Paris Field Service Management

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Company Headquarters
2225 Lawson Lane
Santa Clara, CA 95054
United States
(408) 501-8550

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Field Service Management

The ServiceNow® Field Service Management application helps organizations manage work tasks performed on location. Match tasks to agents based on skills, geographic territory assignments, and available inventory. Agents can record details on assigned tasks like completion status, travel time to jobs, and time spent.
The infographic below provides a high-level overview of the Field Service Management application.
Proactively manage and solve customer issues in the field

Problems that require on-site services from field technicians must be addressed and resolved fast. The costs are high if you're attempting to resolve complex on-site issues using disparate, unconnected systems with little or no automation or visibility into the processes necessary to successfully complete tasks. Get more tasks resolved faster with applications that can streamline task workflows and help your field service teams proactively address issues and resolve them quickly. With Field Service Management, connect teams, processes, and systems to find the root cause of issues and resolve them in a timely manner. Empower your technicians with access to all of their tasks using the Field Service mobile application, which can be used on or offline.

View and download the full infocard for a highlight of Field Service Management features.

<table>
<thead>
<tr>
<th>Efficiently manage technicians and tasks based on location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use maps in Field Service to view assigned and unassigned agent tasks and optimize task routes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drag and drop work assignments based on proximity, availability, and skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drag and drop tasks to agents using Central Dispatch.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Empower technicians with an optimized mobile application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept or reject tasks, track travel and work time, display tasks or parts and do more using the Field Service mobile application.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Improve insights with reporting and dashboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access scorecards, drill into breakdowns, and directly access the underlying operational records using reports and dashboards.</td>
</tr>
</tbody>
</table>
Efficiently manage technicians and tasks based on location

Using agent maps, field service agents can view optimized routes for tasks assigned to them on a given day. Field service managers can view optimized routes for tasks assigned to members in their team. Dispatchers can use the dispatch map to know where field service technicians are to assign and re-assign work based on proximity. Using a color-coded service level agreement (SLA) map, they can prioritize work tasks for technicians based on SLA contractual terms, such as time to breach. The dispatch map enables dispatchers to view all open work tasks to understand work distribution and to quickly identify impacted areas. Work tasks can easily be assigned, routes optimized, and assignments changed directly from the map.
Drag and drop work assignments based on proximity, availability, and skills

Central Dispatch gives dispatchers drag-and-drop work assignment capabilities so they can assign tasks to technicians based on proximity, availability, and the specific skills required. Dispatchers can see at-a-glance what times are available for technicians and the current distance from tasks, then drag-and-drop unassigned work onto available times. The ideal field service technician will be automatically selected, and auto-routing determines the optimal route for them to service multiple locations.
Empower technicians with an optimized mobile application
From their supported smartphones and tablets, field service technicians can accept or reject tasks, track travel and work time, display tasks or parts using map views, and access their schedules. Questionnaires are available to collect and complete necessary task details, such as safety or work completion checklists. When assignments are complete, customers can acknowledge the work with a signature on the technician’s mobile device and receive a work order summary by email. The mobile app also supports offline mode, allowing technicians to work without internet connectivity.
Improve insights with reporting and dashboards
Use and customize reports available with your application to get insights into task metrics such as mean time for resolving work order tasks. Get real-time understanding of utilization, capacity, customers and locations requesting work, and other metrics using the dashboard. Managers can easily customize reports and dashboards to gain real-time insight into technician utilization and capacity, and better understand customer and employee work requests and locations to pinpoint improvement opportunities.

Get started

- Work with an implementation specialist to streamline your Field Service Management setup process. To learn more, see the Customer Success Center.
- Sign up for the ServiceNow Field Service Management training program and certification to learn about core Field Service Management functionality and release-specific features.
- For information on how to begin setting up Field Service Management, see Setting up Field Service Management.

Applications and features

- Field Service Management
- Field Service integration with Customer Service Management
- Field Service integration with Financial Management
- Field Service integration with Project Portfolio Management
- Mobile experience for Field Service Management
- Planned Maintenance

Field Service Management overview module

Use the Field Service Management application to manage work requests that are performed on location by field service agents.

Use Field Service Management to record details such as necessary skills and required parts in work orders and work order tasks and then match tasks to agents based on skill, location, and inventory. Field service agents perform the assigned tasks and track their travel and work time, part requirements, and asset usage.

Integration with Service Management

Field Service Management is integrated with the Service Management (SM) application. This integration helps you manage settings for all of the Service Management-based applications such as Facilities Service Management and Finance Service Management.

Field Service Management user roles

Access to the Field Service Management overview module is granted to a specific set of user roles. Access is limited for users with non-administrative roles. The different levels of access include:

- View: the user can view the overview page and refresh reports.
- Customize: the user can refresh, add, delete, and rearrange reports and other widgets.

Several different roles are used to manage the field service process. The following list provides a brief description of the key roles and what they do.

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Field Service Management overview module roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>admin</td>
<td>View, customize</td>
</tr>
<tr>
<td>sm_admin</td>
<td>View, customize</td>
</tr>
<tr>
<td>sm_agent</td>
<td>View</td>
</tr>
<tr>
<td>wm_basic</td>
<td>View</td>
</tr>
<tr>
<td>wm_dispatcher</td>
<td>View</td>
</tr>
<tr>
<td>wm_initiator</td>
<td>View</td>
</tr>
<tr>
<td>wm_qualifier</td>
<td>View</td>
</tr>
<tr>
<td>wm_initiator_qualifier</td>
<td>View</td>
</tr>
<tr>
<td>wm_initiator_qualifier_dispatcher</td>
<td>View</td>
</tr>
</tbody>
</table>

User role | Description
--- | ---
Administrator [wm_admin] | Manages data and performs setup and configuration tasks. Users with this role can also create, approve, qualify, and dispatch work orders and tasks.  
Initiator [wm_initiator] | Creates work orders and assigns qualification groups.  
Approver user [wm_approver_user] | Approves work orders before they are qualified or assigned to field service agents.  
Qualifier [wm_qualifier] | Qualifies work orders by assigning dispatch groups, creating work order tasks, and adding part requirements.  
Dispatcher [wm_dispatcher] | Schedules tasks, adds necessary parts, and assigns tasks to field service agents. Users with this role can also create tasks and add and source parts as needed.  
Agent [wm_agent] | Performs work at customer locations and records details in the work order form, including parts used and incidental expenses.

Two combination roles can also be used:
- wm_initiator_qualifier
- wm_initiator_qualifier_dispatcher

For a more detailed description, see *User roles installed with Field Service Management.*

**Work orders and work order tasks**

The widgets on this page help users track and manage aspects of the Field Service Management processes, such as work orders, work order tasks, and dispatch locations.
Note: If you have tasks defined with assignment groups of the type Vendor, additional reports display useful information for tracking vendor tasks and performance.

Work orders are records that store information about requested work, including customer names and addresses, locations where work is to be performed, and any associated configuration items (CIs). Work orders can include one or more tasks that contain specific details about the work to be performed, such as required agent skills and part requirements.

Work order and work order task states

Work orders and work order tasks move through several states from creation to completion. Different user roles are required to move work orders from one state to the next, with each role providing an important part of the process. These roles work together to define work orders, add the necessary technical information, break the work down into specific tasks, and assign tasks to dispatch groups and field service agents. After accepting assigned tasks, agents order and pick up parts, perform the work, and record the details.

The state of a work order is displayed on the work order and task forms in the process flow formatter and also in the State field.

Work order states

<table>
<thead>
<tr>
<th>Work order state</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft</td>
<td>The initiator (wm_initiator) creates a work order and adds information to the work order form about the work to be done.</td>
</tr>
<tr>
<td>Awaiting Qualification</td>
<td>The work order is ready to be reviewed by the qualifier (wm_qualifier).</td>
</tr>
<tr>
<td>Qualified</td>
<td>The qualifier (wm_qualifier) has added any necessary technical information to the work order, created tasks, added part requirements, and assigned a dispatch group.</td>
</tr>
<tr>
<td>Assigned</td>
<td>The dispatcher (wm_dispatcher) assigns one or more of the work order tasks to a field service agent.</td>
</tr>
<tr>
<td>Work in Progress</td>
<td>The agent (wm_agent) accepts the assigned work order task and begins work.</td>
</tr>
<tr>
<td>Closed Complete</td>
<td>The agent completes the work in the assigned task. Once all of the tasks for a work order are complete, the state of the work order is set to complete.</td>
</tr>
<tr>
<td>Closed Incomplete</td>
<td>The agent does not complete the work in the assigned task. If one or more tasks for a work order are closed incomplete, the state of the work order is closed incomplete.</td>
</tr>
<tr>
<td>Canceled</td>
<td>The work is no longer necessary or the work order is a duplicate. A reason for canceling the work order must be added to the Work notes field.</td>
</tr>
</tbody>
</table>

Work order task states

<table>
<thead>
<tr>
<th>Work order task state</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft</td>
<td>The qualifier (wm_qualifier) creates a task for a work order.</td>
</tr>
<tr>
<td>Pending Dispatch</td>
<td>The qualifier (wm_qualifier) assigns a dispatch group to the work order task.</td>
</tr>
<tr>
<td>Assigned</td>
<td>The dispatcher (wm_dispatcher) assigns the work order tasks to a field service agent.</td>
</tr>
<tr>
<td>Accepted</td>
<td>The field service agent (wm_agent) accepts the assigned task. The agent can also reject a task. If rejected, the task state returns to Pending Dispatch.</td>
</tr>
<tr>
<td>Work order task state</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Work in Progress</td>
<td>The field service agent (wm_agent) clicks <strong>Start Travel</strong> on the Work Order Task form, followed by <strong>Start Work</strong>, and begins the work described in the task.</td>
</tr>
<tr>
<td>Closed Complete</td>
<td>The field service agent (wm_agent) completes the work for the assigned task, adds a description in the <strong>Work notes</strong> field, and clicks <strong>Close Complete</strong> on the Work Order Task form. The agent can also click <strong>Close Incomplete</strong> and add a reason for the incomplete closure.</td>
</tr>
<tr>
<td>Closed Incomplete</td>
<td>The field service agent (wm_agent) cannot complete the work for the assigned task, adds a reason for the incomplete closure in the <strong>Work notes</strong> field, and clicks <strong>Close Incomplete</strong>.</td>
</tr>
<tr>
<td>Canceled</td>
<td>The work order task is no longer necessary or is a duplicate of another task. The field service agent (wm_agent) adds a reason for the cancellation in the <strong>Work notes</strong> field and clicks <strong>Cancel</strong>.</td>
</tr>
</tbody>
</table>

**Work locations**

Field Service Management relies on defined locations for qualifying work orders and tasks and assigning dispatchers and agents. As part of setting up the application, you can define your locations and then create qualification, dispatch, and assignment groups based on those locations.

**Using guided setup to implement Field Service Management**

Field Service Management guided setup provides a sequence of tasks that help you to configure Field Service Management on your ServiceNow instance. To open Field Service Management guided setup, navigate to **Field Service > Administration > Guided Setup**. For more information about using the guided setup interface, see **Using guided setup**.

**Section 508 compliance features**

Users can view and interact with the following Field Service Management features using Section 508 compliance features:

- Central Dispatch
- Manager Calendar
- Agent Calendar

**Setting up Field Service Management**

Set up Field Service Management to create and manage location-based work tasks that help resolve customer issues quickly.

To set up Field Service Management:

- Activate the Field Service Management plugin ((com.snc.work_management) plugin).
- Optionally, configure domain separation for Field Service Management.
- Configure the Field Service Management application based on your requirements.
Activate Field Service Management

The Field Service Management (com.snc.work_management) plugin is available as a separate subscription. This plugin activates related plugins if they are not already active. After Field Service Management is activated, you can also activate additional plugins that provide demo data and enable a variety of features.

Role required: admin

The Field Service Management plugin activates these related plugins if they are not already active.

### Plugins for Field Service Management

<table>
<thead>
<tr>
<th>Plugin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Schedule [com.snc.agent_schedule]</td>
<td>Enables customer service agents and field service technicians to see work</td>
</tr>
<tr>
<td></td>
<td>schedules and assignments and also add personal events such as meetings or</td>
</tr>
<tr>
<td></td>
<td>appointments.</td>
</tr>
<tr>
<td>Appointment Booking [com.snc.appointment_booking]</td>
<td>Enables setup and configuration for the appointment booking feature</td>
</tr>
<tr>
<td>Assignment Workbench [com.snc.assignment_workbench]</td>
<td>Workbench to assign work to individual agents easily so that work gets</td>
</tr>
<tr>
<td></td>
<td>done efficiently and effectively.</td>
</tr>
<tr>
<td>Central Dispatch [com.snc.central_dispatch]</td>
<td>Installs the core Service Management items used to allow other service-</td>
</tr>
<tr>
<td></td>
<td>related plugins to work, such as Field Service Management and Facilities</td>
</tr>
<tr>
<td></td>
<td>Service Management.</td>
</tr>
<tr>
<td>Dynamic Scheduling [com.snc.dynamic_scheduling]</td>
<td>Enables dynamic scheduling for Service Management applications, which</td>
</tr>
<tr>
<td></td>
<td>supports bulk task recommendations and interval-based auto assignment.</td>
</tr>
<tr>
<td>Field Service – Questionnaire [com.snc.wm_questionnaire]</td>
<td>Enables the system administrator to create questionnaires for work orders</td>
</tr>
<tr>
<td></td>
<td>and work order tasks.</td>
</tr>
<tr>
<td>Field Service – Signature Pad [com.snc.wo_signature_pad]</td>
<td>Captures a customer signature for closed work orders. Creates a PDF of</td>
</tr>
<tr>
<td></td>
<td>the work order that includes a summary of the completed work and the name</td>
</tr>
<tr>
<td></td>
<td>and signature of the customer.</td>
</tr>
<tr>
<td>Field Service Management Mobile [com.snc.work_management_m]</td>
<td>Adds the Field Service Management menu to the mobile user interface.</td>
</tr>
<tr>
<td>Service Management Core [com.snc.service_management.core]</td>
<td>Adds the core Service Management items that enable other service-related</td>
</tr>
<tr>
<td></td>
<td>plugins to work, such as Field Service Management, Facilities Service</td>
</tr>
<tr>
<td></td>
<td>Management, and the custom-app creator.</td>
</tr>
<tr>
<td>Special Handling Notes [com.sn_shn]</td>
<td>Enables users to quickly view important information about records.</td>
</tr>
</tbody>
</table>

1. Navigate to System Applications > All Available Applications > All.
2. Find the plugin using the filter criteria and search bar.
   You can search for the plugin by its name or ID. If you cannot find a plugin, you may have to request it from ServiceNow personnel. To request a plugin, follow the steps in Request a plugin.
3. Click Install, and then in the Activate Plugin dialog box, click Activate.
Additional plugins for Field Service Management

After Field Service Management is activated, you can activate additional plugins that provide demo data and enable a variety of features.

You must have the admin role to activate these additional plugins. For details, see Activate a plugin.

<table>
<thead>
<tr>
<th>Plugin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Service Management Geolocation Demo Data</td>
<td>Enables the Field Service Management application to use Google Maps travel times when auto-dispatching work order tasks. Activating the Field Service Automation Geolocation plugin automatically activates the Field Service Management plugin.</td>
</tr>
<tr>
<td>Field Service Management Demo Data</td>
<td>Adds demonstration data for the Field Service Management application covering the medical and telecommunication domains.</td>
</tr>
<tr>
<td>Field Service Management Mobile</td>
<td>Adds the Field Service Management menu to the mobile user interface. Activating this plugin automatically activates or upgrades the Field Service Management and Mobile UI plugins.</td>
</tr>
<tr>
<td>Customer Service with Field Service Management</td>
<td>This plugin provides an integration between the Customer Service Management and Field Service Management applications. Customers and consumers can view case-related work orders from the Customer Service and Consumer Service Portals. In the Field Service Management application, users can view account and contact information on work orders and work order tasks.</td>
</tr>
<tr>
<td>Performance Analytics - Content Pack - Field Service Management</td>
<td>Enables Performance Analytics for Field Service Management. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.</td>
</tr>
<tr>
<td>Field Service with Project Management</td>
<td>Field Services Integration with Project Management. This plugin activates the Project Management application and may require additional licenses.</td>
</tr>
</tbody>
</table>
### Components installed with Field Service Management

Several types of components are installed with Field Service Management.

Demo data for the Field Service Management application is a separate plugin. The Field Service Management Demo Data plugin (com.snc.work_management.demo) provides sample qualifiers, dispatchers, agents, work orders, work order tasks, stockrooms, and asset information.

### Tables installed with Field Service Management

Tables are added with Field Service Management.

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Order [wm_order]</td>
<td>Stores work order records.</td>
</tr>
<tr>
<td>Work Order Flow [sf_work_order]</td>
<td>Stores the work order state flow records.</td>
</tr>
<tr>
<td>Work Order Model [cmdb_workorder_product_model]</td>
<td>Stores the Product Catalog work order model records. This table was modified by the Field Service Management plugin. This table is renamed and part of Service Order Management.</td>
</tr>
<tr>
<td>Work Order Task [wm_task]</td>
<td>Unit of work performed by one person, in one session (one location and one time).</td>
</tr>
<tr>
<td>Work Task Flow [sf_work_task]</td>
<td>Stores the work task state flow records.</td>
</tr>
<tr>
<td>Work Task Model [cmdb_servicetask_product_model]</td>
<td>Stores the Product Catalog work task model records. This table was modified by the Field Service Management plugin. This table is renamed and part of Service Order Management.</td>
</tr>
</tbody>
</table>
### Properties installed with Field Service Management

The Field Service Management application provides the following system properties.

#### Properties for Field Service Management

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>glide.ui.wm_order_activity.fields</td>
<td>Determines which fields are tracked in the activities list for work orders. The system automatically synchronizes the values in this property and the selections made by personalizing activities.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Type:</strong> String</td>
</tr>
<tr>
<td></td>
<td>• <strong>Default value:</strong> opened_by, work_notes</td>
</tr>
<tr>
<td></td>
<td>• <strong>Location:</strong> System Properties [sys_properties] table</td>
</tr>
<tr>
<td>glide.ui.wm_task_activity.fields</td>
<td>Determines which fields are tracked in the activities list for work order tasks. The system automatically synchronizes the values in this property and the selections made by personalizing activities.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Type:</strong> String</td>
</tr>
<tr>
<td></td>
<td>• <strong>Default value:</strong> work_notes, assigned_to</td>
</tr>
<tr>
<td></td>
<td>• <strong>Location:</strong> System Properties [sys_properties] table</td>
</tr>
<tr>
<td>work.management.agent.geo.history.update.duration</td>
<td>Set the duration (in minutes) of the latest system update that you want to consider for calculating the agent's geolocation history relative to current time. If the duration of the last geolocation history update is more than the duration set for this property, then the system uses the agent's task or home location instead of the geolocation history to determine the agent's current location. For example, if the value for this property is set to 240 minutes, and if the system update for an agent's last geolocation history is more than 240 minutes, the system does not consider the geolocation history and will instead use the agent's task or home location to determine the agent's current location.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Type:</strong> Integer</td>
</tr>
<tr>
<td></td>
<td>• <strong>Default value:</strong> 240</td>
</tr>
<tr>
<td></td>
<td>• <strong>Location:</strong> System Properties list</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>work.management.allow.doublebooking.dynamicscheduling</td>
<td>Enable this property to true would allow the dispatchers to double-book agents manually even when dynamic scheduling is enabled.</td>
</tr>
<tr>
<td></td>
<td>• Type: true/false</td>
</tr>
<tr>
<td></td>
<td>• Default value: false</td>
</tr>
<tr>
<td></td>
<td>• Location: System Properties list [sys_properties] table</td>
</tr>
<tr>
<td>work.management.allow.auto.metric_cleanup</td>
<td>Set the duration in number of days that the metric instance table should periodically be purged of work order task information to avoid an unnecessary amount of data in the table.</td>
</tr>
<tr>
<td></td>
<td>• Type: Integer</td>
</tr>
<tr>
<td></td>
<td>• Default value: 365</td>
</tr>
<tr>
<td></td>
<td>• Location: System Properties list [sys_properties] table</td>
</tr>
<tr>
<td>work.management.default.end.time</td>
<td>Default end time for all work agents when no schedule is set, formatted in a 24-hour clock.</td>
</tr>
<tr>
<td></td>
<td>• Type: String</td>
</tr>
<tr>
<td></td>
<td>• Default value: 17:00</td>
</tr>
<tr>
<td></td>
<td>• Location: Field Service &gt; Administration &gt; Properties</td>
</tr>
<tr>
<td>work.management.default.start.time</td>
<td>Default start time for all work agents when no schedule is set. This value sets the start time for a day other than the current day, when no scheduled task exists or is continued from the previous day. This property uses a 24-hour clock.</td>
</tr>
<tr>
<td></td>
<td>• Type: String</td>
</tr>
<tr>
<td></td>
<td>• Default value: 08:00</td>
</tr>
<tr>
<td></td>
<td>• Location: Field Service &gt; Administration &gt; Properties</td>
</tr>
<tr>
<td>work.management.allow.auto.timecard</td>
<td>Automatically create a time card for a work order task when the task is paused or resumed. Every time the task is resumed, the time taken to work on the task is recorded in the time card. The Actual Work Duration field captures the cumulative amount of time worked on the task.</td>
</tr>
<tr>
<td></td>
<td>• Type: true/false</td>
</tr>
<tr>
<td></td>
<td>• Default value: false</td>
</tr>
<tr>
<td></td>
<td>• Location: Field Service &gt; Administration &gt; Properties</td>
</tr>
<tr>
<td>Property</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>work.management.limit.location</td>
<td>Field Service Management should limit the dispatch groups available to choose by the location of the task. By default, the list of available dispatch groups is filtered by their proximity to the work order task location. When this property is set to false, the system displays all dispatch groups for selection, without any consideration of location. If only one dispatch group is available for a work order task in any location, that group is automatically entered in the Dispatch group field.</td>
</tr>
</tbody>
</table>
|                                                        | • Type: true/false
|                                                        | • Default value: true
|                                                        | • Location: Field Service > Administration > Properties > Dispatch Properties for Field Service |
| work.management.max.agents.processed                   | Sets the maximum number of agents processed by auto-dispatch at a time. The system has an absolute limit of 300 agents and sets the value at that level. If you specify more than 300, then the system cannot auto-dispatch a task for a dispatch group that contains more agents than the value configured. |
|                                                        | • Type: Integer
|                                                        | • Default value: 100
|                                                        | • Location: Field Service > Administration > Properties |
| work.management.work.spacing                           | Amount of time (in minutes) to add between the end of a task and the travel start of the next. An example of a valid time value is 10. |
|                                                        | • Type: Integer
|                                                        | • Default value: 0
|                                                        | • Location: Field Service > Administration > Properties |
| com.snc.wm.wo.task_window_days                         | Default days for a window of a task. |
|                                                        | • Type: Integer
|                                                        | • Default value: 14
|                                                        | • Location: Field Service > Administration > Properties |
| work.management.use.mandatory.skills                   | Enables the mandatory skills feature and indicates that the Task Skills [task_m2m_skill] table is being used for work orders and work order tasks. |
|                                                        | • Type: true/false
|                                                        | • Default value: false
|                                                        | • Location: System Properties list |
### Properties for calculating estimated travel time and distance

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>work.management.autodispatch.geolocation</td>
<td>Geolocation must be used to calculate the estimated travel time for dynamic scheduling and auto assignment of tasks.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Type</strong>: true/false</td>
</tr>
<tr>
<td></td>
<td>• <strong>Default value</strong>: true</td>
</tr>
<tr>
<td></td>
<td>• <strong>Location</strong>: Field Service &gt; Administration &gt; Properties &gt; Dispatch Properties for Field Service Management</td>
</tr>
</tbody>
</table>

**Note:** To use the Google Maps API with dynamic scheduling, you must also enable the **Use Google for travel time and traffic data** check box on the Dynamic Scheduling Configuration form.
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| work.management.travel.calculation.dynamic_scheduling | Uses Google Maps API or straight line estimates to calculate estimated agent travel time and distance to task locations when agents are assigned tasks using dynamic scheduling.  
  • Type: choice list  
  • Default value: Use straight line estimate  
  • Location: Field Service > Administration > Properties |
| work.management.travel.calculation.auto_assignment | Uses Google Maps API or straight line estimates to calculate estimated agent travel time and distance to task locations when agents are assigned tasks using auto assignment.  
  • Type: choice list  
  • Default value: Use Google Maps API  
  • Location: Field Service > Administration > Properties |
| work.management.travel.calculation.manual_assignment | Uses Google Maps API or straight line estimates to calculate estimated agent travel time and distance to task locations when tasks are manually assigned to agents.  
  • Type: choice list  
  • Default value: Use straight line estimate  
  • Location: Field Service > Administration > Properties |
| work.management.travel.calculation.route_optimization | Uses Google Maps API or straight line estimates to calculate estimated agent travel time and distance to task locations when agent route is optimized.  
  • Type: choice list  
  • Default value: Use Google Maps API  
  • Location: Field Service > Administration > Properties |
| work.management.travel.calculation.expected_arrival | Uses Google Maps API or straight line estimates to calculate estimated agent travel time and distance between task location and agent's locations when agent starts to travel.  
  • Type: choice list  
  • Default value: Use Google Maps API  
  • Location: Field Service > Administration > Properties |

**Geolocation properties**

Field Service Management adds the following geolocation properties.
# Geolocation properties for Field Service Management

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>work.management.map.merge.task.agent.markers</strong></td>
<td>Merges the task and agent markers on the geolocation maps with a new purple marker. When this property is true, agent and task markers that are close together are merged into a purple cluster that displays the count of both marker types. The pop-up information window for the purple marker displays the items for all agents and tasks. If this property is false, agents and tasks will only be gathered into their own clusters and not into the single, purple cluster.</td>
</tr>
<tr>
<td>• <strong>Type</strong>: true/false</td>
<td>• <strong>Default value</strong>: false</td>
</tr>
<tr>
<td>• <strong>Location</strong>: Field Service &gt; Administration &gt; Properties</td>
<td></td>
</tr>
<tr>
<td><strong>work.management.evening.rush.hours</strong></td>
<td>Evening rush hour span, formatted as 14:30-16:00. This property uses a 24 hour clock. All times are expressed as a range, separated by a dash with no spaces. Times not using this format are ignored. This property must be used with the <code>work.management.morning.rush.hours</code> and <code>work.management.rush.travel.buffer</code> properties.</td>
</tr>
<tr>
<td>• <strong>Type</strong>: String</td>
<td>• <strong>Default</strong>: 0</td>
</tr>
<tr>
<td>• <strong>Location</strong>: Field Service &gt; Administration &gt; Properties</td>
<td></td>
</tr>
<tr>
<td><strong>work.management.morning.rush.hours</strong></td>
<td>Morning rush hour span, formatted as 06:30-08:00. This property uses a 24 hour clock. All times are expressed as a range, separated by a dash with no spaces. Times not using this format are ignored. This property must be used with the <code>work.management.evening.rush.hours</code> and <code>work.management.rush.travel.buffer</code> properties.</td>
</tr>
<tr>
<td>• <strong>Type</strong>: String</td>
<td>• <strong>Default</strong>: 0</td>
</tr>
<tr>
<td>• <strong>Location</strong>: Field Service &gt; Administration &gt; Properties</td>
<td></td>
</tr>
<tr>
<td><strong>work.management.rush.travel.buffer</strong></td>
<td>Percentage to add to all rush hour travel times. The system uses this percentage to calculate schedules when optimizing task routes for agents. Use this property when both morning and evening rush hour times are defined. An example of a valid time buffer percentage is 15.</td>
</tr>
<tr>
<td>• <strong>Type</strong>: Integer</td>
<td>• <strong>Default value</strong>: 0</td>
</tr>
<tr>
<td>• <strong>Location</strong>: Field Service &gt; Administration &gt; Properties</td>
<td></td>
</tr>
</tbody>
</table>
### Property Description

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>work.management.travel.buffer</td>
<td>Percentage to add to all travel times. An example of a valid percentage value is 15.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Type</strong>: Integer</td>
</tr>
<tr>
<td></td>
<td>• <strong>Default value</strong>: 0</td>
</tr>
<tr>
<td></td>
<td>• <strong>Location</strong>: [Field Service &gt; Administration &gt; Properties]</td>
</tr>
<tr>
<td>work.management.allow.toll.roads</td>
<td>Allows the system to use toll roads when auto-routing or optimizing task routes for agents.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Type</strong>: true/false</td>
</tr>
<tr>
<td></td>
<td>• <strong>Default value</strong>: true</td>
</tr>
<tr>
<td></td>
<td>• <strong>Location</strong>: [Field Service &gt; Administration &gt; Properties]</td>
</tr>
</tbody>
</table>

### Roles installed with Field Service Management

Roles are added with Field Service Management.

<table>
<thead>
<tr>
<th>Role title [name]</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Service Management Administrator [wm_admin]</td>
<td>Manages data related to field service management. Field service management administrators also can:</td>
</tr>
<tr>
<td></td>
<td>• Control and override all information in the Field Service Management application.</td>
</tr>
<tr>
<td></td>
<td>• Delete work orders and tasks.</td>
</tr>
<tr>
<td></td>
<td>• Create tasks using the Clone Task feature.</td>
</tr>
<tr>
<td></td>
<td>• Create, edit, and delete work order models and work task models.</td>
</tr>
<tr>
<td></td>
<td>• Create, edit, and delete incidentals.</td>
</tr>
<tr>
<td></td>
<td>• View expense lines.</td>
</tr>
<tr>
<td></td>
<td>• View certain fields in non-subscription-based contracts.</td>
</tr>
<tr>
<td></td>
<td>• Create questionnaires.</td>
</tr>
<tr>
<td></td>
<td>• Book an appointment.</td>
</tr>
<tr>
<td></td>
<td>Contains Roles</td>
</tr>
<tr>
<td></td>
<td>• wm_approver_user</td>
</tr>
<tr>
<td></td>
<td>• fsm_skill_admin</td>
</tr>
<tr>
<td></td>
<td>• dynamic_scheduling_admin</td>
</tr>
<tr>
<td></td>
<td>• wm_agent</td>
</tr>
<tr>
<td></td>
<td>• skill_model_admin</td>
</tr>
<tr>
<td></td>
<td>• skill_admin</td>
</tr>
<tr>
<td></td>
<td>• territory_admin</td>
</tr>
<tr>
<td></td>
<td>• sn_apptmnt_booking.appointment_booking_admin</td>
</tr>
<tr>
<td></td>
<td>• plan_maint_admin</td>
</tr>
<tr>
<td></td>
<td>• wm_dispatcher</td>
</tr>
<tr>
<td></td>
<td>• questionnaire_admin</td>
</tr>
<tr>
<td></td>
<td>• catalog_admin</td>
</tr>
<tr>
<td></td>
<td>• wm_qualifier</td>
</tr>
<tr>
<td></td>
<td>• knowledge_manager</td>
</tr>
<tr>
<td></td>
<td>• template_admin</td>
</tr>
<tr>
<td>Role title [name]</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Field Service Management Agent [wm_agent]</td>
<td>Manages actual task time and performs work on site. Agents also can: • Accept or reject tasks assigned to them. • Add parts requirements. • Source parts. • Create tasks using the Clone Task feature. • Add work notes to work orders and work order tasks. • Submit questionnaires. • Create, edit, and delete incidentals. • View expense lines. • View certain fields in non-subscription-based contracts. • Book an appointment. Agents cannot update schedule or task window times or toggle the window control.</td>
</tr>
<tr>
<td>Field Service Management Approver User [wm_approver_user]</td>
<td>Responsible for approving work orders before they are qualified or assigned.</td>
</tr>
<tr>
<td>Field Service Management Basic [wm_basic]</td>
<td>Create work orders and follow up on work orders they had created. Common data access shared by all field service roles.</td>
</tr>
<tr>
<td>Role title [name]</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Field Service Management Dispatcher      | Schedules tasks, adds parts, and assigns tasks to work agents. Dispatchers also can:  
  [wm_dispatcher]                          | • Create tasks.  
  • Add part requirements.  
  • Source parts.  
  • Edit all work order task fields and manage tasks from Draft to Assigned status.  
  • Edit the Assigned to field until work starts.  
  • Create tasks using the Clone Task feature.  
  • Set actual travel time and work start and end times if needed.  
  • Add work notes to any field service record.  
  • Create, edit, and delete incidentals.  
  • View expense lines.  
  • View certain fields in non-subscription-based contracts. |  
  • wm_basic  
  • inventory_user  
  • territory_user  
  • dynamic_scheduling_user  
  • document_management_user  
  • sn_customerservice.customer_data_viewer  
  • skill_model_user  
  • sn_apptmnt_booking.appointment_booking_manager  
  • timecard_user |
| Field Service Management Initiator        | Creates work orders and assigns qualification group. Initiators also can:  
  [wm_initiator]                           | • Edit work orders they create that are in the Draft state.  
  • Add work notes to any field service record.  
  • View work order tasks and part requirements. |  
  • wm_basic |
| Field Service Management Initiator        | Initiator-qualifiers can:  
  Qualifier [wm_initiator_qualifier]       | • Create work orders.  
  • Create tasks.  
  • Add part requirements.  
  • Source parts.  
  • Assign skills to agents.  
  • View incidentals. |  
  • wm_initiator  
  • wm_qualifier |
<table>
<thead>
<tr>
<th>Role title [name]</th>
<th>Description</th>
<th>Contains Roles</th>
</tr>
</thead>
</table>
| Field Service Management Initiator Qualifier Dispatcher [wm_initiator_qualifier_dispatcher] | Initiator-qualifier-dispatchers can:  
• Create work orders.  
• Create tasks.  
• Add parts requirements.  
• Source parts.  
• Assign skills to agents.  
• Assign work to agents.  
• Manage agent tasks.  
• View incidentals. | • wm_initiator  
• wm_dispatcher  
• wm_qualifier |
| Field Service Management Qualifier [wm_qualifier] | Qualifies work orders and creates work order tasks. Qualifiers also can:  
• Edit work orders in the **Qualified** state.  
• Edit work orders in the **Awaiting Qualification** state.  
• Edit tasks that are in the **Draft** state to provide technical details, such as information about CIs involved or parts needed.  
• Create tasks using the Clone Task feature.  
• Change the qualification group.  
• Set the dispatch group.  
• Add part requirements.  
• Source parts  
• Add work notes to any field service record.  
• View incidentals. | • wm_basic  
• inventory_user  
• territory_user  
• document_management_user  
• skill_model_user |
| Field Service Management Read [wm_read] | Capable of reading work orders and work order tasks. | • sn_apptmnt_booking.appointment_booking_user  
• cmdb_read |
| Field Service Desk Agent [sn_fsm_servicedesk_agent] | Allows a user to create a work order, apply a template and progress the work order. | • wm_read  
• sn_apptmnt_booking.appointment_booking_user |

**Role integration with Customer Service Management**

When you enable the Customer Service Management plugin (com.sn_customerservice) along with the Field Service Management plugin (com.snc.work_management) and add specific Customer Service roles to the Field Service agents, they can view or create a case and also view additional customer service data. For more information on customer service agent roles, see *Roles installed with Customer Service Management*. 
Adding this role | Allows agents
---|---
**sn_customerservice.case_viewer** | • To have read access to cases.  
• To view all fields in a case that a customer service agent [sn_customerservice_agent] can access.

**sn_customerservice.customer_data_viewer** | **Becomes** read-only access to customer data entities such as:

• Install base items  
• Contracts  
• Entitlements  
• Accounts, contacts, and account team members  
• Assets  
• Consumers  
• Sold product

**sn_customerservice.proxy_contact** | To create a case using a record producer.

---

**Script includes installed with Field Service Management**

Script includes are added with Field Service Management.

<table>
<thead>
<tr>
<th>Script include</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMTimelineGroupSchedulePage</td>
<td>Schedules page script include for the field service resource chart.</td>
</tr>
<tr>
<td>WorkManagementInitiation</td>
<td>Links to a newly created work order and transfers any relevant information.</td>
</tr>
<tr>
<td>FSMQuestionnaireHelper</td>
<td>Creates questionnaires and associates with work order and work order tasks.</td>
</tr>
</tbody>
</table>

---

**Geolocation script includes**

Field Service Management adds the following geolocation script includes.

**Script includes for Field Service Management geolocation**

<table>
<thead>
<tr>
<th>Script include</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMGeolocationAJAX</td>
<td>Automatically routes tasks from the Field Service Management mobile dispatch map.</td>
</tr>
<tr>
<td>WMGeolocationUtils</td>
<td>Provides utilities for Field Service Management geolocation maps.</td>
</tr>
<tr>
<td>WorkTaskRouting</td>
<td>Routing functionality for work order tasks.</td>
</tr>
</tbody>
</table>

---

**Client scripts installed with Field Service Management**

Client scripts are added with Field Service Management.
### Client script

| **Calculate Window End** | Work Order Task [wm_task] | Automatically populates Window End Date based on the latest SLA breach date.  
- Default value: Inactive |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Populate Short Description</strong></td>
<td>Expense Line [fm_expense_line]</td>
<td>Automatically populates the short description of expense lines with the work order short description when expense lines are manually created from work orders. <strong>Cost Management</strong> must be activated.</td>
</tr>
<tr>
<td><strong>Hide End Date Fields</strong></td>
<td>Work Order [wm_order]</td>
<td>Hide estimated_end when the request-driven process is used and hide expected_end when task-driven is used.</td>
</tr>
<tr>
<td><strong>Update UI on load and model change</strong></td>
<td>Asset Usage [sm_asset_usage]</td>
<td></td>
</tr>
<tr>
<td><strong>Show/Hide Task Map section</strong></td>
<td>Work Order Task [wm_task]</td>
<td>This section of the map displays the location of the task and also shows the agents in the vicinity. This section needs to be visible only when the task is in the <strong>Pending Dispatch</strong> state.</td>
</tr>
<tr>
<td><strong>Part requirement activation</strong></td>
<td>Work Order [wm_order]</td>
<td>Hides part requirements on the Work Order form if part requirements are not activated in Field Service Configuration.</td>
</tr>
<tr>
<td><strong>Update Model and Quantity based on Asset</strong></td>
<td>Asset Usage [sm_asset_usage]</td>
<td></td>
</tr>
</tbody>
</table>

### Business rules installed with Field Service Management

Business rules are added with Field Service Management.

<table>
<thead>
<tr>
<th><strong>Business rule</strong></th>
<th><strong>Table</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accept</strong></td>
<td>Work Order Task [wm_task]</td>
<td>Automatically moves a task from the <strong>Assigned</strong> state to <strong>Accepted</strong> if the Accept/Reject option is selected in Field Service Configuration.</td>
</tr>
<tr>
<td><strong>Assigned</strong></td>
<td>Work Order Task [wm_task]</td>
<td>Sets a task in the <strong>Draft</strong> state to the <strong>Assigned</strong> state if the <strong>Assigned to</strong> field is populated. This business rule is associated with the &quot;Assigned (Draft to Assigned)&quot; State flow.</td>
</tr>
<tr>
<td>Business rule</td>
<td>Table</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>--------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Assigned(state flow business rule)</td>
<td>Work Order</td>
<td>Automatically moves an order to the Assigned state if the Assignment group or Assigned to are populated. ServiceNow recommends not editing this business rule.</td>
</tr>
<tr>
<td>Auto close Deliver and Receive Tasks</td>
<td>Work Order Task</td>
<td>Automatically moves a transfer order line task to Closed Complete state whenever the part is received and delivered within the agent stockroom.</td>
</tr>
<tr>
<td>Cancel Work Task</td>
<td>Work Order Task</td>
<td>Cancels any transfer orders for a work order task, via State Flows, when the task is cancelled.</td>
</tr>
<tr>
<td>Create First Work Order Task</td>
<td>Work Order</td>
<td>Creates the first task for a newly qualified work order.</td>
</tr>
<tr>
<td>Field Service Automation Group Types</td>
<td>Group</td>
<td>Ensures data integrity for dispatch group coverage information.</td>
</tr>
<tr>
<td>Field Service Automation Qualification</td>
<td>System Property</td>
<td>Turns off the qualification stage whenever the work.management.qualification system property is set to No. This business rule turns on the qualification stage when the property is set to Yes.</td>
</tr>
<tr>
<td>Populate Skills - Update Child Tasks</td>
<td>Work Order</td>
<td>When the CI is changed, updates the skills required in tasks for the order to contain those skills.</td>
</tr>
<tr>
<td>Populate Work Order from Template</td>
<td>Work Order</td>
<td>Populates a new work order from the work order model selected as a template.</td>
</tr>
<tr>
<td>Populate Window End Based On SLA</td>
<td>Task SLA</td>
<td>Populates latest Task SLA breach date from the parent work order.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Default value: Inactive</td>
</tr>
<tr>
<td>Populate Window End Based On SLA</td>
<td>Work Order Task</td>
<td>Populates latest Task SLA breach date from the parent work order.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Default value: Inactive</td>
</tr>
<tr>
<td>Ready for Qualification (approval off qu)</td>
<td>Work Order</td>
<td>Automatically moves a work order from the Draft state to Ready for Qualification when the Template field is populated.</td>
</tr>
<tr>
<td>Reassign</td>
<td>Work Order Task</td>
<td>Prevents task reassignment if the task has part requirements that are in a state of In transit.</td>
</tr>
<tr>
<td>Business rule</td>
<td>Table</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>RFD (approval qual both off)</td>
<td>Work Order [wm_order]</td>
<td>Automatically moves a work order from the <strong>Draft</strong> state to <strong>Ready</strong> when the <strong>Assigned to</strong> or <strong>Template</strong> field is populated.</td>
</tr>
<tr>
<td>Roll Up Changes</td>
<td>Work Order Task [wm_task]</td>
<td>Updates the work order status based on changes to the work order task.</td>
</tr>
<tr>
<td>Start Work</td>
<td>Work Order [wm_order]</td>
<td>Automatically moves a work order from the <strong>Ready</strong> state to <strong>Work In Progress</strong>.</td>
</tr>
<tr>
<td>Start Work(state flow business rule)</td>
<td>Work Order Task [wm_task]</td>
<td>Automatically moves a task to the <strong>Work in process</strong> state if the <strong>Actual Start Work</strong> field is populated.</td>
</tr>
<tr>
<td>State Change - After - Deprecated</td>
<td>Work Order Task [wm_task]</td>
<td>Ensures that the field service life cycle is followed. ServiceNow recommends not editing this business rule. This business rule is deprecated and is marked inactive for instances that are upgraded. This business rule is not installed for new instances.</td>
</tr>
<tr>
<td>State Change - Before</td>
<td>Work Order Task [wm_task]</td>
<td>Ensures that the field service life cycle is followed. ServiceNow recommends not editing this business rule. This business rule is deprecated and is marked inactive for instances that are upgraded. This business rule is not installed for new instances.</td>
</tr>
<tr>
<td>Sync up Delivery Time with WOT</td>
<td>Transfer Order [alm_transfer_order]</td>
<td>Synchronizes the delivery time with the work orders.</td>
</tr>
<tr>
<td>Transition - Cancel</td>
<td>Work Order [wm_order]</td>
<td>Ensures that the field service life cycle is followed. ServiceNow recommends not editing this business rule.</td>
</tr>
<tr>
<td>Transition - PendingDispatchToAssign</td>
<td>Work Order Task [wm_task]</td>
<td>Ensures that the field service life cycle is followed.</td>
</tr>
<tr>
<td>Transition - StateChange - Deprecated</td>
<td>Work Order [wm_order]</td>
<td>Ensures that the field service life cycle is followed. ServiceNow recommends not editing this business rule. This business rule is deprecated and is marked inactive for instances that are upgraded. This business rule is not installed for new instances.</td>
</tr>
<tr>
<td>Update questionnaires state to complete business rule</td>
<td>Work Order Task [wm_task]</td>
<td></td>
</tr>
</tbody>
</table>
Domain separation in Field Service Management

This is an overview of domain separation and Field Service Management. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can then control several aspects of this separation, including which users can see and access data.

Support level: Basic

- Business logic: Ensure that data goes into the proper domain for the application’s service provider use cases.
- The application supports domain separation at run time. This includes domain separation from the user interface, cache keys, reporting, rollups, and aggregations.
- The owner of the instance must set up the application to function across multiple tenants.

Use case: When a service provider (SP) uses chat to respond to a tenant-customer’s message, the client must be able to see the SP's response.

Overview

In the Field Service Management application, you can use the Company entity to drive domain separation. Assign a domain to each company and then any work orders and tasks created for a company are created within the company domain. Other entities and tasks related to work orders, such as dispatcher and assignment groups, part requirements, and transfer orders, are driven by the company and work order domains.

How domain separation works in Field Service Management

Domain separation for Field Service Management uses the Company entity to drive the domain structure. To use domain separation, all companies must be assigned to a domain.

When using Field Service Management in a domain separated instance, the Company field is a mandatory field on the Work Order form. When you create a work order for a company, the work order is created in the company domain. Any tasks created for the work order are also created in the company domain.

When using Field Service Management integrated with Customer Service Management in a domain separated instance, the Account field is a mandatory field on the Work Order form. When you create a work order for an account through a customer service case, the work order is created in the account domain. Any tasks created for the work order are created in the same domain as the work order. In the event that the domain of the work order changes, the domain of the work order tasks is also updated.

Modifying the company or account on a work order also modifies the domain of the work order and work order tasks. The domains of other related entities are not automatically updated. The company or account can be changed until the work order is qualified.

<table>
<thead>
<tr>
<th>Business rule</th>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>check active questionnaires</td>
<td>Work Order [wm_order]</td>
<td></td>
</tr>
<tr>
<td>Check active questionnaires</td>
<td>Work Order Task [wm_task]</td>
<td></td>
</tr>
</tbody>
</table>
Note: Field Service Management is configured at the application level and does not support domain-specific configuration. For example, if you select use dynamic scheduling as your task assignment method, this method is used to assign tasks in all domains.

Setting up domain separation in Field Service Management

To set up domain separation for Field Service Management, contact ServiceNow, Inc.

Work orders created from Incident, Problem, or Change

For work orders created from an incident, problem, or change request:

- The company on the work order is inherited from the original record.
- The domain of the work order is inherited from the company.
- If the original record does not include a company, the Company field is still a required field on the Work Order form.

Groups

Qualification, dispatcher, and assignment groups are filtered based on the domain of the work order and work order tasks. The group domain must match the work order or work order task domain.

Parts process

The parts process, which includes sourcing and using assets, is also domain separated.

- Part requirements are created in the work order domain.
- Transfer orders and transfer order lines created for a part requirement are created in the part requirement’s domain.
- Assets are available for a work order or work order task based on the part requirement domain.
- When sourcing a part:
  - Assets are available based on the part requirement domain.
  - Stockrooms are available based on available assets.

Global domain configurations

Administrators in the global domain can select configuration settings that determine how Field Service Management handles daily operations.

Administrators in the global domain can set Field Service Management configurations to:

- Include or exclude portions of the request process. For example, you can require a work order to be approved before continuing to the next stage.
- Automatically assign tasks using SM Auto-Assignment, a custom-defined workflow, or leave it up to dispatchers to manually assign tasks. You can manually assigning using Central Dispatch or from the work order task form.
- Track agent travel time.

1. Navigate to Field Service > Administration > Configuration.
The options on the Field Service Configuration screen are arranged in a multiple-tabbed layout, as follows:

- The **Business Process** tab contains options for setting up the request life cycle, creating catalogs and requests, and configuring notifications.
- The **Assignment** tab contains options for setting up manual and auto-assignment.
- The **Add-ons** tab contains options for enabling the knowledge base, managed documents, and task activities.

2. Fill in the fields on the **Business Process** tab.

---

### Field Service Configuration screen - Business Process tab

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lifecycle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process life cycle</td>
<td>Select request driven (subtasks are optional) if you do not want to require tasks to fulfill requests. When the request life cycle is request driven, requests can be directly assigned to users in an assignment group. Users can still add tasks to requests. However, closing all tasks does not automatically close the request.</td>
<td>• Enable state flows is turned on.</td>
</tr>
<tr>
<td>Approval for new request required</td>
<td>When disabled, all requests in the <strong>Awaiting Approval</strong> state are automatically approved.</td>
<td>• Enable state flows is turned on.</td>
</tr>
<tr>
<td>Qualification is required for new requests</td>
<td>Enable to require work orders to be qualified before moving to the next state. If this option is not enabled, any work orders in the <strong>Awaiting Qualification</strong> state are automatically qualified.</td>
<td>• Enable state flows is turned on. • Process life cycle: task driven (subtasks are optional)</td>
</tr>
<tr>
<td>Agent must accept or reject the assigned task</td>
<td>Enable to require the assigned agent to accept or reject the task.</td>
<td>• Enable state flows is turned on.</td>
</tr>
<tr>
<td>Track agent travel time</td>
<td>Enable to use time cards for agent travel for a task.</td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
<td>Dependency</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Work notes are required to close or cancel a request or task</td>
<td>Enable if work notes are required when closing, completing, or canceling requests and tasks. If it is disabled, work notes are not needed when closing, completing, or canceling.</td>
<td></td>
</tr>
<tr>
<td>Copy task work notes to request</td>
<td>Enable to synchronize task work notes with the work notes on the order or request. When work notes are added in the task, the same work notes appear in the order or request.</td>
<td>Enable state flows is turned on.</td>
</tr>
<tr>
<td>Auto close case on work order closure</td>
<td>Enable to automatically close the case when all its related work orders are closed or canceled. Auto closure of a case updates the following fields in the case form with the given status.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• resolution code: Solved- Fixed by closing related issue</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• additional notes: Auto Closed Case- Related work orders are closed</td>
<td></td>
</tr>
<tr>
<td>Update work order states to case</td>
<td>Enable to automatically update the Additional comments field in the case form whenever the state of each work order that is related to that case gets updated.</td>
<td></td>
</tr>
<tr>
<td>Catalog and Request Creation</td>
<td>Create or update requests by inbound email.</td>
<td>Enable this option to allow inbound email messages to create or update requests. This option must be enabled to allow requests to be marked as spam.</td>
</tr>
<tr>
<td>Requests are created using</td>
<td>Select catalog or regular form to install the catalog and enable automatic publishing of request templates to the catalog.</td>
<td>Select regular form only to uninstall the catalog and disable automatic publishing of request templates to the catalog.</td>
</tr>
<tr>
<td>Templates create a dedicated catalog item</td>
<td>Enable this option to allow automatic publishing of catalog items for the application.</td>
<td></td>
</tr>
</tbody>
</table>

**Notification**
### Lifecycle

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Send a notification when a field changes</td>
<td>Configure notifications to be sent to specific recipients when selected fields in requests and/or tasks change.</td>
<td></td>
</tr>
<tr>
<td>for a task or request.</td>
<td>1. From <strong>Table</strong>, select <strong>Request</strong> or <strong>Task</strong>.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. From <strong>Field</strong>, select the field to use for generating notifications. When a change is made to the selected field, a notification is sent to the recipients identified.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. From <strong>Recipients</strong>, select one or more recipients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. If a specific <strong>user</strong> or a specific <strong>group</strong>, is selected, the user is prompted to select a user or group.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. To define more notifications using other fields or recipients, repeat the steps on the next line.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. To remove a notification, click the symbol to the right of the notification.</td>
<td></td>
</tr>
</tbody>
</table>

3. Click the **Assignment** tab and fill in the fields.

**Field Service Configuration screen - Assignment tab**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment method for tasks</td>
<td>Select one of the following task assignment options:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Select <strong>using auto-assignment</strong> to automatically assign work order tasks to field service agents.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Select <strong>using a workflow</strong> to assign work order tasks using a custom-designed workflow.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Select <strong>manually</strong> to allow dispatchers to manually assign work order tasks.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Select <strong>using dynamic scheduling</strong> to use the dynamic scheduling feature.</td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
<td>Dependency</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Use dispatch queue</td>
<td>Enable this option to use the dispatch group for manual assignment.</td>
<td>• Enable state flows is turned on.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Process life cycle: Life cycle is task driven.</td>
</tr>
<tr>
<td>Preferred assignment group</td>
<td>Select one of the following task assignment options:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Select Internal group to prioritize assigning the work order tasks to internal agents.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Select External group to prioritize assigning the work order tasks to external agents or vendors.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> This configuration field displays only if the Field Service Contractor Management plugin (com.snc.fsm_contractor_management) is activated.</td>
<td></td>
</tr>
<tr>
<td>Assign requests or tasks based on assignment group coverage areas</td>
<td>Enable this option to limit the selection of groups from the Dispatch group and Assignment group fields to groups that cover the location of the task.</td>
<td></td>
</tr>
<tr>
<td>Assign tasks based on assignment group product models</td>
<td>Enable this option to limit the selection of groups from the Dispatch group and Assignment group fields to groups that cover the necessary product model requirement of the task.</td>
<td></td>
</tr>
<tr>
<td>Assign tasks based on assignment group skills</td>
<td>Enable this option to limit the selection of groups from the Dispatch group and Assignment group fields to groups that cover the skills that are required to perform the task.</td>
<td></td>
</tr>
<tr>
<td>Scheduling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use agent or task scheduling</td>
<td>Enable this option to allow agent auto-assignment and agent auto-selection.</td>
<td>• Assignment method for tasks is set to using a workflow.</td>
</tr>
<tr>
<td>Auto-selection of agents will consider time zone for tasks</td>
<td>Enable this option to consider the time zone of the agent when assigning a task.</td>
<td>• Enable state flows is turned on.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
<td>Dependency</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>------------</td>
</tr>
</tbody>
</table>
| Enable priority assignment | Enable this option to use priority assignment for auto-assigning agents. | • Enable state flows is turned on.  
• Process life cycle: Life cycle is task driven  
• Auto-selection of agents will consider agent or task schedules |

**Additional Factors**

| Auto-selection of agents will consider location of agents | Enable this option to use the agent and location when determining who to assign the task to. Agents closer to the task location receive preference. | • Enable state flows is turned on.  
• If using Process life cycle: Life cycle is task driven, then  
  • Assignment method for tasks: using auto-assignment  
• If using Process life cycle: Life cycle is request driven, then  
  • Assignment method for requests: using auto-assignment |

| Auto-selection of agents for tasks requires them to have skills | This option determines the degree to which skills must be matched to a task when determining auto-assignment.  
  • Select all to require that an assigned agent has all the skills to perform the task. An agent who lacks one skill is eliminated.  
  • Select some if you want agents who have most of the skills to perform the task.  
  • Select none if you want to auto-assign agents without considering skills. | • Enable state flows is turned on.  
• If using Process life cycle: Life cycle is task driven, then  
  • Assignment method for tasks: using auto-assignment  
• If using Process life cycle: Life cycle is request driven, then  
  • Assignment method for requests: using auto-assignment |

4. Click the Add-ons tab and fill in the fields.
### Field Service Configuration screen - Add-ons tab

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part requirements are needed by agents</td>
<td>Enable this option to require agents to specify parts for the task.</td>
<td></td>
</tr>
<tr>
<td>Reserve parts in agent stockroom</td>
<td>Enable this option to reserve required parts in the agent stockroom when scheduling and rescheduling work order tasks.</td>
<td>Part requirements are needed by agents</td>
</tr>
<tr>
<td>Cancel open Transfer Orders</td>
<td>Enable this option to release the reservation of reserved parts in the agent personal stockroom when unscheduling work order tasks.</td>
<td>Part requirements are needed by agents</td>
</tr>
<tr>
<td>Edit associated models</td>
<td>Click <strong>add</strong> and select the part model to be used for this task. Click <strong>more</strong> to select more part models.</td>
<td>Part requirements are needed by agents</td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable a dedicated knowledge base</td>
<td>Enable this option to install the knowledge base for the application.</td>
<td></td>
</tr>
<tr>
<td>Enable managed documents</td>
<td>Enable this option to add a related list to managed documents.</td>
<td></td>
</tr>
<tr>
<td>Enable task activities</td>
<td>Enable this option to log the task interactions and communications, such as phone calls and email messages.</td>
<td></td>
</tr>
<tr>
<td>Associated Task Tables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Select associated tables</td>
<td>Click <strong>Add</strong> to select more tables.</td>
<td></td>
</tr>
<tr>
<td>Maps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable maps</td>
<td>Enable this option to use maps.</td>
<td></td>
</tr>
<tr>
<td>Signature Capture and PDF Order Summary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signature Capture</td>
<td>Enable this option to include the name and electronic signature of the customer in the PDF work order summary.</td>
<td></td>
</tr>
<tr>
<td>PDF Order Summary</td>
<td>Enable this option to create a PDF summary for a work order that includes completed tasks, parts used and returned, incidental expenses, and the time required to complete the work.</td>
<td></td>
</tr>
</tbody>
</table>

5. **Click Save.**

**Warning**: If you clicked the **Enable state flows** option to disable it, a confirmation box appears, along with a link to documentation that explains the consequences of disabling state flows. It is highly recommended that you read the documentation before proceeding. The action of disabling service management state flows cannot be reversed.
Configure Field Service Management

All SM applications use either task-driven or request-driven processes for handling tasks. Field Service Management defaults to the task-driven method for handling work order tasks.

Task vs request driven processing

All applications use either task-driven or request-driven processes for handling tasks.

Each application defaults to one or the other of these processing types, but you can switch between them as needed.

Task-driven processing means that the work order or request simply contains a list of tasks necessary for completing the overall work. When a work order record is created, an associated task record is automatically created. A request must have at least one task, and more tasks can be defined to handle all aspects of the request. As tasks are performed and completed, the request transitions through a series of states. After the last task is closed, the request automatically transitions to closed.

Request-driven processing means that tasks are assigned to a request, but closing all the tasks does not automatically close the request. A request does not require any tasks and can be opened and closed independently. Any tasks can be transitioned and assigned independently and to different agents than specified on the request. Even if all tasks are closed, the request can remain open and continue to be worked on. However, the request cannot be closed until all tasks are also closed. In request-driven processing, state transitions are based solely on the request.

Request task management

A request contains one or more tasks. These tasks allow qualifiers to define activities that must be done to complete a request.

Administrators can create multiple tasks under a single request.

Splitting a request into separate tasks, when necessary, enables qualifiers to:

- Assign different aspects of a request to different staff members.
- Assign tasks to staff members who have different set of skills or are in different locations.
- Schedule tasks so they are either done one after another, or at the same time by different staff members.
- Schedule additional tasks, if necessary, to complete the request.

Note: If you have the Request life cycle is request driven configuration option activated, you can manually add tasks as needed. If you have Request life cycle is task driven activated, an initial task is automatically created when the request record is created.

Create request tasks

Tasks are created in support of requests.

Role required: [SM application]_admin or [SM application]_qualifier

2. Open the request for which you want to create tasks.
3. Click the Add Task related link.
4. Fill in the fields on the form.

Note: Not all fields display for all SM applications.
## Request task fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Auto-generated identification number for the task.</td>
</tr>
<tr>
<td>Parent</td>
<td>Request that this task is associated with.</td>
</tr>
<tr>
<td>Cloned from</td>
<td>Record number of the task this task was cloned from, if any.</td>
</tr>
<tr>
<td>Location</td>
<td>Geographical area where the work must be done. The location is critical for determining the staff member who is assigned to the task.</td>
</tr>
<tr>
<td>Template</td>
<td>Template for creating this request (optional). Click the lookup icon and select a template. The description of the selected template populates the Description field.</td>
</tr>
<tr>
<td>Skills</td>
<td>Abilities necessary to execute the task. This field is automatically completed based on the selection in the Affected CI field on the associated request. If you change the affected CI on the request, the system adds any skills required by the new CI to the skills already listed here.</td>
</tr>
<tr>
<td>State</td>
<td>Current state of the task, such as Accepted or Closed Complete. The ServiceNow advances the state automatically as users complete the work for each successive state.</td>
</tr>
<tr>
<td>Assignment group</td>
<td>Group from which an individual legal staff member is selected to complete the task. The lookup list shows only the assignment groups associated with the selected Location. If the Assignment Group field is empty, the system searches for the group covering the territory that includes the location of the task.</td>
</tr>
<tr>
<td>Assigned to</td>
<td>Individual staff members who should complete the task, selected from the Assignment group. If you defined skills and assigned them to staff members, the Assigned to field lookup list shows only those staff members in the assignment group who have all the Skills required. If no exact match of skills is found, the lookup list shows all assignment group members. Note: If state flows are disabled, this field is not mandatory.</td>
</tr>
<tr>
<td>Short description</td>
<td>Brief explanation of the task.</td>
</tr>
<tr>
<td>Description</td>
<td>Exact technical description of the unit of work to be performed. Qualifiers should provide as much detail about the problem as possible to avoid extra communication with the caller in later stages of the request.</td>
</tr>
<tr>
<td>Work notes</td>
<td>Information about the task as it progresses through each state. Work notes are not visible to customers.</td>
</tr>
</tbody>
</table>

Scheduling - These fields display for Finance Service Management and Marketing Service Management.
Task windows

A task window is the time period, bordered by start and end times, in which a task is performed.

