Oracle Fusion Field Service

Oracle Fusion Field Service Questions and Answers

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1 **Field Service: Questions and Answers**

How do I configure business rules?

When you set up Oracle Fusion Field Service you can use the **Business Rules** page to configure the way your business processes are handled by the application. You can configure the settings for marking en route for activities, activity priority, countries available in the application, activity markers, retention period, and overnight work among others.

The **Business Rules visibility** profile permission controls the access to the **Business Rules** page. You must set this permission for each user type that manages Business Rules. If the action isn'tconfigured for a user type, or if no visibility is defined, the users don't see the **Business Rules** page. If you select ReadOnly, Business Rules is placed into a view-only mode. If you select Read/Write for this setting, the user can manage Business Rules in Oracle Fusion Field Service.

1. Click **Configuration**.
2. In the **General** section, click **Business Rules**.

   The **Business Rules** page appears.
3. Complete these fields:

Field	Description
General	
Work Skill Support Work Zone support	If a feature is disabled (deselected) the settings defined for it are retained in the application, but no restrictions are applied. Work skills and work zones are critical settings greatly affecting performance, particularly, activity assignment to resources. Select these check boxes to impose these constraints on the process of activities assignment and reassignment: ○ Routing considers work skills and work zones and assigns activities only to resources matching the work skill and work zone requirements of the activities. ○ All newly-created activities have work skills and work zones calculated for them and, therefore, will be correctly assigned afterwards ○ Self-assignment, Quota management, manual activities move or assignment are subjected to work skills and work zones check All these factors contribute to higher application performance and help improve the use of the workforce. Disabling work skills support and/or work zones support might result in Routing results below optimum and, therefore, must be used with care.
Service Window Support	Select this checkbox to select the **Service Window** field by default when you add an activity or teamwork.
En Route Support	Select the checkbox to let mobile workers change the activity status to 'En route'. This status is then shown to your customers on the **Where is My Technician** page. After you enable the En route Support option, the 'En route' status is available only for the activity types that have the **Calculate travel option** enabled.
ETA auto-adjustment for En Route activities	Select this checkbox to provide periodic auto-adjustments to the estimated time of arrival (ETA) to an activity site when an activity is in the En Route status. You can see these adjustments in updated ETA values across the product. You can also see them on the activity History page. Upon selecting this checkbox, the changes take effect in one hour and doesn't affect the activities that are currently in the "En route" status.

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Field	Description
	Note: You can see this checkbox, only if you've a license for Oracle Field Service Enterprise edition. Further, you must select the **Use real-time traffic data** setting for the user type of a user for which you want to assign an activity that receives periodic updates of ETA.
Points Support	Select the box if you use points. When points are used, each shift and corresponding work schedule is assigned some points, which are a relative expression of the required work to be performed within such work schedule. Similarly, each activity might be also assigned some points. As the resource completes activities in their route, their points are added and compared to the total number required for the work schedule. Points might be used by Routing in activities assignment.
Overnight Work	Select this checkbox to define number of hours for overnight work since midnight. Use only if you've overnight work activities. Select the time zone that's used to define when your work-day closes. If the value is greater than 0, it's possible to create activities for the previous day's route and perform other route modifications based on the time zone setting value. Working time ____ hours since midnight <…..> When you define the overnight work hours, you can't update activities if any of these conditions is met: - Current time is greater than the end of the day of the day of route +overnight setting in the resource's time zone. - Current time is greater than the end of the day of the day of route +overnight setting selected in this field. This setting affects the logic of data saving by the Daily Extract functionality. If the company doesn't support overnight shifts, the extraction period covers time since the previous extraction till the end of the previous day. If the company supports overnight shifts, the Daily Extract data for the previous day is available for extraction after the overnight setting expires, that's, at 00:00 AM + overnight. If the data is extracted before that time, the resulting files contain data from two days before. It's recommended to schedule the Daily Extract process several minutes after the overnight setting expires to guarantee that only the relevant data is extracted. The following important note applies to the Daily Extract functionality: **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page. If you use the **Overnight Work** feature, your mobile workers must deactivate their routes and sign out of the application. If they don't do these, they will see the previous day's date when they sign in the next day.
Allow update activities and offline sync after overnight within the following number of hours	Enter the number of hours after the overnight end time within which users can update the past activities and inventories. Users can update activities and inventories through the user interface and the 'Update Activity' and 'Update Inventory' REST API methods, as well as sync offline. Updates aren't allowed after this period. Outbound messages for actions in the past are blocked, except for scenarios that use the 'Service request is created' launch condition.
Full-time Equivalent	Enter a value to convert the calendar to a Full-time Equivalent resource. The value is used in the **Planning** section of **Calendars** and is a company wide setting. For example: If the resource works from 08:00-16:00 (8 hours) and the Full-time Equivalent value = 8 this resource will be shown as 1 Full-time Equivalent.
Expose mass and repeating activities for these number of days	Enter the number of days in advance in which the template activities are created in mobile workers' routes automatically.

Field	Description
	The default value is '0', which means that such activities aren't instantiated automatically, but are created only when a route is created. When you modify the value and save it, Oracle Fusion Field Service scans all the mobile worker routes and instantiates the templates for the dates that match the configured period. If you increase the value, then the application includes more dates into consideration for automatic instantiations. If you decrease the value, then the application doesn't remove the existing instantiated activities, instead processes fewer dates from then on. When you add a new resource or change the templates and schedules, the application changes the activities accordingly. **Note:** Instantiating activities might require significant time, especially if you increase the value and there are many mobile workers in the application. It also generates a significant amount of transactions such as events (routeCreated, activityCreated) and outbound messages for the "Activity is created" launch conditions.
Activity Priority	Select the property that defines the priority of an activity. Activity priority is used by Routing to assign urgent activities, immediate activities, and to prioritize activities for self-assignment on the map. You can use any custom property of activity with type string, enumeration, or integer, but not fields. The configuration consists of these parameters: o **Property to define priority**: Defines the activity property that will be used to identify urgent, immediate, and self assignment activities. o **Urgent activities have these values of the property**: Defines the specific values of the property, which make the activity urgent or immediate. Several values of the same property can be used as criteria. In this case the values must be separated by commas in the field. The order of property values defines the priority level. The value listed first will have the highest priority, with other values following in the descending order. For example, if you've a privileged customer, you might specify it as a specific value (such as "PC") in an activity property, so it qualifies the activity as urgent. For enumeration properties, you must specify the enumeration values. o **Normal activities have these values of the property**: Defines the specific values of the property, which make the activity normal. For example, in-house activity selected as "IN" in an activity property might qualify the activity as normal. When activities are routed using the immediate routing run option or the urgent routing option, the priority specified in the field that you select here are considered. For example, a company must always perform repairs as soon as possible to reduce service disruptions. In this case, the company might have a custom property which indicates that the activity is "Repair" to consider an activity as urgent. The preferred ETA for Urgent activities is the earliest possible time. SLA start time doesn't have any impact on Urgent activities, which means, SLA violation is expected behavior. Further, even if you select Immediate routing, SLA start time doesn't have an impact on the Urgent activities ETA.
Non-scheduled and Not assigned activities map markers	Specifies the markers that will be used for non-scheduled and not assigned activities on the Dispatch Console Map and in the Scheduling Layer. Higher priority markers will be displayed on the map when activities are clustered by close proximity. For more information, see the Configure Activity Map Markers topic.
Reasons for skipping activities suggested when idle	Configure the reasons for skipping activities in the Add Skipping Reasons dialog box.
Assignment Assistant	
Manual Move Reasons	See the Configure the Manual Move Reasons topic.
Excluded User Types	Use this option to select the user types for which the Move Reasons aren't displayed in Assignment Assistant.
Maps and Geocoding	
Available Countries	Select the + symbol to select an additional country from the drop-down list for geocoding purposes. Select the pencil icon to edit the country name for localization purposes. Geocoding is the process of finding associated geographic coordinates (latitude and longitude) from other geographic data,

Field	Description
	such as street addresses, or zip codes (postal codes). Geocoding data is required for Routing and is critical for Map/driving directions. Proper geocoding information is necessary for every country that this environment of the application is operating within. The **Available Countries** field allows adding additional countries for geocoding purposes.
Default Country for Geocoding	Select the country that's used as the default country for geocoding. The country you select here must be within the **Available Country** list selected earlier. Oracle Fusion Field Service includes HERE Maps support for operations in Japan. When the application is configured with Japan as the default geocoding country, maps automatically display higher street-level detail, improved road geometry, and clearer visual representation of activity and resource locations. This enhancement requires no additional configuration or action and improves clarity across both web and mobile experiences. - You can ensure improved map clarity for Japan simply by setting the default geocoding country to Japan. - You can rely on automatic map improvements when supporting teams operating in Japan. **Note:** Google Maps integration uses API Key authentication. The previous Client ID method is no longer required.
Zip Code Format	Select the format of ZIP (postal) code and state code values. Both fields are used in the activity coordinates resolution from its geographic address. The ZIP value is validated by the Inbound API, therefore, its format is important. When the ZIP value sent by the Inbound API doesn't correspond to the format set in the Business Rule, the API returns an error. However, when the Free Post code option is selected, the ZIP value isn't validated and will always be accepted.
State Format	Select the State format. This field includes Free format and US. Select US for addresses in the USA having a strict 2-letter state code format. For all other countries with different civil entity systems, select Free.
GPS	**Identify mobile worker by** – Determines how a unique mobile worker is identified within the context of GPS plotting. These items are applicable with Oracle Fusion Field Service Smart Location Cloud Service: **Resource is considered idle if moved less than __ meters within _- minutes** **Resource is considered to be at the activity location if the distance is less than __ meters -**
Map Parameters	Define the items related to the Map page: **Distance Measurement Units:** Specify whether the distance is measured in miles or kilometers. **Note:** Driving directions for Here map and geocoding are only shown in these languages: (English (default), French, German, Italian, and Spanish). The default maps and geocoding provider is Here. Google can be used, if it's part of your subscription. To use Google maps, contact Oracle Sales. Further, you can have only one provider (Here) configured in the application. Information about the geocoding provider is displayed at the bottom of the map.
Map Layers	Configure the map layers you want to use on top of the map: Work Zone layer (work zone shapes) and/or custom map layers (for example, places of interest such as gas stations or gas pipelines). You can add a Work Zone layer or a new map layer, modify or delete an existing layer, and change the permissions for an existing layer. When you click **Add new**, the **Add Map Layer** dialog box appears. You can either upload shape files through the interface or through an API, or you can provide the path to MapViewer from where the custom layer is obtained. You can add a maximum of 10 map layers per environment. You also see these sections:

Field	Description
	o **Status:** Indicates the status of the layer. If the shape file is uploaded successfully and is ready for use, the status displays a green check mark. If the shape file isn't uploaded properly or has any errors, the status displays a red cross mark. o **Map layers:** Provides the name of the map layer and the date on which it was last updated. If the map layer isn't available, this column provides the reason such as: Shape loading failed. o **Permissions:** User types to which the layer is assigned. If there are multiple user types, they're displayed as, '<user type> and <number> more'. For example, 'Mobile Worker and 3 more'. This column is empty for the Work Zone layer. **Note:** The **Permissions** option isn't available for a Work Zone layer. Properties of Work Zone layers: o Each Work Zone can have only one map layer, and if it doesn't exist, the message, No configured layers appears. o You can create only one Work Zone layer. After a Work Zone layer is created, the Create Work Zone layer option is grayed out on the **Add map layer** dialog box and the message "Only one layer for work zone shapes can be created" is displayed. o When you delete a Work Zone layer through the metadata API, only the layer is deleted. The shape files aren't deleted from the database. However, when you delete a Work Zone layer from the **Business Rules** page by selecting the **Delete associated shapes** option, the layer and its associated shapes are deleted.
Company Boundaries	Provide the latitude and longitude coordinates of the company's geographical work area. Activities can be performed only within these boundaries that are a set of squares. To identify a square, its top left and bottom right corners are defined. If no boundaries are defined the company can perform work anywhere. Additional boundaries can be added by clicking the + symbol.

Retention period

Note: In general, data should not be expected to remain beyond the configured retention period. However, some records may persist slightly longer depending on the specific purge schedule. For example, if an activity was created on January 1 and is currently in a **pending, non-scheduled status**, it will **not** be purged.

Field	Description
Activity, Inventory, Service Request and History information	Enter the retention period for the activities in the past, customer related inventory, service requests, and the associated activity history. It also includes the service requests, messages, logs such as activity history, quota history, configuration log, changes to resources and users. The default value is 90 days. You can set a value between 1 and 90 days. Activities are retained for these number of days regardless of their status. The background data purge process considers the updated value whenever the process runs the next time. If the difference between the changed numbers is huge (for example, you change from, 90 to 3 days), the purge process might take up to 24 hours. **CAUTION:** Don't set the value to 1 (one), if you've set the 'Overnight work' setting on Business Rules to a number greater than 0 (zero). If you do so, your data might be purged before the Daily Extract process runs.
Collaboration History	Enter the retention period for Collaboration chat history. The default value is 90 days. You can set a value between 1 and 90 days. The background data purge process considers the updated value whenever the process runs the next time. If the difference between the changed numbers is huge (for example, you change from, 90 to 3 days), the purge process might take up to 24 hours.
Resource Position History	Enter the retention period for the resource's GPS coordinates. Resources locations are extracted as part of the Daily Extract process. You can retrieve them through the 'Get last known positions of resources' and 'Get position history for resource for certain date' Core API requests. The default value is 90 days. You can set a value between 1 and 90 days. The background data purge process considers the updated value whenever the process runs the next time. If the difference between the changed numbers is huge (for example, you change from, 90 to 3 days), the purge process might take up to 24 hours. The following important note applies to the Daily Extract functionality:

Field	Description
	Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page. **Note:** The value for this field must be less than the value for 'Customer, resource and user information'. As part of the background data purge process for 'Customer, resource and user information', information about queues are also removed. Resource locations are gathered at the queue level, so they can't be shown on the page when the queue is removed.
Daily Extract files	Enter the retention period for files that are generated by the Daily Extract process and retrieved through the 'Download daily extract file' Core API method. The default value is 90 days. You can set a value between 1 and 90 days. Updated value is considered for when the Daily Extract files are generated the next time. The retention period for existing Daily Extract files is the period that was defined when files were created.The following important note applies to the Daily Extract functionality: **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.
Quota Management	
Quota and Capacity	These items are applicable with Oracle Fusion Field Service Capacity Cloud Service: o **Measurement units for Quota and Available Capacity** Defines the general settings affecting Quota Management functionality. Particularly, the user can choose the units of measurement to display Quota and Used values by setting the Quota and available capacity are defined in parameter. The available values are hours, man-days and minutes. Internally, all values are calculated in minutes anyway, and are converted to the selected unit when the corresponding value is displayed in the Quota View. When man-days is selected as the unit of measurement, the **Number of hours per man day is** field appears where the correlation between man-days and hours can be defined. Ultimately, this parameter is used to convert man-hours into minutes. When the Quota is defined as percentage of the capacity available by calendar, sometimes it requires adjustment. To adjust the value, the system estimates the capacity available by calendar, processes the already booked activities (to calculate the Other activities value), and, finally, recalculates the Quota in minutes using the defined percentage value.

Field	Description
	○ **Recalculation period** You can set a predefined time interval for Quota and Capacity recalculation using the **every [ ] minutes** field. Valid values: 1 to 1,440 minutes Default value: 10 minutes Also, you can recalculate quota and capacity for a predefined future period (defined as days or calendar weeks). For example, if you enter 10 minutes and set 3 calendar weeks for Quota and Capacity recalculation, then the recalculation occurs after every 10 minutes for 3 calendar weeks. The Calendar Week (**during** drop-down list) option is processed based on the value selected from the **First Day of the Week** drop-down list in the **Display** page. When you use the Calendar Week option, all remaining days of the current week (unless the start day is the week start day selected using the **First Day of the Week** drop-down list) plus all days of these weeks are considered. However, if the recalculation period is set to 7 days, the recalculation is performed for 7 days only. The maximum value for the Calendar Week option is set to 99 days or 15 calendar weeks. You can select the recalculation start day (current day, tomorrow, or day after tomorrow) from the **The Corresponding quota values are automatically adjusted starting from** drop-down list. The Quota and Capacity is recalculated for the **Available Capacity**, **Booking Status**, and **Quota** pages. **Note:** When an activity is booked during the predefined recalculation period, then irrespective of the routing schedule and the specified recalculation period, the values in the **Available Capacity**, **Booking Status**, and **Quota** pages are recalculated immediately.
Capacity Intervals	See *Define Time Intervals* section in the *Oracle Fusion Field Service Capacity Cloud Service Guide*.
Use resources outside the capacity area	Select this checkbox to include all resources with matching work zones outside the capacity area.
Forecasting	
Recalculate data on a daily basis	Select this checkbox to recalculate the Forecasting data on the current environment every day. The data is updated overnight. This checkbox is selected by default for production environments and deselected for test environments.
Search	
Search Fields	*Define the Activity Search Fields* and *Define the Inventory Search Fields* **Note:** Search uses the first 40 characters of the search string. Inventory search doesn't support enumeration type fields. You can't configure the Search field to accept a keyword that's fewer than three characters or symbols.

Related Topics

- Add a Map Layer
- Enable the En Route Support feature

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How do I set the initial ratio for activity duration?

The **Initial ratio for Activity duration** field indicates the percentage by which the company-wide estimations of the activity duration is multiplied to get the estimated activity duration at the resource level for the new activities. This ratio is applicable only for those activities that are relatively new to the resource with no significant past data. You can edit this field only if the resource doesn't have any completed activities.

> **Note:** The field is displayed only for mobile worker, tool, and vehicle resource types.

1. Log in to the Core application as an admin user.
2. Navigate to **Configuration, User Types** page.
3. Select the **Screens** tab.
4. Under **Resource, User**, click **Edit Resource/User**. The Edit Resource/User Context Layout page appears.

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5. To add the **Initial ratio for Activity duration** field to the context layout:
   a. Expand **New element**.
   b. Drag the List element to the required position on the form.
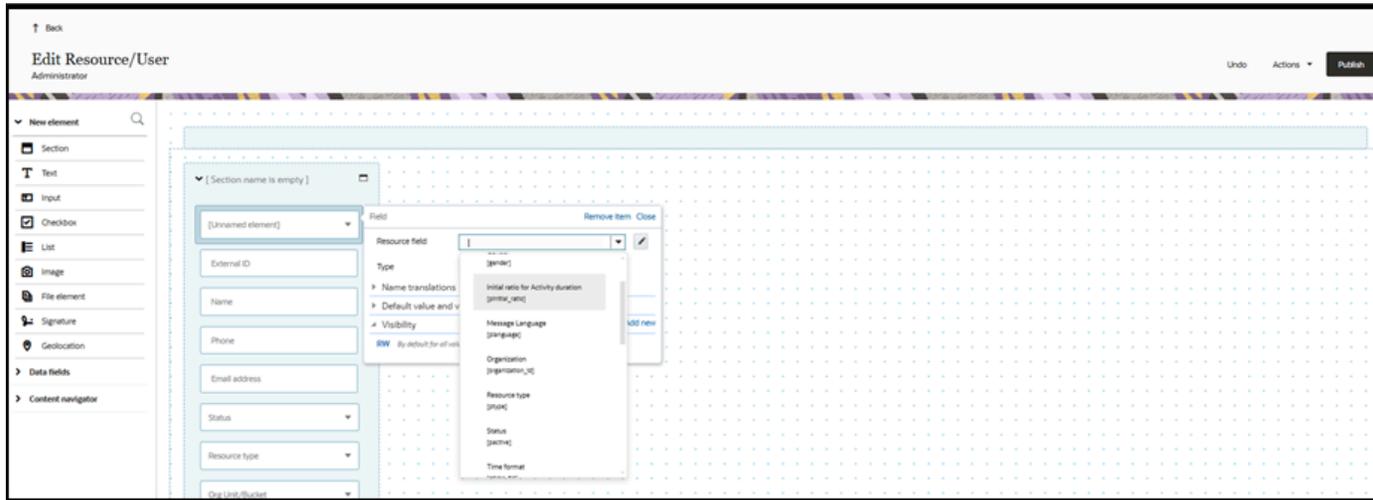
   c. Click the element and in the **Resource Field** field drop-down list, select **Initial ratio for Activity duration** field and set Read-write visibility.

6. Click **Save**.

7. Navigate to the Add or Edit Resource page.

   > **Note:** Based on the settings in **Configuration, Statistics**, the fields, **Lower limit for personal ratio to calculate duration, %** and **Upper limit for personal ratio to calculate duration, %** are displayed.

8. Set an appropriate value for the **Initial ratio for Activity duration** field.

   For example, select 120%. You can view the value on the Resource Edit and Resource Hint pages. The **Default ratio for Activity duration** field is displayed as read-only under the **Initial ratio for Activity duration** field based on the reported duration after the mobile worker completes at least one activity.

   The Default ratio for Activity duration value is always displayed as Read-Only value and only if the Initial ratio for Activity duration value is displayed. The message below the **Initial ratio for Activity duration** drop-down list enables you to understand how the Initial ratio for Activity duration value impacts the resource.

   If the Initial ratio for Activity duration value of the resource differs from one of the predefined options, the current value is added to the bottom of the list. The initial ratio for Activity duration value set through the API is converted to percentages. For example, if you use the API and set the value to "1.25", then on the Resource Edit page and Resource Hint, the value is shown as "125%".

9. Click **Submit**.

How do I enable the En Route Support feature?

You can enable the **En route Support** option, so that the field resources can change the activity status to 'En route'. This status is then shown to your customers on the 'Where is My Technician' page. After you enable the **En route Support** option, the 'En route' status is available only for the activity types that have the **Calculate travel** option enabled. Further, if you disable the En route Support option after using the 'En route' status for some time, then all the current activities with the 'En route' status end their cycle. And, you can't set the 'En route' status for new activities. The 'En

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route' status integrates with the "Where is My Technician" page and you can use it in the Routing module to prevent undesirable adjustments to the next appointment. Enabling the 'En route' feature makes the "En Route" status available for travel activities globally. The changes may impact the "Next activity" function, ETA, and "On my way" notifications to your customers.

1. Click **Configuration** > **Business Rules**.
2. Select the **En route Support** check box.
3. Click **Save**.

   These changes are available for activities and resources:

   - The 'Next activity' section includes the option **I will be Idle for a while**.

   - The activity selected as the next activity gets the status 'En route'.

   - The ETA of the activity is updated using real-time traffic although the activity has a Service window, Access hours, or SLA. Real-time traffic is available only if you've a valid license for Oracle Fusion Field Service Enterprise Edition with Google Maps.

   - The **Adjust travel** option is available when activity is in the 'En route' status. Resources must click **Adjust travel** to change the status of the activity to En route.

   - If **Display and allow adjustment of remaining Travel Time** is selected on the **User Types** > **General** page, resources can change the travel time, but must set the activity to En route immediately. If **Display and allow adjustment of remaining Travel Time** isn't selected, resources can't change the travel time, but can be idle for sometime and then change to En route.

   - When you enable the **En route Support** feature, if your resources don't set their activities as 'En route', then:

     - Oracle Fusion Field Service doesn't consider the resource as on the way to an activity until they set the "En route" status.
     - Travel time isn't recalculated.
     - If you've configured a Message Scenario to notify your customers about resources being on their way, they aren't notified.
     - Where is My Technician page doesn't show the "On the way" status and the resource's position and track.

How do I define the activity search fields?

The application uses the activity property fields defined in the **Search** section of the **Business Rules** page to search for activities.

You can also edit the activity property fields in the **Search** section of the **Business Rules** page to define additional search fields to search for activities. For example, assume that the activities are searched using the Name and Account Number activity fields. Now, you want to search the activities using the Address activity field. You can specify an additional search field as follows:

1. Click **Configuration.**
2. Click **Business Rules** in the **General** section.

   The **Business Rules** page displays.
3. Click the **Edit** icon for Activity Search fields in the **Search** section.

   The **Activity Search Fields** dialog box displays.

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4. Click the **Plus** icon.

5. Select the **Address** field.

6. Click **Add**.

7. Click **OK**.

   The **Address** field displays in the **Activity Search Fields** section.

8. Click **Save**.

9. Click the search icon and click **Search Preferences**.

   The **Search preferences** dialog box displays the selected search categories.

10. Select the **by Address** check box.

11. Click the **Back to Search** button and enter an address, for example, **7700 Technology Way**, in the **Search** field.

   When you search for an activity or a resource, the search fields are selected in the order defined in the **Search preferences** dialog box. You can perform these tasks in the **Search Preferences** dialog box:

   ○ Click the reorder icon to drag the required activity search fields in the list to rearrange the order.

   ○ Select or deselect the required activity search fields to add or remove the activity search fields.

   ○ Select an option from the **Date** drop-down list to refine the activity search results.

   Note: Search uses the first 40 characters of the search string. You can't configure the **Search** field to accept a keyword that's fewer than three characters or symbols. You can't use the Activity ID field to search for activities. This is by design.

Results:

The activities matching the specified address display.

How do I define the inventory search fields?

The application uses the inventory property fields defined in the Search section of the **Configuration** > **Business Rules** page to search for inventories.

You can also edit the inventory property fields in the Search section of the **Business Rules** page and define additional search fields to search for inventories. For example, assume that the inventories in the application are searched using the Model and Item Number inventory fields. Now, you want to search the inventories using the Serial Number field. You can specify an additional search field as follows:

1. Click **Configuration**.

2. Click **Business Rules** in the **General** section.

   The **Business Rules** page displays.

3. Click the **Edit** icon for Inventory Search fields in the **Inventory Search Fields** section.

   The **Inventory Search Fields** dialog box displays.

4. Click the **Plus** icon.

5. Select the **Serial Number** field.

6. Click **Add**.

7. Click **OK**.

   The **Serial Number** field displays in the **Inventory Search Fields** section.

8. Click **Save**.

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9. Click the **Search** icon.
10. Enter the Serial Number (for example, 8779808797) in the **Search** field and click **Search**.

The inventory matching the specified serial number displays.

> **Note:** Search uses the first 40 characters of the search string. Inventory search doesn't support enumeration type fields. You can't configure the Search field to accept a keyword that's fewer than three characters or symbols.

How is activity duration calculated?

You can define the activity duration or the application can calculate it using statistics that is obtained from learned durations.

> **Note:** You can specify durations for specific activities and mobile workers through APIs. For more information, see the REST API for Oracle Field Service guide.

The manually-defined and statistical methods work as follows:

- **Manually-defined:** If you have not selected the **Calculate activity duration using statistics** check box on the **Add activity type** or **Modify activity type** dialog box, the duration specified at the time of creating the activity is used. If you have not specified the duration in the activity, the default duration for that activity type is used.

- **Statistical:** If you have selected the **Calculate activity duration using statistics** check box on the **Add activity type** or **Modify activity type** dialog box, the duration of the activity is calculated based on statistical methods. If the history is not enough to calculate using statistics, the duration entered manually (if entered) at the time of creating the activity is used. If neither history nor a manually entered value is present, then the default duration for that activity type is used. The default duration is specified at the time of creating the activity type.

Calculation of activity duration using statistics

Activity duration estimations are calculated by the application based on the historical data of completed activities. The application analyses new data, compares it against previous estimations, and corrects the previous estimations, based on the new data, to obtain updated estimations for future usage. For this, the application uses two main statistics: company profile and personal profile. The application learns how each mobile worker performs tasks and updates these statistics daily.

- **Company profile:** The activity duration is calculated at the company level based on the **Activity duration stats fields** configured on the **Statistics** page. All activities belonging to the same field value are grouped together for calculating the duration. The key is typically something that identifies similar activities as a single entity including fields such as **Activity Type**. When a mobile worker performs tasks and reports the time against them, the company level estimate is derived for each task type based on the stats field values. The application gives more importance to more recent data for computation, rather than historic data. This increases the estimation accuracy and allows the application to respond to changes in trends in a timely manner. The default duration specified in the **Add activity type** dialog box is used as the starting point for estimating the duration. The application:
  - Refers to the previous experiences of similar tasks.
  - Calculates the estimate based on the summary of experiences.
  - Learns from new experiences.
  - Updates and remembers the updated experiences for future use.

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Every day the estimate is modified by a small amount, based on the durations reported on the previous day for similar activities. The correction applied is controlled to ensure that there isn't too much deviation from the previous estimation and the estimated durations don't keep fluctuating on a daily basis; but is significant enough to respond to any trend change within a few days.

The formula to calculate the new estimate is:

`New estimate = Previous estimate +/- Correction`

where correction is based on previous estimates and the differences between the estimated and reported durations.

- **Personal profile:** The company level estimate and the estimated time for the activity for the mobile worker are computed in the form of a ratio. This ratio is calculated based on the company level estimate for the activity. The final estimate at the mobile worker level is the product of the personal profile ratio and the company level estimate. Each mobile worker may have different ratios for different types of activities, based on their performance. Similar to the correction applied to the Company level estimates, the Personal profile ratio is also updated by a small controlled amount every day, based on the durations reported by the particular mobile worker on the previous day for similar activities. When a mobile worker performs an activity for the first time, the default ratio is used. Ratios are also calculated for each bucket for each kind of activity, based on the durations reported by the resources under the bucket. This ratio is used to estimate the duration when the activity is assigned to a bucket and not yet assigned to a mobile worker. This is also the duration that is used for Capacity and Quota calculations, if the activity is assigned at the bucket level.

Overrides

You can override activity durations for each activity duration key value at either the Company level or the Mobile Worker level, using REST APIs. The Override is stored in the application, in addition to the learned statistical value for the currently active Activity key. For duration estimations, if an override is specified for the user, the overridden value is used instead of the statistically learned value. However, the statistically learned value continues to be updated based on the new reported durations as currently done.

Some more important points about activity durations:

- If the personal profile is not available for an activity key value, the default ratio for the mobile worker is used.

- The default ratio has an initial value that is specified in the **Initial Ratio for Activity Duration** field. This value is updated each time the mobile worker performs a relatively new activity.

- You can specify which type of resources use personal profile, using the **Personalize the estimation of activity duration** field. If you do not select this option, such resource types do not use the personal profile and use only the company wide estimations.

- You can specify whether a resource affects the company level estimates, using the **Use durations reported to enhance company-wide estimations** field. If it does, you can also specify the number of days to be skipped to avoid impacting the company estimates while the resource is new and still learning how to perform activities. The duration reported by only those resources that satisfy these two conditions is used to modify the company level estimates.

- You can set upper and lower limits for activity durations at the resource or bucket level, as a percentage of the company wide estimations. You can use using the **Lower/Upper limit for personal ratio for duration calculation** fields for this. The estimated Activity duration values always remain within the set limits.

The fields that affect activity duration are:

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Field	Page	Description
Minimum and maximum relevant duration time in minutes	Statistics	These specify the acceptable values for reported durations to be considered for estimating Activity Durations. If mobile workers report durations outside of this range, the application does not consider that value when estimating durations.
Lower/Upper limit for personal ratio for duration calculation	Statistics	These specify the range within which the duration estimation for mobile workers and buckets would lie as a percentage of the company level estimation. If the estimation at the mobile worker or bucket level, as a percentage of the company level estimation, is lesser than the set lower limit, the estimation is set to (Lower limit * company level estimation). Similar modifications are done if the percentage is more than the set upper limit.
Default duration	Add activity type and Modify activity type	This is the duration used for estimation, if no other estimation is available including override or historical data for that kind of Activity to estimate duration statistically. This value is also used as the estimated duration, if **Calculate activity duration using statistics** is cleared, or no duration is specified on Activity creation.
Calculate activity duration using statistics	Add activity type and Modify activity type	This parameter specifies whether the duration of the activity must be estimated statistically using historical data. If cleared, the duration specified at the time of creating the activity, or the default duration is used.
Personalize the estimation of activity duration	Add resource type	This parameter specifies whether the activity duration estimation must be learnt for each resource separately. If selected, the application estimates personal profile ratios for each resource for each kind of activity separately. If cleared, the application uses the company wide estimations.
Use durations reported to enhance company-wide estimations	Add resource type	This parameter specifies whether the durations reported by the resource must be considered while calculating activity or travel estimations.
Don't consider reported data of the first x working days	Add resource type	This parameter specifies the number of days only after which the durations reported by a new resource are considered for enhancing statistical estimations. Till such time the durations reported by a new resource are not considered for duration calculation purposes. This field is editable, only if the previous parameter is selected.
Initial ratio for Activity Duration	Resource Info	This is the default ratio that is used for the resource, if there isn't enough historical data for the resource for a particular type of activity. For such activities, the estimated duration of the mobile worker is the value of the `Initial ratio * company wide estimation` (provided "Personalize the estimation of activity duration" is selected).
Working days left for reported data to start impacting duration estimations	Resource Info	This parameter specifies the number of days left before the reported duration of the resource starts affecting the estimated duration. The initial

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Field	Page	Description
		value is based on the value set in **Don't consider reported data of the first x working days**.

Flowcharts

The following diagrams show how Oracle Fusion Field Service determines activity durations. The first flowchart is based on the assumption that the **Personalize the estimation of activity duration** check box is not selected for the resource type, and therefore the activity duration estimate is not adjusted by the resource's personal profile or initial ratios.
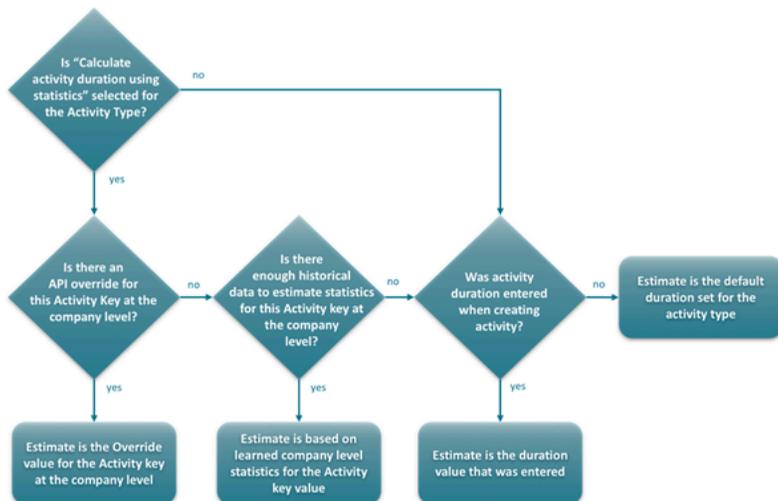
The second flowchart is based on the assumption that the **Personalize the estimation of activity duration** check box is selected for the resource type. This means, the activity duration estimate is adjusted by the resource's personal profile or initial ratio.

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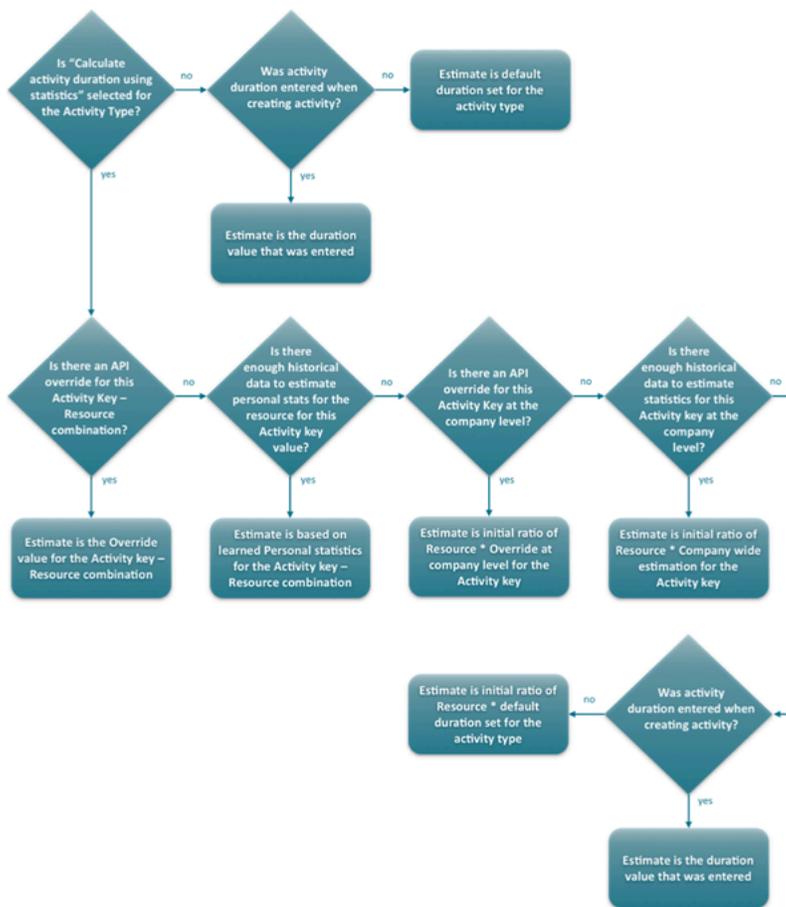
Configuration examples

Example 1: Application uses the duration that is provided at the time of creating the activity

- Activity Type dialog box:
    - Default duration = 30
    - Calculate activity duration using statistics = not selected

If the activity created has a duration of 50 minutes, that value (50) is used. If no value is provided at the time of creating the activity, 30 minutes is used.

Example 2: New resource in the application has no historic data. The administrator wants to provide 20% more time than the estimated duration at the company level.

- Resource Type dialog box: Personalize the estimation of activity duration = selected
- Resource Info page: Initial Ratio for Activity Duration = 120%
- Activity Type dialog box: Calculate activity duration using statistics = selected
- Assume company-wide estimation for the activity to be 45 minutes

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Since the resource does not have previous records for this kind of activity the initial (default) ratio is used for calculations. The estimated duration for the resource is: 45 * 120% = 54 minutes

Example 3: Application uses mobile worker's learned duration with limits. Resource has performed activities of this type in the past and, hence, has a personal activity key ratio.

- Statistics page:
    - ○ Lower limit for personal ratio to calculate duration = 50%
    - ○ Upper limit for personal ratio to calculate duration = 200%

- Resource Type dialog box: Personalize the estimation of activity duration = selected
- Activity Type dialog box: Calculate activity duration using statistics = selected
- Assume personal profile to be 40% and company-wide estimation for the activity to be 50 minutes.

Since the personal activity key ratio is less than the lower limit of 50%, the application uses the lower limit value of 50% for calculations instead of 40%. The estimated duration for the resource is 50 * 50% = 25 minutes.

Example 4: Application uses company duration without using personal profile

- Resource Type dialog box: Personalize the estimation of activity duration = not selected
- Activity Type dialog box: Calculate activity duration using statistics = selected
- Assume company-wide estimation for the activity to be 45 minutes

Since the personal profile is not configured, the estimated duration for the resource is same as the company wide estimation = 45 minutes.

Example 5: Application uses overridden value at mobile worker level instead of learned statistics

- Resource Type dialog box: Personalize the estimation of activity duration = not selected
- Activity Type dialog box: Calculate activity duration using statistics = selected
- Assume personal profile to be 80% and company-wide estimation for the activity to be 50 minutes
- Assume that the duration for the resource for the Activity key has been overridden by a value of 30 minutes

The overridden value takes precedence over the learned duration at the resource level. The estimated duration is 30 minutes and not 80% of 50 = 40 minutes.

Example 6: Reported durations outside the acceptable range are not used as input for Activity duration estimation

- Statistics page: Minimum relevant duration time in minutes = 5 mins
- Statistics page: Maximum relevant duration time in minutes = 1440 mins
- Assume that the estimated duration for the activity was 20 minutes and a resource starts and completes the activity in 4 minutes. That is, the resource reports a duration of 4 minutes for a completed activity.

Since the reported duration lies outside the acceptable range of 5 to 1440 minutes, the duration of 4 minutes is not considered to enhance the estimated duration of the activity key and the estimated duration remains unchanged at 20 minutes (assuming there weren't any other reported activity that could have changed the estimated duration).

How do I add a map layer?

Map layers are layers that are added on top of a map to identify places of interest that are specific to your business. For example, you might add a layer that shows only the airports in a specific area. You can add layers through an external

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source or internally through APIs. You can use APIs or you can upload a file from your local device to upload shape files for each layer. You can also add a layer for your work zone, which is visible to all users.

Before you start

If you're adding a map layer internally, you must upload the shape file through the metadata API.

> **Note:** Work Zone layers aren't displayed on the Map view.

Here's what to do

1. Click **Configuration**.
2. In the **General** section, click **Business Rules**.
3. In the **Maps and Geocoding** section, click **Add new**.

   The **Add Map Layer** dialog box appears.
4. Select whether you want to create a Work Zone layer or a map layer.

   You can add only one Work Zone layer; after you add it, the **Create work zone layer** option is grayed out. You can add a maximum of 10 map layers per environment.
5. Enter the name of the layer in the preferred language.

   The languages displayed here are the languages that you've selected for **Company language** in the **Display** page. This option isn't available for the **Create work zone layer** option. The application adds the name 'Work Zone Layer' automatically and translates into the required languages.
6. Add a label for the custom layer in the **Label** field.

   If you've added a custom layer through the metadata API, the name is suggested as you type it. If you haven't added any layer through API and you don't add an external source, you can't save the layer. This option isn't available for the **Create work zone layer** option. The application adds the name 'wz_layer' automatically and translates into the required languages.
7. Select the status of the layer in the **Status** drop-down list.

   A layer with the Active status is available and a layer with the Inactive status isn't available. This option isn't available for the **Create work zone layer** option.
8. Select the location from which you want to use the shape for the layer:
   - **Upload local file:** Select this option to upload a shape file from your local device. You must select a zip file that doesn't exceed 150 MB. If the file isn't a valid zip file, or if the zip file exceeds 150 MB, an error message is shown. You must correct the errors and upload again. Oracle Fusion Field Service stores this file until you delete the layer with the associated shape file.

- ○ **Upload file using URL**: Select this option to upload a shape file that's available on a different computer. These fields are displayed:
  - URL to shape file: Enter the URL to the location where the shape file is available. Use only a secure protocol, that's, a HTTPS URL.
  - Username and Password: Enter the username and password to access the shape file location.
  - SRID: Enter the shape identifier that was generated in the application in which the shape was created.
- ○ **Upload shapefile later via API:** Select this option to upload a shape file through API.
- ○ **Use already uploaded shape:** Select this option to use a shape that's already uploaded. The list of available shapes is displayed and these details are displayed:
  - Layer label: The label of the layer.
  - Last updated: The date on which the shape file was last updated.
  - Source URL: The URL in which the shape file is uploaded.
- ○ **Use external data source:** Select this option to use an external data source to display custom layers. This functionality requires Oracle MapViewer where the layers are created and stored. These fields are displayed:
  - MapViewer URL: Path to MapViewer from where the layer data is obtained.
  - Data source: The source of the map layer data used by MapViewer.
  - Theme: Layer name in MapViewer.

  All the fields are mandatory. If a field is left empty, the window is rejected with the error message: {field_name} is empty.

9. Click **OK** and then click **Save** on **Business Rules**.

   By default, users of all user types have access to the new custom layer. If the status is Active, the application verifies if:

   - ○ Data for this layer is present in the database.

   - ○ Data is consistent and not corrupted.

   - ○ There are no errors when displaying the layer on map.

   If these conditions are satisfied, the layer is saved and displayed on the team map, activity list, and activity details map pages. You can add a maximum of 10 map layers per environment.

What to do next

Review this information before uploading shape files:

Requirements for the shape file:

- The shape file must be in a zip archive.

- Column names in the shape file must contain only alphanumeric characters and underscore ('_').

- Column names must begin with an alphabet.

Shape file restrictions:

- When uploading a shape file using HTTPS, these restrictions apply: WebLogic's default certificate validator doesn't accept certificates with wildcards (including Google Drive certificate).

- SRID value should be a valid SRID.

- A maximum of 2 GB is available for extracted shape file data that's uploaded and hosted in Oracle Fusion Field Service.

- If a shape file contains a column with the name "SHAPE_AREA" (case insensitive), it's renamed as "SHAPE_AREA_".

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- If a column name is same as an Oracle Database reserved word, then an underscore ("_") is prefixed to the column name. The full list of Oracle Database reserved words is available at: *Oracle Database Reserved Words*.

Recommendations:

- It's recommended that you use shape files with compressed data size less then 50 MB. The shape file data is extracted and stored in the browser memory (when showing to end user), so the size of the file might influence the browser performance, including the inability to show the map layer.
- It isn'trecommended to use polylines for work zones.

What is a Work Skill?

A work skill is the job-specific skill or competency that's necessary to perform an activity. Work skills are the defining criteria to match activities with the resources. So, when you create a work skill, you assign it to an activity type and set the level of expertise of the skill required for the activity.

Similarly, when you create a resource, you can assign a work skill to the resource and define the level of expertise the resource has in the skill. For example, if you create Install as a work skill, you can have the required level of expertise as 90. Only the resources that have the expertise level of 90 percent or more are assigned to the activity. Further, you assign a work skill to a work skill condition and resource. You can also add work skills to Work Skill Groups.

How do I create a capacity category?

A Capacity Category is a predefined set of work skills and/or work skill groups and time slots visible to a user who is booking activities for customers. You can create a capacity category to add work skills, work skill groups, and time slots.

1. Click **Configuration** > **Capacity Categories**.

   The **Capacity categories** page appears.

2. Click **Add New**.

   The **Add Capacity Category** dialog box appears.

3. Enter the appropriate information in the following fields:

   The following table describes the fields available on the **Add Capacity Category** dialog box.

Option	Description
Name	Enter the name of the capacity category. The name is displayed in the list and in the quota matrix. If the application is configured for multiple languages, input boxes will appear for each language.
Label	Specify a label. It is used in the context of APIs and it must conform to a standard naming convention.
Active	Select the **Active** check box to mark this capacity category as active. Only active capacity categories are used in the quota matrix.

4. Click **Save**.

Once you create the capacity category, you must add work skills, work skill groups and time slots to the category.

How do I add a Resource Type for the Field Resource role?

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

A Field Resource is a resource that performs work, has work skills and work zones associated, and has a related user (actual person performing work or group of people). A Field Resource requires a user, can work, is shown with a Tech icon, and does not include the Organization unit option.

Assume that you want to assign activities to a mobile worker. You have to first create the resource type, Mobile Worker and then select Field Resource from the **Role** drop-down list.

> **Note:** Some features are available only during the initial configuration. This will vary based on the options selected during the configuration. Features that aren't available for editing after the initial configuration will be greyed out.

To add a resource type for the Field Resource role:

1. Click **Company Name** > **Configuration**.
2. Click **Resource Types** in the **Resources, Activities, Inventories** section. The **Resource Types** page appears
3. Click **Add new**. The **Add Resource Type** page appears.
4. Select **Field Resource** from the **Role** drop-down list.
5. Complete these fields:

Field	Description
Name (mandatory)	Enter a name for the resource type. All supported languages are listed.
Label (mandatory)	A unique identifier for the resource type that is mapped to the REST API.
Associated Resource Role	> **Note:** This information only applies to Oracle Fusion Field Service environments. You can verify whether you've Oracle Fusion Field Service or Oracle Field Service, by signing in and checking on the **About** page. Drop-down list displaying predefined resource roles and custom roles created through the Manage Resource Roles task in Setup and Maintenance, e.g., "Field Service Mobile Worker" or "Field Service Manager".
Active	By default, the Active check box is selected and the resource type is activated.
Load threshold section	
Units of measurement	Specifies the unit (such as activities, hours, percentage) used for evaluating the resource's workload.

Field	Description
Full Load	The threshold value that, when reached or exceeded by the quantity of activities assigned to the resource's route, marks the resource as fully loaded (no more assignments can be made).
Empty	Used to indicate when the resource's route is at minimum workload, possibly allowing prioritization for new task assignments.
Statistic Parameters section	
Personalize the estimation of activity duration check box	When selected, the resource's personal profile is used for duration calculations. Else, uses only company estimates. For more information, see *How is activity duration calculated?*
Use durations reported to enhance company-wide estimations check box	When selected, company-wide estimations are modified based on the data reported by the resource. If not selected, the company-wide estimations are not changed. This applies to both activity durations and travel estimations. don't select this check box, if you don't want the durations reported by the resource to affect company level estimations.
Do not consider reported data for the first ____ working days, for statistic estimations	Data reported by the resource does not affect the company-wide estimations for the initial number of days specified in this field. The date is considered from the time the user accesses the system. Default value is 5 days. For example, if you enter 15 days, then the data reported by the resource for activity and travel durations are ignored for the first 15 days and will not be considered while calculating the company-wide estimates. This field is enabled only if the **Use data reported to enhance company-wide estimations** field is selected.

6. Select the required features from this list:

- **Resource is a Contingent Worker::** Select the Resource is a contingent worker check box if the resource is not directly associated with the organization.

  > **Note:** Refer to *Add a Resource Type for Contingent Worker* for more information on Contingent Workers. If you select this check box, all other features from this list and Static Parameters fields are not available.

- **Resource can participate in a team**: Select the Resource can participate in a team check box to determine whether the resource type is an assistant for teamwork activities. If deselected, then you cannot add the resource type, mobile worker as an assistant to a team.
- **Resource can be a teamholder**: Select the Resource can be a teamholder check box to determine whether the resource type is a primary team holder of an activity.

  > **Note:** An activity that requires a team is always assigned to the team holder whereas the assisting teamwork activities are assigned to the assistants for the duration of the teamwork.

- **Share inventory in teamwork**: Determines whether the resource type shares inventory with other team members after an activity is started. For example, if the team holder's inventory has 5 items and the

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assistant's inventory has 3 items, then when the activity is started, there are 8 items available for use at the job site.

- ○ **Share geolocation in teamwork**: Select the check box to define whether a resource (team holder or assistant) shares the geolocation in a teamwork assignment. Although, the application uses the GPS device of each resource to predict the location of the resource, these situations can occur:
    - Application is unable to obtain coordinates since the device of a resource has stopped to work.
    - Application is unable to find the location of the resource due to some reasons.

  In the above situations, the application uses an algorithm to predict the location of the resource using the coordinates of other resources in the team. Therefore, you can view the location of each team resource in the map view.

- ○ **Share work skills in teamwork (team-member only)**: Enables the resource to share work skills with the team holder. Sharing is defined on the work skill level according to the "Sharing of the skill in the team" parameter configured in the **Add work skill** dialog box.

- ○ **Used for Quota management**: Selecting **Used for Quota management** ensures that resources of this type contribute to and are tracked by the system's quota and capacity management functions.

  When enabled:

    - The resource type is considered during the calculation of available quotas for scheduling future activities.
    - Activities assigned to resources of this type will count against the overall quota used for planning and capacity.

  When disabled:

    - Resources of this type are excluded from quota management calculations.
    - Scheduling and capacity planning will not take these resources into account.

    For example, assume that each resource (Mobile Worker 1, Mobile Worker 2, and Mobile Worker 3 configured as a Field Resource) has a capacity of 480 minutes per day and the **Use as Capacity Area** check box is selected for each resource. Therefore, the Max Available field in the bucket has the overall workflow capacity of 1440 minutes. Now, if a new resource type, Mobile Worker 4 is added

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and if the **Use as Capacity Area** check box is selected, then the overall workflow capacity of the bucket changes to 1920 minutes.

> **Note:** If the **Used for Quota management** option is selected during the creation of a field resource, you cannot remove (deselect) this option when editing the resource later. However, if this option was not selected during creation, you can enable it when editing the field resource.

- o **Routing can assign activities**: Select the check box if you want routing to assign activities to a resource.

  If selected, these options enable you to specify the cost of the resource's time that helps you to differentiate between resources (for example, Full time resources versus Contractors):

  - **Working hours cost**: Actual working hours of the resource during the day based on activity durations. Select an option (Low, Normal, High, Highest). The routing algorithm factors working time cost differences between resource types for assignments.
  - **Overtime cost**: Overtime refers to the minutes worked beyond the end of the resource's working hours for the day. Specify cost increases either as X minutes after the end of the shift or the time beyond the X minutes threshold.
  - **Travel Time cost**: Refers to the estimated time and the cost required for travelling between activities.

- o **Working time** : Define the travel allowance for resources using these options:

  - Start travel: Enables routing to consider travel time from the beginning of the resource's working time for the day and to the resource's first activity. The application estimates the actual travel time to the location of the first activity, when a resource's Start location is defined. Note that when a route includes activities that require travel and activities that don't need travel, the travel between activities is split into two (or more) pieces by inserting non-travel activities in between. If there is any idle time before an activity, it is considered as travel time for the next activity. Select one of these options:
    - o Travel time to the first activity is not included from the Working Time Start – when selected, travel time to the first activity will be calculated before the Working Time Start value. If an activity has a Service Window of 8:00 am-10:00 am, the activity will have an ETA of 8:00 am and the resource will have to leave their start location to arrive by 8:00 am.
    - o Travel time to the first activity is included from the Working Time Start – when selected, travel time will be calculated to the first activity. If a resource has 30 minutes of travel and the activity has a service window of 8:00 am-10:00 am the activity's ETA will be 08:30 am.
    - o Resource is allotted up to <number> minutes of travel time prior to the Working Time Start – when selected, a portion of the travel time can occur prior to the start of the shift. If the value is set to 30 minutes and the resource need 45 minutes of travel the first 30 minutes will occur prior to the start of the shift and the ETA activity's ETA will be 08:15 am.
  - Final travel: Enables routing to consider travel time to a known end location. Select one of these options:
    - o Travel time from the last activity to the Resources End Location is not included from the Working Time End – when selected, travel time to the final location will be calculated after the Working Time End value. If a resource's shift ends at 6:00 pm with no overtime allowed, routing can assign activities that can end at 6:00 pm.
    - o Travel time from the last activity to the Resources End Location is included from the Working Time End – when selected, travel time to the final location will be calculated. If a resource's shift ends at 6:00 pm with no overtime allowed, routing cannot assign activities that can end at 6:00 pm.
    - o Resource is allotted up to <number> minutes of travel time after the Working Time End – when selected, a portion of the travel time will occur after the shift ends. Suppose that the resource's shift ends at 6:00 pm with no overtime allowed. When the value is set to 30 minutes and the

resource needs 45 minutes of travel to the end location, the latest an activity can end would be 5:45pm.

