



Field Service Lightning Managed Packages Guide

Salesforce, Summer '16



[@salesforcedocs](https://twitter.com/salesforcedocs)
Last updated: August 18, 2016

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Welcome

Welcome to the Field Service Lightning managed packages! Use these two packages to build a comprehensive field service hub in Salesforce. The managed packages are available in Salesforce Classic and all versions of the Salesforce1 mobile app.

The managed packages come with the following features:

- A dynamic scheduling console that gives dispatchers and supervisors a bird's-eye view of all scheduled service appointments
- Scheduling optimization that allocates resources to appointments in the most efficient way possible by accounting for technician skill level, travel time, location, and other factors
- A robust toolbox of objects, work rules, and scheduling policies that help you define your ideal scheduling model
- Out-of-the-box triggers that make it easy to customize your scheduling and display preferences

This guide explains how to implement the Field Service Lightning managed packages in your org. It walks you through installing the packages, setting up profiles and users, and customizing important settings. Let's get started!

EDITIONS

Available at an additional cost in **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Considerations for Salesforce1 Users

With Field Service Lightning available in Salesforce1, field technicians traveling between service appointments can view their schedule, navigate to service locations, and more.

Here are some of the nifty things field technicians can do with Field Service Lightning in Salesforce1.

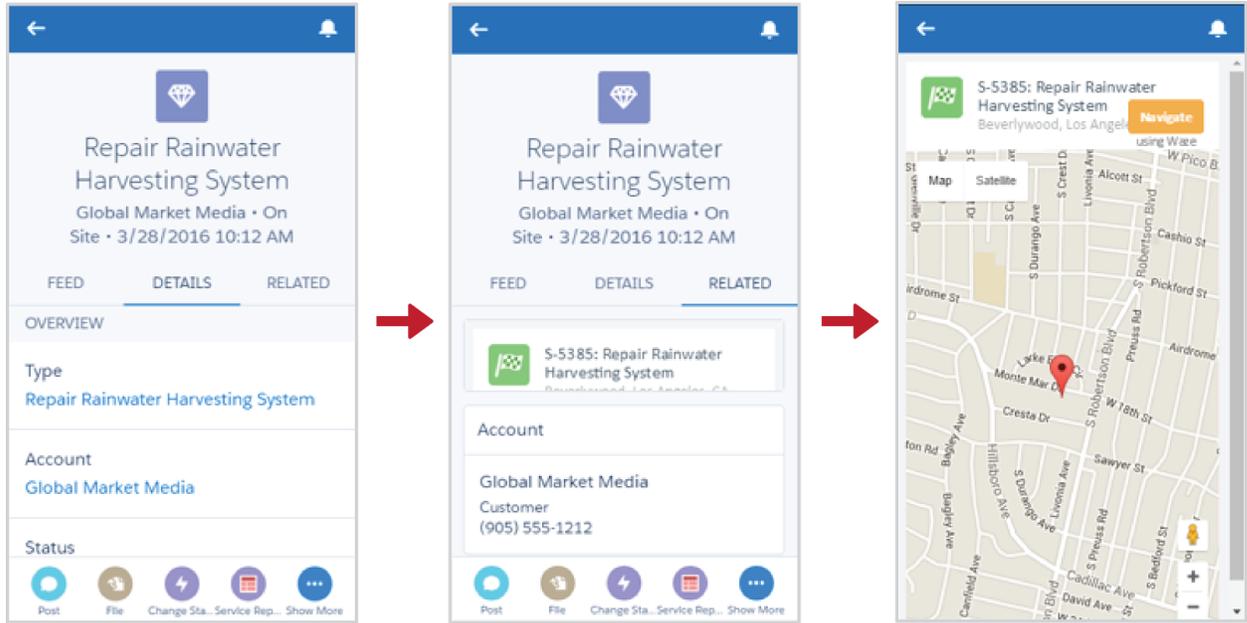
View Scheduled Services

View a list of services from the **Services** item in the Salesforce1 navigation menu. Technicians can set up customized list views from the full site ahead of time so they're able to focus on specific types of services, like those assigned to them or services with a certain status.

Tip: Since all a user's objects appear alphabetically in the Salesforce1 navigation menu, we recommend pinning the most-used Field Service Lightning items, such as **Services**, to the Recent section in the navigation menu for easier access. Do this from the search results screen in the full site.

Navigate to a Service Location

When viewing a service record in Salesforce1, technicians can locate the service address on a map. Select the **Related** tab on the service record, then select the address to navigate to the map.



Change a Service Status

Being in the field is no reason for your service records to get stale. Technicians can change a service status anytime. From the **Services** item, select **Change Status** in the action bar, and then select the new status. For example, after completing a service, a field technician can change the service status from On Site to Completed

Note: The dispatcher console, which includes the service list, scheduling policy picker, Gantt view, and map, isn't available in Salesforce1.

Installing Field Service Lightning

Set Up Profiles

Clone new profiles from the relevant profiles in your Salesforce org. You'll use these profiles later on in the installation process.

To know which profiles to clone, check the license type you are about to use.

1. From Setup, enter `Company Profile` in the Quick Find box, then click **Company Profile > Company Information**.
2. In the User Licenses section, find the list of Salesforce licenses in your org. Confirm that the correct number of licenses have been provisioned to you.

Then, create three profiles: Field Service Mobile, Field Service Dispatcher, and Field Service Administrator.

1. From Setup, enter `Manage Users` in the Quick Find box, then click **Manage Users > Profiles**.
2. Click **New Profile**.
3. Based on the License type you intend to use for your users, select to base the new profile on a clone of the **Standard User** profile for Salesforce licenses.
4. Name your new profile `Field Service Mobile`
5. Click **Save**.
6. Clone the profile two more times to create a `Field Service Dispatcher` and `Field Service Administrator` profile. Save your changes.



Note: If you've created your own custom profiles, you can clone them instead. Just make sure to assign those profiles to the Mobile, Dispatcher and Admin user type in the following steps.

Install Managed Packages

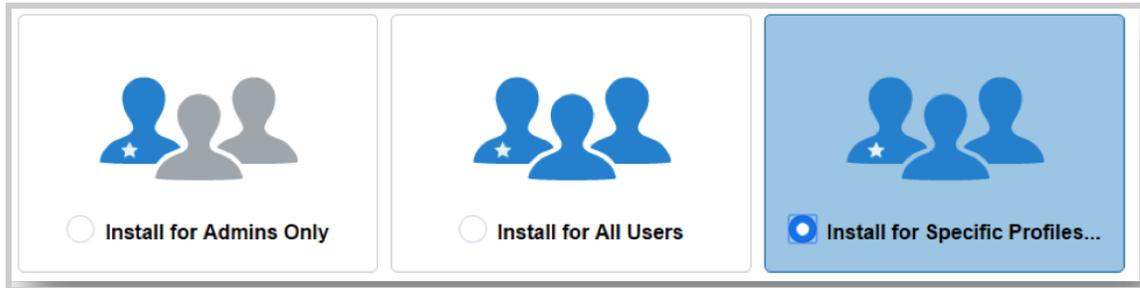
Install the managed packages to get things rolling. Field Service Lightning is composed of two managed packages:

- The **base package** contains the object data model
- The **Lightning package** contains the Field Service Lightning app

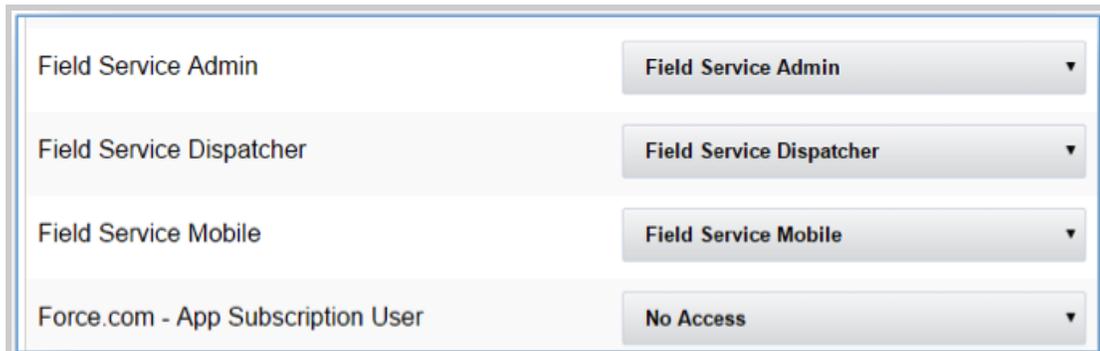
First, install the base package.

1. Click the installation link you received.

2. In the first installation screen, select **Install for Specific Profiles**.



3. Scroll down the page and assign the relevant access to the profiles that you created earlier: Field Service Mobile, Field Service Dispatcher, and Field Service Administrator.



4. Click **Install** to kick off the installation process. If it takes longer than expected, you can opt to be notified by email when the installation is complete.

Then, install the Lightning package.

1. Click the installation link you received.
2. In the first installation screen, select **Install for Specific Profiles**.
3. Scroll down the page and assign the relevant access to the profiles that you created earlier.
4. Click **Install** to kick off the installation process. If it takes longer than expected, you can opt to be notified by email when the installation is complete.

If you receive a request to approve third-party access, click **Yes**. This allows Salesforce to collect the latitude and longitude values for service addresses so the service scheduling optimizer can function properly.

All done? High-five! Next, let's configure your users for Field Service Lightning.

Note: The Field Service Lightning managed packages are available in Salesforce's [32 supported languages](#). You can add support for additional languages via the translation workbench. This guide is available in English only.

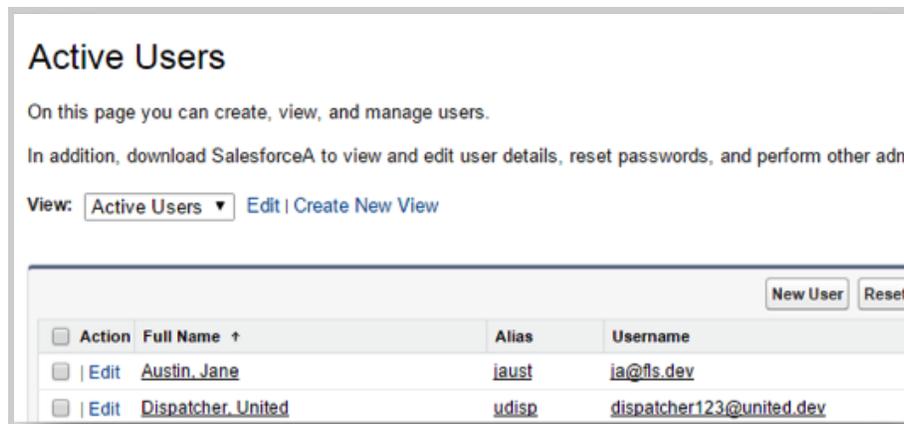
Set Up Users

Every Field Service Lightning user must be assigned a profile, a permission set, and a license.

Create Users

First, create or modify your Field Service Lightning users:

1. From Setup, enter `Manage Users` in the Quick Find box, then click **Manage Users > Users**.
2. Select the user:
 - a. If you want to assign an existing user Field Service Lightning permissions, find the user in the list and click **Edit**.
 - b. If you want to create a new Field Service Lightning user, click **New User**.



3. Enter the user's **name** and **email address** and a unique **username** in the form of an email address. By default, the username is the same as the email address.
4. Select a role.
5. Assign the user a Salesforce user license. The user license determines which profiles are available for the user.
6. Select one of the profiles you created earlier, or use the existing profiles you used when mapping the permissions in the installation process. The profile specifies the user's minimum permissions and access settings.
7. Select the user's time zone, locale, and language.
8. Optionally, select **Generate new password and notify user immediately**.
9. Save your changes.

Assign Permission Sets

Each user needs a permission set that matches their function: administrator, dispatcher, or mobile worker.

1. From Setup, enter `Manage Users` in the Quick Find box, then click **Manage Users > Permission Sets**.

2. Select the permission set you want to assign to a user or users.
3. Click **Manage Assignments**.
4. Click **Add Assignment**.
5. Select the users to assign to this permission set.
6. Click **Assign**.
7. Click **Done**.

Assign Page Layouts

Update Field Service Lightning profiles to include access to a set of standard and custom objects.

1. From Setup, enter `Profiles` in the Quick Find box, then click **Profiles**.
2. Select one of the Field Service Lightning profiles you created.
3. In the Page Layout section, find the Account object and click **View Assignment**.
4. Click **Edit Assignment**.
5. Use the table to specify the page layout for each profile. For Field Service profiles, select **Field Service – Account Layout**. For objects with record types, a matrix displays a page layout selector for each profile and record type.

Edit Page Layout Assignment
Account

The table below shows the page layout assignments for different profiles. Use SHIFT + click or click and drag to select a range of adjacent cells. Use CTRL + click to select multiple cells th

Save Cancel

Page Layout To Use: Field Service - Account Layout 3 Selected 3 Changed

Profiles	Page Layout
Analytics Cloud Integration User	Account Layout
Analytics Cloud Security User	Account Layout
Authenticated Website	Account Layout
Chatter Only User	Account Layout
Contract Manager	Account Layout
Cross Org Data Proxy User	Account Layout
Custom: Marketing Profile	Account (Marketing) Layout
Custom: Sales Profile	Account (Sales) Layout
Custom: Support Profile	Account (Support) Layout
Customer Community Login User	Account Layout
Customer Community Plus Login User	Account Layout
Customer Community Plus User	Account Layout
Customer Community User	Account Layout
Customer Portal Manager	Account Layout
Customer Portal Manager Custom	Account Layout
Customer Portal Manager Standard	Account Layout
External Identity User	Account Layout
Field Service Admin	Field Service - Account Layout
Field Service Dispatcher	Field Service - Account Layout
Field Service Mobile	Field Service - Account Layout
Force.com - App Subscription User	Account Layout



Note: Selected page layout assignment are highlighted. Page layout assignments are italicized until you save your changes.

6. Save your changes. Repeat as needed for the other profiles.
7. In the Custom Object Layout section, assign the Field Service Lightning layout for all Field Service Profiles for the following objects:
 - a. Calendar
 - b. Location
 - c. Resource
 - d. Service

- e. Service Type

Enable Chatter Publisher Actions

Enabling publisher actions lets you add Field Service Lightning actions to Chatter publishers on the home page, the Chatter tab, Chatter groups, and record detail pages. With this setting enabled, you can also customize the order in which actions appear, including Post, File, Link, and Poll.

1. From Setup, enter `Chatter Settings` in the Quick Find box, then select **Chatter Settings**.
2. Click **Edit**.
3. Select **Enable Actions in the Publisher**.
4. Click **Save**.

Customizing Field Service Lightning

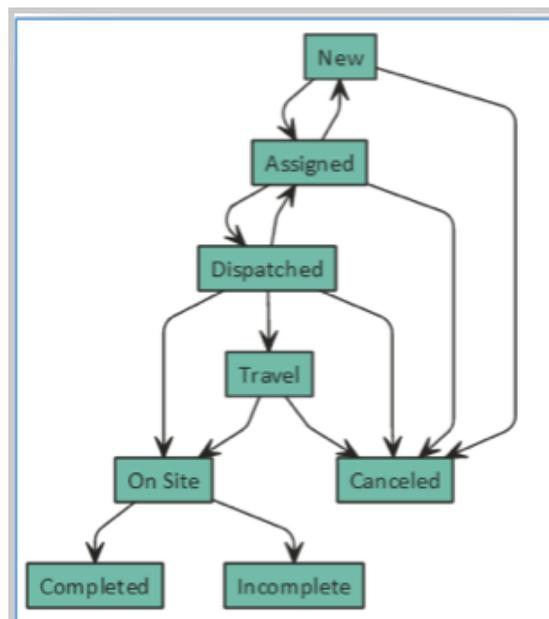
Now that the installation process is complete, you can start to configure your org with business information. In this section, we'll review how to customize and maintain Field Service Lightning to meet your field service needs.

Service Life Cycle

Field Service Lightning offers a predefined list of Service statuses. The Service status reflects the service state in the system and follows its whole lifecycle – from service creation to service completion. The out-of-the-box service statuses are:

- New
- Assigned
- Dispatched
- Travel
- On Site
- Completed
- Incomplete
- Canceled

This diagram shows the preconfigured status transition flow:



You can change the status names to fit your business needs. Changing these names doesn't change the automatic transition behavior.

Automatic Status Transitions

Field Service Lightning offers a predefined list of Service statuses. The Service status reflects the state of the service in the system and follows its whole life cycle – from service creation to service completion.

To configure Status Definition settings, open the **Field Service Admin** app from the Field Service app menu. Click the **Field Service Settings** tab, then click **Status Definition**.

When a service is unscheduled (either by manual operation or automatic) its status is automatically changed to New.

In addition, there are two types of automatic status transitions:

- **When scheduling a service, change its status to Scheduled:** When a service is assigned to a resource (either manually or automatically), its status is changed to Scheduled.
- **Unschedule the service when its status is changed to Cancelled or New:** When a service's status is changed to Cancelled or New, the service is unscheduled and removed from the Gantt (a dynamic Scheduling Board).

These automatic transitions (triggers) can be activated or deactivated, according to the business needs. See *Trigger Settings* for more details.

You can change the status names to fit your business needs, but changing these names doesn't change the automatic transition behavior.

Configurable Service Status Transitions

A service life cycle is the sequence of stages or statuses that a service passes through. The life cycle covers the time when the service enters the system until the time it reaches its final status. Field Service Lightning offers a predefined status transition of Service statuses.

The allowed status transitions are listed in this screenshot:

Each row represents an allowed transition. You can modify a flow by clicking a status and selecting a new status in the drop-down menu. The available values are based on the service status picklist field values. Clicking the tool icon will open a window where you can:

- Limit certain transitions to specific profiles. You can add the relevant profiles for a specific transition, or leave it blank to remove any restriction.
- Select a custom Visualforce page you want to be used for a given status transition.

Click the **X** icon to delete a flow, or click **Add a Flow** to create a new one. To disable this feature, click **OFF** at the top of the screen.

Below the service status transition screen, you can see a status flow diagram that is based on the status flows you specify. The diagram shows the complete list and ignores profile-based restrictions.

Service Status Dictionary

The Schedule engine relies on certain service life cycle milestones. Since each organization can create its own status flow and terminology, it's important to have a dictionary of common milestones to translate the custom status values to the schedule engine terminology. You can see the following options at the bottom of the Status Definition page, which is where you can configure the status dictionary.

Select the status picklist value	
Service is tentatively scheduled	Assigned
Service is published to the assigned resource	Dispatched
Service is not completed	Incomplete
New Service	New
Resource is beginning the service	On Site
Resource is on the way	Travel
Service is canceled	Canceled
Service is completed	Completed

Note: The status names are taken from the Status picklist values. To change the name of a new one, you must update the picklist first.

Status Based Sharing

The Service object sharing rules are changed according to the service lifecycle.

- When a service is created and assigned, the service is only visible to the creator of the record (e.g. one of the dispatchers \ customers \ resources) and to the relevant dispatchers based on user-location sharing.
- When dispatching a service's status is changed to Dispatched, the record is automatically shared with the user of the assigned resource.
- Cancelled services will remove all sharing rules from the service and will be visible only to the owner of the service and the relevant dispatchers based on the user-location object.

You can activate and deactivate status based sharing rules according to business needs. To learn more, see *Trigger Settings*.

