address.
From Country	"Country" part of the source address.

Fields	Description
To Location	Name of the destination address to where the products are shipped. This is a lookup to an existing location record in ServiceMax.
To Street	"Street" part of the destination address.
To City	"City" part of the destination address.
To State	"State/Province" part of the destination address.
To Zip	"Zip/Postal Code" part of the destination address.
To Country	"Country" part of the destination address.
Warehouse	Name/Number of the warehouse where the products will be received.
Shipping/ Receiving Notes	Instruction for receiving department. Free text entry.

RMA Line Fields

Fields	Description
Record Type	Always set to RMA.
Parts Order	RMA number. This is a lookup to an existing Salesforce product record.
Product	Name of the product returned by the customer in the RMA. This is a lookup to the existing Salesforce product record.
Serial Number	ID of the installed product returned by the customer in this RMA. This is a lookup to an existing Installed Products record in ServiceMax.
Expected Receipt Date	Date on which the product is expected to be received at the depot/-factory/warehouse.
Expected Condition	Condition of the product returned.
Expected Qty	Number of products returned. Usually 1 for serialized products.
Disposition	Type of action to be taken by receiving department when the product arrives.
Disposition Instructions	Any special handling notes for product disposition.
Actual Receipt Date	Date on which the product was actually received.
Returned Condition	Condition of the product when received (As expected or otherwise).
Actual Qty	Actual number of unit returned against expected quantity.
Return/Ship Location	The actual location/location where the product was received. This is a lookup to an existing location record.
Service Engineer	Name of the service engineer involved in the RMA receipt. This is a lookup to the existing Salesforce record.
Warehouse	Name/identification of the warehouse, where the product was received.

Adding Products to RMA

Locate the RMA by searching in the side bar or from a list view in the Parts Order tab and then click the RMA number to which you want to add products.

There are two methods to add products to an RMA:

Method 1: Single-line Entry

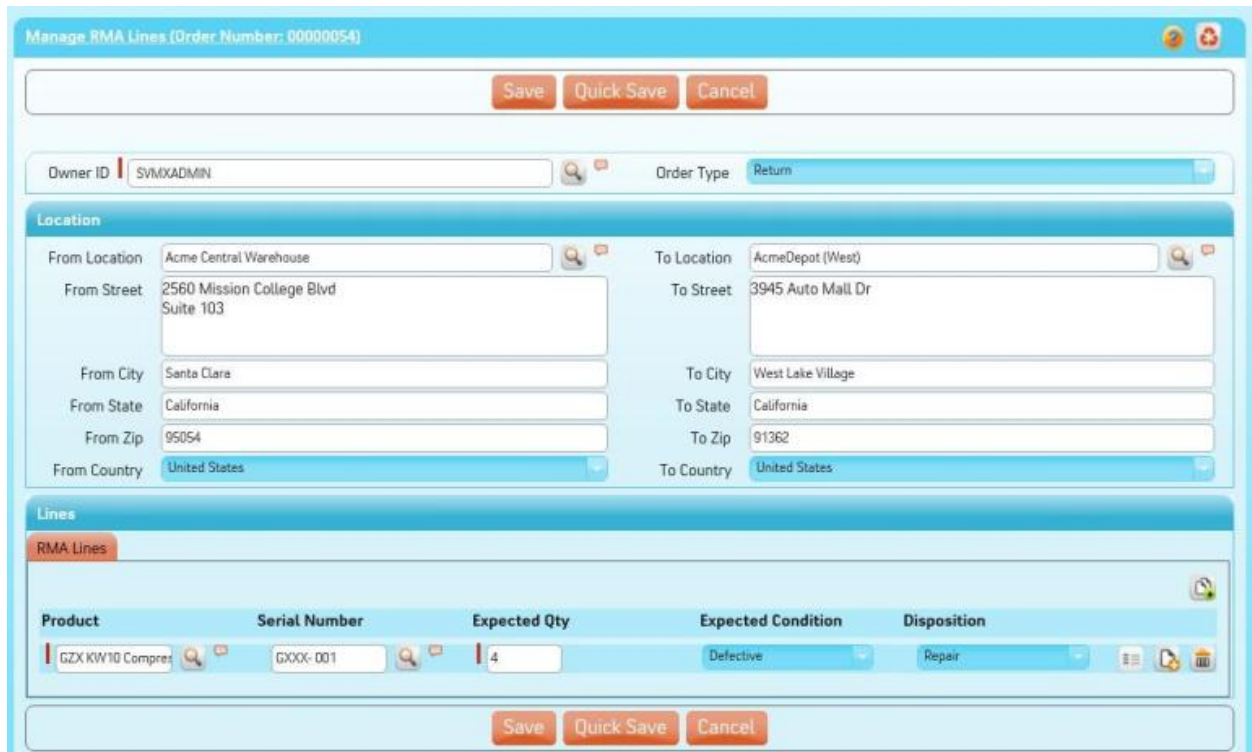
1. Click **New** from the related list Parts Order Lines.
2. Select **RMA** for **Record Type**. The RMA number appears.
3. Select **Open** for **Line Status**.
4. Enter the name of the product that is returned. You can also use the **Lookup** icon to search and select the product.
5. Enter the ID of the Installed Product that is returned. You can also use the **Lookup** icon to search and select the installed product.
6. Enter the **Expected Receipt Date**.
7. Enter the **Expected Qty**. For Serialized Products, this will normally be **1**.
8. Select the **Expected Condition**.
9. Select the **Disposition** and enter additional disposition instructions if necessary.
10. Leave the **Receipt Details** section blank.
11. Click **Save** to add the product.



Note: An RMA can have an unlimited number of products. Repeat the above steps for each product to be returned using the RMA. You can also click **Save & New** after creating a new RMA product record.

Method 2: Multi-line Entry

1. Click **Create Lines** from the RMA screen. An RMA Lines screen appears as shown below:



The screenshot shows the 'Manage RMA Lines' interface for Order Number 00000054. At the top, there are 'Save', 'Quick Save', and 'Cancel' buttons. Below this, the 'Owner ID' is set to 'SVMXADMIN' and the 'Order Type' is 'Return'. The 'Location' section is divided into 'From Location' and 'To Location'. The 'From Location' fields include 'From Street' (2560 Mission College Blvd Suite 103), 'From City' (Santa Clara), 'From State' (California), 'From Zip' (95054), and 'From Country' (United States). The 'To Location' fields include 'To Street' (3945 Auto Mall Dr), 'To City' (West Lake Village), 'To State' (California), 'To Zip' (91362), and 'To Country' (United States). The 'Lines' section contains a table with the following data:

Product	Serial Number	Expected Qty	Expected Condition	Disposition
GZX KW10 Compres	GXXX-001	4	Defective	Repair

At the bottom of the 'Lines' section, there are 'Save', 'Quick Save', and 'Cancel' buttons.

Figure 1: RMA Lines Screen

The top section shows the **From** (Source) and **To** (Destination) locations from the RMA. All the products already entered in the RMA appear at the bottom section.

2. Select **Order Type** as applicable.
3. Select an existing location using the **Lookup** or enter the address details in the appropriate fields in the **From Location** section.
4. Select an existing location using the **Lookup** or enter the address details in the appropriate fields in the **To Location** section.
5. Modify the existing product records as needed.
6. Click **Add** button to add a new product to the RMA. An empty record is added to the bottom of the list.
 - a. Enter the name of the product or use the **Lookup** icon to search and select a product.
 - b. Enter the ID of the installed product or use the **Lookup** icon to search and select the installed product. Note that when an installed product is selected, the product is not automatically calculated.

- c. Enter the **Expected Quantity**.
 - d. Select the **Expected Condition**.
 - e. Select the **Disposition**.
7. To delete product records entered, click **Delete** beside each record.
 8. Click **Save** to save your changes.

Processing/Completing an RMA

This step is typically performed when the material is received. Locate the RMA by searching in the side bar or from a list view in the Parts Order tab and then click the RMA number which you want to process.

There are two ways to process/receive RMA lines:

Method 1: Processing an Individual RMA Item

You can edit each RMA line record and enter receipt information. This is done when there are any differences between the expected quantity and date, and the actual (received) quantity and date.

To process each RMA item individually:

1. In the Parts Order lines Related List section, click **Edit** next to the RMA item you want to receive and process.
2. Enter the actual receipt date. You can enter today's date by clicking on the date link next to the date field.
3. Enter the actual quantity.
4. Enter the name of the service engineer, who should be notified upon the receipt of this material. This could be a depot repair technician who awaits this product to troubleshoot.
5. Select the returned condition.
6. Enter the name of your location or the location where the product was received. You can also use the **Lookup** icon to search and select the location.
7. Enter the warehouse name/number.

8. Change the **Line Status** to **Completed**.
9. Click **Save**.
10. When all the items are completed, edit the RMA, change the **Order Status** to **Closed** and then click **Save**.

Method 2: Processing All of an RMA's Items at Once

You can process all line items at once if the received product information matches the expected product for all RMA lines.

To process an entire RMA in one click:

1. Click **Complete Receipt**.
2. Click **OK** when prompted. This will change the **RMA Status** to **Closed**, set the **RMA Line Item Status** to **Completed**, and set the RMA receipt information to match the expected information for all line items.

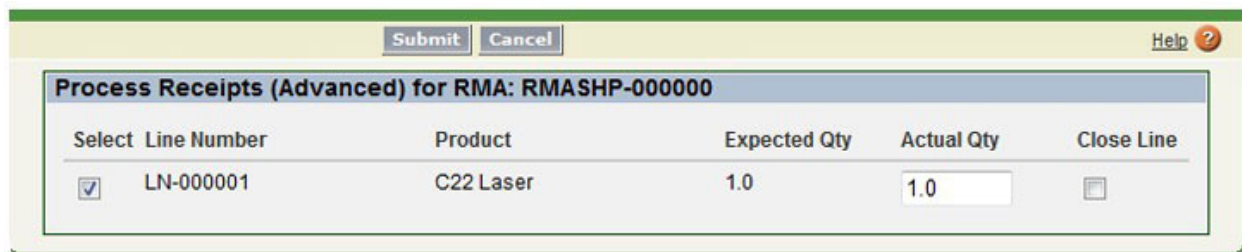
Processing Receipts for RMA

When parts returned are received in the location specified in an RMA, you should process the receipts in ServiceMax for inventory accountability and also to complete the RMA cycle.

To process receipts for an RMA:

1. Locate the RMA by searching in sidebar or from a list view in Parts Orders tab and then click the RMA record for which you want to process receipts.
2. Make sure the RMA is **open** and the destination location is not blank. Also ensure the RMA has at least one product to be received.
3. Click **Process Receipts**. A screen appears (sample shown below) in which you can enter the actual receipt information. The screen lists all products in the RMA that are

not yet received. The **Actual Qty** is defaulted to the pending quantity expected.



Select	Line Number	Product	Expected Qty	Actual Qty	Close Line
<input checked="" type="checkbox"/>	LN-000001	C22 Laser	1.0	1.0	<input type="checkbox"/>

Figure 2: Sample Process Receipts Screen

4. When entering received quantities, one or more of the following scenarios may be applicable:

Receipt Scenario	How to process it
All products in the RMA have been received as expected.	Click Submit . All the open lines and the RMA will be closed automatically.
A product has not been received now but it is expected to be received at a later date.	Enter Zero in Actual Qty . Make sure that the Close Line checkbox is not selected. This leaves the Line open for a future receipt.
A product has not been received and will not be received in the future at all.	This amounts to cancellation of an open RMA line. Enter Zero in Actual Qty . Make sure that the Close Line checkbox is selected. If your organization does not permit short-closing line, this checkbox may be disabled.
A product has been received partially now. The remaining quantity is expected to be received at a later date.	Enter the quantity received. Make sure that the Close Line checkbox is not checked. This leaves the line open for a future receipt.
A product has been received partially now. The remaining quantity will not be received in future at all.	This indicates the short-closure of an RMA line. Enter the quantity received. Make sure that the Close Line checkbox is checked. If your organization does not permit short-closing line, this checkbox may be disabled.

5. Click **Submit** to confirm the entries made. Alternately, click **Cancel** to return to the RMA screen.
6. If your organization tracks inventory at the serial number level, the bottom section of the screen allows you to enter/select serial numbers for serialized products. To enter serial numbers for a product, check the checkbox against the product in the list. See

[Serial Number Selection](#) to learn about how serialized tracking of inventory works in ServiceMax.

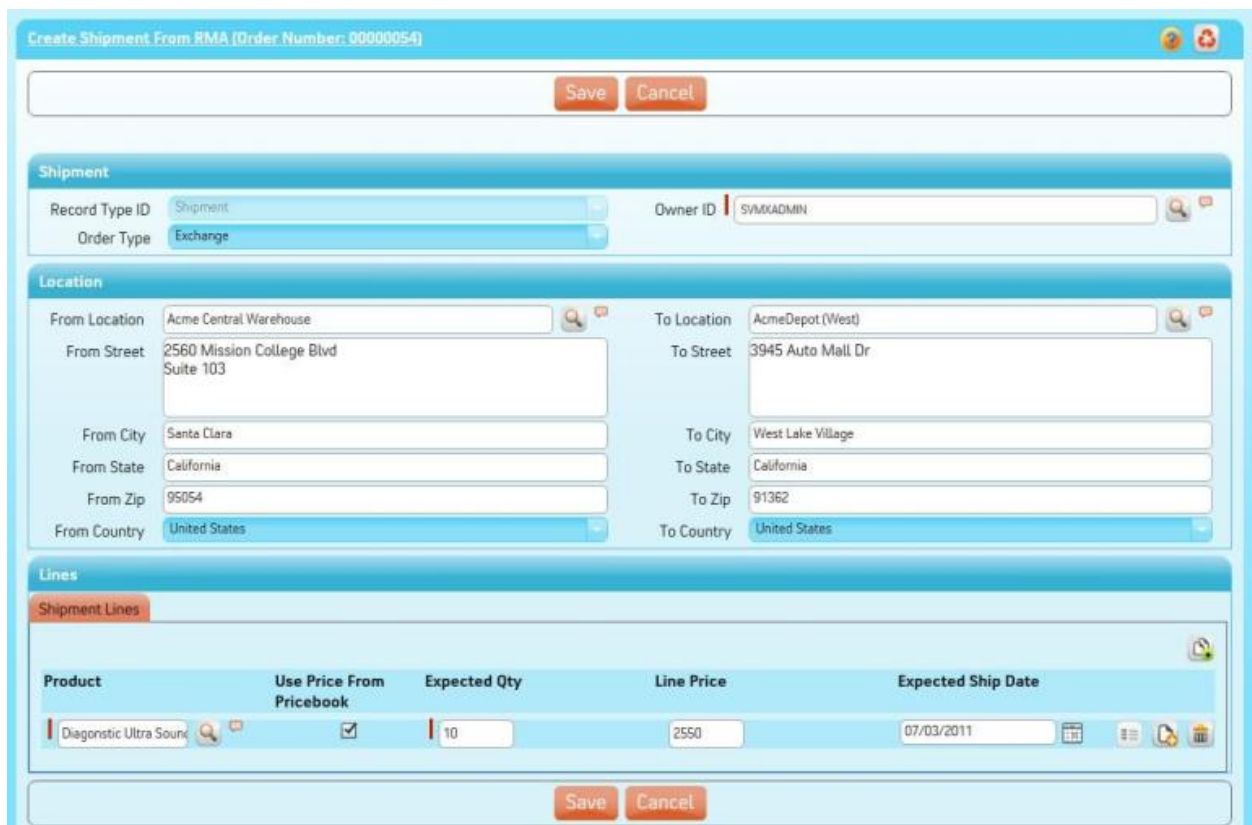
7. The RMA screen refreshes. The RMA Line and RMA Status are updated.

Create Linked Shipment from RMA

This feature allows you to create a shipment order to send the processed RMA'ed material back.

To create a linked shipment order:

1. Locate the RMA by searching in the sidebar or from a list view in the Parts Order tab. Click the order number from which you want to initiate a linked shipment order. The Create Shipment screen appears as shown below.



Create Shipment From RMA (Order Number: 00000054)

Save Cancel

Shipment

Record Type ID: Shipment
Order Type: Exchange
Owner ID: SVMKADMIN

Location

From Location: Acme Central Warehouse
From Street: 2560 Mission College Blvd Suite 103
From City: Santa Clara
From State: California
From Zip: 95054
From Country: United States

To Location: AcmeDepot (West)
To Street: 3945 Auto Mall Dr
To City: West Lake Village
To State: California
To Zip: 91362
To Country: United States

Lines

Shipment Lines

Product	Use Price From Pricebook	Expected Qty	Line Price	Expected Ship Date
Diagnostic Ultra Sound	<input checked="" type="checkbox"/>	10	2550	07/03/2011

Save Cancel

Figure 3: RMA Linked Shipment

2. Select the owner of the Shipment in the Owner ID field by using **Lookup**. Owner ID is usually the ServiceMax user who will be processing this shipment in logistics. By

default, it will be set to your user name.

3. Select **Order Type** as applicable.
4. The **From Location** and **To Location** sections will be populated automatically with the addresses from the RMA record. Edit them as required or you can also enter a new address either manually or select an existing location using **Lookup**.
5. The **Order Lines** section will also be populated automatically with the information of the product(s) that were RMA'ed. Enter the **Expected Quantity**.
6. Click **Add Lines** to add more products. Alternatively, to delete one or more products listed, select the records by checking their checkbox and then click **Delete Lines**.
7. Check the **Use Price Book** checkbox and then click **Get Price** to automatically calculate the price of a product. Note that the price is calculated only if a valid price book is configured for shipments. To enter a price manually, check the **Use Price Book** checkbox.
8. Enter **Expected Ship Date**.
9. Click **Save** to save the created shipment order.

Below are the configurable options available for this screen. These settings can be adjusted by your ServiceMax administrator.

- Default address type.
- **Use Pricebook** should be checked by default or not.
- Default Shipment Line Pricebook.
- Mapping of fields between RMA and Shipment. This includes your organization's custom fields too.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

See Also:[Account](#)[Contacts](#)[Location](#)[Product](#)[Parts Order - Standard Settings](#)[Serial Number Selection](#)[Shipment Order](#)

SHIPMENT ORDER

Overview

Shipment Order is an internal document that authorizes products or parts to be shipped to a customer or field inventory location.

There are two steps in a shipment process:

1. The shipment order is initiated by a support center engineer or inventory planner. A copy of the shipment note is sent to the receiving entity (customer or service engineer).
2. The shipment is processed and closed at the shipping location when the products are actually shipped to the specified destination.

ServiceMax uses the Parts Orders tab for Returned Material Authorization (RMA) and Shipment Orders. See [RMA](#) for more information about the RMA module.

Access and Permissions

Actions	User Permissions Needed
To view the Parts Order tab:	"Read" on Parts Order
To view Shipment Orders:	"Read" on Parts Order, Parts Order Line, Account, Contact, Location, Installed Product, and Product
To create or clone Shipment Orders:	"Create" on Parts Order and Parts Order Line "Read" on Account, Contact, Location, Installed Product and Product
To change Shipment Orders:	"Edit" on Parts Order and Parts Order Line "Read" on Account, Contact, Location, Installed Product and Product

Actions	User Permissions Needed
To delete Shipment Orders:	"Delete" on Parts Order and Parts Order Line
To create Shipment Order products:	"Create" on Parts Order Line "Read" on Product
To change Shipment Order products:	"Edit" on Parts Order Line "Read" on Product
To delete Shipment Order Products:	"Delete" on Parts Order Line
To process/complete a Shipment Order:	"Edit" on Parts Order and Parts Order Line
To process shipments for a Shipment Order:	"Edit" on Parts Order and Parts Order Line "Read" on Product and Location "Create", "Edit", "Delete" on Product Stock, Stocked Serial, and Stock History
To cancel a Shipment Order:	"Edit" on Parts Order and Parts Order Line

Click the **Parts Order** tab to display the Parts Order home page and then click **New** in the Recent Parts Order section. Select the **Record Type** for the new record as **Shipment** and then click **Continue**. The New Parts Order screen appears with the **Record Type** as **Shipment**.



Caution: Remember that when you are deleting a shipment order you will not be warned if the shipment order is used in a related record. Since shipment orders are strongly tied to Cases, Installed Products, and Work Orders, review and make sure the shipment order record is not used in any related records.



Note: Fields related to some standard objects such as Cases and Opportunities are available for use in Shipment Order only if allowed by your ServiceMax license. Please contact your ServiceMax administrator to know the type of license used by your organization.

Shipment Order Fields

Fields	Description
Record Type	Indicates if this is a shipment order or Shipment.
Case	Support case from which this shipment order is originated. This is a lookup to an existing Salesforce case record.
Work Order	Work Order related to this Shipment Order. This is a lookup to an existing Work Order record in ServiceMax.
Account	Company initiating this Shipment Order. This is a lookup to an existing Salesforce account record.
Contact	Name of the contact person from the customer account for this shipment order. This is a lookup to an existing Salesforce contact record.
Parts Order Reference	Reference to another Parts Order number within ServiceMax.
Order Status	Current status of the shipment order.
Priority	Priority of the shipment order.
Expected Ship Date	Date when the products are expected to be shipped to the customer. Useful for planning and allocating resources.
Service Engineer	Name of the service engineer associated with the shipment order. This is a lookup to the existing Salesforce user record.
Sales Order Number	Sales order number reference from a back-office Enterprise Resource Planning (ERP) application.
From Location	Name of your organization's location from where the products will be shipped. This is a lookup to an existing location record in ServiceMax.
From Street	"Street" part of the source address.
From City	"City" part of the source address.
From State	"State" part of the source address.
From Zip	"Zip" part of the source address.
From Country	"Country" part of the source address.
Warehouse	Name/number of the warehouse from where the product will be shipped.

Fields	Description
To Location	Name of the customer's location to which the products are shipped. This is a lookup to an existing location record in ServiceMax.
To Street	"Street" part of the destination address.
To City	"City" part of the destination address.
To State	"State/Province" part of the destination address.
To Zip	"Zip/postal code" part of the destination address.
To Country	"Country" part of the destination address.
Shipping/Receiving Notes	Instruction for the shipping department. This is a free text entry field.
Shipping Terms	List indicates the standard shipping terms such as FOB, EXW, DDP.
Delivery Option	Special delivery requirements such as Saturday Delivery.
Bill To	Indicates who should be billed for shipping charges.
Billing Type	Indicates whether the billing is covered by an agreement or this is a paid shipment.
Shipping Courier	Name of the courier company used to ship the product. This is a lookup to an existing Salesforce Account record.
Tracking Number	Tracking number given by courier company.
Canceled By	The Salesforce user who canceled this Parts order.
Canceled On	Date/time when this Parts order was canceled.
Closed By	Salesforce user who closed this Parts order.
Closed On	Date/time when this Parts order was closed.
Parts Request	The ServiceMax Parts Request for which this shipment order is created.

Shipment Order Line Fields

Record Type	Always set to Shipment
Parts Order	Shipment Order number. This is a lookup to an existing Shipment Order in ServiceMax.

Record Type	Always set to Shipment
Product	Name of the product to be shipped in this Shipment Order. This is a lookup to an existing Salesforce Product record.
Serial Number	ID of the installed product shipped in this shipment order. This is a lookup to an existing Installed Product record in ServiceMax.
Expected Ship Date	Date on which the product is shipped to the customer/field location.
Expected Qty	Number of products shipped. Usually 1 for a serialized product.
Packing Instructions	Any special handling notes for shipping department.
Actual Ship Date	Date on which the product was actually shipped.
Actual Qty	Actual number of units shipped against expected quantity.
Return/Ship Location	The actual location/location where the product was shipped. This is a lookup to an existing location record.
Service Engineer	Name of the service engineer. This is a lookup to an existing Salesforce user record.
Sales Order Number	Sales order reference from back-office ERP application.
Canceled By	The Salesforce user that canceled the shipment line. This is set automatically when a user cancels the shipment line.
Canceled On	Date/time when this shipment was canceled. This is set automatically when a user cancels the shipment line.
Closed By	The Salesforce user who closed this Parts order.
Closed On	Date/time when this Parts order was closed.
Parts Request Line	The ServiceMax Parts Request for which this shipment order was created.
Posted To Inventory	Flag indicates if this Parts order line has been posted to inventory or not.
Work Details	The ServiceMax Work Order parts request line for which this shipment line was created.

Adding Products to a Shipment Order

Locate the shipment order by searching in the side bar or from a list view in the Parts Orders tab and then click the Shipment Order number to which you want to add products.

There are two methods available to add products to a shipment order.

Method 1: Single-line Entry

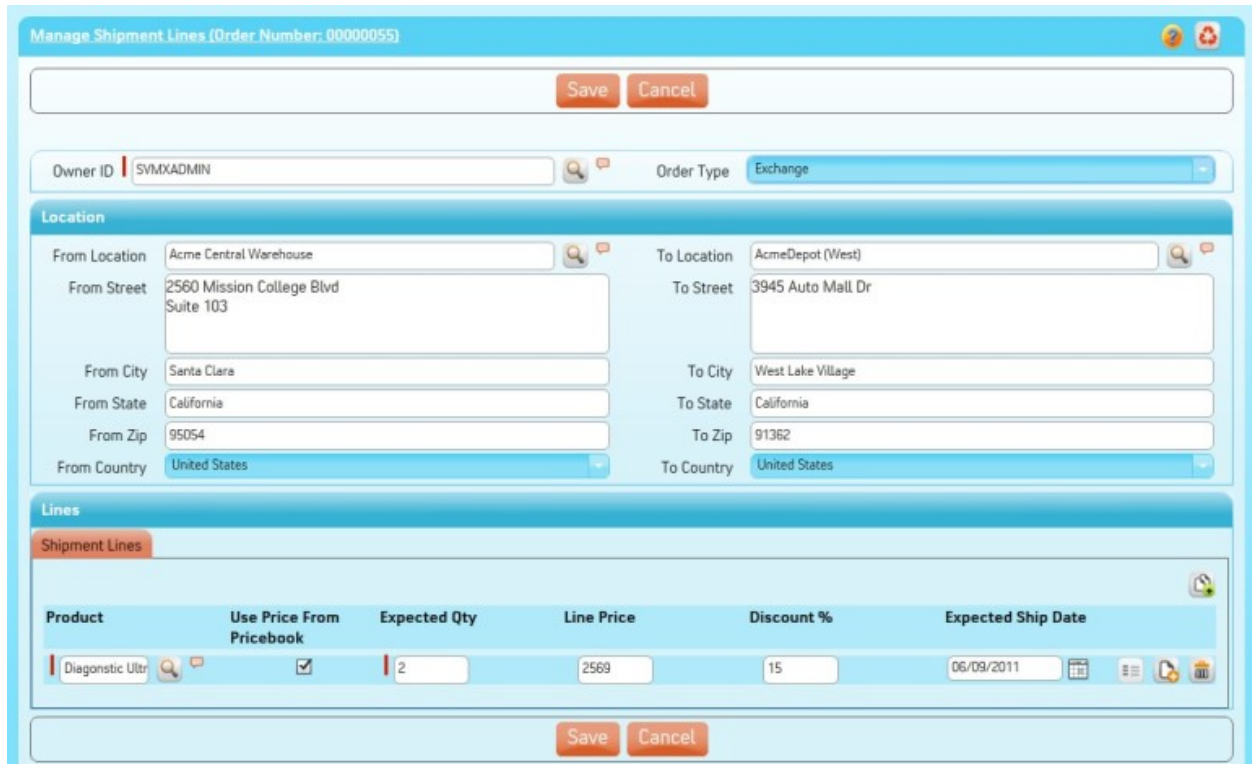
1. Click **New** from the Parts Order Lines related list.
2. Select **Shipment** for the **Record Type**. The Shipment Order number appears.
3. Select **Open** for **Line Status**.
4. Enter the name of the product to be shipped or use the **Lookup** icon to search and select the product.
5. Enter the ID of the installed product to be shipped or use the **Lookup** icon to search and select the installed product.
6. Enter the expected ship date.
7. Enter the expected quantity. For serialized products, this will normally be **1**.
8. Enter special packing instructions if necessary.
9. Leave the actual shipment details section blank.
10. Click **Save**.



Note: A Shipment Order can have an unlimited number of products. Repeat the above steps for each product to be shipped using the Shipment Order. You can also click **Save & New** after creating a new Shipment Order product record.

Method 2: Multi-line Entry

1. Click **Create Lines** from the Shipment screen.



The screenshot shows the 'Manage Shipment Lines' window for Order Number 00000055. It includes fields for Owner ID (SVMXADMIN), Order Type (Exchange), and Location details (From and To). The Location section includes fields for From Location, From Street, From City, From State, From Zip, From Country, To Location, To Street, To City, To State, To Zip, and To Country. Below the Location section is a table for Shipment Lines with columns: Product, Use Price From Pricebook, Expected Qty, Line Price, Discount %, and Expected Ship Date. The table contains one row for 'Diagnostic Ultr' with a checked 'Use Price From Pricebook' box, an expected quantity of 2, a line price of 2569, a discount of 15, and an expected ship date of 06/09/2011. The window has 'Save' and 'Cancel' buttons at the top and bottom.

Figure 1: Shipment Lines Screen

The top section shows the **From** (Source) and **To** (Destination) locations from the shipment. All products that were already entered in the shipment appear at the bottom section.

2. Select **Order Type** as applicable.
3. Select an existing location using the **Lookup** or enter the address in the **From Location** section.
4. Select an existing location using the **Lookup** or enter the address in the **To Location** section.
5. Modify the existing product records, if needed.
6. Click the **Add** button to add a new product to the Shipment Order. An empty record is added at the bottom of the list.
 - a. Enter the name of the product or use the **Lookup** to search and select the

product.

- b. To delete product records entered, click **Delete** beside each record.
 - c. Enter the expected quantity.
 - d. Check the **Use Price Book** checkbox and then click **Get Price** to calculate the price of a product automatically. Note that the price is calculated only if a valid price book is configured for shipments. To enter a price manually, check the **Use Price Book** checkbox.
 - e. Click **Add Line** to add as many products as required. Alternatively, check the record using the checkbox and then click **Delete Lines** to delete one or more products.
7. Click **Save** to save your changes.

Processing a Shipment Order with no Inventory Updates

This step is typically performed when the material is shipped. Locate the shipment order by searching in the sidebar or from a list view in Parts Orders tab. Click the Shipment Order number which you want to process. There are three ways to process/ship shipment order lines:

- [Processing Individual Shipment Order Items](#)
- [Processing an Entire Shipment Order with One Click](#)
- [Processing an Entire Shipment Order with Ship Quantity](#)

Method 1: Processing Individual Shipment Order Items

You can edit each shipment order line record and enter shipment information. This is done when there are any discrepancies between expected quantity and date, and actual (shipped) quantity and date.

1. In the related list section of the Parts Order Lines, click **Edit** next to the shipment order item you want to receive and process.
2. Enter the actual ship date. You can enter today's date by just clicking the date link next to the date field.
3. Enter actual quantity shipped.

4. Enter the name of the service engineer who should be notified upon shipment. This could be a field service engineer awaiting the shipment to complete a Work Order.
5. Enter the name of customer/field location where the product is shipped or use the **Lookup** icon to search and select the location.
6. Change the **Line Status** to **Completed** and then click **Save**.
7. When you have completed all the line items in the Shipment Order, edit the Shipment Order, change the **Order Status** to **Closed** and then click **Save**.

Method 2: Processing an Entire Shipment Order with One Click

You can process all line items at once if the shipped product information matches expected product for all shipment order lines.

To process an entire shipment order in a single click:

1. Click **Complete Shipment** to complete the shipment order.
2. Click **OK** when prompted.

This will change the shipment **Order Status** to **Closed**, set the shipment order **Line Item Status** to **Completed**, and set the shipment order shipping information to match the expected information for all line items.

Method 3: Processing an entire Shipment Order with Ship Quantity

You can process multiple shipment lines by entering ship quantity only.

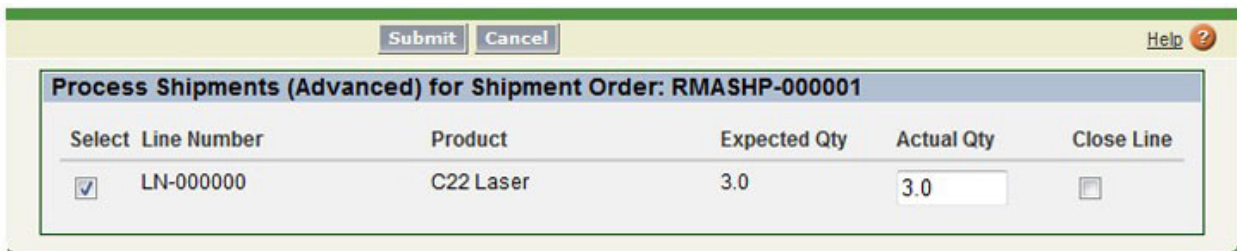
1. Click **Process Shipment**.
2. In the screen that appears, enter the actual shipped quantity for applicable products. Enter zero if a product is not shipped. If you make a partial shipment, you can either select to leave the shipment request open for future shipments or close the remaining by checking the **Close Request** checkbox.
3. Click **Submit** after entering ship quantity for all the items. The shipment order screen will be refreshed and the shipment order line and shipment order status is updated and displayed.

Processing a Shipment with Inventory Updates

When parts are ready to ship to the location specified in a Shipment Order, you should process the shipment in ServiceMax for inventory accountability and to complete the Shipment Order.

To process shipments for a Shipment Order:

1. Locate the Shipment Order by searching in the sidebar or from a list view in Parts Order tab and then click the Shipment Order number associated with the shipment you want to process. Make sure the Shipment Order is **Open** and the destination location is not blank. Also ensure the Shipment Order has at least one product to be shipped.
2. Click **Process Shipments (Inv)**. A screen appears (sample shown below) where you can enter the actual shipment information. The screen lists all products in the Shipment Order that are not yet shipped. The Quantity Shipped is defaulted to the pending quantity requested.



Select	Line Number	Product	Expected Qty	Actual Qty	Close Line
<input checked="" type="checkbox"/>	LN-000000	C22 Laser	3.0	3.0	<input type="checkbox"/>

Figure 2: *Process Shipments (Advanced) Screen*

3. When entering shipped quantities, one or more of the following scenarios may be applicable:

Shipment Scenario	How to process it
All the products in the Shipment Order have been shipped as requested.	Click Submit . All the open lines and the Shipment Order will be closed automatically.

Shipment Scenario	How to process it
A product has not been shipped now but may be later.	Enter Zero in Actual Qty . Make sure the Close Line checkbox is unchecked. This leaves the line open for future shipment.
A product has not been shipped and it will not be shipped at all.	This amounts to the cancellation of an open Shipment Order Line. Enter Zero in Actual Qty . Make sure the Close Line checkbox is selected. If your organization does not permit short-closing lines, this check box may be disabled.
A product has been shipped partially now. The remaining quantity is expected to be shipped later.	Enter the quantity shipped. Make sure the Close Line checkbox is unchecked. This leaves the line open for future shipment.
A product has been shipped partially now. The remaining quantity will not be shipped at all.	This indicates the short-closure of a Shipment Order Line. Enter the quantity shipped. Make sure the Close Line checkbox is checked. If your organization does not permit short-closing line, this checkbox may be disabled.

- Click **Submit** to confirm the entries. Alternatively, click **Cancel** to return to the Shipment Order screen.
- If your organization tracks inventory at the serial number level, the bottom section of the screen allows you to enter/select serial numbers for serialized products. To enter serial numbers for a product, check the checkbox against the product in the list. See [Serial Number Selection](#) to learn about how serialized tracking of inventory works in ServiceMax.
- The Shipment Order screen will be refreshed and the Shipment Order Line and Shipment Order Status are updated.



Note: A serialized product is shipped to a non-stocking location. The Available stock the source location is reduced by the shipped quantity, and DECREASED stock at the source location is increased by the shipped quantity. The shipped serials are associated with the DECREASED stock record.

Canceling a Shipment Order

When you don't have any processed shipments for a Shipment Order, you can cancel the order. Once a Shipment Order is canceled, it will not be available for processing shipments anymore.

To cancel a Shipment Order:

1. Locate the Shipment Order by searching in the side bar or from a list view in the Parts Order tab and then click the Shipment Order you want to cancel. Make sure the Shipment Order is **Open**. Also ensure none of the product in the Shipment Order is shipped.
2. Click **Cancel Shipment** and then click **OK** when prompted.

See Also:

[Account](#)

[Contacts](#)

[Location](#)

[Product](#)

[Parts Order - Standard Settings](#)

[Returned Material Authorization \(RMA\)](#)

[Serial Number Selection](#)

WORK ORDER

Overview

Work Order is used to plan, execute and manage Service events for Field and Depot Service activities. Depending on the service scenario, the Order creation can be triggered by many events:

- When creating a Support Case.
- When one or more installed products require periodic service or calibration.
- When troubleshooting a customer problem in the field.
- If the field service engineer learns that the product requires specialized conditions of a factory/depot to resolve the problem.
- When a new/repair shipment to the customer requires specialized installation activity.

In ServiceMax, Work Orders can be used to manage the entire service delivery process, from creating estimates and quotations, to requesting and receiving parts, to recording usage/consumption, to closure and analysis.



Note: Work Order is also interchangeably referred to as Service Order in ServiceMax.

Access and Permissions

Action	Users Permissions Needed
To view the Work Orders tab:	"Read" on Work Order
To view Work Orders:	"Read" on Work Order and Work Details

Action	Users Permissions Needed
To create or clone Work Orders:	"Create" on Work Order, Account, Contact, Installed Product, Case, Service Team, Technician, and Work Details
To change Work Orders:	"Edit" on Work Order, Account, Contact, Installed Product, Case, Service Team, Technician, and Work Details
To delete Work Orders:	"Delete" on Work Order
To perform Work Order Entitlement:	"Edit" on Work Order "Read" on Account, Contact, Installed Product, Service Contract, Covered Products, Entitled Contacts, Warranty Terms, Product Warranty, and Product "Create" on Entitlement History
To find and assign a Service Team to a Work Order:	"Edit" on Work Order "Read" on Service Team
To find and assign a Work Order:	"Edit" on Work Order "Read" on Technician/Equipment
To perform Advanced Dispatch:	"Edit" on Work Order "Read" on Service Team, Technician/Equipment "Modify All Data" enabled in login user's profile
To create an RMA from a Work Order:	"Read" on Work Order, Account, Contact, Installed Product, Product, Location, and Work Order Details "Create" on Parts Order and Parts Order Line
To create Work Order Lines:	"Create" on Work Details "Read" on Installed Product, Location, and Product
To edit Work Order Lines:	"Edit" on Work Details "Read" on Installed Product, Location, and Product
To delete Work Order Lines:	"Delete" on Work Details

Action	Users Permissions Needed
To create Usage Lines from Estimates:	"Create" on Work Details "Read" on Installed Product, Location, and Product
To create quotations:	"Read" on Work Order, Product, Account, Contact, and Work Details "Create" on Service Quotes, and Quote Item.
To cancel all parts request:	"Edit" on Work Order and Work Details
To perform a stock lookup:	"Read" on Location, Product and Product Stock "Edit" on Work Details.
To create a Shipment Order:	"Read" on Work Order, Account, Contact, Product, and Work Details "Create" on Parts and Parts Order Line.
To process receipts on Work Order:	"Read" on Location. "Edit" on Work Order and Work Details "Create" and "Edit" on Product Stock, Stocked Serial, and Stock History
To view process bottlenecks:	"Read" on Process Bottlenecks, Case, Contact and Work Order
To create process bottlenecks:	"Create" on Process Bottlenecks "Read" on Case, Work Order, and Contact
To change process bottlenecks:	"Edit" on Process Bottlenecks "Read" on Case, Work Order, and Contact
To delete process bottlenecks:	"Delete" on Process Bottlenecks
To close a Work Order:	"Edit" on Work Order and Work Details
To post usage to inventory:	"Edit" on Work Order, Product, Location, and Work Details "Create" and "Edit" on Product Stock, Stocked Serial, and Stock History

Click the **Work Orders** tab to display the Work Order home page.



Caution: When deleting Work Orders, you will not be warned if the Work Order is used in a related record. Since Work Orders are strongly tied to Cases, installed products, and Parts orders, review and make sure the Work Order record is not used in any related records.

Work Order Fields

Fields	Description
Case	Support Case from which this Work Order is originated. This is a lookup to an existing Salesforce Case record.
Account/Company	Company initiating this Work Order. This is a lookup to an existing Salesforce Account record.
Contact	Name of the contact person from the customer account for this Work Order. This is a lookup to an existing Salesforce Contact record.
Component	The component installed product which is at the center of the issue reported by the customer.
Entitlement Notes	Information entered by the support center engineer at the time of entitling the customer for the requested services.
Entitlement Records	List of available entitlement records: warranties and service/maintenance contract.
Top-level	The top-level installed product to which the component installed product belongs.
Parts Order	Reference to a Parts Order number in ServiceMax.
Problem Description	Detailed description of the problem as reported by the customer.
Order Status	Current status of the Work Order.
Priority	Priority of the Work Order.
Customer Down	If the customer situation is critical affecting the uptime due to the problem reported.

Fields	Description
Order Type	Type of Work Order. Options include: Field Service, Depot Repair, and so on.
Purpose of Visit	If the Order Type is Field Service, specific reasons for the field service.
Billing Type	How the Work Order expenses will be accounted for. Options include: Agreement, Paid, and so on.
Service Team	Name of the Service Team that is working on the Work Order. If your organization uses ServiceMax dispatch console to manage Work Order assignments, this field will be read-only in the Work Order screen.
Technician	Name of the Technician working on the Work Order. This does not imply that this member has ownership of the Work Order record. If your organization uses ServiceMax dispatch console to manage Work Order assignments, this field will be read-only on the Work Order screen.
Work Performed	Details of work performed to address or resolve the Work Order.
Special Instructions	Relevant instruction for future service events for the same product/customer.
Customer Failure Feedback	Feedback given by the customer about the overall failure event and how your organization responded.
Corrective Action	Any corrective action taken by your engineer(s) to address the customer feedback.
Configuration - Before	Snapshot of the product's technical details before the engineer(s) started addressing it.
Configuration - After	Snapshot of the product's technical details after the engineer(s) resolved/addressed the issue.
Failure Location	Location where the product failed such as Field or Depot.
Failed Assembly	The assembly of the product that failed. Your system administrator is responsible for configuring this list for your organization's requirements.
Symptom	Symptom that was noted before the failure. Your system administrator is responsible for configuring this list for your organization's requirements.
Root Cause	Root cause of the failure. Your system administrator is responsible for configuring this list for your organization's requirements.

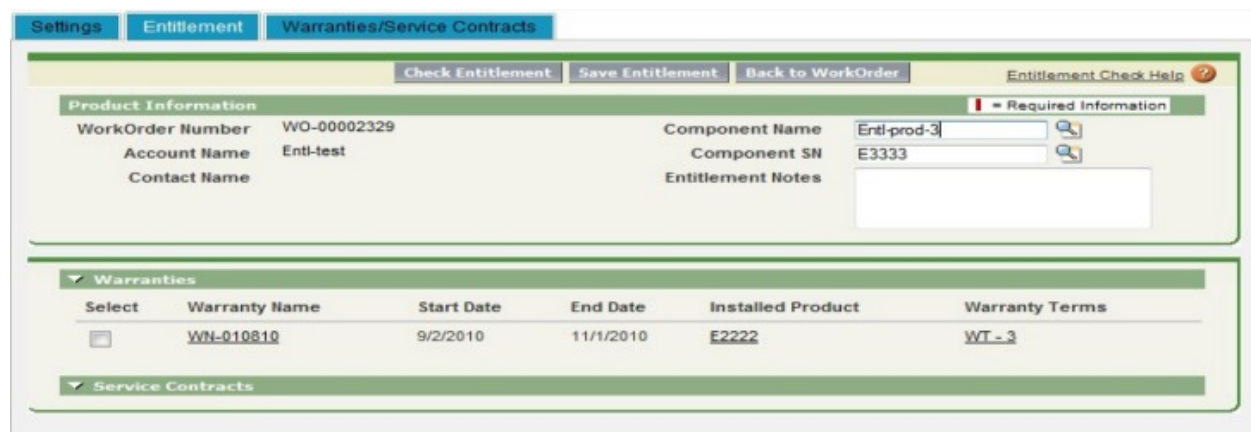
Fields	Description
How Fixed	Type of fix that was applied to resolve the problem. Your system administrator is responsible for configuring this list for your organization's requirements.
Street	"Street" part of the service location's address.
City	"City" part of the service location's address.
State	"State" part of the service location's address.
Zip	"Zip" part of the service location's address.
Country	"Country" part of the service location's address.
Dispatch Process	Dispatch process to be used to schedule which this Work Order. This is a lookup to ServiceMax Process.
Dispatch Priority	Work Order priority bucket as defined in the dispatch process. This will be calculated automatically.
Preferred Technician	Name of the preferred Technician for the Work Order. Calculated from the service contract, installed product or account wherever available.
Primary Territory	Primary Territory for the Work Order. This is calculated automatically by the OptiMax precalculation engine.
Scheduled Date Time	Schedule date and time to dispatch the Work Order.
OptiMax Status	OptiMax dispatch status for the Work Order.
OptiMax Error Text	Details of error occurred when performing precalculations for OptiMax.
Preferred Start Time	Start time for the Work Order to be scheduled. Calculated automatically based on booking window, SLA and access hours.
Preferred End Time	End time before which the Work Order must be scheduled. Calculated automatically based on booking window, SLA and access hours.
SLA Terms	SLA Terms used for dispatch process.
Service Duration (in Seconds)	Duration in minutes required for the Work Order. Calculated from rules by OptiMax precalculation engine.
Is PM Work Order	Indicates if this is a preventive maintenance Work Order or not. Set automatically by PM scheduler.

Fields	Description
Scheduled Date	Scheduled date for the Preventive maintenance Work Order.
Preventive Maintenance Plan	The source PM Plan that resulted in this preventive maintenance Work Order. Set by PM scheduler.
PM Tasks Created	Indicates if PM tasks have been created.

Work Order Entitlements

The entitlement feature utilizes advanced user interface capabilities to deliver a rich interactive experience to users.

To initiate entitlement check a Work Order and click **Entitlement**. The following screen appears:

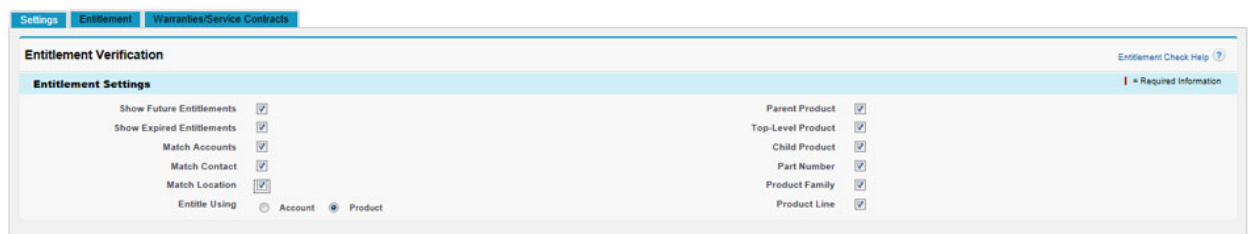


The screenshot shows the 'Entitlement' tab in the Work Order interface. It includes a 'Check Entitlement' button and a 'Save Entitlement' button. The 'Product Information' section displays the Work Order Number (WO-00002329), Account Name (Entl-test), and Contact Name. The 'Component Name' is 'Entl-prod-3' and the 'Component SN' is 'E3333'. The 'Entitlement Notes' field is empty. Below this, the 'Warranties' section shows a table with columns: Select, Warranty Name, Start Date, End Date, Installed Product, and Warranty Terms. The table contains one row with a checkbox, 'WN-010810', '9/2/2010', '11/1/2010', 'E2222', and 'WT-3'. The 'Service Contracts' section is also visible.

Figure 1: Work Order Entitlement Screen

The Entitlement screen has three tabs:

- **Settings:** To show the default entitlement options as shown below. See various [Entitlement options](#) for more information.



The screenshot shows the 'Settings' tab in the Work Order interface. It includes an 'Entitlement Verification' section with a 'Show Future Entitlements' checkbox and a 'Show Expired Entitlements' checkbox. The 'Match Accounts' checkbox is checked. The 'Match Contact' checkbox is checked. The 'Match Location' checkbox is checked. The 'Entitle Using' section has radio buttons for 'Account' and 'Product', with 'Product' selected. The 'Parent Product' checkbox is checked. The 'Top-Level Product' checkbox is checked. The 'Child Product' checkbox is checked. The 'Part Number' checkbox is checked. The 'Product Family' checkbox is checked. The 'Product Line' checkbox is checked.

Figure 2: Entitlement Options Screen

- **Entitlement:** To perform entitlement verification on the Work Order. In the Product Information section at the top-left, information from Work Order record appears. If the Work Order is already entitled using a warranty or service contract, it appears at the bottom section.
- **Warranties/Service Contract:** To view the details for warranty or service contract records as shown below:

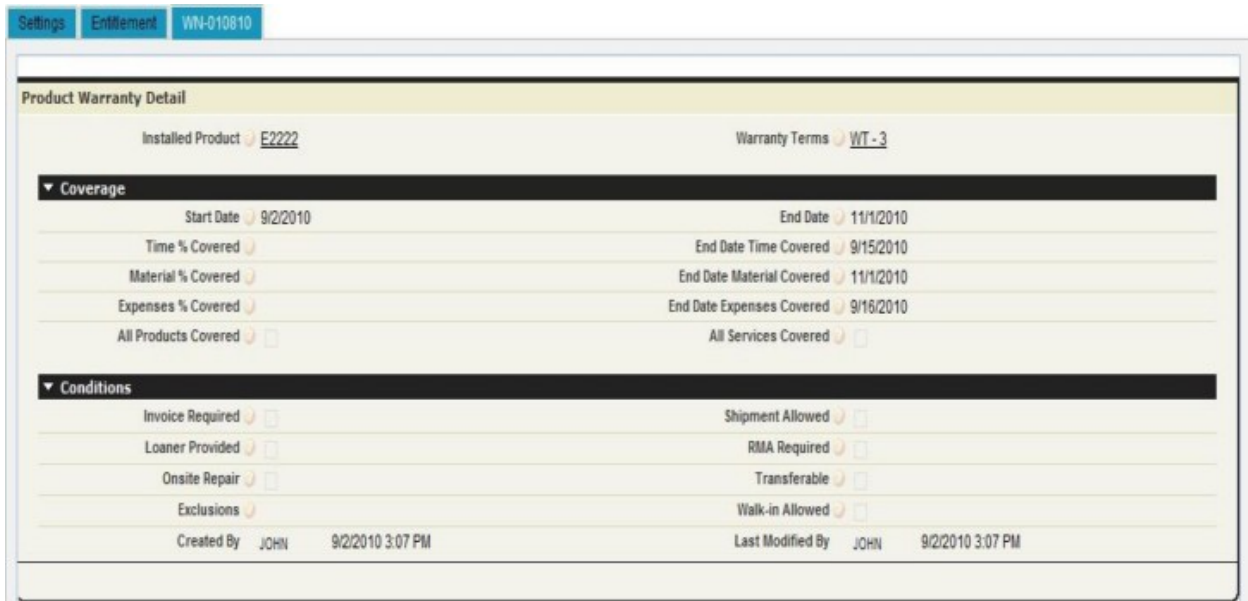


Figure 3: Warranty or Service Contract Screen

Entitlement Options

Option	Purpose
Show Future Entitlements	Include any warranties and service contracts that are yet to be effective.
Show Expired Entitlements	Include warranties and service contracts that have expired.
Match Account	Enforce matching of Account on service contracts with Account on the Work Order. This is relevant when a service contract is purchased by your customer but the end customer of the product is different.

Option	Purpose
Match Contact	Enforce matching of Contact given in the Work Order to the list of entitled contacts in the service contract. This is useful when some contact person from your customer organizations are authorized to contact your support centers.
Match Location	Enforce matching of Location in the Work Order to the list of covered locations in the service contract.
Entitle Using	This indicates if the product or the installed product is considered in entitlement at all. If Account-based entitlement is selected, all the valid service contracts for the given account appear, irrespective of the product. If Product-based entitlement is selected, only those warranties and service contracts that provide the coverage appear.
Parent	Consider the entitlement coverage of the product's immediate parent (in the installed product tree) also. This is useful when your organization implements the installed product hierarchy.
Top-Level	Consider the entitlement coverage of the product's top most product (in the installed product tree) also. This is useful when your organization implements the installed product hierarchy.
Child	Consider the entitlement coverage of the child installed products of the given product. Your administrator can also configure the number of levels to traverse in the product hierarchy.
Part Number	Consider the entitlement coverage of the part number associated with the given installed product.
Line	Consider the entitlement coverage of the product line of the part number associated with the given installed product.
Family	Consider the entitlement coverage of the product family of the part number associated with the given installed product.



Note: Entitlement Criteria such as Parent, Top-Level, Child, Part Number, Family and Line are applicable only for Product-based entitlements.

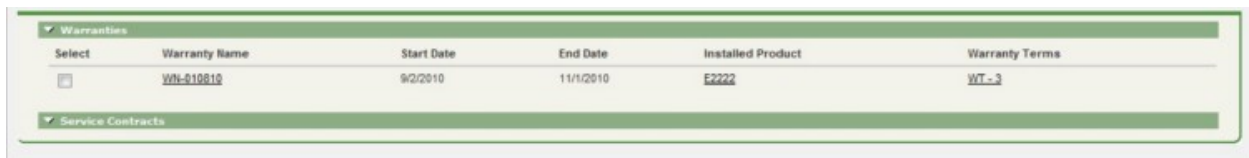


Note: Depending upon your organization's requirements, the default values for the above options can be set up by your administrator. If you find the entitlement options disabled, your administrator may have prevented overriding of the settings by end users.

Work Order Entitlement Process

In order to entitle the customer for requested support/services, the Work Order must be created first with the account information. Once you create the Work Order, locate the Work Order by searching the sidebar or from a list view in the Work Orders tab and then click the Work Order number for which you want to perform entitlement verification.

1. Enter the part or full serial number in the component serial/lot number field and then click the **Lookup** icon to find if the serial number exists. Select the applicable serial number for the product.
2. Click **Check Entitlement** to view the coverage available for the product. ServiceMax will find all the matching warranties and service contracts based on the entitlement option selected. The matching warranties and service contracts appear at the bottom of the screen as shown below.



Select	Warranty Name	Start Date	End Date	Installed Product	Warranty Terms
<input type="checkbox"/>	WN-810810	9/2/2010	11/1/2010	E2222	WT - 3

Service Contracts

Figure 4: Matching Warranties and Service Contracts Screen

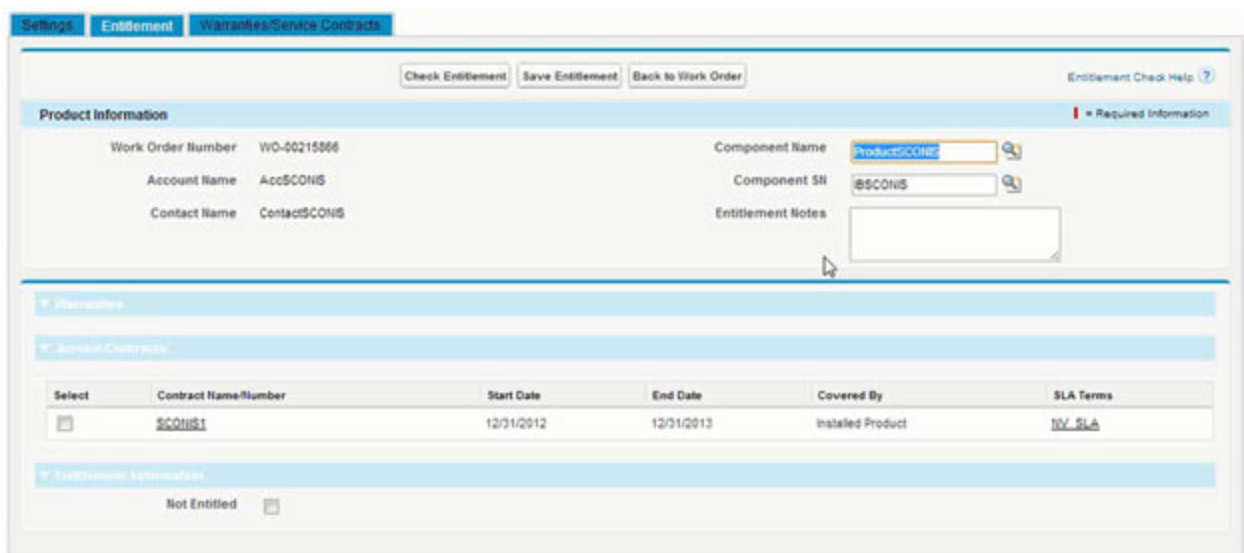
3. Click the **Warranty**, **Service Contract**, or **SLA Terms** link to see more details about a warranty, a service contract, or an SLA Term, respectively. This will display the corresponding records in the Warranties/Service Contracts tab.
4. Check the checkbox against the relevant entitlement record and then click **Save Entitlement**. This action means you have selected to entitle the customer based on the conditions outlines in the selected warranty or service/maintenance contract. Only one record can be selected from the entitlement list. The Work Order screen refreshes with the details.

If you are not sure about choosing the proper entitlement or if you wish to account for data corrections and not to lose the product information, enter entitlement notes and then click **Save Entitlement**. This saves only the product information and allows you to return to the Work Order later to complete the entitlement check.

Work Order Included Services

To select available contract services to entitle, the Service Based Entitlement setting (SET022) must be enabled.

1. Click the **Service Contract** tab.



The screenshot shows the 'Entitlement' tab in the Service Contracts screen. It includes fields for Product Information (Work Order Number, Account Name, Contact Name, Component Name, Component SN, Entitlement Notes) and a table of Service Contracts. The table has columns: Select, Contract Name/Number, Start Date, End Date, Covered By, and SLA Terms. One contract is listed: SCONIS1, 12/31/2012, 12/31/2013, Installed Product, NV SLA. Below the table is a 'Not Entitled' checkbox.

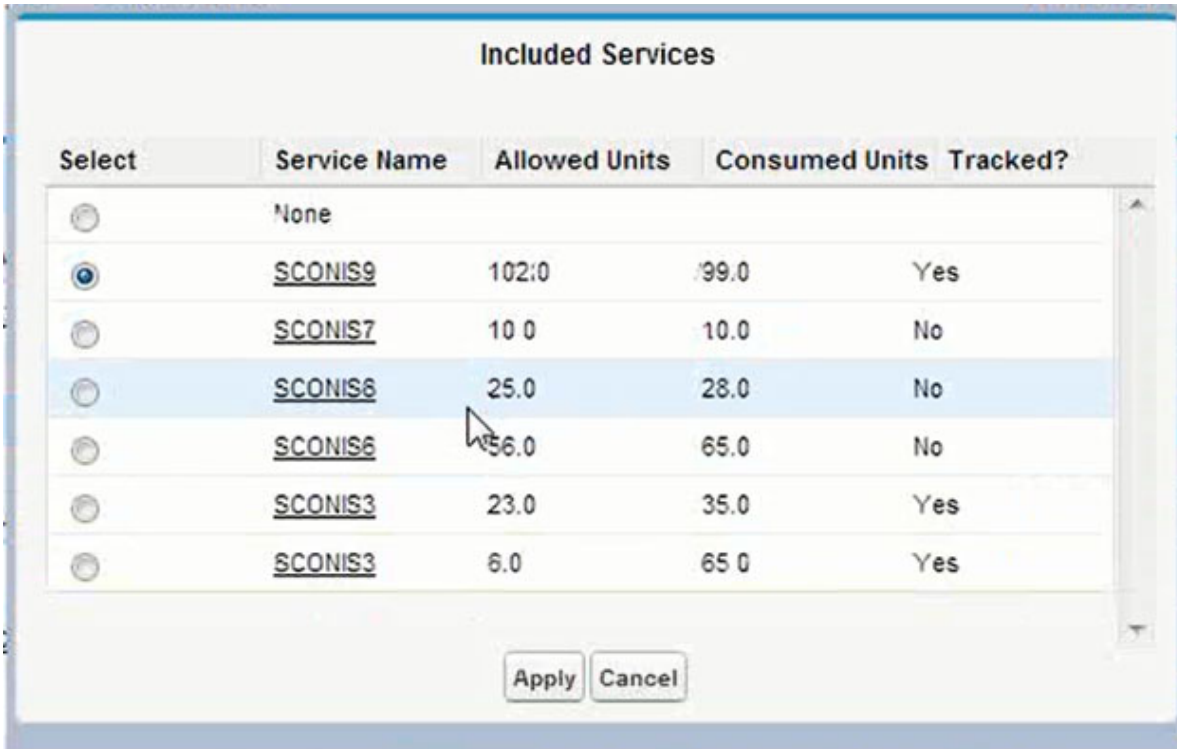
Figure 5: Service Contracts Screen (Entitlement Tab)

2. Click the **Check Entitlement** button.
3. Click the **Select a Service** link for a contract that has services available (see figure below).

Select	Contract Name/Number	Start Date	End Date	Covered By	SLA Terms	Selected Service	
<input checked="" type="checkbox"/>	122	8/31/2011	9/4/2012	Part	Gold		No Services Available
<input checked="" type="checkbox"/>	CContract-United-Cloned	12/26/2012	6/30/2013	Installed Product	NV SLA	Break Fix Available Units: 7	Select a Service
<input checked="" type="checkbox"/>	NV-12246	8/31/2011	9/4/2012	Product Family	Gold		No Services Available
<input checked="" type="checkbox"/>	SCONIS1	12/31/2012	12/31/2013	Installed Product	NV SLA	SCONIS2 Available Units: 3	Select a Service
<input checked="" type="checkbox"/>	SCONIS2	12/31/2012	12/31/2013	installed Product	NV SLA	SCONIS2 Available Units: Unlimited	Select a Service

Figure 6: Select Available Services

4. Select an available service for the contract. In the Included Services dialog box, select the services you want to include for the contract, or click **None** if you do not want to include any services. See figure below.



The screenshot shows a dialog box titled "Included Services" with a table of services. The table has five columns: "Select", "Service Name", "Allowed Units", "Consumed Units", and "Tracked?". The "None" option is selected in the "Select" column. The "Service Name" column contains several entries, including "SCONIS9", "SCONIS7", "SCONIS6", and "SCONIS3". The "Allowed Units" column shows values like 102.0, 10.0, 25.0, 56.0, 23.0, and 6.0. The "Consumed Units" column shows values like 99.0, 10.0, 28.0, 65.0, 35.0, and 65.0. The "Tracked?" column shows "Yes" or "No". At the bottom of the dialog box are "Apply" and "Cancel" buttons.

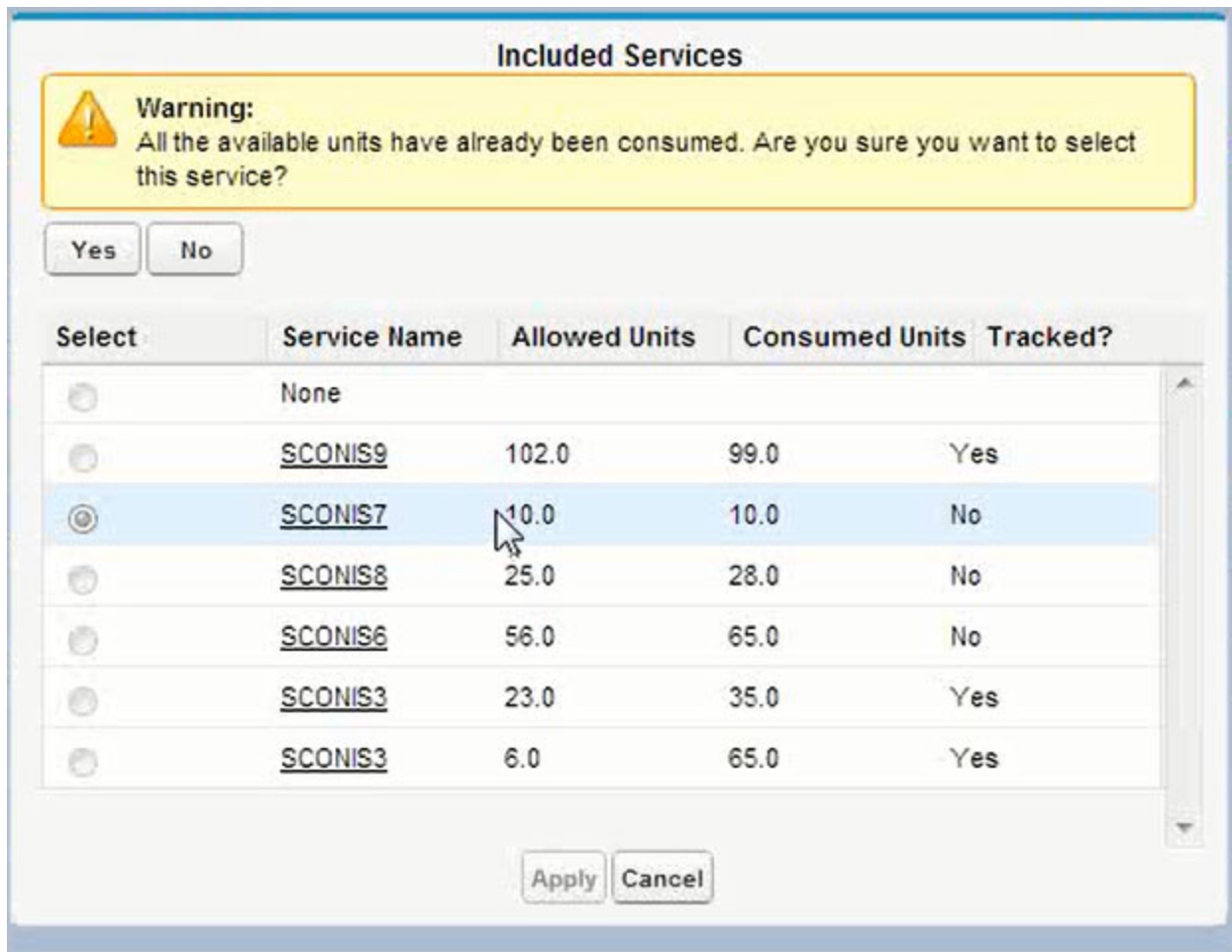
Select	Service Name	Allowed Units	Consumed Units	Tracked?
<input type="radio"/>	None			
<input checked="" type="radio"/>	SCONIS9	102.0	99.0	Yes
<input type="radio"/>	SCONIS7	10.0	10.0	No
<input type="radio"/>	SCONIS6	25.0	28.0	No
<input type="radio"/>	SCONIS6	56.0	65.0	No
<input type="radio"/>	SCONIS3	23.0	35.0	Yes
<input type="radio"/>	SCONIS3	6.0	65.0	Yes

Figure 7: Included Services



Note: The Allowed Units column displays how many units are available for the service. The Consumed Units column displays the number of units consumed.

If you exceed the available units for a service, you will see a warning message asking you to confirm your selection. See figure below.



Included Services

Warning:
All the available units have already been consumed. Are you sure you want to select this service?

Yes No

Select	Service Name	Allowed Units	Consumed Units	Tracked?
<input type="radio"/>	None			
<input type="radio"/>	<u>SCONIS9</u>	102.0	99.0	Yes
<input checked="" type="radio"/>	<u>SCONIS7</u>	10.0	10.0	No
<input type="radio"/>	<u>SCONIS8</u>	25.0	28.0	No
<input type="radio"/>	<u>SCONIS6</u>	56.0	65.0	No
<input type="radio"/>	<u>SCONIS3</u>	23.0	35.0	Yes
<input type="radio"/>	<u>SCONIS3</u>	6.0	65.0	Yes

Apply Cancel

Figure 8: Included Services Warning Message

- Click **Yes** to confirm.
- Click the **Apply** button.
- Click the **Save Entitlement** button.

View/Manage SLA Clocks on a Work Order

When advanced SLA management is enabled for your organization, ServiceMax SLA engine calculates commitment times automatically on a Work Order where applicable.

Depending upon the SLA definition, none, some, or all of the following commitments are tracked on a Work Order:

- Initial Response Time
- Onsite Response Time
- Restoration Time
- Resolution Time

If any of the above timestamps are tracked on a Work Order, a countdown of the remaining time on each clock is displayed embedded in the Work Order screen as shown below:



Figure 9: Clock in the Work Order Screen

In the above screen, the remaining time is displayed in the format "Days : Hours : Minutes : Seconds".


The clock will be displayed in various color-codes depending on the time left:

- **Red:** If no time is left on the clock, the clock appears Red.
- **Yellow:** If less than 25% of time is left, the clock appears Yellow.
- **Green:** If more than 25% of time is left, the clock appears Green.

Pausing the SLA Clock

The Pause feature allows you to suspend the SLA clock for as long as you select. This can be used when the SLA commitment cannot be met due to unforeseen circumstances not caused by internal factors, and when the customer is in agreement with the delay. If your ServiceMax administrator has disabled the ability for you to pause the clock, the Pause button will be disabled.

To pause the SLA clock, click **Pause**. A popup screen appears as shown below:



The screenshot shows a software interface with a dark header bar containing four tabs: "Initial Response", "Onsite Response", "Restoration", and "Reso". On the left side, a large digital clock displays "00:01:29:1" in bright green. To the right of the clock is a light-colored rectangular box with a thin border. Inside this box, there are two labels: "Reason" and "For How Long". Next to "Reason" is a dropdown menu currently showing "--None--". Next to "For How Long" is a dropdown menu currently showing "Indefinitely". At the bottom of this box are two buttons: "Pause" and "Cancel".

Figure 10: *Pause Clock Screen*

In the above screen:

- Select a reason for pausing the clock. The reasons listed are fully configurable. Please contact your ServiceMax administrator if the relevant reasons are not listed.
- Click **Pause** to pause the SLA Clock. The popup screen closes and the Work Order screen refreshes to show the paused clock. Note that all active SLA clocks on the Work Order will be paused.
- To cancel without pausing the clock, click **Cancel**.

Resuming the SLA Clock

To resume a paused SLA clock, click **Resume**. A message appears indicating the amount of time elapsed since the clock was paused.

- Click **Yes** if you would like to extend the SLA commitment with the elapsed time.
- Click **No** if you would like to keep the SLA commitment as is.
- Click **Cancel** if you do not want to resume the clock.

When you answer **Yes** or **No** to the above question, all paused SLA clocks on the Work Order will be resumed.

Setting the SLA Time Commitments

To set the different SLA time commitments on Work Order(s), scroll down to the Custom Links section:

- Click the **Initial Response Completed** link to update the actual response time to current date and time.
- Click the **Onsite Response Completed** link to update the actual onsite response time to current date and time.
- Click the **Service Restored** link to update the actual restoration time to current date and time.
- Click the **Issue Resolved** link to update the actual resolution time to current date and time.

Dispatching a Work Order

ServiceMax provides multiple methods to dispatch Work Orders. These features allow your organization to deploy varying levels of sophistication depending upon your organization's readiness and automation needs.

- **Simple Assignment:** In this method, dispatch processes can be defined to assign Work Orders to Technicians when the Work Orders match certain entry criteria.
- **Dispatch Console:** The simple assignment can be extended to assign Work Orders to dispatchers, who in turn can use the interactive full functional Dispatch Console to queue, assign, and schedule Work Orders on Technician calendars.
- **Advanced Assignment:** This is meant for organizations that want to use [OptiMax](#), the advanced dispatching and scheduling engine of ServiceMax. Using this method, you can define dispatching rules, qualify Technicians by their availability and skills, define various scheduling constraints such as booking windows, SLA commitments, and ultimately assign and schedule Work Orders by optimizing Technician travel time and distance. Please contact your ServiceMax administrator to determine whether OptiMax has been enabled for your organization.

ServiceMax provides the flexibility to deploy all the above methods in various parts of an organization.

Dispatch Console

The ServiceMax Dispatch Console displays a list of Work Orders pending dispatch, and allows dispatchers to find suitable Service Teams and/or Technicians by matching Work Order criteria with team/Technician attributes. It also shows the Technician's calendar of

events and allows dispatchers to reorganize or reassign existing events. In addition, dispatch console provides the ability to view matching teams and Technicians on an interactive map, and a Technician's daily route on the map. For more information on how to dispatch a Work Order, see [Dispatch Console](#).