Task windows can be flexible or fixed and are used by the route optimization and auto-dispatch features when determining the daily schedule of staff members. A flexible window has start and end times that the application attempts to respect when dispatching or routing a task automatically. The system can reschedule a flexible task window if necessary, to make it fit into the schedule of a staff member. A fixed task window cannot be rescheduled. If the auto-router that optimizes task routes or the auto-dispatcher cannot schedule the task for the fixed window time period, that task is not scheduled at all. The time interval configured for a window cannot be less than the time required to perform the task.

Use a task template for multiple request templates

If you have tasks that are often repeated across multiple jobs, you can create a task template and reuse it in multiple request templates. You can also use it on a Facilities request to pull common and repeatable information into a request.

Role required: facilities_admin

Create a request template and an associated task template that contains the information you want to reuse.

1. Navigate to Facilities > Catalog & Knowledges > Facilities Request Templates.

2. Under Task information, create a task template.
3. Click **Copy Task Template** to use a previously created template. Information pre-fills the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
</table>
| Task type              | The type of task being requested. Select:  
  • Facilities Request Task  
  • Move Task |
| Name                   | Descriptive name of the task. |
| Description            | Detailed description of the task. |
| Depends on             | Indicates if the task depends on another task. For example, if you have two tasks, you can make task 2 dependent on task 1 completing before task 2 can start.  
  After a task and task type are defined, you can select it in the next task in the **Depends on** choice list. |
| Checklist template     | A Checklist template saved from the Facilities Request Form. |
| Assignment group       | The group assigned to the task. |
| Skills                 | The skills required to be assigned to the request. |
| Estimated work duration| An estimation of the number of days, hours, or minutes to complete the request. |

4. Click **Submit** or **Save**.

**Clone a request task**

Existing tasks can be cloned to create tasks with the same populated fields.

Role required: admin, ITIL, creator, or catalog admin

In the cloning process, the following information is copied from the source task:

• Parent request reference  
• Short description  
• Description  
• Assignment group  
• Location  
• Required skills

Open the request task and select **Clone Task** under **Related Links**.  
The application creates a task in **Draft** state. The **Work Notes** field contains the original task number and text stating that the task is a clone.

**Auto assignment**

The auto assignment feature can be enabled for requests or tasks, depending on the Service Management (SM) application's configuration settings.

• If the **Requests are assigned via auto-assignment** option is enabled, requests are automatically assigned.  
• If the **Tasks are assigned via auto-assignment** option is enabled, the tasks in a request are automatically assigned.
When auto assignment is enabled and a task is qualified or marked as **Ready for Work**, an appropriate agent is automatically assigned to the task and it is moved to the **Assigned** state. If the task cannot be auto-assigned, a user with the dispatcher role must adjust the values in the request or task form and then save the record.

The system uses these criteria to assign agents automatically.

### Auto assignment criteria

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| Geolocation     | To calculate the estimate time it takes for an agent to get to the task location, consider the following:  
- If the **Use Google Maps API for travel time estimates** geolocation property is enabled, then you can select Google Maps API or straight-line estimates in the properties for calculating estimated travel time and distance.  
- If the **Use Google Maps API for travel time estimates** is not enabled, then the system uses the value in the Estimated Travel Duration field in the work order task to determine task assignment for the agent.  
- For more information, refer to Components installed with Field Service Management |
| Skills          | You can configure whether an agent's skills should be considered when auto-assigning a task. If you are assigning tasks to agents based on mandatory skills requirements, you cannot auto-assign tasks if the agent does not have the mandatory skills required to perform the task. |
| Availability    | Auto-assignment considers an agent's existing schedule when auto-assigning additional tasks.                                                                                                                                                                                                                                               |
| Task windows    | Auto-assignment attempts to schedule within any configured task windows. If a window cannot be scheduled for any available agents, auto-assignment fails.                                                                                                                                                                                      |
| Task dependencies | Auto-assignment considers any upstream task dependencies when auto-assigning a task.                                                                                                                                                                                                                                                  |

### Auto assignment of a request and a task

Automatically assign a task to a dispatch group when the **Requests are assigned using auto-assignment** option is set in the SM application's configuration.

Role required: wm_qualifier, wm_initiator

1. In any SM application, do one of the following:
   - Open a request in the **Awaiting Qualification** state or one that has been qualified automatically, and then open a task in the **Draft** state.
   - Open a task in the **Ready for Work** state.

2. Select an **Assignment group**.
3. If the **Tasks are assigned via auto-assignment** and **Auto-selection of agents will consider location of agents** configuration options are set, enter a location.

Auto-dispatch will fail unless the task contains a valid location.

4. If the **Tasks are assigned via auto-assignment** option is enabled, create a schedule for this task in the **Planned** section, or let the system determine the times. For instructions, see *Creating Work Order Tasks*.

By default, ServiceNow enters the current date and time in the **Window start** field. If you do not create a schedule or a fixed window, ServiceNow uses the **start** value to look for an agent who has that time slot open.

5. Click **Qualified** or **Ready for Work**.

The view returns to the previous page, and a success message appears. The system assigns an agent to the task, enters the agent's assignment group in the task record, and moves the state to **Assigned**.

If auto-assignment fails, the message indicates either that no agent was available or that the task did not specify a location. The system moves tasks that fail auto-assignment to the **Remain in the Pending Dispatch** state.

6. To auto-assign a task that failed previously, enter any missing information or change the schedule, and save the record.

### Service management states

From creation until closure, SM application requests for work (for example, work orders and facilities requests), and their respective tasks follow a life cycle tracked by the **State** field in Field Service Management and Facilities Service Management.

The life cycle is controlled through business rules and UI actions that are updated by the system automatically.

**Note:** The **State** field on the record is always read-only.

### Request states

Service Management requests follow a specific life cycle and move through a series of states, which are displayed in the **State** field on the request record.

The request states displayed depend on the SM application, as indicated in the table.

**Note:** The **State** field on the request record is always read-only.

### Service management request states

<table>
<thead>
<tr>
<th>State</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft</td>
<td>Request initiator adds information about the work to be done.</td>
</tr>
<tr>
<td>Awaiting Qualification</td>
<td>Initiator fully describes the request, and qualifier can process the request. This state is valid only for the following SM applications:</td>
</tr>
<tr>
<td></td>
<td>• Field Service Management</td>
</tr>
<tr>
<td>State</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Qualified             | Request is fully qualified, meaning that all technical information to complete the request tasks has been added, but work has not started. This state is valid only for the following SM applications:  
  • Field Service Management |
| Awaiting Approval     | When the information is complete enough for review by an approver, the request is marked ready for approval. This state is valid only for the following SM applications:  
  • Facilities Service Management  
  • Finance Service Management  
  • Legal Service Management  
  • Marketing Service Management |
| Approved              | The appropriate approver approves the request. This state is valid only for the following SM applications:  
  • Facilities Service Management  
  • Finance Service Management  
  • Legal Service Management  
  • Marketing Service Management |
| Work In Progress      | Work has started.                                                                                                                             |
| Closed Complete       | Request was completed to specification.                                                                                                      |
| Closed Incomplete     | Request could not be completed as specified.                                                                                                  |
| Canceled              | Request was canceled.                                                                                                                         |

In addition to the **State** field, the different request task states are also shown visually at the top of each task record with the process flow formatter.

![Process flow formatter](draft_ready_assigned_work_in_progress_complete)

**Note:** If the **State flows are enabled** option in the configuration screen is not selected, the process flow formatter is removed. If you added states to the request and task tables, those states are visible on the request form.

**Request task states**

Like requests, the associated request tasks follow a specific life cycle and move through a series of states, which are displayed in the **State** field on the task record.

The request task states displayed depend on the SM application, as indicated in the table.
Note: The State field on the request task record is always read-only.

Service management request task states

<table>
<thead>
<tr>
<th>State</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Draft</td>
<td>Qualifier is not done describing the work.</td>
</tr>
<tr>
<td>Pending</td>
<td>Request task is ready to be assigned.</td>
</tr>
<tr>
<td></td>
<td>Depending on the SM application, this state label may be expanded, for example, Pending Dispatch or Pending Change.</td>
</tr>
<tr>
<td></td>
<td>The parent request state can change to Qualified, for example, if all associated tasks are in Pending Dispatch or a later state.</td>
</tr>
<tr>
<td>Assigned</td>
<td>Request task is pending acceptance from the assigned agent.</td>
</tr>
<tr>
<td>Accepted</td>
<td>Agent accepts the request task and is ready to be done. This state is valid only for Marketing Service Management.</td>
</tr>
<tr>
<td>Work In Progress</td>
<td>Work on the request task has started. The parent request state changes to Work In Progress if no associated tasks are in Draft state.</td>
</tr>
<tr>
<td>Closed Complete</td>
<td>Request task was completed to specification.</td>
</tr>
<tr>
<td>Closed Incomplete</td>
<td>Request task could not be completed as specified.</td>
</tr>
<tr>
<td>Canceled</td>
<td>Request task was canceled.</td>
</tr>
</tbody>
</table>

In addition to the State field, the different request task states are also shown visually at the top of each task record with the process flow formatter.

Note: If the State flows are enabled option in the configuration screen is not selected, the process flow formatter is removed.

State flow customization

State flows control the sequence in which records transition between states in Service Management applications.

An administrator can perform the following tasks:

- Add or delete states.
- Trigger events on particular state transitions.
- Transition to another state automatically when data in a request or its task changes, or change states manually when the user clicks a button.
- Limit the choice list for the State field to those end states that are valid transitions from the given start state.
- Control the visibility and behavior of selected fields on a target table when records in that table change states.
- Create custom state flows. Turn off the State flows are enabled option on the configuration screen. Creating custom state flows requires scripting knowledge.

Note: Users with the wm_admin role can create, read, update, and delete only work order flows and work task flows. Users with the facilities_admin role can create, read, update, and delete only facilities request
flows and request task flows. Users with the wm_admin role cannot manipulate facilities records, and users with the facilities_admin role cannot manipulate work order records.

How SM request and task state flows work

State flows replace the standard process that controls how requests and their associated tasks move between states. The ServiceNow system creates business rules, client scripts, and UI actions that perform the transitions and field controls you specify. These programming elements remain in use while the state flow records that use them are present. When state flows on an SM application table are deleted, the system attempts to delete any unnecessary programming elements that were created on that table. You can limit the selections for the State field to valid states for the transition, based on the starting state.

State flows provide the following controls:

- **Manual transitions**: A UI action, created automatically by the system when you provide a condition or a script, initiates a transition.
- **Automatic transitions**: A business rule, created automatically by the system when you provide a condition and a script, initiates a transition when changes are made to a request or task.

Features available with state flows

- **Custom transitions**: Customize the order in which states can change for requests and task records.
- **Field controls**: Control the behavior and visibility of specific fields when a task changes states or reaches a specified end state.
- **State choice list**: Limit the values offered in a task record State field to valid states for that transition. This is the same client script that the system creates to manage field controls for state transitions.
- **Events**: Trigger events when a state transition occurs or when a record reaches a specific end state.

Start and end states

You can create a custom state flow for processing that must occur when a task record makes a specific transition from one state to another. These records require a starting state and an ending state, and processing occurs during the transition between states. To perform some processing when a task record reaches a particular end state, you only need to define the end state. In some cases a state flow can have a starting state only, such as when you need to perform some type of cleanup after a task is canceled. A state flow might have no starting or ending state if the processing in the record applies to more than one state transition.

The solution is to store the business rule or client script in a state flow record and create a condition to trigger processing for any state change that requires it. An example of this in field service management is the Roll Up Changes business rule on the Work Order Task [wm_task] table. This business rule rolls up state changes that occur in tasks to the parent work order.

Customize a state flow

You can customize state flows to control the sequence in which records transition between states in Service Management applications.

Customizing state flows requires scripting knowledge.

1. Before customizing a state flow, make a copy of the state flow record for the transition you want to change and do all your customizations in the copied record.
This allows the system to update the default state flow record automatically during an upgrade and enables you to revert to the default record if necessary.

2. Make sure to deactivate the original record so the system cannot use it.

3. Navigate to the class of state flows you want to customize.
   - State Flows > Work Order Flows
   - State Flows > Work Task Flows

4. Open the record for the transition you want to customize.

5. Right-click the form header and select Insert and Stay.
   The system clears any values from the Business rule and UI action fields. A notification appears at the top of the form describing the action taken.

6. Ensure that the Active check box is selected.

7. In the appropriate section, configure a transition method:
   - Manual: Click Create UI Action to create a button on the form that enables users to execute the transition manually. The system uses the value in the Name field as the label for the UI action. The UI action executes the script in the Manual Script field when the conditions are true
   - Automatic: Click Create Business Rule to create the business rule. The business rule executes the script in the Automatic Script field when the conditions are true

8. Click Create Client Script to create the script that limits the values available a record's State field choice list to valid states for that transition.

9. Complete the Field Controls section to control how specific fields appear when a record changes states. The system enforces the field controls with the same client script you created to filter the choice list for the State field.

10. Click Update

11. Reopen the source record you copied and clear the Active check box
    Deactivating the original record allows the system to upgrade it normally when the instance is upgraded and prevents the system from using the record rather than your custom state flow.

12. Open the copied state flow record you want to customize.

13. Fill in the fields, as needed.
Work task flow
# Work task flow

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Record number automatically generated by the ServiceNow system.</td>
</tr>
<tr>
<td>[Required] Table</td>
<td>Table on which the state flow record runs. The possible tables are:</td>
</tr>
<tr>
<td></td>
<td>• Work Order Task [wm_task]</td>
</tr>
<tr>
<td></td>
<td>• Work Order [wm_order]</td>
</tr>
<tr>
<td>Starting state</td>
<td>Name of the state at the beginning of the transition.</td>
</tr>
<tr>
<td>Ending state</td>
<td>Name of the state at the end of the transition.</td>
</tr>
<tr>
<td>Client script</td>
<td>Client script to run for this transition. The client script controls the</td>
</tr>
<tr>
<td></td>
<td>available starting and ending states you can select by limiting the contents</td>
</tr>
<tr>
<td></td>
<td>of the State choice list to valid states.</td>
</tr>
<tr>
<td>Event</td>
<td>Name of an existing event to trigger when this transition occurs.</td>
</tr>
<tr>
<td>Name</td>
<td>[Required] State name as it appears in the choice list.</td>
</tr>
<tr>
<td>Roles</td>
<td>Roles required to configure the State field that uses the custom transition.</td>
</tr>
<tr>
<td>Active</td>
<td>Switch for enabling or disabling this state flow record.</td>
</tr>
<tr>
<td>Class</td>
<td>Available state flow classes:</td>
</tr>
<tr>
<td></td>
<td>• <strong>State Flow</strong>: Records created for state flows in all task-based tables</td>
</tr>
<tr>
<td></td>
<td>except those in Field Service Management.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Work Order Flow</strong>: Records created for state flows in the Work Order</td>
</tr>
<tr>
<td></td>
<td>[wm_order] table.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Work Task Flow</strong>: Records created for state flows in the Work Order Task</td>
</tr>
<tr>
<td></td>
<td>[wm_task] table.</td>
</tr>
<tr>
<td></td>
<td>This field is required for users with the admin role. Users with the</td>
</tr>
<tr>
<td></td>
<td>wm_admin role can only create state flow records in the Work Order Flow and</td>
</tr>
<tr>
<td></td>
<td>Work Task Flow classes and cannot edit this field in the record.</td>
</tr>
<tr>
<td>Override</td>
<td>Default starting value for the State field on all new records for the</td>
</tr>
<tr>
<td></td>
<td>table named in the state flow record.</td>
</tr>
<tr>
<td>Work notes</td>
<td>Comments about this state flow transition.</td>
</tr>
<tr>
<td>Comment</td>
<td>Details about the customized record.</td>
</tr>
<tr>
<td>Manual</td>
<td>(Runs scripts from a UI action that requires the user to click a button or</td>
</tr>
<tr>
<td></td>
<td>related link.)</td>
</tr>
<tr>
<td>Manual condition string</td>
<td>Conditions for enabling a UI action that cannot be defined with the</td>
</tr>
<tr>
<td></td>
<td>condition builder. For example, you can use this string to define UI</td>
</tr>
<tr>
<td></td>
<td>actions for mobile devices. This condition has an [and] relationship with</td>
</tr>
<tr>
<td></td>
<td>the condition in the Manual condition field.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manual condition</td>
<td>Condition builder for enabling a UI action that can be defined for fields in the target table. This condition has an [and] relationship with the condition in the Manual condition string field.</td>
</tr>
<tr>
<td>Manual script</td>
<td>Script that defines what the UI action does when the conditions are true. This script runs when the user clicks a button or a related link.</td>
</tr>
<tr>
<td>UI action</td>
<td>[Read-only] Names the UI action to enable for this transition. By default, this UI action creates a button on the task form. Click Create UI Action to create the button. The button inherits the name of the state flow record in which it was created.</td>
</tr>
<tr>
<td><strong>Automatic</strong> (Runs a business rule automatically when a task record is changed and updated.)</td>
<td></td>
</tr>
<tr>
<td>Automatic condition string</td>
<td>Conditions for running the business rule that cannot be defined with the condition builder. For example, use this condition to evaluate if the proposed transition is a valid flow. This condition has an [and] relationship with the condition in the Automatic condition field.</td>
</tr>
<tr>
<td>Automatic condition</td>
<td>Conditions for running the business rule that can be defined for fields in the target table. This condition has an [and] relationship with the condition in the Automatic condition string field.</td>
</tr>
<tr>
<td>Automatic script</td>
<td>Script that performs additional work when the condition is true. This script can do tasks such as update the date and time the transition occurred or notify someone of a milestone.</td>
</tr>
<tr>
<td>Business rule</td>
<td>Name of the business rule created for this transition. The business rule has a condition to ensure the validity of the flow. If that condition is true, the business rule performs the transition requested, using the starting and ending states from the Work Order Flow or Work Task Flow form.</td>
</tr>
<tr>
<td><strong>Field Controls</strong> (Determines field properties when a record transitions between states.)</td>
<td></td>
</tr>
<tr>
<td>Mandatory fields</td>
<td>Fields required when this transition occurs or when the Ending state is the current state of a work order or work order task.</td>
</tr>
<tr>
<td>Read only fields</td>
<td>Fields set as read-only when this transition occurs or when the Ending state is the current state of a work order or work order task.</td>
</tr>
<tr>
<td>Visible fields</td>
<td>Fields made visible when this transition occurs or when the Ending state is the current state of a work order or work order task.</td>
</tr>
<tr>
<td>Not mandatory</td>
<td>Fields set as optional when this transition occurs or when the Ending state is the current state of a work order or work order task.</td>
</tr>
<tr>
<td>Not read only</td>
<td>Fields that can be edited when this transition occurs or when the Ending state is the current state of a work order or work order task.</td>
</tr>
</tbody>
</table>
State flow dictionary overrides

A dictionary override in a state flow defines the starting state for all new records in a specific table. You set an override in tables that extend a base table only, so that your customizations are applied only to the extended table.

1. In a state flow record, select an Ending state.
   This is the override value which becomes the starting state for all new records in the table named.

2. Click Create Default Value.
   The system populates the Dictionary override field with a value of state, which is the field in the task table affected by the override. The Dictionary override field is read-only. After the override is created, the system hides the Create Default Value button on all subsequent state flow forms for that table.

Work notes in state flows

Work notes are an important part of the state flow process and are used to communicate information about state transitions.

The state flow adds work notes into the Work notes field of any task making this transition. For example, you might include the note, "Task rejected by agent" in the Reject state flow, which occurs when the task moves from Assigned to Pending Dispatch. If an agent rejects the task and fails to enter a work note, this note tells the dispatcher why the task reappeared in the dispatch queue. Work notes added by an agent rejecting the task are appended to the work notes that are inherited from the state flow.

These rules apply to state flow work notes:

- For a state flow with no Starting state, the work note is added every time the task transitions to the Ending state.
- For a state flow with a Starting state and an Ending state, the work note is added only when the task transitions from that starting state to that ending state.
- If two state flows with work notes have the same Ending state, but only one has a Starting state, the system adds the work notes from the state flow with the starting state. This better matches the state flow work note to the more important transition between specific starting and ending states. In the example here, the work note information is more pertinent to a task moving from Assigned to Pending Dispatch than to a task that reaches the Pending Dispatch state from an undetermined beginning state.

Field controls in state flows

You can define controls for individual fields that are enforced when a record transitions between states.

Settings in the Field Controls section of the State Flow form enable you to apply field controls when the system detects a specified state transition or when the end state is the current state when the form is opened. The control is applied only to existing fields on the form. State flows cannot add fields to the form.

For example, you might want the Problem field to be visible when an incident moves to the Awaiting Problem state. If the incident state changes to Awaiting User Info, you hide the Problem field and make the Caller field mandatory.

Configure state flow records with an ending state only and create the correct behavior for every ending state you want to control. This ensures that the field controls are set properly when the user selects a new state, and also when the user returns a record's State field to the original state. Only specify a full state transition, with both a starting and ending state, when you want a particular behavior for that precise state transition.
Note: State flows use client scripts to enforce field controls. It is possible that your settings can be changed by existing UI policies, which execute after client scripts.

Trigger events on state changes

You can configure a state flow to trigger a registered system event when a task transitions from a starting state to a specified end state. For example, you can use events to trigger email notifications and create script actions.

You can configure a state flow to trigger a registered system event when a task transitions from a starting state to a specified end state. For example, you can use events to trigger email notifications and create script actions. When you attach an event to a state flow, the ServiceNow system creates a business rule called **State Flow Events for `<table name>`** for the table specified in the state flow. If you specify a start and end state, the business rule executes when the record transitions from the start state to the end state. If the state flow only specifies an end state, the business rule executes whenever that end state is reached. The system creates one business rule for all state flows containing events on a single table. When all events or all state flows on a table are deleted, the system deletes the business rule.

To create an event that fires when a work order task moves from a starting state of **Work in Progress** to an end state of **Closed Complete**:

1. Register a new event on the Work Order Task [wm_task] table called **task.closed**.
2. Navigate to **State FlowsWork Task Flows**.
3. Open the state flow record **Close Complete**.
4. Select **task.closed** in the **Event** field and save your changes.

The ServiceNow system automatically creates a business rule called **State Flow Events for wm_task**.
### Business Rule

<table>
<thead>
<tr>
<th>Name:</th>
<th>State Flow Events for wm_task</th>
</tr>
</thead>
<tbody>
<tr>
<td>When:</td>
<td>after</td>
</tr>
<tr>
<td>Table:</td>
<td>Work Order Task [wm_task]</td>
</tr>
<tr>
<td>Order:</td>
<td>100</td>
</tr>
<tr>
<td>Client callable:</td>
<td>☑</td>
</tr>
<tr>
<td>Active:</td>
<td>☑</td>
</tr>
<tr>
<td>Condition:</td>
<td>current.state.changes()</td>
</tr>
</tbody>
</table>

```javascript
    new StateFlow().fireEvents(current, previous, 'wm_task');
```

### Related Links

- UI Actions
- Script Includes
- Client Scripts

### Versions

<table>
<thead>
<tr>
<th>Created</th>
<th>Name</th>
<th>Source</th>
<th>State</th>
<th>Reverted from</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-01-17 10:31:54</td>
<td>sys_script_c7d6bbac31213301eba912970baaf2f7</td>
<td>Update Set Default</td>
<td>Current</td>
<td></td>
</tr>
</tbody>
</table>
Rebuild state flows

You can rebuild state flows when a mismatch between existing and new sys_ids occurs.

When you use an XML file to import a state flow record into an instance, the system attempts to match the incoming states with existing states by comparing sys_ids. Because the sys_ids of items in a choice list can vary between instances, the system can fail to match the states, even though they are otherwise identical.

When matching fails, the start and end states of affected records are left blank or contain numeric values. To repair these records navigate to State Flows > Admin > Rebuild State Flows. This module runs a script that compares the numerical value of each item in the State field choice list until it finds a match in the imported state flow record.

State flow cleanup

The business rules, client scripts, and UI actions that the system creates automatically to perform custom transitions exist only while the state flow records that use them are present.

When all the state flows on a table are deleted, the system attempts to delete any unnecessary programming elements that were created on that table, using these criteria:

<table>
<thead>
<tr>
<th>State Flow Elements Deleted in Cleanup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element</td>
</tr>
<tr>
<td>UI action</td>
</tr>
<tr>
<td>Business rule</td>
</tr>
<tr>
<td>Dictionary override</td>
</tr>
<tr>
<td>Business rule that processes events triggered by a state flow</td>
</tr>
<tr>
<td>Client script (onLoad)</td>
</tr>
<tr>
<td>Client script (onChange)</td>
</tr>
<tr>
<td>Work notes business rule</td>
</tr>
</tbody>
</table>

State flow example

Your business processes might require work order tasks to be accepted automatically when dispatched to an agent.

Create a new state flow record that automates the transition from Pending Dispatch to Accepted and bypasses the Assigned state in which agents can reject tasks. This prevents the system from running the manual script associated with UI actions. The automatic script performs the jobs that the manual script performed, such as updating the date and time the task was dispatched, or to do additional work such as sending a notification.

2. Open the Assigned record that defines a task transition from a starting state of Pending Dispatch to an ending state of Assigned.

This is an automatic state change that occurs when an agent's name is added to the Assigned to field and the task is updated.
### Work Task Flow

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>SF0000916</td>
</tr>
<tr>
<td>Table</td>
<td>Work Order Task (wmt_task)</td>
</tr>
<tr>
<td>Starting state</td>
<td>Pending Dispatch</td>
</tr>
<tr>
<td>Ending state</td>
<td>Assigned</td>
</tr>
<tr>
<td>Client script</td>
<td>wmt_task_state_flow</td>
</tr>
<tr>
<td>Comment</td>
<td></td>
</tr>
</tbody>
</table>

#### Manual | Automatic | Field Controls |  

**Automatic**

**Automatic condition string:** current.state == 10 && current.assigned_to.changes()

**Automatic condition:**

- Assigned to: **true**
- Is not empty: **true**

**Automatic script:**

```java
    current dispatched on = gt.nowDateTime();
```

**Business rule:** Transition - PendingDispatchToAssign

**Update** | Create UI Action | Delete |

---

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3. Change the name of the state flow.
   In this example, change the name to **Skip Agent Acceptance**.

4. Change the value in the **Ending state** field to **Accepted**.
   This transition allows you to bypass the **Accept** state flow record that enables agents to reject tasks.

5. Do not change the settings in these fields:
   - **Automatic condition string**: This condition ensures that the current state is at **Pending Dispatch** and the value in the **Assigned to** field changes: `current.state == 10 && current.assigned_to.changes()`.
   - **Automatic condition**: The condition `[Assigned to] [is not empty]` ensures that all dispatched tasks are accepted automatically.

   **Note**: The previous two condition statements have an **[and]** relationship. In this example, the business rule runs when a task in a state of **Pending Dispatch** is assigned to any agent.

   - **Automatic script**: The automatic script sets the time the task was dispatched, using the method:
     ```javascript
     current.dispatched_on = gs.nowDateTime();
     ```

6. Copy the record using the **Insert and Stay** command.
   This action increments the record number and clears the **Business rule** field. The system automatically creates a new business rule, using the name of the new state flow record. The Skip Agent Acceptance business rule moves the task from **Pending Dispatch** to **Accepted** automatically when a dispatcher enters a user name in the **Assigned to** field. Note that any changes you make to this state flow record in the future are executed by this business rule.

7. Ensure that the **Active** check box is selected.
8. In the Work Task Flows list, locate the Accept state flow record and change the Active status to false. This action deactivates the transition that allows agents to accept tasks and moves the state flow directly from Pending Dispatch to Accepted.

Field service groups

Field service groups are sets of users or agents, filtered by location, skills, product models, and who can perform specific field service tasks.

Work orders and work order tasks use several different types of groups, including qualification, dispatch, and assignment groups. Administrators should set up an administrator group and one or more of each type of field service group, then assign the appropriate roles and users to those groups.

Before using the Field Service Management application in a production environment, create at least one group of each type to cover all locations. Field service group information can be found in User Administration > Groups and Field Service > Group Management.

Qualification groups

A qualification group is a set of users who can provide technical information regarding the work to be performed to fulfill a work order or work order task.

If one qualification group covers the location specified on the work order, the group name is automatically added to the Qualification group field on the work order when the work order state changes to Awaiting Qualification. If no qualification group or more than one qualification group covers the specified location, the Qualification group field is not automatically populated; information can be added manually. If no qualification group is assigned, the work order can remain without a qualification group and proceed through the work order life cycle. However, it is good practice to set up location coverage and qualification groups.

Note: The Qualification group field is hidden in the Work Order form when Field Service Management is configured for automatic qualification.

Dispatch groups

A dispatch group is a set of users who can select an agent to complete a work order task.

Dispatch groups are filtered based on location coverage. If only one dispatch group covers the location specified on a work order task, that group is added to the Dispatch Group field on the work order task record automatically. If multiple dispatch groups cover the specified location, use the lookup list to select a dispatch group. If no dispatch group is assigned, the work order task cannot progress to the Pending Dispatch state.

Assignment groups and vendor groups

An assignment group is a set of agents or vendors, filtered by location, skills, product models, from which an individual agent or vendor should be selected to complete a work order task.

If a dispatch group has been identified and the dispatch group only covers one assignment group, that assignment group is added to the Assignment Group field on the work order task record automatically. If the identified dispatch group covers multiple assignment groups, use the Assignment Group field lookup list to select an assignment group. If the Assignment Group field is empty, the system searches for assignment groups covering the territory that includes the work order task’s location.
Note: When an assignment group of type Vendor is created, be sure to assign a manager to the group who has the vendor manager role for assigning and controlling vendor tasks. Also be sure to add vendors to the group.

Create a group

Set up groups and assign the necessary roles and users. The users in the group inherit the roles of the group, so you do not have to assign roles to each user separately.

Role required: admin

There are a few good practices when creating groups:

- Create one group for administrators and assign the admin role to this group only.
- Create as many groups as needed in your organization. For example, create a staff group for each geographic location, function, skills, and product models, such as building maintenance or building security. Assign the necessary users to those groups, and then assign the staff role to those groups.

1. Navigate to User Administration > Groups.
2. Click New.
3. Fill in the fields on the form, as appropriate. See Creating a user group for an explanation of each field.
4. Click the lock icon beside the Type field. If the field is not visible, configure the form to add it.
   The Type field expands.
5. Click the reference lookup ( ) icon and select the [application] type.
6. Right-click the form header and select Save.
7. Add the [application]_admin or [application]_staff role to the Roles related list.
8. Add users to the Group Members related list.
9. Click Update.

Groups in Field Service Management example

An example of how locations, qualification groups, dispatch groups, and assignment groups can be created and used together for Field Service Management. The best approach is to create locations first, then create the different types of groups and associate locations to the groups.

Company ZYX has a group of field service automation agents that cover four locations:

- San Diego
- Los Angeles
- San Jose
- San Francisco
Group locations

There are two qualification groups that qualify work orders and work order tasks:

- Southern California
- Northern California

The Southern California qualification group covers the San Diego and Los Angeles locations. The Northern California qualification group covers the San Jose and San Francisco locations.
Qualification group

There are four dispatch groups that select agents to complete work order tasks:

- San Diego
- Los Angeles
- San Jose
- San Francisco

Each dispatch group covers their corresponding location.
Dispatch group

There are four assignment groups of agents that complete work order tasks:

- San Diego
- Los Angeles
- San Jose
- San Francisco

Each assignment group covers their corresponding location.
Assignment group

Using the four locations and the different groups, field service tasks can follow a logical flow based on location. The work is qualified, dispatched, and then performed by people who are as close to the work site as possible for maximum efficiency. For example, a work order with San Francisco specified in the Location field is created. A member of the Northern California qualification group qualifies the work order by adding detailed information. A member of the San Francisco dispatch group selects an agent from the San Francisco assignment group to perform the tasks.
Territory management

Territory management determines, by geographical location, the individual or group best positioned to execute a service call.

Territory management allows the assignment of a set of geographical locations to an individual or group. This assignment creates a territory. Territory management is based on a hierarchy where all locations are attached to a parent location. Top-level locations do not have a parent location. Territory Management is activated automatically with Field Service Management.

Assign a location to a user

Territory management allows field service management administrators to assign locations to users.

This creates a territory, or set of locations covered by a given user. The association helps the system to determine which users can fix problems in particular locations.

1. Navigate to Territories > Users.
2. Open a user record.
3. In the Locations Covered related list:
   - Click Edit to add an existing location to the user.
   - Click New to create a new location to associate to the user.

Territory management at the user level is not used for automations.

Assign a location to a group

Territory management allows field service management administrators to assign locations to groups of users.

This creates a territory, or set of locations covered by a given group. The association helps the system to determine which groups can fix problems in particular locations.

1. Navigate to Territories > Groups.
2. Open a group record.
3. In the Locations Covered related list:
   - Click Edit to add an existing location to the group.
   - Click New to create a new location to associate to the group.

Note: To determine which group covers a given location, the system checks the location hierarchy to see if there are any groups assigned to the location. If not, the system checks the upper level of hierarchy.

Push notifications for task assignment

Assign tasks and send reminders to customer service agents and field technicians using push notifications.

Agents and technicians can receive push notifications about tasks on their mobile devices. Dispatchers and managers can use push notifications to assign tasks to groups or to individual agents and to send reminders. Agents and technicians can accept or reject tasks from their mobile devices depending on the configuration.

Push notifications for work order tasks use the ServiceNow Mobile Application push application. Use this application to send notifications to both individual users and assignment groups.

Users with the system administrator role can enable and configure push notifications. See Push notifications for more information.
Push notifications for task assignment

When a dispatcher or manager assigns a task to an individual user:

- The user receives a notification with an **Approve** or **Reject** action. Approving the notification assigns the task to the user. Rejecting the notification unassigns the task and returns it to the **Pending Dispatch** state.
- With auto assignment enabled, the user receives a notification about the assigned task and no further action is required.

**Note:** This behavior depends on the setting for the Agent must accept or reject the assigned task configuration option. If disabled, the agent does not have the option to reject a task.

When a dispatcher or manager assigns a task to an assignment group, all users in the group receive a notification with an **Approve** or **Reject** action. Agents receive the notification and can accept or reject the task. When an agent clicks **Assign to me**, the state of the task changes to **Assigned**.

Push notifications as reminders

Notifications can be sent as reminders about upcoming tasks and about SLAs coming due. These notifications are sent to the agent assigned to the task.

Send notifications as upcoming task reminders. Reminders can be set at 15-minute intervals up to one hour. These reminders require the `wm_notification.upcoming.task.reminder.minutes.before` system property to be set. The default setting is 45 minutes before the task start time. If the value for this property is not defined, the agent does not receive reminders.

Send notifications to the assigned agents and agent managers for the following SLAs:

- SLA warning
- SLA breached
- SLA repair complete

Push notifications, actions, and messages

Push notifications, actions, and messages for work order task assignments and reminders.

**Push notifications**

Adds the following notifications to **System Notification > Push > Push Notifications**:

- `WorkOrderTaskUpcomingReminder`: sends a notification to the assigned agent as a reminder about an upcoming task.
- `WorkOrderTaskAcceptanceNotification`: sends a notification when a task needs to be accepted by an agent.
- `WorkOrderTaskGrpAssignmentNotification`: sends a notification when a dispatcher assigns a task to an assignment group.
- `WorkOrderTaskAutoAcceptanceNotification`: when auto assignment is enabled, sends a notification when a task is auto accepted by an agent.

**Push notification actions**

Adds the following actions to **System Notification > Push > Push Action**:

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• WO Task-Accept Action
• WO Task-Reject Action
• WO Task-Running Late Action

**Push notification messages**

Adds the following messages to System Notification > Push > Push Messages:

• WO Task Acceptance Message
• WO Task Auto Acceptance Message
• WO Task Group Assignment Message
• WO Task Upcoming Reminder Message

**Turn on notification preferences**

Field service agents need to turn on the following notification preferences:

1. Navigate to Self Service > My Notifications.
2. Turn on the work order task notifications:
   • WO Task Acceptance Notification
   • WO Task Auto Acceptance Notification
   • WO Task Group Assignment Notification
   • WO Task Upcoming Reminder
3. Ensure that notifications are set to ON on the user profile.

**Customer notification for work order task**

Send notification messages and emails to customers to update them about the status of their work order tasks.

Customers can receive notifications about work order tasks created for them and can unsubscribe to stop receiving these notifications.

Customer notifications for work order tasks use the Field Service Management - Customer Experience plugin to send both SMS and email notifications. Users with the system administrator role can enable and configure customer SMS and email notifications. For more information, see Notify.

Customers are notified when one of the following activities is performed to the work order task:

• Work order task is created
• Work order task is assigned
• Work order task is reassigned
• Work order task is rescheduled
• Work order task is completed
• Work order task is canceled
• Agent starts to travel to the work order task location
• Appointment booking is confirmed
• Appointment booking is rescheduled
• Appointment booking is canceled
Agent Feedback

Use Field Technician Feedback to collect feedback of field service agents from the customers by sending a survey link through email and SMS.

When agent marks the work order task as complete, the customer receives a survey link through email and SMS to provide feedback. Customers can provide feedback on a field service agent by rating the agent and posting their comments if any.

**Note:** Activate the Field Service Management - Customer Experience plugin to use the Field Technician Feedback survey.

The system calculates the average rating of an agent and store it in the wm_agent_rating table. The Geolocation tracking map displays the calculated rating of an agent to the customers who are tracking the agent.

The Process agent rating, Daily Data Collection job runs every night to refresh the data so that an updated agent rating is calculated and displayed on the Geolocation tracking map for customers.

Work order templates

Work order templates allow you to quickly create well-defined work orders.

These templates automatically create tasks and part requirements on work orders for common activities, such as password reset or memory upgrades. Work order templates and work order task templates are added to the product catalog when the Field Service Management plugin is activated.

Users with the wm_admin or model_manager role can create, edit, and delete work order templates and work order task templates.

Create a work order template

Field Service Management uses the work order template as a source of information for populating fields in a work order.

Role required: wm_admin or model_manager

Some of the predefined fields specific to the Work Order Templates table (cmdb_workorder_product_model) have been removed from the template form. This change enables the template form to be used with other tables, such as the table selected in the Task Type field. Add fields to the template form as needed, such as the Assignment group field, as part of template creation process.

1. Navigate to one of the following:
   - Product Catalog > Templates > Work Order Templates
   - Field Service > Catalog & Knowledge > Work Order Templates

2. Click New.

3. Fill out the fields on the Work Order Template form, as appropriate.
   For fields in the Task Information section of the form, you can click Copy Task Template and add the information from a task template if desired.

<table>
<thead>
<tr>
<th>Work Order Template form fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
</tr>
<tr>
<td>Request information</td>
</tr>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Field</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>Short description</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Checklist template</td>
</tr>
<tr>
<td>Workflow</td>
</tr>
<tr>
<td>Qualification group</td>
</tr>
<tr>
<td>Task information</td>
</tr>
<tr>
<td>Task type</td>
</tr>
<tr>
<td>Name</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Parts and quantities</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Dispatch group</td>
</tr>
<tr>
<td>Depends on</td>
</tr>
<tr>
<td>Checklist template</td>
</tr>
</tbody>
</table>

4. If desired, add a field to the Request Information section of the template:
a) Click **Edit fields** and select the field from the choice list.
b) Add a value to the field.
c) Click the gear icon next to the field and enable the **Show** option if you want this field to be displayed when this template is selected from the Field Service Catalog. If desired, enable the **Mandatory** option to make this a mandatory field.

5. If desired, add one or more fields to the Task Information section of the template from the table selected in the **Task type** field.
a) Click **Edit fields** and select the field from the choice list.
b) Add a value to the field.

6. As you work with tasks, you can click the min and max buttons to expand and collapse task information. If needed, you can also change the order of tasks using drag-and-drop.

7. If you set the **Templates will not create a dedicated catalog item** option on the Field Service Configuration screen, the template screen includes a **Publish** button. You can click this button if you want to manually publish a template as an item in the catalog. If the option is set to **Templates will create a dedicated catalog item**, the **Publish** button will not be displayed and the template will be automatically added to the catalog.

8. When you have completed your entries, click **Submit**.

**Create a knowledge article for a work order template**

You can add knowledge articles and guides (such as installation guides, maintenance procedures, and checklists) to the default knowledge base for hardware, software, and consumable templates.

Role required: wm_admin or model_manager

1. Navigate to one of the following:
   - Product Catalog > Templates > Work Order Templates
   - Field Service > Catalog & Knowledge > Work Order Templates

2. Click **New**.
3. Fill in the fields on the Work Order Template form, as appropriate.

**Work Order Template form fields**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request information</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>[Required] Unique and descriptive name for this template.</td>
</tr>
<tr>
<td>Short description</td>
<td>[Required] Content that is copied into the <strong>Short description</strong> field of a work order when this work order template is used. The exception to this is a work order created from an incident, problem, or change request, which always uses the short description of the source task, even when a template is applied.</td>
</tr>
<tr>
<td>Description</td>
<td>More in-depth description of the purpose of the template.</td>
</tr>
<tr>
<td>Checklist template</td>
<td>Select a checklist template to add a checklist to the work orders created from this work order template. For information on checklists, refer to Checklists</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Workflow</td>
<td>The workflow for work orders created from this template.</td>
</tr>
<tr>
<td>Qualification group</td>
<td>The qualification group for work orders created from this template.</td>
</tr>
<tr>
<td>Task information</td>
<td></td>
</tr>
<tr>
<td>Task type</td>
<td>The type of task to create. The default is <strong>Work Order Task</strong>.</td>
</tr>
<tr>
<td>Name</td>
<td>Unique and descriptive name for this task. As you start to type the description of the task, fields for your next task appear.</td>
</tr>
<tr>
<td>Description</td>
<td>A description of this task.</td>
</tr>
<tr>
<td>Parts and quantities</td>
<td>Parts requirements and quantities, as needed. If you selected <strong>Part requirements are not needed by agents</strong> on the Field Service Configuration screen, the <strong>Parts and quantities</strong> fields are not displayed.</td>
</tr>
</tbody>
</table>

**Note:** Select the **Mandatory** check box in front of all the parts that are required to perform the work order task.

| Dispatch group      | The dispatch group used to select the individuals who will fulfill the task. By default, ServiceNow filters the list of available dispatch groups by their proximity to the work order task location. When the `work.management.limit.location` property is set to **false**, the system displays all dispatch groups for selection, without any consideration of location. If only one dispatch group is available for a work order task in any location, ServiceNow automatically enters that group in this field. If the **Field Service will not use the dispatch queue** option is selected in the Field Service Configuration screen, this field is not displayed. |

| Depends on          | Identifies the task of tasks that must be completed before this task can be performed. You cannot make an entry in the first task until you have created subsequent tasks. |
| Checklist template  | Select a checklist template to add a checklist to the tasks created from this work order template.                                             |

Any hardware, software, and consumable assets you create and assign to the new template are displayed in the **Knowledge** related list on the template record.

**Agent calendar**

Customer service agents and field service technicians can use the agent calendar to see work schedules and assignments and also add personal events such as meetings or appointments.

The agent calendar provides a tool for maintaining different work schedules or shifts and assigning agents and technicians to shifts for specific time periods. The calendar has the flexibility to accommodate work schedules that are fixed or varied and shifts that rotate by week, month, or other patterns. The agent calendar administrator creates...
the calendar configuration, including a schedule configuration for each calendar user and the types of tasks to display on the calendar.

The schedule information stored in the agent calendar is used by other ServiceNow applications and features, such as the assignment workbench, central dispatch, and auto assignment. The assignment workbench uses agent availability, based on upcoming work schedules and personal time off, when evaluating predefined criteria and recommending agents for case assignment. Auto assignment in Service Management core applications, such as Field Service Management and Facilities Service Management, evaluate agent work schedules before assigning tasks.

The agent calendar administrator has access to the Agent Schedule menu in the application navigator. This menu includes the following modules:

- **Event Configuration**: create a configuration for each type of event or task displayed on the agent calendar.
- **Work Schedule**: create one or more work schedules for each calendar user.
- **Agent Personal Events**: create personal schedules for each agent and add events to those schedules.
- **Schedule**: create or modify schedules. For more information, see *Schedules*.

### Viewing the calendar

Customer service agents and field service technicians with the agent_schedule_user role can access their personal calendars in the following ways:

- **Customer Service > My Schedule**
- **Field Service > Agent > My Schedule**

<table>
<thead>
<tr>
<th>Note:</th>
<th>The agent calendar is supported in the mobile application and the mobile web.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11 Sunday</td>
</tr>
<tr>
<td></td>
<td>12 Monday</td>
</tr>
<tr>
<td></td>
<td>13 Tuesday</td>
</tr>
<tr>
<td></td>
<td>14 Wednesday</td>
</tr>
<tr>
<td></td>
<td>15 Thursday</td>
</tr>
<tr>
<td></td>
<td>16 Friday</td>
</tr>
<tr>
<td></td>
<td>17 Saturday</td>
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<td>00:00</td>
<td>01:00</td>
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<td>02:00</td>
<td>03:00</td>
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<td>04:00</td>
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<tr>
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<td>17:00</td>
</tr>
<tr>
<td>18:00</td>
<td>18:00</td>
</tr>
</tbody>
</table>

- **06:00**: Inspect data
- **06:00**: Feedback from team
- **06:00**: Interview new pr...
- **09:00**: Meeting with team
- **10:00**: Router replace
- **12:00**: Demo dryrun
- **13:00**: Inspect router
- **14:00**: Router cable check
- **15:00**: Bandwidth check
- **17:00**: Bootcamp
- **18:00**: Bootcamp
The calendar can display a single day, a week, or a month. Buttons in the calendar header allow you to switch views as well as go backward or forward in time. An agent’s scheduled work hours are highlighted in gray and the current day is highlighted in blue. The agent calendar displays work or tasks assigned to the agent as well as personal events. Each type of event is displayed on the calendar using a different color.

Agents can add events to their calendars by double-clicking a specific time slot and entering the details in the New Event popup window or by clicking and dragging. Agents can also move events by dragging and dropping. Click an event to display a popup with event details and double-click an event to open the event record.

**Plugins**

The Agent Schedule plugin (com.snc.agent_schedule) is activated as part of the Customer Service Management and Field Service Management plugins.

**Tables**

The Agent Schedule plugin adds the following tables.

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent Work Schedule</td>
<td>Stores one or more work schedules for each agent, including the date range for the schedule and the schedule type.</td>
</tr>
<tr>
<td>[agent_work_schedule]</td>
<td></td>
</tr>
<tr>
<td>Agent Personal Schedule</td>
<td>Stores personal calendar events for each agent, such as training, personal time off, or meetings.</td>
</tr>
<tr>
<td>[agent_events]</td>
<td></td>
</tr>
<tr>
<td>Event Configuration</td>
<td>Stores a configuration for each type of task displayed on the agent calendar, such as case tasks or work order tasks.</td>
</tr>
<tr>
<td>[agent_schedule_task_config]</td>
<td></td>
</tr>
<tr>
<td>Agent Schedule User Config</td>
<td>Stores the agent’s personalization data for the calendar. A user configuration is created automatically when a user with the agent_schedule_user role accesses their personal calendar.</td>
</tr>
<tr>
<td>[agent_schedule_user_pref]</td>
<td></td>
</tr>
<tr>
<td>Agent Schedule Relationship</td>
<td>Stores the relationships between agent configurations and event configurations. Relationship entries are created automatically based on a user's read access to the task tables selected in the event configurations.</td>
</tr>
<tr>
<td>[agent_schedule_task_config_rel_user_pref]</td>
<td></td>
</tr>
<tr>
<td>Agent Schedule Definition Theme</td>
<td>Stores the colors used to display different types of tasks on the agent calendar.</td>
</tr>
<tr>
<td>[agent_schedule_definition_theme]</td>
<td></td>
</tr>
</tbody>
</table>

**User Roles**

The Agent Schedule plugin adds the following user roles.

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent schedule administrator</td>
<td>Sets up the Agent Calendar configuration. Contains roles:</td>
</tr>
<tr>
<td>[agent_schedule_admin]</td>
<td>• agent_schedule_user</td>
</tr>
<tr>
<td></td>
<td>• schedule_admin</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent schedule user</td>
<td>Allows customer service agents and field service technicians to access and update their personal calendars.</td>
</tr>
</tbody>
</table>

**Configure the agent calendar**

Users with the agent calendar administrator role can perform several calendar configuration tasks.

These tasks include:

- Creating one or more schedule configurations for each calendar user.
- Creating an event configuration for each type of event to display on the calendar.
- Creating a work schedule to assign to an agent.

If necessary, agent calendar administrators can create personal events for a calendar user although the users themselves typically perform these tasks.

**Create an event configuration for the agent calendar**

Create configurations for each type of entry displayed on the agent calendar. Entries could include case tasks, work order tasks, appointments, or schedule entries such as event types that you could track and manage on the team calendar.

Role required: agent_schedule_admin

The schedule entry uses the Schedule Span [cmn_schedule_span] table to store different types of events.

The following types of schedule entries for event type configurations are available by default:

- Event — Appointment
- Event — Excluded
- Event — Meeting
- Event — Phone
- Event — Time Off
- Event — Other

These configurations are inactive by default. You can activate a configuration by navigating to **Agent Schedule > Event Configuration**, selecting an event type configuration, and setting the **Active** field to **true** for one or more event configuration types you would like to activate. Each configuration displays as a separate event type on the team calendar.

1. Navigate to **Agent Schedule > Event Configuration** and perform one of the following actions:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a configuration from an existing event configuration</td>
<td>1. Select the desired configuration.</td>
</tr>
<tr>
<td></td>
<td>2. Right-click the form header and click <strong>Insert and Stay</strong>.</td>
</tr>
<tr>
<td></td>
<td>A copy of the selected event type configuration is created.</td>
</tr>
</tbody>
</table>

2. Fill in the fields on the Event Configuration form, as necessary.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>A descriptive name for this configuration.</td>
</tr>
<tr>
<td>Config Label</td>
<td>Name displayed for this event in the agent calendar.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Color theme</td>
<td>Color used to display this type of schedule on the agent calendar.</td>
</tr>
<tr>
<td>Setup</td>
<td>Setup method for this configuration.</td>
</tr>
<tr>
<td></td>
<td>• Simple: use condition builder to set up this configuration.</td>
</tr>
<tr>
<td></td>
<td>• Scripted: use advanced scripts to set up this configuration.</td>
</tr>
<tr>
<td>Table</td>
<td>The table where the tasks for this type of configuration are stored.</td>
</tr>
<tr>
<td>Filter</td>
<td>Use condition builder to create the desired conditions for the selected task type. For example, the event configuration for Case Tasks includes a filter on the task State field to display only those tasks that are open.</td>
</tr>
<tr>
<td>User Field</td>
<td>A field from the Table that provides the user assigned to the task.          For example, the event configuration for Case Tasks uses the Assigned To field from the Task table [sn_customerservice_task]. When a case task is assigned, it appears on the agent calendar for the user selected in this field.</td>
</tr>
<tr>
<td>Event type</td>
<td>Type of schedule entry.</td>
</tr>
<tr>
<td>Display Field</td>
<td>A field from the Table that provides the information to be displayed for this event type on the agent calendar. For example, the event configuration for Case Tasks uses the Subject field from the Task table [sn_customerservice_task]. When a case task is assigned, the subject of the task appears on the agent calendar.</td>
</tr>
<tr>
<td>Start Date Field</td>
<td>A field from Table that provides the start date for the task.               For example, the event configuration for Case Tasks uses the Expected start field from the Task table [sn_customerservice_task]. When a case task is assigned, it appears on the agent calendar starting on the date and time specified in this field.</td>
</tr>
<tr>
<td>End Date Field</td>
<td>A field from the Table that provides the end date for the task.             For example, the event configuration for Case Tasks uses the Due date field from the Task table [sn_customerservice_task]. When a case task is assigned, it appears on the agent calendar ending on the date and time specified in this field.</td>
</tr>
<tr>
<td>Note:</td>
<td>Because the agent schedule administrator can select any fields from the Task Table for the Start Date Field and the End Date Field, it is possible that the end date may be earlier than the start date. In this event, the task is displayed on the agent calendar between the two points in time.</td>
</tr>
<tr>
<td>Script</td>
<td>Use advanced scripts to create the event configuration.</td>
</tr>
<tr>
<td>Note:</td>
<td>This field is available when the Scripted value is selected from the Setup field.</td>
</tr>
</tbody>
</table>

3. Perform one of the following actions:
   - If you created the configuration from an existing configuration, click **Update**.
   - If you created a new configuration, click **Submit**.
Create a personal event for an agent or technician

Users with the agent schedule administrator role can create personal events that appear on an agent's personal calendar.

Role required: agent_schedule_admin

Agents and technicians typically add personal events to their own calendars.

1. Navigate to Agent Schedule > Agent Personal Events.
2. Select the personal schedule for the desired agent.
3. In the Schedule Entries related list, click New.
4. Fill in the fields on the Schedule Entry form, as necessary.

Schedule Entry form

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the event.</td>
</tr>
<tr>
<td>Type</td>
<td>The type of event:</td>
</tr>
<tr>
<td></td>
<td>• Time off</td>
</tr>
<tr>
<td></td>
<td>• Appointment</td>
</tr>
<tr>
<td></td>
<td>• Meeting</td>
</tr>
<tr>
<td></td>
<td>• Phone call</td>
</tr>
<tr>
<td></td>
<td>• Excluded</td>
</tr>
<tr>
<td></td>
<td>• On call</td>
</tr>
<tr>
<td></td>
<td>• Time off - in approval</td>
</tr>
<tr>
<td></td>
<td>• Time off - rejected</td>
</tr>
<tr>
<td>Show as</td>
<td>Show this event on the agent's personal calendar as one of the following:</td>
</tr>
<tr>
<td></td>
<td>• Busy</td>
</tr>
<tr>
<td></td>
<td>• Free</td>
</tr>
<tr>
<td></td>
<td>• Tentative</td>
</tr>
<tr>
<td></td>
<td>• On call</td>
</tr>
<tr>
<td></td>
<td>Select <strong>Busy</strong> to exclude the block of time from agent availability</td>
</tr>
<tr>
<td></td>
<td>calculations for the auto assignment and the case assignment workbench.</td>
</tr>
<tr>
<td>When</td>
<td>The start date and time of the personal event.</td>
</tr>
<tr>
<td>To</td>
<td>The end date and time of the personal event.</td>
</tr>
<tr>
<td>All day</td>
<td>Enable this check box if the event lasts all day.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Repeats</td>
<td>Create a repeating event by selecting the frequency. Depending on the selection, other fields are required to complete the frequency information.</td>
</tr>
<tr>
<td></td>
<td>• Does not repeat</td>
</tr>
<tr>
<td></td>
<td>• Daily</td>
</tr>
<tr>
<td></td>
<td>• Every Weekday (Mon-Fri)</td>
</tr>
<tr>
<td></td>
<td>• Every Weekend (Sat, Sun)</td>
</tr>
<tr>
<td></td>
<td>• Every Mon, Wed, Fri</td>
</tr>
<tr>
<td></td>
<td>• Every Tue, Thu</td>
</tr>
<tr>
<td></td>
<td>• Weekly</td>
</tr>
<tr>
<td></td>
<td>• Monthly</td>
</tr>
<tr>
<td></td>
<td>• Yearly</td>
</tr>
<tr>
<td>Repeat every</td>
<td>Enter a number for the frequency of the repeated event.</td>
</tr>
<tr>
<td>Repeat on</td>
<td>For weekly events, select a day of the week.</td>
</tr>
<tr>
<td>Monthly type</td>
<td>For monthly events, select one of the following. These selections use the day and date in the When field as the basis for repetition.</td>
</tr>
<tr>
<td></td>
<td>• Day of the month</td>
</tr>
<tr>
<td></td>
<td>• Day of the week</td>
</tr>
<tr>
<td></td>
<td>• Last day of the month</td>
</tr>
<tr>
<td></td>
<td>• Last week of the month</td>
</tr>
<tr>
<td>Yearly type</td>
<td>For monthly events, select one of the following:</td>
</tr>
<tr>
<td></td>
<td>• Day of the year: this selection uses the day and date in the When field as the basis for repetition.</td>
</tr>
<tr>
<td></td>
<td>• Floating: for this selection, complete the Float week, Float day, and Float month fields.</td>
</tr>
<tr>
<td>Repeat until</td>
<td>Select a date for the end of the repeated event.</td>
</tr>
<tr>
<td>Float week</td>
<td>For a floating yearly repeating event, select the week.</td>
</tr>
<tr>
<td>Float day</td>
<td>For a floating yearly repeating event, select the day.</td>
</tr>
<tr>
<td>Float month</td>
<td>For a floating yearly repeating event, select the month.</td>
</tr>
</tbody>
</table>

5. Click Submit.

**Extension points in Field Service Management**

Use extension points to customize schedule entry and appointment booking configurations.

In the application navigator, enter `sys_extension_point.list` and click Enter to view the extension points used in the Field Service Management application.

You can create multiple implementations for each extension point and provide an order number for each implementation. The implementation that has the lowest order number is executed.

Extension points are available for the following configurations:

- Event type schedule entries
• Appointment booking

Extension points for event type schedule entries

<table>
<thead>
<tr>
<th>Extension Point Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AgentEventUtil</td>
<td>Customize the logic for event type schedule entries.</td>
</tr>
<tr>
<td>AgentScheduleUtil</td>
<td>Customize the logic for computing event time-off spans.</td>
</tr>
</tbody>
</table>

Extension points for appointment booking

<table>
<thead>
<tr>
<th>Extension Point Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>sn_apptmnt_booking.AppointmentBookingAvailabilityExtPoint</td>
<td>Customize the logic to determine bookable appointment windows.</td>
</tr>
<tr>
<td>sn_apptmnt_booking.AppointmentBookingDaoExtPoint</td>
<td>Customize the logic used to create or update an appointment record.</td>
</tr>
<tr>
<td>sn_apptmnt_booking.AppointmentBookingImplExtPoint</td>
<td>Customize the logic to validate appointment data before an appointment is created.</td>
</tr>
<tr>
<td>sn_apptmnt_booking.AppointmentBookingUtilExtPoint</td>
<td>Customize the logic to create a parameter map of appointment data which will be used to create and update appointment records.</td>
</tr>
<tr>
<td>sn_apptmnt_booking.AppointmentRescheduleCancelExtPoint</td>
<td>Customize the logic to determine whether appointments can be canceled or rescheduled.</td>
</tr>
<tr>
<td>sn_apptmnt_booking.AppointmentRESTHelperExtPoint</td>
<td>Customize the logic for retrieving a list of date and time periods available for appointment booking.</td>
</tr>
</tbody>
</table>

Quick start tests for Field Service Management

Validate that Field Service Management still works after you make any configuration change, such as applying an upgrade or developing an application. Copy and customize these quick start tests to pass when using your instance-specific data.