Controlling Field Service Lightning Settings

From the Settings tab, you can customize the following elements of Field Service Lightning:

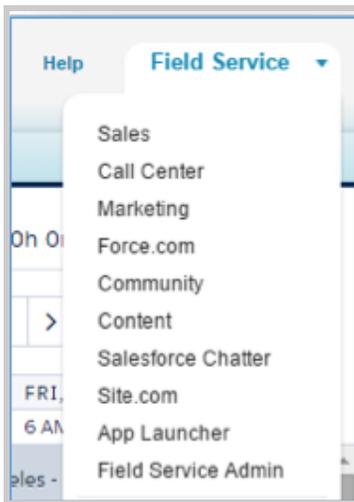
- **Dispatcher settings:** Configure dispatcher actions and controls

- **Triggers:** Configure automations by enabling out-of-the-box triggers
- **Logic:** Configure general logic settings that are used in scheduling
- **Service life cycle:** Configure the service status values and transitions
- **Appointment booking settings:** Configure the appointment booking defaults and object linkage
- **Background jobs:** Configure scheduled jobs

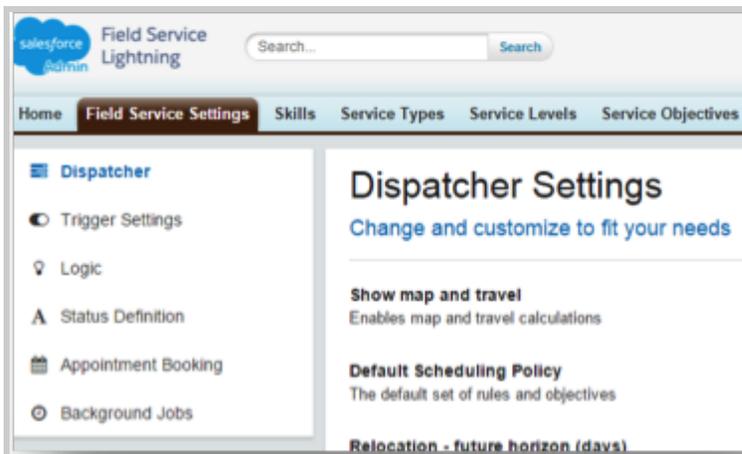
Dispatcher Settings

To customize the actions and controls available to dispatchers:

1. Open the **Field Service Admin** app from the Field Service app menu.

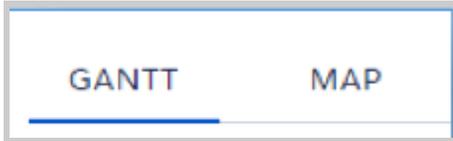


2. Click the Field Service Settings tab, then click **Dispatcher**.



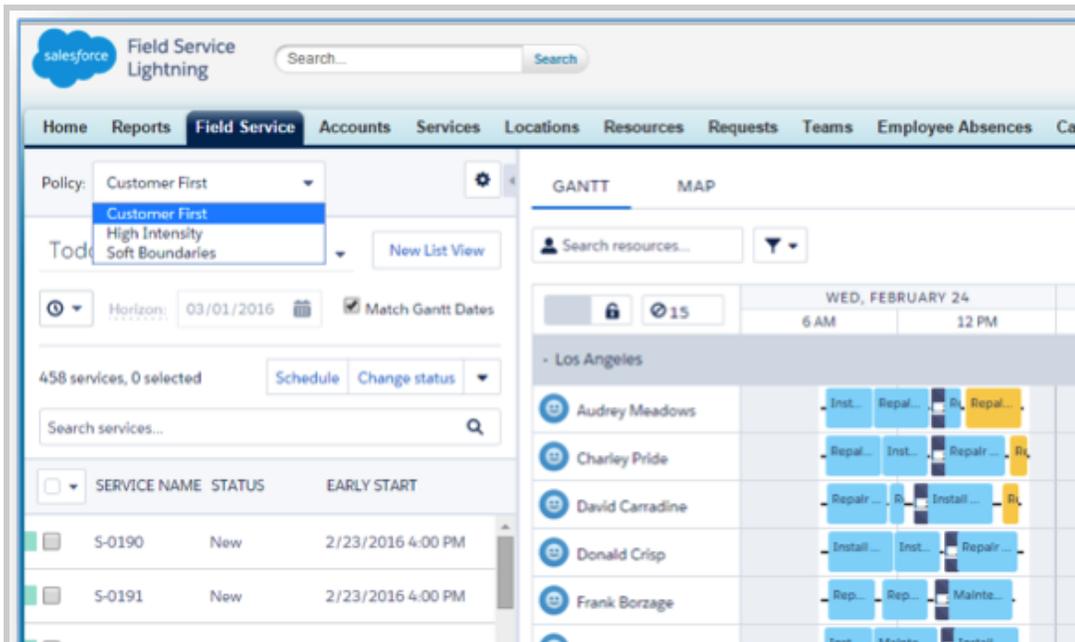
You can configure the following settings.

- **Show Map:** Select this option to let dispatchers switch between the Gantt and Map views:



Travel calculations will be shown on the Gantt. If this option is disabled, the dispatcher won't see the Map view or the Travel calculations on the Gantt.

- **Default Scheduling Policy:** The default set of rules and objectives (scheduling policy) that will be used in the Gantt scheduling, the Schedule Action, and the Auto-Schedule trigger. Field Service Lightning comes with three out-of-the-box scheduling policies.



- **Relocation – future horizon (days):** This parameter limits how **far ahead** relocation will be displayed on the Gantt takes. For better performance, don't exceed 365 days.
- **Relocation – past horizon (days):** This parameter limits how **far back** relocation will be displayed on the Gantt takes. For better performance, don't exceed 60 days.
- **Always show local time inside the Gantt's tooltip:** Select this option if you want service local start and finish times to always be displayed inside the Gantt's tooltip. This option is useful if your call center reps aren't always in the same time zone as scheduled services.
- **Minimum drag time of services on Gantt:** Select the minimum number of minutes for drag (in a drag and drop action) to take effect on the Gantt.

If desired, you can change the dispatcher view on the Field Service Lightning Visualforce pages--Service, Resource and Employee Absence--by loading customized CSS and JS files.

Always save your changes.

Trigger Settings

Field Service Lightning comes with several standard triggers that you can use.

To configure your trigger settings, open the **Field Service Admin** app from the Field Service app menu. Click the **Field Service Settings** tab, then click **Trigger Settings**.

The following triggers are available:

- **Add ClockReport to Timesheet when Service status changes:** When a service status changes, this trigger creates a new clock report with the new status in the resource's timesheet, assuming the resource has a valid timesheet. For example, when a resource changes a service status to On Site, a new clock report will be created with Activity "On-Site."
- **Prevent scheduling of canceled Services:** This trigger prevents the scheduling process from scheduling services with a status of Cancelled.
- **When scheduling a Service change its status to Scheduled:** When a service is scheduled, this trigger changes the service status to Assigned.
- **Derive Time Zone from parent Location:** When a location record has a parent location record, this trigger sets the location time zone to match the time zone on its parent record. If there is no parent location and time zone is not defined, the time zone is automatically set to GMT.
- **Enable object sharing by Locations:** This trigger ensures that dispatchers have access to Resources, Services, and Absences on locations they monitor.
- **Mention user when Service is dispatched:** When a service status changes to Dispatched, this trigger mentions the assigned resource on Chatter.
- **Reduce Resource inventory after Service completion:** When resources complete a service, they update which parts (products) were used. Once the service status is changed to Completed, this trigger subtracts the used parts from the resource inventory.
- **Prevent Relocation overlapping:** This trigger limits field resources to one relocation at a time.
- **Unschedule the Service when its status is changed to Cancelled or New:** When a service's status changes to Cancelled or New, this trigger unschedules them and removes them from the Gantt.
- **Create Absence after Request is approved:** When an Absence request is approved, this trigger creates an Absence at the time specified in the request.
- **Prevent overlapping of Resource Calendars:** This trigger prevents resources' calendar intervals from overlapping. Otherwise, calendar intervals can overlap, and overlapping intervals will be related to the resource as one long interval.
- **Derive Service label from Account name:** If a service is created with an associated account, this trigger adds the Account name to the service label on the Gantt.
- **Set default service duration to one hour:** If the service type duration derivation is disabled (the next trigger) and the duration value is not entered during the service creation, this trigger sets the duration to a default value of one hour.
- **Derive Service Duration and Required Skills from Service Type:** This trigger populates a service's duration and required skills settings based on its service type.
- **Enable Service Sharing Logic:** When a service status changes to Dispatched, this trigger gives the mobile worker assigned to the service access to the service record.
- **Enable Travel and Break Calculation:** This trigger calculates travel time and displays it on the Gantt, and automatically creates breaks in accordance with the specifications in the *Resource Availability* work rule.

- **Automatically populate user groups based on User Location:** This trigger ensures that sharing groups are determined by the User Location object.

Salesforce Calendar Syncing

Services and Absences can be synced with the Salesforce Calendar. To enable this feature, add the `EventType` field to the event layout. If Outlook Sync is enabled in your org, users can configure Outlook categories to allow Outlook events to represent service creation or absences. Field Service Lightning comes with the following calendar settings:

- **Synchronize Services from Salesforce Calendar:** If the event type of an event record is 'Service', this setting creates a service record for the resource associated with the user.
- **Synchronize Services to Salesforce Calendar:** When a service is dispatched, this setting creates an event record for the user associated with the assigned resource record.
- **Service outlook category name:** This setting maps the Outlook category that the organization uses for creating services. The event type of the event created by Outlook synchronization is dependent on that mapping.
- **Synchronize Absences from Salesforce Calendar:** If the event type of an event record is 'Absence', this setting creates an Employee Absence record for the resource associated with the user.
- **Synchronize Absences to Salesforce Calendar:** When an Absence is created, this setting creates an event record for the user associated with the assigned resource record.
- **Absence outlook category name:** This setting maps the Outlook category that the organization uses for creating employee absences. The event type of the event created by Outlook synchronization is dependent on that mapping.

Drip Feed Settings

Drip Feed is a way to dispatch services to field resources. When this option is enabled, a field resource's subsequent services are dispatched to him or her as soon as the previous service is completed, giving the resource access to those service records.

To configure Drip Feed settings, open the **Field Service Admin** app from the Field Service app menu. Click the *Field Service Settings* tab, then click **Drip Feed**.

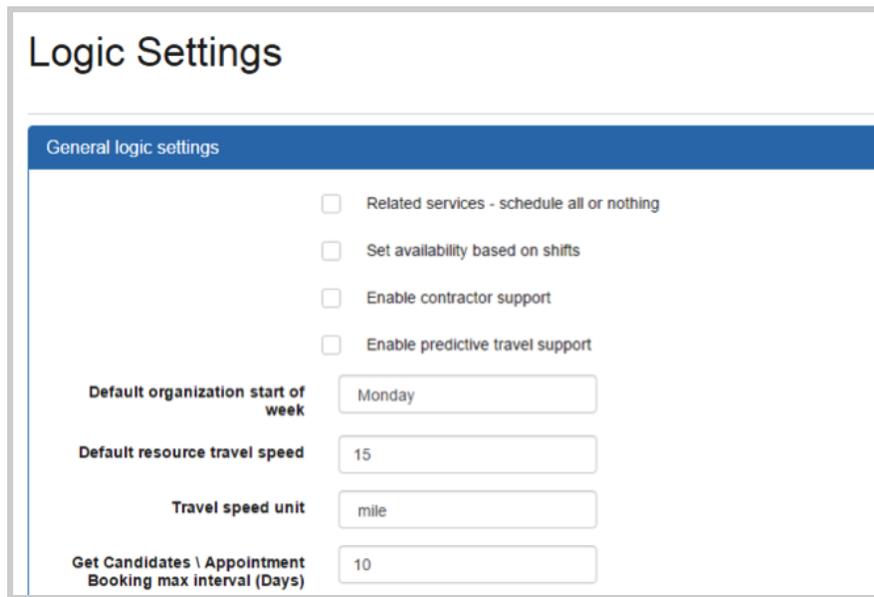
Field Service Lightning includes the following Drip Feed settings:

- **Enable Drip Feed:** Enable or disable the drip feed functionality.
- **Number of Services to dispatch:** The number of services that will be dispatched to the resource when he or she completes a service.

Logic Settings

You can configure the general logic settings that are used in Field Service Lightning scheduling.

To configure Logic settings, open the **Field Service Admin** app from the Field Service app menu. Click the **Field Service Settings** tab, then click **Logic**.



Logic Settings

General logic settings

- Related services - schedule all or nothing
- Set availability based on shifts
- Enable contractor support
- Enable predictive travel support

Default organization start of week: Monday

Default resource travel speed: 15

Travel speed unit: mile

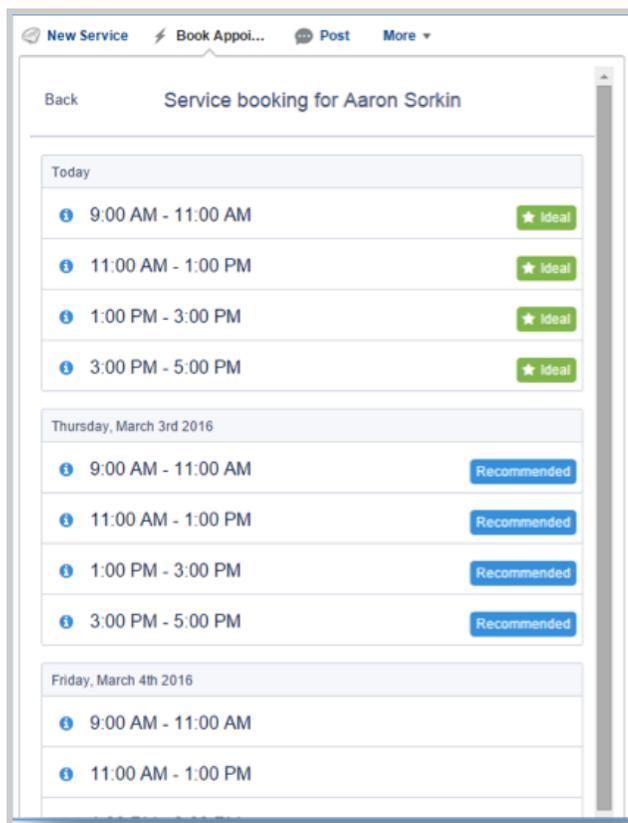
Get Candidates \ Appointment Booking max interval (Days): 10

You can configure the following settings:

- **Related Services – Schedule all or nothing:** This setting prevents a chain of related services (with dependencies between them) from being scheduled separately. It will only be possible to schedule such a chain as a whole unit.
- **Set availability based on shifts:** This setting ensures that resource availability is based on the Shift object rather than the Calendar object.
- **Enable Contractor Support:** This setting activates *Capacity based scheduling*.
- **Enable Predictive Travel Support:** This setting activates *Predictive Travel*.
- **Default resource travel speed:** If a different travel speed is not specified on the resource, this value will be considered in the calculation of travel time.
- **Travel speed unit:** The travel unit that will be used for travel time calculations.
- **Get Candidates \ Appointment Booking max interval (Days):** The maximum amount of days possible to request an appointment or get candidates. Increasing the value significantly may hurt performance.

Appointment Booking Settings

The Field Service Lightning Appointment Booking feature lets you offer truth-based graded appointment slots, meaning slots that are based on actual availability of the mobile workers and that are graded according to the organization key performance indicators (KPIs).



To configure Appointment Booking settings, open the **Field Service Admins** app from the Field Service app menu. Click the *Field Service Settings* tab, then click **Appointment Booking**.

You can adjust the following settings:

Booking Preferences

Default Scheduling Policy

Default Service Level

Default threshold for Ideal grading

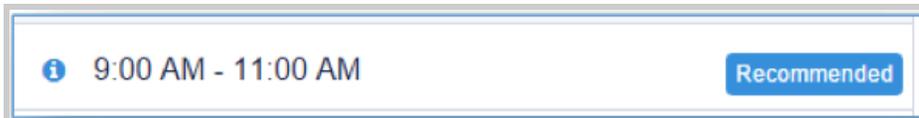
Default threshold for Recommended grading

Show grades explanation

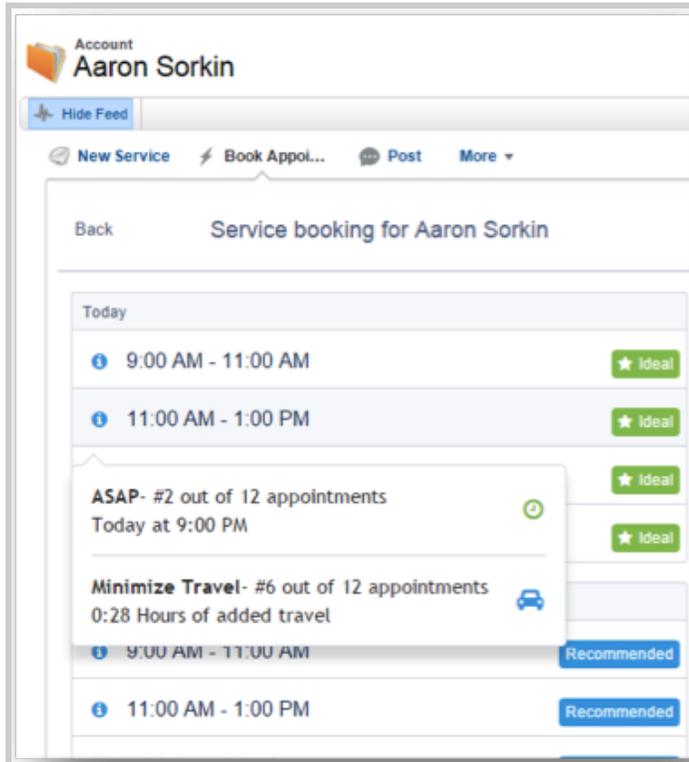
- **Default Scheduling Policy:** The scheduling policy is the set of rules and objective that the scheduling engine takes into consideration when booking and rescheduling appointments.
- **Default Service Level:** The Service Level obeys the appointment window and due date offset requirements specified in each customer's Service Level Agreement (SLA). A service level can be assigned to accounts, cases, or any standard or custom objects. If a specific service level is assigned to the record for which an appointment is scheduled, that service level is used instead of the default one.
- **Default threshold for ideal grading:** A slot with a grade equal to or higher than the value specified here will be shown with the *Ideal* ticker on the Appointment Booking Chatter action.



- **Default threshold for recommended grading:** A slot with a grade equal to or higher than the value specified here and lower than the ideal threshold will be shown with the *Recommended* ticker on the Appointment Booking Chatter action.



- **Show grades explanation:** This option shows how each appointment slot ranks against key performance indicators.



Appointment Booking Derivations



You can link the appointment booking process to any standard or custom object that exists in the system. After selecting an object, you can define how each property listed under the object inherits its value during the appointment process.

In the example below, when a user books an appointment from an account, the service's billing address will be inherited from the account.

Link Appointment Booking with any standard or custom object

Account

Profile

Street

City

State

Zipcode

Country

Longitude

Latitude

Lookup from Service object

Location

- **Profile (replace to service level):** You can create a lookup field on the selected object to the Service Level object, and map this new field to allow derivation of the service level record specified on this lookup field.
- **Lookup from Service object:** You can create a lookup field on the service object to the selected object, and map this new field to allow linkage between the new service record and the selected record.
- **Location:** You can create a lookup field on the selected object to the Location object and map this new field to allow derivation of the Location record specified on this lookup field.

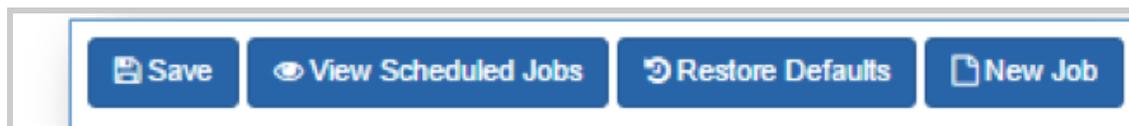
Background Jobs Settings

Background Jobs are automated procedures that can be executed on a schedule. You can configure jobs to execute for specific locations, at a certain frequency, for a certain time horizon, or filtered by a pre-configured filter.

To configure Background Jobs settings, open the **Field Service Admin** app from the Field Service app menu. Click the *Field Service Settings* tab, then click **Background Jobs**.

The available background jobs are:

- **Auto dispatch assigned service:** Automatically changes the service status to Dispatched
- **Chatter reminders before service starts:** Automatically send a Chatter reminder to the resource 15 minutes (this value can be customized) before the service starts
- **Mark unassigned services In Jeopardy:** Marks unassigned services under the configured category with the In Jeopardy flag
- **Automatic Services Scheduler:** Automatically schedules unscheduled services on a weekly or monthly basis.
- **Services Optimization:** Schedules unscheduled services in a way that minimizes travel time, cost, overtime, and no-shows, and maximizes resource efficiency.



After setting the desired configurations of the background job, be sure to save. Click **Restore Defaults** to quickly revert back to the default settings.

For example, you can create a background job that enables automatic dispatching of assigned services and changes the status of the chosen services (according to the job configuration) from *Assigned* to *Dispatched*. The **On/Off** button enables or disables a job type, while the **Run Now** button runs the job.