Create an RMA from a Work Order

1. Locate the Case by searching in the sidebar or from a list view in the Work Order tab. Click the Work Order number from which you want to initiate an RMA.
2. Click **Create RMA**. The Create RMA screen appears as shown below:

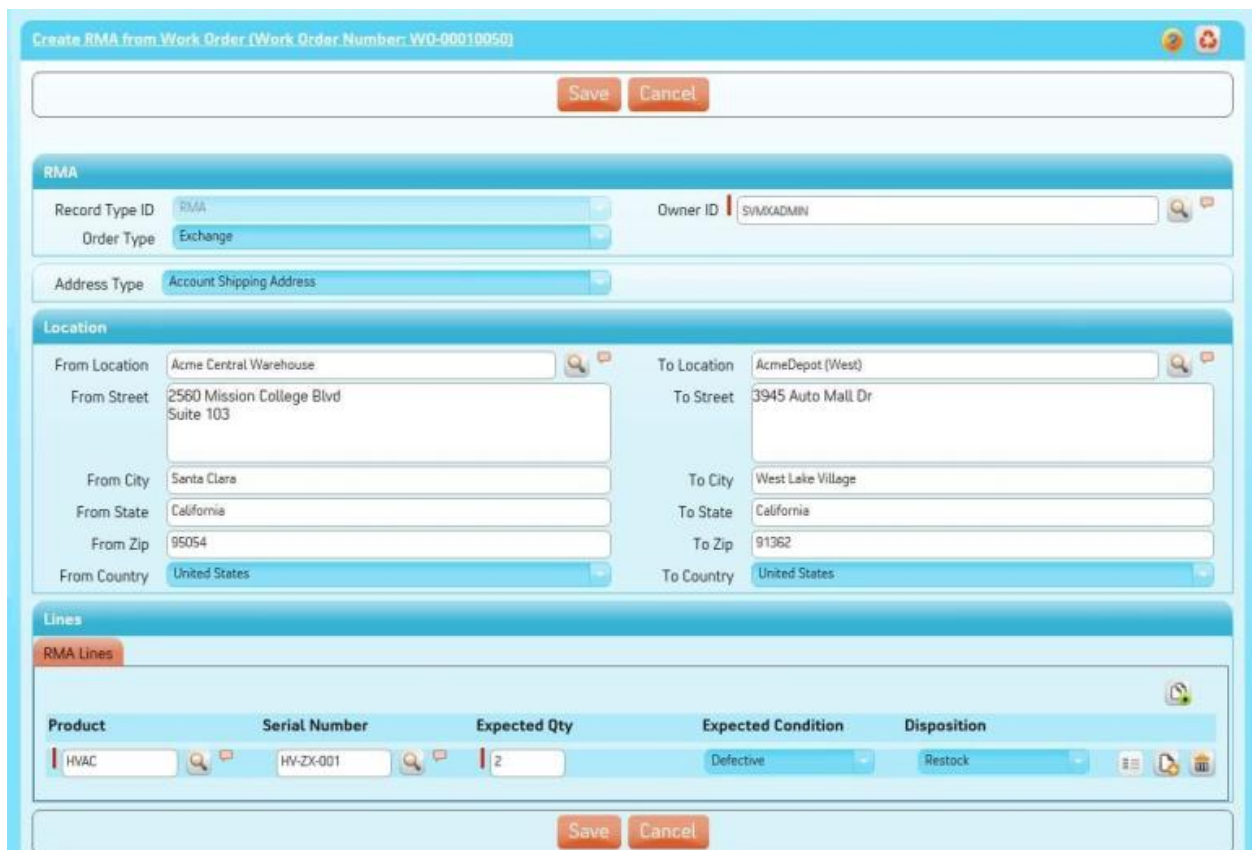


Figure 11: Create RMA Screen

3. Select the owner of the RMA in the Owner ID field by using **Lookup**. Owner ID is usually the ServiceMax user who will be processing this RMA upon receipt. By default, it will be set to your user name.

4. Select **Order Type** as applicable.
5. In the **From Location** section:
 - Select an address type from **Address Type**. This automatically populates the selected address and disables the address field.
 - If you select a location using **Lookup**, the address fields are populated automatically. Alternatively, you can enter the address information manually by entering appropriate values in their respective fields.
6. Select an existing location using **Lookup** or enter the address in the **To Location** section.
7. In the **RMA Lines** section:
 - The product and serial number entered on the Work Order are automatically displayed in the first RMA line.
 - Enter a product and/or serial number using **Lookup**. When the installed product is selected, the product is not automatically calculated.
 - Enter **Expected Qty**, **Expected Condition**, and **Disposition**.
 - Click the **Add** button to add more product returns. To delete one or more products entered, click **Delete** beside each record.
8. Click **Save** to save the created RMA for a Work Order.

Given below are the configurable options available for this screen. These settings can be adjusted by your ServiceMax administrator.

- Default address type.
- Mapping of fields between Work Order and RMA. This includes your organization's custom fields too.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator

Work Order Estimate Fields

Fields	Description
Record Type	Always set to Estimate .
Work Order	Work Order number. This is a lookup to an existing Work Order in ServiceMax.
Line Type	Indicates if this estimate is for Parts , Time , or Expenses .
Product	Name of the product estimated to be used in the Work Order. This is a lookup to an existing Salesforce product record.
Serial Number	ID of the installed product estimated to be used in the Work Order. This is a lookup to an existing installed product record in ServiceMax.
Expense Type	Type of expenses likely to be incurred, if the line type is Expenses .
Estimated Qty	Quantity of part, time, or expenses to be used. This is context-sensitive. For example: Quantity for Travel expense might be 500 (miles).
Estimated Price	The unit price for this estimate item. Total estimate price for the line is calculated by multiplying estimated price and estimated quantity.
Work Description	An assessment of work to be performed or additional details about the line type.
Include in Quote	Indicates if this expense is covered by a warranty/contract, or should be quoted to customer for approval.

Work Order Request/Receipt Fields

Fields	Description
Record Type	Always set to Request/Receipt .
Work Order	Work Order number. This is a lookup to an existing Work Order in ServiceMax.
Product	Name of the product requested. This is a lookup to an existing Salesforce product record.
Serial Number	ID of the installed product requested. This is a lookup to an existing installed product record in ServiceMax.

Fields	Description
Requested Qty	Number of units of this product required.
Date Requested	Date when this product is required.
Destination Location	Location where this product is required. This is a lookup to an existing Salesforce location record.
Requested Street	"Street" part of the Destination Location.
Requested City	"City" part of the Destination Location.
Requested State	"State/Province" part of the Destination Location.
Requested Zip	"Zip/Postal code" part of the Destination Location.
Requested Country	"Country" part of the Destination Location.
Received Qty	Number of units of this product received so far.
Date Received	Date when this product was actually received (Last receipt date if multiple receipts are made).
Received Location	Location where the product was actually received. This is a lookup to an existing Salesforce location record.
Received Street	"Street" part of the received location.
Received City	"City" part of the received location.
Received State	"State/Province" part of the received location.
Received Zip	"Zip/Postal code" part of the received location.
Received Country	"Country" part of the received location.

Fields	Description
Canceled By	The Salesforce user who canceled this part request. This is set automatically when a user cancels a part request.
Canceled On	Date/time when this Work Order parts request was canceled. This is set automatically when a user cancels a part request.
Closed By	The Salesforce user who closed the Work Order line. This is set automatically when parts are received.
Closed On	Date/time when this Work Order line was closed. This is set automatically when parts are received.
Line Status	Work Order line status.
Posted To Inventory	Indicates if quantity from this Work Order line has been posted to inventory or not. This is applicable for Part Requests and Usage/Consumption records in a Work Order.
Qty Shipment Initiated	For part requests, quantity for which shipment has been initiated so far.
Qty Shipped	For parts requests, actual quantity shipped for the request.
Requested From	Stock requested from location. Link to an existing location record in ServiceMax.

Work Order Usage/Consumption Fields

Fields	Description
Record Type	Always set to Usage/Consumption .
Work Order	Work Order number. This is a lookup to an existing Work Order in ServiceMax.
Line Type	Indicates the type of usage: Parts , Labor , or Expenses .
Activity Type	Indicates the type of activity performed. Usually applicable for labor line types. Your administrator is responsible for configuring this list for your organization's requirements.
Log Against	For internal accounting purposes, indicates if this expense/activity is tracked at the Service Team level or at the Technician/equipment level.

Fields	Description
Service Team	Name of the Service Team if the Log Against is set to Service Team . This is a lookup to an existing Service Team record in ServiceMax.
Technician/Equipment	Name of the Technician or equipment if the Log Against is set to Technician/Equipment . This is a lookup to an existing Technician/Equipment record in ServiceMax.
Start Date and Time	Start date and time if the Line Type is Labor .
End Date and Time	End date and time if the Line Type is Labor .
Expense Type	Type of expense incurred if the Line Type is Expenses .
Product	Name of the product used/consumed if the Line Type is Parts . This is a lookup to an existing Salesforce Product record.
Serial Number	ID of the installed product used/consumed if the Line Type is Parts . This is a lookup to an Installed Product record in ServiceMax.
Reference Information	Additional information about the work performed, or expense incurred (mileage for example).
Line Qty	Number of units consumed. This is context-sensitive based on Line Type.
Line Price	The unit price for this line item. Total price is calculated by multiplying line price and line quantity.
Cost Category	Type of costing applied to calculate the actual price.
Is Billable	Indicates if this usage/consumption is billable to the customer.
Closed By	The Salesforce user who closed this Work Order line. This is set automatically when the parts are received.
Closed On	Date/time when this Work Order line was closed. This is set automatically when the parts are received.
Consumed From Location	Location from where the inventory was consumed. Link to an existing Location record in ServiceMax. This must be a stockable location.
Line Status	Work Order line status.
Posted To Inventory	Indicates if quantity from this Work Order line has been posted to inventory or not. This is applicable for Parts Requests and Usage/Consumption records in ServiceMax.

Adding Work Details to a Work Order

There are two methods to add work details to a Work Order:

Method 1: Single-Line Entry

1. Locate the Work Order by searching in the sidebar or from a list view in the Work Orders tab and then click the Work Order number to which you want to add the work details.
2. Click **New** from the Work Details related list section.
3. Select the record type.

If you select the record type as **Estimate**:

Select **Line Type**. If the Line Type is **Parts**, enter the name of the product or use the **Lookup** icon to search and select the product. Optionally, enter the ID of the installed product to be shipped or use the **Lookup** icon to search and select the installed product.

If you select the record type as **Expenses**:

- Enter the estimated quantity and price. The quantity will have different meaning based on the line type and expense type selected.
- Enter work description or additional information about the estimate line.
- For **Parts** line type, the estimated price is automatically assigned from the price book in the background after the estimate record is saved. This happens only if your ServiceMax administrator has enabled automatic calculation of estimated line prices and also configured a price book for Work Order estimates. If the feature is not activated or if no price book is configured for Work Order estimates, the price you entered on the screen is saved.

If you select the record type as **Request/Receipt**:

- Enter the name of the product or use the lookup to search and select the product. Optionally, enter the ID of the installed product or use the **Lookup** icon to search and select the installed product.
- Enter the requested quantity. The quantity will be **1** if you are requesting a specific serial number.
- Enter the date on which the product is requested.
- Enter the name of your location, where you want the product to be delivered or use the lookup to search and select an existing location record. If a location record is not available, you can create a new location (recommended) or enter the address.
- Leave the receipt details section blank. See [Creating Shipment Order from Work Order](#) and [Processing Parts Receipt on Work Order](#) below.

If you select the record type as **Usage/Consumption**:

- Select **Line Type**.
- Depending upon the accountability requirements, select the **Service Team** or **Technician/Equipment** in **Log Against**.
- If the usage/consumption is logged against a Service Team, enter the name of the Service Team or use **Lookup** to search and select the Service Team.
- If the usage/consumption is logged against Technician/equipment, enter the name of the Service Team member or use **Lookup** to search and select the Technician/equipment.
- If the Line Type is **Parts**, enter the name of the product or use **Lookup** to search and select the product. Optionally, you can enter the ID of the installed product used or use **Lookup** to search and select the installed product.
- If the Line Type is **Time**, enter the start date/time and end date/time.
- If the Line Type is **Expenses**, select the expense type.
- Enter Actual Quantity and price. Quantity is context-sensitive depending upon the line type you have selected. For example, when you record Time usage, the quantity may be the number of hours.
- Enter the work description or additional information about the consumption in the **Reference** information field.

4. Click **Save**.



Note: A Work Order can have an unlimited number of work details. Repeat the above steps for each record to be added to the Work Order. You can also click **Save & New** after creating a new work detail record.

Method 2: Multi-Line Entry

1. Locate the Work Order by searching in the sidebar or from a list view in the Work Orders tab and then click the Work Order number to which you want to add the work details.
2. Depending upon the type of lines you want to create in the work order, click one of the appropriate wizards:
 - **Estimate Lines** to create estimate lines.
 - **Parts Request Lines** to create parts request lines.
 - **T&M Lines** to enter Usage/Consumption lines.
3. Follow the instructions below to create/edit work order lines:

If you select **Estimate Lines**, the following screen appears with three tabs: **Parts**, **Labor**, and **Expenses**.

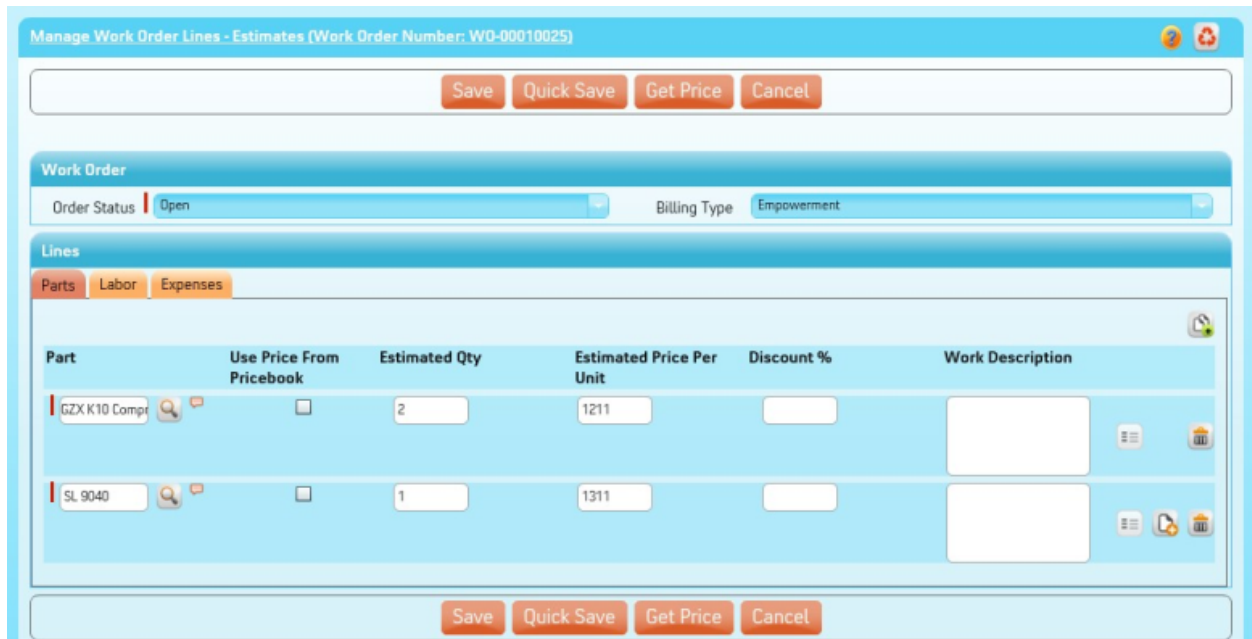


Figure 12: Estimate Lines

- Modify information in the header section as required.
- Click the **Parts** tab to add/modify/delete parts estimates.
- Click the **Labor** tab to add/modify/delete labor estimates.
- Click the **Expenses** tab to add/modify/delete expense estimates.
- To automatically calculate the price of a product, check the **Use Price Book** checkbox and click **Get Price**. Note that the price is calculated only if a valid price-book is configured for Work Order Estimate Lines. To enter a price manually, uncheck the **Use Price Book** checkbox.
- Click **Save** when you have completed all the work detail entries.

If you select **Parts Request Lines**, the following screen appears with the **Parts Request Lines** tab.

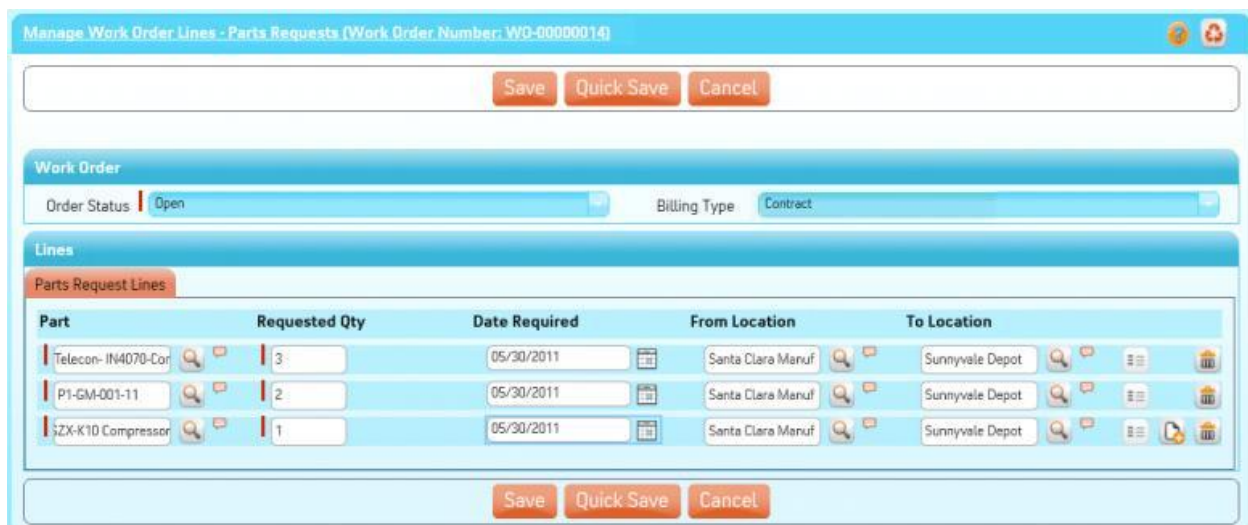


Figure 13: *Parts Request Lines*

- Modify information in the header section as required.
- Use the detail section to add/modify/delete parts required.
- To automatically calculate the price of a product, check the **Use Price Book** checkbox and click **Get Price**. Note that the price is calculated only if a valid price-book is configured for Work Order Request/Receipt Lines. To enter a price manually, uncheck the **Use Price Book** checkbox.
- Click **Save** when you have completed all the work detail entries.

If you select **T&M Lines**, the following screen appears with three tabs: **Parts**, **Labor** and **Expenses**.

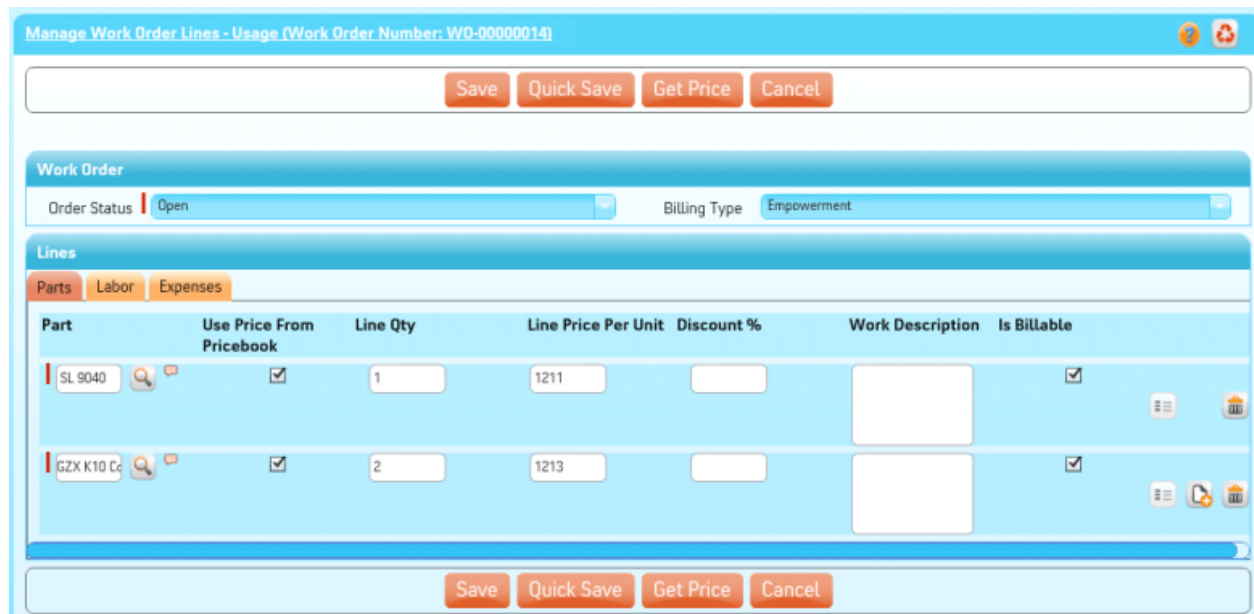


Figure 14: T&M Lines

- Modify information in the header section as required.
- Click the **Parts** tab to add/modify/delete parts used.
- Click the **Labor** tab to add/modify/delete labor used.
- Click the **Expenses** tab to add/modify/delete expenses incurred.
- To automatically calculate the price of a product, check the **Use Price Book** checkbox and click **Get Price**. Note that the price is calculated only if a valid price-book is configured for Work Order Usage Lines. To enter a price manually, uncheck the **Use Price Book** checkbox.
- Click **Save** when you have completed all the work detail entries.

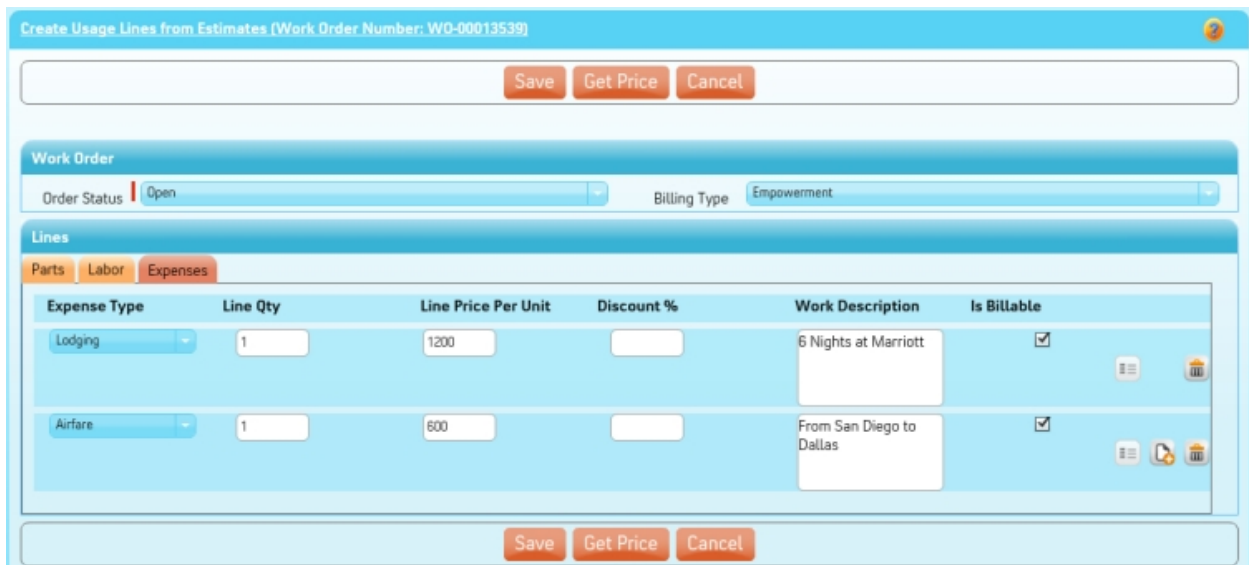


Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Creating Usage Lines From Estimates

To create Usage Lines:

1. Locate the Work Order by searching in the sidebar or from a list view in Work Orders tab and click the Work Order number to which you want to add work details.
2. Click **Create Usage From Estimate**. All estimate lines in the Work Order are copied as usage lines, and displayed in **Edit** mode. For more details about this screen, see [Method-2 Multi-line Entry](#).



Create Usage Lines from Estimates (Work Order Number: WO-00013539)

Save Get Price Cancel

Work Order

Order Status: Open Billing Type: Empowerment

Lines

Parts Labor Expenses

Expense Type	Line Qty	Line Price Per Unit	Discount %	Work Description	Is Billable
Lodging	1	1200		6 Nights at Marriott	<input checked="" type="checkbox"/>
Airfare	1	600		From San Diego to Dallas	<input checked="" type="checkbox"/>

Save Get Price Cancel

Figure 15: Usage Lines From Estimates

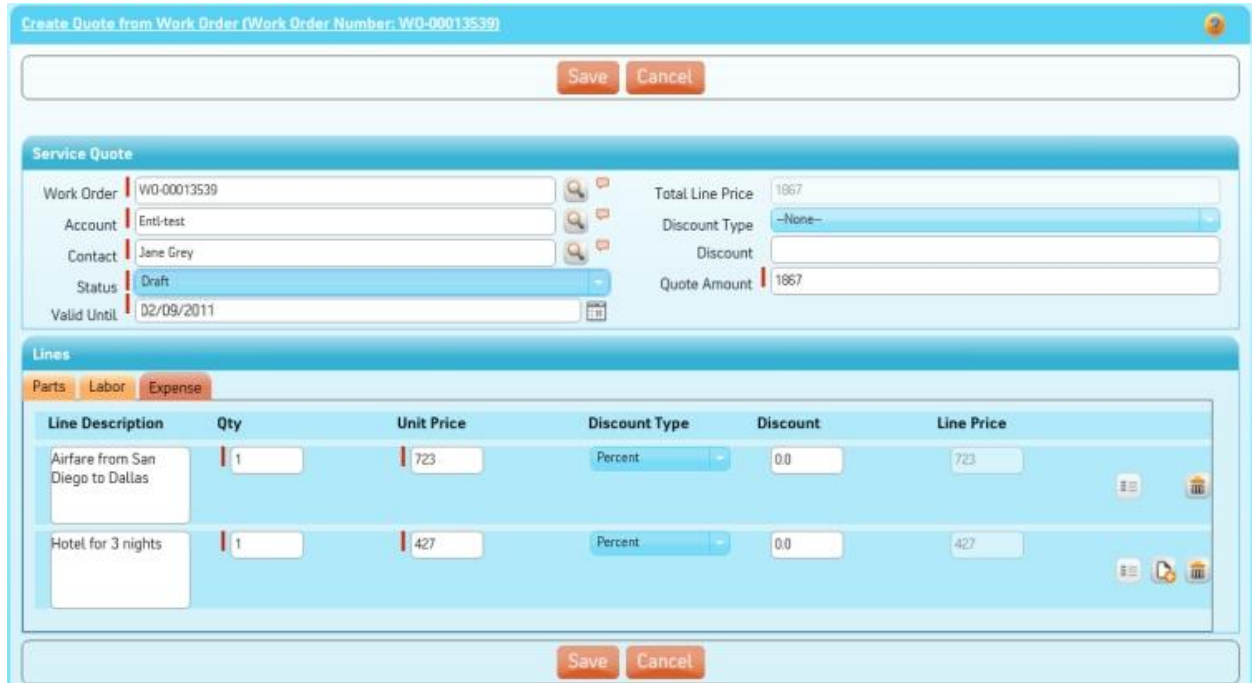
Creating Quotations from a Work Order

Once you have entered estimate lines in a Work Order, you can generate a quotation automatically based on the estimates.

To create quotations from a Work Order:

1. Locate the Work Order by searching in the sidebar or from a list view in Work Orders tab. Click the Work Order number from which you want to generate a quotation.
2. Click **Create Advanced Quote**. The following screen appears with Account, Contact, and Work Order information automatically populated from the Work Order. The screen also has three separate tabs to enter **Parts**, **Labor**, and **Expense** lines in the

quote.



Create Quote from Work Order (Work Order Number: WO-00013539)

Save Cancel

Service Quote

Work Order: WO-00013539
 Account: Enti-test
 Contact: Jane Grey
 Status: Draft
 Valid Until: 02/09/2011

Total Line Price: 1867
 Discount Type: --None--
 Discount:
 Quote Amount: 1867

Lines

Parts Labor Expense

Line Description	Qty	Unit Price	Discount Type	Discount	Line Price
Airfare from San Diego to Dallas	1	723	Percent	0.0	723
Hotel for 3 nights	1	427	Percent	0.0	427

Save Cancel

Figure 16: Service Quote Screen

- Change any information on the Service Quote section as needed.
- All estimate lines from the Work Details are listed in the Service Quotes Lines section in the appropriate tab—**Parts**, **Labor**, and **Expense**.
- Click the **Parts** tab to add/modify/delete parts lines.
- Click the **Labor** tab to add/modify/delete labor lines.
- Click the **Expenses** tab to add/modify/delete expense lines.
- Enter the **Line Quantity** and **Unit Price** for each line as applicable.
- If a discount is applicable for a line, select the discount type—**Percent** or **Amount**. Select **Percent** if the discount is a percentage of (Quantity * Unit Price). Select **Amount** if the discount is a specific amount.
- In any of the three tabs, when you enter quantity, price, discount type, or discount, the Line Price and Quote Amount are calculated automatically.
- Click **Save**. The newly created quote appears.



Note: The mapping of fields between Work Order and Quote, and Work Details and Quote Line are configurable by your ServiceMax administrator. This includes your organization's custom fields too.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Canceling All Parts Requests in a Work Order

When you have neither initiated shipment nor processed receipts for any of the Request/Receipt lines in a Work Order, you can cancel the Work Order by clicking on Cancel All Parts Request wizard. When you cancel Work Order Request/Receipt lines, these lines will not be available for creating a shipment order or for processing receipts going forward.

To cancel all Work Order request/receipt lines for a Work Order:

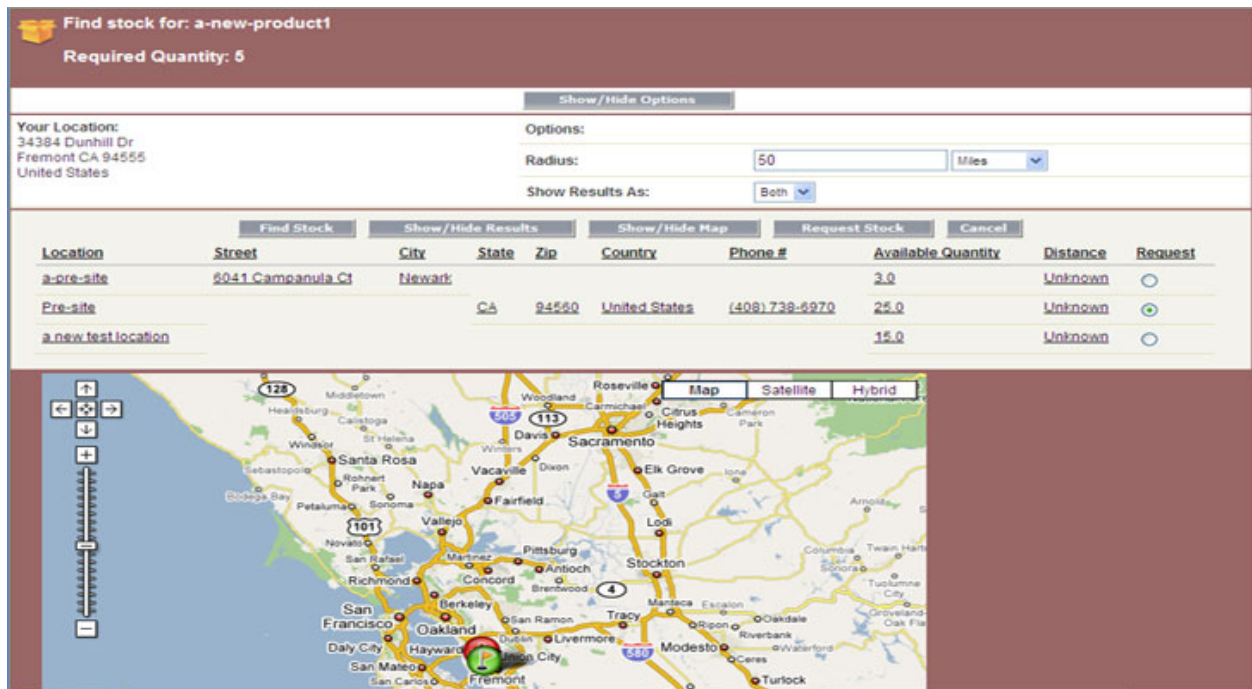
1. Locate the Work Order by searching in the sidebar or from a list view in the Work Order tab and click the Work Order number to which you want to cancel all parts requests.
2. Make sure the Work Order is **Open**. Also ensure none of the product in the Work Order Request/receipt line is initiated for shipment and that no parts have been received against it.
3. Click the **Cancel All Parts Requests** wizard at the top.
4. Click **OK** when prompted. The Work Order screen is refreshed and Work Details and Work Order Status display.

Stock Lookup in Work Order

After you create a parts request, you can use the **Stock Lookup** tool to check availability of stock in other locations. Once you identify the right location, you can request stock from the location by copying the location from stock lookup into the Work Order parts request line.

To Stock Lookup and Request Stock:

1. Locate the Work Order by searching in the sidebar or from a list view in Work Orders tab. Click the Work Order number in which you want to do Stock Lookup.
2. Click the **Line Number** in the related list Work Details for the line you want to do Stock Lookup, Make sure line's record type is **Request/receipt**.
3. Click **Stock Lookup**. A screen appears as shown below:



Location	Street	City	State	Zip	Country	Phone #	Available Quantity	Distance	Request
a-pre-site	6041 Campanula Ct	Newark					3.0	Unknown	<input type="radio"/>
Pre-site			CA	94560	United States	(408) 738-6970	25.0	Unknown	<input checked="" type="radio"/>
a new test location							15.0	Unknown	<input type="radio"/>

Figure 17: Stock Location Screen

4. Enter the radius from your location to limit the search to. The Radius is defaulted to 50.
5. Using the **Show Results As** picklist, you can select to display the results as a grid (table), in an interactive Google map, or both.

6. Click **Find Stock**. Depending on your criteria, the results appear in a grid, map, or both. Clicking a green/red location will show driving directions on the right side.



Note: The Map shows only valid addresses. Locations with required stock are indicated in Green, and locations with less than the required stock are indicated in Red. The grid displays all matching records regardless of whether it is a valid address or not.

7. To request stock from a location:
 - **On Grid:** Click/select the option button in the far right column (titled **Request**) in each row in the grid, and then click **Request Stock**.
 - **On Map:** Double-click the highlighted flag icon in the Map.
 - Click **OK** if prompted. The **Requested From** location in the Work Order parts request screen will now automatically show the location you selected.

Create Shipment Orders from a Work Order

To create a Shipment Order:

1. Locate the Work Order by searching in the sidebar or from a list view in the Work Order tab. Click the Work Order number from which you want to initiate a shipment order.

- Click **Create Shipment Order**. The Create Shipment From Work Order screen appears as shown in the figure below.

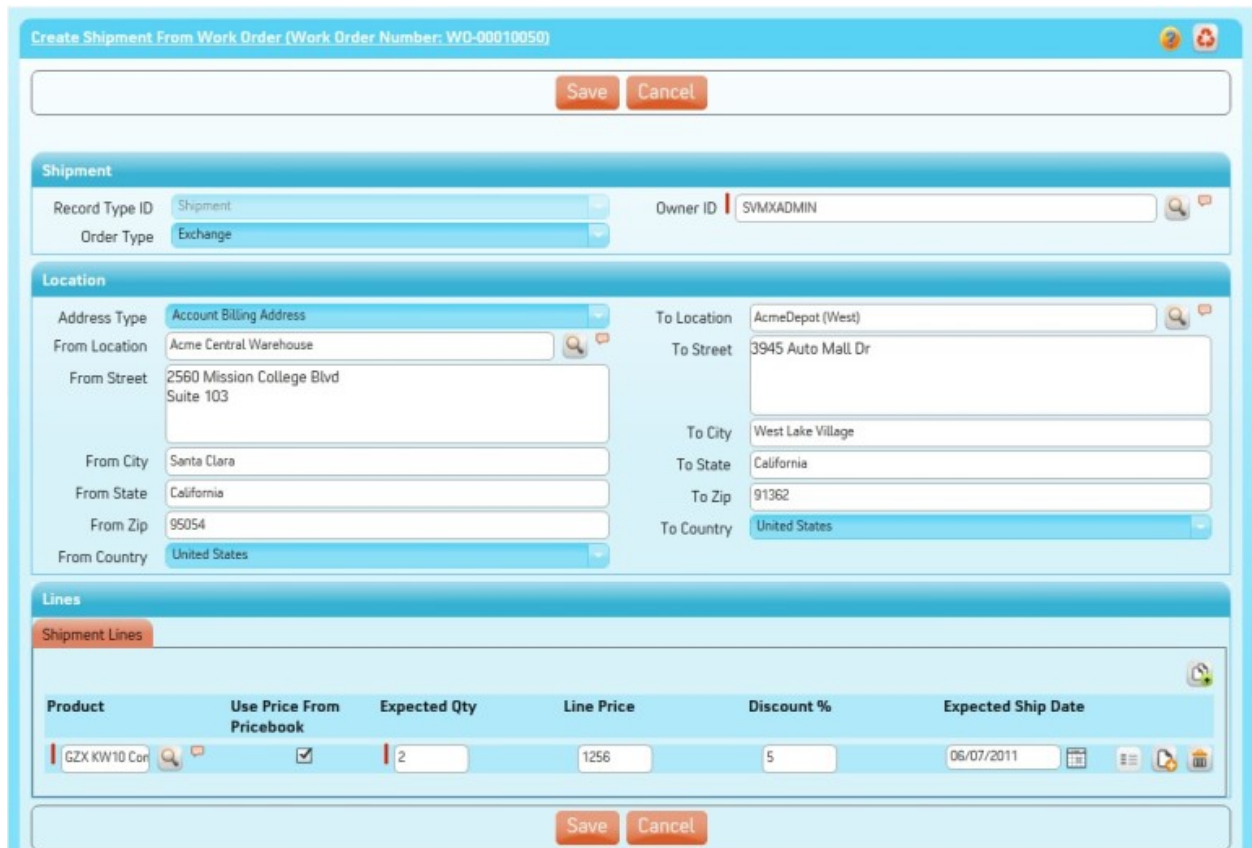


Figure 18: Create Shipment Order Screen

- Select the owner of the Shipment in the Owner ID field by using **Lookup**. Owner ID is usually the ServiceMax user who will be processing this shipment in logistics. By default, it will be set to your user name.
- Select **Order Type** as applicable.
- In the **From Location** section, select an address type from **Select Address Type**. This automatically populates the selected address and disables the address field. If you select a location using **Lookup**, the address fields are populated automatically. Alternatively, you can enter the address information manually by entering appropriate values in their respective fields.
- Select an existing location using **Lookup** or enter the address in the **To Location** section.

7. In the **Order Lines** section, click **Add** to add more shipment lines. To delete one or more products entered, click **Delete** beside each record.
8. Click **Save** to save the created shipment order.

Below are the configurable options available for this screen. These settings can be adjusted by your ServiceMax administrator.

- Default address type.
- Mapping of fields between Work Order and Shipment. This also includes your organization's custom fields.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Processing Receipts in a Work Order

When parts are received in the location specified in a Work Order Request/Receipt line, you should process the receipts to account for the inventory in the receiving location.



Note: In previous releases of ServiceMax, the processing of receipts was allowed in two modes: **Basic** and **Advanced**. **Basic** mode allowed processing of part receipts without making inventory updates, whereas **Advanced** mode performed stock updates on both shipping and receiving locations. From the Summer 09' release onwards, only **Advanced** mode is supported.

To process the receipts for Work Order:

1. Locate the service order by searching in the sidebar or from a list view in the Work Order tab and then click the Work Order number to which you want to process the receipts.
2. Make sure the Work Order **Status** is **Open** and the destination location is not blank. Also ensure that the Work Order has at least one product to be received.

- Click **Process Receipts** in the **Work Order Actions** section, if you want to process multiple parts at a time. You can also click the parts request line and then click **Receive Parts** if you want to receive a specific part. A screen appears as shown below in which you can enter the actual receipt information. The screen lists all products in the Work Order that are not yet received. The **Received Qty** is defaulted to the pending quantity expected.

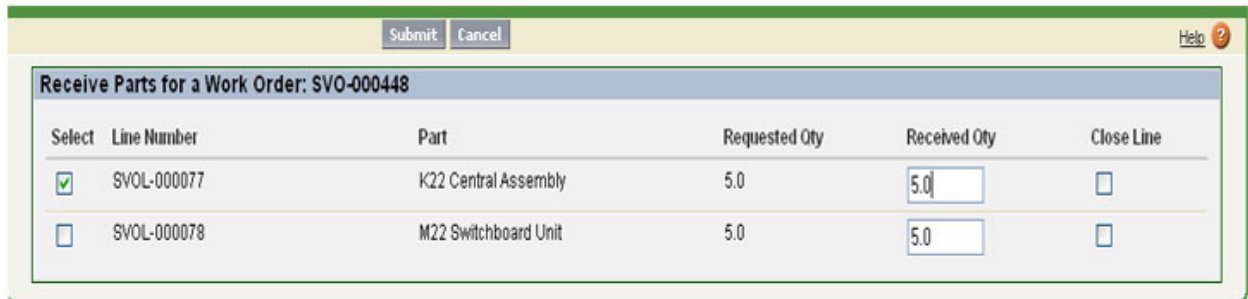


Figure 19: Receive Parts Screen

- When entering the received quantities, one or more of the following scenarios are applicable:

Receipt Scenario	How to Process It
All the products in the Work Order have been received as expected.	Click Submit . All the open lines and the Work Order will be closed automatically.
A product has not been received now but is expected to be received at a later date.	Enter Zero in Received Qty . Make sure the Close Line checkbox is unchecked. This leaves the line open for a future receipt.
A product has not been received and it will not be received in future at all.	This amounts to the cancellation of an open service Order Line. Enter Zero in the Received Qty . Make sure the Close Line checkbox is selected
A product has been received partially now. The remaining quantity is expected to be received at a later date.	Enter the Received Qty . Make sure the Close Line checkbox is unchecked. This leaves the line open for the future receipt. If your organization does not permit short-closing line, this checkbox may be disabled.
A product has been received partially now. The remaining quantity will not be received in future at all.	This indicates short-closure of a Work Order line. Enter the quantity received. Make sure the Close Line checkbox is checked. If your organization does not permit short-closing lines, this checkbox may be disabled.

5. Click **Submit** to confirm the entries. Alternatively, click **Cancel** to return to the Work Order screen.
6. If your organization tracks inventory at the serial number level, the bottom section of the screen allows you to enter/select serial numbers for serialized products. To enter serial numbers for a product, check the checkbox against the product in the list. See [Serial Number Selection](#) to learn how serialized tracking of inventory works in ServiceMax.

The Work Order screen refreshes, and the Work Details and Work Order Status display.

Process Bottlenecks

Process Bottlenecks Fields

Fields	Description
Case Number	Case number is a lookup to an existing Case record in Salesforce.
Work Order	Work Order number. This is a lookup to an existing Work Order in ServiceMax.
Issue area	The main area where the bottleneck has arisen. Your system administrator is responsible for configuring this list for your organization's requirements.
Issue sub-category	Specific type of bottleneck within the issue area. Your system administrator is responsible for configuring this list for your organization's requirements.
Start date and time	Date and time when the waiting/bottleneck started.
End date and time	Date and time when the waiting/bottleneck ended.
Assigned To	Internal ServiceMax user who is the owner of this issue.
Waiting on Contact	External customer contact for whom this issue is waiting for a resolution.
Parts Order Reference	Parts Order connected to this issue. This is a lookup to an existing Parts Order in ServiceMax.
Issue Description	Detailed description about the issue.

Adding Process Bottlenecks to a Work Order

To add process bottlenecks:

1. Locate the Work Order by searching in the side bar or from a list view in Work Orders tab. Click the Work Order number to which you want to add issues affecting timely completion.
2. In the Process Bottlenecks related list, click **New**. Work Order number are populated automatically in the screen.
3. Enter the Case number or use **Lookup** to search and select the **Case** record.
4. Select the appropriate issue area and subcategory.
5. Enter start date and time. As a best practice and to enable visibility to management, it is recommended to log an issue as soon as it is discovered.
6. Leave the end date and time blank until the issue is resolved.
7. If the issue has an internal owner, enter the name of the owner or use **Lookup** to search and select the Salesforce user.
8. If the issue is waiting on a customer contact, enter the name of the contact or use **Lookup** to search and select the contact record.
9. Enter the Parts Order reference or use **Lookup** to search and select the Parts Order record.
10. Enter the detailed issue description.
11. Click **Save**.



Note: A Work Order can have an unlimited number of process bottlenecks. Repeat the above steps for each process bottlenecks record to be added to the Work Order. You can also click **Save & New** after creating a new process bottlenecks record.

Editing Process Bottlenecks in a Work Order

To edit an existing process bottleneck:

1. Locate the Work Order by searching in the sidebar or from a list view in the Work Orders tab and then click the Work Order number in which you want to make the Process Bottleneck changes.
2. In the Process Bottleneck related list, click **Edit** next to the Process Bottleneck record which you want to edit.
3. Make the necessary changes to the process bottleneck record and then click **Save** to save the changes.

Deleting a Process Bottleneck from a Work Order

Unless the Process Bottleneck logged in a Work Order is a test record, it is strongly recommended not to delete existing Process Bottleneck records. These provide valuable insight on typical process challenges and enable your organization to optimize your business processes proactively.

To delete an existing Process Bottleneck record:

1. Locate the Work Order by searching in the sidebar or from a list view in Work Orders tab and then click the Work Order number in which you want to delete consumption.
2. In the Process Bottlenecks related list, click **Del** next to the record which you want to delete and then click **OK** when prompted for confirmation.

Closing a Work Order

When the service event tracked by a Work Order is complete, you can close the Work Order. Note that there may be multiple Work Orders originating from the same support Case for driving parallel service events. Even if you close one or all Work Orders of a Case, your support organization is responsible for closing the original Case manually. Before closing a Work Order, make sure you have entered information in the **Closure** section of a **Work Order Detail** page. The information entered here is used in generating a service report as well as analytics on service organization performance.

To close a Work Order:

1. Locate the Work Order by searching in the sidebar or from a list view in the Work Orders tab and then click the Work Order number which you want to close.
2. Click **Close Work Order**. The Work Order closure screen appears as shown below:

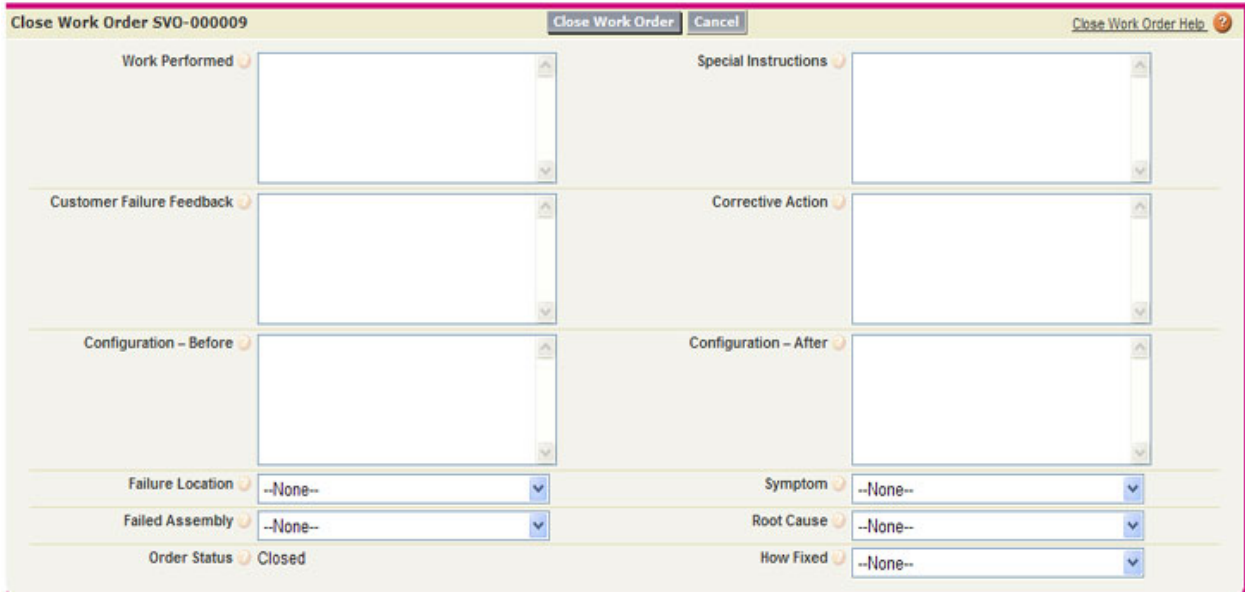


Figure 20: Work Order Closure Screen

3. Enter diagnostics and other analytical information that will be useful for building a sound troubleshooting knowledge-base for your organization.
4. Click **Close Work Order**. The Work Order is closed automatically.

Printing a Service Report from Closure Information

To print a service report from closure information using a formal document template:

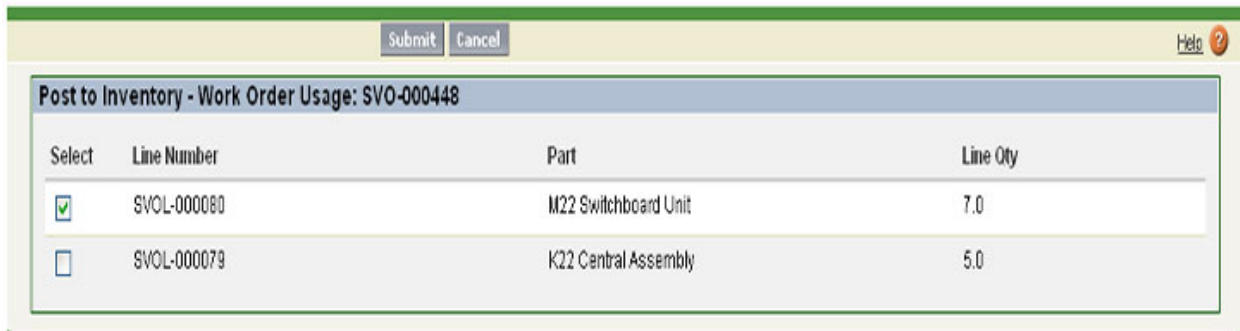
1. Click the **Service Reports** wizard on the Work Order page.
2. In the screen that appears, select a template from the list. These templates are defined and managed by your ServiceMax administrator.
3. Select the output format. **PDF**, **Excel**, and **Word** formats are supported. This generates the Service Report in the selected format.

Posting Usage/Consumption to Inventory

After you have created consumption lines associated with a Work Order, you should post the consumption to inventory to maintain the stock accountability in the inventory.

To post all Work Order Usage/Consumption lines for a Work Order to Inventory:

1. Locate the Work Order by searching in the sidebar or from a list view in Work Orders tab and then click the Work Order number in which you want to post consumption to inventory.
2. Make sure the Work Order **Status** is **Open**.
3. Click the **Post Usage To Inventory** wizard in the Work Order section. A screen similar to the following appears:



Select	Line Number	Part	Line Qty
<input checked="" type="checkbox"/>	SVOL-000080	M22 Switchboard Unit	7.0
<input type="checkbox"/>	SVOL-000079	K22 Central Assembly	5.0

Figure 21: *Post to Inventory Screen*

4. Click **Submit** to confirm the entries. Alternatively, click **Cancel** to return to the Work Order screen.
5. If your organization tracks inventory at the serial number level, the bottom section of the screen allows you to enter/select serial numbers for serialized products. To enter serial numbers for a product, check the checkbox against the product in the list. See [Serial Number Selection](#) to learn how serialized tracking of inventory works in ServiceMax.

The Work Order screen refreshes and Work Order Usage/Consumption Line Status displays.

Creating a Proforma Invoice

To generate a Proforma invoice:

In the Work Order Detail area, click the **Generate Invoice WO** button in the Wizard toolbar.



Figure 22: Generate Proforma Invoice

The Proforma Invoice Details and Invoice Lines display in the appropriate areas (see figure below).

Proforma Invoice Details

New Proforma Invoice Detail

Proforma Invoice Details Help ?

Action	Record Number	Quantity	Service Contract	Work Order	Total Amount
Edit Del	0000021201			WO-00074998	

Proforma Invoice Lines

New Proforma Invoice Line

Proforma Invoice Lines Help ?

Action	Record Number	Quantity	Covered Products	Covered Locations	Included Services	Work Details	Total Line Price
Edit Del	0000003726	12.0000				WL-00033891	
Edit Del	0000003727	12.0000				WL-00033892	USD 0.00

Figure 23: Proforma Invoice Details and Lines

If you click the **Generate Proforma Invoice** button and the invoice is not generated, an inactive error message appears (see figure below). Notify your administrator to activate the Proforma Invoice process.

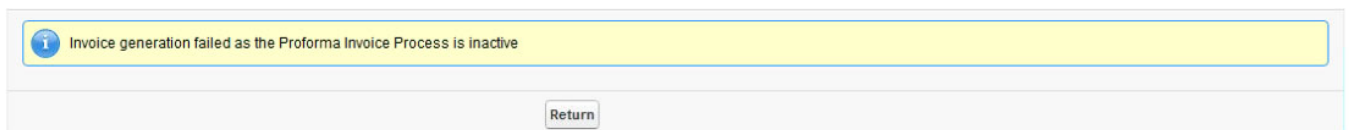


Figure 24: Proforma Invoice Process is Inactive Message

Canceling a Proforma Invoice

To cancel a Proforma invoice:

In the Work Order Detail area, click the **Cancel Proforma Invoice** button in the Wizard toolbar (see figure below).

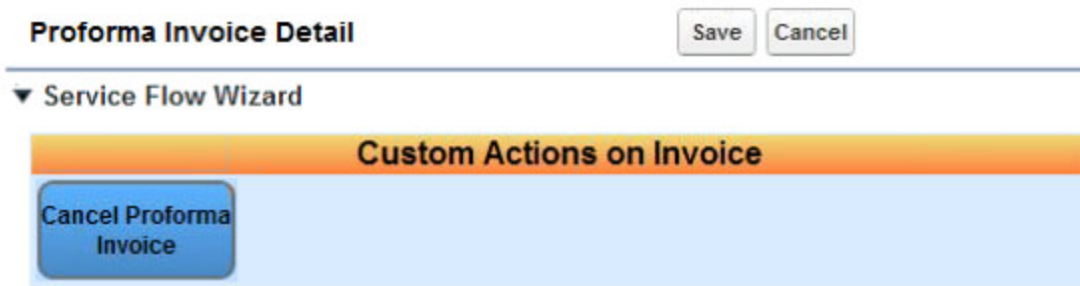


Figure 25: Cancel Proforma Invoice

When you cancel a Proforma invoice, this updates the source document(s) (work order or service contract) and releases them for re-invoicing.

See Also:

[Account](#)

[Contact](#)

[Location](#)

[Product](#)

[Installed Product](#)

[Service Team](#)

[Service/Maintenance Contract](#)

[Service Quotes](#)

[Booking Windows](#)

[Warranty Terms](#)

[Work Order - Standard Settings](#)

SERVICE QUOTE

Overview

In ServiceMax, Service Quote contains the estimated cost of a service event to be presented to a customer to get approval. A Service Quote can either be created manually or generated automatically from the estimate lines of a Work Order.

Access and Permissions

Actions	User Permissions Needed
To view the Service Quotes tab:	"Read" on Service Quote and Quote Item
To view Service Quotes:	"Read" on Service Quote, Work Order, Account, Contact, Product and Quote Item
To create or clone Service Quotes:	"Create" on Service Quote and Quote Item "Read" on Work Order, Account, Contact and Product
To change Service Quotes:	"Edit" on Service Quotes and Quote Item "Read" on Work Order, Account, Contact, and Product
To delete Service Quotes:	"Delete" on Service Quotes and Quote Item
To create Quote Items:	"Create" on Quote Item "Read" on Product
To change Quote Items:	"Edit" on Quote Item "Read" on Product
To delete Quote Items:	"Delete" on Quote Item

Click the **Service Quotes** tab to view the service quotes home page.



Caution: Remember that when deleting service quotes you will not be warned, if the service quote is used in a related record. Since service quotes are connected to Work Orders, review and make sure the service quote record is not used in any related records.

Service Quotes Fields

Fields	Description
Quote Number	Number of the Service Quote - Generated automatically.
Work Order	Work Order number for which this Service Quote is created. This is a lookup to an existing Work Order record in ServiceMax.
Account	Customer account for whom the Service Quote is prepared. This is a lookup to an existing Salesforce Account record.
Contact	Customer contact for which the Service Quote is prepared. This is a lookup to an existing Salesforce Contact record.
Status	Current status of the Service Quote.
Valid Until	Date until which the Service Quote is valid.
Revised From	The original Service Quote number from which this Service Quote was revised. This is a lookup to an existing Service Quote in ServiceMax.
Quote Amount	Total amount of the Service Quote after discount.
Total Line Price	Sum of Line Price for all the lines.
Discount Type	Indicates if the discount is entered as an amount or percentage of total price.
Discount	To capture discount percentage or amount based on selected Discount Type.

Quote Item Fields

Fields	Description
Service Quote	Name of the Service Quote. This is a lookup to an existing Service Quote in ServiceMax.
Line Type	Indicates if the line refers to a Part , Labor or Expense estimate.
Line Description	Detailed description of the quote item.
Product	Name of the product if line type is Parts .
Qty	Number of units. This depends upon the line type.
Unit Price	Price per unit of the line. Product cost if it is a Parts line, hourly charges if it is Labor , and so on.
Discount	Discount (amount or percentage) for the line.
Line Price	Final line price after applying discount.
Discount	Discount (amount or percentage) for the line.
Discount Type	Select the Discount Type.
Work Details	Service Order estimates line record from which this quote line was derived. Not displayed on the screen.

Adding Items to a Quote

Locate the Service Quote by searching in the sidebar or from a list view in Service Quotes tab and then click the Service Quote number to which you want to add lines.

There are two methods available to add lines to a Quote:

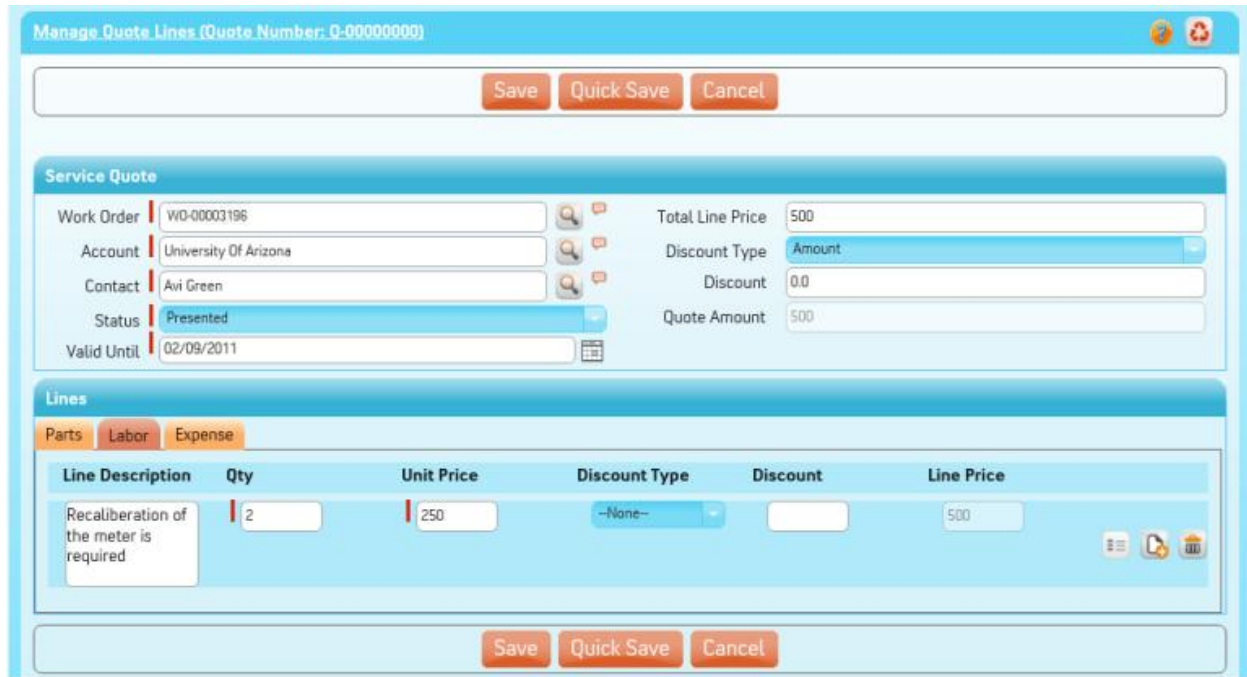
Method 1: Single-line Entry

1. To create a new line, in the related list Quote Lines, click **New**. Alternatively, to edit an existing line, in the related list Quote Items, click **Edit** next to the Quote item record.
2. Select **Line Type**. If the line type is **Parts**, enter the name of the product or use the **Lookup** icon to search and select the product.

3. Enter the quantity, unit price, discount, and line price. The quantity will have a different meaning based on the line type and expense type selected.
4. Enter a detailed description of the line in **Line Description**.
5. Click **Save**.

Method 2: Multi-line Entry

1. Click **Create/Edit Quote Lines** to display the following screen:



The screenshot shows the 'Manage Quote Lines' window for Quote Number Q-00000000. It features a 'Service Quote' section with fields for Work Order (WO-00003196), Account (University Of Arizona), Contact (Ari Green), Status (Presented), and Valid Until (02/09/2011). To the right, summary fields show Total Line Price (500), Discount Type (Amount), Discount (0.0), and Quote Amount (500). Below this is a 'Lines' section with tabs for Parts, Labor, and Expense. The 'Parts' tab is active, displaying a table with one line item: 'Recalibration of the meter is required' with a quantity of 2, unit price of 250, discount type of 'None', and a line price of 500. The interface includes 'Save', 'Quick Save', and 'Cancel' buttons at the top and bottom.

Line Description	Qty	Unit Price	Discount Type	Discount	Line Price
Recalibration of the meter is required	2	250	-None-		500

Figure 1: Service Quotes Edit Screen

2. Change any information in the Service Quote section as needed.
3. Click the **Parts** tab to add/modify/delete parts lines.
4. Click the **Labor** tab to add/modify/delete labor lines.
5. Click the **Expenses** tab to add/modify/delete expense lines.
6. Enter the **Line Quantity** and **Unit Price** for each line as applicable.
7. If a discount is applicable for a line, select the discount type—**Percent** or **Amount**. Select **Percent** if the discount is a percentage of (Quantity * Unit Price). Select **Amount** if the discount is a specific amount.

8. In any of the three tabs, when you enter quantity, price, discount type, or discount, the Line Price and Quote Amount are calculated automatically.
9. Click **Save & Close** to save the changes and return to the quote view screen. To save the quote and continue editing, click **Quick Save**.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator

See Also:

[Account](#)

[Contacts](#)

[Product](#)

[Work Order](#)

DISPATCH CONSOLE

Overview

The Dispatch Console is a powerful tool in the ServiceMax application that helps Service Teams and dispatchers identify open Work Orders, locate the most suitable Technicians and equipment, interactively analyze their availability and work load, and schedule Work Orders on their calendars.

Dispatch Console is used by call center/dispatch organizations responsible for routing Work Orders to various Service Teams. In some organizations, dispatchers are responsible for identifying a Service Team only. In such cases, the Service Team managers/leaders will use the Dispatch Console to view the Work Orders queued to their team and assign/schedule it to their team members.

Service management can measure, analyze, and optimize the performance of service scheduling using the powerful dashboard and reports in-built with the Dispatch Console module. See [Dashboards and Reports](#) for a complete list of reports available with the Dispatch Console module.

Prerequisites

Prerequisite to Launch the Dispatch Console

In order for end users to launch the Dispatch Console window, the administrator must check the **API Enabled** checkbox at the Profile level. If the **API Enabled** checkbox is not checked, then upon launch of the Dispatch Console window, the following error message displays, and then Dispatch Console window closes.

Error Message: Salesforce session is invalid. Dispatch Console will close now.

Prerequisite for Dispatchers to Edit/Delete Events for a Technician

To Edit/Delete Events for the Technician, Dispatchers must have full access to calendars of Salesforce users associated with the Technician. To grant full access to a Dispatcher, Salesforce users must share their calendar using the Sharing option Full Access.

To grant full access to a Dispatcher:

1. Navigate to **Your Name > Setup > My Personal Information > Calendar Sharing**.
2. Click **Add** to share your calendar with others.
3. Use the arrows to add or remove users, roles, or groups to your calendar.
4. Select the Dispatcher users.
5. In Calendar Access, specify the share option **Full Access**.

If a Salesforce user's calendar is not shared with a Dispatcher, the following error message is generated for Edit/Delete Events for the respective Technician:

An error occurred while saving the event. Click on the icon for more details.

SVMXC.DCON_Event_WS.SVMXException: insufficient access rights on object id (SVMXC)

External entry point



Note: If the Dispatcher is a System Administrator, calendar sharing by other Salesforce users is not required for Editing/Deleting Events for the respective technicians.

Access and Permissions

Object Name	User Permissions Needed
Work Order	Read, Write
Event	Read, Write
ServiceMax Event	Read, Write
Service Team	Read
Technician/Equipment	Read
Territory	Read

Object Name	User Permissions Needed
Product	Read
Installed Product	Read
ServiceMax Processes	Read
ServiceMax Config Data	Read

Click the **Dispatch Console** link in the left navigational pane of the Home page to display the Dispatch Console home page as shown in the figure below. Contact your administrator, if you are unable to find this link on your home page.



Figure 1: Dispatch Console Link

Configuration Settings

The functionality and user experience of the Dispatch Console is driven by two types of configuration settings that are managed in different ways:

- **Functionality Settings:** These are settings that influence the behavior of Dispatch Console as listed below. These settings are managed by your ServiceMax administrator using the ServiceMax Setup screens.
 - Default number of days to show in calendar.
 - Default duration for a new event.
 - Default radius in the map.
 - Whether to perform a keyword search automatically when a Work Order is selected in the list.
 - Whether a Work Order should be selected automatically when there is only one Work Order in a view.
 - Default type of tree view (**Service Team** or **Territory**).
 - Default dispatch status to be used to filter Work Order list (**All, New, Assigned, Queued**).
 - Whether the Work Order list should be refreshed automatically when the assignment status of a Work Order changes.
 - Number of minutes to round-off the start time of a new event. For example, if set to 10, when you drop a Work Order at 8:07am, the start time will be 8:10am.
 - Whether a Work Order's owner should be changed when queuing or assigning.
 - Whether past events should be deleted during reassignment of Work Orders.
 - Whether to enforce the integrity of event duration and Work Order times (service time, idle time, and drive time).
 - How to treat events that start outside a Technician's working hours. Show a warning, disallow or allow.
 - Whether the unassignment of a Work Order should release the dispatch lock on the Work Order.
 - API name of up to 10 Work order/Event fields to be displayed in Dispatch Console Screen.
 - URL to the image displayed as icon for Work Order in Dispatch Console Map.
 - URL to the image displayed as icon for Service Team in Dispatch Console Map.

- URL to the image displayed as icon for Technician in Dispatch Console Map.
- Allowing the deployment of settings to other dispatchers.
- Auto-refresh of Work Order List on saving Work Order Events.
- Default event start time for Multi Assign of Work Order.
- Auto-refresh Work Order List on deleting Work Order Events.
- The option to apply Event Subject Rule to Multi Assign.
- **User Interface Settings:** These user-based configurations, listed below, are saved for and by the Dispatch Console users. These settings can be saved from within the Dispatch Console itself.
 - List of columns displayed on the Work Order list.
 - List of columns displayed on the Technician calendar.
 - Auto-refresh of the Work Order list and calendar.
 - Color coding rules for the Work Order list.
 - Color coding rules for events.
 - Default Zoom level in map.
 - Default latitude/longitude to display on map.
 - Keyword search preferences (Work Order, Service Team and Technician fields used for search).
 - Auto-refresh of calendar.
 - Default range of dates in calendar.
 - Unit of measure for Service Duration Travel Time.
 - Unit of measure to plot Maps.

Service Teams and Members

In order to use the Dispatch Console effectively, it is extremely important to define your entire service organization in ServiceMax as Service Teams and members. Since Dispatch Console supports scheduling Work Orders to equipment, you can also define groups of equipment (tools and machinery) that have scheduling requirements in your service

delivery. The more granular and thorough your team definitions are the more efficient and effective your dispatchers can be.

When defining a team of Technicians, identify all the team members (your employees and third party), areas of expertise, products they specialize in servicing, as well as Technicians' current home bases. Make sure the contact information such as telephone number and email, as well as the default address is entered for every Technician and equipment. Technicians that are direct service providers (not third party Technicians) must have a valid Salesforce User associated with them.

Setting Up Equipment

To enable scheduling of equipment through Dispatch Console, create one or more Service Teams with Record Type as **Equipment**. Add all equipment as Service Team members. Make sure the name of the equipment identifies the machinery/tool uniquely. A recommended practice is to use an asset tag or serial number along with the name/type of the equipment. To track the equipment calendar, make sure the record is not linked to a Salesforce user and the **Enable Scheduling** checkbox is checked.

Setting Up Third-Party Technicians

Dispatch Console can be used to assign and schedule Work Orders to third-party Technicians as well. You can create one or more Service Teams with record type **Technician** and add team members. Besides entering all the member information such as telephone number, address, email, expertise, and so on, the **Enable Scheduling** checkbox should be checked on the Technician/equipment page layout. Also make sure the third-party Technicians are not linked to a Salesforce user.



Note: Starting with ServiceMax 3 release, ServiceMax does not use Salesforce public calendars to manage calendars of third-party Technicians and equipment. Existing events from public calendars are not automatically transferred to the new model when upgrading to ServiceMax 3 release. Please contact your ServiceMax administrator for more information regarding this.

Technician/Equipment Availability

Dispatch Console provides valuable information to users by calculating a Technician/equipment's availability in any given period. To do this, it relies on the general/specific availability defined for each Technician/equipment. Availability can be defined specifically for every day of the week, or generally for weekdays and weekends. To maximize your benefits from Dispatch Console, it is strongly recommended that availability of your Service Team members is thoroughly configured in ServiceMax. See the Service Team section for details about how to define Service Team members.

Terminology

The translation capabilities of Salesforce combined with the flexible design of Dispatch Console allow your organization to fully customize the terminology used on the application. This document uses the standard out-of-the-box ServiceMax terms such as Work Orders, Service Teams, and Technicians, and so on. Please contact your ServiceMax administrator if you find that the terminology used in this document does not match the Dispatch Console in your organization.

Launching Dispatch Console

The Dispatch Console can be launched from two locations in ServiceMax as given below. The initial behavior and display of Dispatch Console varies slightly based on where it was launched from. See [Search Work Orders](#) to learn about the differences.

- **Home Page Link**

If enabled by your ServiceMax administrator for your profile, Dispatch Console can be launched from the home page link **Dispatch Console**. Please contact your administrator if you are unable to find this link on your home page.

- **Work Order Page Layout**

Your administrator can also enable Dispatch Console to be launched from the Work Order page layout. If your organization has multiple Work Order page layouts based on various responsibilities, Dispatch Console may or may not be enabled for some of the profiles. Please contact your administrator if you do not see the wizard on your Work Order page layout.

Dispatch Console Screen

The Dispatch Console consists of three sections:

- **Work Orders:** In this section, you can view the Work Orders assigned to you or any Salesforce Queue to which you have access. You can easily configure the columns you wish to view in the Work Order list. You can select one of the resulting Work Orders for dispatch.
- **Tree view and Calendar:** This section displays the list of Service Teams and Territories to which you have been designated as dispatcher. This information is presented in a hierarchical tree view. You can switch between Territory tree view and Service Team tree view. For each Technician in a Service Team or Territory, this section shows the detailed calendar view of events for a given period. You can use this section to pick one or more resources to schedule the Work Order.
- **Map:** Using this section, Service Teams or Technicians returned by a search are plotted on the map as long as they are within the given radius. In addition, this section can be used to find a Technician's daily route on any given day.

A sample Dispatch Console screen is shown below.