- **Enable 'Not activated in time' alert and trigger**: Represents an alert that the resource's route is not activated. For example, consider the resources, Mobile Worker 1 and Mobile Worker 2 configured as field resources. If the Enable 'Not activated in time' alert and trigger check box is selected for the resource, Mobile Worker 1 and not selected for Mobile Worker 2, then the notification messages are created only for Mobile Worker 1.

7. Click **Add**.

> **Note:** These features are available when a role, **Vehicle** or **Tool** is assigned to a resource type:
> - Share inventory in teamwork
> - Share geolocation in teamwork
> - Share work skills in teamwork (team-member only)
> - Working time includes travel to first activity
> - Working time includes travel from last activity
> - Enable 'Not activated in time' alert and trigger

Results:

The resource type, mobile worker displays on the **Resource Types** page. If you click **Modify** and change a feature setting of a resource type, the application automatically applies the changes to the resource type.

Related Topics
- Add a Resource Type for Contingent Worker

How do I create and format a string property?

The string property includes free text boxes, URLs, phone numbers, and email addresses. Assume that resources must enter remarks for an activity after the activity is closed. The Activity Details form must contain a text box, so the resource can enter the remarks. The text box that you add here, is a string property.

1. Click **Configuration**.
2. Click **Properties** in the **Resources, Activities, Inventories** section.
3. Click **Add New**.
4. Select **String** from the **Property Type** drop-down list.

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5. Complete these fields:

- o **Property name** (required): Enter a name that you want to display to the user in English and in all the languages that are active in the application.
- o **Property label** (required): Enter a Unique database identifier for the Oracle Fusion Field Service API.
- o **Property hint** (optional): Enter a hint that you want to display when a user hovers over the field name. For example, Enter comments if any. Enter the text in English and in all the languages that are active in the application.
- o **Regular expression**: Enter an expression to validate the values or format the values in a certain way.
- o **Entity** (required): Select **Activity** as the property is associated with the Activity Details form.
- o **Lines Count** (required): Enter the number of lines that you want the property to display in the Activity Details form. For example, enter 3 to display a maximum of three lines.
- o **GUI** (optional): Select one of these options to define how the property displays to users:

  - - **Text Element**: Displays as a free text field. For our example, select this option.
  - - **URL**: Displays as a clickable URL.
  - - **Phone**: Displays as a clickable phone number.
  - - **Email**: Displays as a clickable email address.
  - - **Geolocation Element**: Displays a button to show the location on a map.
- o **Regular expression** (optional): Enter an expression to validate input or to force the data to display in a certain way.

  For example, to display $23,540, then use this regular expression: /^/$?([1-9]{1}[0-9]{0,2}(/,[0-9]{3})*(/.[0-9]{0,2})?|[1-9]{1}[0-9]{0,}(/.[0-9]{0,2})?|0(/.[0-9]{0,2})?|(/.[0-9]{1,2})?)$/

  Other examples:
  - - Ethernet ARP address: /^([0-9a-fA-F]{2}:){5}[0-9a-fA-F]{2}$/
  - - Phone number: +1(555)5555555: "/^ *\\+? *[0-9]+[-0-9()]*$/"
  - - 16-bit integer: (0-65535): /(^\d{0,4}$)|(^6553[0-5]$)|(^655[0-2][0-9]$)|(^65[0-4]\d{2}$)|(^6[0-4]\d{3}$)|(^[0-5]\d{4}$)/
  - - 1 digit: (0-9): /^\d{1}$/
  - - 2 digits: (01-99): /^\d{2}$/
  - - Integer: (0-99): /^\d{1,2}$/
  - - Integer: (0-999): /^\d{1,3}$/
  - - Any 6 symbols(you can change 6 to any number): /^.{6}$/u
  - - Currency (USD with 2 decimal places): /^/$?([1-9]{1}[0-9]{0,2}(/,[0-9]{3})*(/.[0-9]{0,2})?|[1-9]{1}[0-9]{0,}(/.[0-9]{0,2})?|0(/.[0-9]{0,2})?|(/.[0-9]{1,2})?)$/
  - - Date formatted as DD-MM-YYYY: /^((0[1-9])|([1-2][0-9])|30|31)-((0[1-9])|1[0-2])-2[0-9]{3}$/
- o **Clone property on Reopen/Prework** (optional): Enables you to duplicate the property while reopening the activity or applying prework for a new activity.
- o **Formatting** (optional): If selected, displays these options:

  - - Regular expression
  - - XSL transformation (converts an XML file into a table format viewable in HTML that is read-only).

    Note: Formatted properties aren't available for presentation on the Inventory Grid context layout structure.

  Assume that you want to display this data from a client system within Oracle Fusion Field Service:

Group	Price
One Time Charges and Credits	$ 100.00
Programming Change	$ 5.00
Programming Change	$ 5.00
Programming Change	$ 5.00
Programming Change	$ 5.00
UNKNOWN	$ 0.00
Monthly Charges	$ 129.98
America's Top 250	$ 69.99
HD/SD (2TV) Receiver	$ 14.00
HD/SD (2TV) Receiver	$ 14.00
DVR Service	$ 6.00
Protection Plan	$ 6.00
Israeli: The Israeli Network	$ 19.99
Monthly Credits	$ -10.00
Cr: Agent $ 10x24 Mo	$ -10.00
Monthly Charges and Credits	$ 119.98

Use this regular expression for the above data: /(/s+)?(.+/w)/s+(/$)/s+(.*)/n?/im = [item group="$1"] [name]$2[/name][price]$4[/price][currency]$3[/currency][/item]

This XML file converts the data given earlier into a table format:

```
[xsl:stylesheet version="1.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform"]
[xsl:template match="/"]

 [style]
 .property_table
 {
 font-size:12px;
 font-family: Arial;
 border-collapse: collapse;
 }
 .property_table .property_name
 {
 padding-left:15px;
 }
 .property_table td
 {
 border: 1px solid grey;
 padding: 4px;
 }
```

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```
.property_table .property_price
{
text-aligh:right;
}
.property_group
{
background-color:#ccc;
font-weight: bold;
}
.property_group .property_name
{
padding-left:5px;
font-weight: bold;
}
[/style]
[table class="property_table"]
[xsl:for-each select="root/item"]
[xsl:choose]
[xsl:when test="@group=' '"]
[tr class="property_group"]
[td class="property_name"] [xsl:value-of select="name"/] [/td]
[td class="property_price"]
[span] [xsl:value-of select="currency"/] [/span]
[xsl:value-of select="price"/]
[/td]
[/tr]
[/xsl:when]
[xsl:otherwise]
[tr]
[td class="property_name"] [xsl:value-of select="name"/] [/td]
[td class="property_price"]
[span] [xsl:value-of select="currency"/] [/span]
[xsl:value-of select="price"/]
[/td]
[/tr]
[/xsl:otherwise]
[/xsl:choose]
[/xsl:for-each]
[/table]
[/xsl:template]
```

```
[/xsl:stylesheet]
```

Using XSL transformation, the above XML file is displayed in HTML as shown in this screenshot:

One Time Charges & Credits	$100.00
Programming Change	$5.00
Programming Change	$5.00
Programming Change	$5.00
Programming Change	$5.00
UNKNOWN	$0.00
Monthly Charges	**$129.98**
America's Top 250	$69.99
HD/SD (2TV) Receiver	$14.00
HD/SD (2TV) Receiver	$14.00
DVR Service	$6.00
Protection Plan	$6.00
Israeli: The Israeli Network	$19.99
Monthly Credits	**$-10.00**
Cr: Agent $10x24 Mo	$-10.00
Monthly Charges & Credits	**$119.98**
Amount Due Now	**$0.00**

6. Click **Add**.

   A system generated ID is assigned to the property. The maximum size of a string property you can create is 64 KB, or the maximum length can be 65,535 characters. You can perform these actions:

   ○ Click **Export** to export the properties to an XML file.

   ○ Click **Import**, **Browse**, and select the XML file that you want to import.

What are the supported MIME types?

Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

The full list of File Property MIME-types and the matching file extensions is provided here. Be aware that the maximum size of the file you can upload is 5 MB.

MIME Type	Supproted File Extensions
animation/narrative	'nml'
application/mspowerpoint	'pot', 'pps', 'ppt', 'ppz'
application/msword	'doc', 'dot'

MIME Type	Supproted File Extensions
application/oda	'oda'
application/onenote	'one', 'onetoc2', 'onetmp', 'onepkg'
application/pdf	'pdf'
application/rtf	'rtf'
application/vnd.ms-excel	'xls', 'xlt', 'xla'
application/vnd.ms-excel.addin.macroEnabled.12	'xlam'
application/vnd.ms-excel.sheet.binary.macroEnabled.12	'xlsb'
application/vnd.ms-excel.sheet.macroEnabled.12	'xlsm'
application/vnd.ms-excel.template.macroEnabled.12	'xltm'
application/vnd.ms-officetheme	'thmx'
application/vnd.ms-powerpoint.addin.macroEnabled.12	'ppam'
application/vnd.ms-powerpoint.presentation.macroEnabled.12	'pptm'
application/vnd.ms-powerpoint.slide.macroEnabled.12	'sldm'
application/vnd.ms-powerpoint.slideshow.macroEnabled.12	'ppsm'
application/vnd.ms-powerpoint.template.macroEnabled.12	'potm'
application/vnd.ms-word.document.macroEnabled.12	'docm'
application/vnd.ms-word.template.macroEnabled.12	'dotm'
application/vnd.openxmlformats-officedocument.presentationml.presentatic	'pptx'
application/vnd.openxmlformats-officedocument.presentationml.slide '	'sldx'
application/vnd.openxmlformats-officedocument.presentationml.slideshow	'ppsx'

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MIME Type	Supproted File Extensions
application/vnd.openxmlformats-officedocument.presentationml.template	'potx'
application/vnd.openxmlformats-officedocument.spreadsheetml.sheet	'xlsx'
application/vnd.openxmlformats-officedocument.spreadsheetml.template	'xltx'
application/vnd.openxmlformats-officedocument.wordprocessingml.docume	'docx'
application/vnd.openxmlformats-officedocument.wordprocessingml.template	'dotx'
application/x-excel	'xls'
application/x-gtar	'gtar'
application/x-gzip	'gz'
application/x-pointplus	'css'
application/x-shockwave-flash	'swf'
application/x-sprite	'spr', 'sprite'
application/x-tar	'tar', 'tgz'
application/zip	'zip'
audio/mpeg	'mp2', 'mp3', 'mpga'
audio/x-wav	'wav'
chemical/x-pdb	'pdb'
image/gif	'gif'
image/jpeg	'jpe', 'jpeg', 'jpg'
image/png	'png'
image/tiff	'tif', 'tiff'
image/x-ico	'ico'
text/html	'htm', 'html'
text/plain	'txt'
text/richtext	'rtx'

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MIME Type	Supproted File Extensions
text/tab-separated-values	'tsv'
text/x-speech	'talk'
text/x-vcard	'vcf'
video/mp4	'mp4'
video/mpeg	'mpe', 'mpeg', 'mpg'
video/quicktime	'mov', 'qt'
video/x-msvideo	'avi'

What is Activity Booking?

When a mobile worker performs an activity at the customer's premises, the customer may enquire about the possibility to perform another job for them on a different day. The mobile worker must be able to collect the information about the new job, create an activity, and schedule it right away. To book an activity, the mobile worker must also have the ability to check the available capacity for that specific date and time. This situation is handled by the **Activity Booking** option. You must configure the activity booking context properly to get the most accurate and precise capacity calculation. The **Book new activity** option is configured in the **Activity** section of the **Screens** page.

> **Note:** The activity booking functionality, Quota management page, and the Capacity Area configuration functionality are available only with the "Oracle Fusion Field Service Enterprise Cloud Service" subscription.

Mobile workers can book activities in three ways:

- Direct assignment booking
- Quota based booking:
  - Time slot based
  - Booking interval based (or availability based)

Direct Assignment Booking

Activity booking uses the activity information and finds all the Capacity Areas that match the activity requirements. If a Capacity Area is configured for booking using direct assignment, the activity is created (or reassigned) in a mobile worker's route, provided the mobile worker meets the activity requirements and has enough time to complete it. When there are many available resources that can work on the activity for a particular date and time slot, Oracle Fusion Field Service assigns the activity to one of them. The application typically finds a mobile worker that has a smaller set of working skills than a mobile worker with a wider skillset. This way, resource selection is optimized, so that the following activities that require booking have more available options. With this feature, mobile workers can control the booking strategy that is used on a Capacity Area level. Mobile Workers can also configure different capacity areas to use different booking strategies.

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Availability-Based Booking

Mobile Worker can book activities for Capacity Areas with booking interval based quota configuration. They can use the booking interval based quota when the time slots overlap or, have a significant variation in the activity duration. When mobile workers choose the booking interval based quota, they must select the booking intervals on the Quota Configuration page. If they do not select the booking intervals, the application uses the default Capacity intervals that are configured on the **Business Rules** page.

When you configure a Capacity Area for booking using Quota (time slot based or availability based), then the activity is created (or reassigned) on the bucket that is associated with the Capacity Area. If there are multiple Capacity Areas, the mobile worker must select a Capacity Area, select the day and time slot on which they want to perform the activity, and book it.

You can obtain the booking options from the application in two ways:

- Through the Activity Booking page.
- Through the new API function showBookingGrid. This API simplifies the process of integrating the Booking functionality with external applications.

Regardless of the method, the application uses the activity information you have entered and provides you the list of options where it may be booked.

As soon as you book an activity, Oracle Fusion Field Service subtracts the capacity required for its performance from the available capacity and adds it to the used capacity. It compares the used capacity to the quota values to make sure that orders for new activities are accepted only when the capacity is still available. As having capacity information up-to-date is crucial for the functionality, Activity Booking is available only in the online mode.

If you book an activity close to the end of a time-slot, it has a higher probability of late start. To eliminate risky activity bookings, the application does not provide a booking option for an activity for which the estimated start time appears in the last 20% of the time slot.

How do I modify a glossary entry?

Oracle Fusion Field Service glossary items have a unique identifier referred to as placeholder IDs. The Placeholder ID that displays next to an UI element lets you identify the correct glossary item that you want to edit in the **Glossary** page. For example, you can use *Show* instead of *View*.

You can also modify the description of an UI element using an in-context editor, so that you need not access the **Glossary** page. This example explains how to modify the description of a UI element, View, using placeholders and in-context editor.

To modify a glossary entry:

1. Select your user name (for example, Admin) at the top right corner.
2. To modify the description of each UI element using placeholders:
   a. Click **Preferences**.
   b. Select the **Show Placeholder ID** check box.
   c. Click **OK** and refresh the page.

      Each UI element that corresponds to an Oracle Fusion Field Service glossary item in the application displays an ID next to them.
   d. Select **Dispatch**,**Activities**.

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    e. Make a note of the placeholder ID (for example, 8047) for the UI element, *View*.

    f. Click **Configuration**.

    g. Click **Displays**, **Glossary**.

    h. Enter the **Placeholder ID** in the search field and click the **Search** icon.

        The glossary entry displays.

    i. Select **English** as the language and enter the term, **Show** in the field.

    j. Click **Save**.

        The glossary entry is modified and you can view the original text, *View* when you hover the mouse over the modified term, *Show*.

3. To modify the description of each UI element using the in-context editor:

    a. Repeat steps 1 to 2.c from the above procedure.

    b. Select your user name (for example, Admin) and select **Glossary Editor is Off**.

        The in-context glossary editor is turned on.

    c. Select **Dispatch**, **Activities**.

    d. Select **View**.

        An **on-screen glossary** editor displays.

    e. Enter the term, *View* in the **English** field.

    f. Click **Save**.

    g. Deselect **Glossary Editor is Off** and the **Show Placeholder ID** check box from the **Preferences** page.

    h. Refresh the page.

        The modified description displays.

How do I get notified when negative feedback is submitted?

Before you start

> **Note: Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Configure Where is My Technician*. We recommend that you update your bookmarks accordingly.

The Negative Feedback Notification feature in Oracle Fusion Field Service enables dispatchers or designated helpdesk teams to be automatically alerted when customers submit low ratings (for example, 1–2 stars) using the Where's My Technician (WMT) feedback page. By using Message Scenarios with configured blocking conditions, this process ensures that negative feedback is addressed promptly, improving service recovery and customer satisfaction.

You must select the **Enable Feedback** check box on the **Feedback** page in the Where's My Technician theme for this procedure to work.

Advantages:

- Rapid Response: Immediate awareness of dissatisfied customers enables faster resolution.

- Improved Service Quality: Continuous monitoring of customer feedback allows for quick corrective action.

- Operational Efficiency: Automated alerts reduce manual monitoring and intervention.

- Brand Reputation Protection: Proactive customer engagement helps mitigate potential public complaints.

Use Cases:

- Notifying a helpdesk group when a customer leaves a low rating after service completion.

- Triggering internal escalation workflows for follow-up calls or corrective actions.

- Assigning different helpdesk groups for different service types or lines of business.

- Initiating customer chat interactions to resolve negative experiences in real time.

Here's how you can enable notifications for negative feedback:

Here's what to do

1. Create a Message Scenario named manage_negative_feedback with the Launch Condition *Activity Completed.*
2. Create these message steps to verify the feedback value in the feedback property:
    a. Create the first verification scenario step.
        i. Click **Add new** in the **Scenario steps** section of the manage_negative_feedback Message Scenario.
        ii. Select Collaboration from the **Delivery Channel** drop-down list and Use static address in the **Recipient** drop-down list. You can also select Email.
        iii. Click **Add new** and select a helpdesk group, which is designated to manage feedback responses.
        iv. Select **Deliver to Helpdesk**.
        v. Select Time of event in the **Sending time** field.
        vi. Choose the period for feedback verification. For this, enter a value in the **Sending delay** field. After this delay, the message step verifies if there is a feedback response for the first time.
        vii. In the Patterns tab, configure the message text that is delivered to helpdesk operators. Specify the properties used for Rating and Comments. Use placeholders to add the details for the activity and mobile worker. Ensure that you prefix custom properties with pr_. For example, Rating: {pr_wmt_rating}, Comment: {pr_wmt_comments}).
        viii. Configure the star rating level that triggers a message to the helpdesk operator. For this, add these Blocking Conditions:
            o First condition: Select Rating property, set the condition as Empty and Status as Failed. If there is no feedback value, the message is not sent to an operator.

                > **Note:** Select Rating property, set the condition as **is not empty**. This will block the message if the feedback has already been received.

            o Second condition: Select Rating property, set the condition as >2 (greater than 2) and Status as Failed.
    b. Add the next verification step, in case the feedback was not provided during the configured period of time.
    c. Add more steps the same way to check for feedback in 5,10, and 30 minutes.

Results:

Other Recommendations:

- Define who should manage the negative feedback responses. After defining a dispatcher or a group of dispatchers who will receive notifications of negative feedback, either create a new helpdesk group or use an existing one.

- Configure different helpdesk groups for different types of services or lines of business.

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- Accept the chat to resolve the feedback issue. As soon as the Where's My Technician Feedback with 1 or 2 stars is submitted, a notification appears for the helpdesk group. All online helpdesk users are notified and can see it. When an operator clicks **Take chat** to deal with the issue, the notification is no longer available to the other operators.

How do I create a custom filter?

Filters have two primary uses—first, filters narrow down lists of activities or resources within the workspace area, based on defined fields and values. These filters are used within the Time, List, and Map views, providing an ad hoc reporting capability. Second, filters within routing plans predefine the information that determines how routing distributes activities across available resources. These filters are commonly set up to differentiate the cost, or value of assigning certain jobs to certain resources, as well as determining the priority of certain types of activities.

The **Filters** visibility profile permission controls the access to the **Filters** window. You must set this permission for each user type that manages Filters. If you don't configure this permission or don't define the visibility for a user type, users of this user type can't view the filters that you create. If you select ReadOnly, Filters is placed into a view only mode. If you select Read/Write for this setting, the user can manage Filters. To create a filter:

1. Click **Configuration**.
2. In the **Displays** section, click **Filters**.

   The existing list of filters appears. You can see a maximum of 500 filters from the currently available filters in your environment. If you've more than 500, use a combination of the options such as Find, Visible on screens, and Applicable to entity available on the **View** menu. Or, sort the list by ascending or descending values of the required column.
3. Click **Add New**.

   The Add filter dialog box appears.
4. Complete these fields:

Field	Description
Filter	The filter name that the users see. Enter the name in English and in all the languages that are active in the application.
Applicable for	The entity type (activity or resource) that the filter pertains to. The entity determines the table fields that can be selected when applying the filter conditions.
List/Time/Map/Daily	The views within which the filter is available.
Routing	Whether the filter is used within routing plans.
Restriction of Visible Activities	Whether you want to restrict filter activities from appearing if resource routes haven't been activated or a working day hasn't yet begun. This configuration is related to the User Type. Once the filter is configured, apply the filter as a visibility restriction filter for user type.
User Types	The user types that the filter is available for. This field is displayed if you select the **List/Time/Map/Daily** checkbox. Use the arrow buttons to move the user types between the **Available** and **Selected** columns.

5. Click **Add**.

   The filter is saved.

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Oracle Fusion Field Service
Oracle Fusion Field Service Questions and Answers

Chapter 1
Field Service: Questions and Answers

What to do next

You must add conditions for the filter. If no conditions are added, the filter doesn't work.

How do I add a condition to a custom filter?

Filter conditions help you further narrow down the activity you want to search for. For example, you can have a condition to select activities based on work zones.

1. Click **Configuration** > **Filters**.

   The **Filters** page is displayed.

2. Locate the filter you want to add a condition to.
3. Click **Conditions** in the **Actions** column.
4. Click **Add New** at the top of the page.

   The **Add filter condition** dialog box appears.

5. Complete these fields:

Field name	Action
Field	Choose one or more activity or resource-based criteria on which to base the filter.
Dynamic	Select the box if you want the user to type a value for the field that the condition is for. **Note:** If you create a dynamic filter based on the Activity Work Skills [work_skill] field and use multiple values in the search field, the values are evaluated using the AND condition. This means, only activities with ALL the specified work skill conditions are searched for.
Conditions	Select one or more options to represent how the field selected above relates to the **Value** entry.
Value	These are the options that can be associated with the **Field** chosen for this condition. If multiple values are applicable for this condition to be met, then add them to the **Selected** column. From the list of available values, click to select and then click the >> button. The selected item moves to the **Selected** column. These rules apply to enumeration fields: ○ Any field and property used in the application can serve as a filter condition. ○ You must populate the value for the field and property other than enumerated fields manually. ○ The condition value supports CSV format, such as 1, 2, 3, 4,, "1,1,1", "2,s", and "(""test"")".

6. Click **Add**.
7. Navigate to the **Work Area** and verify that the filter is listed in the **View** drop-down menu.
8. Test the filter to ensure that it meets your requirements.

How do I add a custom form to a page?

You add a custom form to a context layout page, so that Mobile Workers can open and fill it.

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1. Click **Configuration** > **User Types**.
2. Select the type of user for which you want to add the Form.
3. Click **Screens**.
4. Find and click the page to which you want to add the Form.

   The **Visual Form Editor** page appears.
5. Drag-and-drop the **Button** element to the section from where you want to invoke the Form.
6. Click the button.
7. In the **Standard action screen** field, click the pencil icon and then select Custom Forms.
8. In the **Screens** list, select the name of the Form that you want to open and click **OK**.

   The label of the Form is displayed in the **Custom Forms** field, as shown in this screenshot:
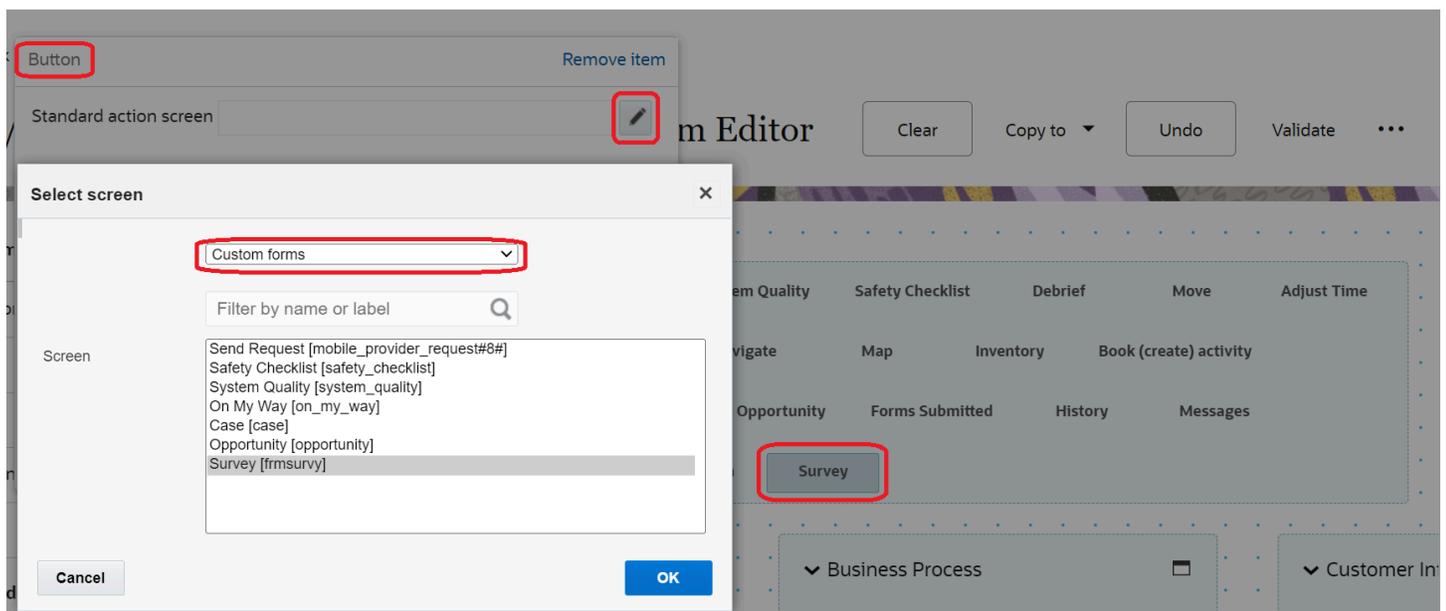
   By default all Forms have a visibility of Read-only.
9. In the **Visibility** section, add the conditions based on which the Form is visible.
10. In the **Parameters** section, add the values that you want the Form to be populated with:
    a. Click **Add new**.

       The **Add parameter** dialog box appears.
    b. Click **Entity** and select Form data.

       The Hidden value, Date, Time, and Date and Time elements added to the Form appear in the **Field name** list.
    c. Select an element in the **Field name** list.
    d. In the **Value** field, add the value that you want to be populated for the element.

       For example, let's say you have a field by name City and you want to populate it with New York. Select City in the **Field name** list and enter New York in the **Value** field. Whenever a Mobile Worker opens the Form, New York is populated for **City**. In another example, let's say you want to populate today's date in a Date field. Select the Date field in the **Field name** list and enter 'today' in the **Value** field. Whenever a Mobile

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Worker opens the Form, today's date is displayed. Similarly, enter 'current time' in the **Value** field to display the current time in the Time field.

e. Click **Save**.

11. In the **Translations** section, add a name for the Form.

This name is displayed on the page from which the Form is invoked.

12. Click **Save** on the **Visual Form Editor** page.

The Form is added to the selected page.

How do I add a login policy for LDAP, SAML, or OpenID Connect authentication method?

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

Login policies determine the authentication method and options for users to access Oracle Fusion Field Service. The application includes a default login policy; you can add login policies for LDAP, SAML, and OpenID Connect authentication methods. You can also add multiple policies with multiple authentication methods.

Before you implement OpenID Connect: Create or register Oracle Fusion Field Service as an application in your identity provider. Get the Configuration URL, Logout URL, Client ID, and Client secret from the identity provider. Further, define an attribute that will be used for the username.

1. Click **Configuration**.
2. In the **Users and Security** section, click **Login Policies**.
3. Click **Add new** or click **Edit** to modify an existing login policy.

The **Add Policy** or **Edit Policy** dialog box appears based on your action.

4. Complete these fields:

Field	Action
General settings	
Label	Enter a unique identifier label. For SAML login policy, enter only alphabets, numbers, and undersrores (_).
Name	Enter a name for this policy. Enter the name in English and in all the languages that are active in the application.
Authenticate Method	Select the type of authentication method used for this login policy.
These fields are displayed for **Internal** authentication method:	
Login settings	

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Field	Action
Max Login Attempts	Enter the number of invalid login attempts after which the user is blocked. When this field is set to 0 (zero), the feature is disabled. However, disabling this feature isn'trecommended for security reasons. Default value is 5.
Login Block Timer (Minutes)	Enter the number of minutes during which the user remains blocked after reaching the maximum number of invalid login attempts. Default value is 5 minutes.
User Inactivity Timeout (Minutes)	Enter the duration of the idle time after which the user is prompted to re-enter the password upon an attempt of any action in the application. Default value is 240 minutes.
Relogin Timeout (Minutes)	Enter the period after which the user is prompted to re-enter the password regardless of whether the user was active or not. Default value is 480 minutes. **Note:** When this field is set to 0 (zero), the feature is disabled.
Max Sessions	Enter the maximum number of simultaneous sessions allowed to the user. Default value is 3.
Allow access only for certain IP addresses	Select whether you want to restrict access to specific IP addresses. By default, a login policy is created without any restrictions to the IP addresses from which the user might log in. Select the checkbox to enable the restriction. When this checkbox selected, the **Allowed IP address list** field appears, where you can enter the IP addresses that can access the application.
Password settings	
Force password change after	Enter the number of days after which the user must change their password to access the application. When this field is set to 0 (zero), the feature is disabled. **Note:** If the customer's LDAP server allows setting the period of forced password change, it's recommended that the period set in the application is shorter than the one set on the LDAP server. This way, the password changes initiated by the application occur earlier than those initiated by the LDAP server which ensures correct and reliable performance.
Min password length	Enter the minimum number of characters in the password. Default is 8.
Password must contain uppercase and lowercase letters	Select whether the password must contain alphabets. This option is selected by default.
Password must contain digits	Select whether the password must contain numbers. This option is selected by default.
Password must contain special symbols	Select whether the password must contain special characters and symbols. This option is selected by default.
Password must not contain personal details	Select whether the password must not contain personal details such as the user's first name or last name. This option is selected by default.
Password must differ from old password	Select whether the password must be different from a previous password. This option is selected by default.
These fields are displayed for the **LDAP** authentication method, along with the fields listed earlier:	
LDAP server URL	Enter the actual host name or IP address of the LDAP server.
LDAP DN pattern	To select the **LDAP server is MS Active Directory** checkbox, enter the part of the UPN (User Principal Name) common among the users. In this case the LDAP DN pattern must always contain the UPN pattern. UPN (User Principal Name) is a string of characters used to represent a resource available in Active Directory. It should be used when communicating with MS Active Directory servers. An example of this field value is %s@test.corp, where %s is a special placeholder to be substituted with the user's login. If the **LDAP server is MS Active Directory** checkbox isn'tselected, this field contains the common path to the LDAP tree for the users, their DN pattern. DN (Distinguished Name) is a string of characters used to represent a resource available in the

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Field	Action
	LDAP directory. An example of this field value is cn=%s,dc=example,dc=com, where %s is a special placeholder to be substituted with the user's login in the application.
LDAP server is MS Active Directory	Select whether the LDAP server is a MS Active Directory.
These fields are displayed for the **SAML** authentication method:	
Specify SAML IdP	Select the way in which you want to select the SAML identity provider. The options are: ○ Upload metadata XML ○ Specify metadata URL ○ Oracle IDCS ○ Manual populate
IdP Metadata XML	This field is displayed if you select **Upload metadata XML** in the **Specify SAML IdP** field. Click **Upload** to upload the XML file that contains the metadata details for the identity provider. If the uploaded file is incomplete, or doesn't contain the details in the proper format, the message, Cannot download metadata from the specified XML: XML parser error is displayed. Contact your Identity Service Provider to get this metadata XML. Ensure that the XML includes or conforms to this information: ○ Metadata XML must be in accordance with SAML 2.0 specifications. ○ The file contains "SAML Issuer" (parameter "entityID" of the node "EntityDescriptor"). ○ The file provides identity provider certificate (nodes "md:EntityDescriptor/md:IDPSSODescriptor/KeyDescriptor/KeyInfo/X509Data/X509Certificate/").
IdP Metadata URL	This field is displayed if you select **Specify metadata URL** in the **Specify SAML IdP** field. Type the URL from which you want to take the SAML metadata details for the identity provider. If the URL is unresolved, the message, Cannot download metadata from the specified URL: no route to host is displayed.
IDCS Metadata XML	This field is displayed if you select **Oracle IDCS** in the **Specify SAML IdP** field. Click **Upload** to upload the XML file that contains the metadata details for Oracle IDCS. Contact your implementation consultant for more details on Oracle IDCS.
OFS Metadata XML	Click **Download** and select the domain that you want to use to redirect the requests from the identity provider to Oracle Fusion Field Service. The metadata file is downloaded to your computer and the address is displayed under **OFS Domain**. You must pair your identity provider with Oracle Fusion Field Service. Use the downloaded XML file to register Oracle Fusion Field Service with your identity provider.
Max sessions	Enter the maximum number of simultaneous sessions allowed to the user.
SAML issuer	Enter the identifier used to identify asserts from the Identity provider (IdP). It can be any string provided by IdP, not only URL. It's used for IdP and Service provider (SP) initiated connections.
SAML identity provider certificate	Enter the IdP public key used to sign requests.
SAML identity provider login URL	Enter the IdP URL to redirect to for login. It's needed only for SP initiated logins.
SAML identity provider logout URL	Enter the IdP URL to redirect to for logout. It's needed only for SP initiated logins.

SAML attribute containing username	Enter the SAML assertion attribute name where IdP must store the user name (login name for Oracle Fusion Field Service). Example:
	`[saml:Attribute Name="uid"`
	` NameFormat="urn:oasis:names:tc:SAML:2.0:attrnameformat:`
	`basic"]`
	`[saml:AttributeValue xsi:type="xs:string"]dispatcher[/saml:AttributeValue]`
	`[/saml:Attribute]`

Field	Action

	If it's empty then Oracle Fusion Field Service gets the user name from the Name Identifier element of Subject statement. Example:
	`[saml:Subject]`
	`[saml:NameID`
	`SPNameQualifier="https://sp.com/sp/module.php/ saml/sp/metadata.php/`
	` default-sp"`
	`Format="urn:oasis:names:tc:SAML:2.0:nameidformat:`
	`persistent"]dispatcher[/saml:NameID]`
	`[/saml:Subject]`

These fields are displayed for the **Open ID Connect** authentication method:	
Max sessions	Enter the maximum number of simultaneous sessions allowed to the user.
Select linkback URL	Click **Select linkback URL** and select the domain that you want to use to redirect the requests from the identity provider to Oracle Fusion Field Service.
Configuration login URL	Enter the Identity Provider URL to start authentication.
Logout URL	Enter the URL to which the user is redirected after logout. It might be the URL for logout from the Identity Provider.
Attribute containing username	Enter the name of the OpenId attribute where the Identity Provider must store the user's name (login name for Oracle Fusion Field Service). Example: email.
Client ID	Enter the value of the field containing data from registered OpenID provider (for example, Client ID).
Client secret	Enter the value of the field containing data from registered OpenID provider (for example, Client Secret).

5. In your OpenID application, configure a link back URL. Use the URL displayed in this dialog box for the option that you've selected.

   Your Identity Provider uses this link to redirect users to Oracle Fusion Field Service upon successful login.

6. Click **Add**.

   A warning appears if any of the security parameters is blank. If not, the Login Policy is saved. The application generates the metadata based on the options you've selected. Use this metadata to link your identity provider with the environment. Note down the environment URL that you must use when setting up an external identity provider.

Sample metadata XML file for SAML identity provider:

```
<?xml version="1.0"?>
<md:EntityDescriptor xmlns:md="urn:oasis:names:tc:SAML:2.0:metadata" xmlns:ds="http://www.w3.org/2000/09/
xmldsig#" entityID="https://idp-saml.ua3.int/simplesaml/saml2/idp/metadata.php">
 <md:IDPSSODescriptor protocolSupportEnumeration="urn:oasis:names:tc:SAML:2.0:protocol">
 <md:KeyDescriptor use="signing">
 <ds:KeyInfo xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
 <ds:X509Data>
 <ds:X509Certificate>MIID7TCCAtWgAwIBAgIJANn3qP91F7M3MA0GCSqGSIb3DQEBCwUAMIGMMQswCQYDVQQGEwJVQTEXMBUGA1UE
 CAwOS2hhcmtpdiBSZWdpb24xEDAOBgNVBAcMB0toYXJrb3YxDzANBgNVBAoMBk9yYWNsZTEYMBYGA1UEAwwPc3RzeWJvdi12bTEudWEzMScw
 JQYJKoZIhvcNAQkBFhhzZXJnaWkudHN5Ym92QG9yYWNsZS5jb20wHhcNMTUxMjI1MTIyMjU5WhcNMjUxMjI0MTIyMjU5WjCBjDELMAkGA1UE
 BhMCVUExFzAVBgNVBAgMDktoYXJraXYgUmVnaW9uMRAwDgYDVQQHDAdLaGFya292MQ8wDQYDVQQKDAZPcmFjbGUxGDAWBgNVBAMMD3N0c3lib
 3Ytdm0xLnVhMzEnMCUGCSqGSIb3DQEJARYYc2VyZ2lpLnRzeWJvdkBvcmFjbGUuY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCA
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 PFHlh4z/qqiS5jHng6JCeUpCIxeiTG9JXVwF1ErBEZbwZYjVxa6S+0grVkS3YxuH4uTyqxskuGnHK/
AviTHLBrLfSrbFKYuQUrXyy6X22wpzo
 bQ3Z+4bhEE8SXQtVbQdy7K0MKWYopNhX05SMTv7yMfUGp8EkGNyJ5Km8AuQt6ZCbVao6cHL2hSujQiN6aMjKbdzHeA1QEicppnnoG/
Zefyi/
 okWdlLAaLjcpYrjUSWQJZQIDAQABo1AwTjAdBgNVHQ4EFgQUIKa0zeXmAJsCuNhJjhU0o7KiQgYwHwYDVR0jBBgwFoAUIKa0zeXmAJsCuNhJj
```

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```
hU0o7KiQgYwDAYDVR0TBAUwAwEB/zANBgkqhkiG9w0BAQsFAAOCAQEAJawU5WRXqkW4emm+djpJAxZ0076qPgEsaaog6ng4MLAlU7RmfIY/
l0VhXQegvhIBfG4OfduuzGaqd9y4IsQZFJ0yuotl96iEVcqg7hJ1LEY6UT6u6dZyGj1a9I6IlwJm/9CXFZHuVqGJkMfQZ4gaunE4c5gjbQA5/
+PEJwPorKn48w8bojymV8hriqzrmaP8eQNuZUJsJdnKENOE5/asGyj+R2YfP6bmlOX3q0ozLcyJbXeZ6IvDFdRiDH5wO4JqW/ujvdvC553y
CO3xxsorB4xCupuHu/c7vkzNpaKjYdmGRkqhEqBcCqYSxdwIFc1xhOwYPWKJzgn7pGQsT7yNJg==</ds:X509Certificate>
</ds:X509Data>
</ds:KeyInfo>
</md:KeyDescriptor>
<md:KeyDescriptor use="encryption">
<ds:KeyInfo xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
<ds:X509Data>
<ds:X509Certificate>MIID7TCCAtWgAwIBAgIJANn3qP9lF7M3MA0GCSqGSIb3DQEBCwUAMIGMMQswCQYDVQQGEwJVQTEXMBUGA1
UECAwOS2hhcmtpdGdiBSZWdpb24xEDAOBgNVBAcMB0toYXJrb3YxDzANBgNVBAoMBk9yYWNsZTEYMBYGA1UEAwwPc3RzeWJvdi12bTEud
WEzMScwJQYJKoZIhvcNAQkBFhhzZXJnaWkudHN5Ym92QG9yYWNsZS5jb20wHhcNMTUxMjI1MTIyMjU5WhcNMjUxMjI0MTIyMjU5WjCB
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SujQiN6aMjKbdzHeA1QEicppnnoG/Zefyi/okWdlLAaLjcpYrjUSWQJZQIDAQABo1AwTjAdBgNVHQ4EFgQUIKa0zeXmAJsCuNhJjhU0o
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wIFc1xhOwYPWKJzgn7pGQsT7yNJg==</ds:X509Certificate>
</ds:X509Data>
</ds:KeyInfo>
</md:KeyDescriptor>
<md:SingleLogoutService Binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect" Location="https://idp-
saml.ua3.int/simplesaml/saml2/idp/SingleLogoutService.php"/>
<md:NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:transient</md:NameIDFormat>
<md:SingleSignOnService Binding="urn:oasis:names:tc:SAML:2.0:bindings:HTTP-Redirect" Location="https://idp-
saml.ua3.int/simplesaml/saml2/idp/SSOService.php"/>
</md:IDPSSODescriptor>
<md:ContactPerson contactType="technical">
<md:SurName>Administrator</md:SurName>
<md:EmailAddress>name@emailprovider.com</md:EmailAddress>
</md:ContactPerson>
</md:EntityDescriptor>
```

How do I configure a Context Layout Structure?

You can configure the Context layout structure for a page, when you want to change the visibility of fields, add conditions for visibility, or add more fields and buttons.

Let's say you want to create an Activity Details form for the Activity Details context, that belongs to the Administrator user type, with these objects:

- **Start** action.
- Special element, **Section**
- **Name** field.

This example explains how to configure the entities, namely, fields, actions, and special elements for the form.

Note: Properties configured on the **Activity Details** context (also known as **Activity Details** page) are ReadOnly, even if the property visibility is set to ReadWrite. To set the property visibility to ReadWrite, you must add the properties to a tab.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to configure a context layout structure.
4. Under **Activity** and select **Activity Details**.

    The **Visual Form Editor** displays.
5. To add the special element Section to the grid:
    a. Expand **New element**.
    b. Drag **Section** to the grid to add a section to the form.
6. To add the **Name** field to the section:
    a. Expand **New element**.
    b. Drag the Input element to the required position on the form.
    c. Click the element and in the **Activity field** drop-down list, select Address.
7. To add the Start action:
    a. Expand **New element**.
    b. Drag Button to the required position on the form.
    c. Click the button and in the **Standard screen action** drop-down list, select start_activity.
8. In the **Name Translations** field, add a name for the new element in all the required languages. To display an icon before the name, simply copy and paste it here.

    This name is displayed for the element on the form. If a user has selected a different display language, the name in the corresponding language is displayed for the user.
9. Click **Save** at the top of the form editor.

Results:

After you configure the entities for a form, sign in to the application and view the configured form. If you add multiple Barcode/QR code scanner fields on a form or page, ensure that the section contains only the Barcode/QR code scanner fields and Text elements. If the section contains any other type of element, the barcode scanner isn't triggered.

> **Note:** Visibility of tabs is the aggregated result of the configured visibility conditions for the child elements (for example, property, text). these rules apply:
> - The tab is visible and accessible, if at least one element is configured to be visible (for example, Read-write or Mandatory) or a Read-only element contains data.
>
> - The tab isn't visible or accessible, if none of the configured elements is visible (for example, no Read-write or Mandatory property or Read-only element without data).
>
> - If a tab has all Read-Only elements, then the buttons are shown. If at least one element in the tab is Read-Write or Mandatory, then the buttons aren't shown.
>
> - If a tab has been configured with visibility conditions, it will be displayed in accordance with those conditions ignoring inner elements.

Fields that can't have the Barcode/QR Code Scanner option

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The **Data entry** field isn't available for these fields on the Visual Form Editor:

Activity fields

These auto-calculated fields:

- Access Schedule [access_schedule]
- Access Hours [access_hours]
- Compliance Alerts [activity_compliance]
- Alerts [activity_alerts]
- SLA End [sla_window_end]
- SLA Start [sla_window_start]
- Traveling Time [travel]
- Resource ID [pid]
- Time Slot [time_slot]

These fields are not auto-calculated (but contain specific data):

- Points [apoints]
- Coordinate X [acoord_x]
- Coordinate Y [acoord_y]
- Duration [length]

These fields are not auto-calculated:

- Name [cname]
- Work Order [appt_number]
- Cellular Phone [ccell]
- Email [cemail]
- Phone [cphone]
- Account Number [customer_number]
- State [cstate]
- ZIP/Postal Code [czip]
- City [ccity]
- Address [caddress]

These auto-calculated fields:

- First Manual Operation [first_manual_operation]
- First Manual Operation Interface [first_manual_operation_interface]
- First Manual Operation Performed by User [first_manual_operation_user_id]
- First Manual Operation Performed by User (Login) [first_manual_operation_user_login]
- First Manual Operation Performed by User (Name) [first_manual_operation_user_name]
- Auto-Routed to Date [auto_routed_to_date]
- Auto-Routed to Resource [auto_routed_to_provider_id]

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- Auto-Routed to Resource (Name) [auto_routed_to_provider_name]
- Activity Time of Assignment [atime_of_assignment]
- Activity Time of Booking [atime_of_booking]
- Capacity Categories [activity_capacity_categories]
- Coordinate Status [acoord_status]
- Date [date]
- Start - End [eta_end_time]
- Delivery Window [delivery_window]
- End [end_time]
- Time Notified [time_delivered]
- Work Zone [aworkzone]
- Activity ID [aid]
- Activity status [astatus]
- Start [ETA]
- Service Window [service_window] [service_window]
- Travel estimation method [travel_estimation_method]

Inventory fields

These auto-calculated fields:

- Changed Inventory ID [inv_change_invid]
- Resource Id [inv_pid]
- Activity Id [inv_aid]
- Inventory Id [invid]
- Inventory pool [invpool]

These fields are not auto-calculated (but contain specific data):

- Quantity [quantity]

Resource fields

These auto-calculated fields:

- ID [pid]
- Working days left for reported data to start impacting duration estimations [skip_days_for_stats]
- Reactivated [reactivated]
- On-call Calendar [oncall_calendar]
- Work Zones [resource_workzones]
- Effective Work Skills [resource_effective_workskills]
- Time slots [resource_time_slots]
- Capacity Categories [resource_capacity_categories]
- Work Skills [resource_workskills]

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- Calendar [calendar]
- Queue status [queue_status]
- Total [total]
- Pending [pending]
- Alerts [alerts]

These fields are not auto-calculated:

- Name [pname]
- External ID [external_id]
- Email address [email]
- Phone [pphone]

Service request fields

These auto-calculated fields:

- Created [srcreated]
- Activity [appt_ident]
- Request Id [srid]
- User Id [sr_uid]
- Resource Id [sr_pid]
- Activity Id [sr_aid]
- Inventory Id [sr_invid]

These possibly auto-calculated fields:

- User [uname]
- Date [srdate]

User fields

These auto-calculated fields:

- User ID [uid]
- Registered [sucreated]
- Failed login attempts [login_attempts]
- Blocked to [login_blocked_to]
- Last login [last_login]
- Last password change [last_password_change]
- Updated [suupdated]
- Main Resource [main_resource_id]

These fields are not auto-calculated (but contain specific data):

- Refresh Rate [refresh_rate]
- Mobile Resource Count [mobile_provider_count]

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- Mobile Activity Count [mobile_activity_count]

- Mobile Inventory Count [mobile_inventory_count]

- Collaboration Group [collab_assigned_user_group]

- Operator of Helpdesk [collab_operator_helpdesk]

These fields are not auto-calculated:

- User name [uname]

- Login [ulogin]

- Password [password]

Can I open internal pages and plug-ins with direct URLs?

You can directly access internal pages such as Activity details, List view, or Inventory details within the Oracle Fusion Field Service Mobile for Android or iOS apps or Core Application, using specific direct URLs.

> **Note:** Use this feature only to launch Oracle Fusion Field Service on the browser or the app using external sources such as sms, emails, or other apps. Don't use this feature to navigate between pages within Oracle Fusion Field Service.

Based on the page that is accessed and the user type accessing the page, you can send the following parameters with the URL:

Name	Type	Description	Constraints
screen	String	Specifies the page that you want to access.	The following labels are supported: • activity_list • activity_by_id • start_activity • end_activity • cancel_activity • notdone_activity • suspend_activity • delay_activity • inventory_list • inventory_by_id • install_inventory • deinstall_inventory

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Name	Type	Description	Constraints
date	Date	Specifies the date for the page that you want to access.	Date format is YYYY-MM-DD.
activityId	Number	Specifies the activity for the page that you want to access.	Valid activity ID is required.
resourceInternalId	Number	Specifies the resource for the page that you want to access.	A valid resourceInternalId is required. Mandatory, if you are navigating from the Supervisor page.
inventoryId	Number	Specifies the inventory for the page that you want to access.	Valid Inventory ID is required.

The order of the parameters is not important. Also, any unsupported parameters are ignored. The supported parameters, URLs, and accessible pages might differ based on whether the logged-in user has access to other users (such as supervisor, mobile worker). In case, there are missing or invalid params or if the user doesn't have access to the page, then an error message is displayed.

<OFS_CORE_APP_URL> is the URL to access the following Core Application pages:

Activity List

The activity_list label lets you access the Activity List page.

Supported Parameters

Name	Mandatory for Mobile Worker	Mandatory for Supervisor
date	No	No
resourceInternalId	No	Yes

Possible URLs

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URL	Description	Applicable for Mobile Worker	Applicable for Supervisor
https://<OFS_CORE_APP_URL>/#screen=activity_list	Displays the Activity List page for today's date.	Yes	No
https://<OFS_CORE_APP_URL>/#screen=activity_list&date=2020-02-19	Displays the Activity List page for the date, 2020-02-19.	Yes	No
https://<OFS_CORE_APP_URL>/#screen=activity_list&resourceInternalId=3000001	Displays the Activity List page of the mobile worker with resourceInternalId 3000001 for today's date.	Yes	Yes
https://<OFS_CORE_APP_URL>/#screen=activity_list&date=2020-02-19&resourceInternalId=3000001	Displays the Activity List page of the mobile worker with resourceInternalId 3000001 for the date, 2020-02-19.	Yes	Yes

Activity Details

The activity_by_id label allows you to access the Activity Details page.

Supported Parameters

Name	Mandatory for Mobile Worker	Mandatory for Supervisor
activityId	Yes	Yes
date	Yes	Yes
resourceInternalId	No	Yes

Possible URLs

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URL	Description	Applicable for Mobile Worker	Applicable for Supervisor
https://<OFS_CORE_APP_URL>/ #screen=activity_by_id&activityId=4225435&date=2020-02-20	Displays the details for activity with id 4225435.	Yes	No
https://<OFS_CORE_APP_URL>/ #screen=activity_by_id&activityId=4225435&date=2020-02-20&resourceInternalId=3000	Displays the details for activity with id 4225435.	Yes	Yes
https://<OFS_CORE_APP_URL>/ ##screen=activity_by_id&activityId=4225435&date=3000-01-01&resourceInternalId=xxxx	Displays the details for non-scheduled activity with ID 4225435.	Yes	Yes

Constraints

- The specified date must be the route date of the specified activity.

- For mobile workers, the activity must be assigned to the mobile worker.

- For supervisors, the specified resourceInternalId must be assigned to the activity and the supervisor must have access to the mobile worker.

Activity Actions

Page Label	Description
start_activity	Access the Start Activity page.
end_activity	Access the Complete Activity page.
cancel_activity	Access the Cancel Activity page.
notdone_activity	Access the Not Done Activity page.
suspend_activity	Access the Suspend Activity page.
delay_activity	Access the Delay Activity page.

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Supported Parameters

Name	Mandatory for Mobile Worker	Mandatory for Supervisor
activityId	yes	yes
date	yes	yes
resourceInternalId	No	yes

Possible URLs

URL	Description	Applicable for Mobile Worker	Applicable for Supervisor
https://<OFS_CORE_APP_URL>/ #screen=<SCREEN_LABEL>&activityId=4225435&date=2020-02-20	Displays the specified Activity Action page for the Activity ID, 4225435.	yes	No
https://<OFS_CORE_APP_URL>/#screen= <SCREEN_LABEL>&activityId=4225435&date=2020-02-20&resourceInternalId=3000001	Displays the specified activity action page for activity with id 4225435.	yes	yes

Constraints

- The specified Activity Action page must be visible for the specified activity.
- The specified date must be the route date of the specified activity.
- For mobile workers, the activity must be assigned to the mobile worker.
- For supervisors, the specified resourceInternalId must be assigned to the activity and the supervisor must have access to the mobile worker.

Inventory List

The inventory_list page label allows you to access the Inventory List page.

Supported Parameters

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Name	Mandatory for Mobile Worker	Mandatory for Supervisor
activityId	No	No
date	No	No
resourceInternalId	No	yes

Possible URLs

URL	Description	Applicable for Mobile Worker	Applicable for Supervisor
https://<OFS_CORE_APP_URL>/#screen=inventory_list	Displays the Inventory List page.	yes	No
https://<OFS_CORE_APP_URL>/ #screen=inventory_list&activityId=4225435&date=2020-02-19	Displays the Inventory List page for the Activity ID, 4225435.	yes	No
https://<OFS_CORE_APP_URL>/#screen=inventory_list&resourceInternalId=3000001	Displays the Inventory List page of the mobile worker with resourceInternalId, 3000001.	No	No
https://<OFS_CORE_APP_URL>/ #screen=inventory_list&activityId=4225435&date=2020-02-19&resourceInternalId=3000001	Displays the Inventory List page for the Activity ID, 4225435. resourceInternalId is required for supervisors.	yes	No

Constraints

- Inventory list action link should be visible from the activity.
- The specified date must be the route date of the specified activity.
- For mobile workers, the activity should be assigned to the mobile worker.