Automatic Service Scheduler Background Job

This background job performs the following actions by reviewing available resources and service locations:

- Services whose Early Start and Due Date are already set are assigned a Resource, Appointment Start, and Appointment Finish.
- Services whose Early Start, Due Date, Appointment Start, and Appointment Finish are already set are assigned a Resource.

To set up the background job:

1. Open the Field Service Admin app from the Field Service app menu.
2. Click the Field Service Settings tab, then click **Background Jobs**.
3. Click **New Job**.
4. Enter a name and select *Automatic Service Scheduler* as the job type.
5. Click **OK**.

6. Select the locations that the background job should run on. The background job will only schedule services that are within the locations you select. Selecting *No Location also schedules services without a specified location*.
7. Select how often the job should run. For example, you can set the job to run every Sunday at 2:00 a.m. for the first six months of the year.
8. Set the time horizon, which tells the job which services to schedule.
9. Optionally, set up a filter and email notifications, and select a scheduling policy.
10. Set the job to *On*.
11. Click **Save**.

Note:

- Pinned services aren't scheduled by the background job.
- High-priority services are scheduled first.
- You can use the "Get Candidates / Appointment Booking Max Interval (Days)" logic setting to let the background job to schedule services beyond the set time horizon—in other words, to schedule services so they can be completed later than their Due Date. To find this setting, open the Field Service Admin app from the Field Service app menu. Click the Field Service Settings tab, then click **Logic**.
- Your org comes with a default background job of this type named Bulk Service Scheduler. To use this default job, open the Field Service Admin app from the Field Service app menu. Click the Field Service Settings tab, then click **Background Jobs** and set the default job to *On*.

Services Optimization Background Job

The service scheduling optimizer helps your business follow the most efficient schedule possible. This automatic process schedules all unscheduled services in a way that:

- Minimizes travel time, overtime, cost, and no-shows
- Maximizes resource efficiency by assigning resources to as many services per shift as possible
- Helps you comply with your SLAs

You can configure the optimizer to run on repeat (for instance, every day), or just run it manually.

Example:

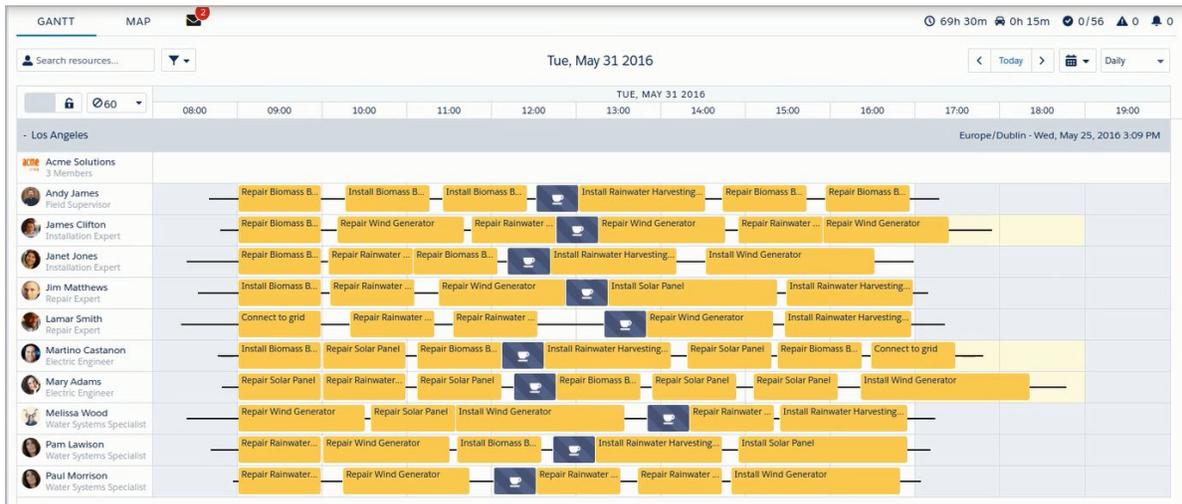
Before running the service scheduling optimizer:

- 62 scheduled hours
- 24 minutes average travel
- 51 scheduled jobs



After running the service scheduling optimizer:

- 69.5 scheduled hours
- 15 minutes average travel
- 56 scheduled jobs

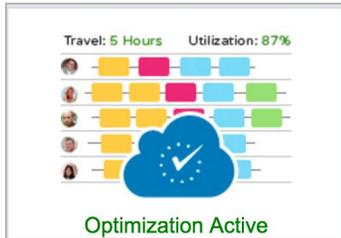


To activate the service scheduling optimizer:

1. As a system administrator with the “Modify All Data” user permission, navigate to the Field Service Settings tab.
2. Click **Create Optimization Profile** in the left-hand navigation bar.
Note: This process consumes one Salesforce license. Before you enable optimization, ensure that a license is available.
3. When you’re prompted, switch to the newly created optimization user to set up your optimization:
 - a. From Setup, click **Users** and locate the optimization user.
 - b. Click **Edit** next to the user and select **Active** on their profile.
 - c. Select **Generate new password and notify user immediately**.
 - d. Log out.
4. When you receive a password reset email, click the link and complete the steps to log into your org as the optimization user.
5. When you’re logged in, click the + icon to see your full list of tabs.
6. Click the Field Service Settings tab.

7. Click **Activate Optimization**.
8. Click **Allow** to allow remote site access and be redirected back to the settings tab.

Optimization is now active in your org, as seen by the **Optimization Active** message in the left-hand navigation bar on the Field Service Settings page. You can log out as the optimization user and log back in with your regular username and password.



To have the optimizer run on repeat, open the **Field Service Admin** app from the Field Service app menu. Click the **Field Service Settings** tab, then click **Background Jobs**. Select the optimizer background job and adjust the settings as needed. When the optimizer is active, a status bar appears on the left-hand side of the Field Service Settings page:

To manually run the optimizer—for instance, for a particular geographical area using a certain scheduling policy—click **Optimize** in the Service drop-down menu on the Gantt and define your settings.

Note:

- A message displays at the top of the Gantt when the optimizer is running.
- If you deactivate the optimization user, the optimization will fail.

Advanced Configuration

To make the most of Field Service Lightning’s powerful scheduling tools, it’s important for you to understand the main elements of Field Service Lightning:

- **Work Rules:** A work rule places a constraint on scheduling. It defines which *assignments* (an assigned resource, such as a technician, for a specific service at a specific time) are valid and which are not. For example, the *Match Skill* rule ensures that a service will be assigned only to resources that have the skill set needed to perform the task. Field Service Lightning comes with a predefined set of Work Rules, and you edit them or create your own.
- **Service Objectives:** A service objective reflects a scheduling goal or target. Each objective returns a grade, or score, for services. When a service is scheduled, the scheduling engine calculates the added score of an objective, and the total score of all objectives taken into consideration is the scheduled service’s total score. Services with higher scores are preferred by the scheduling engine.
- **Scheduling Policies:** A scheduling policy is a set of work rules and service objectives that the scheduling engine can consider when it’s finding the best candidates and slots to create an optimized schedule. Field Service Lightning comes with a predefined set of scheduling policies, and you can edit them or create your own.

Work Rules

A work rule filters out candidates to perform a service if they don't meet the rule requirements.

Since there can be many scheduling constraints in the real world of field service scheduling, Field Service Lightning supports multiple rule types (record types), which can be found in the Work Rules tab.

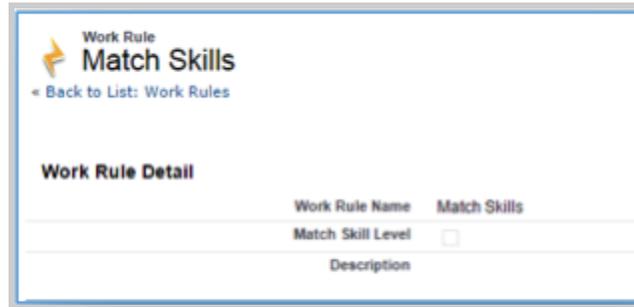
Work Rule Type: Resource Availability

This fundamental rule type ensures that a resource is available to perform the service. It takes into account travel time (known as the “gap” between appointments) and previously scheduled services.

Field Name	Description
Fixed Gap	If selected, the gap between services will be based on the minimum gap field, without travel calculations.
Minimum Gap (minutes)	Determines the minimum gap between services. If Fixed Gap is selected, the value here will determine the gap between the services.
Break Start	Determines the minimum break start time in the format {HH:MM} to create breaks. Leave this field empty if you don't want to create breaks.
Break Duration (Minutes)	Determines the length of the breaks created. Leave this field empty if you don't want to create breaks.
Travel from Home (Minutes)	Determines how many minutes the resource will be available for travel before the start of the work day (at the resource's expense). If this field is empty, any amount of travel before the start of the work day is valid.
Travel to Home (Minutes)	Determines how many minutes the resource will be available for travel at the end of the work day (at the resource's expense). If this field is empty, any amount of travel after the end of the work day is valid.

Work Rule Type: Match Skills

This rule type matches the required skills for a service with a resource’s skill set. You can also use it to match skill levels.



Field Name	Description
Match Skill Level	If selected, Resources whose skill level is lower than what is specified on the service will be filtered out, and won’t be considered eligible candidates to perform the service.

Work Rule Type: Match Location

This rule type matches the location of the service with the resource. It also supports matching a relocated resource with the relocation feature.

Work Rule Type: Match Working Location

This rule type matches the location of the service with the resource’s list of working locations. This rule will not have any impact if it’s included in a scheduling policy together with a Match Location work rule.

Work Rule Type: Required Resources

This rule type ensures that the assigned resource for the service is one of the required resources specified on the service.

Work Rule Type: Excluded Resources

This rule type ensures that the assigned resource for the service is not one of the excluded resources specified on the service.

Work Rule Type: Match Time Rule

This rule type limits the scheduling time window according to service date and time properties.

Field Service Lightning comes with four out-of-the-box match time rules:

- **Early Start:** Ensures that the service will be executed on time in relevance to the earliest start allowed by validating that the equation $Early\ Start \leq start$ is true.
- **Due Date:** Ensures that the service will be executed on time in relevance to the required due date by validating that the equation $Due\ Date \leq finish$ is true.
- **Appointment Start:** Ensures that the resource will not arrive to the service site before the promised Appointment Start by validating that the equation $Appointment\ Start \leq Start$ is true.
- **Appointment Finish:** Ensures that the resource will arrive to the service site before the promised Appointment Finish by validating that the equation $Start \leq Appointment\ finish$ is true.

Work Rule Type: Match Boolean

This rule type validates that a Boolean property on the Resource object is set to true or false. For example, it can check whether a resource is Active.

Work Rule Type: Match Fields

This rule type matches a property between a Service object and a Resource object.

Work Rule Type: Maximum Travel From Home

This rule type lets you set the maximum distance or maximum travel time between a resource's home base and their assigned services.

You can define the maximum distance based on travel time or distance. Both options are calculated using aerial distance (as the crow flies). This work rule may be particularly useful to you if the locations in your org don't represent geographical regions. In such a situation, this rule prevents resources from being assigned to services that are far from their home base.

To create a work rule using this type:

1. Click the Work Rules tab, and click **New**.
2. For "Record Type of new record," select *Field Service - Maximum Travel From Home*.
3. Click **Continue**.
4. Enter a name and description for the rule.
5. For "Maximum Travel From Home Type", select *Distance or Travel Time to indicate the type of maximum*.
6. For "Maximum Travel From Home", enter a maximum value.
 - If you selected Travel Time, the unit is minutes. The travel time between a home base and a service is calculated based on the resource's travel speed or, if none is specified, on the system default for travel speed.
 - If you selected Distance, the unit is your org's travel speed unit. (You can find this setting by clicking the Field Service Settings tab, then clicking **Logic > Travel Speed Unit**.)
7. Click **Save**.

Note:

- If a resource's home base hasn't been specified, they cannot be a candidate for any service.
- If a service's location isn't specified, they can be assigned to any resource with a home base.
- The maximum value on a work rule must be positive.

Service Objectives

A service objective represents a scheduling goal or target. Each objective returns a grade, or score, for services.

When a service is scheduled, the scheduling engine calculates the added score of an objective, and the total score of all objectives taken into consideration is the scheduled service's total score. Services with a higher score are preferred by the scheduling engine.

The score is used in the following automated tasks:

- **Booking appointments:** The best time slots are indicated on the list
- **Finding a valid candidate to perform the task:** The best candidates will be indicated
- **Auto-scheduling:** The service will be scheduled to the highest score

Field Service Lightning comes with a predefined set of service objectives, and you can edit them or create your own.

Here are some objectives you might want to set:

- Assign each service to a resource listed as a preferred resource on the service
- Schedule each service as soon as possible
- Minimize the travel time of resources between services

The first objective would return a higher grade for services involving resources who are listed in the service's Preferred Resources related list. The second and third objectives would return higher grades for services at earlier times and for services that are located closer to other services of the same resource.

Since you might want to focus on some objectives more than others, Field Service Lightning computes a **combined objective** for you. This is a weighted sum of grades that it obtains from the individual objectives. When you add objectives to a scheduling policy, you'll specify their weights in the combined objective. If completing services on time is more important than minimizing travel time, for example, then you might assign weights of 10 and 5 to the two objectives, respectively.

The Field Service Lightning scheduling functionality (**Schedule** action) uses objectives to guide the service schedule assignment. As the services are being scheduled, it favors the services with the best objective grades.

Field Service Lightning includes multiple service objective types (record types).

Service Objective Type: ASAP

This service objective schedules the service as soon as possible.

Service Objective Type: Minimize Overtime

This service objective minimizes the use of overtime.

Service Objective Type: Minimize Travel

This service objective minimizes the travel time between services and/or home base.

Service Objective Type: Prefer Contractor Resource

This service objective prefers the external workforce over the internal workforce, or vice versa. You can opt to prefer the external workforce by selecting **Prefer Contractor**.

Service Objective Type: Preferred Resource

This service objective prioritizes scheduling according to the Preferred Resources related list under the service record.

Service Objective Type: Skill Level

This service objective prefers the least or most qualified candidate. Use the Prioritize Resource picklist to indicate whether to prefer the most qualified or least qualified resource.

Service Objective Type: Resource Priority

This service objective lets you assign resources a priority level based on your own criteria, such as client satisfaction or seniority.

You can update a resource's priority as often as needed—for instance, after they complete a service, or after a periodic performance review.

The lower a resource's rank number, the higher their priority. For example, a resource whose rank is 1 will be preferred to a resource whose rank is 2. You can use zero or negative values if needed.

To use the Resource Priority service objective type, you must first create a numeric "Rank" field on the Resource object.

Working with Service Objective Types

To use a service objective type, it must be available to your user profile and assigned to the proper page layout.

To check that a service objective type is available to your profile.

1. In Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click your profile name.
3. Under Record Type Settings, click **Edit** next to Service Objectives.
4. If the objective type isn't in the Selected Record Types column, use the arrow key to move it there.
5. Click **Save**.

To assign the proper page layout to a service objective type:

1. In Setup, enter *Profiles* in the Quick Find box, then select **Profiles**.
2. Click your profile name.
3. Under Page Layouts, click **View Assignment** next to Service Objective.
4. Click **Edit Assignment**.
5. Under the record type in question, select the layout that matches its name. For example, under the Resource Priority record type, select *Resource Priority Layout* in the drop-down menu.
6. Click **Save**.

To create a service objective:

1. Click the Service Objectives tab.
2. Click **New**.
3. For "Record Type of new record," select *Resource Priority*.
4. Click *Continue*.
5. Enter a name for the service objective, such as "Resource Rank."
6. Click **Save** to be redirected to the new service objective's detail page, where you can configure additional settings.

Scheduling Policies

A scheduling policy is a set of rules and objectives that are used in a scheduling operation.

Field Service Lightning includes the following predefined scheduling policies:

- **Customer First:** This policy balances great customer service with travel minimization. Appointments are graded first by the customer's selection of a preferred employee, and then by the ability to provide the service as soon as possible. Travel minimization is second priority.
- **High Intensity:** This policy is typically used in times of high service volumes, like a storm scenario, where the business is focusing on employee productivity first and customer preferences are second priority.
- **Soft Boundaries:** This policy is identical to the Customer First policy, but allows the sharing of employees between different locations to enhance service coverage.
- **Emergency:** This policy is used with the Emergency Chatter action to dispatch emergency services. If you first installed the managed packages before June 2016, you need to create the Emergency policy manually:
 1. Navigate to the Scheduling Policies tab, and click **New**.
 2. Name your policy *Emergency* and add a description: "This policy is used to schedule emergencies from the Emergency action."
 3. Click **Save**.
 4. Scroll to the Scheduling Policy Work Rules related list on the policy, and click **New Scheduling Policy Work Rule**.
 5. Select Resource Availability, then click **Save & New**.
 6. Select Active Resources, then click **Save & New**.
 7. Select Match Location, then click **Save & New**.
 8. Select Due Date, then click **Save**.

You can edit the weights of the predefined scheduling policies to fit your business needs. You can also copy an existing scheduling policy and adjust the set of rules, objectives, and objective weights to produce a new scheduling flavor. After defining or modifying a scheduling logic, we recommend testing the scheduling results with various scheduling scenarios by using the Get Candidates action in the dispatcher console.

Important: If you create a custom policy and want travel time to be taken into consideration, you must add the Resource Availability work rule to your policy.

To add a service objective to a scheduling policy.

1. Navigate to the scheduling policy that you want to add the resource objective to.
2. In the Scheduling Policy Objectives related list, click **New Scheduling Policy Objective**.
3. For "Service Goal," select an objective.
4. Enter the weight that the objective should use in the policy.
5. Click **Save**.

To add a work rule to a scheduling policy:

1. Navigate to the scheduling policy that you want to add the rule to.
2. Click **New Scheduling Policy Work Rule**.
3. Use the lookup to select the work rule you created.

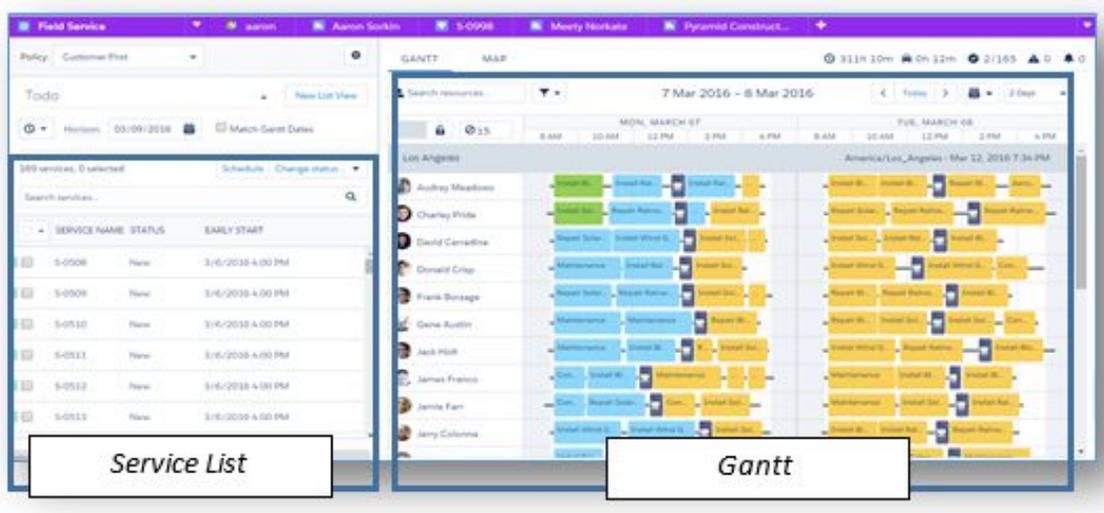
4. Click **Save**. This applies the maximum to all resources in your org.

Using Field Service Lightning

Learn how to navigate the Field Service Lightning user interface.

Using the Dispatcher Console

Field Service Lightning includes the Dispatcher Console (reached by clicking the **Field Service** tab), which is the main working space for dispatchers. It contains the service list, the resources Gantt, the map, and several other features.



Service List

The Service list is located on the left side of the Dispatcher Console and contains a list of relevant services. Users can filter, sort and search within the list.