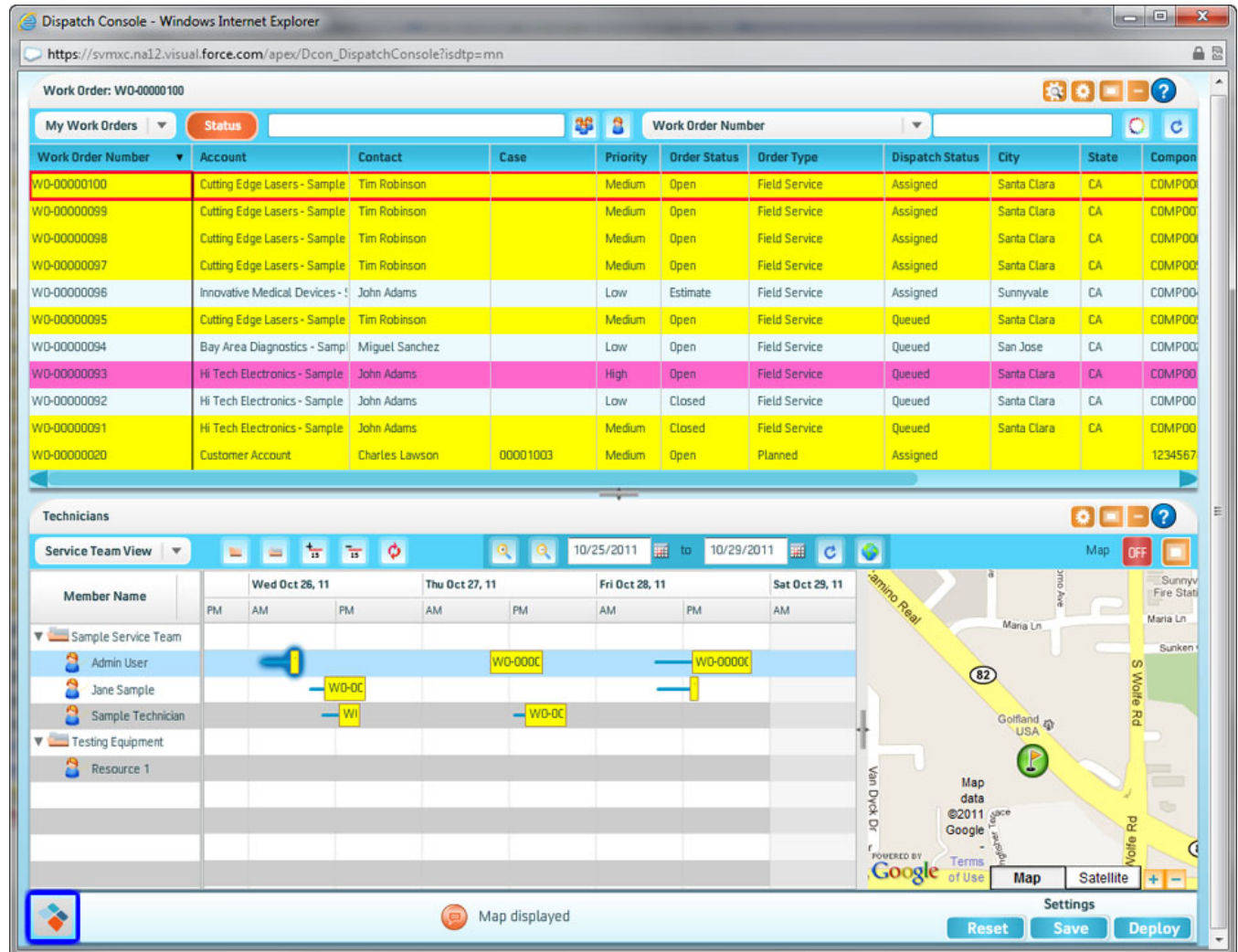


Figure 2: Dispatch Console Screen



Note: Some of the functionality described in this section may have been disabled for your organization or your specific ServiceMax user profile. It could be because the feature is either not available in your geography or it has been disabled by your administrator. Please contact your ServiceMax administrator if you are unable to locate/use any feature described below.

Dispatch Process

The following picture depicts the dispatch process in ServiceMax Dispatch Console.

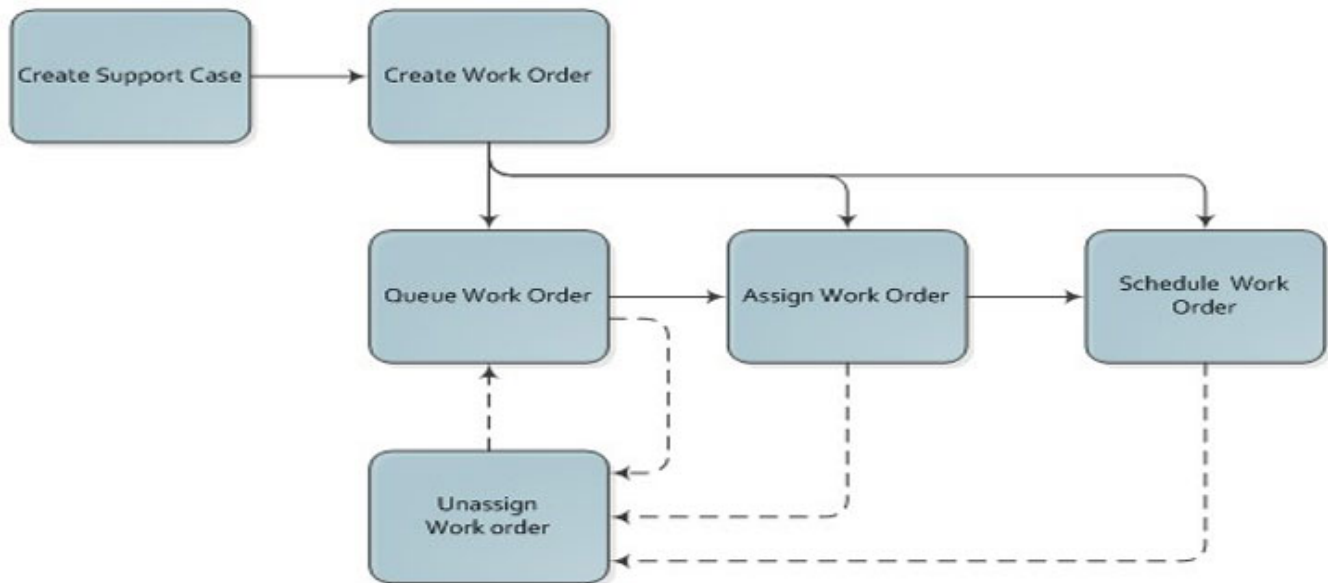


Figure 3: Dispatch Process

As shown in Figure 3, after a Work Order is created, there are up to three stages in reaching it to a Technician.

1. Initially the Work Order is in a *general queue* or yet-to-be-dispatched state. At this stage, the Work Order can be queued to a Service Team.
2. The Work Order can be assigned to a Technician.
3. The Work Order is scheduled on the Technician's (and optionally equipment) calendar.

However, the three stages are not mandatory. If a Work Order is assigned to a Technician directly, it implies that the Work Order belongs to the Technician's Service Team queue. Similarly, if the Work Order is scheduled to a Technician, it implies queuing and assignment.

The dotted lines in the above diagram indicate the reversal of scheduling, assignment and queuing of the Work Order. Whenever a Work Order is unassigned, it is moved back to the *general queue*.

How Dispatch Console Works

Work Order List

Activity in Dispatch Console starts with the selection of Work Orders from the list displayed in the top section. The default display of Dispatch Console is driven by a combination of your Salesforce user profile and whether you are linked to an existing Service Team as a Technician. The Work Order section shows:

- Work Orders assigned to the end user indicated by the view name **My Work Orders**.
- Work Orders assigned to Salesforce queues to which the end user has access. The queue names are displayed in the list of views.
- If the Dispatch Console is launched from an existing Work Order, the Work Order number is added to the list of views.

You can switch between various views simply by selecting the view name from the list. You can filter the Work Order list by the current dispatch status of Work Orders. To do so, click **Status** and then:

- Select **New** to view Work Orders that are not queued or assigned to any Service Team or Technician yet.
- Select **Queued** to view Work Orders that are assigned to a Service Team but not to a Technician.
- Select **Assigned** to view Work Orders that are assigned to a Technician.
- Select **All** to view all Work Orders in the selected view.

You can filter the Work Order list based on data displayed in the list. To do this, select the field name in the **Filter By** picklist and then enter any text in the adjacent text box. The Work Order list will be filtered as you type. To undo the filter, clear the text you entered.

Configuring the Work Order List

The work order list has many configuration options.

To configure the columns to be displayed and the orders of their display:

1. Click **Configure** on the top-right of the Work Order section. The popup window shows all fields in the Work Order including standard ServiceMax fields and any custom fields created in your implementation of ServiceMax.
2. Select one or more columns from left and then move to right. You can also use the up or down arrows to set the order of display.

To refresh the Work Order list automatically:

1. Click **Configure** on the top-right of the Work Order section.
2. In the **Configure Work Order View** dialog box, check the **Automatically Refresh List** checkbox. The frequency field is enabled and displayed.
3. Enter the desired frequency in minutes. A sample configuration screen is shown in the figure below.

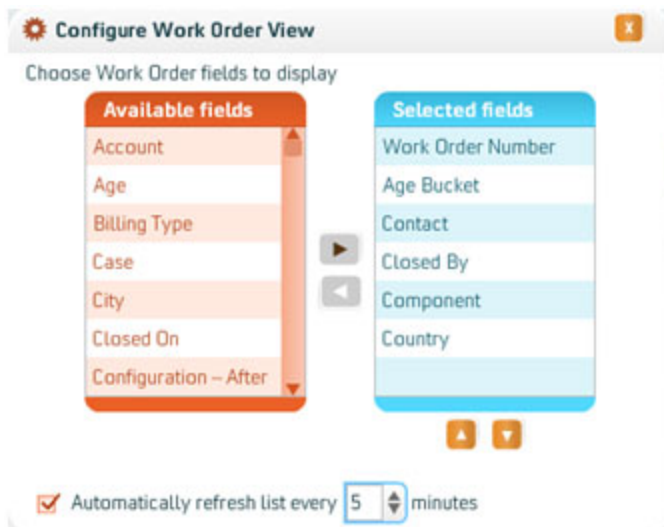
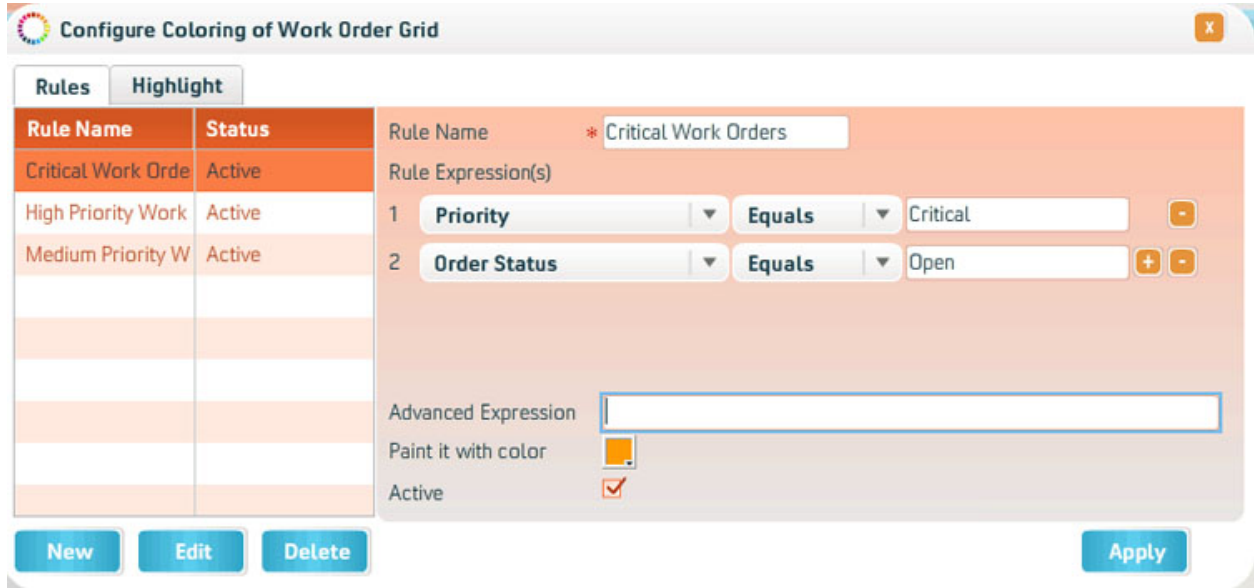


Figure 4: *Configure Work Order Screen*

To apply conditional colors on the work order list and also configure the colors when work order rows are selected:

1. Click **Configure Colors** adjacent to the Filter text box. In the **Rules** tab of the **Configure Coloring of Work Order Grid** dialog box, all the existing coloring rules are

displayed as a list.



Rule Name	Status
Critical Work Order	Active
High Priority Work	Active
Medium Priority Work	Active

Rule Name:

Rule Expression(s)

1

2

Advanced Expression:

Paint it with color:

Active: ☒

Figure 5: Configure Coloring Screen

2. Click **New** to create a new coloring rule. Alternatively, click **Edit** to edit the existing coloring rule.
3. In the **New** coloring or **Edit** coloring mode:
 - a. Enter a valid rule name. For example, "Critical Work Orders."
 - b. Define the criteria by using the Advanced Expression builder. For example, "Priority Equals Critical."
 - c. Use the **+** or **-** buttons to add or delete conditions in the Advanced Expression builder. All conditions must be met to apply a coloring rule.
 - d. If required, use the Advanced Expression field to enter conditions such as **(1 AND 2) OR 3**.
 - e. Click the **Paint it with color** box to display the color palette, and then select a color.
 - f. Ensure the **Active** checkbox is checked.
 - g. Click **Apply**. Your color coding rules are applied immediately on your Work Order list. You can also delete a coloring rule by clicking the rule record and then clicking **Delete**.

4. To set up work order row selection colors, select the **Highlight** tab of the **Configure Coloring of Work Order Grid** dialog box as shown in the figure below.




Figure 6: Configure Highlight Work Order Screen



5. Select the **Hover color**. When you mouse-over a work order record, the row will be highlighted in a box of the **Hover Color**.
6. Select the **Selection color**. When you select a work order record, the row will be highlighted in a box of the **Selection Color**.

Search Criteria

- After you select a Work Order, you can search **Service Team** or **Technician** to assign the Work Order.
- You can configure one or more Work Order fields as the source of keyword search.
- When finding teams or technicians based on the keywords, you can configure which team or technician fields the search should be applied against.

To configure the keyword search:

1. Click the **Configure Search** icon  located at the top right corner of the Work Order section. The Search Configuration dialog box appears. See figure below.






Search Configuration

Select the Service Team fields against which search should be performed.

Available fields

- Active
- Country
- Created By ID
- Created Date
- Deleted
- Email
- Group Code

Selected fields

- City
- Expertise
- Product
- Service Team Name
- State
- Zip

Match ☐ All ☒ Any

Work Order
Service Team
Technician



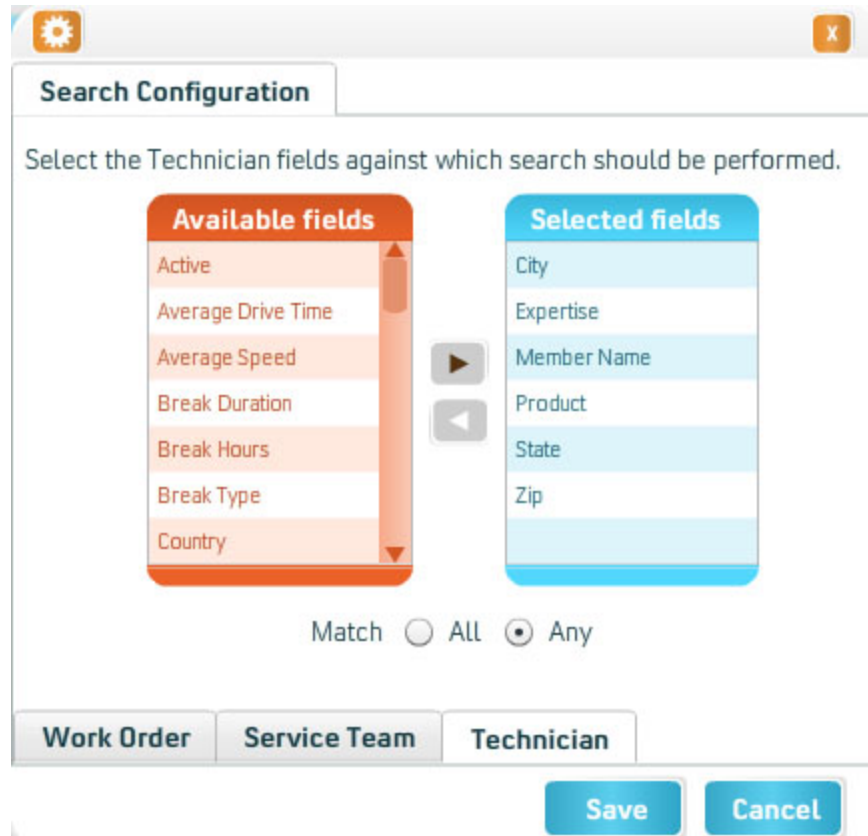



Figure 7: Search Configuration Dialog Box (Service Team)

The Search Configuration dialog box has three tabs for search configuration:

- The **Work Order** tab shows all the Work Order fields. This includes standard ServiceMax fields and any custom fields added to Work Order screen for your ServiceMax implementation. Select the applicable fields from the left and move to the right. Subsequent to this configuration, when you click a Work Order from the list, information from the selected fields is automatically displayed as keywords for search.
- The **Service Team** tab shows all the Service Team fields. This includes standard ServiceMax fields and any custom fields added to the Service Team screen for your ServiceMax implementation. Select the fields against which you wish to apply the keyword search. In addition, indicate if a match should be found for all the keywords or any keyword. Fields selected here will be used when you click Find Service Teams for a Work Order.
- The **Technician** tab shows all the Technician fields. This includes standard ServiceMax fields and any custom fields added to the Technician screen for your ServiceMax implementation. Select the fields against which you wish to apply the keyword search. In addition, indicate if a match should be found for all the keywords or any keyword. Fields selected here will be used when you click **Find**

Technicians for a Work Order.



The image shows a 'Search Configuration' dialog box with a title bar containing a gear icon and a close button. Below the title bar is a tabbed interface with three tabs: 'Work Order', 'Service Team', and 'Technician'. The 'Technician' tab is selected. The main area of the dialog contains the text 'Select the Technician fields against which search should be performed.' Below this text are two columns: 'Available fields' and 'Selected fields'. The 'Available fields' column is a list box with the following items: Active, Average Drive Time, Average Speed, Break Duration, Break Hours, Break Type, and Country. The 'Selected fields' column is a list box with the following items: City, Expertise, Member Name, Product, State, and Zip. Between the two columns are two arrow buttons: a right-pointing arrow and a left-pointing arrow. Below the list boxes are three radio buttons: 'Match', 'ALL', and 'Any'. The 'Any' radio button is selected. At the bottom of the dialog are two buttons: 'Save' and 'Cancel'.

Figure 8: Search Configuration (Technician Team)

2. Click **Save** to save your settings for the duration of the session.
3. Save your user interface settings permanently by clicking the **Save** button in the Settings area located below the Map view located at the bottom right corner of the Dispatch Console. You can also click the **Default** button to restore the default settings.

Logging

To configure log settings:

1. Click the ServiceMax logo located at the bottom left corner of the Dispatch Console to display the log settings menu. See figure below.

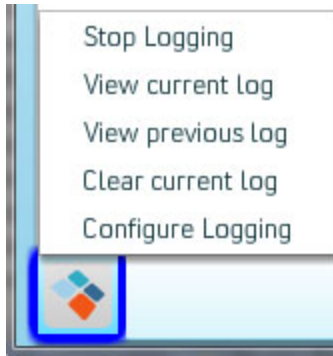


Figure 9: Log Settings Menu

2. Select **Configure Logging** from the log settings menu to configure the level of logging required. The Configure Logging dialog box appears. Enabling logging helps your administrator to troubleshooting potential issues.

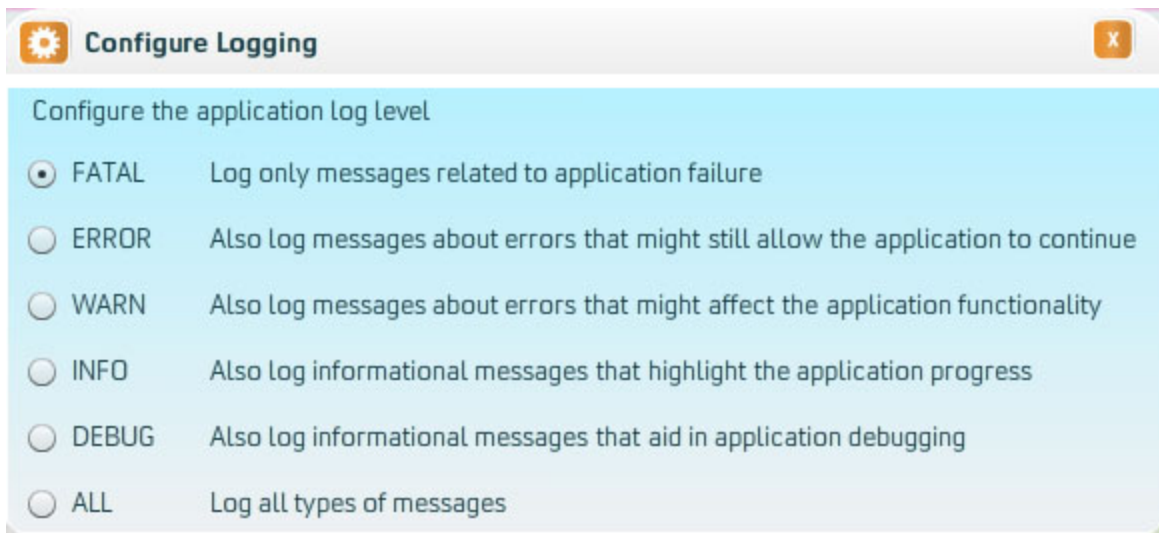


Figure 10: Configure Logging Dialog Box

3. Select the level of logging required. The default recommended level of logging is **FATAL**. This ensures that critical errors are automatically logged for troubleshooting later.
4. Close the **Configure Logging** dialog box. A message appears indicating that your logging preferences are saved only for the duration of your sessions. See image below.



Figure 11: Message Area

5. As shown in the figure below, you can save the logging settings permanently by clicking the **Save** button in the Settings area located below the Map view at the bottom

right corner of the Dispatch Console. You can also click the **Reset** button to restore the default settings.



Figure 12: Settings Area

6. To view log information for a session, click the ServiceMax icon located at the bottom left corner on the Dispatch Console screen and select either **View current log** or **View previous log** (see Figure 9). The Log Information dialog box appears. Sample log information is shown in the figure below. To facilitate troubleshooting, you can copy the log information to your clipboard and send it to your ServiceMax administrator.

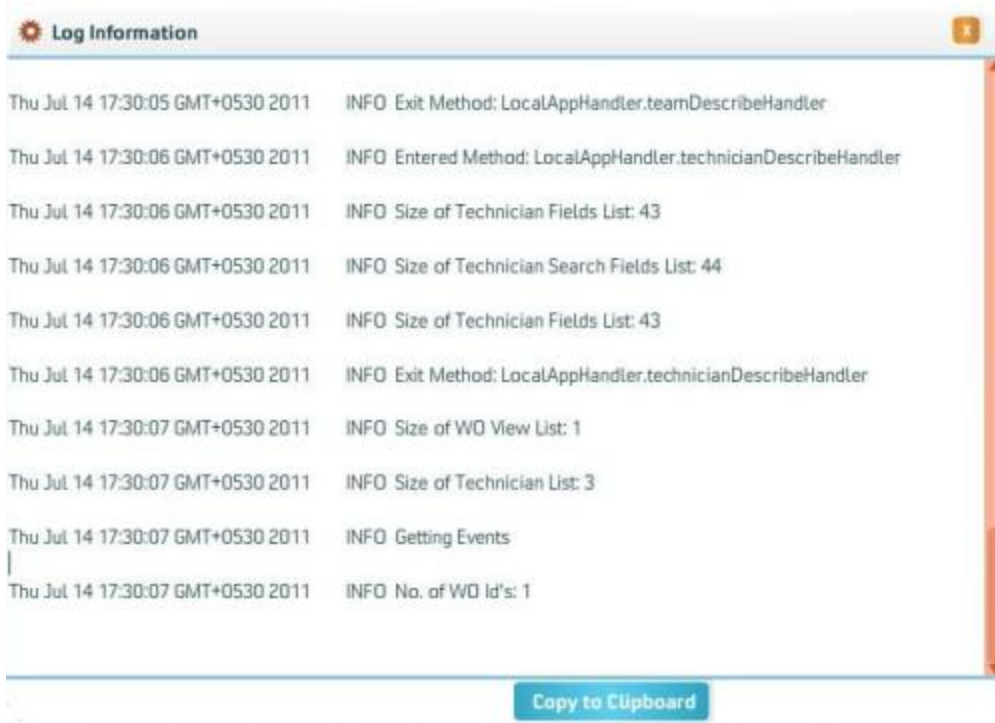


Figure 13: Log Information Dialog Box

Work Order Actions

You can sort the Work Order results by clicking on the column headers. Clicking the same column again will sort it in the reverse order. For example, to sort the result set based on dispatch status, click the highlighted column name **Dispatch Status**.

When you click a Work Order record, the keyword field is automatically populated on your [search configuration](#). You can overwrite the keywords by entering a list of keywords separated by commas manually, as well.



Figure 14: Keywords Separated by Commas

To find Service Teams for the Work Order, click **Find Service Teams** adjacent to the keywords list.

To find Technicians for the Work Order, click **Find Technicians** adjacent to the keywords list.

When you move the mouse over the Work Order number of any record, an arrow is displayed as shown below. Click the arrow and select one of the options from the Work Order actions menu.

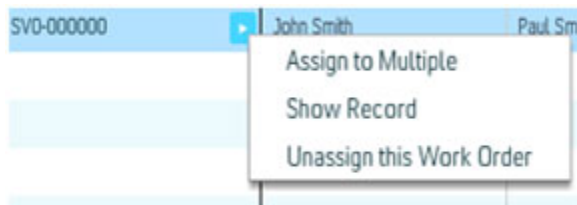


Figure 15: Work Order Actions Menu

Click **Show Record** to see the Work Order record in Salesforce. Note that each **Show Record** click opens the record in a new browser window. These windows are not closed when you close the Dispatch Console.

Click **Unassign** to remove the current assignment (Service Team or Technician) for the Work Order. When prompted, click **Yes** to confirm.

Click **Assign to Multiple** to schedule the Work Order to multiple Technicians simultaneously. A popup window appears as shown below:

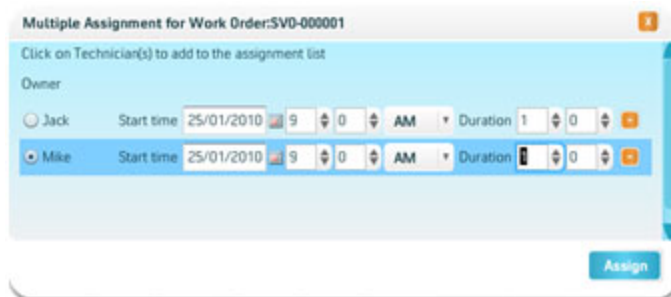


Figure 16: Multiple Assignment Dialog Box

In the above screen:

- Click any Technician from the tree view in the above screen to add the Technician to the assignment list. Alternatively, click the remove button to remove the Technician from the list.
- At least one and only one of the Technicians can be a primary assignee for the Work Order. Use the **Owner** radio button to designate the Technician as the primary Technician.
- Click **Assign** to assign the Work Order. An event will be added to the calendar for all the selected Technicians. The primary Technician will be marked as **Owner**.

Tree and Calendar View

When Dispatch Console is launched, a list of Technicians is displayed in a hierarchical tree view. There are two options for the tree view: **Service Team tree** or **Territory tree**. Only Service Teams and Territories for which you are designated as a Dispatcher appear. For more information regarding designating dispatchers, see Service Team Management Console and [Territory Management Console](#).

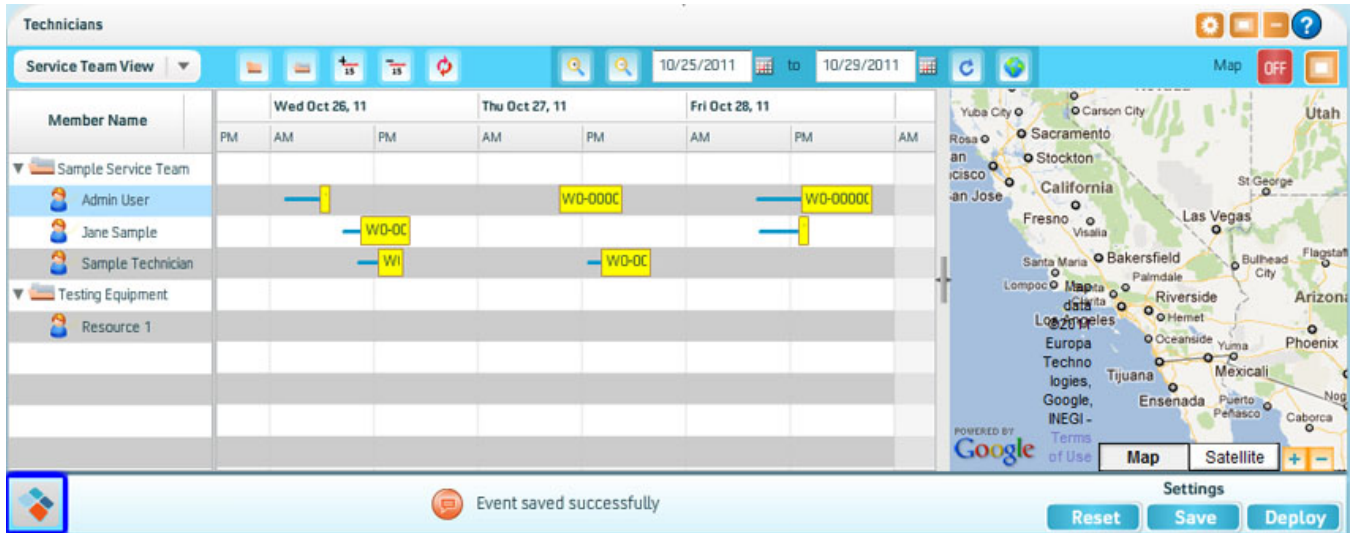


Figure 17: Technician Screen

In addition to the Territory/team hierarchy, the calendar of events for each Technician for the default date range is displayed in the calendar section.

You can also type dates directly into the **Gantt Chart Date** field. For example, 10/25/2011 to 10/29/2011 as shown in the figure above. You must click **Refresh** for the dates to display. (No set up is required for this feature).

Overlapping events display with the shortest event on top as shown in the figure below.

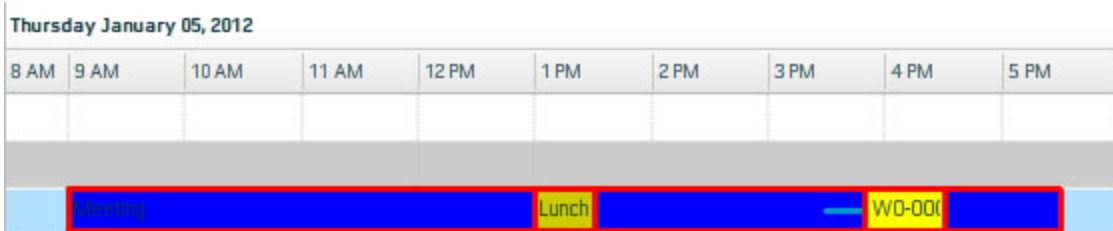









Figure 18: Overlapping Events

- You can switch between the Territory tree or Service Team tree by selecting the view type.
- Use the **Collapse**  or **Expand**  buttons to collapse or expand the tree view respectively. The tree is in **Expanded** mode by default.
- Use the **Zoom Out**  or **Zoom In**  buttons to increase or decrease the zoom level of the calendar respectively.
- To refresh the events view, click **Refresh**.
- When a filter is currently applied on the technician view, the **Reset** button is highlighted in yellow  indicating that you must reset the view to see the entire list of technicians. Clicking on the Reset button will show all technicians that were displayed when Dispatch Console was launched. It will also restore the reset button to its original state .
- To set your time zones in which you want the events to be displayed, click **Select Time Zone**  button. In the popup window (as shown below), click the applicable country and then click **OK**.

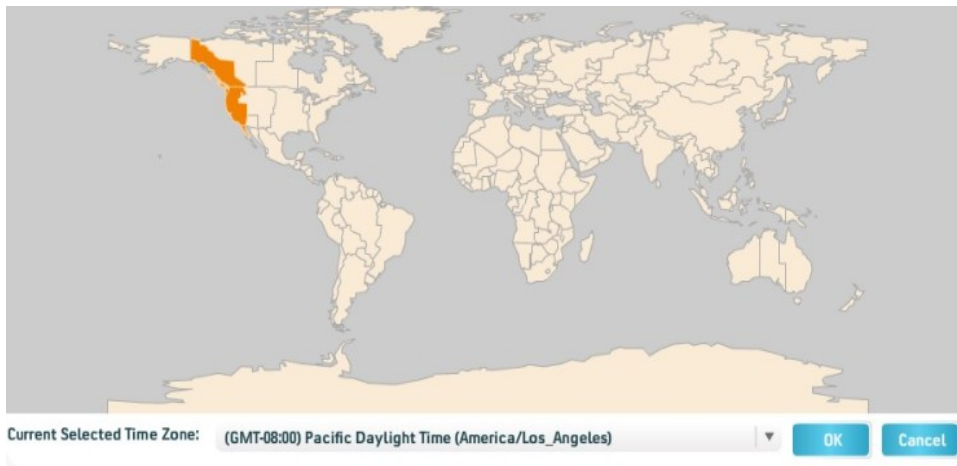




Figure 19: Select Time Zone Screen



Note: The time zone selected here is not connected to your Salesforce time zone. All events displayed or created in dispatch console are considered to be in the time zone selected using this window.

- To delete an existing event in the calendar, click the event and then click the **Delete Event**  button. When prompted, click **Yes** to confirm.
- To create a new event, click the **Add Event**  button. Events created this way are not related to a Work Order.
- To edit an existing event, double-click the event in the calendar. The following dialog box appears in Create and Edit modes for events that are not linked to a Work Order.



The 'New Event' dialog box contains the following fields and controls:

- Assigned to:** Text field with 'Jack' entered.
- Subject:** Text field with 'WO-00010050' entered.
- Description:** Text area with 'Call the customer for clarification' entered.
- Start Date:** Date picker showing 07/15/2011, 07:15 AM.
- End Date:** Date picker showing 07/15/2011, 09:25 AM.
- Location Notes:** Text field with 'Desk' entered.
- Duration (Minutes):** Two spinners for 'Drive time' (60) and 'Service time' (70).
- Buttons:** Three circular icons below the duration spinners.
- Checkboxes:** ☐ Remove current assignment and reassign the work order; ☐ Remember my preference.
- Save:** A blue button at the bottom right.

Figure 20: New Event Screen

In the above screen:

- Enter **Subject**, **Description**, **Start Date**, **End Date**, and **Location**.
- Click **Save**. The event is saved and the calendar is refreshed.



Note: You can also type dates directly in the Gantt Chart Date fields.








- Click the  at the top, the right side of the Create/Edit event screen shows custom fields from Work Order and Event. Up to 10 fields from Work Order and/or Event can be configured by your administrator for this screen. For more details, see [Configure DC Field Updates](#).



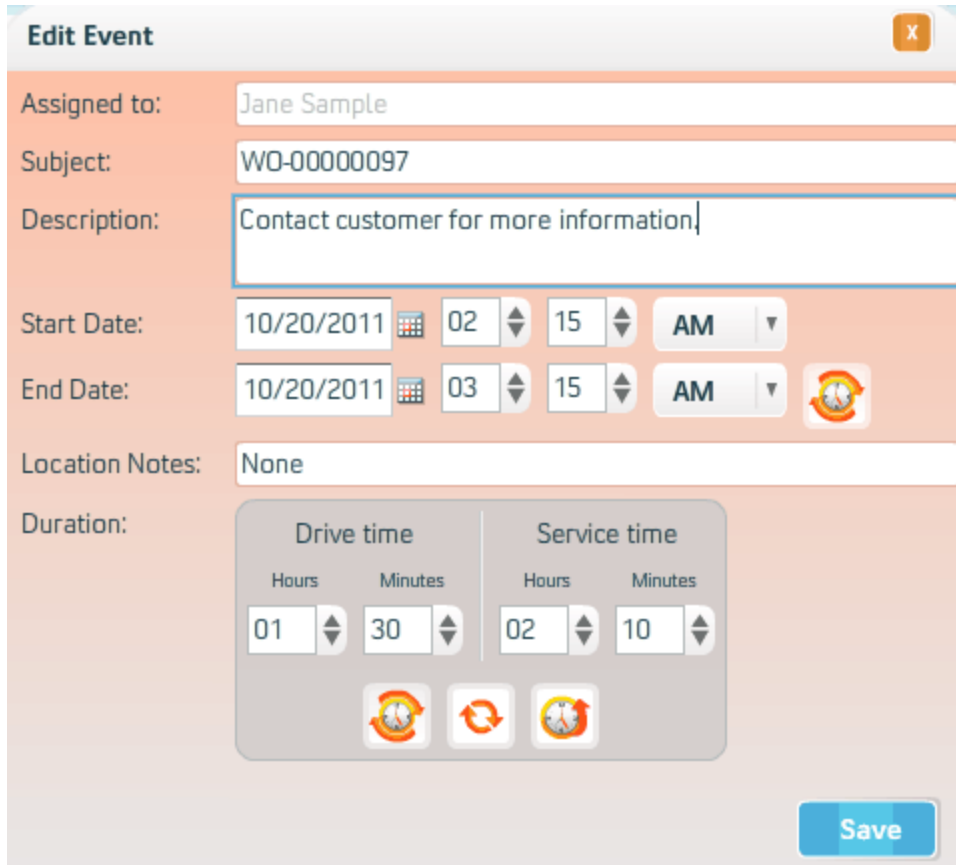
Figure 21 : Edit Events Screen

- To keep the window in expanded mode, click the  pin button available at the top.
- To hide the custom Work Order/Event fields, click .
- If the event is linked to a Work Order, the following popup window is displayed.

In the New Event screen:

- Click any Technician from the tree view for the **Assigned To** field.
- If event subject rules are configured for the Work Order, the Subject field is automatically populated from the relevant fields on Work Order. Please contact your ServiceMax administrator to learn more about how to utilize the Event Subject rules.
- Enter **Subject, Description, Start Date, End Date,** and **Location.**
- Enter **Drive time, Idle time,** and **Service time** as applicable.
- To automatically calculate end time, click the  (Auto-populate) button adjacent to **End Date** field. The end date is calculated as (Start Date) + (Service time + Drive time + Idle time).
- To automatically calculate service time based on start date and end date, click the  (Auto-populate) button in the **Duration** section.
- To set the 3 duration fields to **zero**, click the  (Reset) button.
- To restore the 3 duration fields to their original values from the Work Order, click the  (Restore) button.
- To remove all existing assignments of the Work Order, if any, before assigning the Work Order to the new Technician, check the checkbox.
- If the event start time is outside the Technician's working hours, an error message will be displayed and a **Save** button will be disabled. This happens only if your administrator has enabled this enforcement.
- The service duration and drive time can also be displayed in hours and minutes. See figure below. This feature is controlled by **Group-wide Configuration Settings.**

- Click **Save**. The event is saved and the calendar is refreshed.



Edit Event [X]

Assigned to: Jane Sample

Subject: WO-00000097

Description: Contact customer for more information

Start Date: 10/20/2011 02:15 AM

End Date: 10/20/2011 03:15 AM

Location Notes: None

Duration:

Drive time		Service time	
Hours	Minutes	Hours	Minutes
01	30	02	10

Save

Figure 22: Edit Events Screen (duration time in hours and minutes)

Extended Event Edit Window

You can view and edit events that overlap on the Gantt chart in the Dispatch Console. To access this feature, hover over the block of events in the Gantt chart to display the pop up window for the event. From the popup window, click the arrow on the right corner of the

window. See figure below.

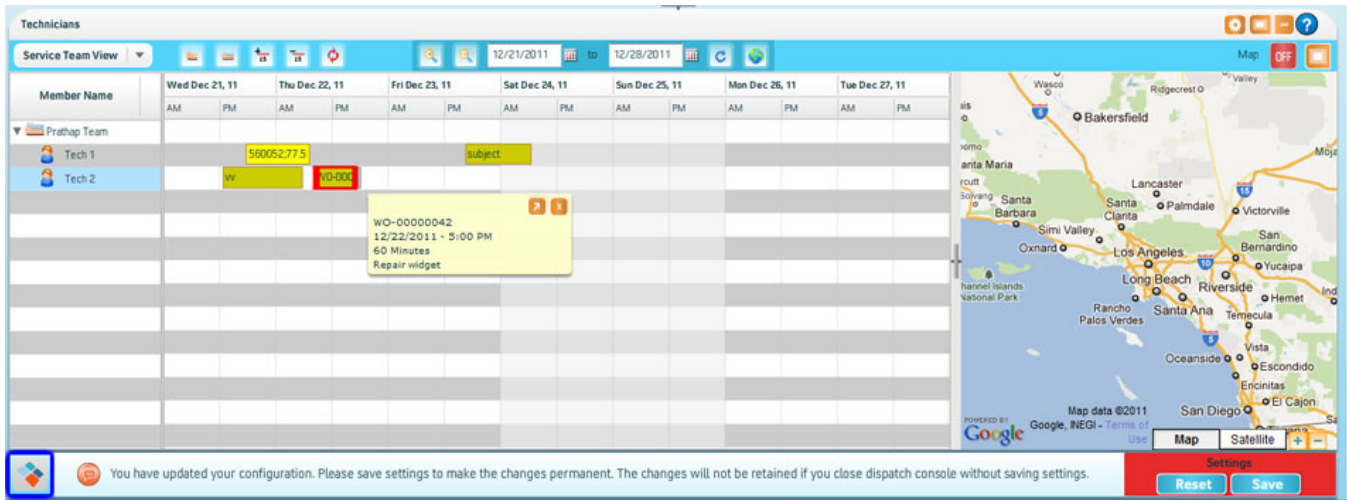


Figure 23: Hover Over Events on Gantt Chart

The Extended Edit Event Window displays all events, including the overlapping events for a technician for a given day.

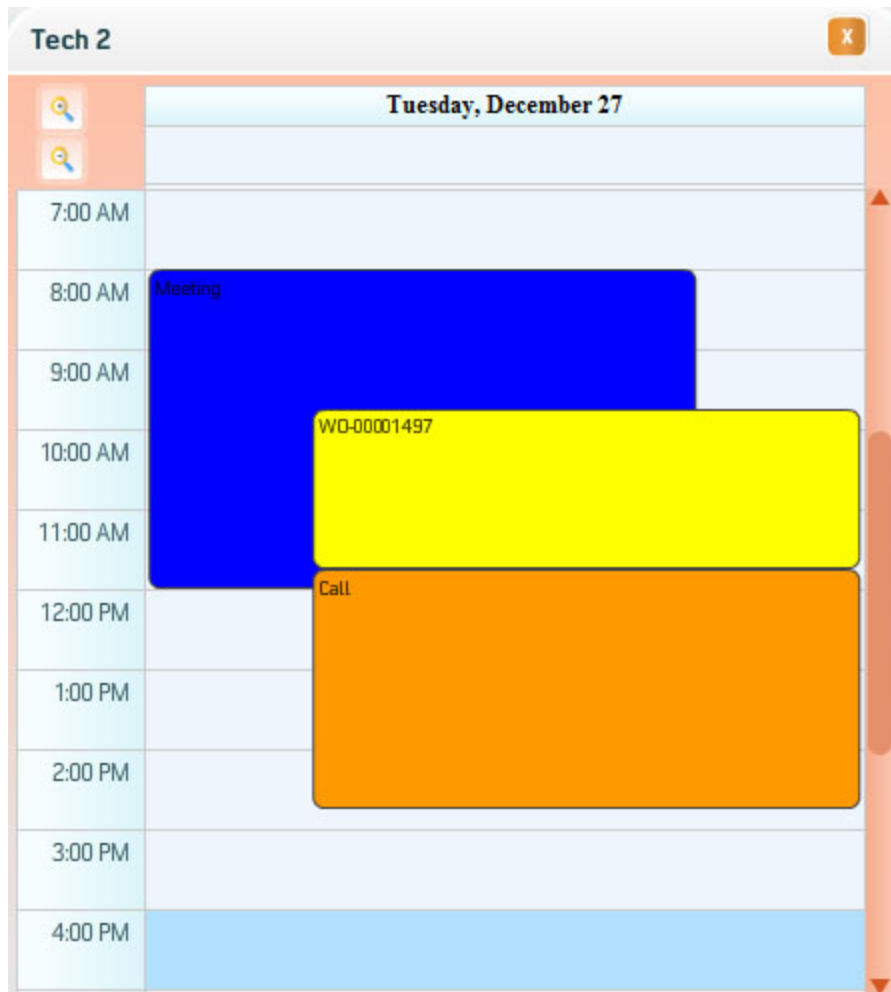


Figure 24: Extended Event Edit Window - Technician Day View

From the above dialog box, you can:

- Hover over an event to display event details.
- Double-click an event to edit the event.
- Zoom in or zoom out using the icons located on the upper left corner of the dialog box.

Events that span across multiple days appear in the top area of the Extended Event window. A black arrow icon displays in the corner of the event area indicating that the event continues.

For example, in the figure below, the **Training** event begins at 9:00 A.M. on January 2nd and ends at 5:30 P.M. on January 3rd.

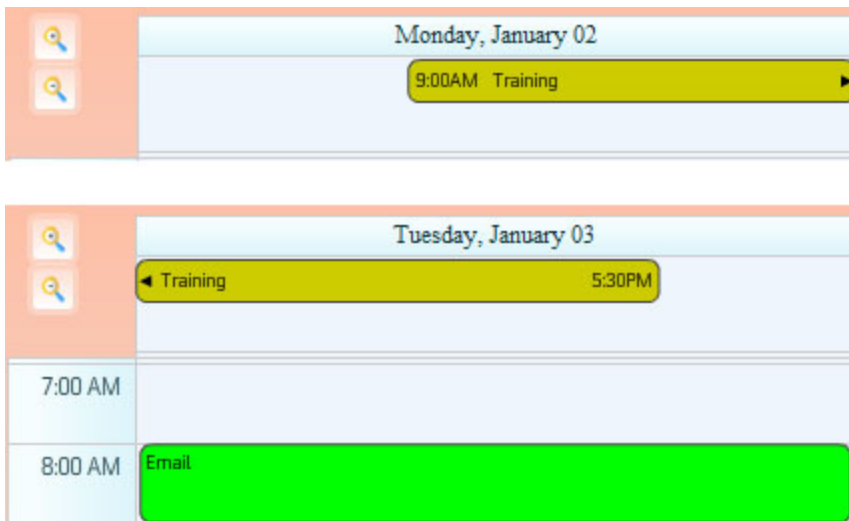


Figure 25: Extended Event Edit Window - Multi Day Events

Configure Technician View

You can configure fields displayed against each Technician and also how the events are colored in the calendar. To configure this, click **Configure** at the top-right of the Technicians section. The Configure technician View appears.

To configure columns displayed in the Technician list:

1. Click the **Columns** tab.



Figure 26: Columns Tab

2. Select the applicable fields from the left and then move it to the right. Member Name must always remain selected and cannot be unselected.
3. Use the Up or Down arrows to manage the display order fields.

To configure colors and other attributes of calendar events:

1. Click the **Calendar** tab.

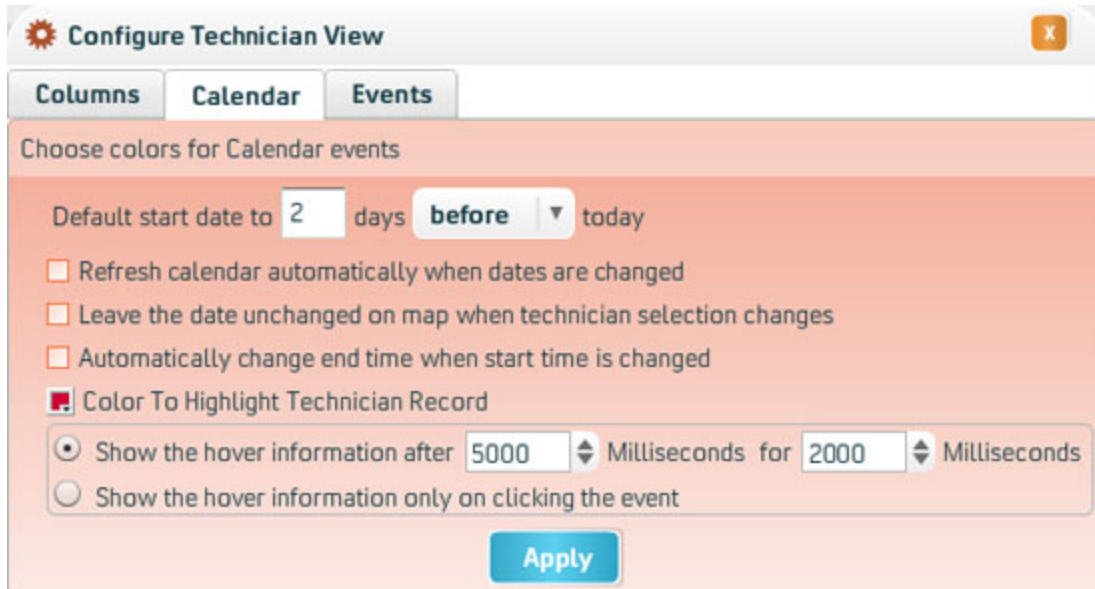




Figure 27: Calendar Color Tab

2. You can designate a color for calendar events based on the subject type. You can select a color for the five standard subject titles supported by Salesforce as well as Work Orders. The Default color is used for any subject that does not match the standard subject names.
3. To view the events details for certain days before or after the current date, enter the number of days in **Default start date to** field and then select **before** or **after** appropriately in the picklist next to the field.
4. To refresh the calendar automatically when start date or end date is selected, check the checkbox **Refresh calendar automatically when dates are changed**. Though this feature provides increased flexibility, it may impact the performance.
5. When viewing daily routes of Technicians, to retain the current date on the map even while switching between Technicians, check the checkbox **Leave the date unchanged on map when Technician selection changes**. If this is cleared, date on the map will be reset to start date when you switch between Technicians.
6. When you change the start date or time in an event, the end date can also be automatically updated with a similar change. For example, if the start time is 3:00 and the

end time is 4:00, and you change start time to 3:30 using the spin buttons, the end time can automatically adjust itself to 4:30. To achieve this effect, check the checkbox **Automatically change end time when start time is changed**.

7. During work order assignment, you can configure the color used to highlight the selected technician record. Use the color palette in **Color To Highlight Technician Record**.
8. There are two configuration options to control when event hover is displayed. To display the hover on mouse-over, select the time delay in milliseconds (1 second is 1000 milliseconds). To display the hover on mouse-click, select the setting **Show the hover information only on clicking the event**.
9. In the hover information, click  at the top right to view the work order record. The standard Salesforce record view as configured by your administrator appears. To close the hover information, click .
10. Click **Apply** to save and apply your changes.

You can rearrange any existing event on the calendar horizontally (for the same Technician) or vertically (across Technicians) by simply dragging the event and dropping it at a desired location. When you drag and drop an event, click **Yes** when prompted for confirmation to finalize the change.

To schedule a Work Order to a Technician on the tree, drag the Work Order from the Work Order list and drop it at any desired location on the calendar. When the dragged record is hovered over the Technician's calendar, date and time for the new event will be shown as pop-up text. The New Event window appears as shown above. Note that nothing happens when you drop a Work Order on a Territory or Service Team. You can drop the Work Order only on Technicians.

When you move the mouse over the Technician name on any record in the tree, an arrow is displayed as shown below. Click the arrow and select one of the options from the Technician Actions menu, either **Show Route** or **View Record**.



Figure 28: Technician Action Menu

In the **Technician Actions** menu:

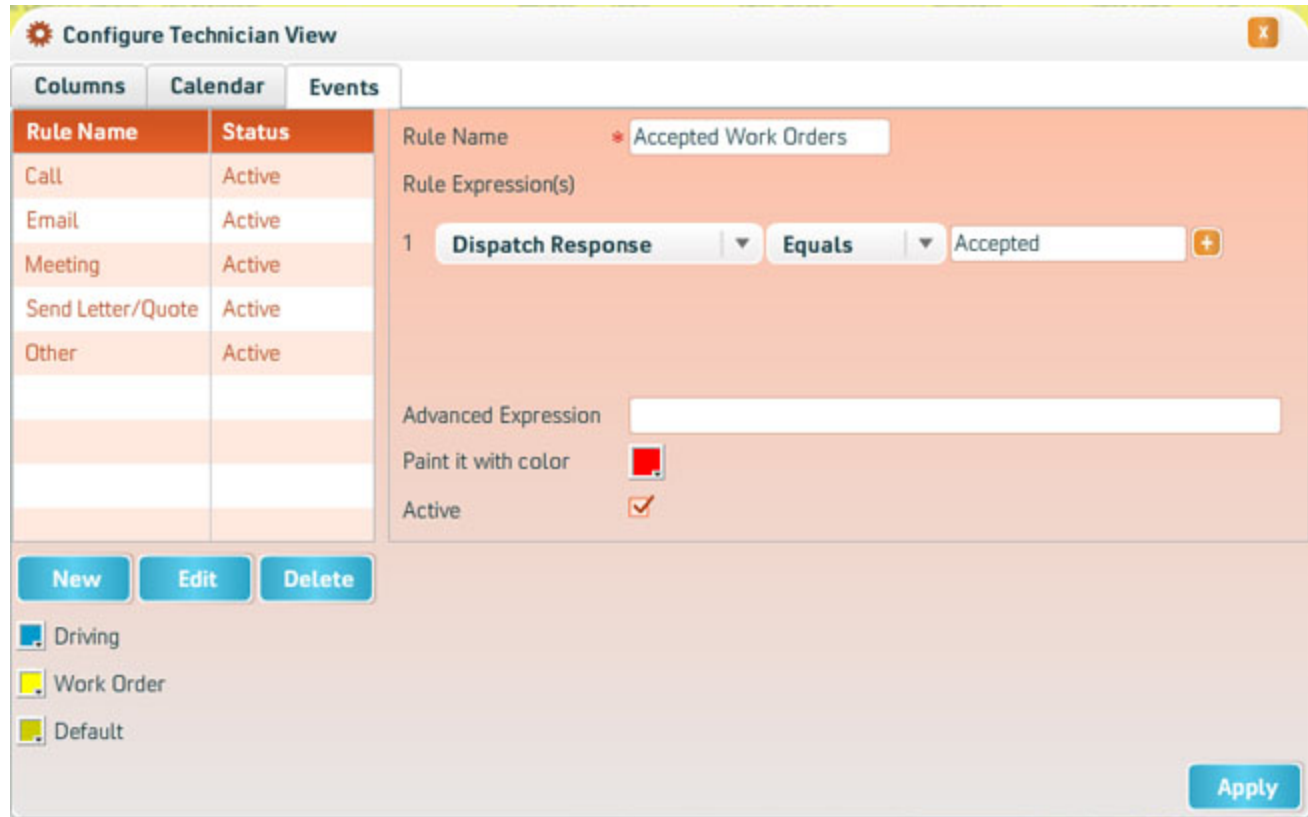
- Click **Show Record** to see the Technician record in Salesforce. Each record view opens a new browser window. These windows are not automatically closed when you close Dispatch Console.
- Click **Show Route** to view the Technician's route on the start date entered in the events view.
 - All Work Orders assigned to the Technician on each day, if available, are displayed.
 - The map also shows the driving route starting from the Technician's address to each Work Order in the order of assignment and back to the Technician's address.
 - To view Technician's route on the next or previous day, click the corresponding buttons in the map section.

Configure Colors and Other Attributes for Events

You can click the **Events** tab to configure coloring rules and other attributes. See figure below.

For event coloring coding rules, an Event field will be listed only if it exists with the same API name and is of the exact same type in both SVMXC__SVMX_Event__c object and Sales-

force Event object.



The dialog box is titled "Configure Technician View" and has three tabs: "Columns", "Calendar", and "Events". The "Events" tab is selected. On the left, there is a table with two columns: "Rule Name" and "Status". The table contains five rows of rules, all with a status of "Active". Below the table are three buttons: "New", "Edit", and "Delete". To the right of the table, there is a section for configuring a rule. It includes a "Rule Name" text box with the value "Accepted Work Orders", a "Rule Expression(s)" section with a single rule "1" showing "Dispatch Response" equals "Accepted", and an "Advanced Expression" text box. Below these are checkboxes for "Paint it with color" (checked with a red square) and "Active" (checked with a checkmark). At the bottom left, there are three color swatches labeled "Driving", "Work Order", and "Default". An "Apply" button is located at the bottom right.

Rule Name	Status
Call	Active
Email	Active
Meeting	Active
Send Letter/Quote	Active
Other	Active

Rule Name: Accepted Work Orders

Rule Expression(s):

1 Dispatch Response Equals Accepted

Advanced Expression:

Paint it with color: ☒

Active: ☒

Buttons: New, Edit, Delete

Color Swatches: Driving, Work Order, Default

Apply

Figure 29: Configure Technician View Dialog Box

The Event tab in the Configure Technician View dialog box includes three sections: the **Rule** list (which includes **Rule Name**, **Status**, and buttons to manage the rules), the **Rule Expression** builder area, and default event colors (**Driving**, **Work Order**, **Default**).

All the defined rules are listed under Rule Name. You can create a new rule, edit an existing rule, or delete a rule by selecting one of the defined rules and clicking the appropriate button located below the Rule list.

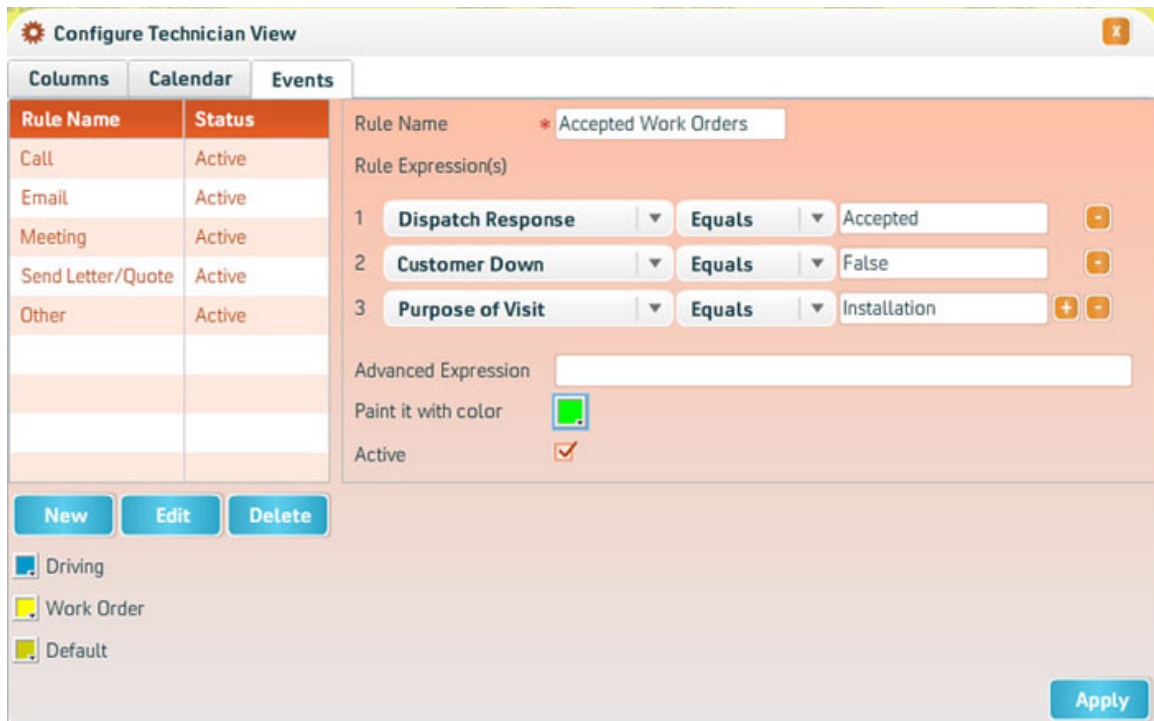
The Rule Expression builder area includes the **Rule Name** text box, **Rule Expression(s)**, and the **Paint it with color** box. The Rule Expression builder area contains three parts: the **Field Name** picklist, the **Operator** picklist, and the **Value** text box. The **Field Name** picklist lists all work order and event fields. The **Event** fields (located in the **Field Name** picklist) are prefixed with the word "Event."

The default colors for **Driving**, **Work Orders**, and **Default** do not match any rules.

To create an event coloring rule:

1. In the **Configure Technician View** dialog box, click the **Events** tab. See figure below.
2. Click the **New** button located below the Rule Name list.
3. Enter a valid rule name in the **Rule Name** text box. "Accepted Work Orders" is an example of a valid rule name.
4. Define your Rule Expression:
 - a. In the **Field Name** picklist, select a field name.
 - b. In the **Operator** picklist, select an operation.
 - c. In the **Value** text box, enter a value. "Dispatch Response Equals Accepted" is an example of a rule expression.
 - d. Use the **+** or **-** buttons to add or delete expressions in the Rule Expression builder area. See figure below.
 - e. If required, use Advanced Expression to enter conditions such as **(1 AND 2) OR 3**.
 - f. Check the **Active** check box.
 - g. Click the **Paint it with color** box to display the color palette and select a color.

- h. Click **Apply**. Your Event Coloring rule displays in the Rule Name list. All conditions must be satisfied before a coloring rule can be applied.



The screenshot shows the 'Configure Technician View' dialog box with the 'Events' tab selected. On the left, a table lists rule names and their status:

Rule Name	Status
Call	Active
Email	Active
Meeting	Active
Send Letter/Quote	Active
Other	Active

Below the table are buttons for 'New', 'Edit', and 'Delete'. At the bottom left, there are color-coded boxes for 'Driving' (blue), 'Work Order' (yellow), and 'Default' (green). The main area on the right is for configuring the rule:

- Rule Name:** * Accepted Work Orders
- Rule Expression(s):**
 - 1. **Dispatch Response** **Equals** **Accepted**
 - 2. **Customer Down** **Equals** **False**
 - 3. **Purpose of Visit** **Equals** **Installation**
- Advanced Expression:** (empty text box)
- Paint it with color:** ☒ (green box icon)
- Active:** ☒ (checkbox icon)

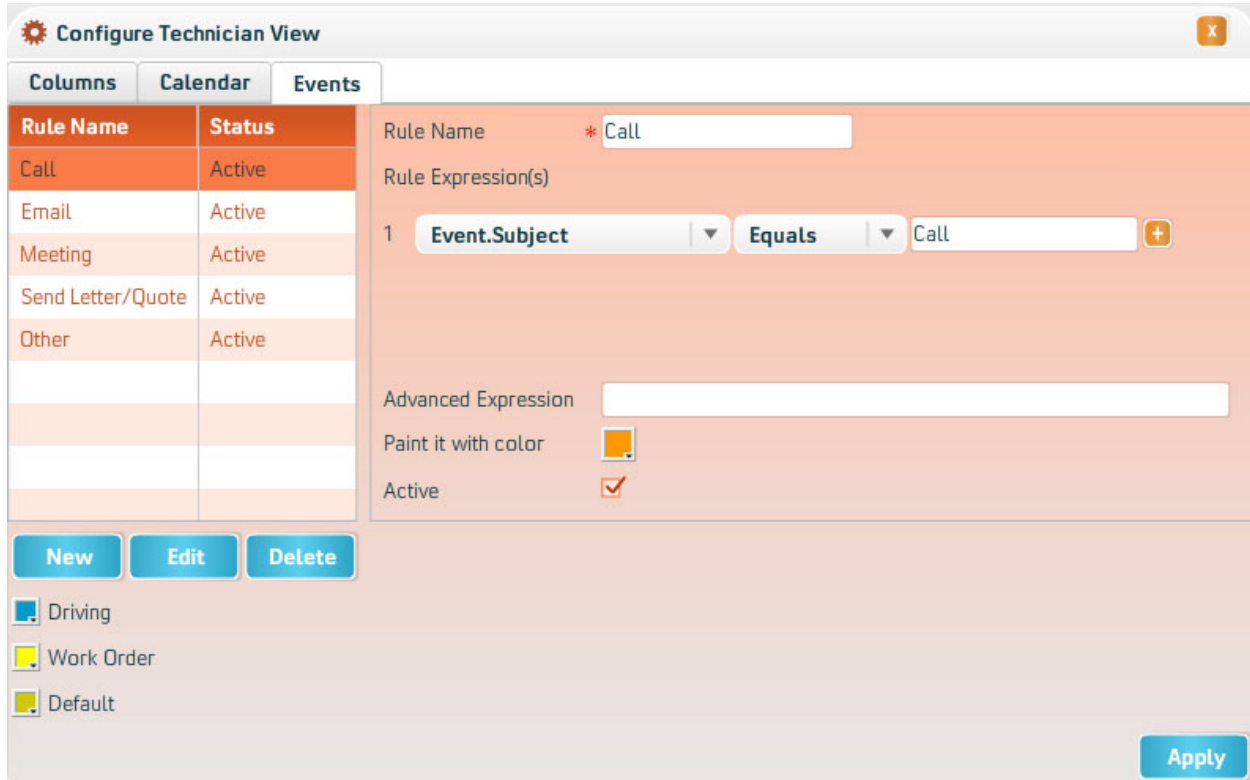
At the bottom right is an 'Apply' button.

Figure 30: Configure Technician View Dialog Box (multiple expressions)

To edit an event coloring rule:

1. Select a rule from the **Rule Name** picklist.
2. In the Configure Technician View dialog box, click the **Edit** button.

The rule populates in the Rule Expression builder area. See figure below.



The screenshot shows the 'Configure Technician View' dialog box with the 'Events' tab selected. On the left, a table lists rules with their names and statuses. The main area on the right is for configuring a rule expression.

Rule Name	Status
Call	Active
Email	Active
Meeting	Active
Send Letter/Quote	Active
Other	Active

Buttons: New, Edit, Delete

Legend:

- Driving
- Work Order
- Default

Rule Configuration:

- Rule Name: * Call
- Rule Expression(s):
 - 1 Event.Subject Equals Call
- Advanced Expression:
- Paint it with color:
- Active: ☒

Buttons: Apply

Figure 31: Configure Technician View Dialog Box (Rule Expression)

3. Make changes to the existing rule by changing the color, the fields (**Name** and **Operator**), or the **Value** text box.
4. Add a new expression by clicking the **+** button. You can delete an expression by clicking the **-** button.
5. Check the **Active** checkbox.
6. Click **Apply**.

Configure Display Sequence

You can configure the display sequence for teams and territories. The Display Sequence configuration feature is useful when you need to rearrange the sequence from its original alphabetical order. For example, you could rearrange the order of the Service Team View area with your business process rules. The person who would be most likely to use this feature is a Dispatch Console Dispatcher or Manager.

See figure below for an example of a default display sequence (alphabetical order by first name).

Technicians

Service Team View

Figure 32: Display Sequence Example

To configure the display sequence:

1. Click the **Gear** icon located on the top right corner of the screen.
2. In the Configure Technician View dialog box, click the **Service Team/Territory** tab.

3. Use the up/down arrows to move team members or territories in the sequence you desire.

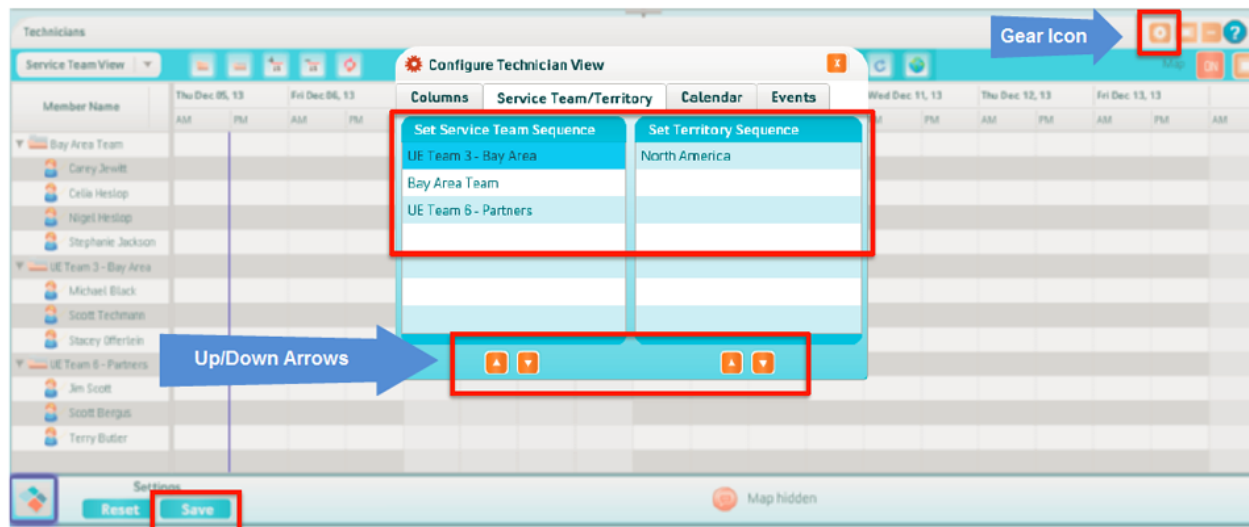


Figure 33: Configure Display Sequence

4. Click **Save**.

The Display Sequence updates based on your arrangement.



Figure 34: Display Sequence Rearranged



Note: If you change the display sequence, there is no **Reset** button to return to the default (alphabetical) sequence).

Gantt Chart Current Time Marker

The Current Time Marker visually displays the current time and day as a vertical bar in the Gantt Chart as shown in the figure below. Dispatch Console Dispatchers can configure the color and turn the current time marker on or off. This feature is most useful to Dispatch

Console Dispatchers who need a quick visual of activities in progress on the Gantt Chart.

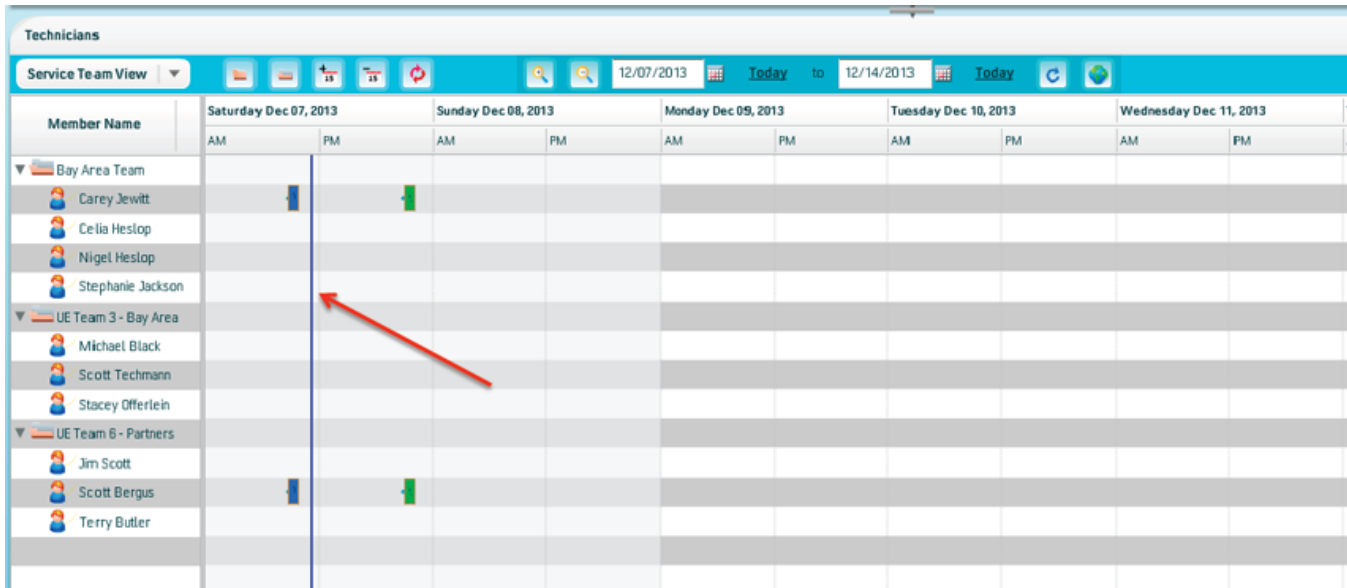
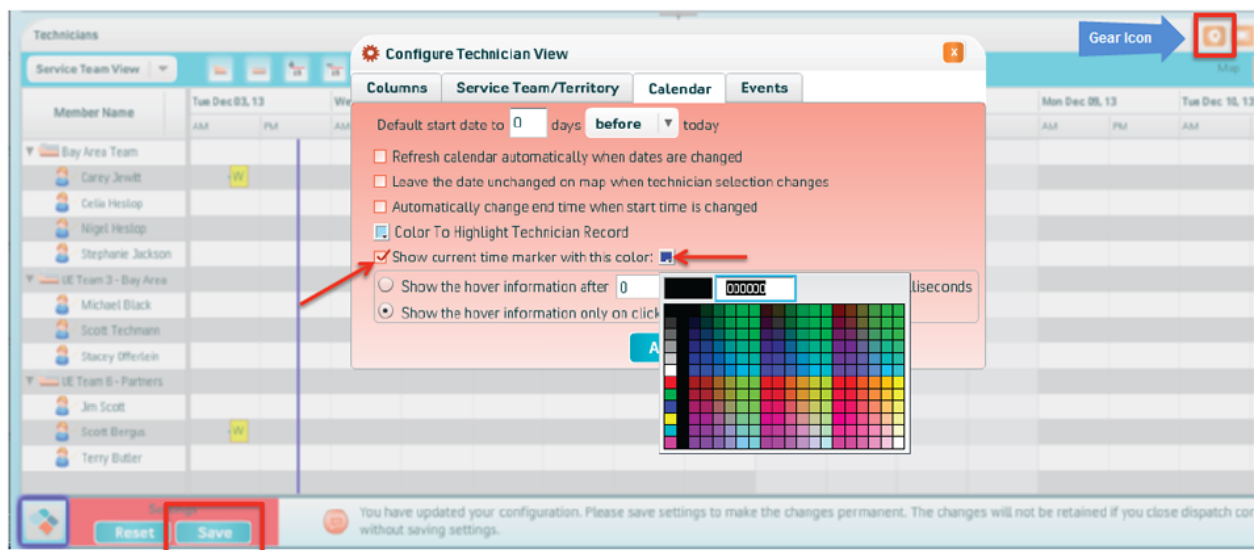


Figure 35: Current Time Marker Example

Follow the instructions below to configure the display option and vertical bar color for the Current Time Marker.