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- For supervisors, the specified resourceInternalId must be assigned to the activity and the supervisor must have access to the mobile worker.

Inventory Details

The inventory_by_id label allows you to access the Inventory Details page with the specified Inventory ID.

Supported Parameters

Name	Mandatory for Mobile Worker	Mandatory for Supervisor
inventoryId	yes	yes
activityId	No	No
date	No	No
resourceInternalId	No	yes

Possible URLs

URL	Description	Applicable for Mobile Worker	Applicable for Supervisor
https://<OFS_CORE_APP_URL>/#screen=inventory_by_id&inventoryId=21229417	Displays the inventory details for the inventory ID, 21229417.	yes	No
https://<OFS_CORE_APP_URL>/#screen=inventory_by_ id&inventoryId=21229417&activityId=4225435&date=2020-02-19	Displays the inventory details for the inventory ID, 21229417 and activity ID, 4225435.	No	No
https://<OFS_CORE_APP_URL>/#screen=inventory_by_ id&inventoryId=21229417&resourceInternalId=3000001	Displays the inventory details for the inventory ID, 21229417 for the mobile worker with	yes	yes

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URL	Description	Applicable for Mobile Worker	Applicable for Supervisor
	resourceInternalI 3000001.		
https://<OFS_CORE_APP_URL>/#screen=inventory_by_id&inventoryId=21229417&activityId=4225435 &date=2020-02-19&resourceInternalId=3000001	Displays the inventory details for the inventory ID, 21229417 and the activity ID, 4225435 for the mobile worker with resourceInternalI 3000001.	yes	yes

Constraints

- For mobile workers, the mobile worker must have the inventory with the specified ID.
- For supervisors, the specified resourceInternalId must belong to a mobile worker with the inventory specified by inventory ID.
- The specified date must be the route date of the specified activity.
- For mobile workers, the activity must be assigned to the mobile worker.
- For supervisors, the specified resourceInternalId must be assigned to the activity and the supervisor must have access to the mobile worker.

Inventory Actions

Page Label	Description
deinstall_inventory	Accesses the Add to Deinstalled page with the selected inventory.
install_inventory	Accesses the Add to Installed page with the selected inventory.

Supported Parameters

Name	Mandatory for Mobile Worker	Mandatory for Supervisor
inventoryId	yes	yes

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Name	Mandatory for Mobile Worker	Mandatory for Supervisor
activityId	yes	yes
date	yes	yes
resourceInternalId	no	yes

Possible URLs

URL	Description	Applicable for Mobile Worker	Applicable for Supervisor
https://<OFS_CORE_APP_URL>/#screen=<SCREEN_LABEL>&activityId=4225435&date=2020-02-19&inventoryId=21229417	Displays the specified Activity Action page for the activity ID, 4225435 and for the inventory ID, 21229417.	yes	no
https://<OFS_CORE_APP_URL>/#screen= <SCREEN_LABEL> &activityId=4225435&date=2020-02-19&resourceInternalId=3000001&inventoryId=21229417	Displays the specified Inventory Action page for the activity ID, 4225435 and inventory ID, 21229417.	no	yes

Constraints

- The specified Inventory Action page must be visible for the specified activity and inventory.
- For mobile workers, the mobile worker must have the inventory with the specified ID.
- For supervisors, the specified resourceInternalId must belong to a mobile worker with the inventory specified by inventory ID.
- The specified date must be the route date of the specified activity.
- For mobile workers, the activity must be assigned to the mobile worker.

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- For supervisors, the specified resourceInternalId must be assigned to the activity and the supervisor must have access to the mobile worker.

How do I add an organization unit or a bucket to define the resource tree structure?

You can add multiple Organization Units within a single Organization, but each one must be a child of the top-level Organization Unit in the Resource Tree. You can assign each Organization Unit to the appropriate Organization as needed. This structure helps maintain consistent management and reporting across your system. The required 'Org Unit/Bucket' field ensures that the resource hierarchy is organized correctly. You can use organization units to sort and organize the items in the resource tree. You can use buckets to hold the activities that aren't yet assigned to mobile workers. You must set up the resource tree using the organization, buckets, and child resources in a way that suits your business requirements.

Difference between resource, user, and child resource: A resource can be a mobile worker (a human being), a dispatcher, an administrator, a vehicle, or a tool. All resources are elements of the Resource tree. A user is a mobile worker or any other user that has access to Oracle Fusion Field Service. A child resource is a resource that is added to a bucket or an organization unit element of the resource tree. In the hierarchy of the resource tree, the bucket or the organization unit appears at a higher level than the child resource. A child resource can be a mobile worker (a human being), a vehicle, or a tool.

Organization units are typically used to group resources by location. Organization units cannot be route owners and you cannot assign activities to them. Buckets can have activities. However, dispatchers can assign activities to buckets manually and Routing can assign activities to buckets automatically. To add an organization unit or a bucket:

1. Click the navigation icon and then click **Resources**.
2. Click the plus icon.
3. Complete these fields:

Field name	Action
Resource Type	Select Group or Bucket or Organization Unit. The fields on the page change based on the option you select.
Name	Enter the name of the organization unit or bucket the way you want it to appear in the resource tree.
External ID	Enter a unique ID for the organization unit or bucket. These IDs are optional.
Status	Select whether the organization unit or bucket is active or inactive. An inactive organization unit or bucket is not listed in the resource tree.
Org Unit/Bucket	Select the organization unit or bucket under which you want to create the organization or bucket. Or, assign the new organization unit as a child of the top-level Organization in the hierarchy.
Time format	Your (currently logged in user) time format is populated, change it if required. This is the time format that your resources see and use in the interface. This can be either **12-hour** or **24-hour**.
Date format	Your (currently logged in user) date format is populated, change it if required. This is the date format that your resources see and use in the interface. This can be either **month-day-year** or **day-month-year**. The date format controls the display of dates in numeric format.

Field name	Action
Message Language	Select the language in which dispatchers and mobile workers see the error messages.
Time zone	Your (currently logged in user) time zone is populated, change it if required. This is the time zone in which the organization is located.

4. Click **Submit**.

The new active organization unit or bucket is added to the resource tree, in the selected hierarchy.

How do I activate, deactivate, or delete a user?

You can control users' access to the application by activating or deactivating them. Active users can log in and use the application. Deactivated uses can be re-activated when needed. Deleted users are no longer available in the resource tree.

Your administrator must first configure Activate, Deactivate, or Delete group actions for the Resources context layout structure, before you can use them.

1. Use one of the following ways to access the user that you want to activate or deactivate:

    a. In the resource tree, click the user for which you want to change the status. Click the Info icon for the resource. On the **Resource Info** page, click the stack icon and then click **Edit**. The **Edit Resource** page appears.

    b. Click the hamburger menu and then click **Resources**. Search for the user for which you want to change the status.

2. Select the corresponding check box and perform any of the following actions:

Action	Description
Activate	Click **Activate** and then click **Activate** on the confirmation dialog box to activate the user.
Deactivate	Click **Deactivate** and then click **Deactivate** on the confirmation dialog box to deactivate the user.
Delete	Click **Delete** and then click **Delete** on the confirmation dialog box.

What to do next

If you want to activate, deactivate, or delete multiple users, click the hamburger menu and then click **Resources**. Search for the resources for which you want to change the status. In the search result, select the check box against resource names and click the appropriate check box in the header.

How do I unlock a user account?

When a user makes too many unsuccessful attempts to log in, the account is locked. You must unlock it for the user to log in and use the application.

1. Click the hamburger menu and then click **Resources**.
2. Select **Blocked** under **Status**.
3. Select the check box next to the resource whose account you want to unlock.
4. Click **Unlock** above the list of resources.

   Unlock appreas as an option, only if you have configured it on the **Resources** context layout structure.
5. Click **Unlock** in the confirmation diaog.

How do I configure activity and resource hints?

Activity hint is a context menu that is displayed when you click an activity on the List, Time, or Map view. Similarly, resource hint is displayed when you click a resource in the resource tree. These menus can include static text such as activity type or capacity category and buttons for actions such as adding or starting an activity. The menu can also include links to open forms and plug-ins.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to configure the hint.
4. Under **Activity**, locate **Activity hint** in the **Dispatch Console** tree and click it. To add a resource hint, locate **Resource hint** in the **Main menu** tree and click it.

   The **Context layout structure** opens for the selected hint. This page displays two sections—**Layout structure** and **Actions**.
5. Click **Click to Add** in the **Layout structure** section and select the required properties such as Alerts, Activity type, Activity status, Resource name.

   The items in the **Layout structure** are static text items.
6. Click **Click to Add** in the **Actions** section.

   The **Add action** dialog box appears and displays these options:
   - **Standard action screen:** Lets you add standard actions such as Activate route, Add child resource, Add to group, Resource calendar, Work Skills, Work Zones, Location, and so on.
   - **Plugins:** Lets you add plug-ins. The plug-ins that you have added on the Forms & Plugins page are listed here.
   - **Custom forms:** Lets you add custom forms. The Forms that you have added on the Forms & Plugins page are listed here.
7. Select one of the three options and then select the required item in the **Available** list.
8. Click **OK**.

   The properties of the newly added item are displayed.

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9. Click **Add new visibility**.

   Read-only is selected by default on the **[item] visibility** dialog box.

10. Click **Conditions** and add any conditions based on which you want to display the link.

11. Click **Save**.

   The new item or link is added to the hint. The item is displayed when the user refreshes the application, or logs in to it the next time.

How do I add My Route to the main menu or landing page?

You can configure the landing page for Mobile Workers to display either the My Route page or the list of activities.

1. Click **Configuration** > **Screens**. The **Screens** page appears.

2. Under Main, click **Main Menu**.

3. Click **Click to Add** and add **My Route**.

4. Click **Add new visibility** and then click **Save**.

   My Route is added to the Main menu.
   - For users who have a route: **My Route** is always displayed in the Main menu regardless of whether it is configured or not.
     - If you have not configured **My Route** but have configured other items for the Main menu, **My Route** is displayed as the first item.
     - If you have configured **My Route** and other items, the position of **My Route** is per the configuration.
     - If a user has access to multiple resources and also has a route of their own, if you have not configured any items, **Manage** and **My Route** are displayed in the Main menu.
   - For users who do not have a route of their own: **My Route** is not displayed in the Main menu even if you have configured it.

   Note: If a resource who does not have access to multiple resources needs to access the Main menu, then set the **Mobile Worker Landing Page** option on the Configuration → Display page to 'My Route'. You can also set the option to 'Activity List'. However, if you set it to 'Activity List', this user will not have access to other Main menu items.

How do time zone settings work?

When you configure the application, it's possible to set different time zones for users and resources. These time zones are used in various contexts across different pages. The application automatically handles daylight saving time changes based on the time zone settings configured for each user and resource, so users don't need to take any action during transitions into or out of daylight saving time.

Here's an overview of how time zones are displayed throughout Oracle Fusion Field Service for mobile workers and dispatchers.

Today's Date

The time zone of the currently logged in user is used when identifying today's date. Let's say it's 1:00 PM, Jun 10 in a UTC+00:00 time zone. If you sign in as a user who's in UTC+12:00 time zone, after logging in you see that the current date is set to Jun 11. This is because, in the user's time zone it's already 01:00 AM, Jun 11.

Where's it Used?

Today's date is used as the initial date on these pages in Oracle Fusion Field Service Core Application: Activities, Offline synchronization, Dashboard, and Print route. For example, on the "Activities" page, it's the date for which the activities are shown after you sign in to the application. You can change the date on these pages to see the information for another date. Nevertheless, when you click the date field, the calendar widget shows you today's date in light blue color. This screenshot shows the calendar with the current date highlighted:
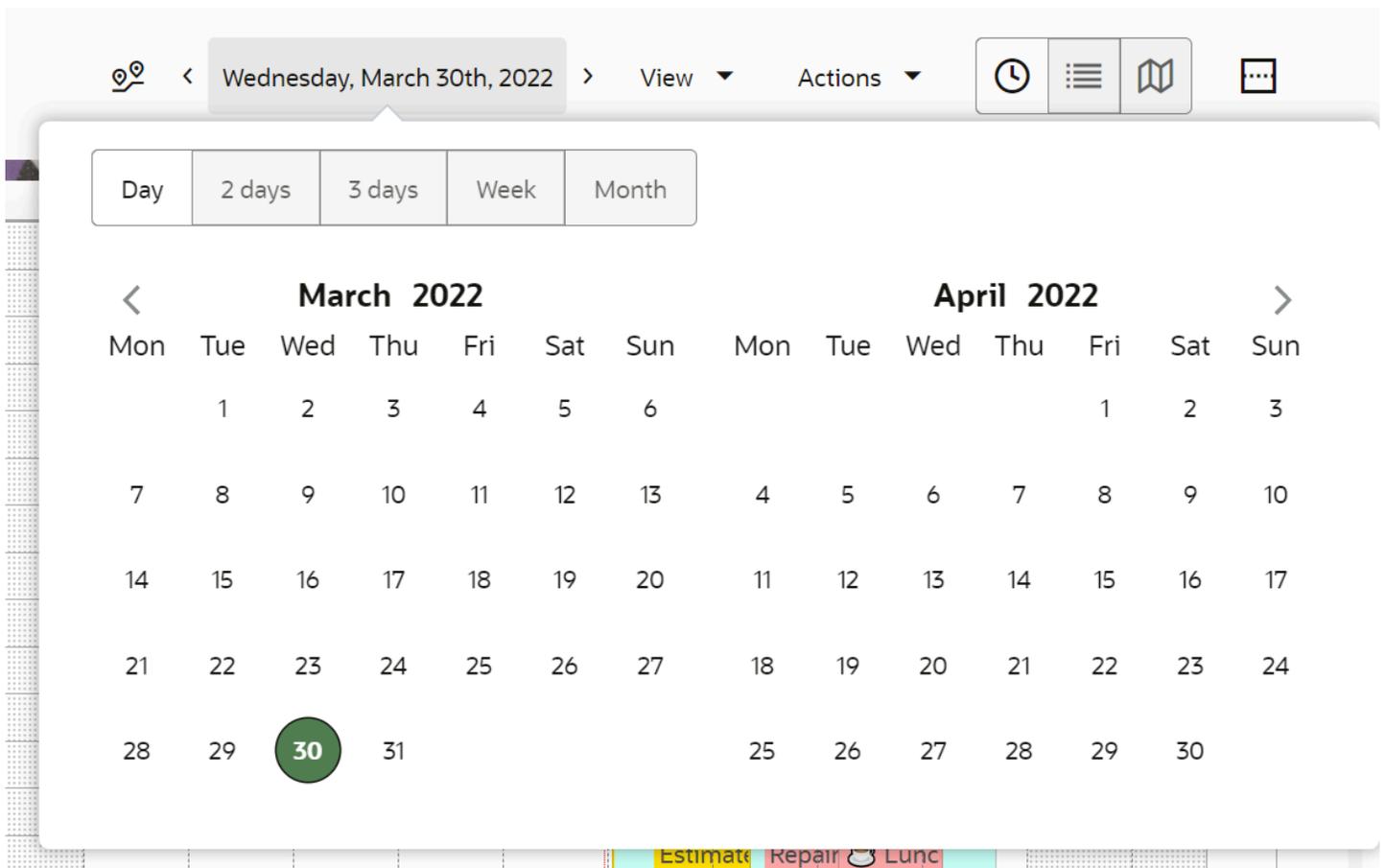
The same behavior is present in Oracle Fusion Field Service Mobile for Android and iOS. When a field resource logs in, today's date is marked with light red color on the date selection panel in the header, as shown in this screenshot:
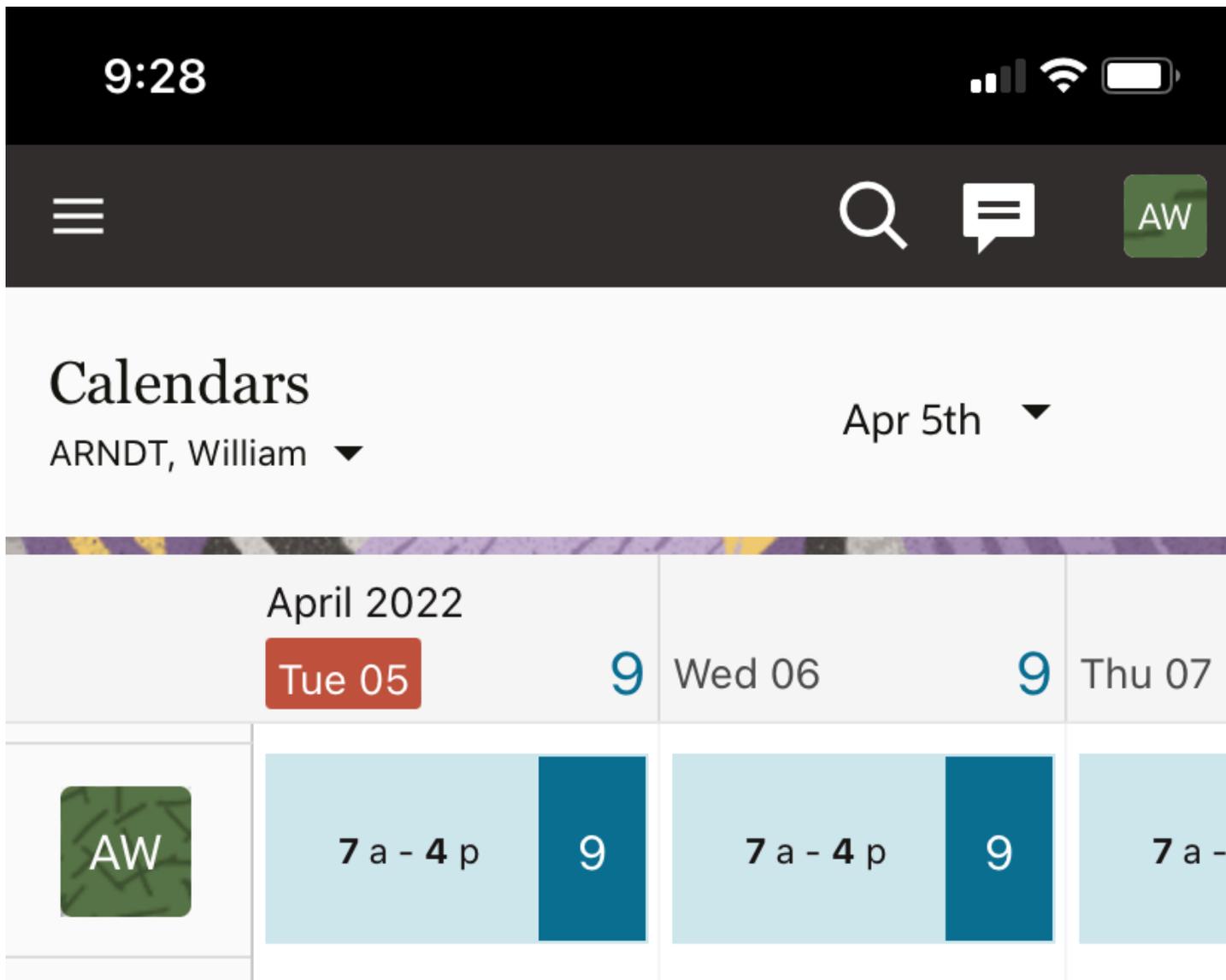
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When a field manager looks at the **Calendars** page in Oracle Fusion Field Service Mobile for Android and iOS, then today's date is marked in light red, as shown in this screenshot:
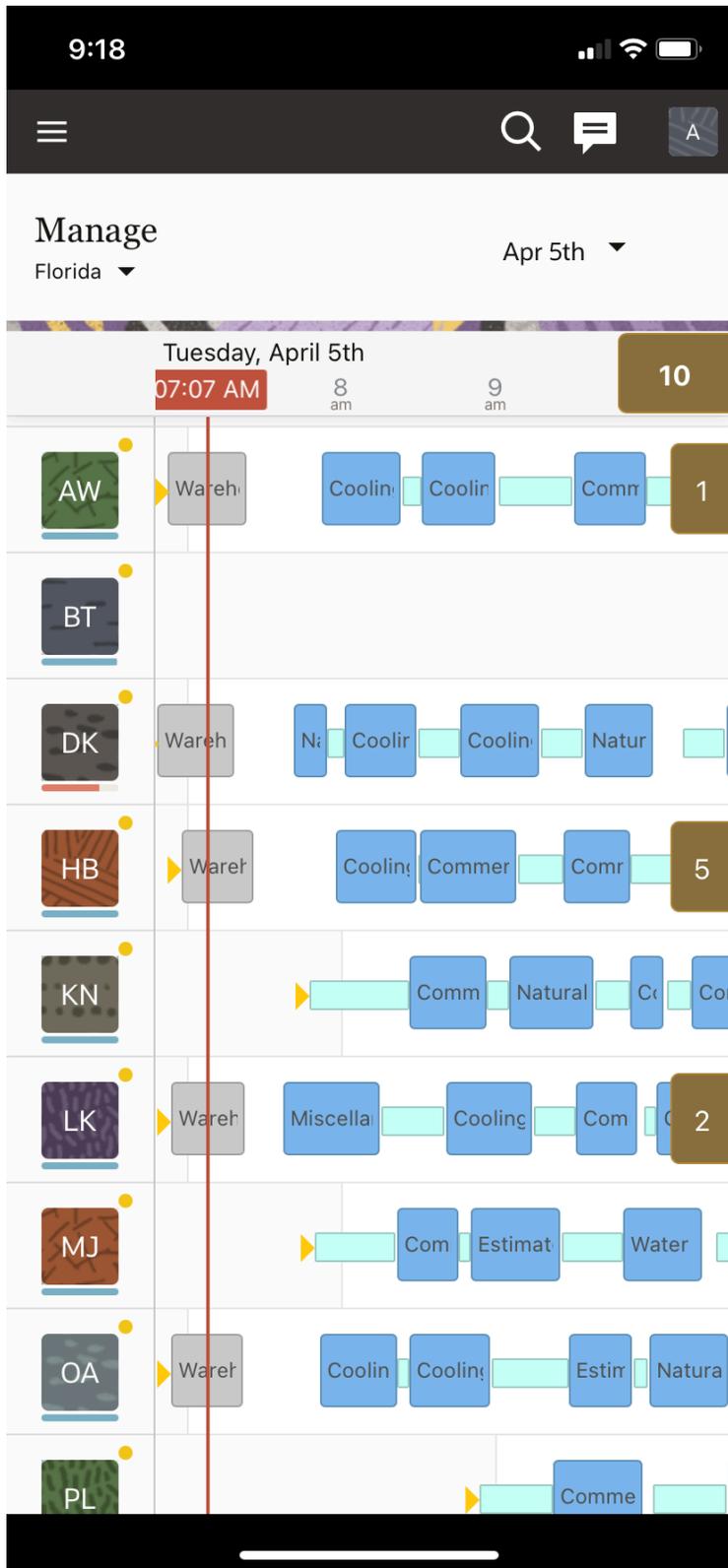
The same date is used in Oracle Fusion Field Service Core Application when searching for activities "starting today".

Current Date of the Resource

The current date of the resource is always identified in the time zone of the resource. You can activate the route and start an activity only on the current date of the resource's time zone.

Changing Past Activities

Every environment has a specific time when all the data that's related to the previous day is frozen and can't be changed any more. This time is configured in the **Overnight work** section on **Business Rules**, shown in this screenshot:
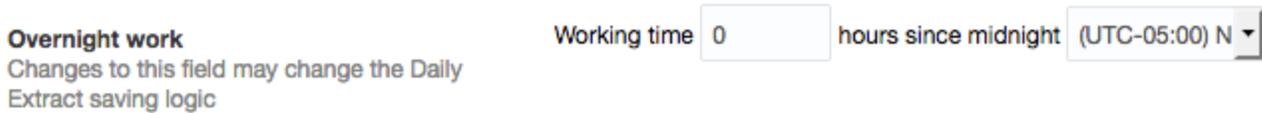
For example, you've configured that the working time is 5 hours starting from midnight in the Eastern time zone. This means that at 5:00 AM in the Eastern time zone all data for the previous day becomes frozen.

> **Note:** If you configure an environment to use in several time zones, you must set the time zone on **Business Rules** to the most "western" time zone. If the work is performed several hours after midnight in this most "western" time zone, then you must also specify the number of hours after midnight.

Time View in Oracle Fusion Field Service Core Application

Time view displays aggregated information for the hierarchy of resources. The information is presented in the same time zone to look consistent on the time line. The time zone is identified as the time zone of the resource selected in the resource tree. When you view a bucket with **Show Hierarchy** enabled, the time view reflects the time zone of the selected resource, and not the individual resource. For example, if a bucket is in CST and a resource is in EST, both might have an 8 AM–5 PM calendar. But when a resource with the CST time zone views it, the EST time appears as 7 AM–4 PM.

The current time, which is shown as a red vertical line is also in the time zone of the selected resource, shown in this screenshot:

> **Note:** The only exceptions are the resource hint, activity hint, and activity label. Information on the resource hint is displayed in the time zone of the resource this hint belongs to. Information on the activity hint and activity label is displayed according to the rules described in the Activity related information section later in the topic.

Manage page in Oracle Fusion Field Service Mobile for Android and iOS

The **Manage** page in Oracle Fusion Field Service Mobile for Android and iOS presents information similarly to the Time view. However, unlike the Time view, no specific resource is selected in the installed app. Instead, the information displayed pertains to a group of resources configured by the user.

As the application can't identify a primary time zone from an individual resource in this context, it defaults to the currently logged-in user's time zone. This ensures that all displayed information is relevant to the user's local time settings.

> **Note:**
> - The only exceptions are the resource hint, activity hint, and activity label. Information on the resource hint displays in the time zone of the resource this hint belongs to. Information on the activity hint and activity label displays according to the rules described in the Activity related information section later in the topic.
>
> - When a user opens the non-scheduled or non-ordered activities, the activity identifier shows information according to the rules described in the Activity related information section later in the topic.

Organizations with Multiple Time Zones

If your organization operates in multiple time zones, it's important that you configure both, the mobile worker and activity time zones correctly. Configuring these time zones is even more important if they're different. A mobile worker sees all the data in their own time zone, but when the activity (customer) is in a different time zone, both times are shown as appropriate. The activity time zone is used for notifications and can be used in APIs (for example, for sending messages). Typically, the time zone of a physical location is used for notifications, but you might use your preferred time zone, such as your headquarters time zone or any other in which you prefer to get notifications.

Resource related information

Information that's related to a resource and the resource's route is entered in the resource's time zone. It includes:

- Route Status (queue_status), includes the time when the route was activated
- Reactivated (reactivated)
- Resource working hours (calendar)
- Resource on-call hours (oncall_calendar)

Time view shows this information differently in Oracle Fusion Field Service Core Application and Oracle Fusion Field Service Mobile for Android and iOS. See the earlier sections for more details.

Activity Related Information

Time related information on an activity is displayed and entered in the time zone of the resource for which the activity is assigned. This information includes:

- Start (ETA)
- End (end_time)
- Start - End (eta_end_time)
- Delivery window (delivery_window)

- Activity Time of Booking (atime_of_booking)
- Activity Time of Assignment (atime_of_assignment)

The only exceptions are:

- Time slot or service window (depending on what's used for the particular activity type)
- SLA window

These properties are either in the resource time zone or in the customer time zone. It depends on the **SLA and Service window use customer time zone** field set on the activity type. Time view shows this information differently in Oracle Fusion Field Service Core Application and Oracle Fusion Field Service Mobile for Android and iOS. See the earlier sections for more details.

User related information

All user related information is shown in the time zone of the user. It includes:

- When the user was registered
- When the user was updated
- When the user logged in last time
- When the user changed the password
- Date and time till when the user is blocked

Collaboration

Each message in Collaboration includes the time when it was sent. This time is shown in the time zone of the currently logged in user.

Can I update activities and sync offline after Overnight end time?

You can complete the activities that you worked on after the Overnight end time. You can change the status of *Started* activities to a final status and work with the inventory for these activities.

Be aware that the option **Allow update activities and offline sync after overnight within the following number of hours** must be selected on the **Business Rules** page.

Beyond the Overnight end time, the activity and inventory-related links and buttons are displayed for those activities that are in *Started* status. You can:

- Change activity status to Completed, Suspended, or Not done.
- Perform actions with inventory such as install, deinstall, and so on.

You can perform these actions from the **My Route** and **Activity Details** pages and from the activity hints available on the **Manage** and **Dispatch Console** pages. The application collects the data and synchronized to the server. You can perform these actions for single activities and segmentable activities and their segments.

> **Note:** You can't start new activities after the Overnight work ends, or manage inventory for activities that are in any other statuses.

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How suspending activity works

Suspending an activity after the Overnight work ends as follows:

- When you suspend a single activity action, the application:
  - Creates a 'Suspended' activity in the route of the original activity.
  - Moves the original activity to the non-scheduled pool, changes its status to 'Pending', and defines its position in route as 'not-ordered'.
- When you suspend a segment of a segmentable activity, the application:
  - Creates a 'Suspended' segment in the route of the original segment.
  - Increases the **Time to complete** value for the master segmentable activity corresponding to the time of the suspended segment.

Note: You must enable the **Allow access to non-scheduled pool** setting for the appropriate user types to make the Suspend activity operation work as described earlier.

Adjusting activity duration

You can adjust the activity duration for both, single activities and segments of segmentable activities.

Selecting next activity and changing action time

You can't select the next activity or set an activity's action time in the UI for the last activity on a given day.

Inventory actions

The following inventory actions are available for inventories related to the *Started* activities after Overnight end time:

- Add to customer
- Add to required
- Delete inventory
- Install inventory
- Deinstall inventory
- Create installed inventory
- Create deinstalled inventory
- Undo install
- Undo deinstall
- Exchange inventory
- Install required inventory
- Delete required inventory
- Edit required inventory
- Create installed required inventory

Apart from this, you can update the values of any fields or properties through the **Inventory Details** page and any forms connected to this page. Changes to field values on the **Required Inventory** page are also supported.

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Limitations

Inventory actions from an activity of a team holder aren't available for an assistant while working in teamwork.

API support

You can get updates for activities that are still in *Started* status after the Overnight end time and any inventory items related to these activities using the following API calls:

- Events
- Get Activity
- Get Activities
- Get Inventory

Daily Extract files

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

The Daily Extract files for a given day won't contain any actions performed after the Overnight end time. You must either wait for the automatic generation of the Daily Extract files for the following day, or run the Daily Extract manually after all the activities are completed. When you do so, you must merge the results from two the Daily Extract files to get the complete data set.

> **Note:** Messages from the Outbound API remain blocked after the configured Overnight period.

How do I add my preference for a specific resource?

If you prefer a specific resource for an activity over other resources, you can use the **Resource Preferences** section to add them. You can also use this section to add resources that shouldn't be added to this activity, or to choose the inventory storage location intended for the consumption of the activity.

Prerequisite: To change the resource preferences, your user type must have Read-write permissions for the **Resource Preferences** section on the **Activity Details** page. If you don't have the permissions, you can only view the existing preferences.

The steps to add resource preferences are:

1. Open the **Time View** or **List View** in the Dispatch Console.
2. Click **Activity Details** in the hint for the activity for which you want to change the resource preferences.
3. Click **Resource Preferences** on the **Activity Details** main page. The **Resource Preferences** section doesn't display the resources and can't be clicked to open in offline mode.
4. Click **Add Preference** and select one of these options:
   - Required: Only one of these resources can be assigned to the activity.
   - Preferred: If no Required resources are listed, then Preferred resources have priority over everyone else.

o Forbidden: Resources that can't be assigned to the activity.

o Warehouse: Storage facility intended for the inventory consumption of the activity.

5. Search for the required resource.
6. Click **Add**. The resource is added to the activity. You can add a resource as a required, preferred, or a forbidden resource only if the activity is added to a bucket, or the resource is assigned to the activity.

How do I use the History tab to review activity and route changes?

You can use the History page to view all the events associated with this activity from the time it was received through completion. Additionally, the page also shows information related to the activity route, which includes the time before the activity was created and after activity was completed. Such details are necessary for dispatch audit and helps you analyze unclear cases, for example, why a mobile worker could be late for an appointment.

Some actions listed in the history, such as **Route updated**, might reflect changes not specific to the activity but to the overall route. These updates can include actions like adding or removing other activities, changing the start or end location for the day, or adjusting the start of working time. As a result, these entries might predate the activity's creation or appear consistent across multiple activities on the same route. This behavior is expected and helps provide full visibility into the resource's route context.

The details that are displayed on the History page depends on the retention period that's configured on the **Business Rules** page. For example, if the retention period for activities is 90 days, you can see the actions performed up to 90 days and not earlier.

You can see a record of the changes and movement of the activity, time stamped with the user ID. The changes and movement are recorded automatically by the application. As a dispatcher, you can use this tab when researching issues or problems with an activity. The user name links to a dialog that shows the interface in which the action was performed and the details of the device with which the action was performed.

This screenshot shows the **History page** that lists the changes made to the activity.:
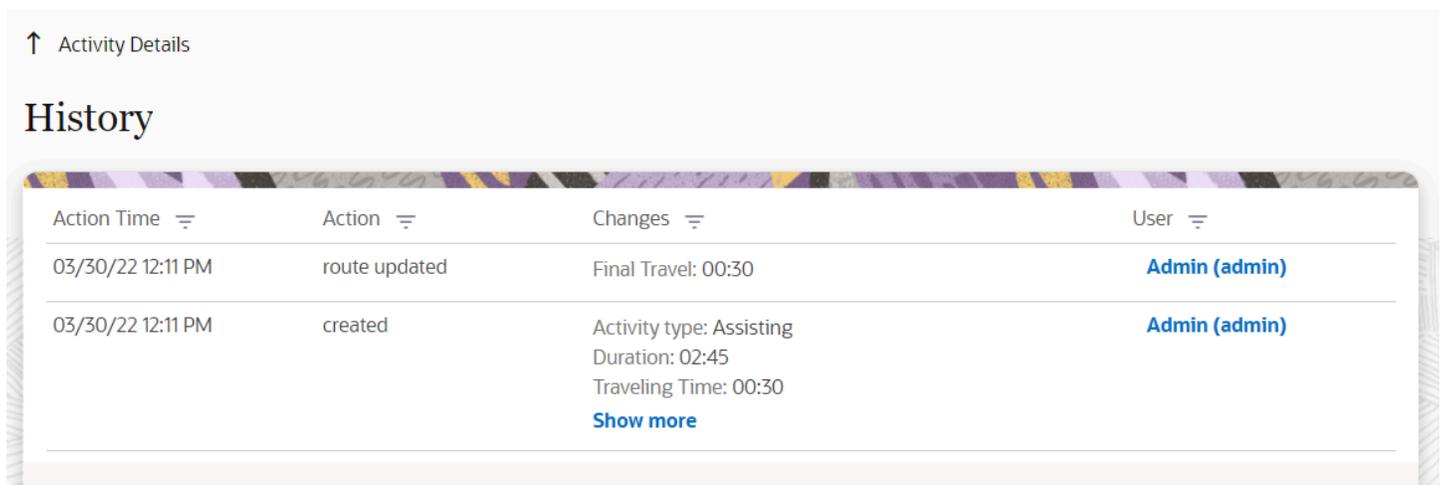
↑ Activity Details

History

Action Time	Action	Changes	User
03/30/22 12:11 PM	route updated	Final Travel: 00:30	Admin (admin)
03/30/22 12:11 PM	created	Activity type: Assisting Duration: 02:45 Traveling Time: 00:30 **Show more**	Admin (admin)

You can filter data using each column:

- In the **Action time** column, select one of the listed times. Select 'All' to include all the records that are generated within the retention period.

- Use the check boxes in the **Action** and **User** columns to filter records based on the existing actions in the table.

- Use the **Search** field to filter data in the **Changes** column. All rows with matching text are displayed.

- Click the user name in the **User** column to see the Interface and User Agent. Interface is the Oracle Field Service module from which you've updated the activity. User Agent provides the details of the browser from which you've accessed Oracle Field Service. This column is blank for the changes made by Oracle Fusion Field Service.

Smaller devices (less than 480 px) don't have these filters.

How do I add a resource?

The resource can be an individual associated with the user who performs an activity or a tool or vehicle that belongs to an organization or resource.

1. Sign in to the Core application as an admin user.
2. Click the Navigator and then click **Resources**.
3. Click the Plus icon.
   The **Add Resource** page displays.
4. Complete the following fields:

Field	Mandatory	Description
Resource type	Yes	Select one of the following resource type that's configured for your organization: ○ Bucket ○ Organization Unit ○ Mobile Worker ○ Truck ○ Manager/Admin/Dispatcher **Note:** The fields on the page change based on the selected resource type.
Type	Yes	Select whether the mobile worker is a Contractor or an In-House employee. **Note:** This field displays only for the mobile worker resource type.
Name	Yes	Enter the resource name that you want to display in the resource tree.
External ID	No	Enter the ID number from an external application, such as the employee ID number. If you use them, each resource must have a unique ID.
Org Unit/Bucket	Yes	If you're adding a bucket, organization unit, or a mobile worker, select the organization or organization unit to which the resource belongs.

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Field	Mandatory	Description
		Note: The field isn't required for the Manager/Admin/Dispatcher resource type.
Status	Yes	Select **Active** if you want the resource to use the application. Otherwise, select **Inactive**.
Access Settings (applicable only for the Mobile Worker and Manager/Admin/Dispatcher resource type)		
User Type	Yes	Select the user type for the resource. You can create and edit resources of only the user types that are selected in the **Configuration** > **User Types** > **General Can create users of the following user types** section. The user types that aren't selected on the **General** page aren't available here for selection. Further, you can't edit the details on the **Resource Info** page of the resources of this user type.
Visible Resources	Yes for the Manager/Admin/Dispatcher resource type.	Select the organization, organization unit, or the bucket to which the resource belongs.
Self Assignment		The **Self-Assignment** feature influences the availability of activities and resources for a user who's assigned to a bucket. By default, **Self-Assignment** is disabled. This setting is mostly used by dispatchers, who allocate activities to resources and usually don't perform any activities.
		If a user is assigned to a bucket and **Self-Assignment** is cleared:
		o All child resources of the bucket are available to the user.
		o All activities in the bucket are available to the user (regardless of their work zones and work skills).
		o The user can move all activities between all available resources (for example, from the bucket to any of the assigned resources, between resources, from a resource back to a bucket).
		o **Self-Assignment** must be selected, if a mobile worker is granted permission to assign tasks. (For example, the user is a crew chief, assigning activities to members of the crew, or a single mobile worker allowed to choose activities to perform.)
		If a user is assigned to a bucket and **Self-Assignment** is selected:
		o Only the resources explicitly assigned to the user are available to such a user (for example, the bucket, the user themselves and members of the crew). No other child resources of the bucket are available to the user.
		o Only those activities in the bucket that can be performed by at least one of available resources (subject to the work zone and work skill requirements) are available to the user.
		o The user can move only the available activities and only between the available resources.
Login	Yes	Enter the login name for the resource.
Password, Confirm Password	No	Enter the password that you'd like to set for the resource.
Force Password Change at Next Login	No	Select the check box, if you want the resource to change their password when they log in for the first time.
Collaboration Group		Select the collaboration groups. See Create a Group or Help Desk section in the *Administering Oracle Field Service Guide*.
Refresh Rate	No	Enter the duration within which you want the dashboard charts to be refreshed automatically. This auto-refresh applies only to the dashboard charts and not other parts of the application. This field is shown on the **Add Resource** page, only if your administrator has added it.

Field	Mandatory	Description
Initial Ratio for Resource Value		See *How do I set the initial ratio for activity duration?*. **Note:** If you select a resource from the Home page, navigate to the **Resource Info** page, and click Information, then the Initial ratio for Activity duration and Default ratio for Activity duration values are displayed on the **Edit Resource** page.
Locale Settings		
Message Language	Yes	Select the language in which the resource sees the error messages.
Time Zone	Yes	Select the time zone that the resource views in the application.
Time Format	Yes	Select the time format (12–hour or 24–hour) that the resource views in the application.
Date Format	Yes	Select the date format that the resource views in the application.
Long Date Format	Yes	Select the long date format that the resource views in the application. A long date is a date that includes words. For example, Wednesday, May 6, 2020. **Note:** The field displays only for the Mobile Worker and Manager/Admin/Dispatcher resource type.

5. Click **Submit**.

What are the common inventory actions?

You can perform inventory transactions on behalf of a mobile worker, if you've the user type permissions.

You perform the inventory actions on the **Inventory list** page on the Activity details page.

Note: You can see inventory actions such as, install, deinstall, and exchange only when the activity is in a Started status.

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↑ Activity Details

Equipment List

Add to Required   Add to Customer

◢ 🏠 **Required** 1

Inventory Type	Model	Missing Quantity	Installed	Quantity
FIT2100 Treadmill	CT800	1		1

▶ 🚐 **Technician** 6

Common inventory actions are listed in this section. The actual configuration may differ based on the way your organization has implemented the application.

How do I exchange the inventory installed for a customer?

Use the exchange action to replace equipment on the customer's premises with a piece of equipment from the mobile worker's inventory pool.

Here's an example of an inventory exchange. Let's say a DVR set top box is being upgraded to a new model. The mobile worker initiates an exchange action, which removes the equipment from the customer's pool and installs the upgraded box from the mobile worker's inventory pool.

1. Open an activity that is in Started status.
2. Open the **Inventory** tab and click **Exchange**.
3. On the **Inventory exchange** window, select another serialized inventory from the mobile worker's inventory pool with which you want to exchange the customer's inventory.
4. Click **OK**.

   When you exchange inventory, the original equipment in the customer pool shows as **Deinstalled** and the newly swapped device shows as **installed**.

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How do I deinstall inventory?

Use the **Add to Deinstalled** action to track equipment or inventory removed from the customer pool. For example, if a mobile worker removes an existing cable box at the customer premise, the **Add to Deinstalled** action tracks the removal of the equipment.

1. Open an activity that is in Started status.
2. Open the **Inventory** tab and click the **Add to Deinstalled** link for the equipment in the customer pool.

   The Deinstall inventory dialog appears, as shown in this screenshot:

3. Enter the details of the inventory you're deinstalling.

   If this is non-serialized inventory and you enter a value that exceeds the quantity precision that's configured, then the precision is rounded off. For example: Quantity precision for an Inventory type = 2. You enter 1.4552; this is rounded off to 1.46. In general, the half-up rounding rule is applied; that is, 0.5 becomes 1 and 0.4 becomes 0. If you enter extra zeros after the decimal point, then all trailing zeros are trimmed and not displayed in the inventory pool. If you try to deinstall more non-serialized inventory than you've in the pool, then the message, 'The quantity 6.5 exceeded your available quantity of 5. Are you sure you want to proceed?' is displayed.

4. Click **Submit**.

   Equipment now shows as **Deinstalled** in the customer pool. If you're using a warehouse to maange inventory, the equipment now shows as Deinstalled and its quantity is incremented in the Warehouse section on the **Equipment List** page.

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How do I install inventory?

Use the install inventory action to track equipment or inventory that is moved from the mobile worker's inventory pool to the customer's inventory pool. Typically, mobile workers install new equipment as part of the activity completion process and the **Add to Installed** action tracks the inventory consumed during the activity. If you use a warehouse to manage inventory, mobile workers draw the new equipment from the warehouse.

1. Use one of these methods to select the equipment that you want to install:
    - Search for the equipment that you want to install either from the global search field or within the warehouse that's assigned to the activity.
    - Scan for the equipment using a barcode scanner.
    - Open an activity that's in Started status. Open the **Inventory** tab and go to the Warehouse section. Search for the required equipment within the warehouse.
2. Click **Add to Installed** for the equipment in the mobile worker pool.

    The Add to Installed dialog box appears, as shown in this screenshot:

3. Enter the details of the inventory you are installing.

    If this is non-serialized inventory and you enter a value that exceeds the quantity precision that's configured, then the precision is rounded off. For example: Quantity precision for an Inventory type = 2. You enter 1.4552; this is rounded off to 1.46. In general, the half-up rounding rule is applied; that is, 0.5 becomes 1 and 0.4 becomes 0. If you enter extra zeros after the decimal point, then all trailing zeros are trimmed and not displayed in the inventory pool.

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If you try to install more non-serialized inventory than you have in the pool, then the message, 'The quantity 6.5 exceeded your available quantity of 5. Are you sure you want to proceed?' is displayed.

4. Click **Submit**.

The equipment is installed and the inventory is deducted from the warehouse.

5. Optionally, click **Deinstall.**

This allows the ability to undo an install if, for example, a device was installed in error. When you deinstall, the equipment is added back and its quantity is incremented in the warehouse.

How do I suspend an activity?

You can suspend an activity and return to it at a later time in the route.

You can suspend both started and pending activities. The started activity is always ordered; the pending activity must be ordered.

When you suspend a started activity, the activity has these characteristics:

- You can work on it later during the day.

- A duplicate of the original activity is created in a suspended status.

- The duplicate is created for tracking purposes.

When you suspend a pending activity, it is converted to a not-ordered pending activity.

1. Open the **Activity details** page for the activity.
2. Click **Actions** > **Suspend**.

The **Suspend activity** dialog box displays and shows the fields configured for your organization.

3. Select the time required to complete the remaining part of the activity in the **Duration** field.

The duration of the pending activity is the duration you've added here and not the one calculated automatically.

4. Select the reason for suspending the activity from the **Suspend Reason** drop-down list, and enter any notes you think might be helpful.

5. Click **Submit**.

If you suspend an activity multiple times, the final duration of the activity is considered to be the duration provided for the most recent suspension.

How do I reschedule an activity?

If your user type allows it, you can reschedule an activity for another day. Activities that have crossed the Overnight work time are 'frozen'. You cannot reschedule such activities.

1. From the **Activity details** page, click the activity that you want to reschedule.
2. Click **Actions** > **Reschedule**.

The **Reschedule Activity** page displays.

3. Click the date to which you want to move the activity.
   - Blue dates are in the future and can be selected
   - Black dates are in the past and cannot be selected

   Oracle Fusion Field Service checks your schedule for the day and then displays the times in your schedule that are available for moving this activity. Rescheduling options include these:
   - Not ordered
   - Set first
   - After (an activity)
   - Set last

   If no schedule information is available, Oracle Fusion Field Service displays **Not Ordered** and **Ordered**.
4. Select a rescheduling option for this activity.
5. Review the alerts in the confirmation dialog box, and then click **Submit**.

How do I update an activity location by repositioning the pin?

Sometimes, the activity location can't be resolved, is resolved with a low accuracy, or the site might have multiple entrances. In such cases, you can update the activity location by repositioning the pin on the map manually.

The Reposition button is available when:

- The address is resolved with a high accuracy.

- The address is resolved, but the accuracy is low.

- The address isn't resolved and an approximate location is available.

  > **Tip:** If you've requested Google to change any information on the map, Oracle Fusion Field Service may take some time to display it. You can keep refreshing the page to see the change. If not, you can make some insignificant change to the address so that Oracle Fusion Field Service sends a new request to update the address.

1. Open the activity for which you want to update the location.
2. On the **Activity Details** page, click **Update Location**.
3. Click **Reposition Pin** and place the pin at the desired location on the map.
4. Click **Update**.

   If you change only the address fields and click **Resolve**, then the address fields and coordinates are updated. If you reposition the pin without changing the address, then only the coordinates are updated.

   When you update a location on the map, then the coordinate accuracy is considered as high. For more information about the best practices to resolve the coordinates, see the knowledge article **What are the best practices to resolve geocoordinates in Oracle Fusion Cloud Field Service? (Doc ID 2947220.1)** on My Oracle Support.

How do I configure the Settings tab?

Use the fields on the **Settings** tab to define the general information about a scenario step for a message scenario, including the recipient, delivery channel, and other message delivery parameters.

Fields in the Settings tab

Field Name	Description	Possible Values
Name	The name of the step	Name of the steps to a maximum of 64 characters.
Type	The type of step	Start, Inner An inner step is triggered by the results from the start step or a previous inner step. An inner step may or may not be performed depending on the result of the start step. Here's an example of an inner step: let's say you've configured a step to notify a customer by email. You can configure an inner step to notify the mobile worker, if notifying the customer through email fails.
Recipient	The person or entity receiving the message.	Customer, Dispatcher, Resource, Use Static Address **Note:** When you select Customer, Resource, or Dispatcher, the recipient's address is obtained from the activity or resource fields. However, if you select Use Static Address, you must enter a static email address using the *notify@example.com* format. You can enter multiple email addresses, separating each by a comma or semicolon.
Recipients (Add new)	Visible only if you select Use static address in the Recipient field. Click Add new and select the email address of a helpdesk. These options are displayed: • Deliver to helpdesk: The message is broadcast to the helpdesk; it's available in the helpdesk as a system message. Any operator in the helpdesk can take this chat and it will be moved to the operator's active chat list where they can act on it. Other operators will not see the message in the helpdesk queue, but they can view this message from the chats in progress menu to know who's working on this message. • Deliver to helpdesk operators: The message is delivered to all the operators within the helpdesk.	Resources or helpdesks
Delivery Channel	The method used to send the message **Note:** The methods used are company-specific and correspond to the list of delivery channels configured for the company.	Email, Set Property (used to set new property value for entities), Collaboration
Sending time	The time when the message is to be sent	Select one of following options: • Day of event

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Field Name	Description	Possible Values
	Note: The messages with **Day of route** option for non-scheduled activities get the status **falsemethod (ACTIVITY_IS_NONSCHEDULED)** as the route date isn't defined.	• Time of event • Day of route For example, if you select Day of event, select +, and enter 2 in the Days field, then the messages are sent after two days from the Day of event.
from	The time when the scenario step can start **Note:** This option isn't applicable when **Sending time** is **time of event**.	00:00 – 23:59 or 12:00AM – 11:59PM, depending on the time format settings
Sending will time out in	The end of the time range during which the message can be delivered, measured in hours and minutes from the sending time	00:01 – 99:59
Sending delay	Time period in minutes between message creation and message sending	0 – 999
Block messages for specific days	The days of the week on which proactive customer messages should not be sent	Sun – Sat. When a day is selected, messages will not be sent on that day.
Block messages for holidays	Whether proactive customer messages can be sent on company holidays. **Note:** The list of holidays can be configured in **Company Settings** > **Holidays**.	When the check box is selected, messages will not be sent on company holidays.
Blocked messages sending	The number of days to shift proactive customer messages back in the calendar if messages are assigned for a day of the week for which a block is set or if they're assigned to fall on a company holiday when holidays are blocked. **Note:** If a message can't be sent because it falls on a non-working day or a holiday and can't be shifted to a working day, it will be blocked with the **falsemethod** status and the **NONWORKING_DAY** description.	0 – 10, when 0 means that the messages will be blocked, because there's no shift of days defined.
Number of attempts on 'failed' status	**Interval** is the maximum number of tries (including the initial one) to resend a message if it's returned with a **Failed** notification status. The **minutes** field defines the number of minutes between tries to resend the message. This functionality is available for all messages except **Set property** and **External launch condition**. The **Failed** tries are ignored if: • Scenario processing has been stopped. (See the Scenarios in which messages are removed section later in this topic.) • The next try can't be scheduled before the message expires.	1 – 999 for both the number of tries and the minutes between tries.

Field Name	Description	Possible Values
	• Further tries are pointless, for example, if the email address is invalid. **Note:** An agent can also stop further **Failed** tries or change their number using the **fault_attempt** and **stop_further_attempts** fields in a **send_message** response or a **set_message_status** request.	
Number of attempts on 'sent'status	**Interval** is the maximum number of tries (including the initial one) to resend a message if it's returned with a **Sent** notification status. The **minutes** field defines the number of minutes between tries to resend the message. This functionality is available only for **External system** messages. The **Sent** tries are ignored if: • Scenario processing has been stopped. (See the Scenarios in which messages are removed section later in this topic.) • The next tries can't be scheduled before the message expires.	1 – 999 for both the number of tries and the minutes between tries.
Customer notification time	The time range to be communicated to the customer. If the final status for the message is **Sent** or **Delivered**, the **Customer notification time** is stored in the **time delivered start/end** activity fields. **Note:** This option is available only when the recipient is **Customer.**	Service Window, Delivery Window, ETA.
Reply address	The email address (for example, notify@ofs.oracle.com) for sending notifications when you select Email as the Delivery channel and Customer, Dispatcher, or Resource as the Recipient. If you've registered a custom domain or subdomain in Oracle Cloud Console, add the address with the custom domain (for example, no_reply@your_business_unit.your_company.com). For more information on how to register a domain, see the Using Cloud Console guide. If you leave this field blank or enter an incorrect ID, Oracle Fusion Field Service uses the default reply address from Oracle (noreply@fs.ocs.oraclecloud.com). This address has the proper SPF and DKIM settings set up for the domain. However, if you use a custom reply address, the best practice is to enable SPF and DKIM on your email server's DNS. For more information on how to enable SPF and DKIM, see the 'Configure SPF' topic in the Oracle Cloud Infrastructure Documentation and the Register your Domain to Enable DKIM topic in the Cloud Console guide.	Any valid email address.
Email address source	The field containing the email address to be used in the 'Email' notification method Not applicable for the 'use static address' recipient	Any field to be selected from the drop-down list of the email address sources available in the system. You can enter multiple email addresses, separating each by a comma or semicolon.

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Scenarios in which messages are removed

There are several actions in the system which, under certain conditions, might remove the existing messages, if the messages haven't yet been sent.