<input type="checkbox"/>	SERVICE NAME	STATUS	EARLY START
<input type="checkbox"/>	S-20888	Dispatched	3/8/2016 12:00 AM
<input type="checkbox"/>	S-5429	Assigned	3/14/2016 2:16 AM
<input type="checkbox"/>	S-5442	Assigned	3/14/2016 2:16 AM
<input type="checkbox"/>	S-6218	Assigned	3/14/2016 5:33 AM
<input type="checkbox"/>	S-5987	Assigned	3/15/2016 3:29 AM
<input type="checkbox"/>	S-5396	Assigned	3/14/2016 2:16 AM

To change the order of the bulk action buttons in the service list, navigate to Dispatcher Settings and select **Bulk actions order**. Then, drag and drop the actions to fit your preference.

You can use field sets to control:

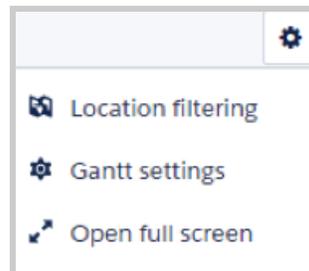
- Which fields appear in the service list
- Which fields appear when viewing a single service within the service list

You can also drag fields in the service list to adjust their width and reveal additional fields.

Options Button

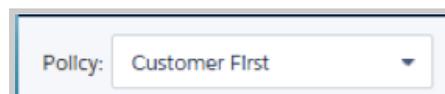
The Options button is located above the Service List and includes several settings:

- **Location filtering:** Filter the locations seen on the Gantt.
- **Gantt Settings:** Configure the Gantt data set, behavior, and layout.
- **Open full screen:** Open the Dispatcher Console in full screen with four available tabs: Accounts, Services, Resources, and Absences.



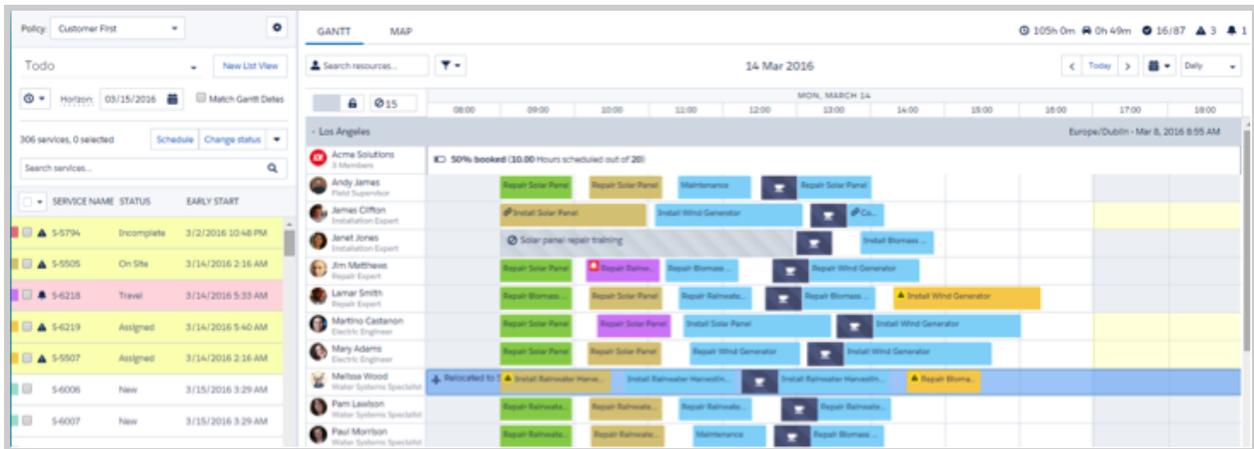
Scheduling Policy Picker

A scheduling policy is a set of rules and objectives that are used in a scheduling operation. The scheduling policy you select will be used in every scheduling action.

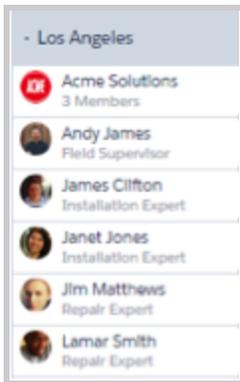


Gantt

The Gantt is located on the right side of the Dispatcher Console and contains the resource list, the schedule view, and additional features.



- The *resource list* displays all active resources whose locations are selected in *Location Filtering*



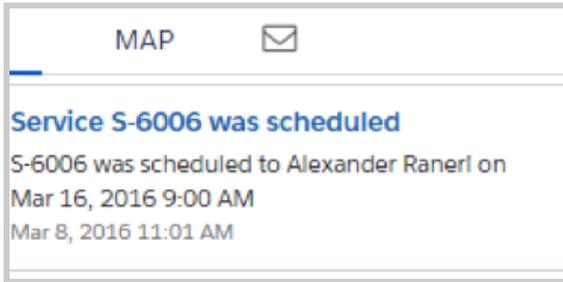
- The *Resource Filter* lets you control which resources appear in the Gantt:



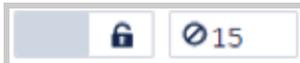
You can customize which fields are available in the filter by editing the Resource Gantt Filter field set. Only picklists and checkbox fields can be added. Select **Show working resources only** in the filter box to show only resources who are scheduled to perform services in the calendar interval shown on the Gantt.

- The *Gantt Filter* lets you filter resources by skill and by the hours / days displayed on the Gantt.

- The *notifications area* shows you details about scheduling actions that you took such as *Schedule*, *Un-schedule*, *Delete*, etc.



- The *Lock Gantt* button lets you switch between a read-only and read/write view of the Gantt



- The *Employee Absence Tool* lets you quickly create a non-availability for a specific resource by a simple drag & drop



- The *KPI Monitor* gives you your schedule highlights, including the total work load, average travel time, number of completed services, number of rules violating services, and number of services which are In Jeopardy

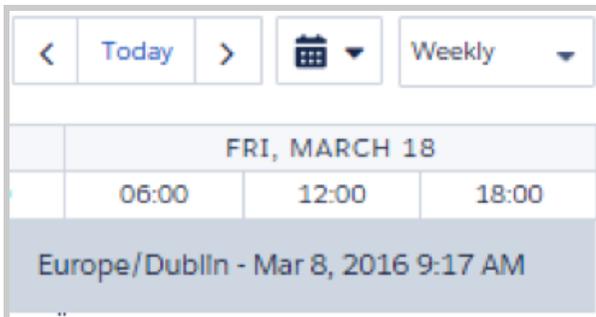


- The *Date view and Resolution* controls the date range that is displayed on the Gantt, and offers several options:

- Jump to a specific date
- Scroll one day to the left/right
- Jump to Today
- Gantt resolution: The number of days to display on the Gantt



- The *Location's time zone* displays each location's current date and time

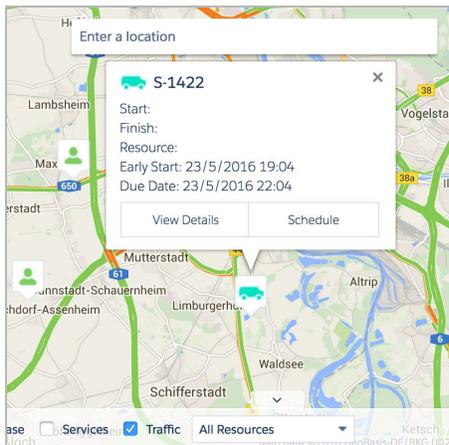


Map

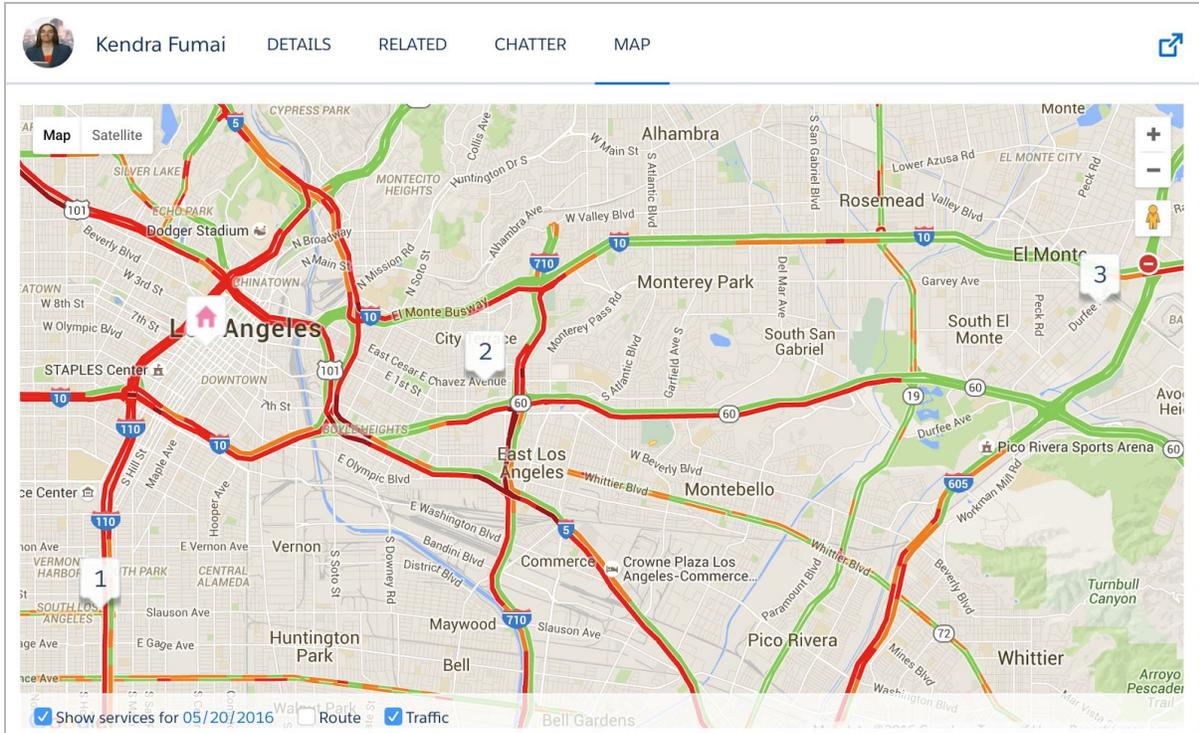
The map displays the location of services from the Service List, the resource's home base, and the resource's last known position. You can also add any location-based object to the map.

- **Schedule services:** Click the service icon and click **Schedule** to auto-assign the service to an available resource.
- **Display Google traffic data:** Select the **Traffic** checkbox at the base of the map.
- **View a resource's daily route at street level:** Open the Resource section in the Gantt and click the right-hand tab.
- **View all location-based standard or custom objects as separate map layers:** Set up a tabular report for any object with latitude and longitude values. Click **Map Layers** in the top left-hand corner of the map to view reports and resources.
 - In the **Reports** tab, you can select layers to add to the map. Only reports in the Field Service Reports folder appear in the Reports tab. The markers' icons on the map are visible according to the first column in the report. Up to 10 additional columns are visible inside the marker's info window.
 - The map shows all resources by default. Type a name in the Resources tab and click **Show on map** to view a single resource's markers.

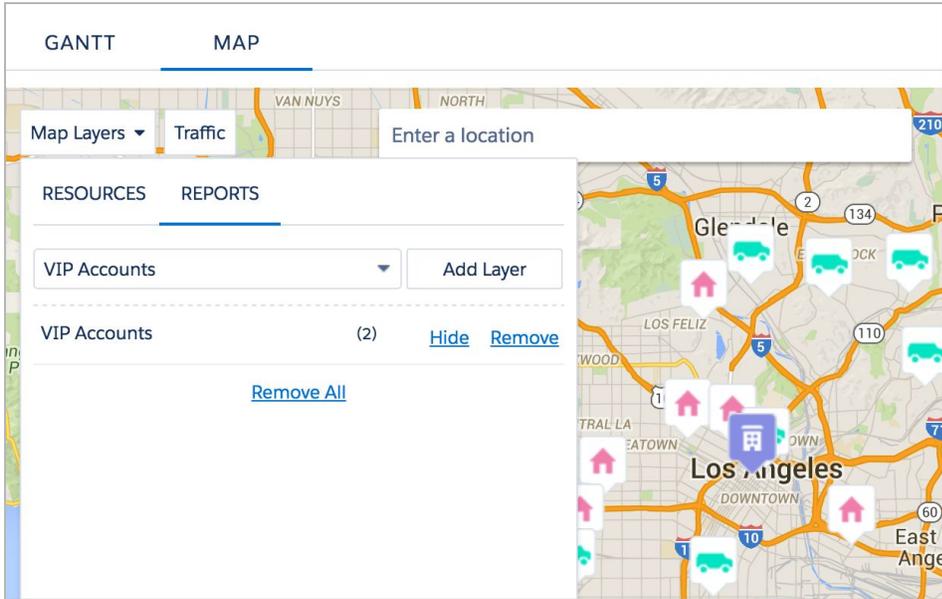
Scheduling a service from the map view:



Viewing a resource's daily route:



Viewing an Accounts layer on the map:



Keyboard Shortcuts

The dispatcher console comes with the following handy keyboard shortcuts to make your work easier.

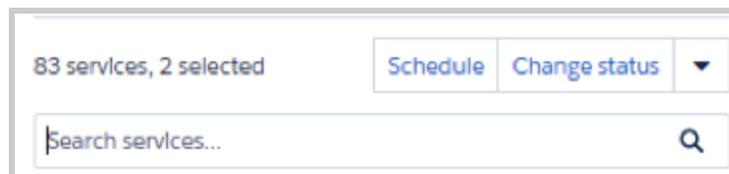
- Press **0** to switch to 8-hour resolution
- Press **1** to switch to full-day resolution
- Press **2** to switch to 2-day resolution
- Press **3** to switch to 3-day resolution
- Press **7** to switch to weekly resolution
- Press **T** to jump to today's date
- Use the **LEFT** and **RIGHT** arrow keys to jump to the previous and next days
- Use the **UP** and **DOWN** arrow keys to scroll up and down in the Gantt
- Press **CTRL + Z** or **CMD + Z** to undo the most recent drag-and-drop in the Gantt
- After clicking a service in the Gantt:
 - Press **Enter** to view the service details in a pop-up window
 - Press **E** to view the service's details in a new tab
 - Press **F** to flag and unflag the service
 - Press **Delete** to delete the service

Searching the Dispatcher Console

Field Service Lightning offers search options for both the Service list and the Resource list.

Service List Search

To search for a service in the Service list, enter at least 2 characters in the Service list search box:



The search process takes into account the following service properties: ID, Service name, Service Type name, Location, Gantt label, Resource name, Account name, and any fields that are included in the service list header columns.

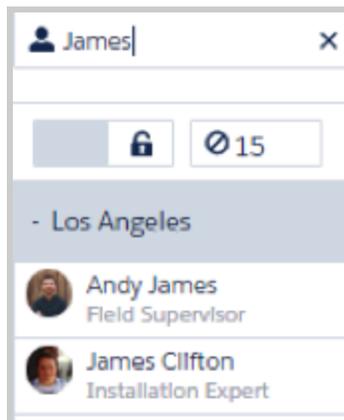
You can search using more than one keyword by separating each keyword with a comma (AND logic condition is applied on all search items).

After you enter 2 characters in the search box, the service list is filtered to list only services that have at least one matched property (from the above service properties list) with the entered value. For example:

	SERVICE NAME	STATUS	EARLY START
<input type="checkbox"/>	S-6122	New	
<input type="checkbox"/>	S-6220	New	
<input type="checkbox"/>	S-6221	New	

Resource List Search

To search for a resource on the resource list, type at least one character into the search box:



The search process filters based on the resource name.

You can also use the *Gantt Filter* to filter resources by their skill set or by any checkbox or picklist field included in the filter field set..

Using the Service List

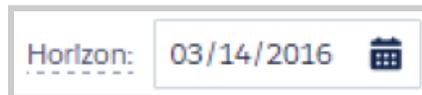
The Service list is located on the left side of the Dispatcher Console and contains a list of the relevant services which you can filter, sort and search. You can also perform actions on selected services in the list.

<input type="checkbox"/>	SERVICE NAME	STATUS	EARLY START
<input type="checkbox"/>	S-6007	New	3/15/2016 3:29 AM
<input type="checkbox"/>	S-6008	New	3/15/2016 3:29 AM
<input type="checkbox"/>	S-6009	New	3/15/2016 3:29 AM

The Services seen on this list are directly related to the Scheduling Horizon and the Filters.

Scheduling Horizon

The Scheduling Horizon takes into account the selected date properties, and shows the relevant services (amount configurable) up to and including the horizon date.



For example:

- **Number of services to show:** 500 (amount configurable)
- **Selected date property:** Due Date
- **Scheduling horizon:** 05/30/2015

The list will show the last 500 services, starting with the Due Date of 05/30/2015 and going backwards.

If you select **Match Gantt Dates**, this changes the scheduling horizon to match the dates the Gantt shows.

Service List Filters

Services seen in the list can be filtered with the existing predefined filters:



Most filters are self-explanatory (All, Scheduled, Unscheduled, etc.).

The *Todo* filter shows services that are waiting for the dispatcher's next action. For example: unscheduled services, services with a rule violation, services in jeopardy, etc.

The *Gantt* filter shows the same services seen on the Gantt.

You can also create *Custom* filters:

The screenshot shows a configuration window for a custom filter. At the top, there's a dropdown menu set to 'All Services' and a 'New List View' button. Below that are 'Save' and 'Cancel' buttons. A text input field labeled 'Custom Filter' is empty. The main area is titled 'Select the status and property filters for your new list view'. It is organized into three sections: 'Status', 'Services Properties', and 'Location'. The 'Status' section has a header and a sub-header 'Include services with the following status:'. It contains eight checkboxes: 'Completed' (checked), 'Travel' (unchecked), 'Incomplete' (checked), 'On Site' (unchecked), 'New' (unchecked), 'Assigned' (unchecked), 'Canceled' (checked), and 'Dispatched' (unchecked). The 'Services Properties' section has a header and includes: 'Minimum start date: 03/01/2016', 'Maximum end date: 03/08/2016', 'Minimum service priority: 0' (with a text input field), and three checkboxes: 'Show unscheduled' (checked), 'Show services with violations' (checked), and 'Show jeopardies' (checked). The 'Location' section has a header and three checkboxes: 'No location' (unchecked), 'Los Angeles' (checked), and 'San Francisco' (checked).

Service List Search

Use the *Service List Search* to filter services displayed on the service list by keywords. You can search for more many words by separating each word with a comma (applying the AND logic condition). The searchable fields are:

- Service Name
- Location
- Service Type
- Status
- Account
- Resource

- Gantt Label
- Service Salesforce ID
- Every field displayed on the service list Columns

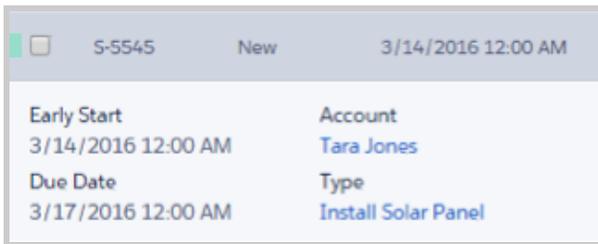
Service List Customization

There are two components you can customize for the service list:

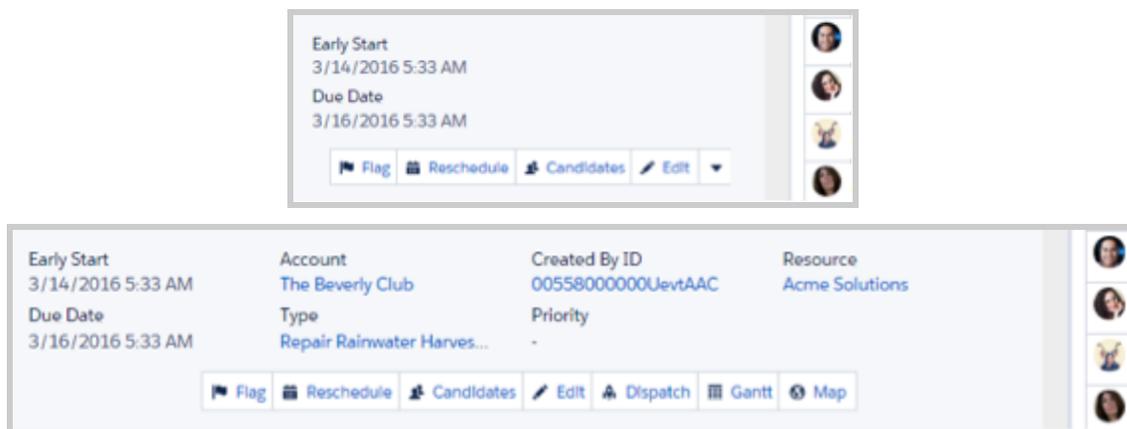
- **Service list columns:** Use the *Service list columns Field Set* to configure which fields you want to appear at the service list header. You can select up to 6 fields.