To configure the Current Time Marker on the Gantt Chart:

1. Click the **Gear** icon located at the top, right corner of the Gantt Chart area as shown in the figure below.

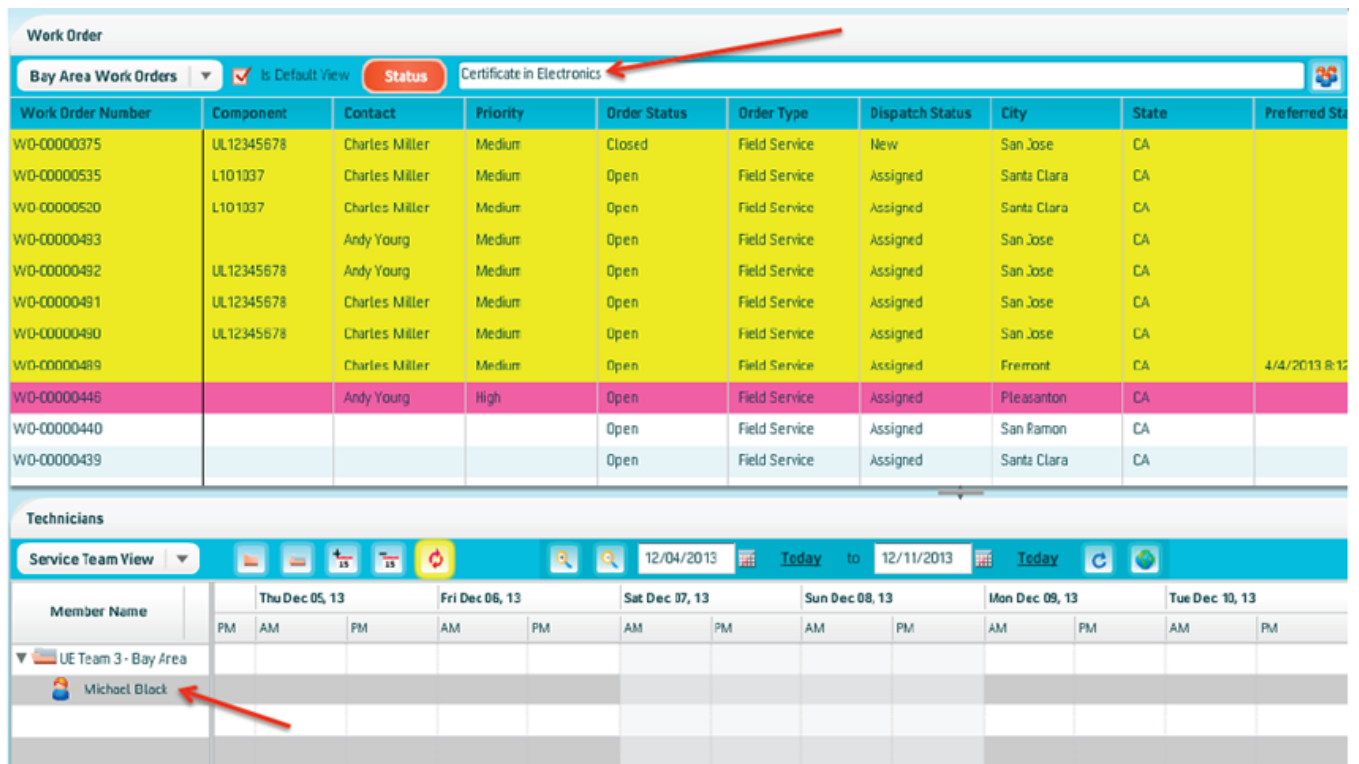


2. Click the **Calendar** tab.
3. Find and click option titled, **Show current time marker with this color**, to display the marker on the Gantt Chart.
4. Click the color box of the **Show current time marker with this color** option to open the array of available colors.
5. Select your desired color.
6. Click **Save**.

Check Validity for Expertise Search

The Check Validity for Expertise Search is a feature that enables Dispatchers to configure technician expertise searches to display only valid technician skills and expertise. Any technician whose expertise dates have expired will not display in search results.

For example, if a Dispatcher searches for technicians with the expertise "Certificate in Electronics," only those technicians with a valid "Certificate in Electronics" expertise record will display.



The screenshot displays the ServiceMax Dispatch Console interface. The top section shows a 'Work Order' list with columns: Work Order Number, Component, Contact, Priority, Order Status, Order Type, Dispatch Status, City, State, and Preferred Status. A red arrow points to the 'Certificate in Electronics' search filter in the 'Status' column. Below the Work Order list is a 'Technicians' section with a 'Service Team View' tab. The Gantt chart shows a timeline from 12/04/2013 to 12/11/2013. A red arrow points to the 'Michael Black' technician in the Gantt chart.

Work Order Number	Component	Contact	Priority	Order Status	Order Type	Dispatch Status	City	State	Preferred Status
WO-00000375	UL12345678	Charles Miller	Medium	Closed	Field Service	New	San Jose	CA	
WO-00000535	L101037	Charles Miller	Medium	Open	Field Service	Assigned	Santa Clara	CA	
WO-00000520	L101037	Charles Miller	Medium	Open	Field Service	Assigned	Santa Clara	CA	
WO-00000493		Andy Young	Medium	Open	Field Service	Assigned	San Jose	CA	
WO-00000492	UL12345678	Andy Young	Medium	Open	Field Service	Assigned	San Jose	CA	
WO-00000491	UL12345678	Charles Miller	Medium	Open	Field Service	Assigned	San Jose	CA	
WO-00000490	UL12345678	Charles Miller	Medium	Open	Field Service	Assigned	San Jose	CA	
WO-00000489		Charles Miller	Medium	Open	Field Service	Assigned	Fremont	CA	4/4/2013 R 12
WO-00000446		Andy Young	High	Open	Field Service	Assigned	Pleasanton	CA	
WO-00000440				Open	Field Service	Assigned	San Ramon	CA	
WO-00000439				Open	Field Service	Assigned	Santa Clara	CA	

Member Name	Thu Dec 05, 13	Fri Dec 06, 13	Sat Dec 07, 13	Sun Dec 08, 13	Mon Dec 09, 13	Tue Dec 10, 13
	PM	AM	PM	AM	PM	AM
UE Team 3 - Bay Area						
Michael Black						

Figure 36: Check Validity for Expertise Search Example

Map View

The Map section at the bottom right of the Dispatch Console can be used for two purposes:

- To view matching teams or Technicians for a Work Order within a given radius.
- To know the Technician's route on a given day.

A sample map view is shown below:

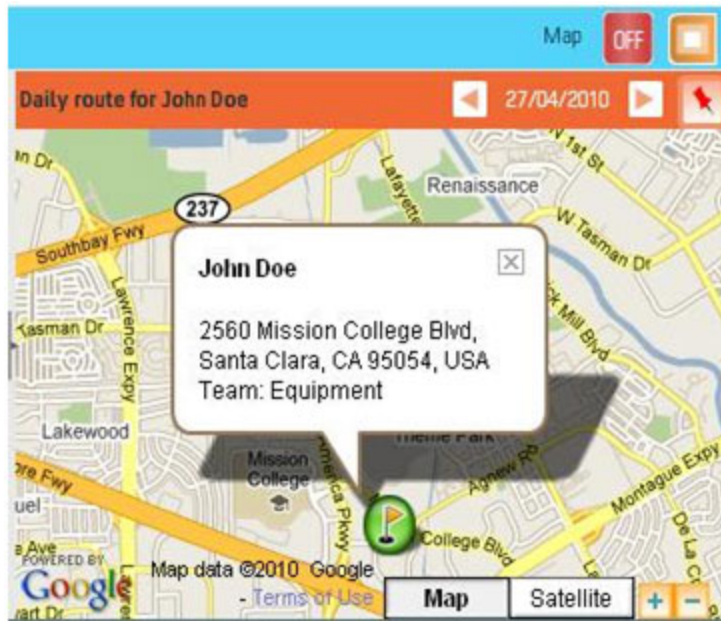


Figure 37: Map View

- The map can be toggled by clicking **ON** or **OFF** at the top-right of the map section.
- A floating panel appears on the map when you keep the mouse pointer anywhere on the map, and then disappears when the mouse pointer is moved away from the map. To keep the floating panel permanent on the map, click the **Pin** button available on the panel itself.
- If the map is **ON** (displayed), when you search for Service Teams and Technicians, the matching teams/Technicians are plotted on the map automatically. Only teams/Technicians within the radius entered in the map section are displayed.
- Click the **Maximize** button next to the **OFF** button to view the map in the new browser window. This will provide more room for the calendar section. Closing the map in the new browser window will show the map in its original position next to the calendar.
- If the map is **ON** (displayed), when you select a work order and then click **Find Technician** adjacent to the keywords list, the map will open in radius mode and the match-

ing Technician(s) within the radius is plotted automatically as shown below.

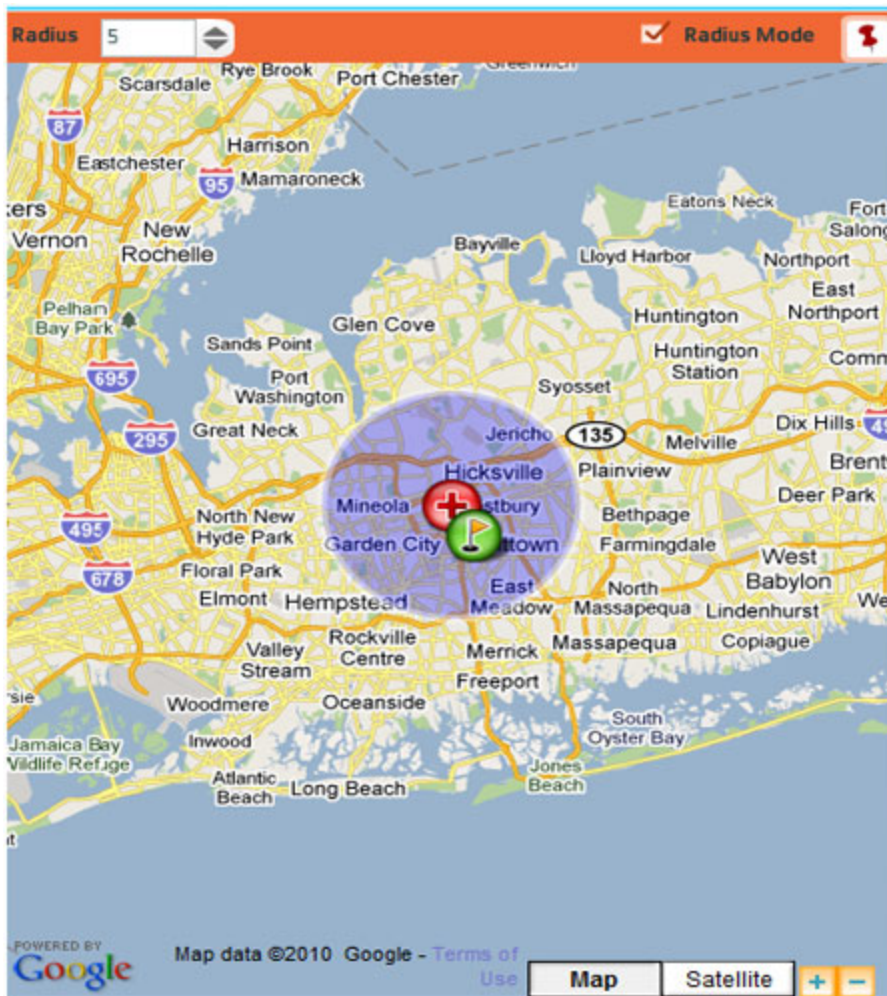


Figure 38: Map View in Radius Mode

- To locate Technicians within a certain radius, you can enter a radius value in miles or use the spin button to increase/decrease the value. If **Radius Mode** checked, a circle appears around the work order to visually indicate the coverage of your radius on the map. The circle changes as you increase or decrease the radius. Uncheck the **Radius Mode** checkbox to view the map in normal mode.
- To make the floating panel permanent, click the **Pin** button adjacent to the **Radius Mode** checkbox.



Note: Icons used to represent **Work Order**, **Technician**, and **Team** on the map are configurable. For more details contact your Service Administrator.

JavaScript Map View

The existing Flash-based Map in Dispatch Console is being replaced with JavaScript-based Map. This is to switch from the deprecated Google Maps API for Flash to Google Maps JavaScript API v3. In this release, JavaScript-based Map supports all the features of Flash-based Map except the following:

- Plotting Dispatch Console Views for Work Order, Location, and Account
- The functionality related to Radius

JavaScript-based Map includes the following enhancements:

- Default map size is now set to 25% of the width and 100% of the height of the Dispatch Console window, with the map still positioned on the right side (see image below for an example)

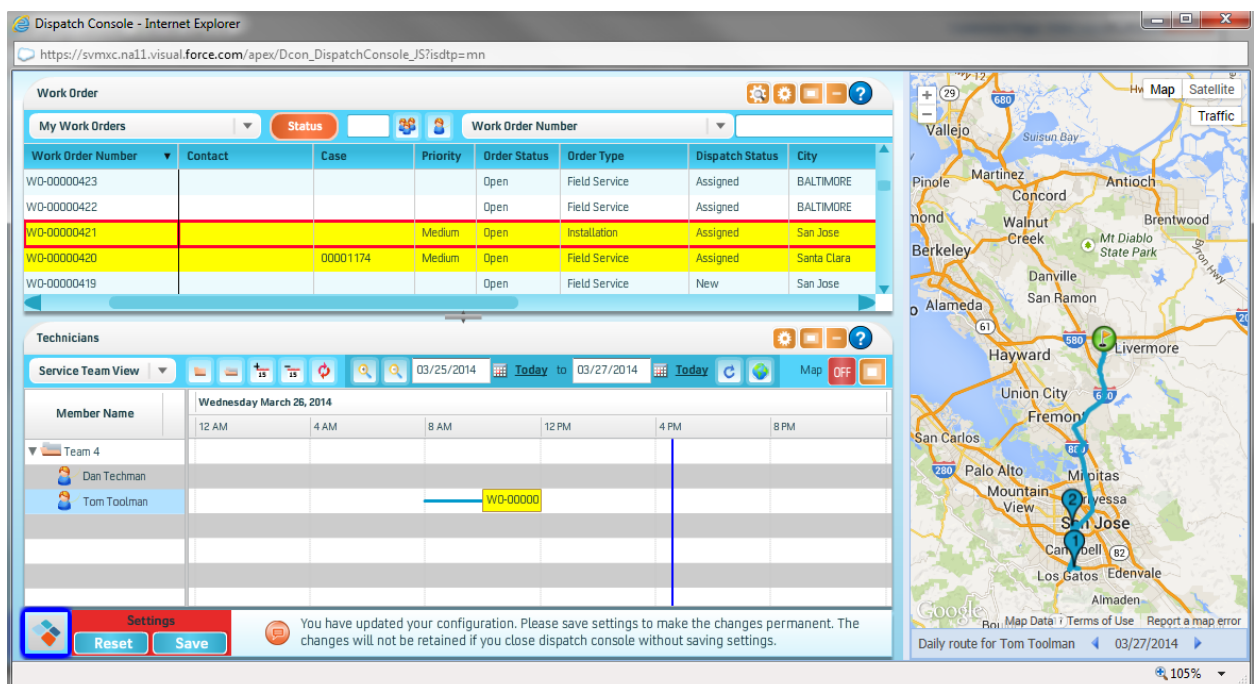


Figure 39: Default Map for JavaScript Map View

- User can personalize the map width by resizing the map and saving it by clicking the Save button in the Settings area
- Disable map component:
 - This can be achieved by closing the map component and clicking the Save button in the Settings area
 - Once saved, map component will not be displayed when Dispatch Console is launched
 - When required, map can be switched on again for the session or permanently
- Show Route enhancements:
 - Plot the route for the selected technician for the first day visible in Gantt
 - Route starts at and ends at the home location
 - Home location is represented by a new icon
 - Each stop (work order) on the route is displayed with a sequential numbered icon starting from 1, for better visualization of technician's route
 - Route displayed for current day is for the rest of the day, starting from the most recent work order and ending at the home location
 - Show route for one technician in a single color, with up to 15 distinct colors used to show routes for different technicians in different colors
- Map Hover enhancements:
 - Ability to configure hover fields for Service Team and Technician in the Dispatch Console Hovers configuration screen
 - Display the configured hover field values on hovering over the relevant icons on the map, for both routes and search results
 - If no hover fields are configured, display Name and Address details for Work Order, Team, and Technician, and Name for Account and Location
 - Option in the hover window to open the record in Salesforce
- Ability to view Dispatch Console on two monitors, with Work Order grid and Gantt displayed on one monitor and the map displayed on another monitor
- Maintain the map view state when switching between inline and pop-out maps

- Option to select traffic as an overlay option on the map, to enable viewing of current traffic conditions (see example below)

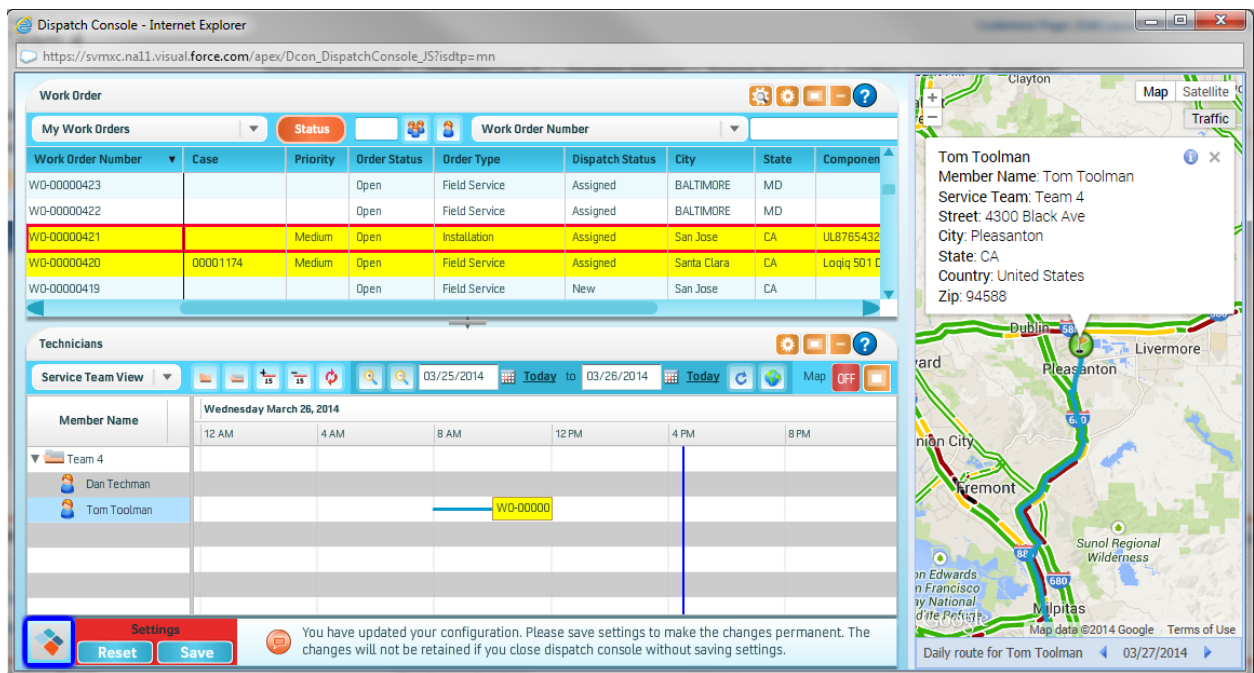


Figure 40: Traffic Overlay Option

- Use of icons for teams and technicians to represent the search results on the map

DC Custom Views

Your administrator can create custom Work Order, Account, and Location views and assign them to technicians, teams, and territories. These views can be filtered by ownership and pre-conditions. The display results columns can be specified. All available custom Work Order, Account, and Location views can be accessed from the **DC View List** picklist. A black line separates the custom views from the standard views. See figure below.

To display your custom DC view:


- Select a custom view from the **DC View List** picklist.
- The **DC View List** will be refreshed with results.
- Check the **Is Default View** checkbox to save the view as a default (see figure below).

- Save the setting by clicking the **Save** button in the Settings area (located in the bottom right corner underneath the Map view).



Work Order	Service Type	Customer Down	Dispatch Response	Priority	Account
001 - Central Unassigned	Id Service	false		Medium	Hi Tech Electronics - Sample
Critical Work Orders	Id Service	false		Medium	Hi Tech Electronics - Sample
My Open Work Orders	Id Service	false		Medium	Cutting Edge Lasers - Sample
This Week's Work Orders	Id Service	false		Medium	Cutting Edge Lasers - Sample
WO-00004620	Field Service	false		Medium	Cutting Edge Lasers - Sample
WO-00004622	Field Service	false		Medium	Cutting Edge Lasers - Sample
WO-00004621	Field Service	false		Medium	Cutting Edge Lasers - Sample
WO-00004617	Field Service	false		Low	Bay Area Diagnostics - Sample
WO-00004616	Field Service	false		High	Hi Tech Electronics - Sample
WO-00004619	Field Service	false		Low	Innovative Medical Devices - Sample
WO-00004613	Field Service	true		Medium	Hi Tech Electronics - Sample
WO-00004506	Field Service	false		Medium	Cutting Edge Lasers - Sample

Figure 41: Dispatch Console Screen (Work Order Custom Views)

- Click the  icon located at the top of left corner of the Map to display the Work Order, Account, and Location tabs for the DC map views to plot nearby work orders, account addresses, and locations in the map area. See figure below. A floating panel appears on the map when you keep the mouse pointer anywhere on the map, and then disappears when the mouse pointer is moved away from the map. To keep the floating panel permanent on the map, click the **Pin** button available on the panel

itself.

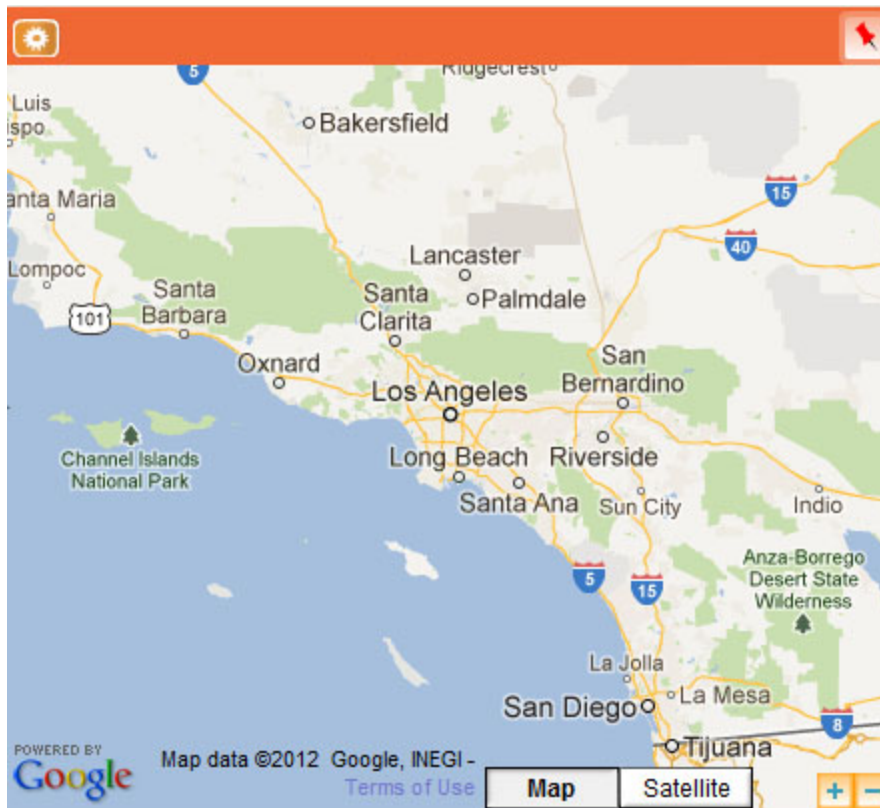


Figure 42: Configure Map Button

- Click one of the tabs: **Work Order**, **Account**, and **Location**. See figure below.

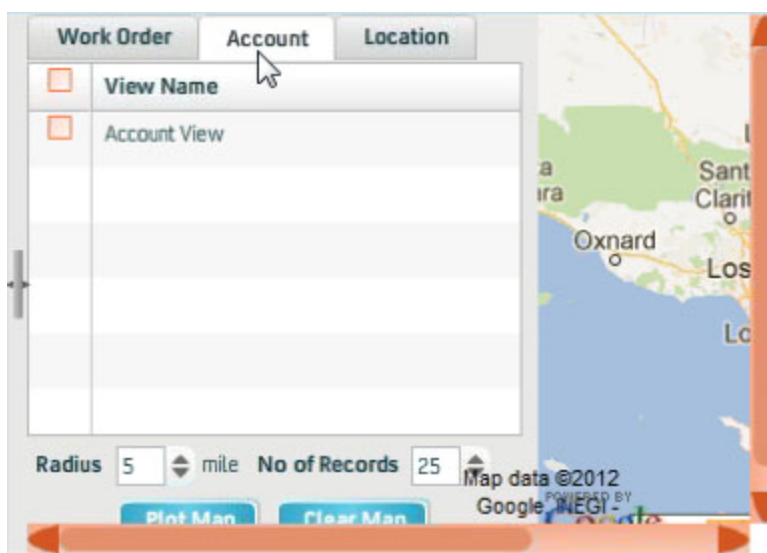


Figure 43: Work Order, Account, and Location Tabs

7. Select a **View Name** from the **Work Order**, **Account**, or **Location** tabs.

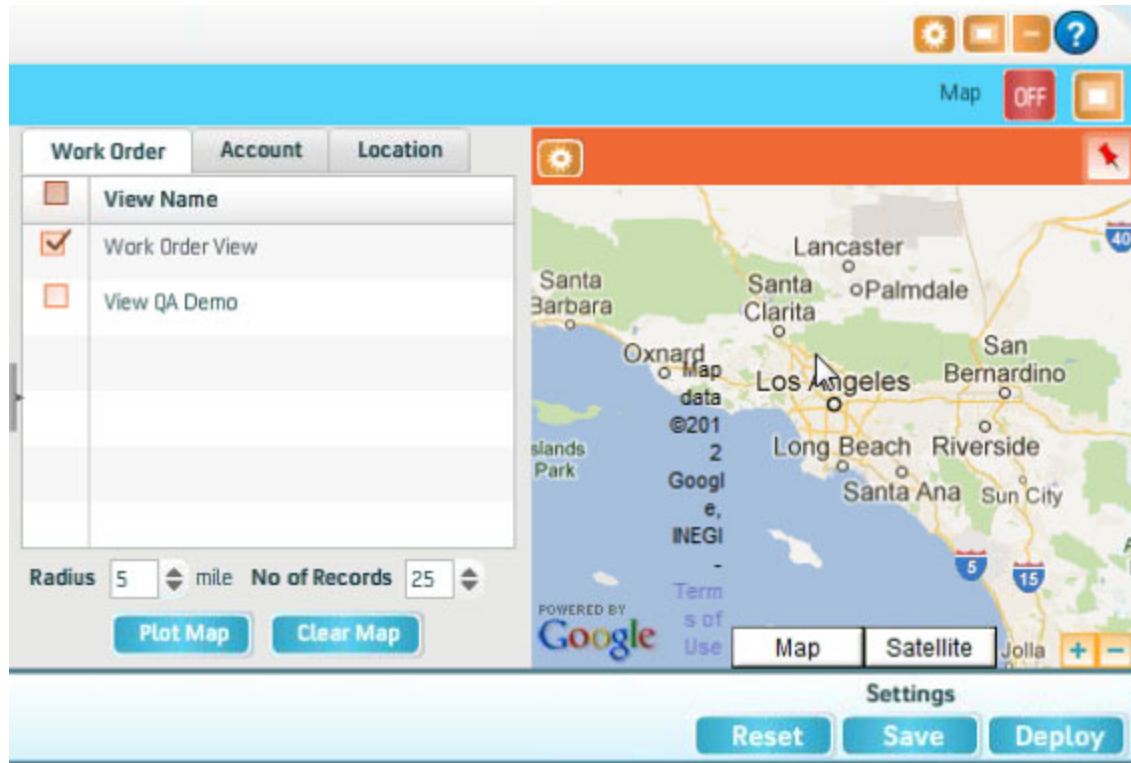


Figure 44: View Name Selection

8. In the **Radius** text box, select the radius (in miles) using the up and down arrows.
9. In the **Number of Records** text box, indicate the number of records to display on the map.

- Click the **Plot Map** button to plot the view on the map.

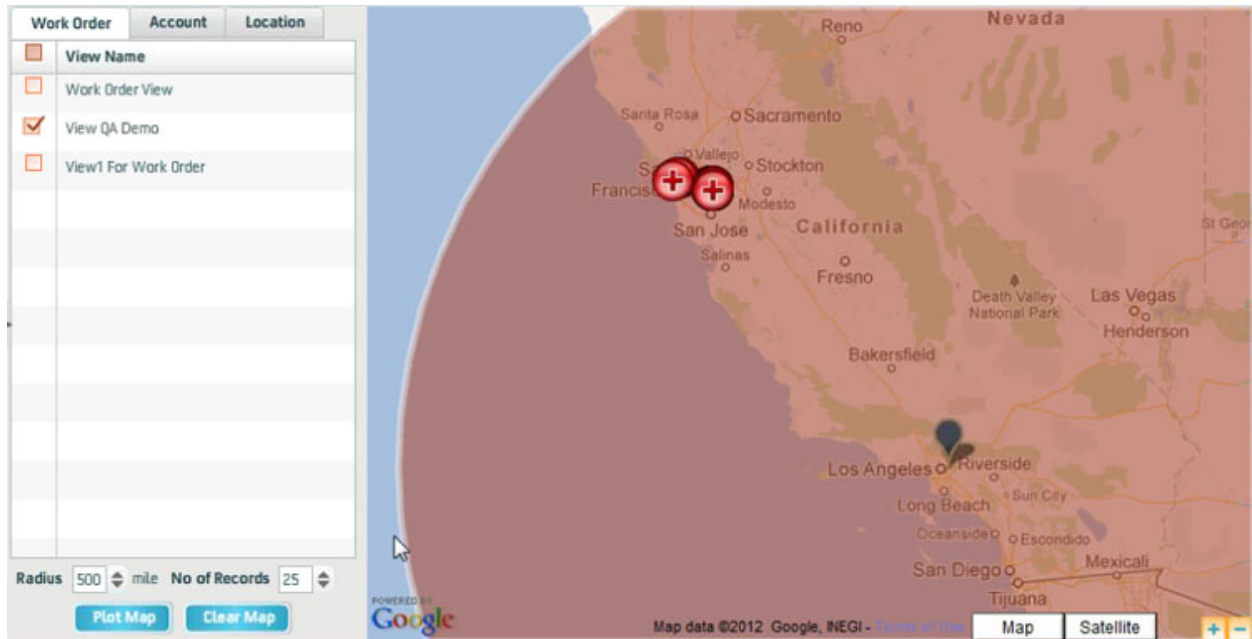


Figure 45: Account View Plotted on Map

The selected view is plotted on the map.

- Hover over the plotted points on the map to display information about the view. See figure below.

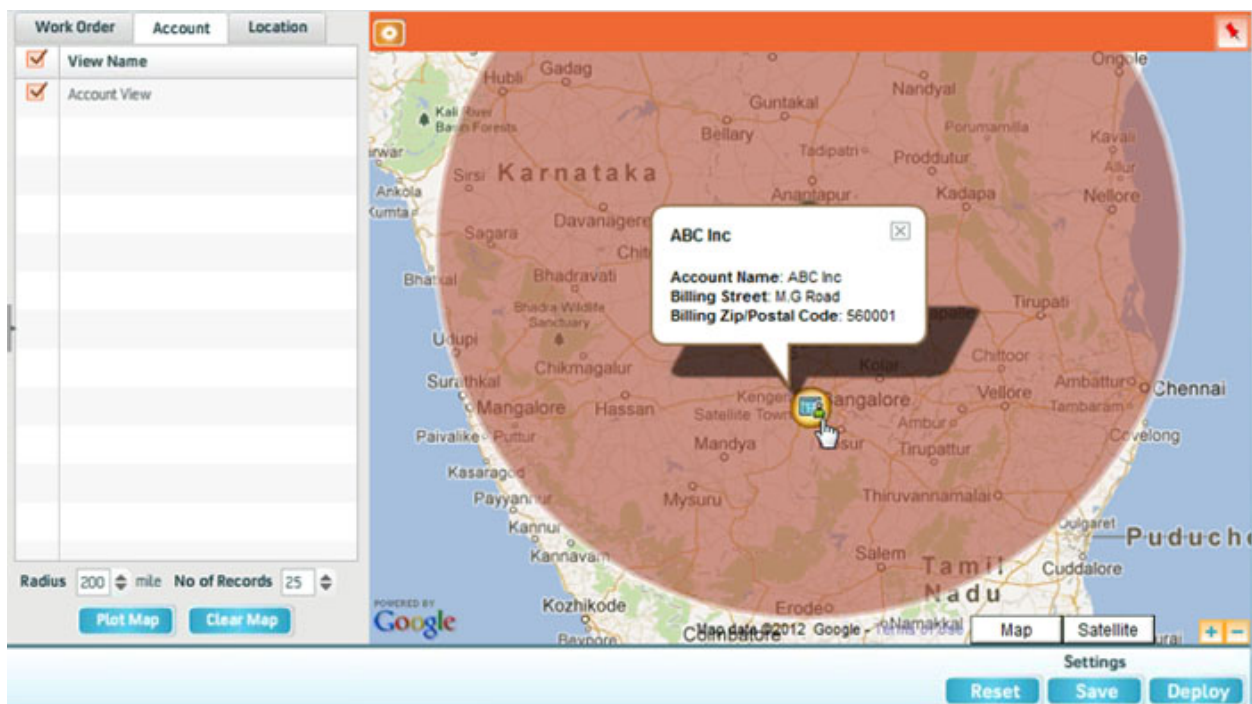


Figure 46: DC Map Hover



Note: Your administrator configures the field criteria for the Work Order, Account, and Location views that are displayed when you hover over the plotted points on the map.

Super Dispatcher

Super Dispatcher is a feature that enables you to deploy Dispatch Console configurations to multiple dispatchers.

Administrators must activate this feature for the desired dispatchers by checking the checkbox titled, **Is Super Dispatcher?** located in the User Detail page. For more information about adding Super Dispatcher to the page layout, see Salesforce Help and Training.

After the administrator activates the Super Dispatcher feature, relaunch the Dispatch Console.

When Super Dispatcher is activated, a **Deploy** button appears in the Settings area of the Dispatch Console as shown in the figure below. The Settings area is located below the Map view.



Figure 47: Settings Area

To deploy Dispatch Console configurations:

1. Click the **Deploy** button in the Settings area located below the Map view.

The Deploy UI Settings dialog box displays as shown in figure below.

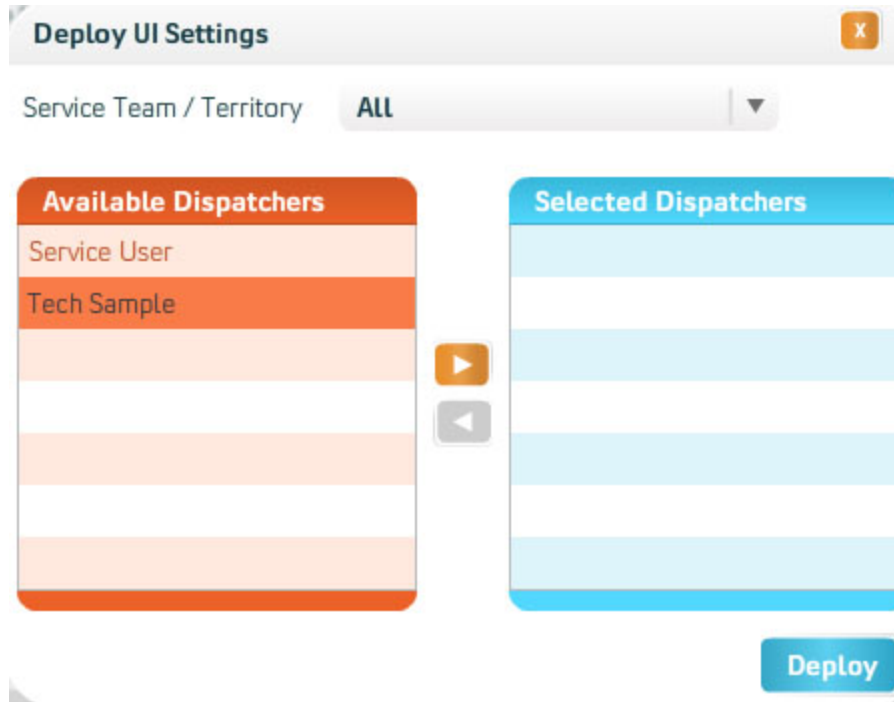


Figure 48: Deploy UI Settings Dialog Box

2. Select a service team or territory from the **Service Team/Territory** picklist. See figure below.

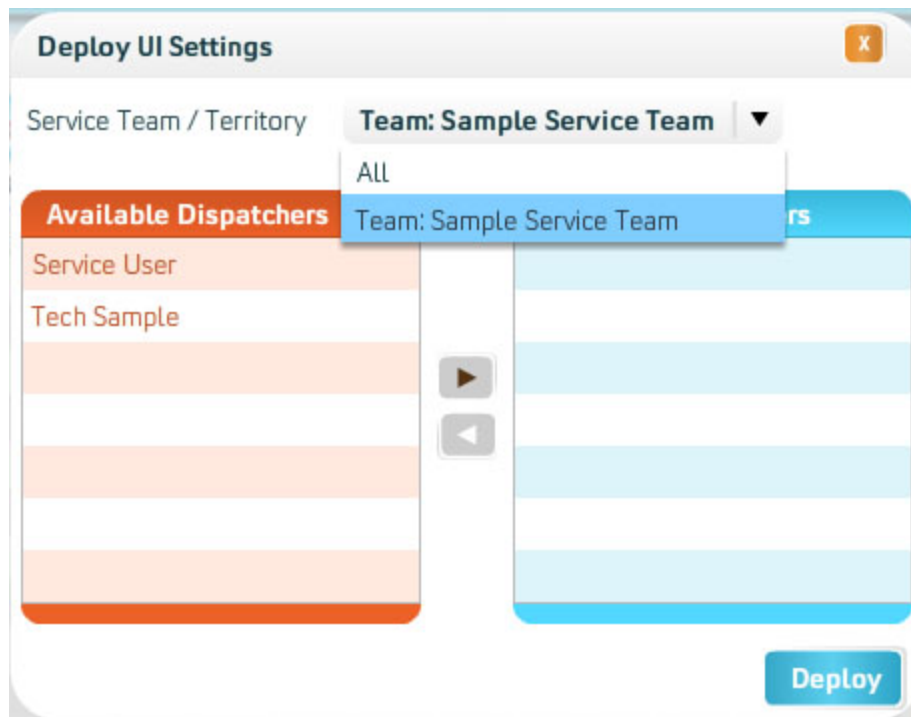


Figure 49: Select a Service Team or Territory

Available dispatchers display in the Available Dispatchers list.

- Find the dispatcher you want to deploy in the **Available Dispatchers** list and move it to the **Selected Dispatchers** list using the appropriate arrow. See figure below.

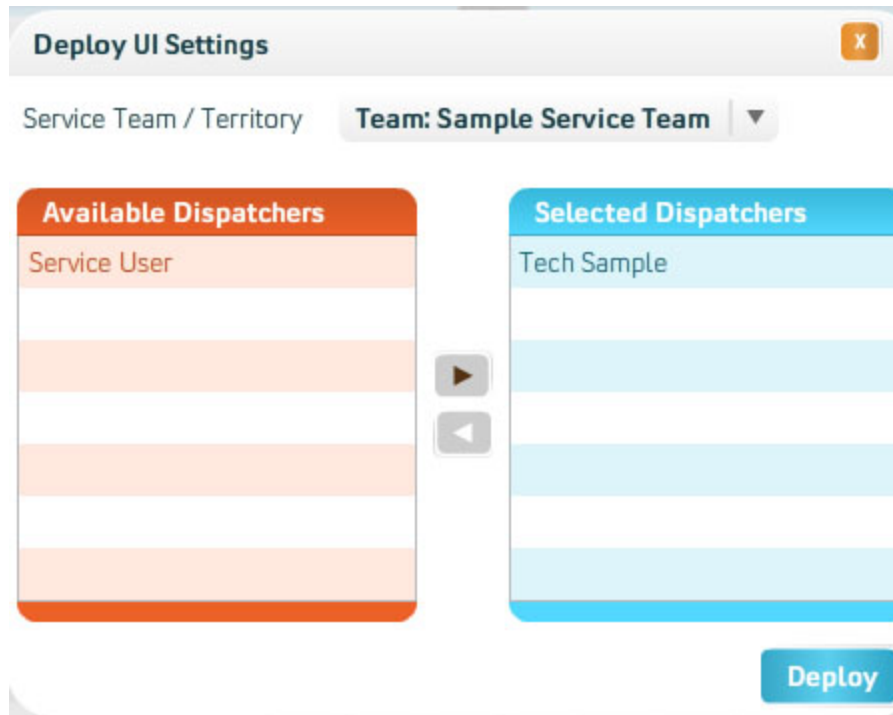


Figure 50: Selected Dispatchers List

- Click the **Deploy** button.

A message indicating that your deployment was successful displays in the Message area. See figure below.

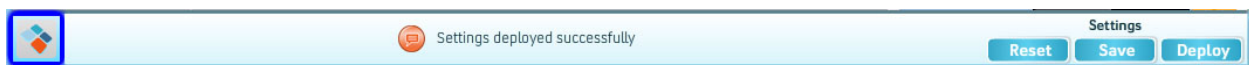


Figure 51: Successful Deployment



Note: If your deployment was not successful, read the message in the Message area for information to help you troubleshoot the issue.

Work Flow and Notifications

Since most actions in Dispatch Console directly impact the activities of individuals and team leaders, email notifications are sent to Service Teams and Technicians based as a result of actions in Dispatch Console. The table below lists all the workflow rules available.



Note: Workflow rules can be deactivated if they are not applicable for your service organization.

In addition, the email templates used by the workflow rules can also be fully customized as per your requirements. Contact your ServiceMax administrator to know your organization's active rules as well as the email templates used.

Event	Recipient(s)
Work Order is queued	Email ID of the Service Team
Work Order is assigned	Email ID of the Technician or equipment
Work Order is scheduled	Email ID of the Technician or equipment
Work Order is unassigned	Work Order Owner
Work Order is removed from the queue	Work Order Owner

See Also:

[Dispatch Console - Standard Settings](#)

[Installed Product](#)

[Product](#)

[ServiceMax Processes](#)

[Territory](#)

[Work Order](#)

PARTS REQUEST

Overview

Parts Request allows field engineers and other repair locations to request for parts from other locations (mainly a warehouse). The requirement for parts is usually driven by reorder levels. The Parts Request does not have the context of a service event; the parts are not requested for a specific Work Order.

Access and Permissions

Actions	User Permissions Needed
To view the Parts Request tab:	"Read" on Parts Request
To view Parts Requests:	"Read" on Parts Request and Parts Request Line
To create or clone Parts Requests:	"Create" on Parts Request and Parts Request Line "Read" on Location and Product
To change Parts Requests:	"Edit" on Parts Request and Parts Request Line "Read" on Location and Product
To delete Parts Requests:	"Delete" on Parts Request and Parts Request Line
To create Parts Requests Line:	"Create" on Parts Request Line "Read" on Product
To edit Parts Requests Line:	"Edit" on Parts Request Line "Read" on Product
To find the stocks in Parts Request Lines:	"Read" on ServiceMax Settings, Product, Location, and Product Stock "Edit" on Parts Request Line

Actions	User Permissions Needed
To create Shipment Order from Parts Request:	"Read" on Parts Request, Product, and Location "Edit" on Parts Request Line "Create" on Parts Order and Parts Order Line
To process receipt in Parts Request:	"Read" on ServiceMax Settings, Product and Location "Edit" on Parts Request Line and Parts Requests "Create" and "Edit" on Stock History, Product Stock, and Stocked Serial
To cancel Parts Request:	"Edit" on Parts Requests and Parts Request Line

Click the **Parts Requests** tab to view the Parts Requests home page.

Parts Requests Fields

Fields	Description
Additional Information	Any additional information relevant to this Parts Request.
Age	Age of the Parts Request in number of days.
Canceled By	Name of the Salesforce user who canceled this Parts Request.
Canceled On	Date/time when this Parts Request was canceled.
Closed By	Name of the Salesforce user who closed this Parts Requests.
Closed On	Date/time when this request was completed.
Requested From	Location from where the stock is requested. This is a lookup to an existing location record.
Required At Location	Location where the stock is required. This is a lookup to an existing location record.
Status	Current status of the Parts Request.
Supplier	Name of the supplier company. Applicable for replenishing stock at warehouse locations. This is a lookup to an existing Salesforce account record.

Parts Request Line

Parts Request Line Fields

Fields	Description
Additional Information	Any additional information relevant to this Parts Request line.
Canceled By	The Salesforce user who canceled this Parts Request. This is set automatically when the user cancels the Parts Request.
Canceled On	Date/time when this part request was canceled. This is set automatically when the user cancels the Parts Request.
Closed By	The Salesforce user that closed this Parts Request line. This is set automatically when the receipt is processed.
Closed On	Date/time when this Parts Request line was closed. This is set automatically when the receipt is processed.
Date Received	Date when the requested part was received at the requested location.
Date Required	Date when this part is required at the requesting location.
Date Shipped	Date when the requested part was shipped using a Shipment Order.
Line Status	Status of the Parts Request line.
Parts Request	Link to the Parts Request header. This is a lookup to an existing ServiceMax Parts Request.
Posted To Inventory	Flag indicating if this receipt has been posted to product inventory.
Product	Name of the product. This is a lookup to an existing Salesforce product record.
Qty Received	Received quantity of product.
Qty Required	Required quantity of product.

Fields	Description
Qty Shipment Initiated	Quantity of product for which shipment has been initiated.
Qty Shipped	Actual shipped quantity of product.
Use Price From Price Book	Leave this box checked if you want the price to be filled automatically from the default Price Book. If you would like to enter a price manually for this part, simply uncheck this box.
Unit Price	Unit Price for Line Item.

Adding Lines to Parts Request

Locate the Parts Request by searching in the sidebar or from a list view in Parts Request tab and click the Parts Request name to which you want to add lines (products).

There are two methods available to add products to a Parts Request as described below.

Method 1: Single-Line Entry

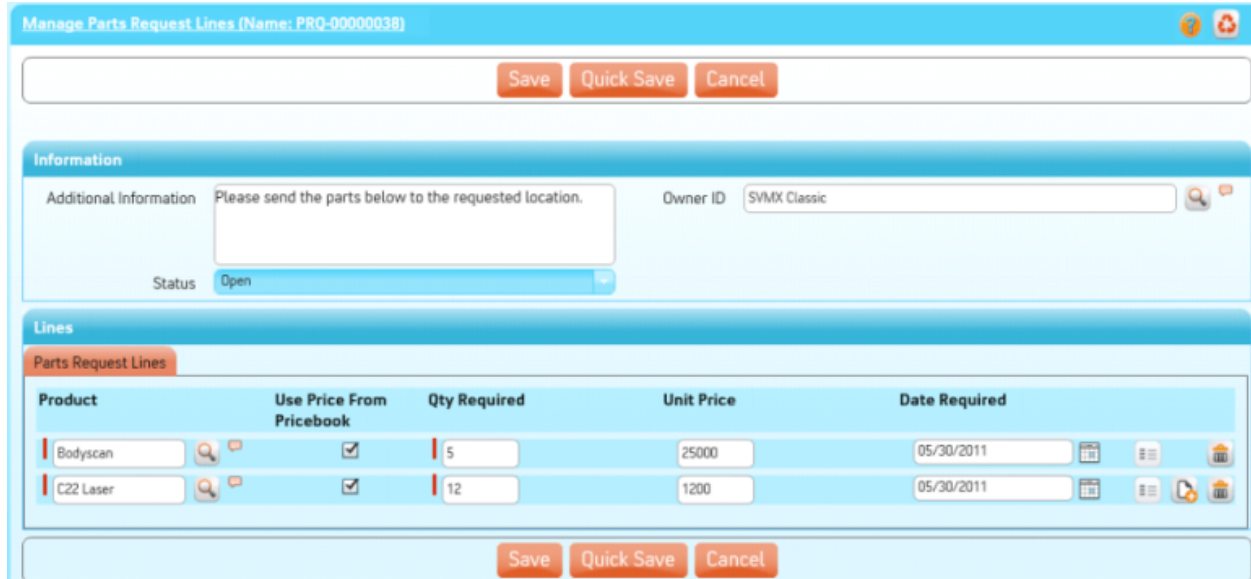
1. Click **New** from the related list **Parts Request Lines**. A new Parts Request Lines record appears below the existing records.
2. Enter the name of the product or use the **Lookup** icon to search and select the product.
3. Enter the **Qty Required**. This should be greater than zero.
4. Enter the date on which the product is required. This should not be a past date.
5. Leave the Shipment/receipt information section blank. See [Creating Shipment Order](#) from Parts Request and [Processing Part Receipts](#) in Parts Request for more information.
6. Click **Save**.



Note: A Parts Request can have an unlimited number of products. Repeat the above steps for each part required. You can also click **Save & New** after creating a new Parts request line record.

Method 2: Multi-Line Entry

1. Click **Create Lines** from the Parts Request screen. The Parts Request Lines screen appears as shown below:



The screenshot shows the 'Manage Parts Request Lines' screen for a request named 'PRO-00000038'. At the top, there are 'Save', 'Quick Save', and 'Cancel' buttons. Below this is an 'Information' section with a text area for 'Additional Information' (containing 'Please send the parts below to the requested location.'), an 'Owner ID' field (containing 'SVMX Classic'), and a 'Status' dropdown menu (set to 'Open'). The main section is titled 'Lines' and contains a table for 'Parts Request Lines'. The table has columns for 'Product', 'Use Price From Pricebook', 'Qty Required', 'Unit Price', and 'Date Required'. Two rows are visible: 'Bodyscan' with a quantity of 5 and unit price of 25000, and 'C22 Laser' with a quantity of 12 and unit price of 1200. Both rows have the 'Use Price From Pricebook' checkbox checked. At the bottom of the table, there are 'Save', 'Quick Save', and 'Cancel' buttons.

Product	Use Price From Pricebook	Qty Required	Unit Price	Date Required
Bodyscan	<input checked="" type="checkbox"/>	5	25000	05/30/2011
C22 Laser	<input checked="" type="checkbox"/>	12	1200	05/30/2011

Figure 1: Parts Request Screen

2. Click the **Add** button to add a new product to the Parts Request. An empty record is added to the bottom of the list.
3. Enter the name of the product or use the **Lookup** icon to search and select the product.
4. Enter the **Qty Required**.
5. Enter **Date Required**.
6. To delete product records entered, click **Delete** beside each record.
7. Click the **Add** button to add as many products as required. Alternatively, to delete one or more products, check the records using the checkbox and click **Delete Lines**.
8. Check the **Use Price Book** checkbox and then click **Get Price**, to automatically calculate the price of a product. Note that the price is calculated only if a valid Price Book is configured for Parts Requests. To enter a price manually, uncheck the **Use Price Book** checkbox.
9. Click **Save**.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Editing Lines in a Parts Request

To edit lines in a Parts Request:

1. Locate the Parts Request by searching in the sidebar or from a list view in Parts Request tab and click the Parts Request name in which you want to make part request changes.
2. In the related list Parts Request Lines, click **Edit** next to the part request line record
3. Make necessary changes to the parts request line record. You cannot change Quantity Required if shipment activity has been initiated for the line.
4. Click **Save** to save your changes.

You can also edit multiple Parts Request Lines records. See [Multi-Line Entry](#) for more information.

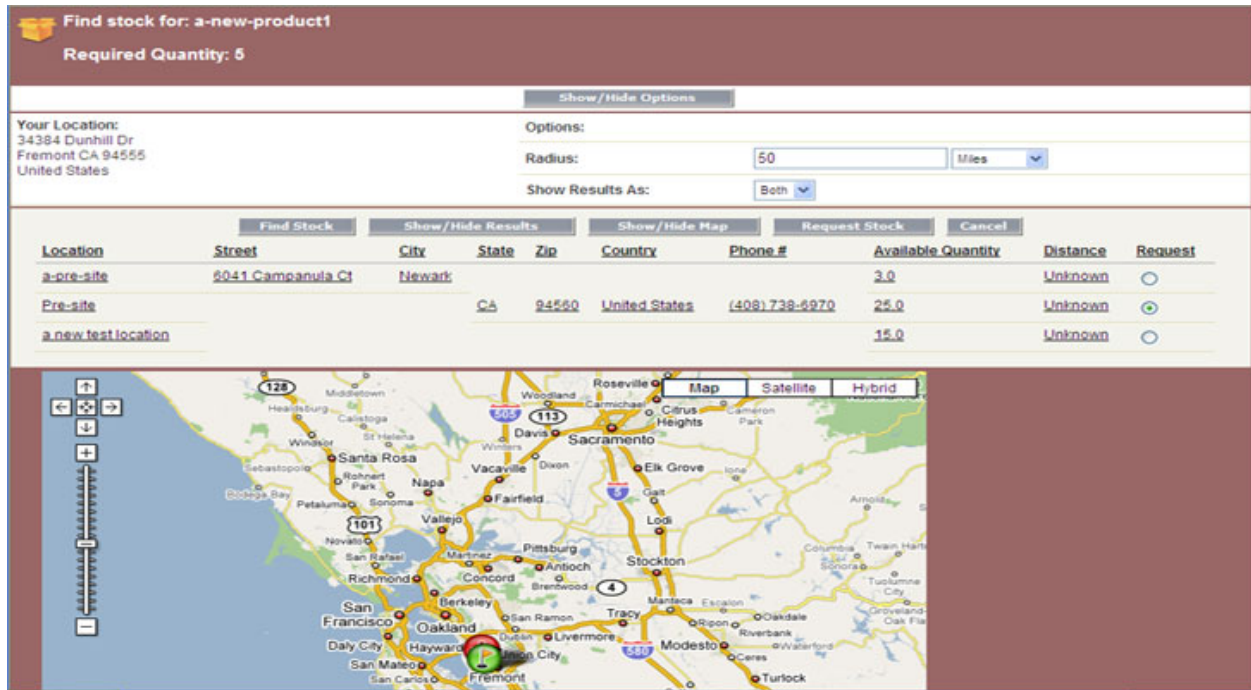
Finding Stock in a Parts Request Line

After you create a Parts Request line, you can check stock availability in various locations by using the Stock Lookup tool.

To use the Stock Lookup and Request Stock:

1. Locate the Parts Request by searching in the sidebar or from a list view in Parts Request tab. Click the Parts Request name in which you want to find stock.
2. Click the Name in the related list Parts Request Lines for any line.

- Click **Find Stock**. A screen appears (sample shown below).



Location	Street	City	State	Zip	Country	Phone #	Available Quantity	Distance	Request
a-pre-site	6041 Campanula Ct	Newark					3.0	Unknown	<input type="radio"/>
Pre-site			CA	94560	United States	(408) 738-6970	25.0	Unknown	<input checked="" type="radio"/>
a new test location							15.0	Unknown	<input type="radio"/>

Figure 2: Find Stock For Screen

- Enter the radius from your location to limit the search to. The Default Radius is set at **50**.
- Using the **Show Results As** picklist, select to display the results as a **grid** (table), in an interactive **Google map**, or **both**.
- Click **Find Stock**. Depending on your criteria, the results appear as a grid, in a map, or both.



Note: The Map will show only valid addresses. Locations with required stock are indicated in Green; locations with less than the required stock are indicated in Red. The grid displays all matching records whether it is a valid address or not.

When you rest the mouse pointer over a location on the map, it shows location and stock details as a display list.

- Click a green/red location to display driving directions on the right side.
- To request stock from a location:

- a. On **Grid**: Click the option button in the far right column (titled **Request**) of each row in the grid, and click **Request Stock**.
- b. On **Map**: Double-click the highlighted flag icon in the Map.
- c. Click **OK** once prompted.

The **Requested From location** in the Parts Request screen displays the location you selected.

Create a Shipment Order from a Parts Request

Once you have entered parts request lines in a Parts Request, you can generate a Shipment Order automatically based on the parts requests lines. Typically this step is done by planners responsible for procurement of the requested products.

To create a Shipment Order for a Parts Request:

1. Locate the Parts Request by searching in the sidebar or from a list view in the Parts Request tab.
2. Click the Parts Request name from which you want to generate a Shipment Order, making sure the Parts Request is **Open**. Also, ensure the Parts Request has at least one line (product) pending for initiating shipment.

3. Click **Create Shipment Order**. A screen appears (sample shown below).

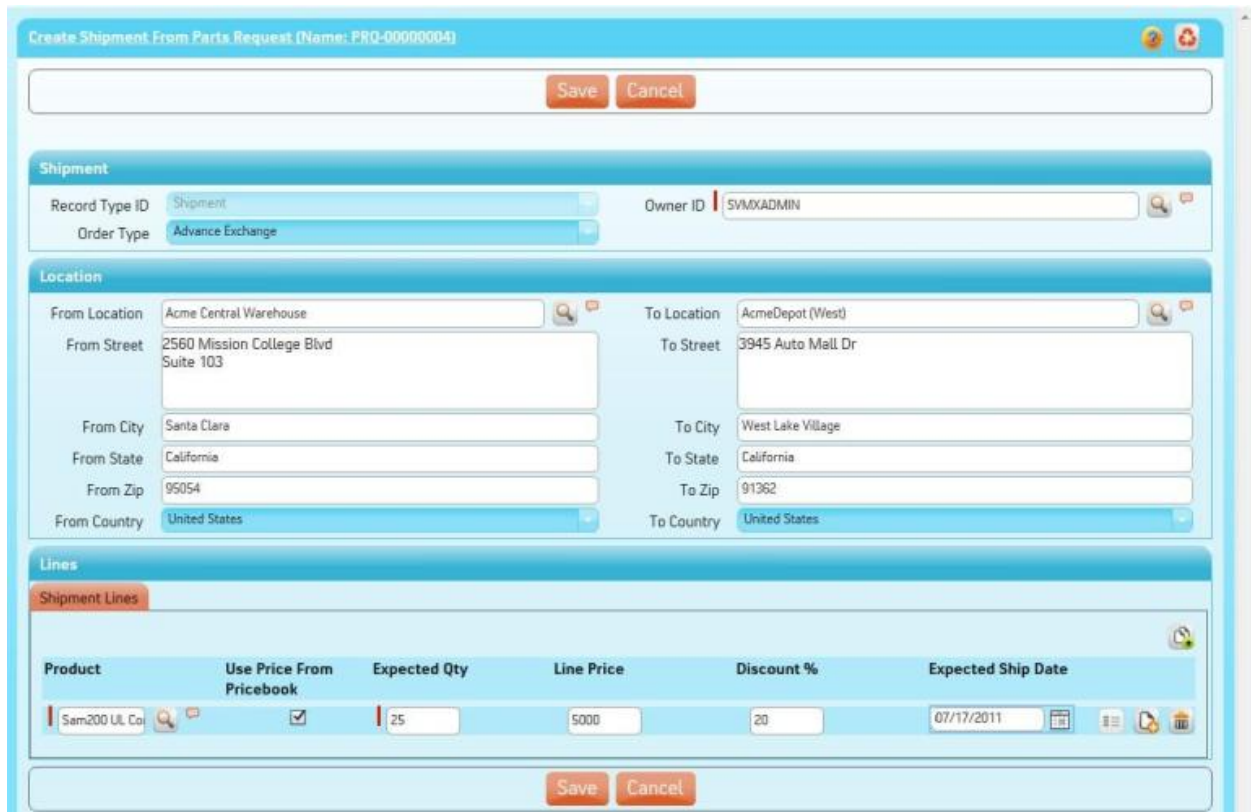


Figure 3: Create Shipment Order Screen

4. Select **Order Type** as applicable.
5. Enter Quantity to be shipped for each product. The screen lists all products from the Parts Request for which Shipment Order is not yet created. The Quantity to be created in Shipment Order is defaulted to the remaining quantity for Shipment Order creation. When entering the quantity to be shipped, one or more of the following scenarios may be applicable:

Create Shipment Order Scenario	How to process it
Shipment initiated for all products in the Parts Request.	Click Submit . Shipment Order will be created for all open Parts Request lines.
Shipment for a part to be initiated on a future date.	Enter Zero in the Quantity to be shipped. Make sure the Close Line checkbox is cleared. This leaves the line open for creation of a Shipment Order in the future.

Create Shipment Order Scenario	How to process it
A Parts Request line is not valid anymore and no shipment will be initiated for this part in the future.	This amounts to cancellation of an open Parts Request line. Enter Zero in Quantity to be Shipped . Make sure the Close Line checkbox is checked.
Partial shipment to be initiated for a part. Shipment for the remaining quantity will be initiated in the future.	Enter the quantity to be shipped. Make sure the Close Line checkbox remains unchecked. This leaves the line open for creation of a Shipment Order in the future.
Partial shipment to be initiated for a part. The remaining quantity will not be shipped in the future.	This indicates short-closure of a Parts Request Line. Enter the quantity to be shipped. Make sure the Close Line checkbox is checked.

6. Click **Save** to confirm the entries you have made. Alternatively, click **Cancel** to return to the Parts Request screen.

7. The newly created Shipment Order displays.

To learn how shipments are processed, see [Process Shipment in Shipment Order](#).



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

Process Receipts in a Parts Request

When parts are received in the receiving location specified in a Parts Request, you should process the receipts in ServiceMax for inventory accountability and also to complete the Parts Request.

To process parts receipts for a Parts Request:

1. Locate the Parts Request by searching in the sidebar or from a list view in Parts Request tab, click the Parts Request number for which you want to process receipts.

2. Make sure the Parts Request is **Open**. Also ensure the Work Order has at least one Parts Request line (product) to be received.
3. If you are receiving parts from an internal stockable location, such as a *warehouse*, click **Process Receipts (Internal)**. If you are receiving parts from an external/non-stockable entity, such as a *supplier*, click **Process Receipts (Supplier)**. A screen appears (sample shown below) in which you can enter the actual receipt information. The screen lists all products in the Work Order that are not yet received. The **Quantity Received** is defaulted to the pending quantity expected.

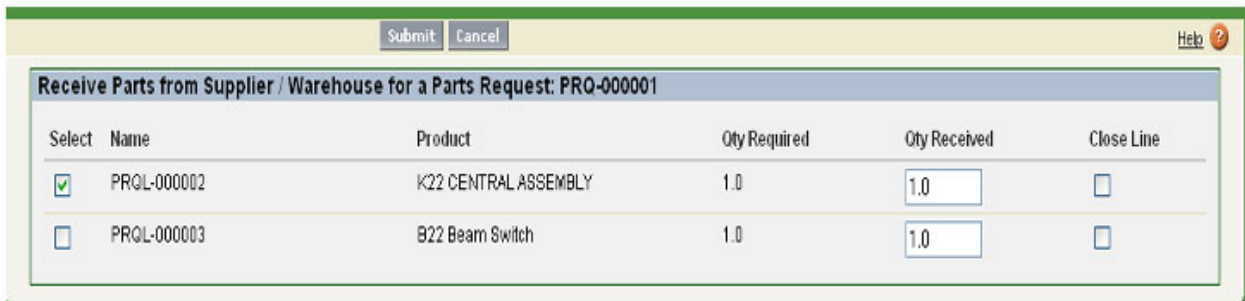


Figure 4: *Process Receipts Supplier Screen*

4. When entering received quantities, one or more of the following scenarios may be applicable:

Receipt Scenario	How to process it
All products in Parts Request have been received as expected.	Click Submit . All the open lines and the Parts Request will be closed automatically.
A product has not been received now but is expected to be received at a later date.	Enter Zero in Quantity Received . Make sure the Close Line checkbox is unchecked. This leaves the line open for a future receipt.
A product has not been received and it will not be received in the future at all.	This amounts to cancellation of an open Parts Request line. Enter Zero in Quantity Received . Make sure the Close Line checkbox is checked. If your organization does not permit short-closing lines, this checkbox may be disabled.

Receipt Scenario	How to process it
A product has been received partially now. The remaining quantity is expected to be received at a later date.	Enter the quantity received. Make sure the Close Line checkbox is unchecked. This leaves the line open for a future receipt.
A product has been received partially now. The remaining quantity will not be received in the future at all.	This indicates short-closure of a Parts Request line. Enter the quantity received. Make sure the Close Line checkbox is checked. If your organization does not permit short-closing lines, this checkbox may be disabled.

- Click **Submit** to confirm the entries you have made. Alternatively, click **Cancel** to return to the Parts Request screen.
- If your organization tracks inventory at the serial number level, the bottom section of the screen allows you to enter/select serial numbers for serialized products. To enter serial numbers for a product, check the checkbox against the product in the list. See [Serial Number Selection](#) to learn about how serialized tracking of inventory works in ServiceMax.

The Parts Request screen is refreshed and you will see the Parts Request Line and Parts Request Status updated accordingly.

Cancel a Parts Request

When you have neither initiated shipment nor processed receipts for any of the part request line in Parts Request, you can cancel a Parts Request. When you cancel Parts Request, this will not be available for creating a Shipment Order or for processing receipts going forward.

To cancel parts request for a Parts Request:

- Locate the Parts Request by searching in sidebar or from a list view in Parts Request tab and then click the relevant Parts Request name.
- Make sure the Parts Request Status is **Open**. Also ensure that shipment is not initiated for any of the Parts Request line (product).

3. Click **Cancel Parts Requests**.
4. Click **OK** when prompted.

The Parts Request screen will be refreshed and you will see the Parts Request Line and Parts Request Status updated accordingly.



Note: Since parts requests are strongly tied to the inventory module you are not allowed to delete a Parts Requests. Instead you can cancel a Parts Request.

See Also:

[Account](#)

[Location](#)

[Parts Request - Standard Settings](#)

[Product](#)

[Serial Number Selection](#)

STOCK TRANSFER

Overview

Stock Transfer is used when there is no shipping involved between two locations but the transfer is a hand-pick/delivery. This is applicable when field engineers drop by at a warehouse for picking up inventory or when parts are moved between a warehouse and a repair facility that are both located in the same building.

Access and Permissions

Actions	User Permissions Needed
To view the Stock Transfer tab:	"Read" on Stock Transfer
To view Stock Transfer:	"Read" on Stock Transfer and Stock Transfer Line
To create or clone Stock Transfer:	"Create" on Stock Transfer and Stock Transfer Line "Read" on Location and Product
To change Stock Transfer:	"Edit" on Stock Transfer and Stock Transfer Line "Read" on Location and Product
To delete Stock Transfer:	"Delete" on Stock Transfer and Stock Transfer Line
To create Stock Transfer Line:	"Create" on Stock Transfer Line "Read" on Product
To edit Stock Transfer Line:	"Edit" on Stock Transfer Line "Read" on Product
To post Stock Transfer to inventory:	"Read" on ServiceMax Settings, Product, and Location "Edit" on Stock Transfer Line and Stock Transfer "Create" and "Edit" on Stock History, Product Stock, and Stocked Serial



Note: Since stock transfers are strongly tied to the inventory module you are not allowed to delete a stock transfer record.

Stock Transfer Fields

Fields	Description
Additional Information	Any additional information relevant to this Stock Transfer.
Destination Location	Physical location where the stock is transferred to. This is a lookup to an existing Location record.
Source Location	Physical location from where the stock is transferred. This is a lookup to an existing Location record.

Stock Transfer Lines

Stock Transfer Line Fields

Fields	Description
Additional Information	Any additional information relevant to this Stock Transfer line.
Posted To Inventory	Indicates if this Stock Transfer record has been posted to inventory or not. This is set automatically.
Product	Name of the product. This is a lookup to an existing Salesforce Product record.
Qty Transferred	Quantity transferred from source to destination location.
Stock Transfer	Reference to Stock Transfer.
Unit Price	Unit Price for Line Item.
Use Price From Price Book	Leave this box checked if you want the price to be filled automatically from the default price book. If you would like to enter a price manually for this part, simply uncheck this box.

Adding Lines to a Stock Transfer

Locate the Stock Transfer by searching in the sidebar or from a list view in the Stock Transfer tab and then click the Stock Transfer name to which you want to add lines.

There are two methods available to add products to a Stock Transfer as described below.

Method 1: Single-Line Entry

1. Click **New** from the related list Stock Transfer Lines. The Stock Transfer screen appears.
2. Enter the name of the product or use the **Lookup** icon to search and select the product.
3. Enter the Quantity to Transfer. This should be greater than zero and once saved you cannot modify the quantity.
4. Enter the additional information.
5. Click **Save**.



Note: Stock Transfer can have an unlimited number of products. Repeat the above steps for each part required. You can also click **Save & New** after creating a new Stock Transfer line record.

Method 2: Multi-Line Entry

1. Click **Create Lines** from the Stock Transfer screen. The following screen appears:

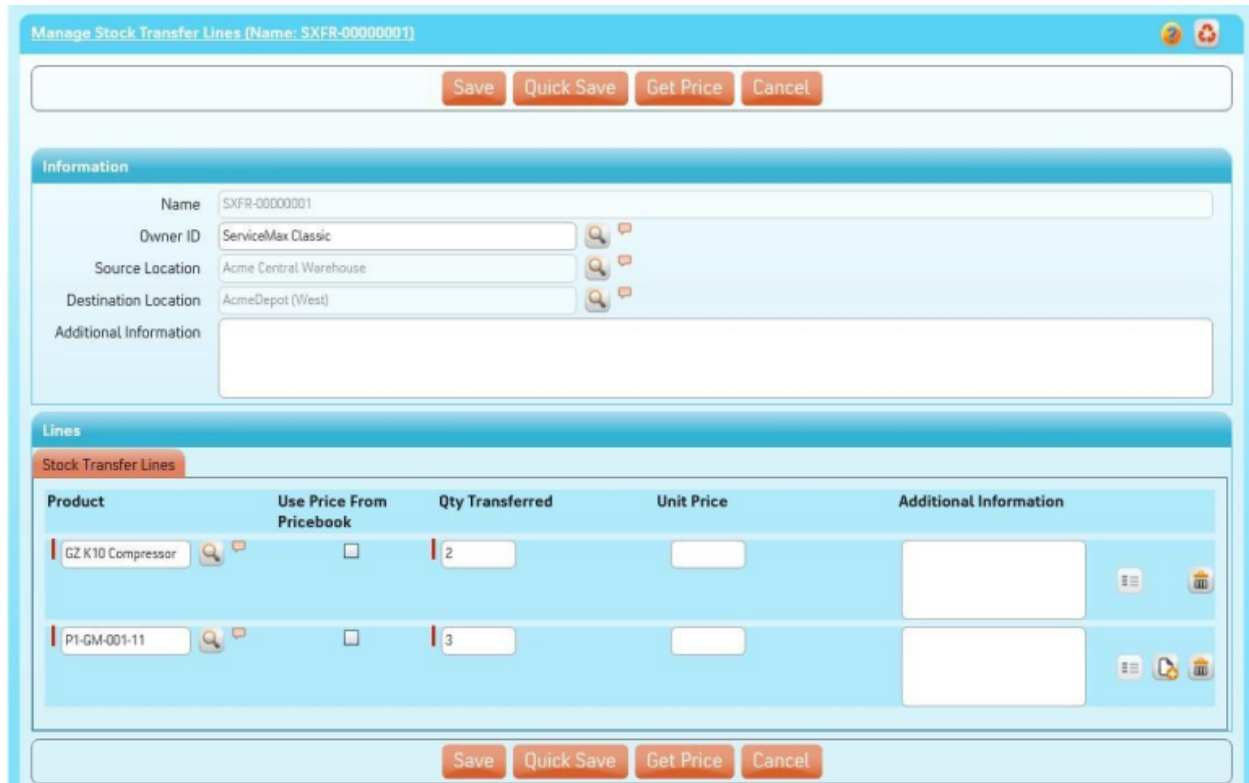


Figure 1: Stock Transfer Screen

2. Click **Add** to add a new product to the Stock Transfer. An empty record is added to the bottom of the list.
3. Enter the name of the product or use the **Lookup** icon to search and select the product.
4. Enter the quantity transferred.
5. Click **Add** to add as many products as required. To delete one or more products, check the records using the checkbox and then click **Delete Lines**.
6. Check the **Use Price Book** checkbox and then click **Get Price**, to automatically calculate the price of a product. Note that the price is calculated only if a valid price book is configured for Stock Transfer. To enter a price manually, uncheck the **Use Price Book** checkbox.
7. Click **Save**.