Field Service Management quick start tests are available when you enable the Field Service Management plugin (com.snc.work_management). Enable the demo data plugin (com.snc.work_management.demo) in a non-production instance to start using the quick start tests available with your application. You can also modify existing data and customize it to run the quick tests.

FSM: Field Service Management test suite

<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
<th>Release version</th>
</tr>
</thead>
</table>
| FSM: Create Initiate Qualify Dispatch and assign Work Order Task | • Create a work order.  
• Initiate and qualify a work order.  
• Dispatch a work order.  
• Assign a work order task to an agent. | Madrid           |
<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
<th>Release version</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSM: Part Sourcing</td>
<td>• Source any part to an agent's stock room from the work order task.</td>
<td>Madrid</td>
</tr>
<tr>
<td></td>
<td>• Create a transfer order line for the part sourcing.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Use this part for any work order to consume it using the Part Usage action.</td>
<td></td>
</tr>
<tr>
<td>FSM: Part Usage</td>
<td>• Source any part to an agent's stock room from the work order task.</td>
<td>Madrid</td>
</tr>
<tr>
<td></td>
<td>• Use this part for any work order to consume it using the Part Usage action.</td>
<td></td>
</tr>
<tr>
<td>FSM: Questionnaire</td>
<td>Create a questionnaire and associate it with a work order task.</td>
<td>Madrid</td>
</tr>
<tr>
<td>FSM: Field Service Configuration</td>
<td>Verify that the default configuration such as task assignment method, qualification requirement, PDF summary and agent's ability to accept or reject tasks is preserved.</td>
<td>New York</td>
</tr>
<tr>
<td>FSM: Planned Maintenance</td>
<td>Create a planned maintenance work order with weekly interval time for printer maintenance.</td>
<td>New York</td>
</tr>
<tr>
<td>FSM: Appointment Booking Configuration</td>
<td>Verify that the default configuration for appointment booking is preserved and that the point of sale service and catalog item exists in the system.</td>
<td>New York</td>
</tr>
<tr>
<td>FSM: Create Work or Personal Schedules</td>
<td>Create personal or work schedule for agents.</td>
<td>Orlando</td>
</tr>
<tr>
<td>FSM: Field Service Property Settings</td>
<td>Verify that the field service system properties preserve expected values.</td>
<td>Orlando</td>
</tr>
<tr>
<td>FSM: Work Groups</td>
<td>Verify that field service agents can be added to work groups.</td>
<td>Orlando</td>
</tr>
</tbody>
</table>
| FSM: Dynamic Scheduling - Preferred Technician assignment with mandatory parts reservation | With Dynamic scheduling:  
  • Preferred technician should be picked for task assignment.  
  • Mandatory parts should be reserved in the agent stock room. | Paris           |

**Note:** Activate Customer service management demo data plugin.
Initiating work

Create work orders, tasks, or part requirements using templates that integrate the right skills, part requirement, and scheduling.

Work Order Management

Create, approve, qualify, or close work orders and manage SLAs using the Field Service Management application.

Manage work orders

Work orders are requests for off-site work. Users with the appropriate roles create the work orders and provide the necessary information needed for the work order tasks. Then other users qualify those work orders and create the tasks necessary to complete the work order.

For instructions on how to dispatch tasks using geolocation with Google Maps, see Using the dispatch map.

Creating work orders

If you have the wm_initiator or wm_initiator_qualifier role, you can create work orders. You can create entirely new work orders, or you can create a work order from another record.

Work orders can be created from these other record types: problem, incident, change, or project task. They can also be created from another existing work order. For each record, you can create only one work order.

Work orders created from another existing work order

If the scope of an existing work order changes during the execution phase, you can create another work order from it. Analyze whether the scope change can be managed by adding additional tasks instead of creating another work order.

When you create a work order from an existing work order, the following information is copied from the original work order:

- Work order record reference (in the Initiated from field)
- Affected CI
- Caller
- Location
- Priority
- Short description
- Description

Because some information is copied from the original record, an existing work order can be used as a template to create new work orders.

Work orders created from an incident, problem, change, or project task record

If an incident, problem, change record, or project task must be assigned to an off-site agent and tracked, you can create a work order from it. Some information from the original record is copied automatically into the new work order.
Create a work order

When off-site work is requested, create a work order to provide information for the agents who fulfill the request. You can create an entirely new work order, or you can create a work order from these other record types: problem, incident, change, or project task. You can also create a work order from another existing work order.

Role required: wm_initiator, wm_initiator_qualifier, or admin

In the work order, specify the nature of the work required and identify the configuration items (CI) affected.

To create work orders for common tasks such as the onboarding of new employees, you can use work order model templates to create all the necessary records automatically.

1. Create the work order.

<table>
<thead>
<tr>
<th>Record type</th>
<th>Fields copied to the work order</th>
</tr>
</thead>
</table>
| Incident      | • Incident record reference (in the Initiated from field)  
|               | • Caller  
|               | • Location  
|               | • Priority  
|               | • Short description  
|               | • Description  |
| Problem       | • Problem record reference (in the Initiated from field)  
|               | • Affected CI  
|               | • Priority  
|               | • Short description  
|               | • Description  |
| Change        | • Change record reference (in the Initiated from field)  
|               | • Affected CI  
|               | • Priority  
|               | • Short description  
|               | • Description  |

**Project task**

Note: Before work orders can be created from project tasks, Field Service Management must be integrated with Project Portfolio Management.

These work order fields are synchronized with the project task:

• State
• Scheduled start
• Estimated end

For more details on the synchronized fields, see Integration with Project Portfolio Management.
## Option

### Create a new work order

1. Navigate to **Field Service > Work Order > Create New**.

2. Enter a **Short description**. Optionally, you can click the search knowledge icon (🔍) to view articles in the knowledge base relating to this product model, plan, or CI. Doing so could provide a solution related to the reason you are submitting a work order.

3. Click **Submit**.

### Create a work order from an incident, problem, change, project task, or another work order.

1. Open the record that you want to create the work order from.

   **Note:** Before work orders can be created from project tasks, Field Service Management must be integrated with Project Portfolio Management.

2. Right-click the form title bar and select **Create Work Order**.

The work order is created in the **Draft** stage.

If you created the work order from another record, the short description of the original record is copied as the short description of the work order. Some of the work order fields are auto-filled with information from the original record. For details, see *Creating work orders*.

2. Fill in the fields on the Work Order form, as appropriate.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Auto-generated identification number for the work order.</td>
</tr>
<tr>
<td>Company</td>
<td>Company for which the work order was opened. The lookup list shows only those companies designated as Customers in their company record.</td>
</tr>
<tr>
<td>Caller</td>
<td>Person that requires the work. The lookup list shows only users associated with the selected Company.</td>
</tr>
<tr>
<td>Affected CI</td>
<td>Primary item that requires work, such as a broken laptop or a printer that needs ink. Configuration Item lookup lists are based on the selected Company. If more than one item requires work, add them to the Affected CIs related list. When assigning CIs to individual tasks, the qualifier and dispatcher can choose only from the CIs in the Work Order Affected CIs related list. The same CI in a work order can be applied to multiple work order tasks.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Location</td>
<td>Geographical area where the work must be done. If not entered manually, the field is filled automatically based first on the <strong>Affected CI</strong> field and then, if no affected CI or location is provided, on the <strong>Caller</strong>.</td>
</tr>
<tr>
<td>Template</td>
<td>Template for creating this work order (optional). Click the lookup icon and select a template. The description of the selected template will populate the <strong>Description</strong> field. If you selected <strong>Tasks will be dispatched manually</strong> in the Field Service Configuration screen, work order tasks that were created for orders that use templates are automatically transitioned to <strong>Pending dispatch</strong>. For more information on templates, see Creating Service Order Templates.</td>
</tr>
<tr>
<td>Note:</td>
<td>If defined in advance, the template may contain task dependencies, which the tasks in your work order will inherit.</td>
</tr>
<tr>
<td>Opened</td>
<td>Date and time the work order was opened.</td>
</tr>
<tr>
<td>Priority</td>
<td>Precedence of the work order, based on severity of the impact, number of users affected, or other factors. The SLA applied to this work order is determined by the priority selected in this field.</td>
</tr>
<tr>
<td>State</td>
<td>Current stage of the work order in the work order life cycle.</td>
</tr>
<tr>
<td>Qualification group</td>
<td>Group that can specify the technical details of the work order. The lookup list shows only the qualification groups associated with the selected <strong>Location</strong>. If no qualification groups exist for the location, all qualifications groups are listed and any can be selected. This field is hidden when Field Service Management is configured for <strong>automatic qualification</strong>.</td>
</tr>
<tr>
<td>Initiated from</td>
<td>Record number of the original problem, incident, change request, or other work order from which the work order was created.</td>
</tr>
<tr>
<td>Billable</td>
<td>Option for issuing a statement of fees or charges for the work order. This is useful for running reports on billable work orders.</td>
</tr>
<tr>
<td>Short description</td>
<td>Brief explanation of the work order.</td>
</tr>
<tr>
<td>Description</td>
<td>Detailed information describing the work to be performed. Initiators create work orders, but qualifiers should add as much detail about the work to be performed as possible to avoid extra communication with the caller.</td>
</tr>
<tr>
<td>Work Notes</td>
<td>Information about the work order and how it was completed. This field is not visible to customers. Work notes are added throughout the work order life cycle to help users who work on it to communicate useful information.</td>
</tr>
<tr>
<td>Scheduling</td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>Scheduled start</td>
<td>Date and time when the earliest task is scheduled to start.</td>
</tr>
<tr>
<td>Estimated end</td>
<td>Estimated date when all tasks will be completed.</td>
</tr>
<tr>
<td>Actual work start</td>
<td>Date and time when the earliest task actually started.</td>
</tr>
<tr>
<td>Actual work end</td>
<td>Date and time when the last task actually ended.</td>
</tr>
<tr>
<td>Requested due by</td>
<td>Estimated date when the latest task will be completed.</td>
</tr>
</tbody>
</table>

The **Lead Time** for the maintenance schedule is subtracted from the **Required Due by** date for the work order to determine this date.

3. Click **Submit** or **Update** to save your changes.

After you complete the Work Order form, move it to the next state that is **configured for Field Service Management**. In the next state, other users with appropriate roles for the state will process the work order.

On the Work Order form, click whichever of the following options is available:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ready for Approval</td>
<td>Click <strong>Ready for Approval</strong> to move the work order to the Waiting for Approval state. This option appears only when <strong>Approval for new request required</strong> is enabled in the configuration for Field Service Management.</td>
</tr>
<tr>
<td>Ready for Qualification</td>
<td>Click <strong>Ready for Qualification</strong> to move the work order to the Awaiting Qualification state. A work order task is automatically created if one does not exist. The short description, description, and location of the work order are copied into the task. The <strong>Ready for Qualification</strong> option is available only when <strong>Qualification is required for new requests</strong> is enabled in the configuration for Field Service Management.</td>
</tr>
<tr>
<td>Ready for Dispatch</td>
<td>Click <strong>Ready for Dispatch</strong> to move the work order to the Ready for Dispatch state. The <strong>Ready for Dispatch</strong> option is available only when <strong>Approval for new request required</strong> and <strong>Qualification is required for new requests</strong> are disabled in the configuration for Field Service Management.</td>
</tr>
</tbody>
</table>

**Approve or reject a work order**

When a work order is assigned to you for approval, review it to determine if the work is required. You can also request more information for the work order before you decide what to do with it. Work order approvals are mandatory only when Field Service Management is configured to request them.

Role required: wm_approver_user or admin

Approvals are required only when **Approval for new request required** is enabled in the configuration of Field Service Management. You can view all the work orders awaiting your approval from the **Field Service > Work**
Order > My Approval module. If you do not see this module, Approval for new request required is disabled and you do not need to complete this task.

1. Navigate to Field Service > Work Order > My Approval, and click a work order that is in the Requested state.
2. Review the work order, and then process it with one of the following options.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approve the work order</td>
<td>Click Approve. The work order is then moved to the next state. Depending on the configuration of Field Service Management, it is moved to the qualification or dispatching state. In the next state, other users with appropriate roles for the state will process the work order.</td>
</tr>
</tbody>
</table>
| Reject the work order                       | 1. From the State list, select Rejected.  
2. In the Comment field, explain why this work order is rejected.  
3. Click Update. The work order is then closed. |
| Cancel the work order because it is no longer required | 1. From the State list, select No Longer Required.  
2. Click Update. The work order is then closed. |
| Request more information about the work order | 1. From the State list, select More Information Required.  
2. In the Comment field, ask for the information that you need.  
3. Click Update. The work order reverts back to the Draft state and the following work note is added to the order: The order needs more information for further approval. |
| Close the work order because it duplicates another work order | 1. From the State list, select Duplicate.  
2. Click Update. The order is moved to the Cancelled state and the following work note is added to the order: The order already exists. |

Qualifying work orders

Work orders must be qualified to ensure that work order tasks are created and assigned. The qualifying process can be automatic or manual.

Depending on how the Qualification is required for new requests option is set in the Field Service Management configuration, the qualifying process is manual or automatic.

Manual qualification
When **Qualification is required for new requests** is enabled, the qualifying process is manual. Each work order must go through these states of the process:

**Awaiting Qualification ➔ Qualified**

In the Awaiting Qualification state, all the work order tasks must be qualified by a user with the appropriate role.

Qualifiers, who are users with the `wm_qualifier` role, select the dispatch group, add work order tasks, and define part requirements. Qualifiers can also edit the affected CI, short description, and description for work orders.

After all the tasks are qualified, the work order is moved to the Qualified state.

Work orders tasks can be qualified individually or in bulk.

**Automatic qualification**

When **Qualification is required for new requests** is disabled, the qualifying process is automatic. The work order is automatically qualified and moved directly to the next state that is configured for Field Service Management.

A task is also automatically created for each qualified work order. These work order tasks are automatically qualified but must still be manually moved to the dispatch queue. Users with the `wm_initiator_qualifier` or `wm_admin` roles can move the work order tasks.

**Filtering available dispatch groups**

The `work.management.limit.location` property controls whether the choice list of available dispatch groups is filtered by proximity to the task location.

**Request additional information to qualify a work order**

Transfer orders move necessary parts to the location where the agent can receive them. If there is not enough information to create a transfer order, the dispatcher can request more details from the qualifier.

Role required: `wm_dispatcher` or `wm_admin`

1. Navigate to **Field Service > Dispatching > Dispatch Queue**.
2. Open a work order task in **Pending Dispatch** state.
3. In the **Work Notes** field, enter a reason for returning the work order.
4. Click **Request more information**.

   The task state changes to **Draft** and the work order state changes to **Awaiting Qualification**. If Field Service Management is configured for **automatic qualification**, the work order state remains at **Qualified**.

**Qualify work order tasks**

When a work order is assigned to you for qualification, review and qualify its tasks to ensure that they contain enough information for the groups that are dispatched to work on them. Qualifying work order tasks is required only when Field Service Management is configured for manual qualification.

Role required: `wm_qualifier`

If Field Service Management is configured for automatic qualification, you do not need to complete this process. Work orders are automatically qualified and tasks are automatically created for them. For details on manual and automatic qualification, see **Qualifying work orders**.

On the Work Order form, you can qualify tasks from the Work Order Tasks related list. You can qualify a single task or multiple tasks at the same time. While you qualify a single task, you can also qualify any sibling tasks, which are different tasks that are related to the same order.
**Note:** If Field Service Management is configured to automatically assign tasks, you must also select a dispatch group for each work order task. If you do not select a dispatch group, you are prompted to select one before you can qualify the task.

1. Navigate to **Field Service > Work Order > Awaiting Qualification**, and click a work order.
   
   If you do not see the Awaiting Qualification module, Field Service Management is configured for automatic qualification.

2. To qualify a single work order task and any of its sibling tasks:
   a) In the Work Order Tasks related list, click the task.
   b) On the Work Order Task form, click **Qualified**.
   c) From the Sibling Tasks related list, qualify any sibling tasks.
      
      You can either click a single sibling task to qualify, or select multiple sibling tasks from the list to qualify. After you select multiple tasks, select **Qualified** from the Actions choice list.

3. To qualify multiple work order tasks:
   a) In the Work Order Tasks related list, select the check box next to each task.
   b) From the Actions choice list, select **Qualified**.

---

**Move a work order task to the dispatch queue**

If Field Service Management is configured to automatically qualify work orders, tasks are also automatically created for the orders. When one of these automatically created tasks is assigned to you, select a dispatch group for it and move it to the dispatch queue.

Role required: wm_initiator_qualifier, wm_admin, or admin

1. Navigate to **Field Service > Work Order > My Work Order Tasks**.
2. Click a task in the Draft state.
3. On the Work Order Task form, make sure that a **Dispatch group** is selected.
4. Click **Ready for Dispatch**.

---

**Closing work orders**

In Field Service Management, work orders are closed automatically depending on the states of the associated work order tasks.

Work orders are closed in the following scenarios:

- If all work order tasks are marked **Closed Complete**, the work order state changes to **Closed Complete**.
- If at least one work order task is marked **Closed Incomplete**, the work order state changes to **Closed Incomplete**.

After a work order is closed, the time and effort for it are calculated automatically. The work order also becomes inactive and is removed from the list of work orders.

After an order has been assigned to an agent, that agent can complete and close the order under two conditions:

- When the **Request lifecycle is task driven** configuration option is enabled, all states of the work order are driven by the task. The agent can click the **Close Complete** button on the Work Order Task form to close any tasks that need to be closed manually. After all of the order's tasks are closed, the work order is closed automatically.
- When the **Request lifecycle is request driven** configuration option is set and all of the work order's tasks are closed, the agent can click the **Close Complete** button on the Request form to close and complete the order.
Cancel a work order

Cancel a work order if the work is no longer necessary or if it is a duplicate of another work order.

Role required: Work orders can be canceled by users with different roles during specific states in the work order life cycle.

When you cancel a work order, all associated work order tasks are also canceled.

1. Navigate to Field Service > All Work Orders.
2. Click the work order.
3. In the Work notes field, enter a reason for canceling the work order.
   A reason is required for canceling work orders. If you do not provide a reason, an error message prompts you to enter one in the Work notes field.
4. Click Cancel.

Delete a work order

For tracking purposes, you should close or cancel an existing work order that is no longer in use. Closed and canceled work orders are inactive and do not appear on work order lists. Avoid deleting a work order unless you are cleaning up errors, such as duplicate work orders.

Role required: wm_admin

Deleting a work order automatically deletes all associated work order tasks, so agents are not assigned work order tasks that are part of a deleted work order.

1. Navigate to Field Service > All Work Orders.
2. Click the work order.
3. Click Delete.
4. Confirm the action when prompted.

Signed PDF summaries for closed work orders

In Field Service Management, customers can digitally sign and confirm work orders that are closed with the Closed Complete or Closed Incomplete state. A PDF summary of the signed work order is then created.

The summary includes the completed tasks, parts used and returned, incidental expenses, and the time required to complete the work. The PDF also includes the name and signature of the customer.

Enabling signed PDF summaries for work orders

Before PDF summaries for work orders can be generated, an administrator must complete the following tasks:

1. Activate the Field Service – Signature Pad plugin (com.snc.wo_signature_pad). The plugin installs the following table and script include.

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature Images</td>
<td>Stores images of customer signatures for work orders.</td>
</tr>
<tr>
<td>[signature_image]</td>
<td></td>
</tr>
</tbody>
</table>

Script include
<table>
<thead>
<tr>
<th>Script include</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GeneralWOForm</td>
<td>Creates a PDF of the work order form.</td>
</tr>
</tbody>
</table>

2. In the Field Service Management configuration, enable **Signature Capture and PDF Order Summary**.

*Create a signed PDF summary for a work order*

If PDF summaries are enabled for Field Service Management, you can request that customers digitally sign and confirm a closed work order. A PDF summary of the signed work order is then created.

**Role required:** wm_agent

When a work order is closed, you are notified with a link to the work order. Open the work order to request a signature from the customer.

1. When you receive a message about the completed work order, click the link in the message to open the Work Order form.
   
   You can also find closed work orders by navigating to **Field Service > Work Order > All Work Orders**.

2. In the title bar of the Work Order form, click **Sign & Confirm**.
   
   You can also click the **Sign & Confirm** related link.

3. In the Signature Pad window, ask the customer to enter their name in the **Name** field and sign their name in the **Signature** field.

4. Click **Accept**.

The signed PDF summary is generated and attached to the Work Order form.

**Work order questionnaires**

Create questionnaires and associate them with work orders and work order tasks.

As part of completing some work orders and tasks, field service agents fill out questionnaires or complete checklists. For example, an agent might need to complete a safety checklist before starting work on a task or fill out an inspection questionnaire before completing a work order.

The work order questionnaire feature enables users with the system administrator role to create questionnaire records and associate those records with work orders or work order tasks. Questionnaire records include some configuration information, such as the condition or event that triggers the questionnaire, as well as the list of questions included in the questionnaire. The Survey Designer tool is used to create the questionnaires.

When a work order or task has an associated questionnaire, the **Questionnaires** button appears at the top of the form. Clicking this button displays the Questionnaires page, where the agent can complete the questionnaire or checklist.

Enable the work order questionnaire feature by activating the Field Service - Questionnaire plugin (com.snc.wm_questionnaire). This plugin requires the following plugins:

- Customer Service (com.sn_customerservice)
- Customer Service Management Demo Data (com.snc.customerservice.demo)
- Field Service Management (com.snc.work_management)

The Field Service - Questionnaire plugin adds the Questionnaire module to the Field Service menu (**Field Service > Administration > Questionnaire**).
Demo questionnaire

One demo questionnaire record, Inspection Questionnaire, is included with the Field Service - Questionnaire plugin. This questionnaire record has a trigger condition that adds a questionnaire to a work order task when the task state changes to Work in Progress.
Complete the inspection questionnaire

Questionnaire complete!

To create a questionnaire record that is assigned to the user when the state of a work order or work order task changes to Work In Progress, select the following in the Trigger Condition field: "State changes to Work In Progress." This configuration creates a questionnaire on the state change.

- Trigger condition
  - Add Filter Condition
  - Add "OF" Clause
  - State
  - changes to
  - Work In Progress
  - AND
  - OR

Mandatory
This demo questionnaire works as follows:

1. The dispatcher assigns a work order task to an agent.
2. The agent accepts the task and clicks **Start Work** on the task form.
3. The task state changes to **Work in Progress** and the **Questionnaires** button appears in the task form header.
4. The agent clicks **Questionnaires** to display one or more available questionnaires for the task.
5. The agent clicks **Start** on the desired questionnaire.
6. The agent completes the questionnaire and clicks **Submit Save**
7. The agent returns to the work order task, completes the work, and closes the task.

**Note:** Questionnaires are not editable after the associated work order or task is closed.

**Troubleshooting the questionnaire feature**

If a trigger condition is defined for the task state as **Work in progress** rather than when the task state changes to **Work in progress**, every update of the work order task creates a questionnaire.

When a task gets reassigned to another agent, the existing questionnaires do not get reassigned.

Configure the form layout and add the **Assigned to** field to ensure that a questionnaire does not get created without an assigned agent.

*Create a questionnaire for a work order or task*

Create a questionnaire record and then associate it with a table such as the Work Order or Work Order Task tables.

Role required: admin

The system administrator can view questionnaire records from the Questionnaire list and questionnaires by navigating to **Surveys > View Surveys**.

1. Navigate to **Field Service > Administration > Questionnaire**.
2. Click **New**.
3. Fill in the fields on the Questionnaire form to create a new questionnaire record.
   This record stores the basic information for the questionnaire.

**Questionnaire form fields (new record)**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the questionnaire.</td>
</tr>
<tr>
<td>Active</td>
<td>Enable this check box to make the questionnaire record active. The system administrator can attach active questionnaires to work orders and work order tasks.</td>
</tr>
<tr>
<td>Description</td>
<td>A brief description of the questionnaire record.</td>
</tr>
<tr>
<td>Introduction</td>
<td>Text that appears at the beginning of the questionnaire.</td>
</tr>
<tr>
<td>End note</td>
<td>Text that appears at the end of the questionnaire.</td>
</tr>
<tr>
<td>Table</td>
<td>The table with which this questionnaire record is associated.</td>
</tr>
</tbody>
</table>
**Complete a questionnaire for a work order or task**

Field service agents can access and complete questionnaires from the Work Order or Work Order Task forms.

Role required: `wm_agent`

If one or more questionnaires are available for a work order or work order task, the `Questionnaires` button appears at the top of the form. Clicking this button displays the questionnaires.

Agents can also navigate to **Self-Service > My Assessments & Surveys** to see questionnaires for work orders and work order tasks.

**Note:** Users who can view a work order or task can also view associated questionnaires. Users who are assigned to a work order or task can complete associated questionnaires.

1. Open a work order or work order task.
2. Click **Questionnaires**.
   
   The Questionnaires page opens and displays the questionnaires associated with the task record. Each questionnaire is listed as an individual tile and displays the associated work order or task number.
3. Click **Start** on the questionnaire tile.
   
   The questionnaire opens in the window. A message at the top displays the related work order or task number.
4. Complete the questionnaire.
5. Click **Submit** or **Save**.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submit</td>
<td>Submits the questionnaire and returns to the work order or task form. Once submitted, an agent cannot make changes to the questionnaire. Upon returning to the questionnaire list, an agent can only view the responses. (Tile displays <strong>View</strong>.)</td>
</tr>
</tbody>
</table>
### Field Service in CSM Agent Workspace

Use Field Service in CSM Agent Workspace to create work orders from cases while on a live call or chat with the customer. You can automatically create tasks and part requirements for the required work using work order templates. Mark these work order tasks as ready for dispatch and inform customers of the status of the work orders—all while still interacting live with the customer.

### Agent Workspace in action

Here's how agents use Agent Workspace.

### Key features

**Field service integration with case**

Create a case, use knowledge to find relevant case information, and also generate work orders and work order tasks from the case using a single user interface.
Communicate in real time with your customers by chat or phone using the workspace. Let them know when the technician is scheduled to arrive on site to resolve their case.
Automatic task creation using templates
Use templates that have tasks, skills, and parts required for the work orders defined to resolve customer issues.
Get started

Select a tile to get started.

Agents and system administrators go here to learn about Workspace.

System administrators go here to set up Workspace.

Agents go here to learn how to use Workspace.

Explore Field Service in CSM Agent Workspace

Learn how work orders get created from a case and how customer issues are resolved using Field Service in Customer Service Management (CSM) Agent Workspace.

As a customer, when you initiate a chat using the customer service or consumer service portal, the CSM agent can interact with you using the workspace.

The agent can then:

• Create a case to resolve issues.
• Search for relevant knowledge articles to see if the case can be resolved.
• If there is a need for a technician to be on-site, create a work order using a template.

All relevant information from the case is automatically copied into the work order. The template has a list of tasks, skills, and part requirements for resolving the issue. These items are automatically created for the work order. CSM agent can book appointment for the work order.

The technician to work on this job is dynamically scheduled using the Field Service application. The CSM agent, still on chat, communicates the technician's schedule to work on the issue. The technician completes the job based on assigned schedule and gets the sign-off from the customer.

Here's a representation of how a CSM agent opens a case and gets the issue resolved for the customer.
Field Service Workflow in CSM Agent Workspace

**CSM agent**
Role: sn_customerservice_agent or sn_customerservice_consumer_agent
Use field service in CSM Agent Workspace to create work orders from case and manage work orders and work order tasks.

- CSM agent is on a live chat with customer
- Creates a case for the issue customer is reporting
- Searches knowledge to find relevant information to resolve the case
- CSM Agent manages appointment
- CSM agent, who is still on live chat with the customer, lets the customer know when the field service agent will arrive at customer site to complete the work

**FSM agent**
Role: wm_agent
Field service agents are assigned to tasks based on their availability, skills, and the parts required to work on tasks. Agents can optimize their routes for the day to find the quickest way to get to task location and complete the job.

- If on-site work is required, creates a work order from case
- Applies a work order template that automatically creates tasks and part requirements
- The work order task is assigned to a field service agent using dynamic scheduling
- Field service agent goes to task site and completes the tasks
- Gets sign-off on the work order from the customer

The agent must also have a wm_qualifier role to create work order tasks and qualify them.
Set up Field Service in CSM Agent Workspace

Activate Field Service in CSM Agent Workspace and set up roles for performing the tasks.

Activating Agent Workspace

Activate the following plugins:

- Customer Service with Field Service Management plugin [com.snc.csm_fsm_integration] to enable account, contact, partner, partner contact, consumer information from Customer Service to Field Service Management.
- Field Service Management plugin (com.snc.work_management) to provide support for scheduling and managing on-location work tasks.
- FSM Agent Workspace plugin (com.snc.agent_workspace.fsm) is activated when you enable the Field Service Management plugin (com.snc.work_management) or the Customer Service with Field Service Management plugin [com.snc.csm_fsm_integration].

Roles used in Agent Workspace for FSM

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
<th>Contains Roles</th>
</tr>
</thead>
</table>
| Administrator [admin] | Update Field Service Management roles for Agent Workspace. | • knowledge  
| | | • sn_fsm_servicedesk_agent  
| | | • template_editor  
| | | • chat_admin  
| | | • sn_customerservice.deescalation_requester  
| | | • sn_customerservice_agent  
| | | • sn_templated_snip.template_snippet_reader  
| | | • sn_shn.editor  
| | | • timecard_user for  
| | | [sn_customerservice_agent]  
| | | • sn_esm_agent  
| Customer Service Agent [sn_customerservice_agent, sn_customerservice.consumer_agent] | Create work orders from case.  
| | | • View and apply template on a work order.  
| | | • Move a work order from Draft state to Ready for Approval, Ready for Qualification, and Ready for Dispatch based on existing state flow and sm_config rules.  
| | | • Book an appointment on a work order.  
| | | • sn_fsm_servicedesk_agent  
| | | • sn_esm_location_agent  
| Location agent [sn_customerservice.svc_location_agent] | Create and manage work orders created from cases for contacts and consumers in their service organization. In integration with Field Service Management:  
| | | • View and apply template on a work order.  
| | | • Move a work order from Draft state to Ready for Approval, Ready for Qualification, and Ready for Dispatch based on existing state flow and sm_config rules.  
| | | • Book an appointment on a work order.
<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
<th>Contains Roles</th>
</tr>
</thead>
</table>
| Location consumer agent     | Create and manage work orders created from cases for contacts and consumers in their service organization. In integration with Field Service Management:  
  • View and apply template on a work order.  
  • Move a work order from Draft state to Ready for Approval, Ready for Qualification, and Ready for Dispatch based on existing state flow and sm_config rules.  
  • Book an appointment on a work order. | • sn_fsm_servicedesk_agent  
• sn_esm_location_agent                                                                                                      |
| Location manager            | Create and manage work orders created from cases for contacts and consumers that belong to the service organizations within their hierarchy. In integration with Field Service Management:  
  • View and apply template on a work order.  
  • Move a work order from Draft state to Ready for Approval, Ready for Qualification, and Ready for Dispatch based on existing state flow and sm_config rules.  
  • Book an appointment on a work order. | • sn_fsm_servicedesk_agent  
• sn_customerservice.svc_location_aguent  
• email_client_quick_message_author  
• sn_templated_snip.template_snippet_writer  
• sn_shn.admin  
• approver_user  
• sn_publications.approver  
• sn_customerservice.svc_location_consumer_agent                                                                                   |
| Relationship agent          | Restricts an agent’s access to cases for the accounts, contacts, consumers, and households that they have a relationship with Relationship Manager and Account Manager. In integration with Field Service Management:  
  • View and apply template on a work order.  
  • Move a work order from Draft state to Ready for Approval, Ready for Qualification, and Ready for Dispatch based on existing state flow and sm_config rules.  
  • Book an appointment on a work order. | • agent_workspace_user  
• sn_fsm_servicedesk_agent  
• sn_customerservice.svc_location_agent  
• snc_internal  
• sn_shn.editor  
• email_composer                                                                                                                  |

Notes:

- When a case is created, the service organization on the case is the service organization of the user who creates the case.
- When a case is assigned to an agent, the service organization on the case is updated to the service organization of the assigned agent.
**Use Field Service in CSM Agent Workspace**

Use Field Service in CSM Agent Workspace to create a work order for a case, create work order tasks from work orders, and qualify work order tasks.

**Create a work order for a case using Field Service in CSM Agent Workspace**

Add a work order to a case to track the work that must be done to resolve the case.

Role required: sn_customerservice_agent, or sn_customerservice.consumer_agent

When you create a work order from a case, the following fields are automatically copied from the case form:

<table>
<thead>
<tr>
<th>Field in the Case form</th>
<th>Field in the Work Order form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short description</td>
<td>Short description</td>
</tr>
<tr>
<td>Assigned to</td>
<td>Opened by</td>
</tr>
<tr>
<td>Number</td>
<td>Initiated from</td>
</tr>
<tr>
<td>Contact</td>
<td>Contact</td>
</tr>
<tr>
<td>Account</td>
<td>Account</td>
</tr>
</tbody>
</table>

You can click the attachments icon and add attachments to the work order. You can also use Agent Assist to search relevant articles and attach it to the work order.

1. Navigate to **Agent Workspace > Agent Workspace Home**.
2. Click the lists icon and select a case for which you want to create the work order.
3. Create a work order for the case.
   - **Create a work order from the quick-action button**
     - Click Create Work Order.
   - **Create a work order from the related list.**
     1. Click the Work Orders related list.
     2. Click New.

4. Optional: In the work order **Template** field, select a template for the work order to automatically tasks and part requirements. For more information on using work order templates, refer to **Work order templates**.
   The application creates the work order and adds it to the case form and to the related list for the case.

**Create work order tasks using Field Service in CSM Agent Workspace**

Create work order tasks to track the work created for a work order.

Role required: wm_qualifier and sn_customerservice_agent, or wm_qualifier and sn_customerservice.consumer_agent

1. Click the lists icon
2. Navigate to **Work Orders > Created by me**
3. Select the work order for which you would like to create a work order task.
4. Do one of the following:
   - To create a work order task using a work order template, click the search icon in the **Template** field and select the template for this work order.
   - To create a work order task manually, click **New** and fill in the required fields.

For field descriptions, refer to **Create a work order task**.
5. Click Save.

Qualify work order tasks using Field Service in CSM Agent Workspace
Qualify work order tasks associated with a work order to dispatch them to agents who can work on the task.
Role required: wm_qualifier and sn_customerservice_agent, or wm_qualifier and sn_customerservice.consumer_agent
1. Click the lists icon.
2. Navigate to Work Orders > Awaiting Qualification
3. Select the work order that has the work order tasks you want to qualify.
4. To qualify a work order task:
   1. Select the work order task.
   2. In the Dispatch group field, click the search icon, and select a dispatch group.
   3. Click Save.
   The work order task moves to Pending Dispatch state. When all work order tasks related a work order are qualified the work order moves to Qualified state. For more information on qualifying work order tasks, see Qualify work order tasks.

Book work order appointment using Field Service in CSM Agent Workspace
Book appointment for an associated work order to dispatch agent to address the customer issue.
Role required: wm_qualifier and sn_customerservice_agent, or wm_qualifier and sn_customerservice.consumer_agent
1. Click the lists icon.
2. Navigate to Work Orders > Created by me.
3. Select the work order for which you would like to book an appointment.
4. To book an appointment:
   1. Click Book Appointment.
   2. In the Schedule appointment dialog box, view available appointment time slots, and then select the desired day and time.
   3. Click Schedule.
   The application books an appointment for the work order.

Reschedule work order appointment using Field Service in CSM Agent Workspace
Reschedule appointment for an associated work order to dispatch agent to address the customer issue based on rescheduled time slot.
Role required: wm_qualifier and sn_customerservice_agent, or wm_qualifier and sn_customerservice.consumer_agent
1. Click the lists icon.
2. Navigate to Work Orders > Created by me.
3. Select the work order for which you would like to reschedule an appointment.
4. To reschedule an appointment:
   1. Click Reschedule Appointment.
2. In the Reschedule appointment dialog box, view available appointment time slots, and then select the desired day and time.

3. Click Reschedule.

The application reschedules an appointment for the work order.

Cancel work order appointment using Field Service in CSM Agent Workspace

Cancel an appointment for customer from a work order. Cancelling an appointment, cancels the associated work order.

Role required: wm_qualifier and sn_customerservice_agent, or wm_qualifier and sn_customerservice.consumer_agent

Note: If necessary, activate the Cancel Appointment UI Action configuration to add the Cancel Appointment button.

1. Click the lists icon
2. Navigate to Work Orders > Created by me.
3. Select the work order for which you would like to cancel an appointment.
4. Click Cancel Appointment.

The application cancels the appointment and associated work order.

Manage work order tasks

Use work order tasks to define separate activities that must be done to complete a work order.

A work order contains one or more work order tasks. These tasks allow qualifiers to define separate activities that must be done to complete a work order.

When a user with the wm_qualifier role or a qualifier combination role moves a work order from Draft to Awaiting Qualification, a work order task is automatically created and populated with information from the work order. This user can edit existing tasks or create new tasks at any time.

A key feature in Field Service Management is the ability to create multiple work order tasks under a single work order. Splitting a work order into separate tasks, when necessary, enables qualifiers to:

• Assign different aspects of a single work order to different agents.
• Assign work to agents with different skill sets.
• Assign work to agents in different locations.
• Schedule parts of the work at different times.
• Schedule tasks so they are done one after another.
• Schedule tasks so they are done at the same time by different agents.
• Schedule additional tasks, if necessary, to complete the work order.
• Coordinate the arrival and usage of the parts required to complete a work order.

Create a work order task

Create a work order task from a work order.

Role required: wm_qualifier or qualifier combination role

A task window is the time period, bordered by start and end times, in which a task should be performed. It can be flexible or fixed and is used by the route optimization and auto-assignment features to determine an agent's daily schedule.
• A flexible window has start and end times that the Field Service Management application attempts to respect when dispatching or routing a task automatically. The system can reschedule a flexible task window if necessary to make it fit into an agent's schedule.
• A fixed task window cannot be rescheduled. If the route optimization or auto-dispatcher features cannot schedule the task for the fixed window time period, that task is not scheduled at all. The time interval configured for a window cannot be less than the time required to perform the task.

These users can edit schedule times, including task windows and planned durations. The Estimated end time is calculated from the expected start time and the work duration and is read-only.

Schedule task roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Edit capabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>wm_qualifier</td>
<td>Tasks in the Draft state.</td>
</tr>
<tr>
<td>wm_dispatcher</td>
<td>Tasks in the Pending Dispatch state.</td>
</tr>
<tr>
<td>wm_admin</td>
<td>Tasks in Draft or Pending Dispatch state.</td>
</tr>
</tbody>
</table>

1. Open a work order.
2. Click the Work Order Tasks related list and then click New.

Note: If the Approval for new request required configuration option is enabled, the New button in the Work Order Tasks related list does not appear until the work order has been approved. Also, if you are attempting to create a work order task using a template, the task is not be created until the work order has been approved.

3. Fill in the fields on the Work Order Task form, as appropriate.

Work Order Task form fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Auto-generated identification number for the task.</td>
</tr>
<tr>
<td>Parent</td>
<td>Work order this task is assigned to.</td>
</tr>
<tr>
<td>Cloned from</td>
<td>Record number of the work order task this task was cloned from, if any.</td>
</tr>
<tr>
<td>Priority</td>
<td>Priority of this task.</td>
</tr>
<tr>
<td>Location</td>
<td>Geographical area where the work needs to be done.</td>
</tr>
<tr>
<td>Skills</td>
<td>Abilities necessary to execute the task. ServiceNow automatically completes the Skills field based on the selection in the Affected CI field on the associated work order. If you change the affected CI on the work order, the system adds any skills required by the new CI to the skills already listed here. If you want to identify mandatory skills for agents executing the tasks, you must confirm the form to display the Task-Skill table.</td>
</tr>
<tr>
<td>Under warranty</td>
<td>Indicator of an existing warranty for one or more configuration items associated with the task. Qualifiers can select and clear this option.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>State</td>
<td>Current state of the task, such as Accepted or Closed Complete. ServiceNow advances the state automatically as users complete the work for each successive state.</td>
</tr>
<tr>
<td>Dispatch Group</td>
<td>Group that can select an agent to complete the task. By default, a Field Service Management property is enabled to limit the dispatch groups that you can select to those groups that belong to the location that you selected. If no dispatch groups exist for the location, all dispatch groups are listed for assignment of the tasks.</td>
</tr>
<tr>
<td>Assignment group</td>
<td>Group from which an individual agent or vendor should be selected to complete the task. The lookup list shows only the assignment groups associated with the selected Location, Asset, and Skills. If the Assignment Group field is empty, the system searches for the group covering the territory that includes the location of the task.</td>
</tr>
<tr>
<td>Assigned to</td>
<td>Individual agent or vendor who should complete the task, selected from the Assignment group. If you have defined skills and assigned them to agents, the Assigned to field lookup list shows only those agents in the assignment group who have all the Skills required. If no exact match of skills is found, the lookup list shows all assignment group members. If an assignment group of type Vendor is selected, this field defaults to the vendor manager assigned to the selected vendor group. If the vendor group does not have a manager, the Assigned to field is left blank.</td>
</tr>
<tr>
<td>Assigned vendor</td>
<td>Individual vendor who should complete the task, selected from the Assignment group. This field displays only when an assignment group of type Vendor is selected.</td>
</tr>
<tr>
<td>Vendor reference</td>
<td>A reference number for tracking the selected vendor's work activities. This field displays only when an assignment group of type Vendor is selected.</td>
</tr>
<tr>
<td>Short Description</td>
<td>Brief explanation of the task.</td>
</tr>
<tr>
<td>Description</td>
<td>Exact technical description of the unit of work to be performed. Qualifiers should provide as much detail about the problem as possible to avoid extra communication with the caller in later stages of the work order life cycle.</td>
</tr>
<tr>
<td>Work notes</td>
<td>Information about the task as it progresses through each state. Work notes are not visible to customers.</td>
</tr>
<tr>
<td>Planned</td>
<td></td>
</tr>
<tr>
<td>Window start</td>
<td>Start of the time window established for this task. Route optimization and auto-dispatch features use this time when calculating the agent's daily schedule.</td>
</tr>
<tr>
<td>Window end</td>
<td>End of the time window established for this task. The elapsed time of the window cannot exceed the value in the Estimated work duration field. The route optimization and auto-dispatch features use this time when calculating the agent's daily schedule.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Scheduled travel start</td>
<td>Date and time when the agent expects to travel to the site. In versions at Eureka or later, the travel start time is automatically set to one hour from the current time. In versions prior to Eureka, the travel start time is set to the beginning of the next hour. For example, if you save the Work Order Task record at 9:35 am, the scheduled travel start is automatically set to 10:00am. When the task reaches the Pending Dispatch stage, the default value can be edited. An agent cannot be scheduled for two tasks at the same time. If a specified time is already allocated to another task, an error message is displayed. This field is required when the task is assigned or when the state is Assigned, Accepted, Pending Dispatch, or Work In Progress.</td>
</tr>
</tbody>
</table>
| Scheduled start       | Date and time that work on the task is expected to begin.  
• The scheduled start date is pre-filled with the date calculated by subtracting the number of days entered in the Lead Time field for the maintenance schedule from the Required Due by date for the work order.  
This field is required when the task is assigned or when the state is Assigned, Accepted, Pending Dispatch, or Work In Progress. |
<p>| Estimated end         | [Read-only] Date on which work on the task will end. The date is automatically calculated based on the Scheduled start and Estimated work duration. |
| Is fixed window       | Indicator of a fixed service window that cannot be shortened or extended to accommodate other tasks in an agent's daily schedule. If this checkbox is not selected, the service window is considered flexible. A flexible task window can be rescheduled by optimizing task routes and auto-assignment, but a fixed window cannot. If a fixed window task does not fit into the agent's schedule, the task is not routed or dispatched. |</p>
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated travel duration</td>
<td>The estimated travel time to work site. The duration is updated when you assign a task to an agent, change the order in which the task is executed, or the start date and time of the task. Note: • If an agent does not have a prior task scheduled, it is calculated from the agent’s home location. • If an agent updates the travel duration manually, then that value overrides any calculated values. By default, the time is estimated as one hour. When the task reaches the Pending Dispatch stage, the default value can be edited.</td>
</tr>
<tr>
<td>Estimated work duration</td>
<td>Estimated amount of work time. One hour is set by default. The default value can be edited during the Draft or Pending Dispatch stage. The estimated work duration cannot exceed the total time of the window, if one is defined for this task.</td>
</tr>
<tr>
<td>Actual</td>
<td></td>
</tr>
<tr>
<td>Actual travel start</td>
<td>Date and time agent traveled to the site.</td>
</tr>
<tr>
<td>Actual work start</td>
<td>Time when work began. This field is not available until Actual travel start time is added manually or the Start Travel button is clicked.</td>
</tr>
<tr>
<td>Actual work end</td>
<td>Time when work on the task was completed.</td>
</tr>
<tr>
<td>Actual travel duration</td>
<td>Amount of time spent traveling to the site.</td>
</tr>
<tr>
<td>Actual duration</td>
<td>[Read-only] Total amount of time spent traveling to the site and completing the task. This value is automatically calculated based on the Actual work start and Actual work end times.</td>
</tr>
<tr>
<td>Actual work duration</td>
<td>[Read-only] Automatically records the total amount of time spent on the task after you start the work until you close work on the task excluding the time paused on the work.</td>
</tr>
<tr>
<td>Related Lists</td>
<td></td>
</tr>
<tr>
<td>Task SLA</td>
<td>SLAs associated with the parent work order.</td>
</tr>
<tr>
<td>Work Order Task Affected CIs</td>
<td>Configuration items (CIs) associated with the task. CIs are items that require work, such as a broken laptop or a printer that needs ink</td>
</tr>
<tr>
<td>Part Requirements</td>
<td>Part requirements associated with the task.</td>
</tr>
<tr>
<td>Transfer Orders</td>
<td>Orders for transferring the necessary parts between stockrooms for this task.</td>
</tr>
<tr>
<td>Asset Usages</td>
<td>Records indicating if the parts requested for this task were used, not used, or removed because they were defective.</td>
</tr>
<tr>
<td>Depends on</td>
<td>Upstream dependencies associated with the task.</td>
</tr>
</tbody>
</table>
The customer receives SMS and email notification that the work order task is created.

**Clone a work order task**

Clone existing tasks to quickly create new tasks.

Role required: wm_qualifier or *qualifier combination role*

In the cloning process, the following information is copied from the source task:

- Parent work order reference
- Short description
- Description
- Dispatch group
- Assignment group
- Location
- Planned information (scheduled and estimated, no actuals)
- Required skills

1. Open the task from the related list in a work order.
2. Select the **Clone Task** related link.
   
   This creates a new task in **Draft** state.

   An entry in the **Work Notes** field contains the original task number and text stating that the task is a clone.

**Delete a work order task**

Work order tasks can be deleted by users with the **wm_admin** role.

Role required: **wm_admin**

A task cannot be deleted if it has a part requirement with a transfer order. To delete the task in this case, you must first delete the transfer order.

1. Navigate to a work order.
2. In the **Work Order Tasks** related list, select the check box beside the task **Number**.
3. Select **Delete** from the **Actions** choice list.

**Create dependencies between work order tasks**

If a work order contains multiple tasks, you can create dependencies between the tasks that determine the order in which tasks are performed.

Role required: **wm_qualifier** or *qualifier combination role*

These dependencies set and enforce the order in which a single agent or multiple agents perform the tasks. For example, on a work order for a new server, one agent might install the server, the upstream task, and a different agent might configure the server after installation is complete, the downstream task.

You can specify multiple dependencies, both upstream and downstream, for a single task. The system prevents circular relationships where two tasks are dependent on each other by considering all upstream dependencies when deciding if a task can be auto-assigned.
• Setting a work order task as an upstream task means that this task must be completed before any downstream tasks can be started.
• Setting a work order task as a downstream task means that this task cannot be started until any upstream tasks have been completed.

**Note:** Dependencies can only be set for work order tasks in the Draft state.

1. Navigate to a work order.
2. Open a work order task in the Draft state.
3. In the Depends on related list, click New.
4. Select either Upstream task or Downstream task.
   Only tasks for the same work order are listed.
5. Click Submit.

### Create a work order task dependency using a work order template

In addition to creating work order task dependencies that are inherited from the associated work orders, you can also create work order templates that contain task dependencies.

**Role required:** wm_qualifier or qualifier combination role

Like work order tasks created from work orders, the dependencies inherited from the template enforce the order in which a single agent or multiple agents perform the tasks.

1. Navigate to Product Catalog > Templates > Work Order Template.
2. Create a new work order template.
3. Create the work order tasks.
4. Open one of the tasks.
   • If other tasks are dependent on this task; that is, this task must be completed before other tasks can be completed, click Dependents > New and select the dependent tasks.
   • If this task is dependent on other tasks; that is, other tasks must be completed before this task can be completed, click Depends on > New and select the tasks to which this task is dependent.
5. Repeat this process for the remaining tasks.
6. When you have defined the dependencies for all tasks, click Update.

After the work order task dependencies are defined, you can select the template when creating a new work order, and the tasks, along with the defined dependencies, will be inherited by the work order.

### Use the work order template

Work order templates enable users with the proper roles to automatically create work orders, tasks, and part requirements.

**Role required:** wm_admin or model_manager

1. Navigate to Field Service > Work Order > Create New.
2. Select the desired work order template from the Template field and save the form.

The template information is used to:

• Copy the short description, priority, and billable status to the work order. The system also copies the qualification group to the work order form if this field is present. Qualification groups are not required when automatic qualification is configured. Work orders created from an incident, problem, or change request display the short description from the source task, even when a template is selected. Tasks for work orders created from templates always display the short description from the task template.
• Create any tasks, using the information from the work task templates.
• Create the parts requirements. If a part specified is out of stock, the system displays a message naming the part.

Add knowledge to a work order or work order task

Add additional information to complete tasks.

To enable the search and to attach articles on the form, the system administrator must do the following:

• Configure the work order and work order task forms to display the Related Search Results section on the forms.
• In the glide.knowman.attach.fields property, add work_notes to the Value field. This enables the attaching of articles to the work notes.

Role required: wm_initiator, wm_qualifier, wm_agent, wm_manager, or admin

As you enter a short description for a work order or work order task, a list of relevant knowledge articles is displayed that you can associate with the work order or work order task.

1. Navigate to a work order or a work order task form.
2. Click Related Search Results.
   A list of articles that match the text entered in the Short Description field are displayed.
3. To preview, click the article.
4. To attach an article,
   • To attach the article you're previewing, click Attach to Work Order.
   • To attach an article without previewing it, click Attach next to it in the list of suggested articles.
5. Click Update.

Request Management

Request Management allows catalog items to be requested and fulfilled based on defined flows.

Request creation

Requests are created differently based on the role that has been granted to the user. Department administrators can create requests differently than an employee can.

Create a request through a catalog

The catalog provides several different categories so users can choose the one that closely relates to their request.

1. From the Self-Service module, navigate to Self-Service > [SM application] Catalog.
2. Choose from the displayed categories.
3. Select a subcategory, if necessary.
4. Fill in the fields on the form.

Note: Each service management application displays different fields.
Catalog fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opened for</td>
<td>The name of the person submitting this request. Select a new name if you are opening this request on behalf of another user.</td>
</tr>
<tr>
<td>Location</td>
<td>The location for this request.</td>
</tr>
<tr>
<td>Priority</td>
<td>The priority that describes the importance of this request.</td>
</tr>
<tr>
<td>Short Description</td>
<td>A brief summary of the request.</td>
</tr>
<tr>
<td>Detailed Description</td>
<td>A detailed description of the request.</td>
</tr>
</tbody>
</table>

5. Click **Submit**.

**Note:** If the catalog fields do not appear on the request form, you can configure the form and add the **SM Variable Editor** related list.

**Clone a request**

To save time, an existing request can be cloned to create a new request.

In the cloning process, the following information is copied from the source task:

- Parent request reference
- Short description
- Description
- Dispatch group
- Assignment group
- Location
- Planned information (scheduled and estimated, not actuals)
- Required skills

Open the task and select **Clone Task** under **Related Links**.

New tasks are created in **Draft** state. The **Work Notes** field contains the original task number and text stating that the task is a clone.

**Request creation using inbound email actions**

Requests can be automatically created or updated from the information in inbound emails as long as the functionality has been enabled on the configuration screen of SM application. The emails are also to be sent to a mailbox defined by criteria in the appropriate inbound email action.

After the functionality has been enabled by selecting the **Requests can be created and updated by inbound email** option on the application configuration screen, three inbound email actions are available for the SM applications available in the base system. These inbound email actions are also available for new applications created using the SM application creator.

**Create a request from an inbound email**

Requests can be automatically created from the information in inbound emails as long the functionality has been enabled on the configuration screen of SM application. The emails are also to be sent to a mailbox defined by criteria in the appropriate inbound email action.

1. Navigate to **System Policy > Email > Inbound Actions**.
2. Select the inbound email action called **Create [application name] Request**.
The inbound email action record opens and displays the default conditions that trigger the inbound email action.

When an email is sent to the mail list defined by the criteria in Actions, a request is created with the following information:

- The **Contact type** is set to **Email**.
- The email sender (if found) populates the **opened_by** and **Caller** fields for a newly created sm_order based item.
- The email subject populates the **Short description** field.
- The email body populates the **Description** field.
- The email senders company (Sender->Company) populates the **Company** field.
- The email senders location (Sender->Location) populates the **Location** field.
- The entire email is copied into the **Work notes** field.

3. You can use the email action as it is or modify it to meet the needs of your organization.

*Create a request from a forwarded inbound email*

Requests can be automatically created from the information in forwarded inbound emails as long the functionality has been enabled on the configuration screen of SM application. The emails are also to be sent to a mailbox defined by criteria in the appropriate inbound email action.

1. Navigate to **System Policy** > **Email** > **Inbound Actions**.
2. Select the inbound email action called **Create [application name] Request (Forwarded)**.

When an email is forwarded to the mail list defined by the criteria in Action, a request is created with the following information:

- The **Contact type** is set to **Email**.
- The email sender (if found) populates the **opened_by** and **Caller** fields for a newly created sm_order based item.
- The email subject populates the **Short description** field.
- The email body populates the **Description** field.
- The email senders company (Sender->Company) populates the **Company** field.
- The email senders location (Sender->Location) populates the **Location** field.
- The entire email is copied into the **Work notes** field.

3. You can use the email action as is or modify it to meet the needs of your organization.

*Update a request from an inbound email*

Requests can be automatically updated from the information in inbound email replies as long the functionality has been enabled on the SM application's configuration screen. The emails must also be sent to a mailbox defined by criteria in the appropriate inbound email action.

1. Navigate to **System Policy** > **Email** > **Inbound Actions**.
2. Navigate to the inbound email action called **Update [application name] Request** and click its Name.

When an email reply is received in the mail list defined by the criteria in the email action, the associated request is opened and update information is added to the **Work notes** field.

3. You can use the email action as is or modify it to meet the needs of your organization.
Request approvals

Approving a request in an SM application means that the request is ready for task creation and assignment.

When a request is sent to a user with the [SM application]_approver_user role, the approver has several choices. If you select Approval is required for new requests in the applications Configuration screen, a newly created request automatically moves to the Awaiting Approval state. Otherwise, the request moves to the next configured state.

<table>
<thead>
<tr>
<th>Approval Choice</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved</td>
<td>The request is approved.</td>
</tr>
<tr>
<td>Rejected</td>
<td>The request is not qualified and it is moved to the canceled state. Also, the following work note is added to the request: The [SM application] request is rejected.</td>
</tr>
<tr>
<td>More information required</td>
<td>The request does not contain enough information. It reverts to the Draft state and the following work note is added to the request: The [SM application] request needs more information for further approval.</td>
</tr>
<tr>
<td>Duplicate</td>
<td>The request is no longer required, because another request has already performed the work. The request is moved to the Cancelled state and the following work note is added to the request: This is a duplicate [SM application] request.</td>
</tr>
</tbody>
</table>

Agent assignment methods

Depending on your settings in the SM application configuration screen, you can assign agents manually or using auto-assignment.

If you have a limited number of agents for completing requests or you simply do not want to auto-assign agents, you can use manual assignment.

Auto-assignment enables you to define criteria by which agents can be automatically selected to satisfy requests entered in service management applications. Based on the needs of your organization, you can configure the criteria for agent auto-assignment in the following ways.

When auto-assignment is enabled and a task is qualified or marked as Ready for Work, the following actions occur:

- Available agents are evaluated based on the criteria defined in the configuration.
- An appropriate agent is automatically assigned to the task.
- The task is moved to the Assigned state.

If the configuration is set up to consider more than one set of criteria, such as location and skills, the agents are evaluated based on the weighting property settings in addition to other criteria.

If the task cannot be auto-assigned, a user with the dispatcher role must adjust the values in the request or task form and then save the record.

Manually assign agents to active requests

Use this procedure to assign agents to active requests in service management (SM) applications.

1. Navigate to one of the following modules:
2. Open the request you want to assign.
3. In the Assignment group field, enter the group that handles this kind of request. If no groups are available, leave this field blank.

   To look up the assignment group, click the reference lookup icon ( ) beside the Assignment group field.

   **Note:** You do not have to select an assignment group, but doing so limits the users you can assign the request to.

4. In the Assigned to field, enter the agent to handle this request.

   To look up an agent, click the reference lookup icon ( ) beside the Assigned to field.

   **Note:** If one was selected, the users in the search results are limited to the users in the Assignment group.

5. Click Update.

   An email notification is automatically sent to the assigned agent when email notifications are set up for the instance.

---

**Agent auto assignment using rating-based criteria**

Rating-based methods, such as location, skills, and time zones, help to auto assign agents based on configuration settings and optional properties. The calculated ratings are used to determine the best agent to perform the task.

Any combination of rating-based methods can be enabled in configuration screen of the application.

When a task is created, a rating for each type of enabled selection criteria is calculated for each available agent. The agent whose average rating is highest is considered for auto-assignment. The settings for the auto-assignment weighting properties, found in [SM application] > Administration > Properties, are included in the rating calculations.

These values help you prioritize which auto-assignment selection criteria is more important to your organization. The priority values should be [1, 10] and they are factored between 1 and 0. That is, 10 is a factor of 1, 5 is a factor of 0.5, and so on. For an example of how the weighting properties affect agent ratings, see **Agent auto assignment using multiple selection criteria**.

**Agent auto assignment using location**

Agents can be auto assigned based on the location defined in their user record and the location of the tasks.

Auto assignment by location can be performed in a task- or request-driven processing environment when the Auto-selection of agents will consider location of agents configuration is enabled.

When a task is created, agent locations are compared to the following ranges to determine a location rating for each agent.

<table>
<thead>
<tr>
<th>Distance (mi.) from agent to task</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–0.1</td>
<td>1</td>
</tr>
<tr>
<td>0.11–0.5</td>
<td>0.9</td>
</tr>
<tr>
<td>0.51–5</td>
<td>0.7</td>
</tr>
<tr>
<td>Distance (mi.) from agent to task</td>
<td>Rating</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>5.1–10</td>
<td>0.5</td>
</tr>
<tr>
<td>10.1–20</td>
<td>0.4</td>
</tr>
<tr>
<td>20.1–30</td>
<td>0.3</td>
</tr>
<tr>
<td>30.1–40</td>
<td>0.2</td>
</tr>
<tr>
<td>40.1–100</td>
<td>0.1</td>
</tr>
<tr>
<td>&gt;100</td>
<td>0</td>
</tr>
</tbody>
</table>

When a task is qualified or marked as **Ready for Work**, the agent closest to the task location is considered for the task. If the application is configured so that only location is considered, the closest agent is auto-assigned to the task.

If the application is configured to use other selection criteria—such as skills, time zone, or schedule—the ratings of all selection criteria are averaged, and the agent with the highest overall rating is auto-assigned for the task. See *Agent auto assignment using multiple selection criteria* for details.