- **Service mini view:** When you click a service in the service list, the row extends to expose the *service mini view*. Use the *Service List Clicked Service Field Set* to configure which fields you want to appear at the service mini view. You can select up to 12 fields.



The service list and the service mini view are responsive, so expanding and reducing the width of the service view component will expose or hide fields to match the screen real estate available.



Service List Bulk Actions

You can perform different mass actions on services in the service list by opening the Actions menu and choosing an action.

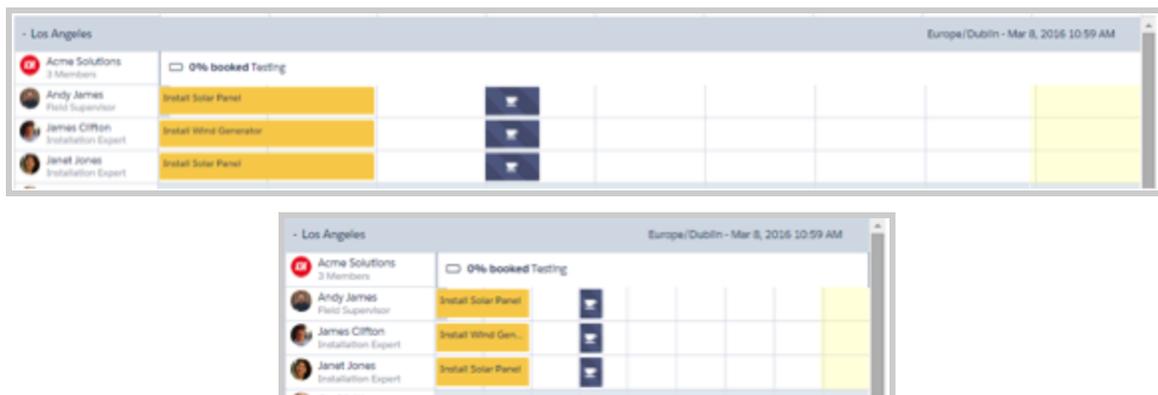
The available actions are:

- **Schedule:** Execute an automatic scheduling process for the selected services.
- **Change Status:** Change the status for the selected services, or indicate what is the relevant time range and locations of the services which should be subject to the status change.
- **Create Service:** Quickly create a new service straight from the Dispatcher Console.
- **Flag / Unflag:** Add or remove a flag for the selected services. You can use the flag for filtering later.
- **Unschedule:** Unschedule the selected services, or define the relevant time range and locations of the services that should be unscheduled.
- **Delete:** Delete the selected services.
- **Optimize:** Turn on scheduling optimization.

The list of actions is customizable; you can remove some actions and edit the order based on your preference.

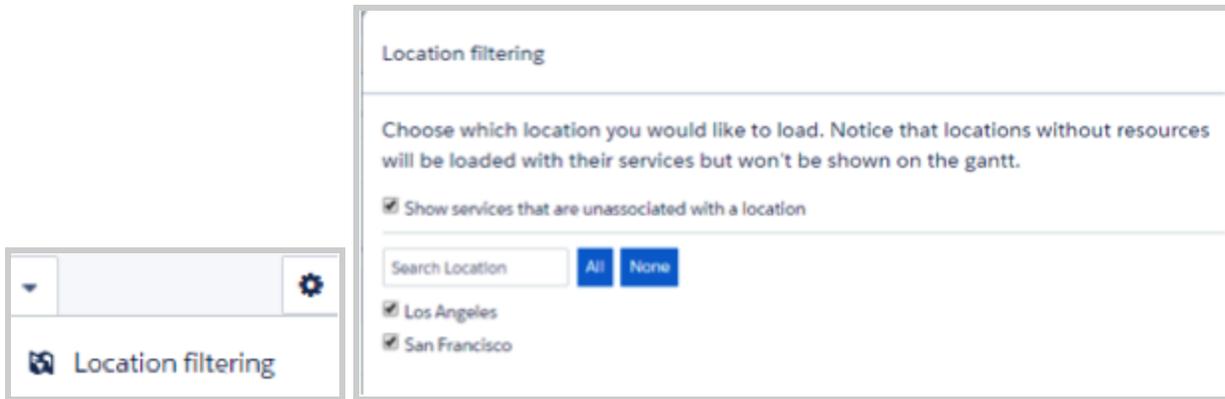
Using the Gantt

The resources Gantt is located on the right side of the Dispatcher Console.



Location filtering

You can filter the locations displayed on the Gantt by clicking the **Settings icon** and then **Location filtering**.



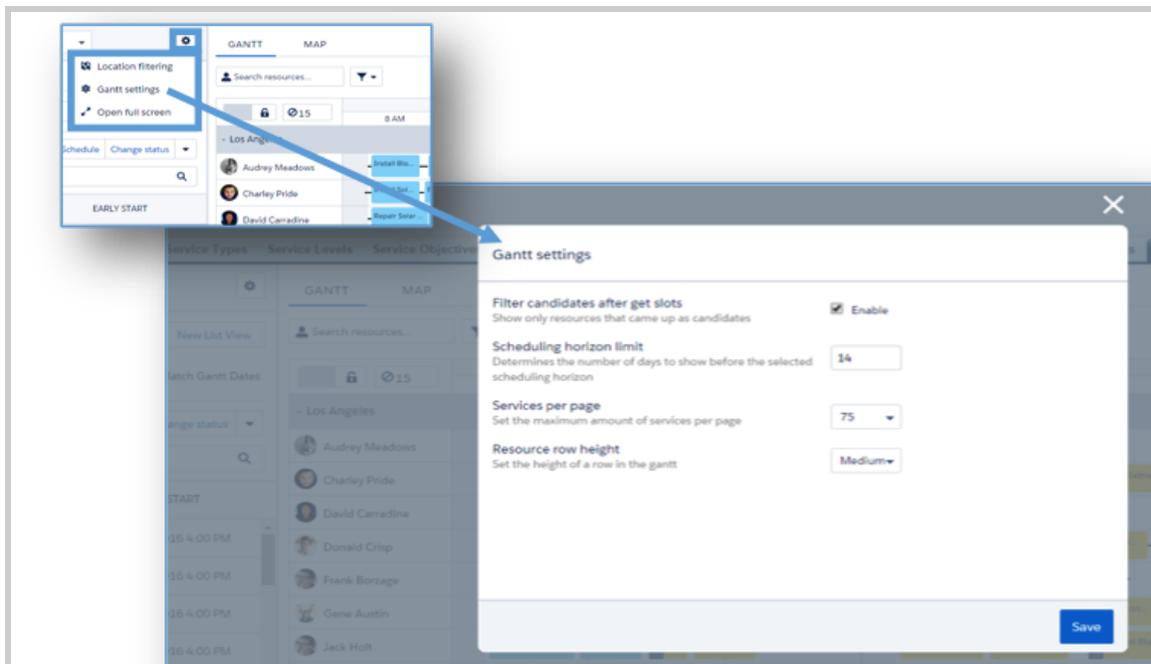
The selected locations will be loaded with the relevant resources and services.

Note: Locations without resources will be loaded with services but won't be shown on the Gantt. You will only see these services on the service list.

- **Show services that are not associated with a location:** Select this option to see services that are unassociated with a location on the service list. You will be able to schedule them to any of the loaded locations.
- **Search Locations:** Use the search bar to filter out locations.
- **All / None:** Use these buttons to quickly select all locations or remove all selections.

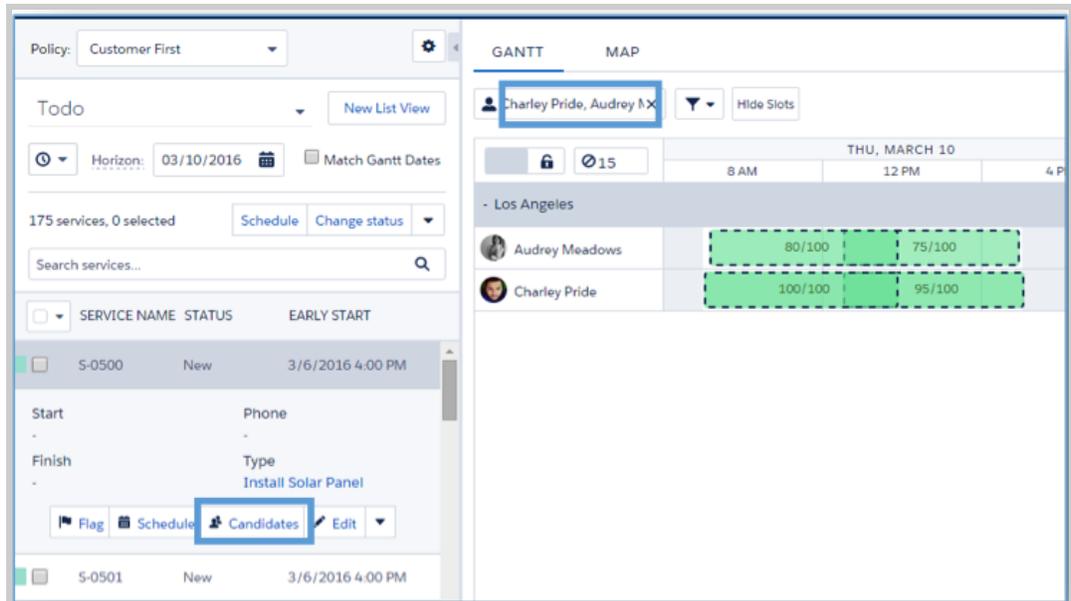
Gantt settings

Configure your Gantt Settings by clicking the **Settings icon** and then **Gantt Settings**.

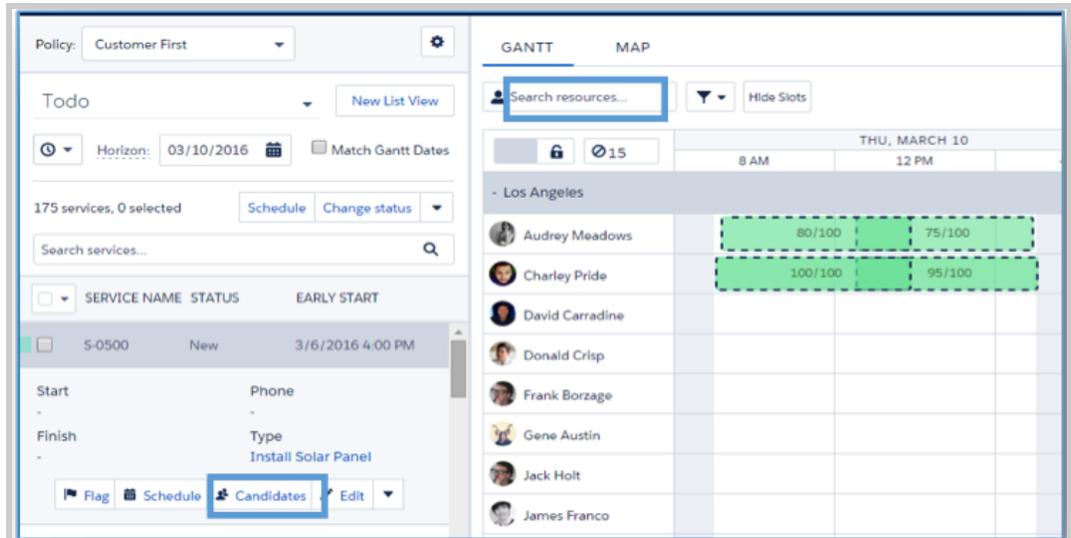


The available settings are:

- **Filter candidates after get slots action:** Show only resources that come up as candidates when using the *Get Candidates* service list or Gantt action.
 - When enabled, only the available resources for scheduling will be seen on the Gantt:



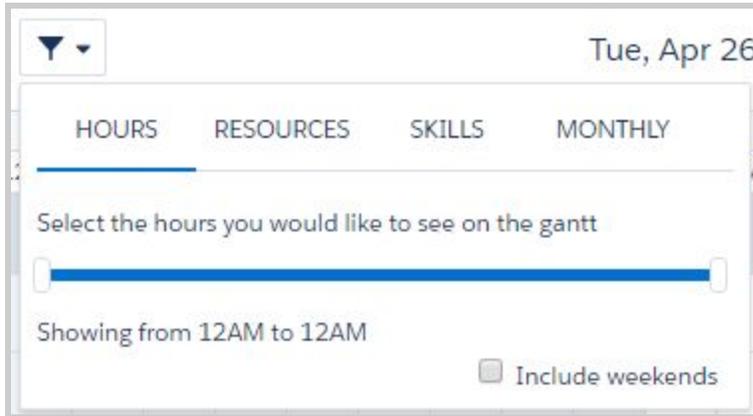
- When disabled, all the resources will be seen on the Gantt without any filtering:



- **Scheduling horizon limit:** Set the number of days to show before the selected scheduling horizon.
- **Services per page:** Set the maximum number of services per page in the Service list. The available options are 50, 75, 100, 125, and 150.
- **Resource row height:** Set the height of the resources row in the Gantt. The available options are XSmall, Small, Medium, and Large.

The Gantt Filter

The *Gantt Filter* in the top left lets you filter resources by their skills and other features, and set the available hours and days to display on The Gantt.



- The **Hours filter** lets you select a range of hours that you would like to see across all dates resolution (daily, 2 days, 3 days and weekly). It also lets you select whether to display weekends on the Gantt.
- The **Resources** filter lets you specify which resources are shown. Selecting a field activates the filter. You can customize which fields are available in the filter by editing the Resource Gantt Filter field set. Only picklists and checkmark fields can be added. In addition, you can select **Show working resources only** in the filter box to show only resources who are scheduled to perform services in the calendar interval shown on the Gantt.
- The **Skills filter** ensures that only resources with the selected skills are visible on the Gantt.
- The **Monthly** filter lets you select how a resource's monthly capacity is calculated. Deselect any fields that you don't want to be included in the calculation.

KPI Monitor

The KPI Monitor can be found on the top right side of the Gantt.



The available indicators are:

- Total Scheduled time (workload) of all loaded locations: Clicking the icon will open a related report in a new tab.
- Average travel time per service of all service shown on the Gantt: Clicking the icon will open a related report in a new tab.

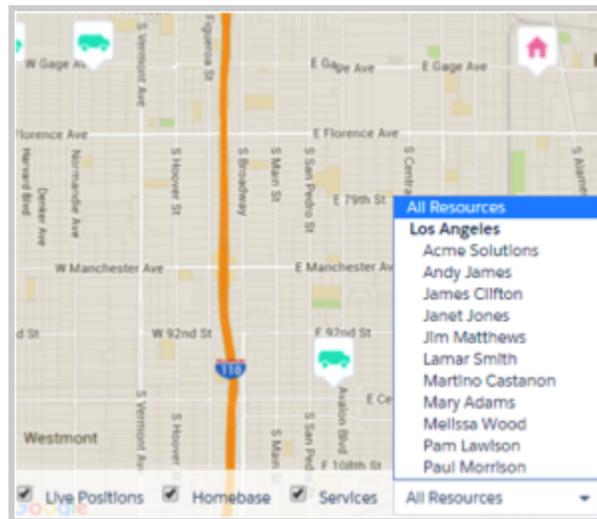
- Number of completed service out of all services shown on the Gantt: Clicking the icon will open a related report in a new tab.
- Total number of rules violating services
- Total number of services in jeopardy: Clicking the icon will open a related report in a new tab.

Using the Map

The Map view shows you all resources' home bases, assigned services, and last known positions. You can view one or more items by selecting the checkboxes below the map.

Select a resource name in the drop-down list to filter the Map to display only:

- **Services:** All the services that are assigned to the selected resource and which appear in the Service list.
- **Home base:** Resources' home base, according to the home base coordinates specified in the resource details.
- **Live positions:** When resources update service status from their mobile device, their coordinates are automatically recorded. Live Position shows the latest coordinates saved in the system.



View Resource Availability by the Month

The monthly view in the dispatcher console lets you review and plan out your monthly capacity. Gain insight into your workforce's work time, travel, and absences. To give users access to this view, simply assign the "Field Service Monthly Planner" permission set.

To see the monthly view, use the drop-down view selector in the Gantt.

	01	02	03	04	05	06	07	08	09	10	11	12
- Los Angeles	89%	83%	90%	98%	73%	43%	92%	93%	87%	88%	96%	72%
Amos Valdez												
Austin Francis	64%	100%	100%	76%								
Becky Bryant	130%	161%	87%									
Cecilia Hopkins	97%	97%	95%	78%								
Christopher Taylor Super Duper User	99%	100%	103%	101%	98%		98%	100%	97%	101%	102%	99%
Clayton Barker	94%	99%	102%	112%	97%		97%	98%	162%	104%	103%	100%
Gloria Flowers												

Los Angeles - Nov 4, 2016

🕒 101h 30m 🚗 91h 20m 🕒 2h 00m
 Total Scheduled Total Travel Total NAs

☕ 10h 00m 🚗 200h 00m 🕒 10h 00m
 Total Breaks Total Capacity Total Overtime

The Gantt filter lets you select how a resource’s monthly capacity is calculated. Deselect any fields that you don’t want to be included in the calculation.

You can also customize the capacity-based color coding in the Monthly View Settings. Enter the number of hours that indicate High Capacity (default: 100), Critical Capacity (default: 150), and Extensive Travel (default: 33). On the monthly view:

- Resources whose schedules are below High Capacity appear in green.
- Resources whose schedules are between High and Critical Capacity appear in yellow.
- Resources whose schedules are above Critical Capacity appear in red.
- Resources whose percentage of travel is larger than the value you specify are considered Extensive Travel candidates, and appear with an automobile icon.

On the monthly resource view, you can:

- Click an event name to view its details
- Flag services
- Click the date on the vertical axis to switch to the date’s daily view.

Managing Services

Booking Appointments

Field Service Lightning lets you book a new service appointment for a customer from any object in your system. To book an appointment, follow the steps below (for convenience, we’re using the account object):

1. Open an account.
2. In the Chatter feed, select the **Book Appointment** quick action. If this action isn’t available, you can add it to the layout.

3. Select a Service Type from the drop-down list.

Service booking for Tara Jones

Service type
Connect to grid

Address
3027 Weldon Ave, Los Angeles, CA 90065, USA

Location
Los Angeles

Assign to me

Get Appointments

[Show more options](#)

The address is automatically populated using the Account address (this is configurable).

4. Select the business location from the Location drop down list. Click **Show more options** if you want to change the Early Start and Due Date default range.