Note: This screen is presented by the Service Flow delivery engine of ServiceMax based on the service flow configuration. To learn more about how to use this screen's features, see [Using The Application > Service Flow Screen](#). In addition, you can click the screen title or the help button to view additional help for this screen, if configured by your administrator.

To edit Lines in a Stock Transfer:

1. Locate the Stock Transfer by searching in the sidebar or from a list view in the Stock Transfer tab and then click the Stock Transfer name in which you want to make Stock Transfer changes.
2. In the related list Stock Transfer Lines, click **Edit** next to the Stock Transfer line record. The Stock Transfer screen appears in the edit mode for the selected record.
3. Make the necessary changes to the Stock Transfer line record.
4. Click **Save**.

Posting Stock Transfer to Inventory

After you have created Stock Transfer lines to a Stock Transfer, you should post Stock Transfer information to inventory to maintain the stock accountability in inventory.

To post Stock Transfer to inventory:

1. Locate the Stock Transfer by searching in the sidebar or from a list view in the Stock Transfer tab.
2. Click the Stock Transfer which you want to post to inventory. Make sure the Stock Transfer is not already posted to inventory. Also ensure the Stock Transfer has at least one product for posting to inventory

3. Click **Post To Inventory**. A screen as shown below appears:



Select	Name	Product	Qty Transferred
<input checked="" type="checkbox"/>	SXFRL-000000	C22 Laser	10.0

Figure 2: Post to Inventory Screen

4. Click **Submit** to confirm the entries. Alternatively, click **Cancel** to return to the Stock Transfer screen.
5. If your organization tracks inventory at the serial number level, the bottom section of the screen allows you to enter/select serial numbers for serialized products. To enter serial numbers for a product, check the checkbox against the product in the list. See [Serial Number Selection](#) to learn how serialized tracking of inventory works in ServiceMax.

The Stock Transfer screen refreshes and you will see the updated flag of Posted to Inventory in Stock Transfer.

See Also:

[Account](#)

[Location](#)

[Product](#)

[Serial Number Selection](#)

[Stock Transfer - Standard Settings](#)

STOCK ADJUSTMENT

Overview

Stock Adjustment is used to perform a hard-reset of stock information in ServiceMax when mismatches are found between actual stock and information in ServiceMax. Only administrators can perform this task.

Access and Permissions

Actions	User Permissions Needed
To view the Stock Adjustment tab:	"Read" on Stock Adjustment
To view Stock Adjustments:	"Read" on Stock Adjustment
To create or clone Stock Adjustments:	"Create" on Stock Adjustment "Read" on Location and Product
To change Stock Adjustments:	"Edit" on Stock Adjustment "Read" on Location and Product
To delete Stock Adjustments:	"Delete" on Stock Adjustment
To post Stock Adjustments to inventory:	"Read" on ServiceMax Settings, Product and Location "Edit" on Stock Adjustment "Create" and "Edit" on Stock History, Product Stock, and Stocked Serial

Click the **Stock Adjustment** tab to display the Stock Adjustment home page.



Caution: Since Stock Adjustments are strongly tied to inventory module you are not allowed to delete a stock adjustment.

Stock Adjustment Fields

Fields	Description
Additional Information	Any additional information relevant to this Stock Adjustment.
Adjustment Account Number	The source/target inventory account against which this increase/decrease is accounted for.
Adjustment Type	Type of adjustment. Indicates the purpose for Stock Adjustment.
Change Qty	Positive number indicating the change in quantity (Higher quantity - lower quantity).
Change Type	Indicates if the change was an increase or decrease.
Location	Physical location of the product where the stock is adjusted. This is a lookup for an existing Location record. The adjustment location should be a stocking location.
New Qty	Product quantity after Stock Adjustment.
Old Qty	Product quantity before Stock Adjustment.
Partner Account	This is a lookup to Partner Account.
Partner Contact	This is a lookup to Partner Contact.
Posted To Inventory	Indicates if this Stock Adjustment has been posted to inventory or not. This is set automatically.
Product	Name of the product. This is a lookup to an existing Salesforce Product record.

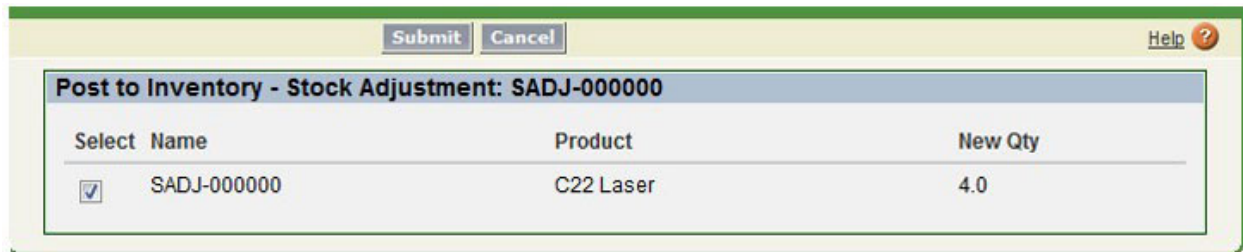
Figure 1: Posting Stock Adjustment to Inventory

After you have created Stock Adjustment, you should Post Stock Adjustment information to inventory to maintain the stock accountability in inventory.

To post Stock Adjustment to inventory:

1. Locate the Stock Adjustment by searching in the sidebar or from a list view in the Stock Adjustment tab.

2. Click the Stock Adjustment which you want to post to inventory. Make sure the Stock Adjustment is not already posted to inventory.
3. Click **Post To Inventory**. A screen appears as shown below:



Select	Name	Product	New Qty
<input checked="" type="checkbox"/>	SADJ-000000	C22 Laser	4.0

Figure 2: Post to Inventory Screen

4. Click **Submit** to confirm the entries. Alternatively, you can click **Cancel** to return to the Stock Adjustment screen.
5. If your organization tracks inventory at the serial number level, the bottom section of the screen allows you to enter/select serial numbers for serialized products. To enter serial numbers for a product, check the checkbox against the product in the list. See [Serial Number Selection](#) to learn how serialized tracking of inventory works in ServiceMax.



Note: The Stock Adjustment screen will be refreshed and you will see the updated flag of Posted to Inventory in Stock Adjustment. Product Stock quantity for a serialized product at a given location is found to be less than the current stock, and Stock Adjustment operation is performed to record this correction. The ADJUSTED stock at the source location is increased by the excess quantity. The excess serials are associated with the ADJUSTED stock record.

See Also:

[Account](#)

[Location](#)

[Product](#)

[Serial Number Selection](#)

SERIAL NUMBER SELECTION

Overview

ServiceMax provides increased granularity of inventory management by tracking the stock of products and spare parts using serial numbers. This is an optional feature that is enabled upon request. When this feature is enabled, users will be prompted to select or enter serial numbers whenever inventory transactions such as RMA, Shipment, or Stock Transfer are carried out. In addition, since all products in your organization may not be tracked by serial numbers, you can enable serialized tracking of inventory for specific products only.

Based on your organizational requirements, you can configure ServiceMax to allow or block duplicate serial numbers for a product/part. You can also define the level of strictness with which serial number uniqueness is enforced. Please contact your ServiceMax administrator to learn if serialization is enabled and configured for your organization.

Entering/Selecting a Serial Number

For all inventory transactions, a standard screen will be displayed to enter/select serial numbers for each product in the transaction. A sample serial number selection screen is

shown below.

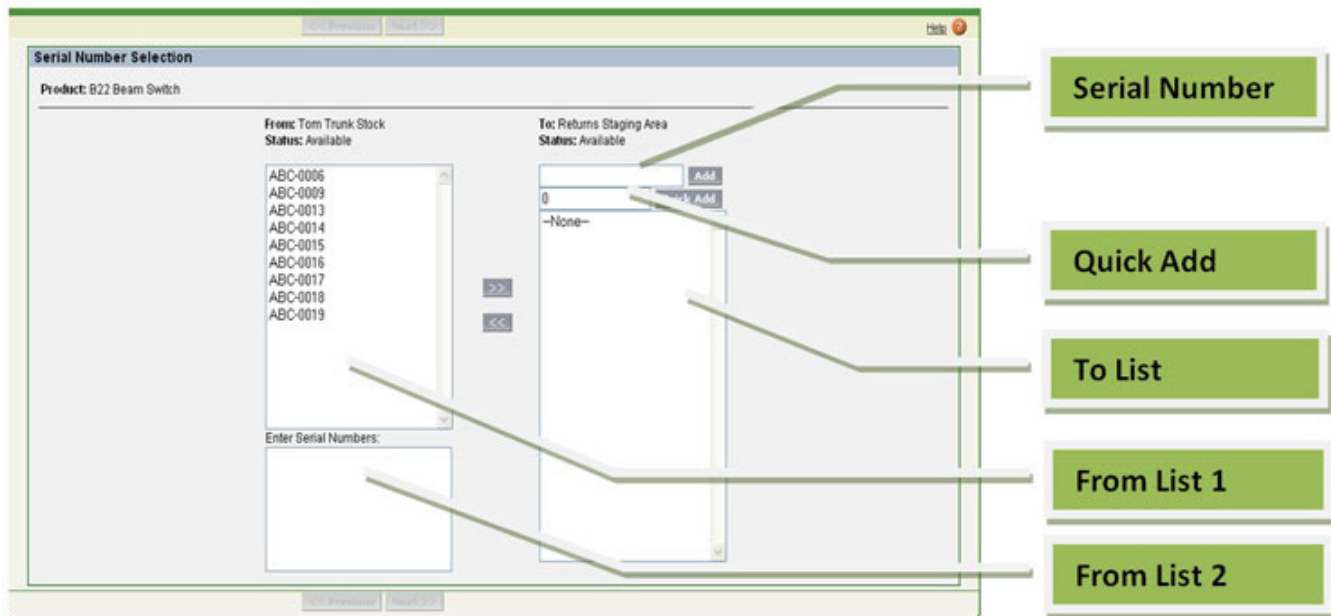


Figure 1: Serial Number Selection Screen

- The top of the section shows the product currently selected from the list. This is the product for which serial numbers are required to be selected.
- The **From List 1** shows the serial numbers available in the **From Location** for choosing. Depending on the type of inventory transaction, sometimes this list may be empty.
- The **From List 2** is a free text area where you can enter serial numbers and move to the **To Location**. This is especially useful when processing supplier receipts with a large volume of serial numbers.
- The **To List** is the list of serial numbers selected into the **To Location**. This list always starts as an empty list.
- In some cases, the **From Location** and **To Location** may be the same but the **Status** will be different. For example, when you receive parts on a Parts Request or Work Order, the **From Location** status will be **In Transit** (indicating the part has been shipped), and the **To Location** status will be **Available** (indicating it is the final receiving location).

When the above screen is displayed, you can add serial numbers to the **To Location** in many ways:

- Move serial numbers from the **From List 1** to the **To List**. You can select multiple entries from the **From List 1** by holding the **CTRL** key and then clicking the list. Then click **Add (>>)** to move the selected serial numbers to the **To List**. To undo the selection made, select the entries from the **To List** and then click **Remove (<<)**.
- If you are processing supplier receipts and need to enter a large volume of distinct serial numbers, paste the serial numbers in **From List 2** and click **Add (>>)** to move the serial numbers to the **To List**. To undo the selection made, select the entries from the **To List** and then click **Remove (<<)**.
- You can also manually enter serial numbers by using the Serial Number field one at a time. Click **Add (>>)** after entering each serial number.
- If the serial numbers you wish to add are in a sequence, you can enter the starting serial number in the Serial Number field and enter the number of serial numbers you wish to add in the **Quick Add** field. For example, if you wish to add 10 serial numbers starting from "SN-0001", enter SN-0001 in the serial number field, enter 10 in the **Quick Add** field, and click the **Quick Add** button. This will add 10 serial numbers from SN-0001 to SN-0010 to the **To List**. You cannot use **Quick Add** for serial numbers with only alphabetical digits.

When adding serial numbers, ServiceMax validates to make sure you have not selected or entered more serial numbers than required by the transaction. For example, if you are processing an RMA for 5 numbers of a product, you will be allowed to add only 5 numbers to the **To List**.

Once you have finished entering serial numbers for a product, navigate to the next product using the **Next** button. Use the **Prev** button to navigate to the previous product in the list. Alternatively, you can select any product from the list at the top to process serial numbers for that product.

After completing serial selection for all products, click **Submit**.

If you have omitted any product, or selected fewer serial numbers than required, or if you have entered duplicate serial numbers, error messages appear at the bottom of the screen in the Error Messages section. Rectify the errors and then click **Submit** again.

DASHBOARDS AND REPORTS

Overview

Several operational and management reports are preloaded in ServiceMax. These reports and dashboards are fully customizable. In addition, you can create your own custom reports using the ServiceMax object model and custom report types. To learn about how to create your own reports or customize existing reports, see the online help on the topic **Reports** on [Salesforce.com](https://www.salesforce.com).

ServiceMax Finance Reports

Dashboard Name	Description
Service Contract Billing Report	Service Contract Billing Report by week in a given period.
Work Order Amounts per Technician	Shows the billable and total work order amounts per technician for the current and prior fiscal year.
Work Order Billing Information	Lists all closed work order details for last month, for billing.

ServiceMax Parts & Inventory Reports

Dashboard Name	Description
Consumption Trend by Location (Quantity)	Stock consumption trend (quantity) by location
Consumption Trend by Location (Value)	Consumption Trend (Value) by location

Dashboard Name	Description
Consumption Trend by Partner (Quantity)	Stock consumption Trend (quantity) by Partner location
Consumption Trend by Partner (Value)	Consumption Trend (Value) by Partner location
Delayed RMAs	Open RMAs past the scheduled release date
Parts Below Reorder Level	Shows the inventory levels of each stocking location and displays a chart of how many of each product family need to be ordered to get back to desired levels.
Parts Below Reorder Level by Partner	Parts Below Reorder Level by Partner
Pending RMAs	Lists RMAs that are due today and in the future.
RMA/Shipment Backlog for Partners	RMA/Shipment orders past the scheduled return/shipment dates for Partners.
Shipment Backlog	Shipment orders past the scheduled shipment dates.
Stock Quantity By Location	Stock quantity by location
Stock Quantity by Partner Location	Stock quantity by Partner location
Stock Value By Location	Stock value by location and family
Stock Value by Partner Location	Stock value by Partner location
This Week's RMA/Shipment for Partners	List of Material expected to be returned and Shipments expected to be sent this Week for Partners
This Week's RMAs	Material expected to be returned this week
This Week's Shipments	Shipments expected to be sent this week

Dashboard Name	Description
Today's RMA/Shipments for Partners	List of Material expected to be returned and Shipments expected to be sent today for Partners
Today's RMAs	Material expected to returned today.
Today's Shipments	Shipments expected to be sent today.

ServiceMax Productivity Reports

Dashboard Name	Description
Efficiency in Assignment To Scheduling	Time taken between assignment and scheduling of work orders
Efficiency in Queuing To Assignment	Time taken between queuing and assignment of work orders
Efficiency in Scheduling To Closure	Time taken between scheduling and closure of work orders
Service Turnaround Time	Turnaround time to close work orders
Service Turnaround Time by Partner	Turnaround time to close work orders by Partner
Work Order Throughput	Open and Closed work orders in the current FQ
Work Order Throughput by Partner	Partner's Open and Closed work orders in the current FQ
Work Order Time to Assign	Time it takes for initial assignment of work orders to technicians
Work Order Time To Queue	Time it takes for initial queuing of work orders to service teams
Work Order Time to Schedule	Time it takes for initial scheduling of work orders
Work Orders Assigned Multiple Times	Incidences of work orders assigned more than once
Work Orders by Technician This Qtr	Shows all work orders for the current quarter by technician, based on the work order creation date.
Work Orders Closed Per Tech Last 7 Days	Shows the number of work orders closed per day by each technician for the last 7 days.

Dashboard Name	Description
Work Orders Created Per Month	Shows the trend of the number of work orders created per month, by order type.
Work Orders Queued Multiple Times	Incidences of work orders queued more than once
Work Orders Scheduled Multiple Times	Incidences of work orders scheduled more than once

ServiceMax Warranty/Svc Reports

Dashboard Name	Description
Active Service Contracts by Country	Shows active service contracts grouped by country.
Active Service Contracts by SLA	Active Service Contracts by SLA terms
Active Service Contracts by State	Lists all active service contracts by state, and shows relative value and number coming from each state.
Incidents in warranty*	Incidents in warranty
Installed Product Status	Installed Product Status
Installed Products By Country	Installed Products by Country
Installed Products By State	Compares the number of installed products by state.
New Service Contracts by Month	Shows the value of new service contracts started each month for the last year.
New Warranties by Month	Shows the number of new warranties per month over the last year.
Service Contract Expiration by Month	Value and number of contracts expiring in the next 12 months, by month.
Service Contract Expiration Report	A list of all service contracts expiring in the last 3 weeks or the next 3 months, sorted by contract end date.

Dashboard Name	Description
Warranties by Country	Shows the number of current warranty terms by country.
Warranties by State	Shows the number of current warranty terms by state.
Warranty Expiration by Month	Lists warranties expiring per month for the next 12 months.
Warranty Expiration Report	Lists all product warranties that have expired in the last 4 weeks or are expiring in the next 8 weeks and have no service contract associated with them.

* Reports available only in some editions of ServiceMax. Please contact your ServiceMax administrator to know the type of license used by your organization.

ServiceMax Work Order Management Reports

Report Name	Description
Canceled Work Orders Per Month	Shows the number of work orders canceled per month over the last 12 months. If this is a significant number, or rising fast, it may be worth further investigation.
Critical Work Orders By Type	Lists work orders open for more than 7 days.
Critical Work Orders for Partners	Lists work orders open for more than 7 days assigned to partners.
Down Customers	Lists work orders that are in Customer-down situations.
Down Customers by Partner	Lists service orders that are in Customer-down situations.
Open Work Order Matrix	Shows the number of work orders by work order type.
Open Work Orders by Status & Type	Lists all open work orders and shows them in a chart of how many are in each status and type.
Open Work Orders by Technician	Shows the number of work orders of each order type by technician.
Open Work Orders By Type	Lists open work orders grouped by order type.

Report Name	Description
Open Work Orders By Type for Partners	Lists open partner work orders grouped by order type.
Service Bottlenecks*	Cases/Service issues preventing completion of service delivery
Unscheduled PM Work Orders	Shows unscheduled planned maintenance work orders by created date to show possible overlooked PMs.
Upcoming PM Work Orders	Shows the number of scheduled PM work orders over the next 12 months.
Work Order Aging	Open work orders in various time buckets
Work Order Aging by Partner	Open partner work orders in various time buckets

* Reports available only in some editions of ServiceMax. Please contact your ServiceMax administrator to know the type of license used by your organization.

ServiceMax Dashboards

Dashboard Name	Description
IB, Warranty & Service contracts dashboard	Has charts showing installed product distribution, warranty and service/maintenance contracts performance
Service Operations dashboard	Contains reports and charts useful for daily operations in service
RMA dashboard	Charts and reports pertaining to RMA activities
Shipment dashboard	Charts and reports pertaining to shipment activities
Service management dashboard	Charts and reports for service administration and executive management
Failure analysis dashboard	Charts highlighting performance of products in customer locations from a service standpoint
Dispatch Console dashboard	Contains reports and charts useful for dispatch and service management
Inventory dashboard	Contains reports and charts useful for daily operations in service

USING THE SFM TRANSACTION SCREEN

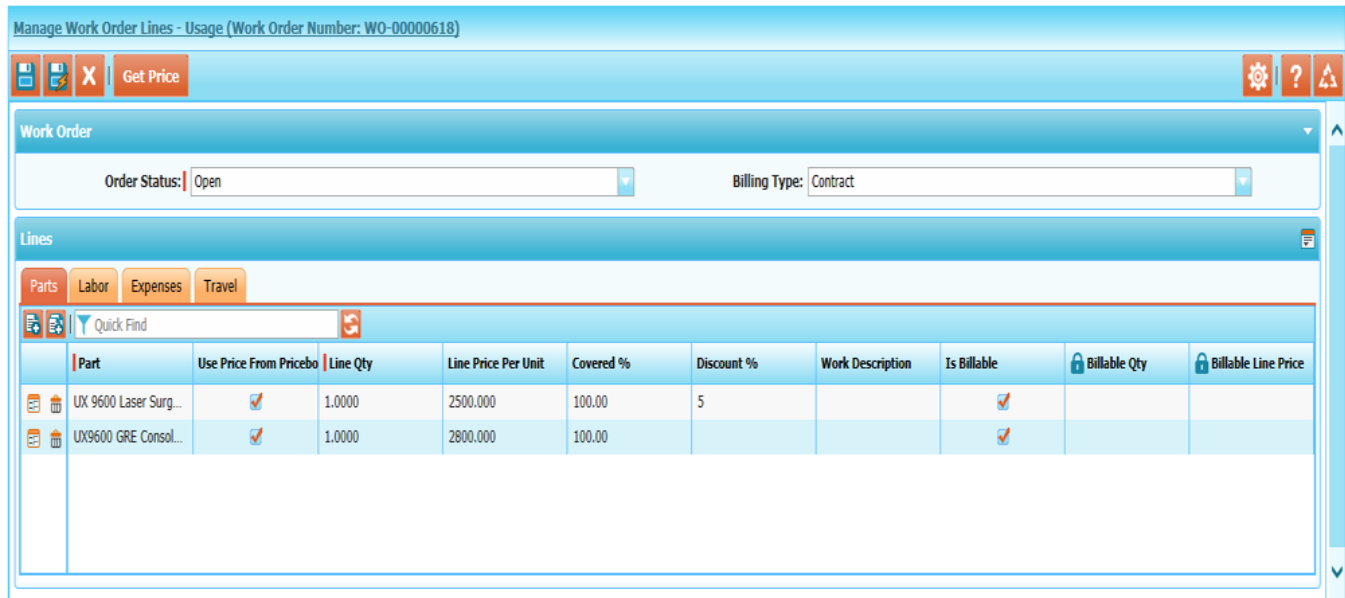
Overview

The SFM Transaction delivery engine provides a rich user interface to deliver the user experience for all SFM Transactions—standard and custom. Irrespective of whether an SFM transaction is used to create target records from source records or to edit target record lines in standalone mode, certain user interface aspects remain the same. The overall experience of entering data would be similar to entering data in a Salesforce web screen. However, the SFM transaction delivery engine supports some advanced data-entry capabilities to enhance the productivity of end users. The capabilities include:

- Ability to enter header and child records at the same time.
- Adding multiple child records from a lookup at once.
- Extended edit for child records.
- Advanced context-based lookup.

Screen Sections

A sample SFM transaction designer screen with header and details is shown below.



Manage Work Order Lines - Usage (Work Order Number: WO-00000618)

Get Price

Work Order

Order Status: Open Billing Type: Contract

Lines

Parts Labor Expenses Travel

Quick Find

Part	Use Price From Pricebo	Line Qty	Line Price Per Unit	Covered %	Discount %	Work Description	Is Billable	Billable Qty	Billable Line Price
UX 9600 Laser Surg...		1.0000	2500.000	100.00	5				
UX9600 GRE Consol...		1.0000	2800.000	100.00					

Figure 1: A Sample SFM Screen Designer

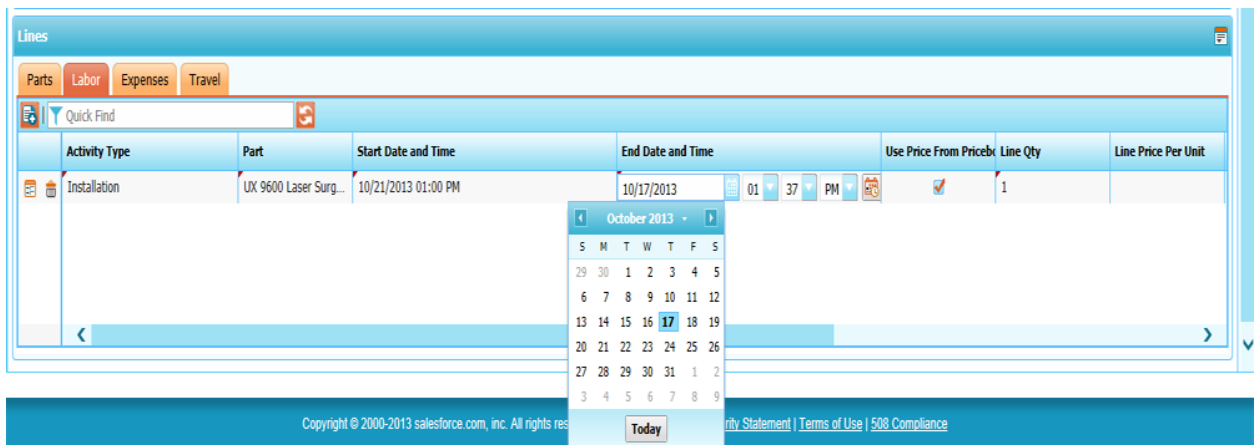
The transaction contains the following areas:

- Header with sections
- Child record tabs
- Standard and custom buttons.

Entering Data

Entering data in SFM transaction screens is much like entering data in any web page or in the standard Salesforce application. Required fields are marked in Red. All other fields are optional and may be left blank. Listed below are key features to know while using SFM transaction screens:

- When creating target records, some of the fields may be automatically filled with data from the source records if available.
- Any data you entered/edited will be lost and default values will be restored for all fields if you refresh the browser screen.
- In the header section, the tab order is always top-to-bottom within a section. In the child tabs, the tab order is always left-to-right.
- Text fields include all fields with text data type, email, URL, and phone numbers. No special handling or formatting is done for phone numbers and URLs. Email entries are validated for adherence to a valid email format.
- Long text fields show multiple lines to enter data as configured in the page layout designer.
- Multi-select picklists are displayed in a list box. Use CTRL+Click to select or deselect one or more values from the list.
- Date and Date/Time fields provide a date picker as shown in the figure below.



The screenshot shows the 'Lines' section of the SFM Transaction screen. The 'End Date and Time' field is active, displaying a date picker for October 2013. The date picker shows the month of October with days 1 through 31. The current date selected is 10/17/2013. The time is set to 01:37 PM. The date picker is overlaid on the table below.

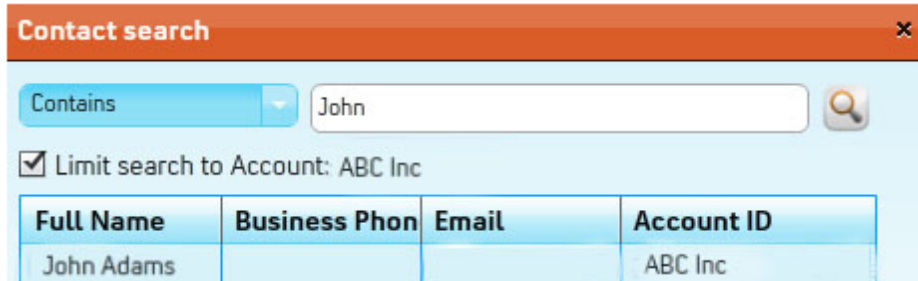
Activity Type	Part	Start Date and Time	End Date and Time	Use Price From Pricebook	Line Qty	Line Price Per Unit
Installation	UX 9600 Laser Surg...	10/21/2013 01:00 PM	10/17/2013 01:37 PM	<input checked="" type="checkbox"/>	1	

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Figure 2: Date Picker in SFM Transaction

Lookup Attributes Tab

- Lookup fields have a *locator* button adjacent to them. Click the **Locator** button to open the Configure Lookup dialog box as shown below.



The dialog box titled "Contact search" has a close button (X) in the top right corner. It features a search bar with a dropdown menu set to "Contains" and a text input field containing "John". A magnifying glass icon is to the right of the input field. Below the search bar is a checkbox labeled "Limit search to Account: ABC Inc" which is checked. At the bottom is a table with four columns: "Full Name", "Business Phon", "Email", and "Account ID". The first row of data shows "John Adams" under "Full Name" and "ABC Inc" under "Account ID".

Full Name	Business Phon	Email	Account ID
John Adams			ABC Inc

Figure 3: *Lookup Field Screen*



Note: You can also enter a field name or a partial field name, and then click the **Locator** button to conduct a search based on the field name or partial field name.

- You cannot use other parts of the SFM transaction screen when a lookup window is displayed.
- If your administrator has configured a custom lookup for this field, the custom lookup screen appears. If not, the default generic lookup is shown.
- The lookup object is automatically searched if any text is already entered.
- The search is performed based on the fields configured for the custom lookup. Standard lookup uses only the **Name** field in search.
- The result set shows the fields configured for the custom lookup. Standard lookup only shows the **Name** field in the result set.
- The number of records displayed in the result set is also configurable by the administrator. Standard lookups show up to 50 matching records.
- If a context (controlling) lookup has been configured for the lookup, the search results are limited to the values matching the controlling field. For example, if Account is set up as a controlling/context for Contact lookup and you have selected ABC Inc. in the account field, the contact result set will display only those contacts that are linked to the account ABC Inc. Depending upon the setup, you may be allowed to override this behavior and select to search all contacts irrespective of the account.

There are four search options in the search operator picklist (**Contains**, **Starts With**, **Ends With**, and **Exact Match**). See figure below.

- The **Contains** option will include your search term(s) in the search results.
- The **Starts With** option searches for terms that start with your search term.
- The **Ends With** option searches for terms that end with your search term.
- The **Exact Match** option searches for terms that are an exact match with your search term.
- The default search operator is determined by the value global setting GBL017 (Module, Common, Sub Module, and Global Settings).

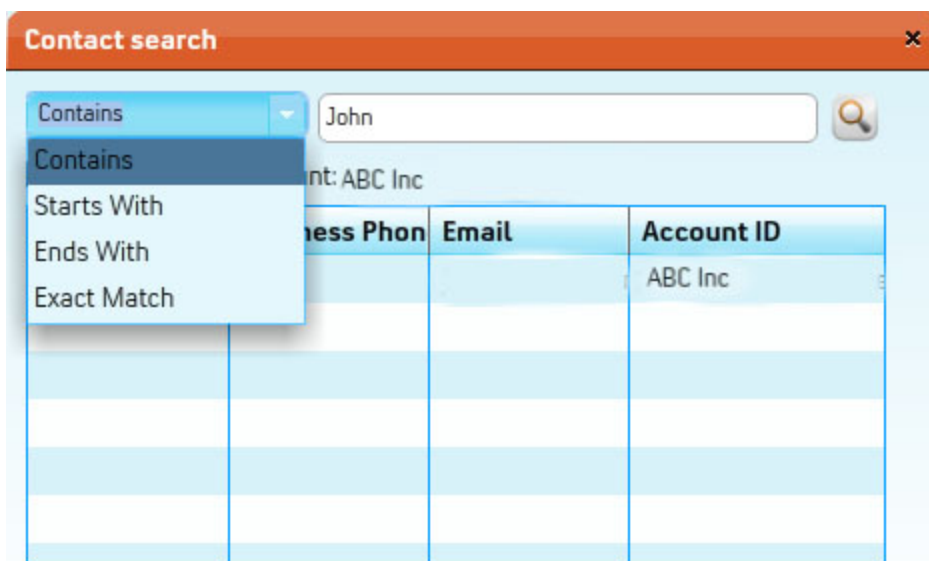


Figure 4: Search Operator Picklist

- Once a valid record is selected in a lookup, clicking the bubble icon beside the field shows additional information from the selected record. The fields to be used in the bubble can be configured by the administrator. If no configuration is available, the **Name** field appears. The bubble goes away when you click anywhere outside its box.

Advanced Filter

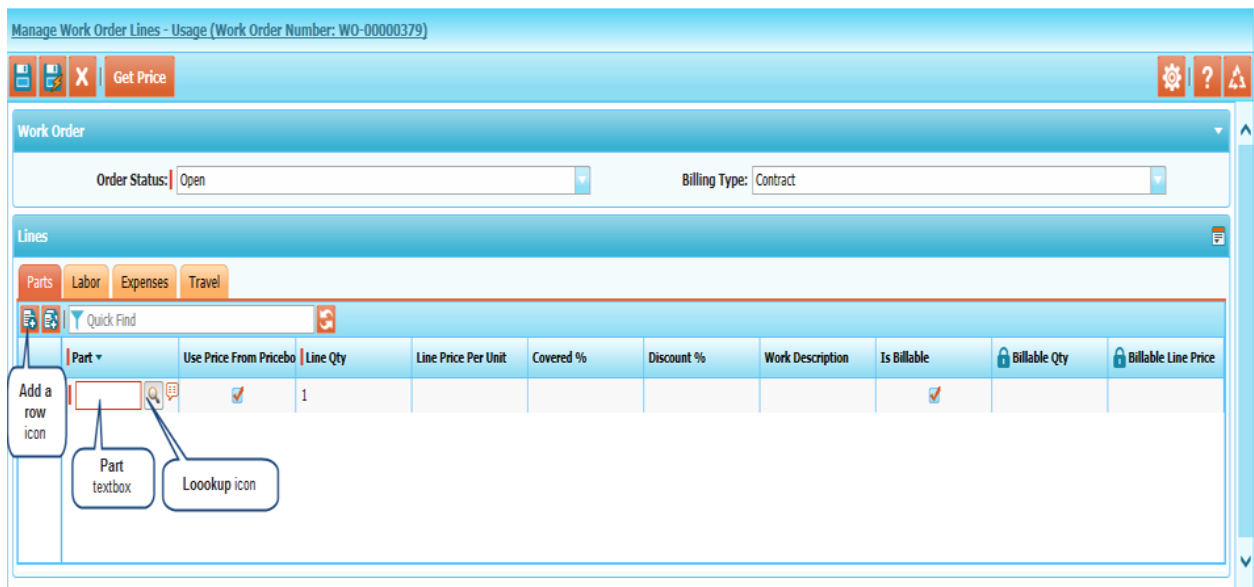
Your administrator can set up an advanced filter to create filter criteria based on a related object. For example, your administrator can set up an advanced filter for Product Stock to limit the parts you can record to only those parts that are available in your trunk stock.


Advanced Lookup Filter Example

An advanced filter Product Stock example is illustrated below.

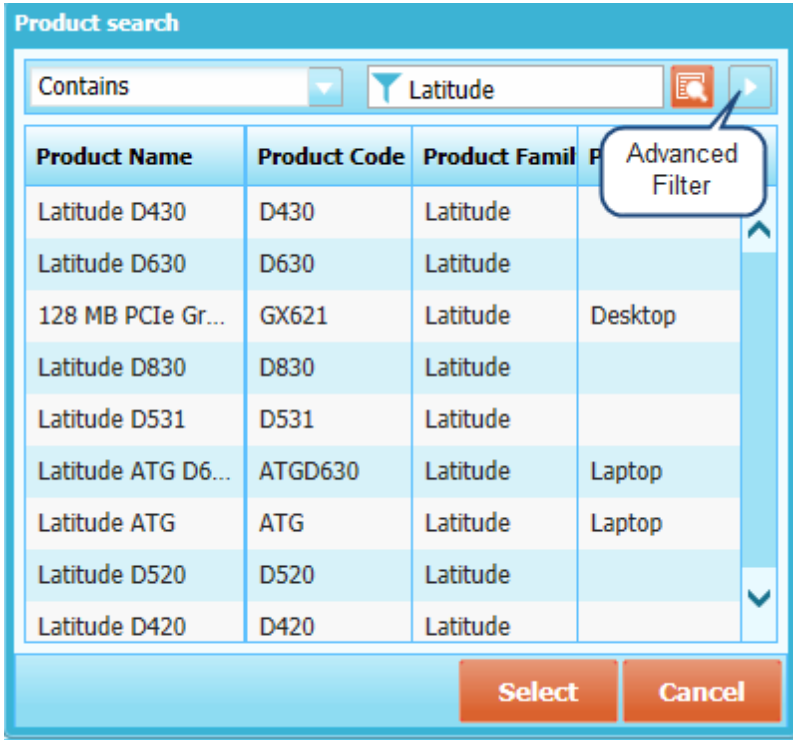
To conduct a search based only on those items in your product stock:

1. Open a work order.
2. In the Service Flow Wizard area, click the **Record T&M** button.
3. In the Manage Work Order Lines window, click **Add a row** to add a row to the **Parts** tab area (if necessary). See figure below.
4. Click inside the **Part** text box area to display the **Part** text box and **Parts Lookup** icon. See figure below.



5. Click the **Parts Lookup** icon as shown in the above figure.
6. In the **Product search** dialog box, select a search string (**Contains**, **Starts With**, **Ends With**, or **Exact Match**) and enter the product you want to search for.
7. In the **Product search** dialog box, click **Search** . The products from the search criteria display in the **Product search** dialog box.

8. In the **Product search** dialog box, click the **Advanced Filter** icon as shown in the figure below.



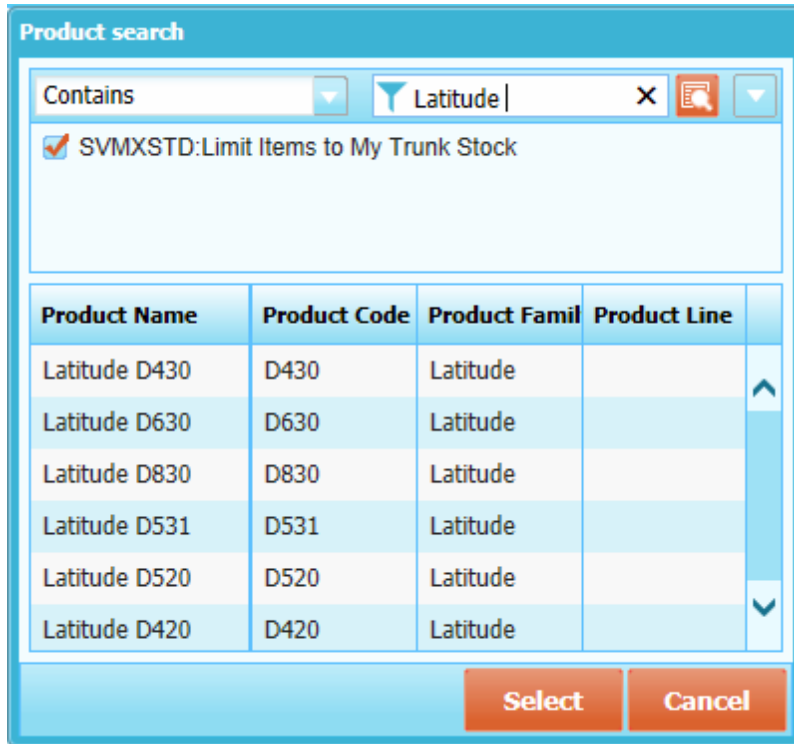
The image shows a 'Product search' dialog box. At the top, there is a search bar with the text 'Contains' and a dropdown arrow, followed by a filter icon and the text 'Latitude'. To the right of the search bar is an 'Advanced Filter' icon, which is highlighted by a callout bubble labeled 'Advanced Filter'. Below the search bar is a table with the following columns: 'Product Name', 'Product Code', 'Product Family', and 'Product Type'. The table contains the following data:

Product Name	Product Code	Product Family	Product Type
Latitude D430	D430	Latitude	
Latitude D630	D630	Latitude	
128 MB PCIe Gr...	GX621	Latitude	Desktop
Latitude D830	D830	Latitude	
Latitude D531	D531	Latitude	
Latitude ATG D6...	ATGD630	Latitude	Laptop
Latitude ATG	ATG	Latitude	Laptop
Latitude D520	D520	Latitude	
Latitude D420	D420	Latitude	

At the bottom of the dialog box are two buttons: 'Select' and 'Cancel'.

Figure 5: Product Search

9. Check the **Limit Items to Truck Stock** checkbox to limit the search to only the products that are available in your trunk as shown in the figure below.




The Product search dialog box is shown. It has a search bar with the text 'Latitude' and a search icon. Below the search bar is a checkbox labeled 'SVMXSTD:Limit Items to My Trunk Stock' which is checked. Below the checkbox is a table with the following data:

Product Name	Product Code	Product Famil	Product Line
Latitude D430	D430	Latitude	
Latitude D630	D630	Latitude	
Latitude D830	D830	Latitude	
Latitude D531	D531	Latitude	
Latitude D520	D520	Latitude	
Latitude D420	D420	Latitude	

At the bottom of the dialog box are two buttons: 'Select' and 'Cancel'.

Figure 6: Product Search

10. Click **Search** . The product list now includes only items from your truck stock.
11. Click a product from the available product list to select it.
12. Click **Select** to select the selected product.
13. If you need to cancel your search, click **Cancel**.

Lookup Form Fill

Lookup form fill is an administrator setting that enables information to be copied over from a record you have looked up to the current record you are editing. For example, your administrator can configure a form fill attribute for warranty information. In this example, the warranty information automatically populates with the form fill attribute your administrator has configured. An illustrated example of this feature is described below.

Lookup Form Fill Feature Example

In this warranty example, the administrator created a Lookup form fill for warranty start date and end date. Therefore, the warranty information will automatically populate into

the record.

To use the Lookup Form Fill feature:

1. Open a Work Order.
2. Launch a transaction from the Service Flow Wizard (SFW).
3. Add a **Products Serviced** detail line and select a serial number. See figure below.

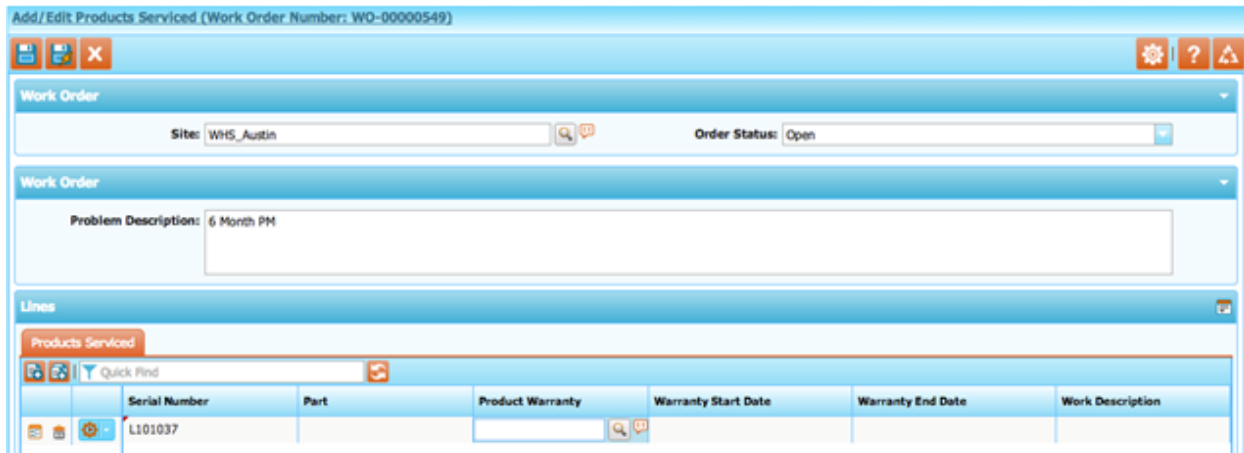


Figure 7: Add/Edit Products Serviced

4. Click the **Lookup** icon next to the Product Warranty field.
5. In the **Recent Items: Product Warranty** dialog box, click the **Search** icon. Applicable warranty records appear in the dialog box as shown in the figure below.

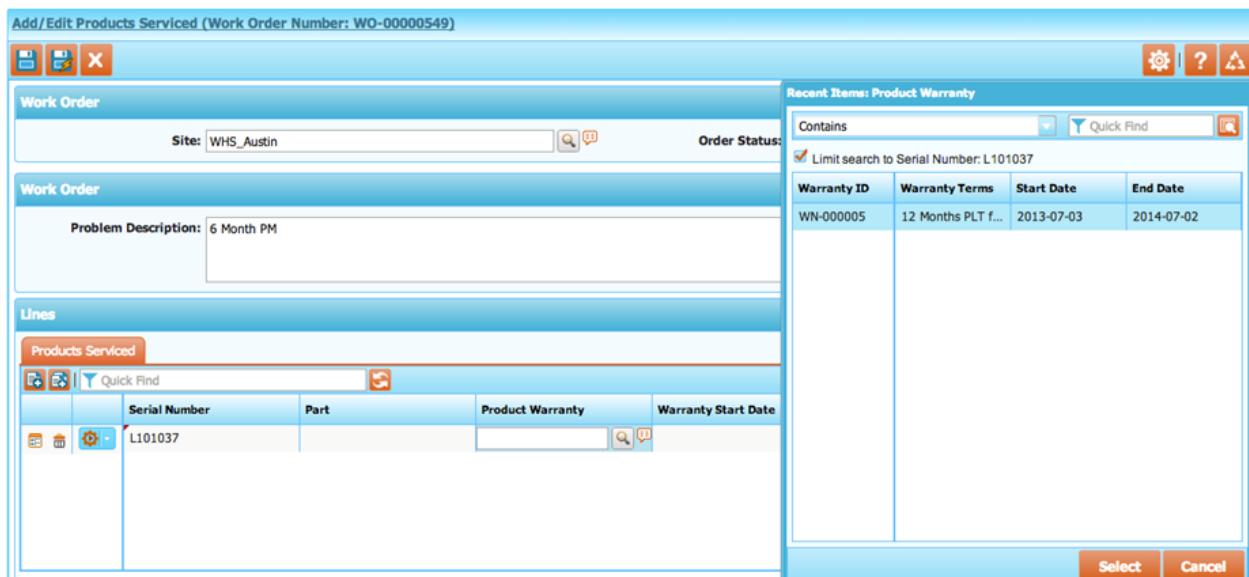
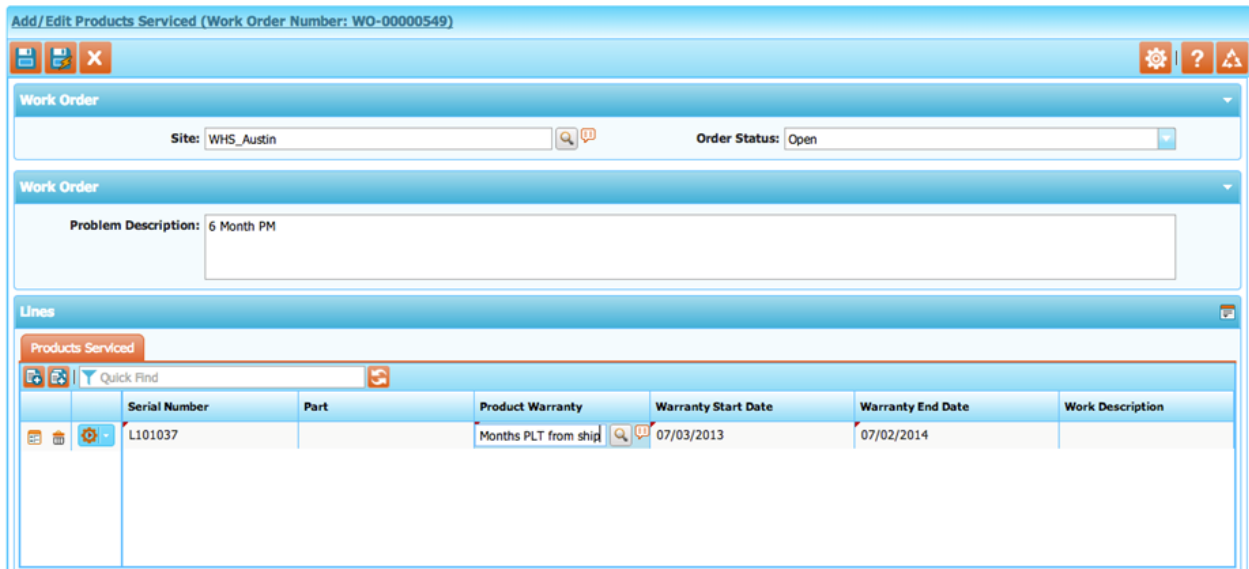


Figure 8: Add/Edit Products Serviced

6. In the **Recent Items: Product Warranty** dialog box, select a product warranty item from the available list by clicking it.
7. Click **Select**. The Warranty Start Date and End Date are updated in the source record.



Serial Number	Part	Product Warranty	Warranty Start Date	Warranty End Date	Work Description
L101037		Months PLT from ship	07/03/2013	07/02/2014	

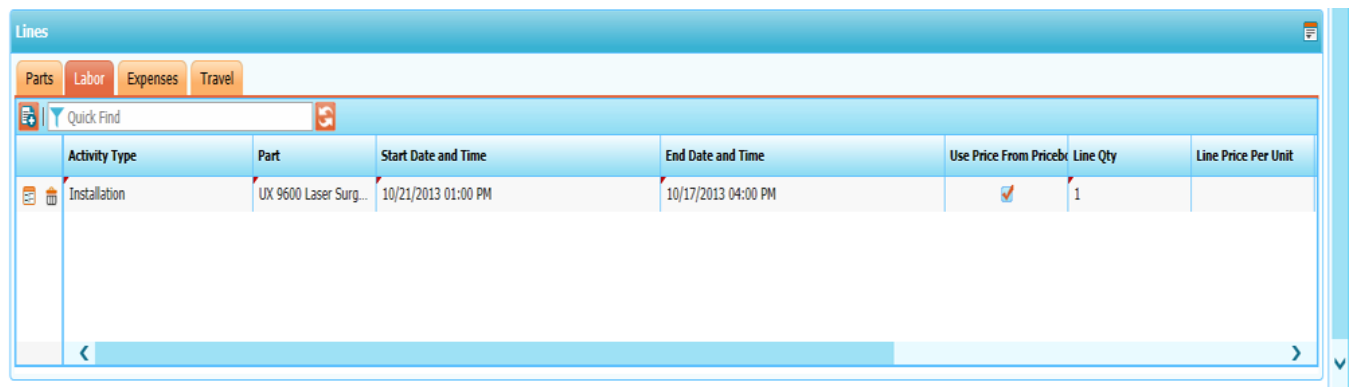
Figure 9: Add/Edit Products Serviced



Note: This functionality is available only when you are using ServiceMax SFM—not on custom VF pages or Salesforce page edits.

Child Records

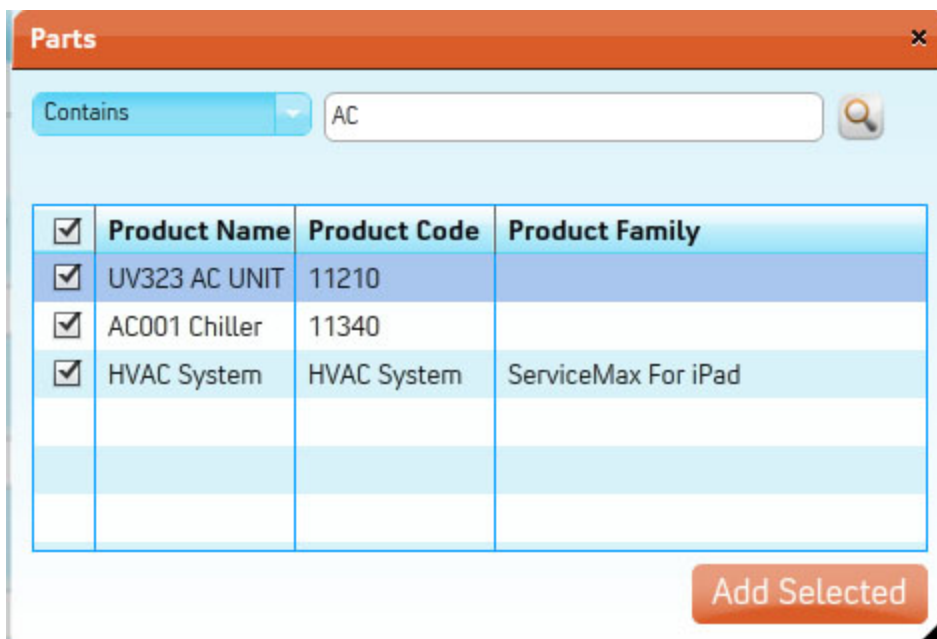
Child records are displayed as tabs below the header as shown below. (Parts, Labor, Expenses, and Travel are examples of Child records).



Activity Type	Part	Start Date and Time	End Date and Time	Use Price From Pricebook	Line Qty	Line Price Per Unit
Installation	UX 9600 Laser Surg...	10/21/2013 01:00 PM	10/17/2013 04:00 PM	<input checked="" type="checkbox"/>	1	

Figure 10: *Tabbed Display of Child Records*

- To add a new record, click the **Add** button. This button will not be available if your administrator has disabled it based on your organization's requirements.
- If your child section contains one or more lookups, your administrator may have configured one of those lookups to facilitate adding of multiple records quickly. For example, when creating Parts consumed for a work order, you can add multiple part records from the lookup.
- To add multiple child records in one go, click the **Multi-Add** button. A popup appears as shown below. The multi-add lookup works the same as the regular lookup screen (described above), except it allows you to select more than one record from the result set.
- To select all the products at once, check the checkbox next to the **Product Name** field. See figure below.



The screenshot shows a 'Parts' popup window with a search bar containing 'Contains' and 'AC'. Below the search bar is a table with the following data:

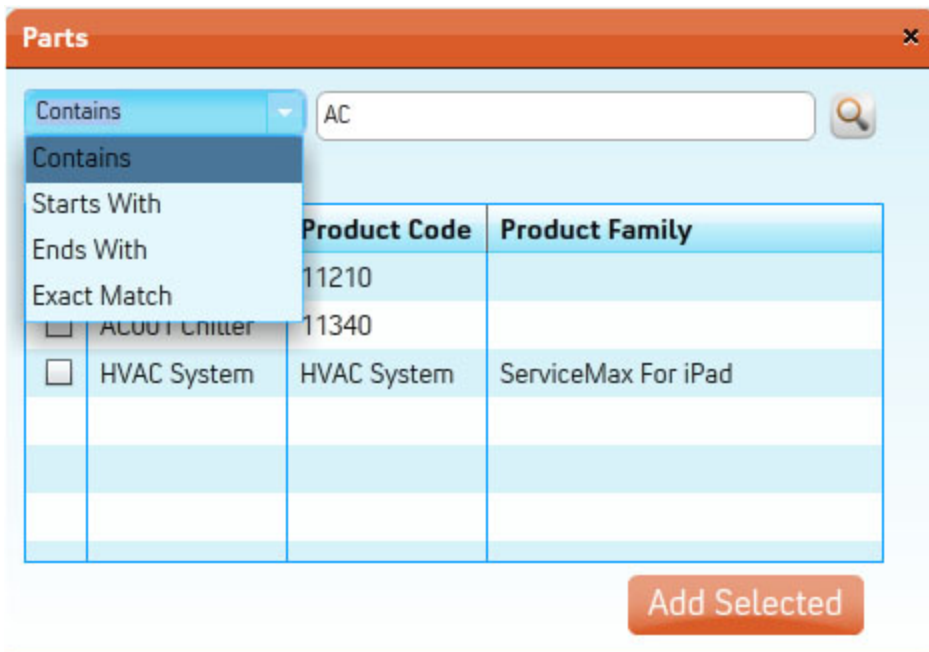
<input checked="" type="checkbox"/>	Product Name	Product Code	Product Family
<input checked="" type="checkbox"/>	UV323 AC UNIT	11210	
<input checked="" type="checkbox"/>	AC001 Chiller	11340	
<input checked="" type="checkbox"/>	HVAC System	HVAC System	ServiceMax For iPad
<input type="checkbox"/>			
<input type="checkbox"/>			

At the bottom right of the popup is an 'Add Selected' button.

Figure 11: *Adding Multiple Child Records using the Multi-Add Feature*

There are four search options in the search operator picklist (**Contains**, **Starts With**, **Ends With**, and **Exact Match**). See figure below.

- The **Contains** option will include your search term(s) in the search results.
- The **Starts With** option searches for terms that start with your search term.
- The **Ends With** option searches for terms that end with your search term.
- The **Exact Match** option searches for terms that are an exact match with your search term.



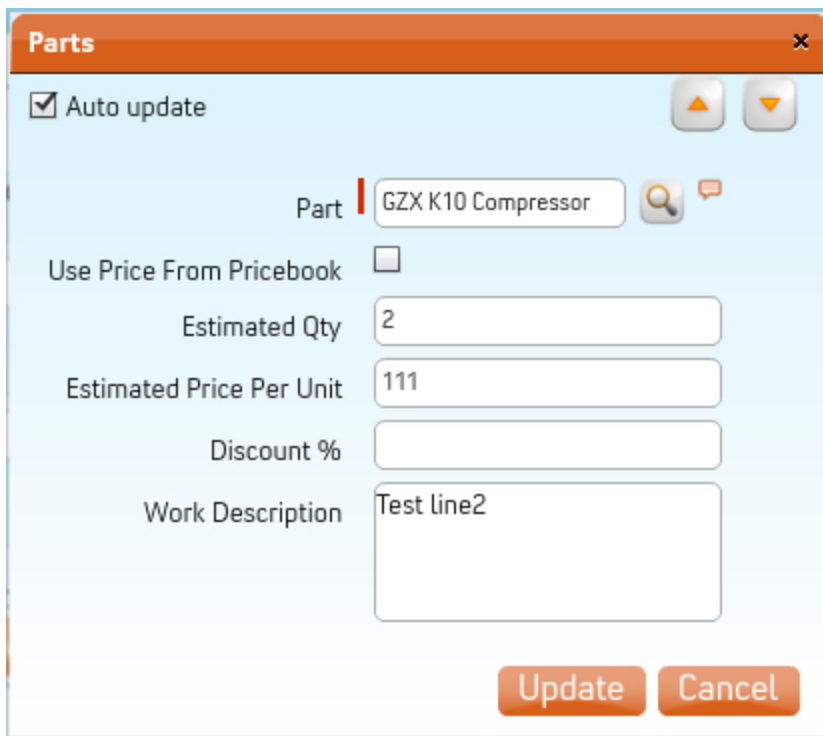
The screenshot shows a window titled 'Parts' with a search bar containing 'AC' and a magnifying glass icon. A dropdown menu is open, showing the following options: 'Contains' (selected), 'Starts With', 'Ends With', and 'Exact Match'. Below the dropdown is a table with the following data:

	Product Code	Product Family
	11210	
<input type="checkbox"/> AC Unit Chiller	11340	
<input type="checkbox"/> HVAC System	HVAC System	ServiceMax For iPad

At the bottom right of the window is an 'Add Selected' button.

Figure 12: Search Operator Picklist

- To remove a child record, click the **Delete** button in the row itself. Though the record is deleted from the screen, you must click **Save** to make the deletion final.
- If the child section contains too many fields, it may be difficult to scroll back and forth to fill all the fields. You can avoid the horizontal scrolling by using the **Extended Edit** feature. A popup screen as shown below appears when you click the **Extended Edit** button.



The image shows a popup window titled "Parts" with a close button (X) in the top right corner. Inside the window, there is a checkbox labeled "Auto update" which is checked. Below this, there is a "Part" label followed by a text input field containing "GZX K10 Compressor" and a magnifying glass icon. To the left of the input field is a red vertical bar. Below the "Part" field is a checkbox labeled "Use Price From Pricebook" which is unchecked. Below that are three text input fields: "Estimated Qty" with the value "2", "Estimated Price Per Unit" with the value "111", and "Discount %" which is empty. Below these is a text area labeled "Work Description" containing the text "Test line2". At the bottom right of the window are two buttons: "Update" and "Cancel".

Figure 13: Editing the Child Record using Extended Edit Feature

In this transaction you can enter data for each child record and also navigate through other child records in the tab without closing the popup. Extended Edit works for existing records only—you cannot create new records using this screen.



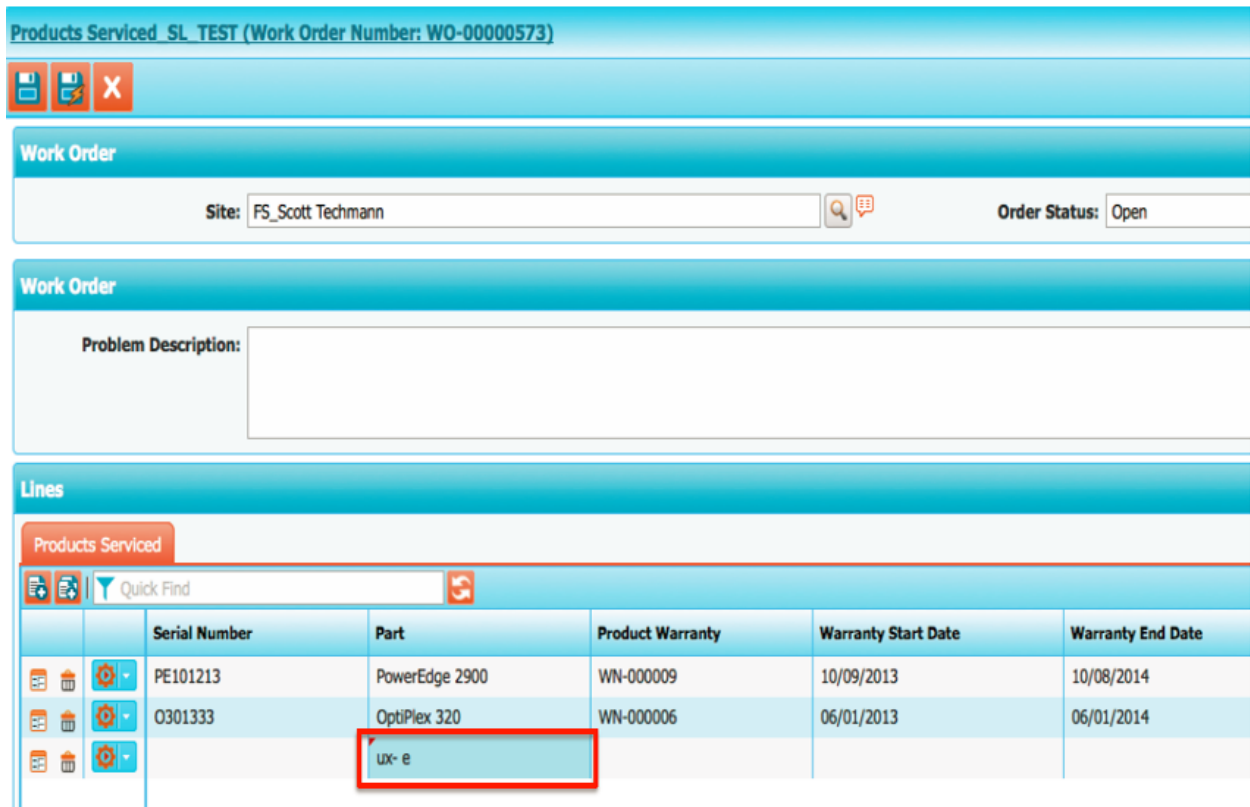
Note: Rich Text fields are not supported by the SFM transaction manager in this release. Standalone Create and View processes are not supported.

Auto Resolve Lookup

Auto Resolve Lookup is a feature that enables end users to enter values on SFM Transaction lookup fields directly, rather than opening the Lookup dialog box and choosing a value.

To use the Auto Resolve Lookup feature:

1. Enter text in an Object field (for example, Part, Account). See figure below.



Products Serviced SL TEST (Work Order Number: WO-00000573)

Work Order

Site: FS_Scott Techmann Order Status: Open

Work Order

Problem Description:

Lines

Products Serviced

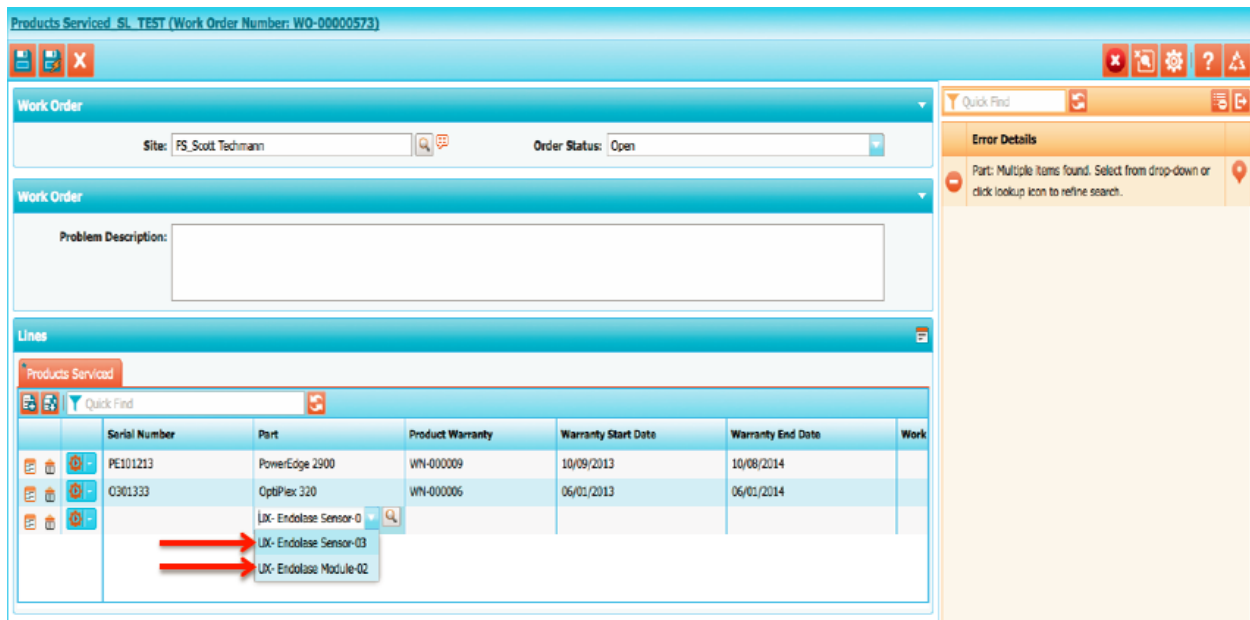
Quick Find

Serial Number	Part	Product Warranty	Warranty Start Date	Warranty End Date
PE101213	PowerEdge 2900	WN-000009	10/09/2013	10/08/2014
0301333	OptiPlex 320	WN-000006	06/01/2013	06/01/2014
	ux- e			

Figure 14: Auto Resolve Lookup Feature

2. Click **Save**. The Auto Resolve Lookup feature automatically processes.

If the Auto Resolve Lookup feature finds multiple matches, the **Error Details** dialog box displays an error message as shown in the figure below.



The screenshot shows the SFM Transaction Screen for a Work Order. The top bar indicates 'Products Served SL TEST (Work Order Number: WO-00000573)'. The 'Work Order' section shows 'Site: FS Scott Techmann' and 'Order Status: Open'. The 'Problem Description' field is empty. The 'Lines' section shows a table of products served. The 'Error Details' dialog box is open on the right, displaying the message: 'Part: Multiple items found. Select from drop-down or click lookup icon to refine search.'

Serial Number	Part	Product Warranty	Warranty Start Date	Warranty End Date	Work
PE101213	PowerEdge 2900	WN-000009	10/09/2013	10/08/2014	
O361333	OptiPlex 320	WN-000006	06/01/2013	06/01/2014	
	UX- Endolase Sensor-0				
	UX- Endolase Sensor-03				
	UX- Endolase Module-02				

Figure 15: Error Details Dialog Box

If your value has multiple matches, click the Object's arrow to open the Object's pick-list as shown in the figure above.

Screen Buttons

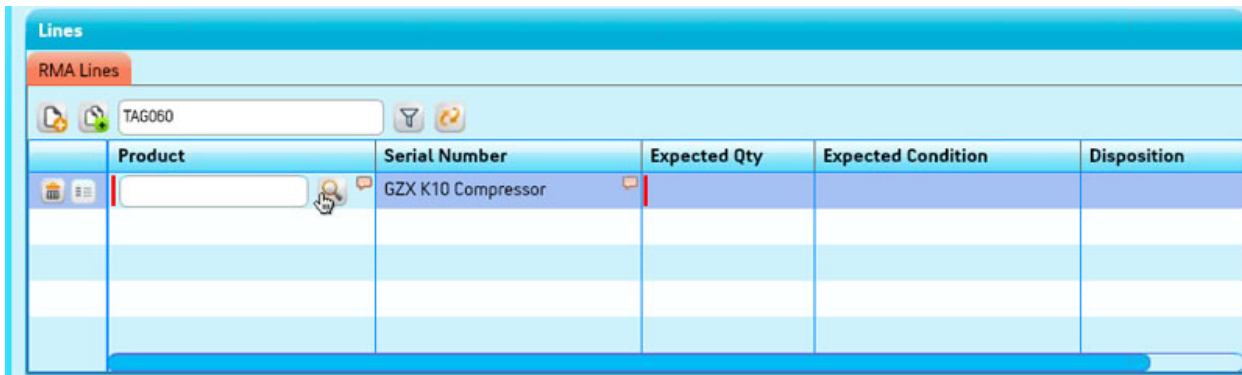
- Standard and custom buttons are displayed at the top and bottom of all SFM transaction screens. Standard buttons such as **Save** and **Cancel** are always displayed at the left.
- Click the **Save** button to create/update header and child records as applicable. Upon successful saving of data, you will be redirected to the created/updated record in Salesforce in view mode.
- To discard your changes, click **Cancel**. You will be redirected to the record from which you launched the SFM transaction screen.
- If the SFM transaction is for standalone editing of a record with child records, an additional button **Quick Save** is available. This button allows you to work on the same SFM transaction after saving.
- Some of the standard ServiceMax transactions have special standard buttons in addition to **Save** and **Cancel**. See the appropriate section in this document where the SFM transaction functionality is described in detail.

Clicking custom buttons will result in one of the following:

- Execute any custom logic associated with them. The header and child sections will be refreshed with the results of the custom logic. Contact your ServiceMax administrator if you need more information regarding how to use the custom buttons in the context of your SFM transactions.
- Launch the URL associated with the button in a new window.

SFM Delivery Lines Area Enhancement Grid

The delivery lines area has been enhanced to support a universal, grid based format that includes sort, filter, and other capabilities (see Figure below).

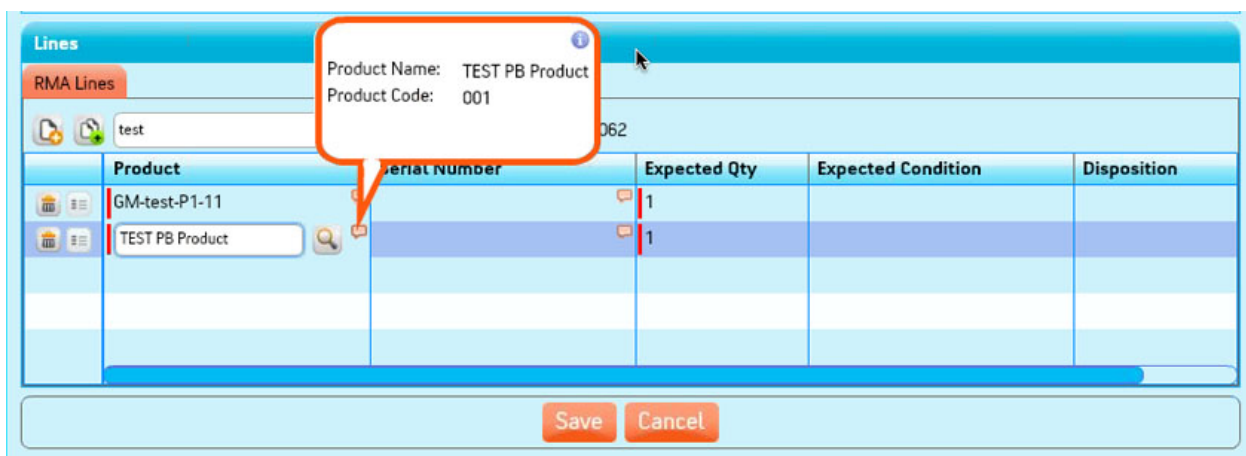


Product	Serial Number	Expected Qty	Expected Condition	Disposition
	GZX K10 Compressor			

Figure 16: Delivery Lines Area Grid

In the delivery lines grid area:

- Click the record once to select it.
- Click the record twice to access the **Product Lookup** feature and (if applicable) edit any content in the text box (see Figure above).
- Once a record is selected, you can use the **Tab** key to move to the next column.
- Resize columns by moving the lines between columns with your cursor (left to right).
- You can **Delete** a row or use the **Extended Edit** feature by clicking the appropriate buttons on the left side of the grid.
- The **Add a row** and **Search** and **Add** buttons are featured on the left side of the grid.
- To use the filter option, enter a name in the **Search** text area and click the **Refresh** button.
- Click the **Bubble** icon to get information about the record. See figure below.