Activity Start action

Event/Action	Description
Removed Messages	`Reminder, Change, Day before`
Status	`obsolete`
Description	`ACTIVITY_WAS_STARTED`

Activity Cancelation action

Event/Action	Description
Removed Messages	All
Status	`obsolete`
Description	`ACTIVITY_WAS_CANCELED`

Activity Notdone action

Event/Action	Description
Removed Messages	All
Status	`obsolete`
Description	`ACTIVITY_WAS_NOT_DONE`

Deletion of a Pending Activity action

Event/Action	Description
Removed Messages	All
Status	`obsolete`
Description	`ACTIVITY_WAS_DELETED`

Activity Suspend action

Event/Action	Description
Removed Messages	All except `SLA Warning`
Status	`obsolete`
Description	`ACTIVITY_WAS_SUSPENDED`

Activity Reschedule action

Event/Action	Description
Removed Messages	All except `SLA Warning`
Status	`obsolete`
Description	`ACTIVITY_WAS_RESCHEDULED`

Activity Move action

Event/Action	Description
Removed Messages	`Reminder`, `Change`, `Not started`, `Service window warning`, `Call ahead`, `Add`
Status	`obsolete`
Description	`ACTIVITY_WAS_MOVED`

Convert an activity to not ordered

Event/Action	Description
Removed Messages	`Reminder`, `Change`
Status	`obsolete`
Description	`ACTIVITY_IS_NOT_ORDERED`

Reminder message creation action

Event/Action	Description
Removed Messages	`Customer` messages: Recipient = `Customer`
Status	`obsolete`

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Event/Action	Description
Description	`NEW_CUSTOMER_MESSAGE_WAS_CREATED`
Notes	The `Reminder` launch condition isn't invoked if the existing customer messages can't be dropped using the `drop_message` call (if required).

Change message creation action

Event/Action	Description
Removed Messages	`Customer` messages: Recipient = `Customer`
Status	`obsolete`
Description	`NEW_CUSTOMER_MESSAGE_WAS_CREATED`
Notes	The `Change` launch condition isn't invoked if an incomplete `Reminder` exists, or if the existing customer messages can't be dropped using the `drop_message` call (if required).

Cancel visit action

Event/Action	Description
Removed Messages	All (visit related)
Status	`obsolete`
Description	`VISIT_WAS_CANCELED`

Delete visit action

Event/Action	Description
Removed Messages	All (visit related)
Status	`obsolete`
Description	`VISIT_WAS_DELETED`

Start visit action

Event/Action	Description
Removed Messages	`Visit reminder, Visit change #, Visit day before`

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Event/Action	Description
Status	**obsolete**
Description	**VISIT_WAS_STARTED**

Applying new visit formulas action

Event/Action	Description
Removed Messages	All (visit related)
Status	**obsolete**
Description	**VISIT_WAS_RECALCULATED**
Notes	The messages are only removed if the visit is removed as the result of applying formula changes.

Block/Shift messages action

Event/Action	Description
Removed Messages	N/A
Status	**false**
Method Description	**NONWORKING_DAY**
Notes	This removal is performed if message sending of isn't allowed for a non-working day (or a holiday) and such message can't be shifted to an appropriate working day.

How do I configure the subject and body of a message in the Patterns tab?

The **Patterns** tab defines the content of the message that's sent for the scenario step, such as the subject and body. The options for the pattern depend on the selected delivery channel.

Every pattern has a subject and body. Some patterns can be defined for several languages, although English is the default language and it is used if the message step does not include a pattern in another language. The different pattern types are described below.

Patterns can use placeholders to represent actual values that will be inserted when the message is sent. For example, if you want to include the customer's name in a message, you can use the **{activity_customer_name}** placeholder.

Placeholders

Use placeholders in messages when you want the message to include an actual value for an entity when the message is generated. Placeholders let you create a single message pattern that replaces the placeholders with information specific to each instance, such as the resource time and time of arrival. You can define the type of encoding to be applied to a placeholder value before printing. The encoding can be specified after a name of the placeholder. The | character is used as the delimiter in this case. The following encoding types are supported:

- none
- xml/html
- slashes/cslashes
- cescape
- url
- cgi
- csv_item
- json
- sql_slashes

Here are a couple of examples for encoding placeholder values:

```
CSV: "{pr_address|csv_item}","{pr_comments|csv_item}","{pr_notes|csv_item}"
URL: address={pr_address|cgi}&comments={pr_comments|cgi}&notes={pr_notes|cgi}
```

Email notification pattern

When the delivery channel is email, you can define the subject and body for the message using placeholders to represent the actual value that will be inserted into the message.

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Modify scenario step

Settings   Patterns   Blocking Conditions   Next Steps

Message patterns

Subject (English)

Customers canceled via ETAdirect IVR

Body (English)

This appointment was canceled by the customer: {activity_customer_name} Address: {activity_address} Account: {activity_customer_number} Order: {activity_number}

○   **Generate content on message creation**
◉   **Generate content on message sending**

Cancel   **Modify**

External application notification pattern

External application notification patterns for the message body use XML, as shown in the figure.

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Message patterns	
Subject(English)	Body(English)

ORDER_ADDED	`<message>`
	`<f n="appt_number">{activity_number}</f>`
	`<f n="external_id">{resource_external_id}</f>`
	`<f n="time_slot">{activity_time_slot}</f>`
	`<f n="resource_name">{resource_name}</f>`
	`<f n="XA_Technology_Name">{pr_XA_Technology_Name}</f>`
	`</message>`

Message patterns	
Subject(English)	Body(English)

INSTALL VALIDATION	`<message>`
	`<f n="appt_number">{activity_number}</f>`
	`<f n="external_id">{resource_external_id}</f>`
	`<f n="XA_Service">Validate_Order</f>`
	`<f n="XA_TipoPeticion">Installed</f>`
	`</message>`
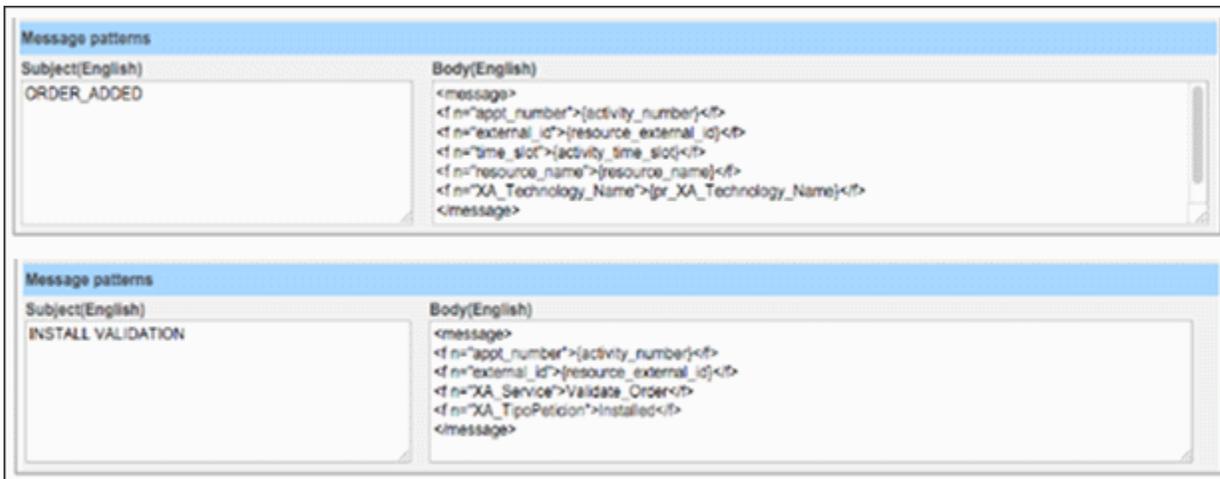
Set property notification pattern

The following message for the **Set property** delivery channel sets the CANCEL_REASON property to the value with index14, indicating a customer request as defined in the property settings. – 'CUSTOMER REQUEST', as is defined in the property settings.

Settings   **Patterns**   Blocking Conditions   Next Steps

Message patterns

Subject (English)

CANCEL_REASON

Body (English)

14

Subject (Greek)

Body (Greek)

○ **Generate content on message creation**

◉ **Generate content on message sending**

Cancel   **Modify**

Note: Values for properties should be defined using an internal format. In particular, use **property_label** to define the subject value. For enumeration properties, use the **index** value in a message body rather than its corresponding translation. Translations for enumeration property values are shown in the following screenshot.

Tip: If you want to delete a custom property, add the property in the **Subject** field and leave the **Body** field blank.

External launch condition notification pattern

In external launch condition patterns, the body defines the activity information to be passed to an external application, as shown in the figure.

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Timing of message content generation

The **Patterns** tab also lets you define when the message content should be generated. The options are:

- **On message creation**—This option is intended for use when messages are related to synchronizing activity statuses and assignments. If multiple operations are performed for the same activity within a short time period, a separate message should be generated for each operation. Each message should contain activity details that are accurate at the moment of creation. For example, if several sequential move operations are performed, it might be necessary to include **from** and **to** values in all intermediate messages.

- **On message sending**–This option is recommended for messages that are generated in advance, such as **Day before** and other proactive customer notifications.

What are the available activity message placeholders?

These are message placeholders related to activities.

Activity Number placeholder

Placeholder	Description
`activity_number`	ID of the corresponding work order in an external system

Activity Type placeholder

Placeholder	Description
`activity_type`	activity primary type (regular, reopened, prework, multiday_activity, multiday_activity_segment)

Activity Status placeholder

Placeholder	Description
`activity_status`	activity status

Activity Worktype placeholder

Placeholder	Description
`activity_worktype`	activity work type (name)

Activity Worktype ID placeholder

Placeholder	Description
`activity_worktype_id`	activity work type (id)

Activity Worktype Label placeholder

Placeholder	Description
`activity_worktype_label`	activity work type (label)

Activity Workzone placeholder

Placeholder	Description
`activity_workzone`	activity work zone (name)

Activity Worktype ID placeholder

Placeholder	Description
`activity_workzone_id`	activity work zone (id)

Activity Travel Area placeholder

Placeholder	Description
`activity_travel_area`	activity travel area (name)

Activity Travel Area ID placeholder

Placeholder	Description
`activity_travel_area_id`	activity travel area (id)

Activity Travel Area Label placeholder

Placeholder	Description
`activity_travel_area_label`	activity travel area (label)

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Activity Workskill placeholder

Placeholder	Description
`activity_workskill`	activity work skill (name). can only be used in the 'activity_workskills' block.

Activity Workskill ID placeholder

Placeholder	Description
`activity_workskill_id`	activity work skill (id). can only be used in the 'activity_workskills' block.

Activity Workskill Label placeholder

Placeholder	Description
`activity_workskill_label`	activity work skill (label. can only be used in the 'activity_workskills' block.

Activity Workskill Required Level placeholder

Placeholder	Description
`activity_workskill_required_level`	required work skill level for an activity. can only be used in the 'activity_workskills' block.

Activity Workskill Preferable Level placeholder

Placeholder	Description
`activity_workskill_preferable_level`	preferable work skill level for an activity. can only be used in the 'activity_workskills' block.

Activity Start Time placeholder

Placeholder	Description
`activity_start_time`	estimated start time of the activity ("hh24:mi" format)

Activity End Time placeholder

Placeholder	Description
`activity_end_time`	estimated end time of the activity ("hh24:mi" format)

Activity duration placeholder

Placeholder	Description
`activity_duration`	estimated activity duration

Activity Service Window Start placeholder

Placeholder	Description
`activity_service_window_start`	service window start ("hh24:mi" format)

Activity Service Window End placeholder

Placeholder	Description
`activity_service_window_end`	service window end ("hh24:mi" format)

Activity SLA Window Start placeholder

Placeholder	Description
`activity_sla_window_start`	sla window start ("yyyy-dd-mm hh24:mi" format)

Activity SLA Window End placeholder

Placeholder	Description
`activity_sla_window_end`	sla window end ("yyyy-dd-mm hh24:mi" format)

Activity Delivery Window Start placeholder

Placeholder	Description
`activity_delivery_window_start`	delivery window start ("hh24:mi" format)

Activity Delivery Window End placeholder

Placeholder	Description
`activity_delivery_window_end`	delivery window end ("hh24:mi" format)

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Activity Time Delivered Start placeholder

Placeholder	Description
`activity_time_delivered_start`	start of the time window delivered to customer ("hh24:mm" format)

Activity Time Delivered End placeholder

Placeholder	Description
`activity_time_delivered_end`	end of the time window delivered to customer ("hh24:mm" format)

Activity Traveling Time placeholder

Placeholder	Description
`activity_traveling_time`	estimated travel time from the previous activity (minutes)

Activity Time Slot placeholder

Placeholder	Description
`activity_time_slot`	activity time slot (name)

Activity Time Slot ID placeholder

Placeholder	Description
`activity_time_slot_id`	activity time slot (id)

Activity Time Slot Label placeholder

Placeholder	Description
`activity_time_slot_label`	activity time slot (label)

Activity Time Zone placeholder

Placeholder	Description
`activity_time_zone`	name of the time zone defined for the activity

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Activity Time Zone ID placeholder

Placeholder	Description
`activity_time_zone_id`	id of the time zone defined for the activity

Activity Timezone Label placeholder

Placeholder	Description
`activity_time_zone_label`	label of the time zone defined for the activity

Activity Timezone Diff placeholder

Placeholder	Description
`activity_time_zone_diff`	time difference of the time zone defined for the activity

Activity Customer Name placeholder

Placeholder	Description
`activity_customer_name`	customer's name

Activity Customer Number placeholder

Placeholder	Description
`activity_customer_number`	id of the corresponding customer's account in an external system

Activity Phone placeholder

Placeholder	Description
`activity_phone`	activity/customer contact information

Activity Email placeholder

Placeholder	Description
`activity_email`	activity/customer contact information

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Activity Cell placeholder

Placeholder	Description
`activity_cell`	activity/customer contact information

Activity Address placeholder

Placeholder	Description
`activity_address`	location of the activity

Activity City placeholder

Placeholder	Description
`activity_city`	location of the activity

Activity State placeholder

Placeholder	Description
`activity_state`	location of the activity

Activity Zip placeholder

Placeholder	Description
`activity_zip`	location of the activity

Activity Coord Status placeholder

Placeholder	Description
`activity_coord_status`	whether or not the activity coordinates were found

Activity Coordx placeholder

Placeholder	Description
`activity_coordx`	longitude of the activity (of customer's location)

Activity Coordy placeholder

Placeholder	Description
`activity_coordy`	latitude of the activity (of customer's location)

Activity Language placeholder

Placeholder	Description
`activity_language`	customer's messaging language (name)

Activity Language ID placeholder

Placeholder	Description
`activity_language_id`	customer's messaging language (id)

Activity Language Label placeholder

Placeholder	Description
`activity_language_label`	customer's messaging language (label)

Activity Reminder Time placeholder

Placeholder	Description
`activity_reminder_time`	customer's reminder notification time

Activity Position in Route placeholder

Placeholder	Description
`activity_position_in_route`	sequential position (starts from "1") of the corresponding activity in a route

Activity Time of Booking placeholder

Placeholder	Description
`activity_time_of_booking`	time when the activity was booked (customer activities) or created (internal activities). ("yyyy-dd-mm hh24:mi" format)

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Activity Time of Assignment placeholder

Placeholder	Description
`activity_time_of_assignment`	For the activity currently assigned to a resource, the placeholder returns the time when the corresponding move/reschedule/create operation was performed. For the activity in a bucket, the placeholder's value is empty ("yyyy-dd-mm hh24:mi" format).

Activity Link Min Interval placeholder

Placeholder	Description
`activity_link_min_interval`	minimum duration of the time interval between linked activities. This placeholder can only be used in the 'linked_activities' block.

Activity Link Max Interval placeholder

Placeholder	Description
`activity_link_max_interval`	maximum duration of the time interval between linked activities. this placeholder can only be used in the 'linked_activities' block.

What are the available launch conditions for escalation message?

These condition-driven launch conditions provide notifications about activities that are not started on time.

Not started 1 – This launch condition is invoked when an activity has not been started within a certain time after ETA.

Not started 2 – This launch condition is similar to **Not started 1**. It allows setting the second message with a different delay time. The `Not started` launch condition can only be invoked for a pending ordered activity (regular or reopened) in an activated route which belongs to the current working day. The **Enable not started trigger** feature should be enabled for the corresponding activity type. The **Not started 1** and **Not started 2** messages are independent and can be generated for the same activity at the same time.

Not activated – This message is sent if the resource has not activated their route the defined number of minutes after the planned start of the working day, according to the calendar. It works only once a day for a specific route. The messages are not generated again if the calendar has been changed. If any not activated in time messages are present for the resource at the moment of route activation, these messages become obsolete. For a new resource the Not activated in time messages are only generated on the next day (in the company time zone) after its creation. This launch condition is only invoked for resources with the **Enable Not activated in time alert and trigger** feature enabled.

Service window warning - This message is intended to notify of a possibility to lose the service window. It is sent in the case when the Activity has not been started within the defined number of minutes before the service window end.

This trigger is only invoked for pending ordered activities (regular or reopened) in an activated route with a service window that belongs to the current working day. This trigger is invoked only once per activity. You should also activate the **Enable SW Warning trigger** feature for the corresponding activity type.

Configure this trigger using the threshold parameter near the **Service window warning** trigger selector on the **Notification Triggers** screen. It defines the number of minutes before the end of service window that is used in the condition.

SLA window warning – This message is intended to notify of a possibility to lose the SLA window. This trigger is only invoked for pending or started activities (regular or reopened). The warning is sent if the activity has not been started (for pending activities) or completed (for started activities) the defined number of minutes before the SLA window end. It is invoked only once per activity. But, if SLA window end has changed after the generation of the SLA window warning messages, the trigger can be invoked again.

Configure this trigger using the threshold parameter (**hours/minutes**) near the **SLA window warning trigger** selector on the **Notification Triggers** screen. It defines the number of minutes before the end of the SLA window that is used in the condition.

Note: For more information, see the *Add a launch condition for a message scenario* section.

How does the Call Ahead launch condition work?

This action-driven launch condition is initiated when a mobile worker completes the previous activity or marks an activity as En route.

The launch condition is typically used to:

- Inform the customer.
- Initiate provisioning or hardware test while the resource is on the way.

When configured, the **Complete Activity** page has the mandatory Next Activity field. The resource is to select the next activity. When the resource submits the Complete Activity form, the application generates the `Call ahead` trigger for the next activity (selected by the resource).

Similarly, if the En route option is enabled and a mobile worker sets the status of an activity as En route, the application generates the `Call ahead` trigger for the next activity in the route. You can use this trigger to notify your customers.

Note: For more information, see the *Add a launch condition for a message scenario* section.

What's the Set Property method?

One of the delivery channels for a scenario step is **Set Property**. When you select this method, the message scenario can update all company-defined properties, except file properties.

The `set_property` method can update the following entities:

- Activity (except mass/repeating)

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- Inventory
- Resource
- User

The property values must use an internal format. In particular, use the index values for enumeration properties rather than their translations. In the **Subject** field, specify a label for the property you are assigning. Do not use a **pr_** or **prnum_** prefix for the label.

The `set_property` method supports the following predefined list of activity fields. Additional predefined fields are not available.

- appt_number
- customer_number
- customer_name
- cell (or "sms")
- address
- city
- state
- zip
- email
- phone
- points
- time_slot
- service_window (hh:mm; hh:mm)
- sla_window_start
- sla_window_end
- action (Only the `cancel_activity` and `unschedule_activity` action are supported. See the following sections for more details.)

What are the blocking conditions available for activities?

You can use these blocking conditions with activities.

Activity Status Blocking Condition

Activity Status	
Condition name	`[appt_status]`
Condition type	Activity
Description	Checks activity status
Valid values/format	`started`, `completed`, `suspended`, etc.

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Activity Status	
Case sensitive?	No
Suggested functions	`IN, NOT IN`

Customer Number Blocking Condition

Account Number	
Condition name	`[customer_number]`
Condition type	Activity
Description	Checks the account number
Valid values/format	text

Activity Type Blocking Condition

Activity Type	
Condition name	`[appt_type]`
Condition type	Activity
Description	Checks the activity type
Valid values/format	`regular, reopened, prework, multiday_activity, multiday_activity_segment`
Case sensitive?	No
Suggested functions	`IN, NOT IN`

Activity Time of Assignment blocking condition

Activity Time of Assignment	
Condition name	`[atime_of_assignment]`
Condition type	Activity
Description	Checks the time the activity is assigned in the time zone of the assigned resource.
Valid values/format	`YYYY-MM-DD HH24:MI:SS`
Suggested functions	`IS NULL, IS NOT NULL, CONTAINS, DOESN'T CONTAIN, <, >`
Example 1	**Condition**: `'Time of assignment' CONTAINS '2012-05-21'` **Result**: Blocks all activities that were assigned during `'2012-05-21'`
Example 2	**Condition**: `'Time of assignment' <'2012-05-21'` **Result**: Blocks all activities that were assigned before `'2012-05-21'`

Activity Time of Booking Blocking Condition

Activity Time of Booking	
Condition name	`[atime_of_booking]`
Condition type	Activity
Description	Checks the time the activity is booked in the time zone of the assigned resource.
Valid values/format	`YYYY-MM-DD, HH24:MI:SS`
Suggested functions	`IS NULL, IS NOT NULL, CONTAINS, DOESN'T CONTAIN, <, >`
Example 1	**Condition**: `'Time of booking' CONTAINS '2012-05-21'` **Result**: Blocks all activities that were booked during `'2012-05-21'`
Example 2	**Condition**: `'Time of booking' < '2012-05-21'` **Result**: Blocks all activities that were booked before `'2012-05-21'`

Activity Work Type Blocking Condition

Activity Type	
Condition name	`[aworktype]`
Condition type	Activity
Description	Checks the activity work type
Valid values/format	Activity type IDs
Notes	This condition can be used with both activity types and their groups.

Address Blocking Condition

Address	
Condition name	`[caddress]`
Condition type	Activity
Description	Checks the activity address
Valid values/format	text

Calendar Days from Activity Assignment blocking condition

Calendar Days from Activity Assignment	
Condition name	`[calendar_days_from_activity_assignment]`
Condition type	Activity

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Calendar Days from Activity Assignment	
Description	Calculated as the number of calendar days from the activity assignment date to the current date of the resource.
Valid values/format	integer >= 0
Suggested functions	`IN, NOT IN, <, >, <=, >=`
Example 1	**Condition**: `'Calendar days from activity assignment' <= 1` **Result**: Blocks all activities that were assigned yesterday `(1)` or today `(0)`.
Notes	Both dates have the same time zone difference.

Calendar Days from Activity Booking blocking condition

Calendar Days from Activity Booking	
Condition name	`[calendar_days_from_activity_booking]`
Condition type	Activity
Description	Calculated as the number of calendar days from the activity booking date to the current date of the resource the activity is assigned to.
Valid values/format	integer >= 0
Suggested functions	`IN, NOT IN, <, >, <=, >=`
Example 1	**Condition**: `'Calendar days from activity booking' <= 1` **Result**: Blocks all activities that were booked or created yesterday `(1)` or today `(0)`.
Notes	Both dates have the same time zone difference.

Capacity Categories blocking condition

Capacity Categories	
Condition name	`[activity_capacity_categories]`
Condition type	Activity
Description	Selects activities that belong to the given capacity category.
Valid values/format	Capacity category IDs
Suggested functions	`IN` - the activity belongs to all provided categories. `NOT IN`- the activity belongs to none of the categories provided in the list.
Notes	The same rules apply as in Quota Management.

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City blocking condition

City	
Condition name	**[ccity]**
Condition type	Activity
Description	Checks the city of the activity location.
Valid values/format	text

Coordinate Status blocking condition

Coordinate Status	
Condition name	**[acoord_status]**
Condition type	Activity
Description	Checks whether or not the current activity coordinates were found
Valid values/format	**found, not_found, invalid**

Coordinate X blocking condition

Coordinate X	
Condition name	**[acoord_x]**
Condition type	Activity
Description	Checks the longitude of the activity location
Valid values/format	A longitude value, such as **37.40562** or **-79.42639**

Coordinate Y blocking condition

Coordinate Y	
Condition name	**[acoord_y]**
Condition type	Activity
Description	Checks the latitude of the activity location
Valid values/format	A latitude value, such as **22.831438**

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Days from Activity Assignment blocking condition

Days from Activity Assignment	
Condition name	`[days_from_activity_assignment]`
Condition type	Activity
Description	The number of full days elapsed between the time the activity was assigned and the current time.
Valid values/format	integer >= 0
Suggested functions	`IN, NOT IN, <, >, <=, >=`
Example	**Condition**: `'Days from activity assignment' = 0` **Result**: Blocks all activities assigned within the last 24 hours. If the current time is `'2012-09-27 08:28:22'`, the condition will return the activity that was assigned on `'2012-09-26 19:17:00'`.

Days from Activity Booking blocking condition

Days from Activity Booking	
Condition name	`[days_from_activity_booking]`
Condition type	Activity
Description	The number of full days elapsed between the time the activity was booked and the current time.
Valid values/format	integer >= 0
Suggested functions	`IN, NOT IN, <, >, <=, >=`
Example	**Condition**: `'Days from activity booking' = 0` **Result**: Blocks all activities booked within the last 24 hours. If the current time is `'2012-09-27 08:28:22'`, the condition will return the activity that was booked on `'2012-09-26 19:17:00'`.

Days to Activity blocking condition

Days to Activity	
Condition name	`[days_to_appt]`
Condition type	Activity
Description	Returns the number of days from the message creation to the activity.
Valid values/format	integer >= 0
Suggested functions	`IN, NOT IN`

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Activity Scheduled? blocking condition

Activity Scheduled?	
Condition name	`[is_activity_scheduled]`
Condition type	Activity
Description	Checks if the activity is scheduled
Valid values/format	`1` or `<empty>`
Suggested functions	`IS NULL, IS NOT NULL`
Notes	This condition cannot be used in the `cancel activity` scenario. This constraint is related to the two-phase nature of the `Cancel non-scheduled activity` action.This action consists of two steps: 1. Making the activity `scheduled` (moving it to the current day). 2. Performing the`cancel` action. According to this scenario, the launch condition is invoked when the activity is already `scheduled`. Therefore, the condition is always `false`.

Message Language blocking condition

Message Language	
Condition name	`[clanguage]`
Condition type	Activity
Description	Checks the language of the message to be sent to the customer
Valid values/format	Language IDs
Suggested functions	`IS NULL, IS NOT NULL`
Notes	This condition is true for both segmentable activities and individual segments which can be distinguished by the value of the `Type` field. For segmentable activities the `Type` value is `multiday_activity`, while for segments it is `multiday_activity_segments`.

Customer Name blocking condition

Name	
Condition name	`[cname]`
Condition type	Activity
Description	Checks the customer name
Valid values/format	text

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Not Ordered Activity blocking condition

Not Ordered Activity	
Condition name	`[all_day_flag]`
Condition type	Activity
Description	Checks if the activity is not ordered
Valid values/format	1 or `<empty>`
Suggested functions	`IS NULL, IS NOT NULL`

Pending Activity Order blocking condition

Pending Activity Order	
Condition name	`[pending_activity_order]`
Condition type	Activity
Description	Checks the offset of a pending activity from the start of the route to which this activity belongs
Valid values/format	integer >= -1
Suggested functions	`IN, NOT IN, <, >, <=, >=`
Example	**Condition**: `'Pending activity order' = 1` **Result**: Blocks the first pending activity in the route.
Notes	The following logic applies:– "1..." pending ordered activity in the route (offset from the route start)– "1" pending ordered in the bucket– "1" pending ordered non-scheduled activity– "-1" pending not ordered activity– "0" started, completed, canceled, notdone, suspended activity

Phone blocking condition

Phone	
Condition name	`[phone]`
Condition type	Activity
Description	Checks the customer's phone number
Valid values/format	text
Notes	Takes into account whether the contact can be used with messages.

Email Address blocking condition

Email Address	
Condition name	`[email]`

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Email Address	
Condition type	Activity
Description	Checks the customer's email address
Valid values/format	text
Notes	Takes into account whether the contact can be used with messages.

Cellular Phone blocking condition

Cellular Phone	
Condition name	[cell]
Condition type	Activity
Description	Checks the customer's cell phone number
Valid values/format	text
Notes	Takes into account whether the contact can be used with messages.

Points blocking condition

Points	
Condition name	[apoints]
Condition type	Activity
Description	Checks the number of points assigned to the activity
Valid values/format	integer

Position in Route blocking condition

Position in Route	
Condition name	[position_in_route]
Condition type	Activity
Description	Checks the activity position in the route
Valid values/format	integer

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Reminder blocking condition

Reminder	
Condition name	`[cmessagetime]`
Condition type	Activity
Description	Checks the number of minutes before the `Notification base` when reminder notification is to be generated
Valid values/format	integer

SLA Start blocking condition

SLA Start	
Condition name	`[sla_window_start]`
Condition type	Activity
Description	Checks the start of the activity SLA window
Valid values/format	`YYYY-MM-DD, HH24:MI:SS`

SLA End blocking condition

SLA End	
Condition name	`[sla_window_end]`
Condition type	Activity
Description	Checks the end of the activity SLA window
Valid values/format	`YYYY-MM-DD, HH24:MI:SS`

Service Window End blocking condition

Service Window End	
Condition name	`[service_window_end]`
Condition type	Activity
Description	Checks the end of the activity service window
Valid values/format	`HH24:MI`

Service Window Start blocking condition

Service Window Start	
Condition name	`[service_window_start]`
Condition type	Activity
Description	Checks the start of the activity service window
Valid values/format	`HH24:MI`

Start blocking condition

Start	
Condition name	`[eta]`
Condition type	Activity
Description	Checks if the activity has an ETA
Valid values/format	`HH24:MI:SS`
Suggested functions	`IS NULL, IS NOT NULL`

State blocking condition

State	
Condition name	`[state]`
Condition type	Activity
Description	Checks the area name of the activity (state, county, land, etc.)
Valid values/format	text

Time Slot blocking condition

Time Slot	
Condition name	`[time_slot]`
Condition type	Activity
Description	Checks the label of the activity time slot

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Time Zone blocking condition

Time Zone	
Condition name	`[c_zid]`
Condition type	Activity
Description	Checks the activity time zone
Valid values/format	Time zone IDs

Time Notified blocking condition

Time Notified	
Condition name	`[time_delivered]`
Condition type	Activity
Description	Checks the start time of arrival interval communicated to the customer
Valid values/format	`HH24:MI`
Suggested functions	`IS NULL, IS NOT NULL`
Notes	This condition works both for a single activity and a visit. If the message is based on a visit, it refers to the visit's field instead of the activity's field.

Travel Area blocking condition

Travel Area	
Condition name	`[atravelarea]`
Condition type	Activity
Description	Checks the activity travel area
Valid values/format	Travel area IDs

Traveling Time blocking condition

Traveling Time	
Condition name	`[travel]`
Condition type	Activity
Description	Checks the travel time from the previous activity/location to the current activity
Valid values/format	integer

Work Order blocking condition

Work Order	
Condition name	`[appt_number]`
Condition type	Activity
Description	Checks the activity work skills
Valid values/format	Work skill IDs
Suggested functions	`IS NULL` - The activity doesn't require any work skills. `IS NOT NULL` - The activity requires at least one work skill. `IN` - The activity requires all the provided work skills. `NOT IN` - The activity requires none of the provided work skills.
Example 1	**Activity #1 work skills:** `Install IPTV (1),English (10)` **Activity #2 work skills:** `Install IPTV (1), Spanish (11)` **Condition:** `Activity work skill IN (1)` **R**
Example 2	**Condition:** `Activity work skill IN (1, 10)` **Condition:** `Activity work skill NOT IN (1,10` **Result: <NONE>**
Notes	Groups of work skills are also supported. In this case a group is handled as any work skill it includes.

ZIP/Postal Code blocking condition

ZIP/Postal Code	
Condition name	`[czip]`
Condition type	Activity
Description	Checks ZIP (postal code)
Valid values/format	text

Time Delivered End blocking condition

Time Delivered End	
Condition name	`[ctime_delivered_end]`
Condition type	Activity
Description	Checks the end time of arrival interval communicated to the customer
Valid values/format	`YYYY-MM-DD, HH24:MI:SS`
Suggested functions	`IS NULL, IS NOT NULL`

Time Delivered Start blocking condition

Time Delivered Start	
Condition name	`[ctime_delivered_start]`
Condition type	Activity
Description	Checks the start time of arrival interval communicated to the customer
Valid values/format	`YYYY-MM-DD, HH24:MI:SS`
Suggested functions	`IS NULL, IS NOT NULL`

Delivery Window End blocking condition

Delivery Window End	
Condition name	`[delivery_window_end]`
Condition type	Activity
Description	Checks the delivery window end
Valid values/format	`HH24:MI:SS`

Delivery Window Start blocking condition

Delivery Window Start	
Condition name	`[delivery_window_start]`
Condition type	Activity
Description	Checks the delivery window start
Valid values/format	`HH24:MI:SS`

How do I add a plug-in to a page?

You add a plugin to a context layout page, so that Mobile Workers can open it. You can configure the parameters for a button to send the parameters to the plugin, or to open a specific page, or another plugin.

1. Sign in to the application as a setup administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to add the plugin.
4. Find and click the page to which you want to add the plugin.

   The **Visual Form Editor** page appears. Plug-ins are available not only on the Visual Form Editor, but on old context layout structures such as Parts Details as well. On such pages, add an action and select a plugin from the list.

5. Drag-and-drop the **Button** element to the section from where you want to invoke the plugin.

> **Note:** You cannot add buttons to context layout structures that are responsible for changing the state of an activity, simultaneously with submitting data. Some of the context layout structures where you cannot add buttons are Add activity, Not done activity, Install inventory, End activity. Further, you cannot remove or change the visibility of the two predefined buttons on these pages: Dismiss and Submit. This is to preserve the data integrity within transitions between states.

6. Click the button.
7. In the **Standard action screen** field, click the pencil icon.
8. Select **Plug-ins**.
9. In the **Screens list**, select the name of the plugin that you want to open and click **OK**.

   The label of the plugin is displayed in the **Plug-in** field. By default all plugins have a visibility of Read-only.

10. In the **Visibility** section, add the conditions based on which the plugin is visible.
11. In the **Translations** section, add a name for the plugin. [Optional]

    This name is displayed on the page from which the plugin will be invoked. This screenshot shows the Visual Form Editor page where a plugin is added to a Button element:
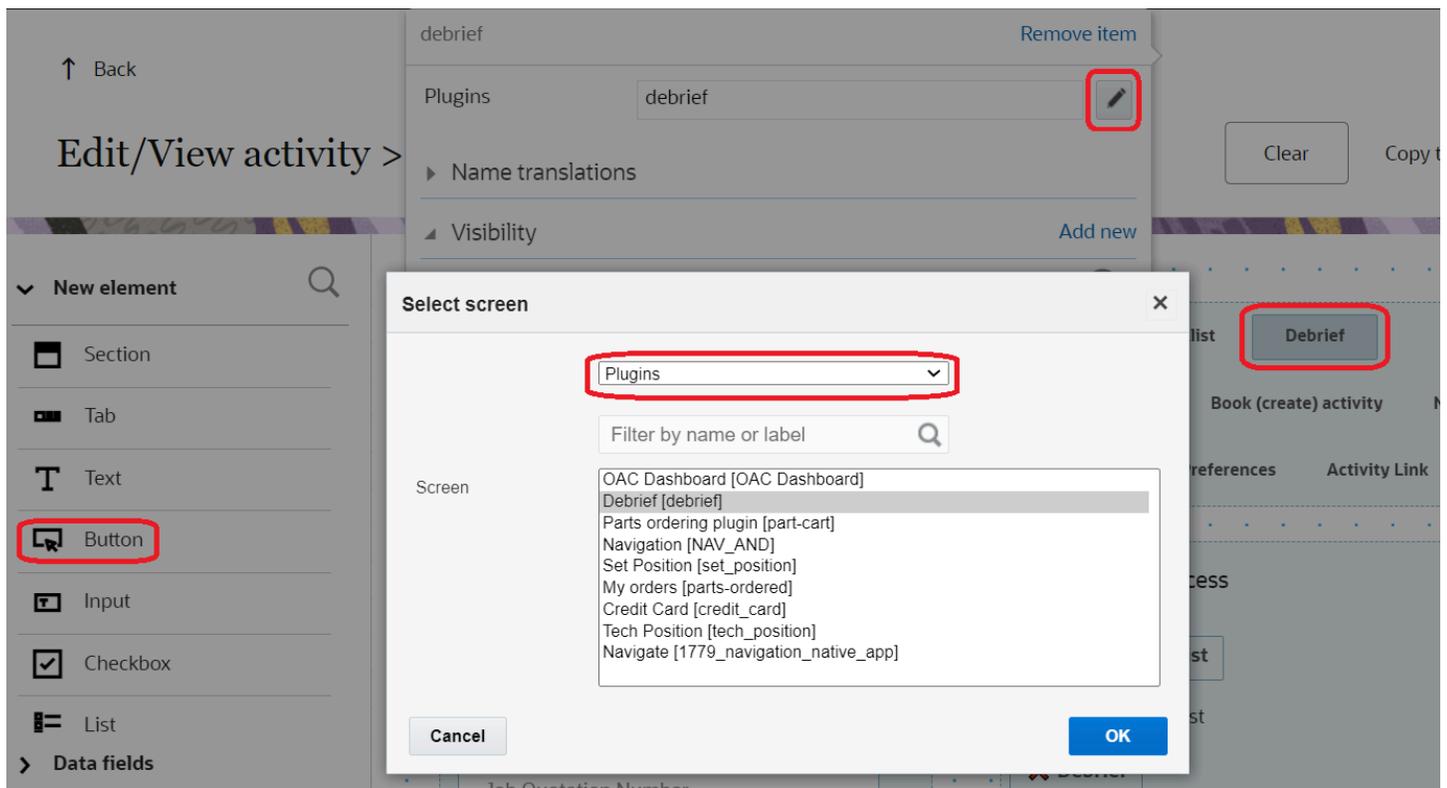
If you retain the default name and if you happen to change the name of the plugin later, the new default name is populated automatically.

12. To configure the parameters:

    a. Click **Add new** in the **Parameters** section.

    b. Enter a name for the parameter in the **Name** field.

       For example, enter defaultScreen to define a page as the default page in the plugin. The maximum length of the name that you can enter is 248 characters.

    c. Enter a value for the parameter.

       For example, enter part_order to display the Part order page as the default page in the plugin. The maximum length of the value that you can enter is 4000 characters.

    d. Click **Save**.

    e. Repeat the procedure for all the parameters that you want to configure.

       The total combined length of all parameter names and values must not exceed 5000 characters. These parameters are not encrypted when sent to the plugin.

13. Click **Save** on the **Visual Form Editor** page.

    The plugin is added to the selected page.

How does routing work?

Oracle Fusion Field Service Routing leverages a sophisticated algorithm to optimize resource utilization. It learns about your resources and activities through the information you enter and through the real-time data that it collects about resources and activities. The application then uses this information to generate routes that optimize the mobile workforce utilization details.

Oracle Fusion Field Service Routing includes the logic to consider the resource arrival time communicated to the customer, so that the company's commitments can be fulfilled. If the customer has been notified of the arrival period (both the start and end time of the arrival period have been communicated), and such arrival period overlaps the Service Window, the module uses this overlap as the interval within which the activity start is preferred to be scheduled.

Here is the data flow of the routing process:

- Oracle Fusion Field Service receives activities from the activity booking system. The application identifies the necessary skills and skill levels for the activity as well as any other requirements and then identifies resources with a matching set of skills, skill levels, working areas and other constraints. Then Oracle Fusion Field Service Routing assigns the activity to the resource that best matches the requirements. If a resource is selected as the Preferred resource for an activity, the resource is given priority. However, when a Preferred resource is inactive or unavailable, other appropriate resources are selected. The company realizes cost savings through efficiencies, resources receive routes that are tailored to their skill levels and their locations, and customers receive quality service on time.

- Oracle Fusion Field Service Routing always considers the assignment requirements established for activities and resources in Oracle Fusion Field Service. This includes - work skills, work zones, activities forbidden, required resources, activity links constrains and resource calendars. Routing plan level settings let you configure additional constrains and priorities; however, it is not possible to minimize the standard constrains at the plan level.

Note: Routes are optimized using a number of different goals, not just the ones that you select. For example, if you build a routing strategy that optimizes travel and work time, the application prioritizes not just the optimization of travel time and work, but it also maximizes a number of assigned activities and minimizes resources overtime as additional optimization goals.

How do I add a routing profile?

Routing profiles contain one or more routing plans that run against a bucket.

To add a routing profile:

1. Click **Routing** to open the **Routing** screen.
2. Select **Routing Plans** to display the routing plans and routing profiles available for the selected bucket or resource.
3. Click **Add routing profile** located on the toolbar.
   The **Add routing profile** dialog box displays.
4. Type the name of the routing profile in the **Routing profile name** field.
5. Select the **Active** check box.
6. Click **Add**.
   The new profile displays in the **Routing Profiles** list.

How do I create a routing plan?

Routing plans provide the rules to use when deciding how to route activities to resources. When you create a new routing plan, you select the routing profile to assign it to in the first step.

Before you start

You must create a Routing Profile before creating a routing plan.

To create a routing plan:

Here's what to do

1. Navigate to the **Routing Profiles** screen.
2. Find the routing profile to which you want to add the routing plan.
3. Click **Add routing plan** in the **Actions** column.
   A new routing plan template displays.
4. Expand each section and add values as necessary.
5. Click **Add**.
   Before you can run a routing plan against a bucket, you must assign the routing profile that contains the routing plan to the bucket.

Related Topics
- How do I add a routing profile?
- How do I assign a routing profile to a bucket?

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How do I configure a sequential routing plan?

The configuration of a sequential Routing run always includes selection of a predecessor Routing plan, that is, the one to be completed before the current one starts. Any Routing plan, regardless of its schedule, can be selected as predecessor. However, any Routing plan can have only one successor, therefore, whenever a sequence has already been created, the predecessor Routing plan of such sequence can no longer be selected for other sequences. Its name is disabled in the list.

This screenshot shows the settings for a sequential routing plan:

Sequential Routing plans can be used as predecessors creating longer sequences, if the business needs so require. Other routing plan settings depend on the company specifics and are not influenced by the sequential nature of the Routing plan.

> **Note:** Routing plan sequences can only be created within one routing profile. Sequences of Routing plans between different Routing profiles are not supported. The Routing plan summary shown in the Routing plan header contains its schedule – Sequentially after [predecessor_Routing_plan_name].

A Routing plan belonging to a sequence cannot be deleted unless detached from the sequence. On an attempt to delete such Routing plan, the action is rejected with the [Routing_plan_name] is already in use and cannot be deleted error message. To detach a Routing plan, change the schedule from **sequentially** to any other, starting from the last plan in the sequence. This restriction applies to all plans in a sequence regardless of their position. The system prevents creation of Routing plan chains forming closed loops in which the first plan is to be started after the completion of the last one. If the first Routing plan in the sequence is changed to the sequential schedule to start after the completion of the last plan in the same sequence, the modification is rejected with the Routing plan {plan_name} cannot be processed error message.

What are routing profiles and plans?

You can create or modify a custom routing profile or plan.

Routing Plan

Routing plans define the optimization strategies for a company. A company may have several strategies such as:

- a strategy for customer facing activities and employees
- a strategy for internal maintenance activities and employees (if the organizations are managed separately)
- a strategy for morning time, for noon, and for after hours (for example, the morning strategy prioritizes the travel optimization most, noon prioritizes activities that are older then 3 days, after hours works with VIP customers activities, or highest priority problems only)
- a strategy for weekdays
- a strategy for weekends (weekends have a different number of field employees, different service layer agreements, which can be similar to morning but running morning, noon, and after hours)

Routing Profile

A routing profile is a group of all the required routing plans. A routing profile can be assigned to many buckets, so that the customer need not copy the plans for each bucket, and only the plans that are from the assigned profiles are available for the bucket. This ensures that the strategies for different buckets, related to different lines of business or regions are not mixed with other buckets. To run routing on a bucket, you must have a non-empty routing profile assigned to the bucket.

How Access Schedule Impacts Routing

Generally no work is done beyond the hours defined by the *Access Schedule*. Therefore, routing plans including urgent, immediate, and bulk routing will not schedule activities outside of the *Access Schedule*. The only exception is when the activity is manually scheduled to be performed beyond Access Hours. In this case, routing ignores the access hours and uses the service window for routing activities.

If a Service Window is configured for an activity with Access Hours then the Access Hours will be not be used for routing assignment. The Service Window will override the provided Access Hours.

How do I delete a routing plan?

You can delete a routing plan from the **Routing Profiles** screen, as long as it doesn't have a Routing Summary report.

Before you start

A Routing plan belonging to a sequence cannot be deleted unless detached from the sequence.

To delete a routing plan:

Here's what to do

1. Navigate to the **Routing Profiles** screen.
2. Select the routing plan to delete.

You cannot delete the routing plans for which the activities that were routed are still available in the application (including the activities that are not yet deleted by your retention policy).

3. Click the **Delete** link in the **Actions** column.

   A confirmation message displays.

4. Click **Yes** to delete the selected routing plan.

Related Topics

- How do I configure a sequential routing plan?

How do I identify the activities in jeopardy?

A jeopardy situation means that the activity will miss its promised service window. Jeopardy situations are easily identified by the pink blocks on the *list view* or *time view* screen. You can change the colors per your organization's requirements, and you can display the status in text in the activity hint.

List View: Activity in jeopardy:

Time View: Activity in jeopardy:

To identify situations that are in jeopardy:

1. Identify activities that are in jeopardy.
2. Do one of these:

   ○ Move the activity to a resource that has *idle time*.

   ○ Move the activity back to the bucket to be re-routed later.

   ○ If the resource can arrive on time despite the warning, don'thing.

Related Topics

- How do I move an activity using the Assignment Assistant?

How do I assign a routing profile to a bucket?

You must assign a routing profile to each bucket so that the routing plans in that profile can run against the buckets.

To assign a routing profile to a bucket:

1. Click **Routing**.
2. Select the bucket for which you want to assign the routing profile from the resource tree.
3. Click **Routing Plans**.

   Bucket has no Routing Profile is displayed.
4. Click **Assign Routing Profile**.

   The **Select Routing Profile** dialog box displays.
5. Select the routing profile that you want to assign to this bucket from the drop-down list.
6. Click **Update**.

   > **Note:** If you select the blank value from the **Routing Profile** drop-down list and click **Update**, any previous profile assignments for the selected bucket are removed.

Results:

The Routing Plans block shows the routing plan for the selected bucket.

How do I configure the run schedule for a routing plan?

The run schedule identifies when you want the plan to run, how often you want to run it, and whether you want to run it over multiple days. You can also specify the day's activities to run the plan against. The run schedule that you choose affects the information you can share with your customers through notifications. For example, to launch a notification the afternoon before an activity, but you don't run routing until the evening, your notification will not include the time slot.

To configure the run schedule for the Routing Plan:

1. Navigate to the **Routing Profiles** page and locate the routing plan that you want to configure.
2. In the **Actions** column, click **Modify**.

   The **Edit Routing Plan** screen appears.
3. Expand **Run Schedule**.

4. Configure one of the following routing plans:

    a. Create a plan to start routing manually:

        i. Select Manually from the **Run routing** drop-down list.

        ii. Enter a number in the **Apply to activities within day interval** field. The activities selected for this routing plan are executed within the number of days selected in this field, starting the selected day.

        iii. Move the **Time Limit** slider to set the duration for which the plan must run.

    This screenshot shows an example of a manual routing plan:

    b. Create a recurring routing plan:

        i. Select Recurrent from the **Run routing** drop-down list.

        ii. Enter a number in the **Apply to activities within day interval** field. The activities selected for this routing plan are executed within the number of days selected in this field, starting the selected day.

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    iii. Select the start and end time at which the routing plan must run, in the **Start time** and **End time** fields.

    iv. Enter the interval between each run in the **Interval between runs in minutes** field.

    v. Check the boxes corresponding to the days on which the routing plan must run recurrently, in the **Activity days** field.

    vi. Move the **Time Limit** slider to set the duration for which the plan must run. This time denotes the maximum number of minutes and seconds that the routing plan will run before producing a result. When the application launches a routing plan, it runs the plan over and over again until it either finds the best match or the time limit expires, whichever comes first. Three minutes is usually sufficient. The maximum time limit possible is 20 minutes.

c. Create a plan that runs once a day:

    i. Select **once a day** from the **Run routing** drop-down list.

    ii. The activities selected for this routing plan are executed within the number of days selected in the **Apply to activities within day interval** field, starting the selected day. The default value is 1.

    iii. The **Start day for activity processing** field is used in the Once a Day and Recurrently plans. New values for Start day for activity processing allow to run routing starting at 2, 3 or 4 weeks in future.

       Select one of these values from the drop-down list:

         ○ yesterday

         ○ today

         ○ tomorrow

         ○ +2 days

         ○ +3 days

         ○ +4 days

         ○ +5 days

         ○ +6 days

         ○ +7 days

         ○ +8 days

         ○ +2 weeks

         ○ +3 weeks

         ○ +4 weeks

    iv. Enter the time at which the routing plan must run, in the **Time of run** field.

    v. The **Activity days** field specifies the days on which activities are scheduled.

    vi. Move the **Time Limit** slider to set the duration for which the plan must run. This time denotes the maximum number of minutes and seconds that the routing plan will run before producing a result. When the application launches a routing plan, it runs the plan over and over again until it either finds

the best match or the time limit expires, whichever comes first. Three minutes is usually sufficient. The maximum time limit possible is 20 minutes.

This figure shows an example of a plan that runs once a day:
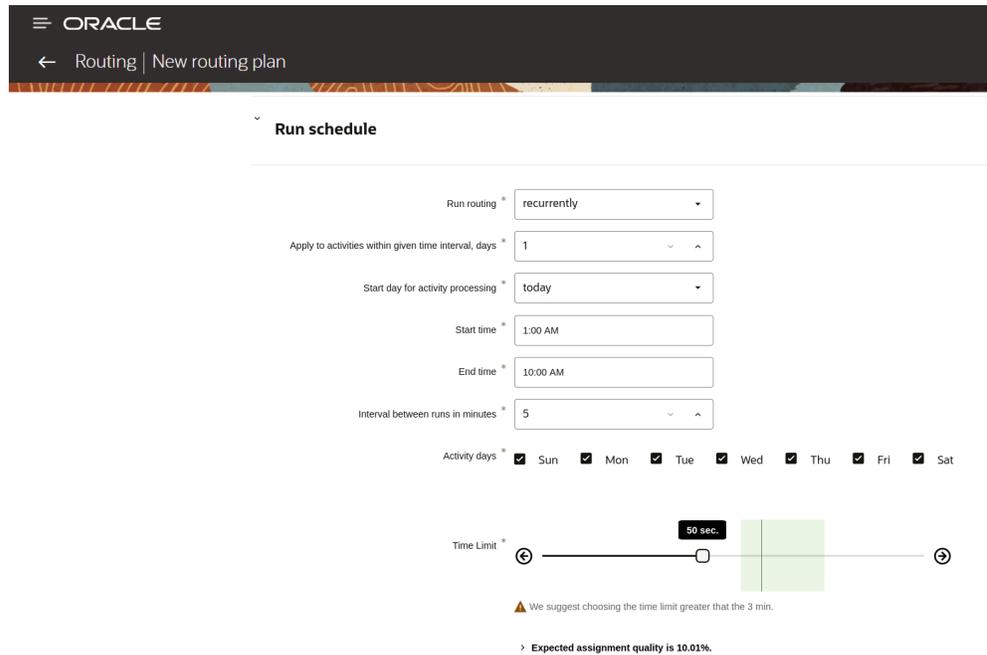
d. Create a plan that runs immediately:
   i. Select Immediately from the **Run routing** drop-down list.
   ii. Select one of the following options:

      o **for Urgent Activities**: Activities are assigned and scheduled the same day, regardless of whether this assignment disrupts other scheduled activities. In this case, the SLA isn't honored for the activity.

      o **activities that correspond with filter**: Only those activities that correspond to the selected filter are assigned immediately. Such activities can also be bundled with other activities that are scheduled for the same location and bucket soon.

      The image shows the Run routing field in the Add Routing Plan screen:

        iii. Set **Bundle the Activities Starting Today within a Given Time Interval, Days** to define the bundling window (1–99 days). Assignment and bundling start the same day Immediate Routing starts.

    e. Create a plan that runs sequentially after another plan:

        i. Select Sequentially from the **Run routing** drop-down list.

        ii. Select the plan that must run before the current plan, from the **after the completion of** drop-down list.

        iii. Move the **Time Limit** slider to set the duration for which the plan must run. This time denotes the maximum number of minutes and seconds that the routing plan will run before producing a result. When the application launches a routing plan, it runs the plan over and over again until it either finds the best match or the time limit expires, whichever comes first. Three minutes is usually enough. The maximum time limit possible is 20 minutes.

    f. Create a plan that optimizes the routes continuously:

        i. Select continuous improvement from the **Run routing** drop-down list. The re-optimization starts only if routing can assign more activities or can optimize the route further in some way. For more information on optimizing routes continuously, see the Optimize Routes Continuously topic.

        ii. In the **Start time** and **End time** fields, select the start and end time between which the routing plan must run.

        iii. In the **Activity days** field, select the check boxes for the days on which the routing plan must run.

5. Click **Add** to save your changes.

> **Note:**
>
>   ◦ Sometimes, when routing's evaluation must end due to time limit, it consumes slightly more time than configured. This is because termination can't occur at the arbitrary point; it occurs only after the completion of the current block of computations.
>
>   ◦ If the suggested Run Schedule Time Limit exceeds 60 minutes, a warning is displayed: "We suggest decreasing the amount of activities the plan should work with by splitting the plan into several sequential ones."

How do I fine-tune a routing plan to achieve specific goals?

You can set the Assignment Parameters to further configure or fine-tune the routing plan to achieve specific goals such as creating an inventory pickup activity or creating the activities close to the service window start time.