Service booking for Tara Jones

Service type
Connect to grid

Early start
03/08/2016

Due date
03/13/2016

Address
3027 Weldon Ave, Los Angeles, CA 90065, USA

Location
Los Angeles

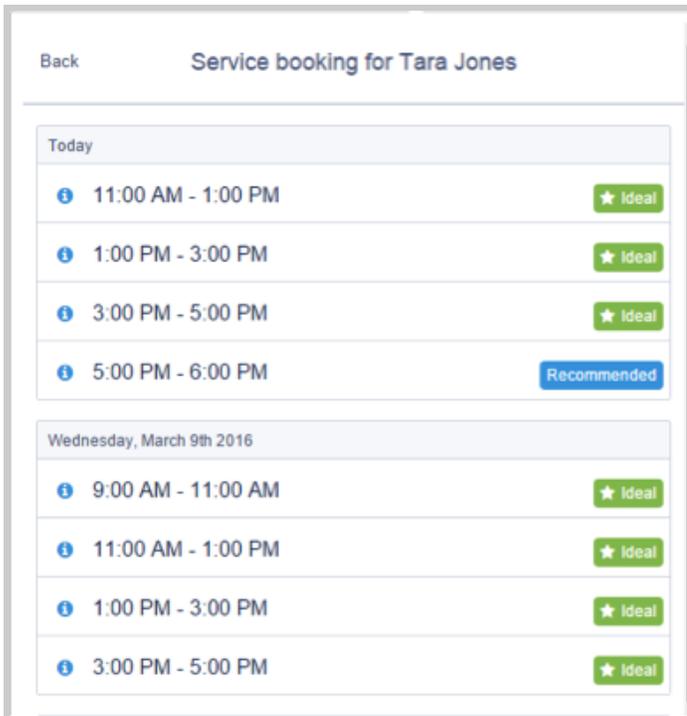
Assign to me

Get Appointments

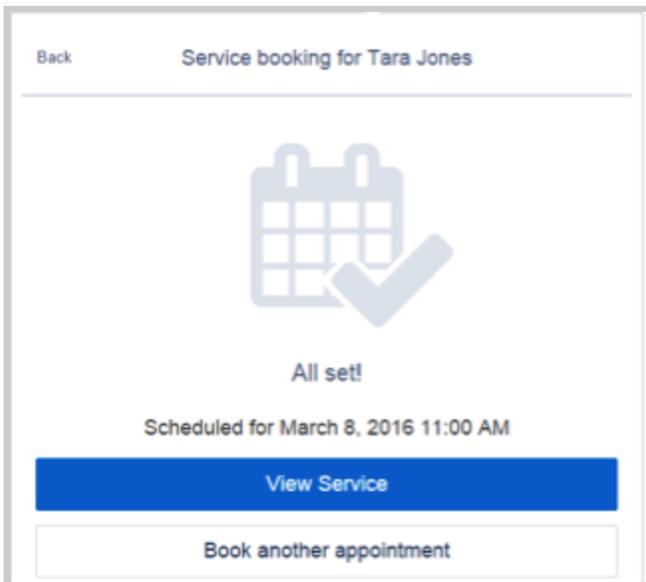
[Show less options](#)

5. Click **Get Appointments** to view a graded list of available slots for this service. The list considers all scheduling constraints such as the current schedule, work rules, and service objective. Slots may be indicated with an 'Ideal' or 'recommended' icons. Clicking the information icon opens the Appointment Insights window, which shows how each slot ranks against the Company KPIs as

defined in the Scheduling policy.



6. Click **Extend Dates** to show a wider range of services dates.
7. Select the suitable appointment window. A service will be created and automatically allocated to a resource, taking into consideration all scheduling constraints.



8. To view the details of the new service, click **View Service**.

Rescheduling an Appointment

Once an appointment is booked, it can be rescheduled from within the specific service.

Service booking for S-20888

Service type
Connect to grid

Address
3027 Weldon Ave, Los Angeles, CA 90065, USA

Location
Los Angeles

Reschedule
 Book a new service
 Assign to me

Get Appointments

[Show more options](#)

1. Open a service record that has a booked appointment.
2. In the Chatter feed, select the **Book Appointment** quick action. If this action is not available, you can add it to the layout.
3. Select **Reschedule**.
4. Click **Get Appointments** to view a list of available slots.
5. Select the suitable appointment window, and the service is automatically rescheduled.

Note: Selecting **Book a new service** finds available slots for a new service, not for the existing one.

Create a New Service

A service can be created in various ways, just like any other Salesforce object. You can create a service from the Service tab, from a *Create record* Chatter action, from a publisher action, or from an Apex trigger. You can also use the *Create a Service* list view action.

From the Dispatcher Console:

1. Extend the service actions list by clicking on drop-down indicator, then select **Create Service**. The *Create Quick Service* window appears.

2. Update all necessary fields and click **Save**.

Note: The service type is a template that the service record inherits certain default values and properties from: Duration, required skills, and required products.

The screen now shows the newly created service. You can search in the service list for the service name.

<input type="checkbox"/>	SERVICE NAME	STATUS ↓	EARLY START
<input checked="" type="checkbox"/>	S-20893	New	3/8/2016 12:50 PM
Early Start		Account	
3/8/2016 12:50 PM		Tara Jones	
Due Date		Type	
3/12/2016 12:50 PM		Install Biomass Boiler	
<input type="button" value="Flag"/> <input type="button" value="Schedule"/> <input type="button" value="Candidates"/> <input type="button" value="Edit"/> <input type="button" value="Map"/>			

Set Visiting Hours for a Customer

Respect the operating hours of your business customers by creating “visiting hours” for them. For example, if a customer only wants technicians to visit on weekdays between noon and 4 PM, you can use visiting hours to ensure that any services for that customer are scheduled within those hours. The service scheduling optimizer will only schedule appointments for customers within their visiting hours. Dispatchers can manually schedule appointments outside a customer’s visiting hours, though they’ll be alerted that they’re doing so.



Calendar

Visiting Hours for United Partners (San Francisco)

Custom

[« Back to List: Custom Object Definitions](#)

[Days \[3\]](#) | [Resource Calendars \[0\]](#) | [Service Levels \[0\]](#) | [Accounts \[1\]](#)

Calendar Detail

[Edit](#) [Delete](#) [Clone](#)

Calendar Name Visiting Hours for United Partners (San Francisco)

Owner

Description Tue-Thu, 10am - 3pm

Exact Appointments

Created By [Bharat Jindal](#), 5/23/2016 12:17 AM

Last Modified By B

▼ Calendar Editor

[Save](#)

Drag and drop on a timespan to create a working interval. Right click an interval to toggle between working and optional (overtime).

	12:00A	1:00AM	2:00AM	3:00AM	4:00AM	5:00AM	6:00AM	7:00AM	8:00AM	9:00AM	10:00A	11:00A	12:00P	1:00PM	2:00PM	3:00PM	4:00P
Monday																	
Tuesday											10:00 - 15:00						
Wednesday											10:00 - 15:00						
Thursday											10:00 - 15:00						

To set visiting hours:

1. Confirm that your profile has access to the “Field Service - Service Visiting Hours” work rule record type. If you don’t have access, click **Edit** next to Work Rules and add this record type to the “Selected Record Type” list.
2. Navigate to the Work Rules tab, and create a work rule by selecting “Field Service - Service Visiting Hours.”
3. Click **Continue**.
4. Add a name, such as “Service Visiting Hours,” and a description.
5. Click **Save**.

To add your new visiting hours work rule to a scheduling policy:

1. Navigate to the Scheduling Policies tab.
2. Select the scheduling policy you want to use.
3. Click **New Scheduling Policy Work Rule**.
4. Select the work rule.
5. Click **Save**.

To add the visiting hours calendar to a service:

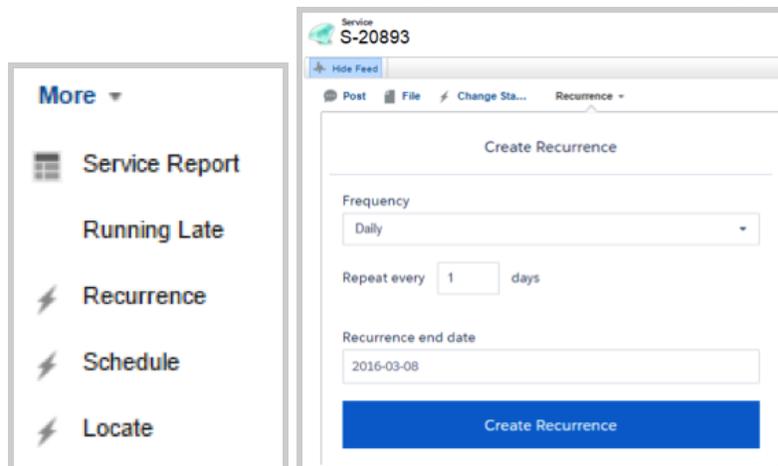
1. Create a calendar that fits your customer's visiting hours. This can be a generic calendar that applies to several customers ("10 AM to 4 PM"), or a customer-specific calendar ("United Partners Visiting Hours.")
2. Add the Calendar field to your service page layout.
3. Select the calendar you want to attach to the service.
4. Click **Save**.

Notes:

- You can attach one calendar per service.
- The calendar is effective until you remove or replace it on the service.
- Calendars use the time zone of the service they're attached to. The service inherits its service location's time zone. If the location has no time zone specified, GMT is used.
- The scheduling optimizer respects visiting hours.
- You can map a lookup field from a custom object to the Service Object 'Visiting Hours Calendar' field to auto-populate the Visiting Hours Calendar field.

Service Recurrences

You can use the Service Recurrence quick action to easily create a series of recurring services.



From a service record:

1. Click the *Recurrence* Chatter action. You may need to add it to the page layout.
2. Select the frequency:
 - a. **Daily:** Every 'x' days. For example, "Repeat every 5 days."
 - b. **Weekly:** Every 'x' weeks on selected days. For example, "Repeat every 2 weeks on Monday and on Thursday."
 - c. **Monthly:** Choose one of two options:

- i. Every 'x' months on the 'n' day. For example, "Repeat every 3 months on the 15th day."
 - ii. The first/last [day name] of every 'x' months. For example, "The last Tuesday of every 6 months."
3. Select the series end date.
4. Click **Create Recurrence** to view the services you've just created. Click **Undo** to delete the services you have created and return to the previous screen.

Deleting a Service

Beside the regular ways to delete records (Delete button, Data Loader, triggers), Field Service Lightning lets you delete a service straight from the Dispatcher Console.

From the Dispatcher Console:

1. Select the services you want to delete by ticking the boxes next to the services in the service list.
2. Extend the service list actions list by clicking the drop-down indicator.
3. Select **Delete** and confirm your change.
4. Deleted services are moved to the recycle bin.

Scheduling Services

You can schedule services in several ways:

- Manual drag and drop
- Click 'Schedule' from the service mini view
- Click 'Schedule' from the service list mass actions
- Use the 'Candidates' Chatter quick action
- Use the 'Emergency' Chatter quick action

Scheduling a service with a manual drag and drop

The Dispatcher can schedule a service by dragging it from the services list and dropping it on a selected resource space on the Gantt.

Using this method, you can drag the service to any resource. If it causes rule violations (for example, the wrong skill set for a service), the service will be marked with a yellow triangle. Hovering over the service space shows the service details and the list of rule violations, as shown below:

S-5505 / Install Rainwater Harvesting System (On Site)

Account: Terrence Hale
Type: Install Rainwater Harvesting System

Start	Mon, Mar 14, 2016 9:00 AM
Finish	Mon, Mar 14, 2016 10:30 AM
Travel to	1402 Minutes
Travel from	10 Minutes

⚠ Rule violations

Resource Availability - The service must have a gap of at least 1302 minutes from the previous location and 10 minutes to the next location.

⚠ Install Rainwater Ha...

Note: Rule violations can only occur when a service is scheduled manually. Automatic scheduling will never break a rule.

Scheduling a service with the mini service view schedule action

You can click a service in the service list to expand a mini service view. On the bottom of the mini service view, you can find the **Schedule** action:

☐ S-5928
New
3/14/2016 3:29 AM

Early Start	Account
3/14/2016 3:29 AM	The Beverly Club
Due Date	Type
3/17/2016 3:29 AM	Repair Biomass Boiler

🚩 Flag
📅 Schedule
👤 Candidates
✎ Edit
📍 Map

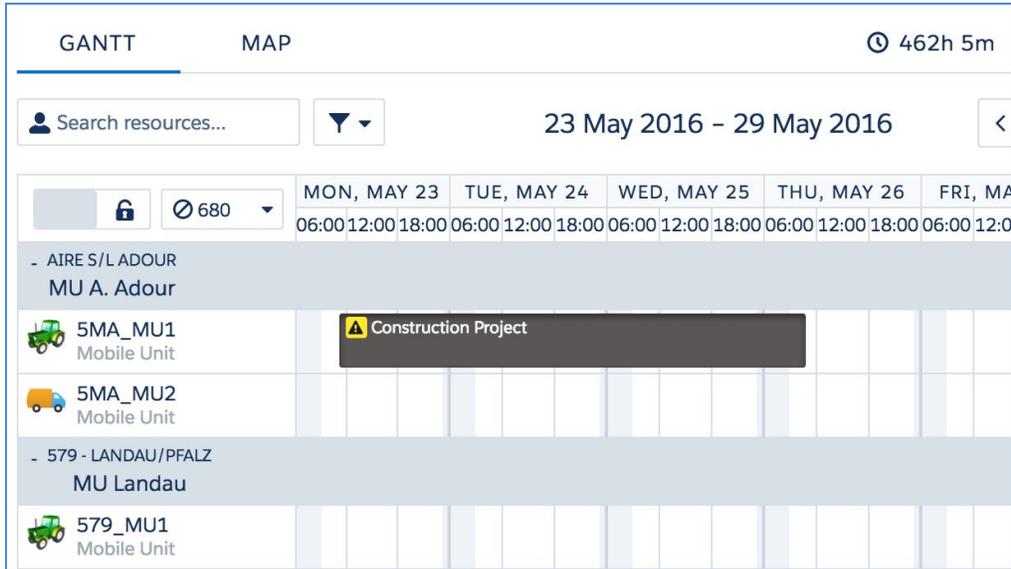
Click **Schedule** to let the system schedule the service while taking into account the rules and objectives in the configured scheduling policy (located above the service list).

You will be notified if there are no available candidates for the service. You can manually bypass the rules and objectives for further scheduling.

Schedule multi-day services

Rome wasn't built in a day, and chances are that your grander projects also require more than a day's work. Happily, you can now schedule services that span multiple days.

Multi-day construction project:



To use multi-day scheduling:

1. Navigate to Field Service Settings, then click **Logic**. Next to Multi day service field select **Is Multiday**.
2. Add the Multi-Day checkbox to service page layouts.
3. If a service will span multiple days, select this checkbox on the service.

Note:

On multi-day services:

- The service start and end times must be in valid time slots of the assigned resource's calendar.

The resource can't be assigned to any other service during the multi-day service.

Scheduling a service with service list mass schedule action

By using the Schedule option from the *Service List Mass Actions* menu, you can automatically schedule multiple services in order based on their priority.

To schedule service(s):

1. In the Service list, select the service(s) you would like to schedule.

- On the service list mass schedule menu, click **Schedule**.

The progress bar appears on the bottom right-hand side.

- When the scheduling process is completed, you can either close the message box or view the detailed schedule results by clicking **View services**.

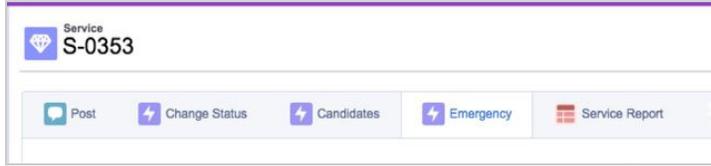
ID	Start	Finish	Resource	
S-5505	Mar 14, 2016 10:05 AM	Mar 14, 2016 11:35 AM	Gloria Barnes	Show on gantt
S-5506	Mar 14, 2016 10:03 AM	Mar 14, 2016 11:03 AM	Jane Austin	Show on gantt
S-5507	Mar 14, 2016 9:00 AM	Mar 14, 2016 10:00 AM	Janice Gonzales	Show on gantt
S-5508	Mar 14, 2016 10:06 AM	Mar 14, 2016 11:06 AM	Melissa Wood	Show on gantt
S-5509	Mar 14, 2016 9:00 AM	Mar 14, 2016 10:00 AM	Melissa Wood	Show on gantt
S-5510	Mar 14, 2016 9:00 AM	Mar 14, 2016 10:00 AM	Gloria Barnes	Show on gantt
S-5511	Mar 14, 2016 11:41 AM	Mar 14, 2016 1:11 PM	Gloria Barnes	Show on gantt

Scheduling an emergency service

Swiftly schedule, dispatch, and track emergency appointments in just a few clicks with the help of a real-time map view. Clicking the **Emergency** Chatter action on a service reveals a map of up to 20 resources who are

available to complete the service.

Emergency Chatter action:



The Emergency Dispatch Settings include several ways to customize your approach to emergency services.

Setting Name	Description
Emergency Scheduling Policy	The default policy that will be used to find resources to assign to an emergency service. We recommend using an Easy policy with softer rules to ensure that more candidates are returned.
Breadcrumbs Validity	The number of minutes after which a data breadcrumb--such as resource location or geolocation--is no longer valid. For example, if the breadcrumb validity is 20 minutes and the location of resource X was last updated 30 minutes prior, the emergency dispatcher then calculates the resource's ETA based on the location of the last service they completed, or if they did not complete any services that day, their home base.
Idea/Good Availability Grade	The grading of candidates (color-coded). In the breadcrumbs example: <ul style="list-style-type: none"> • Resources who can reach the service in less than 30 minutes are ideal candidates • Resource who can reach the service between 30 and 60 minutes are good candidates • Resources who can reach the service after 60 minutes are bad candidates
Emergency Due Date Offset	The amount of time you have to resolve the emergency, not counting the service duration. The <code>Early Start</code> on the service is set to the current time, and the <code>Due Date</code> = current time + service duration + Emergency Due Date Offset. For example, if a service will require one hour of work and you set the Emergency Due Date Offset to 360 minutes (6 hours), the emergency dispatcher show you only resources who can travel to and complete the task in the next 7 hours.

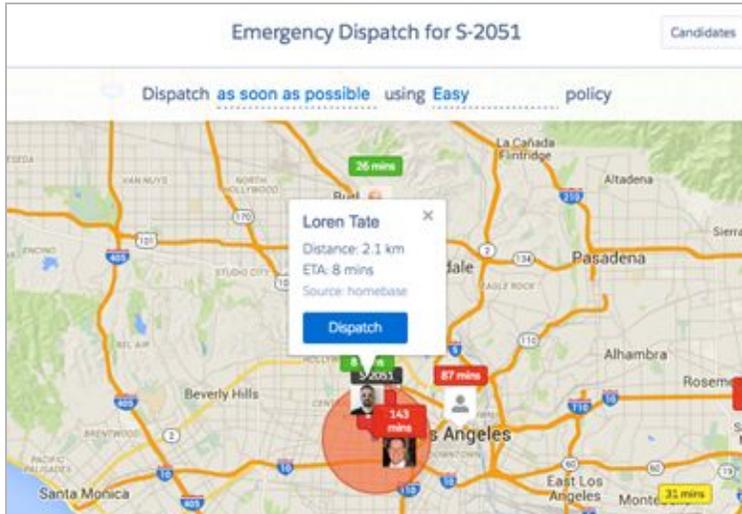
Click a resource on the map to see:

- Their route to the emergency service and ETA
- The data (breadcrumb) that their location is based on
- A **Dispatch** button. Click **Dispatch** to assign the service to them and send them a customizable

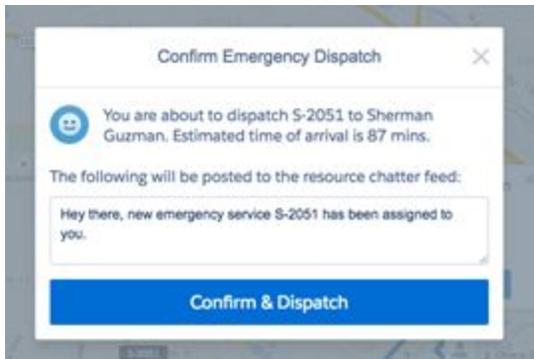
Chatter notification.

Resource locations are calculated based on their latest breadcrumbs. If they don't have valid breadcrumbs, their location is the location of the last service they completed, or if they did not complete any services that day, their home base.

Clicking a resource:



Notifying the assigned resource in Chatter:



The emergency dispatcher tool comes with a range of helpful features:

- If your current scheduling policy isn't returning any candidates, change the policy directly on the map to trigger another search (for instance, from Medium to Easy).
- If you want a candidate to complete their current service before heading to the emergency service, change the dispatcher setting from "as soon as possible" to "after current service" at the top of the map. Changing this setting updates the candidates' ETA.



- Click **Candidates** to view a list of all candidates in order of ETA. Hover over a resource name in the list to see options to dispatch them or view them on the map.
- Quickly spot emergency services in the Gantt by looking for the lightning icon:



- Click  to display the traffic layer, if available.
- Click  to zoom in on the emergency service location.

Changing the service status manually

The Service status can be changed either automatically (i.e. status becomes 'New' by the unscheduled Gantt action, status becomes Dispatched by the Auto dispatch background job etc.) or manually by the dispatcher or the field resource.