Product	Serial Number	Expected Qty	Expected Condition	Disposition
GM-test-P1-11		1		
TEST PB Product		1		

Figure 17: Delivery Lines Area Grid (Bubble icon)

SFM SEARCH

Overview

SFM Search is a search feature for your business-related processes (Accounts, Installed Products, Work Orders, and so on).

Your administrator configures and manages the profile access permissions for the **SFM Search** feature. For information about your settings, contact your administrator.

ServiceMax Search

The ServiceMax Search box is located in the top left corner of the Home screen.

To use the ServiceMax Search:

1. Select your search options from the **Select Search** picklist (Figure 1).

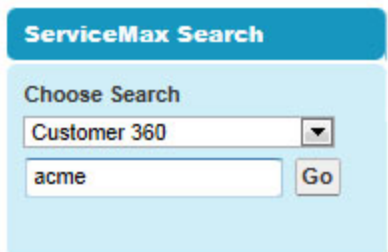
The image shows a screenshot of the ServiceMax Search interface. It features a blue header bar with the text "ServiceMax Search". Below the header, there is a section titled "Choose Search". This section contains a dropdown menu with "Customer 360" selected, a text input field containing the word "acme", and a "Go" button to the right of the input field.

Figure 1: ServiceMax Search

2. Enter your keyword(s) in the search text box.
3. Click the **Go** button.

The SFM Search Results Page appears (Figure 2).

Choose a pre-defined Search on the left, enter a search keyword and click Go.

Available Searches

SVMXSTD

SVMXSTD: Search Trunk Stock

SVMXSTD: Account Search

SVMXSTD: Account Search : Find Account related information

Contains Acme2 Go Show 10 Records T

Open Cases (0) Open Work Orders (2) Open RMA (0) Open Shipment (0)

Work Order Number	Component	Product	Problem Description	Order Type	Order
WO-00000448	Sort Ascending	PowerVault RD1000	--	Field Service	Open
WO-00000447	Sort Descending	OptiPlex 320	Not working	Field Service	Awaiti

Columns

Unlock

Lock

- Work Order Number
- Component
- Product
- Problem Description
- Order Type
- Order Status
- Dispatch Status
- Scheduled Date Time

Service Flow Wizards: WO-00000448

Field Service Under Contract Field Service Toolbox

Dispatch Technician Record T&M Print Service Report Post Inventory

Figure 2: SFM Search Results Page

From this screen you can:

- Select a predefined search (**Contains, Exact Match, Ends With, Starts With**) in the picklist.
- Enter a search keyword in the text box and click the **Go** button.
- Click the **Account Search** area to see account related information.
- Get **Customer Details** by clicking the **Customer 360** area.
- Click the **Locate IB** area to find the process stage IB is in.
- Click **Serial Number Search** to search by serial number.

SERVICE PARTS & REVERSE LOGISTICS

SERVICE PARTS & REVERSE LOGISTICS

Overview

Service Parts & Reverse Logistics enables organizations to seamlessly manage end-to-end repair and logistics operations involving high volumes of data including initiating returns, receiving, shipping, exchange fulfillment, and depot repair.

To activate Service Parts & Reverse Logistics:

1. Go to **Home > ServiceMax Setup > App Administrations > Configuration Profiles**.
2. Select an active Org-wide Profile and click the **Edit** button.
3. Select **Common** from the **Select Module** picklist.
4. Select **Global Settings** from the **Select SubModule** picklist.
5. Check the checkbox for **GBL014**.

For configuring Service Parts & Reverse Logistics see:

- [Depot & Stocking Locations](#)
- [Routes & Stops](#)
- [Repair Shipment Preparation](#)
- [Forwarding Engine](#)
- [Product Substitution Matrix](#)
- [Returns Process](#)
- [Receiving Process](#)
- [Delivery Rules](#)
- [Shipping Process](#)
- [Sourcing Rules](#)

For using Service Parts & Reverse Logistics see:

- [Case](#)
- [Return Material Authorization \(RMA\)](#)
- [Shipment](#)
- [Fulfillment](#)

ADVANCED CONFIGURATION: SERVICE PARTS & REVERSE LOGISTICS

Overview

Service Parts & Reverse Logistics enables organizations to seamlessly manage end-to-end repair and logistics operations involving high volumes of data from initiating returns, receiving, shipping, exchange fulfillment, and depot repair.

In order to use Service Parts & Reverse Logistics in your organization, your administrator must set up configurations for each Service Parts & Reverse Logistics module listed below.

Service Parts & Reverse Logistics consists of the following modules:

- [Depot & Stocking Locations](#)
- [Returns Process](#)
- [Routes & Stops](#)
- [Receiving Process](#)
- [Delivery Rules](#)
- [Repair Shipment Preparation](#)
- [Forwarding Engine](#)
- [Shipping Process](#)
- [Product Substitution Matrix](#)
- [Sourcing Rules](#)

See the [Glossary](#) for a list of terms associated with Service Parts & Reverse Logistics.

DEPOT & STOCKING LOCATIONS

Overview

The Depot & Stocking Locations module enables administrators to manage Service Parts Depots (Warehouses) and their Stocking Locations. You can define multilevel hierarchical structures to represent regional depots, field stocking locations, central warehouses, and so on. You can also define stocking locations (receiving, holding, delivery, and staging) within a depot.

Access and Permissions

Actions	User Permissions Needed
To view Depot & Stocking Locations	"Read" on Location
To create or edit Depot & Stocking Locations	"Create" and "Update" on Location
To delete Depot & Stocking Locations	"Delete" on Location

Manage Depot & Stocking Locations Screen

To access the Reverse Logistics module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area in the top left of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistics** button.
3. Click the **Depot & Stocking Locations** button.

4. Click the **Go** button. The Manage Depot & Stocking Locations screen appears as shown in the figure below.

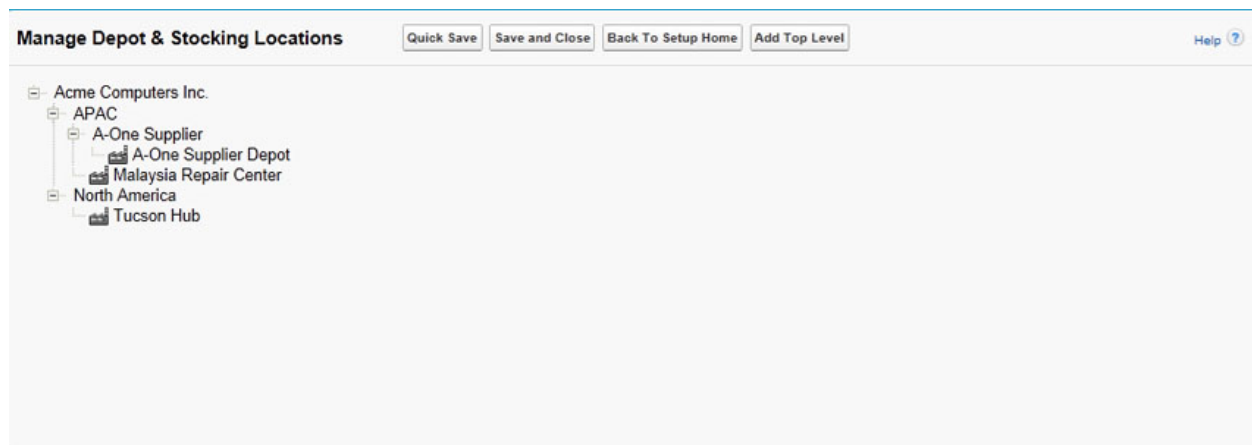


Figure 1: Manage Depot & Stocking Locations

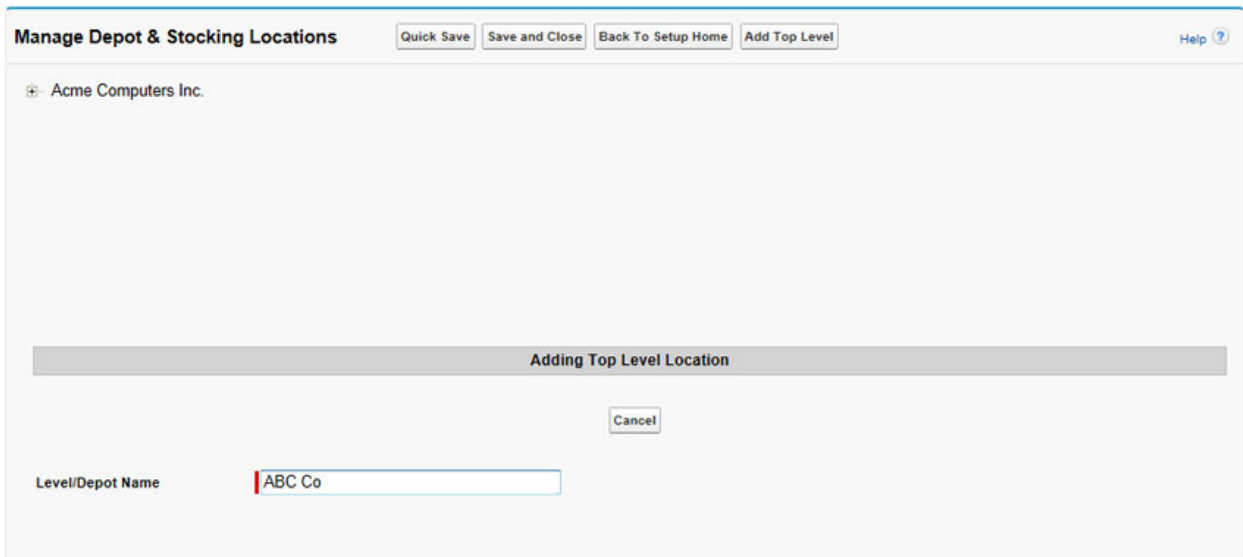
In the Manage Depot & Stocking Locations screen (Figure 1 above) you can:

- You can add new a top level location by clicking the **Add Top Level** button.
- Quick Save locations.
- Save locations and close the window.
- Return to ServiceMax Setup Home.

To add a top level location:

1. Click the **Add Top Level** button.

2. In the **Level/Depot Name** text box, enter the name you want to assign to the level/depot. See Figure below.

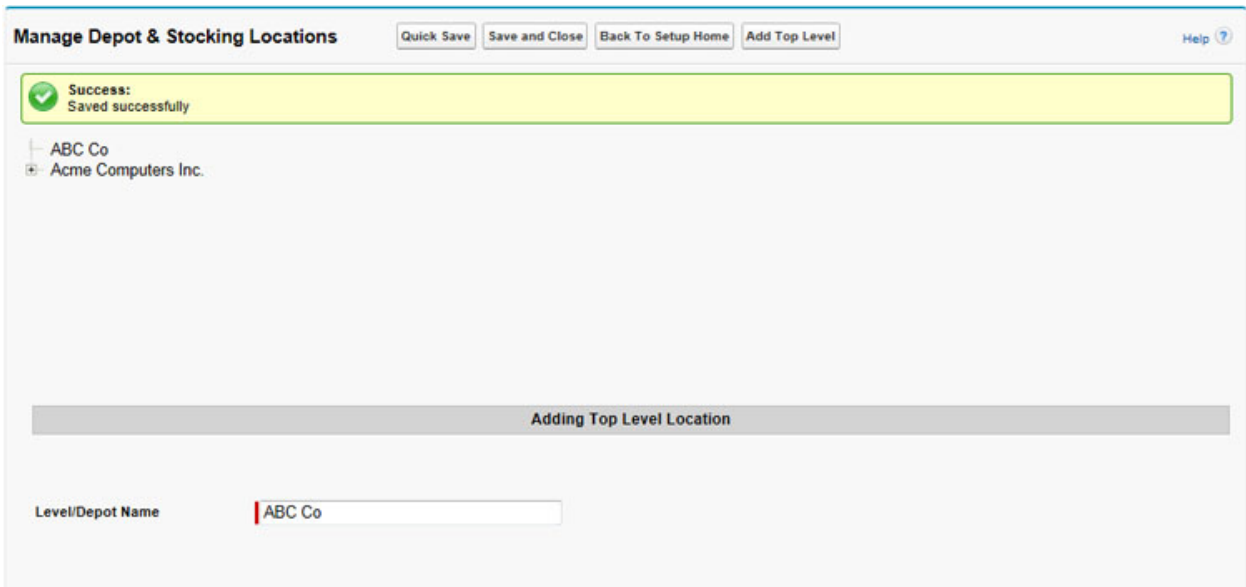


The screenshot shows the 'Manage Depot & Stocking Locations' window. At the top, there are buttons: 'Quick Save', 'Save and Close', 'Back To Setup Home', and 'Add Top Level'. A 'Help' link is also present. Below the buttons, there is a tree view showing 'Acme Computers Inc.' as the selected entity. A modal dialog box titled 'Adding Top Level Location' is open in the center. It contains a 'Cancel' button and a text input field labeled 'Level/Depot Name' which has 'ABC Co' entered.

Figure 2: Level/Depot Name

3. Click the **Quick Save** button to save the location.
4. Click the **Save and Close** button to save the location and close the Manage Depot & Stocking Locations screen.

The Level/Depot Name is saved. See figure below.



This screenshot shows the same 'Manage Depot & Stocking Locations' window after a successful save. A yellow banner at the top displays a green checkmark icon and the text 'Success: Saved successfully'. The tree view now shows 'ABC Co' as the selected entity, with 'Acme Computers Inc.' listed below it. The 'Adding Top Level Location' dialog box is still open, showing the 'Level/Depot Name' field with 'ABC Co'.

Figure 3: Level/Depot Name Saved Successfully

Editing Level/Depots

In the Edit Level/Depot area of the Manage Depot & Stocking Locations screen, you can add levels, add depots, and delete locations.

To add a level:

1. Click the **Level/Depot Name**.
2. Click the **Add the Level** button.
3. In the Adding a Level area, enter a level/depot name in the Level/Depot Name text box.

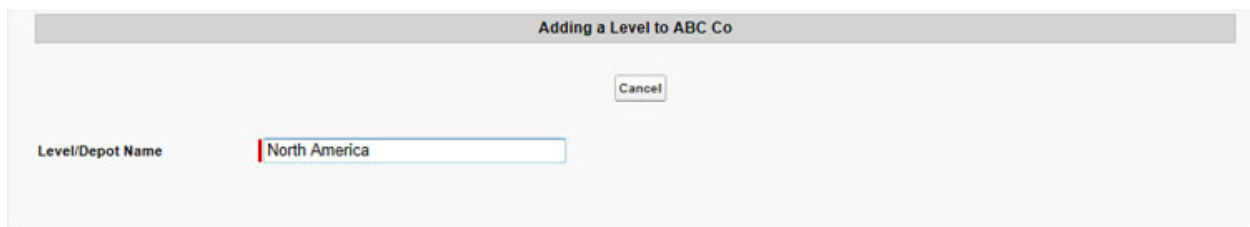
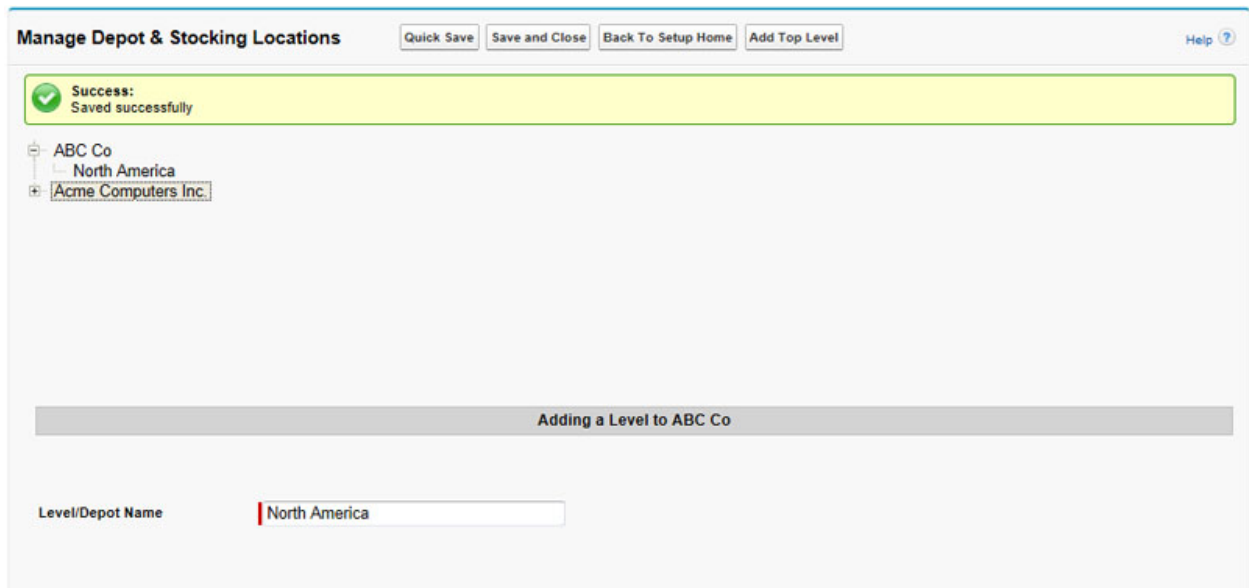


Figure 4: Adding a Level

4. Click the **Quick Save** button to save the location.
5. Click the **Save and Close** button to save the location and close the Manage Depot & Stocking Locations screen.
6. Click the **Cancel** button to cancel the level.

The level is added to the location. See figure below.



The screenshot shows the 'Manage Depot & Stocking Locations' interface. At the top, there are buttons for 'Quick Save', 'Save and Close', 'Back To Setup Home', and 'Add Top Level', along with a 'Help' link. A yellow success banner at the top left reads 'Success: Saved successfully'. Below this is a tree view showing a hierarchy: 'ABC Co' (expanded) contains 'North America' (selected) and 'Acme Computers Inc.'. A grey bar below the tree indicates 'Adding a Level to ABC Co'. At the bottom, the 'Level/Depot Name' text box contains 'North America'.

Figure 5: Added Level Saved

To add a level/depot:

1. Click a top level to select it. The level/depot displays in the Level/Depot Name text box.
2. Click the **Add Depot** button in the Edit/Level Depot area.
3. Enter the **Level/Depot Name** in the first text box.
4. Enter appropriate information in the **Street, City, State, Zip,** and **Country** text fields.
5. Select a **Location Type** (**Internal, Customer, Supplier, Field**).
6. Enter the **Latitude** and **Longitude** in the appropriate text boxes.
7. Enter Locations for the top level.
 - a. Enter the name in the **Name** text box.
 - b. Select a function (**Default Delivery, Delivery Location, Receiving Location, Staging Location**) from the **Function** picklist.
 - c. Check the appropriate checkbox to answer the question **Has Good Stock?**

- Click the **Validate Address** button to validate the Level/Depot address.

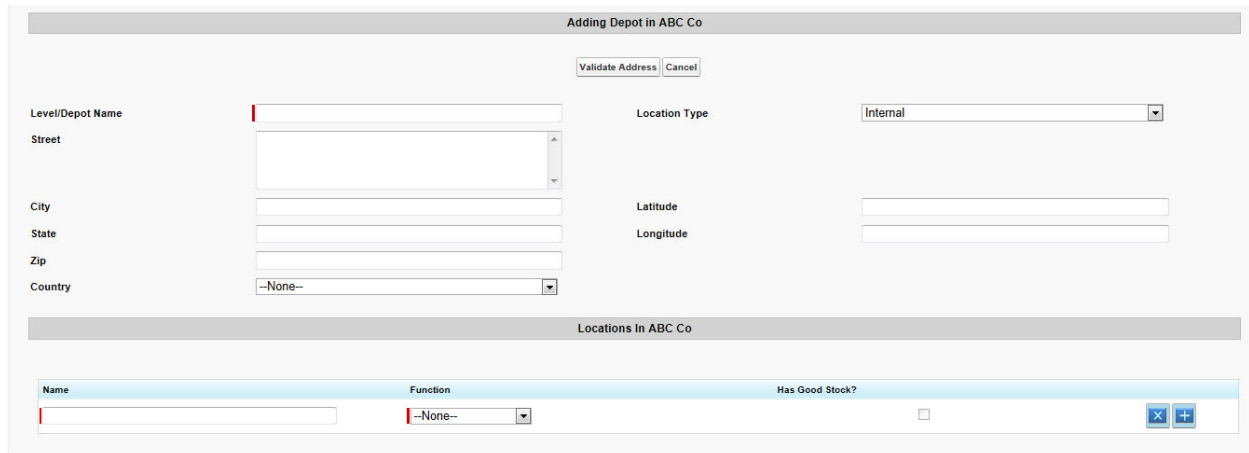


Figure 6: Adding a Level/Depot

Setting Up Service Parts & Reverse Logistics Locations

To set up a Service Parts & Reverse Logistics Location:

- In the Manage Depot & Stocking Locations screen, select a **Depot** and a **Depot Parent**.
- In the Edit Level/Depot area, enter the address information in the appropriate fields.
- For further location details, enter the **Latitude** and **Longitude** for the depot. Use the **Validate Address** button to populate values in the **Latitude** and **Longitude** fields.
- Select the **Location Type** (**Internal**, **Customer**, **Supplier**).

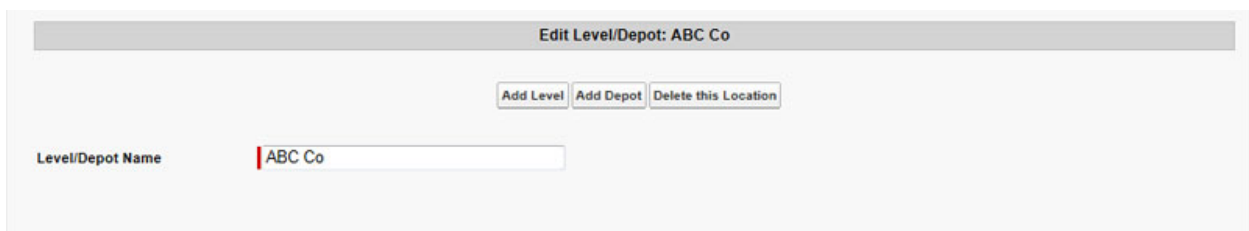




Figure 7: Edit Level/Depot

- If you select **Customer** or **Supplier** as the **Location Type**, enter the account information in the **Account** field.
- Assign locations for the depot (**Receiving**, **Delivering**, and/or **Staging**). See Figure 8 below.

7. If the location has good stock, check the checkbox, **Has Good Stock?**
8. Click the  icon to add additional locations; click the  icon to delete locations. If you delete a location, you will receive a warning message. Click **OK** to proceed with the deletion.



Name	Function	Has Good Stock?	
Depot1_RL	Receiving Location	<input type="checkbox"/>	
Depot1_DL	Delivery Location	<input type="checkbox"/>	
Depot1_StgL	Staging Location	<input type="checkbox"/>	 

Figure 8: *Locations in Depot*

9. Click the **Validate Address** button to verify the Depot address.
10. Click **Quick Save** to save the location.
11. You can click the **Outbound Routing** button to configure [Outbound Routing](#) or you can click the **Delivery Rules** button to set up Delivery Rules for the selected Depot.
12. If you select to configure Outbound Routing and set up Delivery Rules at a later time, click **Save and Close** to save the location and return to the ServiceMax Setup Home.

ROUTES & STOPS

Overview

Use the Routes & Stops module to define your service delivery network. Routes & Stops for returned products can be defined as inbound routes terminating in repair/disposition centers. Similarly, you can setup Routes & Stops for outbound parts & repaired products which are shipped to customers.

Access and Permissions

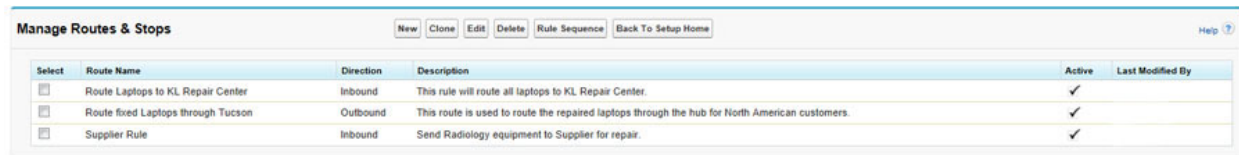
Actions	User Permissions Needed
To view Routes & Stops:	"Read" on ServiceMax Processes, ServiceMax Config Data and Location.
To create or edit Routes & Stops:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data. "Read" on Location.
To delete Routes & Stops:	"Delete" on ServiceMax Processes and ServiceMax Config Data.

Manage Routes & Stops Screen

To access the Routes & Stops Module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top-left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistic** button.
3. Click the **Routes & Stops** button.
4. Click the **Go** button.

The Manage Routes & Stops screen displays as shown in the figure below.



Select	Route Name	Direction	Description	Active	Last Modified By
<input type="checkbox"/>	Route Laptops to KL Repair Center	Inbound	This rule will route all laptops to KL Repair Center.	✓	
<input type="checkbox"/>	Route fixed Laptops through Tucson	Outbound	This route is used to route the repaired laptops through the hub for North American customers.	✓	
<input type="checkbox"/>	Supplier Rule	Inbound	Send Radiology equipment to Supplier for repair.	✓	

Figure 1: Routing Rules Screen

Manage Routes & Stops

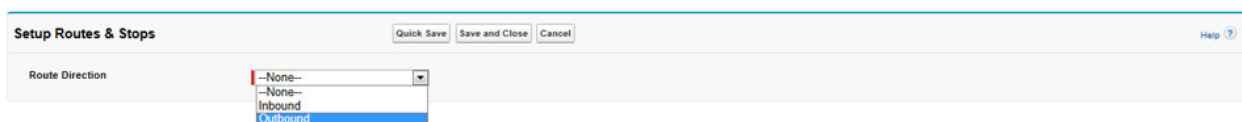
In the Manage Routes & Stops screen you can:

- Select an existing Route & Stop and edit it.
- Select an existing Route & Stop and clone it.
- Create a new Route & Stop.
- Delete a Route & Stop.
- Place rules in a specific order.
- Return to ServiceMax Setup Home.

Creating a New Route & Stop

To create a new Route & Stop:

1. Click the **New** button in the Manage Routes & Stops screen (see Figure 1).
2. Select the **Route Direction (Inbound, Outbound)** in the Setup Routes & Stops screen. (See Figure 2 below). Select **Inbound** if you are configuring an inbound route. Select **Outbound** to configure an outbound route. For Inbound routes, you have the option to select the additional objects (**Case, Case Line**).

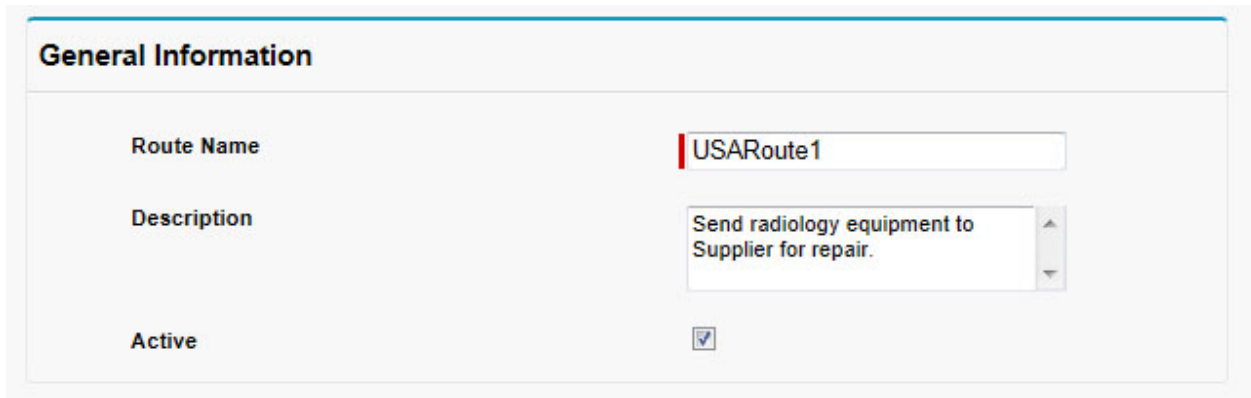


Setup Routes & Stops	
<input type="button" value="Quick Save"/> <input type="button" value="Save and Close"/> <input type="button" value="Cancel"/>	
Route Direction	<div> <div>--None--</div> <div>--None--</div> <div>Inbound</div> <div>Outbound</div> </div>

Figure 2: Setup Routing Rules Screen

3. In the General Information area, enter a **Route Name** and a **Description**.

4. Check the **Active** checkbox if you want activate the route.



General Information

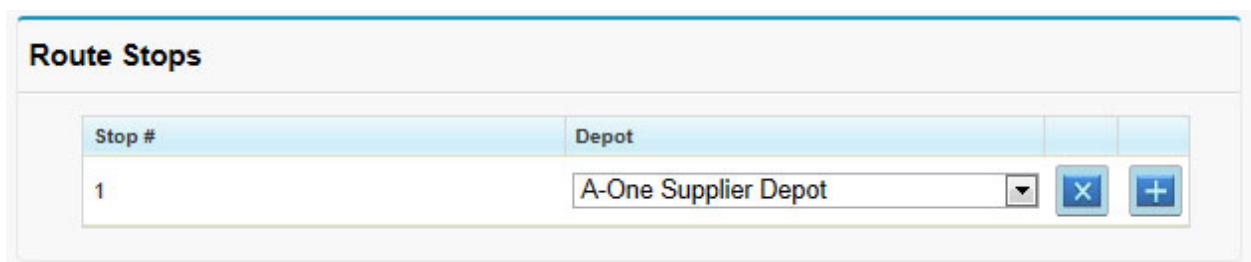
Route Name: USARoute1

Description: Send radiology equipment to Supplier for repair.

Active: ☒

Figure 3: General Information Area

5. Click the **Quick Save** button to save your information.
6. In the Route Stops area, select a depot from the **Depot** picklist (Figure 4).

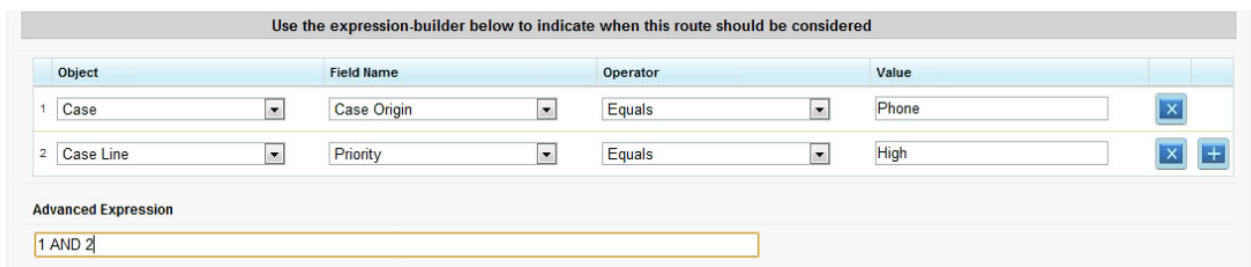


Route Stops

Stop #	Depot		
1	A-One Supplier Depot	<input type="button" value="X"/>	<input type="button" value="+"/>

Figure 4: Route Stops

7. Add another depot by clicking the icon. If you need to delete a depot, click the icon.
8. Use the Expression Builder to indicate when this route should be considered. Enter the **Object**, **Field Name**, **Operator**, and **Value**. (See Figure 5).
9. Use the and icons to add or delete expressions.
10. Use the Advanced Expression if necessary. For Inbound routing only, you can select between the following objects (**Account**, **Case**, **Case Line**, and **Product**).



Use the expression-builder below to indicate when this route should be considered

	Object	Field Name	Operator	Value		
1	Case	Case Origin	Equals	Phone	<input type="button" value="X"/>	
2	Case Line	Priority	Equals	High	<input type="button" value="X"/>	<input type="button" value="+"/>

Advanced Expression

1 AND 2

Figure 5: Expression Builder

11. Click the **Save and Close** button to save and return to the Manage Routes & Stops screen.

Editing a Route & Stop

To edit a Route & Stop:

1. Select a Route & Stop to edit by checking the **Select** checkbox for the selected rule.
2. Click the **Edit** button in the Manage Routes & Stops screen.
3. From the Setup Routing Rules screen, you can edit the **General Information** area, **Route Stops**, and the **Expression Builder**.
4. Click the **Save and Close** button to save the rule and return to the Manage Routes & Stops screen.

Cloning a Route & Stop

Cloning a Route & Stop creates a duplicate rule of the original.

To clone a Route & Stop:

1. Select a Route & Stop to clone by checking the checkbox for the appropriate rule.
2. Click the **Clone** button in the Manage Routes & Stops screen.
3. Update the **General Information**, **Route Stops**, and **Expression Builder**.

If you want to change the Rule Direction, you must create a new Route & Stop.

Deleting a Route & Stop

To delete a Route & Stop:

1. Check the **Select** checkbox for the appropriate rule.
2. Click the **Delete** button.

A warning dialog box displays asking the question, "Are you sure you want to delete the selected rule(s)?"

3. Click **OK** to delete the rule.

Changing the Rule Sequence

You can change the order of the rules. To dictate the sequence in which rules are processed, click **Rule Sequence**. The first matching rule is considered for calculating the route.

To change the order:

1. In the Mange Routes & Stops screen, click the **Rule Sequence** button.
2. In the Rules Sequence dialog box, click a rule to select it (Figure 6).

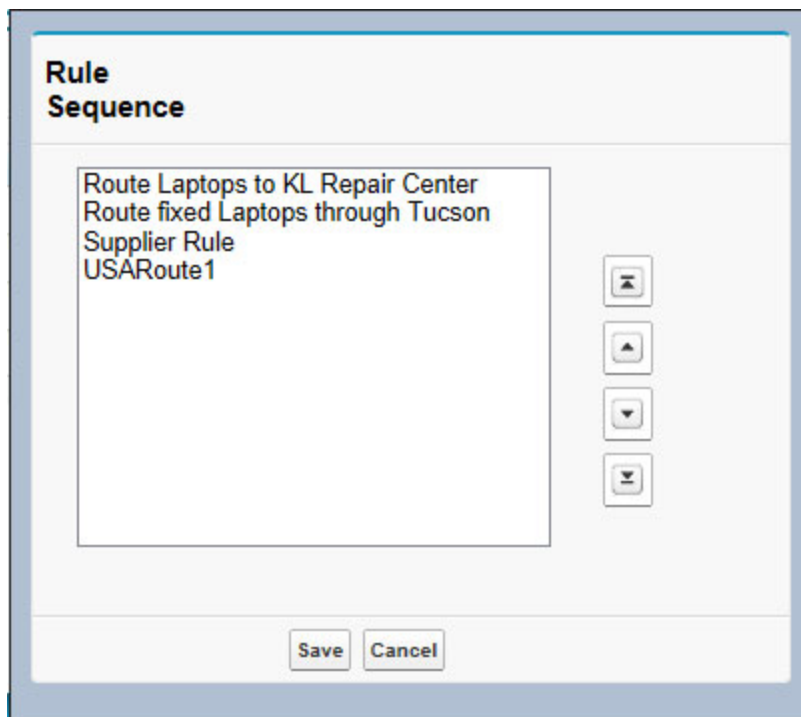


Figure 6: Rule Sequence Screen

3. Using the Up, Down, Top, Bottom arrows move the rule to the desired order.
4. Click the **Save** button to save the order.
5. Click the **Cancel** button to cancel the order.

REPAIR SHIPMENT PREPARATION

Overview

Use this option to configure when Outbound routes must be calculated from work orders and external (reverse) RMAs from suppliers. Use relevant attributes in work orders and RMAs that indicate the repair cycle is complete and the product is ready to make its return journey to the customer.

Access and Permissions

Actions	User Permissions Needed
To view Repair Shipment Preparation:	"Read" on ServiceMax Processes, ServiceMax Config Data and Location.
To create or edit Repair Shipment Preparation:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data "Read" on Location.
To delete Repair Shipment Preparation:	"Delete" on ServiceMax Processes and ServiceMax Config Data

Manage Repair Shipment Preparation Rules

To access the Repair Shipment Preparation module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistics** button.
3. Click the **Repair Shipment Preparation** button.
4. Click the **Go** button.

The Manage Repair Shipment Preparation Rules screen appears. See Figure 1.

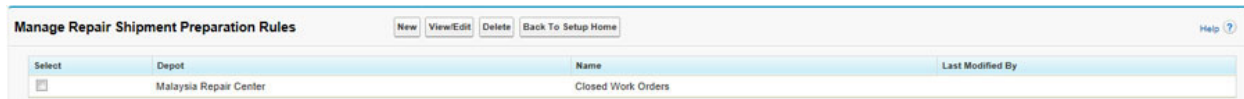


Figure 1: Manage Repair Shipment Preparation Rules Screen

From the Manage Repair Shipment Preparation Rules screen you can:

- Create a new rule by clicking the **New** button.
- View or edit a rule by clicking the **View/Edit** button.
- Delete a rule by clicking the **Delete** button.
- Return to ServiceMax Setup Home by clicking the **Back to Setup Home** button.

Creating a New Rule

To create a new rule:

1. Click the **New** button in the Manage Repair Shipment Preparation Rules screen.
2. In the Rule Information dialog box, enter the **Depot** name, **Name** of the rule, and the **Description**. See Figure 2.
3. Check the **Active** checkbox to activate the rule.
4. Click the **Save** button to save the rule, or click the **Cancel** button to cancel the rule.

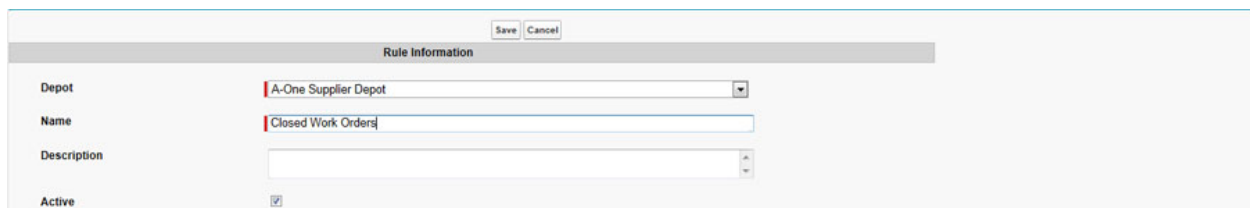


Figure 2: Rule Information Area



5. Use the Expression Builder to select criteria to indicate how Work Orders qualify for Outbound Route calculation (Figure 3).
 - a. Select an existing criteria from the **Use An Existing Criteria** picklist, or view/edit existing criteria from the **View/Edit** link.

- b. You can also create new criteria by clicking the **Or Create New Criteria** link.




Using the expression-builder below, select criteria to indicate how Work Orders qualify for Outbound Route Calculation

Use An Existing Criteria: [View/Edit](#) [Or Create New Criteria](#)

Figure 3: Use Existing Criteria Expression Builder

6. Use the Expression Builder in Figure 4 to indicate how the supplier returns for Outbound Route Calculations.
 - a. Select the **Object**, **Field**, **Operator**, and **Value** from their respective picklists.
 - b. Use the Advanced Expression if necessary.
 - c. Use the  and  icons to add or delete expressions.
 - d. Click the **Save** button to save the rule.

Using the expression-builder below, indicate how Supplier Returns (Reverse RMAs) qualify for Outbound Route Calculation

	Object	Field	Operator	Value	
1	Parts Order	Record Type ID	Equals	RMA	
2	Parts Order	Order Status	Equals	Completed	 

Advanced Expression

Figure 4: Expression Builder-Outbound Route Calculation

Deleting a Rule

To delete a rule:

1. Check the checkbook for the appropriate rule.
2. Click the **Delete** button.

A warning dialog box displays asking the question, "Are you sure?"

3. Click **OK** to delete the rule.

FORWARDING ENGINE

Overview

The Forwarding Engine automatically creates shipment orders to the next stop in the route based on route cards. In this area, you can define which RMAs will be processed by the engine. The configuration should be setup for each Depot exclusively, and you can also specify a schedule for the depot.

Access and Permissions

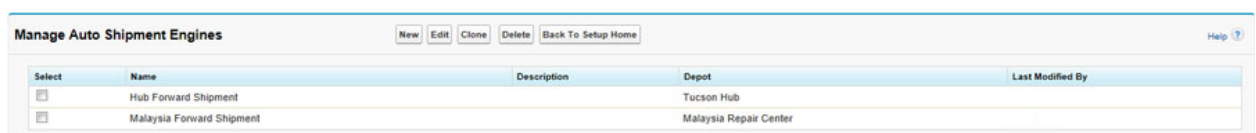
Actions	User Permissions Needed
To view Forwarding Engine:	"Read" on ServiceMax Processes and ServiceMax Config Data.
To create or edit Forwarding Engine:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data.
To delete Forwarding Engine:	"Delete" on ServiceMax Processes and ServiceMax Config Data.

Forwarding Engine Screen

To access the Forwarding Engine module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistics** button.
3. Click the **Forwarding Engine** button.
4. Click the **Go** button.

The Manage Auto Shipment Engines screen displays as shown in the figure below.



Select	Name	Description	Depot	Last Modified By
<input type="checkbox"/>	Hub Forward Shipment		Tucson Hub	
<input type="checkbox"/>	Malaysia Forward Shipment		Malaysia Repair Center	

Figure 1: Manage Auto Shipment Engines Screen

In the Manage Auto Shipment Engines screen you can:

- Setup a new Auto Shipment Engine process.
- Edit or clone an existing Auto Shipment Engine process.
- Delete an existing Auto Shipment Engine process.
- Return to the ServiceMax Setup Home Page.

Creating a New Forwarding Engine Process

To create a new Shipment Engine process:

1. Click the **New** button in the Manage Auto Shipment Engine screen.
2. In the Setup Forward Shipment Processes screen, select a Depot from the **Depot** picklist (see Figure 2).
3. In the **Name** field, enter the name of the forward shipment process.
4. In the **Description** field, enter a description.
5. Click **Quick Save** to save your General Info & Criteria and remain in the Setup Auto Shipment Engine screen.

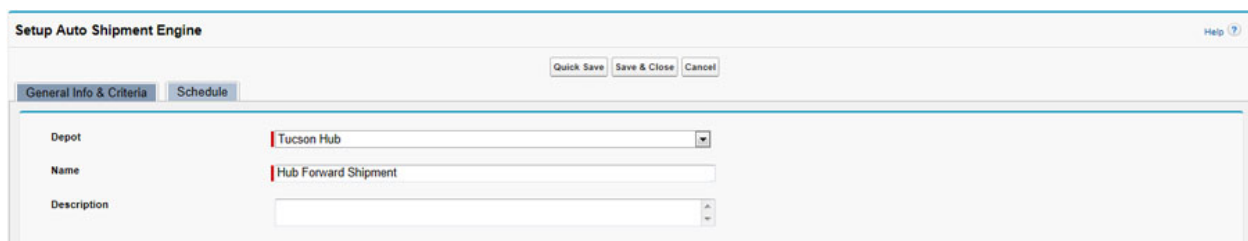




Figure 2: General Info & Criteria Area

6. Use the expression-builder to qualify RMAs and RMA lines for forward shipments.
 - a. For each picklist (**Object**, **Field**, and **Operator**) select the appropriate item for your expression.
 - b. In the **Value** field, enter the value that represents the expression.
 - c. Use the  and  icons to add or delete expressions.

- d. If necessary, use an advanced expression to qualify RMAs and RMA lines for forward shipments.

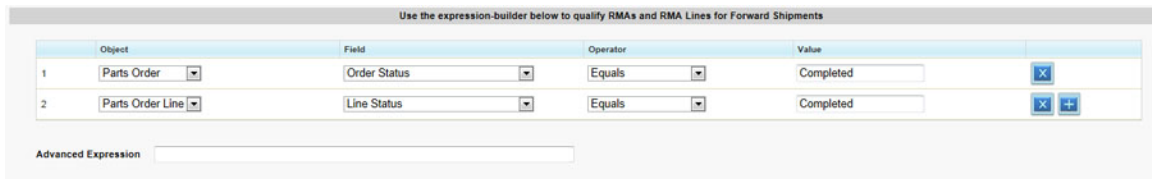


Figure 3: Expression Builder- Forward Shipments

7. Select field maps to create shipment orders and lines from originating customer RMA and lines by selecting items from two picklists: **Field map to create forwarding shipment from originating customer RMA** and **Field map to create forwarding shipment lines from originating customer RMA lines** (see Figure 4).
8. Click the **Quick Save** button to save your information and remain in the current screen.

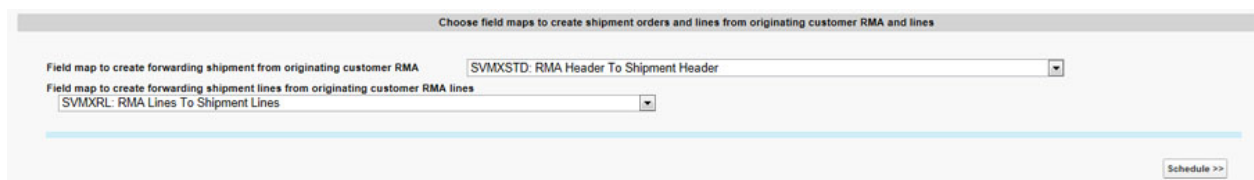


Figure 4: Select Field Maps to Create Shipment Orders area

9. Click the **Schedule** button located on the bottom right corner of the screen area, or click the **Schedule** tab located at the top left corner of the screen.
10. In the Schedule tab, select the time you want the forward shipment engine to run from the **Run At** picklist (see Figure 5).

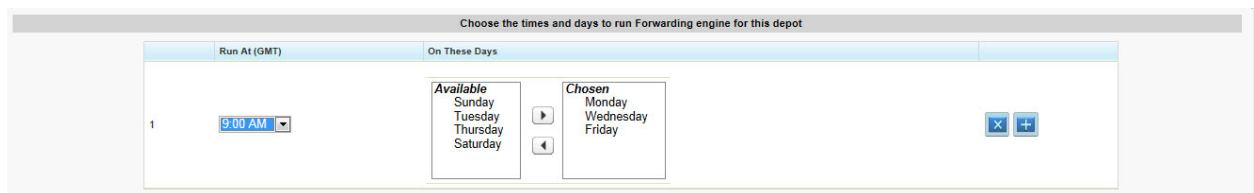






Figure 5: Schedule tab (Select Days and Times)

11. Select the days you want the forward shipment engine to run using the  and  arrows between the **Available** and **Chosen** areas by moving the appropriate day from left to right.
12. Use the  and  icons to add or delete schedules.

13. In the **Specify recipients of notification and alerts** area, enter an e-mail address to notify recipients of successful notifications and an e-mail address to notify recipients of error notifications (see Figure 6).
14. Click the **Save and Close** button to save your information and close the screen.
15. To return to the General Info & Criteria tab, click the **General Info & Criteria** button located at the bottom left corner of the screen.

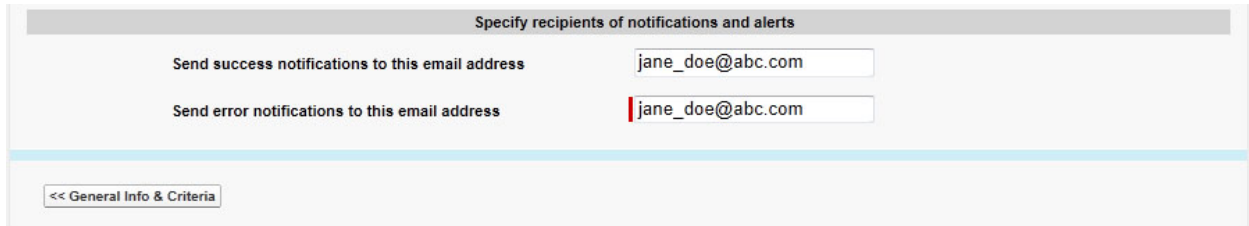
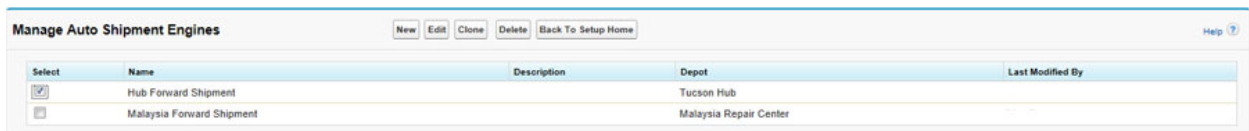


Figure 6: Specify recipients of notifications and alerts area

Editing a Forwarding Engine Process

To edit a shipment engine process:







1. In the Manage Auto Shipment Engines screen, select a process from the list of process names (Figure 7).



Select	Name	Description	Depot	Last Modified By
<input checked="" type="checkbox"/>	Hub Forward Shipment		Tucson Hub	
<input type="checkbox"/>	Malaysia Forward Shipment		Malaysia Repair Center	

Figure 7: Select a Shipment Engine Process

2. Click the **Edit** button.
3. Change the Depot, by choosing a new one in the **Depot** picklist (see Figure 2).
4. In the General Info & Criteria tab, update the **Name** and **Description** fields, if necessary.
5. Use the expression-builder to update the RMAs and RMA lines for forward shipments (see Figure 3).
 - a. For each picklist (**Object**, **Field**, and **Operator**) select the appropriate item for your expression.
 - b. In the **Value** field, enter the value that represents the expression.

- c. Use the  and  icons to add or delete expressions.
 - d. If necessary, use an advanced expression to qualify RMAs and RMA lines for forward shipments.
6. Select field maps to create shipment orders and lines from originating customer RMA and lines by selecting items from two picklists: **Field map to create forwarding shipment from originating customer RMA** and **Field map to create forwarding shipment lines from originating customer RMA lines** (see Figure 4).
 7. Click the **Quick Save** button to save your information and remain in the current screen.
 8. Click the **Schedule** button located on the bottom right corner of the screen.
 9. In the Schedule tab, select the time you want the forward shipment engine to run from the **Run At** picklist (see Figure 5).
 10. Select the days you want the forward shipment engine to run using the  and  arrows between the **Available** and **Chosen** areas by moving the appropriate day from left to right.
 11. Use the  and  icons to add or delete schedules.
 12. In the **Specify recipients of notification and alerts** area, enter an e-mail address to notify recipients of successful notifications and an e-mail address to notify recipients of error notifications (see Figure 6).

Cloning a Forwarding Engine Process

To clone a forwarding engine process:

1. In the Manage Auto Shipment Engines screen, select a process from the list of process names (Figure 7).
2. Click the **Clone** button.
3. Enter a unique process name in the **Name** field of the General Info & Criteria tab.
4. Click the **Quick Save** button.

Deleting a Forwarding Engine Process

To delete a forwarding engine process:

1. Check the checkbox for the appropriate rule.
2. Click the **Delete** button.
3. Click **OK** in the dialog box that asks the question, "Are you sure?"

PRODUCT SUBSTITUTION MATRIX

Overview

Use this option to setup one or more products as alternatives for a given product and establish the order of preference. Substitutions defined here are used in the Fulfillment Console to drive exchange product fulfillment.

Access and Permissions

Actions	User Permissions Needed
To view Product Substitution Matrix:	"Read" on Product and Product Replacement.
To create or edit Product Substitution Matrix:	"Create" and "Update" on Product Replacement. "Update" on Product.
To delete Product Substitution Matrix:	"Delete" on Product Replacement. "Update" on Product.

Manage Product Replacements Screen

To access the Product Substitution Matrix module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistics** button.
3. Click the **Product Substitution Matrix** button.
4. Click the **Go** button.

The Manage Product Substitutions screen displays as shown in the figure below.

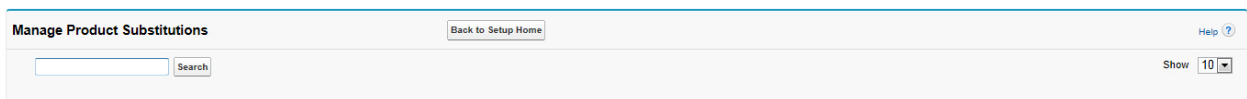



Figure 1: *Manage Product Replacements*

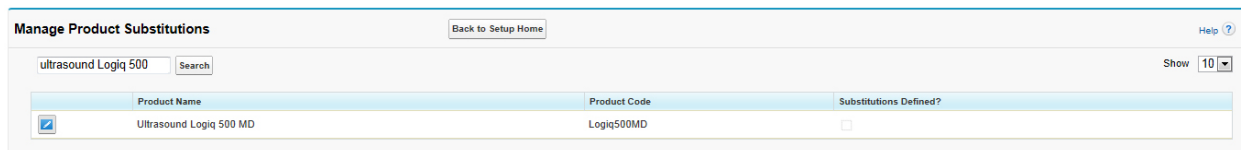
In the Manage Product Substitutions screen you can:

- Look up and edit product substitutions.
- Return to ServiceMax Setup Home.
- Indicate the number of products to display on the Manage Product Substitutions screen.

Substituting a Product

To substitute a product:

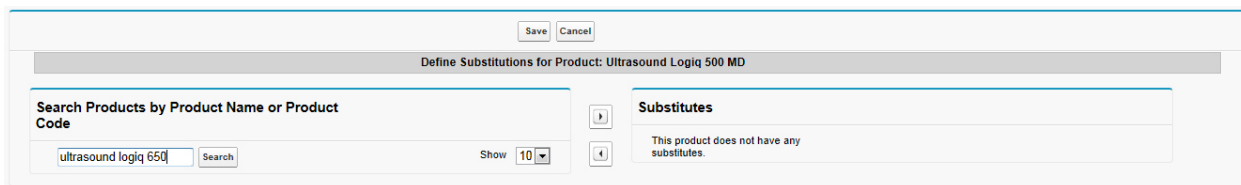
1. Enter the full or partial product name in the text box next to the **Go** button. Click **Go** to view all the products.
2. Click the  icon to edit the product (Figure 2).



The screenshot shows the 'Manage Product Substitutions' interface. At the top, there is a search bar with 'ultrasound Logiq 500' entered and a 'Search' button. To the right of the search bar is a 'Show' dropdown menu set to '10'. Below the search bar is a table with three columns: 'Product Name', 'Product Code', and 'Substitutions Defined?'. The table contains one row with the product 'Ultrasound Logiq 500 MD', product code 'Logiq500MD', and a checkbox in the 'Substitutions Defined?' column. A 'Back to Setup Home' button is located at the top right of the table area.



Figure 2: Manage Product Substitutions Display Area



3. In the Define Replacements For Product area, enter a different product name or click **Go** for a list of available products. See Figure 3.



The screenshot shows the 'Define Substitutions for Product: Ultrasound Logiq 500 MD' interface. At the top, there are 'Save' and 'Cancel' buttons. Below them is a search bar with 'ultrasound logiq 650' entered and a 'Search' button. To the right of the search bar is a 'Show' dropdown menu set to '10'. Below the search bar is a table with two columns: 'Available Product(s)' and 'Substitutions Product(s)'. The 'Available Product(s)' column contains a list of products. The 'Substitutions Product(s)' column is empty and contains the text 'This product does not have any substitutes.' Arrows are used to move products between the two columns.

Figure 3: Define Substitutions for Product Area

4. Check the appropriate checkbox for the product.
5. In the Available Product(s) area, click the arrow to move the selected product to the Substitutions Product(s) area (Figure 4).
6. Continue to select products and use the  and  arrows to move products from the Available Product(s) area to the Replacement Product(s) area using the applicable arrow keys.

7. Use the  and  arrows to move products up and down in the Define Substitutions Product(s) area.
8. Click the **Save** button to save your product information.

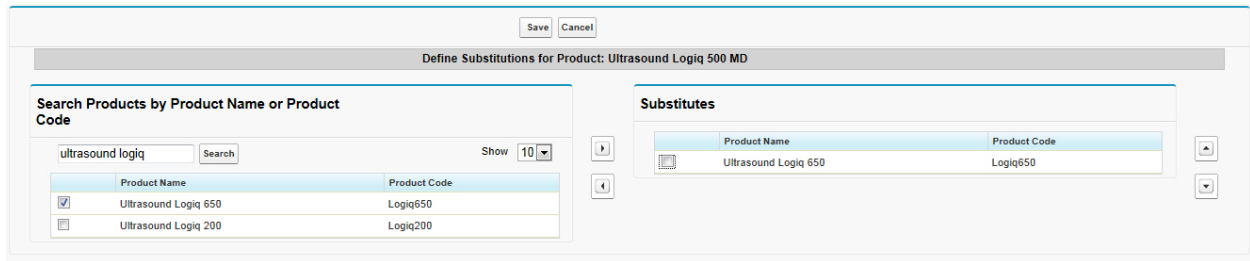


Figure 4: Define Substitutions for Product Area

RETURNS PROCESS

Overview

Use this option to configure returns process (RMA) for returns originating from customers. A typical customer returns process involves performing entitlement checks & route calculation. One or more RMAs will be created based on destination depots as a result of this process.

Access and Permissions

Actions	User Permissions Needed
To view Returns Process:	"Read" on ServiceMax Processes, ServiceMax Config Data and SFM Event.
To create or edit Returns Process:	"Create" and "Update" on ServiceMax Processes, ServiceMax Config Data and SFM Event.
To delete Returns Process:	"Delete" on ServiceMax Processes, ServiceMax Config Data and SFM Event.

Standard and Custom Returns Process Screen

To access the Returns Process module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located in the top left of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistics** button.
3. Click the **Returns Process** button.
4. Click the **Go** button.

The Standard Returns Process and Custom Returns Process screens display as shown in the figure below.

Standard Returns Process				
View Clone Back to Setup Home Help				
Select	Process ID	Process Name	Description	Last Modified By
<input type="checkbox"/>	001_SAMPLE_RETURN	SVMXSTD: Sample Return	This is a sample	

Custom Returns Process				
New Edit Clone Delete				
Select	Process ID	Process Name	Description	Last Modified By
<input type="checkbox"/>	RMA_PROCESS_1	RMA Process	This is a sample	

Figure 1: Standard/Custom Returns Process

Custom Returns Process

As shown in Figure 1 above, in the Custom Returns Process area, you can:

- Create a new custom returns process.
- Edit an existing custom returns process.
- Clone a custom returns process.
- Delete a custom returns process.

Creating a New Custom Returns Process

To create a new custom returns process:

1. In the Custom Returns Process area, click the **New** button.

The Setup Returns Process screen displays.

General Info Tab Screen

2. Click the **General Info** tab, enter a **Process Name**, **Process ID**, and a **Description** for your process.

Process Name	<input type="text"/>
Process ID	<input type="text"/>
Description	<input type="text"/>

Figure 2: General Info Tab- Returns Process

3. Using the Expression Builder, indicate how the Case qualifies for the return process (Figure 3). Select between the following two options in the Expression Builder area.
 - a. Select an existing criteria from the **Use an existing criteria from the list** pick-list.
 - b. Or create new criteria by clicking the **Or Create a new criteria** link.

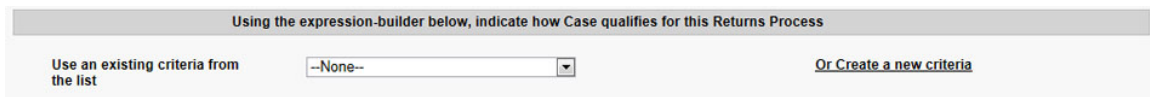


Figure 3: Expression Builder-Case

4. Using the Expression Builder, indicate how the Case Line records qualify for the return process (Figure 4). Select between the following two options in the Expression Builder area.
 - a. Select an existing criteria from the **Use an existing criteria from the list** pick-list.
 - b. Or create a new criteria by clicking the **Or Create a new criteria** link.

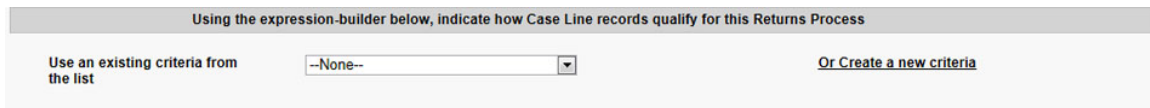


Figure 4: Expression Builder - Case Line Records

Entitlement Tab Screen

5. Click either the **Entitlement** tab or the **Entitlement** button located at the bottom right corner of the screen (Figure 5).
6. Check the **Perform Entitlement** checkbox.

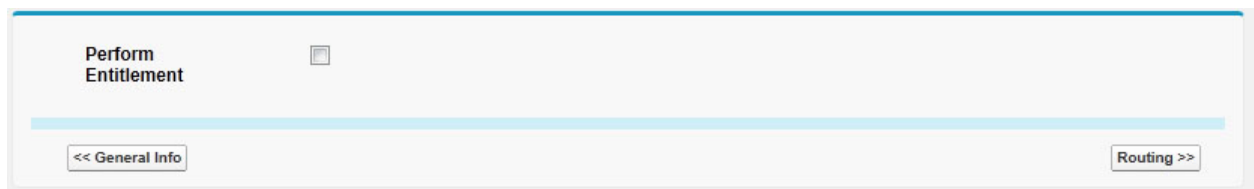


Figure 5: Perform Entitlement Checkbox

7. Using the Expression Builder, indicate how the Case qualifies for entitlement check.
 - a. Select an existing criteria from the **Use an existing criteria from the list** pick-list.

- b. Or create a new criteria by clicking the **Or Create a new criteria** link.

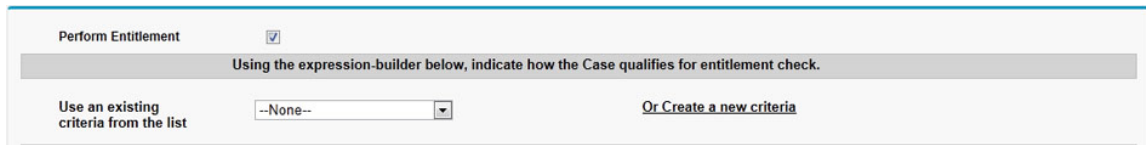


Figure 6: Expression Builder- Case

8. Using the Expression Builder, indicate how the CaseLine Records qualifies for entitlement check.
- Select an existing criteria from the **Use an existing criteria from the list** picklist.
 - Or create a new criteria by clicking the **Or Create a new criteria** link.

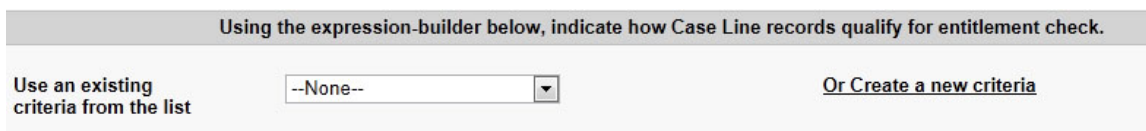


Figure 7: Expression Builder- Case Lines

9. In the Configure Custom Events area, enter the **Namespace Prefix**, **Web service class name**, and **Method name** in the appropriate text boxes (Figure 8).

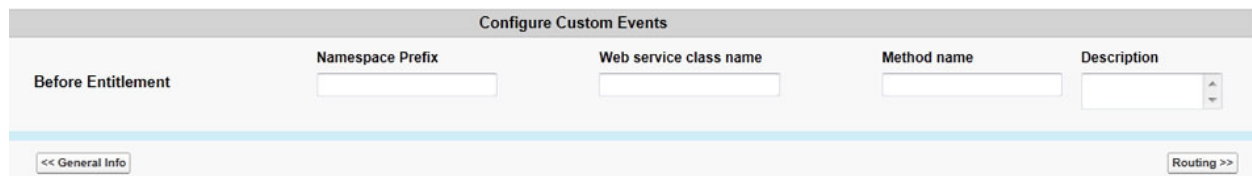


Figure 8: Configure Custom Events

Routing Tab Screen

- Click either the **Routing** tab or the **Routing** button located at the bottom right corner of the screen.
- The Perform Route Calculation checkbox is checked automatically.
- In the **Consider Location From** picklist, select where the location will be considered (Figure 9).

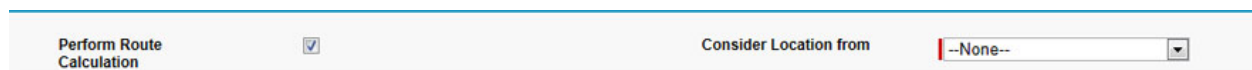


Figure 9: Route Calculations- Consider Location

13. Using the Expression Builder, indicate how the Case qualifies for Route Calculation.
 - a. Select an existing criteria from the **Use an existing criteria from the list** pick-list.
 - b. Or create a new criteria by clicking the **Or Create a new criteria** link.

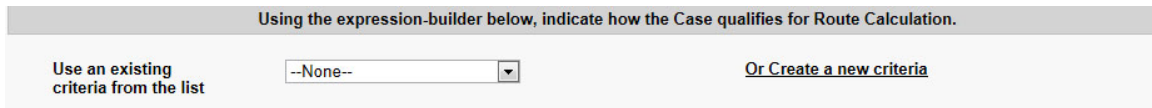


Figure 10: Expression Builder Case- Route Calculation

14. Using the Expression Builder, indicate how the Case Line Records qualify for Entitlement Check.
 - a. Select an existing criteria from the **Use an existing criteria from the list** pick-list.
 - b. Or create a new criteria by clicking the **Or Create a new criteria** link.

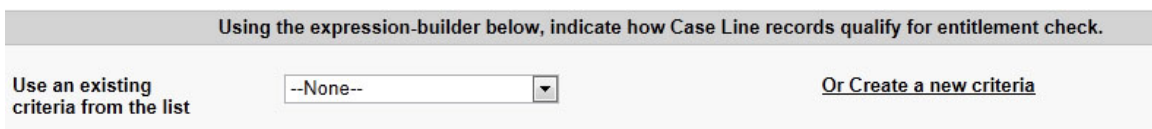


Figure 11: Expression Builder Case Line Records

15. In the Configure Custom Events area, enter the **Namespace Prefix**, **Web service class name**, **Method Name** in the appropriate text boxes (Figure 12).

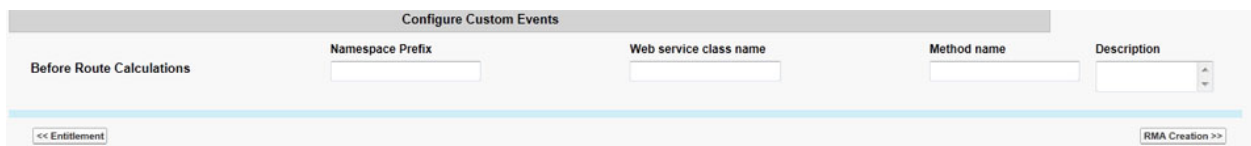


Figure 12: Configure Custom Events

RMA Creation Tab Screen

16. Click either the **RMA Creation** tab or the **RMA Creation** button located at the bottom right corner of the screen.
17. In the Object Mapping to Create RMA(s) area, select a field-map in the appropriate picklist to create an RMA from the Case.

18. In the Object Mapping to Create RMA(s) area, select a field-map in the appropriate picklist to create RMA Lines from Case Lines.

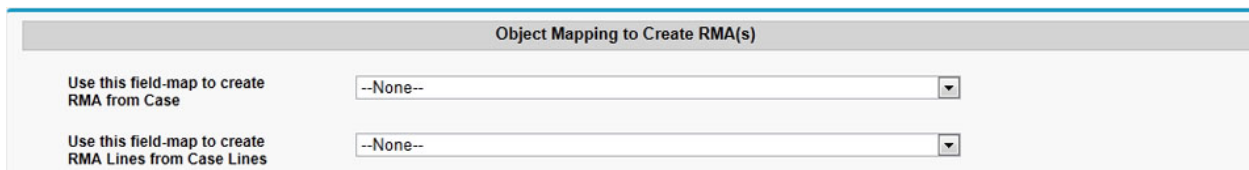


Figure 13: Object Mapping to Create RMA(s)

19. In the Configure Custom Events area, enter the **Namespace Prefix**, **Web service class name**, and **Method name** in the appropriate text boxes for Before RMA Creation and After RMA Creation.

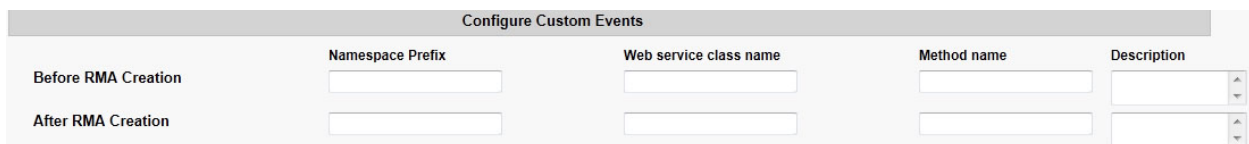


Figure 14: Configure Custom Events- RMA Creation

20. In the Other Details area, enter the **VisualForce page name to use for printing RMAs** in the appropriate text box (Figure 15).



Source Updates Tab Screen

21. Click the **Source Updates** tab or the **Source Updates** button located on the bottom right corner of the screen.



Figure 15: Other Details

22. Configure automatic field updates to the Case after the route calculation is performed.
- Select the field from the **Field** picklist.
 - The default for the Operator is **Set**.
 - Enter the **Value**.
 - Indicate when the update will occur in the **When** picklist.

- e. Click the  and  buttons to add or delete.

In this section, configure the automatic field updates to Case after route calculation is performed.

Field	Operator	Value	When
1 --None--	Set		After Entitlement




 

Figure 16: Configure Automatic Field Updates to Case

23. Configure automatic field updates to the Case Lines after the route calculation is performed.
 - a. Select the field from the **Field** picklist.
 - b. The default for the Operator is **Set**.
 - c. Enter the **Value**.
 - d. Indicate when the update will occur in the **When** picklist.
23. Click the **Quick Save** button to save your information and remain in the Setup Return Process screen or click the **Save and Close** button to save your information and close the screen.
24. To return to the previous screen, click the **RMA Creation** button located on the bottom left corner of the screen.

In this section, configure the automatic field updates to Case lines after route calculation is performed.

Field	Operator	Value	When
1 --None--	Set		After Entitlement

<< RMA Creation

Figure 17: Configure Automatic Field Updates to Case Lines

Editing a Custom Returns Process

The steps for editing a Custom Returns Process are very similar to creating a new Custom Return Process. For more information and detailed screen shots for each step, see [Creating a New Custom Returns Process](#).

To edit a Custom Returns Process:

1. Select a custom return process from the **Process ID** picklist by checking the **Select** checkbox for the appropriate process name.
2. In the Custom Returns Process area, click the **Edit** button.

The Setup Returns Process screen displays.

General Info Tab Screen

3. Click the **General Info** tab, and update the **Process Name**, **Process ID**, and **Description**, if necessary.
4. In the Expression Builder, update how the Case qualifies for the return process, either by choosing criteria from the picklist or creating new criteria (Figure 3).
5. In the next Expression Builder, indicate how the Case Line records qualify for the return process (Figure 4). Select criteria from the picklist or create new criteria.

Entitlement Tab Screen

6. Click either the **Entitlement** tab or the **Entitlement** button located at the bottom right corner of the screen (Figure 5).
7. Check the **Perform Entitlement** checkbox.
8. In the Expression Builder, indicate how the Case qualifies for entitlement check by choosing an existing criteria from the **Use an existing criteria from the list** picklist, or creating a new criteria by clicking the **Or Create a new criteria** link.
9. In the Expression Builder, indicate how the Case Line Records qualify for entitlement check by choosing an existing criteria from the **Use an existing criteria from the list** picklist, or creating a new criteria by clicking the **Or Create a new criteria** link.
10. In the Configure Custom Events area, enter the **Namespace Prefix**, **Web service class name**, and **Method name** (Figure 8).

Routing Tab Screen



11. Click either the **Routing** tab or the **Routing** button located at the bottom right corner of the screen.
12. The **Perform Route Calculation** checkbox is checked automatically.
13. In the **Consider Location From** picklist, select where the location will be considered (Figure 9).
14. In the Expression Builder, indicate how the Case qualifies for Route Calculation, by choosing an existing criteria from the **Use an existing criteria from the list** picklist, or creating a new criteria by clicking the **Or Create a new criteria** link.