To set assignment parameters:

1. Navigate to the **Routing** screen and locate the routing plan to which you want to configure.

2. Click **Actions** and select **Modify** to open the **Edit Routing Plan** screen.

3. Expand the **Assignment Parameters** section.

4. Select the following options, as necessary:

   ◦ **Enable Routing by Inventory:** When this check box is selected, routing considers the required inventories for all activities that are sent to routing, and assigns activities only to those resources that can meet these requirements. This could result in some activities being unassigned. Activities which have no inventory

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requirements are not affected by this setting. They are routed in the same way as before. Activities are unassigned if there are no resources that meet their inventory requirements. Such activities are rejected with the reason code: 6003 and message: no appropriate resources. Regular activity filters and resource filters, work zone, work skill restrictions apply as usual. For example, if a resource which has the inventory X is not selected by a filter for the activity that requires inventory X, then that activity is not assigned to that resource.

- o **Enable Inventory Pickup:** Bulk routing may auto-create an inventory pickup activity to obtain the required inventory pieces from the nearest warehouse and handle the changes during intra-day routing re-optimization runs. This increases the autorouted percentage value and improves the routing quality as the same mobile worker completes more activities.
- o **Dynamic Routing:** This option helps you set the limits on how long the module runs based on the number of minutes and/or the number of activities routed. This screenshot shows a different location for setting minutes/activities (described as the Dynamic Routing check box of the Add/Edit routing plan dialog box):
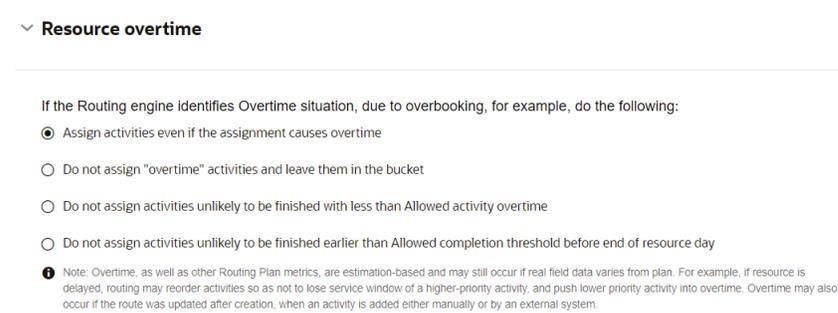
- o **Limit work by points:** Select the box to enable Routing to limit how many activities mobile workers can have in their routes. Note the following:
  - Overload by points may still happen if an activity was added to the route or updated after routing was performed.
  - Routing will not remove previously-assigned activities back to bucket nor assign to another resource if a route was already overloaded before the Routing run.
  - Zero points activities may be assigned to any resource, including but not limited to, resources with already overloaded routes and resources that have zero or negative points capacity.
- o **Try to schedule activities to service window start:**This option (formerly named Route Uniformity) schedules activities as close to the start of service windows as possible. As a result, routing options will typically include a broader selection of resources and the possibility of burdening some resources with many activities and under-utilizing others is minimized. Note, however, the following consequences are there:

  - Idle time may collect closer to the end of the service window.
  - Summary travel time may increase.
  - Summary work time may increase.
- o **Override default service window reservation value:** Select this check box to enable modification of service window reservation. Default *Service window reservation* is up to 20% of the service window but no more than 60 minutes. See 'Service window reservation %' description for more details
- o **Service window reservation %:** This field determines the percentage of the service window from its end that must be reserved. Routing tries to avoid assigning activities with ETA within the reserved part of their service windows by pushing the activities to an earlier ETA. Routing tries to push the activity to an earlier

ETA as higher is the late arrival penalty for this activity. This setting applies to all the activities that are part of the routing plan.

For example, an activity has a service window from 10:00 AM to 5:00 PM:

- If 15% is specified in the **Service window reservation %** field, the last 63 minutes of this 420 minutes service window are reserved.
- If 50% is specified in the **Service window reservation %** field, 210 minutes are reserved.

Higher **Service window reservation %** increases the 'buffer time', which may result in the degradation of the other metric.

Lower percentage may result in a higher risk of resource appears to be late for the appointment.

> **Note:** Service Window Reservation % is not applied (its effective value is 0%) when (a) bundling the activities on the same address or (b) having the same bundling key and assigned to same mobile worker for activities starting from second one in the bundle. For bundled activities, both SLA and Service Window are calculated by the start of the first activity in the bundle.

- **Center point home zone support:** This option defines the home zone radius, that is, the number of miles in any direction from the starting point and the penalty to be applied if a resource must leave the home zone to complete an activity. The default penalty (Overstep Weight) is 4.
- **Automatic ordering:** This option places activities without service windows on the route in the most efficient order. If cleared, the application places these activities on the route, but does not assign a time slot. In this case, resources decide when to do the work.

  Automatic Ordering can help you complete more activities over the course of the day, but it also reduces the resources' ability to use their own judgement in completing activities.
- **Limit work by points:** This option is only necessary if you use points to estimate activities. It limits the number of activities assigned to a resource based on the maximum points allowed within a resource's shift. You must also enable Points Support in Business Rules, enable a Points property, and send the point value for the activity through the API.
- **Move activities to the bucket instead of assignment to contractor's resource:** This option assigns the relevant activities to a contractor's bucket instead of the contractor's resource. For this option to work, you must run the plan from an In-house Organization bucket that has contractor buckets (and, possibly, in-house ones) as children. In this case activities routed to in-house mobile workers will be assigned to mobile workers, but activities routed to contractor mobile workers will be assigned to contractor buckets. However, if you run the plan from a contractor bucket, the activities will be assigned to the underlying contractor mobile workers.

> **Note:** Routing runs that assign or reassign all activities to the contractor's personnel will be moved to the parent bucket of such resources, regardless of the optimization destination selected. To prevent activities that are already assigned to the contractor resources before the routing run, of being taken from contractor's resources to the bucket, select the **Do not move activities between routes and do not reorder activities for Handling of preassigned activities** check box.

When you close **Assignment Parameters**, you'll see your selections summarized on screen.

What are the routing error messages?

The following table provides the message codes:

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Error Code	Error	Explanation
6000	Dynamic routing	This is a common error that you can expect to see when using dynamic routing. It means the activity was filtered out because it falls outside the dynamic routing time or activity limitations. To route the activity, change either the dynamic routing time or activity limitations, or turn dynamic routing off.
6003, 6077	No appropriate resources	This means that the activity has requirements that can't be met by any available resources. This message doesn't necessarily indicate an error. It informs you that the application couldn't find a matching resource for the activity. Check the following settings to confirm that they're accurate for your mobile workforce: • Work Zones • Work Skills • Resources Calendars
6005	Service window start is greater than service window end	This is a data validation error. The service window end time falls before the service window start time on the activity. Fix the activity configuration.
6007	Unacceptable overdue	The activity wasn't scheduled because it would be late and would start after the lateness settings specified in the filter parameters. Check the settings in the filter parameters. Go to the Filters section of the routing plan and click Settings to view filter parameters.
6008	Resource is overloaded or has not enough inventory	The activity was left unscheduled because of the Limit work by points parameter or lack of inventory. The assignment of this job would have caused a mobile worker to use extraneous inventory or incur more points than the max threshold. You can adjust the resource's point allotment in Daily View.
6009	Resource workday stop	The activity was left unscheduled because it would have caused overtime for the resource. To allow overtime for resources, change the Resource Overtime settings in the routing plan.
6010	Unacceptable travel time	The activity was left unscheduled because the travel time would have exceeded the maximum travel time allowed. To allow longer travel, change the Travel time settings in the routing plan.
6011, 6013, 6063	Linked activity cannot be scheduled	The activity is part of the group of linked activities and the group can't be assigned without link constraint violation.
6016	May cause SLA violation	Activity was unscheduled because it would cause a SLA violation by another following activity. It's normal to obtain this unscheduling reason when using SLA windows.
6017	Other	Reserved for cases where there are no other specific or precise unscheduling reasons. There's a very low chance to see this error code.
6018	Improper cost configuration	Activity wasn't routed due to improper cost configuration. For example, either its non-assignment cost is too low or resources' time and travel costs are too high.
6019, 6079	Activity cannot be assigned due to SLA restrictions	The activity wasn't scheduled because it would be late and would start after the lateness settings specified in the filter parameters. Check the settings in the filter parameters. Go to the Filters section of the routing plan and click Settings to view filter parameters.
6020, 6070	Provider preferences	Activities can't be assigned without Provider Preferences violation. Insufficient Capacity: There's no available employee to handle the activity among required/allowed employees.
6021	May cause unacceptable overdue on other activities	Assignment will cause unacceptable overdue on other activities.

Error Code	Error	Explanation
		Insufficient Capacity: The activity assignment pushes another, more important or non-movable, activity into unacceptable overdue.
6022	May cause unacceptable overtime on other activities	Assignment will cause unacceptable overtime on other activities. Insufficient Capacity: The activity assignment pushes another, more important or non-movable, activity into unacceptable overtime.
6024	Unable to reach activity	Street level routing engine can't make a route from the given activity to any of the activities in the route. This occurs due to an error in the data. Check the activity address, the coordinates, or travel key.
6025	Unacceptable travel distance	The activity was left unscheduled because the travel distance would have exceeded the maximum travel distance allowed. To allow longer travel, change the Travel distance settings in the routing plan.
6027	Segmentable activity was partially assigned	This message doesn't necessarily indicate an error. It informs you that the segmentable activity was partially assigned due to resource availability in combination with configured minimal and maximal length of a single segment. It may be a result of Insufficient Capacity and/or small maximal segment length.
6028	Unable to fit bundling policy constraints	Assignment will cause a violation of bundling policy constraints. If at least one bundled activity according to all-or-none bundling policy isn't assigned, it may cause non-assignment of the whole group of bundled activities.
6094	Activity location is missing	The travel-enabled activity can't be assigned due to its location not being specified either by coordinates or travel key.
6032	Travel statistics is missing	The travel can't be defined because the activity has a travel key only but required statistics is missing.
6037	Unacceptable daily travel distance	The activity was left unscheduled because the total daily travel distance exceeds the allowed value.
6050	Activity was removed from route while routing was running	Activity was removed from route while routing was running.
6051	Resource was removed while routing was running	Resource was removed while routing was running.
6052	Target route was deactivated while routing was running	Target route was deactivated while routing was running.
6053, 20189	Target route was changed while routing was running	Target route was changed while routing was running.
6054, 6081	Status of activity or activity segment was changed while routing was running	Status of activity or activity segment was changed while routing was running.
6055	Activity was moved while routing was running	Activity was moved while routing was running.
6056	Activity has no Work Zones	Activity has no Work Zones when the information is expected.
6057	Activity has no Work Skills	Activity has no Work Skills when the information is expected.
6058	Resource was deactivated while routing was running	Resource was deactivated while routing was running.

Error Code	Error	Explanation
6059	Resource calendar was changed to non-working while routing was running	Resource calendar was changed to non-working while routing was running.
6061	Activity is not movable	Activity isn't movable according to the activity type configuration.
6064	Result is not accepted according to optimization criteria	This message doesn't necessarily indicate an error. The message means that the activity might be routed, but according to configured optimization criteria for chosen Optimization Goal, routing run was either not started or run results weren't applied.
6067	No required Work Zones	No technicians with required Work Zones available. Insufficient Capacity: there aren't enough resources in the required work zone to handle the activity.
6068	No required Work Skills	No technicians with required Work Skills available. Insufficient Capacity: there aren't enough resources with the required work skills set to handle the activity.
6069	No required inventory	Technician doesn't have the required inventory. Insufficient Capacity: there aren't enough resources with the required inventory available to handle the activity.
6071	Not enough points	Technician doesn't have enough points to perform this activity.
6072	Calendar	Field Resources with matching working calendar aren't found.
6073, 6074, 6075, 6076	Appropriate field resources are not found	It's the message from immediate routing that there are no field resources with active users or just field resources who may perform the activity. Insufficient Capacity: There are no available Field Resources to handle the activity.
6084, 6085, 6086, 6087, 6088, 6089	Resource cannot be used as a warehouse	Resource can't be used as a warehouse because it doesn't have Start Location, or working calendar, or inventory or other reason.
6090	Link constraints are not supported by chosen routing plan	Link constraints aren't supported by the chosen routing plan.
6091	The resource located outside of the routing bucket is partially excluded due to another run that is currently in progress. Please repeat the routing to include the resource.	The resource located outside of the routing bucket is partially excluded due to another run that's currently in progress. Repeat the routing to include the resource.
6092	Activity cannot be moved	Activity type constraints or routing plan settings prevent the activity from being moved between days and/or resources.
6093	Field Resources calendars and activity windows do not intersect	The activity's requirements can't be met by any available resource because there's no intersection between available working calendars and activity SW/SLA. While this error doesn't necessarily indicate an error, you should check the following settings to confirm that they're accurate for your mobile workforce: • Resources Calendars • SLA policy

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Error Code	Error	Explanation
		• Service window
		• SLA window
6096	Appropriate activities were not found	The routing report shows that this issue pertains to field resources rather than activities. This signifies that when the routing run was scheduled to commence, the field resources met the criteria but weren't included in the routing due to the absence of appropriate activities that could be allocated to them.
20186	Broadcast has timed out	An activity wasn't assigned within the allowed time for broadcasting. It may be a result of insufficient capacity when resources are fully loaded.
20188	No matching resources to broadcast	An activity wasn't assigned via broadcasting because there were no matching resources for it.

What information is displayed in the Autorouting block?

The Autorouting block shows the efficiency of automatic Routing in percentage. The Autorouting block includes both scheduled activities for the date selected and non-scheduled activities that were routed but not necessarily by the date selected.

The Autorouting efficiency is calculated as the ratio of the number of autorouted activities to the total number of routed activities (both automatically and manually). This statistics takes into account the number of operations resulting in 'meaningful' changes to the activity routing, that is, changes to the date of the route or the resource to whose route the activity has been assigned. Operations bringing no changes to the activity date or resource to which the activity is assigned, are ignored. Similarly, reverse operations resulting in no change to the initial activity assignment are ignored, as well.

The figures shown in the **Autorouting** block are aggregated results of all resources in the selected bucket and its child buckets, if any. If no activities were routed manually, the Autorouting efficiency is 100%. The Autorouting drop-down menu contains the following data:

- **Manually processed:** Displays the number of manually routed activities
- **By Dispatcher / By Resource:** Allows viewing the number of manual operations performed by the dispatcher or by the resource. This section contains the breakdown of manual operations in the following types:
  - **Assigned:** Activities moved from the bucket to resources' routes
  - **Reassigned:** Activities moved between resources
  - **Unassigned:** Activities moved from resources' routes to the bucket
  - **Reordered:** Activities moved to a different position in the route. The **Reordered** category is not available in manually processed **By Resource** column
- Total amount of manually processed activities {number} (of {number})

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How do I embed an external report in the Dashboard?

You can embed reports from external applications in Oracle Field Service using the **Embedded dashboard** option.

You can select the user type from the page header and add relevant reports or dashboard charts to the dashboard to create a predefined dashboard for that user type. Or, you can use the following procedure to embed a predefined dashboard as a dashboard tab.

To embed a dashboard:

1. Navigate to the **Dashboards** page from the Configuration menu.
2. On the **Dashboards** page, click **Actions** > **Add Dashboard**.
3. In the **Add Dashboard** dialog box, select **Embedded dashboard** option.
4. In the **Name** field, enter the name that you want to be displayed on the new dashboard tab.
5. In the **URL** field, provide the URL for the Oracle Analytical Cloud, Oracle Business Intelligent Cloud Services, or Oracle Integrated Cloud Services report, or any report from an external application.

   The embedded reports are presented as a new dashboard tab on the Dashboards page.

   Note: You cannot configure embedded dashboards.

How do I view the changes made to the Configuration pages?

The Configuration History report displays the changes made to any of the Configuration pages within the application.

Note: Whenever a PATCH API is used to update a value for an Activity Duration or Travel Duration, the **Configuration History** report has an entry showing the number of records that were updated in addition to the Activity duration or Travel duration key.

To view the Configuration History report:

1. Click the navigation menu and select **Dashboards**.
2. Select **'Configuration History** from the navigation pane.

   The Configuration History report is displayed.

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3. Review the following information in the report:
   a. **Action Time**—Specifies the date and time in the time zone and desired format of the user viewing the page when the change in Configuration was made.
   b. **Action**—Specifies either an Insert, Update or a Delete based on the operation carried out by the user.
   c. **Old value**—Displays the previous value of the fields related to the element in case of a Delete or an Update operation.
   d. **New value**—Displays one of the following:
      - In case of an Update operation, this column displays the modified value of fields related to the element.
      - In case of an Insert operation, this column displays the set value of the fields.
   e. **Element**—Displays the element or object that has been added, deleted or modified.
   f. **User**—Displays the user name of the user who made the modification. On mouse hover, the user name and the user ID are displayed.

4. To filter the report, click **View**.
   a. **Start Date** and **End Date**—Select the date range to filter the data.
   b. **Find** —Enter a string to search within the Old value and New value columns in the report.
   c. **Search Category**—Select an action to filter the report based on a category for example message type.
   d. **Rows**—Specify the number of rows to be displayed on each page of the report.

Results:

Changes made to these pages in the application are included in the Configuration History report:

- Business Rules
- Link Templates
- Work Schedules
- Work Zones
- Work Skills
- Properties
- Capacity Categories
- Time Slots
- Resource Types
- Activity Types
- Inventory Types
- Glossary
- Action Management
- Display
- Filters
- Organizations
- Login Policies
- User Types
- Oracle Knowledge
- Statistics

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- Applications

- Message Scenarios

- Holidays

- Resource Info

- Resource Calendars

- Locations

- Resource Work Zones

- Users (Except for Collaboration and Helpdesk groups)

- Daily

- Routing

- My Display

- Themes (only when default Theme is changed)

- Applications (limited to changes in the context of APIs)

Known Behaviors:

- The 'Find' option within 'View' is applicable only for the Old value and New value columns, it is not available for the Identifier column.

- You can search only Old value and New value columns using the value of the field and not the field name. For example: for the entry 'Activity Type: Install', you can search the word 'Install', but not on 'Activity Type'. You can search Users using the *User ID* ; you cannot search using the *User Name*.

- Some fields may display the IDs of the values, instead of the actual values. For example: Design Theme: 2 or Time Slots can have values like 2, 3.

- The Identifier column, in some cases may display IDs instead of or in addition to values. For example: 'Display Profile: UT16_DISPLAY_PROFILE**/26**' instead of 'Display Profile: UT16_DISPLAY_PROFILE' ID: 15497

- The Identifier may display just the Company name when the Business Rules screen is modified.

- In entries related to the Statistics page, the value of the Type displays the label instead of the text. For example: 'Type: appt_duration' instead of 'Type: Activity duration stats fields'

- The Context Layout displayed within the Identifier column shows the label instead of the text. For example: 'Display Context Layout: web_menu manage/540'

- In some cases, the number of rows displayed on the screen may be less than the configured number of rows. For example: The page may display only 18 rows on the screen though the user has set 20 as the number of rows.

- Sorting is only available using the Action Time and Operation columns.

- Values of sensitive information like passwords, client secrets, and certificates are masked using * characters.

- Collaboration and Helpdesk groups are not shown in the Configuration History.

- Changes done to the SAML login policy using "Upload Metadata XML" are not logged.

Note: Configuration History Log information will be available for the past 90 days; information beyond 90 days is automatically removed.

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How do I view the quota matrix?

Based on the resource changes, Oracle Fusion Field Service updates the quota periodically. Quota and capacity are displayed side by side in the Quota Management matrix.

The application updates quota automatically based on the resource changes as they affect quota at the Day, Time Slot and/or Capacity Category levels.

1. Select **Quota**.

2. Select a capacity area.

3.
   Click the **Quota** icon.

   The **Quota** page opens. It includes the Resource Tree and the Quota matrix. You must have the Read-only or Read-write permission on the Quota element (Configuration > User Types > Quota > Quota) to view this page.

What is Activity Booking?

When a mobile worker performs an activity at the customer's premises, the customer may enquire about the possibility to perform another job for them on a different day. The mobile worker must be able to collect the information about the new job, create an activity, and schedule it right away. To book an activity, the mobile worker must also have the ability to check the available capacity for that specific date and time. This situation is handled by the **Activity Booking** option. You must configure the activity booking context properly to get the most accurate and precise capacity calculation. The **Book new activity** option is configured in the **Activity** section of the **Screens** page.

> **Note:** The activity booking functionality, Quota management page, and the Capacity Area configuration functionality are available only with the "Oracle Fusion Field Service Enterprise Cloud Service" subscription.

Mobile workers can book activities in three ways:

- Direct assignment booking

- Quota based booking:
    - Time slot based
    - Booking interval based (or availability based)

Direct Assignment Booking

Activity booking uses the activity information and finds all the Capacity Areas that match the activity requirements. If a Capacity Area is configured for booking using direct assignment, the activity is created (or reassigned) in a mobile worker's route, provided the mobile worker meets the activity requirements and has enough time to complete it. When there are many available resources that can work on the activity for a particular date and time slot, Oracle Fusion Field Service assigns the activity to one of them. The application typically finds a mobile worker that has a smaller set of working skills than a mobile worker with a wider skillset. This way, resource selection is optimized, so that the following activities that require booking have more available options. With this feature, mobile workers can control the booking

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Oracle Fusion Field Service
Oracle Fusion Field Service Questions and Answers

Chapter 1
Field Service: Questions and Answers

strategy that is used on a Capacity Area level. Mobile Workers can also configure different capacity areas to use different booking strategies.

Availability-Based Booking

Mobile Worker can book activities for Capacity Areas with booking interval based quota configuration. They can use the booking interval based quota when the time slots overlap or, have a significant variation in the activity duration. When mobile workers choose the booking interval based quota, they must select the booking intervals on the Quota Configuration page. If they do not select the booking intervals, the application uses the default Capacity intervals that are configured on the **Business Rules** page.

When you configure a Capacity Area for booking using Quota (time slot based or availability based), then the activity is created (or reassigned) on the bucket that is associated with the Capacity Area. If there are multiple Capacity Areas, the mobile worker must select a Capacity Area, select the day and time slot on which they want to perform the activity, and book it.

You can obtain the booking options from the application in two ways:

- Through the Activity Booking page.
- Through the new API function showBookingGrid. This API simplifies the process of integrating the Booking functionality with external applications.

Regardless of the method, the application uses the activity information you have entered and provides you the list of options where it may be booked.

As soon as you book an activity, Oracle Fusion Field Service subtracts the capacity required for its performance from the available capacity and adds it to the used capacity. It compares the used capacity to the quota values to make sure that orders for new activities are accepted only when the capacity is still available. As having capacity information up-to-date is crucial for the functionality, Activity Booking is available only in the online mode.

If you book an activity close to the end of a time-slot, it has a higher probability of late start. To eliminate risky activity bookings, the application does not provide a booking option for an activity for which the estimated start time appears in the last 20% of the time slot.

What are the rules to schedule Oracle Field Service updates?

Some rules to keep in mind during the Update process.

- Oracle releases Updates four times a year. The Updates are available from the first Friday of each quarter in a year (in the months of Feb, May, Aug, and Nov).
- You can select any date within the quarterly Update period to schedule or re-schedule quarterly Updates for the respective Prod and Test environments. The quarterly Update period lasts for 77 days starting from the quarterly Update General Availability date. Oracle manages the quarterly Updates for Test Preview environments and these cannot be configured.
- It's possible to pick update dates for four future GA updates. For example, if the current release is 21C, you can pick Update dates for 21D, 22A, 22B, and 22C.
- Oracle defines the number of updates and availability that can happen per day. The available dates are allotted on first come, first served basis.

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- Updates are performed during the standard 3-hour update window. You can specify an update window, which is applied to all the environments in your subscription. If you do not specify any update window, the default update window is applied depending on the geographical region in which the hosting takes place.

  - o North America (NA) and Latin America (LATAM) – AMER : Friday, 21:00 CDT/CST
  - o Europe and Africa - EMEA : Friday, 21:00 BST/GMT8

- Update selection is not available in the following cases:

  - o You have an Oracle maintained extension.
  - o You don't have access to your Oracle Fusion Field Service environments from the Cloud Portal.

- Oracle reserves the right to cancel an update if the conditions are not optimal. In such a case, you'll be notified to select a different date.

What data is copied and not copied when refreshed from another environment?

When you refresh an environment from another environment, some data is (or configuration elements are) copied and some isn't copied.

This table gives the configuration elements that are copied when you refresh an environment from another environment.

Data Copied with the Environment		
Activity Types	Applications	Business Rules
Capacity Categories	Collaboration / Helpdesk groups and their members	Company Settings
Daily Extract, BICS / DbaaS Configuration	Dashboards (both Reports and Dashboards)	Display The following important note applies to the Daily Extract functionality: **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.
Filters	Forms and Plugins	Geocoding Configuration

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Data Copied with the Environment		
Glossary	Holidays	Inventory Types
Link Templates	Login Policies	Message Scenarios
Oracle Knowledge	Organizations	Properties
Quota (configuration settings)	Resources	Resource Types
Resource Settings	Routing Settings	Time Slots
Themes	User and User Types	Work Schedules
Work Skills	Work Skill Conditions	Work Zones
Work Zone Layers		

In addition to the above configuration elements, the following data is copied when you select the **Refresh From Another Environment** option with **data for future** or **data for future and 7 days from the past** option:

- Activities
- Inventory
- Quota (quota values)
- Statistics Parameters (both the parameters, estimated activity, and travel durations)
- Service requests
- Parts catalog

Note: Customer information including phone numbers, emails, and so on are copied while copying the data. So, be very careful if message scenarios use this information and contact customers accidentally from your TEST environments that are copied from Production or other TEST environments. For Statistics, only the durations are copied not the raw, reported data. In addition, the process that calculates statistics isn't run in non-production environments (that is, TEST). This means any started and completed activities aren't used to create statistics in a non-production environment.

If you've integrated an external application using Oracle Integration, the application is copied over to the target environment. However, you must reactivate the target environment in Oracle Integration to restart the data flow.

This data won't be copied for any type of operation:

Data that is Not Copied		
Certificates (uploaded for SAML & Open ID login policies and Applications)	Collaboration chats	Daily extract archives The following important note applies to the Daily Extract functionality:

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Data that is Not Copied		
		Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.
BICS / DBaaS / OAC real time data	GPS tracks / positions	Files (images, file attachments, signatures, and user avatars)
History (activity, resource, and inventory)	Logs	Messages
Plug-ins credentials (credentials should be manually re-configured)	Work zone shapes	Subscriptions (event subscriptions)

What does the GPS data fields (gpstracks) data set contain?

The 'GPS Track Fields' ('gpstracks') contains data calculated based on the GPS data in Oracle Field Service in fixed format native for the application. All GPS data collected for each resource in the course of extraction period is gathered.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

GPS Track Fields are exported in the Daily Extract file for which 'GPS Track Fields' is selected as the entity. Any GPS Track fields available in Oracle Field Service (for example, 'distance', 'idle', 'status', etc.) can be included in the Daily Extract by adding them to the file structure.

> **Note:** You can't edit the Field name for this entity.

Depending on the requirements of the company, the list of exported properties and fields can be changed at any time by removing or adding certain fields.

Data can be retrieved as one or more XML files consisting of 'tracks' root element that contains 'track' elements. 'track' elements are sets of 'Field' elements whose attributes are names of GPS Track fields and whose contents are their corresponding values.

This table provides the label and description of fields in the GPS Track Fields data set:

Field	Label	Description
Activity ID	gps_tracks.aid	The ID of the activity started at the moment of the data collection or if there were no started activities at the moment of the next activity in the resource' route
Distance	gps_tracks.distance	Distance from the resource's location to the activity. This field is measured in the unit of measurement set on the Business Rules page, **Distance measurement units** field.
Idle Time	gps_tracks.idle	Number of seconds the resource spent in the point.
Latitude	gps_tracks.latitude	The Y coordinate of the position.
Longitude	gps_tracks.longitude	The X coordinate of the position.
Resource External ID	provider.external_id	External identifier for the resource
Status	gps_tracks.status	Location status. Possible values are: • 0 - a position without warnings • 1 - a position has the alert "Started outside the location" (Started at driving) • 2 - a position has the alert "Completed outside the location" (Finish at driving) • 4 - a position has the alert "Resource left the activity location" (Driving at working time) • 8 - an 'idling' position (See Business rules to understand what position is considered as 'Idle') Sometimes you might see values such as 5, 7, 9, which refer to a combination of two or more bits set: 5 = 1+4 7 = 1+2+4 9 = 1+8 For example, a status value = 5 means that both values 1 and 4 are set as follows: 1 - a position has the alert "Started outside the location" (Started at driving) AND 4 - a position has the alert "Resource left the activity location" (Driving at working time)

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Field	Label	Description
Time	gps_tracks.time	Timestamp received along with the GPS data.
Track Route ID	gps_tracks.queue_id	The ID of the route for which the geolocation data has been received.

Note: No changes and custom properties for this data set.

Example: GPS Track Fields File

The following data is collected. Provide a meaningful name to the report.

- The ID of the queue for which the geolocation data has been received, for example, **queue_id**
- The ID of the activity started at the moment of the data collection or if there were no started activities at the moment of the next activity in the resource queue, for example, **aid**
- Timestamp received along with the GPS data, for example, **time**
- The x coordinate of the position, for example, **longitude**
- The y coordinate of the position, for example, **latitude**
- Distance from the resource's location to the **aid** activity, for example, **distance**
- Location status, for example, **status**
- Number of seconds the resource spent in the point, for example, **idle**

The example provides details of two positions for a resource. On 10 October, 2012 , which corresponds to queue 00234, at 09:08:15, 10 October, 2013 the resource was at (41° 22' 51" North; 02° 07' 22" East) performing activity 89765 and the location of the resource fully complied with the route. On the same day at 10:25:45 the resource was at (41° 25' 49" North; 02° 27' 25" East) 5230 meters away from the next activity 96754. The resource had spent 36000 seconds at this point, which exceeds the idle threshold.

```
<?xml version="1.0" encoding="UTF-8"?>
<tracks>
 <track>
 <Field name="queue_id">00234</Field>
 <Field name="aid">89765</Field>
 <Field name="time">2012-04-10 09:08:15</Field>
 <Field name="longitude">41.380833</Field>
 <Field name="latitude">2.122778</Field>
 <Field name="distance">0</Field>
 <Field name="status">0</Field>
 <Field name="latitude" />
 </track>
 <track>
 <Field name="queue_id">00234</Field>
 <Field name="aid">96754</Field>
 <Field name="time">2012-04-10 10:25:45</Field>
 <Field name="longitude">41.430278</Field>
 <Field name="latitude">2.456944</Field>
 <Field name="distance">5230</Field>
 <Field name="status">8</Field>
```

```
    <Field name="latitude">36000</Field>
    </track>
</tracks>
```

What are the responsibilities of an administrator?

The Administrator plays an essential role in the application. The Administrator user type is assigned to an individual or group of individuals who oversee the regular maintenance and updating of users, resources, calendars, and the Resource Tree.

The Administrator is responsible for a combination of functions that can include:

- Managing users—Adding new users and deactivating users.
- Assigning user types to users. Resetting passwords.
- Managing the Resource Tree.
- Managing the resource calendars, shifts, and teamwork.
- Working with work zones, work skills, work conditions, and work skills groups.

The Administrator user type is unique to each company and includes any combination of the responsibilities mentioned earlier, depending upon the visibilities assigned to the user type. As a general rule, the administrator user:

- Has read-write access to the interface.
- Can manage user and resource related information.
- Can manage own account (password).

> **Note:** This document covers all aspects of an administrator's role. Based on your company's configuration and modules purchased, some of the functionality described in this document may not apply.

As an administrator, one of your key responsibilities is to manage user information. There are two primary types of users:

- Users who use the manage aspect, for example, dispatchers and field managers.
- Field service resources who use the mobile app, for example, field service personnel.

In either case, a *user* is someone who requires access to some part of the application's interface.

How do I adjust travel time for the next activity?

You can adjust the time required to travel to the next activity when you are about to complete the current activity.

> **Note:** The **Display and allow adjustment of remaining Travel Time remaining** option must be selected on the **Configuration** > **User Types** page for the corresponding User Type to use this functionality. The behavior is also influenced by the **Allow selection of next activity on Complete** option on the **Configuration** > **User Types** page for the corresponding User Type.

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When you are about to mark an activity as **End**, **Not Done**, or **Cancel**, you can adjust the travel time for the next activity. You will find different options based on how Allow selection of next activity selection on Complete is configured.

1. Start an activity by selecting **Start**.
2. Change the status of the activity to one of the three options (End/Not Done/Cancel). Either one or both options appear on the page:
   - Ability to select the Next Activity from a drop-down list. This displays a drop-down list where you can select the next activity to be visited.
   - The Travel Time Remaining selection field.
3. Select the required time from the **Travel Time** drop-down list.
4. Click **Submit**. The travel time for the next activity is updated.

   > **Note:** If there is no idle time before the next activity, or if the idle time is less than the amount of time travel that is being adjusted with, the start time of the next activity may be shifted to a further time. If the previous activity finishes late, you must adjust the travel correspondingly to shift the planned start time of the next activity.

How do I suspend an activity as a dispatcher?

When resources must return to activities at a later time and they don't want to cancel the activity, they can suspend it. If necessary, you can suspend the activity on the resource's behalf.

Suspending an activity captures the time that a resource has already spent working on it. It also creates a duplicate activity that the resource can start later, typically on the same day.

You can suspend only started or pending activities. The application behavior on activity suspension:

Action	Application Behavior
Suspend a started activity	Original is marked suspended; a duplicate is created as pending and not ordered
Suspend a pending activity	Activity is converted to pending and not ordered
Multiple suspensions	Most recent suspension duration is considered
Rescheduling suspended activity	Must be done manually; can be moved to a future day

1. Navigate to the **Dispatch Console** from the navigation menu.
2. In the Resource Tree, select the resource for whom you want to suspend the activity.
3. Select a started or pending activity that you want to suspend.
4. In the activity hint, click **Suspend**.

   The **Suspend activity** dialog box displays.
5. Change the **Suspension Time** as required within the same working day.
   - The time appears in your configured time display format.
   - You can adjust the time in five-minute increments.

- o This time is reflected in the Dispatch Console, Activity History, and sent to external applications if integrated.
- o If you're offline, you must switch to online to change the suspension time.
- o When you suspend a started activity, a duplicate activity is created in suspended status.
- o When you suspend a pending activity, it's converted into a not-ordered pending activity.

> **Note:** Although the suspension feature is primarily intended for completing activities later on the same day, it can also b used to resume work on future days. In such cases, a mobile worker or dispatcher can suspend the activity and then manually reschedule the duplicate to the next day. This approach allows the same mobile worker to continue the task without creating a new activity through integrations. It's often preferred whe the same person must complete the activity, when avoiding the use of middleware or external systems is desirable, or when there's a need to track work across multiple days. In such cases, the duplicate activity must also be manually moved into a future time slot on the route to ensure it's correctly scheduled.

6. In the Work Area, the current part of the activity closes. It now displays as a suspended activity (scheduled, but not ordered) in the lower half of the page.
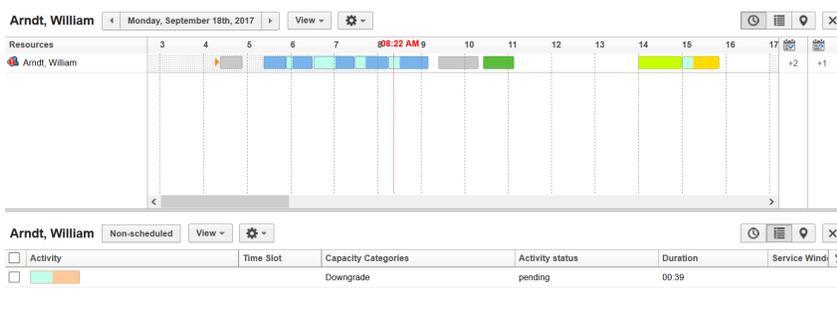
> **Note:** Alternatively, if an activity can't be completed on the same day, you can mark it as **Not Done** instead of suspending it. In this case, the mobile worker selects **Not Done** and chooses a relevant reason, such as **Reschedule for tomorrow**. This action can trigger an outbound event to the host application, which can then create a new activity for the desired date. This approach might be preferable when rescheduling requires additional approval or control, when assignment rules need to be recalculated, or when existing integrations are already designed to handle incomplete work.

7. Select the **Reason for suspension** and add notes, if needed.

8. In the **Duration** field, specify the time needed to complete the remaining part of the activity. If you suspend an activity multiple times, only the duration from the latest suspension is used.

> **Note:** If your upstream application - such as payroll or billing - needs to calculate the total time worked on an activity, it must aggregate the durations reported across multiple events. When an activity is suspended, the suspended event sends the duration already worked to the upstream application. Later, when the activity is completed, the complete event sends the duration of the final segment. To determine the total time spent - such as 30 minutes on Day 1 plus 60 minutes on Day 2 for a total of 90 minutes - the upstream application must add these values. The Oracle Fusion Field Service itself doesn't automatically combine durations across multiple segments, so this calculation must be handled externally.

9. Click **Submit**.

> **Note:** For traceability in the Activity List:
> - Use visual indicators such as custom labels or activity property values to distinguish suspended activities.
> - The duplicate activity includes a **masterActivityId** field referencing the original activity.

How do I configure time and list views in dispatch console?

You can configure columns and action buttons that display on the Time and List views of your Dispatch Console to suit your business requirements.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to configure the views.
4. Under **Main**, click **List view columns** under the **Dispatch Console** tree.

   The **Context layout structure** opens and displays the default items available on the page. You can add more static text or action items to it.
5. To configure the columns that you want to display in the list view, click **Click to Add** in the **Layout structure** section and select the required items.

   The items in the **Layout structure** are static text items.
6. To configure the buttons, click **Click to Add** in the **Buttons** section.

   The **Add button** dialog box appears and displays these options:
   - **Standard action screen:** Lets you add standard actions such as Activate route, Add child resource, and so on.
   - **Plugins:** Lets you add plug-ins. The plug-ins that you have added on the Forms & Plugins page are listed here.
   - **Custom forms:** Lets you add custom forms. The Forms that you have added on the Forms & Plugins page are listed here.
7. Select one of the three options and then select the required item from the **Available** list.
8. Click **OK**. The selected button is now available under Buttons.

   The properties of the newly added item are displayed.
9. Select the Button that you want to add and then click **Add new visibility**. The {Action} Visibility dialog box appears.

   Read-only is selected by default on the **[item] visibility** dialog box.
10. Click **Conditions** and add any conditions based on which you want to display the link.
11. Next, click Add new under the {Action} parameter section. The Add Parameter dialog box appears. Define the parameter as per the selected {action}
12. Click **Save**.

How do I configure the columns to display in List View?

You can use the List view to get a chronological list of the day's activities for the selected resource, group, or bucket. Activities are ordered by estimated start time. Use this view when you want to see both, the daily schedule and the related details all at once. You can rearrange as well as show and hide the columns in this view. The length of a travel bar on the List view is based on the 'Continuous traveling time' setting.

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1. Open the **List** view, select **View**, and click **Manage Columns**.

   The **Manage Columns** page displays the list of columns available for your user type as configured by your administrator.

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Manage Columns

🔍 Search

☑ Activity   ═

☑ Resource   ═

☑ Activity type   ═

☑ Start   ═

☑ End   ═

☑ Work Order   ═

☐ Work Order Number   ═

☑ Work Skill   ═

☑ Work Zone   ═

☑ Activity status   ═

☑ Time Slot   ═

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Dismiss   Apply

2. Select the columns you want to see.
3. Drag the columns to change their order.
4. Click **Apply**.

How do I rename an environment?

You can rename an auto-generated environment name to a meaningful name, which becomes part of environment URL. This name is also visible to users on the Login page.

However, the auto-generated environment remains as is and the environment can be accessed using it.
To rename an environment:

1. Log in to Oracle Fusion Field Service Service Console with your credentials.
   You can see the list of your subscribed environments.
2. Click the menu on the right of the environment that you want to rename.
3. From the drop-down list, select **Rename Environment**.
   The **Rename Environment** dialog box appears.
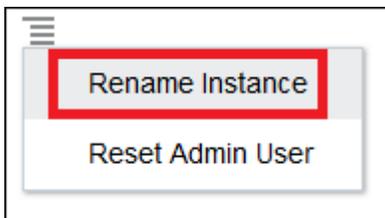
4. Enter a valid name for your environment and click **Rename**.

   Note: A valid environment name can have numbers (0-9), lowercase letters (a-z), and dashes (-). The environment name must start and end with an alphanumeric number.

How do I edit a Context Layout Structure?

Use the Context Layout Structure to configure the fields that appear on the application pages.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to edit the context layout.
4. Click the page for which you want to edit the context layout. For example, click **Activity hint**.
   The **Context layout structure** for the selected page and the selected user type opens. On this page, you can add or edit properties, actions, tabs, columns, and sections. Properties appear as fields and actions appear as buttons. Tabs,

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columns, and sections define the structure of the layout. You can also configure visibilities to properties and define the conditions under which the visibility settings are effective.

5. Follow these steps to add a property:

    a. Click the **Click to add** button.

       The **Add property** dialog box appears.

    b. Select the property that you want to add and click **OK**.

       If you add an enumeration property, the **Value visibility** section is displayed. When you configure pages for a user type, the **Context layout structure** page provides an indicator to show that a property is configured. When you add an item to the **Layout structure** column of the page, it appears in red until you add visibility to the field. After you define a visibility for the item, it's no longer highlighted in the **Layout structure** column.

> **Note:** You must add an instance of a property, button, or field only once in a form. More than one instance of a field, button, or property on a form might lead to unexpected behavior such as property not being saved or the action being denied.

6. Follow these steps to configure the visibility for the newly added property:

    a. Click **Add new visibility**.

       The [property name] visibility dialog box appears.

    b. Select the access mode.

    c. To add a condition for visibility, click **Add new condition**.

       The corresponding fields appear.

    d. Select a property, select the condition, select the additional condition if available, and then click the tick mark.

       The condition can be equal, not in, empty, and so on.

       Example: If you've selected the property as activity status and the condition as equal, the additional condition can be suspended and pending.

7. Follow these steps to add the visibility for a value:

    a. Click **Add new** in the **Value visibility** section.

    b. On the **Value Visibility Settings** dialog box, select the values for which you want to set the visibility conditions.

    c. Click the plus icon and select the conditions under which you want to display the values and click **Save**.

       For example, let's say you want to show the cancelation reason Customer Request only for Free Service type of activities. Open the Cancel Activity context layout edit and click **Add new** in the **Value visibility** section. On the **Value Visibility Settings** dialog box, click **Select values** and select Customer Request. Click the plus icon, select Activity type [aworktype], in equal, and Free Service. After you save and publish this condition, Customer Request is available for selection only if the activity type being canceled is Free Service.

    d. Click **Publish** on the context layout editor.

8. Follow these steps to add an action:

    a. Click the **Click to add** button under **Actions**.

       The **Add action** dialog box appears.

    b. Select the action that you want to add and click **OK**.

       After adding the action, set visibility for it. Visibility isn't set by default, so you must configure it for every field and action that you add.

9. Follow these steps to add a tab:

    a. Click a property and click **Group**.

        The **Add to group** dialog box appears.

    b. Enter the name of the group.

    c. Select one of these options and then click **OK**:

Option	Description
Section	Select this option to start a new section or block.
Tab	Select this option to start a new tab with the name provided earlier.
Predefined tab	Select this option to include a predefined tab. Select the tab from the **Tab** type drop-down list. Predefined tabs are the tabs available in the application by default.

10. Follow these steps to add a column or section:

    a. Select a property or an action and click **Add marker**.

    b. In the **Add marker** dialog, select **End of column** or **End of section**.

    c. Click **OK**.

How do I modify the work zone key?

A work zone key helps you identify a work zone with a short name. The work zones that you create are automatically assigned with the key or convention that you define in the **Work Zone Key** dialog box. By default, ZIP/Postal Code is the work zone key in the application. Work Zones must maintain unique keys, regardless of the Organization they belong to. This means that even if two Work Zones are related to different Organizations, they can't share the same key.

1. Make sure that the User Type you're associated with has Read-write access to the **Business Rules** page.
2. Click **Configuration**.
3. In the **General** section, click **Work Zones**.
4. Click the **Edit** icon next to Work Zone Key in the header area.

    The **Work Zone Key** dialog box appears.

5. To retain ZIP/Postal Code as the key and just change the length of the key, change the number in the **Length** field. In the next field, select whether you want the entire key as case insensitive, or just the first letter.
6. Click **OK**.

    The existing work zone keys are edited to conform to the new configuration.

7. To add a new field as the key, click the plus icon in the **Work Zone Key** dialog box.

    The list of fields available in the application is displayed in alphabetical order.

8. Select a field of your choice and click **Add**.

    The newly added field is displayed in the **Work Zone Key** dialog box.

9. Add the length of the key in the **Length** field. In the next field, select whether you want the entire key as case insensitive, or just the first letter.

   If you've selected multiple fields (a combination of fields), you must add the length of the key for each field. If the value of the field or property is lower than the length, the application populates the remaining length with 'space' characters. This is done for all the fields and properties the Work Zone is built from.

   When the application creates a Work Zone key from all the fields and properties, it trims the Work Zone key and removes all the spaces from the right to the left until the first non-space character is met.

10. Click **OK**.

    The modifications are applied to the existing work zone keys. If the key size exceeds 50 characters, it's truncated to 50.

Results:

How do I pick a date to schedule an Update?

You can manage a schedule for quarterly Updates from the **Update Schedule** tab and select the update dates for any of the quarterly Updates ahead. You can schedule updates for all the environments, except the **Test preview** environment, which is managed by Oracle.

1. Open the Service Console and go to the **Update Schedule** page.
2. Identify the environment for which you want to schedule an update and click **Select** in the appropriate column.
3. To schedule an update, pick any of the available dates from the calendar.
4. To re-schedule an update, click a date that's shown as a link, and select a different date from the calendar.

   Completed updates appear as green check boxes and you can't reschedule them. This screenshot shows the Update Schedule page:
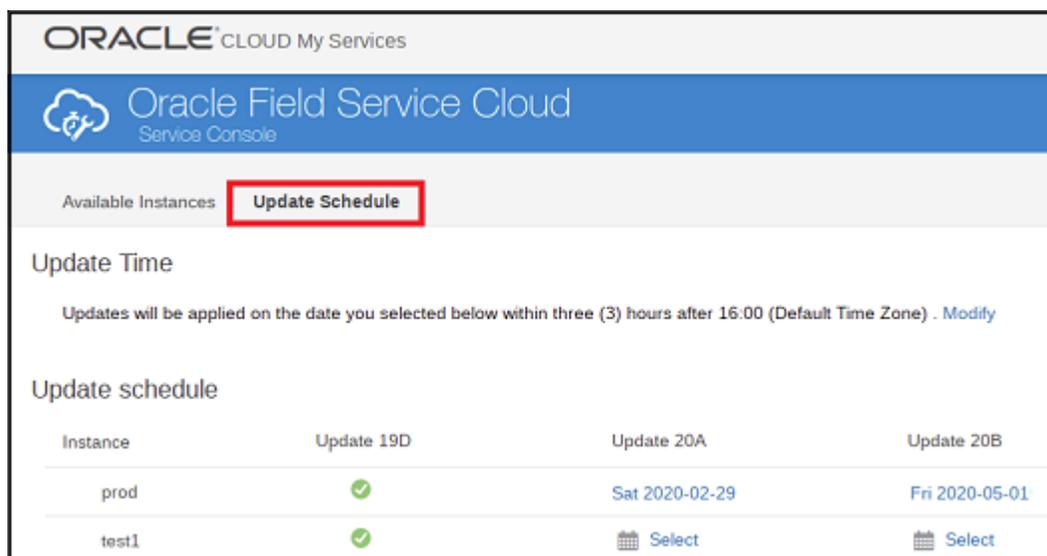
How do I configure real-time data integration With Oracle Autonomous Database?

The **Applications** page acts as a single page to configure and view all applications in Oracle Field Service.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

You can use the **Applications** page to create applications to transfer data to their Oracle Autonomous Database instances. Also, you can configure real-time data transmission for Oracle Field Service entities. The data is transferred to the Oracle Autonomous Database instances when the events corresponding to the entities are triggered in Oracle Field Service.

To complete real-time data integration:

1. Sign in to Oracle Field Service Manage.
2. Click **Configuration** > **Applications**.
3. In the **Applications** page, click **Add Application** to configure a new application.

   The **Add Application** dialog box for an Oracle Autonomous Database application is displayed.
4. Select **Oracle Autonomous Database** from the **Application Type** drop-down list and enter the details in these fields:

   a. **Application Name**: Type a name for the Oracle Autonomous Database application. Here's a screenshot of the **Add Application** dialog box:

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Add Application

Application Type
Oracle Autonomous Database ▾

You can integrate with Oracle Database Cloud Services like Autonomous Data Warehouse (ADW), Autonomous Transaction Processing (ATP) and Database as a service (DBaaS).

Application Name
AIS DBaaS

URL
http://identifier.adb.region.oraclecloudapps.com

Schema Alias
AIS_DB

User Name
sys

Password
••••••••

Confirm Password
••••••••

b. URL: Type the URL of the ORDS endpoint in the format: http://identifier.adb.region.oraclecloudapps.com. Make sure that the access rule ora_p2_httpssl is enabled in Oracle Autonomous Database. For more information on enabling the access rule, see the Oracle Database Cloud Service documentation.

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    c. **Alias**: Type the schema alias for the ORDS-enabled schema.

    If you're connecting to a Pluggable Database (PDB), use the format: <PDB_Name>/<schema_name>.

    If you're not connecting to a PDB, use the format: <schema_name>.

    Prerequisite: You must REST enable the Oracle database schema on which you want to use the REST Enabled SQL service. To REST enable the Oracle Database schema, you can use SQL Developer or the PL/SQL API. For more information, see the Oracle Database Cloud Service documentation.

    d. **User Name**: Type the name of the ORDS user with roles: SQL developer or Oracle database schema name. For more information, see the Oracle Database Cloud Service documentation.

    Before using the REST Enabled SQL service, you must authenticate against the Oracle database schema on which you want to run the SQL statements. Following types of authentications are available:

      - First Party Authentication (Basic Authentication): For this authentication, create a user in ORDS with the SQL Developer role. This ORDS user can run SQL for any Oracle database schema that's REST-enabled.
      - Schema Authentication: For this authentication, use the Oracle database schema name in uppercase and the Oracle database schema password (for example, HR and HRPassword). This user type can run SQL for the specified schema.

    e. **Password**: Type the ORDS user's password with SQL Developer role or the Oracle database schema password

    f. **Confirm Password**: Retype the password.

5. Click **Add**.

After a successful channel is created using ORDS, the **Applications** page shows the Oracle Autonomous Database application. You can add, delete, and change application configurations from the **Applications** page, if you've the permission to access such applications.

6. Click the Oracle Autonomous Database application to configure it:

    a. Click **Add New** to create a new entity.

    b. In the **Add configuration** dialog box, specify the required details:

    c. **Entity**: Select a list of Oracle Field Service fields that you want to view.

    d. **Table Name**: Enter the table name that you want to create in the new application.

    e. **Data Transfer**: Select one of these options:

      - **Once Daily**: Data is transferred to the Oracle Autonomous Database instance once in a day as per the daily extraction period configured in Oracle Field Service.
      - **Real-time**: Data transfer from Oracle Field Service to Oracle Autonomous Database occurs in near real time.

    f. Click **Submit**.

    The entity is added to the channel with the specified details.

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7. To add fields to the entity, click the Properties icon corresponding to that row and select **Fields** from the drop-down list.

This image shows the Properties icon drop-down list option to configure fields:
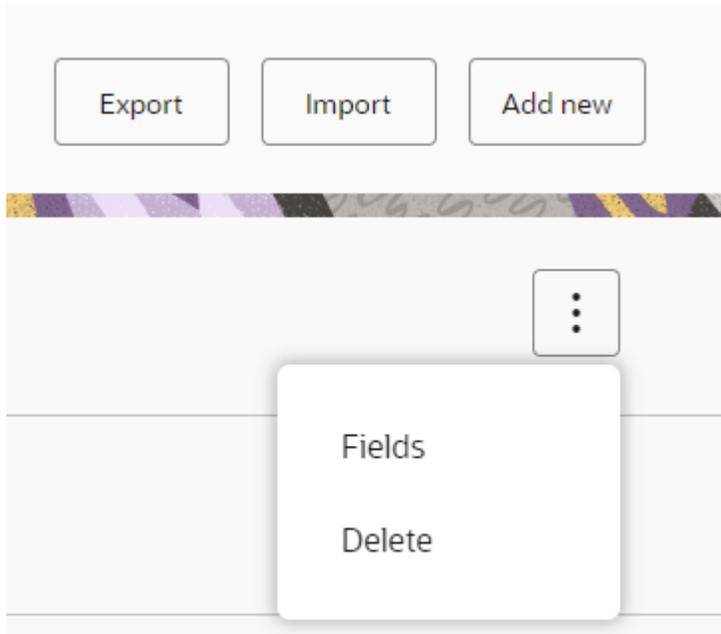
8. Click the **Plus** icon and select the required field that you want to add to the entity.

9. Click **Add** and Click **OK**.

The selected fields are added as columns to the corresponding tables in the Oracle Autonomous Database instance.

Results:

After you add a new application:

- The Applications page displays the updated list of applications.

- Monitoring data or information displayed in the Applications page is reset every day (24 hours).

- The data processing and transmission depends on the volume of data stored. You might expect a delay in transferring big volumes of data for real-time data transfer. Also, the daily transmission starts as per the daily extraction period specified in Oracle Field Service.

- The data transfer for the entities, namely, Activity, Inventory, ActivityLink, Resources, Users, and Route entities isn't started immediately when the user opts for real-time data transfer.

  The real-time data transfer for the entities is started only from the next day after the first run of the daily extraction process is completed.

Consider the following configurations for the new application:

- Chat Fields and Chat Message Fields entities are configured.

- Real-time data transfer method is selected.

- The Oracle Field Service environment is connected to the application environment.