This section explains manual status changes done by a dispatcher. Automatic status changes are described under Automatic Service Status Change.

You can manually change the Service status from several places:

- Dispatcher Console – Mass Actions schedule button
- Service on the Gantt – Right click, and change the status
- 'Change status' Chatter quick action
- Service detail page or lightbox

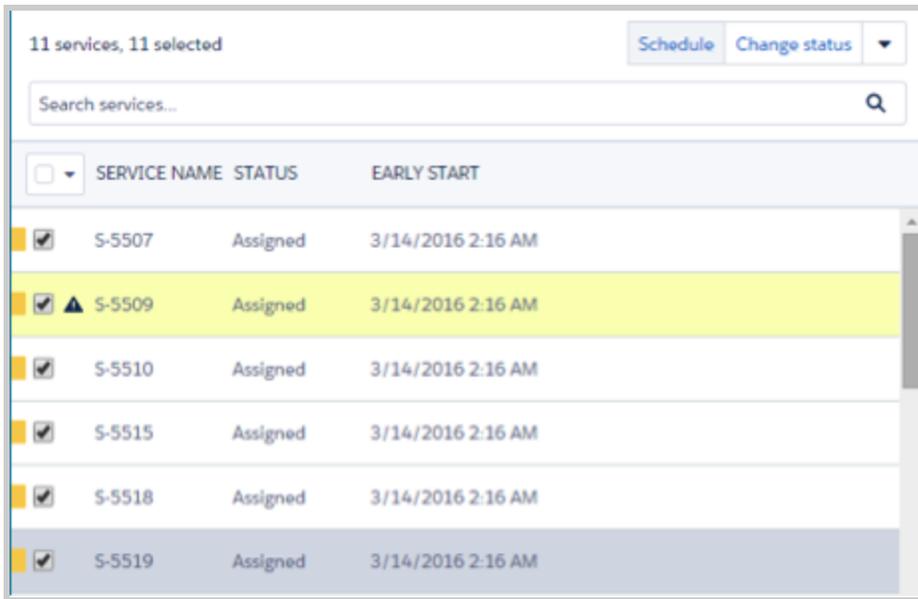
Changing a service status with service list mass change status action

By using the Change Status option from the Service List Mass Actions menu, you can change the status for one or more services at the same time.

To change a service status:

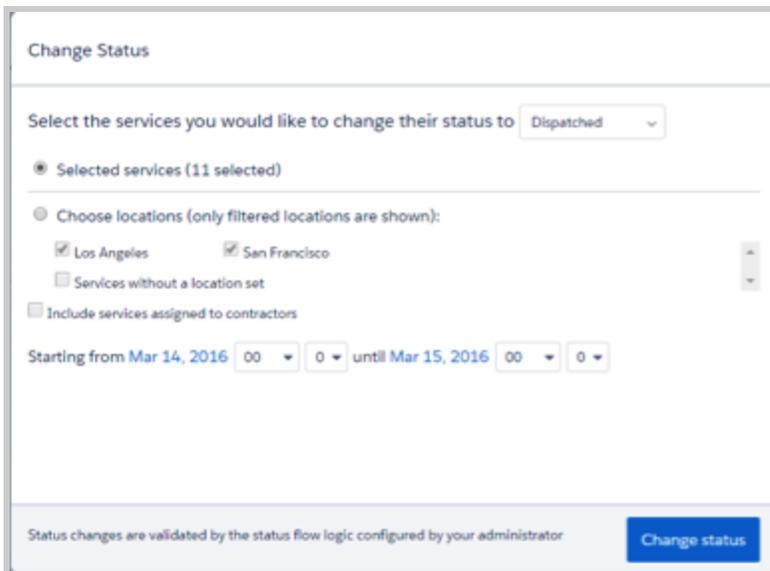
1. In the Service list, select the desired service(s).

2. On the service list mass schedule menu, click **Change Status**.



<input type="checkbox"/>	SERVICE NAME	STATUS	EARLY START
<input checked="" type="checkbox"/>	S-5507	Assigned	3/14/2016 2:16 AM
<input checked="" type="checkbox"/>	S-5509	Assigned	3/14/2016 2:16 AM
<input checked="" type="checkbox"/>	S-5510	Assigned	3/14/2016 2:16 AM
<input checked="" type="checkbox"/>	S-5515	Assigned	3/14/2016 2:16 AM
<input checked="" type="checkbox"/>	S-5518	Assigned	3/14/2016 2:16 AM
<input checked="" type="checkbox"/>	S-5519	Assigned	3/14/2016 2:16 AM

The Change status pop up screen will appear.



Change Status

Select the services you would like to change their status to

Selected services (11 selected)

Choose locations (only filtered locations are shown):

- Los Angeles
- San Francisco
- Services without a location set

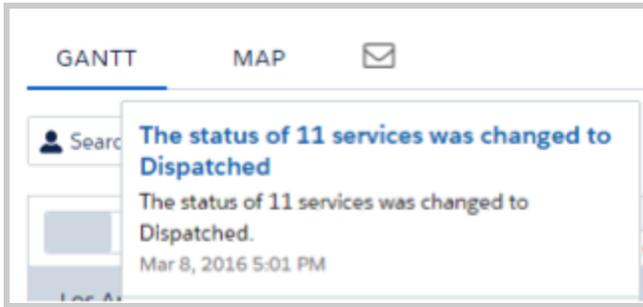
Include services assigned to contractors

Starting from Mar 14, 2016 until Mar 15, 2016

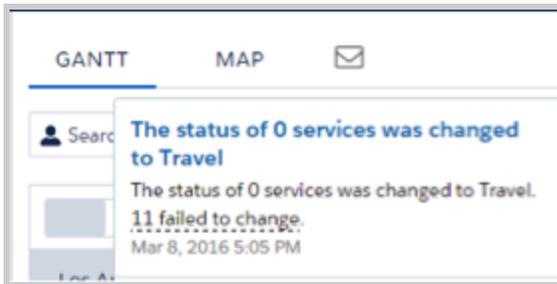
Status changes are validated by the status flow logic configured by your administrator

3. You can change the status of the selected services only (from the service list) or for an entire location. Select the status value you need, and click **Change Status**.
Note: The drop-down list will show all statuses in the system, but the status change will work only according to the configured status flow.

4. A notification will appear when the status change process has finished.

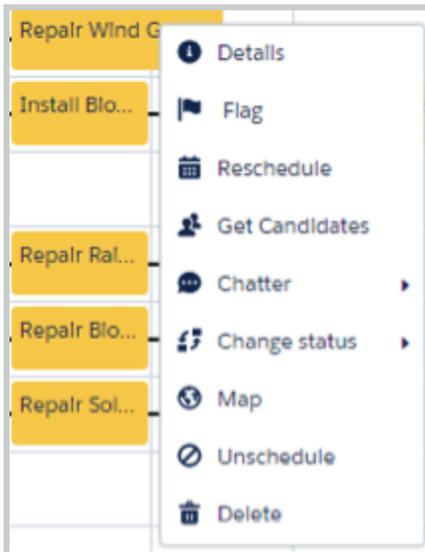


If status fails to change, a notification will list the services that failed.

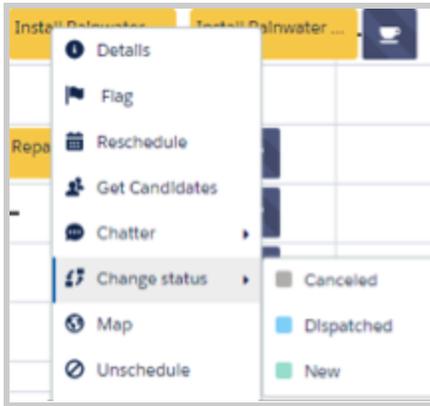


Changing a service status with a right click action on a service from the Gantt

1. On the Gantt, select the service(s) whose status you want to change. You can select more than one service by holding CTRL / CMD while clicking on services.
2. Right click on the selection to display the Gantt actions.



3. Hover over the 'Change Status' action displays the status value list. Click the desired status.

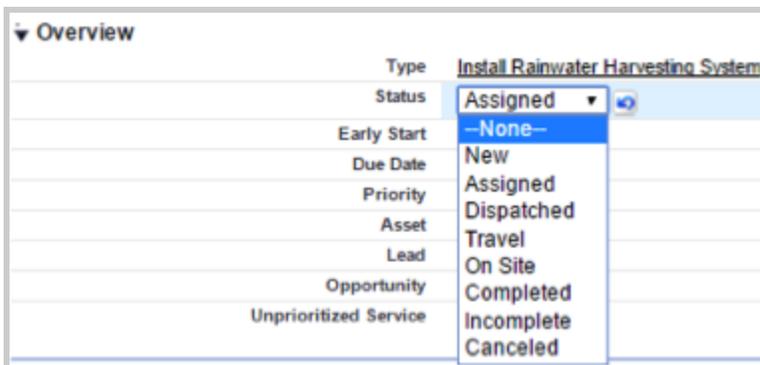


Changing a service status from the 'Change Status' Chatter quick action

1. Open a service record whose status you want to change, either in a Salesforce record detail view or in a Gantt lightbox.
2. In the Chatter feed, select the 'Change Status' Chatter quick action.
3. Select the desired status. Only status value that are obeying the status flow configuration will be shown. A notification will appear that the status was updated successfully.

Changing a service status on the service record

1. Open the service record whose status you want to change, either in a Salesforce record detail view or in a Gantt lightbox.
2. Double click the **Status** field to select a new value.



Note: The drop-down list will show all statuses in the system, but the status change will work only according to the configured status flow.

Automatic service status change

The Service status can be changed automatically or manually by the dispatcher or the field resource.

Automatic status changes are triggered by the following:

- **Automatic Status change - Auto dispatch background job:**
This job enables automatic dispatching of assigned services. It changes the status of the chosen services (according to the job configuration) from Assigned to Dispatched.
- **Automatic Status change – System triggers:**
 - **When scheduling a Service change its status to Scheduled:** When a service gets assigned to a resource (either by manual scheduling or automatic) its status will automatically be changed to Assigned.
 - **Unschedule the Service when its status is changed to Cancelled or New:** When a service is Cancelled or its status is changed to New, the service will be automatically unscheduled and removed from the Gantt.

The above triggers can be activated or deactivated, according to the business needs.

Scheduling policies

A scheduling policy is a set of rules and objectives that are used in a scheduling operation. Typically, the scheduling policy is used when requesting an appointment and on various Gantt operations such as Schedule, Candidates etc.

The following scheduling policies are included in Field Service Lightning:

- **Customer First:** This policy balances objectives such as great customer service with travel minimization. Appointments are graded first by the customer's selection of a preferred employee and by the ability to provide the service as soon as possible. Travel minimization is considered as a second priority.
- **High Intensity:** This policy is typically used in times of high service volumes, in emergencies like a storm scenario, where the business focuses on employee productivity first and customer preferences are considered as a second priority.
- **Soft Boundaries:** This policy is identical to the Customer First policy, but allows the sharing of employees between different locations in order to enhance service coverage.
- **Emergency:** This is the default policy for the Emergency Dispatch quick action, which lets you quickly dispatch a resource to the emergency site with as few constraints as possible.

You can create additional scheduling policies to reflect your business needs. The dispatcher can select different scheduling policies while using the Gantt scheduling operations. The list of scheduling policies is located above the services list.

Checking rule violations

Rule violations occur when Field Service Lightning recognizes that a service schedule doesn't adhere to predefined scheduling rules. Examples of rule violations include travel time conflicts, and services that are not scheduled between their Early Start and Due Date.

Rule violations will not occur when using the Automatic Scheduling services (such as Schedule action or Candidates action). The system will automatically choose schedules that do not violate any rules.

The Rule Violation list is displayed on your screen, listing the rules that have been violated.

If rule violations are incurred, a service is marked with a yellow triangle. Hovering over the service space shows the service details and the list of the rules that have been violated, as shown below:

S-5505 / Install Rainwater Harvesting System (On Site)
Account: Terrence Hale
Type: Install Rainwater Harvesting System

Start	Mon, Mar 14, 2016 9:00 AM
Finish	Mon, Mar 14, 2016 10:30 AM
Travel to	1402 Minutes
Travel from	10 Minutes

▲ Rule violations
Resource Availability - The service must have a gap of at least 1302 minutes from the previous location and 10 minutes to the next location.

▲ Install Rainwater Ha...

The set of rules taken into consideration on the Dispatcher Console is taken from the configured scheduling policy (located above the service list):

Policy: Customer First ▼
Customer First
High Intensity
Prefer Contractors
Soft Boundaries

Unscheduling services

You can unschedule services from several places:

- Dispatcher Console – Service list mass Actions menu
- Service on the Gantt – Right click, then select **Unschedule**
- Changing service status to **New**

Unschedulering a service from the service list mass actions menu

By using the unshedule option from the *Service List Mass Actions* menu, you can unshedule one or more services at the same time:

1. In the Service list, select the service(s) you want to unshedule.
2. On the service list mass shedule menu, click **Unshedule**. The progress bar will appear on the bottom right hand side.

Unshedulering a service with a right click action on a service from the Gantt

1. On the Gantt, select the service(s) you want to unshedule. You can select more than one service by holding CTRL / CMD while clicking services.
2. Right click on the selection to display the Gantt actions.
3. Click **Unshedule**.

Unshedulering a service by changing the status to New

Changing a service status to New automatically unshedules it and removes it from the Gantt. You can change the service status to New by simply editing the service Status field.

Generating Service Reports

PDF service reports offer a complete snapshot of a service's status and settings. To generate a service report:

1. Open the service you're interested in.
2. Navigate to the feed.
3. Click **More > Service Report**.
4. Download the service report.

You can customize service reports in the following ways.

- To substitute your own logo for the Salesforce logo that appears in the top left-hand corner of service reports, upload your logo to the Documents tab. Then log a case with Salesforce to have the logo substituted. In the case description, include a link to the logo file you uploaded.
- To control which fields appear in the General section of a service report, edit the Service Report field set.
- To control which fields appear in the Date & Time section of a service report, edit the Service Report Time field set.
- To control which fields appear in the Address section of a service report, edit the Service Report Address field set.
- To further modify or add a custom page to your service report template, log a case with Salesforce.

Managing Resources

Resources represent technicians or equipment that are assigned to complete a service.

Creating and deleting resources

- To create a resource, go to the **Resources** tab and click **New**. Update the necessary details and save your changes.
- To delete a resources, open the resource and click **Delete**.

Viewing a resource's calendar

Resource detail pages include a customizable calendar that shows the resource's scheduled services and absences. This makes it easier for dispatchers to get a snapshot of a resource's availability, and helps resources keep track of their schedule.

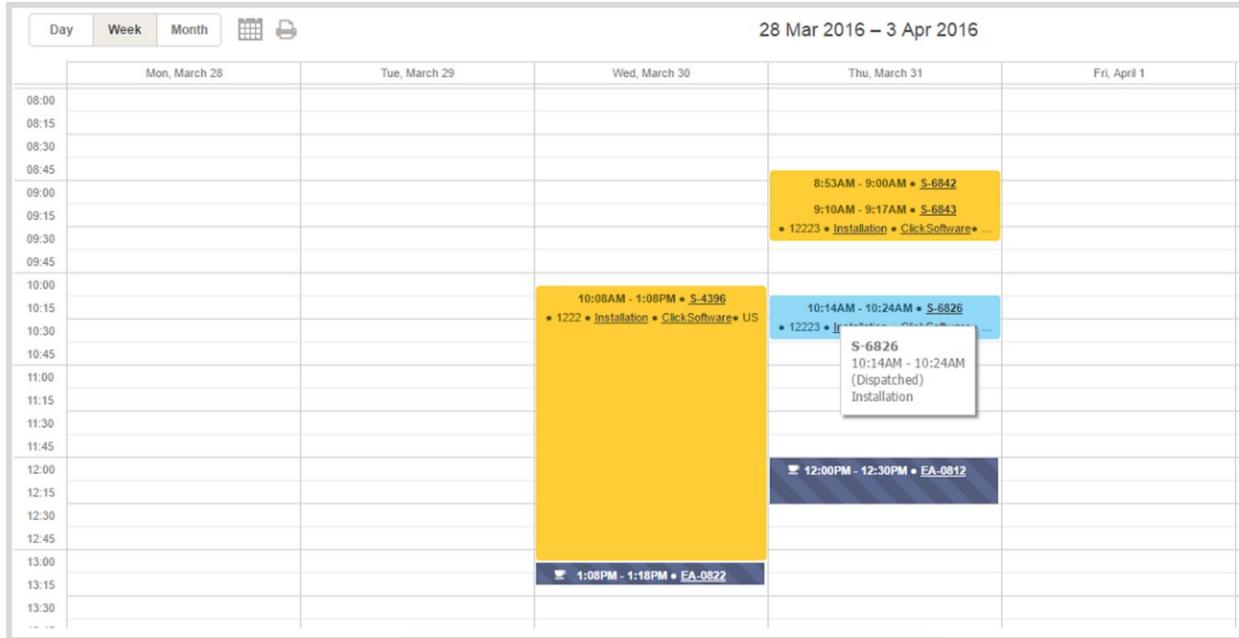
Follow these steps to control which information appears in the calendar:

1. Manage which fields appear in calendar entries for services:
 - a. From Setup, enter *Objects* in the Quick Find box, then click **Objects** under Create.
 - b. Click **Service** and scroll to the Field Sets section. You can customize two field sets:
 - *Service Resource Calendar Display*: Controls what information appears on the calendar entry.
 - *Services Resource Calendar Tooltip Display*: Controls what information appears in a tool tip when you hover over the calendar entry.
2. Manage which fields appear in calendar entries for employee absences:
 - a. From Setup, enter *Objects* in the Quick Find box, then click **Objects** under Create.
 - b. Click **Employee Absence** and scroll to the Field Sets section. You can customize two field sets:
 - *Employee Absence Resource Calendar Display*: Controls what information appears on the calendar entry.
 - *Absence Resource Calendar Tooltip Display*: Controls what information appears in a tool tip when you hover over the calendar entry.

When you navigate to the Resources tab and click a resource name, you can now see their calendar. Clicking a field on a calendar entry opens the corresponding record in a new tab.

Note: If you don't see the calendar on resource pages, add the *VF079_ResourceCalendar* Visualforce component to the resource page layout.

Sample resource calendar:



Assigning a skill to a resource for a given time period

Often, technicians earn certifications that must be renewed periodically to ensure that their skills remain up-to-date. You can specify a time period for a resource’s skill to make it easier to track active certifications and skill levels.

First, enable the Time Phased Skills setting:

1. Open the Field Service Admin app from the Field Service app menu.
2. Click the Field Service Settings tab, then click **Logic**.
3. Select **Enable Skill Time Phase**.
4. Click **Save**.
5. Add the *VF034 skill selector v2* Visualforce component to the resource detail page layout.

When the setting is enabled, several new features become available in your org:

- The Skill Phase fields appear in the VF034 skill selector v2 component on resource detail page layouts.
- The Match Skills work rule and Skill Level service objective type now take into account resources’ skill time periods.
- Users can define several skill phases for each resource, and skill phases can be assigned to different skill levels. For best results, keep all skill levels between 1 and 10, and don’t create more than 50 time phases per skill.

For example, suppose a networking technician passed the networking certification exam, which grants him Level 2 router repair skills for one year. To reflect this time period on the resource record:

1. Navigate to the resource record.

2. Select the skill that the resource has gained. The Level and Phase fields appear next to the skill.

The screenshot shows a 'Skills' management interface. On the left, there is a search bar and a list of skills: Router Repair (checked), Hub Installer, Modem Installer, and Modem Repair. The 'Router Repair' skill is selected, and its details are shown on the right. The details include a table with columns for 'SKILL PHASE START', 'SKILL PHASE FINISH', and 'LEVEL'. A single row is visible, with values '03/22/2016 2:49 PM', '03/24/2016 2:49 PM', and '1'. A red box highlights this row. There are also 'Add Phase' and 'Remove' buttons.

SKILL PHASE START	SKILL PHASE FINISH	LEVEL
03/22/2016 2:49 PM	03/24/2016 2:49 PM	1

3. Under Phase, click **Add**. The skill phase options appear to the right.
4. Enter a start and finish date. If you don't specify a start date, the skill is considered valid since the beginning of time. If you don't specify an end date, the skill phase never expires.
5. Enter a skill level.
6. Click **Save**.
7. If desired, add additional skill phases by clicking **Add Phase**.