15. Using the Expression Builder, indicate how the Case Line Records qualify for Route Calculation by choosing an existing criteria from the **Use an existing criteria from the list** picklist, or creating a new criteria by clicking the **Or Create a new criteria** link.
16. In the Configure Custom Events area, enter the **Namespace prefix**, **Web service class name**, and **Method Name** in the appropriate text boxes (Figure 12).

RMA Creation Tab Screen

17. Click either the **RMA Creation** tab or the **RMA Creation** button located at the bottom right corner of the screen.
18. In the Object Mapping to Create RMA(s) area, select a field-map in the appropriate picklist to create an RMA from the Case.
19. In the Object Mapping to Create RMA(s) area, select a field-map in the appropriate picklist to create RMA Lines from Case Lines.
20. In the Configure Custom Events area, enter the **Namespace Prefix**, **Web service class name**, and the **Method name** in the appropriate text boxes for Before RMA Creation and After RMA Creation.
21. In the Other Details area, enter the **VisualForce page name to use for printing RMAs** in the appropriate text box (Figure 15).

Source Updates Tab Screen

22. Click the **Source Updates** tab or the **Source Updates** button located on the bottom right corner of the screen.
23. Configure automatic field updates to the Case after the route calculation is performed.
 - a. Select the field from the **Field** picklist.
 - b. The default for the Operator is **Set**.
 - c. Enter the **Value**.
 - d. Indicate when the update will occur in the **When** picklist.
 - e. Click the  and  buttons to add or delete.
24. Configure automatic field updates to the Case Lines after the route calculation is performed.
 - a. Select the field from the **Field** picklist.

- b. The default for the Operator is **Set**.
 - c. Enter the **Value**.
 - d. Indicate when the update will occur in the **When** picklist.
25. Click the **Quick Save** button to save your information and remain in the Setup Return Process screen. Click the **Save and Close** button to save your information and close the screen.
26. To return to the previous screen, click the **RMA Creation** button located on the bottom left corner of the screen

Cloning a Returns Process

To clone a Return Process:

1. Select a custom return process from the **Process ID** list by checking the **Select** checkbox for the appropriate process name.
2. In the Custom Returns Process area, click the **Edit** button.
The Setup Returns Process screen displays.
3. Click the **General Info** tab, and enter a unique **Process Name** and **Process ID**.
You must enter a unique **Process Name** and **Process ID** to clone a return process.
4. Update other sections in **Returns Process** as appropriate: Qualification for Pick and Move, Updates and Pick and Move, Qualification for Pack and Ship, Updates on Pack and Ship, Custom Events and Links, and RMA Rules.



Note: For detailed, step-by-step instructions for the above mentioned sections, see [Creating a New Custom Returns Process](#) or [Editing a Custom Returns Process](#).

5. Click the **Save** button to save the process and remain in the Setup Return Process screen. Click the **Save and Close** button to save the process and return to the Standard Process and Custom Returns Process screen.

Deleting a Returns Process

To delete a Returns Process:

1. Check the **Select** checkbox for the appropriate rule.
2. Click the **Delete** button.

A warning dialog box displays asking the question, "Are you sure you want to delete the selected process(es)?"

3. Click **OK** to delete the rule.

RECEIVING PROCESS

Overview

The Receiving Process module enables you to define how various depots (hubs, warehouses or repair centers) process their inbound products, and subsequently store/deliver them to their internal locations.

There are two types of Receiving Processes—Standard and Custom.

Access and Permissions

Actions	User Permissions Needed
To view Receiving Process:	"Read" on ServiceMax Processes, ServiceMax Config Data and SFM Event.
To create or edit Receiving Process:	"Create" and "Update" on ServiceMax Processes, ServiceMax Config Data and SFM Event.
To delete Receiving Process:	"Delete" on ServiceMax Processes, ServiceMax Config Data and SFM Event.

Standard and Custom Receiving Processes Screen

To access the Receiving Process module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistics** button.
3. Click the **Receiving Process** button.
4. Click the **Go** button.

The Standard Receiving Processes and Custom Receiving Processes areas display as shown in the figure below.

Standard Receiving Processes				
<div>View Clone Back To Setup Home</div> <div>Help ?</div>				
Select	Process ID	Process Name	Description	Last Modified By
<input type="checkbox"/>	SAMPLE_RECEIPT	Sample Receiving Process	Sample Receipt Process for all RMA's. Work Orders are created on Receipt.	

Custom Receiving Processes				
<div>New Edit Clone Delete</div>				
Select	Process ID	Process Name	Description	Last Modified By
<input type="checkbox"/>	SL002_SAMPLE_RECEIPT	Standard Hub Receiving Process	Standard Hub Receipt Process for all RMA's.	
<input type="checkbox"/>	SL003_Malaysia_RECEIPT	Malaysia Receiving Process	Standard Receipt Process for all RMA's. Work Orders are created on Receipt.	

Figure 1: Standard and Custom Receiving Processes

Standard Receiving Processes

As shown in Figure 1, in the Standard Receiving Processes area, you can:

- View a standard receiving process.
- Clone a standard receiving process.
- Return to ServiceMax Setup Home.

Custom Receiving Processes

As shown in Figure 1, in the Custom Receiving Processes area, you can:

- Create a new custom receiving process.
- Edit an existing custom receiving process.
- Clone a custom receiving process.
- Delete a custom receiving process.

Creating a New Custom Receiving Process

To create a new custom receiving process:

1. Select a custom receiving process by checking the **Select** checkbox for the appropriate process name.
2. Click the **Edit** button.

The Setup Receiving Process screen displays.

- Click the **General Info** tab, enter a **Process Name**, **Process ID**, and a **Description** for your process (Figure 2).




Figure 2 shows the General Info tab with three input fields: Process Name, Process ID, and Description.

Figure 2: General Info Tab

- In the Receiving Console Configuration area, select up to 3 fields to display in the RMA using the corresponding picklists (Figure 3).
- In the Receiving Console Configuration area, select up to 2 fields to display in the RMA Line using the corresponding picklists (Figure 3).

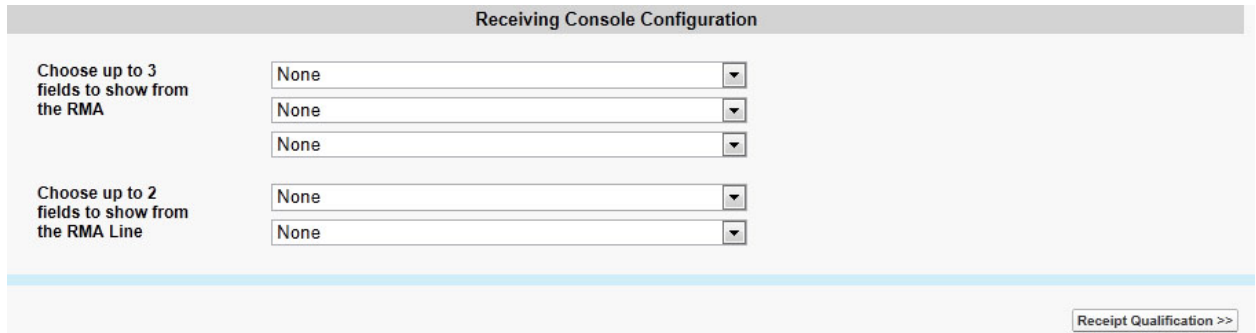


Figure 3 shows the Receiving Console Configuration area. It contains two sections for selecting fields to display in the RMA and RMA Line. Each section has three picklists, all currently set to 'None'. A 'Receipt Qualification >>' button is located at the bottom right.

Figure 3: Receiving Console Configuration

- Click either the **Receipt Qualification** tab or the **Receipt Qualification** button located at the bottom right corner of the screen.

Receipt Qualification

- Using the expression builder below, indicate how the RMA record qualifies for the receiving process (Figure 4). Select an existing criteria from the **Use an existing criteria from the list** picklist, or you can create a new criteria by clicking the **Create New** link.

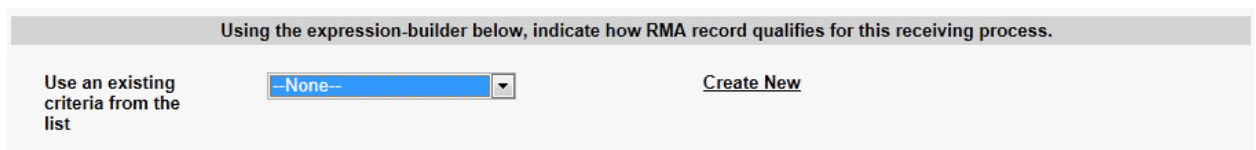


Figure 4 shows the Expression Builder for RMA Record. It includes a header instruction: 'Using the expression-builder below, indicate how RMA record qualifies for this receiving process.' Below this, there is a picklist labeled 'Use an existing criteria from the list' with a value of '-None--'. To the right of the picklist is a link labeled 'Create New'.

Figure 4: Expression Builder- RMA Record

8. Using the expression builder below, indicate how the RMA line records qualify for the receiving process (Figure 5). Select an existing criteria from the **Use an existing criteria from the list** picklist, or you can create a new criteria by clicking the **Create New** link.

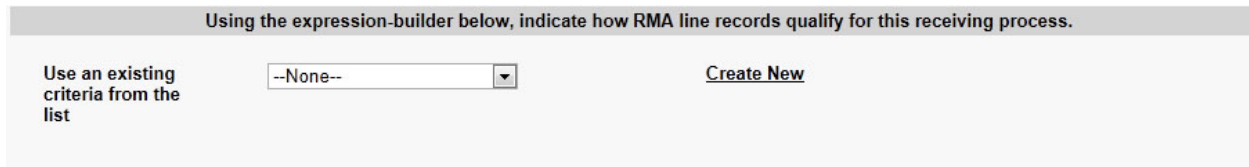


Figure 5: Expression Builder - Line Records

9. In the Reconciliation Rules area, select action items in the respective picklists.

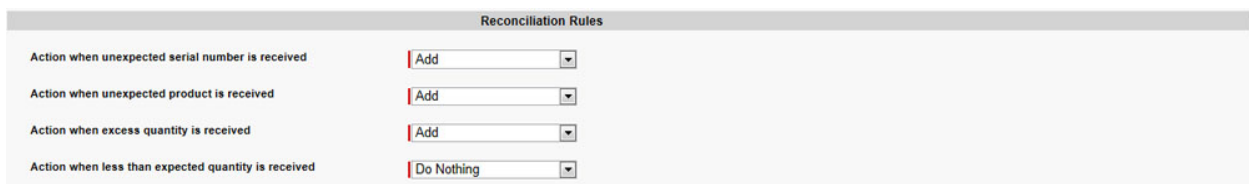


Figure 6: Reconciliation Rules

10. In the Installed Product And Entitlement area, complete the following (Figure 7):
- If applicable, check the **Resolve Unexpected Serial Number To Installed Product** checkbox.
 - Complete the text boxes for the **Optional Custom Web Service to Resolve Installed Product**.
 - If applicable, check the **Perform Entitlement Check For Resolved Serial Numbers** checkbox.

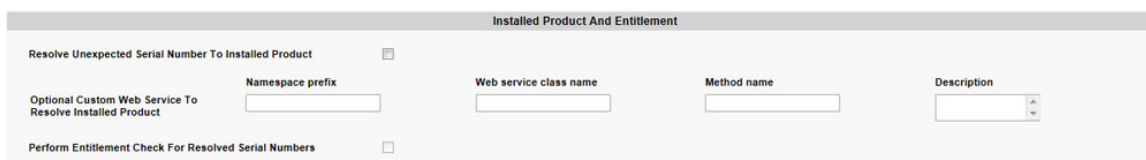


Figure 7: Installed Product and Entitlement

11. Click either the **Updates on Receipt** tab or the **Updates on Receipt** button located at the bottom right corner of the screen.

Updates on Receipt

12. Select items from the **Field Names**, **Operator**, and **Value** picklists to configure the automatic field updates to the RMA record when the lines are received. Add or delete

lines using the  and/or  buttons.

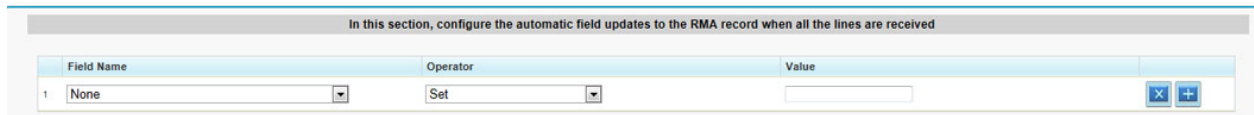




Figure 8: Configure the Automatic Field Updates (RMA Records)

13. Select items from the **Field Names**, **Operator**, and **Value** picklists to configure the automatic field updates to the RMA lines when the line item is received. Add or delete lines using the  and/or  buttons.

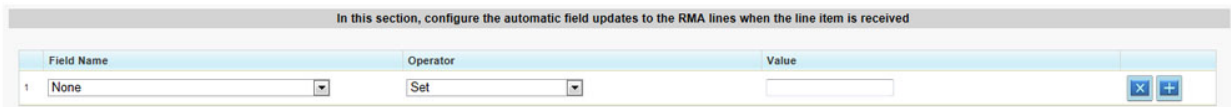


Figure 9: Configure the Automatic Field Updates (RMA Lines)

14. Click either the **Events and Links** tab or the **Events and Links** button located at the bottom right corner of the screen.

Events and Links

15. In the Configure Custom Events area, complete the **Namespace prefix** and **Web service class name** text boxes for **After Receipt**, **After Delivery**, and **After Closure**.

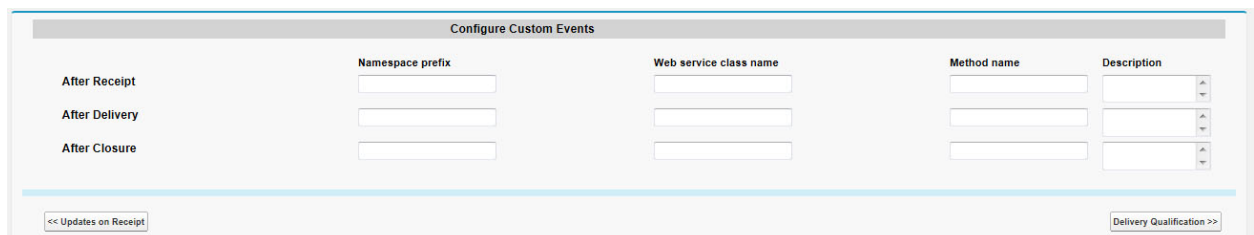


Figure 10: Configure Custom Events

16. Click either the **Delivery Qualification** tab or the **Delivery Qualification** button located at the bottom right corner of the screen.

Delivery Qualification

17. Use the expression builder in Figure 11 to indicate how the RMA qualifies for Delivery. Select an existing criteria from the **Use an existing criteria from the list** picklist,

or you can create a new criteria by clicking the **Create New** link.

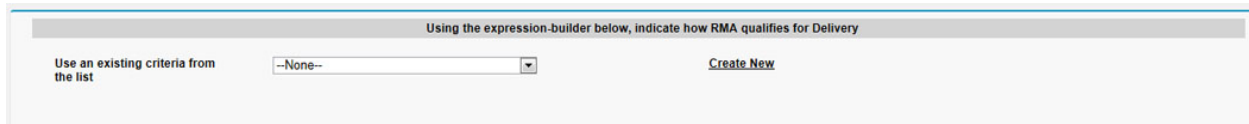

 A screenshot of the 'Expression Builder' interface. At the top, it says 'Using the expression-builder below, indicate how RMA qualifies for Delivery'. Below this, there is a section 'Use an existing criteria from the list' with a dropdown menu currently showing '--None--'. To the right of the dropdown is a link labeled 'Create New'.

Figure 11: Expression Builder: Qualifying RMA for Delivery

18. Use the expression builder in Figure 12 to indicate how RMA lines qualify for Delivery. Select an existing criteria from the **Use an existing criteria from the list** picklist, or you can create a new criteria by clicking the **Create New** link.

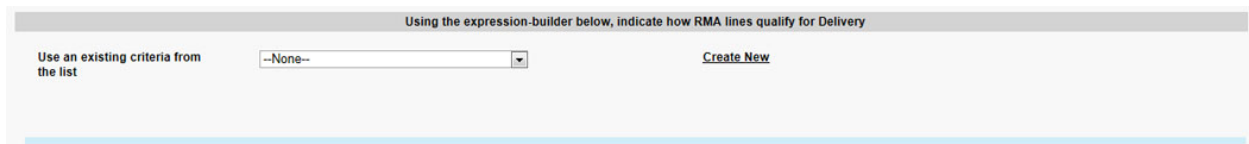



 A screenshot of the 'Expression Builder' interface, similar to Figure 11. It says 'Using the expression-builder below, indicate how RMA lines qualify for Delivery'. The 'Use an existing criteria from the list' dropdown shows '--None--' and there is a 'Create New' link.

Figure 12: Expression Builder: Qualifying RMA lines quality for Delivery

19. Click either the **Updates after delivery** tab or the **Updates after delivery** button located at the bottom right corner of the screen.

Updates After Delivery

20. Configure the automatic field updates (**Field Name**, **Operator**, **Value**) to the RMA record when all the lines are delivered (Figure 13). Add or delete lines using the  and/or  buttons.

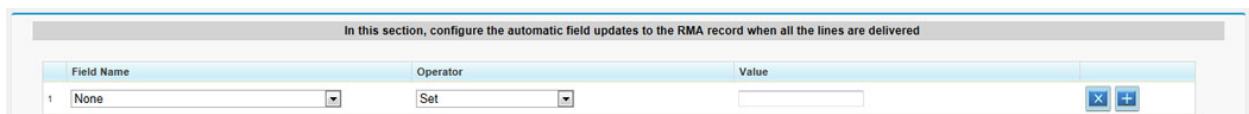



 A screenshot of the 'Configure Automatic Field Updates' interface. The header says 'In this section, configure the automatic field updates to the RMA record when all the lines are delivered'. Below is a table with three columns: 'Field Name', 'Operator', and 'Value'. The first row has 'None' in the Field Name, 'Set' in the Operator, and an empty Value field. To the right of the table are two buttons: a minus button (x) and a plus button (+).

Figure 13: Configure Automatic Field Updates (All the Lines are Delivered)

21. Configure the automatic field updates (**Field Name**, **Operator**, **Value**) to the RMA lines when the line item is delivered (Figure 14). Add or delete lines using the  and/or  buttons.

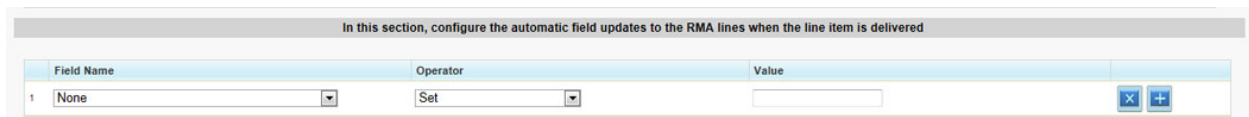

 A screenshot of the 'Configure Automatic Field Updates' interface, similar to Figure 13. The header says 'In this section, configure the automatic field updates to the RMA lines when the line item is delivered'. The table shows 'None' for Field Name, 'Set' for Operator, and an empty Value field. Minus and plus buttons are on the right.

Figure 14: Configure Automatic Field Updates (Line Item is Delivered)

22. Click either the **Config Work Order** tab or the **Config Work Order** button located at the bottom right corner of the screen.

Config Work Order

23. In the Config Work Order Generation Rules area, select a criteria when a work order is created (Figure 15).

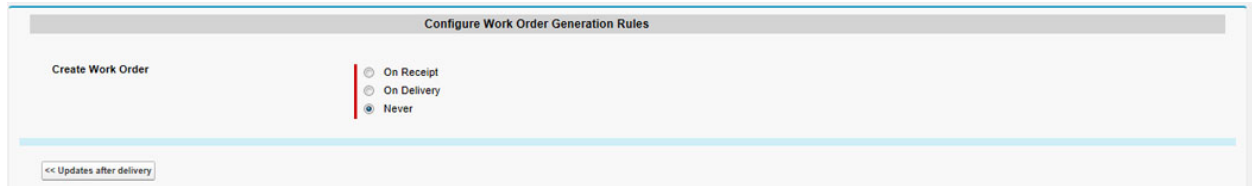


Figure 15: Configure Work Order Generation Rules

24. Click **Quick Save** to save the custom receiving process and remain on the page, or click **Save and Close** to save the process and close the Custom Receiving Process screen.

Editing a Custom Receiving Process

The steps for editing a Custom Receiving Process are similar to creating a New Custom Receiving Process.

You can move through the tabs or buttons (**General Info**, **Receipt Qualification**, **Updates on Receipt**, **Events and Links**, **Delivery Qualification**, **Updates after Delivery**, and **Config Work Order**) in any order.

The steps for the Receiving Process are described in a linear fashion in this section, but you can update these sections in any order.

To create edit a custom receiving process:

1. In the Custom Receiving Processes area, click the **New** button.
The Setup Receiving Process screen displays.
2. Click the **General Info** tab, enter a **Process Name**, **Process ID**, and a **Description** for your process.
3. In the Receiving Console Configuration area, select up to 3 fields to display in the RMA using the three corresponding picklists (Figure 16).

4. In the Receiving Console Configuration area, select up to 2 fields to display in the RMA Line using the two corresponding picklists (Figure 16).

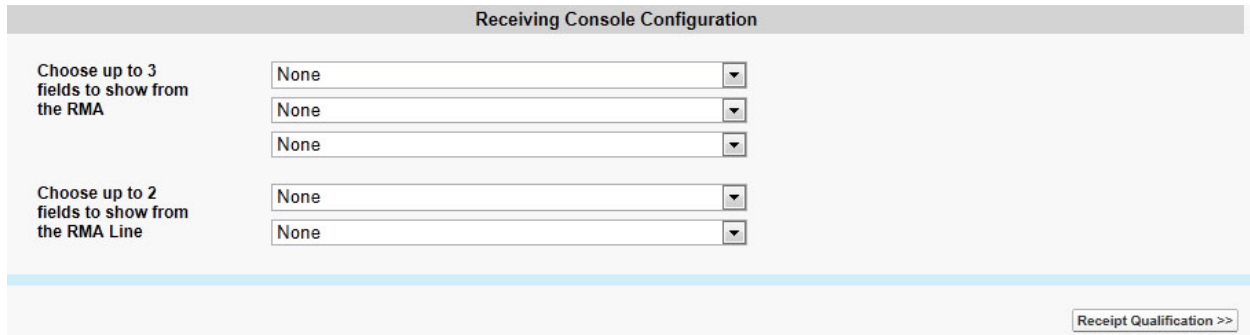


Figure 16: Receiving Console Configuration

5. Click either the **Receipt Qualification** tab or the **Receipt Qualification** button located at the bottom right corner of the screen.

Receipt Qualification

6. Using the expression builder, indicate how the RMA record qualifies for the receiving process (Figure 4). Select an existing criteria from the **Use an existing criteria from the list** picklist, or you can create a new criteria by clicking the **Create New** link.
7. Using the expression builder below, indicate how the RMA line records qualify for the receiving process (Figure 5). Select an existing criteria from the **Use an existing criteria from the list** picklist, or you can create a new criteria by clicking the **Create New** link.
8. In the Reconciliation Rules area, select action items in the respective picklists.




Figure 17: Reconciliation Rules

9. In the Installed Product And Entitlement area, complete the following (Figure 18):
 - a. If applicable, check the **Resolve Unexpected Serial Number To Installed Product** checkbox.

- b. Complete the text boxes for the **Optional Custom Web Service to Resolve Installed Product**.
- c. If applicable, check the **Perform Entitlement Check For Resolved Serial Numbers** checkbox.

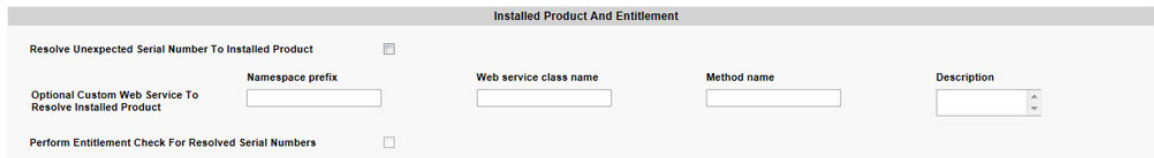




Figure 18: *Installed Product and Entitlement*

10. Click either the **Updates on Receipt** tab or the **Updates on Receipt** button located at the bottom right corner of the screen.

Updates on Receipt

11. Select items from the **Field Names**, **Operator**, and **Value** picklists to configure the automatic field updates to the RMA record when the lines are received. Add or delete lines using the  and/or  buttons.

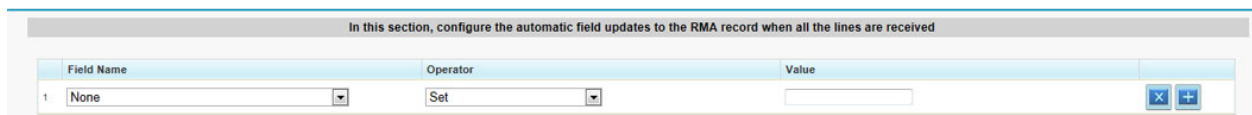




Figure 19: *Configure the Automatic Field Updates (RMA Records)*

12. Select items from the **Field Names**, **Operator**, and **Value** picklists to configure the automatic field updates to the RMA lines when the line item is received. Add or delete lines using the  and/or  buttons.

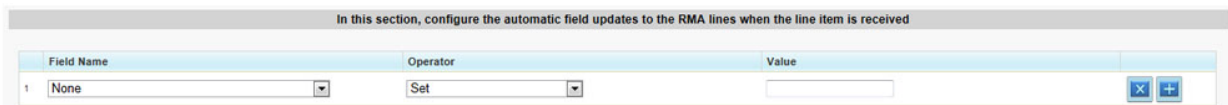


Figure 20: *Configure the Automatic Field Updates (RMA Lines)*

13. Click either the **Events and Links** tab or the **Events and Links** button located at the bottom right corner of the screen.

Events and Links

14. In the Configure Custom Events area, complete the **Namespace prefix** and **Web service class name** text boxes for the **After Receipt**, **After Delivery**, and **After**

Closure.

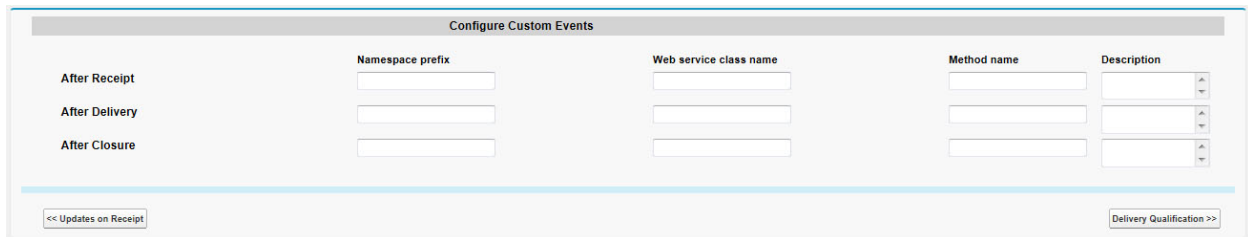

 A screenshot of the 'Configure Custom Events' window. It features a table with five columns: 'Event Name', 'Namespace prefix', 'Web service class name', 'Method name', and 'Description'. The 'Event Name' column contains three entries: 'After Receipt', 'After Delivery', and 'After Closure'. Each entry has corresponding input fields in the other columns. At the bottom left is a button labeled '<< Updates on Receipt' and at the bottom right is a button labeled 'Delivery Qualification >>'.

Figure 21: *Configure Custom Events*

- Click either the **Delivery Qualification** tab or the **Delivery Qualification** button located at the bottom right corner of the screen.

Delivery Qualification

- Use the expression builder in Figure 21 to indicate how the RMA qualifies for Delivery. Select an existing criteria from the **Use an existing criteria from the list** picklist, or you can create a new criteria by clicking the **Create New** link.

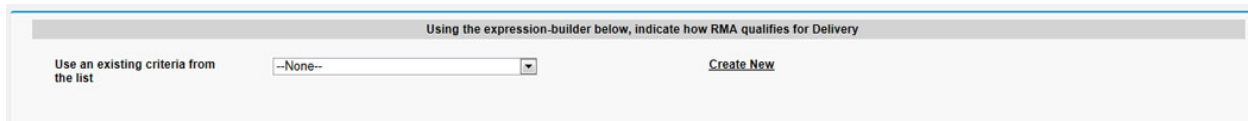

 A screenshot of the 'Expression Builder' window titled 'Using the expression-builder below, indicate how RMA qualifies for Delivery'. It contains a picklist labeled 'Use an existing criteria from the list' with a dropdown menu showing '--None--'. To the right of the picklist is a link labeled 'Create New'.

Figure 22: *Expression Builder: Qualifying RMA for Delivery*

- Use the expression builder in Figure 22 to indicate how RMA lines qualify for Delivery. Select an existing criteria from the **Use an existing criteria from the list** picklist, or you can create a new criteria by clicking the **Create New** link.

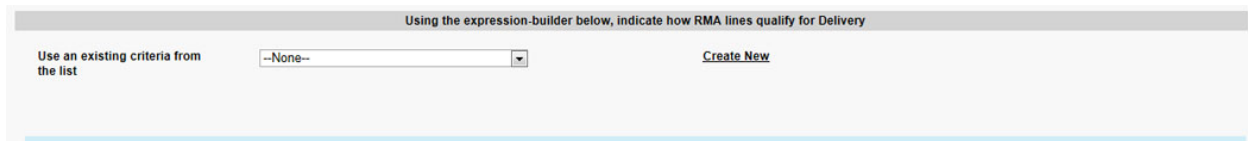


 A screenshot of the 'Expression Builder' window titled 'Using the expression-builder below, indicate how RMA lines qualify for Delivery'. It contains a picklist labeled 'Use an existing criteria from the list' with a dropdown menu showing '--None--'. To the right of the picklist is a link labeled 'Create New'.

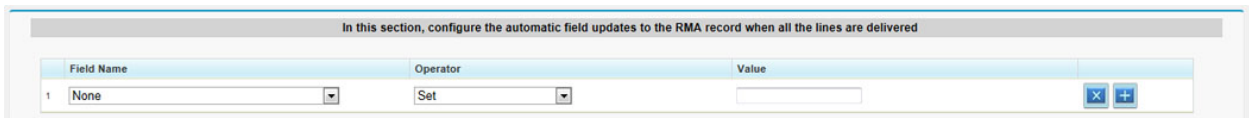
Figure 23: *Expression Builder: Qualifying RMA lines quality for Delivery*

- Click either the **Updates after delivery** tab or the **Updates after delivery** button located at the bottom right corner of the screen.

Updates After Delivery



- Configure the automatic field updates (**Field Name**, **Operator**, **Value**) to the RMA record when all the lines are delivered (Figure 23). Add or delete lines using the 

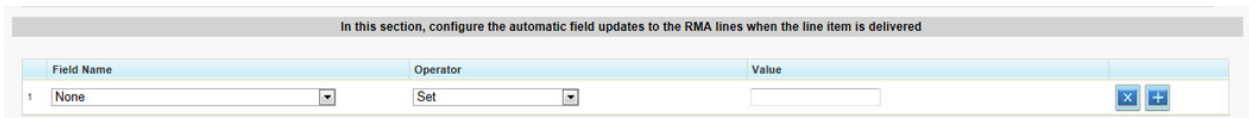
and/or  buttons.



The screenshot shows a configuration window titled "In this section, configure the automatic field updates to the RMA record when all the lines are delivered". It contains a table with three columns: "Field Name", "Operator", and "Value". The first row has "1" in the first column, "None" in the second column, and "Set" in the third column. There are "X" and "+" buttons at the end of the row.

Figure 24: Configure Automatic Field Updates (All the Lines are Delivered)

20. Configure the automatic field updates (**Field Name**, **Operator**, **Value**) to the RMA lines when the line item is delivered (Figure 24). Add or delete lines using the  and/or  buttons.



The screenshot shows a configuration window titled "In this section, configure the automatic field updates to the RMA lines when the line item is delivered". It contains a table with three columns: "Field Name", "Operator", and "Value". The first row has "1" in the first column, "None" in the second column, and "Set" in the third column. There are "X" and "+" buttons at the end of the row.

Figure 25: Configure Automatic Field Updates (Line Item is Delivered)

21. Click either the **Config Work Order** tab or the **Config Work Order** button located at the bottom right corner of the screen.

Config Work Order

22. In the Config Work Order Generation Rules area, select a criteria when a work order is created.
23. Click **Quick Save** to save the custom receiving process and remain on the page, or click **Save and Close** to save the process and close the Custom Receiving Process screen.

Cloning a Custom Receiving Process

To clone a Custom Receiving Process:

1. Select a Custom Receiving Process from the **Process** list by checking the **Select** checkbox for the appropriate process name.
2. In the Custom Receiving Processes area, click the **Clone** button.
The Setup Receiving Process screen displays.
3. Click the **General Info** tab, and enter a unique **Process Name** and **Process ID**. You must enter a unique Process Name and Process ID to clone a return process.

4. Update other sections in the Receiving Process screen as appropriate: **Receipt Qualification, Updates on Receipt, Events and Links, Delivery Qualification, Updates after Delivery, and Config Work Order.**



Note: For detailed, step-by-step instructions for the above mentioned sections, see [Creating a New Custom Receiving Process](#) and [Editing a Custom Receiving Process](#).

5. Click the **Save** button to save the process and remain in the Setup Return Process screen. Click the **Save and Close** button to save the process and return to the Standard Process and Custom Return Process screen.

Deleting a Custom Receiving Process

To delete a Custom Receiving Process:

1. Check the **Select** checkbox for the appropriate rule.
2. Click the **Delete** button.

A warning dialog box displays asking the question, "Are you sure?".

3. Click **OK** to delete the rule.

DELIVERY RULES

Overview

Use this option to configure how received products are delivered (distributed) within a depot. The rules should be set up for each depot, and are driven by a combination of account and product attributes.

Access and Permissions

Actions	User Permissions Needed
To view Delivery Rules:	"Read" on ServiceMax Processes, ServiceMax Config Data and Location.
To create or edit Delivery Rules:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data "Read" on Location.
To delete Delivery Rules:	"Delete" on ServiceMax Processes and ServiceMax Config Data.

Setup Delivery Rules Screen

To access the Delivery Rules module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistics** button.
3. Click the **Delivery Rules** button.
4. Click the **Go** button.

The Setup Delivery Rules screen displays as shown in the figure below.

Setup Delivery Rules			
New View/Edit Delete Back To Setup Home			
Select	Depot	Rule Name	Last Modified Date
<input type="checkbox"/>	Amsterdam_Depot	DeliveryRule1	Wed Jan 04 05:13:45 GMT 2012
<input type="checkbox"/>	Berlin_Depot	DelRule123	Tue Jan 17 09:43:19 GMT 2012
<input type="checkbox"/>	Copeland_Depot	DeliveryRule3	Tue Jan 10 06:37:43 GMT 2012
<input type="checkbox"/>	Derby_Depot	Derby delivery	Tue Jan 17 09:53:13 GMT 2012
<input type="checkbox"/>	Eden_Depot	Eden Delivery	Mon Jan 16 11:39:10 GMT 2012
<input type="checkbox"/>	Frankfurt_Depot	DeliveryRule2	Wed Jan 04 05:08:35 GMT 2012

Figure 1: Setup Delivery Rules

In the Setup Delivery Rules screen:

- Create a new rule.
- View or edit a rule.
- Delete a rule.
- Return to ServiceMax Setup Home.

Creating a New Delivery Rule

To create a new rule:

1. Click the **New** button in the Setup Delivery Rules screen (Figure 1).
2. In the **Select Depot** picklist, select a Depot (Figure 2).

Save Cancel	
Select Depot	--None--

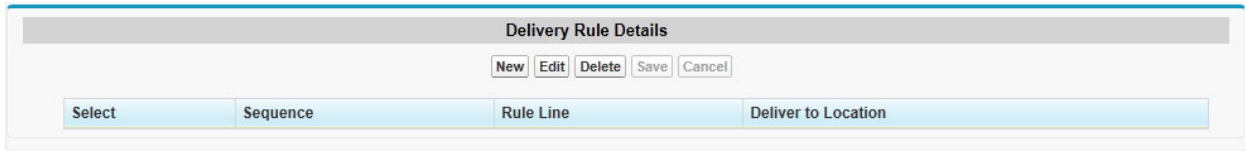
Figure 2: Select Depot Area

3. In the **Rule Name** field, enter the Delivery Rule name (Figure 3).

Save Cancel		
Depot	A-One Supplier Depot	Default Delivery Location
Description	A-One Delivery Location	A-One Delivery Location
Delivery Type	<input type="radio"/> Manual <input checked="" type="radio"/> Automatic	



Figure 3: Setting Up Rule Information

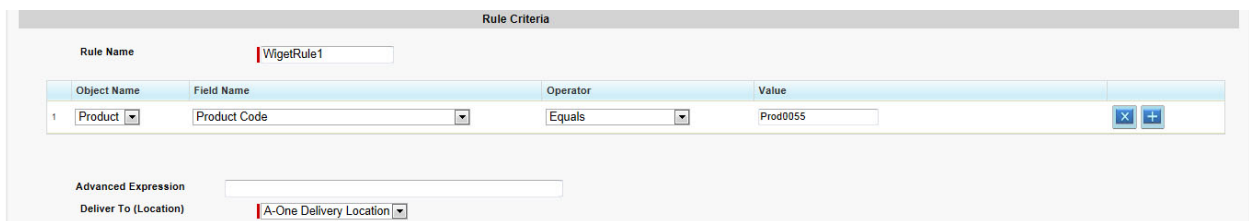
4. Select the Delivery Type (**Manual** or **Automatic**).
5. From the **Default Delivery Location** picklist, select a delivery location.
6. In the Delivery Rules Details area, click the **New** button to add a line (Figure 4).



The screenshot shows the 'Delivery Rule Details' window. At the top, there are buttons for 'New', 'Edit', 'Delete', 'Save', and 'Cancel'. Below these buttons is a table with four columns: 'Select', 'Sequence', 'Rule Line', and 'Deliver to Location'. The 'Select' column contains a checkbox, and the 'Deliver to Location' column contains a dropdown menu.

Figure 4: Delivery Rule Details

7. In the Selected Delivery Rule Line's Criteria area, enter a **Rule Line Name**.
8. In the Rule Criteria area, select an object from the **Object Name** picklist.
9. Select a field name from the **Field Name** picklist.
10. Select an operator from the **Operator** picklist.
11. Enter a value in the **Value** field.
12. If necessary, enter an expression in the **Advanced Expression** text box.
13. Select a delivery location from the **Deliver To (Location)** picklist.
14. Use the  and  buttons to add or delete rule lines.
15. Click the **Save** button.



The screenshot shows the 'Rule Criteria' window. At the top, there is a 'Rule Name' field with the value 'WidgetRule1'. Below this is a table with four columns: 'Object Name', 'Field Name', 'Operator', and 'Value'. The 'Object Name' column has a dropdown menu with 'Product' selected. The 'Field Name' column has a dropdown menu with 'Product Code' selected. The 'Operator' column has a dropdown menu with 'Equals' selected. The 'Value' column has a text field with 'Prod0055'. To the right of the table are buttons for 'X' and '+'. Below the table is an 'Advanced Expression' text box. At the bottom, there is a 'Deliver To (Location)' dropdown menu with 'A-One Delivery Location' selected.

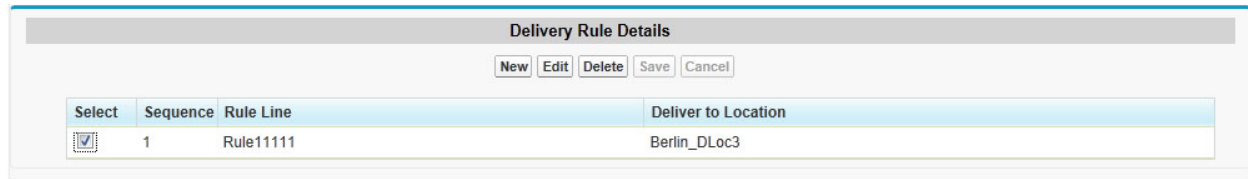
Figure 5: Selected Delivery Rule Line's Criteria

Viewing/Editing a Delivery Rule

To view or edit a Delivery Rule:



1. Check the **Select** checkbox of the Depot you would like to view or edit (Figure 1).
2. Click the **View/Edit** button in the Setup Delivery Rules screen (Figure 2).
3. In the **Select Depot** picklist, select a Depot (Figure 2).

4. Update the Delivery Type (**Manual** or **Automatic**). See Figure 5.
5. Update the delivery location from the **Default Delivery Location** picklist.
6. In the Delivery Rule Details area, check the **Select** checkbox.



Select	Sequence	Rule Line	Deliver to Location
<input checked="" type="checkbox"/>	1	Rule11111	Berlin_DLoc3

Figure 6: Delivery Rule Details

7. Click the **Edit** button to edit items in the rule line (**ObjectName**, **Field Name**, **Operator**, **Value**, **Advanced Expression**, and **Delivery To Location**). See Figure 6.
8. Use the  and  button to add or delete rule lines.
9. Click the **Save** button.

Deleting a Delivery Rule

To delete a Delivery Rule:

1. Check the **Select** checkbox for the appropriate rule.
2. Click the **Delete** button.
3. Click **OK** in the Warning dialog box to delete the rule.

SHIPPING PROCESS

Overview

Use this option to define how various depots (hubs, warehouses or repair centers) would process outbound products from picking to shipping.

Access and Permissions

Actions	User Permissions Needed
To view Shipping Process:	"Read" on ServiceMax Processes, ServiceMax Config Data and SFM Event.
To create or edit Shipping Process:	"Create" and "Update" on ServiceMax Processes, ServiceMax Config Data and SFM Event.
To delete Shipping Process:	"Delete" on ServiceMax Processes, ServiceMax Config Data and SFM Event.

Standard and Custom Shipping Processes Screen

To access the Shipping Process module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistics** button.
3. Click the **Shipping Process** button.
4. Click the **Go** button.

The Standard Shipping Processes and Custom Shipping Processes screens display as shown in the figure below.

Standard Shipping Processes				
View Clone Back to Setup Home Help ?				
Select	Process ID	Process Name	Description	Last Modified By
<input type="checkbox"/>	SAMPLE_SHIPMENT	Sample Shipping Process	This is a sample shipment process.	

Custom Shipping Processes				
New Edit Clone Delete				
Select	Process ID	Process Name	Description	Last Modified By
<input type="checkbox"/>	CUSTOM_SHIP	Standard Shipping Process	This is a sample shipment process.	
<input type="checkbox"/>	CUSTOM_SHIP_AE	Advanced Exchange Shipping Process	This is a sample shipment process.	

Figure 1: Standard and Custom Shipping Processes

Standard Shipping Processes

As shown in Figure 1, in the Standard Shipping Processes area, you can:

- View a standard shipping process.
- Clone a standard shipping process.
- Return to ServiceMax Setup Home.

Custom Shipping Processes

As shown in Figure 1, in the Custom Shipping Processes area, you can:

- Create a new custom shipping process.
- Edit an existing custom shipping process.
- Clone a custom shipping process.
- Delete a custom shipping process.

Creating a New Custom Shipping Process

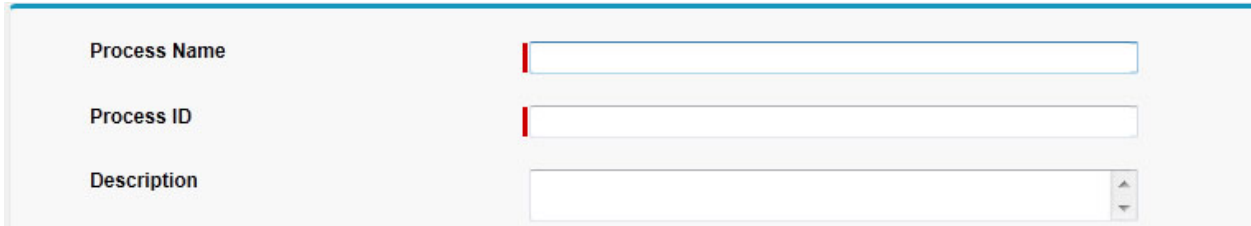
To create a new custom shipping process:

1. In the Custom Receiving Processes area, click the **New** button.

The Setup Shipping Process screen displays.

General Info Screen

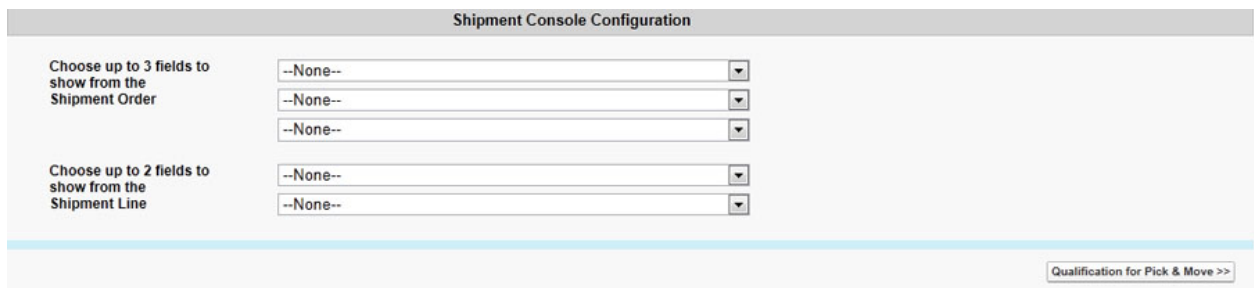
- Click the **General Info** tab, enter a **Process Name**, **Process ID**, and a **Description** for your process.



The form contains three input fields: Process Name, Process ID, and Description. Each field has a red vertical bar on the left side of the input area.

Figure 2: General Info Tab-Shipping Process

- In the Shipment Console Configuration area, select up to 3 fields to display in the Shipment Order using the three picklists (Figure 3).
- In the Shipment Console Configuration area, select up to 2 fields to display in the Shipment Line using the two picklists (Figure 3).

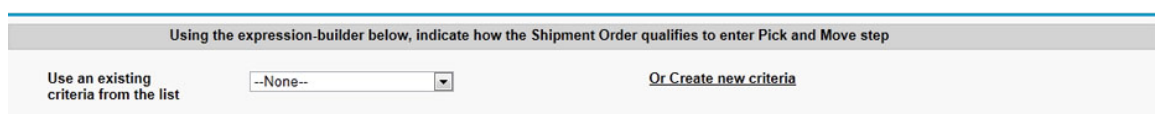


The form is titled "Shipment Console Configuration". It contains two sections: "Choose up to 3 fields to show from the Shipment Order" and "Choose up to 2 fields to show from the Shipment Line". Each section has three picklists, all currently set to "--None--". A "Qualification for Pick & Move >>" button is located at the bottom right.

Figure 3: Shipment Console Configuration

Qualification for Pick and Move Screen

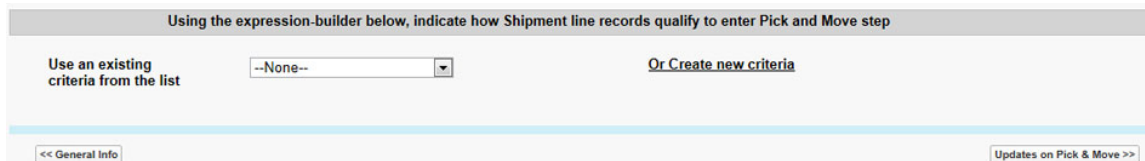
- Click either the **Qualification for Pick and Move** tab or the **Qualification for Pick and Move** button located at the bottom right corner of the screen.
- Using the Expression Builder below, indicate how the Shipment Order qualifies to enter the Pick and Move step. Select between the following two options.
 - Select existing criteria from the **Use and existing criteria from the list** picklist.
 - Or you can create a new criteria by clicking the **Or Create new criteria** link.



The form is titled "Using the expression-builder below, indicate how the Shipment Order qualifies to enter Pick and Move step". It contains a picklist labeled "Use an existing criteria from the list" with a value of "--None--". To the right of the picklist is a link labeled "Or Create new criteria".

Figure 4: Expression Builder for Shipment Order

7. Using the Expression Builder below, indicate how the Shipment Line records qualify to enter Pick and Move. Select between the following two options.
 - a. Select existing criteria from the **Use and existing criteria from the list** pick-list.
 - b. Or you can create a new criteria by clicking the **Or Create new criteria** link.





Using the expression-builder below, indicate how Shipment line records qualify to enter Pick and Move step

Use an existing criteria from the list: --None-- [Or Create new criteria](#)

<< General Info Updates on Pick & Move >>

Figure 5: Expression Builder for Shipment Lines

Updates on Pick and Move Screen



8. Click either the **Updates on Pick and Move** tab or the **Updates on Pick and Move** button located at the bottom right corner of the screen.
9. Configure the field updates for the Shipment Record. Select items from the picklists (**Field, Operator, Value**).
10. Add or delete lines using the  and  buttons.

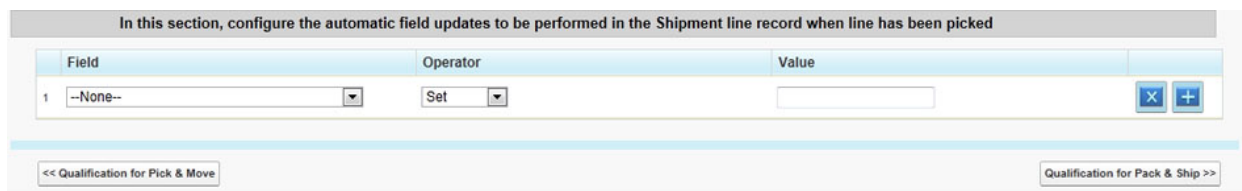


In this section, configure the automatic field updates to be performed in the Shipment record when all the lines have been picked



	Field	Operator	Value	
1	--None--	Set		 

Figure 6: Configure Automatic Field Updates for Shipment Records

11. Configure the field updates for the Shipment Line Record. Select items from the picklists (**Field, Operator, Value**).
12. Add or delete lines using the  and/or  buttons.



In this section, configure the automatic field updates to be performed in the Shipment line record when line has been picked

	Field	Operator	Value	
1	--None--	Set		 

<< Qualification for Pick & Move Qualification for Pack & Ship >>

Figure 7: Configure Automatic Field Updates for Shipment Line Records

Qualification for Pack and Ship Screen

13. Click either the **Qualification for Pack and Ship** tab or the **Qualification for Pack and Ship** button located at the bottom right corner of the screen.
14. Using the Expression Builder, select the Shipment Order qualifiers for the Pack and Ship step.
 - a. Select existing criteria from the **Use and existing criteria from the list** pick-list.
 - b. Or you can create a new criteria by clicking the **Or Create new criteria** link.

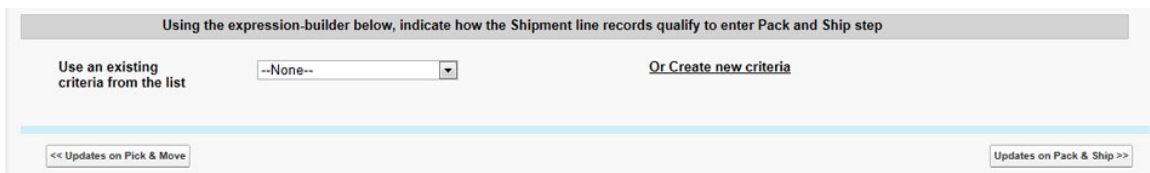


Using the expression-builder below, indicate how the Shipment Order qualifies to enter Pack and Ship step

Use an existing criteria from the list --None-- [Or Create new criteria](#)

Figure 8: Expression Builder -Pack and Ship for Shipment Order

15. Using the Expression Builder, select the Shipment Line Records qualifiers for the Pack and Ship step.
 - a. Select existing criteria from the **Use and existing criteria from the list** pick-list.
 - b. Or you can create a new criteria by clicking the **Or Create new criteria** link.



Using the expression-builder below, indicate how the Shipment line records qualify to enter Pack and Ship step

Use an existing criteria from the list --None-- [Or Create new criteria](#)

<< Updates on Pick & Move Updates on Pack & Ship >>

Figure 9: Expression Builder- Pack and Ship for Shipment Line Records

Updates on Pack and Ship Screen





16. Click either the **Updates for Pack and Ship** tab or the **Updates for Pack and Ship** button located at the bottom right corner of the screen.
17. Configure the field updates for the Shipment Record when all lines have been shipped. Select items from the picklists (**Field, Operator, Value**).
18. Add or delete lines using the  and/or  buttons.



Figure 10: Configure Field Updates- Shipment Record (Shipped Lines)

19. Configure the field updates for the Shipment Line Record when line has been shipped. Select items from the picklists (**Field, Operator, Value**).
20. Add or delete lines using the  and/or  buttons.

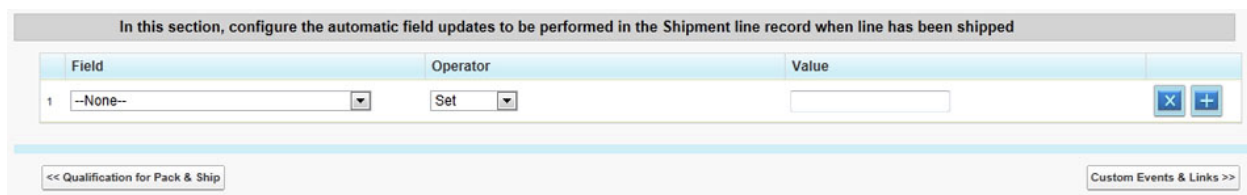


Figure 11: Configure Field Updates- Shipment Line Record (Shipped Lines)

Custom Events and Links Screen

21. Click either the Custom Events and Links tab or the Custom Events and Links button located at the bottom right corner of the screen.
22. In the Custom Events on Shipment area, enter the **Namespace Prefix**, **Web Service Class Name**, and **Method Name** for the following: **After Pick and Move**, **After Shipment**, and **After Closure**.

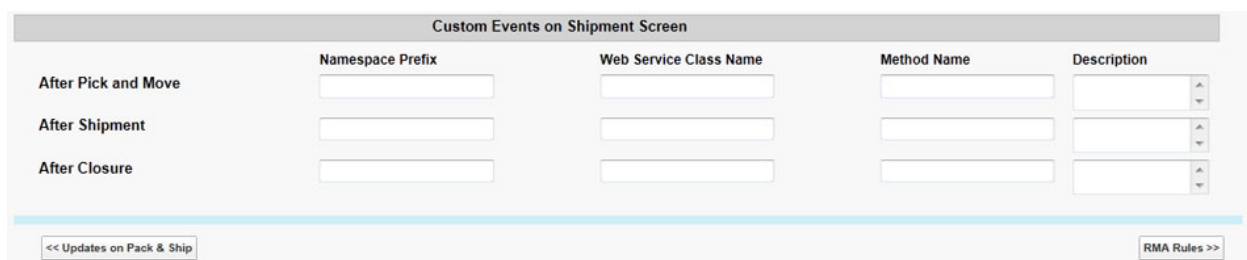


Figure 12: Custom Events on Shipment Screen

RMA Rules Screen

23. Click either the **RMA Rules** tab or the **RMA Rules** button located at the bottom right corner of the screen.
24. Create the internal RMA rules when shipping to internal locations.
 - a. To create an internal RMA for a ship confirmation, check the appropriate checkbox.
 - b. Select an item from the **Use this field-map to create RMA** picklist.
 - c. Select an item from the **Use this field-map to create RMA Lines** picklist.

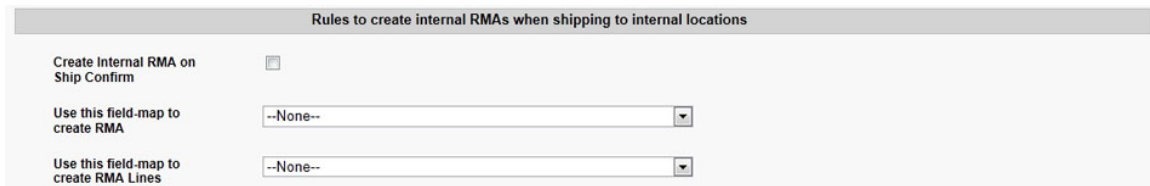


Figure 13: Rules to create internal RMAs (shipping to internal locations)

25. Create the external (reverse) RMA rules when shipping to supplier locations.
 - a. To create a supplier RMA for a ship confirmation, select the appropriate check box.
 - b. Select an item from the **Use this field-map to create RMA** picklist.
 - c. Select an item from the **Use this field-map to create RMA Lines** picklist.

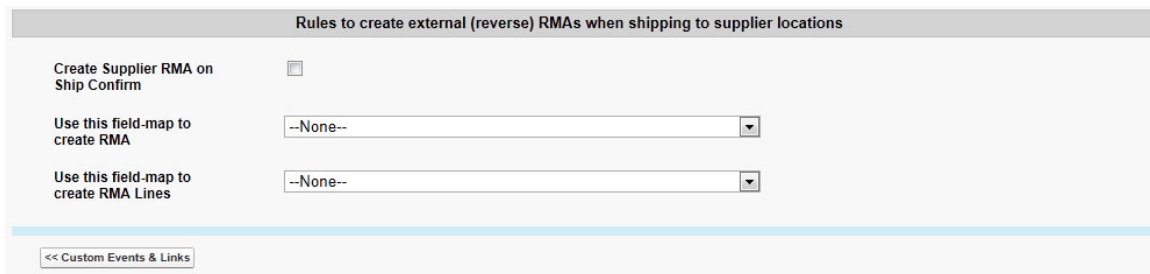


Figure 14: Rules to Create External (Reverse) RMAs (shipping to supplier locations)

Editing a Custom Shipping Process

The steps for editing a Custom Shipping Process are similar to creating a new Custom Shipping Process. For more information and detailed screen shots for each step, see [Creating a New Custom Shipping Process](#).

Move through the tabs or buttons (**General Info**, **Qualification for Pick and Move**, **Updates on Pick and Move**, **Qualification Pack and Ship**, **Updates on Pack and Ship**, **Custom Events and Links**, and **RMA Rules**) in any order. The steps for the Shipping Process are described in a linear fashion in this section, but you can update these sections in any order.

To edit a Custom Shipping Process:

1. Select a Custom Shipping Process from the **Process** list by checking the **Select** check box for the appropriate process name.
2. In the Custom Shipping Processes area, click the **Edit** button.

The Setup Shipping Process screen appears.

General Info Screen

3. Click the **General Info** tab, and update the **Process Name**, **Process ID**, and **Description** if necessary.
4. In the Expression Builder, update how the Case qualifies for the return process, either by selecting criteria from the picklists or by creating new criteria (Figure 15).

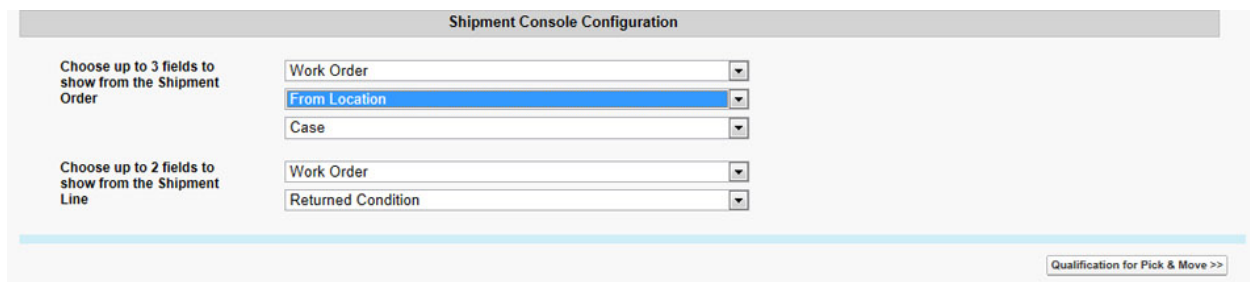


Figure 15: *Shipment Console Configuration*

Qualification for Pick and Move Screen

5. Click either the **Qualification for Pick and Move** tab or the **Qualification for Pick and Move** button located at the bottom right corner of the screen.
6. Using the Expression Builder below, update how the Shipment Order qualifies to enter the Pick and Move by updating existing criteria, or creating new criteria.
7. Using the Expression Builder below, update how the Shipment Line records qualify to enter Pick and Move by updating existing criteria, or creating new criteria.

Updates on Pick and Move Screen





8. Click either the **Updates on Pick and Move** tab or the **Updates on Pick and Move** button located at the bottom right corner of the screen.
9. Configure the field updates for the Shipment Record. Select items from the picklists (**Field, Operator, Value**).
10. Add or delete lines using the  and  buttons.



Figure 16: Configure Automatic Field Updates for Shipment Records

11. Configure the field updates for the Shipment Line Record. Select items from the picklists (**Field, Operator, Value**).
12. Add or delete lines using the  and/or  buttons.

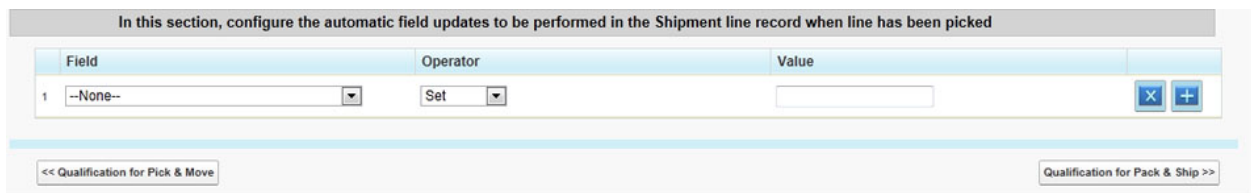


Figure 17: Configure Automatic Field Updates for Shipment Line Records

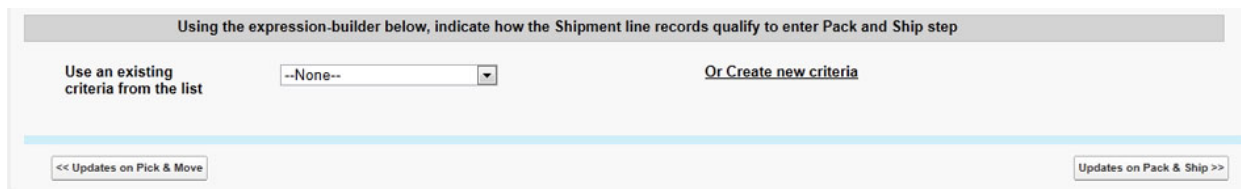
Qualification for Pack and Ship Screen

13. Click either the **Qualification for Pack and Ship** tab or the **Qualification for Pack and Ship** button located at the bottom right corner of the screen.
14. Using the Expression Builder, update the Shipment Order qualifiers for the Pack and Ship step by selecting existing criteria, or create new criteria.



Figure 18: Expression Builder- Pack and Ship for Shipment Order

15. Using the Expression Builder, update the Shipment Line Records qualifiers for the Pack and Ship step by selecting existing criteria, or create new criteria.





Using the expression-builder below, indicate how the Shipment line records qualify to enter Pack and Ship step

Use an existing criteria from the list: --None-- Or Create new criteria

<< Updates on Pick & Move Updates on Pack & Ship >>

Figure 19: Expression Builder- Pack and Ship for Shipment Line Records

Updates on Pack and Ship Screen



16. Click either the **Updates for Pack and Ship** tab or the **Updates for Pack and Ship** button located at the bottom right corner of the screen.
17. Configure the field updates for the Shipment Record when all lines have been shipped. Update items from the picklists (**Field, Operator, Value**).
18. Add or delete lines using the  and/or  buttons.

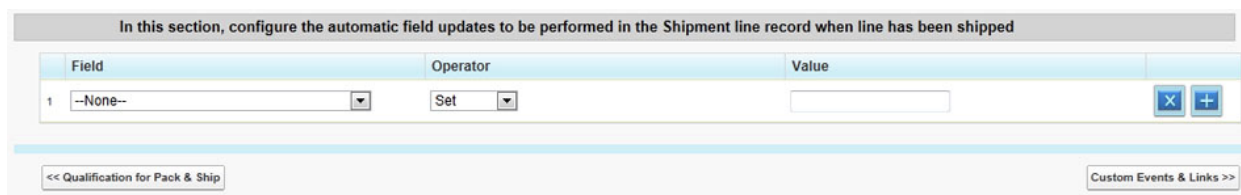


In this section, configure the automatic field updates to be performed in the Shipment record when all the lines have been shipped



	Field	Operator	Value	
1	--None--	Set		 

Figure 20: Configure Field Updates- Shipment Record (Shipped Lines)

19. Configure the field updates for the Shipment Line Record when line has been shipped. Update items from the picklists (**Field, Operator, Value**).
20. Add or delete lines using the  and/or  buttons.



In this section, configure the automatic field updates to be performed in the Shipment line record when line has been shipped

	Field	Operator	Value	
1	--None--	Set		 

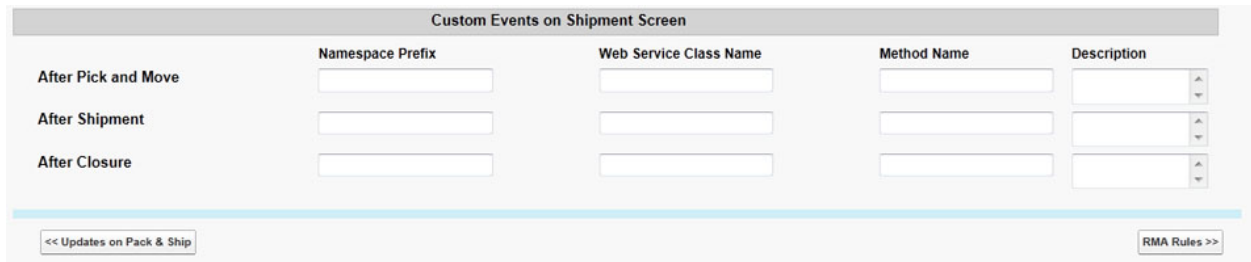
<< Qualification for Pack & Ship Custom Events & Links >>

Figure 21: Configure Field Updates- Shipment Line Record (Shipped Lines)

Custom Events and Links Screen

21. Click either the **Custom Events and Links** tab or the **Custom Events and Links** button located at the bottom right corner of the screen.
22. In the Custom Events on Shipment area, update the **Namespace Prefix**, **Web Service Class Name**, and **Method Name** for the following: **After Pick and Move**,

After Shipment, and After Closure.



Event Name	Namespace Prefix	Web Service Class Name	Method Name	Description
After Pick and Move				
After Shipment				
After Closure				

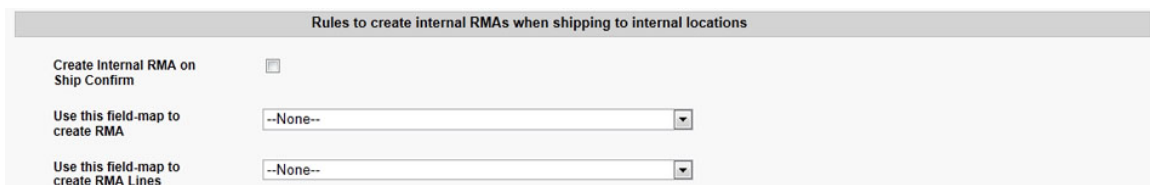
<< Updates on Pack & Ship

RMA Rules >>

Figure 22: Custom Events on Shipment Screen

RMA Rules Screen

23. Click either the **RMA Rules** tab or the **RMA Rules** button located at the bottom right corner of the screen.
24. If necessary, update the internal RMA rules when shipping to internal locations.
 - a. Check the **Internal RMA on Ship Confirm** checkbox.
 - b. Update the **Use this field-map to create RMA** picklist.
 - c. Update the **Use this field-map to create RMA Lines** picklist.



Rules to create internal RMAs when shipping to internal locations

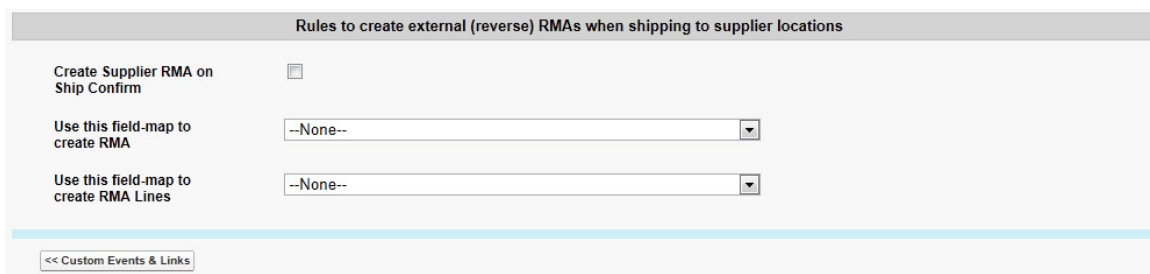
Create Internal RMA on Ship Confirm ☐

Use this field-map to create RMA --None--

Use this field-map to create RMA Lines --None--

Figure 23: Rules to create internal RMAs (shipping to internal locations)

25. Update the external (reverse) RMA rules when shipping to supplier locations.
 - a. Check the **Create Supplier RMA on Ship Confirm** checkbox.
 - b. Update the **Use this field-map to create RMA** picklist.
 - c. Update the **Use this field-map to create RMA Lines** picklist.



Rules to create external (reverse) RMAs when shipping to supplier locations

Create Supplier RMA on Ship Confirm ☐

Use this field-map to create RMA --None--

Use this field-map to create RMA Lines --None--

<< Custom Events & Links

Figure 24: Rules to Create External (Reverse) RMAs (shipping to supplier locations)

Cloning a Custom Shipping Process

To clone a Custom Shipping Process:

1. Select a Custom Shipping Process from the **Process** list by checking the **Select** checkbox for the appropriate process name.
2. In the Custom Shipping Processes area, click the **Clone** button.
The Setup Shipping Process screen displays.
3. Click the **General Info** tab, and enter a unique **Process Name** and **Process ID**. You must enter a unique Process Name and Process ID to clone a return process.
4. Update other sections in Shipping Process as appropriate: **Qualification for Pick and Move, Updates and Pick and Move, Qualification for Pack and Ship, Updates on Pack and Ship, Custom Events and Links, RMA Rules**.



Note: For detailed, step-by-step instructions for the above mentioned sections, see [Creating a New Custom Shipping Process](#) and [Editing a Custom Shipping Process](#).

5. Click the **Save** button to save the process and remain in the Setup Return Process screen. Click the **Save and Close** button to save the process and return to the Standard Process and Custom Return Process screen.

Deleting a Custom Shipping Process

To delete a Custom Shipping Process:

1. Check the **Select** checkbox for the appropriate rule.
2. Click the **Delete** button.

A warning dialog box displays asking the question, "Are you sure?".

3. Click **OK** to delete the rule.

SOURCING RULES

Overview

Use this option to define the sourcing and allocation rules for various types of fulfillment orders (repair or sales orders). Fulfillment processes can be then placed on applicable Service Flow wizards.

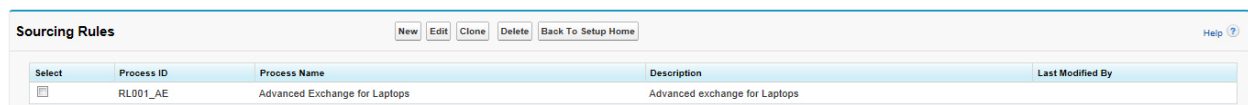
Access and Permissions

Actions	User Permissions Needed
To view Sourcing Rules:	"Read" on ServiceMax Processes, ServiceMax Config Data and Location.
To create or edit Sourcing Rules:	"Create" and "Update" on ServiceMax Processes and ServiceMax Config Data "Read" on Location.
To delete Sourcing Rules:	"Delete" on ServiceMax Processes and ServiceMax Config Data.

To access the Sourcing Rules module:

1. From the Home tab, click **ServiceMax Setup** located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Reverse Logistics** button.
3. Click the **Sourcing Rules** button.
4. Click the **Go** button.

The Sourcing Rules screen displays as shown in the figure below.



Sourcing Rules				
New Edit Clone Delete Back To Setup Home Help ?				
Select	Process ID	Process Name	Description	Last Modified By
<input type="checkbox"/>	RL001_AE	Advanced Exchange for Laptops	Advanced exchange for Laptops	

Figure 1: Sourcing Rules Screen

In the Sourcing Rules screen you can:

- Create a new Rule.
- Edit an existing Rule.
- Clone a Rule.
- Delete a Rule.
- Return to ServiceMax Setup Home.