**Agent auto assignment using skills**

Agents can be auto assigned based on the skills of an agent, and the skills required to perform the task. Assign skills to an agent user records using **Skills > Users**.

Auto assignment by skills can be performed in either a **task- or request-driven processing** environment when the **Auto-selection of agents for tasks requires them to have skills** configuration option must be set to **all** or **some** for the application.

When a task that includes skills is qualified or marked as **Ready for Work**, skills of each agent are compared with the skills required to perform the task, and a rating is calculated based on the skills configuration option. If the option is set to **some**, the agent with the closest skills match is auto-assigned the task. If the option is set to **all**, only agents who possess all the required skills are considered. If no agents possess all the skills required to perform the task, none are auto-assigned.

Skills rating of an agent is calculated as:

\[ \text{Skills}_{\text{agent}} / \text{Skills}_{\text{task}} \]

When:

- **Skills_{agent}** is the number of skills possessed by the agent that match the skills required for the task.
- **Skills_{task}** is the total number of skills required for the task.

For example, if a task requires four skills, and Agent A possesses three of them and Agent B possesses two of them:

- Skill rating of Agent A = 3/4 or 0.75
- Skill rating of Agent B = 2/4 or 0.5

If the application is configured to use other selection criteria, such as location or time zone, the ratings of all selection criteria are averaged, and the agent with the highest overall rating is auto-selected for the task. See *Agent auto assignment using multiple selection criteria* for details.

**Agent auto assignment using time zones**

Agents can be auto assigned based on the time zone defined in their user records and the time zone of the tasks.

Auto assignment by time zone can be performed in either a **task- or request-driven processing** environment when the **Auto-selection of agents will consider time zone for the task** configuration option must be enabled for the application.

When a task is qualified or marked as **Ready for Work**, agents in the time zone closest to the task time zone are considered for the task. If the application is configured so that only time zone is considered, an agent in the same time zone is auto-assigned the task.
Note: It is important that the time zones for the agent and the task are set correctly.

When a task is created, agents are rated based on the time zones of both task and agent using the following formula:

\[ 1 - \left| \frac{\text{abs}(\text{Task}_\text{tz} - \text{Agent}_\text{tz})}{12} \right| \]

Where:

- \( \text{abs} \) is the mathematical function to compute the absolute value.
- \( \text{Task}_\text{tz} \) is the offset between the time zone of the task and GMT.
- \( \text{Agent}_\text{tz} \) is the offset between the time zone of the agent and GMT.

For example, a task is created in New York City (GMT-4), and two agents are available to perform the task, one in Los Angeles (GMT-7) and one in Paris, France (GMT+1).

The rating of the agent in Los Angeles is calculated as:

\[ 1 - \left| \frac{-4 - (-7)}{12} \right| = 0.75 \]

The rating of the agent in Paris is calculated as:

\[ 1 - \left| \frac{-4 - 1}{12} \right| = 0.58 \]

So if the auto assignment of the task is based on the time zone alone, it is assigned to the agent from Los Angeles.

If the application is configured to use other selection criteria, such as skills or location, the ratings of all selection criteria are averaged, and the agent with the highest overall rating is auto-selected for the task. See Agent auto assignment using multiple selection criteria for details.

Agent auto assignment using time-based criteria

Time-based methods, such as schedules and priority assignment, help you auto assign agents based on configuration settings and optional properties. The calculated ratings are used to determine the best agent to perform the task.

Any combination of time-based methods can be enabled in the application configuration screen.

When a task is created, the schedule of the agent and the task to be performed are combined with rating-based criteria to auto-assign an agent.

Agent auto assignment using schedules

Agents can be auto assigned based on the agent or the task schedule.

Auto assignment by schedule can be performed only in a task-driven processing environment, and the Auto-selection of agents will consider agent or task schedules configuration option must be enabled for the application. If this option is turned off, only the agent ratings are used for auto-assignment.

When a task is qualified or marked as Ready for Work, agents ratings are evaluated, and the schedules of qualified agents are compared against the schedule of the task to determine the agent with the best matching schedule.

Note: If the task includes specific time entries in the Window start and Window end fields, and no schedule of an agent falls within that task window, no agents are assigned. Also if the customer wants a task to be performed at or near a specific time, the Window start time should be set as close to that time as possible. For example, the Window start and Window end fields are set to 1:00 pm and 8:00 pm respectively. The customer prefers the job to be started at 4:00 pm. It is possible that an agent is dispatched at 13:00. So, setting the Window start closer to 4:00 can help ensure that the work is performed when the customer prefers it to be done.

If the application is configured to use other selection criteria, such as skills or time zone, the ratings of all selection criteria are averaged, and the agent with the highest overall rating is auto-selected for the task. See Agent auto assignment using multiple selection criteria for details.
Agent auto assignment using priority assignment

The priority assignment feature enables you to configure auto assignment so that agents can be assigned to perform tasks or provide services on a continual, 24x7x365 basis. Priority assignment is triggered when the priority of a task matches the priority set in the application configuration page.

Priority assignment can be used with location and skills settings. However, it can also operate independently.

To use priority assignment, you must set the following configuration options for the application.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process life cycle</td>
<td>Set to <em>task driven (subtasks are required)</em>.</td>
</tr>
<tr>
<td>Assignment method for tasks</td>
<td>Set to <em>auto-assignment</em>.</td>
</tr>
<tr>
<td>Auto-selection of agents considers agent or task schedules</td>
<td>Enabled.</td>
</tr>
<tr>
<td>Enable priority assignment</td>
<td>Enabled.</td>
</tr>
<tr>
<td>Select priorities for assignment</td>
<td>Select one or more priorities.</td>
</tr>
</tbody>
</table>

Only tasks of the selected priority or priorities trigger auto-assignment based on priority assignment.

When a task is qualified or marked as **Ready for Work**, and the priority of the task matches a priority selected for the application, the agent that best matches the schedule of the task is auto-assigned. If the location and skills options are enabled, agents are first evaluated on their physical proximity to the location of the task, and then on how their skills match the skills required to perform the task. The agent whose location, availability, and skills best match the requirements of the task is auto-assigned.

When a task has a priority that matches a priority in the priority assignment list, the Location Rating and Timezone Rating are ignored, even if they have been enabled.

If the priority of a task matches a priority selected in the **Select priorities for assignment** option, and no agents in the assignment group are available to be auto-assigned, the task is assigned to the group manager, regardless of whether the manager is available. It is the responsibility of the manager to locate an agent to perform the task.

**Note:** If no agent is located in the same time zone as the task, priority assignment fails.

Agent auto assignment using multiple selection criteria

At its simplest, auto assignment involves identifying a set of selection criteria and automatically assigning the task to the agent who most closely meets the criteria. You can, however, select multiple sets of criteria, including both rating-based and time-based criteria.

When a task is qualified or marked as **Ready for Work**, the following evaluations are performed:

1. The ratings of an agent are calculated. If the **Auto-selection of agents will consider agent or task schedules** configuration option is disabled for the application, the ratings of an agent are used exclusively for auto-assigning an agent.

   For more information on how the ratings are calculated, see:
   - Agent auto assignment using location
   - Agent auto assignment using skills
   - Agent auto assignment using time zones

2. If the **Auto-selection of agents will consider agent or task schedules** configuration option is enabled, the schedules of the agents whose ratings are acceptable for auto-assignment are compared to the schedule for the task, and the agent with the best match is auto-assigned. For more information on time-based methods for auto-assigning agents, see:
Auto assignment is based on the following calculation:

\[
\frac{(\text{Criteria}_1 \text{ rating} \times \text{Criteria}_1 \text{ weight}) + (\text{Criteria}_2 \text{ rating} \times \text{Criteria}_2 \text{ weight}) + (\text{Criteria}_3 \text{ rating} \times \text{Criteria}_3 \text{ weight})}{\text{Number of criteria types used}}
\]

Where:

- Number of criteria types used = 1, 2, or 3 depending on the location, skill, and time zone settings used.

This example calculates agent auto-assignment based on location and skills. The example is based on the following assumptions.

- The **Auto-selection of agents will consider location of agents** configuration option is enabled for the application.
- The **Auto-selection of agents requires them to have some of the required skills for the task** configuration option is enabled for the application.
- The **Skills Weight** property is set to 10 for the application.
- The **Location Weight** property is set to 5 for the application.
- Agents A and B are available to perform a task, and the task requires four specific skills.
- The location of Agent A is 5 miles from the site of the task. Agent A possesses three of the four required skills.
- The location of Agent B is one-quarter mile from the site. Agent B possesses two of the required skills.

Auto assignment for the agents uses this calculation:

\[
\frac{[(\text{Location rating} \times \text{Location weight}) + (\text{Skills rating} \times \text{Skills weight})]}{2}
\]

- The auto assignment calculation for Agent A is: \([0.7 \times 0.5] + (0.75 \times 1)]/ 2 = 0.55
- The auto assignment calculation for Agent B is: \([0.9 \times 0.5] + (0.5 \times 1)]/ 2 = 0.475

In this example, Agent A is auto assigned the task.

**Collaborate on a request**

Within a request, you can enter comments that are visible to the submitter, allowing for collaboration between the two of you. For collaboration with other agents, you can enter comments that are not visible to the submitter.

1. Navigate to **[SM application]** > All **[SM application]** Requests.
2. Open the request you want to collaborate on.
3. In the **Additional comments** (Customer visible) field, enter the comments that you want the person who submitted the request to see. The submitter can see the comments in this field and add more comments as necessary. Update this field as many times as necessary to correspond with the submitter.
4. To correspond with other agents, enter content that you do not want the submitter to see in the **Work notes** field.

**Close a request**

When you close a request, you can add details that you want the submitter to be aware of.

1. Navigate to **[SM application]** > **Assigned to me**.
2. Click the request number.
3. In the **Additional comments** field, enter any final notes or comments.
4. Change the **State** field to the appropriate closed state.
5. Click Update.

Closed and completed requests

When the Request lifecycle option is set to request-driven, the assigned agent can complete and close the request once all the tasks in the request are complete.

A Close Complete button is visible to the agent assigned to the request. The agent enters work notes before clicking Close Complete. When the button is clicked, the open task is automatically completed (if applicable) and the request transitions to the Complete state.

Close an SM request as spam

Mark any open request as spam; that is, the request has no value and should be closed.

Role required: admin

1. In the SM application, open the request you want to mark as spam.
2. In the header bar, click Spam.
   The state of the request is changed to Closed and the Work notes indicate that the request was closed as spam.
   
   If the State flows are enabled option on the configuration screen is not selected, the state is not changed, but the Work notes indicate that the request was closed as spam.

Field Service Management SLAs

ServiceNow SLAs track the service level provided by groups and individuals.

When you create a work order, the system automatically assigns it a default Service Level Management concepts based on priority level. If you change the priority of the work order, the system cancels the current SLA and applies the SLA appropriate for the new priority. The SLA timer continues to run even if the priority is changed. The three default SLAs used for work orders are:

<table>
<thead>
<tr>
<th>SLA</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WM - 5 business days</td>
<td>Assigned to work orders with a priority level of 4 (Low)</td>
</tr>
<tr>
<td>WM - Next business day</td>
<td>Assigned to work orders with a priority level of 3 (Moderate)</td>
</tr>
<tr>
<td>WM - Same business day</td>
<td>Assigned to work orders with a priority level of 2 (High) or 1 (Critical)</td>
</tr>
</tbody>
</table>

Users with the wm_admin role can create and edit SLAs or delete them from work orders. Changes to an SLA are used in new work orders, but they do not affect existing work orders that use the SLA.

**Note:** The SLA applies to the work order. All associated work order tasks must be completed within the SLA time period to meet the SLA.

Manage a work order SLA

View and manage work order SLAs from the Work Order form or the Work Order Task form.

Role required: wm_admin, wm_dispatcher
Activities include suspending and resuming SLAs and deleting SLAs from a work order.

To view the list of work orders with SLAs, navigate to **Field Service > Work Order > Work Order SLAs**.

![Work order SLA form](image)

### Work order SLA form

### View a task with a SLA

View all work order tasks associated with work orders that have SLAs.

Role required: wm_admin, wm_dispatcher

1. Navigate to **Field Service > Work Order > Work Order Tasks With SLAs**.
   
   Tasks that are behind schedule are highlighted according to how delinquent they are.

2. To view SLAs for a work order, select the **Task SLAs** related list in the Work Order form.

The information in this list includes:

![Task SLAs table](image)

### Work order form

<table>
<thead>
<tr>
<th>Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual elapsed time</td>
<td>Total running time of the SLA since it started, including any time that has passed since a breach.</td>
</tr>
<tr>
<td>Information</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Actual elapsed percentage</td>
<td>Total percentage of the SLA time period that has elapsed. This value can rise above 100% after a breach and increases until the task is completed.</td>
</tr>
<tr>
<td>Actual time left</td>
<td>Total time remaining until this SLA breaches. When the Actual elapsed percentage reaches 100%, this value is set to 0 seconds.</td>
</tr>
<tr>
<td>Business elapsed time</td>
<td>Amount of time that has elapsed for this SLA within the business calendar. For example, if the business calendar for this SLA is from 8am to 5pm on weekdays, then the running time for the SLA is computed between these hours only and not on weekends. If no business calendar is in effect, the business elapsed time is the same as the actual elapsed time.</td>
</tr>
<tr>
<td>Business elapsed percentage</td>
<td>Percentage of the SLA time period that has elapsed on the business calendar for this SLA. If no business calendar is in effect, the business elapsed percentage is the same as the actual elapsed percentage.</td>
</tr>
<tr>
<td>Business time left</td>
<td>Time remaining on the business calendar until this SLA is breached. If no business calendar is in effect, the business time left is the same as the actual time left. When the Business elapsed percentage reaches 100%, this value is set to 0 seconds.</td>
</tr>
</tbody>
</table>

### Suspend and resume SLA timing from a work order

Pause and resume the timing on a work order SLA from the work order.

Role required: wm_admin, wm_initiator, wm_qualifier, wm_dispatcher, or a combination role

This is useful if a qualifier or dispatcher is waiting for information from the caller or for other actions to take place before continuing the work order.

**Note:** Initiators cannot view the SLAs attached to the work orders they suspend or resume.

1. Navigate to a work order with an SLA using the path visible to your role:
   - Field Service > Work Order > Work Order SLAs
   - Field Service > Work Order > Awaiting Qualification
   - Field Service > Work Order > Draft Work Orders

2. Select an active work order.

3. On the work order record, add a work note explaining why the work order is suspended.

4. Click **Suspend**.

   The system sets the **Stage** of the SLA to **Paused**.

5. Click **Resume** to restart the SLA.

   The system resets the SLA to its previous stage.

### Suspend and resume SLA timing from a work order task

Pause and resume the timing on a work order SLA from a work order task.

Role required: wm_admin, wm_qualifier, wm_dispatcher, wm_agent, or a combination role
This is particularly useful for agents because it enables them to suspend the timing on the parent work order if they are waiting for information or for others to perform actions.

1. Navigate to a work order task with an SLA using the path visible to your role:
   - Field Service > Work Order > Work Order Tasks with SLAs
   - Field Service > Work Order > My Work Order Tasks
   - Field Service > Work Order > Assigned to me

2. Select an active work order task.
3. Add a work note explaining why you are suspending the work order.
4. Under Related Links, click Suspend Work Order.
   - The system sets the Stage of the SLA to Paused.
5. Click Resume Work Order to restart the SLA.
   - The system resets the SLA to its previous stage.

Delete an SLA from a work order

Remove an SLA from a work order but leave it available for use with other work orders.

Role required: wm_admin

1. Navigate to Field Service > Work Order > Work Order SLAs.
2. Open a work order.
3. In the Task SLAs related list, select the check box beside the SLA name.
4. In the Actions choice list, select Delete.

Use the SLA map

View open work order tasks and their SLA status.

The SLA map view allows users with the wm_admin, wm_dispatcher, or dispatcher combination role to quickly see open work order tasks that are in danger of breaching their SLAs.

When the SLA map appears, the view is centered on the logged in user's location, from the Location field on the user record. Each task's icon color indicates the level of the SLA's Business elapsed percentage. This is the percentage of the SLA duration that has expired on the applicable business calendar, if one exists.

For example, a work order with an SLA of 5 business days starts on a Friday. On Tuesday the actual elapsed percentage for the SLA reaches 100%. However, the business elapsed percentage does not reach 100% until Thursday, because the business calendar shows that a business day runs from 8am to 5pm on weekdays. If the SLA breaches on Thursday, the business elapsed percentage continues upward from 100% until the task is completed. If no business calendar is in use, the business elapsed percentage equals the actual elapsed percentage.

Access the map

How to access the SLA map.

Role required: wm_admin, wm_dispatcher, or dispatcher combination role

To access the SLA map, navigate to Field Service > Dispatching > My SLA Map.

The map opens in the geographical area containing work orders with SLAs that are assigned to your dispatch group.

SLA map symbols

Icons in the SLA map and what they represent.
### SLA map symbols

<table>
<thead>
<tr>
<th>Icon</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Agent on schedule</td>
<td>Current location of an agent selected in the filter. Agents with this icon are on time or ahead of schedule.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Agent behind less than 30 minutes</td>
<td>Current location of an agent who is less than 30 minutes behind schedule.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Agent behind less than 60 minutes</td>
<td>Current location of an agent who is between 30 and 60 minutes behind schedule.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Agent behind more than 60 minutes</td>
<td>Current location of an agent who is at least one hour behind schedule.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Agent off the schedule</td>
<td>Last known location of an agent who is not currently on the schedule or working on any tasks.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Green</td>
<td>Tasks with a business elapsed percentage from 0 to less than 25.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Yellow</td>
<td>Tasks with a business elapsed percentage from 25 to less than 50.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Orange</td>
<td>Tasks with a business elapsed percentage from 50 to less than 75.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Red</td>
<td>Tasks with a business elapsed percentage over 100.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Multiple tasks</td>
<td>Multiple active tasks with SLAs, clustered by proximity.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Multiple agents</td>
<td>Multiple agents, clustered by proximity.</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Agent/Tasks</td>
<td>Combination of agents and tasks with SLAs, clustered by proximity.</td>
</tr>
</tbody>
</table>

### Filter the SLA map

How to filter the SLA map.

Role required: wm_admin, wm_dispatcher, or dispatcher combination role

1. **Click View Filter.**

   These filters are available:

   - **Date**: Select the date you want to search.
   - **Show agents current location**: Show or hide agent locations on the map. By default, all agents are shown.
2. Select the desired filters.
3. Click **Apply Filter** to apply your changes to the map.

![SLA map filter](image)

### Manage a task with an SLA

How to access and manage tasks with SLAs.

Role required: wm_admin, wm_dispatcher, or dispatcher combination role

1. Click the task icon to display a pop-up window with these SLA details:

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLA</td>
<td>Name of the SLA.</td>
</tr>
<tr>
<td>Time left</td>
<td>Business elapsed time remaining on the SLA.</td>
</tr>
<tr>
<td>Priority</td>
<td>Task priority by number, where 1 is the highest and 5 the lowest.</td>
</tr>
<tr>
<td>Skills Needed</td>
<td>Skills needed to perform the work.</td>
</tr>
<tr>
<td>Parts Needed</td>
<td>Parts needed to perform the work.</td>
</tr>
</tbody>
</table>
SLA map detail

2. Click the task number link to display the record in a pop-up window in the map.
3. Select the Task SLAs related list to view the SLA details.
4. The list shows the following SLA values:

<table>
<thead>
<tr>
<th>SLA values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>SLA</td>
<td>Name of the SLA. Click this link to view the SLA definition and its schedule.</td>
</tr>
<tr>
<td>Start time</td>
<td>Time the SLA started.</td>
</tr>
<tr>
<td>Stage</td>
<td>Status of this SLA, such as <strong>In progress</strong>, <strong>Completed</strong>, or <strong>Breached</strong>.</td>
</tr>
<tr>
<td>Business elapsed percentage</td>
<td>Percentage of time that has elapsed for this SLA on the business calendar. If no business calendar exists, then this value is the same as the actual elapsed percentage.</td>
</tr>
<tr>
<td>Business time left</td>
<td>Amount of time remaining for this SLA on the business calendar. If no business calendar exists, then this value is the same as the actual time remaining.</td>
</tr>
</tbody>
</table>

Integration with Customer Service Management

Provides an integration between the Customer Service Management and Field Service Management applications.
Users can view account and contact information on work orders and work order tasks in the Field Service Management application. Customers and consumers can view case-related work orders from the Customer Service and Consumer Service Portals.

When an agent creates a work order from a customer service case, the work order and task forms include case-related information such as the account and contact.

When a customer or a consumer views a case from either the Customer or Consumer Service Portals, they can view the details of any work orders and tasks related to the case.

**Product use rights included with this application**

If you have purchased a subscription for the Customer Service Management application and have the customer service agent [sn_customerservice_agent] or the customer service agent manager [sn_customerservice_manager] role, you can create and view all work orders and appointments related to your case. If you are an external user with the snc_external role, you can create and view all case-related work orders and appointments related either to your account or a related#account.

**Customer Service with Field Service Management plugin**

The Customer Service with Field Service Management plugin (com.snc.csm_fsm_integration) integrates the Field Service Management and Customer Service Management applications. This plugin requires:

- Field Service Management
- Customer Service Management
- Customer Service Portal

**Changes to the Field Service Management application**

In the Field Service Management application, this integration adds the following fields to the Work Order form. These fields are visible in the Case view. To display these fields, right-click the Work Order form header and select View > Case.

- Account
- Consumer
- Contact
- Asset
- Partner
- Partner Contact

Updating the **Account** field on the Work Order form also updates the **Company** field.

Updating the **Contact** field on the Work Order form updates the **Caller** field.

**Changes to the Customer Service Management application**

In the Customer Service Management application, this integration adds the **Work Orders** link to the Customer Service Portal and Consumer Service Portal headers. Click this link to view a list of work orders, including the work order number, priority, state, and short description. The work orders displayed in this list on the Customer Service Portal depend on the customer role: customer, customer admin, partner, or partner admin.

Click a work order in this list to display the work order details.
Known limitations

There is no synchronization between the Work Order form and the associated Case form. If information changes on the Case form, it does not get updated on the Work Order form.

Integration with Project Portfolio Management

Link project tasks to work orders to assist with managing installation or deployment projects in the field.

A project can have multiple tasks that are assigned to field service agents. Using the Field Service Management integration with Project Portfolio Management, you can create work orders directly from project tasks. Linking project tasks to work orders in this way:

- Synchronizes the planned and actual dates between the project task and the work order.
- Synchronizes the states between the project task and the work order.

To create a work order from a project task, click the Create Work Order related link on the Project Task form. To view an active linked work order, click the View Work Order related link on the Project Task form. Project tasks can have more than one linked work order, but only one work order can be active at a time.

Dates

Dates are synchronized in one direction, from the project task to the linked work order and to any work order tasks.

- Work order tasks created for a linked work order have fixed Window start and Window end dates that are based on the planned start and end dates of the project task.
- Updates to project task dates are also updated in the linked work order tasks for tasks that are not in the Work In Progress or Closed states.

Note: Changes to the dates on a work order task do not change the dates on the linked project task.

States

State changes are synchronized in one direction, from the work order to the project task.

- Updating the work order state also updates the state of the linked project task.
- Updating the state of a project task add a note to the Work Notes field on the linked work order.
- Closing a work order also closes the project tasks.

If an update to the state of a project task fails, a note is added to the project task Work notes field about the corresponding work order update. Updates can fail with project tasks that have dependencies.

Work order and project task states are updated as follows.

<table>
<thead>
<tr>
<th>Work Order State</th>
<th>Project Task State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work In Progress</td>
<td>Work In Progress</td>
</tr>
<tr>
<td>Close Complete</td>
<td>Close Complete</td>
</tr>
<tr>
<td>Close Incomplete</td>
<td>Close Incomplete</td>
</tr>
<tr>
<td>Canceled</td>
<td>Close Skipped</td>
</tr>
</tbody>
</table>
Plugins

Activate the Field Service with Project Management plugin (com.snc.wm_ppm) to use this feature. This plugin requires the Field Service Management plugin (com.snc.work_management) and the PPM Standard plugin (com.snc.financial_planning_pmo).

Customize the work order state transition map

Users with the system administrator role can customize the work order state transition map, which maps work order states to project task states.

Updating the state of a work order also updates the state of the linked project task. The FieldServicesProjectTaskStateHandler script maps the work order states to the project task states. Users with the system administrator role can customize this state transition map as needed based on the following examples.

Examples

Setting the status of a work order to **Close complete** should not close the project task. To make this change, remove the following line in the `initialize()` function:

```javascript
this.workOrderProjectTaskStateMap[FieldServiceProjectTaskStateHandler.WORK_ORDER_STATE_CLOSE_COMPLETE] = FieldServiceProjectTaskStateHandler.PROJECT_TASK_STATE_CLOSE_COMPLETE;
```

To map the work order **Pending dispatch** state to the project task **Open** state, add the following line to the `initialize()` function:

```javascript
this.workOrderProjectTaskStateMap[FieldServiceProjectTaskStateHandler.WORK_ORDER_STATE_PENDING_DISPATCH] = FieldServiceProjectTaskStateHandler.PROJECT_TASK_STATE_OPEN;
```

To qualify a task automatically once the project task is changed to **Open**, change the `FieldServiceProjectUpdateHandler` process function that listens on project task updates and change the linked work order to **Qualified**. Add the following line after this section:

```javascript
if(taskJSON.change_map && taskJSON.change_map.state){
    if(taskJSON.change_map.state ==
        FieldServiceProjectTaskStateHandler.PROJECT_TASK_STATE_OPEN
        workOrder.state = FieldServiceProjectTaskStateHandler.
        WORK_ORDER_STATE_PENDINGDispatch
        workOrder.update();
}
```

Sourcing Parts

Get the parts you need to complete the tasks.

You can:

- Transfer parts based on stock rules.
• Access the parts you have in your inventory
• Move parts to your inventory from available locations

Manage part requirements

Create, copy, and delete part requirements as required for work order tasks.

If the agent assigned to the task does not have the skills or parts required, the dispatcher can select an agent who is better equipped to complete the task.

Create a part requirement

Create a part requirement for a work order task.

Role required: wm_agent, wm_qualifier, wm_dispatcher, wm_admin, or qualifier combination role

1. Navigate to Field Service > Work Order > All Work Orders.
2. Open a work order.
3. Open a work order task that is not in the Closed or Cancelled state.
4. Do one of the following:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click Source.</td>
<td>All tasks and part requirements are listed on the left. Point to any task or part requirement icon to obtain more information. Right-click a work order task and select Create Part Requirement. This method is useful if you are sourcing multiple parts for a work order task.</td>
</tr>
<tr>
<td>In the Part Requirements related list, click New.</td>
<td>This method is useful if you are sourcing a single part for a work order task.</td>
</tr>
</tbody>
</table>

5. Fill in the fields, as appropriate.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Auto-generated number for the part requirement.</td>
</tr>
<tr>
<td>Work order task</td>
<td>Number assigned to the work order task.</td>
</tr>
<tr>
<td>Model</td>
<td>Description of the part model needed to complete the work order task.</td>
</tr>
<tr>
<td>Required by date</td>
<td>Date by which all parts should be delivered. The date is filled in automatically based on the task's expected travel start time. If necessary, change the date manually.</td>
</tr>
<tr>
<td>Required quantity</td>
<td>Total quantity necessary to complete the part requirement. This field becomes read-only when the full number of required parts has been sourced.</td>
</tr>
<tr>
<td>Reserved quantity</td>
<td>Total quantity that has been sourced already.</td>
</tr>
<tr>
<td>Sourced</td>
<td>Indicator for whether the required quantity for this part requirement has been reserved and transfer requested from one stockroom to another.</td>
</tr>
<tr>
<td>Delivered</td>
<td>Indicator for whether the transfer order lines under this part requirement have been delivered or not.</td>
</tr>
</tbody>
</table>
### Field Service Management

#### Short description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short description</td>
<td>Contents of the Short description field from the parent work order. If the work order was created from an incident, problem, or change request, the short description of the part requirement is inherited from that record. If the work order was created automatically from a Work order models, the short description is from model template. This field is not visible by default.</td>
</tr>
</tbody>
</table>

6. Click **Submit**.

   If the part is out of stock, a message appears at the top of the form naming the part.

7. If someone other than the qualifier will source the part requirement, create transfer order lines, move the part from a stockroom to an agent, and click **Qualified**.

   **Note:** Part requirement record numbers start with an SOPR prefix and the records are stored in the [sm_part_requirement] table in the Service Order Management application. Part requirements created in prior releases start with an WOPR prefix.

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### Copy a part requirement

Copy a part requirement to quickly create another, similar part requirement.

**Role required:** wm_agent, wm_qualifier, wm_dispatcher, wm_admin, or qualifier combination role

1. Navigate to Field Service > Work Order > All Work Orders.
2. Open a work order.
3. Open a work order task that is not in Closed or Cancelled state.
4. Click **Source**.
5. In the Source Work Order list, right-click on a work order part number and select **Copy Part Requirement**.
   
   This action copies the part requirement information to the clipboard.
6. In the Source Work Order list, right-click on a work order task number and select **Paste Part Requirement**.

### Delete a part requirement

Delete a part requirement from a work order task.

**Role:** wm_qualifier or qualifier combination role

1. Navigate to Field Service > Work Order > All Work Orders.
2. Open a work order.
3. Open a work order task that is not in Closed or Cancelled state.
4. Click **Source**.

   The Source Work Order list appears, showing the part requirement records in a tree structure.
5. Right-click on a part requirement number and select **Delete Part Requirement** from the context menu.

   The system deletes the part requirement without displaying a confirmation message.

### Part requirements

After all work order tasks are qualified and the parent work order state automatically changes to **Qualified**, you can request more information from the qualifier, if necessary, and source any parts required for the tasks.
If a work order was created from a work order template, the part requirements are automatically added to the work order task.

The examples included in this topic illustrate the use of part requirements with work orders; however, part requirements can be used with any Service Management application.

To create part requirements and source parts, enable the Part requirements are needed by agents configuration option on the Field Service Configuration screen.

To automatically reserve the required parts in agent stockroom, enable the Reserve parts in agent stockroom configuration option on the Field Service Configuration screen.

Note: The required parts must be available in the agent personal stockroom or group stockroom to reserve them for a work order task.

Source parts

Sourcing a part is the process of reserving and obtaining an asset described in a part requirement record, either by ordering it from a vendor or transferring it from one stockroom to another.

Users who can create work orders can create part requirements by using work order templates or by manually using the procedures on this page. Agents, qualifiers, and dispatchers, including users with the combination roles, can create and source a part requirement.

• A qualifier determines if parts are necessary to execute work order tasks.
• A dispatcher sources the part requirements and creates transfer order lines.
• A dispatcher or agent moves the parts through the transfer process.
• An agent accepts delivery of the parts and records part usage.

Part requirements must be associated with a work order task. After parts are identified, a transfer order is created to move the parts from the stockroom where they are located to a different stockroom or directly to an agent. Agents can be selected based on skills and the availability of parts in their personal stockrooms. One work order task can have multiple part requirements and multiple transfer orders.

• In one work order task, multiple part requirements may require different items that can all be found in one stockroom. One transfer order can satisfy the part requirements. The transfer order will have multiple transfer order lines, each specifying a different item based on the part requirements.
• When one stockroom has all required items, a single transfer order line can fulfill the order when moving consumable assets. One or more transfer order lines may need to be created when moving non-consumable assets. (For more information about consumable and non-consumable assets, see Managing Assets.)
• If a single stockroom does not contain all the items needed for the part requirement, create an additional transfer order line to a different stockroom. Because the new transfer order line specifies a different stockroom, a separate transfer order is automatically created. One part requirement is then fulfilled by two separate transfer orders to two different stockrooms.

When a technician/agent is working on a task, and requires a part, she should be able to use the part from her personal stock room, when available, without going through the sourcing process.

With simplified part sourcing, an agent can create a part requirement and use a part from their personal stockroom without going through the sourcing process. This is helpful for agents who are already working on tasks and have access to the necessary parts. The Use Asset and Remove Asset buttons are available on the Asset Usages related list on the Work Order Task form.

Simplified part sourcing

With simplified part sourcing, an agent can create a part requirement and use a part from their personal stockroom without going through the sourcing process. This is helpful for agents who are already working on tasks and have
access to the necessary parts. To use simplified part sourcing, click the Use Asset button on the Asset Usages related list on the Work Order Task form.

**Source a part and assign an agent**

The work order sourcing option is useful when you want to assign a work order task to agents who already have the required parts in their stockroom or to a specific agent who needs you to obtain the parts for them.

Role required: wm_agent, wm_qualifier, wm_dispatcher, wm_admin, or qualifier combination role

The sourcing option shows the full list of tasks and part requirements to source for a work order or task. For each task, the agents and stockrooms that have the required parts are listed. Also, the skills and parts required for each task are displayed. Select an agent to see if the agent has the skills and parts required for the task. The time slots during which the agent is available within the work order window are shown to help you schedule task work efficiently.

1. Navigate to **Field Service > Work Order > All Work Orders**.
2. Open a work order.
3. Open a work order task that is not in **Closed** or **Cancelled** state.
4. Click **Source**.
5. In the Source Work Order list, click a work order task.
Work Order Task Sourcing screen

The **Agent** field under **Agent info** is populated automatically based on information provided in the work order task.

6. To specify a different agent, click the reference lookup icon (🔍).

Only agents that meet the criteria in the work order task are available for selection. The system populates the **Skills** and **Parts** fields automatically, based on the agent specified. If a not available icon (🚫) appears next to a part, the specified agent either does not have the part or does not have enough units of the part to complete the task.

7. Point to the icon to obtain information about how many units of the part are needed and how many units the agent has in their stockroom.

8. To filter agents and reserve parts, click the arrow next to **Agent info** to expand the section.
• Select the skills and parts options to filter the agents.
• Select Reserve parts in agent stockroom to reserve parts located in the specified agent's stockroom. This automatically sources the parts already present.

9. In the Date field, select the date on which the work should take place.
If the agent is available on the date specified, the Assign button appears in the Schedule field.

10. If necessary, you can update the Scheduled start and Scheduled end fields in the Task info section.
• If you change the Scheduled start and Scheduled end fields in the Part Requirements section at the top of the screen, the corresponding fields in Task info are also changed. If you make changes to the fields in the Task info section, the corresponding fields in the Part Requirements section are not changed.
• Any edits to the Estimated travel duration, Estimated work duration, or Scheduled start time fields on the Task form appear automatically in Task info.

11. Click Assign.

12. To revert your changes to Agent Info, click Refresh.
You cannot use **Refresh** after you have saved the record.

13. Click **Save**.

The agent is not assigned until you save the record.

14. Source any parts the specified agent does not yet have reserved. In the left pane, select a part from the list of part requirements under the task.

15. Click **Source Part** and complete the transfer order.

**Transfer orders**

Use a transfer order to move necessary parts between company stockrooms or to a location where an agent can receive them.

The transfer order defines delivery dates, the stockrooms involved in the transfer, and the general status of the order. A transfer order contains one or more transfer order lines which allow the transfer of multiple parts or assets on one transfer order. A transfer order line describes the part, the quantity required, and the status of the part in the transfer process.

The system creates a transfer order automatically when you create a transfer order line. You can add additional transfer order lines to a transfer order as long as the transfer order is in the **Draft** stage. When any of the transfer order lines advance to the next stage, the transfer order stage also advances, and can no longer accept additional transfer order lines.

**Consumable and non-consumable models**

The transfer process is slightly different for consumables than it is for non-consumables.
Consumable assets, such as computer keyboards, are not tracked individually in transfer orders. Non-consumable assets, such as network routers, are configuration items that are tracked individually in transfer orders.

**Consumable models**

If the model being transferred is a consumable, the system can order all the items at once if you specify a **Requested quantity** on a single transfer order line. After the quantity is specified, the system determines whether the selected stockroom has enough quantity to fulfill the part requirement. If the stockroom cannot fill the entire part requirement, the system enters the quantity available in the stockroom automatically. For example, if the requirement is for 25 keyboards and the selected stockroom only contains 10, the available quantity of 10 is added. The user must create another transfer order line manually to order the remaining 15 keyboards from another stockroom.

**Non-consumable models**

If the model being transferred is a non-consumable asset, create one transfer order line per asset. The system creates as many transfer order lines as the required quantity. This approach is used so that each configuration item can change its status and stockroom location independently. For example, if the part requirement specifies two Canon i960 Photo printers, and printers are managed as configuration items, then the system generates two transfer orders lines - one per configuration item. After the agent receives the parts (item state changes to **In Stock** and substate changes to **Reserved**) and uses them, the asset is listed as **In Use** by the caller who originated the work order.

**Create a transfer order**

Create a transfer order that moves the necessary parts or assets to the correct stockroom or agent location.

Role required: wm_agent, wm_qualifier, wm_dispatcher, wm_admin, or qualifier combination role

1. Navigate to Field Service > Work Order > All Work Orders.
2. Open a work order.
3. Open a work order task.
4. In the **Part Requirements** related list, click a **Number**.
5. Click **Source Part**.

   A new **Transfer Order Line** form appears. The system completes the **Model** field automatically with information from the part requirement. You can select a different model, but it must be a **substitute** for the requested model. If you click the reference lookup icon (🔍) beside the **Model** field, only the selected model and any substitute models that are in stock are listed.

6. Select a **From Stockroom**.
   - Only stockrooms that have the model specified are included in the list. If no stockrooms are listed, the part is considered out of stock.
   - The **From Stockroom** field is auto-populated with a default stockroom location, only if the part is available in the agent’s personal stockroom or assignment group stockroom. You can specify a different stockroom location, if needed.

7. Select a **To stockroom**.
   - The **To stockroom** field is auto-populated with a default stockroom location. You can specify a different stockroom location, if needed.
   - To deliver the items to an agent directly and skip the **Received** stage, select a personal stockroom as the destination. If no agent is assigned to the work order task, the transfer order line waits in the **Received** stage until an agent has been assigned.
   - To use a part without transferring it, select the same non-personal stockroom for both the source and destination stockroom. This action moves the transfer order directly to the **Received** stage and sets the asset state and substate to **In stock - Pending transfer**.
Note: An error occurs if the same personal stockroom is selected for both the source and destination stockroom. In this case, the transfer order line automatically moves to the Delivered stage even if no agent is assigned to the work order task.

8. Specify the Quantity requested.
   If the first stockroom you select does not contain sufficient quantity, then repeat steps 2-5 until the entire quantity required is ordered. As you order from stockrooms, the number in the Reserved quantity field is updated automatically. When the numbers in the Reserved quantity and Requested quantity fields on the Part Requirement form match, the system selects the Sourced check box. After one transfer order line is requested from the part requirement, you cannot change the part requirement.

9. Select a Delivery method.
   Qualifiers, dispatchers, agents and users with combined roles can specify a delivery method for parts while a transfer order is in the Draft stage. The possible delivery options are:
   - Standard
   - Overnight
   - Courier
   - Agent Pickup

10. Click Submit.

Move an asset through the transfer process

Use transfer order line tasks to move assets through the shipment or drop-off transfer process.

Role required: wm_agent, wm_qualifier, wm_dispatcher, wm_admin, or qualifier combination role

Transfer order line tasks are created to move transfer order lines from one stage to the other. A transfer order line initially has one transfer order line task for completing the fulfillment. When you fulfill a asset requirement and close the task, the system automatically creates two transfer order line tasks: one to prepare for shipment and another one to drop off the asset.

Closing a transfer order line completes the task, moves the transfer order line task to the next stage, and creates the next task in the process until you close all tasks required for completing the transfer order line. For more information on the stages of transfer, see Transfer order line stages.

1. Navigate to Field Service > Sourcing > Sourcing Transfer Orders.
2. Select a transfer order to transfer the asset.
3. From the Transfer Order Line related list, select a transfer order line.
4. From the Transfer Order Line Tasks related list, select a transfer order line task that is ready for fulfillment. Eligible tasks have the short description text "Ready for fulfillment" and the state Open.

5. Click Close Task to complete fulfillment and start the asset transfer process. The transfer order line task that was ready for fulfillment moves to the Closed Complete state.
   The system automatically creates two new transfer order line tasks:
   - The short description text for the transfer order line task to prepare for shipment is "Prepare for shipment" and the state is Open.
   - The short description text for the transfer order line task for drop off is "Receive" and the state is Open.

6. Drop off or prepare for shipment.
<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare for shipment</td>
<td>When you are ready to ship the asset:</td>
</tr>
<tr>
<td></td>
<td>1. Click and open the transfer order line task created to prepare for shipment.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Prepare for shipment&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>2. Click <strong>Close Task</strong>.</td>
</tr>
<tr>
<td></td>
<td>The system automatically does the following:</td>
</tr>
<tr>
<td></td>
<td>• Moves the transfer order line task created to prepare for shipment to the Closed Complete state.</td>
</tr>
<tr>
<td></td>
<td>• Opens a transfer order line task for shipping the asset. The short description text for this transfer order line task is &quot;Ship&quot; and the state is Open.</td>
</tr>
<tr>
<td></td>
<td>• Moves the transfer order line task created for drop off to the Closed Skipped state.</td>
</tr>
<tr>
<td></td>
<td>3. Click and open the transfer order line task created for shipping the asset.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Ship&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>4. If the asset is a consumable, in the <strong>Quantity received</strong> field, enter the number of assets to be delivered.</td>
</tr>
<tr>
<td></td>
<td>5. When the shipment is ready for shipping, click <strong>Close Task</strong>.</td>
</tr>
<tr>
<td></td>
<td>This task automatically moves to the Closed Complete state.</td>
</tr>
<tr>
<td></td>
<td>6. Click and open the transfer order line task created for receiving the shipment.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Receive&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>7. When the shipment is ready for transit, click <strong>Close Task</strong>.</td>
</tr>
<tr>
<td></td>
<td>This task automatically moves to the Closed Complete state.</td>
</tr>
<tr>
<td></td>
<td>8. Click and open the transfer order line task created for delivering the asset.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Deliver&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>9. After the shipment is delivered, click <strong>Close Task</strong>.</td>
</tr>
<tr>
<td></td>
<td>This task automatically moves to the Closed Complete state.</td>
</tr>
<tr>
<td>Drop off</td>
<td>When you are ready to drop off the part or asset:</td>
</tr>
<tr>
<td></td>
<td>1. Click and open the transfer order line task created for drop off.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Receive&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>2. If the asset is a consumable, in the <strong>Quantity received</strong> field, enter the number of part or asset to be dropped off.</td>
</tr>
<tr>
<td></td>
<td>3. When the parts or assets are ready for drop-off, click <strong>Close Task</strong>.</td>
</tr>
<tr>
<td></td>
<td>The system automatically moves the transfer order line created to prepare for shipment to the Closed Skipped state.</td>
</tr>
<tr>
<td></td>
<td>4. Click and open the transfer order line for delivery.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Delivery&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>5. When the part or asset is delivered, click <strong>Close Task</strong>.</td>
</tr>
<tr>
<td></td>
<td>The task moves to the Closed Complete state.</td>
</tr>
</tbody>
</table>
Merge transfer orders

After you submit a new transfer order, the system examines all existing transfer orders attached to the current work order task to determine if the new transfer order can be merged with any of the existing orders.

The system uses these criteria to merge transfer orders:

- Created from the Field Service Management application. (Configure the transfer order record to add the Type field.)
- In the Draft stage.
- Same From Stockroom.
- Same Destination Stockroom.

If an existing transfer order matches these criteria, the new transfer order line is placed under the existing transfer order. If no existing transfer order matches these criteria, a new transfer order is created and the transfer order line is added. It is good practice to view the transfer order and ensure that all information is correct. For example, check that the Delivery by date on the transfer order is appropriate for the Required by date on the part requirement. Transfer orders created in the Field Service Management application are not merged or combined with transfer orders created from any other application, such as Procurement.

When all the transfer order lines under a part requirement are delivered to the assigned agent's personal stockroom, the part requirement is marked Delivered. When both the consumable and non-consumable assets are delivered, the system changes their State to In stock and their Substate to Reserved (in Asset Management).

Scheduling and dispatching agents

Send agents to work on the tasks.

You can:

- Assign tasks to agents
- Use dispatch map to monitor agent and task status
- Dispatch tasks to agents

Dispatching work order tasks

When all of the work order tasks associated with a work order are qualified, you can dispatch the work order tasks from the task form or task map, or by using central dispatch.

When all of the associated tasks are qualified, the state of the parent work order changes to Qualified. If you have already sourced parts and created transfer order lines, you are ready to begin dispatching the work order tasks to agents. Users with the following roles can dispatch work order tasks: wm_dispatcher, wm_initiator_qualifier_dispatcher, or wm_admin.

You can dispatch work order tasks to qualified work agents from these locations:

- **Dispatch queue**: Dispatch tasks to agents from task records.
- **Task map**: Dispatch tasks to agents using a Google map with geolocation.
- **Central Dispatch**: Dispatch tasks to agents using the Central Dispatch board, which provides drag-and-drop capabilities to assign and dispatch tasks.

**Note:** Central Dispatch replaces Visual Dispatch in the Helsinki release.
Note: When dynamic scheduling is enabled, dispatchers can manually double-book an agent for more than one work order task with overlapping time. You can enable double booking using `work.management.allow.doublebooking.dynamicscheduling` system property.

### Dispatch a work order task from the dispatch queue

You can dispatch a work order task from the dispatch queue.

Role required: `wm_dispatcher`, `wm_initiator_qualifier_dispatcher`, or `wm_admin`

If an agent rejects a task that was assigned to the agent, you view the task rejection details in the Task Rejections related list of the work order task.

1. Navigate to **Field Service > Dispatching > My Dispatch Queue**.
2. Open a work order task.
3. Select an **Assignment group**.
4. Select an individual agent in the **Assigned to** field.
   - The lookup list displays all of the agents in the selected assignment group.
5. Click **Update**.

### Dispatch a work order task from the task map

You can dispatch a work order task from the task map.

Role required: `wm_dispatcher`, `wm_initiator_qualifier_dispatcher`, or `wm_admin`

In some cases, you might need to dispatch an urgent task or reassign a task to an alternate agent if the assigned agent is delayed or otherwise unable to perform the task. Only users with the `wm_dispatcher` or `wm_initiator_qualifier_dispatcher` role can display their tasks on the dispatch map directly from a task record and see the available agents nearby who have the skills to perform the task.

Note: A task cannot be displayed on the dispatch map without a location that has latitude and longitude defined.

1. Navigate to **Field Service > Dispatching > My Dispatch Queue**.
2. Open the work order task that you want to dispatch or reassign.
3. Click **View Task on Map**.
   - This button is only visible if the task contains a location with a defined latitude and longitude. The map that appears displays a red task icon with a black spot for the task, and shows icons for all nearby agents.
4. Click **View Filter**.
5. Select a skill level for the agents to display in the map.
   - Match all needed skills
   - Match some needed skills
   - Match none of skills
6. Click **Apply Filter**.
   - The resulting list shows the agents on the map who match the skills selection.
7. Click an agent icon to show the agent's name, skills, and schedule.
8. Click the icon beside the agent's name to assign the task to that agent.
Assign single task

If the task can fit within the agent's schedule, the task is assigned to the agent and a confirmation message is displayed. If the agent's schedule cannot accommodate the task, the system displays a failure message and allows you to select a different agent.

Auto-dispatch a work order task

Automatically match a task to a nearby agent who has the necessary skills and a schedule that can accommodate the task.

Role required: wm_dispatcher, wm_initiator_qualifier_dispatcher, or wm_admin

Auto-dispatch evaluates an agent's dispatch group, assignment group, location, or skills before assigning a task.

1. Open a task.
2. Click Auto-Dispatch.
   The system assigns the work order task to the selected agent. If the system cannot find an appropriate agent, it displays a failure message and leaves the task in the Pending Dispatch state.

Request additional work order task information

If there is not enough information in the task record to dispatch a work order task, you can request more details from the qualifier.

Role required: wm_dispatcher, wm_initiator_qualifier_dispatcher, or wm_admin

1. Navigate to Field Service > Dispatching > Dispatch Queue.
2. Open a work order task in Pending Dispatch state.
3. In the Work Notes field, enter a reason for returning the work order task.
4. Click Request more information.
   The work order task state changes to Draft and the work order state changes to Awaiting Qualification. If Field Service Management is configured for automatic qualification, the work order state remains at Qualified.

Appointment booking

Create time windows for offered services that customers and employees can use to book service appointments.

With the appointment booking feature, customers can view available appointment windows, make a selection, and book a service appointment from the service portal. Agents and dispatchers can also book appointments on behalf of customers. Booking an appointment creates a work order and one or more work order tasks, depending on the type of service. Booked appointments can be rescheduled and canceled within time constraints identified in the configuration.
Appointment booking requires configuration at both the application level and the service level. One configuration is required for the application, which is provided for Field Service Management. This configuration contains settings that apply to all of the services within the application that support appointment booking.

A separate configuration is required for each of the services within the application that offer scheduled appointments. A service configuration includes settings that apply only to that specific service. Both the application configuration and the service configuration must be active to book appointments.

**Appointment booking components**

The roles, properties, and tables for the appointment booking feature.

The Appointment Booking plugin (com.snc.appointment_booking) is activated automatically when you activate the Field Service Management plugin. A demo data plugin, Appointment Booking Demo Data (com.snc.appointment_booking_demo), is also available.

Appointment booking adds the Appointment Booking menu to the application navigator and the following modules:

- **Appointment Booking Configuration**: Use this module to create an appointment booking configuration for an application and then configurations for each service within that application.
- **Appointment Bookings**: Use this module to view a list of appointments that have been booked for services. This list includes the work orders associated with each appointment.

**Roles**

Appointment booking adds the following roles.

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointment booking admin</td>
<td>Creates appointment booking configurations for services within an application.</td>
</tr>
<tr>
<td>[sn_apptmnt_booking.appointment_booking_admin]</td>
<td></td>
</tr>
<tr>
<td>Appointment booking manager</td>
<td>Creates and updates appointment booking records.</td>
</tr>
<tr>
<td>[sn_apptmnt_booking.appointment_booking_manager]</td>
<td></td>
</tr>
<tr>
<td>Appointment booking user</td>
<td>Books appointments for services from the Customer or Consumer Service Portal. This user can also reschedule or cancel appointments and view appointment details.</td>
</tr>
<tr>
<td>[sn_apptmnt_booking.appointment_booking_user]</td>
<td></td>
</tr>
</tbody>
</table>

**Properties**

Appointment booking adds the following properties.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>sn_apptmnt_booking.max_new_appointments_daily</td>
<td>The maximum number of appointments that a user can create daily. The upper limit is 100 appointments per day.</td>
</tr>
<tr>
<td>sn_apptmnt_booking.max_appointments_returned</td>
<td>The maximum number of appointment availability windows displayed in the Select Appointment window.</td>
</tr>
</tbody>
</table>
Tables

Appointment booking adds the following tables.

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointment Booking Service Configuration [sn_apptmnt_booking_service_config]</td>
<td>Stores service configuration records for appointment booking.</td>
</tr>
<tr>
<td>Appointment Booking Configuration</td>
<td>Stores application configurations records for appointment booking.</td>
</tr>
<tr>
<td>Appointment Bookings</td>
<td>Stores records for all appointments, including booked, rescheduled, and canceled appointments.</td>
</tr>
</tbody>
</table>

Administer appointment booking

Create or modify and enable the application configuration and the individual service configurations for the appointment booking feature.

The system administrator can create, modify, and enable an application configuration. Appointment booking administrators (appointment_booking_admin) can create, modify, and enable configurations for services within an application.

The Field Service Configuration is an application level configuration provided with the appointment booking feature, which includes several service level configurations. Administrators can modify these configurations as needed or use them as examples to create new configurations.

Appointment availability

Settings in the application configuration determine how the appointment booking feature determines availability.

Two different methods are provided for determining availability:

**Number of appointments per slot**

This method uses a specified number of available appointments per time window. The actual number of appointments is specified in the service configuration. For example, if the administrator specifies 10 appointments per window, then each appointment window will have 10 available appointments. The number of available appointments for an appointment window decreases by one each time an appointment within that window is booked.

**Scripted**

This method uses a script to determine the number of available appointments per time window. The default script included with the Field Service Management application configuration uses the task assignment method set in the Field Service configuration to determine availability. If the task assignment method is set to manual, the availability defaults to the **Number of appointments per slot** availability method. If the task assignment is set to auto-assignment or dynamic scheduling, the configurations associated with these task assignment methods are considered while calculating availability.

Excluding days from appointment availability

In the service configuration, the appointment booking administrator can select a schedule of days that are excluded from appointment availability. The **Holiday Schedule** field is a reference field that points to the Schedules table [cmn_schedule]. Selecting a schedule from the Schedules list defines the days and times to exclude from appointment availability. In the schedule selected, those days must be set to **Excluded**.
Task assignment

The application configuration works with the Field Service Management configuration for task assignment.

Appointment booking works with the task-driven process life cycle and the following task assignment methods:

- Auto-assignment
- Dynamic scheduling
- Manual

Auto-assignment and dynamic scheduling include enhancements that support appointment booking:

- Identifying the best dispatch group for task assignment.
- Preventing tasks with appointment windows from being unassigned.
- Calculating availability for agents and groups.

Dynamic scheduling

Appointment booking adds unassignment criteria to the dynamic scheduling configuration that prevents work orders and work order tasks with appointment windows from being unassigned. It also adds criteria that prioritizes work orders and tasks with appointment windows.

Navigate to Field Service > Administration > Dynamic Scheduling Configuration.

- The Task Filters related list includes an Appointment Tasks filter for tasks that have an appointment window and are in the Pending Dispatch state.
- The Un-Assignment Constraints related list includes the Has Appointment constraint that prevents tasks with appointment windows from being unassigned.

Central dispatch

When using central dispatch to assign a task with an appointment window, the Window start and Window end fields for the task use the scheduled appointment date and the appointment window start and end times.

When a task with an appointment window is assigned to a time that is outside of the appointment window, the system displays a warning message. The dispatcher can ignore the warning and assign the task outside of the appointment window.

Rescheduling work start and work end times

When a work order is created for a booked appointment, or when an appointment is booked for an existing work order, the appointment window start and end times are used for the work order task Window start and Window end times.

For work order tasks that have scheduled appointments, dispatchers receive warning messages if they change any of the following fields:

- Window start
- Window end
- Scheduled start
- Scheduled travel start
Appointment booking email and SMS notifications

The system administrator can create email and SMS notifications for appointment confirmation and cancellation notices and appointment reminders.

An email and SMS notification for an appointment includes task information, such as the task number and description, as well as the appointment time. It can also include a link that enables the user to reschedule or cancel the appointment.

System administrators can configure both email and SMS notifications using these appointment booking email templates:

- appointment.confirmed
- appointment.cancel
- appointment.reschedule

**Note:** Ensure to install Customer Experience plugin to configure SMS.

Appointment booking email and SMS notifications are active for all services using the appointment booking feature. The following email notifications are included with the appointment booking feature:

- **Appointment Confirmation:** Sent to the customer once the task for an appointment has been assigned to and accepted by a technician. If acceptance by the technician is not required, the notification is sent to the customer when the task is assigned.
- **Appointment Cancel:** Sent to the customer when an appointment is canceled. Can include task information and also a reason for the cancellation.
- **Appointment Reschedule:** Sent to the customer when an appointment is rescheduled. Can include task information.

Enable or disable appointment booking

Enable or disable the appointment booking feature for an application as well as for services within the application that are provided to customers.

Role required: admin

1. Navigate to Appointment Booking > Appointment Booking Configuration.
2. Click the desired configuration.
   
   For Field Service Management, the Field Service Configuration is provided with the appointment booking feature.
3. Enable or disable the Active check box.
4. In the Appointment Booking Service Configuration related list, click the name of a service.
   
   This action opens the Appointment Booking Service Configuration form for the selected service.
5. Set the Active field to true.
6. Click Update.

Create or modify an appointment booking application configuration

Create or modify an appointment booking configuration for an application. The information stored in this configuration applies to all the services within that application.

Role required: admin

The Field Service Configuration is provided with the appointment booking feature.

1. Navigate to Appointment Booking > Appointment Booking Configuration.
2. To create a new configuration, click New. To modify a configuration, click the configuration name.
3. In the Appointment Booking Configuration form, fill in or modify the following fields as needed.

### Appointment booking application configuration fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the application configuration.</td>
</tr>
<tr>
<td>Task Table</td>
<td>Appointments are created for the tasks in the selected table. The Work Order [work_order] table is the default table for the Field Service Configuration.</td>
</tr>
</tbody>
</table>
| Availability Method    | Use one of two methods to determine appointment availability. The selection depends on the Field Service Management configuration setting in the Assignment method for tasks field:  
  - **Number of appointments per slot**: Define a specific number of appointments per time slot. Use this availability method if the task assignment method is set to manually.  
  - **Scripted**: Use the Field Service Management configuration setting to determine availability if the task assignment method is set to using auto assignment or dynamic scheduling. This is the default setting. |
| Active                 | Activates the application configuration and enables appointment booking.    |
| Auto acceptance        | If the Field Service Management configuration setting for Process lifecycle is set to task-driven, an agent must accept or reject an assigned task. Enable the Auto acceptance check box to override this configuration setting for appointment booking. |
| Portal View            | Display available appointments in the Select Appointment window on the Customer or Consumer Service Portal for a single day or for a week. |
| Script                 | The script used to determine the number of available appointments.           |

4. Click **Submit**.

### Create or modify an appointment booking service configuration

Create or modify an appointment booking configuration for a service within an application that is provided to customers.

Role required: appointment_booking_admin, admin

To use the appointment booking feature, administrators must create a configuration for each service that is available to customers. Service configurations are created within an application configuration, such as the **Field Service Configuration**, which is provided with the appointment booking feature.