Note that the total number of chat messages and total number of helpdesk messages are displayed in that environment. If a user logs in to the Oracle Field Service environment and sends a helpdesk chat request, then the total number of chat messages and total number of helpdesk messages are incremented in the environment. However,

if a one-to-one chat is started between the users, then the total number of chat messages is incremented in the environment.

How do I see the messages for an activity?

You can see these types of messages in the Messages tab:

- *Notification*: messages sent to the customer and/or resource.
- Messages sent to or received from an external application.

Messages are displayed per these rules:

- Obsolete messages and messages in final statuses are removed from the message queue.
- No 'day of event' or 'day of route' messages are generated for non-scheduled activities.
- Messages that use the **Set property** delivery channel (method) are shown in this view, only if they were generated less than one (1) hour ago. The only exception from this rule is for messages that have the Failed status. Such messages are important for troubleshooting, so they don't have the one (1) hour expiration time.

You can filter the types of messages that are visible by using the **Message Status**, **Message Type**, and **Recipient** drop-down lists.

Follow these steps to view all of the messages associated with an activity:

1. Select the word "any" from a drop-down list to view all the messages.
2. Click **Search**. The page resets, displaying all messages, as shown in this screenshot:

Time: Indicates the day and time that the message was issued. If it is in the future, then the time listed indicates when the message will be sent to the customer.

Method: Indicates the method by which the message is sent. For example:

- Voice –telephone or voice call.
- SMS – SMS text message.

Trigger: Indicates the previous action that triggered the message.

Scenario (Step): Specifies the details on the message sent.

Status (Description): Indicates whether the message was successfully sent or not. If a message was successfully sent, this column displays **Delivered** or **Sent**. If not, the column displays **Failed** and a reason for failure.

Address: Indicates the phone number or e-mail address to which the message was sent. If this column says **External system**, it means the message was sent to an external billing system.

equipment S/N: Indicates the serial number of any equipment referenced.

Time Delivered: Indicates the time the message was delivered.

What types of message blocks are available?

These types of message blocks are available in Oracle Fusion Field Service.

Block	Description
`installed_inventory`	This block retrieves the list of inventory from the `install` pool.
`deinstalled_inventory`	This block retrieves the list of inventory from the `deinstall` pool.
`customer_inventory`	This block retrieves the list of inventory from the `customer` pool.
`resource_inventory`	This block retrieves the list of inventory from the `resource` pool.
`exchanged_inventory`	This block retrieves the list of exchanged inventory.
`required_inventory`	This block retrieves the list of required inventory.
`visit`	This block can include information related to work orders that belong to a visit into a single message. This block can only be used in scenarios attached to the visit-related launch conditions.
`team-members`	This block retrieves the list of team-members for a given teamholder and a given day. It can be used in messages that are related to a route. It also it works for the `Manual` (service request) launch condition.
`regular_calendar/oncall_calendar`	These two blocks are intended for switching between the `regular` and `on-call` calendar types. The `regular` calendar is selected by default and it is not required to use the block in this case.
`activity_workskills`	Only the following placeholders can be used in this block: • Activity Workskill • Activity Workskill ID • Activity Workskill label • Activity Workskill Required level • Activity Workskill Preferable label See *What activity message placeholders are available?*
`destination_resource`	This block retrieves values of fields (resource_* placeholders) and custom properties for a destination resource in the following cases: • "move activity" trigger • "move inventory" trigger

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Block	Description
`forbidden_resources/required_resources/preferred_resources`	These blocks retrieve forbidden/required or preferred resources.
`linked_activities`	This block retrieves activities linked to the current one. The block has the following syntax: <BLOCK type="linked_activities: label of activity link type">. This block cannot be used without the label of activity link type. All related activity links are also handled as ordered even if the corresponding activity link type has two identical labels.
`multiday_activity`	This block temporarily switches the context to the related segmentable activity. It can be used in scenarios related to both segmentable activities and their segments. If this block is invoked for a single-day activity, it will not process any records and the result will contain no data.
`multiday_activity_segments`	This block prints information about all existing segments of a segmentable activity regardless of their statuses (except `deleted` segments). It can be used in scenarios related to both segmentable activities and their segments. If this block is invoked for a single-day activity, it will not process any records and the result will contain no data.

Examples of message blocks

These are the examples of message blocks.

Visit

```
<visit>
<BLOCK type="visit">
<work_order number="{activity_number}" status="{activity_status}" comments="{pr_comments}"/>
</BLOCK>
</visit>
```

Team

```
<team>
<BLOCK type="team-members">
<team-member
resource_external_id ="{resource_external_id}"
resource_name = "{resource_name}"
teamwork_start = "{activity_start_time:+{activity_start_time}}{activity_start_time:-
{activity_service_window_start}}"
teamwork_end = "{activity_end_time:+{activity_end_time}}{activity_end_time:-{activity_service_window_end}}"
teamwork_activity_number = "{activity_number}"
teamwork_activity_worktype = "{activity_worktype}"
teamwork_activity_duration = "{activity_duration}"
teamwork_activity_time_slot = "{activity_time_slot}"
/>
</BLOCK>
</team>
```

Oncall_calendar

```
regular_shift = "{calendar_shift}"

<BLOCK type="oncall_calendar">
```

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```
oncall_shift = "{calendar_shift}"
</BLOCK>
```

Activity_workskills

```
Pattern:

<desc><BLOCK type="activity_workskills">{activity_workskill},</BLOCK></desc>
<details>
<BLOCK type="activity_workskills">
<skill label="{activity_workskill_label}" required="{activity_workskill_required_level}"
preferable="{activity_workskill_preferable_level}"/>
</BLOCK>
</details>
```

Linked activities and preferred resources

```
Pattern:

<linked_activities>
<BLOCK type="linked_activities: start-before">
<activity link = "predecessor" min_delay = "{activity_link_min_interval}" max_delay =
"{activity_link_max_interval}" date = "{date}" resource = "{resource_name}" number = "{activity_number}"
worktype = "{activity_worktype}"/>

<forbidden_resources>
<BLOCK type="forbidden_resources">
<resource resource = "{resource_name}"/>
</BLOCK>
</forbidden_resources>

<required_resources>
<BLOCK type="required_resources">
<resource resource = "{resource_name}"/>
</BLOCK>
</required_resources>

<preferred_resources>
<BLOCK type="preferred_resources">
<resource resource = "{resource_name}"/>
</BLOCK>
</preferred_resources>

<resource_inventory>
<BLOCK type="resource_inventory">
<inventory serial = "{inventory_serial_number}" type="{inventory_type}"/>
</BLOCK>
</resource_inventory>

</activity>
</BLOCK>
<BLOCK type="linked_activities: start-after">
<activity link = "successor" min_delay = "{activity_link_min_interval}" max_delay =
"{activity_link_max_interval}" date = "{date}" resource = "{resource_name}" number = "{activity_number}"
worktype = "{activity_worktype}"/>
</BLOCK>
<BLOCK type="linked_activities: start-together">
<activity link = "simultaneous" date = "{date}" resource = "{resource_name}" number = "{activity_number}"
worktype = "{activity_worktype}"/>
</BLOCK>
</linked_activities>
```

Required inventory

```
Pattern:
```

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```
<required_inventory>
<BLOCK type="required_inventory">
<item
type="{required_inventory_type_label}"
model="{required_inventory_model}"
quantity="{required_inventory_quantity}"
/>
</BLOCK>
</required_inventory>

</conbody>
</concept>
```

How do I activate, deactivate, or delete an activity type?

If you don't want to use an activity type any more, you can change its status and deactivate it, or delete it. Similarly, if you've an existing deactivated activity type, you can activate it and start using it.

1. Click **Configuration**.
2. In the **Resources, Activities, Inventories** section, click **Activity Types**.
3. Select the check box next to an activity type.

   Group action buttons such as activate and deactivate appear.
4. Click the appropriate button, based on the action you want to perform.

   > **Note:** Deactivate doesn't delete the activity type; it just makes it inactive. You can't delete an activity type that's in use (or, activities of this type exists).

How do I use the open method in the Plug-In API?

When a user opens a plugin through a button, a message with the open method is sent to the plugin after Oracle Fusion Field Service receives the ready message. The response of the 'open' method contains the 'user' item, includes the 'main_resource_id' field that represents the resource which is referenced to the current user. Similarly, the response of the 'open' method includes the 'team' item, which contains information about teamwork. The response of the 'open' method also contains the 'queue' key with current queue state (activated, not activated, or deactivated). The 'resource' key contains the time-related fields such as the current resource's time, resource's time zone difference, and the difference between a device's clock and UTC.

The open message contains entity collections, for example, data of available Oracle Fusion Field Service entities such as activities and inventories. See Available entities and data collections for details. The 'dataItems' option of the 'ready' method controls the availability of the 'team' item. The 'team' item is not sent if the plugin is opened from the Main menu. The response of the 'open' method is extended with the activity and inventory lists when they are available.

Example of open message

```
{
 "apiVersion": 1,
 "method": "open",
 "entity": "activity",
 "user": {
 "uid": 38,
 "ulogin": "rayner",
```

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```
        "uname": "RAYNER, Faye",
        "format": {
        date: "m/d/y",
        long_date: "l, F jS, Y",
        time: "h:i A",
        datetime: "m/d/y h:i A"
        },
        "su_zid": 4,
        "week_start": 0,
        "ulanguage": 1,
        "languageCode": "en",
        "design_theme": 11,
        "allow_vibration": 1,
        "allow_desktop_notifications": 0,
        "sound_theme": 11,
        "providers": [
        "5000038",
        "5000039"
        ],
        "main_resource_id": 5000038
        },
        "team": {
        "assistingTo": {
        "3000001": [
        "3000008",
        "3000037"
        ],
        "3000015": []
        },
        "assistingMe": [
        "3000003",
        "3000008"
        ],
        "teamMembers": {
        "3000001": {
        "uid": 1000001,
        "external_id": "resource_1",
        "pname": "Resource 1",
        "pactive": 1
        },
        "3000003": {
        "uid": 1000003,
        "external_id": "resource_13",
        "pname": "Resource 3",
        "pactive": 1
        },
        "3000008": {
        "uid": 1000008,
        "external_id": "resource_8",
        "pname": "Resource 8",
        "pactive": 1
        },
        "3000015": {
        "uid": 1000015,
        "external_id": "resource_15",
        "pname": "Resource 15",
        "pactive": 1
        },
        "3000037": {
        "uid": 1000037,
        "external_id": "resource_37",
        "pname": "Resource 37",
        "pactive": 1
        }
        }
        },
```

```
"resource": {
"pid": 5000038,
"pname": "RAYNER, Faye",
"external_id": "55038",
"gender": "1"
},
"activityiList": {
"3956534": {
"WO_COMMENTS": "AUTOMATIC TRANSFER WORK ORDER\n\n",
"astatus": "started",
"aid": 3956534
}
},
"activity": {
"WO_COMMENTS": "AUTOMATIC TRANSFER WORK ORDER\n\n",
"astatus": "started",
"aid": 3956534
},
"inventoryList": {
"20997919": {
"invid": 20997919,
"inv_aid": 3956534,
"inv_pid": 5000038,
"invpool": "install",
"invsn": "SABDFWKNZ"
},
"20998078": {
"invid": 20998078,
"inv_aid": 3956532,
"invpool": "customer",
"invsn": "5CTBME4AW090379"
},
"20998080": {
"invid": 20998080,
"inv_aid": 3956533,
"invpool": "customer",
"invsn": "SABGZTWGM"
}
}
}
```

Example of the open message for a plugin opened from the Main menu (only 'user' collection is available)

```
{
"apiVersion": 1,
"method": "open",
"entity": "user",
"user": {
"uid": 2315,
"ulogin": "admin",
"uname": "Admin",
"format": {
"date": "m/d/y",
"long_date": "l, F jS, Y",
"time": "h:i A",
"datetime": "m/d/y h:i A"
},
"week_start": 0,
"ulanguage": 1,
"language": "en",
"design_theme": 1,
"allow_vibration": 0,
"allow_desktop_notifications": 0,
"sound_theme": 0,
"providers": [
2
```

```
      ]
    }
  }
```

Example of the open message for a plugin opened from the Parts Catalog

```
  {
  "apiVersion": 1,
  "method": "open",
  "entity": "partsCatalogItem",
  "team": {
  "assistingTo": {},
  "assistingMe": [],
  "teamMembers": {}
  },
  "user": {
  "uid": 2315,
  "ulogin": "admin",
  "uname": "Admin",
  "format": {
  "date": "m/d/y",
  "long_date": "l, F jS, Y",
  "time": "h:i A",
  "datetime": "m/d/y h:i A"
  },
  "week_start": 0,
  "ulanguage": 1,
  "languageCode": "en",
  "design_theme": 1,
  "allow_vibration": 0,
  "allow_desktop_notifications": 0,
  "sound_theme": 0,
  "providers": [
  2
  ]
  },
  "partsCatalogItem": {
  "catalogId": 2,
  "label": "a5123-df"
  },
  "resource": {
  "pid": 5000038,
  "pname": "RAYNER, Faye",
  "external_id": "55038",
  "gender": "1"
  },
  "activityiList": {
  "3956534": {
  "WO_COMMENTS": "AUTOMATIC TRANSFER WORK ORDER\n\n",
  "astatus": "started",
  "aid": 3956534
  }
  },
  "inventoryList": {
  "20997919": {
  "invid": 20997919,
  "inv_aid": 3956534,
  "inv_pid": 5000038,
  "invpool": "install",
  "invsn": "SABDFWKNZ"
  }
  }
  }
```

Structure of the 'team' collection in the 'open' method when teamwork is not set:

```
  "team": {
```

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```
 "assistingTo": {},
 "assistingMe": [],
 "teamMembers": {}
}
```

Structure of the 'team' collection in the 'open' method when teamwork is set:

```
"team": {
 "assistingTo": { - object with list of resources who I am assisting to
 "3000001": [ - array with list of additional resources who is assisting to user who I am assisting to
 (current user 3000035 is absent in this list!)
 "3000008", - resource ID who is also assisting to resource 3000001
 "3000037"
 ],
 "3000015": []
 }
 "assistingMe": [ - array with list of resources who is assisting me
 "3000003", - resource ID who is assisting to me
 "3000008"
 ]
 "teamMembers": { - object with information of all team members
 "3000001": {
 "uid": 1000001, - the resource is main resource for this user ID
 "external_id": "resource_1", - resource external ID
 "pname": "Resource 1", - resource name
 },
 "3000003": {
 "uid": 1000003,
 "external_id": "resource_13",
 "pname": "Resource 3"
 },
 "3000008": {
 "uid": 1000008,
 "external_id": "resource_8",
 "pname": "Resource 8"
 },
 "3000015": {
 "uid": 1000015,
 "external_id": "resource_15",
 "pname": "Resource 15"
 },
 "3000037": {
 "uid": 1000037,
 "external_id": "resource_37",
 "pname": "Resource 37"
 }
 }
}
```

Example of "open" message for Plugin opened using deep link

```
{
 "apiVersion": 1,
 "method": "open",
 "entity": "activityList",
 "resource": {},
 "team": {
 "assistingTo": {},
 "assistingMe": [],
 "teamMembers": {}
 },
 "user": {
 "uid": 2315,
 "ulogin": "admin",
 "uname": "Admin",
```

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```
   "format": {
   "date": "m/d/y",
   "long_date": "l, F jS, Y",
   "time": "h:i A",
   "datetime": "m/d/y h:i A"
   },
   "week_start": 0,
   "ulanguage": 1,
   "languageCode": "en",
   "design_theme": 1,
   "allow_vibration": 0,
   "allow_desktop_notifications": 0,
   "sound_theme": 0,
   "providers": [
   2
   ]
   },
   "activityList": {
   "4225438": {
   "aid": "4225438"
   },
   "4225439": {
   "aid": "4225439"
   }
   },
   "inventoryList": {
   "21064417": {
   "invid": "21064417"
   },
   "21064418": {
   "invid": "21064418"
   }
   },
   "openParams": {},
   "externalData": {
   "zipcodes": ["35801", "06101", "62701"],
   "status": "completed"
   }
   }
```

Available Entities and Data Collections

The field 'entity' and entity data collections are available only for 'open' and 'close' methods. The value of the special 'entity' field depends on the Oracle Fusion Field Service Core Application page from which the user opens the plugin. Availability of entity data collections that are sent within the message data, depends on the value of 'entity'. this table gives the available entities and data collections for the *open* method:

Page	Entity Field Value	Available Collections
Main menu Team Map	user	user
Activity List Route Map	activitiyList	user team
Activity List -> Inventory List	inventoryList	queue resource

Page	Entity Field Value	Available Collections
		activitiyList inventoryList
Activity List -> Activity Details	activity	user
Activity List -> Activity Details -> Inventory List	activityInventoryList	team queue resource activityList activity inventoryList
Activity List -> Inventory List -> Inventory Details	inventory	user team queue resource activitiyList inventoryList inventory
Activity List -> Activity Details -> Inventory List -> Inventory Details	activityInventory	user team queue resource activityList activity inventoryList inventory
Inventory Search -> Parts Catalog Item Details	partsCatalogItem	user

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Page	Entity Field Value	Available Collections
		team
		queue
		resource activitiyList
		inventoryList
		partsCatalogItem

Entity Data Collections

- **team**: Information about assistants and resources who are assisting to the current resource
- **resource**: Element in the resource tree representing a defined company asset
- **activity**: Entity of Oracle Fusion Field Service that represents any time-consuming activity of the resource
- **activityList**: Activity list
- **inventory**: Equipment that can be installed or deinstalled during an activity
- **inventoryList**: Inventory list
- **user**: User who has currently logged in to Oracle Fusion Field Service Core Application and opens the plugin
- **partsCatalogItem**: Information that identifies the parts catalog item, so it can be retrieved using the getParts procedure

Note: The 'team', 'resource', 'user', and 'partsCatalogItem' collections can't be updated through the plugin API and are ignored if they're sent with the 'close' message.

Availability of activity, inventory, and resource properties depends on the configuration of the plugin. See Available Properties for details.

Available Fields for 'user' Entity Collection

The available properties for this entity are predefined and do not depend on the configuration of the plugin. this table provides the available fields for the 'user' entity collection:

Field	Type	Example Value	Description
uid	Number	2315	Internal id of user
ulogin	String	admin	Login
uname	String	Admin	Name
format	Object<String, String>	```{ "date": "m/d/y", "long_date": "l, F jS, Y", "time": "h:i A", "datetime": "m/d/y h:i A" ```	Collection of date format strings in the PHP's style

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Field	Type	Example Value	Description
		}	
su_zid	Number	2	Time Zone id
week_start	Number	0	Week start day (0-6) 0 - Sunday, 1 - Monday
ulanguage	Number	1	Language id (1 - English)
languageCode	String	en	Two-letter code for the language
design_theme	Number	1	Design theme ID
allow_vibration	Number	0	1 - Vibration on mobile devices is allowed, 0 - disallowed
allow_desktop_notifications	Number	0	1 - Browser desktop notifications are allowed, 0 - disallowed
sound_theme	Number	0	Sound notification settings 0 - Off, 1 - Quiet, 2 - Loud, 3 - Persistent
providers	Array<Number>	[38, 3000001]	List of resources, that are visible to user, excluding their descendants
main_resource_id (optional)	Number	1111	Resource ID, which is set as the main resource

Available Fields for 'activity' Entity Collection

This table provides the available fields for the 'activity' entity collection:

Field	Description
cname	Name
caddress	Address
ccity	City
czip	ZIP/Postal Code
cstate	State
customer_number	Account Number
c_zid	Time Zone
cphone	Phone

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Field	Description
cemail	Email
ccell	Cellular Phone
atype	Activity Type
position_in_route	Position in Route
aworktype	Activity type
time_slot	Time Slot
service_window	Service Window
appt_number	Work Order
clanguage	Message Language
cmessagetime	Reminder
activity_workskills	Work Skill
length	Duration
ETA	Start
astatus	Activity status
aid	Activity ID
end_time	End
delivery_window	Delivery Window
acoord_status	Coordinate Status
acoord_x	Coordinate X
acoord_y	Coordinate Y
travel	Traveling Time
sla_window_start	SLA Start
sla_window_end	SLA End
atime_of_booking	Activity Time of Booking
atime_of_assignment	Activity Time of Assignment
activity_flow	Activity workflow

Non-Available Fields for 'activity' Entity Collection

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This table provides the fields that are not available for the 'activity' entity collection:

Field	Description
aworkzone	Work Zone
time_delivered	Time Notified
eta_end_time	Start - End
date	Date
pid	Resource ID
apoints	Points
atravelarea	Travel Area
activity_capacity_categories	Capacity Categories
activity_alerts	Alerts
activity_compliance	Compliance Alerts
auto_routed_to_provider_id	Auto-Routed to Resource
auto_routed_to_date	Auto-Routed to Date
first_manual_operation	First Manual Operation
first_manual_operation_user_id	First Manual Operation Performed by User
first_manual_operation_interface	First Manual Operation Interface
auto_routed_to_provider_name	Auto-Routed to Resource (Name)
first_manual_operation_user_name	First Manual Operation Performed by User (Name)
first_manual_operation_user_login	First Manual Operation Performed by User (Login)
access_hours	Access Hours
access_schedule	Access Schedule

'activity_flow'

The "activity_flow" field can be set from the plugin, or it will be calculated dynamically based on the workflow conditions created. The "activity_flow" field can be set for only those activities in status '*Pending*' or '*En route*'. Also, the "activity_flow" field can be set when the activity status is changed from '*Pending*' or '*En route*' to '*Started*'. The dynamic calculation works when the activity status is changed from '*Pending*' or '*En route*' to '*Started*' and "activity_flow" field was not ser previously; the application associates the workflow with the activity permanently, saves the workflow ID into the "activity_flow" field, and stops recalculation. It is prohibited to change the "activity_flow" field after an activity is started; a corresponding error message will be displayed.

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'masterActivityId'

Each segment of a segmentable activity has a field called "masterActivityId". It's and id of the main activity which the segment belongs to. This field may be usable in a scenario when a plugin needs to deinstall inventory from a segmentable activity because customer pool inventory is assigned to the main segmentable activity (via "inv_aid" field) which is absent in the activity list. Using the "masterActivityId" activity field, the plugin can filter inventories from the "inventoryList" which belong to the main segmentable activity.

Example of an "open" message which contains segments of a segmentable activity and customer pool inventory

```
{
 "apiVersion": 1,
 "method": "open",
 "entity": "activityList",
 "user": {
 "allow_desktop_notifications": 1,
 "allow_vibration": 1,
 "design_theme": 11,
 "format": {
 "date": "m/d/y",
 "long_date": "l, F jS, Y",
 "time": "h:i A",
 "datetime": "m/d/y h:i A"
 },
 "providers": [
 2
 ],
 "sound_theme": 2,
 "su_zid": 15,
 "uid": 2315,
 "ulanguage": 1,
 "languageCode": "en",
 "ulogin": "admin",
 "uname": "Admin",
 "week_start": 0
 },
 "resource": {
 "pid": 3000037,
 "currentTime": "2021-08-30 05:21:23",
 "deviceUTCDiffSeconds": 0,
 "timeZoneDiffSeconds": -14400
 },
 "team": {
 "teamMembers": {},
 "assistingTo": {},
 "assistingMe": []
 },
 "queue": {
 "date": "2021-08-30",
 "status": "notActivated",
 "isActual": true
 },
 "activityList": {
 "4227119": {
 "acoord_status": null,
 "acoord_x": null,
 "acoord_y": null,
 "aworktype": "LU",
 "appt_number": null,
 "astatus": "pending",
 "aid": "4227119"
 },
 "4227120": {
 "acoord_status": null,
 "acoord_x": null,
```

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```
    "acoord_y": null,
    "aworktype": "4",
    "appt_number": null,
    "astatus": "pending",
    "aid": "4227120"
},
"4227122": {
    "acoord_status": null,
    "acoord_x": null,
    "acoord_y": null,
    "aworktype": "Multiday",
    "appt_number": null,
    "astatus": "pending",
    "aid": "4227122",
    "masterActivityId": 4227121
},
"4227123": {
    "acoord_status": null,
    "acoord_x": null,
    "acoord_y": null,
    "aworktype": "Multiday",
    "appt_number": null,
    "astatus": "pending",
    "aid": "4227123",
    "masterActivityId": 4227121
},
"4227133": {
    "acoord_status": null,
    "acoord_x": null,
    "acoord_y": null,
    "aworktype": "Multiday",
    "appt_number": null,
    "astatus": "pending",
    "aid": "4227133",
    "masterActivityId": 4227132
}
},
"inventoryList": {
"21258560": {
"invpool": "customer",
"invid": "21258560",
"inv_aid": 4227121,
"inv_pid": null,
"invsn": null,
"invtype": "EC",
"quantity": 42
},
"21258561": {
"invpool": "customer",
"invid": "21258561",
"inv_aid": 4227132,
"inv_pid": null,
"invsn": null,
"invtype": "HD12",
"quantity": 100
}
},
"buttonId": "20360",
"openParams": {}
}
```

Available Fields for 'inventory' Entity Collection

This table provides the available fields for the 'inventory' entity collection:

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Field	Description
invsn	Serial Number
invpool	Inventory pool
invtype	Inventory Type
invid	Inventory Id
inv_aid	Activity Id
inv_pid	Resource Id
inv_change_invid	Changed Inventory ID
quantity	Quantity

Available Fields for 'resource' Entity Collection

This table provides the available fields for the 'resource' entity collection:

Field	Description
email	Email address
external_id	External ID
pdate_fid	Date format
pactive	Status
pid	ID
planguage	Message Language
pname	Name
pphone	Phone
ptime_fid	Time format
ptype	Resource type
time_zone	Time zone
currentTime	Current time in "YYYY-MM-DD hh:mm:ss" format in the resource's time zone at the time of generating the "open" message.
deviceUTCDiffSeconds	Difference between browser's time and UTC (server time) in seconds. A plugin can calculate the actual UTC time using this formula: UTC = Math.round(new Date().getTime() / 1000) - deviceUTCDiffSeconds.

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Field	Description
timeZoneDiffSeconds	Provider's timezone diff in seconds at the time of generating the "open" message.

Unavailable Fields for 'resource' Entity Collection

This table provides the fields that are not available for the 'resource' entity collection:

Field	Description
alerts	Alerts
calendar	Calendar
oncall_calendar	On-call Calendar
organization_id	Organization
p_rprid	Routing profile
pcapacity_bucket	Use as Capacity Area
pending	Pending
pinitial_ratio	Initial Ratio for Activity Duration
queue_status	Queue status
reactivated	Reactivated
resource_capacity_categories	Capacity Categories
resource_effective_workskills	Effective Work Skills
resource_time_slots	Time slots
resource_workskills	Work Skills
resource_workzones	Work Zones
skip_days_for_stats	Working days left for reported data to start impacting duration estimations
total	Total

Available Fields for "partsCatalogItem" Entity Collection

This table provides the available fields for the 'partsCatalogItem' entity collection:

Field	Example Value	Description	Mandatory
catalogId	17	A unique identifier of a catalog which contains the item. Is returned by the getPartsCatalogsStructure procedure and is required by getParts procedure.	Yes

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Field	Example Value	Description	Mandatory
label	a5123-df	A unique identifier of a part within a catalog. Is required by getParts procedure.	Yes

Available Fields for "user" Entity Collection

This table provides the available fields for the 'user' entity collection:

Field	Type	Example Value	Description
allow_desktop_notifications	Number	0	1 - Browser desktop notifications are allowed,0 - disallowed
allow_vibration	Number	0	1 - Vibration on mobile devices is allowed,0 - disallowed
design_theme	Number	1	Design theme ID

format	Object<String, String>	{
		
		"date": "m/d/y",
		
		"long_date": "l, F jS, Y",
		
		"time": "h:i A",
		
		"datetime": "m/d/y h:i A"
		
		}
			Collection of date format strings in the PHP's style

main_resource_id (optional)	Number	1111	Resource ID which is set as main resource
providers	Array<Number>	[38, 3000001]	List of resources, that are visible to user, excluding their descendants
sound_theme	Number	0	Sound notification settings.0 - Off, 1 - Quiet, 2 - Loud, 3 - Persistent
su_zid	Number	2	Time Zone id
uid	Number	2315	Internal id of user
ulanguage	Number	1	Language id (1 - English)
ulogin	String	admin	Login
uname	String	Admin	Name
week_start	Number	0	Week start day (0-6).

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Field	Type	Example Value	Description
			0 - Sunday, 1 - Monday

Available Fields for "team" Entity Collection

This table provides the available fields for the 'team' entity collection:

Field	Description
assistingTo	Object with resources to assist (each item is an array with other resources who assists)
assistingMe	Array with IDs of assistants
teamMembers	Object as plain collection with information about assistants. The information consists of the following four fields: • external_id • pactive • pname • uid

Available Fields for the 'queue' Entity Collection

You can implement the activate and deactivate route functions in your custom plug-ins using the Plug-in API framework. You can activate and deactivate the route and get the state of the currently selected route. You can use plug-ins instead of the standard Activate/Deactivate dialog box. You can implement scenarios such as gathering data before activating and deactivating the route.

This table lists all the available fields for the 'queue' entity collection:

Field	Example Value	Description	Mandatory (Yes/No)
date	2021-02-03	Date of the queue. Is a key field for the queue.	Yes
status	notActivated	Status of the queue. Possible values: • notActivated - the queue hasn't been activated or deactivated yet. • activated - the queue has been activated • deactivated - the queue has been deactivated	Yes
isActual	true	Boolean, true if the current queue can be operated (not archived, not in future)	Yes

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Field	Example Value	Description	Mandatory (Yes/No)
activationTime	2021-02-03 04:05:06	Date and time of queue activation. Present if the queue has been activated.	No
deactivationTime	2021-02-03 04:05:06	Date and time of queue deactivation. Present if the queue has been deactivated and not activated after.	No
reactivationTime	2021-02-03 04:05:06	Date and time of repeated queue activation (re-activation). Present if the queue has been activated after deactivation.	No

Examples

```
"queue": {
 "date": "2021-02-03",
 "status": "notActivated",
 "isActual": true
 }


"queue": {
 "date": "2021-02-03",
 "status": "activated",
 "isActual": true,
 "activationTime": "2021-02-03 04:05:06"
 }


"queue": {
 "date": "2021-02-03",
 "status": "deactivated",
 "isActual": false,
 "activationTime": "2021-02-03 04:05:06",
 "deactivationTime": "2021-02-03 06:07:08",
 "reactivationTime": "2021-02-03 05:06:07"
 }
```

What are the error codes displayed for inventory actions?

This table describes the errors that are available for inventory-related actions:

Code	Caused by Action	Cause
TYPE_ACTION_ERROR		
CODE_ACTION_NUMBER_LIMIT_ EXCEEDED	create	Number of items in the "actions" field of *close* or *update* message is greater than 10,000.

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Code	Caused by Action	Cause
CODE_ACTION_ON_PAST_DATE_NOT_ALLOWED	• install • deinstall • undo_install • undo_deinstall • create • delete	Any of these: • "inv_aid" param of "install", "deisntall", "undo_install" or "undo_deinstall" action is equal to id of activity that is assigned for a past date • "inv_aid" param of "create" or "delete" action is equal to id of the activity that is assigned for a past date, and "invpool" is "customer", "install" or "deinstall"
CODE_ENTITY_ID_INVALID	• install • deinstall • undo_install • undo_deinstall • create • delete	"invid" param is not equal to the id of any inventory in available pools
CODE_ACTION_UNKNOWN	—	"action" param is not equal to any of the supported inventory actions (for example, "install", "create")
CODE_ACTION_ENTITY_UNKNOWN	—	"entity" param is not equal to "inventory"
TYPE_ACTION_PARAM		
CODE_ACTION_INVENTORY_AID_INVALID	create	"inv_aid" param is sent for the "create" action, and "invpool" is "provider"
CODE_ACTION_INVENTORY_PID_INVALID	• deinstall • create	Any of these: • "inv_pid" param value is not equal to id of current resource or his teammates • "inv_pid" param is sent for "create" action, and "invpool" is "customer"
CODE_ACTION_INVENTORY_POOL_INVALID	create	"invpool" param value is not equal to one of: "customer", "install", "deinstall", "provider"
CODE_ACTION_INVENTORY_TYPE_INVALID	create	"invtype" param value is not equal to the label of any of the Inventory Types, configured for Oracle Fusion Field Service
CODE_ACTION_MANDATORY_PARAM_EMPTY	• install • deinstall • undo_install • undo_deinstall • create • delete	Any of these: • "invid" param is not sent or its value is empty for "install", "deinstall", "undo_install", "undo_deinstall" or "delete" action • "invpool" param of "create" action is not sent or is empty • "inv_aid" param of "install" action is not sent or is empty • "inv_pid" param of "deinstall" action is not sent or is empty • "inv_aid" param of "create" action is not sent or is empty, and "invpool" is "customer", "install" or "deinstall" • "inv_pid" param of "create" action is not sent or is empty, and "invpool" is "provider", "install" or "deinstall"

Code	Caused by Action	Cause
		• "quantity" is not sent or is empty for inventory of non-serialized type
CODE_ACTION_PARAM_VALUE_INVALID	• install • deinstall • undo_install • undo_deinstall • create	Any of these: • "properties" param value is sent but is not a plain object • "quantity" is sent for inventory of serialized type • "quantity" is not a positive integer number
TYPE_ACTION_PROPERTY		
CODE_ACTION_MANDATORY_ PROPERTY_EMPTY	• install • deinstall • undo_install • undo_deinstall • create	[Reserved]
CODE_ACTION_PROPERTY_VALUE_ INVALID	• install • deinstall • undo_install • undo_deinstall • create	Any of these: • Property type is 'file', its GUI type is 'signature' and its value is not a valid Data URI, or it has an invalid MIME-type • Property type is 'enumeration', and its value is not a valid enumeration item's index
CODE_ACTION_PROPERTY_VALUE_ TOO_LARGE	• install • deinstall • undo_install • undo_deinstall • create	Any of these: • Property type is 'field' and the length of its value exceeds 119 UTF-16 codepoints • Property type is 'file', its GUI type is 'signature' and the length of its value exceeds 102400 UTF-16 codepoints • Property is neither field nor signature and the length of its value exceeds 32767 UTF-16 codepoints See Property Value Length and Limits for details.
TYPE_ACTION_FAILED		
CODE_ACTION_INVENTORY_ACTIVITY_ STATUS_INVALID	• install • deinstall • undo_install • undo_deinstall • create • delete	Any of these: • "inv_aid" param of "install", "deinstall", "undo_install" or "undo_deinstall" action is not equal to the id of a started activity • "inv_aid" param of "create" or "delete" action is not equal to the id of a started activity, and "invpool" is "install" or "deinstall" • "inv_aid" param of "create" or "delete" action is equal to the id of a completed, not done, or cancelled activity, and "invpool" is "customer" • "invid" param of "deisntall", "undo_install" or "undo_deinstall" action is equal to the id of an inventory, associated with a not started regular activity • "invid" param of "deisntall", "undo_install" or "undo_deinstall" action is equal to the id of an inventory, associated with a

Code	Caused by Action	Cause
		segmentable activity that is not a master activity of the currently started segment
CODE_ACTION_INVENTORY_ACTIVITY_TYPE_INVALID	• install • create	"inv_aid" param equal to the id of an activity, whose type doesn't support inventories
CODE_ACTION_INVENTORY_ACTIVITY_UNKNOWN	• install • create	"inv_aid" param isn't equal to: • Id of one of the activities in the queue of current provider / his teammates • Id of one of the activities in the unscheduled pool
CODE_ACTION_INVENTORY_POOL_TRANSITION_INVALID	• install • deinstall	Any of these: • "invid" param of "install" action is equal to the id of inventory, whose "invpool" isn't equal to "provider" • "invid" param of "deinstall" action is equal to the id of inventory, whose "invpool" isn't equal to "customer" • "invid" param of "undo_install" action is equal to the id of inventory, whose "invpool" isn't equal to "install" • "invid" param of "undo_deinstall" action is equal to the id of inventory, whose "invpool" isn't equal to "deinstall"
TYPE_INTERNAL		
CODE_UNKNOWN	• install • deinstall • undo_install • undo_deinstall • create	Oracle Fusion Field Service is unable to process the message due to an unexpected change of the system's state

Related Topics
- Which inventory actions does the plugin API support?

Which inventory actions does the plug-in API support?

The Plug-in API supports install, deinstall, undo install, undo deinstall, create, and delete actions for inventory.

install

This table describes the parameters supported for the install inventory action:

Parameter	Mandatory	Type	Description
invid	Yes	String	Id of an existing inventory that is in the "provider" pool of the current resource or the resource's teammates.

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Parameter	Mandatory	Type	Description
inv_aid	Yes	String	Id of the started activity. Inventory will be installed to its "install" pool. Must contain the id of started segment for segmentable activities.
quantity	Yes/No	Number	Is mandatory and must be > 0 for non-serialized inventory. Is forbidden for serialized inventory.
properties	No	Object	Is a key-value object, where keys are the labels of Oracle Fusion Field Service inventory properties to be updated. Properties are validated and processed according to the plugin configuration.

deinstall

This table describes the parameters supported for the deinstall inventory action:

Parameter	Mandatory	Type	Description
invid	Yes	String	Id of an existing inventory that is in the "customer" pool of a started activity.
inv_aid	Yes	String	Id of the current resource or the resource's teammates. Inventory will be deinstalled to its "deinstall" pool.
quantity	Yes/No	Number	Is mandatory and must be > 0 for non-serialized inventory. Is forbidden for serialized inventory.
properties	No	Object	Is a key-value object, where keys are the labels of Oracle Fusion Field Service inventory properties to be updated. Properties are validated and processed according to the plugin configuration.

undo_install

This table describes the parameters supported for the undo-install inventory action:

Parameter	Mandatory	Type	Description
invid	Yes	String	Id of an existing inventory that is in the "install" pool of a started activity.
quantity	Yes/No	Number	Is mandatory and must be > 0 for non-serialized inventory. Is forbidden for serialized inventory.

Parameter	Mandatory	Type	Description
properties	No	Object	Is a key-value object, where keys are the labels of Oracle Fusion Field Service inventory properties to be updated. Properties are validated and processed according to the plugin configuration.

undo_deinstall

This table describes the parameters supported for the undo-deinstall inventory action:

Parameter	Mandatory	Type	Description
invid	Yes	String	Id of an existing inventory that is in the "deinstall" pool of the current resource or the resource's teammates.
quantity	Yes/No	Number	Is mandatory and must be > 0 for non-serialized inventory. Is forbidden for serialized inventory.
properties	No	Object	Is a key-value object, where keys are the labels of Oracle Fusion Field Service inventory properties to be updated. Properties are validated and processed according to the plugin configuration.

create

This table describes the parameters supported for the create inventory action:

Parameter	Mandatory	Type	Description
invtype	Yes	String	Label of one of the Inventory Types, configured for Oracle Fusion Field Service (for example, "NT")
invpool	Yes	String	Inventory pool in which the inventory is created. It can be one of: "customer", "install", "deinstall", "provider".
inv_aid	Yes/No	String	Id of the started activity. Inventory will be created in its pool. Must contain the id of the started segment for segmentable activities. Is mandatory if invpool is one of: "customer", "install", or "deinstall". Is forbidden for invpool equal to "provider".
inv_pid	Yes/No	String	Id of the current resource or the resource's teammates. Inventory will be created in the resource's pool. Is mandatory if invpool is one of: "provider", "install", "deinstall".

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Parameter	Mandatory	Type	Description
			Is forbidden for invpool equal to "customer".
quantity	Yes/No	Number	Is mandatory and must be > 0 for non-serialized inventory. Is forbidden for serialized inventory. **Note:** If the quantity is not present in the **Add Plugin** or **Modify Plugin** page, **Available properties** section or present and set to "Read-only" and if it's not configured as available for the plugin, then it is set to "1" for non-serialized inventory by Oracle Fusion Field Service Core Application itself.
properties	No	Object	Is a key-value object, where keys are the labels of Oracle Fusion Field Service inventory properties to be updated. Properties are validated and processed according to the plugin configuration.

delete

This table describes the parameters supported for the delete inventory action:

Parameter	Mandatory	Type	Description
invid	Yes	String	Id of an existing inventory that is in the "provider" pool of the current resource or the resource's teammates, or in "install", "deinstall" or "customer" pool of the started activity. **Note:** There is no quantity parameter for the delete action. The entire record with any quantity is deleted from the corresponding pool.

What are the warning messages displayed while moving activities?

This topic describes the warning messages that you would see while moving activities.

You might see these types of warning messages:

- Service window warning
- Resource overload risk warning

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- SLA warning

- Overtime warning

- Linked activity warnings

  - Has successor scheduled earlier

  - Has predecessor scheduled later

  - Has simultaneous activity

- Work zone mismatch

- Work skills mismatch

- Soft skill mismatch

Resource overload risk warning

The *Resource overload risk* warning message is displayed if you try to assign activities with a total duration of more than 12 hours to a single resource's route. The message doesn't appear when you assign activities to a bucket or to the non-scheduled pool of a resource. The message is displayed when you move activities using these methods:

- Dragging from the List View

- Using the lasso tool on the Dispatch Map

Here's a sample warning message:

Resource overload risk; You are assigning 30 activities with estimated time over 25 hours to a single Field Resource.

If you try to move more than 200 activities, then only the duration of the first 200 is displayed in the warning message.

Linked activity warnings

The warnings related to linked activities are as follows:

- **Has successor scheduled earlier:** This warning appears for a pending activity linked to another activity that must be started after, but is scheduled before its estimated completion.

- **Has predecessor scheduled later:** This warning appears for a pending activity linked to another activity that must be finished before, but is scheduled after its estimated start.

- **Has simultaneous activity:** This warning appears for a pending activity linked to another activity that must be started simultaneously, but is scheduled to a different time.

Overtime alert: This alert notifies you that the estimated completion time of the activity extends beyond the end of a resource's working day.

Work Zone mismatch alert: The application doesn't allow you to assign an activity to a resource without a required work zone. The only exception is when the **All** checkbox is selected. In this case, the resource is shown in red and the "Work zone mismatch" alert appears in its hint.

Work skill **mismatch alert:** This alert displays when you move an activity to a resource that doesn't have the required and preferred qualification level of an activity skill. The only exception is when the **All** checkbox is selected. In this case, the resource is shown in red and the "Work skill mismatch" alert appears in its hint. Depending on your settings, the Work skill mismatch alert either prevents you from moving the activity, or gives you the option to move it, or let you cancel the move. This alert is also displayed in the team work scenario. When an assistant is set to inactive or has a non-working day, their work skills aren't shared with the team anymore. So, the 'Work Skills mismatch' alert is displayed.

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Soft Skill mismatch alert: If an activity is to be moved to a resource and a work skill level of this resource is more than (or equal to) the level 'required' to complete this activity, but less than the 'preferred' level, the 'Soft skill mismatch' alert appears. In case of the 'Soft skill mismatch' warning, the resource isn't removed from the list of available resources on the **Move activity** page (the **All** checkbox doesn't affect this behavior). But, it's shown in a different color (blue) than a regular one and the 'Soft skill mismatch' text is shown in its hint message. The 'preferable' skill level is ignored by the 'Self assignment' constraint that's used to filter activities in bucket. In this case the 'required' level is only checked. The 'Soft skill mismatch' warning is shown on attempt to move an activity to a mobile worker with an insufficient 'preferred' skill level.

don't move alert: This alert displays when you try to move an activity type that isn't allowed to move between resources. Activity types are configured in the **Add activity type** page.

Resource preferences

- If an activity has a list of Forbidden resources, the application doesn't allow to assign it to one of these resources. They aren't shown in the GUI (regardless of the "All" option).

- If an activity has a list of Required resources, these resources are only shown in GUI (regardless of the "All" option).

- If an activity has a list of Preferred resources, these resources are shown in GUI by default. Other resources are returned, if the **All** option is set. In this case, such resources are shown in red and the **Resource is not preferred** message appears for the activity to be moved.

If several activities are selected to be moved at the same time, these rules are used to merge their lists of preferred resources:

- Forbidden

  - The resulting list of the Forbidden resources is a union of the original activity lists.

- Required

  - If activities to be moved have the Required resources, the result is an intersection.

  - Activities without the Required list aren't processed. If only one of the two activities has the Required list, this list is only used in the restriction.

  - If two activities have the Required lists and these lists aren't intersected, all the activities can't be assigned together to the same resource.

- Preferred

  - If any of the activities has the Required list, the Preferred resources are ignored.

  - The result Preferred list is calculated as an intersection.

  - Activities without the Preferred list aren't processed. If only one of two activities has the Preferred list, this list is only used in the restriction.

  - If two activities have the Preferred lists and these lists aren't intersected, all the activities can't be assigned together to the same resource (can be overridden using the **All** option).

How do I add an activity filter to a routing plan?

You can use assignment rules (previously called activity filters) to prioritize certain types of activities or resources over others during the routing process. Assignment rules provide an alternative to creating additional routing plans for prioritization.

1. Navigate to the **Routing Profiles** screen and find the routing plan that you want to add the filter to.
2. Select the routing plan and click **Modify**.
3. Expand the **Filters** section of the **Routing Plan** page.
4. Click **Add activities assignment rule** (previously Add activity filters group).
5. Select the rule that you want to add to the routing plan from the **Set of activities to be assigned** list.
6. Select the Resources to which the rule should apply.
    - All rule types are managed within this single **Filters** section.
    - Preassigned activities with a **Do Not Assign** priority are eligible for re-optimization. If re-optimization is enabled, these activities may be moved back to the bucket or unscheduled.
7. Select **Cost** for each resource that you added.
    - In general, the higher the cost, the less desirable the assignment.
    - If you select **Do Not Assign**, resources of that type are excluded from assignment unless re-optimization rules move them.
8. Repeat these steps to add additional rules. Drag the rules to arrange them in the sequence you want them applied.
    - The rules are arranged in the sequence you added them, with the most recently added rule appearing at the top of the list.
    - The **All** rule always appears last in the list and cannot be deleted.
    - If **All** is the only rule added the label displays as **All**; if the other rules are also added its label displays as **Other**.

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9. Click **Add** to save your changes.

Assignment Cost for Multiple Activity Filters:

In this example, the routing strategy includes these steps:

- o   Do not assign work to contractors.

- o   Assign activities to In-house resources before all others.

The **Contractors** filter has the assignment cost **Do not assign** so that activities are never assigned to contractors.

The **In-House** filter has a lower assignment cost than the *** (Other)** filter so that in-house personnel receive activities before all other resources.

Using Legacy Assignment Rules:

By default, routing plans display the **Simplified Filters** configuration (single Filters section).

If needed, you can enable the **Legacy Assignment Rules** option to restore the previous configuration. When enabled:

- o   The **Other** filter label is retained instead of **All**.

- o   Missing groups are automatically added with a default **Do Not Assign** filter.

- o   All the four following legacy filter groups reappear: (non-scheduled activities, activities in the bucket, preassigned non-scheduled activities, and activities in existing routes).
  - -   **Non-scheduled activities in the routing bucket that should be scheduled and assigned** are not currently on any route. They are not assigned to time slots or resources. Routing will attempt to route them during the next run.
  - -   **Activities in the routing bucket that should be assigned** are not currently on any route. They are assigned to time slots but are not assigned to resources. Routing will attempt to route them during the next run.
  - -   **Preassigned non-scheduled activities that should be scheduled** are already assigned to resources, but they are not assigned to time slots. You can use reoptimization to automatically move these activities during the routing process.
  - -   **Activities in the existing routes** are already assigned to resources and time slots. You can use reoptimization to automatically move these activities during the routing process.

How do I use the update method in the Plug-In API?

You can use the *update* method to update Oracle Fusion Field Service entities through a plugin, without leaving the plugin's page.

Oracle Fusion Field Service validates the format of the *update* message and processes it in the same way as the *close* message. The differences between the *update* and *close* methods are:

- • *update* messages may be sent by the plugin multiple times before closing. However, the plugin cannot send the next *update* message until the previous *update* is applied and the *updateResult* message is sent to the plugin.

- • The plugin page is not closed after applying of *update* message and its iframe is not destroyed.

- • The message fields wakeupNeeded, backScreen, backActivityId, backInventoryId, backPluginLabel, backPluginButtonId, backPluginOpenParams, and iconData are ignored.

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- Upon successful processing of the *update* message, Oracle Fusion Field Service sends a message with the *updateResult* method.

If the validation or processing of the *update* message fails, the Plugin API sends the "error" message of same format (with the same "type" and "code" values) that is sent for the *close* message.

If a user has to stay on the plugin page after applying the updates, the best practice is to use the *update* method instead of *close*. This improves the user experience and reduces the consumption of the device's resources (RAM and CPU), as the plugin page won't be recreated and the plugin doesn't have to process the open data again.

Example of the *update* method:

```
{
 "apiVersion": 1,
 "method": "update",
 "activity": {
 "caddress": "Cleveland",
 "aid": "4224031"
 }
}
```

How do I install the Debrief plug-in?

Debrief is available as a part of the Screens-> Activity in Oracle Fusion Field Service. Debriefing require additional set up before mobile workers can use it.

You can add additional secure parameters to the plugin, but you can't change the label, or available properties.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. Go to **Activity->Debriefing**.

    The **Debriefing Activate Screen** page appears and these sections are displayed:
    - **Properties to be added.** These are the properties that are automatically installed with the plugin. These properties will be available on the **Configuration** > **Properties** page. If you de-install this plugin in the future, these properties will still remain on the Properties page.
    - **Existing properties to be used.** These are the properties that are required for the plugin and are currently present in Oracle Fusion Field Service.

        Note: If a property has an incorrect configuration (for example, for property type or entity), then you'll see a corresponding message. Open the plugin's documentation, find the property requirements, and change the property settings accordingly.

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4. Click **Activate** and confirm the activation.

A message similar to, 'Debriefing Successfully activated.' is displayed after the activation. You can activate the Debrief plugin only once. The **Activate** button is not available after the activation. Be aware that plugins are supported only in the English language. Further, the Debrief plugin doesn't work in offline mode.

> **Note:** You can download the plugin source by clicking **Download as Plugin Source**.

Oracle Fusion Field Service creates the required properties automatically or notifies you that some existing properties will be used by the plugin, if they're already configured. If you've created the properties in the application with the corresponding names and labels, but with the improper configuration, you must change the property settings and activate the plugin again. Here are the properties for resource, activity, and inventory entities that the plugin uses:

Resource entity properties

Name	Label	Type	GUI	Description
ID	pid			Internal ID of the resource.
Name	pname			Name of the resource.

Activity entity properties

Name	Label	Type	GUI	Description
Invoice	invoice	File	File	PDF file of the generated invoice. For example, mime_types ="application/pdf"
Company name	ccompany	String	Text	Customer's company name, displayed as the title of the invoice.
Activity ID	aid			Internal ID of the activity.
Name	cname			Name of activity used in the PDF invoice.
Address	caddress			Activity address used in the invoice.
City	ccity			Activity city used in the invoice.

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Name	Label	Type	GUI	Description
State	cstate			Activity state used in the invoice.
ZIP/Postal Code	czip			Postal code used in the invoice.
Work Order	appt_number			Work order used in the invoice.
Signature	csign			Customer signature, required prior to saving the invoice as PDF.

Inventory entity properties

Name	Label	Type	GUI	Description	
Expense	expense_amount	String	Text	Amount of expense.	
Expense Currency	expense_currency_code	Enumeration	Combobox	Value of each enumeration item is separated with the "|" character.	
				Index	**Value**
				USD	$|US Dollars
				EUR	€|Euro
Part Disposition	part_disposition_code	Enumeration	Combobox	The value that identifies whether the inventory is consumable by the customer and there is no need to track it anymore, or whether the inventory is returnable. If the inventory is returnable, the Inventory Management system of Oracle SCM Cloud must track the part until it is returned by the customer.	
Part Unit of Measure	part_uom_code	Enumeration	Combobox	The unit of measurement (UOM) of parts (inventories).	

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Name	Label	Type	GUI	Description
Part Item Description	part_item_desc	String	Text	The description of the part. For example, 'Magnetic hard drive'. It is used to search for inventory in the catalog.
Part Item Number	part_item_number	String	Text	The number of the part that has been installed or taken from the customer. It is specified as a code. For example, FS908765.
Part Item Revision	part_item_revision	String	Text	A single-letter code, for example, "A" or "B". Also, it is possible to have a single digit like "1" or "2". Usually, the inventory is identified by Part Item + Part Item Revision, but Item Revision is optional.
Part Item Number + Revision	part_item_number_rev	String	Text	The Part Item number concatenated with the Part Item Revision. For example, FS908765A, where "FS908765" is a Part Item Number and "A" is a Part Item Revision. It is used to search for inventory in the catalog.
Expense Activity	expense_service_activity	Enumeration	Combobox	Type of expense.
Expense Item	expense_item_number	Enumeration	Combobox	The subtype of expense.
Expense Item Description	expense_item_desc	Enumeration	Combobox	The description of expense subtypes. The indices must be the same as in the expense_item_number property.\n\nThe values must describe the corresponding expense_item_number element.
Labor End Time	labor_end_time	String	Text	The time when a mobile worker stops working on particular service activity. It must be not later than the end time of the work order (Oracle Fusion Field Service activity). Also, there must be no overlap between the items in the labor list. The format is T24:59:59.
Labor Start Time	labor_start_time	String	Text	The time when a mobile worker starts working on a particular service activity. It must be not be earlier than the start time of the work order (Oracle Fusion Field Service activity). Also, there must be no overlap between the items in the labor list. The format is T24:59:59.