Creating a Sourcing Rule

To create a new Sourcing Rule:

1. Click the **New** button in the Sourcing Rules screen (Figure 1).
2. In the General Info area, enter the **Process Name**, **Process ID**, and **Description** in the appropriate text boxes (Figure 2).

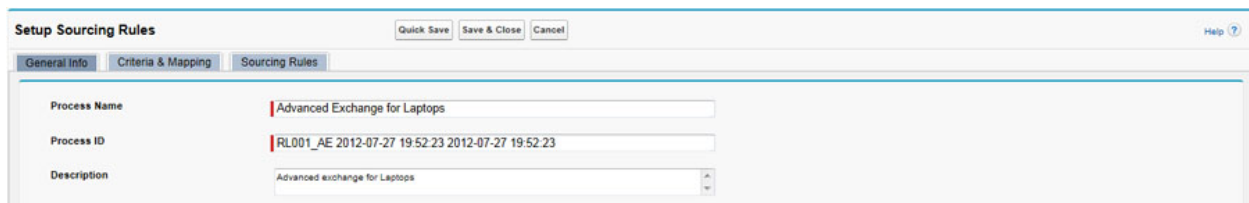

 The screenshot shows the 'Setup Sourcing Rules' window with the 'General Info' tab selected. It contains three text input fields: 'Process Name' with the value 'Advanced Exchange for Laptops', 'Process ID' with the value 'RL001_AE 2012-07-27 19:52:23 2012-07-27 19:52:23', and 'Description' with the value 'Advanced exchange for Laptops'. At the top right are buttons for 'Quick Save', 'Save & Close', and 'Cancel'. A 'Help ?' link is also present.

Figure 2: Setup Fulfillment Process

3. In the Fulfillment Console Configuration area, select up to 3 fields to display in the header record using the corresponding picklists (Figure 3).
4. In the Fulfillment Console Configuration area, select up to 2 product fields to display for each line using the corresponding picklists (Figure 3).

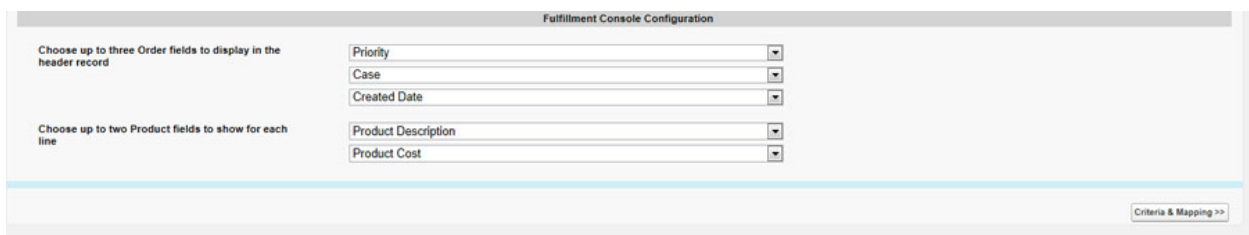

 The screenshot shows the 'Fulfillment Console Configuration' section. It has two main areas for selection. The first area, 'Choose up to three Order fields to display in the header record', includes picklists for 'Priority', 'Case', and 'Created Date'. The second area, 'Choose up to two Product fields to show for each line', includes picklists for 'Product Description' and 'Product Cost'. A 'Criteria & Mapping >>' button is located at the bottom right.

Figure 3: Fulfillment Console Configuration Area

5. Click the **Criteria & Mapping** tab at the top of the screen, or click the **Criteria & Mapping** button located on the right bottom corner of the screen to access the expression builder.
6. Use the Expression Builder to specify how header records and line records qualify to complete the fulfillment. See Figure 4.
 - a. In the expression builder area for header records, select an existing criteria from the **Use Existing Criteria** picklist, or you can create a new criteria by clicking the **Create New** link.
 - b. In the expression builder area for line records, select an existing criteria from the **Use Existing Criteria** picklist, or you can create a new criteria by clicking the **Create New** link.

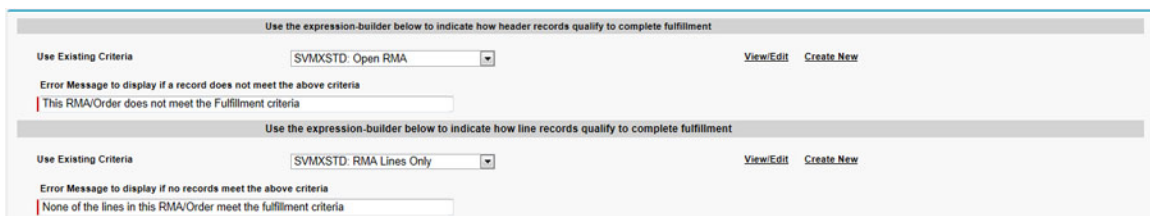


Figure 4: Expression Builder: Header and Line Records Area

7. Select field maps to create shipment orders and lines from originating customer order and lines. Update the two picklists: **Field map used to create shipment order from originating customer order** and **Field map used to create shipment order lines from originating customer order lines** (Figure 5).

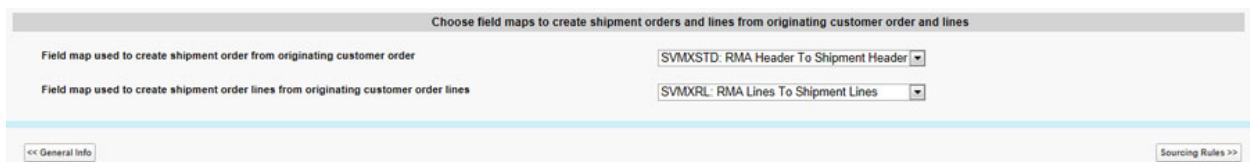
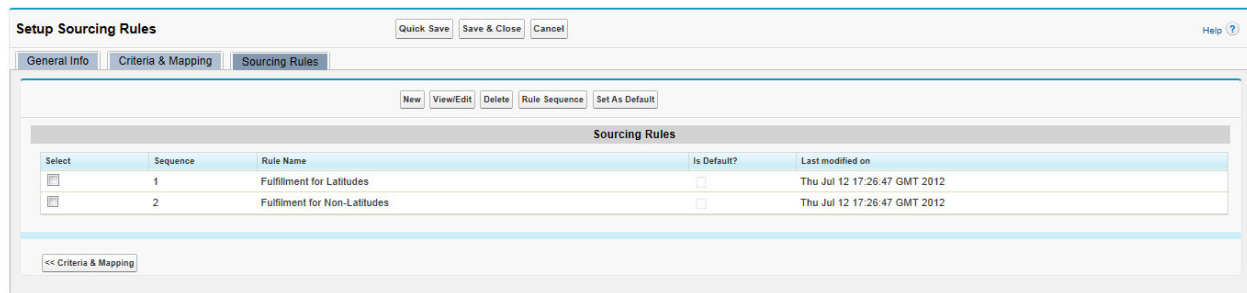


Figure 5: Configure Mapping to Create Fulfillment Order

8. Click the **Sourcing Rules** tab at the top of the screen or click the **Sourcing Rules** button located on the right bottom corner of the screen to access the Sourcing Rules area.

9. Click the **New** button to create a new rule (Figure 6).



The screenshot shows the 'Setup Sourcing Rules' window with the 'Sourcing Rules' tab selected. At the top, there are buttons for 'Quick Save', 'Save & Close', and 'Cancel'. Below the tabs, there are buttons for 'New', 'View/Edit', 'Delete', 'Rule Sequence', and 'Set As Default'. The main area contains a table titled 'Sourcing Rules' with the following data:

Select	Sequence	Rule Name	Is Default?	Last modified on
<input type="checkbox"/>	1	Fulfillment for Latitudes	<input type="checkbox"/>	Thu Jul 12 17:26:47 GMT 2012
<input type="checkbox"/>	2	Fulfillment for Non-Latitudes	<input type="checkbox"/>	Thu Jul 12 17:26:47 GMT 2012

At the bottom left, there is a button labeled '<< Criteria & Mapping'.

Figure 6: Sourcing Rules Tab

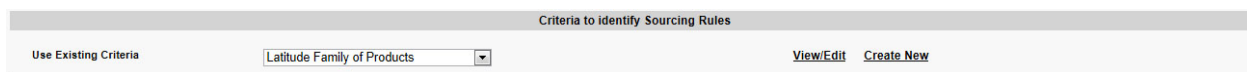
10. In the Sourcing Rule area, enter the rule name in the **Rule Name** text box (Figure 7).



The screenshot shows the 'Sourcing Rule' form. It has a title bar 'Sourcing Rule' and buttons for 'Save' and 'Cancel'. Below is a text box labeled 'Rule Name' with a red cursor inside.

Figure 7: Sourcing Rule Area

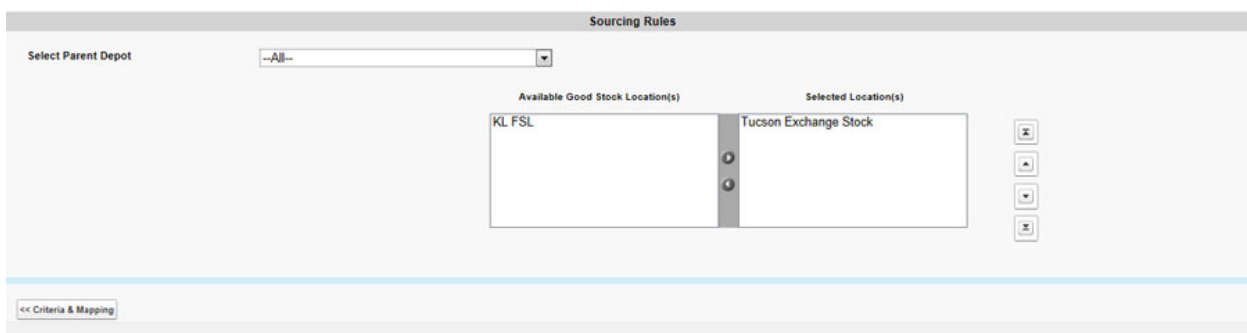
11. In the Criteria to identify fulfillment path area, select an existing criteria from the **Use Existing Criteria** picklist, and click the **View/Edit** link. Click the **Create New** to create a new criteria. See Figure 8.



The screenshot shows the 'Criteria to identify Sourcing Rules' form. It has a title bar 'Criteria to identify Sourcing Rules'. Below is a section labeled 'Use Existing Criteria' with a dropdown menu showing 'Latitude Family of Products'. To the right are links for 'View/Edit' and 'Create New'.

Figure 8: Criteria to Identify Fulfillment Path Area

12. In the Sourcing Rules area, select a parent depot from the **Select Parent Depot** picklist (Figure 9).
13. Using the left/right arrows, move locations from the Available Good Stock Location(s) to the Selected Location(s) (Figure 9).
14. In the Selected Location(s) area, use the **Up**, **Down**, **Top**, **Bottom** buttons to position the locations in the desired order (Figure 9).



The screenshot shows the 'Sourcing Rules' form. It has a title bar 'Sourcing Rules'. Below is a section labeled 'Select Parent Depot' with a dropdown menu showing '--All--'. Below that are two lists: 'Available Good Stock Location(s)' containing 'KL FSL' and 'Selected Location(s)' containing 'Tucson Exchange Stock'. Between the lists are left and right arrows. To the right of the 'Selected Location(s)' list are four buttons: 'Up', 'Down', 'Top', and 'Bottom'. At the bottom left, there is a button labeled '<< Criteria & Mapping'.

Figure 9: Sourcing Rules Area

15. Create a rule sequence by clicking the **Rule Sequence** button located underneath the Sourcing Rules area.
 - a. In the **Rules Sequence** dialog box, click a rule to select it (Figure 10).
 - b. Using **Up, Down, Top, Bottom** arrows to move the process to the desired order.

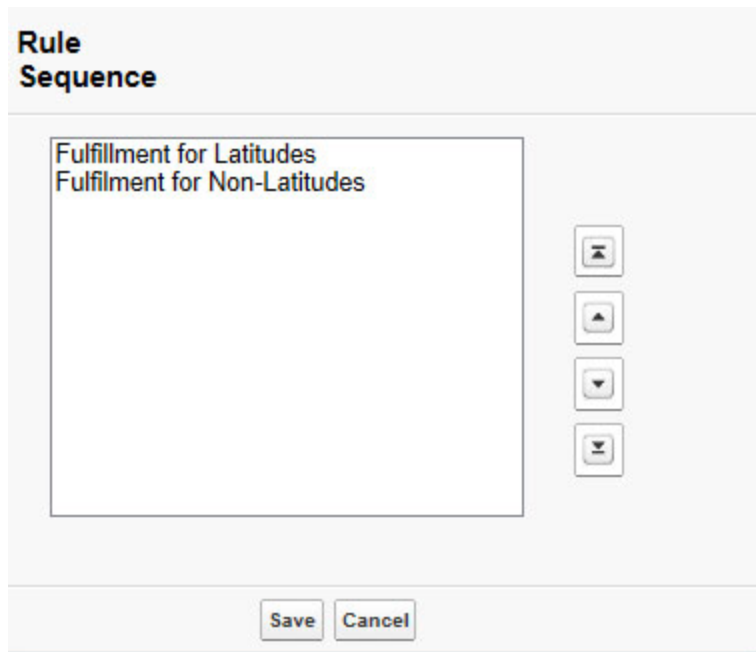


Figure 10: Rule Sequence Screen

16. Click the **Set As Default** button to set as the default rule (Figure 6).
17. Click the **Save** button to save the order.
18. In the Setup Sourcing Rules screen, click the **Save and Close** button to save the process and return to the Sourcing Rules screen.

Cloning a Sourcing Rule

Cloning a Sourcing Rule creates a duplicate process of the original.

To clone a Sourcing Rule:

1. Select a rule to clone by checking the checkbox for the appropriate rule.
2. Click the **Clone** button in the Sourcing Rules screen.

3. In the Setup Sourcing Rules screen, enter a new **Process Name**, **Process ID**, and **Description**. You must change at least the Process Name and the Process ID to clone a process.
4. Make any necessary changes in the **General Info**, **Criteria & Mapping**, and **Sourcing Rules** areas by clicking on their respective tabs.
5. Click **Quick Save** to create the clone process.
6. When finished, click the **Save and Close** button to save the process and return to the Sourcing Rules screen.

Deleting a Sourcing Rule

To delete a Sourcing Rule:

1. Check the **Select** checkbox for the appropriate process.
2. Click the **Delete** button.
3. Click **OK** in the warning dialog box to delete the process.

USING SERVICE PARTS & REVERSE LOGISTICS

Overview

For information about how to use Service Parts & Reverse Logistics, view the following sections:

[Case](#)

[Returned Material Authorization \(RMA\)](#)

[Shipment](#)

[Fulfillment](#)

LOCATION (APL)

Overview

Locations are set up by your Administrator in the [Depot & Stocking Locations](#) section. Contact your administrator for more information.

CASE (SERVICE PARTS & REVERSE LOGISTICS)

Overview

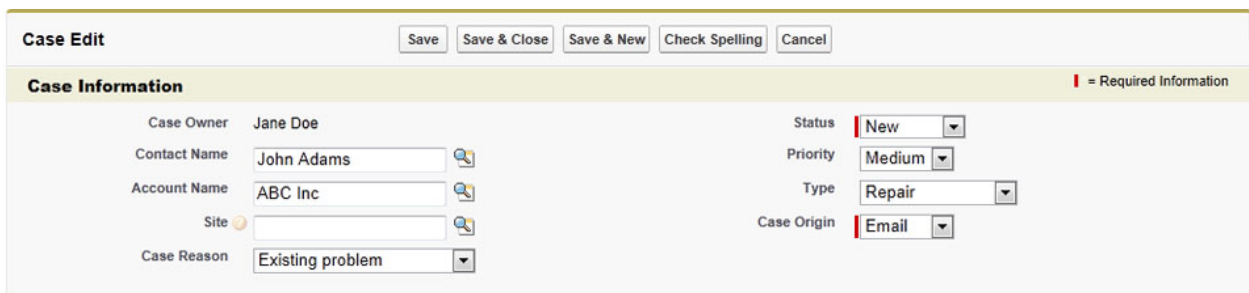
This section includes information about creating a Case, adding Case lines, and Initiate Return process.

Create a Case

To begin the Return Process, you must first create a Case for the product(s) and add Case lines.

To create a Case:

1. Navigate to the **Case** home page.
2. In the Recent Cases area, click the **New** button.
3. In the Case Information area, enter the full or partial **Contact Name** or **Account Name** in the appropriate text boxes.
4. If necessary, click the **Lookup** icon to initiate a search.
 - a. In the **Lookup** dialog box next to the Search field, click the **Go** button to search for the name.
 - b. Select your Contact or Account name in the Search Results area to populate the **Account** and **Contact** Name fields.
5. In the Case Information area, select the **Status**, **Priority**, **Type**, and **Case Origin** for the Case (Figure 1).



The screenshot shows the 'Case Edit' form with the following fields and values:










Case Edit		Save	Save & Close	Save & New	Check Spelling	Cancel
Case Information ! = Required Information						
Case Owner	Jane Doe					
Contact Name	John Adams 	Status	New 			
Account Name	ABC Inc 	Priority	Medium 			
Site	 	Type	Repair 			
Case Reason	Existing problem 	Case Origin	Email 			

Figure 1: Case Information Area

6. If required, enter the optional fields in these areas (**Description Information**, **Product Entitlement**, **Automatic Entitlement**, and **Optional**).
7. Click the **Save** button to create the case.

Create Case Lines

After you create the case, add case lines.

To add Case Lines:

1. Click the **New Case Lines** button in the Case Lines area located below the System Information area (Figure 2). You can also click/hover over the **Case Lines [0]** link, and click the **New Case Lines** button in the Case Detail area.



Figure 2: New Case Line Button

Your Case number populates in the Case text box in the New Case Line screen.

2. In the Information area of the Case Line Edit window, enter information for the following text boxes: **Product**, **Quantity**, **Problem Description**, and the **Serial Number List**. Where available, use the **Lookup** feature to search any of these fields (Figure 3).

3. Select a line status from the **Line Status** picklist.

Case Line Edit

Save
Save & New
Cancel

Information

Record Number
0000000236

Case
00001314

Product
P-A

Quantity
4

Location 2 test

sa_custdatetime2
[2/8/2012 2:20 PM]

Problem Summary

Problem Description

Line Status
Open

Priority
Medium

Route Card

Entitlement Details

Installed Product

Entitled Exchange Type
--None--

Location

Product Text

Serial Number List
PaSI1;PaSI2;PaSI3;PaSI4

Entitlement Status
--None--

Entitlement History

Entitlement Notes

Save
Save & New
Cancel


Figure 3: Case Line Information







Note: If you have more than one quantity, separate each serial number with a semi-colon.

4. Click the **Save** button.

The Case Lines Detail area populates with your product data (Figure 4).

Case Line  0000000236

[Customize Page](#) | [Edit Layout](#) | [Printable View](#) | [Help for this Page](#) 

[Route Cards](#)  | [Parts Order Lines](#)  | [Service/Maintenance History](#) 

Case Line Detail		Edit Delete Clone	
Record Number	0000000236	Line Status	Open
Case	00001314	Priority	Medium
Product	P-A	Route Card	
Quantity	4.0000		
Location 2 test			
sa_custdatetime2			
Problem Summary			
Problem Description			

▼ **Entitlement Details**

Installed Product	Entitlement Status
Entitled Exchange Type	Entitlement History
Location	Entitlement Notes
Product Text	Service Contract
Serial Number List	PaSI1;PaSI2;PaSI3;PaSI4
Warranty	Service Contract Start Date
Warranty Start Date	Service Contract End Date
Warranty End Date	Service Contract Line
Warranty Exchange Type	Service Contract Exchange Type
Created By	Jane Doe , 2/8/2012 2:15 PM
Last Modified By	Jane Doe , 2/8/2012 2:24 PM

[Edit](#) [Delete](#) [Clone](#)

Figure 4: Case Line Detail

Initiate Return

After you have created the Case lines, click the **Initiate Returns** button located underneath the Returns Process area in the ServiceMax Flow Wizard (SFW).

The next step in the process is to convert the Case to an RMA. Proceed to RMA section.

The Routing Rules are evaluated and the Routing engine generates a Route card for each case line and creates RMA and RMA lines.

Your administrator configures the Entitlement Check, the Routing Rules, and determines what criteria is used for RMA creation.

Access and Permissions (Initiate Return)

Objects	Read	Create	Update	Delete
Case	Yes			
Case Line	Yes		Yes	
Parts Order	Yes	Yes	Yes	
Parts Order Line	Yes	Yes	Yes	
Route Card	Yes	Yes	Yes	
Route Stop	Yes	Yes	Yes	
ServiceMax Process	Yes			
ServiceMax Config Data	Yes			
SFM Event	Yes			
Account	Yes			
Product	Yes			
IB	Yes			

RETURNED MATERIAL AUTHORIZATION (RMA) FOR (SERVICE PARTS & REVERSE LOGISTICS)

Overview

Returned Material Authorization (RMA) is a document that authorizes products or parts to be returned to the manufacturer/repair center/warehouse.

There are two steps in the RMA process:

1. The RMA is initiated by a support center engineer or field engineer, along with instructions for handling the returned products. A copy of the RMA document is given to the customer to be used as a reference in their shipment.
2. The RMA is processed or closed at the receiving location when the products actually arrive.

Generating an RMA (Service Parts & Reverse Logistics)

After you create a Case with Case lines, the initiate Returns Process created the RMA, the RMA lines, and the related Route Cards. The Returns Process evaluates Routing Rules, checks for Entitlement, and generates the RMA.

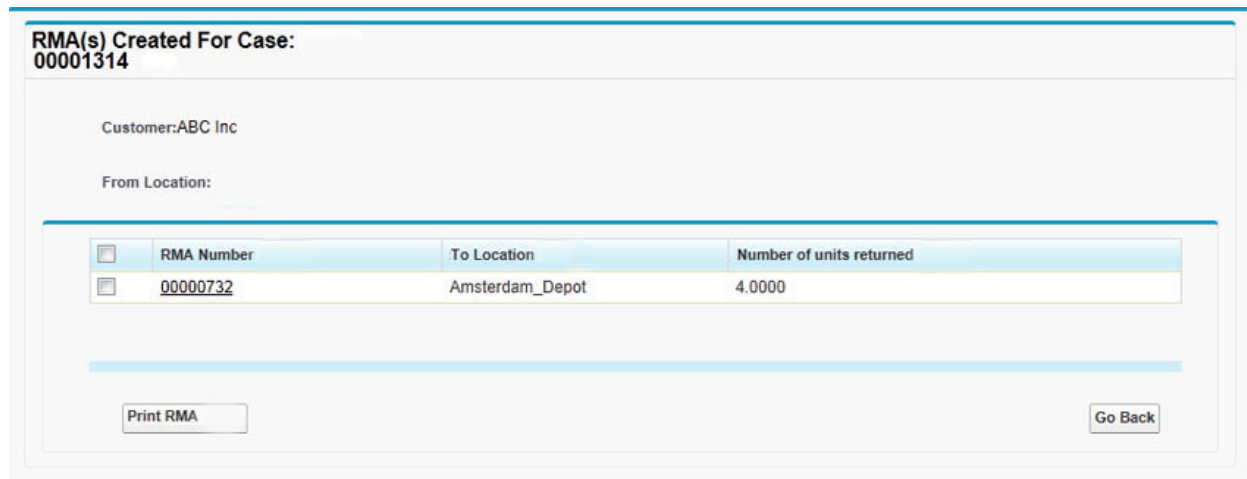
Your administrator configures the Routing Rules and Entitlement check. Consult with your administrator regarding questions and changes to these configurations.

The Returns Process occurs when you click the **Initiate Process Entitlement & Route** button located underneath the Returns Process area in the ServiceMax Flow Wizard (SFW). From there, an RMA is generated.

To generate an RMA for Service Parts & Reverse Logistics:

1. In the Case Line Detail area, click the **Case** link. (You can also hover over the **Case** link to open the Case dialog box, and then click **View**).
2. In the Service Flow Wizard area, click the **Initiate Process- Entitlement & Route** button.

The engine calculates routes, checks for entitlement, creates a Route Card, and generates the RMA based on the configurations set up by your administrator.



RMA(s) Created For Case:
00001314

Customer: ABC Inc

From Location:

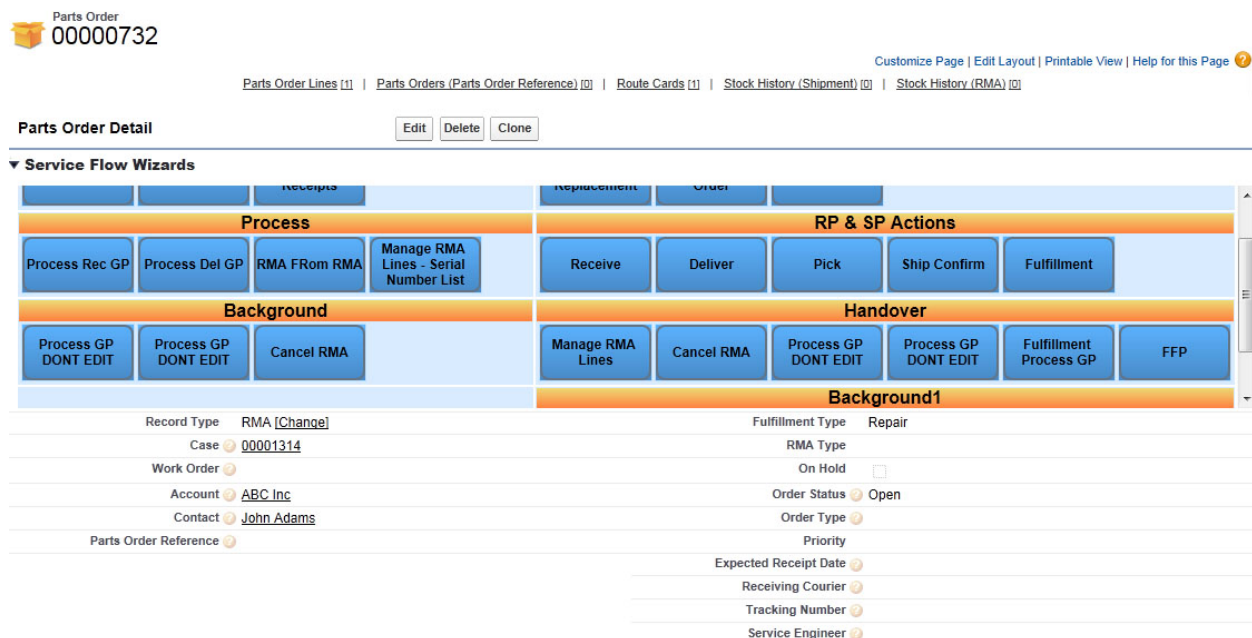
RMA Number	To Location	Number of units returned
00000732	Amsterdam_Depot	4.0000

Print RMA Go Back

Figure 1: RMA Created for Case

- Click the **RMA Number** link to open the RMA.

The Parts Order Detail screen appears. In this screen, you can verify the Shipping From and To locations of the product, which were determined by your administrator's configuration when generating a Route Card.



Parts Order: 00000732

Customize Page | Edit Layout | Printable View | Help for this Page

Parts Order Lines (1) | Parts Orders (Parts Order Reference) (0) | Route Cards (1) | Stock History (Shipment) (0) | Stock History (RMA) (0)

Parts Order Detail Edit Delete Clone

▼ Service Flow Wizards

Process	RP & SP Actions
Process Rec GP Process Del GP RMA FROM RMA Manage RMA Lines - Serial Number List	Receive Deliver Pick Ship Confirm Fulfillment
Background	Handover
Process GP DONT EDIT Process GP DONT EDIT Cancel RMA	Manage RMA Lines Cancel RMA Process GP DONT EDIT Process GP DONT EDIT Fulfillment Process GP FFP
Background1	

Record Type RMA [Change]	Fulfillment Type Repair
Case 00001314	RMA Type
Work Order	On Hold <input type="checkbox"/>
Account ABC Inc	Order Status Open
Contact John Adams	Order Type
Parts Order Reference	Priority
	Expected Receipt Date
	Receiving Courier
	Tracking Number
	Service Engineer

Figure 2: Parts Order Detail

- At the top of the Parts Order Detail screen, click the **Route Card** link. The Route Card Detail area shows the various locations and/or hubs the product will be delivered to (Figure 3).

Route Card 0000001424 Customize Page | Edit Layout | Printable View | Help for this Page

[Route Stops \(2\)](#) | [Parts Order Lines \(1\)](#) | [Route Card History \(1\)](#) | [Case Lines \(1\)](#)

Route Card Detail

[Edit](#) [Delete](#) [Clone](#)

Record Number	0000001424	Owner	Jane Doe [Change]
Created By	Jane Doe, 2/8/2012 2:28 PM	Last Modified By	Jane Doe, 2/8/2012 2:28 PM
Case	00001314	Current Stop	
Case Line	0000000236	First Stop	Amsterdam Depot
RMA	00000732	Next Stop	Amsterdam Depot
RMA Line	LN-00002083	Last Stop	Berlin Depot
Status	Open	Route Type	Inbound
Supplier			

[Edit](#) [Delete](#) [Clone](#)

Route Stops

[New Route Stop](#) Route Stops Help

Action	Record Number	Stop Number	Stop Location	Next Stop	Received?	Delivered?	Picked?	Shipped?	Shipment Initiated?	Work Order Created?
Edit Del	0000003028	1	Amsterdam Depot	Berlin Depot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Edit Del	0000003029	2	Berlin Depot		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 3: Route Card Detail



Note: Your administrator sets up the rules for the Route Card. If you have any questions regarding the Routing Rules, consult your administrator.

- In the Route Card Detail area, click the **RMA link** to view the RMA.

The Parts Order Detail screen updates the Service Flow Wizards area with the following Receiving Process buttons: **Receive**, **Deliver**, **Pick**, and **Ship Confirm**. The Service Flow Wizards area will display that the part has come from the customer to the depot.

Next, the depot must verify that they have received the product. See Processing Receipts for an RMA (APL).

Processing Receipts for an RMA (Service Parts & Reverse Logistics)

Once the part or product is received at the specified location or depot in an RMA, you must process the receipts to complete the RMA cycle.

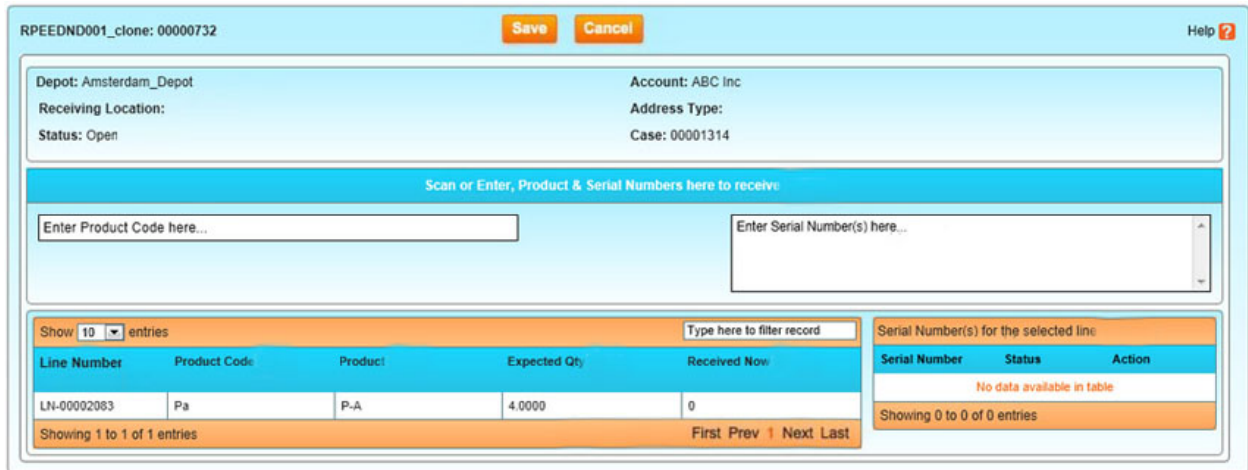
Access and Permissions (Receipt Console)

Object	Read	Create	Update	Delete
Parts Order	Yes		Yes	
Parts Order Line	Yes	Yes	Yes	
Route Card	Yes	Yes	Yes	
Route Stop	Yes	Yes	Yes	
ServiceMax Process	Yes			
ServiceMax Config Data	Yes			
SFM Event	Yes			
Work Order	Yes	Yes		
Product Stock	Yes	Yes	Yes	
Product Stock History		Yes		
Stock Serial	Yes	Yes	Yes	
Serial History		Yes		
Account	Yes			
Product	Yes			
Location	Yes			

To process a receipt for an RMA:

1. Click the **Receive** button located in the Service Flow Wizard area.
2. Scan or enter the **Product Code**.
3. Scan or enter the **Serial Numbers** (see figure below).
4. Click the **Save** button.

5. The Receiving Process returns you to the RMA record.



RPEEDND001_clone: 00000732 Save Cancel Help ?

Depot: Amsterdam_Depot Account: ABC Inc
Receiving Location: Address Type:
Status: Open Case: 00001314

Scan or Enter, Product & Serial Numbers here to receive:

Enter Product Code here... Enter Serial Number(s) here...

Show 10 entries Type here to filter record

Line Number	Product Code	Product	Expected Qty	Received Now
LN-00002083	Pa	P-A	4.0000	0

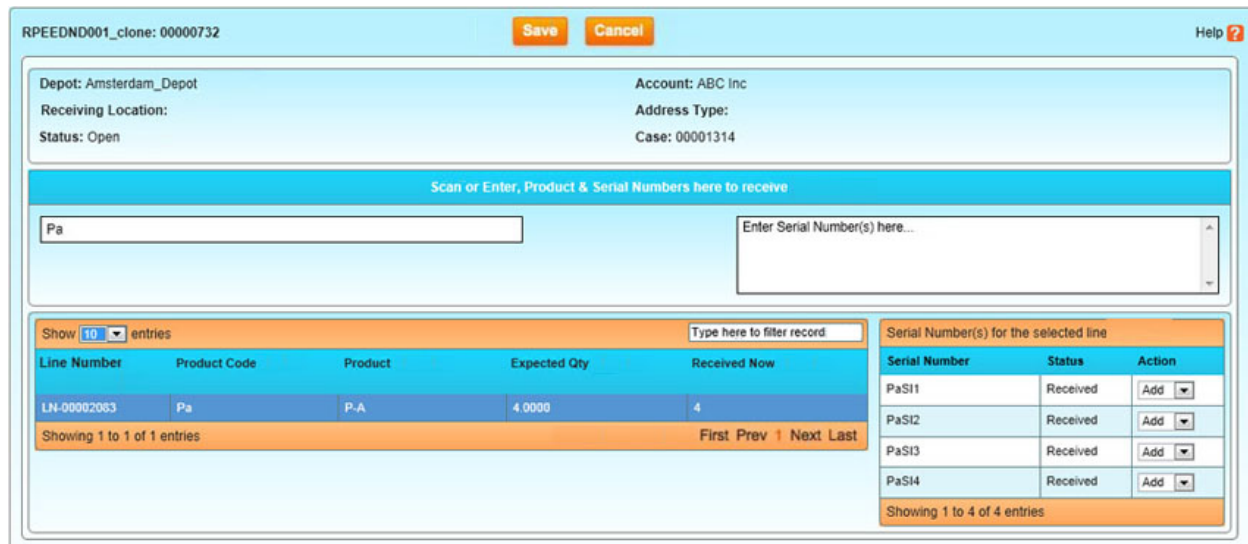
Showing 1 to 1 of 1 entries First Prev 1 Next Last

Serial Number(s) for the selected line:

Serial Number	Status	Action
No data available in table		

Showing 0 to 0 of 0 entries

Figure 4: Processing Received Product Items



RPEEDND001_clone: 00000732 Save Cancel Help ?

Depot: Amsterdam_Depot Account: ABC Inc
Receiving Location: Address Type:
Status: Open Case: 00001314

Scan or Enter, Product & Serial Numbers here to receive:

Pa Enter Serial Number(s) here...

Show 10 entries Type here to filter record

Line Number	Product Code	Product	Expected Qty	Received Now
LN-00002083	Pa	P-A	4.0000	4

Showing 1 to 1 of 1 entries First Prev 1 Next Last

Serial Number(s) for the selected line:

Serial Number	Status	Action
PaSI1	Received	Add
PaSI2	Received	Add
PaSI3	Received	Add
PaSI4	Received	Add

Showing 1 to 4 of 4 entries

Figure 5: Product Items Received



Note: The Serial Numbers for the selected line status has changed from Expected to Received. The 'Received Now' area updates as well.

Delivering Received Products (RMA)

After units are received, they must be delivered to internal locations within the depot where the next set of activities will occur. There must be at least one delivery rule, set up by your administrator.

Access and Permissions (Delivery Console)

Object	Read	Create	Update	Delete
Parts Order	Yes		Yes	
Parts Order Line	Yes		Yes	
Route Card	Yes		Yes	
Route Stop	Yes		Yes	
ServiceMax Process	Yes			
ServiceMax Config Data	Yes			
SFM Event	Yes			
Product Stock	Yes	Yes	Yes	
Product Stock History		Yes		
Stock Serial	Yes	Yes	Yes	
Serial History		Yes		
Account	Yes			
Product	Yes			
Location	Yes			

To deliver received products:

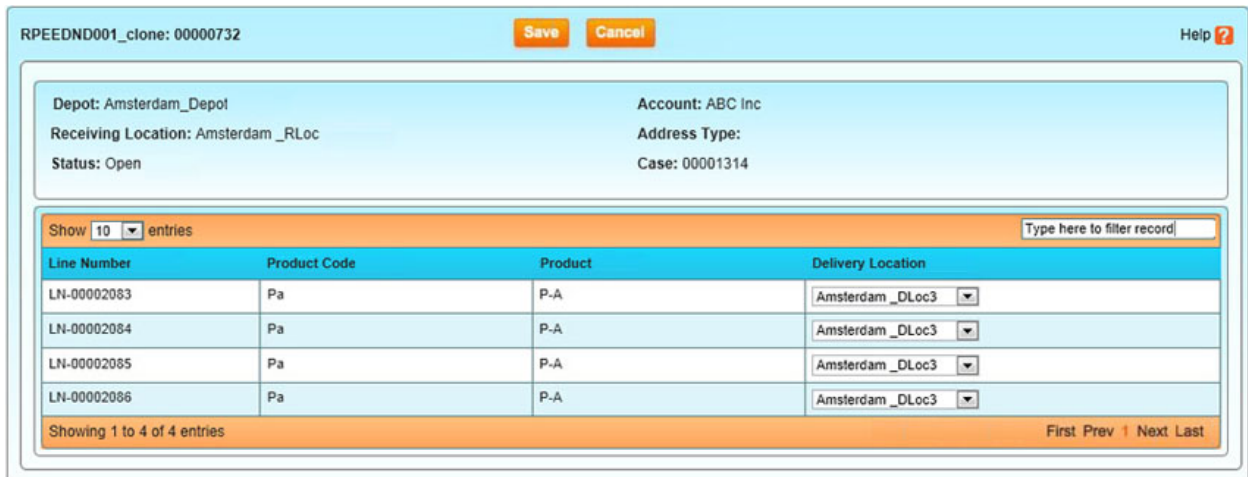
1. From the RMA, click the **Deliver** button.

The Delivery Console displays a table including the following: **Line Number**, **Product Code**, **Product**, and **Delivery Location**. Your administrator may have configured additional columns.



Note: After Receiving is complete, you might be directed to the Delivery console. This is an Administrator configured option for the Receiving Process.

2. Select a location from the **Delivery Location** picklist (see Figure 6). The Delivery Location represents the internal work or stocking centers where units are processed.
3. Click the **Save** button to complete the delivery of the product(s) to the selected locations within the depot. Once complete, you are returned to the RMA record.



Line Number	Product Code	Product	Delivery Location
LN-00002083	Pa	P-A	Amsterdam_DLoc3
LN-00002084	Pa	P-A	Amsterdam_DLoc3
LN-00002085	Pa	P-A	Amsterdam_DLoc3
LN-00002086	Pa	P-A	Amsterdam_DLoc3

Figure 6: Delivery Console

The 'Received' and 'Delivered' fields on the parts order line record(s) are updated during the Receiving and Delivery process. The checkbox fields are unchecked by default; when each process is completed, the corresponding checkbox is checked. Figure 7 represents an example of a Parts Order Lines related list showing the post delivery state of the 'Received' and 'Delivered?' fields.

Parts Order Lines											New Parts Order Line		Parts Order Lines Help ?	
Action	Line Number	Product	Expected Qty	Serial Number List	Line Status	Received?	Delivered?	Picked?	Route Card	Work Order				
Edit Del	LN-00002083	P-A	1.0000	PaSi1	Open	✓	✓	<input type="checkbox"/>	0000001424					
Edit Del	LN-00002084	P-A	1.0000	PaSi2	Open	✓	✓	<input type="checkbox"/>	0000001425					
Edit Del	LN-00002085	P-A	1.0000	PaSi3	Open	✓	✓	<input type="checkbox"/>	0000001427					
Edit Del	LN-00002086	P-A	1.0000	PaSi4	Open	✓	✓	<input type="checkbox"/>	0000001428					

Figure 7: Parts Received & Delivered



Note: If products have not reached the last Route Stop, they must be shipped to the next stop on the Route Card. Otherwise, the products are handled as determined by the applicable business process. If there is a next stop available on the Route Card, the Forward Shipment engine generates a shipment order the next time it is scheduled to run.

See the [Shipment](#) and Work Order sections for more information.

SHIPMENT (SERVICE PARTS & REVERSE LOGISTICS)

Overview

Your Administrator has set up criteria and schedules for Forward Shipment at each depot. The Forward Shipment engine generates shipment orders based on the applicable Route Cards. Each shipment order may either return product to the customer or ship to the next depot in the configured route. There are two processes involved in processing a shipment order, **Pick and Move** and **Pack and Ship**.



Note: The Fulfillment process also generates a shipment order when product is allocated from a good stock location. See [Fulfillment](#) for more information.

Access and Permission (Forward Shipment)

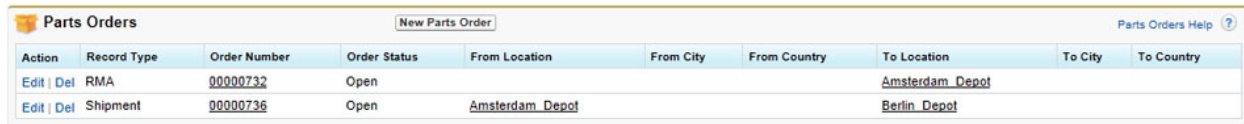
Object	Read	Create	Update	Delete
Parts Order	Yes	Yes	Yes	
Parts Order Line	Yes	Yes	Yes	
Route Card	Yes			
Route Stop	Yes		Yes	
ServiceMax Process	Yes			
ServiceMax Config Data	Yes			
Location	Yes			

Processing a Shipment Order (Pick and Move)

From the Delivery Location, someone must pick up the parts and ship them. You will receive notification (email, fax, or phone) when the Shipment engine has completed Forward Shipment.

To ship products to the next hub:

1. Click the **Shipment Order number** link in the Parts Orders area (Figure 1).



Action	Record Type	Order Number	Order Status	From Location	From City	From Country	To Location	To City	To Country
Edit Del	RMA	00000732	Open				Amsterdam Depot		
Edit Del	Shipment	00000736	Open	Amsterdam Depot			Berlin Depot		

Figure 1: Shipment Order Number

2. If the products are ready for pick up, click the **Pick** button in the Service Flow Wizard area.
3. In the Pick and Move console enter or scan the serial number(s) of the product(s) in the text box titled, **Enter Serial Number(s) here** (Figures 2 and 3).
4. Click the **Save** button.

Access and Permissions (Pick and Move Console)

Object	Read	Create	Update	Delete
Parts Order	Yes		Yes	
Parts Order Line	Yes	Yes	Yes	
Route Card	Yes		Yes	
Route Stop	Yes		Yes	
ServiceMax Process	Yes			
ServiceMax Config Data	Yes			
SFM Event	Yes			
Product Stock	Yes	Yes	Yes	
Product Stock History		Yes		
Stock Serial	Yes	Yes	Yes	
Serial History		Yes		
Account	Yes			
Product	Yes			
Location	Yes			

sa_Smk_ShipProcess001_cl: 00000736 Save Cancel Help ?

Depot: Amsterdam_Depot From Location: Amsterdam_Depot
Staging location: Amsterdam_StgLoc To Location: Berlin_Depot
StatusOpen Order Type:

Scan or Enter, Product & Serial Numbers here to receive

Enter Product Code here... Enter Serial Number(s) here...

Show 10 entries Type here to filter record

Line Number	Product Code	Product	Expected Qty	Picked Quantity
LN-00002100	Pa	P-A	1.0000	0
LN-00002101	Pa	P-A	1.0000	0
LN-00002102	Pa	P-A	1.0000	0
LN-00002103	Pa	P-A	1.0000	0

Showing 1 to 4 of 4 entries First Prev 1 Next Last

Picked Serial Number(s) for selected line

Serial Number	Status	Action
No data available in table		

Showing 0 to 0 of 0 entries

Figure 2: Pick Up Products From Delivery Location

Processing a Shipment Order (Ship Confirm)

The Pick Quantity field populates with the number of products received (Figure 3).

sa_Smk_ShipProcess001_cl: 00000736 Save Cancel Help ?

Depot: Amsterdam_Depot From Location: Amsterdam_Depot
Staging location: Amsterdam_StgLoc To Location: Berlin_Depot
StatusOpen Order Type:

Scan or Enter, Product & Serial Numbers here to receive

Pa Enter Serial Number(s) here...

Show 10 entries Type here to filter record

Line Number	Product Code	Product	Expected Qty	Picked Quantity
LN-00002100	Pa	P-A	1.0000	1
LN-00002101	Pa	P-A	1.0000	1
LN-00002102	Pa	P-A	1.0000	1
LN-00002103	Pa	P-A	1.0000	1

Showing 1 to 4 of 4 entries First Prev 1 Next Last

Picked Serial Number(s) for selected line

Serial Number	Status	Action
PaS11	Picked	Add

Showing 1 to 1 of 1 entries

Figure 3: Picked Products Quantity

A screen displays and confirms the products that will be shipped.

Access and Permission (Ship Confirm Console)

Object	Read	Create	Update	Delete
Parts Order	Yes		Yes	
Parts Order Line	Yes		Yes	
Route Card	Yes		Yes	
Route Stop	Yes		Yes	
ServiceMax Process	Yes			
ServiceMax Config Data	Yes			
SFM Event	Yes			
Product Stock	Yes	Yes	Yes	
Product Stock History		Yes		
Stock Serial	Yes	Yes	Yes	
Serial History		Yes		
Account	Yes			
Product	Yes			
Location	Yes			

5. Click the **Ship Confirm** button (Figure 4).



Figure 4: RP & SP Actions

6. From the Ship Confirm console, click the **Save** button.

When the products have been shipped, a checkmark displays in the **Shipped** checkbox in the Parts Order Lines area (Figure 5).

Parts Order Lines									
New Parts Order Line									
									Parts Order Lines Help ?
Action	Line Number	Product	Serial Number List	Line Status	Received?	Delivered?	Picked?	Shipped?	Delivery Location
Edit Del	LN-00002456	P-A	asr4	Open	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Amsterdam_DLoc3
Edit Del	LN-00002457	P-A	asr5	Open	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Amsterdam_DLoc3
Edit Del	LN-00002458	P-A	asr3	Open	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Amsterdam_DLoc3
Edit Del	LN-00002459	P-A	asr2	Open	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Amsterdam_DLoc3
Edit Del	LN-00002460	P-A	asr1	Open	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Amsterdam_DLoc3
									Route Card
									0000001491
									0000001492
									0000001493
									0000001494
									0000001490

Figure 5: Parts Order Lines (Products Shipped)

If the **Location Type** is designated as **Supplier** (a product is being shipped to a supplier), an external RMA is generated.



Note: If a product is being shipped from one hub to another hub, an internal RMA gets generated on Ship Confirm.

When shipping products between multiple hubs, repeat the steps in the following above processes: **Receive**, **Delivery**, **Pick**, and **Ship**. When it reaches the last hub, the Outbound Routing rules engine sends the product(s) to the customer.

Before Outbound Routing can take place (sending the product to the customer), the supplier must send the product to a hub via the Receive and Deliver processes.



Note: Each line is associated with an inbound Route card.

To receive and deliver products from a supplier to a hub:

1. Click the **Receive** button from the RP & SP Actions area (Figure 4).
2. From the Receiving screen, enter or scan the serial number(s) of the product(s) in the text box titled, **Enter Serial Number(s) here**.
3. Click the **Save** button.
4. From the Delivery screen, the Delivery location displays for each product serial number.

5. If necessary, select the **Delivery Location** from the picklist for each product.
6. Click the **Save** button.

The Parts Order Lines area indicates that the supplier has received the products and delivered them to a hub.

Action	Line Number	Product	Expected Qty	Serial Number List	Line Status	Received?	Delivered?	Picked?	Route Card	Master Order Line
Edit Del	LN-00002469	P-A	1.0000	asr4	Open	✓	✓	<input type="checkbox"/>		LN-00002454
Edit Del	LN-00002470	P-A	1.0000	asr5	Open	✓	✓	<input type="checkbox"/>		LN-00002455
Edit Del	LN-00002471	P-A	1.0000	asr3	Open	✓	✓	<input type="checkbox"/>		LN-00002453
Edit Del	LN-00002472	P-A	1.0000	asr2	Open	✓	✓	<input type="checkbox"/>		LN-00002452
Edit Del	LN-00002473	P-A	1.0000	asr1	Open	✓	✓	<input type="checkbox"/>		LN-00002451

Figure 6: Parts Order Lines (Received and Delivered)

7. From the picklist, set the **Priority** (based on the criteria in the Outbound Routing configuration).
8. In the Parts Order window, click the **Save** button to save the external RMA.



Note: The Route Card changes from Inbound to Outbound. An Outbound Routing card is generated based on the Outbound Routing rules your administrator has set up.

The next step in the process is to create a shipment order from the Master RMA to the customer.

Forwarding Engine

Use Outbound Routing to configure when Outbound routes must be calculated from work orders and external (reverse) RMAs. Use relevant attributes in work orders and RMAs that indicate the repair cycle is complete and product is ready to make its return journey to customer.

Access and Permissions

Object	Read	Create	Update	Delete
Parts Order	Yes			
Parts Order Line	Yes		Yes	
Route Card	Yes	Yes	Yes	
Route Stop	Yes	Yes	Yes	
ServiceMax Process	Yes			
ServiceMax Config Data	Yes			
Work Order	Yes		Yes	
Account	Yes			
Product	Yes			
Location	Yes			

External RMA

To create a Shipment Order for Outbound Routing:

1. If you haven't already done so, enter the **Address** fields in the **Shipping From and To** areas in the Master RMA.
2. Click the **Save** button located in the Additional Information area.
3. Enter a date in the **Expected Receipt Date** field.
4. Click the **Save** button located in the Parts Order Detail area to generate a shipment order (Figure 7).
5. Click the **Shipment Order number** link to view the details (Figure 7).



Parts Orders (Parts Order Reference)										
New Parts Order										
Action	Order Number	Record Type	Account	Order Status	From Location	From City	From Country	To Location	To City	To Country
Edit Del	00000886	Shipment	ABC Inc	Closed	Amsterdam Depot			Copeland Depot		
Edit Del	00000896	Shipment	ABC Inc	Open	Amsterdam Depot				Bengaluru	Iceland

Figure 7: Parts Orders (Shipment Order Generated)

The Shipping From and To area displays the Supplier location that the product was shipped from and the customer location that the product will be shipped to.

▼ Shipping From and To	
From Location 📍 <u>Amsterdam Depot</u>	To Location 📍
From Street 📍	To Street 📍 Trinity Circle
From City 📍	To City 📍 Bengaluru
From State 📍	To State 📍 Karnataka
From Zip 📍	To Zip 📍 560570
From Country 📍	To Country 📍 Iceland
Warehouse 📍	

Figure 8: Shipping From and To

After the shipment order is generated, you are ready for the Pick and Ship process, so the product can be shipped to the customer via the Outbound Routing rules. The Outbound Routing rules are configured by your administrator.

- Click the **Pick** button in the RP & SP area.
- In the console, enter or scan the serial number(s) of the product(s) in the text box titled, **Enter Serial Number(s) here**.

The Pick Quantity field populates with the number of products received.

- Click the **Save** button.

The screen displays and confirms the products that will be shipped.

- Click the **Ship Confirm** button.
- From the Ship Confirm console, click the **Save** button.

When the products have been shipped, a checkmark displays in the **Shipped** checkbox in the Parts Order Lines area.

After the products reach the supplier, it returns to the depot/hub, and then travels to the customer for its final destination.

Outbound Routing can occur from the work order or external RMA. Your administrator defines configuration for Outbound Routing. When the part reaches the repair center, you can also generate a work order instead of an external RMA.

FULLFILLMENT (SERVICE PARTS & REVERSE LOGISTICS)

Overview

Use the Fulfillment option to define the sourcing and allocation rules for various types of fulfillment orders (repair or sales orders). Fulfillment processes can be then placed on applicable Service Flow Wizards.

Access and Permissions (Fulfillment Console)

Object	Read	Create	Update	Delete
Parts Order	Yes	Yes	Yes	
Parts Order Line	Yes	Yes	Yes	
ServiceMax Process	Yes			
ServiceMax Config Data	Yes			
Location	Yes			
Product Stock	Yes		Yes	
Allocated Stock	Yes	Yes	Yes	
Account	Yes			
Product	Yes			

Fulfillment Process:

1. From the SFM Wizard, invoke the **Fulfillment** process.

The Fulfillment screen appears (Figure 1).




Figure 1: Fulfillment Screen

2. Click the **Product** line to populate the Stock Available area.

The Stock Available area indicates how many good stock locations have parts available for the Fulfillment process. If there is no good stock available, the Product line highlights in pink.

3. If necessary, create product stock.
 - a. Click the **Products** link.
 - b. From Products Home, use the **View** picklist in the Product Views area to locate your product.
 - c. Click the respective product link.
 - d. In the respective product screen, click the **Product Stock** link located at the top of the screen.
 - e. In the Product Stock area, click the **New Product Stock** button.
 - f. Use the **Lookup** feature to find your location from the Product Stock Edit Information area.
 - g. Update the **Status** to **Available**.
 - h. Indicate the quantity in the **Qty** field.
 - i. Click the **Save** button.

When stock is available, the Product line is highlighted in green indicating the stock at the Fulfillment path is available.

- Enter the quantity of product for each location in the **Allocated** text box (Figure 2).



The screenshot shows the Fulfillment console interface. At the top, there's a header with the ID 'sa_Smk_Fulfillment001: 00001086', 'Save' and 'Cancel' buttons, and a 'Help' icon. Below the header, the 'Depot' is set to 'Heathrow_Depot' and the 'Status' is 'Open'. A search bar with 'Show 10 entries' and a filter input is present. The main table displays product allocation details:

Product Code	Product	Required Qty	Total Available	Total Allocated
Ph	P-H	5.0000	22	3

Below the table, it says 'Showing 1 to 1 of 1 entries' and navigation links 'First Prev Next Last'. To the right, a section titled 'Stock Available for: P-H' shows a table of stock availability:

Location	Avl.Stock	Allocated
Amsterdam_GSLoc	12	3
Copeland_GSLoc	10	2

At the bottom of this section, it says 'Showing 1 to 2 of 2 entries'.

Figure 2: Allocated Stock to Locations

- Click the **Save** button.
- The Fulfillment screen updates to indicate that the quantities have been fulfilled.
A shipment order gets generated.
- Click the **Back to Parts Order** button.

The Fulfillment process is complete. The Shipping process begins the **Pick and Move** process and the **Ship Confirm** process to ship the parts to the Shipment location.



Note: The Serial Number list is blank. You need to manually populate stock serials, or you can use your existing inventory. The fulfillment serial number is different from the expect serial number.

SERVICE PARTS & REVERSE LOGISTICS GLOSSARY

Overview

Glossary terms used in Service Parts & Reverse Logistics (listed in alphabetical order) are in this section.

Terms

Depot & Stocking Locations

A module that enables administrators to manage locations relevant to Service Parts & Reverse Logistics. Administrators can define unlimited levels above depots and unlimited number of locations within a depot for (receiving, delivery, staging, and so on).

Delivery Rules

A module that configures how received products are delivered (distributed) within a depot. The administrator sets up these rules for each depot.

Depot

The Depot location is a facility where units are handled during receiving, fulfillment, shipping, and repair.

Good Stock

Products that are available to ship are referred to as "good stock."

Receiving Process

Use this option to define how various depots (hubs, warehouses or repair centers) would process their inbound products and subsequently store/deliver them to their internal locations.

Returns Process

Use this option to configure the behavior of customers initiating return of one or more products from a Case. A typical Initiate Return process would consist of entitlement check, route calculation, and RMA creation.

Routing Cards:

The Route Card indicates where the product is going. There could be various location or hub stops.

Your administrator sets up the rules for the routing card. If you have any questions regarding the rules associated with the products, consult your administrator.

Shipping Process

Use this option to define how various depots (hubs, warehouses, or repair centers) would process outbound products from picking to shipping.

APPENDIX

LOOKUP FORM FILL USE CASE EXAMPLE

LOOKUP FORM FILL USE CASE

Overview

Lookup Form Fill is an SFM capability that enables information to be automatically copied over to the record being edited when a Lookup field is updated by an end user. This section provides additional information about the feature and a detailed administrative use case.



Note: This functionality is available only when using ServiceMax SFM—it is not available on custom VF pages or Salesforce page edits.

Role Based Use Case Examples

The Lookup Form Fill feature can be used for various roles as described in the following examples:

- **Customer/Product Support:** When a serial number is selected from the Lookup feature, field values from installed products like Product Name, Primary Technician, Contact, Location, and so on, can be automatically copied over to the record being edited.
- **Field Service Technician:** When a technician adds products serviced to a Work Order and selects applicable warranty and warranty terms, warranty start date and end date can be copied over to the record being edited. (For an illustrated example of this use case, see [Lookup Form Fill](#).)
- **Administrator:** An administrator can configure a form fill attribute for warranty information. In this example, the warranty information (start date/end date) automatically populates with the form fill attribute your administrator has configured. For an example of this use case, see the section below titled: Administrator Use Case.

Benefits of Using Lookup Form Fill

The benefits of using this feature are listed below:

- **Accuracy:** Eliminates duplicate data entry, which minimizes errors.
- **Speed:** Enables field technicians to complete a service in three steps instead of six.
- **Efficiency:** When records are edited, contextual information can be copied into the record.

Administrator Use Case (Warranty)

The following scenario is an administrative use case example using Warranty information. In this example, the administrator configures a Lookup form fill attribute for Warranty start date and end date, so that this Warranty information will automatically populate into an end user's record.

First, the administrator needs to define a Warranty map via the SFM Mapping module, and then select the created map from the **Lookup Form Fill Object Mapping** picklist from the SFM Transaction Designer.

To configure a Lookup Form Fill for Warranty information:

1. From the Home tab, click the **ServiceMax Setup** link located under the ServiceMax Administration area located on the top left corner of the Home page.
2. In the ServiceMax Setup Home screen, click the **Service Flow Manager** button.
3. Click the **SFM Mapping** button.
4. Click the **Go** button.


The Configure SFM Mappings screen displays as shown in the figure below.

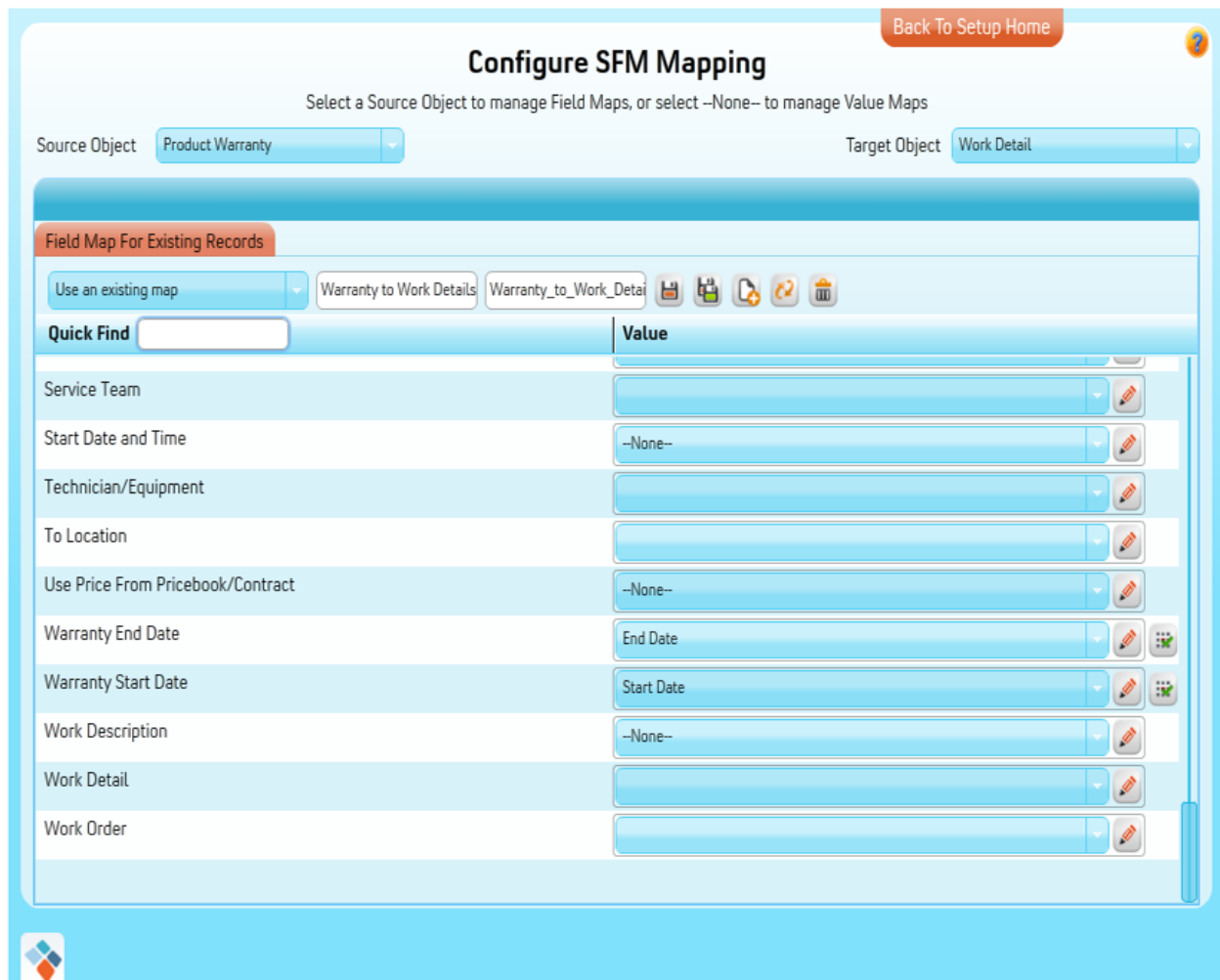


The screenshot shows the 'Configure SFM Mapping' screen. At the top right is a 'Back To Setup Home' button. Below the title, there is a instruction: 'Select a Source Object to manage Field Maps, or select --None-- to manage Value Maps'. There are two dropdown menus: 'Source Object' and 'Target Object', both currently showing 'Select'. The background is a light blue gradient.

Figure 1: *Configure SFM Mappings Screen*

5. In the Source Object picklist, select **Product Warranty**.
6. In the Target Object picklist, select **Work Detail**. The Configure SFM Mapping screen displays the Field Map for Existing Records tab.

7. Click the New  icon. The Field Map for Existing Records tab populates with available fields for Product Warranty, as shown in the figure below.



Configure SFM Mapping

Select a Source Object to manage Field Maps, or select --None-- to manage Value Maps

Source Object: Product Warranty Target Object: Work Detail

Field Map For Existing Records

Use an existing map: Warranty to Work Details Warranty_to_Work_Details

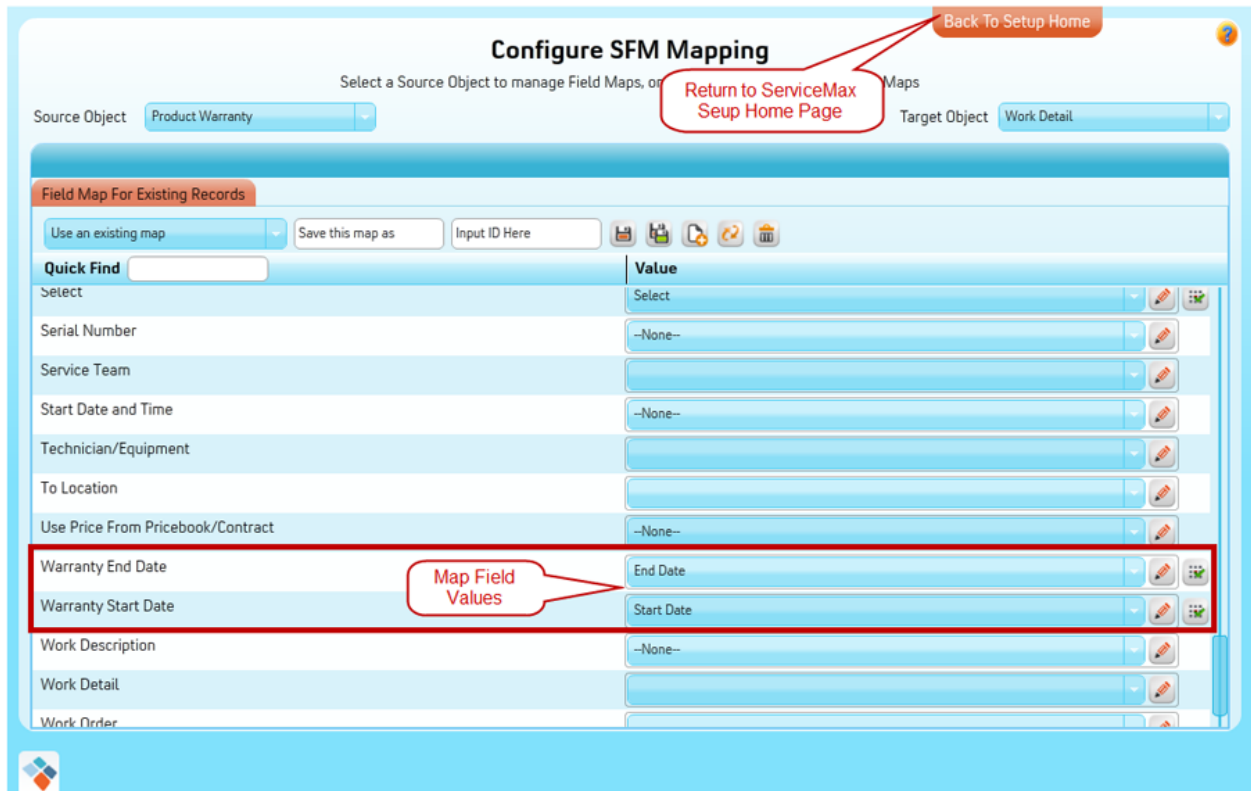
Quick Find: [Search Box] Value

Field	Value
Service Team	[Dropdown]
Start Date and Time	--None--
Technician/Equipment	[Dropdown]
To Location	[Dropdown]
Use Price From Pricebook/Contract	--None--
Warranty End Date	End Date
Warranty Start Date	Start Date
Work Description	--None--
Work Detail	[Dropdown]
Work Order	[Dropdown]

Figure 2: Configure SFM Mapping (Field Map for Existing Records)

8. Select **End Date** as the value for the **Warranty End Date** field. See figure below.

9. Select **Start Date** as the value for the **Warranty Start Date** field.



Configure SFM Mapping

Select a Source Object to manage Field Maps, or Maps

Source Object: Product Warranty Target Object: Work Detail

[Back To Setup Home](#)

[Return to ServiceMax Setup Home Page](#)

Field Map For Existing Records

Use an existing map Save this map as Input ID Here



Quick Find	Value
Select	Select
Serial Number	--None--
Service Team	
Start Date and Time	--None--
Technician/Equipment	
To Location	
Use Price From Pricebook/Contract	--None--
Warranty End Date	End Date
Warranty Start Date	Start Date
Work Description	--None--
Work Detail	
Work Order	

[Map Field Values](#)

Figure 3: Map Fields (Warranty End Date/Start Date)

10. In the **Save this map as** text box, enter a name for your map. When you click inside the **Input ID Here** text box, it automatically populates with an underscore variation of your map name.
11. Click **Save** to save your map.



Note: There are two options for choosing values: Click  and select an option from the **Value** picklist, or click  and enter a value in the **Value** text field.



Note: If you do not see Warranty End Date and Warranty Start Date as map field options, you can create custom objects in Salesforce. For information on how to create custom objects, view the Managing Custom Objects section of the Salesforce help documentation: https://help.salesforce.com/htviewhelpdoc?id=dev_objectedit.htm&siteLang=en_US.

After you have configured your map in the SFM Mapping module, go to the SFM Transaction Designer & Docs module and update the Page Layout/Screen Designer tab as described in the instructions below.

12. Click the **Back To Setup Home** button to return to the ServiceMax Setup Home page. See figure above.
13. In the ServiceMax Setup Home screen, click the **Service Flow Manager** button.
14. Click the **SFM Transaction & Docs Designer** button.
15. Click the **Go** button.
16. In the SFM Transaction & Docs Designer screen, select the **SFM transaction Add/Edit Products Serviced** and click the **Screen Designer** tab. See figure below.
17. Click inside the **Product Warranty** text box. See figure below.

18. In the **Object Mapping** picklist, select **Warranty to Work Details**.

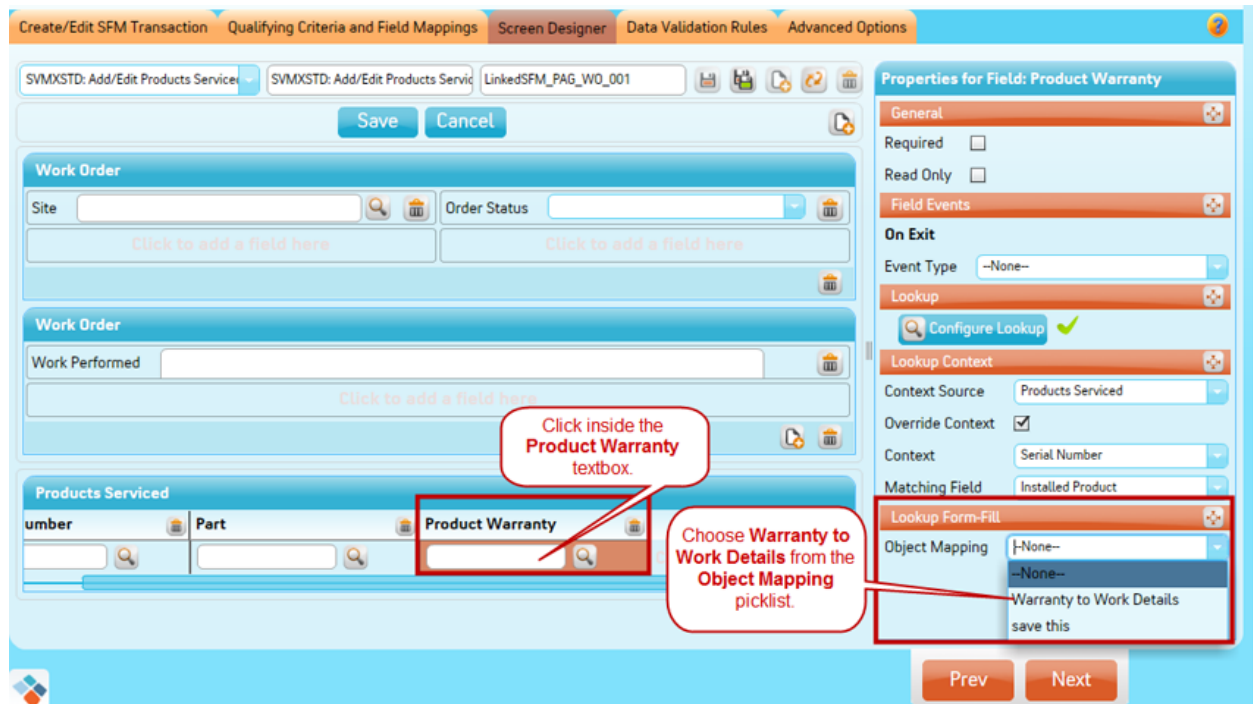


Figure 4: Screen Designer

19. Click **Save** to save your settings.
20. Continue to edit your SFM transaction as needed.

See Also:

[Lookup Form Fill section of Using the SFM Transaction Screen](#)

[Advanced Configuration: SFM Mapping Module](#)

[Advanced Configuration: SFM Transaction Designer \(Lookup Form Fill section\)](#)