1. Navigate to Appointment Booking > Appointment Booking Configuration.
2. Click **Field Service Configuration**.
3. In the Appointment Booking Service Configuration related list, click **New**.
4. In the Appointment Booking Service Configuration form, fill in the following fields as needed.
### Appointment booking service configuration fields

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active</strong></td>
<td>Activates appointment booking for the service.</td>
<td>If deactivated, customers cannot schedule appointments for the service but can still create work orders.</td>
</tr>
<tr>
<td><strong>General Information</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>The name of the service configuration.</td>
<td></td>
</tr>
<tr>
<td>Appointment Booking Configuration</td>
<td>The name of the appointment booking configuration to which this service belongs.</td>
<td></td>
</tr>
<tr>
<td>Availability Table</td>
<td>The table that is used to calculate appointment availability. The default is the Work Order Task [wm_task] table.</td>
<td></td>
</tr>
<tr>
<td>Holiday Schedule</td>
<td>The holiday schedule to use when determining availability. Appointment booking evaluates the holiday schedule when determining the number of available appointments and excludes any day in the schedule that is set to Exclude. Click the lookup icon and select a schedule from the Schedules list.</td>
<td>Holiday schedules are useful when the assignment method for tasks is set to manually, which does not consider agent schedules.</td>
</tr>
<tr>
<td><strong>Catalog Information</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catalog Item</td>
<td>The service in the service catalog for which this appointment booking configuration is being created. Click the lookup icon and select a service from the Record Producers list.</td>
<td>The catalog item must exist in the service catalog.</td>
</tr>
<tr>
<td>Note</td>
<td></td>
<td>If you are using appointment booking with work orders, create a work order template before you configure appointment booking.</td>
</tr>
<tr>
<td>Location</td>
<td>The field on the record provider that determines the appointment location.</td>
<td></td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| Appointment is mandatory            | Enable this check box if it is mandatory that a customer create an appointment when requesting this service.  
• If enabled, the **Appointment** field appears on the record producer and the user must select an available appointment on the **Select Appointment window** before submitting the service request.  
• If disabled, the user can submit the service request without selecting an appointment. |
| User contact                        | The field on the record provider that determines who the appointment is being created for. This is a reference field that looks for a sys_user variable on the record producer, for example, **Contact**.                         |
| Timezone                            | The appointment window based on the **Timezone** field specified in the user contact record or the location where the appointment for the task is scheduled.                                                     |
| Booking                             |                                                                                                                                                                                                             |
| Appointments per window             | The number of available appointments for each configured appointment time slot. This number determines the number of available appointments that are displayed on the Select Appointment window. Enter a number in this field if the assignment method for tasks is set to **manually**. If set to either using **auto-assignment** or using **dynamic scheduling**, this setting does not apply, unless a location is not provided. Then the configuration defaults to the number of appointments per window. |
| Lead Time                           | The number of hours or days from the current time after which an appointment can be booked for this service. Define the lead time in hours or days. The default is 4 hours.                                         |
| Future Bookable Max Days            | The number of days in advance of the current day for which an appointment can be booked for this service. The default is 14 days.                                                                               |
| Reschedule / Cancel By Time         | The number of hours or days prior to an appointment start time that are required for an appointment to be canceled or rescheduled. If a user attempts to cancel or reschedule an appointment within this number of hours, the **Cancel** button is not available. Define the time in hours or days. The default is 4 hours. |
| Appointments                        |                                                                                                                                                                                                             |
| Appointment Window                  | The length or duration of the appointment window.                                                                                                                                                            |
| Work Duration                       | The amount of time required to complete all tasks created by the record producer. This duration is set for a task when it is created. Used to determine availability. The default is 1 hour.                                                                 |

*Note: Allow enough time for the work to be started and completed within this window.*
<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Travel Duration</td>
<td>An estimated value of the average travel time required (round trip) for the agent performing the task. Used to determine availability. The default is 15 minutes.</td>
</tr>
<tr>
<td>Daily Schedule</td>
<td></td>
</tr>
<tr>
<td>Bookable Days</td>
<td>The days of the week for which appointments can be booked. The default is Monday through Friday.</td>
</tr>
<tr>
<td>Daily Start Time</td>
<td>The start of the work day and the earliest start time for an appointment window. The default is 9:00.</td>
</tr>
<tr>
<td>Daily End Time</td>
<td>The end of the work day and the latest end time for an appointment window. The default is 18:00 PM.</td>
</tr>
<tr>
<td>Include Daily Break</td>
<td>Enable this check box to schedule a break for each bookable day, then select the break start and end times. Can define one break which applies to all days.</td>
</tr>
<tr>
<td>Appointment booking preview</td>
<td>Provides a preview of the appointment windows and times based on the selected start and end times, break time, and appointment window.</td>
</tr>
</tbody>
</table>

5. Click Submit.

**Configure an appointment booking record producer**

Configure an appointment booking record producer and enable the appointment booking variable set to display the correct fields in that record producer.

Role required: appointment_booking_admin, admin

The appointment booking variable set must be enabled in order to display the appointment selection widget on the record producer.

1. Navigate to Service Catalog > Catalog Definitions > Record Producers.
2. Click the desired record producer.
3. In the Variable Sets related list, click Edit.
4. Select sn_appointment_variable_set and move it to the Variable Sets list.
5. Click Save.

**Use appointment booking**

Book, reschedule, and cancel appointments for available services.

**Select Appointment window**

When booking or rescheduling an appointment for a service, use the Select Appointment pop-up window to view available appointment time slots, select the desired day and time, and submit the appointment request.

In the Select Appointment pop-up window, users see appointment availability based on the configurations created for the application and the selected service. This configuration can include:

- Whether the window shows available appointments in a day or week view
- The length of the appointment windows (for example, 2 hours)
- The start and end times for the appointment windows
- The number of appointments available per day
**Note:** Based on the configuration set for the user's time format, the appointment booking window will display either a 12-hr or a 24-hr clock.

### Select Appointment pop-up window

A read-only field at the top of the window displays the currently selected day or week. Use the arrows or the calendar icon at the top of the window to display different dates. Unavailable appointment windows are grayed out and not selectable.

The time zone used for appointment is displayed in the lower corner of the window.

- If the selected location for the service has an associated time zone, that time zone is used.
- If the location does not have an associated time zone and the current user does, the user's time zone is used.
- If neither the location nor the current user have an associated time zone, the system time zone is used.

### Book an appointment for a customer

Dispatchers and agents can book appointments for customers.
Role required: wm_dispatch, sn_customerservice_agent, sn_customerservice.consumer_agent

Dispatchers and agents can click **Book Appointment** on the work order form. This button appears on the form after the work order is qualified.

Note: The **Book Appointment** feature is not available for work orders, if the related work order task is assigned to an external group or agent.

1. Open a work order form.
   
   The **Template** field displays the template for the service for which the appointment is being booked. A service must have an active service configuration in order to book an appointment.

2. Click **Book Appointment** in the work order header to display the Select Appointment pop-up window.
   
   This window displays available appointments for either a single day or for a week. If no appointments are available, select a different day or week.

3. Use the left and right arrows or the calendar icon to display the desired day or week.
   
   Available appointment time slots for the selected day or week are displayed.

4. Click the desired time slot and then click **Select**.
   
   Click the link in the information message to view the appointment details. The appointment is added to the **Appointment Bookings** related list. If necessary, configure the Work Order form to display this list.

   The appointment is created for the selected date and time. The **Window start** and **Window end** fields on the work order task are updated with the selected appointment start and end times. The **Estimated work duration** field is updated with the duration of the selected appointment time slot.

**Reschedule an appointment for a customer**

Dispatchers and agents can reschedule appointments for customers.

Role required: wm_dispatch, sn_customerservice_agent, sn_customerservice.consumer_agent

A dispatcher or an agent can reschedule an appointment for a customer from a work order.

1. Open the work order form.

2. Click **Reschedule Appointment** to open the Select Appointment pop-up window.
   
   The Select Appointment pop-up window displays the selected day and time of the current appointment.

3. Select a different day and appointment time slot and then click **Select**.
   
   The date and time for the appointment are updated. Click the link in the information message to view the appointment details.

   Rescheduling an appointment triggers an appointment rescheduled email to the customer.

**Cancel an appointment for a customer**

Dispatchers and agents can cancel appointments for customers.

Role required: wm_dispatch, sn_customerservice_agent, sn_customerservice.consumer_agent

A dispatcher or an agent can cancel an appointment for a customer from a work order.

1. Open the work order form.

2. Click **Cancel Appointment**.

   Note: If necessary, configure the work order form and add the **Cancel Appointment** button.

   The customer receives SMS and email notification that their scheduled appointment is canceled.
Cancel or delete a work order with an appointment

The dispatcher or agent can delete a work order that has a booked appointment.

Role required: wm_dispatch, sn_customerservice_agent, sn_customerservice.consumer_agent

- If a work order with an appointment is canceled, the associated appointment is canceled.
- If the appointment booking configuration uses the number of appointments per slot as the availability method, the number of remaining available slots for that appointment window is incremented when a work order is canceled or deleted.
- When a work order is canceled or deleted, the customer receives a message that the associated appointment is also canceled or deleted.

Book an appointment from the portal

Book an appointment for a service from either the Customer or the Consumer Service Portal.

Role required: appointment_booking_user

Booking an appointment creates a work order for the selected service. After the appointment is confirmed and the work order is scheduled, the customer receives a confirmation email with the appointment details.

Note: If you book an appointment from the Consumer Service Portal, the work order does not get assigned to agents from the external assignment group.

1. From the portal, select a service that requires an appointment.
2. If necessary, enter a detailed description.
3. Click the calendar icon in the Appointment field to open the Select Appointment pop-up window.
   This window displays available appointments by day or by week.
4. Use the left and right arrows or the calendar icon to display a different day or week.
   Available appointment time slots for the selected day or week are displayed. Unavailable dates are grayed out and not selectable. If you do not see any available appointments, select a different day.
5. Click the desired time slot and then click Select.

Note: Based on the configuration set for the logged in user's time format, the appointment booking window will display either a 12-hr or a 24-hr clock.

The Appointment field on the record producer displays the selected appointment window day and time.

6. Click Submit in the record producer.

   The appointment request is submitted and the work order created for the appointment is displayed. The appointment details appear on the work order page in the Appointment widget.

   Information about the scheduled appointment is noted in the Activities field on the work order. This information includes the appointment day and time and the time zone for the selected location.

   When the work order is assigned and accepted by a technician, the customer receives a confirmation email and SMS.

Book an appointment from an existing work order

Book an appointment for an existing work order from either the Customer or the Consumer Service Portal.

Role required: appointment_booking_user

1. In the portal header, click Support > Work Orders.
2. Select the desired work order from the work order list.
3. Use the appointment booking widget to schedule an appointment.

When work order is accepted by the assigned technician, customer receives SMS and email notification that their appointment is confirmed.

Reschedule an appointment from the portal

Reschedule a service appointment from either the Customer or the Consumer Service Portal.

Role required:

The details for the scheduled appointment appear on the work order form. Access the appointment information by selecting the appointment from the list of upcoming appointments or by going directly to the work order.

Note: An appointment cannot be rescheduled if the current time is within the reschedule/cancel window specified in the service configuration.

1. In the portal header, click Support > Appointments to display the Appointment Listing page.
2. Click Upcoming to view a list of upcoming appointments.
3. Select the appointment to reschedule.
   This opens the work order for the selected appointment.
4. Click the Appointment field to open the Select Appointment pop-up window.
   The Select Appointment pop-up window displays the day or week of the current appointment and highlights the selected time slot.
5. Select a different day and appointment time slot and then click Select.
   The Appointment field displays the new date and time.

Information about the rescheduled appointment is noted in the Activities field on the work order. This information includes the original appointment window, the rescheduled appointment window, and the user who made the change.

   The user receives a confirmation email that the appointment has been rescheduled.

The customer receives SMS and email notification that their appointment is rescheduled.

Cancel an appointment from the portal

Cancel a service appointment from either the Customer or the Consumer Service Portal.

Role required:

An appointment cannot be canceled if the current time is within the cancellation time window specified in the service configuration. If within this cancellation time window, the Cancel button does not appear in the Appointment field on the work order.

Note: Canceling an appointment also cancels the associated work order and work order tasks.

1. In the portal header, click Support > Appointments to display the Appointment Listing page.
2. Click Upcoming to view a list of upcoming appointments.
3. Select the appointment to reschedule.
   This opens the work order for the selected appointment.
4. Below the Appointment field, click Cancel.
   The system displays a warning that the appointment and the associated work order will be canceled.
5. Click Continue to cancel the work order.
   The appointment and work order are canceled. The Appointment field no longer appears on the work order form and the customer should receive a confirmation email regarding the cancellation.
Information about the canceled appointment is noted in the **Activities** field on the work order. This information includes the original appointment window, an appointment cancellation message, and the user who made the change.

**View work order and appointment details on the portal**

View a list of appointments for the current user on the Customer or the Consumer Service Portal and select an appointment to view the work order details.

Role required: appointment_booking_user

1. In the portal portal header, click **Support > Appointments** to display the Appointment Listing page.
2. Click **Upcoming** to view a list of upcoming appointments.
3. Click an upcoming appointment to view the details on the associated work order.
   
   If necessary, use the **Appointment** field to reschedule or cancel the appointment.

**Field service agent management**

Field service managers can view and manage skills, schedules, and work order tasks of agents in their assignment group using the team calendar. They can view agent locations and nearby tasks using the Manager map.

The **Field Service > Manager** module provides the following capabilities for users with the wm_manager role.

<table>
<thead>
<tr>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Team</td>
<td>Provides a list of agents in the manager's assignment groups.</td>
</tr>
<tr>
<td>Team Calendar</td>
<td>Provides a calendar view of the agents in the manager's assignment groups and their assigned work order tasks and events.</td>
</tr>
<tr>
<td>Manage Skills</td>
<td>Provides a list of the current skills and the agents in the manager's assignment groups. Managers can create or edit skills, assign skills to agents, and view agents with a specific skill.</td>
</tr>
<tr>
<td>Note: <strong>Manage Skills</strong></td>
<td><strong>Note:</strong> In the Customer Service Management application, users with the sn_customerservice_manager role can access the Manage Skills module.</td>
</tr>
<tr>
<td>Manager Map</td>
<td>Provides a map view of the agents in the manager's assignment groups and their locations.</td>
</tr>
<tr>
<td>Work Order Task</td>
<td>Open work order tasks assigned to the manager's agents and groups.</td>
</tr>
<tr>
<td>Recent Work Order Tasks</td>
<td>Work order tasks created for the manager's agents and groups within the last 30 days. This list includes open and closed work order tasks.</td>
</tr>
<tr>
<td>Time Sheets - Pending Approval</td>
<td>Time sheets for the agents in the manager's assignment group that are pending manager approval.</td>
</tr>
</tbody>
</table>
Using the manager map

The manager map displays agent information and the tasks assigned to them. Field service managers can search and view information about agents in their assigned groups and the status of all tasks in their area.

The manager map can be accessed using the desktop or mobile interface. The mobile interface also displays the map legend.

The map uses icons to display:

- Accepted, assigned, and unassigned tasks
- Agent status, including on schedule, off schedule, and delayed
- Multiple tasks
- Multiple agents
View agent location and assign tasks to agents

View the location of agents in your assignment group so you can assign agents to nearby tasks.

Role required: wm_manager

1. Navigate to Field Service > Manager > Manager Map.
2. View the agent location and nearby tasks on the manager map.

Note: The round, blue icon indicates agent location and the round, red icon indicates tasks.

3. Optional: View details about tasks or agents by clicking the related icons.
4. To assign or reassign a work order task, open a task and add the agent you want to work on the task to the **Assigned to** field.

**Search agents and optimize agent task routes**

Manage agent schedule and time efficiently by searching for agents in your assignment groups. Optimize routes that agents can take for executing tasks assigned to those agents.

Role required: **wm_manager**

1. Navigate to **Field Service > Manager > Manager Map**.
2. Click the configuration icon.

   ![Configuration Icon](image)

   The **WM Manager Map** filter form displays.

3. Do the following to search for an agent:

<table>
<thead>
<tr>
<th>Field</th>
<th>Instruction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Group</td>
<td>Select an agent work group.</td>
</tr>
<tr>
<td>Agent</td>
<td>Select the name of an agent.</td>
</tr>
<tr>
<td>Assigned</td>
<td>All assigned tasks are included by default. Clear the check box to hide assigned tasks.</td>
</tr>
<tr>
<td>Unassigned</td>
<td>All unassigned tasks are included by default. Clear the check box to hide unassigned tasks.</td>
</tr>
<tr>
<td>On</td>
<td>You can change the date to view tasks for that day.</td>
</tr>
</tbody>
</table>

4. Do any of the following:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search for agents</td>
<td>Click <strong>Search</strong>. The agent's location and assigned tasks are displayed.</td>
</tr>
<tr>
<td>Optimize the route the agent can take for executing the tasks for that day</td>
<td>Click <strong>Optimize Route</strong>. The map displays the agent route.</td>
</tr>
</tbody>
</table>

**Using the team calendar**

Field service managers can use the team calendar to view a list of agents in their assignment groups and the work order tasks and events that are assigned to the agents.

The calendar displays information for a single day or a week. In the week view, the current day is highlighted in blue. Buttons in the calendar header enable you to switch views as well as go backward or forward in time. Use the calendar icon to select a specific date or date range or click **Today** to select the current date.

The team calendar lists the agents in the selected group and displays the work order tasks assigned to each agent. It also displays other events such as case tasks, appointments, and personal time-off. Each type of event is displayed on the calendar using a different color. Click the schedule configuration icon in the calendar header to select the types of events displayed in the calendar.

**Team calendar visibility user roles**

Users can perform necessary actions in the team calendar based on the assigned roles.
### Add team calendar visibility for group members

Field service managers can increase the visibility of the group members in a team calendar to other members within the group as well as to other groups.

The `team_calendar.enable_for_grpmember` system property must be enabled by the administrator.

Role required: `wm_manager`

The team calendar includes a list of the members in your group and their current schedule. Increasing the visibility to this information enables teams to better coordinate meetings, events, and tasks.

1. Navigate to the group record for which you want to add calendar visibility.
2. Click the **Type** field.
3. You may have to configure the form to add this field.
4. Add the group type.

<table>
<thead>
<tr>
<th>To</th>
<th>Do This</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make all members in the group visible to other members in the group.</td>
<td>Select <code>schedule_visible_internally</code>.</td>
</tr>
</tbody>
</table>
To | Do This
---|---
Make all members in the group visible to all groups. | Select schedule_visible_externally.

4. Click Update.

View events in team calendar
View the events and schedule of all agents that are visible in your calendar. You can also create an event for yourself in the team calendar.

You can view agents on the team calendar based on the group visibility configured for your account.

Role required: agent_schedule_user

1. Navigate to Field Service > Agent > Team Calendar.
2. Do one of the following:
   • To create an event for yourself, click Create.
   • To view an event for an agent, double-click an event timeslot for the agent.

   **Note:** Click a schedule for the agent to view the summary of the event.

3. Fill in the following fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User</td>
<td>Name of the agent for whom the event is scheduled.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If you create an event for yourself, your user name is automatically populated.</td>
</tr>
<tr>
<td>Name</td>
<td>A descriptive name for the event.</td>
</tr>
<tr>
<td>Type</td>
<td>The type of event scheduled for the agent:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Time off</strong>: personal or work-related event</td>
</tr>
<tr>
<td></td>
<td>• <strong>Appointment</strong>: appointment for a service</td>
</tr>
<tr>
<td></td>
<td>• <strong>Meeting</strong>: a work-related meeting</td>
</tr>
<tr>
<td></td>
<td>• <strong>Phone call</strong>: a work-related phone call</td>
</tr>
<tr>
<td></td>
<td>• <strong>Excluded</strong>: user is not available for task assignments</td>
</tr>
<tr>
<td>Show as</td>
<td>Show this event in the team calendar as one of the following:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Busy</strong>: agent is not available to work on task assignments</td>
</tr>
<tr>
<td></td>
<td>• <strong>Free</strong>: agent is available to work on task assignments</td>
</tr>
<tr>
<td></td>
<td>• <strong>Tentative</strong>: agent is tentatively available to work on task assignments</td>
</tr>
<tr>
<td>When</td>
<td>The start date and time of the event.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong></td>
</tr>
<tr>
<td></td>
<td>• If you click <strong>Create</strong>, the start date of the current timeslot is</td>
</tr>
<tr>
<td></td>
<td>automatically populated and the time for the event is rounded up to</td>
</tr>
<tr>
<td></td>
<td>the next hour.</td>
</tr>
<tr>
<td></td>
<td>• If you double-click the event timeslot for an agent, the selected start</td>
</tr>
<tr>
<td></td>
<td>date and time of the event are automatically populated.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>To</td>
<td>The end date and time of the event.</td>
</tr>
</tbody>
</table>

**Note:**
- If you click **Create**, the end date for the current timeslot is automatically populated and the time for the event is rounded up to the next hour.
- If you double-click the agent timeslot, the selected end date and time of the event are automatically populated.

<table>
<thead>
<tr>
<th>All day</th>
<th>Indicates that the event lasts all day.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repeat</td>
<td>The frequency of the repeated event.</td>
</tr>
</tbody>
</table>

4. Click **Submit**.

**Manage agents and agent groups on the team calendar**

View agent events, add events for agents in your assignment group, and search agents and agent groups using the team calendar. You can also add or edit agent skills and schedule and view or reassign work order tasks.

**View an agent profile**

An agent profile displays the agent's personal information as well as the work status, schedule, location, and time zone. View agent's profile from the team calendar. You can also start a chat session with the agent from the profile preview.

Role required: agent_schedule_user

Agents can view the profile information of agents in groups they don't belong based on the group visibility configured for the agent.

1. Navigate to **Field Service > Agent > Team Calendar**.
2. To preview the profile of an agent, click on an agent icon in the agent list.
   The preview displays the following agent information:

   **Note:** You can customize the fields to display the desired agent information using advanced scripts.

3. To start a chat session with the agent:
   a) Click **Send a Direct Message**.
      A chat window opens and you are automatically connected to the agent.
   b) Start typing a conversation in the chat window. You can also add attachments by clicking the attachments icon. To send the message, click **Enter**.
   c) End the session by clicking the close icon (x) at the top right corner of the chat window.

4. To view or edit the full profile of an agent, click **View User Profile**.
   a) On the form, edit or add agent information as appropriate:

   **Agent Profile Form**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First name</td>
<td>First name of the agent.</td>
</tr>
<tr>
<td>Last name</td>
<td>Last name of the agent.</td>
</tr>
<tr>
<td>Work agent status</td>
<td>The agent's work status when the agent updates the work order task.</td>
</tr>
</tbody>
</table>
Update an agent's profile

Update skills, schedule, or work order tasks for agents in your assignment groups. You can also set the agent work hours to include travel time.

Role required: wm_manager

1. Navigate to Field Service > Manager > Team Calendar.
2. Select an agent name.
3. To add or edit agent skills:
   a) Click View User Profile.
   b) In the Skills related list, add new skills or edit existing skills for the agent.

   Perform one of the following actions:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add new skills</td>
<td>1. Click New.</td>
</tr>
<tr>
<td></td>
<td>2. In the Name field, enter a skill name.</td>
</tr>
<tr>
<td></td>
<td>3. In the Description field, enter the description for the skill.</td>
</tr>
<tr>
<td></td>
<td>4. Click Submit.</td>
</tr>
<tr>
<td>Edit existing skills</td>
<td>1. Click Edit.</td>
</tr>
<tr>
<td></td>
<td>2. Add skills from the Available to the Selected column.</td>
</tr>
<tr>
<td></td>
<td>3. Click Save.</td>
</tr>
</tbody>
</table>

The selected skill is added to the Skills list in the user profile.

4. To view or modify an agent schedule:
   a) In the Agent Schedule related list, do one of the following:
      • To view an agent schedule, select a schedule record.
• To add a new schedule for the agent, click **New**.

   In the **Agent Work Schedule** form, fill in the fields as needed:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>The start date of the agent work schedule.</td>
</tr>
<tr>
<td>To Date</td>
<td>The end date of the agent work schedule.</td>
</tr>
<tr>
<td>User</td>
<td>Name of the agent.</td>
</tr>
<tr>
<td>Work Schedule</td>
<td>Name of the work schedule.</td>
</tr>
<tr>
<td>Type</td>
<td>The type of schedule.</td>
</tr>
</tbody>
</table>

b) Click **Submit**.

*Create an event for an agent on the team calendar*

As a manager, you can create or edit events for agents in your assignment group to make use of available time slots and maximize resource allocation.

Role required: agent_schedule_manager

1. Navigate to **Field Service > Manager > Team Calendar**.
2. Create an event.
   • Double-click a timeslot to schedule an event for an agent.
   • Click **Create**.
3. Fill in the following fields:

   **Create New Event**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User</td>
<td>Name of the agent for whom the event is scheduled.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> If you double-click the agent timeslot, the name of the agent is automatically populated.</td>
</tr>
<tr>
<td>Name</td>
<td>Descriptive name for the event.</td>
</tr>
<tr>
<td>Type</td>
<td>Type of event scheduled for the agent:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Time off</strong>: Personal or work-related event</td>
</tr>
<tr>
<td></td>
<td>• <strong>Appointment</strong>: Appointment for a service</td>
</tr>
<tr>
<td></td>
<td>• <strong>Meeting</strong>: A work-related meeting</td>
</tr>
<tr>
<td></td>
<td>• <strong>Phone call</strong>: A work-related phone call</td>
</tr>
<tr>
<td></td>
<td>• <strong>Excluded</strong>: User is not available for task assignments</td>
</tr>
<tr>
<td>Show as</td>
<td>Show this event in the team calendar as one of the following:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Busy</strong>: Agent is not available to work on task assignments</td>
</tr>
<tr>
<td></td>
<td>• <strong>Free</strong>: Agent is available to work on task assignments</td>
</tr>
<tr>
<td></td>
<td>• <strong>Tentative</strong>: Agent is tentatively available to work on task assignments</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>When</td>
<td>The start date and time of the event.</td>
</tr>
</tbody>
</table>
| Note:  | • If you double-click the agent timeslot, the selected start date and time of the event are automatically populated.  
       | • If you click Create, the start date of the currently selected timeslot is automatically populated and the time for the event is rounded up to the next hour. |
| To     | The end date and time of the event. |
| All day| Option to schedule this event for the entire day. |
| Repeat | The frequency of the repeated event. |

4. Click Submit.

Configure a default agent group on the team calendar

Set an agent group as default to readily access them on the team calendar.

Role required: wm_manager

Whenever you log in to the team calendar, agents in the default agent group are displayed.

1. Navigate to Field Service > Manager > Team Calendar.
2. Click the calendar configuration icon.
3. In the Default Group list, select a group that you would like to set as default and click the calendar configuration icon again.

Whenever you log in to the team calendar, agents in the default agent group are displayed.

Note: If your default agent group is removed from your assignment group, the agent list shows users from the first group in the list displayed in alphabetical order.

Manage Field Service and Customer Service skills

Field Service and Customer Service managers can create or edit skills, assign skills to agents, and view agents with a specific skill.

Users with the wm_manager role (Field Service Management) or sn_customerservice_manager (Customer Service Management) can manage agent skills.

Navigate to Field Service > Manager > Manage Skills or Customer Service > Manage Skills to access the Manage Skills form. This form displays a list of the available skills and the agents in the manager's assignment groups.

Each skill in the All Skills list on the left side of the screen includes the skill name and the number of users who are assigned that skill. Each user in the user section on the right side of the screen is represented by a tile that includes the user's name, assignment group, address, and a list of the skills currently assigned.

From this form, managers can:
• Create new skills by clicking **New Skill** and adding the skill name and description.
• Edit existing skills by clicking the pencil icon to the left of the skill name.
• View all agents by clicking **All Users**.
• View the agents who are assigned a specific skill by clicking the skill name.
• Assign a skill to an agent using the following methods:
  • Click a skill in the skills list and then click **Assign/Remove Users**. To add a skill, click the desired user. The tile for the selected user turns blue. To remove a skill, click a user who has the skill already assigned. If the skill is assigned, the user's tile is blue.
  • In the user's tile, click the down arrow on the **Skills** button. Assign multiple skills to a single user by checking the boxes for the desired skills.

There are two default skills: Field Service Skill and Customer Service Skill. These are parent skills; other skills created by the manager are stored under these parent skills.

**Mandatory skills**

Use the mandatory skills feature to identify any skills that are required for agents and technicians to work on customer service cases and field service work orders and tasks. Then assign cases and tasks to agents and technicians who have those required skills.

When assigning cases, work orders, and work order tasks, the assignment tools consider the mandatory skills, filter out agents and technicians who do not have these skills, and then rank the remaining agents.

• If agents with the mandatory skills are available, the cases and tasks are assigned to these agents.
• If agents with the mandatory skills are not available, then agents with any other, non-mandatory skills identified in the cases and tasks are ranked and assigned.

Field service dispatchers (wm_dispatcher), field service technicians (wm_agent), customer service managers (sn_customerservice_manager), and customer service agents (sn_customerservice_agent) can specify both skills and mandatory skills for cases and tasks.

Mandatory skills is an optional feature. Mandatory skills can be identified on the assignment workbench. In addition to the **Skills** list, the assignment workbench includes a **Mandatory Skills Added** list. Agents are ranked in the workbench based on the number of skills that match the skills identified in the Skills list. If the mandatory skills feature is being used, then the agents displayed are filtered by the skills listed in the Mandatory Skills Added list and then ranked by the other matching criteria.

**Configuring the mandatory skills feature**

Configure the mandatory skills feature for use with the Customer Service Management and Field Service Management applications.

Mandatory skills is an optional feature included with the Customer Service Management and Field Service Management plugins. Use the steps below to configure this feature with the desired application.

**Customer Service Management configuration**

To configure the mandatory skills feature for use with Customer Service Management:

• In the Case form:
  • Configure the form layout to use the Task Skills [task_m2m_skill] table.
  • In the Task Skills table, set the **Mandatory** field to **True** to identify skills that are mandatory to complete a task.

**Note:** The Case form should use either the **Skills** field or the Task Skills table, but not both.
• [Optional] For existing cases that have data populated in the Skills field on the Case form, run the Migrate Skills to Task Skill M2M script to move this data to the Task Skills table. By default, this fix script migrates the skills from existing entries in the Case, Work Order, and Work Order Task tables to the Task Skills table. For more information, see Migrate skills to the Task Skill table.

• If you are using the assignment workbench, replace the Matching Skills matching criteria with the Matching Skills - Mandatory Skills Support matching criteria. For more information, see Matching rules for case assignment.

Field Service Management configuration

To configure the mandatory skills feature for use with Field Service Management:

• Enable the work.management.use.mandatory.skills system property.
• Configure the Work Order form and the Work Order Task form to use the Task Skills [task_m2m_skill] table.
• [Optional] For existing work orders and tasks that have data populated in the Skills field on the Work Order and Work Order Task forms, run the Migrate Skills to Task Skill M2M script to move this data to the Task Skills table. By default, this fix script migrates the skills from existing entries in the Case, Work Order, and Work Order Task tables to the Task Skills table and configures them as optional skills. For more information, see Migrate skills to the Task Skill table.

• If you are using dynamic scheduling, update the task filter for the dynamic scheduling configuration and replace the Matching Skills for Dynamic Scheduling matching criteria with the Matching Mandatory Skills for Dynamic Scheduling matching criteria. For more information, see Create a task filter.

For configuring optional skills, navigate to Field Service > Administration > Configuration, click the Assignment tab and set Auto-selection of agents for tasks requires them to have skills to one of the following:

• All - indicates that the agent must have all optional skills listed in the task for task assignment.
• Some - indicates that the agent must have at least one optional skill listed in the task for task assignment.
• None - indicates that the agent is not required to have any optional skill.

Mandatory Skills system properties

The Migrate Skills to Task Skill M2M script migrates skills from existing tasks to the Task Skills [task_m2m_skill] table. Configure the task tables included in the migration using the skills_management.migration system property.

The mandatory skills feature adds the following system properties.

<table>
<thead>
<tr>
<th>System parameter</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>work.management.use.mandatory.skills</td>
<td>Enables the mandatory skills feature and indicates that the Task Skills [task_m2m_skill] table is being used for work orders and work order tasks.</td>
</tr>
<tr>
<td></td>
<td>• Type: true/false</td>
</tr>
<tr>
<td></td>
<td>• Default value: false</td>
</tr>
</tbody>
</table>

Note: To open the System Property [sys_properties] table, enter sys_properties.list in the navigation filter.
### System parameter

<table>
<thead>
<tr>
<th>System parameter</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>skills_management.migration</td>
<td>Lists the task tables to migrate to the Task Skills [task_m2m_skill] table when an admin runs the Migrate Skills to Task Skill M2M script.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Type</strong>: choice list</td>
</tr>
<tr>
<td></td>
<td>• <strong>Default value</strong>: wm_task,customerservice_case,wm_order</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>com.snc.skills_management.task_skill_migrated_table</th>
<th>Contains a list of tables for which the Skills field has already been migrated to the Task Skills [task_m2m_skill] table. If the table name is listed in this property, the data has been migrated and will not be migrated again.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• <strong>Type</strong>: choice list</td>
</tr>
<tr>
<td></td>
<td>• <strong>Default value</strong>: none</td>
</tr>
</tbody>
</table>

### Migrate skills to the Task Skill table

Migrate data from the Skills field to the Task Skills table to utilize mandatory skills support for executing tasks in a case or work order.

Role required: wm_admin, admin

The Task Skills [task_m2m_skill] table stores skills and mandatory skills.

In the Customer Service Management application, the assignment workbench uses the Task Skills table instead of the Skills field in the Case table to display agents based on the evaluation criteria for task assignments.

In the Field Service Management application, the work order task assignments done using auto-assignment, dynamic scheduling, and central dispatch use the Task Skills table instead of the Skills field in the Work Order and Work Order Task tables to assign agents for task assignments.

1. **Add a system property** with the following settings:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a system property for a table in the Customer Service Management application.</td>
<td>Make sure that you are logged in to the Customer Service Management application.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong>: Configure the System Properties form to display the <strong>Suffix</strong> field.</td>
</tr>
<tr>
<td></td>
<td>In the <strong>Suffix</strong> field, enter the name of the system property as follows:</td>
</tr>
<tr>
<td></td>
<td>com.snc.skills_management.&lt;table_name&gt;_migrate_skills,</td>
</tr>
<tr>
<td></td>
<td>where <strong>&lt;table_name&gt;</strong> is the name of a case task table from which the skills need to be copied.</td>
</tr>
<tr>
<td>Create a system property for a table in the Field Service Management application.</td>
<td>Make sure that you are logged in to the Global application.</td>
</tr>
<tr>
<td></td>
<td>In the <strong>Name</strong> field, enter the name of the system property in the following format:</td>
</tr>
<tr>
<td></td>
<td>com.snc.skills_management.&lt;table_name&gt;_migrate_skills,</td>
</tr>
<tr>
<td></td>
<td>where <strong>&lt;table_name&gt;</strong> is the name of a work order or work order task table from which the skills need to be copied.</td>
</tr>
</tbody>
</table>

2. In the **Type** field, set the value to true.

3. Click **Update**.

4. Navigate to **System Definition > Fix Scripts** and run the **Migrate Skills to Task Skill M2M** fix script.
The skills are copied to the task_m2m_skill table. The name of the table from which the skills are copied gets appended to the `com.snc.skills_management.task_skill_migrated_tables` system property. When the script is run again, it ignores all tables from which skills have already been migrated.

**Allow agents to start traveling before their scheduled work hours**

Support flexible work types by allowing agents to start traveling before their scheduled work hours. For example, you may want to add travel time outside of work hours for your contract or on-demand employees and not for the full-time employees.

Role required: `wm_dispatcher`, `wm_manager`, `wm_admin`, or `admin`

If you are an administrator, you can run a script and add travel time outside of work hours for all users.

1. Navigate to **Field Service**.
2. Do one of the following:
   - If you are a dispatcher, go to **Dispatching > My Agents**.
   - If you are a manager, go to **Manager > My Team**.
3. Select a user profile.
4. To add or update user records, do one of the following:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
</table>
| Add a new record for this user | 1. Click New.  
  2. Select the **Travel outside of work hours** check box.  
  3. Click **Submit**. |
| Updated an existing record | 1. Open the existing record.  
  2. Select the **Travel outside of work hours** check box.  
  3. Click **Update**. |

5. To add travel time as work hours for all users:
   1. Navigate to **System Definition > Scripts - Background**
   2. In the **Run Script** window, add the script to include travel time as work hours for all users.
To | Do this
---|---
Add travel time as work hours for all users | 1. Add this script:

```javascript
createWorkParamsForAllAgents("yes");

function createWorkParamsForAllAgents(travelOutsideWorkHours) {
    var gr = new GlideRecord("sys_user_has_role");
    gr.addEncodedQuery("role=26c324ba1b32200096f9fbcd2c0713c2"); // fetching users having wm_agent role
    gr.query();
    gs.info("total work agents found: "+gr.getRowCount());
    var agentWorkParameter = {};

    while (gr.next()) {
        var userId = gr.getValue("user");
        if (!agentWorkParameter[userId]) {
            var wp = new GlideRecord("wm_agent_work_configuration");
            wp.initialize();
            wp.setValue("user", userId);
            wp.setValue("travel_outside_of_work_hours", travelOutsideWorkHours); // setting default value for travel_outside_of_work_hours
            wp.insert();
            agentWorkParameter[userId] = true;
        }
    }
}
```

2. Click Run Script.
To | Do this
--- | ---
Update travel time as work hours for all users | 1. Add this script:

```javascript
updateWorkParamsForAgents("yes"); // param1: default travel outside work hours value

function updateWorkParamsForAgents(travelOutsideWorkHours) {
    var gr = new GlideRecord("wm_agent_work_configuration");
    gr.query();
    gs.info("total agent work parameters found: "+gr.getRowCount());
    var updateCount = 0;

    while (gr.next()) {
        var canTravelOutside =
            gr.getValue("travel_outside_of_work_hours");
        if (canTravelOutside != travelOutsideWorkHours) {
            gr.setValue("travel_outside_of_work_hours",
                travelOutsideWorkHours);
            if (gr.update())
                updateCount ++;
        }
    }
    gs.info("total agent work parameters updated: "+updateCount);
}
```

2. Click Run Script.

Central dispatch

Use the central dispatch calendar view to evaluate work order tasks and available agents and assign tasks by dragging and dropping to the desired agent schedule and time slot.

Central dispatch provides both a list and calendar view of unassigned tasks. Configure the list to display tasks that meet certain conditions or search the list for specific information. Task bars in the calendar provide a visual representation of the scheduled start and end time as well as the task window.

Central dispatch also provides a list of the field service agents in a dispatch group and a calendar view of their assignments. Assign tasks by dragging them from the task calendar above to the desired agent schedule below and then confirming the assignment.

Note: Central dispatch uses the settings on the Field Service Configuration page when assigning tasks, even if the Assignment method for tasks configuration option is set to manually.

Supported browser versions

Central dispatch is supported on the following browsers:
- The latest public release of Firefox
- The latest public release of Chrome
• Safari version 6 and up
• Internet Explorer version 10 and up

Task SLA indicators

Display task SLA information in central dispatch in the following ways:

• The system administrator can configure the Tasks list and task tooltips to display SLA information by adding the SLA due field to the Task Fields and Task Tooltip Fields on the Personalize Central Dispatch window.
• Task bars: The system administrator can configure the colors for SLA visual indicators on the Personalize Central Dispatch window. Dispatchers can configure central dispatch to display these color indicators under task bars in the calendar.

Central dispatch components

Central dispatch includes work order task and agent information and a calendar view of assigned and unassigned tasks.

Central dispatch is comprised of these main areas:

Header

Displays notifications and error messages about configuration changes, task assignment issues, and other usage tips. Includes buttons for calendar display options.

Calendar

• Displays scheduled and unscheduled work order tasks in a calendar view, either by day or by week depending on options selected in the header.
• When Filter by Date Range is enabled, tasks and available agents are displayed for the selected date range.

Tasks

Displays unassigned work order tasks, with a list of tasks on one side and the tasks represented in a calendar view on the other side.

Team

Displays the field service agents in the dispatch group, with a list of team members on one side and the assigned work order tasks in a calendar view on the other side.

Note: You can resize the task and team areas by dragging the gray bar on the board.
Central dispatch header and calendar

Central dispatch displays assigned and unassigned tasks in a calendar. View tasks in the calendar by day or by week. Use these options in the header to change the calendar view. The current date or range of dates for the selected view is displayed in the header.

- **Day**: Displays 24 hours starting at midnight.
- **Week**: Displays seven days starting with Sunday.

View different dates in the calendar by clicking the arrows in the header.

- **Calendar**: Navigate to the desired date using the calendar picker to view central dispatch details.
- **Previous week**: Displays the previous week in the **Week** calendar view.
- **Previous day**: Displays the previous day in both the **Day** and the **Week** calendar view.
- **Today**: Displays the current date.
- **Next day**: Displays the next day in both the **Day** and the **Week** calendar view.
- **Next week**: Displays the next week in the **Week** calendar view.

In **Week** view, you can also click a day at the top of the calendar to move that day to the first day of the displayed week. A blue vertical line in the calendar denotes the current date and time.

Tasks section

The Tasks section displays unscheduled work order tasks in both a list view and a calendar view.

The Tasks list shows the unassigned tasks that meet the conditions configured by the dispatcher in the Configuration Settings menu. By default, this list displays the **Short description** and **Number** for each task. The dispatcher can configure this list to display additional task fields, such as the location and assignment group. The system administrator configures the task fields that are available for selection by the dispatcher.

When you navigate to central dispatch, the first task in the list is selected. When you select a task in the Tasks list:

- An auto assign icon appears, which can be used to assign the task to an available agent.
- The Team list updates to show all of the agents available for this task.

Scroll through the Tasks list to display additional tasks. If not automatically displayed, click **Show more tasks** at the bottom of the list.

The Tasks calendar displays unassigned work order tasks using these types of bars:

- A solid bar that extends from the task's scheduled start time to the estimated end time.
- A dashed bar that indicates the window of time in which the task can be completed. This bar is displayed if the task's scheduled start and estimated end fall within the task window.

Team section

The Team section displays the field service agents in the dispatcher's group and the tasks assigned to each agent.

The Team list displays the names of the agents. The dispatcher can configure this list to display additional information for each agent, such as the agent's location, matching skills, and parts required. The system administrator can configure the fields that are available for selection by the dispatcher. To see more details about an agent, click the agent name in the Team list to open the user form on top of central dispatch.
When you select a task from the Tasks list, the Team list updates to show all of the agents available for this task. To show all team members, click the **Show all Team members** link at the bottom of the Team list. Scroll through this list to display additional agents. As you scroll, more agents appear at the bottom.

Assigned tasks are represented in the team calendar by colored bars, with the color of the bar indicating the task state. The default colors for the task states are:

- Blue: accepted
- Yellow: assigned
- Gray: pending dispatch
- Green: work in progress
- Black: other states

The length of the task bar indicates the estimated work duration. The colored task bar is preceded by a thinner gray bar that represents estimated travel time.

**Central dispatch integration with dynamic scheduling**

Drag and drop a task over an assigned task in the agent calendar. Dynamic scheduling determines the best way to unassign or reassign the original task to make room for the new task.

The central dispatch integration with dynamic scheduling enables a dispatcher to drag and drop a task (either assigned or unassigned) to an agent's timeline where another task is already assigned. When the dispatcher attempts to assign the new task at this position, dynamic scheduling unassigns or reassigns one or more tasks and assigns the new task. In the Confirm Assignment pop-up window, the dispatcher can confirm or cancel the proposed schedule changes.

**Note:** Tasks that are already work in progress cannot be unassigned. Only tasks which are scheduled but not started can be reassigned or unassigned.

If the dispatcher drags a higher priority task on top of a lower priority task, dynamic scheduling assigns the higher priority task and attempts to reassign the lower priority task. If the dispatcher drags a lower priority task over a higher priority task, central dispatch displays a warning and the dispatcher must acknowledge to continue.

The system administrator can enable the integration with dynamic scheduling by navigating to **Field Service > Administration > Configuration**, clicking the Assignments tab, and selecting **using dynamic scheduling** in the **Assignment method for tasks** field.

**Working with tasks in the central dispatch calendar**

Display task and SLA information and use the drag and drop feature to assign, unassign, and reassign tasks in the central dispatch calendar.

Display task information:

- Point to a task in the calendar to display a tooltip with task information, including the number and short description. For assigned tasks, the initials of the assigned agent are also displayed. The system administrator can configure the information included in task tooltips.
- Click the task number in the Tasks list or double-click the task in the calendar to open the Work Order Task form on top of central dispatch. This allows the dispatcher to view task details without navigating away from central dispatch.

Assign, unassign, and reassign tasks using drag and drop.

- Assign a task by clicking the task bar in the task calendar and dragging it to an agent and time slot in the team calendar. After assigning a task, confirm the assignment information in the work order task window, including the agent in the **Assigned to** field.
• Unassign an assigned or accepted task by dragging it from the agent calendar to the task calendar. Work in progress tasks cannot be unassigned.

• If dynamic scheduling is enabled, a dispatcher can drag an unassigned task on top of an already assigned task. This results in the unassigned task taking priority over the assigned task, and dynamic scheduling attempts to re-assign the already assigned task.

• When dragging a task, a tooltip shows the scheduled start time at the current position in the team calendar. The agent row is also highlighted.

A dispatcher can display SLA indicators for assigned and unassigned tasks by enabling the Show SLA indicator toggle button on the Tasks tab in the Configuration Settings window. These indicators appear as colored horizontal lines below each task bar. The system administrator configures the colors used to display the different task SLAs.

When navigating from a Work Order Task form to central dispatch by clicking Central Dispatch in the task header or the Central Dispatch related link, the content in the Tasks list is filtered to display only that task.

Configuring central dispatch

View work order tasks and agent information and assign work order tasks using central dispatch. Dispatchers can view the work order task and agent information that is configured by the administrator. Dispatchers can enable or disable the fields related to task and agent information that are visible to them.

Administer central dispatch

Customize the information that appears in the task and agent list in central dispatch.

Role required: admin

The system administrator can set the following advanced configuration settings:

• The task fields displayed for each task in the Tasks section.
• The task fields displayed in the tooltip for a task scheduled for an agent.
• The user fields displayed for each agent in the Team section.
• The colors assigned to the different task states.

These configuration settings are saved for each dispatcher and are available the next time the dispatcher logs in. These settings would override the configuration settings the dispatcher had previously set.

1. Do one of the following:
   • Navigate to Field Service > Administration > Central Dispatch Configuration
   • Do the following:
     • Navigate to Field Service > Dispatching > Central Dispatch
     • Click the configuration settings icon ( ) in the upper right corner of the screen
     • Click the Advanced Configuration link at the bottom of the configuration settings window.

2. Configure the information that appears in the task and agent list.
<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the fields that can be displayed for a task in the Tasks list</td>
<td>In the Task Fields section, select the desired fields and move them to the Selected list. The selected fields appear in Task Display Fields section in the Tasks tab in the configuration settings window. The dispatcher can enable or disable these fields as desired. The information for the fields that are enabled display for each task in the Tasks list.</td>
</tr>
<tr>
<td>Select the fields that can be displayed in the task tooltips</td>
<td>In the Task Tooltip Fields section, select the desired fields and move them to the Selected list. The selected fields appear in the tooltip when the dispatcher points to a task for an agent.</td>
</tr>
<tr>
<td>Select the fields that can be displayed for an agent in the Team list</td>
<td>Click the Team Display tab. In the Team Display Fields section, select the desired fields and move them to the Selected list. The selected fields appear in the Team Display Fields section in the Team tab in the Configuration Settings window. The dispatcher can enable or disable these fields as desired. The information for the fields that are enabled display for each agent in the Team list.</td>
</tr>
<tr>
<td>Select the number of days for which agent’s closed tasks must be displayed</td>
<td>Click the Team Display tab. In the View closed tasks for field, select the number of days for which a dispatcher can view agent’s closed tasks. You can customize the choices to set the number of days to view agent’s closed tasks. To customize the choices: 1. Right-click View closed tasks for and select Configure Choices. 2. In the Enter new item field, add a new choice and click Add. Note: The valid number of days for viewing closed tasks range from 0 day to the last 90 days. 3. Click Save. The added choice is available as a selection in the View closed tasks for drop-down menu.</td>
</tr>
<tr>
<td>Select the colors that represent the different task states</td>
<td>Click the State Color tab. For each task state, enter the name or HTML hex number for the desired color. Assigned tasks are represented on the calendar by colored bars, with the color of the bar indicating the task state.</td>
</tr>
</tbody>
</table>

3. Click Update.

Enable the display of task and agent information

Enable or disable work order task and agent information you want to display in the central dispatch task and team list or in the dispatch calendar. Customize the type of work order tasks you want to display in the calendar.

Role required: wm_dispatcher or admin
The system administrator can customize the configuration settings by adding or removing field label buttons in the Tasks and Team tabs. Dispatchers can enable or disable these settings. The configuration settings set by the administrator would override the settings the dispatcher had previously set.

1. Navigate to **Field Service > Dispatching > Central Dispatch.**

2. Click the configuration settings icon (➡️) in the upper right corner of the screen.

3. To enable the work order task information you want to display in central dispatch, click **Tasks** and do the following:

<table>
<thead>
<tr>
<th>To</th>
<th>Do This</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable the fields that you want to display for each task in the Tasks list</td>
<td>In the <strong>Task Display Fields</strong> section, enable the fields that you want to display for each task. The <strong>Number</strong> and <strong>Short description</strong> fields are enabled by default and cannot be disabled.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To</th>
<th>Do This</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable the display to filter tasks based on selected date or date range</td>
<td>In the <strong>Settings</strong> section, enable <strong>Filter By Date Range</strong>. View all tasks and available agents filtered by the selected date range.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To</th>
<th>Do This</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable the display of the time-window in which a task can be completed</td>
<td>In the <strong>Settings</strong> section, enable <strong>Show Task Window</strong>. For each task, the time-window for completing a task displays as a gray striped bar adjacent to the task bar.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To</th>
<th>Do This</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable the display of a visual SLA indicator for each task</td>
<td>In the <strong>Settings</strong> section, enable <strong>Show SLA Indicator</strong>. A visual SLA indicator appears as a thin colored line under the task bar.</td>
</tr>
</tbody>
</table>

**Note:** The SLA colors are controlled from the Attributes field of the Business elapsed percentage column in Task SLA table.

4. To enable the agent information you want to display in central dispatch, click **Team** and do the following:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable the fields you want to display for each agent in the Team list.</td>
<td>In the <strong>Team Display Fields</strong> section, enable the fields that you want to display for each task. The <strong>Name</strong> field is enabled by default and cannot be disabled.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable agent recommendation for work order tasks.</td>
<td>If you want Central Dispatch to locate the tasks and recommend suitable agents to assign those tasks, enable <strong>Agent Recommendation</strong>.</td>
</tr>
</tbody>
</table>

5. To customize the type of work order tasks you want to display in the dispatch calendar, do the following:

1. Click **Tasks.**

2. Click **Advanced Configuration** at the bottom of the window.

3. Use the condition builder to filter the conditions to customize the display of the work order tasks.

4. Click **Update.**

6. Click the configuration settings icon (➡️) to close the window.
Using central dispatch

You can display a task or a user form, assign work order tasks, and search work order tasks or field service agents using central dispatch.

Display a task form

Display a work order task form from central dispatch.

Role required: wm_dispatcher or admin

1. Navigate to Field Service > Dispatching > Central Dispatch.
2. Click a task number in the Tasks list or double-click a task bar in the calendar view.
   The task form opens on top of central dispatch.
3. If necessary, make any changes to the task form.
4. Click Update.

Display a user form

Display user information for a field service agent from central dispatch.

Role required: wm_dispatcher or admin

1. Navigate to Field Service > Dispatching > Central Dispatch.
2. Click an agent name in the Team list.
   The User form opens on top of central dispatch. This form includes information about the agent, including current schedule status.
3. If necessary, make any required changes to the task form.
4. Click Update.

Assign a work order task using central dispatch

Assign a work order task to a field service agent from central dispatch.

Role required: wm_dispatcher or admin

You can assign tasks that have a state of Pending Dispatch. You can also reassign tasks.

When assigning and dispatching work order tasks, consider the following:

- The length of time required to complete a task
- The window of time in which a task must be completed
- The schedule and availability of the agents with the necessary skill sets
- The availability of required parts
- The impact on other tasks

Enable the Skills Management (com.snc.skills_management) plugin, to view the skills and skill levels associated with each agent next to the name of the agent.

In the Central Dispatch configuration, enable the Distance to Task field for the team to view how far away the agent is from the task location. This information is displayed next to the name of the agent in central dispatch.

1. Navigate to Field Service > Dispatching > Central Dispatch.
2. Do one of the following:
   - Click a task bar in the calendar and drag it to an agent in the Team list.
   - Select a task in the Tasks list and click the auto assign icon ( ).
3. Confirm the assignment information in the work order task window, including the agent in the **Assigned to** field. If a task is assigned to an agent or reassigned, the system updates the estimated travel duration. The updated value is based on the **Manual Assignment** property setting used for calculating estimated travel time and distance.

4. Click **Update**.
   The task is displayed on the calendar next to the agent's name and the task bar color indicates that the task has been assigned.

---

**Search work order tasks**

Search the tasks in the central dispatch Tasks list.

Role required: wm_dispatcher or admin

You can search on the following fields:

- Task number
- Short description
- Assignment group
- Dispatch group
- Assigned agent
- Location

1. Navigate to **Field Service > Dispatching > Central Dispatch**.
2. Click the search icon in the Tasks list header to expand the search field.
3. Type the search term in the search field and press the Enter key.
   The tasks that meet the search requirements are displayed in the Tasks list.
4. To clear the search and display all tasks, delete the search term and press the Enter key.

---

**Search field service agents**

Search the agents in the central dispatch Team list.

Role required: wm_dispatcher or admin

You can search on the following fields:

- Agent name
- Assignment group
- Assignment group manager
- Location

1. Navigate to **Field Service > Dispatching > Central Dispatch**.
2. Click the search icon in the Team list header to expand the search field.
3. Type the search term in the search field and press the Enter key.
   The agents that meet the search requirements are displayed. If agents are not available for the selected time period, a message displays indicating the agents are not available. Click **Show all team members** to display agents available for all time periods.
4. To clear the search and display all agents, delete the search term and press **Enter**.

---

**Dispatch map**

The Field Service Management dispatch map uses geolocation data to show tasks and agents in the field.
Users with the `wm_dispatcher` role or the dispatcher combination role can use the dispatch map to schedule and assign work order tasks. When the dispatch map opens, the view centers on the logged in user's location, as defined on the user record. Icons for tasks and agents provide access to scheduling information and links to related records.

An administrator must activate the Field Service Management (com.snc.work_management) plugin to enable the dispatch map.

The image below shows a dispatch map with an agent profile that displays the following:

- Agent and agent schedule status
- Agent's assignment group
- Agent's contact number
- Time and date when the agent last logged into the system
- The list of tasks the agent needs to execute on the current date. Each task displays the task details and status.

The map displays the optimized task route for all tasks the agent needs to execute on that day.
The image below shows the agent map with the task filter that displays the following:

- The date when the tasks are scheduled to be executed.
- A drop-down list that displays the assignment group of agents scheduled to execute the tasks.
- List of agents scheduled to execute those tasks.
- Status of the tasks to be executed for that day.

The dispatch map displays the agent and task location.
Agent location

The agent location is determined by the geographic coordinates returned from the agent's mobile device.

Agent starting position

If geolocation is not enabled, the starting position defaults to the agent's home office. The Field Service Management application uses these criteria to locate work agents at the beginning of the day:

- If the agent is routed for a future date, the system calculates the route from the home office.
- If current geolocation data for the agent is available at the start of the day, the system uses those geographical coordinates instead of the home office as the starting point for the agent's routing.
- If current geolocation data for the agent is not available for an agent at the start of the day or if geolocation tracking is disabled, the system uses the home office as the starting point.
- If the agent has a task that is still **Work in Progress** at the start of the current day, the system starts the agent's route for that day at the location of the unfinished task. The start time is set to the time of the scheduled completion of the unfinished task or the current time, whichever is later.

To enable geolocation tracking:

In the default view of the User form, select the **Geolocation tracked** check box to enable agent location tracking.

**Note:** The system can update geographic coordinates only for users who have location services enabled in their browsers. Even users who have the **Geolocation tracked** check box selected may be prompted by their browsers to share or withhold their location.

When the ServiceNow system tracks an agent, it updates the geographic coordinates whenever the agent loads a record on the Task [task] table or on a table that extends Task. After the initial update, the system continues to update the agent's geographic coordinates at recurring intervals if the agent does not close or reload the record.

Administrators can set the length of this interval by editing the **Minimum amount of time between updating the user's location (in seconds)** system property. The default geolocation update interval value is 300 seconds, or 5 minutes.

To change the default geolocation update interval, navigate to **Geolocation > Administration > Geolocation Properties**.

Agent work and schedule status

View an agent's work status and schedule status as they complete their tasks.

Work status

To evaluate the agent's work status, the system checks the action that the agent takes when updating a task and interprets it as a status.

An agent's work status can be one of the following:

- On route
- On site

For example, when the agent starts travel to a task, the system considers the agent's status as **On route**. When the agent starts to work on a task, the agent's status is updated to **On site**. When an agent closes or cancels a task, the agent's status is updated to **None** in preparation for travel to the next task.
You can view an agent's work status in the information box that opens when you click the agent's icon in the dispatch map or in an agent's user record. To display agent work status in the user record, navigate to User Administration > Users and configure the User form to show the Work agent status field. This action puts the status field on all user records.

**Schedule status**

When you click an agent icon in the dispatch map, the agent profile appears. If a location shows more than one agent, you can select an agent to display their profile. You can view the status of the agent's schedule, which could be any of the following:

- Ahead of schedule
- On time
- Behind schedule, less than 30 minutes
- Behind schedule, between 30 to 60 minutes
- Behind schedule, more than an hour

To display the agent schedule status in the user lists and records, navigate to User Administration > Users and configure the User list and form to show the On schedule field. This action puts the schedule status field on all user records.

**Dispatcher view**

The icons in the dispatch map mark the location of tasks and agents in the dispatcher's area and serve as access points to various records.

Users with the wm_dispatcher, wm_admin, or wm_initiator_qualifier_dispatcher roles can manage tasks and routing from the map, filter the view, and determine at a glance what agents are on time or behind schedule.

To access the dispatch map, navigate to Field Service > Dispatching > My Dispatch Map.

**Note:** You can click the refresh button on the dispatch map to get updated data on the tasks and agents at any time.

The dispatch map opens in the geographical area containing the agents from any assignment group that is part of your dispatch group. These icons indicate the location of agents and tasks:

**Dispatch map legend**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Agent Icon" /></td>
<td>Agent location.</td>
</tr>
<tr>
<td><img src="image" alt="All Agents Icon" /></td>
<td>All agents available at that location.</td>
</tr>
<tr>
<td><img src="image" alt="Accepted Task Icon" /></td>
<td>Accepted work order task displayed while viewing agent's route.</td>
</tr>
<tr>
<td>Icon</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>![Icon]</td>
<td>All accepted work order tasks at each location displayed while viewing agent's route.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Accepted work order task at the location.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>All accepted work order tasks at each location.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Assigned work order task displayed while viewing agent's route.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>All assigned work order tasks at each location displayed while viewing agent's route.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Assigned work order task at the location.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>All assigned and accepted work order tasks at each location.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Unassigned work order task displayed while viewing agent's route.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>All unassigned, assigned, and accepted work order tasks at each location displayed while viewing agent's route.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Unassigned work order task.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>All unassigned, assigned, and accepted work order tasks at each location.</td>
</tr>
</tbody>
</table>

**View task information**

View task information by clicking the task icon on the dispatch map.

If there are two or more tasks at a location, you can select any of the tasks to view the information.

**Task Details Screen**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Auto-generated identification number for the task.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Priority</td>
<td>Priority of this task.</td>
</tr>
<tr>
<td>State</td>
<td>The current state of this task.</td>
</tr>
<tr>
<td>Location</td>
<td>Geographical area where the work needs to be done.</td>
</tr>
<tr>
<td>Dispatch group</td>
<td>Group that can select an agent to complete the task.</td>
</tr>
<tr>
<td>Assignment group</td>
<td>Group from which an individual agent or vendor should be selected to complete the task.</td>
</tr>
<tr>
<td>Skills</td>
<td>Abilities necessary to execute the task.</td>
</tr>
<tr>
<td>Short description</td>
<td>Brief explanation of the task.</td>
</tr>
<tr>
<td>Description</td>
<td>Exact technical description of the unit of work to be performed.</td>
</tr>
<tr>
<td>Work notes</td>
<td>Information about the task as it progresses through each state.</td>
</tr>
</tbody>
</table>

The **Task Details** popup screen displays all information related to the *work order task* including part requirements and SLAs for the work order.

**View agent information**

View details about an agent at a particular location by clicking the agent icon on the dispatch map.

A pop-up window shows the agent's profile that displays the agent schedule and these additional details:

- **Last login**: Time the agent last logged in to the instance. This field is updated automatically each time a user with geolocation tracking enabled views a task.
- **Schedule status**: Possible values are *On time*, *Behind schedule*, and *Ahead*.
- **Assignment group**: Assignment group this agent belongs to.
- **Mobile Phone**: Contact number for the agent.

You can also view all tasks for the agent for that day in the **Tasks** list. To display the agent's task route for the day, click **Show Route** and to optimize the route, click **Optimize Route**. The icons are labeled alphabetically based on the start time of the task in the agent's route. For more information on optimizing an agent's task route, see **Route optimization**.

**Dispatch map filters**

Filter the items that are visible on the dispatch map.

To change the items visible in the map, click **Filter**. You can select the date, assignment groups, agents, and tasks that you want to view on the map.