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Name	Label	Type	GUI	Description
Labor Activity	labor_service_activity	Enumeration	Combobox	The type of labor.
Labor Item	labor_item_number	Enumeration	Combobox	The subtype of labor.
Labor Item Description	labor_item_desc	Enumeration	Combobox	The description of labor subtype. The indices must be the same as in labor_item_number property. The values must describe the corresponding labor_item_number element.
Labour Hours	laborItemNumberForR	Enumeration	Combobox	This is updated with the billing item under which the Labor hours can be tracked.
FS Travel Time	laborItemNumberForT	Enumeration	Combobox	This is updated with the billing item under which the Travel Time can be tracked
Inventory ID	invid			Internal ID of the inventory.
Activity ID	inv_aid			Internal ID of the activity to which the inventory is assigned.
Resource ID	inv_pid			Internal ID of the resource to which the inventory is assigned.
Inventory Pool	invpool			The inventory pool (Resource, Customer, Installed, De- installed).
Inventory Type	invtype			Type of inventory. See Add Inventory Types for the Plug-In.
Quantity	quantity			The installed parts or the parts taken from the customer. It can be either counted or specified in inches, feet, and so on. The quantity is defined as an integer number.
Serial Number	invsn	Field	Text	The serial number of the inventory.

5. To add your company logo in the Time & Labor Report, add a new secure parameter with the name "logoUrl" with the value "url of the company logo".

Logo only supports .jpeg images and the recommended size of the image is less than "150X60 ".

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How do I enable Service Logistics to Oracle Field Service synchronization?

The Service Logistics to Oracle Fusion Field Service Oracle Integration recipe enables you to synchronize field service mobile workers, their stock locations and corresponding inventory balances from Service Inventory and Logistics Management with Oracle Fusion Field Service.

This feature includes these improvements:

- Synchronize mobile worker inventory and parts catalog data from Service Logistics to Oracle Fusion Field Service.

- Allow mobile workers to order parts that are required for an activity from Service Logistics.

- Order parts to replenish their trunk stock.

- Transfer a debrief transaction to Service Logistics and manage charges and estimates upon completion of an activity. This can further generate a customer invoice for billing, adjust inventory balances, update a customers asset configuration, and capture costs of service.

You can connect Service Logistics natively to Oracle Fusion Field Service with minimal configuration. The Oracle Fusion Service application configuration has been enhanced to incorporate the service logistics-related configurations as well.

You must configure these profile options in the Fusion application to enable this recipe:

- INV_DEFAULT_ORG
- RCL_DEF_PARENT_RESOURCE

To enable this recipe, follow these steps:

1. Click Configuration, **Applications**.
2. In the Applications page, click **Add Application**.
3. In the Add Application dialog box, select **Oracle Fusion Service and Service Logistics Integration** from the **Application Type** drop-down list.
4. In the **Application Name** field, enter the name of the application to be displayed.
5. Provide the Oracle Fusion Service endpoint details for the application in the URL, User Name and password for the application.
6. Select the integration channel that is used for this integration from the **Integration Channel** drop-down list.
7. Check **Connect with Service Logistics** to enable the service logistics connectivity.
8. Specify the password in **Integration Password**.

   An integration user is a must-have prerequisite setup configuration for accessing Oracle Fusion Service and Service Logistics APIs from Oracle Integration (OIC). When you create a new Oracle B2B and Service Logistics Integration application, the integration users "SERVICE_APP_ICS" and "SERVICE_LOG_ID" will be created within Fusion to access the Oracle Fusion Service and Service Logistics API from Oracle Integration.

9. Click OK.

   A new application for Oracle Fusion Service and Service Logistics Integration is created. It can be used to connect Service Logistics to Oracle Fusion Field Service with the Oracle Fusion Service application.

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Results:

When the configurations are successful, you can click the card to see the status of the integrations. The status is also available on the details page.

This screenshot displays the Add Application dialog box for Oracle Fusion Service and Service Logistics application type:
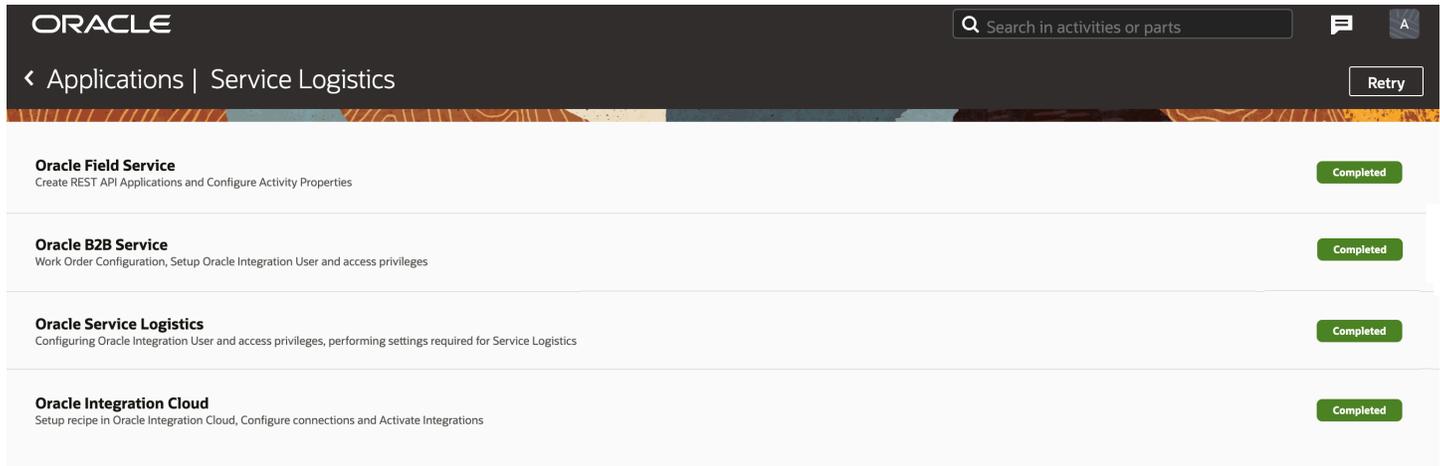
This OIC recipe is now active and the data flow between Oracle Fusion Field Service and Service Logistics will start according to the configurations in Oracle Integration. The application status in Oracle Fusion Field Service becomes active, along with date and time of activation.

This screenshot displays the Oracle Fusion Service and Service Logistics application knowledge card:
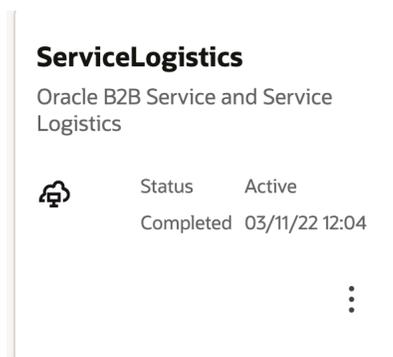
How do I regenerate the Daily Extract files?

If the Daily Extract process fails, you can regenerate or re-create the Daily Extract files by yourself.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

1. Go to **Configuration** > **Applications**.

2. On the **Daily Extract** tile, click **Manual Run** on the actions menu.

3. Select the date for which you want to extract the file.

   Yesterday's date is populated by default. You can provide a date which is within the past 90 days (today-90). You can extract the data for one day at a time, so to extract the data for multiple days, you must submit the extraction for each day individually.

4. Click **Extract Data**.

   The application processes only one extraction request per environment at a time, which can be triggered automatically or manually. Therefore, if an extraction process is running on an environment, the **Manual Run** button isn't available. The files for Manual Run are generated at the same location and in the same format as the automatic Daily Extract files. So, if you run the process manually, the existing files are overridden.

5. To view the history of extractions, click **History** on the Daily Extract tile.

   You can see the last 20 extractions, including automatic and manual runs.

How do I complete a segmentable activity?

You can complete a started segment of a *segmentable activity* by clicking **End** and entering the required information.

In addition to the single-day activity fields, a **segmentable activity is finished** check box displays on the on the **Complete activity** page. When checked, you confirm that you are completing the entire activity together with the segment. When the current segment is the last segment of a segmentable activity, the check box is enabled by default, otherwise it is disabled.

If the last segment is completed simultaneously with the expiration of **Time to complete**, the segmentable activity is completed. However, if **Time to complete** is longer than the duration of the last segment, the remaining duration is moved to the non-scheduled pool after the completion of the last segment, and the segmentable activity remains **started**.

If you choose to complete only the current segment (by leaving the check box unchecked), the **Time to complete** field on the **Complete activity** page shows the remaining duration of the segmentable activity. Initially, the **Time to complete** value is calculated according to the following formula:

```
segmentable activity duration – Duration of finished segments – (current time – start time)
```

The **Time to complete** value can be adjusted simultaneously with completing a segment.

> **Note:** Changing the **Time to complete** value results in recalculation of the remaining pending segments of the segmentable activity and may cause changes to their number and/or duration.

If you choose to complete the entire segmentable activity and enable **segmentable activity is finished**, the **Time to complete** field is replaced with the **segmentable activity status** field, allowing you to select either **completed** or **not done** from the drop-down list as the final status of the segmentable activity.

The final status of a segment may be different from the final status of the entire segmentable activity. For example, a segment can be closed as **not done** while the activity will have the **completed** status, and vice versa.

If you choose to complete the entire activity together with completing a segment that is not the last in the segmentable sequence, all subsequent segments are deleted from the route(s).

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You can set a segmentable activity as not completed in a similar manner, except the final status of the activity will be **not done**.

The **not done** button of a started segment behaves in the similar manner, also offering an option of completing the entire segmentable activity or setting it as not done.

What's Daily Extract?

The Daily Extract functionality extracts data from Oracle Field Service for storage, analysis, and reporting of events. The extracted data contains details of the main entities such as activities, inventory, and messages and are stored as a set of XML files in the Daily Extract database. The following important note applies to all the topics in the Daily Extract and Data Sets sections.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

The process for manually regenerating data for previous days in the Daily Extract application is detailed in *Regenerate the Daily Extract files* topic. For other applications, regenerating files that have already been generated for previous days isn't possible.

You can configure the files that are extracted at the time of implementing the application and later change as necessary.

These rules describe how the Daily Extract files are generated when fields or entities are changed:

- When you change the name of an entity in Oracle Field Service, a new table is created in the target application with the new name:
    - For daily transactions, the changes are shown in the next daily run configured for the customer
    - For entities that support both daily and realtime transactions, the changes are shown after the next daily run
    - For entities that support only realtime, changes are shown immediately

- When you change a field that's configured for an entity, a new column is created in the target table:
    - For daily transactions, the changes are shown in the next daily run configured for the customer
    - For entities that support both daily and realtime transactions, the changes are shown after the next daily run
    - For entities that support only realtime, changes are shown immediately

- When you change the data transfer mode (Real time to Daily or the reverse), the data transfer starts only from the next day.

> **Note:** To access data elements that aren't described here, use a different interface, such as REST APIs.

What are Suspended and Not Done activity statuses?

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Suspended Suspended status indicates that an activity has been postponed because the work could not be completed within the given timeframe, and allows the activity to be completed at a later time during the day. For activities that cannot be completed on the same day, use Not Done. When you click Suspend for an activity with the Started status, the activity is cloned. While the original activity is added to the not-ordered activity queue with a Pending status, the cloned activity gets a new activity ID with the status Suspended. If you click Suspend for an activity with the Pending status, it is converted to a not-ordered activity with the Pending status.

Not Done: Not Done status indicates an activity that cannot be completed that day, and closes the activity so that the resource can move on to the next customer. Unlike suspend, which creates a duplicate copy of the activity to be completed by the mobile worker the same day, the Not Done status is considered to be a final status. For example: the customer was not home, or the customer asked to reschedule. See also completed status.

How do I add the Find Nearby Inventory action to parts details page?

Mobile Workers can find out the availability of an item with any of the nearby mobile workers. You must first configure the context layout of the **Part details** page to display the **Find Nearby Inventory** action on the **Parts details** page.

The Find Nearby Inventory option is available based on these rules:

1. The **Find Nearby** link is active ONLY if these conditions are true:
    o   Collaboration is enabled and configured for the user type and user.
    o   User location information is available and the location permission given in the browser.
    o   Nearby resources are available for the current user and at least one nearby user is online.
    o   Nearby action link is added to the Part Details context for the user.
    o   User activated the route.
    o   A parts catalog item is mapped to an existing inventory type. For example: the inventory type label defined as 'IN'.
    o   The mapped inventory type must have a Model Property assigned, which should be a String Text Inventory Property or any text string property.
    o   Add inventories to the resource with the specified inventory type 'IN' and set the String Text Inventory Property value to match the parts catalog label name. This means the string text inventory property value should be the same as the parts catalog item label.
    o   Requested Part Catalog is already assigned to the User Types.
2. The **Find Nearby Inventory** tab shows the number of users who hold this inventory within 50 miles distance from the resource.
3. The **Find Nearby Inventory** tab displays the travel duration only if these conditions are true:
    o   Your company has a subscription to Oracle Fusion Field Service Enterprise edition with Google Maps.
    o   You have enabled the Enable Real Time Traffic check box on the User Types page.

To add the Nearby Inventory action to the Parts details page:

1. Click **Configuration**.
2. Click **User Types**.

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3. Open the **Screens** tab.
4. In the **Inventory** section, click **Parts details**.

   The Parts details context layout structure appears.
5. Under Action, click the **Click to Add** link.
6. Select the **Standard action screen** option.
7. Select the **Nearby Inventory** check box and then click **OK**.
8. Click **Add new visibility**.

   Read-only is selected by default.
9. Click **Save**.

Results:

The **Nearby Inventory** button is now available on the **Parts details** page.

Are there any prerequisites to use the Activity Booking feature?

If you want to use the Activity Booking feature, you must complete some prerequisite tasks.

1. Add the fields required for booking activities to the **Book new activity** Visual Form Editor. Typically, you need activity type, activity address, work skills for the activity, work zone it belongs to, activity duration, and the coordinates of the activity. On the **Schedule booked activity** Visual Form Editor, configure the fields that your mobile workers see when they reschedule an existing activity. Go to **Configuration** > **User Types** > **Screens** > **Book new activity** (or Schedule booked activity) to add the fields.
2. Add the **Book (create) activity** and **Book (reschedule) activity** buttons to the **Edit/View activity** and the **Activity hint** Visual Form Editors. Mobile Workers use these buttons to book and reschedule activities. Go to **Configuration** > **User Types** > **Screens** > **Activity hint** to add the buttons.
3. Configure the Capacity Areas for booking activities. You can configure a different type of booking option for each Capacity Area. For more information, see the *Using Capacity* guide.
4. Configure the booking recommendations. You can show or hide the booking recommendations for each Capacity Area separately. For more information, see the *Using Capacity* guide.

How do I filter activities by SLA?

Sometimes, you may first want to assign activities for which SLA is about to start or expire. You can use a custom filter to find the activities for which SLA is starting or expiring within a specified number of days or hours.

Before you start

Your administrator must create a filter for example, 'Calendar Days before SLA', 'Full Days before SLA', or 'Hours before SLA'. The **Property** field on the **Configuration** > **Filters** > **Conditions** > **Add new condition** dialog box must have a value of **Calendar Days Before SLA End** [calendar_day_to_sla_window_end], **Full Days to SLA End** [days_to_sla_window_end], or **Hours to SLA End** [hours_to_sla_window_end]. The field **Condition** must have a value of <=.

Here's what to do

1. Open the **Dispatch Console** and go to the **Map view**.
2. Click **View** and select **Calendar Days before SLA**, **Full Days before SLA** or **Hours to SLA End**.
3. Add the number of days or hours remaining for the SLA to expire.

   Activities that match the criterion are displayed. Here's the difference between "Calendar Days to SLA Start" and "Full Days to SLA Start":

   Let's say the current time is "2023-03-20 14:00" and you've an activity for which SLA starts at "2023-03-23 13:59".

   The condition that includes "Calendar Days to SLA Start" finds the difference between the date part of the SLA start and the current date (that is, "2023-03-23" – "2023-03-20" = 3 days). Therefore, in this example, a filter condition of "Calendar Days to SLA Start > 2" results in a match.

   The condition that includes "Full Days to SLA Start" takes the time into account. Using the same example, the difference between the SLA start and the current time ("2023-03-23 13:59" – "2023-03-20 14:00") would equal 2.999 days, which would be further truncated to 2 days. Therefore, a filter condition of "Full Days to SLA Start > 2" doesn't result in a match.

What details can I see on the Resource History page?

Oracle Fusion Field Service saves the history of the changes made to resources, such as a change in the location or work zone. You can view, filter, sort, and export the list of such changes.

1. Open the **Resource Info** page from the **Manage**, **Dispatch Console**, or **Resources** page.
2. Click **Resource History**.

   The **Resource History** page displays the **Action**, **Value**, **Action Time**, and **User** columns.
3. Click the **Action**, **Action Time**, or **User** column to filter and sort the history.
4. Click **Export** to export the history to a comma separated value (.CSV) file.

What are the activity link types available to link activities?

Activity link types identify the way that two or more activities are linked. It specifies the constraints, if any, that are placed while assigning and scheduling resources. You can use Start-to-Start, Finish-to-Start, Simultaneous, and Related types of links.

Before you can link activities, you must create activity link types.

Activity link types are generic. You can reuse a link type to link activities over time. Apart from the link type, you can add specific characteristics such as the interval between activities and any rules for assigning and scheduling the resources.

There are two types of activity links:

- Regular link type: This link type places the first activity in the schedule before the second activity.

- Reverse link type: This link type places the second activity in the schedule before the first activity.

The links that you create – both regular and reverse – are available when you link activities.

The activity link type template shown below features four different linkages:

- Start-to-Start: Second activity starts after the first has been started.
- Finish-to-Start: Second activity starts after the first one has been finished. If you want to start the activities manually, you can still start the activities in any order. Routing enforces the Finish-to-Start constraint while assigning linked activities, but you can still override such constraints. However, if starting an activity out of order sets the other activity to jeopardy, then you will see a warning.
- Simultaneous: Both activities start at the same time.
- Related: The relationship between these two activities is not sequential.

Because each of these link types generates two different linking options — regular and reverse — your linkage "library" could begin with at least eight link types. These might further be differentiated by the amount of time between activities and any assignment and scheduling constraints you want to place on them. For example, same mobile worker over two days, or different mobile workers on the same day.

How do I view the Number of Active Users report?

You can use the Number of Active Users report to view the number of users with Active status for each user type in the selected organization unit or bucket.

To view the number of active users:

1. Click the navigation menu and select **Dashboards**.
2. Go to **Admin Reports** and select **Number of Active Users**.

The Number of Active Users report is displayed for the selected org unit or bucket.
This screenshot shows the number of individual users for each user type.

Number of Active Users
Sunrise HVAC ▾

View ▾   Print   Print All   Export

User Type	Active users
Dispatcher	9
Administrator	3
Technician	117
Manager	10
Privileged Administrator	1

1 - 5 of 5

3. The number of active users report displays these fields:

  o **User Type**—Displays the name of the user type which has at least one active user. One user will have only one user type.
  o **Active users**—Displays the number of active users with a given profile.

How can I configure User Type Settings?

An administrator can add a user type and define the user settings such as, user type name, access, activity management, resource management, maps, permissions, and field restrictions using the **User Types** page.

To configure the User Type settings:

1. As an administrator, navigate to the **Configuration** page.

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2. Click the **User Types** option. The **User Types** page appears.

   Below is a screenshot of the **User Types** page:
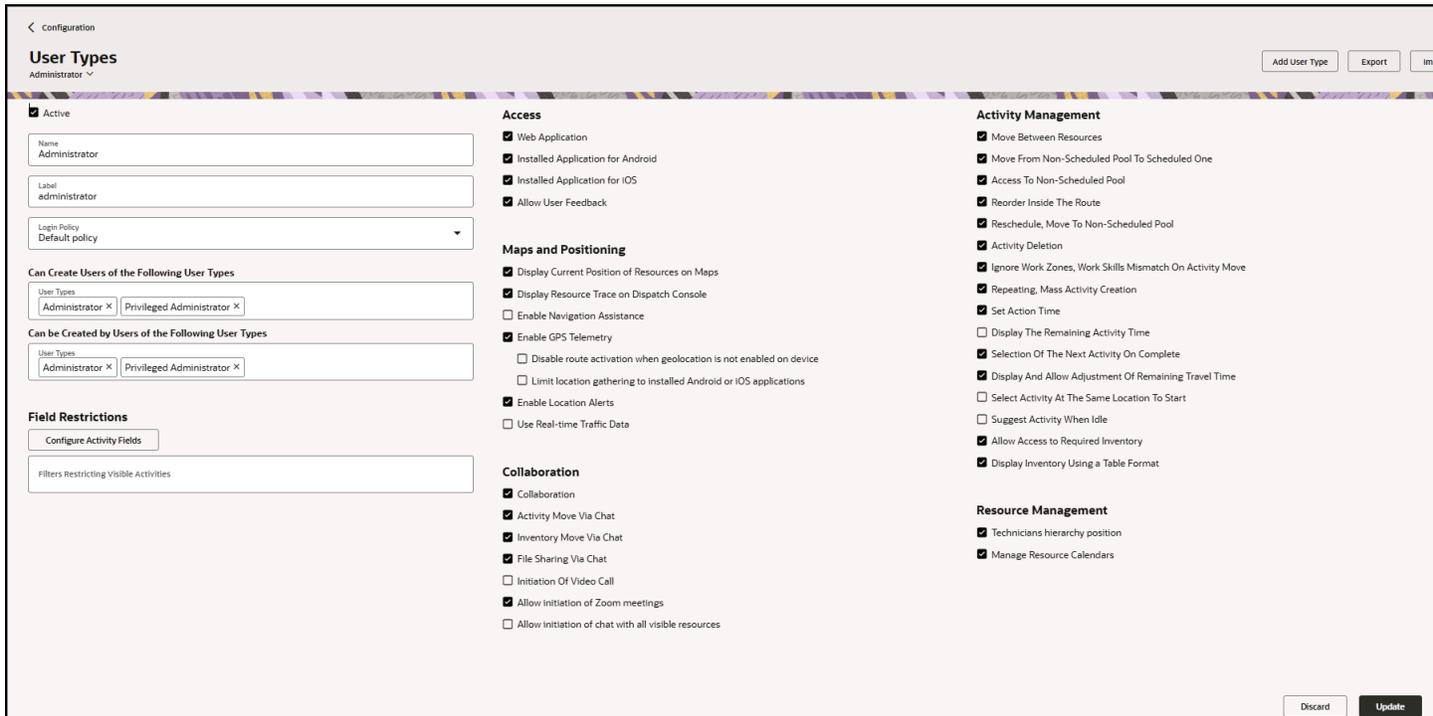
3. Select the appropriate user type and specify the following settings as described in the table below:

Setting	Description	Notes
User Type Info		
Active	Indicates whether the user type is active.	Activating a user type simply makes it assignable to users. Inactive user types still apply to users that are assigned to them.
Name	A user-friendly name that describes the user type.	Required. Spaces are allowed.
Label	A unique identifier of the *user* type.	Required. No spaces are allowed.
Associated Resource Role	Drop-down list displaying predefined resource roles and custom roles created through the Manage Resource Roles task in Setup and Maintenance, e.g., "Field Service Mobile Worker" or "Field Service Manager".	**Note:** This information only applies to Oracle Fusion Field Service environments. You can verify whether you've Oracle Fusion Field Service or Oracle Field Service, by signing in and checking on the **About** page.

Setting	Description	Notes
Login Policy	Defines the user authentication method to Oracle Fusion Field Service	**Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.
Can Create Users of the Following User Types	Lists the user types that this user type can create.	Inactive user types are greyed out and cannot be created by this user type. Permission to create user types is reciprocal. For example, if user type Manager can create user type Dispatcher, user type Dispatcher can create user type Manager. To change the user types this user type can create, click the pencil icon.
Can be Created by Users of the Following User Types	Lists the user types that can create the current user type.	Inactive user types are greyed out. Permission to create user types is reciprocal. For example, if user type Manager can create user type Dispatcher, user type Dispatcher can create user type Manager.
Field Restrictions		The **Field Restrictions** section is being deprecated. These controls are hidden during the upgrade to 25D if not in use and remain visible only for users actively using them.
Filters Restricting Visible Activities	Defines whether the users of the current type can view the entire routes or only some activities.	Setting the visibility restrictions requires proper configuration of the applicable filters.
Access Settings		
Web Application	When enabled, users of the current type can use the unified Core Application to manage dispatch operations.	None
Installed Application for Android	When enabled, users can access the application through the Oracle Fusion Field Service Mobile for Android application.	None
Installed Application for iOS	When enabled, users can access the application through the Oracle Fusion Field Service Mobile for iOS application.	None

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Setting	Description	Notes
Allow User Feedback	When selected, Oracle Fusion Field Service Android and iOS app users can see the Like and Dislike icons on either the My Route or Activity List page. Using these icons users can provide feedback about the app to Oracle.	None
Maps and Positioning		
Display Current Position of Resources on Maps	The following options are available only when you select **Display Current Position of Resources on Maps** settings: • Dispatch Console Map > Show Nearby Resources • Dispatch Console Map > Show Resource Location on the Map (renamed to 'Show Resource Position on Map') • Team Map > Layer switcher > Resources • Route Map > Layer switcher > Resources	None
Display Resource Trace on Dispatch Console	The following options are available only when you select **Display Resource Trace on Dispatch Console** settings: • Dispatch Console Map > Show Resource Trace • Dispatch Console Time View > Show Resource Trace	None
Enable Navigation Assistance		
Enable GPS Telemetry	When enabled, the user's geo-positioning information can be collected directly from the user's device.	None
Disable route activation when geolocation is not enabled on device	When selected, users can't activate the route if they haven't enabled the location settings on their device. **Note:** This option is available only when you enable GPS Telemetry.	None
Limit location gathering to installed Android or IOS applications	When selected, Oracle Fusion Field Service collects the location details only for the installed applications. If you don't select this permission, the application collects the location details from all the interfaces that the mobile worker has logged in to.	Be aware that even if you select this option, resource positions can still be sent through APIs.

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Setting	Description	Notes
	Note: This option is available only when you enable GPS Telemetry.	
Enable Location Alerts	When enabled, the user can receive alerts on their mobile device whenever any compliance issues have occurred and have been identified by the Smart Location module.	None
Use Real-Time Traffic Data	When enabled, the check box, **Show Traffic** is shown on the **Map** view. Users can select the **Show Traffic** check box to view the current traffic data in the selected route.	This feature isn't available for Contingent Workers.

Real-time traffic is available to users of Oracle Fusion Field Service and Oracle Field Service Enterprise customers. |
Collaboration		
Collaboration	Select the check box to view the collaboration settings.	None
Activity Move Via Chat	In addition to chat functions, allows the user to transfer activities via chat.	None
Inventory Move Via Chat	In addition to chat functions, allows the user to transfer inventory via chat.	None
File Sharing Via Chat	In addition to chat functions, allows the user to share files via chat.	If this option is unchecked, users will not be able to view Files/Images shared with them.
Initiation Of Video Call	When enabled, the setting allows the user type to access the Video Chat functionality.	None
Allow initiation of Zoom meetings	Select the check box to enable the ability to initiate Zoom calls using Collaboration.	Zoom meetings can be initiated only from one-to-one chats and group conversations but are not available in broadcast chats.
Allow initiation of chat with all visible resources	Select this check box to initiate chats with anyone you are authorized to see in the system, based on the visible resources assigned. When enabled, you can: • Search for and initiate one on one chats with any users visible in the organization structure (Visible resources field), this includes all mobile workers as well as Manager/Dispatcher/Admin users • Start conversation with nearby resources visible in the organization structure	None

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Setting	Description	Notes
	• Initiate group chats using multiple group selection methods. When starting a group message based on user groups, the visible resource tree becomes available alongside the existing options: Collaboration Groups and Favorite groups.	
Activity Management		
Move Between Resources	When enabled, the user can move an activity from one resource to another.	None
Move From Non-Scheduled Pool To Scheduled One	When enabled, the user can convert a non-scheduled activity to one that's scheduled.	None
Access To Non-Scheduled Pool	When enabled, the user can access the pool of non-scheduled activities and perform actions to them.	None
Reorder Inside The Route	When enabled, the user can change the position of an activity in the route.	None
Reschedule, Move To Non-Scheduled Pool	When enabled, the user can move an activity to a different date or make it non-scheduled.	None
Activity Deletion	When enabled, the user can delete an activity together with canceling it. Otherwise, a canceled activity remains in the application.	None
Ignore Work Zones, Work Skills Mismatch On Activity Move	When enabled, the user can move activities to resources with work zones and/or work skills not matching those of the activity.	None
Repeating, Mass Activity Creation	When enabled, the user can create mass and repeating activities.	None
Set Action Time	When enabled, the user can adjust the time for activity actions and route activation manually. When not enabled, the action time is logged as the current time.	None
Display The Remaining Activity Time	When enabled, the activity work progress countdown is displayed.	None
Selection Of Next Activity On Complete	When enabled, the user completing an activity can select the next activity to start. Otherwise, only the next activity in the route can be started.	None
Display And Allow Adjustment Of Remaining Travel Time	When enabled, the Travel Time Countdown is displayed and the user can adjust travel time. Available values are: 5, 10, 15, 30, 45 minutes, 1 hour, 1 hour and 30 minutes, 2, 3, 4 and 8 hours.	None

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Setting	Description	Notes
Select Activity At The Same Location To Start	When enabled, displays the number of activities that are assigned in the same location for a mobile worker. This information is displayed above the **Start** button on the **Resource Info** page.	The distance within which a location falls is determined by the **Resource is considered to be at the activity location if the distance to it is less than X meters** setting in the **SmartLocation/GPS** section on the **Business Rules** page.
Suggest Activity When Idle	Select this checkbox to let Oracle Fusion Field Service suggest an activity to a resource that has idle time between activities. Only those activities that fit the current route are suggested when an activity is marked Complete or Not Done. The suggested activities might include pending and unassigned activities that are close to the resource's current location. The suggestions are available only in online mode.	None
Allow Access To Required Inventory	When enabled, the user can access the Required inventory functionality and perform all related actions.	The **Required Inventory** permission for Manage is implemented as a visibility setting for the **Required Inventory** tab in the **Add activity** or **Activity details** context.
Display Inventory Using A Table Format	When selected, inventory is displayed in a tabular format. When not selected, inventory is displayed as a list, grouped by Inventory Type.	None
Resource Management		
Technicians Hierarchy Position	When enabled, the user can move the resources to different organizations in the resource tree.	None
Manage Resource Calendars	When enabled, the user can modify the working calendar of the resource.	None

How do I set up SSO authentication?

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

You must use the Service Provider initiated implementation method to have your users use SSO to sign in to iOS and Android installed apps. You can implement it using SAML or OpenID type of authentication.

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These options are available to sign in using SAML or OpenID authentication:

- Use the full URL of login policy in browser application: To construct correct URL you must use the environment URL followed by the login policy label. For example, https://environment_name.fs.ocs.oraclecloud.com/login_policy_label/. Here, the environment name can be a name of your choice or automatically generated upon provisioning. The login policy label is configured manually and can be found on the **Login Policies** page. When you use this option, enter the full URL of the login policy in the browser address bar and the application redirects you to an Identity Provider for further authentication.

- Use the environment name and login policy label in installed apps: In the iOS and Android installed apps you must specify the environment name followed by the login policy label on the **Environment** page. Enter the name in the {environment_name}/{login_policy_label} format. When you do this and click **Next**, the application redirects you to an Identity Provider for further authentication.

- Configure the URL through the MDM configuration file: Use this approach for Android and iOS installed applications. Here you must specify a URL in the {environment URL + login policy label} format within the configuration file managed by the MDM settings. When you open the app, the app uses this URL to navigate you to your Identity Provider for authentication. Within the MDM file the environment, the URL must be in the format: https://{environment_name}.fs.ocs.oraclecloud.com/saml_idp/

  For example:

  ```xml
  <?xml version="1.0" encoding="UTF-8"?>
  <managedAppConfiguration xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:noNamespaceSchemaLocation="/com.mobileiron.onetouch/appconfig/appconfig.xsd">
   <version>123</version>
   <bundleId>com.oracle.ofsc.mobile</bundleId>
   <dict>
   <string keyName="environment.name_1">
   <defaultValue>
   <value>environment_name</value>
   </defaultValue>
   </string>
   <string keyName="environment.url_1">
   <defaultValue>
   <value> https://{environment_name}.fs.ocs.oraclecloud.com/saml_idp/ </value>
   </defaultValue>
   </string>
   </dict>
  </managedAppConfiguration>
  ```

When you configure the SSO authentication, users must click **Sign in with SSO** on the **Sign in** page and follow the instructions.

Domains for Production Environments

Each production environment might have several URLs depending on the provided alternate name and domain zones. These domains are always constructed from two parts:

- either environment name (mentioned as the 'environment_name' parameter in the example) or an alternate name

- domain zones available for an environment

The standard set of addresses for any environment is:

- https://{environment_name}.fs.ocs.oraclecloud.com

- https://{environment_name}.fs.ocs.oraclecloud.com

For legacy environments that are created before June 2021, the domains are also registered within the etadirect.com zone:

- https://{environment_name}.etadirect.com
- https://{environment_name}.etadirect.com

Domains for Test Environments

The rules for provisioning end points for test environments are almost the same as those for production environments. The only difference is that for test environments, the application automatically adds the '.test' suffix after the name. This logic is applied to easily distinguish production and test environments. The example of an end point for a test environment is https://{environment_name}.test.fs.ocs.oraclecloud.com.

Example of How the Authentication Works

Assume that your identity provider is configured to accept requests from acme.fs.ocs.oraclecloud.com to perform SAML authentication. Also assume that there's a user that uses ofsc-1e800d.fs.ocs.oraclecloud.com, which is another valid address of your environment.

When the user tries to sign in to the environment, the application replaces ofsc-1e800d.fs.ocs.oraclecloud.com with acme.fs.ocs.oraclecloud.com in the request to the identity provider, which lets this user authenticate to the environment.

How do I export a report?

You can export any dashboard report as a **.csv** file, so that you can download and use the data in any reporting tool. When you print or export a report, it's printed or exported in the language set in the **Company language** field of the **Display** page.

The **Export** option is available for all reports in the work area.

To export a report:

1. Open **Dashboard**.
2. Open the report that you want to want to export and click **Export**.

   The **Open Report** dialog box appears for the selected report.
3. Select **Open with** and then choose any application from the list to view the report.
4. Optionally, select **Save File** to save the report to the default application, Microsoft Excel.

   The file name of the saved file is displayed in the language set in the operating system.
5. Optionally, click the **Do this automatically for files like this from now on** check box to save the export settings as default.
6. Click **OK**.

   The file is saved in **.csv** format. The exported report includes all the columns that are shown in the user interface.

How do I enable or disable internet caching?

If you're using Oracle Fusion Field Service with Oracle Integration and you want your IP address to be added to the allowlist, you must disable internet caching just for the end point that's required for the integration. You can use the Content acceleration option in the Service Console to manage the internet caching.

You must disable content acceleration to prevent caching in these scenarios:

- To configure your environment for private access over VPN or FastConnect.

- To integrate Oracle applications (for example, integration through Oracle Cloud). Disabling this feature retains API requests within the Oracle network, reduces the rate of errors, and enhances integration reliability.

- To add your IP addresses to allowlist for integration with Oracle.

Follow these steps:

1. Sign in to Oracle Cloud Console and open the Service Console.
2. Go to the environment for which you want to disable internet caching. If your environment domain isn't OCI, then four domain names are displayed. If your environment domain is OCI, then two domain names are displayed. Select the domain for which you want to disable internet caching.
3. Click the actions menu and select **Content acceleration**.
4. Click **Enabled** and then click **Update**. Internet caching is updated for the domain and Enabled becomes Disabled. 'Internet caching is disabled' is displayed next to the domain name.

How do I pin an activity to a specific time in a route?

You might want to pin an activity to a specific time in a route, especially when you work with a third-party provider. Oracle Fusion Field Service uses the Communicated Window Start and Communicated Window End fields to pin an activity. The Communicated Window is preserved throughout the application.

Prerequisites:

- Your administrator must add the Communicated Window Start and Communicated Window End fields to the **Add/Edit Activity** page.

- Your administrator can configure an activity identifier using the Communicated Window End Is not empty condition to distinguish pinned activities from other activities.

How it works:

You must select the date and time in the Communicated Window Start and Communicated Window End fields on the **Activity Details** page for the activity that you want to pin. Then:

- The Time view shows the activity with the visual identifier.

- If you try to move the activity manually, you see a warning. If you move it despite the warning, you can see that the activity is in jeopardy.

- Bulk routing optimizes and moves the activity back so that the Communicated Window is preserved.

Exceptions:

- Urgent and Immediate routing ignore the Communicated Window Start and Communicated Window End values.

- Bulk update API might move the activity outside its Communicated Window date and time. This is to ensure that the activity is synchronized correctly with third-party applications.

Note: The Communicated Window functionality is designed for customer-facing activities to record the time that was communicated to the customer. For single-day internal activities, the Communicated Window fields work as expected and you can pin them to specific times. However, the Communicated Window fields aren't intended to be used for repeating internal activities such as trainings, lunches, or warehouse tasks. These activities are treated as phantom activities in future routes until at least one customer-facing or internal activity is assigned to the resource's queue for that date. As a result, their pinned time will not be held.

How do I assign a parts catalog to a user type?

When you've many parts catalogs in an environment, you can assign each catalog to specific user types. With this, users can use only those catalogs that are applicable to them and the application can download only the required catalogs for offline use.

Prerequisites:

- The parts catalogs are available in Oracle Field Service (they're uploaded using APIs).
- The Parts Catalog button is added to the Configuration page with Read-write visibility.
  To assign a parts catalog:

1. Click **Configuration** > **Parts Catalogs**.
2. Click the action buttons on the catalog for which you want to assign user types and then click **Assign to user types**.
3. On the **Assign Parts Catalog to User Types** page, select the required user types.
4. Click **Assign**.
   When you assign or unassign a parts catalog to a user type, you can view it on the **Configuration History** report.

How do I add Parts Catalog to the Configuration page?

You must add the **Parts Catalog** button to the **Configuration** page for the users who can add the catalogs to other user types.

1. Click **Configuration** > **User Types**.
2. Select the required user type and go to the **Screen configuration** tab.
3. Click **Configuration** under **Main menu**.
4. Click the **Click to add** button and select Parts Catalogs.
5. Click **OK** on the **Add Button** dialog box.

6. Click **Parts Catalogs** and then click **Add new visibility**. Select one of these options:

   ○ Read-only: If you select this visibility, users can only view the parts catalogs and their audit information.

   ○ Read-write: If you select this visibility, users can view the catalogs and their audit information, and assign the catalogs to other user types.

7. Click **Save** on the [Parts Catalogs] visibility dialog box.

> **Note:** User types that have Read-write access to the **Inventory types** page have the Read-write visibility to the Parts Catalogs. And, user types that have Read-only access to the **Inventory types** page have Read-only visibility to the Parts Catalogs.

How can I troubleshoot a parts catalog?

Here are some common scenarios in which you can't view or use the parts catalogs.

Troubleshooting Parts Catalogs

Issue	Reason
Users can't see the parts catalogs assigned to them	• The catalog is empty: If there are no parts in the catalog, users can't see the catalog. You can see this warning on the catalog card. • The catalog isn't assigned to any user type: The catalog is uploaded to Oracle Field Service, but it isn't assigned to any user type. You can see this warning on the catalog card. • Language mismatch: If the language of some users from the assigned user types differs from the catalog language, users can't see the catalog. You can see a warning about the number of users that can't access the catalog due to the language mismatch on the catalog card. This count includes only the users in 'active' status and doesn't include 'inactive' users.
Parts catalog isn't downloaded for offline use	This might happen due to the lack of resources on the mobile devices. You can try to change the number of parts available for offline to decrease the data that's downloaded.
Last updated date isn't displayed for a parts catalog	This happens when there's a warning.

How do I generate a report of the activities for a future date?

You can generate a report of the activities that are scheduled for a future date or a past date for your business analysis. You can generate this report by exporting the list of activities on the Dispatch Console.

1. Open the **Dispatch Console**.

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2. Select a resource or bucket in the resource tree.
3. Click the date editor and select a past or future date.

   The past date you can select depends on the **Retention Period** that's selected on the **Business Rules** page.
4. Click **View** and select **Apply Hierarchically**.

   When you select **Apply Hierarchically**, the report includes the activities of the child resources of the selected resource or bucket.
5. Click **Actions** > **Export**.

   The activities for the selected resource or bucket and period are exported as a .csv file. Your administrator can change the fields to be exported from the **List view columns** context layout page.
6. To export non-scheduled activities, go to **List view** and select Non-Scheduled in the date editor.

What's the Debrief plug-in?

Debriefing involves documenting the time and materials used during an activity. You can click the **Debrief** button on an ongoing activity to record time, expenses, or materials information for an invoice report. You can save this information and obtain the customer's signature.

You can use the debriefing process to report:

- Labor: Includes travel time and working time (measured in hours)

- Parts: Parts and materials used while performing the activity

- Charges: Any extra charges such as tolls or parking (measured in money spent)

The Debriefing page provides seamless integration between Oracle Fusion Field Service and Fusion Service Logistics. When you complete an activity, Debriefing items are automatically updated in Fusion Service Logistics. Additionally, any debrief data entered while offline is securely saved. After a mobile worker is back online, this data is updated in Service Logistics.

All parts, labor, and expense items are stored in the installed inventory pool of the corresponding customer activity. The invoice is saved as a PDF file to the file property of the activity. You can share the Debriefing data with other users using email or messaging applications installed on your device.

Note: The Debrief page currently works exclusively with Service Logistics. If you wish to connect to other external applications, you must download the Debrief plugin, complete the necessary setup for integration, and maintain it as a custom plugin.

What are the formats allowed to send messages to a plug-in?

You can send a message to a plugin as a string, containing serialized JSON data, or as a raw JavaScript object.

Here's an example of a message that's sent as a string containing serialized JSON data:

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```
window.parent.postMessage('{"apiVersion":1,"method":"close","activity":{"cname":"John"}}', targetOrigin);
```

Here's an example of a message that's sent as a raw JavaScript object:

```
window.parent.postMessage({
 apiVersion: 1,
 method: 'close',
 activity: {
 cname: 'John'
 }
}, targetOrigin);
```

You can update file properties only by using a JavaScript object as message data. See File properties for details. Similarly, the plugin must process the messages that it receives. Oracle Fusion Field Service always sends the data to the plugin as a serialized JSON string and never as a raw object. For example:

```
function getPostMessageData(event)
{
 var data = JSON.parse(event.data);
 switch (data.method)
 {
 case 'open':
 pluginOpen(data);
 break;
 default:
 showError();
 }
};

window.addEventListener("message", _getPostMessageData, false);
```

JSON data is an object (hash) of a defined format, and contains common fields (that describe the message itself) and fields that are specific for different 'methods' (for example, that hold Oracle Fusion Field Service entities data), for example:

```
{
 "apiVersion": 1,
 "method": "open",
 "entity": "activity",
 "resource": {
 "pid": 5000038
 },
 "inventoryList": {
 "20997919": {
 "invid": 20997919,
 "inv_pid": 5000038,
 }
 }
}
```

Where:

- **apiVersion, method**: Common fields.

- **entity**: Name of the Oracle Fusion Field Service entity that's to be processed by the plugin. Available only for the 'open' method.

- **resource, inventoryList**: Entity data collections. Available only for 'open' and 'close' methods.

Common Fields

- **apiVersion:** Version of the plugin API that's used for interaction between and Oracle Fusion Field Service and the plugin. Available methods and data depend on it. This is a required parameter. You must include this parameter in the message for the plugin to be processed without any errors.

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- **method:** Describes the action initiated by Oracle Fusion Field Service or the plugin, and the actions that should be performed by other side.

Related Topics
- Does the plugin apply limits to property values?

Does the plug-in apply limits to property values?

Limits are applied to property values that are submitted by the plugin through the Plugin API for update. If a value length exceeds the limit, Oracle Fusion Field Service returns an error message as part of the message with the *error* method.

Fields (property type is 'field')

Maximum un-formatted data to store is 239 bytes. JavaScript uses UTF-16 for strings, so one Unicode character may take up 2 to 4 bytes. But, the String.length property uses UTF-16 code points for counting, which is 2 bytes. This means, the length of the string containing one 4-byte UTF-16 char is 2. So, only ceil(239/2) = 119 code points can be stored without truncating.

Signatures (property type is 'file' and GUI option is 'Signature')

We assume that the value contains only MIME-type and correct base64 string. So, each character takes up 2 bytes as JavaScript uses UTF-16. To avoid overflow of LocalStorage, each signature is limited with 200 KB (1024*200/2 = 102400 characters).

File Properties (property type is 'file' and GUI is not 'Signature')

Maximum allowed length for a file property value depends on the "File size limit" attribute configured for the property, but it can't exceed 20 MB (20971520 bytes) in any case.

Properties (any other property type)

Maximum amount of data to store is 65 535 bytes (2^16 - 1). Oracle Fusion Field Service internally uses the UTF-8 encoding, so the value is converted to UTF-8 representation before checking against the limit. One Unicode character (code point) may take up 1 to 4 bytes in UTF-8. But, JavaScript uses UTF-16 for strings, so one character takes up 2 to 4 bytes. The String.length property uses UTF-16 code units for counting, which is 2 bytes. So the length of the string that contains one 1 or 2-byte Unicode char is 1. The length of the string that contains one 3 or 4-byte Unicode char (code point) is 2. There's also a range of 2-byte Unicode code points (U+0800 - U+10000) that take up 2 bytes (1 code unit) in UTF-16 (e.g. ¿ - \u20AC), but require 3 bytes in UTF-8. So, only 65535/3 = 21845 code units are always under limit. If the length of the string is grater that 21845, it may or may not pass the validation depending on its contents. To know whether the property value is of valid length, it must be converted to UTF-8, for example:

```
function isPropertyLengthValid(value) {

if (('' + value).length <= }}{{21845) {
return true;
}

if (('' + value).length > }}{{65535) {
return false;
}

var utf8Encoder = }}{{new TextEncoder();
var utf8BytesArray = utf8Encoder.encode(value);
```

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```
utf8Encoder = }}{{null;

if (utf8BytesArray.length <= }}{{65535) {
return true;
}

return false;
}
```

File Properties

Plugin API supports updating of file properties. The plugin sends the values of file properties with the regular properties in the entity collections or inventory actions as part of the *close* message. Due to performance limitations, it's not rational to send the file contents using JSON strings, so the Plugin API accepts raw JS objects as the value for PostMessage data. File properties can be updated only using JS objects as message data. The value of the file property in the PostMessage data must be an object that has two properties:

- fileName: Name of the file, that will be shown on the Oracle Fusion Field Service user interface

- fileContents: Blob object that contains the file contents. It can be constructed and filled with the data generated by JS code in runtime, or just obtained from the file input and sent to Oracle Fusion Field Service Core Application without any transformation, as the File object inherits the Blob.

Contents of the file property value is validated against these rules:

- Length of the file must be less than or equal to the configured File size limit

- MIME type of the file must be equal to one of the configured Allowed MIME types

How do I add on-call, non-working, or custom working time to a calendar?

Use *non-working time* to identify times when a resource, an organization unit, or a bucket isn't available for work. You can use the custom working time to specify a custom schedule for a resource. Similarly, you can use the on-call option to specify the time during which a resource is available on call. Be aware that you can change the calendar, only if you've the Read-Write permission for Resource Calendar on the Resource/User Info context layout structure.

1. Click the hamburger icon and then click **Calendars**.

   The Calendar view appears for the group or bucket assigned to you.
2. Select the bucket, group, or resource for which you want to change the calendar.
3. Click the date for which you want to add the non-working time, custom working time, or an on-call schedule.
4. Click On-Call and update these fields:

Name	Description
On-Call Schedule	The field specifies whether the resource isn't working, is working in a custom schedule, or is on call. Select Non-Working Time, Custom Working Time, or On-Call. If you select the blank option, the existing on-call schedule is removed and the earlier schedule is restored. You can't remove an on-call shift, which is part of a Schedule.

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Name	Description
Reason	If you've selected Non-Working Time, select the reason for which the resource isn't working. For example, Others. This field isn't displayed if you've selected Custom Working Time or On-Call.
Start time, End time	If you've selected Custom Working Time, select the custom start and end time of the schedule. This field isn't displayed if you've selected Non-Working Time or On-Call.
Comment	Enter any comment that you wish to provide, for example, Daughter's graduation day, or Dentist's appointment at 4:00 pm. This field isn't displayed if you select On-Call.
End Date	Select the date on which you want to end the new working time.
Repeat	Select the frequency (Daily, Weekly, Yearly) at the new working time must be repeated. Enter the number of days or select the day of the week on which you want the new working time to be repeated. If you've selected Yearly, select the end date for the recurrence of the new working time. The end date of the new schedule is displayed below the field. You can't add recurrence for a schedule and for Non-Working Time.
Keep the Non-working days	Select this check box to retain the existing non-working days in the resource's calendar. This check box is available and enabled by default if the schedule is changed for more than a day. That is, it's available if you change the **End date** field.

5. Click **Submit**.

If the non-working time can be applied, the resource is marked as a non-working resource for the selected date range. If the non-working time can't be applied, a warning message appears. If you click OK, the non-working time is applied, but a warning message appears on the resource tree for that resource on that day. Non-working time can't be applied if the mobile worker has anything other than repeating, shift, or mass type of activities assigned on this route. The activities on the resource's route, other than mass and repeating activities, are rerouted or assigned to the bucket, if these conditions are met:

- The routing plan has the Enable reoptimization check box selected.

- The resource meets the routing plan filter conditions.

- If the **Use resources outside the bucket** option isn't selected for the routing plan, the activities may be assigned to the bucket despite having different work zones.

- If the **Use resources outside the bucket** option is selected, then it depends on the resource. If the resource is a child of the routing bucket, their activities may be assigned to the bucket even if the work zone isn't a common work zone. However, if the resource isn't a child of the routing bucket, then only the activities for which the bucket has all the work zones may be assigned to the bucket.

How do I view the forms and plug-ins?

You can view the **Forms & Plugins** page to add a custom Form or a plug-in, and to export and import plug-ins.

1. Click **Configuration** > **Forms & Plugins**.

   The **Forms & Plugins** page opens and displays the default plug-ins, custom plug-ins and Forms. The page shows the number of action links that are configured for each Form and plug-in.

   > **Note:** Forms that are configured to generate PDFs are visually identifiable on the **Forms & Plugins** page. Each Form is labeled with a description indicating its purpose, such as "This form generates PDF for printing and sharing" or "This form uploads a PDF to OCI Object storage."

2. To see the buttons configured for a form or plug-in, click the **Buttons Configured** icon ⬀ . A dialog box opens and lists the buttons grouped by context layout structure and then by user type. Click a button to open the editor; the button is highlighted in the Visual Form Editor or Context Layout Editor.

3. View the date and time of the last update, along with the user who changed a plug-in, to track update history.

4. To add a new custom Form, click **Add Form**.

5. To add a new plug-in, click **Add Plugin**.

6. To export and import plug-ins, click **Export Plugins** and **Import Plugins** respectively.

7. To delete a Form or plug-in, click the actions icon and then click **Delete**.

   You can see the **Delete** option only if you haven't configured any buttons to the Form or plug-in. This means, you can delete only those Forms and plug-ins that show **Not Configured**.

8. To search for a specific Form or a plug-in, click **View** and select the required options.

How do I add a hosted plug-in?

A Hosted plugin is hosted in Oracle Fusion Field Service and uses the Plugin API to interact with Oracle Fusion Field Service.

> **Note:** You can host a maximum of 35 internal plugins excluding Standard plugins. However, there is no restriction on hosting external plugins.

1. Click **Configuration** > **Forms & Plugins**.

   The Forms & Plugins page appears and displays the existing forms and plugins.

2. Click **Add Plugin**.

3. Click **Plugin Archive** and then click **Next**.

4. Complete these fields:

Field Name	Description
General Information section	
Label	A required field defining a unique action or a label for the plugin.
Entity	Entity (activity, inventory, required inventory, resource, service request, user) to which the action or plugin is to be related. For example, if you select Inventory, the action will appear only in the contexts related to inventory. Leave the field blank for the action to be available in all contexts of all the entities.

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Field Name	Description
Visibility rules similar to	The base action from which the plugin is to be derived, if needed. When a base action is selected, the resulting plugin functions per the same rules as the base action. The base action affects only the visibility of buttons and not the functioning of the plugin. It appears only in the contexts in which the base action appears and is shown or hidden according to the same visibility conditions. For example, if start_activity is selected as the base action for a plugin, the plugin is only be shown in the context of a pending activity when there's no started activity in the same route, similar to the Start action. The list of available base actions is filtered according to the Entity that's selected.
Name (English)	A required field defining the plugin name in the English language. The action or plugin appears under this name in the actual context.
Name (other languages)	Plug-in name translations to other languages, if used.
Plugin settings section	
Plugin archive	The zip file for the Hosted plugin, which contains HTML, CSS, and JavaScript files. Click the field to browse and select file, or drag a file.
Disable plugin in offline	Determines whether you want to disable the pluginug-in when Oracle Fusion Field Service is offline. Clear this check box forpluginug-in to work in offline mode.
Plugin parameters	The section where sensitive information such as a user name and password that is used to access external sites is entered. Click plus to add the parameters. The **Add new parameter** dialog box appears with these fields: ○ Name: Enter a name for the parameter that is used to access an external application. For example, Client ID. ○ Value: Enter a value for the parameter. ○ Secure parameter: Select the check box to indicate that the parameter contains sensitive data. When you enable the check box, the application masks the value of the parameter and replaces it with a series of dots. You can deselect the check box and verify that the value is correct until you save the configuration of the pluginug-in. Once you save the configuration, the application masks the value of the parameter on the Edit Plugin and Modify parameter pages. However, when you open an existing secure parameter, you can only replace the value, as the application deletes the value from the field. ○ Click **Add**. The parameter is added topluginug-in. You can add a maximum of 20 key-value textbox pairs, after which the icon is hidden. The maximum size of the parameters allowed is 5 KB. This size includes the data structure overhead and doesn't correspond to the length of keys and values of strings. Changes to the secure data are sent to Oracle Fusion Field Service during the next synchronization. The data is sent topluginug-in when the next message is sent. If you open the values saved earlier, the application deletes them. You must add them again.
Available properties	The properties that you want to be passed topluginug-in or updated bypluginug-in. These properties are added as read-only and are available through the Plugin API. Click the field to select the properties. You need not define the visibility for the properties explicitly. These properties can't be updated through the Plug-in API: ○ activity_capacity_categories ○ auto_routed_to_date ○ auto_routed_to_provider_id ○ aworkzone ○ date

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Field Name	Description
	○ time_delivered
	You can't add these properties to the list of Available properties:
	○ activity_alerts
	○ access_hours
	○ activity_compliance
	○ atravelarea
	○ travel_estimation_method
	○ service_window_end
	○ service_window_start
	○ eta_end_time
	○ pid (it's still available for the Resource entity)
	○ ctime_delivered_start
	○ ctime_delivered_end

5. Click **Add**.

The archive is uploaded only if these conditions are met:

   ○ The archive is a ZIP archive and has the extension .zip.