Note:

- To disable Time Phased Skills, you must first remove all skill phases from your org.
- If Time Phased Skills isn't enabled, the Match Skills work rule and the Skill Level service objective type assume that each skill is valid indefinitely.

Integration

Logic API

Field Service Lightning includes various APEX APIs which you can call from your Apex code. It doesn't include custom web services.

If you want to integrate appointment booking, you must wrap it in a web service of your choice (SOAP \ REST).


```
CKSW_SRVC.ScheduleResult result = CKSW_SRVC.ScheduleService.Schedule(policy.Id, ServiceID);
```

API signature

Appointment booking

- Returns available appointments slots for a service by a specific calendar objects (which represents the appointment slots) and time zone for the calendar.
- The service must be inside the database. If you want to get appointments for a “future” service, you must insert a service and rollback the transaction.

```
CKSW_SRVC.AppointmentBookingService.GetSlots(Service.Id, policy.id, calendar, UserInfo.getTimeZone());
```

API Signature

```
global class ABExample
{
    webService static List<CKSW_SRVC.AppointmentBookingSlot> GetAppointments(
        CKSW_BASE__Service__c Service,
        String PolicyName,
        string CalendarName)
    {
        Savepoint sp = Database.setSavepoint();

        CKSW_BASE__Scheduling_Policy__c policy = [
            select id from CKSW_BASE__Scheduling_Policy__c where Name =: PolicyName
        ];
        CKSW_BASE__Calendar__c calendar = [
            Select id,
            CKSW_BASE__Exact_Appointments__c,
            (Select CKSW_BASE__Finish_Time__c,
            CKSW_BASE__Start_Time__c,
            CKSW_BASE__Type__c,
            RecordType.DeveloperName From CKSW_BASE__Days__r)
            From CKSW_BASE__Calendar__c where Name =: CalendarName];

        if (Service.Id == null)
        {
            insert Service;
        }

        List<CKSW_SRVC.AppointmentBookingSlot> appointments = CKSW_SRVC.AppointmentBookingService.GetSlots(
            Service.Id,
            policy.Id,
            calendar,
            UserInfo.getTimeZone()
        );

        Database.rollback(sp);

        return appointments;
    }
}
```

Appointment booking code example

Transaction limits

Salesforce has strict rules about using server \ DB and other multi-tenant shared resources.

Schedule & Appointment booking actions consume some of these resources (SOQL queries, CPU time). Therefore, you can't call these actions inside a loop, or you will get an exception raised by Salesforce Execution Governors.

Instead, try to separate your code into multiple transactions:

- Each web service call will be considered as an API call
- Each org is limited to a certain amount of API calls every 24 hours, based on the number of licenses purchased

Geocoding

Each service and resource has an “Auto Geocode” checkbox. When this option is selected, a trigger sends geocoding requests to a remote server that transfers these requests to Google using the right QPS (queries per second) in order to stay within Google limits.

This service is an “async” service, and it may take a while before the objects are updated with their geolocation.

You can mass update and create services and resources with “Auto Geocode” selected, or use the API to geocode other related objects like accounts.

```
ic class GeocodeExample
{
    public void Geocode()
    {
        CKSW_SRVC.Geocoder geocoder = new CKSW_SRVC.Geocoder();

        string[] objectsIDS = new string[] {'a0e3700000052yEAAQ'};
        string[] addresses = new string[] {'Derech Zeev Jabotinsky 2, Ramat Gan'};
        // addresses and objectsIDS needs to be in the same size

        // last parameter is the 'Auto Geocode' field name that will be updated to false when geocoding is complete (optional)
        boolean result = geocoder.Geocode(objectsIDS, addresses, 'Account', 'BillingLatitude', 'BillingLongitude', null);

        // result = false if the admin didn't click "Activate optimization" inside the FieldExpert Admin app
    }
}
```

Geocoding code example

Information for Developers

Field Service Lightning Objects

Field Service Lightning contains the following data objects:

Service: Services are the jobs needed to perform on the field. A service is performed for a customer / to an asset and can be linked to cases, work orders or any standard or custom object. In order to execute a service we need to know “Who (Resource with availability and right skills) does What (Service Type, required skills), when (Time constraints), where (Geolocation) and for whom (Account / Contact)?”

Resources: Resources are the field workers performing the services, and will be mapped for an existing user record. When scheduling, the rule engine will match the services properties (Location, Time, Skills) with all the relevant resources to find the best candidates.

Service Type: A service type is the type of job being requested. For example: Installation, Remedial or Upgrade. A service type derives the required skills and products for a service, as well as of the due date offset and the default duration.

Skills: A catalogue of employee skills used to define what each employee can do, or what is required to perform a service. Please note that FLS Skills object is a custom object and it is a different object than the Live Agent skills / Omni skills / work.com skills objects.

Calendars: Used for specifying the working hours of the resources. A resource can have more than one calendars, effective for different time ranges. Also used for specifying the organization appointment booking windows. Please note that FSL Calendar object is different than Salesforce Calendar feature.

Employee Absence: A worker's non-availability. Used to block scheduling. Appears on the Gantt.

Service Order: Represents a work order that is made of different individual jobs. Not a scheduling entity. A parent of service records. An optional object.

Location: A location defines a working unit, department or district and group together employees and services.

Object Fields

Service Fields

Services are the work orders or jobs performed for customers in the field.

Field Label	API Name	Data Type	Description
Account	Account__c	Lookup (Account)	(Optional field) The customer account.
Appointment Finish	Appointment_Finish__c	Date/Time	The time the appointment is scheduled to finish, and the latest time a field technician can arrive to the job. Represent the promise given to the customer.
Appointment Grade	Appointment_Grade__c	Number (3, 2)	A number between 0 to 100 that ranks the appointment in its ability to meet the company's KPI, as defined in the scheduling policy.
Appointment Start	Appointment_Start__c	Date/Time	The time the appointment is scheduled to start, and the earliest time a field technician can arrive to the job. Represents the promise given to the customer.
Area	Area__c	Lookup (Area)	The service area that the service belongs to. Used when calculating travel time with the predictive travel feature enabled.
Auto Schedule	Auto_Schedule__c	Checkbox	When this boolean is set to TRUE, an asynchronous trigger fires and assigns the service to the best candidate based on work rules.
City	City__c	Text (100)	Part of the service address. The address is not automatically inherited from a related record, but you can set up automation to have the service inherit its address from the object the user is scheduling a service for (e.g. its account).
Comment	Comment__c	Long Text Area (32768)	Used by the field technician, planner, or service representative to record comments related to the service.
Contact	Contact__c	Lookup (Contact)	(Optional field) The customer contact.
Country	Country__c	Text (100)	Part of the service address. The address is not automatically inherited from a related

			record, but you can set up automation to have the service inherit its address from the object the user is scheduling a service for (e.g. its account).
Date	Date__c	Formula (Date)	The date value of the Start date/time field.
Day Of Week	Day_Of_Week__c	Formula (Text)	The day of the week (Mon - Sun) of the service. Calculated based on the Start field.
Description	Description__c	Long Text Area (32768)	The description of the service.
Due Date	Due_Date__c	Date/Time	The date and time by which the service must be completed without violating the company SLA, as defined in the Service Type or Service Level.
Duration	Duration__c	Number (10, 2)	Together with the Duration Type field, this numeric field defines the planned amount of time that a resource needs to complete the service.
Duration Type	Duration_Type__c	Picklist	Together with the Duration field, this field defines the planned amount of time that a resource needs to complete the service. (Days / Hours / Minutes)
Early Start	Early_Start__c	Date/Time	The earliest date and time that a service can be started, represented by the technician arriving at the service site. For example, a work order may be received at 8:00 AM, but the request for service states that a resource cannot start to perform the task until 3:00 PM. Then, the early start time would be 3:00 PM. The default value is NOW().
Finish	Finish__c	Date/Time	The calculated time used to complete the service. Equal to Start + Duration.
Gantt Label	Gantt_Label__c	Text (255)	The label displayed for service on the Gantt view. Usually populated by Process Builder to capture the service type, the case number, or the customer.
Geolocation	Geolocation__c	Geolocation	The service geolocation coordinates. This can be automatically populated by selecting the Auto-Geocode checkbox.
Incomplete Reason	Incomplete_reason__c	Picklist	The reason for an incomplete service. Default values: <ul style="list-style-type: none"> ● Customer not ready ● Customer rejected ● Emergency

			<ul style="list-style-type: none"> ● Missing Part ● Missing Tool ● No access ● Weather hazard ● Other
Incomplete Reason Text	Other_Incomplete_Reason__c	Long Text Area (32768)	
In Jeopardy	In_Jeopardy__c	Checkbox	Setting this boolean field to TRUE will mark the service as In Jeopardy on the Gantt view, alerting the dispatcher to problems. Common jeopardy scenarios are a delayed start, a due date approaching on an unscheduled service, etc.
In Jeopardy Reason	In_Jeopardy_Reason__c	Picklist	The reason a service is in jeopardy. Default values: <ul style="list-style-type: none"> ● Delayed Start ● Delayed Finish ● No Response ● Due Date Approaching
Location	Location__c	Lookup (Location)	A location defines a working unit, department, or district, and groups together employees and services. The location you select indicates which location service area the service falls into. This determines which resources are available to complete the service.
My Service	My_Service__c	Formula (Checkbox)	A calculated field. TRUE when the current user ID is equals the user ID of the assigned resource.
Notification Time	Notification_Time__c	Date/Time	(Non-functional) Together with the Notification Type field, this field specifies the time the customer has requested to be notified that the field worker is en route.
Notification Type	Notification_Type__c	Picklist	(Non-functional) Together with the Notification field, this field specifies the time the customer has requested to be notified that the field worker is en route.
Open Date	Open_Date__c	Date/Time	If the Service was created in a different system and was created in Salesforce through integration, this field lists the date when the service was created in the other system.
Phone	CustomerPhone__c	Phone	The customer's phone number.
Pinned	Pinned__c	Checkbox	Pins the service when using optimization as a service server. If a service is pinned, the

			resource and time cannot be changed and the service cannot be unscheduled.
Priority	Priority__c	Number (18, 0)	The priority of the service. A value of 1 indicates higher priority than a value of 10. Priority may influence appointment grades.
Recurrence	Recurrence__c	Formula (Checkbox)	If a service is part of a recurrence (meaning it has a recurrence key), this field is TRUE.
RecurrenceKey	RecurrenceKey__c	Text (255)	A system field that captures the ID of the first member (initiator) in the series and other recurrence properties.
Related Service	Related_Service__c	Lookup(Service)	Used for multi-stage services.
Resource	Resource__c	Lookup(Resource)	The field technician that the service is assigned to.
Same Day	Same_Day__c	Checkbox	Used for multi-stage services. Indicates to the rule engine that both services must be scheduled for the same day.
Same Resource	Same_Resource__c	Checkbox	Used for multi-stage services. Indicates to the rule engine that both services must be assigned to the same field technician.
Service Order	Service_Order__c	Lookup (Service Order)	(Optional) When services are part of a service order, this field lists the service order record.
Start	Start__c	Date/Time	The calculated time when the work should start.
State	State__c	Text (255)	Part of the service address. The address is not automatically inherited from a related record, but you can set up automation to have the service inherit its address from the object the user is scheduling a service for (e.g. its account).
Status	Status__c	Picklist	The status of the service. For example, On Site or Completed.
Street	Street__c	Text (255)	Part of the service address. The address is not automatically inherited from a related record, but you can set up automation to have the service inherit its address from the object the user is scheduling a service for (e.g. its account).
Time Dependency	Time_Dependency__c	Picklist	Used for multi-stage services. Default values: <ul style="list-style-type: none"> ● Same Start ● Start after Finish

			<ul style="list-style-type: none"> Finish before Start
Tooltip Text	Tooltip_Text__c	Text (255)	When this field is populated, it appears on the Gantt tool tip.
Total Travel (in hours)	Total_Travel__c	Formula (Number)	The number of hours traveled, calculated based on Travel Time From and Travel Time To.
Travel Time From	Travel_Time_From__c	Number (18, 0)	The travel time in minutes from a service to home or to the next service.
Travel Time From (Hours)	Travel_Time_From_Hours__c	Formula (Number)	The travel time in hours from a service to home or to the next service.
Travel Time To	Travel_Time_To__c	Number (18, 0)	The travel time in minutes to a service.
Travel Time To (Hours)	Travel_Time_To_Hours__c	Formula (Number)	The travel time in hours to a service.
Type	Service_Type__c	Lookup (Service Type)	The type of service being requested. For example, installation, remedial, or upgrade.
UpdatedByOptimization	UpdatedByOptimization__c	Checkbox	If this Boolean field is set to TRUE, it means that the service was updated by the optimization as a service server.
Zip	Zip__c	Text (15)	Part of the service address. The address is not automatically inherited from a related record, but you can set up automation to have the service inherit its address from the object the user is scheduling a service for (e.g. its account).

Resource Fields

Resources are the field technicians or assets performing the services. They are mapped to an existing user record.

Field Label	API Name	Data Type	Description
Active	Active__c	Checkbox	Only active resources appears on the Gantt.
Area	Area__c	Lookup (Area)	The area this resource home base belongs to. Used to calculate travel time when the predictive travel feature is enabled.
Auto Geocode	Auto_Geocode__c	Checkbox	(Non-functional) When this boolean field is set to TRUE, an asynchronous trigger populates the geolocation properties of the

			resource home base based on the user address fields.
Capacity Size	Capacity_Size__c	Number (14, 4)	(Non-functional)
Capacity Weight	Capacity_Weight__c	Number (14, 4)	(Non-functional)
City	City__c	Formula (Text)	A formula field that returns the related user's city.
Contract	Contract__c	Lookup (Resource Contract)	(Non-functional)
Contractor	Contractor__c	Checkbox	When this boolean field is set to TRUE, Field Service Lightning treats the resource as an external worker (contractor) who is assigned services based on capacity.
Country	Country__c	Formula (Text)	A formula field that returns the related user's country.
Email	Email__c	Formula (Text)	A formula field that returns the related user's email.
Gantt Label	Gantt_Label__c	Text (255)	The label displayed for the resource on the Gantt view.
Homebase	Homebase__c	Geolocation	The resource's home base geolocation coordinates. This field is auto-populated by selecting the Auto-Geocode checkbox.
Location	Location__c	Lookup (Location)	The resource's default location. This controls where the resource appears in the dispatcher console.
Manager	Manager__c	Formula (Text)	A formula field that returns the related user's manager.
Phone	Phone__c	Formula (Text)	A formula field that returns the related user's phone.
Picture Link	Picture_Link__c	Long Text Area (8000)	Stores the picture of the resource displayed on the Gantt.
State	State__c	Formula (Text)	A formula field that returns the related user's state.
Street	Street__c	Formula (Text)	A formula field that returns the related user's street.
Tooltip Text	Tooltip_Text__c	Text (255)	When this field is populated, it appears on the Gantt tool tip.

Travel Speed	Travel_Speed__c	Number (10, 3)	Used to calculate travel time. If this field is blank, a default value from the settings is considered.
User	User__c	Lookup (User)	The related user.
Zip/Postal Code	Zip_Postal_Code__c	Formula (Text)	A formula field that returns the related user's postal code.

Service Type Fields

A **service type** is the type of job being requested.

Service types let you define the work context, and they also serve as a template for a job's expected duration, required skills, products, and due date. When you set up service types, we recommend filling in the required skills, duration, and due date offset. That way, these values are automatically added to service records created in the future.

Field Label	API Name	Data Type	Description
Due Date Offset	Due_Date_Offset__c	Number (18, 0)	Sets the due date of a new service according to its start time and the value entered in this field. The offset is calculated in minutes.
Duration	Duration__c	Number (5, 2)	Sets the duration of a new service according to the value entered in this field. Together with the Duration Type field, it defines the planned amount of time needed to complete the service.
Duration Type	Duration_Type__c	Picklist	Sets the duration type of a new service according to the value entered in this field. Together with the Duration field, it defines the planned amount of time needed to complete the service. (Days / Hours / Minutes).

Skill Fields

The **Skill** object is a catalogue of employee skills used to define what each employee can do, or what is required to perform a service.

The Skill Name field is used in work rules when matching the resource skill set and the service required skills. The Skill Category field is a placeholder that you can assign meaningful values.

Calendar Fields

A calendar specifies a resource's working hours or an organization's appointment booking windows. A resource can have more than one calendar, effective for different time ranges.

When the Exact Appointment checkbox is selected, appointments booked with that calendar will not consider the appointment windows, but only the start time of the time interval.

Employee Absence Fields

An **employee absence** represents a worker's non-availability. It is used to block scheduling.

Field Label	API Name	Data Type	Description
Area	Area__c	Lookup(Area)	Used to calculate travel time when the predictive travel feature is enabled. Indicates which area the service belong to.
Comment	Comment__c	Long Text Area (32768)	A comment on the employee absence.
Date	Date__c	Formula (Date)	The date value of the Start field.
Day Of Week	Day_Of_Week__c	Formula (Text)	The day of the week (Mon - Sun) of the service. Calculated based on the Start field.
Finish	Finish__c	Date/Time	The time when the absence will be over and the resource will be available for scheduling.
Gantt Label	Gantt_Label__c	Text (255)	The label displayed for absence on the Gantt view.
Geolocation	Geolocation__c	Geolocation	The service geolocation coordinates.
Location	Location__c	Formula (Text)	A location defines a working unit, department, or district, and groups employees and services together.
My Absence	My_Absence__c	Formula (Checkbox)	A calculated field. This field is TRUE when the current user ID equals the user ID of the assigned resource.
RecurrenceKey	RecurrenceKey__c	Text(255)	A system field that captures the ID of the first member (initiator) in the series and other recurrence properties.
Resource	Resource__c	Lookup(Resource)	The field technician that the absent is associated with.
Start	Start__c	Date/Time	The time the absence will begin and the resource will not be available for scheduling.
Team Absence	Team_Absence__c	Lookup(Team Absence)	If this absence is part of a Team absence, this field lists the parent Team absence record.

Travel Time From	Travel_Time_From__c	Number(18, 0)	The travel time in minutes from this absence to home or the next service.
Travel Time To	Travel_Time_To__c	Number(18, 0)	The travel time in minutes to this absence from home.
Type	Type__c	Picklist	The absence type.
UpdatedByOptimization	UpdatedByOptimization__c	Checkbox	If this Boolean field is set to TRUE, the service was updated by the optimization as a service server.

Service Order Fields

A **service order** represents a work order composed of different individual jobs. It is a parent of service records, and is an optional object that is not used for scheduling.

Field Label	API Name	Data Type	Description
Account	Account__c	Lookup(Account)	The customer.
Description	Description__c	Long Text Area(32768)	A description of the service order.
Finish	Finish__c	Date/Time	The time when the work should end.
Start	Start__c	Date/Time	The time when the work should begin.
Status	Status__c	Picklist	A placeholder field that you can assign meaningful values.

Location Fields

A **location** defines a working unit, department or district, and groups together employees and services.

You can use locations to represent territories or service areas, and then decide which resources service each area. You can also create hierarchies of locations using the `Parent Location` field.

Tip:

- When you create a resource, use the `Location` lookup field to set a default location for the resource. This controls where the resource appears in the dispatcher console.
- When you create a service, use the `Location` lookup field to indicate which location (service area) the service falls into. This determines which resources are available to complete the service.
- To share resources between locations, create a “Default Service Area” location lookup field on the Account object. Then, whenever you create service for the account, copy the location from the account record.
- To define locations by postal code ranges, use a table to map postal codes to locations and automatically populate the `Location` field when a service is created.

Field Label	API Name	Data Type	Description
First Day of Working Week	First_Day_of_Working_Week__c	Picklist	(Non-functional until scheduling optimization is supported)
Parent Location	Parent_Location__c	Lookup(Location)	Use this field to build a location hierarchy.
Start of Day	Start_of_Day__c	Text(5)	(Non-functional until scheduling optimization is supported)
System Jobs	System_Jobs__c	Picklist (Multi-Select)	
Time Zone	Time_Zone__c	Picklist	The location time zone. Affects the Gantt.