### Dispatch map filters

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Date to display the dispatch information on the map.</td>
</tr>
<tr>
<td>Assignment Groups</td>
<td>Displays agents in the selected assignment group.</td>
</tr>
<tr>
<td>Agents</td>
<td>Displays the location of selected agents.</td>
</tr>
</tbody>
</table>
## ServiceNow Field Service Management

<table>
<thead>
<tr>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
</table>
| Tasks | Displays the location of the selected type of tasks. Available choices:  
  - All- displays all tasks for the selected day.  
  - Unassigned- displays all unassigned tasks for the selected day.  
  - Assigned- displays all assigned tasks for the selected day.  
  - Accepted - displays all accepted tasks for the selected day. |

### Route optimization

Optimizing task routes reorders agent tasks for the day as efficiently as possible using either geolocation or straight-line estimation.

An agent task route is optimized when an agent has fewer than 15 tasks assigned to be completed in a day. Route optimization takes all those tasks and the agent travel time into consideration and then reorders the tasks to provide the optimal route to execute those tasks. If an agent has more than 15 tasks to be executed in a day, the system auto-routes the tasks based on the next closest location where the agent has to execute the task.

**Note:** If an agent has more than 200 tasks assigned to be completed in a day, auto-routing will fail and the system displays a message describing the error.

The system takes the settings for the following properties into consideration to evaluate auto-routing or for optimizing the task route for an agent:

- **Amount of time (in minutes) to add between the end of a task and the travel start of the next.**
- **Allow toll roads to be used.**
- **Use Google Maps API or straight-line estimates to calculate travel time and distance. This value is set in Route Optimization in the Property for calculating estimated travel time and distance setting.**
  
  If you use Google Map API, which uses Google route data for travel time and distance estimates, you must set the Google Maps API key or the client ID to use Google Maps API for Business. For more information, see *Set up Google Maps API*. If straight-line estimate is used, the system uses built-in time and distance estimates based on latitude and longitude.
  
  - **Default start time for all work agents if no schedule is specified.**
  - **Default end time for all work agents if no schedule is specified.**
  - **Percentage to add to all travel times.**
  - **Percentage to add to rush hour travel times.**
  - **Morning rush hour span.**
  - **Evening rush hour span.**

If the values for these properties are defined in the *Field Service Management application properties*, those values are used. If not, the values for the properties defined in the *Geolocation application properties* are used. If no values are defined in either of these application property settings, the default value is used.

The system also takes the agent schedule, *agent travel time outside of work hours*, and agent time-off into consideration to optimize task routes.

If a task cannot be optimized because the task location is impractical or missing or if the task window cannot be scheduled, the system displays a message with a reason that the task could not be routed. It then returns the task to the *Pending Dispatch* state.
Automatic execution of route optimization

You can set a scheduled job to optimize agent task routes for a given day. The **Optimize Task Routing** scheduled job is inactive by default. When you set the **Active** field for this scheduled job to true, the job runs everyday at 3:00 am system time. The scheduled job considers the tasks assigned to or accepted by agents on the current date and automatically optimizes the routes for those tasks.

Optimize agent task route

View assigned and unassigned agent tasks on a given day and optimize the task route for that day.

Field service agents can view optimized routes for tasks assigned to them on a given day. Field service dispatchers can view optimize routes for tasks assigned to members in their assignment groups. Field service managers can view optimize routes for tasks assigned to members in the groups they manage.

Role required: wm_agent, wm_dispatcher, or wm_manager

1. Navigate to the **Field Service** application.
2. Perform one of the following actions:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
</table>
| **Optimize the route for tasks assigned to you** | 1. Navigate to **Field Service Management > Agent > My Map**  
2. Click **Edit**.  
3. In the **Date** field, select the date to optimize task route. **Note:** Your location, task routing sequence, and tasks assigned and unassigned to you are displayed by default. You can disable any of them by clearing the respective check boxes and then clicking **Apply**. |
| **Optimize the route for tasks assigned to members in your assignment group** | 1. **Field Service Management > My Dispatch Map**  
2. Click on an agent icon on the map.  
3. In the agent profile pop-up screen, click **Optimize Route**. |
| **Optimize the route for tasks assigned to members in the groups you manage** | 1. Navigate to **Field Service Management > Manager Map**  
2. Click the configuration setup icon.  
3. In the **Work Group** field, select the name of the group.  
4. In the **Agent** field, select the name of the agent.  
5. In the **On** field, select the date to optimize task route. **Note:** The assigned and unassigned tasks for the selected agent are displayed by default. You can disable either of them by clearing the respective check boxes. |

3. Click **Optimize Route**.
The map displays all tasks assigned to an agent for that day, the task locations, and the optimal route to travel to those locations.

Assign a work order task

Assign agents to unassigned work order tasks using the dispatch map.

Role required: wm_dispatcher, wm_initiator_qualifier_dispatcher

1. Navigate to **Field Service > Dispatching > My Dispatch Map**.
2. Select a filter view for the day and the assignment group you want to see.
3. Click an unassigned task in the map.
   A pop-up window shows the unassigned task and task details.
4. Do one of the following:
   - In the **Assigned to** field, select the agent available to work on the task.
   - Click **Auto Assign** to automatically assign the task to the available agent.
5. Click **Update**.

The customer receives SMS and email notification that the work order task is assigned.

Assign a single task

In some cases, you might need to dispatch an urgent task or reassign one to an alternate agent if the assigned agent is delayed or otherwise unable to perform the task.

Role required: wm_dispatcher, wm_initiator_qualifier_dispatcher

Only users with the wm_dispatcher or wm_initiator_qualifier_dispatcher role can display their tasks on the dispatch map directly from a task record and see the available agents nearby who have the skills to perform the task. A task cannot be displayed on the dispatch map without a location that has latitude and longitude defined. A task assigned in this manner can be accepted or rejected by the agent.

1. Navigate to **Field Service > Dispatching > My Dispatch Queue**.
2. Open the task you want to dispatch or reassign.
3. Click the **View Task on Map**.

   The task is not visible in the **Draft, Closed Complete, Closed Incomplete**, or **Cancelled** state. The map that appears displays a red task icon with a black spot for the task, and shows icons for all nearby agents.
4. Click **View Filter**.
5. Select a skill level for the agents to display in the map.
   The default filter selects all agents in the vicinity. The icons in the map indicate agents with these skill combinations:
   - Match all needed skills
   - Match some needed skills
   - Match none of skills
6. Click **Apply Filter**.
   The system displays the agents on the map who match the skills selection.
7. Click an agent icon to show the agent's name, skills, and schedule.
8. Click the icon beside the agent's name to assign the task to that agent.
If the task can fit within the agent's schedule, the system assigns the task and displays a confirmation message. If the agent's schedule cannot accommodate the task, the system displays a failure message and allows you to select a different agent.

The customer receives SMS and email notification that the work order task is reassigned.

View agent location history map

View the location history map of field service agents to track and review their activities over a historical period.

Role required: wm_dispatcher, wm_manager, wm_admin, or admin

1. Navigate to the agent location history map.
   - If you are a dispatcher, go to Field Service > Dispatching > Agent Location History Map.
   - If you are a manager, go to Field Service > Manager > Agent Location History Map.

2. Track agent location history.
   1. Click Filter.
   2. From the Date field, select the date to track.
   3. From the Agent field, select the name of the agent.

The Agent Location History Map highlights the agent's tracked locations on the selected date.

3. Click a marker to open a geolocation history record.
   The data record appears with details such as user, location, latitude, longitude, location timestamp, duration, task, and action description from the geolocation history table.

Note: The work order task number appears if the agent activity is a task. You can open the work order task record to view the details.

Dynamic scheduling

Use dynamic scheduling to assign tasks to field service agents. Select and prioritize a list of tasks, provide assignment recommendations based on selected criteria, and auto assign tasks.

Dynamic scheduling provides schedule optimization, allowing dispatchers to auto assign tasks and adapt to changing conditions, as well as to focus only on exception cases. Using this advanced tool for task assignment, you can:

- Select a set of tasks for scheduling.
- Prioritize the tasks in the set based on ordering rules (for example, assign P1 tasks first).
- Use ordering rules and unassignment constraints to unassign previously assigned tasks in order to allow the assignment of higher priority tasks.
- Use selection criteria, such as agent skills and travel time, to select agents.
- Re-assign tasks for agent time off.

System administrators can configure task filters and ordering rules to specify how and when tasks are assigned and unassigned. Dispatchers can use dynamic scheduling to automatically assign tasks as they are created and unassign tasks as needed to accommodate higher priority tasks. Dispatchers can also select multiple tasks and use dynamic scheduling to optimize the task assignment.

Dynamic scheduling can run in one of two modes: manually or automatically. For manual operation, dispatchers select a set of tasks and then click Auto Assign to prioritize and assign the tasks. For automatic operation, dispatchers can choose to run dynamic scheduling immediately upon task creation or at a specified interval. Using task filters you can identify some tasks to be assigned manually while others can be set up for auto assignment.
Agent schedules

When an agent creates a time-off event in the agent calendar, the tasks assigned to the agent during the time-off event are reassigned to other agents based on availability.

Configure dynamic scheduling

Follow these steps to configure the dynamic scheduling feature.

1. Configure the Field Service Management application to use dynamic scheduling.
2. Create or modify a dynamic scheduling configuration.
   a. Select the task table on which to run dynamic scheduling and enable or disable the task unassignment option.
   b. Create a task filter.
   c. Create one or more task ordering rules.
   d. If needed, define any task unassignment constraints.
3. Enable the agent to travel outside of work hours.
   When you Allow agents to start traveling before their scheduled work hours, dynamic scheduling allows the agent to start traveling before the scheduled work start time and complete travel after the scheduled work end time.

Activate dynamic scheduling

Activate the dynamic scheduling feature by activating the Field Service Management plugin (com.snc.work_management).

Role required: admin

The Field Service Management plugin activates the Dynamic Scheduling plugin (com.snc.dynamic_scheduling) and adds the following module to the Field Service menu in the application navigator: Field Service > Administration > Dynamic Scheduling Configuration.

The following tables are installed with dynamic scheduling:

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constraint</td>
<td>Stores the unassignment constraints for the dynamic scheduling feature.</td>
</tr>
<tr>
<td>[scheduling_constraint]</td>
<td></td>
</tr>
<tr>
<td>Dynamic Scheduling Configuration</td>
<td>Stores the configurations for the dynamic scheduling feature. Configurations include the selected task table, task filters, task ordering rules, and task unassignment constraints.</td>
</tr>
<tr>
<td>[dynamic_scheduling_config]</td>
<td></td>
</tr>
<tr>
<td>Task Filter</td>
<td>Stores the task filters for a dynamic scheduling configuration. Filters identify a list of tasks to be assigned using dynamic scheduling.</td>
</tr>
<tr>
<td>[dynamic_schedule_task_filter]</td>
<td></td>
</tr>
<tr>
<td>Task Ordering Rule</td>
<td>Stores the task ordering rules for a dynamic scheduling configuration. Ordering rules prioritize the list of tasks identified by the task filters.</td>
</tr>
<tr>
<td>[task_ordering_rule]</td>
<td></td>
</tr>
<tr>
<td>Table</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>Un-Assignment Constraint [unassignment_rule]</td>
<td>Stores the task unassignment constraints for a dynamic scheduling configuration. Constraints prevent a task from being unassigned even if it is of lower importance based on the task ordering rules.</td>
</tr>
</tbody>
</table>

1. Navigate to System Applications > All Available Applications > All.
2. Find the plugin using the filter criteria and search bar.
   
   You can search for the plugin by its name or ID. If you cannot find a plugin, you may have to request it from ServiceNow personnel. To request a plugin, follow the steps in Request a plugin.
3. Click Install, and then in the Activate Plugin dialog box, click Activate.

**Note:** When domain separation and delegated admin are enabled in an instance, the administrative user must be in the global domain. Otherwise they will receive the following error: Application installation is unavailable because another operation is running: Plugin Activation for <plugin name>.

**Dynamic scheduling system properties**

Dynamic scheduling uses the following system properties.

<table>
<thead>
<tr>
<th>Property</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>com.snc.dynamic.scheduling.showlogs</td>
<td>Controls the display of logs on the Confirm Assignment pop-up window.</td>
</tr>
<tr>
<td>com.snc.dynamic.scheduling.maxtasks</td>
<td>Controls the maximum number of tasks that can be selected when manually running dynamic scheduling. The default value for this property is 50 tasks.</td>
</tr>
</tbody>
</table>

**Dynamic scheduling task dependencies**

Dynamic scheduling uses task ordering rules to prioritize the list of tasks to be assigned. Where applicable, task dependencies override the task ordering rules.

- A task with one or more downstream tasks cannot be unassigned.
- If a downstream task is assigned and the upstream task gets reassigned, dynamic scheduling attempts assign the upstream task before the start of the downstream task.
- If a task has an upstream task that is unassigned, the downstream task does not get assigned.
- If a task has an upstream task that is assigned, the downstream task does not start until the upstream task is completed.
- If a task has an upstream task that is assigned a lower priority, the downstream task is not assigned until the upstream task is assigned.

**Configure Field Service Management to use dynamic scheduling**

Configure the Field Service Management application to use dynamic scheduling as the task assignment method.

Role required: admin
For more information, see *Global domain configurations*.

1. Navigate to **Field Service > Administration > Configuration**.
2. Click the **Assignment** tab.
3. In the **Assignment method for tasks** field, select **using dynamic scheduling**.
4. Click **Save**.

### Create a dynamic scheduling configuration

Create a new dynamic scheduling configuration or modify the configuration provided with the Field Service Management application.

Role required: admin

Dynamic scheduling works with one selected task table, such as the Work Order Task [wm_task] table, which you select on the Dynamic Scheduling Configuration form. As part of the configuration, create task filters to identify specific lists of tasks, create task ordering rules, and define any task unassignment constraints.

**Note:** To use dynamic scheduling, select this *task assignment method* on the Field Service Configuration screen.

The **Dynamic Scheduling Config for Work Order** configuration is provided with the Dynamic Scheduling plugin. Modify this configuration to meet your needs or use it as an example for creating your own configuration.

1. Navigate to **Field Service > Administration > Dynamic Scheduling Configuration**.
   The Dynamic Scheduling Config For Work Order form is displayed.
2. Select a table in the **Task Table** field.
   By default, this configuration uses the Work Order Task [wm_task] table. For Field Service Management, you can also select the Work Order [wm_order] table.

   **Note:** Dynamic scheduling can have only one configuration for each task table.

3. If desired, disable the **Un-assignment** check box.
   When the unassignment option is enabled, dynamic scheduling can unassign a previously assigned task in order to complete the assignment of a more important task. Task importance is determined by task ordering rules. This field is enabled by default.

   **Note:** If you disable the **Un-assignment** check box, the **Un-Assignment Constraints** related list is removed from the form.

4. Set the dynamic scheduling **properties for calculating estimated travel time and distance** to use either Google Maps API or straight-line estimates to calculate agent's estimated travel time and distance to task location.

   **Note:** To calculate the estimate time it takes for an agent to get to the task location, consider the following:
   - If the **Use Google Maps API for travel time estimates** geolocation property is enabled, then you can select Google Maps API or straight-line estimates in the properties for calculating estimated travel time and distance.
   - If the **Use Google Maps API for travel time estimates** is not enabled, then the system uses the value in the Estimated Travel Duration field in the work order task to determine task assignment for the agent.

5. Click **Update**.
Create a task filter

Create one or more task filters to identify a list of tasks to be assigned using dynamic scheduling.

Role required: admin

For example, create a task filter to identify tasks of a specific priority or tasks with expiring SLAs. Also define criteria to evaluate and identify suitable agents for each task. If desired, enable auto assignment and select the frequency for assigning tasks.

You can create multiple task filters. The filter with the lowest **Execution Order** value defines the initial task list. Filters with higher values further filter the initial task list.

The All Work Order tasks filter is provided with the Dynamic Scheduling plugin. This filter identifies all active work order tasks.

If desired, you can also enable auto assignment and select the frequency for assigning tasks. Dynamic scheduling can run on the tasks returned from a task filter automatically as soon as the tasks are ready to be assigned or at a specified interval. Dynamic scheduling can also be run manually by a dispatcher.

1. Navigate to Field Service > Administration > Dynamic Scheduling Configuration.
2. In the Task Filters related list, click New.
3. Fill in the fields on the Task Filter form, as necessary.

### Task Filter form

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The task filter name.</td>
</tr>
<tr>
<td>Active</td>
<td>Denotes this filter as active.</td>
</tr>
<tr>
<td>Execution Order</td>
<td>The order in which this filter is evaluated. The filter with the lowest <strong>Execution Order</strong> value defines the initial task list.</td>
</tr>
<tr>
<td>Table</td>
<td>The task table selected for this dynamic scheduling configuration.</td>
</tr>
<tr>
<td>Conditions</td>
<td>Define the conditions that identify the specific list of tasks.</td>
</tr>
<tr>
<td>Auto Assign</td>
<td>Enable this check box to auto assign tasks. Enabling <strong>Auto Assign</strong> displays the <strong>Auto Assignment Frequency</strong> field.</td>
</tr>
<tr>
<td>Auto Assignment Frequency</td>
<td>The frequency with which tasks are auto assigned.</td>
</tr>
<tr>
<td></td>
<td>• Immediate: tasks are assigned as soon as they are ready to be assigned.</td>
</tr>
<tr>
<td></td>
<td>• Interval: tasks which are ready to be assigned are selected at the defined interval and assigned.</td>
</tr>
<tr>
<td></td>
<td>Selecting <strong>Interval</strong> displays the <strong>Auto Assignment Interval</strong> field.</td>
</tr>
<tr>
<td>Auto Assignment Interval</td>
<td>The interval, in minutes, at which tasks are selected for auto assignment.</td>
</tr>
</tbody>
</table>

**Note:** A task filter with a higher **Execution Order** value must have an interval that is greater than the interval for a task filter with a lower **Execution Order** value.
4. In the **Select Criteria** related list, select the criteria used to evaluate and identify suitable agents for each task.

Select criteria from the Matching Criteria list. For more information, see *Matching criteria for case assignment.*

**Note:**
- If you are using mandatory skills for dynamic scheduling, you must replace the **Matching Skills For Dynamic Scheduling** criterion with the **Matching Mandatory Skills for Dynamic Scheduling** criterion to match agents with mandatory skills required for the task.
- If you are ranking agents based on the number of skills and skill levels for each agent, you must add the **Matching Skill Level Gap for Dynamic Scheduling** criterion to the task filter and use **Less is better** ranking method. When you *auto-assign tasks using dynamic scheduling*, this criterion is used to evaluate the agents to work on tasks.
- If you are ranking rejected agents of a work order task, add the **Ignore rejected technician** matching criterion to the task filter.
- If you are ranking agents based on the number of parts available in the agent stockroom, add the **Matching Agents With Most Parts For Dynamic Scheduling** criterion to the task filter.
- If you are ranking preferred agents for a customer account, add the **Preferred technicians for a customer account** matching criterion to the task filter. You must have the Customer Service plugin (com.sn_customerservice) or the Customer Service with Field Service Management plugin (com.snc.csm_fsm_integration) enabled to use this criterion.
- If you are ranking excluded agents for a customer account, add the **Ignore excluded technician for a customer account** matching criterion to the task filter. You must have the Customer Service plugin (com.sn_customerservice) or the Customer Service with Field Service Management plugin (com.snc.csm_fsm_integration) enabled to use this criterion.
- If you are ranking agents based on the availability of mandatory parts that are required to perform the job, add the **Matching Mandatory Parts for Dynamic Scheduling** criterion to the task filter. When you *auto-assign tasks using dynamic scheduling*, this criterion is used to evaluate the agents to work on tasks.

5. If necessary, adjust the **Weight** for the selected criteria.

By default, each matching criterion has an assigned weight of 10. You can assign a higher weight to the criteria that are more important.

6. If necessary, select a different **Ranking Method** for the selected criteria.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>More is better</td>
<td>A higher value is preferred. For example, more availability is better when determining the agent ranking.</td>
</tr>
<tr>
<td>Less is better</td>
<td>A lower value is preferred. For example, fewer assigned cases are better when determining agent ranking.</td>
</tr>
</tbody>
</table>

7. **Click Save.**

**Create a task ordering rule**

Create one or more task ordering rules to prioritize the list of tasks identified by the task filters.

Role required: admin

Dynamic scheduling evaluates the task ordering rules based on the values in the **Execution Order** field. The ordering rule with the lowest value determines the initial task order. For example, you can create a task ordering rule that sorts tasks based on the assigned **Priority** and orders the P1 tasks first followed by P2 tasks, P3 tasks, and so on. The ordering rule with the next lowest value determines an additional order for a subset of tasks within the initial task list. For example, sort all P1 tasks by SLA due date. Create any number of task ordering rules to determine how tasks are ordered for dynamic scheduling.
Rules are evaluated in the execution order. Dynamic scheduling goes to the rule with the next highest execution order only when task values are equal for the current rule.

You can create two types of task ordering rules: simple and advanced.

- A simple rule sorts tasks based on one selected field from the task table and either an ascending or descending sort order.
- An advanced rule sorts tasks based on selections from two unrelated tables: the task table and any other table that contains the desired information, using a reference field. The connecting task field connects these two unrelated tables using the reference field.

For example, let's assume that you want to order rules for work order tasks based on the least amount of time left on SLAs and you want to sort them in descending order. You can do the following:

- Use Task SLA [task_sla] as the sort table
- Set the sort order as descending
- Select **Actual time left** as the sort field

The SLAs are based on work orders (wm_order) and not work order tasks (wm_task). They are maintained in the Task SLA (task_sla) table.

- Select **Task** (task_sla.task), which is a field in the work order table, as the Task Field.
- Select **Parent** (wm_task.parent) as the Connecting Task Field. This field establishes a parent relationship reference between the Task SLA [task_sla] and the Work Order (wm_order) table to look up the SLAs in the work order tables. The task ordering rule uses this reference to sort the actual time left in the Task SLA table.
Task Ordering Rule

Create one or more task ordering rules to sort the tasks by their importance. Dynamic scheduling evaluates these rules based on the execution order, then assigns the tasks in the order determined by these rules. These rules are evaluated to determine tasks of lower importance that can be unassigned if needed.

- **Name**: SLA Advanced Ordering
- **Execution Order**: 330
- **Advanced**: Yes
- **Dynamic Scheduling Config**: Work Order Task Dynamic Scheduling 0
- **Sort Table**: Task SLA (task_sla)
- **Sort Field**: Actual time left
- **Sort Order**: a to z
- **Task Field**: Task
- **Task Table**: Work Order Task (wot_task)
- **Aggregate Function**: MIN

**Connecting Task Field**

- **Available**:
  - Parent
  - Assigned
  - State
  - Short description
  - Acknowledged on
  - Active
  - Activity due
  - Actual duration

- **Selected**: None

Submit
The **Priority Based Ordering** rule is provided with the Dynamic Scheduling plugin. This rule uses the **Priority** field and the **a to z** sort order to determine the order of the tasks to be scheduled. You can modify this task and create additional tasks as needed.

1. Navigate to **Field Service > Administration > Dynamic Scheduling Configuration**.
2. In the **Task Ordering Rules** related list, click **New**.
3. Fill in the fields on the Task Ordering Rule form, as necessary.

**Task Ordering Rule form**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The task ordering rule name.</td>
</tr>
<tr>
<td>Execution Order</td>
<td>The order in which this rule is evaluated.</td>
</tr>
<tr>
<td>Dynamic Scheduling Config</td>
<td>The dynamic scheduling configuration to which this ordering rule applies.</td>
</tr>
<tr>
<td>Advanced</td>
<td>Enable this check box to create an advanced task ordering rule. When enabled, the Task Field, Task Table, Connecting Task Field, and Aggregate Function fields are displayed.</td>
</tr>
<tr>
<td>Sort Table</td>
<td>The table that contains the tasks to be sorted.</td>
</tr>
<tr>
<td>Sort Field</td>
<td>The field on which the tasks are sorted.</td>
</tr>
<tr>
<td>Sort Order</td>
<td>The order in which the tasks are sorted, either ascending (<strong>a to z</strong>) or descending (<strong>z to a</strong>).</td>
</tr>
<tr>
<td>Task Field</td>
<td>The field on which the tasks are sorted.</td>
</tr>
<tr>
<td>Task Table</td>
<td>For an advanced ordering rule, this field displays the table that contains the tasks to be sorted.</td>
</tr>
<tr>
<td>Connecting Task Field</td>
<td>The field that establishes a relationship between two unrelated tables.</td>
</tr>
<tr>
<td>Aggregate Function</td>
<td>The aggregate function to apply when there are multiple rows for a task.</td>
</tr>
<tr>
<td></td>
<td>- MIN</td>
</tr>
<tr>
<td></td>
<td>- MAX</td>
</tr>
<tr>
<td></td>
<td>- COUNT</td>
</tr>
<tr>
<td></td>
<td>- SUM</td>
</tr>
</tbody>
</table>

4. Click **Submit**.

**Create a task unassignment constraint**

Define the constraints that prevent a task from being unassigned even if it is of lower importance based on the task ordering rules.

Role required: admin

Three task unassignment constraints are provided with the Dynamic Scheduling plugin.

- **Task with downstream**: prevents a task from being unassigned if it has a downstream task.
- **Would breach SLA in the next 5 hours**: prevents a task from being unassigned if the task SLA is due to expire within five hours.
- **Part sourced**: prevents a task from being unassigned if one or more parts required for the task have already been sourced.
When the unassignment option is enabled, dynamic scheduling can unassign a previously assigned task in order to complete the assignment of a more important task. Task importance is determined by task ordering rules. If an unassigned task has downstream tasks, the downstream tasks are also unassigned and added to the queue. The system will take care of assignments correctly, as long as ordering rules are not defined in a way that conflicts with the task dependencies.

1. Navigate to Field Service > Administration > Dynamic Scheduling Configuration.
2. In the Un-Assignment Constraints related list, click New.
3. Click the lookup icon next to the Constraint field.
4. In the Constraints list, click New.
5. Fill in the fields on the Constraint form, as necessary.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The constraint name.</td>
</tr>
<tr>
<td>Task Table</td>
<td>The task table to which this constraint applies.</td>
</tr>
<tr>
<td>Type</td>
<td>The type of constraint.</td>
</tr>
<tr>
<td></td>
<td>• Simple: define a simple constraint by selecting a table, a task field, and one or more filter conditions.</td>
</tr>
<tr>
<td></td>
<td>• Advanced: define an advanced constraint by creating a script.</td>
</tr>
<tr>
<td>Constraint Table</td>
<td>The table used to define a constraint on a task.</td>
</tr>
<tr>
<td>Task Field</td>
<td>The task field to which this constraint applies.</td>
</tr>
<tr>
<td>Constraint Condition</td>
<td>When true, the selected condition prevents a task from being reassigned or unassigned.</td>
</tr>
<tr>
<td>Constraint Script</td>
<td>For an advanced constraint, create a script to define the constraint details.</td>
</tr>
</tbody>
</table>

6. Click Submit.
   Returns you to the Un-Assignment Constraint form.
7. Click Submit.
   Returns you to the configuration form and adds the constraint to the Un-Assignment Constraints related list.

Validate the dynamic scheduling configuration

After creating a dynamic scheduling configuration, validate the configuration to ensure that works as intended.

Role required: admin

After creating or modifying a dynamic scheduling configuration, click the Validate config related link to validate the settings. If the configuration is valid, an informational message appears at the top of the Dynamic Scheduling Configuration form.

Select and assign multiple tasks

Dispatchers can manually select multiple tasks on which to run dynamic scheduling.

Role required: wm_dispatcher or wm_admin
Users with the dispatcher role can select multiple tasks for assignment. Clicking **Auto Assign** creates assignment recommendations for the selected tasks which the dispatcher can view in the **Confirm Assignment pop-up window**. The dispatcher can then cancel or confirm the task assignments.

If there has been an update to any of the selected tasks, an informational message notifies the dispatcher to run the recommendations again.

1. Navigate to a list of work order tasks.
2. Select the desired tasks for assignment. Tasks must be in the **Pending Dispatch** state.
3. From the Actions menu at the bottom of the list, select **Auto Assign**.

   The Confirm Assignment pop-up window displays a list of the selected tasks in the following categories: Assigned, Not Assigned, Reassigned, and Unassigned.

   **Note:** If there has been an update to any of the selected tasks, an informational message notifies the dispatcher to run the recommendations again.

   **Note:** If more tasks are selected than dynamic scheduling can handle, the pop-up window displays a message to reduce the number of tasks.

4. Click **Confirm** to approve the recommendations on the Confirm Assignment pop-up window.

**Confirm Assignment pop-up window**

When using the dynamic scheduling feature, the Confirm Assignment pop-up window displays the task assignment recommendations.

When a dispatcher selects multiple tasks for assignment and clicks **Auto Assign**, the results of the task assignment process are displayed in the Confirm Assignment pop-up window. Information about the selected tasks, including the **Short Description**, **Scheduled Start**, and **Estimated End**, is displayed in the following categories.

<table>
<thead>
<tr>
<th>Category</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assigned</td>
<td>Dynamic scheduling is able to find a suitable agent and recommends the task for assignment.</td>
</tr>
<tr>
<td>Unassigned</td>
<td>Dynamic scheduling is not able to find a suitable agent and the task remains unassigned.</td>
</tr>
<tr>
<td>Reassigned</td>
<td>Tasks that were previously assigned and have been reassigned to a different agent or time slot to allow for the assignment of the selected tasks.</td>
</tr>
<tr>
<td>Not Assigned</td>
<td>Tasks that were previously assigned, have been unassigned to allow for the assignment of the selected tasks, and have not yet been reassigned. Selected tasks that do not match the task filter also appear in the Not Assigned category.</td>
</tr>
</tbody>
</table>

The information icon next to each task displays additional information about the task in a tool tip, such as required skills and parts. For unassigned and reassigned tasks, this information also includes the previous agent and schedule start time.

If more tasks are selected than dynamic scheduling can handle, the pop-up window displays a message to reduce the number of tasks.

If there has been an update to any of the selected tasks, an informational message notifies the dispatcher to run the recommendations again.

Clicking **Save** confirms the task assignment recommendations listed in the Confirm Assignment pop-up window.
Task assignment debug log

System administrators can also view task assignment debug logs in the Confirm Assignment pop-up window by enabling the `com.snc.dynamic.scheduling.showlogs` system property. This information is displayed below each task in the pop-up window. Collapse or expand the debug log by clicking on the task.

Assigning preferred agents to work on tasks

Preferred agents are agents who are most familiar with the context of tasks they've been assigned and are preferred by customers. For example, they could be agents who work on-site at a customer premise or are associated with the customer contracts or entitlements.

You can assign preferred agents to tasks using dynamic scheduling when you assign tasks using any of the following methods:

- Preferred agent recommendation in Central Dispatch.
- Auto-assign using agent recommendation
- Book an appointment using Appointment Booking

Here are a few scenarios on how tasks can get assigned to preferred agents.

Note: The preferred technicians must be added to the respective customer accounts and the preferred technician matching criteria must be added to the dynamic scheduling configuration.

In this example, let's define the roles as follows:

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer of Acme Corporation</td>
<td>George Warren</td>
</tr>
<tr>
<td>Dispatcher</td>
<td>Lisa Ray</td>
</tr>
<tr>
<td>Preferred technicians for Acme Corporation account</td>
<td>Mona Lisa</td>
</tr>
<tr>
<td></td>
<td>Alex Ray</td>
</tr>
<tr>
<td></td>
<td>Lynda Caraway</td>
</tr>
</tbody>
</table>

Scenario 1: Preferred agent recommendation in Central Dispatch

This example shows that when a task for Acme Corporation is selected in Central Dispatch, the Team list automatically reorders and shows the preferred agents.

Note: Lisa Ray is logged in as dispatcher.

1. Navigate to Field Service > Dispatching > Central Dispatch
2. In the Tasks list, select a task for Acme Corporation that needs to be assigned to a preferred agent. The Team list is re-ordered to display the preferred agents.
3. Drag the task and drop it to one of the preferred agents in the Team list.

Scenario 2: Auto-assign using agent recommendation
This example shows how tasks that are high priority can get assigned to preferred agents.

**Note:** Lisa Ray is logged in as dispatcher.

1. Navigate to **Field Service > Dispatching > Central Dispatch**
2. Locate a task for Acme Corporation that needs to be assigned to a preferred technician. Let's say Mona Lisa is the preferred technician available to work on this task.
3. Drag the task and drop it to Mona Lisa in the Team list. The task has now been scheduled.
4. Now, a high-priority task from Acme Corporation enters the task queue. This task needs to be assigned to the same preferred agent Mona Lisa and has to be scheduled at the same time when the previous task was scheduled.
5. Drag and drop the task to Mona Lisa in the Team list. This task automatically takes the time slot of the previously scheduled task and that task moves to the next available schedule that is available for Mona Lisa.

**Scenario 3: Book an appointment using Appointment Booking**

This example shows how when a customer books an appointment, it is automatically assigned to the preferred agent.

**Note:** George Warren is logged in as customer of Acme Corporation.

1. Navigate to the customer service portal.
2. Select a service that requires an appointment.
3. Click the desired time slot and click **Select**.
4. Click **Submit**.

Navigate to **Field Service > Dispatching > Central Dispatch** and see that the task has been assigned to the preferred agent Mona Lisa.

### Assign preferred agents to tasks

Identify agents most preferred for working on a customer account and assign them to tasks related to that account.

Role required: wm_dispatcher

You can automatically assign tasks to agents most preferred for working on a customer account. The tasks are assigned to preferred agents using dynamic scheduling when you drag tasks and drop to agents in central dispatch, when you auto-assign the tasks, or when a customer books an appointment. To assign tasks for a preferred agent:

- Configure dynamic scheduling to automatically assign tasks to preferred agents of a customer account.
- Add the field service agent details to the customer account under the assignment preference as **Preferred Agent**.

1. Add preferred technicians criteria to the task filter.
   1. Navigate to **Field Service > Administration > Dynamic Scheduling Configuration**
   2. In the **Task Filters** tab, add the preferred agents for a customer account criterion to the following three task filters:

      For information on adding criteria to a task filter, see [Create a task filter](#).

      - Appointment Tasks
      - Assignment: Assign pending Dispatch Work orders
1. Reassignment: reassign unassigned task

3. Click the customer account for which you want to add field service agents as excluded agents.
   a) Select Technician Preferences > New.
   b) Add the agent details with Assignment Preference as Preferred Agent.
   c) Click Update.
      The field service agent is added as preferred agent and is assigned to work on any tasks on the customer account.

4. Assign tasks to agents using any of the following methods:
   - Drag and drop using central dispatch
   - Auto-assignment
   - Appointment booking
      The task is assigned to an agent preferred for working on the customer account the task is associated with.

**Prevent assignment of work order tasks to excluded field service agents**

Prevent the dynamic scheduling of work order tasks to excluded field service agents. Administrators or dispatchers can manually assign work order tasks to excluded agents, if required.

**Configure dynamic scheduling to ignore excluded technicians**

Add dynamic scheduling task filters to ensure that work order tasks are not assigned to agents who are excluded from the customer account.

Ensure that dynamic scheduling is selected as assignment method for tasks.

Role required: wm_dispatcher, wm_manager, wm_admin

Dispatchers or managers can override exclusions at any time by manually assigning work order tasks to excluded technicians. A warning message appears that the work order task has been assigned to an excluded agent.

1. Navigate to Field Service > Administration > Dynamic Scheduling Configuration.
2. On the Task Filters tab, add the Ignore Excluded Technician criterion to the task filters.
   For information on adding criteria to a task filter, see Create a task filter.
3. Click Update.
   The dynamic scheduling matching criteria screens out the excluded agents from a particular account when the work order tasks are assigned using any of the following methods:
   - Drag and drop using central dispatch
   - Auto-assignment
   - Appointment booking

**Exclude Field Service agents from being assigned work order tasks**

Exclude field service agents from a customer account.

Ensure that dynamic scheduling is set to ignore excluded technician.

Role required: wm_dispatcher, wm_manager, wm_admin

1. Navigate to Customer Service > Accounts.
2. Click the customer account from which you want to exclude field service agents.
3. Click Technician Preferences > New.
4. Add the agent details with and set Assignment Preference to Excluded Agent.
5. Click Update.

The field service agent is added as excluded agent and is ignored to work on any tasks on the customer account.

**Display the task assignment debug log**

Display information from the task assignment debug log in the Confirm Assignment pop-up window.

Role required: admin

System administrators can enable the `com.snc.dynamic.scheduling.showlogs` system property to display debug logs in the Confirm Assignment pop-up window. This information is displayed below each task. Collapse or expand the debug log by clicking on the task.

The task assignment debug log information is stored in the Log [syslog] table.

1. Navigate to System Properties > All Properties.
2. Go to the `com.snc.dynamic.scheduling.showlogs` property.
3. Set the Value to true.
4. Click Update.

The Confirm Assignment pop-up window displays the debug logs for each of the selected tasks. Click the task to collapse or expand this information.

**View an agent's status in Central Dispatch**

Use Central Dispatch to see if an agent is ahead of schedule, behind schedule, or on time.

Agents are responsible for updating their schedule status. An agent can update this information from the mobile UI by navigating to the Field Service menu and selecting the Schedule Status option, then selecting the desired status in the On schedule field.

After updating, there are two ways for a dispatcher to view an agent's status:

- Adding the status to the display fields in the Team list.
- Viewing the status on the User form for a selected agent.

In Central Dispatch, the Team list displays the agents in a dispatch group. The dispatcher can configure the information displayed for each agent in this list, including the agent's status. See Configure central dispatch for more information about displaying the Schedule Status field in the Team list.

Click an agent name in the Team list to display the agent's User form. The On schedule field displays the agent's current status:

- On time
- Behind schedule, less than 30 minutes
- Behind schedule, between 30-60 minutes
- Behind schedule, more than an hour
- Ahead of schedule

**Set agent status from the mobile UI**

Field service agents can indicate their status from the mobile UI and let dispatchers know if they are ahead of schedule, behind schedule, or on time.
Role required: wm_agent

1. In the mobile UI, navigate to Field Service > Schedule Status.
2. Select the desired status in the On schedule field.
   • On time
   • Behind schedule, less than 30 minutes
   • Behind schedule, between 30 to 60 minutes
   • Behind schedule, more than an hour
   • Ahead of schedule
3. Click Save.
   The status is updated on the agent's User form. The dispatcher can see this status update in Central Dispatch.

Set agent status from the desktop

Field service agents can indicate their status from the desktop and let dispatchers know if they are ahead of schedule, behind schedule, or on time.

Role required: wm_agent

The system administrator must enable the FSM Profile view before field service agents can update their schedule status from the desktop.

1. Click your user name in the banner frame and then click Profile.
2. Select the desired status in the On schedule field.
   • On time
   • Behind schedule, less than 30 minutes
   • Behind schedule, between 30 to 60 minutes
   • Behind schedule, more than an hour
   • Ahead of schedule
3. Click Update.
   The status is updated on the agent's User form. The dispatcher can see this status update in Central Dispatch.

Work order task start and end dates

Dynamic scheduling uses work order task Window start and Window end dates to schedule tasks.

If both the Window start and Window end dates are present in the work order tasks, dynamic scheduling uses these dates.

If the task has a Window start date but the date has passed, dynamic scheduling uses the current date and time for this value.

If the task has a Window start date but no Window end date, dynamic scheduling uses the com.snc.wm.wo.task_window_day property to determine this value.

If the task has no Window start date but has a Window end date, dynamic scheduling uses the current time for this value.

If the task has neither a Window start nor a Window end date, dynamic scheduling uses the current time and date for the Window start and the com.snc.wm.wo.task_window_day property for the Window end.

If a task is created, the Window end date gets automatically populated based on the latest SLA breach date from its parent work order. The business rules Populate Window End Based On SLA for both Task SLA [task_sla] and Work Order Task [wm_task] tables, and the client script Calculate Window End has to be set to True.
If a task is created and Fixed window is enabled, the business rules and client scripts doesn't execute and Window end time is not updated. If a work order is created based on an appointment and there is an SLA associated with the work order, the Window end time is populated based on the appointment and not on the SLA.

Window start date gets updated for the work order tasks based on the delivery date of the transfer order only for work orders that are not assigned. The business rule Sync up Delivery Time with WOT business rule has to be set to True. Multiple transfer orders that has mandatory part requirements, the Window start is set to the latest delivery time of the transfer order. Window start date is only updated based on transfer orders only when the part requirement associated with the transfer order is mandatory. However, you can manually edit the window start time and override the existing date that is populated based on the transfer order.

Note: The Window start date is not updated if the work order task is:
- Associated with an appointment
- Fixed Window
- Window end is populated and is before the delivery by date

Create a work schedule for an agent or technician

Users with the agent schedule administrator role can create one or more work schedules for a customer service agent or a field service technician.

Role required: agent_schedule_admin

A work schedule includes a date range and a schedule type, such as day shift or evening shift. Agents and technicians can have multiple work schedules.

1. Navigate to Agent Schedule > Work Schedule.
2. Click New.
3. Fill in the fields on the Agent Work Schedule form, as necessary.

Agent Work Schedule form

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Date</td>
<td>The first day of the work schedule.</td>
</tr>
<tr>
<td>To Date</td>
<td>The last day of the work schedule.</td>
</tr>
<tr>
<td>User</td>
<td>The selected agent or technician.</td>
</tr>
<tr>
<td>Work Schedule</td>
<td>The selected schedule from the Schedules list.</td>
</tr>
<tr>
<td>Type</td>
<td>The type of work that the agent or technician is performing during this schedule:</td>
</tr>
<tr>
<td></td>
<td>• Primary work</td>
</tr>
<tr>
<td></td>
<td>• Other</td>
</tr>
<tr>
<td></td>
<td>An agent can have only one primary schedule for a specific range of dates. Primary schedules cannot overlap.</td>
</tr>
</tbody>
</table>

4. Click Submit.

Create a schedule to use with the agent calendar

Users with the agent calendar administrator role can create a schedule to use with the agent calendar.
Role required: agent_schedule_admin

Creating a schedule for the agent calendar uses the schedule feature. For more information, see *Schedules*.

Schedules are configured with two types of records.
- Schedule records specify a time zone and a type of schedule and use one or more schedule entries. Schedule records are saved in the Schedule [cmn_schedule] table.
- Schedule entry records specify the time periods that are included or excluded from a schedule. Schedule entries are saved in the Schedule Entry [cmn_schedule_span] table.

1. Navigate to Agent Schedule > Schedule.
2. Click New.
3. Complete the fields on the Schedule form.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Enter a unique name for the schedule.</td>
</tr>
<tr>
<td>Time Zone</td>
<td>Select the time zone for the schedule. If you select <em>Floating</em>, the time zone will be relative to whatever is accessing the item at any given time.</td>
</tr>
<tr>
<td>Parent</td>
<td>Select a parent schedule to constrain the new schedule.</td>
</tr>
<tr>
<td>Type</td>
<td>Enter a label that describes the purpose of the schedule. You can also use one of these system terms to determine how to process certain schedules:</td>
</tr>
<tr>
<td></td>
<td>• excluded: excludes time periods from SLA counts.</td>
</tr>
<tr>
<td></td>
<td>• maintenance: specifies time periods where change management activities are allowed. A schedule containing maintenance schedule entries cannot also contain blackout schedule entries.</td>
</tr>
<tr>
<td></td>
<td>• blackout: excludes time periods from change management schedules. A schedule containing blackout schedule entries cannot also contain maintenance schedule entries.</td>
</tr>
<tr>
<td>Description</td>
<td>[Optional] Describe the schedule.</td>
</tr>
</tbody>
</table>

Note: The Schedule form displays a warning message if there are no active entries defined for the current schedule. If your schedule is a child schedule that only contains exclusions, ignore the message because exclusions are non-active entries.

4. Right-click the header bar and click Save.

Note: If you create a schedule of type *maintenance* and save the record, a UI policy hides the **Type** field from the form. To view or change the value for the **Type** field, view the list of schedules rather than the schedule form and add the **Type** column if necessary. You can double-click the cell for the value in the **Type** column and modify from the list view.

5. Configure one or more schedule entries.
6. Click Submit.
Getting help to complete the work

Access schedule and location to complete task work.

To work on the tasks:

• View your schedule
• Use maps to navigate to task site
• Access relevant articles
• Create questionnaires to track task conditions
• Get customer signature and confirmation after you have completed the work

Execute work order tasks

After the dispatcher dispatches work order tasks, the ServiceNow system automatically sends the tasks to the assigned agent's queue.

The agent has the option to accept or reject the work order task. If the agent accepts the task, the task state automatically changes to Accepted. If the agent who accepts assignment of a work order task does not yet have a personal stockroom, the system creates a personal stockroom automatically with the name Personal stockroom - <first and last name of agent>. If the wm_agent role is ever removed from the user, the personal stockroom is deleted.

The examples in this page illustrate the use of tasks with work orders; however, tasks can be used with any. The ServiceNow system provides an agent with these methods for managing work order tasks:

• Agent task map: The agent task map displays an agent's location and the location of that agent's tasks for the day in a familiar Google Map. The agent map is available when the Service Management Geolocation plugin (com.snc.service_management.geolocation) is active. This map allows for the general scheduling of tasks and provides estimates of an agent's location. Precise agent locations and some automatic features are available when your organization purchases a Google Maps API for Business key and enters it into the system.

• Task queue: If the task map is not available, an agent can manage assigned tasks and their schedule directly from a queue accessed from the application navigator.

Accept or reject a work order task

Accept a work order task if you are ready to work on that task. Reject the task and provide a reason if you cannot work on that task.

Role required: wm_agent

The task must be in Assigned state for an agent to accept or reject the task. Dispatchers can view the task rejection history in the work order tasks.

1. Navigate to Field Service > Agent > Assigned to me.
   You can view a list of all work order tasks assigned to you.
2. Open a work order task.
3. Accept or reject the task.

<table>
<thead>
<tr>
<th>To</th>
<th>Do the following</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept the task</td>
<td>Click Accept. The work order task moves to Accepted state.</td>
</tr>
</tbody>
</table>
To do the following

Reject the task.

1. Click **Reject**.
   The Reject Task pop-up appears.

2. From the **Reason** list, select a reason for the rejecting the task.
   Available options:
   - Schedule conflict – you have another appointment scheduled for the same time window.
   - Skills mismatch – the skills you have do not match the skills required to work on the task.
   - Location mismatch – the location specified for the task is not the location you could work.
   - Duplicate task – another record of this task exists.
   - Parts unavailable – you do not have the required parts to work on this task.
   - Customer unavailable – customer is not available for the scheduled task time-window.
   - Other – any reason other than the ones listed earlier.

3. In the **Details** field, enter additional information for rejecting the task.

4. Click **OK**.
   The reason for rejecting the task is populated in the work notes and the task moves to **Pending Dispatch** state.

**Note:** The rejected task is not dynamically scheduled to the same agent for the next 24 hours. This is controlled by the `work.management.rejected.technician.duration` system property. However, as an agent you can manually assign the work order task back to yourself or as a dispatcher you can assign it back to the same agent.

---

**Task dependencies**

When an agent accepts a downstream task that is dependent on another task, the downstream task can be started before the upstream task is complete.

When the agent clicks **Start Work**, a message states that open task dependencies exist and asks if the agent wants to start work. If the agent clicks **OK**, the task state changes to **Work in Progress**. If the agent clicks **Cancel**, no change occurs and the task remains in the **Accepted** state.

**Execute a task from the agent map**

As an agent, you can accept or reject tasks assigned to you using features in the agent task map, or take on unassigned tasks near you if your schedule permits.

The Service Management Geolocation plugin (com.snc.service_management.geolocation) must be enabled and the Google Maps Platform key must be entered into the appropriate **Google Maps property**.

Role required: wm_agent
You can optimize task routes in the map to have the system determine the most efficient route. Initial routing shows the sequence established when the dispatcher assigned the tasks. Route optimization uses your location information and creates an ideal schedule based on variables such as location, task duration, travel time, or any task windows. The agent map, which displays color-coded icons for the tasks and your current location, is updated as you complete each task.

To access the map, navigate to Field Service > Agent > My Map. Tasks that are in one of these states are visible on the map:

- Assigned
- Accepted
- Pending Dispatch
- Work in Progress

**Agent map symbols**

The agent map shows your location, the tasks assigned to you for the current day, tasks that have been accepted, and other tasks that have not yet been assigned.

Task icons are color coded and display automatic sequence numbers indicating the order in which the dispatcher has scheduled the tasks initially.

**Task icons**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Agent Icon" /></td>
<td>Agent</td>
<td>Your current location on the map.</td>
</tr>
<tr>
<td><img src="image" alt="Assigned Icon" /></td>
<td>Assigned</td>
<td>Assigned tasks that have not yet been accepted.</td>
</tr>
<tr>
<td><img src="image" alt="Accepted Icon" /></td>
<td>Accepted</td>
<td>Tasks that have been accepted or tasks that are in progress.</td>
</tr>
<tr>
<td><img src="image" alt="Unassigned Icon" /></td>
<td>Unassigned</td>
<td>Unassigned tasks that are awaiting dispatch. These tasks are available for an agent to accept to fill gaps in a schedule.</td>
</tr>
<tr>
<td><img src="image" alt="Multiple Tasks Icon" /></td>
<td>Multiple tasks</td>
<td>Multiple tasks clustered by proximity. the ServiceNow system gathers tasks together by proximity into a cluster as you increase the altitude of the map view. Counters in the cluster icon indicate the number of tasks rolled up as the perspective changes.</td>
</tr>
</tbody>
</table>
Agent map

Agent location

The Field Service Management application calculates your location from a set of geographical coordinates. These coordinates are updated at a predefined interval based on geolocation data returned by your mobile device. Your position at the beginning of the day might be calculated from mobile device coordinates or from the location of the home office, whichever is more current. If you are starting the day completing a task that carried over from the previous day, the system uses the location of that task as your starting position. The system uses your precise location throughout the day to calculate accurate travel times, route your tasks automatically, and schedule fixed time windows.

Note: The actions such as start travel, start work, pause work, resume work, close complete, and close incomplete performed either from the desktop application or mobile application generate an entry in the geolocation history table with the following additional details:

• Action description
• Work order task number
Manage tasks on the map

The icons in the task map mark the location of tasks assigned to you and any unassigned tasks in your area.

You can manage your tasks and routing from the map, filter the view, and accept unassigned tasks.

View work order task information

Click the task icon on the agent map to view task details.

A summary pop-up window shows the task number and description, the name of the agent if one is assigned to the task, and other important information.

Click a cluster icon to display a summary pop-up listing the number of tasks at that location by State. Click any entry to display detailed summaries for all the tasks in a pane beside the map. You can access individual task records from this list.

The following information is included in a summary pop-up window for a single task and in the summary pane for a task cluster:

- SLA: the time remaining on an SLA, if one is affected by this task.
- Priority: the task priority by number, with 1 being the highest priority and 5 being the lowest.
- Skills needed: the agent skills needed to perform the work.
- Parts needed: the parts needed to perform the work.

Click the task number link in the summary pop-up or in the summary pane to display the task in a record pop-up. Use the controls under Related Links to accept or reject a task and to update your work status by starting or completing a task.
Agent map with task details

*Customize the display of task information on the dispatch map*

Configure the agent map to display assigned and unassigned tasks for an agent on the specified date. Display agent location and routing numbers for tasks dispatched on that day.

Role required: wm_agent

1. Navigate to **Field Service > Agent > My Map**
2. Click **Edit**.
3. Change the filter settings as needed.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Displays the current date. Select a different date to view task assignments for that day.</td>
</tr>
<tr>
<td>Option</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Show my location</td>
<td>Displays your current location on the map with an agent location icon. Clear the check box to remove this icon from the map. If the system cannot locate you automatically by mobile device, it uses the location of a continuing task or the home office.</td>
</tr>
<tr>
<td>Show routing numbers</td>
<td>Displays the routing numbers for the tasks dispatched for the date selected in the calendar. Clear the check box to hide the routing numbers.</td>
</tr>
<tr>
<td>Assigned</td>
<td>Displays all assigned tasks for the selected date. Clear the checkbox to hide assigned tasks.</td>
</tr>
<tr>
<td>Unassigned</td>
<td>Displays all unassigned tasks for the selected date. Clear the checkbox to hide unassigned tasks.</td>
</tr>
</tbody>
</table>

4. Do one of the following:
   - To apply the changes to the configuration, click **Apply**.
   - To cancel the changes made to the configuration, click **Cancel**.
   - To optimize the agent’s task route, click **Optimize Route**.

*Route optimization*

Optimizing task routes reorders agent tasks for the day as efficiently as possible using either geolocation or straight-line estimation.

An agent task route is optimized when an agent has fewer than 15 tasks assigned to be completed in a day. Route optimization takes all those tasks and the agent travel time into consideration and then reorders the tasks to provide the optimal route to execute those tasks. If an agent has more than 15 tasks to be executed in a day, the system auto-routes the tasks based on the next closest location where the agent has to execute the task.

**Note:** If an agent has more than 200 tasks assigned to be completed in a day, auto-routing will fail and the system displays a message describing the error.

The system takes the settings for the following properties into consideration to evaluate auto-routing or for optimizing the task route for an agent:

- Amount of time (in minutes) to add between the end of a task and the travel start of the next.
- Allow toll roads to be used.
- Use Google Maps API or straight-line estimates to calculate travel time and distance. This value is set in **Route Optimization** in the **Property for calculating estimated travel time and distance** setting.

   If you use Google Map API, which uses Google route data for travel time and distance estimates, you must set the Google Maps API key or the client ID to use Google Maps API for Business. For more information, see **Set up Google Maps API**. If straight-line estimate is used, the system uses built-in time and distance estimates based on latitude and longitude.

- Default start time for all work agents if no schedule is specified.
- Default end time for all work agents if no schedule is specified.
- Percentage to add to all travel times.
- Percentage to add to rush hour travel times.
- Morning rush hour span.
- Evening rush hour span.

If the values for these properties are defined in the **Field Service Management application properties**, those values are used. If not, the values for the properties defined in the **Geolocation application properties** are used. If no values are defined in either of these application property settings, the default value is used.
The system also takes the agent schedule, *agent travel time outside of work hours*, and agent time-off into consideration to optimize task routes.

If a task cannot be optimized because the task location is impractical or missing or if the task window cannot be scheduled, the system displays a message with a reason that the task could not be routed. It then returns the task to the **Pending Dispatch** state.

**Automatic execution of route optimization**

You can set a scheduled job to optimize agent task routes for a given day. The **Optimize Task Routing** scheduled job is inactive by default. When you set the **Active** field for this scheduled job to true, the job runs everyday at 3:00 am system time. The scheduled job considers the tasks assigned to or accepted by agents on the current date and automatically optimizes the routes for those tasks.

**Start work**

What to do when you are ready to begin travelling to the first task.

1. Open the task record from the map, and click **Start Travel** under **Related Links**.
   
   The system enters the time in the **Actual travel start** field.

2. When you arrive at the job site and begin the task, open the task record, and click **Start Work** under **Related Links**.
   
   The system enters the time in the **Actual work start** field.

3. When the work is done, open the task record and add a work note describing what you did to complete the task.

4. Click **Close Complete** under **Related Links**.

   The system redraws the map and removes the icon for the completed task. The next accepted task in the route is relabeled as number 1. The agent icon appears at the site of the last location update.

![Agent map with next task](image-url)
View task information on the classic mobile UI map

The agent map on the classic mobile interface displays the agent’s location, tasks assigned to the agent for the current day, accepted tasks, and unassigned tasks.

Role required: wm_agent

Use the filter to change the items visible on the agent map. Show and hide tasks or routing sequence numbers, change the location, or change the date to view the tasks for a different day.

1. **In the mobile interface, navigate to Field Service > My Map.**
2. **Click the gear icon in the map header to display the filter settings.**
3. **Change the filter settings as needed.**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>Displays the current date. Click the arrow to display the calendar and select a different date.</td>
</tr>
<tr>
<td>Show Assigned Tasks</td>
<td>All assigned tasks are displayed by default. Disable the switch to hide assigned tasks.</td>
</tr>
<tr>
<td>Show My Location</td>
<td>Displays your current position on the map with the agent location icon. Disable the switch to remove this icon from the map.</td>
</tr>
<tr>
<td></td>
<td>If the system cannot locate you automatically by mobile device, it uses the location of a continuing task or the home office.</td>
</tr>
<tr>
<td>Show Routing Numbers</td>
<td>Displays the routing numbers on tasks dispatched for the date selected in the calendar. Disable the switch to hide the routing numbers.</td>
</tr>
<tr>
<td>Show Unassigned Tasks</td>
<td>All unassigned tasks are displayed by default. Disable the switch to hide unassigned tasks.</td>
</tr>
</tbody>
</table>

4. **Click Save and then click the left arrow to return to the map.**

Pick up an unassigned task

Agents can assign themselves nearby unassigned tasks directly from the agent task map.

Agents can assign themselves nearby unassigned tasks directly from the agent task map. This might be necessary to complete a schedule when another task is cancelled or a fixed task window cannot be met. Make sure the task’s scheduled start time and duration fit into your route and that the travel time is realistic. If the task does not fit into the available time slot in your schedule, the ServiceNow system blocks the assignment and displays a warning.

1. To pick up an unassigned task, click a red icon near you and open the task record.
2. **Under Related Links, click Assign to me.** If the task can be assigned to you, one of the following occurs:
   - If you belong to more than one assignment group, you are asked to select a group. Only the assignment groups that belong to the dispatch group of the task are displayed.
   - If you belong to only one assignment group, the system assigns the task to you and enters your assignment group in the Work Order Task form.
3. **If the assignment is allowed, the task state changes to Accepted, and the icon on the map turns green.** In the task form, the Start Travel and Start Work links appear under Related Links.

Execute a task from the queue

If the agent task map is not used in your organization, you can manage assigned tasks from the task queue.

1. **Navigate to Field Service > Agent > Assigned to me.**
2. Open a work order task.
3. When parts are delivered or picked up from a stockroom, acknowledge the delivery.
   a) In the Transfer Orders related list, open the transfer order.
   b) In the Transfer Order form, open a record from the Transfer Order Lines related list.
   c) Click Receive to acknowledge delivery from an external stockroom, or click Deliver if the part is located in your personal stockroom.

![Transfer order lines form](image)

4. Click Start Travel when you begin travel to the remote site.
   This is mandatory if the Scheduled travel start field is completed.
   
   **Note:** When the agent clicks Start Travel, the customer receives a notification email and SMS that an agent is on his way.

5. Click Start Work when you begin working on the task.
6. When work is complete, record any asset usage.
7. Add a description of the work you did to the Work notes field.
   This is required to close the task.
8. Close the task.
Pick up an asset

Agents can view a consolidated list, grouped by stockroom, of all their assets that are waiting to be picked up.

The agents can physically pick up the assets and then record them as delivered. The list contains transfer order lines in the Received or In Transit stage with a work order task that meets the following criteria:

- Assigned to the agent
- In the Accepted or Work in Progress state


The Transfer Order Lines list is displayed in PickUpList view.

2. Optional: Click text in any column to obtain more information about the transfer order, the transfer order line, or the asset.

3. After physically picking up the items, select a check box next to the transfer order column, then go to the Actions choice list and select Deliver.

Use drop off lists

Agents use drop off lists to return items that are in their personal stockroom.

An item may need to be returned because it is defective or not needed to complete a work order task. Agents can create a drop off list of items to send the items to a different stockroom using a transfer order. Agents also have the option to physically drop items off at a stockroom and note the drop off in the Field Service Management application.

Agents using the mobile interface can also ship drop off lists to a remote location using the Prepare for shipment and Ship buttons.

An asset must meet the following criteria to be added to an agent's drop off list:

- Located in the agent's personal stockroom
- Drop Off check box selected on the transfer order record
- One of the following:
  - Substate is Defective
Create a drop off list

Agents can create a drop off list of assets at any time.

As an example, the agent might have several assets that were removed when completing a work order task and all of the assets need to be returned to a different stockroom.

After creating a drop-off list, there are two ways to add items to the list.

- Use the Add Defective button to add items that are in their personal stockroom with a substate of Defective. For more information about defective items, see Recording Asset Usage.
- Create a transfer order line for an item in the personal stockroom.

The item cannot have a substate of Reserved or Defective, and cannot already be included on another drop off list.

1. Navigate to Field Service > Pick Up/Drop Off > Create Drop Off List.
2. Select a To stockroom.
3. Click Submit.
4. Do one or both of the following:
   - Click Add Defective to add all defective items in your personal stockroom to the drop off list.
   - In the Transfer Order Lines related list, click New, select a Model, and click Submit.

Only items in an agent's personal stockroom that are not reserved, not defective, and not included on another drop off list are available for selection.

View a drop off list

Agents can view a consolidated list, grouped by stockroom, of all items that have been added to drop off lists by all agents.

1. Navigate to Field Service > Pick Up/Drop Off > All Drop Off Lists.
2. Expand a group by clicking the arrow beside the group name.

Drop off an asset

Agents can physically drop assets off at a stockroom.

If a dropped-off item was not used, it is automatically placed in In Stock - Available state. If a dropped off item is defective, it is automatically placed in In Stock - Defective state.

1. Navigate to Field Service > Pick Up/Drop Off > My Drop Off List.

   The Transfer Order Lines list is displayed in DropOffList view.

2. Optional: Click text in any column to obtain more information about, for example, the transfer order or stockrooms.

3. After physically dropping off the items, select the check box beside the item, then go to the Actions choice list and select Drop Off.
Drop off an asset

Record asset usage

The Field Service Management application tracks the consumable and non-consumable parts that are used or changed during the execution of work order tasks.

The Asset Usages related list on the Work Order Task form displays the assets that are used during the execution of a task and also any existing assets that are removed from the task location.

The possible statuses of an asset are listed in the following table.

Asset status settings

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used</td>
<td>When an agent records the use of an asset, the asset is added to the Asset Usages related list with a status of Used. Non-consumable assets are marked as being In Use and assigned to the caller identified on the work order. Consumable assets are marked as Consumed.</td>
</tr>
<tr>
<td>Not used</td>
<td>When a transfer order line is delivered to an agent, a new asset usage record is created with a status of Not Used. If the agent does not use the asset and the work order task is closed, the asset usage record remains Not Used. The asset is marked as In Stock Available in the agent’s personal stockroom.</td>
</tr>
<tr>
<td>Removed</td>
<td>When an agent records the removal of an asset, the asset is added to the Asset Usages related list with a status of Removed. If an asset is removed because it is not working, it should be marked as Defective.</td>
</tr>
</tbody>
</table>
Record the removal of an asset from a task location

If you remove an existing asset from a task location during the execution of a task, record the asset removal.

Role required: wm_agent

1. Navigate to Field Service > Agent > Assigned to me.
2. Open a work order task.
3. In the Asset Usages related list, click Remove Asset to display the Asset Usage form.
   The Service order task field displays the work order task number and the Status of the asset is set to Removed.
4. Select a model in the Model field.
   The Quantity and Asset fields are enabled or disabled depending on the selection in the Model field.
5. Enter the quantity or specific asset removed depending on whether the selected model is consumable.
   • If the selected model is consumable, enter the quantity that was removed in the Quantity field.
   • If the selected model is non-consumable, select the specific asset listed in the Asset field.
6. Click Submit.
   The removed asset is added to the Asset Usages related list.

Record the assets used during a work task

Record any assets you use during the execution of a task.

Role required: wm_agent

1. Navigate to Field Service > Agent > Assigned to me.
2. Open a work order task.
3. In the Asset Usages related list, click Use Asset to display the Asset Usage form.
   The Service order task field displays the work order task number and the Status of the asset is set to Used.
4. Select the model of the asset in the Model field.
   If the selected model is a consumable, the Asset field becomes read-only.
5. Enter the quantity or specific asset removed depending on whether the selected model is consumable.
   • If the selected model is consumable, enter the quantity that was removed in the Quantity field.
   • If the selected model is non-consumable, select the specific asset listed in the Asset field.
6. Click Submit.
   The asset that was used is added to the Asset Usages related list.

Record an incidental expense

Record incidental expenses associated with your business travel through the Field Service application to execute work order tasks.

Log incidentals to manage your expenses such as car rental cost, mileage, and vendor costs that you spend to execute your work order task at any point during the task life cycle. You can attach a receipt for a logged incidental.

For example, field service administrators might create an incidental in the Pending state before an agent begins work, based on an anticipated expense. Agents might create incidentals in the Incurred state as expenses arise during work.

Role required: wm_admin or wm_agent.

1. Navigate to Field Service > Work Order > All Work Order Tasks.
2. Open a work order task for which you want to log incidentals.
3. In the Service Management Incidentals related list, click New.
4. Fill in the fields as described in the following table.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service order task</td>
<td>[Read-only] Task from which the incidental was created.</td>
</tr>
<tr>
<td>Type</td>
<td>Select incidental type:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Mileage</strong> for travelling to and from the task site.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Car Rental</strong> for renting the car.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Vendor Cost</strong> for all vendor-related costs on a</td>
</tr>
<tr>
<td></td>
<td>contract.</td>
</tr>
<tr>
<td>Cost</td>
<td>Total cost of the incidental.</td>
</tr>
<tr>
<td></td>
<td>• From the <strong>Currency</strong> field, select the currency for</td>
</tr>
<tr>
<td></td>
<td>the expense.</td>
</tr>
<tr>
<td></td>
<td>• Enter cost:</td>
</tr>
<tr>
<td></td>
<td>• If the type is <strong>Mileage</strong>, the cost is read-only and</td>
</tr>
<tr>
<td></td>
<td>is automatically calculated by multiplying <strong>Quantity</strong></td>
</tr>
<tr>
<td></td>
<td>and <strong>Cost per mile</strong>.</td>
</tr>
<tr>
<td></td>
<td>• If the type is <strong>Car Rental</strong>, enter the total cost of</td>
</tr>
<tr>
<td></td>
<td>rental expenses.</td>
</tr>
<tr>
<td>Quantity</td>
<td>Number of units for the incidental.</td>
</tr>
<tr>
<td></td>
<td>This field is required if the type is <strong>Mileage</strong>; enter</td>
</tr>
<tr>
<td></td>
<td>the number of miles traveled. This field is hidden if</td>
</tr>
<tr>
<td></td>
<td>the type is <strong>Car Rental</strong>.</td>
</tr>
<tr>
<td>State</td>
<td>Select the status of the expense:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Incurred</strong> when the expense has already occurred</td>
</tr>
<tr>
<td></td>
<td>• <strong>Pending</strong> when the expense has not yet occurred.</td>
</tr>
<tr>
<td>Cost per mile</td>
<td>Average cost of transportation per mile. This field is</td>
</tr>
<tr>
<td></td>
<td>visible only if the type is <strong>Mileage</strong>.</td>
</tr>
<tr>
<td>Description</td>
<td>Helpful information about the incidental expense.</td>
</tr>
</tbody>
</table>

5. Click Submit.

An incidental record is created, the system generates an expense line if the following conditions are met:

- The state is **Incurred**.
- The type is not **None**.
- The cost is greater than zero.

**Note:** The expense line is deleted if any of these conditions change.

Field service administrators and agents can view all incidentals by navigating to **Field Service > Agent > Incidentals**.

**Close a work order task as complete**

Only agents can close work order tasks assigned to them.
If the caller's problem was fixed or resolved, use the **Close Complete** option.

1. Navigate to **Field Service > Agent > Assigned to me.**
2. Open a work order task.
3. Add information to the **Work notes** field. The notes should include a description of the work done and any other helpful information.
4. Optional: Enter a date and time earlier than the current date and time in the **Actual Work End** field.
   
   You cannot add a date and time later than the current date and time.

   If you do not enter a date and time, the ServiceNow system adds the current date and time automatically when you click **Closed Complete.**
5. **Click Close Complete.**
   - The status of all unused parts automatically changes to **In-Stock.**
   - The state of the parent work order automatically changes to **Closed - Complete** if all work order tasks on the work order have a state of **Closed - Complete** or **Canceled.**

The customer receives SMS and email notification that the work order task is completed.

### Close a work order task as incomplete

Close a work order task as incomplete if there is work pending on the task.

Role required: **wm_agent**

1. Navigate to **Field Service > Agent > Assigned to me.**
2. Open a work order task.
3. **Click Close Incomplete.**
   
   The **Close Incomplete** pop-up appears.
4. Do one of the following:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clone the task and create a follow-on task</strong></td>
<td>From the Create a follow on task? list, select Yes.</td>
</tr>
<tr>
<td><strong>Close the work order as incomplete without creating a follow-on task</strong></td>
<td>From the Create a follow on task? list, select No.</td>
</tr>
</tbody>
</table>

5. **In the Reason for the incomplete closure field**, enter a reason for not completing the task. This information is copied to the **Work Notes** field on the work order task form.

6. **Click OK.**

   The status of all unused parts automatically changes to **In-Stock.**

The parent work order state changes based on the following conditions:

<table>
<thead>
<tr>
<th>If</th>
<th>The work order state changes to</th>
</tr>
</thead>
<tbody>
<tr>
<td>All work order tasks are in the <strong>Closed-Complete</strong> or <strong>Canceled</strong> state and at least one work order task is in <strong>Closed-Incomplete</strong> state.</td>
<td><strong>Closed - Incomplete</strong></td>
</tr>
<tr>
<td>Only one work order task is associated with a work order and that task generates a follow-on task, which is in <strong>Draft</strong> state.</td>
<td><strong>Awaiting Qualification</strong></td>
</tr>
<tr>
<td>More than one work order task is associated with a work order and one or more those tasks generate a follow-on task, which is in <strong>Draft</strong> state.</td>
<td><strong>Work in Progress</strong></td>
</tr>
</tbody>
</table>
### Cancel a work order task

The **Cancel Task** option is appropriate if a work order task is no longer necessary or is a duplicate of another work order task.

Work orders and work order tasks cannot be canceled while in **Closed Complete** or **Closed Incomplete** state. When you cancel a work order task, the ServiceNow system automatically:

- Cancels all associated transfer orders if the items have not already shipped. If the items have shipped, the system blocks the cancellation of the task until the parts are delivered.
- Removes all upstream and downstream dependencies.
- Changes the state of the parent work order to **Canceled** if all associated work order tasks are **Canceled**.
- Removes all part requirements without a transfer order line.
- Retains all asset usage information.
- Sends a notification email and SMS to the customer about the cancellation of work order task.

Work order tasks can be canceled by users with these roles:

<table>
<thead>
<tr>
<th>User roles</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiator</td>
<td>Can cancel a work order, which automatically cancels all associated work order tasks.</td>
</tr>
<tr>
<td>Qualifier</td>
<td>Can cancel work orders and work order tasks.</td>
</tr>
<tr>
<td>Dispatcher</td>
<td>Can cancel work orders and work order tasks.</td>
</tr>
<tr>
<td>Agent</td>
<td>Can cancel work order tasks assigned to them.</td>
</tr>
<tr>
<td>Field Service Management Administrator</td>
<td>Can cancel any active work order or work order task at any time.</td>
</tr>
</tbody>
</table>

1. Navigate to **Field Service > Work Order > All Work Orders**.
2. Open a work order.
3. Open a work order task.
4. In **Work notes**, enter a cancellation reason.
5. Click **Cancel Task**. An error message appears if text is not entered into the **Work Notes** field.
   For traceability, auditing, and possible deletion, field service administrators need to know the reason why a work order or work order task was canceled.

The customer receives an SMS and email notification that the work order task is canceled.
Time recording for Field Service Management

Agents record time worked on tasks and activities. Time recorded entries automatically generate time cards and time sheets for approval by managers.

The time recording feature extends the functionality of the Time Card Management application to Field Service Management. Agents can record time worked on tasks from the Work Order Task form and time spent on other activities, such as meetings or training, from the Time Worked form. Time worked entries automatically create time cards for each selected work category. Time cards are automatically included in a weekly time sheet.

The time recording feature also extends the functionality of the Cost Management application to Field Service Management. Managers can view and create rate types and labor rate cards and also view expense lines. Time sheets use labor rate cards to determine costs.

Agents can modify the hours recorded on time cards. Once a time sheet is approved and a time card is processed, the agent can still go back and modify the time worked. The time sheet reverts to the Pending state and new time cards are created. If an agent adds more time worked records to an approved time sheet for the same week, a new time sheet record is created for the current week.

Managers can view time worked records, time cards, and time sheets for agents in their assignment groups, as well as approve and reject time sheets. After a time sheet is approved, the system processes the time cards and uses rate cards based on the time card category to create expense lines.

Time recording plugin

The time recording feature requires the Field Service Management plugin and the Time Recording for Field Service plugin (com.snc.wm_time_recording).

The Time Recording for Field Service plugin activates the Time Card Management (com.snc.time_card) and the Cost Management (com.snc.cost_management) plugins.

User roles

The time recording feature for Field Service Management adds these user roles.

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time card user</td>
<td>Create time worked records, time cards, and time sheets. Users with the wm_agent role inherit the timecard_user role.</td>
</tr>
<tr>
<td>timecard_user</td>
<td>Note: This role restricts access to the time sheets, time cards, and time worked records created by the agent.</td>
</tr>
<tr>
<td>Time card admin</td>
<td>View, approve, and reject time cards and time sheets. Users with the wm_manager role inherit the timecard_admin role.</td>
</tr>
<tr>
<td>timecard_admin</td>
<td>Note: This role restricts access to the time sheets, time cards, and time worked records created by the agents in the groups assigned to the manager.</td>
</tr>
</tbody>
</table>
Time Sheet policy

For users with the wm_agent role, creating time worked records automatically creates or modifies time cards regardless of the setting for the `com.snc.time_card.time_worked` system property. The Time Sheet policy controls this functionality. The system administrator can disable the auto creation of time cards for a specific user with the wm_agent role by creating a separate Time Sheet policy for that user.

Field Service view

The Time Card form and the Time Sheet form have a Field Service view. For users with the wm_agent and wm_manager roles, this view:

- Removes the Generate Time Cards UI action.
- Displays the Time Worked related list on the Time Card form.

Using rate types and labor rate cards

Use rate types and labor rate cards to define different cost rates for different activities recorded by field service agents.

Rate types

When multiple rate types are enabled for Field Service Management, agents can select active rate types when creating time worked entries. Active rate types can be selected in the Rate Type field on:

- Time worked records
- Time cards
- Labor rate cards
- The Worker Portal

The Standard rate type is the default value for the Rate Type field.

The time recording feature provides the following rate types:

- FSM Billable Overtime
- FSM Billable Standard

System administrators can create additional rate types by navigating to Time Sheets > Administration > Rate Types and clicking New.

Labor rate cards

The time recording feature provides the following labor rate cards:

- FSM Rate Card Task Work (Billable)
- FSM Rate Card Task Work OT (Billable)
- FSM Rate Card (Default)

System administrators can create additional labor rate cards using rate types. Navigate to Cost > Costs > Labor Rate Cards and click New.
Enable multiple rate types

To enable multiple rate types for Field Service Management:

1. Navigate to Time Sheets > Administration > Time Sheet Policies.
2. Click the desired time sheet policy. By default, the system uses the Default time sheet policy.
3. Enable the Allow multiple rate types field.
4. Select a Default rate type. The default value for this field is the Standard rate type.
5. Enable the Auto create time card on planned task update field.
6. Enable the Auto fill time card with time worked entries field.
7. Click Update.

Record time worked for a task or activity manually

Agents can record time worked on a work order task as well as time spent on other activities.

Role required: wm_agent

An agent can record time worked directly from a work order task by clicking Record Time on the Work Order Task form. An agent can record time regardless of the work order task state. An agent can also record time spent on other activities from the Time Worked list by creating a new time worked record, recording the time, and selecting a category.

Note: If multiple rate cards are enabled, agents can also select rate types when creating time worked entries.

A time card is created for each category type and work order task. The total hours recorded on each time card are then recorded on the current time sheet in the Time Cards related list.

1. To record time worked for a task or an activity:
   - Navigate to a work order task and click Record Time. This opens a Time Worked form with the Task and User field already populated.
   - Navigate to Time Sheets > My Time Worked and click New. This opens a Time Worked form with the User field already populated.
2. If necessary, select the work order task in the Task field.
3. If necessary, select the Work Date. This field defaults to the current date.
4. Select a Category for the time being recorded.
5. Select a Rate type for the time being recorded.
   When multiple rate types are enabled for Field Service Management, agents can specify multiple rate types for time worked against a task.
6. Fill in the Time worked.
7. Provide any additional information in the Comments field and click Submit.
   The Time Worked form is saved and added to the Time Worked list. If this is the first time worked entry for the selected category, a time card is created for that category and the time worked record is added to the card. If a time card for the category already exists, the time worked record is added to that card.
Pause a work order task

Record a break from a work order task in the Field Service application if you are unable to continue the work for any reason. You can resume the work order task when you start working on it again. The system automatically tracks and calculates the actual time taken to complete the task even though you worked at different intervals.

The system administrator can choose to enable the `work.management.allow.auto.timecard` property so that time cards are automatically created when you start working on a task. The data of the time cards is stored in `[metric_instance]` table and is controlled by `work.management.allow.auto.metric_cleanup` system property.

Role required: `wm_agent`

The work order task must be in the Work in Progress state to pause the timer.

1. Navigate to the work order task that you want to pause.
2. Click **Pause Work**.

   The button toggles to **Resume Work** automatically.
3. Click **Resume Work** when you are ready to work on the activity again.

Each time you pause or resume work on the task, a timestamp is captured in the activity stream and the actual time you worked on the task is automatically calculated. An entry for the time worked is created in the **Time Worked** related list.

Review time recorded for a task

Agents can review the time recorded for work order tasks.

Role required: `wm_agent`

The **Time Worked** related list on the Work Order Task form displays the Time Worked records that have been created for the work order task. From this related list, field service agents can review their recorded time and also delete records.

1. Navigate to the desired work order task.
2. Go to the **Time Worked** related list.

   This list displays the Time Worked records that have been created for this work order task.
3. To view a record, click the **Category**.

Modify or delete time worked entries

Agents can modify and delete existing time worked entries and create new entries after a time sheet has been approved.

Role required: `wm_agent`

An agent can add, modify, or delete time worked entries for an approved time sheet. Adding, modifying, or deleting these entries creates new time cards or updates existing time cards and generates an updated time sheet.

**Note:** Do not manually edit time cards. Instead, edit the original time worked entries, which generates updated time cards and time sheets.

1. To modify or delete a time worked entry:
   - Navigate to the desired work order task, click the **Time Worked** related list, and click the desired entry.
   - Navigate to **Time Sheets > My Time Worked** and click the desired entry.

2. To modify the entry, make changes to the desired fields and click **Update**.
3. To delete the entry, click Delete.

**Review and submit a time sheet**

Agents can review and submit time sheets to managers for review and approval.

Role required: wm_agent

The total hours worked for each category are recorded on the time card and on the time sheet. From the time sheet, you can see total hours by day and by category.

1. Navigate to **Time Sheets > My Time Sheets > Current Time Sheet**.
2. If desired, review the time cards associated with the time sheet in the **Time Cards** list.
3. Click **Submit Time Sheet**.

The time sheet is submitted to the manager for approval. The state of the time sheet changes from **Pending** to **Submitted** and the form becomes read-only.

**Review and approve time sheets**

Managers can review time cards and time sheets for agents in their assignment groups.

Role required: wm_manager

1. Navigate to **Field Service > Manager > Time Sheets - Pending Approval**.
2. Select a time sheet.
3. If necessary, review the time cards associated with this time sheet in the **Time Cards** related list.
4. Click one of the following:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approve</td>
<td>The state of the time sheet and the associated time cards changes to <strong>Approved</strong> and becomes read-only. Time cards for any work order tasks that are in the <strong>Work in process</strong> state are marked as <strong>Processed</strong>. Once the work order task is <strong>Complete</strong>, the time cards are marked as <strong>Approved</strong>.</td>
</tr>
<tr>
<td>Reject</td>
<td>The state of the time sheet and the associated time cards changes to <strong>Rejected</strong>. The field service agent can make changes to the time sheet and submit again for approval.</td>
</tr>
</tbody>
</table>

If rate cards are applicable for the time worked, expense lines are generated as part of the time sheets. Users with the **financial_mgmt_user** role can view these expense lines.

**Use the agent calendar**

Users with the agent calendar user role can add events to their personal calendar and configure the calendar to show or hide different types of events.

**Add an event to the agent calendar**

Users with the agent schedule user role can add events to their personal calendar.

Role required: agent_schedule_user

1. Navigate to your calendar.
   • **Customer Service > My Schedule**
2. Double-click a timeslot or click and drag over a timeslot on the calendar to open the New Event form.
3. Fill in the fields on the New Event form, as necessary.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the event.</td>
</tr>
<tr>
<td>Type</td>
<td>The type of event:</td>
</tr>
<tr>
<td></td>
<td>• Time off</td>
</tr>
<tr>
<td></td>
<td>• Appointment</td>
</tr>
<tr>
<td></td>
<td>• Meeting</td>
</tr>
<tr>
<td></td>
<td>• Phone call</td>
</tr>
<tr>
<td></td>
<td>• Excluded</td>
</tr>
<tr>
<td></td>
<td>• On call</td>
</tr>
<tr>
<td></td>
<td>• Time off - in approval</td>
</tr>
<tr>
<td></td>
<td>• Time off - rejected</td>
</tr>
<tr>
<td>Show as</td>
<td>Show this event on the agent's personal calendar as one of the following:</td>
</tr>
<tr>
<td></td>
<td>• Busy</td>
</tr>
<tr>
<td></td>
<td>• Free</td>
</tr>
<tr>
<td></td>
<td>• Tentative</td>
</tr>
<tr>
<td></td>
<td>• On call</td>
</tr>
<tr>
<td></td>
<td>Select <strong>Busy</strong> to exclude the block of time from agent availability calculations for the auto assignment and the case assignment workbench.</td>
</tr>
<tr>
<td>When</td>
<td>The start date and time of the personal event.</td>
</tr>
<tr>
<td>To</td>
<td>The end date and time of the personal event.</td>
</tr>
<tr>
<td>All day</td>
<td>Enable this check box if the event lasts all day.</td>
</tr>
<tr>
<td>Time zone</td>
<td>[Read only] If an agent has selected a specific time zone in their user profile, that time zone is displayed here and is used as the time zone for this event. Subsequent changes to the <strong>Time zone</strong> field in the user profile do not change the time zone designation for this event.</td>
</tr>
<tr>
<td>Repeats</td>
<td>Create a repeating event by selecting the frequency. Depending on the selection, other fields are required to complete the frequency information.</td>
</tr>
<tr>
<td></td>
<td>• Does not repeat</td>
</tr>
<tr>
<td></td>
<td>• Daily</td>
</tr>
<tr>
<td></td>
<td>• Every Weekday (Mon-Fri)</td>
</tr>
<tr>
<td></td>
<td>• Every Weekend (Sat, Sun)</td>
</tr>
<tr>
<td></td>
<td>• Every Mon, Wed, Fri</td>
</tr>
<tr>
<td></td>
<td>• Every Tue, Thu</td>
</tr>
<tr>
<td></td>
<td>• Weekly</td>
</tr>
<tr>
<td></td>
<td>• Monthly</td>
</tr>
<tr>
<td></td>
<td>• Yearly</td>
</tr>
<tr>
<td>Repeat every</td>
<td>Enter a number for the frequency of the repeated event.</td>
</tr>
</tbody>
</table>
### Repeat on

For weekly events, select a day of the week.

### Monthly type

For monthly events, select one of the following. These selections use the day and date in the **When** field as the basis for repetition.

- Day of the month
- Day of the week
- Last day of the month
- Last week of the month

### Yearly type

For monthly events, select one of the following:

- Day of the year: this selection uses the day and date in the **When** field as the basis for repetition.
- Floating: for this selection, complete the **Float week**, **Float day**, and **Float month** fields.

### Repeat until

Select a date for the end of the repeated event.

### Float week

For a floating yearly repeating event, select the week.

### Float day

For a floating yearly repeating event, select the day.

### Float month

For a floating yearly repeating event, select the month.

### Move an event on the agent calendar

Users with the agent schedule user role can move events on their personal calendar.

**Role required:** agent_schedule_user

1. Navigate to your calendar.

   - **Customer Service > My Schedule**
   - **Field Service > Agent > My Schedule**

2. Use one of the following methods to move an event.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Click an event and drag it to a new day or time</td>
<td>The <strong>When</strong> and <strong>To</strong> fields in the event record are updated with the new information.</td>
</tr>
<tr>
<td>Double-click an event to open the event record</td>
<td>Change the date and time information in the <strong>When</strong> and <strong>To</strong> fields and click <strong>Submit</strong>. The event appears on the calendar in the new location.</td>
</tr>
</tbody>
</table>

### Show or hide event types on the agent calendar

Users with the agent schedule user role can personalize their calendar and show or hide different types of events.

**Role required:** agent_schedule_user

1. Navigate to your calendar.
• Customer Service > My Schedule
• Field Service > Agent > My Schedule

2. Click the configuration icon in the calendar header to display the Schedule Configuration menu.

3. Enable or disable the switches for the different types of events.
   An option is enabled when the switch is moved to the right and appears with a green background.

4. Click the configuration icon again to hide the Schedule Configuration menu.
   The calendar displays the enabled task types.

Monitoring operations in real time

Proactively monitor critical field service trends and track cost allocations with dashboards.

You can:
• Track how proactively issues were identified and reported
• Monitor how well field service resources were utilized
• Analyze the estimate time vs. the actual time it takes to complete tasks
• Allocate, track, and report on expenses for all operations

Use the Field Service Management dashboard

The Field Service Management overview module provides a dispatch map that displays tasks and links to the related task records.

Navigate to Field Service > Overview.

The map view depends on whether or not the Field Service Management Geolocation Demo Data plugin (com.snc.work_management_geolocation.demo) is activated.

The dispatch map view with geolocation enabled groups tasks and agents by proximity and displays related records in pop-up windows on the map.
The dispatch map view without geolocation enabled shows individual tasks by state and displays related records in a separate window.

You can click elements within the reports to obtain more information without leaving the overview page.

Field Service Management Analytics and Reporting Solutions

Analytics and Reporting Solutions contain preconfigured dashboards. These dashboards contain actionable data visualizations that help you improve your business processes and practices.
Use the Performance Analytics widgets on the dashboard to visualize data over time, analyze your business processes, and identify areas of improvement. With Analytics and Reporting Solutions, you can get value from Performance Analytics for your application with minimal setup. You can always create your own objects as well.

**Important:** Set up and test Analytics and Reporting Solutions on a non-production instance before enabling them in production. You can set up Performance Analytics on a non-production instance without a subscription.

**Note:** Analytics and Reporting Solutions provide all the configuration records required to analyze default applications. Customize these records for use in your production environment. For more information, see *Configure Analytics and Reporting Solutions*.

To enable the solution plugin for Field Service Management, an admin navigates to **System Definitions > Plugins** and activates the Performance Analytics - Content Pack - Field Service Management plugin (com.snc.work_management_pa).

Activating this plugin adds the Performance Analytics option to the Field Service menu. Click this option to view the Field Service Performance Analytics homepage, which includes the following reports:

- Percent productive agent time for work order tasks
- Percent utilization of agents for work order task
- Percent actual duration to planned duration for work order tasks
- Average closing time for work orders
- Number of new work orders
- Number of open work orders
- Number of closed work orders

**Note:** If you have Performance Analytics installed, the Field Service Management Performance Analytics plugin (com.snc.work_management_pa) is automatically activated as part of the Field Service Management plugin.

**Integrating with Financial Management**

Customer Service Management and Field Service Management provide an integration with the Financial Management application as well as dashboards and reports.

The Financial Management application enables you to allocate, track, and report on expenses in your organization. When the Financial Management application allocates an expense, it breaks down the expense into detailed amounts of money called allocations. These allocations can be associated with specific segments and accounts for a specific cost model. The integration with Financial Management provides cost allocations for Customer Service Management and Field Service Management.

Use these cost allocations on the Financial Management workbench, which provides financial administrators with a graphical interface to allocate expenses. Access the workbench through the **Cost Transparency > Workbench** module.

**Plugins**

Two different plugins, one for Customer Service Management and one for Field Service Management, enable the integration with Financial Management. These plugins also add dashboards based on cost allocations.

The Performance Analytics - Content Pack - Financial Management for Customer Service plugin includes demo data for FY16: Q1 through FY17: Q2. The demo data includes records with the CSFM prefix, which indicates that the records are for the Customer Service Management integration with Financial Management. Activating the plugin adds these records to the Case (sn_customerservice_case) table.

**Note:** The Performance Analytics - Content Pack - Financial Management for Field Service Management plugin does not include demo data.

**Cost models**

A cost model is a set of rules, methods, and metrics that determines the allocation of expenses. Select cost models on the Data Definitions tab of the Financial Management workbench.

For Customer Service Management, the integration with Financial Management provides these cost models:

- **CSM Allocation Model for Cust Account**: allocates expenses for individual B2B customer accounts.
- **CSM Allocation Model for Channels**: allocates expenses for communication channels.

For Field Service Management, the integration with Financial Management provides this cost model:

- **FSM Allocation Model for Company**: allocates expenses for companies.

**Segment hierarchy**

All accounts in the chart of accounts belong to segments which are structured in a hierarchy. This hierarchy enables the roll-up of expenses from lower-level accounts and segments to higher-level accounts and segments.

- **CSM Allocation Model for Cust Account** uses this segment hierarchy: Assignment Group > Product > Customer Account.
- **CSM Allocation Model for Channels** uses this segment hierarchy: Assignment Group > Product > Channels.
- **FSM Allocation Model for Company** uses this segment hierarchy: Assignment Group > Product > Company.

**Account buckets**

Use account buckets to categorize cleansed expenses before assigning them to accounts and segments. Account buckets can be organized in parent-child relationships so that several child buckets can refer to a single parent bucket.

The Customer Support and Field Service Support account buckets include:

- Facilities
- IT Chargeback
- Payroll and Labor Expenses
- Professional Fees & Services
- Supplies
- Training
- Other expenses
Allocation metrics

Allocation metrics are rules that you can create and use to split an allocation based on dimensions such as:

- Number of Customer Service cases: allocate expenses to a product based on the number of cases closed in a fiscal period.
- Total Customer Service case resolution time: allocate expenses to a product based on the total hours worked on cases closed in a fiscal period.
- Number of Field Service work order tasks: allocates expenses to a product based on the number of work order tasks completed in a fiscal period.
- Total work order completion time: allocates expenses to a product based on the total hours worked on tasks completed in a fiscal period.

For Customer Service Management, the integration with Financial Management provides these allocation metrics:

- CSM Allocate to Assignment Groups by Headcount
- CSM Allocate to Product by # Cases
- CSM Allocate to Product by Case Time Worked Duration
- CSM Rollup from AssgGrp to Product by # Cases
- CSM Rollup from AssgGrp to Product by Case Time Worked Duration
- CSM Rollup from Product to Account by # Cases
- CSM Rollup from Product to Account by Case Time Worked Duration

For Field Service Management, the integration with Financial Management provides these allocation metrics:

- FSM Allocate to Assignment Groups by Headcount
- FSM Allocate to Product by # Work Orders
- FSM Rollup from Product to Company by # Work Orders

User roles

These roles can access the Financial Management workbench (Cost Transparency > Workbench):

- cost_transparency_analyst
- cost_transparency_admin
- financial_mgmt_user
- financial_mgmt_admin

Dashboards and reports

The Performance Analytics - Content Pack - Financial Management for Customer Service and Performance Analytics - Content Pack - Financial Management for Field Service Management plugins provide the following dashboards:

- CSM Financials Dashboard
- FSM Financials Dashboard

Navigate to Performance Analytics > Dashboards and select the desired dashboard from the Dashboard menu.
Mobile experience for Field Service Management

Manage your field service tasks from anywhere using the Field Service Management mobile application. When not connected to the Internet, you can still plan, work on, and complete tasks. Your device will sync information when it next connects.

The Field Service Management mobile application runs on the ServiceNow mobile platform.
Prioritize your work using the Field Service mobile application
- plan your tasks
- plan your schedule
- Start work

Find the quickest way to complete assigned jobs
- get optimal routes for executing tasks in multiple locations
- navigate to task locations using the task map

Track parts you need using the mobile application
- locate parts using the asset map on the app
- record assets used for a work order task

Get help needed to complete jobs
- call customers from the app if more information is needed
- connect with peers by calling or sending them a text message

Access the information you need using the mobile application
- search through knowledgebase articles for assistance
- know when you team members are on-site and if they are on schedule to complete their tasks

Keep tabs on inventory
- see what parts you have on hand as well as parts available to you from inventory
- transfer parts from available locations to your task location

And when offline, you can still execute assigned tasks, manage assets, track the time stamp of updated tasks, and close work orders and work order tasks. The data for tasks performed offline is stored on your device and synchronized when the device goes online.

Configure the Field Service mobile application

Configure the Field Service mobile application and customize it for field service agents and dispatchers.
Role required: admin
The Field Service Mobile plugin (com.sn_fsm_mobile) enables the Field Service mobile application. This plugin is activated when you activate the Field Service Management (com.snc.work_management) plugin.

1. Navigate to System Applications > Studio.
2. In the Select Application screen, select Field Service Mobile.
3. Customize the application to display the desired widgets and fields on the mobile application instance.

Customizing UI actions for the Field Service mobile application

Make it easier for your end users to get things done faster with the Field Service mobile application by creating custom UI actions.

The configurations for UI action conditions are different in Field Service mobile applications than those in the desktop application. Unlike the desktop application, the UI action conditions on mobile do not execute any database queries and therefore do not take up mobile resources. On the mobile application, instead of performing a system check on whether a Field Service configuration is enabled or disabled, you can explicitly configure the button to be active or inactive.

As an administrator, you can review the mobile UI actions and disable the ones that are not being used to use less mobile resources.

Here's a sample UI action configuration for accepting a work order task.

The Accept button on the desktop application has the following UI action conditions:

```javascript
current.state == 16 && (new StateFlow().validFlow(current, '53d0aea8d7230100fceaa6859e610326', 'manual'));
```

The system checks these state flow conditions:

1. The SMConfiguration record to see if the accept_reject UI action is enabled or disabled using this script:

   ```javascript
   (new sn_sm.SMConfiguration()).isEnabled(current, "accept_reject", false)
   ```

2. If the task has been self-assigned

To modify the UI action for the corresponding button on your mobile device:

1. Do not change the `current.state == 16` condition. It checks for information on the current record.
2. If this condition:

   ```javascript
   (new sn_sm.SMConfiguration()).isEnabled(current, "accept_reject", false)
   ```

   is set to `false`, drop this condition and disable the corresponding mobile UI actions on the mobile application.

3. Set the value for the current tasks assigned to field parameter to the logged in user as shown here:

   ```javascript
   current.assigned_to == gs.getUserID()
   ```

Based on the above example, here is the modified condition for the UI action in the mobile application:

```javascript
current.state == 16 && current.assigned_to == gs.getUserID()
```

Here is another sample configuration for self-assigning a task.
The **Assign to Me** function on the desktop application has the following UI action conditions:

```java
(new SMTask()).canAssignToSelf(current)
```

The `SMTask.canAssignToSelf(task)` script include method performs a system check for these conditions:

1. State of the task
2. Value of the scheduled start time
3. If the task has been self-assigned
4. If the user has the basic and agent roles as defined in the SM Configuration record
5. Whether the user is part of a group handled by the task dispatch group

On the mobile application, the following UI script condition performs a check for the first three conditions listed above:

```java
current.assigned_to != gs.getUserID() && !
(current.expected_start.nil()) && (current.state == 10 ||
current.state == 16)
```

For the fourth condition, you can add a specific role to the **Roles** field.

For the fifth condition, perform the following validation in the `wot_assign_to_me` write-back action item:

```java
if (smTask.canAssignToSelf(wotGR))
    smTask.assignToMe(gs.getUserID(), input.sys_id);
else
    gs.addErrorMessage(gs.getMessage("Not a valid task
assignment."));
```

**Configure UI actions in the mobile application**

Enable or disable the desired UI actions on the mobile device to minimize the load on the mobile resources.

Role required: admin

1. In the desktop application navigator, enter `sys_sg_button_instance.list` and press **Enter**.
2. Set the filter condition on the **Function Instances** form to `[Application] [is] [Field Service Mobile]`.
3. Right-click the **Function** field and select **Group**.
4. Set the **Active** field to **false** for the buttons you want to disable in the Field Service mobile interface.

**Configure scheduled offline caching**

Configure system components to automatically download the cache in the background.

Role required: wm_admin

1. Configure properties to schedule the offline cache download.
   a) In the application navigator, enter `sys_properties.list`.
   b) Set the values for the system properties.
<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| glide.sg.offline.scheduled_download.enabled | Enable scheduled downloading for all Agent app users.  
  - Type: true/false  
  - Default value: false |
| glide.sg.offline.scheduled_download.cachesync_offset | Number of minutes before a user's shift to begin payload generation. The property value is in minutes. |
|          | **Note:** Do not set the value of this property to less than the interval that the Mobile Offline Scheduling job is running. Doing so would prevent offline payloads from being generated. |
| glide.sg.offline_payload.refresh_frequency | The number of minutes before a cached record is flagged for refresh.  
  - Type: Integer  
  - Default value: 240 minutes |
| glide.sg.offline.expiration | The duration when the cache expires on the client. Every time the payload is refreshed, this time gets extended.  
  - Type: Integer  
  - Default value: 48 hours |
|          | **Note:** After 48 hours, the system deletes the data due to a security protocol. |

**Note:** To set additional properties for scheduling offline cache download, see *Configure offline mode behavior*.

c) Click **Update**.

2. Configure the scheduled job to schedule the offline cache download.
   a) Navigate to **System Definition > Scheduled Jobs**.
   b) Click the **Populate Agents Daily Schedule Table** scheduled job and configure the job schedule.
      1. Activate the job by selecting the **Active** check box.
      2. In the **Time** field, enter the time to execute the job.
      3. Set the **Run** field to **Daily**.
   c) Click **Update**.
Get started with the Field Service mobile application

Install and access the Field Service application instance on your mobile application to so that you can manage tasks from your phone or other mobile device.

Download the ServiceNow® mobile application on an iOS platform using the App Store or on an Android platform using Play Store.

Role required: wm_agent or wm_dispatcher

1. Open the mobile application and tap the + sign.
2. Enter the address for your Field Service instance manually or by scanning the QR code.
   • To enter the address manually, type the address for the instance in the Instance address field.
   • To scan the QR code, tap the QR code icon and scan the QR code provided by your administrator.
3. Tap Field Service to get started with managing your field service tasks.

Prioritize your work using the Field Service mobile application

Accept or reject tasks, assign tasks to yourself and plan your schedule for the day, View task details, schedule, and task location, or close a work order task using your mobile application.

Plan tasks using the Field Service mobile application

Plan how to execute tasks assigned to you using the mobile app. You can prioritize by accessing SLAs and call customers directly from the app.

Role required: wm_agent or wm_dispatcher

The task list displays the following information for each work order task:

• The work order task number.
• The short description of the work order task.
• Company for which the work order task is being executed.
• Asset details appear only if there is an asset associated with the work order task.
• Location where the work order task is being executed.
• The work order task state.
• Scheduled start date and time for work order task to be executed.
• For a work order task, if the parent work order has an account, navigate from the work order screen and drill down the account details to see primary contact details, related cases, assets, contracts, and entitlements.

Note: The logged in user must have sn_customerservice.customer_data_viewer role to drill down and view the account details from work order.

• For a work order task, if the parent work order has been initiated from a case, navigate from the work order screen and drill down the see case details.

Note: The logged in user must have case_viewer role to navigate to case screen from work order and sn_customerservice.proxy_contact role to add work notes and comments to the Case Activity Stream.

1. Open ServiceNow® Agent mobile application.
2. Tap My Work.
3. Perform one of the following actions:
3. To edit the task description, tap the Description field, enter a description for the task and click the back icon to go back to the Edit screen.

4. Perform one of the following actions:
   • On an iOS device, tap Submit.
   • On an Android device, tap the send icon.

6. View the SLA for the work order that the task is associated with.
   1. Tap the work order number.
   2. Select the work order to view the details.
   3. Tap Related Lists.
   4. Tap Task SLA.

   The screen displays all SLAs related to the work order.

   Tap the arrow at the top left corner to go back to the work order.

7. Make a call to the caller identified on the work order.
   1. Select the Details tab.
   2. Select the caller identified in the Caller field.
   3. Swipe the caller record to the left and click Call to place the call.

   Tap the arrow at the top left corner to go back to the work order.

**Plan your schedule using the Field Service mobile application**

View tasks to be executed as well as your personal events on a particular day to plan your schedule for that day. Add events for yourself and display your availability to team members.

Role required: wm_agent or wm_dispatcher

You can view your personal events and the schedule for all active tasks assigned to you from the current date. You can also view tasks that have been closed within the last seven days.
The task list displays the following information for each work order task:

- The short description of the work order.
- The work order task number.
- Scheduled start time and end time when the work order task must be executed.

1. ServiceNow® Agent mobile application
2. Tap My Work.
3. Open My Schedule applet.
4. Select a date on the calendar.
   Your personal events and the work order tasks that must be executed for that day displays below the calendar.
5. Select a task to view all details for that task.
6. Add or edit a personal event.
   1. Tap the overflow icon ( ... ) and select Create Event.
   2. Fill in the following fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name of the event.</td>
</tr>
<tr>
<td>Type</td>
<td>Type of schedule entry.</td>
</tr>
<tr>
<td>Show as</td>
<td>Display the event on the schedule as one of the following:</td>
</tr>
<tr>
<td></td>
<td>• Busy</td>
</tr>
<tr>
<td></td>
<td>• Free</td>
</tr>
<tr>
<td></td>
<td>• Tentative</td>
</tr>
<tr>
<td></td>
<td>• On call</td>
</tr>
<tr>
<td>Start time</td>
<td>Start date and time for this event.</td>
</tr>
<tr>
<td>End time</td>
<td>End date and time for this event.</td>
</tr>
<tr>
<td>Repeats</td>
<td>Frequency of the repeated event.</td>
</tr>
<tr>
<td></td>
<td>Available options:</td>
</tr>
<tr>
<td></td>
<td>• None</td>
</tr>
<tr>
<td></td>
<td>• Daily</td>
</tr>
<tr>
<td></td>
<td>• Every Weekday (Mon - Fri)</td>
</tr>
<tr>
<td></td>
<td>• Every Weekend (Sat, Sun)</td>
</tr>
<tr>
<td></td>
<td>• Every Mon, Wed, Fri</td>
</tr>
<tr>
<td></td>
<td>• Every Tue Thu</td>
</tr>
<tr>
<td>Repeat every</td>
<td>How many times this event is repeated.</td>
</tr>
<tr>
<td>Repeat until</td>
<td>End date for this event.</td>
</tr>
</tbody>
</table>

3. Click Submit.

Pick up an unassigned task using the Field Service mobile application

If you are available, you can assign a task to yourself.
The work order task must be in **Pending Dispatch** state.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service mobile application.
2. Tap **My Work**.
3. Open the **My Group Tasks** applet.
4. Select the desired work order task.
5. Tap the overflow icon

(·)

and then select **Assign To Me**.

You receive a notification that the task has been assigned to you.

---

**Accept or reject a work order task on the Field Service mobile application**

Accept a work order task that has been assigned to you. You can reject the task if, for example, you do not have the required skills or you are not available at the required time.

Role required: wm_agent or wm_dispatcher

1. Open ServiceNow® Agent mobile application.
2. Tap **My Work**.
3. Perform one of the following actions:

<table>
<thead>
<tr>
<th>Option</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept a task</td>
<td>Do one of the following:</td>
</tr>
<tr>
<td></td>
<td>• To accept a task from the work order task list, select the desired</td>
</tr>
<tr>
<td></td>
<td>task, swipe to the left and select <strong>Accept</strong>.</td>
</tr>
<tr>
<td></td>
<td>• To accept a task after reviewing the work order task details:</td>
</tr>
<tr>
<td></td>
<td>• Select and open the desired task.</td>
</tr>
<tr>
<td></td>
<td>• Review the task details.</td>
</tr>
<tr>
<td></td>
<td>• Tap <strong>Accept</strong>.</td>
</tr>
</tbody>
</table>

When you accept a task, the work order task state changes to **Accepted**.
<table>
<thead>
<tr>
<th>Option</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reject a task</td>
<td>Do one of the following:</td>
</tr>
<tr>
<td></td>
<td>• To reject a task from the work order task list, select the desired</td>
</tr>
<tr>
<td></td>
<td>task, swipe to the left and select Reject.</td>
</tr>
<tr>
<td></td>
<td>• To reject a task after reviewing the work order task details:</td>
</tr>
<tr>
<td></td>
<td>• Select and open the desired task.</td>
</tr>
<tr>
<td></td>
<td>• Review the task details.</td>
</tr>
<tr>
<td></td>
<td>• Tap Reject.</td>
</tr>
<tr>
<td></td>
<td>The Reject Task pop-up appears.</td>
</tr>
<tr>
<td></td>
<td>• From the Reason list, select a reason for the rejecting the task.</td>
</tr>
<tr>
<td></td>
<td>Available options:</td>
</tr>
<tr>
<td></td>
<td>• Schedule conflict – you have another appointment scheduled for the</td>
</tr>
<tr>
<td></td>
<td>same time window.</td>
</tr>
<tr>
<td></td>
<td>• Skills mismatch – the skills you have do not match the skills</td>
</tr>
<tr>
<td></td>
<td>required to work on the task.</td>
</tr>
<tr>
<td></td>
<td>• Location mismatch – the location specified for the task is not the</td>
</tr>
<tr>
<td></td>
<td>location you could work.</td>
</tr>
<tr>
<td></td>
<td>• Duplicate task – another record of this task exists.</td>
</tr>
<tr>
<td></td>
<td>• Parts unavailable – you do not have the required parts to work on</td>
</tr>
<tr>
<td></td>
<td>this task.</td>
</tr>
<tr>
<td></td>
<td>• Customer unavailable – customer is not available for the scheduled</td>
</tr>
<tr>
<td></td>
<td>task time-window.</td>
</tr>
<tr>
<td></td>
<td>• Other – any reason other than the ones listed earlier.</td>
</tr>
<tr>
<td></td>
<td>• In the Details field, enter additional information for rejecting the</td>
</tr>
<tr>
<td></td>
<td>task.</td>
</tr>
<tr>
<td></td>
<td>• Do one of the following:</td>
</tr>
<tr>
<td></td>
<td>• On an iOS device, tap Submit.</td>
</tr>
<tr>
<td></td>
<td>• On an Android device, tap the done icon.</td>
</tr>
<tr>
<td></td>
<td>The reason for rejecting the task is populated in the work notes and</td>
</tr>
<tr>
<td></td>
<td>the task moves to Pending Dispatch state.</td>
</tr>
</tbody>
</table>

**Note:** The rejected task is not dynamically scheduled to the same agent for the next 24 hours. This is controlled by the work.management.rejected.technician.duration system property. However, as an agent you can manually assign the work order task back to yourself or as a dispatcher you can assign it back to the same agent.

Start the work on a task using the Field Service mobile application.

**Start work on a task using the Field Service mobile application**

You can record both the time you begin traveling to the work site and the time you start the work.

Role required: wm_agent or wm_dispatcher

Administrators can configure the wm_notification.upcoming.task.reminder.minutes.before system property to set the number of minutes before which a task reminder is sent. By default, you will receive a notification 45 minutes before the work start time.
Administrators can enable push notifications in Studio. For information on setting up push notifications, see Mobile push notifications.

1. Navigate to the Field Service mobile application.
2. Tap My Work.
3. In the My Tasks section, click See All.
4. Select the work order task you want to get started with.
   You can only start work on tasks that are in the Accepted state.
5. Perform any of the following actions:

<table>
<thead>
<tr>
<th>Option</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>When you start traveling to the job site</td>
<td>Perform one of the following actions:</td>
</tr>
<tr>
<td>• To record your travel start time using the work order task list, swipe the desired task to the left and select Start Travel.</td>
<td></td>
</tr>
<tr>
<td>• To record your travel start time after you review the work order task details:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Select and open the desired task.</td>
</tr>
<tr>
<td></td>
<td>• Review the task details.</td>
</tr>
<tr>
<td></td>
<td>• Tap Start Travel.</td>
</tr>
</tbody>
</table>

| When you start working on the task | Perform one of the following actions: |
| • To record the work start time using the work order task list, swipe the desired task to the left and select Start Work. |
| • To record the work start time after you review the work order task details: |
| | • Select and open the desired task. |
| | • Review the task details. |
| | • Tap Start Work. |

The work order task state changes to Work In Progress.

Complete a questionnaire on the Field Service mobile application

Complete the answers to questions associated with a work order task and store the responses for future reference. For example, you can create questionnaires for verifying the condition of an equipment before it is repaired.

You can view a questionnaire in a work order task if it is made available for that task. For more information on creating questionnaires and associating them with work orders or work order tasks, see Work order questionnaires

Role required: wm_agent or wm_dispatcher

1. Open ServiceNow® Agent mobile application.
2. Tap My Work.
3. In the My Tasks section, tap See All.
4. Select the work order task for which you want to fill out the questionnaire.
5. Tap the overflow icon
   (   )
and select Questionnaires.
6. On the Pending tab, tap the questionnaire that you are ready to take.
7. Tap Get Started and answer each question in the questionnaire.
8. Perform one of the following actions:
To | Do this
---|---
Save the questionnaire | Tap Save. You can edit the questionnaire at a later time.
Submit the questionnaire | Tap Submit. Once submitted you can view but not make changes to your questionnaire.

The submitted questionnaire appears in the **Completed** tab.

**Find the quickest way to complete assigned jobs**

Get optimal routes to your task locations and use the task map to navigate to the location.

**Optimize a task route using the Field Service mobile application**

You can view the location of tasks assigned to you for the current week and use the app to choose the optimal route to execute the tasks for the current day.

Role required: wm_agent or wm_dispatcher

The work order task displays the following information:

- The work order task number.
- The work order task state.
- The short description of the work order.
- The start date and time that the work order task needs to be executed.

1. Navigate to the Field Service mobile application.
2. Tap **My Work**.
3. Open the **My Task Map** applet.

The work order task records display at the bottom of the map in the order they need to be executed.

4. Swipe a task record to the left or right to view each task for the current week and its location on the map.
5. Perform any of the following actions:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimize the route for executing more than one task in a day</td>
<td>Tap the overflow icon (\vdots) and select <strong>Optimize Today’s Route</strong>.</td>
</tr>
<tr>
<td>Navigate to a task location</td>
<td>Tap the directions icon and select the desired application to get directions to the task location.</td>
</tr>
<tr>
<td>View task details</td>
<td>Select the task.</td>
</tr>
</tbody>
</table>

**Track parts you need using the mobile application**

View your asset inventory and locate parts you need for completing a work order task.

**Locate parts to complete tasks using the Field Service mobile application**

Identify assets in your personal stock room and create work orders for missing assets. Locate parts using the asset map.

Role required: wm_agent or wm_dispatcher

1. Open ServiceNow® Agent mobile application.
2. Tap **Inventory**.
3. Perform one of the following actions:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Search Inventory</strong></td>
<td>Enter a keyword to search for assets and parts.</td>
</tr>
<tr>
<td><strong>View assets in your personal stock room</strong></td>
<td>Tap <strong>My Inventory</strong>.</td>
</tr>
</tbody>
</table>

**Search a part to complete a task**

1. Tap **Available Parts**.
2. Tap **Model**.
3. Search for and select the part model.
4. In the **Radius** field, enter the radius in miles to search the parts within the specified distance.

**Note:** The system uses the current location of the agent to determine source location and displays the search results within the specified radius.

5. (Optional) To view substitutes of the selected part model, select **Search for substitutes**.
6. Perform one of the following actions:
   - On an iOS device, tap **Submit**.
   - On an Android device, tap the send icon.

   Swipe each asset record displayed below the map to the left or the right to see the location of the selected part. You can tap the directions icon and select the desired asset to get directions to the asset location.

**Create a work order for an asset**

Tap **Asset Lookup** and **view or create work orders for an asset**.

---

**Analyze all work orders on an asset using the Field Service mobile application**

Scan an asset to view its work history and upcoming work orders. You can also create a work order for an asset.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service mobile application.
2. Tap **Inventory**.
3. Tap **Asset Lookup**.
4. Tap the barcode icon and scan the asset.
5. Tap the asset record.
6. Do one of the following:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>View all work orders related to this asset</strong></td>
<td>• Tap <strong>Related List</strong>.</td>
</tr>
<tr>
<td></td>
<td>• You can perform the following actions:</td>
</tr>
<tr>
<td></td>
<td>• To view all completed work orders, click <strong>Completed Work Orders</strong>.</td>
</tr>
<tr>
<td></td>
<td>• To view all upcoming work orders, click <strong>Upcoming Work Orders</strong>.</td>
</tr>
</tbody>
</table>
Create a work order for this asset

Do the following:

1. Tap the overflow icon
   
   (   
   and select Create Work Order

2. Tap Short description

3. Enter a short description for the work order and click Done.

4. Click Submit.

The work order gets qualified automatically if it requires qualification; if not, the work order state changes to Ready to dispatch. For more information, see Qualifying work orders.

Record assets used for a work order task using the Field Service mobile application

Track assets used to execute a work order task or assets removed from a task location when a task is executed. The work order task must be in Accepted or Work in Progress state.

When you record asset usage:

- The Use Part screen displays assets in the Reserved Part and Available Part list in your inventory and shows the state as In Stock and the sub state as Reserved and Available.
- The Remove Part list displays the assets for all companies and locations for the work order or work order tasks you are working on where the state of the part is In Stock and the sub state is Defective.

Role required: wm_agent or wm_dispatcher

1. Open ServiceNow® Agent mobile application.

2. Tap My Work.

3. In the My Tasks section, tap See All.

4. Select the work order task for which you want to track assets.

   The Asset field of the work order task inherit asset details from its parent work order. If you add an asset to a work order, all its work order tasks are updated with the same asset details.

5. Do one of the following:

   • To record an asset usage, tap Use Part.
   • To record an asset removal, from the overflow icon, select Remove Part.

6. Record the usage or removal of the asset.
### Record asset usage

Do one of the following:

- To manually record the asset usage, select the desired part from your inventory, swipe to the left, and select **Use Part**.
- To record the asset usage by scanning the asset tag:
  1. Select the desired part record.
  2. Select the overflow icon
     - and select **Scan Part**.
  3. Select **Scan Asset Tag**.
  4. Point the viewfinder rectangle on a bar code to scan the asset. The bar code digits are automatically recorded in the scanner.
  5. Tap the done icon to accept the scanned bar code.
  6. Tap the back icon to go back to the **Use Part** screen.

The asset is added to the **Asset Usages** related list and the state for the part changes to **In Use**.

### Record asset removal

Do one of the following:

- To manually record an asset removal, swipe the part record to the left and select **Remove Part**.
- To record the asset removal by scanning the asset tag:
  1. Select the desired part.
  2. Tap the overflow icon
     - ( )
     - and then select **Scan Part**.
  3. Select **Scan Asset Tag**.
  4. Point the viewfinder rectangle on a bar code to scan the asset. The bar code digits are automatically recorded in the scanner.
  5. Tap the done icon to accept the scanned bar code.
  6. Tap the back icon to go back to the **Remove Part** screen.

The asset is removed from the **Asset Usages** related list and the state for the part changes to **In Stock** and the sub state to **Defective**.

### Get help needed to complete jobs

Connect with your customers or peers using the mobile app to get more information when you are at a task location.

### Collaborate and resolve issues in real time using the chat channel on your mobile app

Communicate with other users in real time to collaborate and resolve issues using the chat channel on the Field Service mobile application.

Role required: **wm_agent** or **wm_dispatcher**
If you receive a message on chat when you are not available to view the message, you will receive a notification reminding you of the message. You can click on that message to open the chat window and continue the chat conversation.

1. Navigate to the Field Service mobile application.
2. Click the chat icon.
3. Click the + button to select and add an agent you want to connect with. You can add multiple agents to start a group chat.
4. In the Message dialog box, enter a message and click Enter in android or Send in iOS to start the dialog. To end the conversation, click X in android and Return in iOS.

Access the information you need using the mobile application

Search relevant information from knowledge articles and see when your team members are on-site and if they are on schedule.

Access knowledge articles relevant to your work order tasks on the mobile app

Search through articles from your organization's knowledge base to find helpful information relevant to a work order task assigned to you.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service mobile application.
2. Perform one of the following actions:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
</table>
| View knowledge articles for a work order task assigned to you | 1. Tap My Work.  
2. In the My Tasks, tap See All.  
3. Select and open the desired task.  
4. Tap the Overflow icon ( ) and then select View Knowledge. |
| Search knowledge articles | Do one of the following:  
1. Tap Articles.  
2. In the search bar, type the text relevant to the search. |

The application uses the task short description to search all knowledge bases and returns articles based on that search.

For more information on accessing knowledge articles, see Now Mobile for Knowledge Management.
Access information about your team on the Field Service mobile application

Know when your team members are on-site working on a task and if they are on schedule to complete their tasks. You can connect with them by calling or sending a text message.

Role required: wm_agent or wm_dispatcher

1. Open ServiceNow® Agent mobile application.
2. In the footer navigation bar, tap More and go to My Team.
3. Tap the desired team and view the group members.
   The agent's email, address, contact number, current schedule status, location are displayed.
4. Connect with a team member.

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Place a call</td>
<td>Do one of the following:</td>
</tr>
<tr>
<td></td>
<td>• Select the member, swipe to the left, and tap Call Mobile.</td>
</tr>
<tr>
<td></td>
<td>• Open the member profile, tap the mobile number, and select Dial number.</td>
</tr>
<tr>
<td>Send a text message</td>
<td>1. Open the member profile.</td>
</tr>
<tr>
<td></td>
<td>2. Tap the mobile number.</td>
</tr>
<tr>
<td></td>
<td>3. Select Send SMS and send your message through one of the available messaging options.</td>
</tr>
</tbody>
</table>

Keep tabs on inventory

Track parts available in your inventory or transfer parts from an available location.

Create a part requirement using the Field Service mobile application

Create a part requirement if you cannot find the necessary parts to work on a task.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service mobile application.
2. Tap My Work.
3. In the My Tasks section, tap See All.
4. Select the work order task that does not have the necessary parts to complete the task.
5. Tap the overflow icon
   (·)
   and then select Create Part Requirement.
6. Tap Model.
7. Select a part model.
8. (optional) To view substitutes of the selected part model, select Search for substitutes.
9. In the Required quantity field, enter the total quantity of the parts required to complete the task.
10. In the Required by date field, enter the date by which all parts should be delivered.
11. Enable the Mandatory option to specify the parts required to perform the work order task.
12. Perform one of the following actions:
   • On an iOS device, tap Submit.
   • On an Android device, tap the send icon.
13. Tap the back icon to go back to the task.

**Transfer parts from available locations to your location**

Find a part that you need to complete a work order task. Request a part transfer from an available location to your stockroom.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service mobile application.
2. Tap **Inventory**.
3. Perform one of the following actions:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>View all parts</td>
<td>In the <strong>My Part Requirements</strong> section, tap <strong>See All</strong>.</td>
</tr>
<tr>
<td>View parts relevant to a work order</td>
<td>Do the following:</td>
</tr>
<tr>
<td></td>
<td>1. Tap <strong>My Work</strong>.</td>
</tr>
<tr>
<td></td>
<td>2. In the <strong>My Tasks</strong> section, tap <strong>See All</strong>.</td>
</tr>
<tr>
<td></td>
<td>3. Select the work order task for which you want to find the part.</td>
</tr>
<tr>
<td></td>
<td>4. Select <strong>Related Lists</strong>.</td>
</tr>
<tr>
<td></td>
<td>5. Select <strong>Part Requirements</strong>.</td>
</tr>
</tbody>
</table>

4. Find a part.
   a) Select a part requirement.
      You can select the **Service order task** field to view the task details.
   b) Select **Find Part**.
   c) Optional: To view location of parts most relevant to you, select the desired items from the following fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset tag</td>
<td>Alphanumeric information assigned by your organization to help track the asset.</td>
</tr>
<tr>
<td>Model</td>
<td>Specific product model for this asset.</td>
</tr>
<tr>
<td>Search for substitutes</td>
<td>The substitute parts matching the product model appear in the search results.</td>
</tr>
<tr>
<td>Quantity</td>
<td>Number of items this asset represents.</td>
</tr>
<tr>
<td>Stockroom</td>
<td>Current stockroom in which the asset is physically located.</td>
</tr>
</tbody>
</table>

   d) Click **Done**.
      All available parts matched with the specified search criteria display on the map.

5. Swipe each part displayed below the map to the left or the right to see the location of the selected part.

6. Source a part.
   a) Select the part on the asset map.
   b) Tap **Source Part** and complete the transfer order.
Pick up a part to complete tasks using the mobile app

When you are at a task site and need a missing part to complete your job, you can pick up the part by transferring it from an available stockroom.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service Mobile application.
2. Tap Part Transfers.
4. Tap a part for pick up, swipe to the left and select Confirm pickup.
   The sourcing stages for the part appears. If the part is in Received stage, you can confirm pick up.
5. Click Confirm pickup.
   The sourcing stage moves to Delivered and the part is added to your inventory and is marked as available.

Track the parts for drop-off using the mobile app

You can view the parts that you have scheduled for drop off from your personal stockroom to another stockroom.

Role required: wm_agent or wm_dispatcher

The transfer order line for drop-off must be in Draft or Requested state. For more information on transfer order line stages, refer to Transfer orders for Asset Management.

1. Navigate to the Field Service Mobile application.
2. Tap Part Transfers.
3. Tap Drop off.
   You can view the list of parts that you have scheduled for drop off.
   For more information on dropping off an asset, refer to Drop off an asset.

Move defective assets through the transfer process using the mobile app

Add defective parts from your stockroom to the drop-off list. Generate transfer orders to move these items to the stockroom where it needs to be dropped off.

Role required: wm_agent or wm_dispatcher

1. Navigate to Inventory > My Inventory.
   Parts that are in available or reserved substate are displayed in the Available tab and the ones that are defective are displayed in the Defective tab.
2. Click Defective.
3. Select the part for drop-off.
4. Do one of the following to move the part to the stockroom where it needs to be returned.

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drop off</td>
<td>1. Click the part</td>
</tr>
<tr>
<td></td>
<td>Swipe the part to the left and click Add to drop-off list.</td>
</tr>
<tr>
<td>View part details and then drop off</td>
<td>1. Click the part and open the form.</td>
</tr>
<tr>
<td></td>
<td>2. Verify the model number and part quantity.</td>
</tr>
<tr>
<td></td>
<td>3. Click the overflow icon and select Add to drop-off list.</td>
</tr>
</tbody>
</table>
5. Click **To Stockroom**, select a stockroom for drop-off.
6. Do one of the following:
   - In iOS, click **Submit**.
   - In Android, click the send icon.

   A new transfer order line is created.
   - If there is an existing transfer order for the drop-off location, then the new transfer order line is added that transfer order.

     **Note:** The transfer order must be in **Draft** state.

   - If a transfer order for the drop-off location does not exist, then a new transfer order is created and the transfer order line added to that transfer order.

   For more information on asset transfers, see *Move an asset through the transfer process*.

**Complete tasks using the Field Service mobile application**

A work order is automatically closed when all work order tasks associated with it have been closed.

**Close a work order task on the Field Service mobile application**

Close a work order task as complete after you finish the work required for the task. You can close the work order task as incomplete and optionally create a follow-on task to complete.

Agents can only close the work order tasks assigned to them. The work order task must be in the **Work in Progress** state.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service mobile application.
2. Tap **My Work**.
3. In the **My Tasks** section, tap **See All**.
4. Select the work order task you want to close.
5. Do one of the following:

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close a work order task after you complete the work on the task</td>
<td>Select <strong>Close Complete</strong>.</td>
</tr>
<tr>
<td>To</td>
<td>Do this</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Close a work order task if a follow-on task is pending completion</td>
<td>Do the following:</td>
</tr>
<tr>
<td></td>
<td>1. Select <strong>Close Incomplete</strong>.</td>
</tr>
<tr>
<td></td>
<td>2. Optionally, turn the <strong>Has follow-on task</strong> button on.</td>
</tr>
<tr>
<td></td>
<td>3. Select <strong>Closure Note</strong> and enter the reason for closing the task as incomplete. The text entered is copied into the <strong>Work notes</strong> field.</td>
</tr>
<tr>
<td></td>
<td>4. Do one of the following to close the work order task:</td>
</tr>
<tr>
<td></td>
<td>• On an iOS device, tap <strong>Submit</strong>.</td>
</tr>
<tr>
<td></td>
<td>• On an Android device, tap the done icon.</td>
</tr>
<tr>
<td></td>
<td>A clone of the work order task set to <strong>Draft</strong> state is created and the originally created work order task changes to the <strong>Closed Incomplete</strong> state.</td>
</tr>
<tr>
<td></td>
<td>5. Do one of the following to return to the work order task:</td>
</tr>
<tr>
<td></td>
<td>• On an iOS device, tap <strong>Submit</strong>.</td>
</tr>
<tr>
<td></td>
<td>• On an Android device, tap the done icon.</td>
</tr>
</tbody>
</table>

When all work order tasks associated with a work order are closed, the work order is automatically closed.

**Complete a work order using the Field Service mobile application**

Receive a digital signature and confirmation from a customer that a work order has been completed.

The **Sign and Confirm** button must be enabled to receive digital confirmation from a customer after a work order is closed.

The signed PDF summaries capability must be enabled to generate a work order summary and get the customer signature on the work order after it has been closed. For more information on enabling the PDF summaries capability, see **Signed PDF summaries for closed work orders**.

When all work order tasks associated with the work order are closed, the work order is automatically closed.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service mobile application.
2. Locate the work order you want to complete.
   1. Tap **My Work**.
   2. In the **My Tasks** section, tap **See All**.
   3. Select the work order task associated with the work order you want to close.
   4. Select the work order number.
   5. Select the work order to view the details.
3. Receive the signature and confirmation from the customer for completing the work order.
   1. Select the **Details** tab.
   2. Tap **Sign & Confirm**.
   3. Tap the **Signature** field.
   4. In the signature pad, receive the signature from the customer to confirm the completed work.
   5. Accept the signature.
• On an iOS device, tap Submit.
• On an Android device, tap the done icon.

The signed PDF summary is generated and attached to the work order form. You can view the signed PDF summary in the activity stream.

Note: Click the trash icon to cancel the signature.

Enable users to sign and confirm work orders on your mobile device

Enable customers to digitally sign and confirm a work order on the Field Service mobile application after it has been closed.

Role required: admin

1. On your desktop Field Service instance, navigate to System Mobile > Mobile Applications.
2. Click Field Service.
3. From the Folders related list, click My Work.
4. From the Screens belonging to Folder related list, click Work Order.
5. Do one of the following to enable the Sign and Confirm button.

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
</table>
| Enable the Sign and Confirm option to display when you swipe a work order from a list | 1. Click the Master Items tab.  
2. Click Work Order.  
3. Click the Button Instances belonging to Master Item tab. |
| Enable the Sign and Confirm option to display when you open a work order form | Click the Function instances belonging to Screen tab. |

6. Click Sign & Confirm.
7. Enable the Active check box.
8. Click Update.

Cancel or suspend a work order on the Field Service mobile application

Cancel a work order if it is no longer needed or suspend a work order if you want to work on it later.

You can cancel or suspend a work order that has not been closed.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service mobile application.
2. Tap My Work.
3. In the My Tasks section, tap See All.
4. Select the work order task.
5. Select the work order number associated with the task.
   The work order number, work order state, and the short description for the work order appear.
6. Select the work order to view the details.
7. Tap the overflow icon

    (  

    )

    and cancel or suspend the work order.
• To cancel the work order, select **Cancel Work Order**.
• To suspend the work order:
  1. Select **Suspend**.
  2. Select **Suspend Note**.
  3. Enter the reason to suspend this work order.
  4. Cancel the work order.
     • On an iOS device, tap **Back**.
     • On an Android device, tap the back icon.
  5. Go back to the work order screen.
     • On an iOS device, tap **Back**.
     • On an Android device, tap the done icon.

When you are ready to work on it again, tap the overflow icon and select **Resume**.

**Pause a work order task on the Field Service mobile application**

Record a break from a work order task in the Field Service mobile application if you are unable to continue the work for any reason. You can resume the work order task when you start working on it again. The system automatically tracks and calculates the actual time taken to complete the task even though you worked at different intervals.

Role required: wm_agent

The work order task must be in the Work in Progress state to pause the timer.

1. Navigate to the work order task that you want to pause.
2. Click **Pause Work**.
   The button toggles to **Resume Work** automatically. A pause on the work order task disables mobile actions such as Use Part, Close Complete, Edit, Questionnaires, Remove Part, Create Part Requirement, Record Time, and Close Incomplete on the work order task.
3. Click **Resume Work** when you are ready to work on the activity again.

Each time you pause or resume work on the task, a timestamp is captured in the activity stream and the actual time you worked on the task is automatically calculated. An entry for the time worked is created in the **Time Worked** related list.

**Record time worked on a task using the Field Service mobile application**

Record the duration for executing a task using the Field Service mobile application.

Role required: wm_agent or wm_dispatcher

1. Navigate to the Field Service mobile application.
2. Tap **My Work**.
3. In the **My Tasks** section, tap **See All**.
4. Select a work order task to record the time.
5. Tap the overflow icon
   
   ( ⋯ )
   and then select **Record Time**.
6. Select the desired items from any of the following fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Date</td>
<td>Date the task was executed.</td>
</tr>
<tr>
<td>Category</td>
<td>Category for the accomplished task.</td>
</tr>
<tr>
<td>Time Worked (Hours)</td>
<td>Number of hours worked on the task.</td>
</tr>
<tr>
<td>Time Worked (Minutes)</td>
<td>Number of minutes worked on the task.</td>
</tr>
<tr>
<td>Comments</td>
<td>Additional notes about the task.</td>
</tr>
</tbody>
</table>

7. Record the task duration.
   - On an iOS device, tap the Submit button.
   - On an Android device, tap the send icon.

Record an incidental expense on the Field Service mobile application

Record incidental expenses associated with your business travel through the Field Service mobile application to execute work order tasks.

Role required: wm_agent

Log incidentals to manage your expenses such as car rental cost, mileage, and vendor costs that you spend through the mobile application to execute your work order task. You can attach a receipt for a logged incidental.

1. Open the ServiceNow® Agent mobile application.
2. Tap My Work.
3. Select a work order task to record related expenses.
4. Tap the overflow icon
   
   and track a cost.

<table>
<thead>
<tr>
<th>Cost being tracked</th>
<th>Do this</th>
</tr>
</thead>
</table>
| The amount you spent to travel to and from the task site | 1. Tap Log Mileage.  
2. In the Cost per mile field, enter the average cost of transportation per mile.  
3. In the Quantity field, enter the number of miles traveled for the task. |
| Rental car                                              | 1. Tap Log Car Rental Expense.                                          |
|                                                        | 2. In the Cost field, enter the cost for renting the car.               |
| All costs associated with a contract                   | 1. Tap Log Vendor Cost.                                                 |
|                                                        | 2. In the Cost field, enter the total amount you spent on vendor-related costs for a contract. |
|                                                        | 3. In the Contract field, select the contract ID for which you want to track costs. |

5. From the Currency field, select the currency you used for the expense.
6. In the **State** field, indicate whether the expense has already occurred (**Incurred**) or has not yet occurred (**Pending**).

7. In the **Description** field, enter a description for the incidental you want to record.

8. Record the expense for the incidental.
   - On an iOS device, tap the **Submit** button.
   - On an Android device, tap the send icon.

9. Optional: Attach a receipt to an incidental.
   a) Navigate to **Related Lists > Incidental** for the work order task.
   b) Tap the required incidental and then select the **Activity Stream > Add**.
   c) Upload an attachment.

### Field Service mobile offline application

When you are at a task site that does not have an Internet connection, you can work on field service tasks, record time worked on a task, track asset usage, and complete work order and work order tasks using the Field Service mobile application.

### Run the Field Service mobile application in offline mode

Download field service data to the application cache and enable mobile offline mode to execute field service tasks at locations with no internet connection. Synchronize the data when your mobile device is online again.

Role required: wm_agent or wm_dispatcher

You can view a list of all actions taken when your device was offline and the time stamp for each action in the offline mode outbox. Generates flat data of agent schedules that are used in the mobile application for scheduled downloads of offline payloads. Administrator can also choose to download cache automatically in background by setting up the **system properties**. This helps to at least give you one download of data at the beginning of the shift.

1. Open ServiceNow® Agent mobile application.
2. Log in to your Field Service application instance.
3. Do the following: Tap the menu icon and select **Offline**.
   - Tap **More**.
   - Tap **Settings**.
   - Tap **Offline**.

4. To automatically download the scheduled cache in background, tap the **Enable** button. For more information, see **Scheduled offline caching**.

   Scheduled offline caching automatically downloads your cache according to your work schedule. Scheduled caching works in the background, so you can continue to use the application while the download completes. You can also enable **Wi-Fi only** to download cache when you are connected to Wi-Fi. This provides seamless synchronization when the device turns online.

5. Do one of the following to download data and go offline:
To | Do this
---|---
Take the app offline when the data is downloaded. | 1. Tap the Offline Mode button.  
2. Tap Download cache & go offline.

The app takes a few minutes to download the data and then takes the app offline. You can click cancel if you do not want to download data and go offline.

Manually download the data and then choose to take the app offline. | 1. Tap Download data.  
2. After the data is downloaded:  
   • To take the app offline, tap Go offline.  
   • To stay online, tap OK.

6. Update or clear cache on the mobile application.
   If you take your app online and then offline again, you can download the updated data to the app cache. You can clear the cache after you take the app online.
   • To update the app cache, tap Update cache. The app reloads the data to the cache. Refer to the previous step to take the app offline.
   • To clear the cache, tap Clear cache.

7. Synchronize updated records.
   | Do this
---|---
 synchronize the data when your mobile device is offline | 1. Tap Outbox.  
2. Tap Sync.  
3. Tap Go Online & Sync.

Synchronize the data after your mobile device is connected online | 1. Tap the Offline Mode button.  
2. Tap Go Online & Sync

The application synchronizes all of the data that you updated offline.

**Working with tasks when your mobile device is offline**

Accept or reject tasks, record travel or work start time, track inventory, pause tasks, complete tasks, and close work orders using your mobile device when you are not connected to the internet.

With your Field Service instance on your mobile device in offline mode, you can:

**Execute tasks assigned to you at the task location.**

• Start working on tasks by accepting or rejecting tasks assigned to you.  
• Record the time when you start to travel to the task site or start the work on a task.

**Track asset usage.**

• Tap My Inventory on your mobile app to view your inventory.  
• After you work on a task, record assets used for a task.
Pause work order tasks.

• When you want to take a break from the task activity, pause a work order task.

Complete work orders and work order tasks.

• After you complete the work on a task, close a work order task.
• When you finish all tasks related to a work order, complete the work order.

Log incidentals.

• Report the expenses such as car rental cost, mileage, car rental cost, and vendor cost to execute the work order tasks by logging incidentals.

You can close work order SLAs in offline mode. The Field Service mobile application records the device time stamp when the SLA was closed. After you connect your device online and synchronize the data, the SLA admin can repair the SLA to display the actual time the SLA was closed.

Repair an SLA after closing a work order on the Field Service mobile application

Repair an SLA to capture the device time stamp that was recorded when an SLA was closed on the Field Service mobile application in offline mode.

Role required: sla_admin or admin

Agents and dispatchers can close work order SLAs when their mobile application is offline. The mobile application records the device time stamp when the SLA was closed. When the mobile application is online again and the data is synchronized, you can repair the SLA and capture that device time stamp which reflects the actual time when the SLA was closed.

1. In your desktop instance, navigate to Field Service > SLAs Updated Offline.
2. Perform one of the following actions:
   • Click an SLA to repair.
   • If you have more than one SLA to repair, select those SLAs.
3. Click Repair.

Contractor Management

With the ServiceNow Contractor Management application, connect, engage, and collaborate with third-party contractor companies and their staff to outsource the work order tasks.

The Contractor Management application enables internal managers of your organization to outsource work by onboarding contractor companies and their staff, such as external managers and external agents. Work order tasks are assigned to the external manager of the qualified group from the contractor company. A group qualifies the assignment criterion based on the selected assignment group values, such as the external group, and its coverage area, skills, and product models.

The managers of these contractor companies use the Field Service Contractor Portal to review the assigned work order task details and can choose to reject work on the tasks. If they accept the task, they can then reassign the tasks to field service agents.

If the preferred assignment group is internal but no one in the internal group qualifies for the assignment group criterion, then the system searches for a suitable external group to assign the task to and vice versa.
Activate Field Service Contractor Management

Activate the Field Service Contractor Management plugin (com.snc.fsm_contractor_management) to use the Contractor Management application. This plugin includes demo data and activates related plugins if they are not already active.

Role required: admin

The Field Service Contractor Management plugin is available only for customers who are licensed for the Field Service Management application.

Activation of Field Service Contractor Management plugin (com.snc.fsm_contractor_management) plugin activates these related plugins if they are not already active.

<table>
<thead>
<tr>
<th>Plugin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Contractor Base</td>
<td>Enables an outsourced service provider to use the tables, roles, and access controls.</td>
</tr>
<tr>
<td>[com.snc.outsourced_service_provider]</td>
<td></td>
</tr>
</tbody>
</table>

1. Navigate to **Application > System Definition > Plugins**.
2. Search for the plugin com.snc.fsm_contractor_management.
3. Click **Activate**.

Contractor Management components

The plugin and roles for the Contractor Management application.

Contractor Management adds the Outsourced Field Service menu to the application navigator and the following modules:

- **My Outsourced Service providers**: Use this module to view the list of onboarded contractor companies and its external workforce managed by the logged-in user.
- **Outsourced Service Providers**: Use this module to view the list of all the contractor companies, onboard contractor companies and their external workforce, and create groups.
- **Field Service**: Use this module to view a list of activities associated with Field Service Management and managed by an internal contractor manager. This list includes the work order tasks assigned to external agents, personal stockrooms of external agents and managers, stockrooms based on the associated external groups, and groups created for contractor companies.

Roles

Contractor Management adds the following roles:

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Service Contractor Management Internal Manager [wm_contractor_manager_int]</td>
<td>Manager of the organization that outsources its work order tasks to the contractor companies.</td>
</tr>
<tr>
<td>Field Service Contractor Management External Agent [wm_ext_agent]</td>
<td>Employee of the contractor company who works on the assigned tasks.</td>
</tr>
</tbody>
</table>
### Configure Contractor Management

You can configure various aspects of Contractor Management to manage contractor companies and their staff.

**Role required:** `admin`, `wm_admin`, and `wm_contractor_manager_int`

With the system administrator role, you can use guided setup to configure Contractor Management. To access the Contractor Management guided setup, navigate to Field Service > Administration > Guided Setup. For more information about using the guided setup interface, see [Using guided setup](#).

As an internal manager of the organization, you can access the Field Service Management menus and use the modules to configure the following aspects of Contractor Management.

1. Navigate to Field Service Management and choose the menu and module you require.
2. Configure one or more of the following aspects for your Field Service Contractor Management.

### Onboard a contractor company

Onboard a contractor company to outsource field service tasks. The contractor company then sends its employees to the customer location to perform required tasks.

**Role required:** `wm_admin` and `wm_contractor_manager_int`

1. Navigate to Outsourced Field Service > Outsourced Service Providers.
2. Click New.
3. On the form, fill in the fields.

**Outsource Service Provider form**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name of the contractor company.</td>
</tr>
<tr>
<td>Manager</td>
<td>Internal manager of the company selected from a drop-down list.</td>
</tr>
<tr>
<td>Phone</td>
<td>Company phone number.</td>
</tr>
<tr>
<td>Fax phone</td>
<td>Fax number of the company.</td>
</tr>
<tr>
<td>Website</td>
<td>Web address of the company.</td>
</tr>
<tr>
<td>Street</td>
<td>Mailing street address of the company.</td>
</tr>
<tr>
<td>City</td>
<td>City in which the company is located.</td>
</tr>
<tr>
<td>State / Province</td>
<td>State or province in which the company is located.</td>
</tr>
<tr>
<td>Zip / Postal code</td>
<td>ZIP or postal code for the company.</td>
</tr>
<tr>
<td>Country</td>
<td>Name of the country in which the external contractor company is located.</td>
</tr>
<tr>
<td>Service Provider Type</td>
<td>Field Service Provider.</td>
</tr>
</tbody>
</table>
Onboard an external manager

Onboard a manager from a contractor company to manage, review, and assign the outsourcing and assignments of work order tasks to their field agents.

Role required: wm_admin and wm_contractor_manager_int

1. Navigate to **Outsourced Field Service > Outsourced Service Providers**.
2. Click the contractor company from which you want to onboard a manager.
3. Click **Onboard Manager**.
4. On the form, fill in the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes</td>
<td>Any information about the company that would be helpful for others to know.</td>
</tr>
</tbody>
</table>

5. Click **Submit**.

The system sends an email to the newly onboarded manager that includes a URL to use to log in to Field Service Contractor Portal.

Create a work group for external field agents

Create groups to assign work to external field agents based on your requirements such as skills, location, and product models so you can route work order tasks to the most qualified field agents

Role required: wm_admin, wm_contractor_manager_int

External work groups are managed by internal and external managers.

1. Navigate to **Outsourced Field Service > Outsourced Service Providers**.
2. Click the contractor company from which you want to create a work group.
3. Click **Create Group**.
4. On the form, fill in the fields.
Group form

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name of the work group.</td>
</tr>
<tr>
<td>Manager</td>
<td>Group manager or lead.</td>
</tr>
<tr>
<td>Hourly rate</td>
<td>Amount charged per hour that is used to calculate the planned and actual resource costs for a task.</td>
</tr>
<tr>
<td>Description</td>
<td>Helpful information about the group.</td>
</tr>
<tr>
<td>Group email</td>
<td>Group email distribution list or the email address of the point of contact, such as the group manager.</td>
</tr>
<tr>
<td>Parent</td>
<td>Other group of which this group is a member. If a group has a parent, the child group inherits the roles of the parent group. The members of the child group are not members of the parent group.</td>
</tr>
</tbody>
</table>

5. Click Submit.

A vendor group for the contractor company is successfully created.

Onboard an external agent

Onboard an agent for contractor company to assign the work order tasks.

Role required: wm_admin, wm_contractor_manager_int

Internal manager of the company can onboard field service agents for the third-party contractor companies. These onboarded agents are known as external agents and responsible for performing the assigned work order tasks at the customer location.

1. Navigate to Outsourced Field Service > Outsourced Service Providers.
2. Click a contractor company from the list for which you want to on board a field service agent.
3. Click Onboard Agent.
4. On the form, fill in the fields.

Service Organization External Staff form

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First name</td>
<td>Agent’s first name.</td>
</tr>
<tr>
<td>Last name</td>
<td>Agent’s last name</td>
</tr>
<tr>
<td>Active</td>
<td>Option for making this agent the selected external agent.</td>
</tr>
<tr>
<td>Email</td>
<td>Agent’s official email address.</td>
</tr>
<tr>
<td>Time zone</td>
<td>Time zone for this agent’s location.</td>
</tr>
<tr>
<td>Business phone</td>
<td>Agent’s business phone number.</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>Agent’s mobile phone number.</td>
</tr>
<tr>
<td>Photo</td>
<td>Photograph of the agent.</td>
</tr>
<tr>
<td>Date format</td>
<td>String format as specified in the field.</td>
</tr>
</tbody>
</table>

5. Click Submit.
The system sends an email to the newly onboarded agent that includes a URL to reset the password while logging to Field Service Contractor Portal for the first time.

**Offboard an external agent**

Offboard external managers or agents of the contractor company to terminate their services.

Before offboarding a manager or an agent, ensure that they are not assigned to any task and remove them manually from the assigned assignment groups and stockrooms.

Role required: wm_admin, wm_contractor_manager_int

Offboarded manager or agent cannot log in to the Field Service Contractor Portal and do not receive any notification through email or SMS.

1. Navigate to **Outsourced Field Service > Outsourced Service Providers**.
2. From the list of field service providers, click a contractor company from which you want to offboard an agent.
3. Click the **Contacts** tab.
4. From the **Service Organization External Staffs** list, click an agent whom you want to offboard.
5. Click **Offboard Agent**.

The external manager or agent is removed from all the assigned groups.

**Field Service Contractor Portal**

Use Field Service Contractor Portal to manage work order tasks.

Field Service Contractor Portal enables managers and field service agents of contractor companies to manage and work on the assigned work order tasks.

You can make your ServiceNow Field Service Contractor Portal instance accessible from a company-branded or custom URL. For more information about customizing URLs, see *Associating custom URLs to your instance*.

**Log in to the Field Service Contractor Portal for the first time**

Click the link in the email you are sent after you are onboarded to change your password so you can log in for the first time.

Role required: none

1. Navigate to your email inbox.
2. In the onboarding email message, click the **Reset a password** related link.
   
   The **Password Reset** dialog box displays.
3. Enter your new password in the **New Password** field.
4. Re-enter your new password in the **Retype Password** field.
5. Click **Reset Password**.
   
   The **Field Service Contractor Portal** login page displays.
6. Enter your user ID in the **User name** field.
7. Enter your new password in the **Password** field.
8. Click **Login**.

**Onboard agents on the Field Service Contractor Portal**

Onboard a Field Service agent so the contractor company can assign outsourced work order tasks to be performed at the customer location by that agent.
Role required: wm_contractor_ext_manager

1. Navigate to Field Service Contractor Portal > Homepage.
2. Click Requests > Onboard Agent in the header menu.
3. On the form, fill in the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First name</td>
<td>Agent’s first name.</td>
</tr>
<tr>
<td>Last name</td>
<td>Agent’s last name.</td>
</tr>
<tr>
<td>User ID</td>
<td>Auto-populated unique identifier for this user. The user ID follows the format firstname.lastname.</td>
</tr>
<tr>
<td>Assignment Group</td>
<td>Group name to which the agent belongs. For example, external.</td>
</tr>
<tr>
<td>Email</td>
<td>Email address of the agent.</td>
</tr>
<tr>
<td>Company</td>
<td>Name of the employer.</td>
</tr>
<tr>
<td>Business phone</td>
<td>Phone number of the agent.</td>
</tr>
<tr>
<td>Mobile phone</td>
<td>Mobile number of the agent.</td>
</tr>
</tbody>
</table>

4. Click Submit.

An external agent of the contractor company is onboarded and the internal manager receives an approval request for the agent.

The internal manager receives a request to approve the onboarding of an agent. For more information, see Approve or reject requests for onboarding agents.

Approve or reject requests for onboarding agents

Review external agent requests that are assigned to you for approval and determine whether to accept or reject them.

Role required: wm_contractor_manager_int, wm_admin, and admin

Whenever a manager of the contractor company onboards a field service agent, the request goes to the internal manager of the organization for approval process.

1. Navigate to Self-Service > My Approvals.
2. Click a requested item from the Approvals list for which you want to approve the agent.
3. Click the Onboard a new Contractor Agent link in the Approval-Requested Item request form to review agent details.
4. Process the request.
   - To approve the agent, Click Approve.
     The newly onboarded agent is approved by the parent company. External managers can assign the work order tasks to the agent.
   - To reject the agent, Click Reject.
     The newly onboarded agent is rejected by the parent company. External managers cannot assign the work order tasks to the agent.
View an agent profile on the Field Service Contractor Portal

As a manager of a contractor company, you can view the profile information of all the agents in your teams.

Role required: wm_ext_agent and wm_contractor_ext_manager

Agents can view and edit only their own profile information.

1. Navigate to Field Service Contractor Portal > Homepage.
2. Click Agents.
3. From the Service Organization External Staffs list, click the agent profile that you want to review.
4. Review the agent profile information.

Offboard agents on the Field Service Contractor Portal

Offboard agents of the contractor company to terminate their services.

Before offboarding an agent, ensure that agents do not have items pending with the following status:

- Tasks in the Work In Progress state.
- Transfer orders in the In Transit state
- Parts in the In Stock state or Pending Transfer sub state in their personal stockroom.

Role required: wm_contractor_ext_manager

1. Navigate to Field Service Contractor Portal > Agents.
2. From the Service Organization External Staffs list, select the agent that you want to offboard.
3. Click Offboard Agent.

The agent is offboarded successfully.

After receiving the offboarding request:

- Assigned and accepted tasks from the agent's work list are reassigned to the manager who initiated the offboarding request.
- The offboarding agent cannot be assigned new tasks
- New transfer orders cannot be created in the agent's personal stockroom
- The agent cannot log in to the Field Service Contractor Portal.
- Email or SMS notifications are not longer sent to the agent.

Work order tasks on the Field Service Contractor Portal

Organizations outsource their work order tasks to the contractor companies in the Field Service to perform required jobs at a customer location. Managers and agents of contractor companies use the Field Service Contractor Portal to view and manage the work order tasks assigned to them.

Managers and agents can perform the following activities:

- Managers can view the work order tasks assign to them and choose to accept or reject the assigned task. If the manager rejects the task, the state of the task changes to Pending dispatch or Pending assignment.
  
  In the meantime, the next appropriate group is identified and assigns this task to the manager of that group. If the system cannot identify another qualified group, the task remains in the Pending dispatch state so that the dispatcher can manually assign the task.
- Managers can reassign work order tasks to their agents.
• Agents can view the work order tasks assigned to them and choose to accept or reject them. If an agent rejects the task, it goes back to the agent's manager. The manager can reassign the task to another appropriate agent from the same group, accept the request and work on the task, or keep the task in the Pending assignment state.
• Managers and agents receive email notifications for each work order task assignment that include a link to use to open and view the work order task details.

Assign outsourced work order tasks
Managers of contractor companies can assign outsourced work order tasks to be performed at the customer location to their agents or to themselves.
Role required: wm_contractor_ext_manager
Outsourced work order tasks are always automatically assigned to the managers of the contractor companies.
1. Navigate to Field Service Contractor Portal > Homepage.
2. Click My Lists > My Tasks > All Tasks.
3. Click a work order task in the list.
4. On the Work Order Task form, assign the work order task.
   • To work on the task yourself, click Accept.
   • To assign the task to an agent, select one from the Assigned to list.
   • To cancel the task, click Reject.
     If you reject working on the task, its state changes to pending dispatch or pending assignment so it can be reassigned to another qualified group.
5. Click Save.

If you have assigned the task to an agent, the agent receives an email notification about the assignment.

Accept or reject assigned external work order tasks
As a manager or field service agent of a contractor company, you can accept tasks assigned to you through the Field Service Contractor Portal.
The task must be in Assigned state for you to be able to accept the task.
Role required: wm_ext_agent and wm_contractor_ext_manager
1. Navigate to Field Service Contractor Portal > Homepage.
2. Click My Lists > My Tasks > All Tasks.
3. Click a work order task in the list.
4. Process the work order task.
   • To accept working on the task, click Accept.
   • To reject the task, click Reject.
     If an agent rejects the task, it is assigned back to the agent's manager to take further actions, such as reassigning the task to another agent or the manager accepting to work on the task.

After accepting the task, you can start working on it. For more information about executing tasks, see Execute and track external work order tasks

Execute and track external work order tasks
Execute and track the time required for work order tasks that you have accepted.
Role required: wm_ext_agent and wm_contractor_ext_manager
1. Navigate to Field Service Contractor Portal > Homepage.
2. Open the work order task record that you are ready to work on, and click **Start Travel**.
The start time is entered in the **Actual travel start** field.
3. When you arrive at the job site and begin the task, open the task record, and click **Start Work**.
The start time is entered in the **Actual work start** field.
4. If you take a break from the task activity, pause and then resume work on the task.
   - When you take a break from the task activity, click **Pause Work**. The button toggles to **Resume Work**.
   - When you are ready to work on the activity again, click **Resume Work**.

Each time you pause or resume work on the task, the timestamp is captured in the activity stream and the actual time you worked on the task is automatically calculated. An entry for the time worked is created in the **Time Worked** related list.

5. When the work is done, open the task record and add a work note describing what you did to complete the task.
6. Click **Close Complete**.

The cumulative amount of time worked on the task is captured in the **Actual Work Duration** field. This total includes the time you started working on the task until you closed work on the task, excluding any time paused on the work.

**Record the usage of assets on the Contractor Portal**

The staff of contractor companies can track the consumable and non-consumable parts that are used or changed during the execution of work order tasks on the Field Service Contractor Portal.

The **Asset Usages** related list on the Work Order Task form displays the assets that are used during the execution of a task and also any existing assets that are removed from the task location.

The possible statuses of an asset are listed in the following table.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used</td>
<td>When an agent records the use of an asset, the asset is added to the Asset Usages related list with a status of <strong>Used</strong>. Non-consumable assets are marked as being <strong>In Use</strong> and assigned to the caller identified on the work order. Consumable assets are marked as <strong>Consumed</strong>.</td>
</tr>
<tr>
<td>Not used</td>
<td>When a transfer order line is delivered to an agent, a new asset usage record is created with a status of <strong>Not Used</strong>. If the agent does not use the asset and the work order task is closed, the asset usage record remains <strong>Not Used</strong>. The asset is marked as <strong>In Stock Available</strong> in the agent's personal stockroom.</td>
</tr>
<tr>
<td>Removed</td>
<td>When an agent records the removal of an asset, the asset is added to the Asset Usages related list with a status of <strong>Removed</strong>. If an asset is removed because it is not working, it should be marked as <strong>Defective</strong>.</td>
</tr>
</tbody>
</table>

**Record the assets used during a work task on the Contractor Portal**

Record any assets you use during the execution of a task.

Role required: **wm_ext_agent** and **wm_contractor _ext_manager**

1. Navigate to **Field Service Contractor Portal > My Lists > My Tasks**.
2. Open a work order task.
3. Click **New** in the Asset Usages related list.
4. Record the used asset.
   a) In the Asset Usage form, select **Used** from the **Status** list.
   b) Select the asset from the Asset list.
5. Click **Save**.

The asset you used is successfully recorded in the agent personal stockroom.

*Record the removal of an asset from a task location on the Contractor Portal*

If you remove an existing asset from a task location during the execution of a task, record the asset removal.

Role required: `wm_ext_agent` and `wm_contractor_ext_manager`

1. Navigate to **Field Service Contractor Portal** > **My Lists** > **My Tasks**.
2. Open a work order task.
3. Click **New** in the Asset Usages related list
   a) Select **Removed** from the **Status** list.
   b) Select the asset that you have removed from the Asset list.
4. Click **Save**.

The removed asset is successfully recorded in the agent personal stockroom list.

**View task SLAs on the Contractor Portal**

View the work order SLA timeline in the Field Service Contractor Portal to make sure you complete your task within the SLA time period.

Role required: `wm_ext_agent` and `wm_contractor_ext_manager`

You cannot create and edit SLAs or delete them from work order tasks using the Field Service Contractor Portal. For more information, see **Manage a work order SLA**.

1. Navigate to **Field Service Contractor Portal** > **Homepage**
2. Click **My Lists** > **My Tasks** > **All Tasks**.
3. Open a work order task from the list.
4. Click the Task SLA related list in the Work Order Task form.
5. From the Task SLAs list, open an SLA Definition and review the details.
   The SLA report details includes the progress of the task SLA over the lifetime of the task.

**View sibling tasks related to a work order**

View details of sibling work order task that are related to the same work order in Field Service Contractor Portal.

Role required: `wm_ext_agent` and `wm_contractor_ext_manager`

1. Navigate to **Field Service Contractor Portal** > **Homepage**.
2. Click **My Lists** > **My Tasks** > **All Tasks**.
3. Open a work order task from the list.
4. Click the Sibling Tasks related list in the **Work Order Task** form.
5. From the **Service Order Task** list, open a sibling work order task and review the task details.
   The sibling work order task provide details, such as parent work order task number, required asset, location, and so on.
Record Service Management incidental expenses on the Contractor Portal

Agents of contractor companies can use the Field Service Contractor Portal to track incidental expenses that arise during the execution of a work order task.

Role required: wm_ext_agent and wm_contractor_ext_manager

Service Management Incidents or incidental expenses are distinct from other expenses related to work orders, such as part requirements. Incidents represent expenses that arise during the execution of a task or that are otherwise related to the task. Field Service Management provides incidental types to track the costs of car rentals and miles traveled. Your organization can create additional custom types.

You can create incidental expenses for a work order task at any point during the task life cycle. When an incidental record is created, the system generates an expense line if the following conditions are met:

- The state is Incurred
- The type is not None
- The cost is greater than zero

The expense line is deleted if any of these conditions change.

1. Navigate to Field Service Contractor portal > My Lists > My Tasks.
2. Open a work order task from the work order tasks list.
3. In the Service Management Incidents related list, click New.
4. On the form, fill in the fields.

<table>
<thead>
<tr>
<th>Service Management Incidents form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
</tr>
<tr>
<td>Service order Task</td>
</tr>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Cost</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>State</td>
</tr>
</tbody>
</table>

5. Click Save.

Requesting and receiving required parts

Get the parts you need to complete the assigned work order tasks.

The process to get the required parts to complete work order tasks is as follows:

- **Create a part requirement request**: After a work order task is assigned, create a request to source parts required for the task.
- **Transfer parts to your inventory from available locations**: A transfer order is created automatically when you create a part requirement. Each transfer order consists of an auto-generated transfer order line and a transfer order line task. The transfer order line task helps move a transfer order line from one stage to another such as fulfilment, shipping, delivery, and receipt. The system automatically creates multiple transfer order line tasks one after another when you close the first task of fulfilling an asset requirement.
- **Access parts that are available in your stockroom**: Assets or parts are kept in stockrooms until they are needed. Stockrooms are categorized based on the user’s personal stockroom and assignment group type. Managers and agents of the contractor companies are assigned to personal stockrooms and group stockrooms, and can check the availability of required assets.
• **Pick up parts:** Pick up parts from the stockroom and then record them as delivered.

**Create and source a part requirement request on the Field Service Contractor Portal**

Create a part requirement request for a work order task that is assigned to you.

Role required: wm_ext_agent and wm_contractor_ext_manager

Creating a part requirement request automatically creates a part requirement number and a transfer order number so you can view the required part details and source the part.

1. Navigate to **Field Service Contractor Portal > Homepage > Requests > Create and Source Parts.**
2. On the form, fill in the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Number</td>
<td>Number assigned to the work order task. Select a task that is not in the Closed or Cancelled state.</td>
</tr>
<tr>
<td>Model</td>
<td>The part model needed to complete the work order task.</td>
</tr>
<tr>
<td>Required by date</td>
<td>Date by which all parts should be delivered. The date is filled in automatically based on the expected travel start time provided in the work order task. If necessary, change the date manually.</td>
</tr>
<tr>
<td>Required quantity</td>
<td>Total quantity necessary to complete the work order task. This field becomes read-only when a hardware item is selected in the Model field.</td>
</tr>
<tr>
<td>From Stockroom</td>
<td>Location of the stockroom from which the item is to be shipped.</td>
</tr>
<tr>
<td>To Stockroom</td>
<td>Location of the stockroom where the item is to be shipped.</td>
</tr>
<tr>
<td>Asset</td>
<td>Asset requested by the transfer order line, for example, a specific printer.</td>
</tr>
</tbody>
</table>

3. Click **Submit.**

The **Part Requirements** and **Transfer Orders** related list is updated automatically with the part requirements information in the work order task form.

**Transfer part orders through the Field Service Contractor Portal**

Use a transfer order to move required parts between company stockrooms or to a location where a requesting agent can receive the parts.

Role required: wm_contractor_ext_manager

You can process only transfer orders that contain parts sourced from a warehouse that you manage.

1. Navigate to **Field Service Contractor Portal > My Lists > Transfer Orders.**
2. Select a transfer order to transfer the asset.
3. From the **Transfer Order Line** related list, select a transfer order line.
4. From the **Transfer Order Line Tasks** related list, select a transfer order line task that is ready for fulfillment. Eligible tasks have the short description text "Ready for fulfillment" and the state Open

5. Click **Close Task** to complete fulfillment and start the asset transfer process.

The transfer order line task that was ready for fulfillment moves to the Closed Complete state.

The system automatically creates two new transfer order line tasks:
• The short description text for the transfer order line task to prepare for shipment is "Prepare for shipment" and the state is Open.
• The short description text for the transfer order line task for drop off is "Receive" and the state is Open.

6. Drop off or prepare for shipment.

<table>
<thead>
<tr>
<th>To</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare for shipment</td>
<td>When you are ready to ship the asset:</td>
</tr>
<tr>
<td></td>
<td>1. Click and open the transfer order line task created to prepare for shipment.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Prepare for shipment&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>2. Click Close Task.</td>
</tr>
<tr>
<td></td>
<td>The system automatically does the following:</td>
</tr>
<tr>
<td></td>
<td>• Moves the transfer order line task created to prepare for shipment to the Closed Complete state.</td>
</tr>
<tr>
<td></td>
<td>• Opens a transfer order line task for shipping the asset. The short description text for this transfer order line task is &quot;Ship&quot; and the state is Open.</td>
</tr>
<tr>
<td></td>
<td>• Moves the transfer order line task created for drop off to the Closed Skipped state.</td>
</tr>
<tr>
<td></td>
<td>3. Click and open the transfer order line task created for shipping the asset.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Ship&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>4. If the asset is a consumable, in the <strong>Quantity received</strong> field, enter the number of assets to be delivered.</td>
</tr>
<tr>
<td></td>
<td>5. When the shipment is ready for shipping, click Close Task.</td>
</tr>
<tr>
<td></td>
<td>This task automatically moves to the Closed Complete state.</td>
</tr>
<tr>
<td></td>
<td>6. Click and open the transfer order line task created for receiving the shipment.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Receive&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>7. When the shipment is ready for transit, click Close Task.</td>
</tr>
<tr>
<td></td>
<td>This task automatically moves to the Closed Complete state.</td>
</tr>
<tr>
<td></td>
<td>8. Click and open the transfer order line task created for delivering the asset.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Deliver&quot; and the state Open.</td>
</tr>
<tr>
<td></td>
<td>9. After the shipment is delivered, click Close Task.</td>
</tr>
<tr>
<td></td>
<td>This task automatically moves to the Closed Complete state.</td>
</tr>
<tr>
<td>To</td>
<td>Do this</td>
</tr>
<tr>
<td>-------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Drop off</td>
<td>When you are ready to drop off the part or asset:</td>
</tr>
<tr>
<td>1.</td>
<td>Click and open the transfer order line task created for drop off.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Receive&quot; and the state Open.</td>
</tr>
<tr>
<td>2.</td>
<td>If the asset is a consumable, in the <strong>Quantity received</strong> field, enter the number of part or asset to be dropped off.</td>
</tr>
<tr>
<td>3.</td>
<td>When the parts or assets are ready for drop-off, click <strong>Close Task</strong>.</td>
</tr>
<tr>
<td></td>
<td>The system automatically moves the transfer order line created to prepare for shipment to the Closed Skipped state.</td>
</tr>
<tr>
<td>4.</td>
<td>Click and open the transfer order line for delivery.</td>
</tr>
<tr>
<td></td>
<td>This task has the short description text &quot;Delivery&quot; and the state Open.</td>
</tr>
<tr>
<td>5.</td>
<td>When the part or asset is delivered, click <strong>Close Task</strong>.</td>
</tr>
<tr>
<td></td>
<td>The task moves to the Closed Complete state.</td>
</tr>
</tbody>
</table>

**Track part pickups on the Field Service Contractor Portal**

You can see which parts are ready to be picked up by viewing a consolidated list of assets grouped by stockroom and waiting to be picked up. After picking up the part, you can close the transfer order line task.

Role required: wm_ext_agent

The agents can physically pick up the assets and then record them as delivered. The list contains transfer order lines in the Received or In Transit stage with a work order task that meets the following criteria:

- Assigned to the agent
- In the Accepted or Work in Progress state

1. Navigate to **Field Service Contractor Portal > My Lists > Pickup Parts**.
2. From the **Transfer Order Line** list, select a transfer order line.
3. From the **Transfer Order Line Tasks** list, select a transfer order line task that has the short description text "Receive" and the state Open.
4. After physically picking up the items, click **Close Task**.
5. Review the transfer order line task that has the short description text "Deliver" and the state Open.
6. Click **Close Task**.

The part is delivered successfully to the agent.

**Access stockroom information on the Field Service Contractor Portal**

As a manager or agent of contractor companies, you can access and view the availability of assets in your stockrooms using the Field Service Contractor Portal.

Role required: wm_ext_agent and wm_contractor_ext_manager

Agents can access only information for their personal stockrooms and group stockrooms they are assigned to. Managers can access their personal stockrooms, group stockrooms, and the personal stockrooms of agents.

1. Navigate to **Field Service Contractor Portal > My Lists > Stockrooms**.
2. From the **Stockrooms** list, select a stockroom that you want to review.
3. Check the status of assets in the Stockroom.
• To check the status of hardware items available in the stockroom, such as model, quantity, state, and sub state, click the Hardware related list.

• To check the status of consumable items available in the stockroom, such as quantity, state, and sub state, click the Consumable related list.

Emergency Exposure Management for field service agents

The Emergency Exposure Management feature in Field Service Management helps identify field service agents and customers who may have visited an affected location or come in contact with an agent who has been classified as positive for a condition, such as COVID-19.

Using the Emergency Exposure Management application in collaboration with Field Service Management helps you identify potentially affected customers and other agents using the work order history of the affected agent.

If an agent reports as positive for a condition, the diagnostic admin can run a diagnostic report to identify affected agents, customers who might have come in contact with the affected agent, and other agents who visited the affected customers during the selected time period. The Field Service manager can view the diagnostic report and take appropriate action to mitigate the spread of infection, promoting agent safety by blocking the availability of the affected and potentially exposed agents for future dates.

Using Emergency Exposure Management enables you to do the following:

• Trace affected agents and customers: Run a diagnostic report for affected agents based on their work order history for the selected time period and view the report to identify other potentially affected agents and customers.
• Block agent calendars: Mark the affected and potentially affected agents unavailable for the selected time period to avoid assigning any further tasks.
• Enforce compliance checks for agents: Require agents to participate in a compliance survey before starting work on the task and before completing the work order task to check whether they have taken proper precautions based on the recommended safety protocol guidelines.
• View Covid19 map: View task, agent, and asset locations on a map that shows the COVID-19 impact.
• Check agent compliance status: Review the status of compliant and non-compliant agents and tasks using the Field Service Safety dashboard.

Emergency Exposure Management components

Several types of components are installed with the Emergency Exposure Management feature, including roles, tables, and business rules.

Install the Emergency Exposure Management plugin (sn_imt_diagnosis) to use the Emergency Exposure Management feature with the Field Service Management application. For more information on installation, see Install Emergency Exposure Management. The Emergency Exposure Management plugin is available for customers who are licensed for the Field Service Management application.

Install the free COVID-19 Global Health Data Set application to see the Field Service Management Covid19 map on your Field Service Safety dashboard.

Roles

Emergency Exposure Management adds the following roles.
### Role

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic Admin</td>
<td>Trace potentially impacted users based on customer locations visited by an agent and other agents who visited the same customer locations.</td>
</tr>
<tr>
<td>[sn_imt_diagnosis.diagnostics_admin]</td>
<td></td>
</tr>
<tr>
<td>Field Service Manager</td>
<td>View compliance reports of agents to determine whether they adhere to safety protocols during field visits. Can also view tasks, agents, and assets in their territory along with COVID-19 Data.</td>
</tr>
<tr>
<td>[wm_manager]</td>
<td></td>
</tr>
<tr>
<td>Field Service Technician</td>
<td>Take surveys to report safety compliance during field visits.</td>
</tr>
<tr>
<td>[wm_agent]</td>
<td></td>
</tr>
</tbody>
</table>

### Tables

Emergency Exposure Management adds the following table.

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Service Impacted Users</td>
<td>Stores the diagnostic records of affected users.</td>
</tr>
<tr>
<td>[wm_impacted_users]</td>
<td></td>
</tr>
<tr>
<td>Task Compliance Result</td>
<td>Stores the task compliance records of questionnaires taken by agents.</td>
</tr>
<tr>
<td>[task_compliance_result]</td>
<td></td>
</tr>
</tbody>
</table>

### Business rules

Emergency Exposure Management adds the following business rules.

<table>
<thead>
<tr>
<th>Business rule</th>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacted Users Event</td>
<td>Field Service Impacted Users [wm_impacted_users]</td>
<td>Triggers the [wm.user.impacted] event whenever an entry is made in the wm_impacted_users table. Customers can subscribe to this event notification.</td>
</tr>
<tr>
<td>Determine Covid Compliance of Task</td>
<td>Assessment Instance [asmt_assessment_instance]</td>
<td>Processes the completed questionnaires specified in the business rule condition to determine whether a task was performed in a compliant manner.</td>
</tr>
</tbody>
</table>

### Administer Emergency Exposure Management for field service agent information

Create, modify, and enable the application configuration and the individual service configurations for the Emergency Exposure Management feature related to field service agents.
System administrators can create, modify, and enable an application configuration. Field Service administrators (wm_admin) and diagnostic administrators (sn_imt_diagnosis.diagnostics_admin) can create, modify, and enable configurations for the Emergency Exposure Management services within an application.

**Activate the questionnaire for Field Service Emergency Exposure Management**

Activate questionnaire records and then associate them with the Task Compliance Result table to store the results of compliant and non-compliant agents and tasks.

Role required: wm_admin

Field Service Management provides Pre-Work Check list and Post-Work Check list questionnaires to record the compliance reports of agents during their field visits. Agents receive these questionnaires through survey links and must answer them before starting work on the task and before completing the task.

By default, these questionnaires are deactivated. Administrators can activate them and either use the default questionnaires, modify them, or use them as examples to create new questions.

1. Navigate to **Field Service > Administration > Questionnaire**.
2. Activate the following questionnaires to use them as default.
   - In the **Pre-Work Check list** questionnaire, set the **Activate** field to **true**.
   - In the **Post-Work Check list** questionnaire, set the **Activate** field to **true**.
3. Optional: Modify the questionnaire.
   For more information, see *Edit a survey in the survey designer*.

**Publish a survey in the Survey Designer**

**Run an Emergency Exposure Management diagnostic report**

Run the Emergency Exposure Management diagnostic report to identify affected and potentially affected agents and customers.

Role required: sn_imt_diagnosis.diagnostics_admin

Run an Emergency Exposure Management diagnostic report for an affected agent to identify agents and customers who might have come in contact with the affected agent and agents who visited the same customer location during the selected time period for which the report is generated. For more information, see *Identify potentially exposed employees*.

1. Navigate to **Emergency Exposure Management > Create New**.
   By default, the Report Generation Status field is set to **Not Initiated** and the **Active** check box is selected.
2. Select the **Use field service tasks** check box to query by the tasks performed by field service agent.
3. Enter the start date and end date.
   - In the **Start Date** field, provide the estimated date of infection. Because the infection window might vary, pick an end date at least 14 days prior to the date of reported symptoms.
   - In the **End Date** field, provide the date for reported symptoms at least one day prior to the current date.

   Use a combination of the location, Outlook meetings, and field service task information for better coverage of potentially affected agents and customers.
4. From the **Affected user** field, select the affected agent's name.
5. Click **Save**.
   The Impacted Customers and Impacted field agents related lists appear, which will contain the relevant information after you run a diagnostics report.
6. Click **Run Diagnostics**.
The related lists display potentially affected agents and customers. Refresh a list to see the affected people immediately.

- Impacted Customers: Customers who came in contact with the affected agent.
- Impacted field agents: Field service agents who came in contact with the affected agent or visited the same customer location within the specified time period.

**Use Emergency Exposure Management for Field Service agent monitoring and assignments**

Monitor the spread of infectious disease by using Emergency Exposure Management to identify affected agents and agents and customers who potentially might have been exposed, and to view the compliance reports of agents and tasks.

**View an Emergency Exposure Management diagnostic report for an affected agent**

View the diagnostic report to identify affected agents and potentially affected customers and agents.

Role required: wm_manager

The Field Service manager of an affected agent can view the diagnostic report of an affected agent to identify potentially affected agents and customers.

1. Navigate to Field Service > Manager > Diagnostic Reports.
2. In the Diagnostics Request form, click the number of the diagnostic request for which you want to view the report.
3. View a list of impacted customers or impacted field agents.
   - To view the list of impacted customers, click the Impacted customers tab.
   - To view the list of impacted agents who potentially came in contact with the affected agent or visited the same customer location within the selected time period, click the Impacted field agents tab.

**Block the calendar of field agents based on an Emergency Exposure Management diagnostic report**

Block the calendar of affected and potentially affected agents based on an Emergency Exposure Management diagnostic report.

Role required: wm_manager

The Field Service manager can view a diagnostic report and take appropriate action to mitigate the spread of infection, promoting agent safety by blocking the availability of the affected and potentially exposed agents for future dates. For more information about the agent calendar, see *Configure the agent calendar*.

1. Navigate to Field Service > Manager > Diagnostic Reports.
2. In the Diagnostics Request form, click the number of the diagnostic request.
3. Click Block Agent Calendar to block the affected agent's calendar.
4. On the form, fill in the fields.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>User</td>
<td>Auto-populated with name of the agent.</td>
</tr>
<tr>
<td>Name</td>
<td>A descriptive name for the event.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>The type of event scheduled for the agent.</td>
</tr>
<tr>
<td></td>
<td>Note: The event type configurations are inactive by default. For information about activating them, see <em>Create an event configuration for the agent calendar</em>.</td>
</tr>
</tbody>
</table>

The event types are:

- **Time off**: Personal or work-related event
- **Appointment**: Appointment for a service
- **Meeting**: Work-related meeting
- **Phone call**: Work-related phone call
- **Excluded**: User is not available for task assignments
- **On call**:
  - **Time off- in approval**: Approved personal or work-related event
  - **Time off- rejected**: Rejected personal or work-related event

<table>
<thead>
<tr>
<th>When</th>
<th>The start date and time of the personal event.</th>
</tr>
</thead>
<tbody>
<tr>
<td>To</td>
<td>The end date and time of the personal event.</td>
</tr>
<tr>
<td>All day</td>
<td>Option for indicating that the event lasts all day.</td>
</tr>
<tr>
<td>Notes</td>
<td>Enter notes for the event, if any.</td>
</tr>
</tbody>
</table>

5. Click **Submit**.
6. If there are potentially affected agents, block their calendars.
   1. Click the **Impacted field agents** tab.
   2. In the Field Service Impacted Users list, click the diagnostic request number.
   3. Repeat steps 3 through 5 to block the calendar of a potentially affected agent for future dates.

**Using the Field Service Safety dashboard**

Review the status of agents, tasks, and assets using the Field Service Management Covid19 map and monitor the compliance reports of agents through the Field Service Safety dashboard.

Users with the wm_manager role can use the Field Service Safety dashboard to monitor whether agents are compliant with the safety protocols of possible exposure to an infectious disease while performing tasks. The Covid19 map displays the impact of global COVID-19 on the locations that are covered by agents, tasks, and assets of an individual field Service Manager.

**Note:** Install the free COVID-19 Global Health Data Set application to see the FSM Covid19 map on your Field Service Safety dashboard.

**COVID-19 Global Health Data Set**

You can use the COVID-19 Global Health Data Set application to see the Field Service Management Covid19 map on your Field Service Safety dashboard. It appears as an application in the instance navigation menu, and displays
global COVID-19 information on request in the Field Service Safety dashboard. The COVID-19 Data Feed - pre-sync and COVID-19 Data Feed - sync central instance, Daily Data Collection jobs run every night to refresh the data.

Use the Field Service Safety dashboard

Navigate to Field Service > Safety Dashboard.
Field Service Safety Dashboard with COVID-19 data

Locations with alerts are listed on the FSM Covid19 map. Use the map controls as follows:

• To zoom in to a location and its alerts, click the location icon.
• To select a time period to review, use the Task Date Range at the top left.
- To filter the information displayed on the map, click the layers icon on the top right and select task, agent, and asset as needed.

Each icon displays the information in the following table.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>Tasks for the locations that are covered by the logged-in field service manager. To display the task number and short description, click the task marker. To review task details, click the task number.</td>
</tr>
<tr>
<td>Assets</td>
<td>The installed or available assets at the locations that are covered by the logged-in field service manager. To display the name and company name of the asset, click the asset marker. To review asset details, click the asset name.</td>
</tr>
<tr>
<td>Agent</td>
<td>Managed by the logged-in field service manager. To display the agent's name and mobile number, click the agent marker. To review agent details, click the agent name.</td>
</tr>
</tbody>
</table>
Field Service Compliance Report

Managers can view the task compliance result of their agents based on the date, such as tasks performed by the agents in the last 30 days and so on. Click any area of a chart to see the corresponding records.

<table>
<thead>
<tr>
<th>Chart</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Non-Compliant Agents</td>
<td>The number of agents who completed their tasks without following the safety protocols within the selected date range. Click the metrics to view the list of non-compliant tasks.</td>
</tr>
<tr>
<td>My Working Agents</td>
<td>The number of agents working on at least one task and reporting to the logged-in field service manager. Click the metrics to view the list of their compliant and non-compliant tasks.</td>
</tr>
<tr>
<td>Task Compliance by my Agents</td>
<td>The breakdown of compliant and non-compliant tasks by each agent within the selected date range. Click a section to view the list of tasks.</td>
</tr>
</tbody>
</table>
Install Virtual Agent for Field Service Management

You can install the Field Service Virtual Agent Conversations application (com.sn_fsm.virtualagent) if you have the admin role. The application includes demo data and installs related ServiceNow® Store applications and plugins if they are not already installed.

• Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see Get entitlement for a ServiceNow product or application.

• Virtual Agent for Field Service Management requires the following plugins. Ensure that these plugins are activated before you install Field Service Virtual Agent Conversations.

  Required ServiceNow plugins

  **Virtual Agent plugin (com.glide.cs.chatbot)**

  Enables the chatbot conversation with virtual agent. For details on activating Virtual Agent, see Activate Virtual Agent.

• Virtual Agent for Field Service Management requires the following ServiceNow Store applications. Ensure that these applications are installed before you install Field Service Virtual Agent Conversations.

  Required ServiceNow Store applications

  **Field Service Management**

  Manage work order tasks performed at customer location. For more information, see Activate Field Service Management.

  **Field Service NLU Model for Virtual Agent Conversations**

  For more information, see Enabling NLU.

Role required: admin

The following items are installed with Field Service Virtual Agent Conversations:

• Plugins
• Store applications
• Roles
• Scheduled jobs
• Tables

For more information, see

1. Navigate to System Applications > All Available Applications > All.

2. Find the Field Service Virtual Agent Conversations application (com.sn_fsm.virtualagent) using the filter criteria and search bar.

   You can search for the application by its name or ID. If you cannot find the application, you may have to request it from the ServiceNow Store.

   Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes.

3. In the Application installation dialog box, review the application dependencies.

   Dependent plugins and applications are listed if they will be installed, are currently installed, or need to be installed. If there are any plugins or applications that need to be installed, you must install them before you can install.
4. Optional: If demo data is available and you want to install it, click **Load demo data**.
   Demo data comprises sample records that describe application features for common use cases. Load demo data when you first install the application on a development or test instance.

   **Important:** If you don't load the demo data during installation, it's unavailable to load later.

5. Click **Install**.
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