   ○ The size of the archive is less than 500 KB.

   ○ The archive includes only directories and files of these types:

- .html files
- .css files
- .js files
- .appcache files
- .jpg, .jpeg, .png, .gif, .svg files
- Directories

   ○ Files are less than 1 MB.

   ○ The "index.html" file is found in the root of the archive.

   ○ The archive includes a maximum of 10 entries, including empty directories.

If any of these conditions isn't met, an error message is displayed and the archive isn't uploaded.

To usepluginug-in, you must add it to a button or a link. See the Add the Plug-In to a Page topic. The URL for the hosted pluginug-in is typically https://plugins-0-instance_name.fs.ocs.oraclecloud.com.

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How do I start an activity and track travel and on-site time?

To track travel and on-site time in Oracle Fusion Field Service, mobile workers must follow the correct sequence of actions during customer visits. These actions such as marking when travel begins and when the activity starts help the application calculate travel duration, time spent on-site, and overall activity performance metrics.

Start an Activity

When you arrive at a customer location, you must start the activity in Oracle Fusion Field Service from the **My Route** page. The application uses this data to project activity durations, travel time, and distance.

Always start activities as soon as you arrive at the customer's location, even before you get out of your vehicle. If you forget to start an activity on time, contact dispatch so that they can start the activity and enter the correct start time for you.

> **Note:** You must always start the scheduled activities in order. This means, you can only start the next activity in the list. Unordered activities are different, they can be started at any time.

1. Open **My Route** and click **Start** for the activity that you want to begin.

   A confirmation page displays. By default you start the first pending activity in the route.
2. Select the time of start and click **Submit**.

   The activity status changes to **started**. You can't select a time that's earlier than the current time.

   > **Note:** After you start an activity, you've the option to adjust time or to change the activity status. Menu options are driven by previous activity actions.

Track Travel and On-site Time

To ensure that travel time is recorded separately from time spent on-site, you must follow this sequence:

- Select **En route** when leaving for the activity location. The application begins recording travel time.
- Select **Start** upon arrival at the site. This stops the travel timer and starts tracking on-site activity duration.
- Select **Complete** when the job is finished.

The application calculates:

- **Travel time:** From En route to Start
- **On-site duration:** From Start to Complete

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How do I change the status of an activity to En Route?

When you mark an activity as End, Not Done, or Cancel you can select the next activity that you're going to. After the confirmation, the next activity becomes 'En route'.

1. Sign in to Oracle Fusion Field Service.
2. Open the Activity details page for the activity that you want to complete.
3. Click **Complete**.
4. Fill up the required fields and click **Submit**.
5. On the **Select next activity** dialog box, select the next activity that you want to go to.

   The Travel Time option is available on the **Select next activity** dialog box only if **Display and allow adjustment of remaining Travel Time** is selected on the **Configuration** > **User Types** > **General** page for your user type.
6. Click **Confirm**.

   The selected activity is assigned with the En route status. This behavior doesn't depend on the 'En route' action link configured for your user type.

How do I deactivate my route at the end of the day?

At the end of the day, you must deactivate your route, and all the activities must be listed in the **Closed** section of your home page. This notifies dispatch that you're no longer available to take jobs. Before you deactivate the *route,* verify that all of your activities have been completed or cancelled.

1. Click **Deactivate Route** on your home page.

   The **Deactivate Route** option displays only when you mark all activities as **Closed** on the activities list.

   > **Note:** You must have managed any remaining pending activities according to your business rules - rescheduled to another date, canceled, or not done. The **Deactivate Route** menu option will not appear if there are pending activities on the route.

2. Click **Yes** on the confirmation dialog box.

   If your organization uses the **Overnight Work** feature, you must deactivate your route and sign out of the application. If you don't do these, you'll see the previous day's date when you sign in the next day.

How do I add an activity type?

An activity type defines the properties based on which users can create activities. The properties could be whether the activity is created for customers, internal activities, or team work, whether travel needs to be calculated for the activity, whether the activity can be rescheduled, and so on. You can't change some features after you start creating activities for

some activity types. Whether you change the features for existing activity types on the user interface or through REST APIs, the application validates the features and displays warnings, as appropriate.

1. Click **Configuration** > **Activity Types** > **Add new**.
2. On the Add Activity Type page, complete these fields:

Field	Action
Activity type info section	
Label	Enter a unique identifier for the activity type.
Active	Specify whether the activity type is active. Users can't select inactive activity types while creating activities.
Name	Enter a user-friendly name that appears in the interface. Enter the name in English and in all the languages that are active in the application.
Group	Select the activity type group this activity type belongs to, for example, Customer, Internal, Teamwork, or Task.
Default duration, minutes	Enter the time taken to complete the activity in minutes. This is the default value and it will be used when no statistics are available for the activity.
Available Time Slots Section	
Available Time Slots	Select the times slots during which activities of this type must be completed. You must have set up time slots on **Configuration** > **Time Slots** for them to be available on this page. Select the check box to activate the time slot.
Color Scheme Section	
Copy from	Select the color palette to be copied from an existing activity type. The color scheme of the selected activity type is duplicated.
Pending through Cancelled	Define colors for each of activity statuses and for warning with standard RGB color codes and palettes. The colors that you select here are used on all the application pages. For example, let's say you select Green for the Started status. Whether you view the Time View, List View, or Manage, activities with the Started status are displayed in Green. The colors Pending = FFDE00, Completed = 79B6EB, Warning = FFAAAA, Suspended = 99FFFF, Not done = 60CECE, Not ordered = FFCC99, Started = 5DBE3F, and Canceled = 80FF80 are not available in the Supervisor Time View (Manage).
Features Section- The features are yes/no flags, which define individual characteristics of the type processing. If the check box is selected then the feature is enabled.	
Allow mass activities	Select the check box to define that the activities of this type can be performed by multiple resources simultaneously. For example, team meeting, or training. If you select this option at the time of creating the Activity Type and save the Activity type, you can't clear it later. However, if you've cleared it at the time of creating the Activity Type, you can select it later. But, you see a warning message. o This option can't be enabled if **Teamwork** is selected. o This option can't be enabled if **Allow move between resources** is selected. o This option can't be enabled if **Support of not-scheduled activities** is selected. o This option can't be enabled if **Allow reschedule** is selected.
Teamwork	Select the check box to define that the activities of this type are allowed for teamwork. Teamwork is an activity that's performed by minimum two resources: a team leader and an assistant. You can select this option only while creating the Activity Type. After you select this option and save the Activity type, you can't clear it. Similarly, if you clear it at the time of creating the Activity Type, you

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Field	Action
	can't select it later. When the Teamwork activity feature is enabled, these activity type features are disabled: ○ Enable segmenting and extended duration ○ Allow move between resources ○ Allow creation in buckets ○ Allow reschedule ○ Allow non-scheduled ○ Enable 'day before' trigger ○ Enable 'reminder' and 'change' triggers ○ Support of work zones ○ Support of work skills ○ Support of inventory ○ Support of preferred resources ○ Allow mass activities
Enable segmenting and extended duration	Select the check box to define that the activities of this type are intended to be used for field work that must be split into segments, which can be scheduled and assigned to mobile workers. You can select this option only while creating the Activity Type. When you select this option, a new section, **Enable segmenting and extended duration**, appears in the **Add activity type** window where you can set the duration for segments. After you select this option and save the Activity type, you can't clear it. Similarly, if you clear it at the time of creating the Activity Type, you can't select it later. These fields are displayed in the **Enable segmenting and extended duration** section: ○ **Minimum segment duration for a single day:** Defines the minimum length (in minutes) of each segment the activity is to be split. ○ **Maximum segment duration for a single day:** Defines the maximum total duration (in minutes) of the activity segments for any day. When you select the **Enable segmenting and extended duration** feature, these activity type features are disabled: ○ Teamwork ○ Allow mass activities ○ Allow repeating activities ○ Enable 'day before' trigger ○ Enable 'reminder' and 'change' triggers ○ Enable 'not started' trigger ○ Enable 'SW warning' trigger For more information on Segmentable activities, see the Segmentable Activities topic available in the ***Using Core Application Guide*** .
Allow move between resources	Select the check box to define that the activities of this type can be moved from one resource to another. You can't select this option if you've selected **Teamwork**.
Allow creation in buckets	Select the check box to define that the activities of this type can be created in a bucket. If you select this option at the time of creating the Activity Type and save the Activity type, you can't clear it later. However, if you've cleared it at the time of creating the Activity Type, you can select it later. But, you see a warning message. ○ You can't select this option if you've selected **Teamwork**.

Field	Action
	o You can select this option only if you've selected **Allow move between resources**.
Allow reschedule	Select the check box to define that the activities of this type can be rescheduled to another date.
Support of not-ordered activities	Select the check box to define that the activities of this type can be not-ordered activities. If you select this option at the time of creating the Activity Type and save the Activity type, you can't clear it later. However, if you've cleared it at the time of creating the Activity Type, you can select it later. But, you see a warning message. Not-ordered activities are the ones for which the order of processing isn't defined. Such activities don't have an estimated time of arrival. The resource, dispatcher or routing may define the order (for example, command change order in mobile interface or edit activity command in web interface).
Allow non-scheduled activities	Select the check box to define that this activity type can have non-scheduled activities. You can't select this option if you've selected **Teamwork**. If you select this option at the time of creating the Activity Type and save the Activity type, you can't clear it later. However, if you've cleared it at the time of creating the Activity Type, you can select it later. But, you see a warning message. Non-scheduled activities are the ones that don't have a specific day of completion assigned to them.
Support of work zones	Select the check box to define that the resource work zone must be calculated for this type of activities. This option can't be enabled if **Teamwork** is selected. If this option is selected and a work zone can't be calculated, a warning is displayed when such an activity is moved; routing will not assign such activities. If using work zones, Business rules must be configured to allow support of work zones (**Configuration** > **Business Rules** > **GUI features** > **Enable work zones support**).
Support of work skills	Select the check box to define that the work skills are calculated and assigned to the activities of this type, based on any conditions met. Subsequently, only resources with matching work skills are considered for assignment of the activity. If you don't select this check box, work skills are not considered and the activity can be assigned to any available resource. o You can't select this option if you've selected **Teamwork**. o This option does not depend on the **Allow move between resources** feature (as work skills are used not only to move activities but to calculate capacity). If you choose to use work skills, you must configure Business Rules to allow support of work skills (**Configuration** > **Business Rules** > **GUI features** > **Enable work skills support**).
Support of time slots	Select the check box to define that the activities of this type require time slots. This refers to predefined time slots within which the activity can be performed. After you select this option and save the Activity type, if you try to clear the option, you see the message, 'Time Slot values will not be preserved after the change of this feature.' If you don't select this check box and the 'Time slot' field is added to the **Edit/View activity** context layout, then it's replaced with the Service Window field.
Support of inventory	Select the check box to define that inventory can be used for activities of this type. For example, lunch breaks and team meetings do not have inventory. You can't select this option if you've selected **Teamwork**. If you select this option at the time of creating the Activity Type and save the Activity type, you can't clear it later. However, if you've cleared it at the time of creating the Activity Type, you can select it later. But, you see a warning message.
Support of links	Select the check box to define that the activities of this type can be linked with predecessor/successor activity relationships. If you select this option at the time of creating the Activity Type and save the Activity type, you can't clear it later. However, if you've cleared it at the time of creating the Activity Type, you can select it later. But, you see a warning message.
Support of preferred resources	Select the check box to define that the activities of this type can have preferred resources (Preferred Resource tab). You can't select this option if you've selected **Teamwork**. If you select this option at the time of creating the Activity Type and save the Activity type, you can't clear it later. However, if you've cleared it at the time of creating the Activity Type, you can select it later. But, you see a warning message.

Field	Action
Allow repeating activities	Select the check box to define that the activities of this type can be recurrent. If you select this option at the time of creating the Activity Type and save the Activity type, you can't clear it later. However, if you've cleared it at the time of creating the Activity Type, you can select it later. But, you see a warning message. ○ You can't select this option if you've selected **Allow move between resources**. ○ You can't select this option if you've selected **Support of not-scheduled activities**.
Calculate travel	Select the check box to define that the travel time to an activity must be calculated. If you've selected **Calculate travel** for an activity and it has neither the travel key (that is, zip code) nor coordinates, a company default value is used as a value of travel to and from the activity. ○ If the feature is selected, the algorithm implemented for activities is used for all activities of the type. ○ If the feature isn't selected, the travel time to activities of the type is always calculated as zero (0) (as if location of activities of the type is the same as location of previous activity) and travel to the next stop also starts from this previous location.
Calculate activity duration using statistics	Select the check box to define that the activities are estimated using the statistics that are gathered at the resource level and company level.
Allow to search	Select the check box to define that the Oracle Fusion Field Service Search Engine indexes activities of this type.
Allow to create from Incoming interface	Select the check box to define that the activities of this type can be created from Inbound Interface. Activities may originate from either Oracle Fusion Field Service or external systems.
Enable 'day before' trigger	Select the check box to define that the day before trigger is invoked for activities of this type. You can't select this option if you've selected either **Teamwork** or **Enable segmenting and extended duration**. You can select or clear this option at the time of creating the Activity Type, or later.
Enable 'reminder' and 'change' triggers	Select the check box to define that the 'reminder' and 'change' triggers are invoked for activities of this type. You can't select this option if you've selected either **Teamwork** or **Enable segmenting and extended duration**. You can select or clear this option at the time of creating the Activity Type, or later.
Enable 'not started' trigger	Select the check box to define that the 'not started' trigger is invoked for activities of this type. You can't select this option if you've selected either **Teamwork** or **Enable segmenting and extended duration**. You can select or clear this option at the time of creating the Activity Type, or later.
Enable 'SW warning' trigger	Select the check box to define that the 'SW warning' trigger (Service Window warning) is invoked for activities of this type. You can't select this option if you've selected either **Teamwork** or **Enable segmenting and extended duration**. You can select or clear this option at the time of creating the Activity Type, or later.
Calculate delivery window	Select the check box to define that a delivery window can be calculated for activities of this type.
SLA and Service window use customer time zone (required for routing)	Select the check box to define that SLA/Service Window can be adjusted for the activities of this type. You must select this feature if you've selected **Support of time slots**.
Support of required inventory	Select the check box to define that the required inventory is supported for activities of this type.
Disable resource tracking for this activity type	Select the check box to define that the resource's geolocation isn't tracked, if the activity has the status 'Started'. The message, 'Your location isn't tracked for this activity.' appears on the Landing page. Location tracking resumes after the activity status changes (that is, the status changes to 'Completed/End', 'Suspend', or 'Not Done') and, the route is still active. This functionality is supported in the Oracle Fusion Field Service Core Application (browser) and installed applications (Android and iOS) and requires Oracle Fusion Field Service Smart Location, Oracle Field Service Professional Cloud Service or Oracle Field Service Enterprise Cloud Service. This message isn't displayed if you've not selected **Enable GPS Telemetry** under the **Configuration** > **User Types** > **Permissions** section.

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3. Click **Add**.

Related Topics
- How is activity duration calculated?

How do I set the Access Schedule for an activity?

Typically, you add the Access Schedules to an activity when you create the activity, however, you can set it later as well.

1. Open the **Activity details** page for the activity for which you want to add an Access Schedule.

2. Click the pencil next to the **Access Schedule** field.

The **Access Schedule editor** opens.

3. Choose the days of the week for which you want to set the Access Schedule. Use the "+" and "-" icons to add and delete Access Schedule Intervals.

You can set up to two Access Schedule Intervals per day of the week. If multiple days of the week have the same Access Schedule, you can set up the Access Schedule Intervals for all at once.

4. To add the days on which the asset isn't accessible, click the "+" icon in the **Exception Days** section and then choose a date in the calendar. To delete an Exception Day, use the "-" icon.

For Example: You can set this Access Schedule:

- Mon-Fri: 8AM-12PM, 13PM-17PM

- Sat: 10AM-12PM

- Exceptions: 2018-01-01, 2018-05-01

This means that the asset is accessible from 8 AM till 12 PM and from 13 PM till 17 PM, Monday to Friday and from 10 AM till 12 PM on Saturday. It I s closed on Sundays. The non-working days are January 1st and May 1st next year.

5. Click **Apply**.

The Access Schedule is saved.

What information can I see on the My Route tile?

The information you see on the My Route tile depends on the width of your device screen. A wide screen device shows more information.

Wide screens

The My Route tile for wide screen contains the Workload bar with the percent of resource work time load for the selected day.

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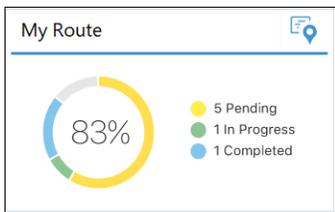
The percentage of workload is calculated using the formula: Load = (Duration/Shift)*100%, where:

Duration is the time taken to complete an activity, which is = duration of the activity + travel time

Shift is the duration of the shift in minutes.

The Workload is grouped based on these activity statuses:

- Pending
- Started
- Completed
- Suspended
- Not Done

On a narrow screen device, you see the total number of activities in the route for the selected day.

The tile redirects to the **Route Map** page if your administrator has configured the **Map** action link on the **Activity List** Context layout page.

This tile is always displayed even if there are no activities in your route.

If an activity is in jeopardy (for example, Missing SLA window), the tile turns orange.

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How do I change the optimization goal for a routing plan?

You can now select optimization goals for the routing plan and set the routing plan parameters in the best way. When you select an Optimization Goal, routing tweaks the variable parameters (costs) and suggests changes to the routing plan parameter.

Migration

During the migration process, re-optimization goals are migrated to optimizations.

This table provides the re-optimization goals and new optimizations goals:

Legacy Re-optimization Goal	New Optimization Goal
Optimize routes	Default
Assign high priority activities	Maximized assigned activities number
Reduce overdue	Reduce activities overdue

To set optimization goal for a routing plan:

1. Navigate to the **Routing** page.
2. Select the routing plan that you want to modify in the list.
3. Click the **Modify** link to display the **Modify routing plan** dialog box.

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4. Expand the Optimization Strategy section and select an **Optimization goal** from the drop-down list:

This figure shows the Modify routing plan dialog box with the Optimization goal options:

↑ Routing

Bulk Routing

~~manually~~
Time Limit - **3 min.**

⌄ **Optimization Strategy**

Default
Maximize the number of assigned activities
Maximize activities per resource ratio
Minimize total travel
Prioritize earlier start of most important activities
Reduce activities overdue

Optimization goal | Default ▾ |
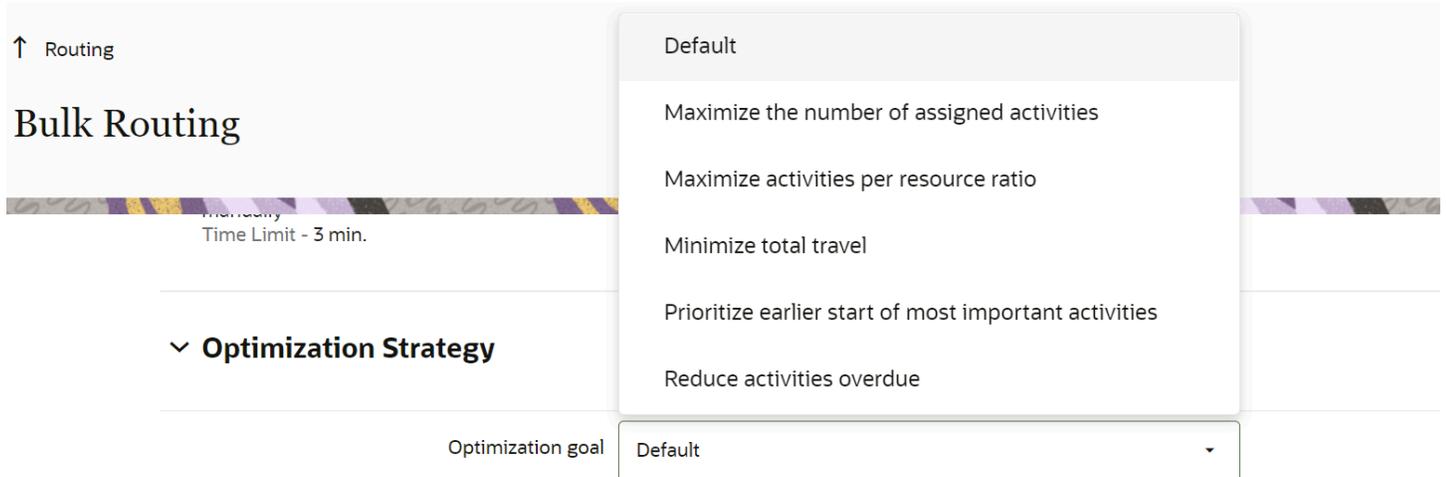
It is the default behavior. The reoptimization will only be started if it has the ability to assign new activities or change existing routes. There are no acceptance criteria.

5. When you select an Optimization Goal, routing tweaks the variable parameters (costs) and suggests changes to the routing plan parameter.

- Default—Ensures that there are no changes in the general routing behavior in comparison with previous versions. This is the default value. Reoptimization starts only if routing can assign new activities or change existing routes.

- Maximize assigned activities number—Slightly pushes the routing optimization behavior so that more activities are taken to the routes in total even if it requires more travel. If moving the activities between resource routes is ON, the routing plan will start only if there are non-assigned activities with high or highest non-assignment cost and the results are applied only if at least one such activity is assigned. The suggestions listed also help in setting up a routing plan to assign activities more aggressively.

- Minimize total travel—Slightly pushes the routing optimization behavior such a way that less travel is involved even at the cost of lesser total activities number. The suggestions listed also helps to set up a routing plan to minimize travel more aggressively.

- Maximize activities per resource ratio—Slightly pushes the routing optimization behavior in accordance to real travel time or distance in such a way that activities are assigning to less number of resources, leaving some of them completely free if possible. This option is recommended if there more personnel in the bucket that are needed for today and user would like to transfer resources to another bucket for some time. The suggestions listed also helps to set up a routing plan to minimize number of assigned resources.

- Prioritize earlier start of most important activities—Pushes the activities with a higher cost of non-assignment closer to the beginning of the working day. This works only for Bulk Routing plans and works when you've selected Cost of not assigning an activity as the highest. Optimization starts only if routing can assign new activities; optimization results are automatically applied.

  Bulk routing tries to optimize the entire set of routes, rather than each individual route. Because of this, it's possible (although not likely) for a particular activity with a higher non-assignment cost to be scheduled

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later than the one with a lower non-assignment cost, if such an assignment provides better overall optimization when travel time is considered.

To achieve the desired result, keep your non-assignment costs consistent among all the filters, including the ones for non-scheduled activities, for the activities that are already in the routes, and across all the routing plans within the profile, including optimization plans.

These constraints are applied:

- This optimization goal applies to bundled visits. It is expected that the mobile worker at the job site for the first activity in a given bundle completea all the activities in the bundle. However, activities in the bundle must also be ordered by non-assignment costs, and the activity with the highest non-assignment cost must represent the entire bundle in the route.
- The activity's work skill, work zone, and calendar requirements are met.
- The activity's Delivery Window, Service Window, Time Slot and Access Hours are met.
- Late arrival penalties are considered for activities that have the same non-assignment cost priority.
- Travel is optimized while it doesn't affect activity order.
- An activity's SLA is observed, but only for activities that have the same non-assignment cost priority.

Nine main priority levels are used to prioritize an activity's start, ranging from Minimal to At All Costs. If additional levels are required, you can use the Late arrival penalty to distinguish the activity priorities further for the activities that have the same non-assignment cost (from Minimal to High). For example, an activity that has the Cost of non-assignment set to High and the Late arrival penalty set to Normal has a higher priority than an activity with the Cost of non-assignment set to Normal and the Late arrival penalty set to Normal. However, the first activity has a lower priority than an activity with the Cost of non-assignment set to High and the Late arrival penalty set to High.

○ Reduce activities overdue—If moving the activities between resource routes is ON, the routing plan will only start if there are activities to be processed with high or highest overdue penalty and actually assigned with overdue and the results are applied only if the resulting overdue was decreased by given percentage. The suggestions listed helps to set up a routing plan to minimize number of activities having overdue and total overdue value.

Based on the selected option, internal routing optimization strategy is tweaked for better achieving the goal (with the except of default Balanced mode, which leaves costs untouched). If there are other parameters that are set to suboptimal values according to the selected goal, the suggestions for their values will also be displayed in this section.

6. Click **Update** to save your changes.

If a resource within a team is made inactive or has a non-working day, their work skills aren't shared with the team anymore, so the work skills are recalculated. As a result, the activity may be moved to a bucket or assigned to another resource.

Are there any known constraints for optimization goals?

Here are some known constraints for optimization goals.

We don't recommend mixing routing plans with different optimization goals in the same bucket, especially if the plans having an optimization goal set to **Prioritize earlier start of most important activities** are combined with plans having other optimization goals. If such a combination is inevitable, we recommend preventing the ability to move

activities between routes and reorder activities within the same route for all the plans, except the ones that have the optimization goal set to **Prioritize earlier start of most important activities**.

We don't recommend using Immediate Routing for activities matching the filter for the same set of activities that are used by the plan having the optimization goal set to **Prioritize earlier start of most important activities** as the assignments might be handled differently. However, you can combine an Immediate Routing for Urgent activities plan along side of a plan having the optimization goal set to **Prioritize earlier start of most important activities**, providing that activities with Urgent priority levels have the maximum non-assignment costs in the plan settings.

How do I define the blocking conditions for a message scenario?

The **Conditions** tab is used to define the set of blocking conditions under which the message should not be sent.

To define blocking conditions:

1. Open the scenario step for which you want to define blocking conditions.
2. Click the **Conditions** tab.
   The **Add Blocking Condition** tab opens:

3. Complete the fields as described in the following table.

Fields in the Add Blocking Condition tab

Field Name	Description
Condition to block message	
Field	Select the property from the menu that you want to use as the blocking condition. The menu includes all available properties related to activity, inventory, resource, service request, route, visit, user, and shifts and calendars. Additionally, several **other** fields, such as interface and day of the week, can be used for blocking conditions.
Check on	Choose one of the following options to define the time when the message's blocking conditions should be checked: ○ On creation—The conditions are checked at time of the message generation and not checked again. ○ On sending—The message is generated and stored in the message queue. The blocking conditions are checked at the time of message sending, which allows the system to account for any changes since the message was generated. ○ On creation and sending—The blocking conditions are checked at time of both message creation and sending.
Condition	Select the operator from the menu that relates the field you selected and the value you'll enter. For example, to block a message if the day hasn't changed, you'd select **Day changed?** for the field, enter **no** for the value, and select **in** from the **Condition** menu. The menu options include: In–The field value matches the entry in the **Value** field. Not in–The field value doesn't match the entry in the **Value** field. Contains—The field value contains the entry in the **Value** field. Does not contain—The field value doesn't contain the entry in the **Value** field. ▌ **Note:** Don't use the **Contains** or **Does not contain** option for enumeration properties. Is empty—The field value is null or undefined. Is not empty—The field value isn't null. > >= < <= These operators compare the field value to the entry in the **Value** field. They apply to integer, string, enumeration properties, and date/time fields. Does not start with—The field value doesn't start with the entry in the **Value** field. Starts with—The field value starts with the entry in the **Value** field.
Status	Select the final status that will be assigned to the message when the defined conditions are met. Setting the status lets the message be processed further in the scenario, even though the actual message creation is blocked by the defined conditions. The options include:

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Field Name	Description
	o Failed o Sent o Delivered o False Method o Obsolete **Note:** If you don't select an option from the **Result** menu, no message is created.
Set message final status	
Value	Type a value that will be compared to the field value with the following operators: **In**, **Not in**, **Contains**, **Does not contain**, **>**, **>=**, **<**, and **<=**. You can enter only one value for the **>**, **>=**, **<**, and **<=** operators. To enter multiple values for the other operators, separate the values with commas.
Description	Type a description that defines what happens when the message is blocked. **Note:** The **Description** field isn't enabled until you make a selection from the **Result** menu.

4. Click **Add** to add the blocking condition.

   The new blocking condition appears in the **Block Conditions** tab.

5. To add more blocking conditions, repeat steps 1 through 4.

6. To rearrange blocking conditions, select an option from the **Order** drop-down list in the **Add/Modify Blocking Condition** tab.

   The application processes the blocking conditions one by one in order of their appearance in the list in the right panel. Checking stops after the first blocking condition is met, so the order of the conditions may change the message-sending logic.

7. To delete a blocking condition, select it in the right panel and click **Delete**.

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8. Click **Save** to save the blocking condition addition or changes to the scenario step.

In this screenshot, the blocking condition has been set so that the customer with phone number 555–12345, who has confirmed the appointment earlier in another manner, will never receive any messages. Therefore, the message's final status will be set as **Obsolete** with the **Previously confirmed** description.

Condition to block message		Set message final status	
Field	Phone [phone]	Status	Obsolete
Condition	Contains	Description	confirmed
Value	12345	* Final status will be set without message sending	

> **Note:** For troubleshooting message scenario configurations, ensure that you include properties used in Blocking Conditions and Message Scenario Steps to the **Monitored activity** and **Monitored inventory** fields. You can configure the properties on the **Configuration, Displays, Display, Activity history** page.

What are calendars, work schedules, and shifts?

Whether they're set at the organization unit, bucket or resource level, overall calendar options are made up of combinations of work schedules, shifts, working, and non-working time. They represent a holistic view of who's available or not available for work at any given time on any given day.

Here are a few rules regarding the hierarchy of calendars in general, and their levels of precedence:

- Work schedules, shifts, and working time applied to a bucket or an organization unit, by default, also apply to all resources that are part of bucket or organization unit.

- Calendars created or adjusted at a lower level override the calendar at a higher level. That is, the calendar that you've set up at a resource level overrides the calendar that the resource may have inherited from its parent entity. However, the work schedule defined at the child level doesn't override the shift, custom working time, and non-working time defined at the parent level. To override custom working time, you must delete any existing custom working time.

- A calendar at the individual resource level applies only to that resource and overrides all other calendars.

To understand calendars and their potential components better, we must define the different options. The components of a calendar are:

- Work Schedules: Work schedules contain multiple shifts and non-working times. Work schedules are the mechanisms for grouping these items, so that they can be applied to a single resource, a bucket, or an entire organization unit. Work schedules represent the highest level of calendar options.

- Shifts: Shifts are used to define the different working times as defined by an organization. They can be created once and used by various work schedules, simplifying the assignment of schedules. In addition to work schedules, shifts can also be assigned directly to organization units, buckets, or resources.

- Working Time: The time frame in which a resource is scheduled to work that doesn't comply with one of a company's standard shift definitions.

- Non-working Time: Non-working time is used to identify known absences such as bereavement, illness, holidays, and vacations.

Earlier portions of this guide covered the creation of work schedules, shifts, and non-working time. This section will concentrate on assigning those calendar options to entities on the Resource Tree (organization units, buckets, resources). While the process is the same for each, depending on what you select on the Resource Tree, the implications differ. This ties back in with the explanation of the calendar hierarchy.

How do I add a holiday?

There might be certain nonworking days when you don't want to send notifications to your customers from Oracle Fusion Field Service. You must add such days on the **Holidays** page for the application to consider them.

1. Click **Configuration** > **Holidays**.
2. Click **Add new**.

   The **Add Holiday** page appears.
3. Complete these fields:

Field Name	Action
Name	Enter the name of the holiday, for example, New Year Day.
Active	Select the check box if you want this Holiday to be considered by the application.
Date	Click the calendar icon and select the date, for example, 01/01/2023.

4. Click **Add**.

How do I add a shift to a resource's calendar?

Shifts are standard patterns of working time. They decide when a resource is available for work. Shifts applied at the resource level override the shifts applied at a higher level in the resource tree. You must modify the resource's calendar to add a shift.

1. Method 1: Click the calendar icon on the navigation bar. Select a resource from the resource tree.

   Method 2: Go to the **Resource Info** page for the desired resource and click **Resource Calendar**. The **Calendars** page appears.
2. Click the date for which you want to change the shift.

   The shift dialog box displays.
3. Complete the fields.

Field name	Action
Schedule	Select a shift from the drop-down list. The list includes: ○ Shifts that aren't related to any Organization (empty Organization field). ○ Shifts within the same Organization that are configured for the schedule.

Field name	Action
	- Shifts that are currently configured for the selected schedule, even if the Organization in the schedule and shift differ. - All active shifts, if no Organization is configured for the schedule.
End date	Select the end date of the shift, if applicable.
Comments	Enter comments, if any.
Recurrence-Repeats-Daily	Apply to schedules such as every other day or every 3rd day. If you select this option, add the frequency of occurrence in the field **Days between occurrences**.
Recurrence-Repeats-Everyday	Applies to every day schedules that repeat without exception and without any modification options.
Recurrence-Repeats-Weekly	Apply calendars that have a regular weekly pattern. Select the days that apply to this shift using the check boxes for the individual days. Indicate the frequency of this pattern weekly by adding a value to the **Weeks between occurrences** field.
Recurrence-Repeats-Yearly	Occurs every year from the selected date entered in the **From day** until the date entered in the **To day** field.

4. Click **Submit**.

How do I add a Mass activity?

You create a Mass activity when you want several resources to use it at the same time. For example, if all the mobile workers are required to attend a training, you add a Mass activity.

1. Open the **Dispatch Console**.
2. Select a resource, an organization unit, or a bucket in the resource tree.
3. Click **Actions** > **Add Activity**.
4. Complete the Activity Notes, Position in Route, Duration, SLA Start, SLA End, and Time Slot fields.

   If **Position in Route** is either Read-Only or isn't configured for the page, the order of the activity is decided based on the Time Slot or Service Window. If **Position in Route** is available, the order of the activity is the same as selected for this field.
5. Click **Mass Activity.**

   The **Mass Activity** check box is displayed only for the activity types for which it's configured.
6. Select the resources that you want to be part of this activity.

   The resource, organization unit, or bucket that you selected in the resource tree is selected by default. This means, the child resources that are part of the organization unit or bucket are selected automatically. If you had selected an individual resource in Step 2, you can select more individual resources as required.
7. Click **Submit**.

   The activity is assigned to all the selected resources and the child resources of the selected organization unit or bucket. Be aware that the activity isn't created on the bucket or the organization unit itself. You can't deselect the **Mass Activity** check box and make it an individual activity after you click **Submit**.

   If you've configured the **Expose mass and repeating activities in API for these number of days** field on the **Business Rules** page, the activities are instantiated in the mobile worker's route in advance. If the value for this field is zero then the activities aren't instantiated automatically, but are created only when a route is created.

How do I add a workflow step?

> **Note: Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Workflow Manager*. We recommend that you update your bookmarks accordingly.

A workflow step is the page that you want to display at that step. This can be either a custom form, a plug-in, or a standard inventory action page. A step includes conditions that decide when a step is started or completed.

1. Click **Configuration** > **Workflow Manager**.

   The existing workflows are displayed.
2. Click the workflow for which you want to add a step.
3. Click the plus icon (**Add new** button) in the right pane.
4. Complete these fields on the **Add step** dialog box:

Field	Action
Open	Select one of these options: o **Forms:** Select the custom form that you want to display at this step. To display a form dynamically, select **Form label is taken from property** and select the form property that was created for this purpose in the **Property containing form label** field. o **Plugins:** Select the plugin that you want to display at this step. o **Standard action screens:** Select the standard inventory page that you want to display at this step. The options in the **Show completed when** section change based on the option you select here.
Position in workflow	Select the position of the step within the workflow. If you're adding the first step, 'First' is automatically populated. You can change the order of the steps on the **Workflows** page as well.
Name translations	Add the name of the step in the languages that you prefer. This name is displayed on the workflow panel.
Show available when	Select the visibility condition for the step. The condition can be based on a field or property, or a step in the workflow. This step is visible for end users only when the condition is satisfied. **Always available (no conditions)** means that a step is displayed for end users initially. Click the plus icon and select one of these options: o **Fields and Properties:** Click the plus icon. Select the field name and then select the condition it must satisfy. This is similar to adding the visibility conditions for user types. o **Workflow Step:** Click the plus icon. Select the custom form that you've selected for the current or an earlier step. Add the condition. This option lets you specify whether you want to display a step when a form selected in an earlier step is completed. **Default:** Form <form name> in (equal) submitted The *Submitted* option isn't available if you've selected a plug-in in the **This step will open** field.

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Field	Action
Show completed when	Select the condition that decides a step as completed. The condition can be based on a field or property, or a step in the workflow. The step is marked as completed only when the condition is satisfied. Click the plus icon and select one of these options: ○ **Fields and Properties:** Click the plus icon. Select the field name and then select the condition it must satisfy. This is similar to adding the visibility conditions for user types. ○ **Workflow Step:** Click the plus icon. Select the custom form that you've selected for the current or an earlier step. Add the condition. This option lets you specify whether you want to mark a step as completed when the current form is submitted. **Default:** Form <form name> in (equal) submitted The *Submitted* option isn't available if you've selected a plug-in in the **This step will open** field.
Parameters	Use the **Parameters** section to prepopulate the fields on the form you're using with this step. This option is similar to the **Parameters** option when you configure a custom form using the Visual Form Editor.

5. Click **Add**.

   The step is added.

6. Click **Save**.

   The workflow is saved.

Related Topics

- Launch a Custom Form Dynamically
- Add the Form Property to a Workflow Step

How do I launch a custom form dynamically?

If your business uses several form variations, for example, a form for a specific type of asset or activity, you need not configure a button for each form individually. Instead, you can configure a single button or workflow step to launch the relevant form dynamically. This is achieved by populating the appropriate form label into a designated label property while creating an activity. To start with, you must define a property that stores the unique form label.

The high-level steps to configure a dynamic form button or workflow step are:

1. Create a custom property to store the form label.
2. Link the property to a button or workflow step.
3. Populate the relevant form label into the property when creating a new activity (new activities are typically created through APIs).

Forms launched dynamically are supported in offline mode the same way as persistent forms. The application caches the forms for offline use, while loading the application at the beginning of the work day or while receiving updates for activities or inventory.

Oracle Fusion Field Service displays an error when you try to open a form that doesn't exist in the environment. For example, when an incorrect form label is populated into a dynamic form property. Further, dynamic form buttons and workflow steps are disabled when the linked dynamic form property is empty.

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How do I create a form property to store the form label?

You must create a form property to store the form label, to launch forms dynamically.

1. Click **Configuration** > **Properties**.
2. Click **Add new**.
3. Complete these fields:
   a. **Entity:** Select the entity as activity or equipment. You can create a dynamic property only for these two entities.
   b. **Label:** Add a label for the form that aligns with the activity for which you're using the form.
   c. **Name:** Add a name for the form in the English language field and other required language fields.
   d. **Property type:** Select string. The dynamic property supports only string type of properties.
   e. **GUI:** Select Text element. The dynamic property supports only text elements.
4. Click **Add**.

How do I add a form property to a workflow step?

If you wish to launch a custom form dynamically from a workflow step, you must create a property to store the form label and then link the property to the required workflow step. Perform this step after creating the form property to store the label.

1. Click **Configuration** > **Workflow Manager**.
2. Add a new workflow or edit an existing one.
3. Within the workflow, add a new step or modify an existing step.
4. In the **Add step** or **Modify step** dialog box, select **Forms**.
5. Select the **Form label is taken from property** check box.
6. Select the form property that you've configured earlier, in the **Property containing form label** field.
7. Complete the remaining fields as required.
8. Click **Add** or **Modify** and save the step configuration.

Related Topics
- Launch a Custom Form Dynamically
- Create a Form Property to Store the Form Label

How do I view the quota history?

Quota history stores the data related to the changes you perform on the time slot based Quota pages (for example, Quota by day, Quota by time slot, and Quota by Capacity Categories). You can view quota history using the filter

options. You can also export quota history in the default export file format setup in the **My Display** settings under your user profile.

> **Note:** During implementation, an unnamed group is created and the Quota History action link is moved under the unnamed group.You can navigate to the User Types screen and add the Quota History action link to the group so that it displays under the ▤ icon for the required user type.

To view the quota history for a bucket:

1. Click the **Quota** icon on the navigation panel.
2. Open the **Quota** page.
3. In the resource tree, select the bucket for which you want to view the quota history.
4. Click **Actions** > **Quota history**.

Quota history includes the following information:

- **Date:** Date of the action.

- **Time Slot:** Time slots that are updated. Filter the values in the Time Slot column by selecting or deselecting some or all the time slots used in the Quota Management.

- **Capacity Category:** Capacity categories that are updated. Filter the values in the **Capacity Category** column by selecting or deselecting some or all the capacity categories used in the Quota Management.

- **Work zone:** Work zones that are updated.

- **Action:** Actions performed in the Quota Management screen. Filter the values in the **Action** column using the following options:

    ○ **Change:** Changes made to the values in the Quota, % Quota, Min. quota, and % to stop booking at cells at a Quota level.

    ○ **Close:** Quota closed for a day, time slot, capacity category or work zone.

    ○ **Open:** The opening Quota for a day, time slot, capacity category or work zone.

    ○ **Remove work zone specific settings:** Displays only if the close time is updated and the following conditions are met:

        - Quota for all work zones for a particular capacity category that belongs to a particular time-slot or time-interval is closed using the **Close All** option. A red cross mark displays on the cell when the quota for all work zones is closed.

        - Quota for all work zones is opened using the **Open All** option for the same capacity category for which the quota for all work zones was closed.

- **Action time:** Time of the action performed in the Quota Management screen. The values in the **Action time** column are shown in the time zone of the selected capacity area. Filter the values in the Action time column to display the actions performed within the last 4 hours, last 8 hours, last day or last 2 days. Additionally, it's possible to sort the data in ascending or descending orders.

- **% Quota, Min. quota:** These columns are only shown when the Quota is defined as a percentage of the available capacity according to the configuration of the capacity area. They show the corresponding values.

- **Quota:** Changes made to the to the Quota values.

- **% to stop booking at:** This column is shown only when the**% to stop booking at** option is enabled at the Time Slot or Capacity Category level during the capacity area configuration.

- **User:** User who updated the quota. When a change is performed automatically, the **User** column doesn't contain any value.

> **Note:** Quota history isn't available in the multi-bucket mode.

How do I configure Pass-Through authentication?

The pass-through authentication (PTA) option helps track the actual usage of users accessing Knowledge Advanced for B2C Service from Oracle Fusion Field Service. When you select PTA as the security policy in Oracle Fusion Field Service, Oracle B2C Service acts as an IDP. This security policy uses PTA in Oracle B2C Service to create the contact and provide access to Knowledge Advanced for B2C Service.

Follow these steps:

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1. Click **Configuration** > **Oracle Knowledge**.

   Oracle Knowledge is displayed on the **Configuration** page, only if you've a license for it:

   This screenshot shows the Configure PTA dialog box.

Knowledge access

Security Policy	Pass-Through Authentication
URL	https://test.local
Secret Key	●●●●●●●●●●●●●●●

Knowledge fields mapping

Search	Activity Type [ACTIVITY_TYPE]
Category	W/O Type [WO_TYPE]
Product	W/O Type [WO_TYPE]

Save

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2. Complete these fields:

Field	Description
Security policy	The security policy that you want to use to connect to Knowledge Advanced for B2C Service. Select Pass-Through Authentication.
URL	The URL to access the knowledge base.
User Name	User name is a concatenation of your Oracle Fusion Field Service user name and the string &p_li_passwd followed by the value of PTA_SECRET_KEY. For example, 'john.smith&p_li_passwd=ThisIsASecret'.
Password	Your Oracle Fusion Field Service password.
Knowledge fields mapping	Provides the possibility to configure the parameters of the context search and filtering, based on activity properties. Select the desired search, category, and product properties from the drop-down lists.

3. Click **Save**.

See the PTA guide for more information about the configuration settings.

What to do next

PTA Fields and Values

> **Note:** Connectivity must be available to integrate Oracle Fusion Field Service with Knowledge Advanced for B2C Service. Oracle Fusion Field Service must be able to reach the Knowledge Advanced for B2C Service URL.

Name	Value	Description
PTA_ENABLED	Yes	Enables the use of PTA login integration.
PTA_ENCRYPTION_KEYGEN	3	Specifies the type of keygen method to use for PTA encryption. 3 ? RSSL_KEYGEN_NONE
PTA_ENCRYPTION_METHOD	aes256	Specifies the encryption scheme PTA logins should use. aes256 ? 256 bit AES in CBC mode
PTA_ENCRYPTION_PADDING	1	Specifies the type of padding method to use for PTA encryption. 1 ? RSSL_PAD_PKCS7
PTA_IGNORE_CONTACT_PASSWORD	Yes	Specifies whether contact passwords are honored during PTA logins. If enabled, contact

		passwords are ignored and users can log in through PTA with just a user name.
PTA_SECRET_KEY	< User defined value >	Specifies the secret key used to validate login integration parameters, when encryption is disabled, or to decode the PTA string when encryption is enabled. If encryption is disabled, you must pass this value as a p_li_passwd parameter encoded within the PTA login string. If encryption is enabled, you must not include this value within the PTA string and use only to encrypt the value sent. Requests that send an invalid value are rejected. This key used as the "Secret Key" in the new configuration page of Oracle Knowledge.

NOTE: As part of the new user authentication process, Oracle B2C Service expects an email address as a required field. Oracle Fusion Field Service uses the user email address configured in a custom property selected as "Email for password reset" on the "Display" screen for this purpose. If you haven't enabled this email address, or you've provided an invalid email address, Oracle Fusion Field Service generates a dummy email address in the format " <Oracle Field Service_login>@<Oracle Fusion Field Service_environment_id >. invalid". If a domain isn't available in the email address field, the application doesn't create a contact. So, make sure that you've configured a valid email id in Oracle Fusion Field Service.

Security Policy as a Basic Authentication

This policy supports the existing single user-based access to Knowledge Advanced for B2C Service.

Name	Value	Description
PTA_ENABLED	Yes	Enables the use of PTA login integration.
PTA_ENCRYPTION_KEYGEN	Empty value	Specifies the keygen method used for PTA encryption.
PTA_ENCRYPTION_METHOD	Empty value	Specifies the encryption method you want to use.
PTA_ENCRYPTION_PADDING	Empty value	Specifies the padding method used for PTA encryption.
PTA_IGNORE_CONTACT_PASSWORD	No	Specifies whether contact passwords are honored during PTA logins. If enabled, contact passwords are ignored and users can log in through PTA with just a username.

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Name	Value	Description
PTA_SECRET_KEY	Empty value	Specifies the secret key used to validate login integration parameters when encryption is disabled, or to decode the PTA string when encryption is enabled.

Oracle Fusion Field Service - Knowledge Advanced for B2C Service Authentication Workflow

1. When a user opens Knowledge Advanced for B2C Service pages from Oracle Fusion Field Service, Oracle Fusion Field Service initiates a request to Oracle B2C Service for authentication.
2. It validates whether a user that's present in Oracle B2C Service is using the user id.
3. If a valid user id is present in Oracle B2C Service, the user is authorized to access the Knowledge Advanced for B2C Service pages.
4. If there's no user present in Oracle B2C Service, Oracle Fusion Field Service creates a new contact in Oracle B2C Service with User login, user last name, and email. The user login and user last name are taken from the Oracle Fusion Field Service login details. The email is taken from restore password (if email id is defined there) and updated in Oracle B2C Service.
5. If there's no valid email available in Oracle Fusion Field Service, a dummy email is created in Oracle B2C Service with the format, <Oracle Field Service_login>@<Oracle Field Service_environment_id>.invalid. Make sure that you've a valid email id in Oracle Fusion Field Service, before you create a new request in Knowledge Advanced for B2C Service, so that the contact in Oracle B2C Service is created with a valid email id.

How do I add the 'Select Resource' button to a page?

You can add the **Select Resource** button to the **Activity Details** and **Add/Details inventory** Visual Form Editor to help dispatchers, field users, and supervisors view the activities assigned to a mobile worker in one click. For dispatchers, **Select Resource** leads to the **Dispatch Console**, where the resource is automatically selected in the resource tree. For mobile workers and supervisors who don't have access to the **Dispatch Console**, **Select Resource** opens the mobile worker's landing page.

The **Select Resource** link is added by default to the Activity Hint and it can't be configured.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to add the button.
4. Under the Activity section, and click **Activity Details**.
5. Expand **New element** and drag the **Button** element to the header.
6. Click the pencil icon in the **Standard action screen** field.
7. On the **Select screen** dialog, select **Select Resource [select_provider]** in the **Screen** field.
   The **Select Resource** button is added with a default visibility of Read-Only.
8. Click **OK**.
9. Add any name translations and visibility conditions that you want.
10. Click **Save** on the Visual Form Editor.
11. Repeat steps 3 to 9 and add the button to the **Add/Details inventory** page.

How does immediate activity assignment work?

The Routing module can now prioritize activities and assign urgent ones to mobile workers immediately, even if it's at the cost of other activities. If the priority of the new activity is high enough, Routing can rearrange mobile workers' routes and insert urgent activities in front of other activities. This rearrangement happens even when the mobile worker is already on the way to an activity or in the middle of an activity.

Oracle Fusion Field Service Routing automatically assigns activities created in the bucket to resources matching the requirements of such activities. Depending on your company requirements, you can select a routing schedule that's the most suitable for a particular bucket. Routing can be started manually or once a day or recurrently with the specified interval. These options covered most of the operational patterns used by different companies. If the company preferred to distribute the workload the day before and provide its mobile workers with complete routes at the beginning of their working day, then once-a-day Routing is the best option. If the company needs to respond quickly to new tasks received during the day, then recurrent Routing running several times a day is the solution.

Routing schedule options have been enhanced to handle urgent activities. Routing can assign activities meeting certain criteria immediately after they're created in or moved to the bucket so that the time between the activity creation and its assignment is minimal. Routing now has an additional schedule option, **immediate**. Depending on the schedule settings, Routing either assigns urgent activities identified by the activity priority or assigns certain activities from the bucket keeping the time till assignment to the minimum.

Urgent and immediate activities with SLA end that have a preferred resource are assigned to preferred resources. If a preferred resource has the work day start after SLA end time and other resources are available to execute this activity, then the activity is assigned to the other resource. Further, if a preferred resource isn't available for an urgent activity assignment, the activity will be assigned to another resource with the matching work skills (and work zone based on the routing plan configuration).

Urgent routing doesn't assign activities to those mobile workers who just have on-call working calendars but their route isn't activated. Urgent routing assigns activities to those mobile workers who have on-call working calendars and their route is activated.

> **Note:** Resources that have activated routes are considered eligible to be assigned activities, assuming all other conditions are met, even if they activated the route before their scheduled start time.

Here's the difference between an Immediate Routing plan for Urgent activities and activities meeting filter conditions-- Immediate routing for urgent activities can reassign activities, whereas Immediate routing for activities that satisfy the filter conditions can't reassign.

Basic Principles of Immediate Activity Assignment

Immediate-assignment functionality is aimed at assigning certain activities immediately following their creation in or moving to the bucket. It serves the following purposes:

- Assignment of activities with the minimum ETA possible. The activities to be assigned are determined by the **Activity Priority** settings.
- Assignment of activities within the configured interval. The activities to be assigned are determined by applying a filter.

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- Support segmentable activity assignment when the Activity Type = segmentable activity flag is set.

  Note: Segmentable activities aren't supported by urgent routing plans.

- Segmentable activities are available for Immediate Routing when you create them and when you move them to the bucket.

- Immediate routing of segmentable activities will use the required work skill ratio and not the preferred work skill ratio. This is different from regular activities.

Immediate Routing may not route those activities that are linked with hard constraints if they're assigned to the Bucket and linked before Immediate Routing triggers and starts the processing of such new Activities. Activities linked with other constraints will be routed via Immediate routing without any issues.

Start-start and finish-finish are considered hard constraints as one linked activity is assigned to a resource while another linked activity is in the bucket; this violates the constraint for an assigned activity.

Immediate Routing may still assign one of the linked activities (say activity A) in case if:

- Activities linked to A are assigned to the mobile worker

- Activity A is assigned in such a way that its links will not be violated (apart from other Routing's conditions) .

  Note: Assigning simultaneous links isn't supported using Immediate Routing; such activities are skipped and unassigned.

Immediate Routing and SLA

Here's how Immediate Routing plans work with the SLA fields:

- To minimize the chance of a resource to be retained on an activity that's nearing SLA End, Immediate Routing doesn't route activities (that satisfy the filter conditions) if the ETA is greater than the remainder of SLA End and SLA Window Threshold (that is, ETA > SLA End - SLA Window Threshold).

- This automatically applies to activities for which SLA ends earlier than the SLA Window Threshold, before the current time. These activities can't be routed by Immediate Routing, even if they satisfy the filter conditions.

- If you try to assign activities manually in such a way that ETA > SLA End - SLA Window Threshold, it leads to the warning that the SLA Window may be lost.

You can configure the SLA Window Threshold using the **Activity has not been completed XX minutes before the end of SLA Window** setting on the **Configuration** > **Display** > **Alerts** section.

Resource Filters in Immediate and Urgent Routing

Immediate and urgent routing plans contain resource filters similar to Bulk Routing plans. The Filters section is similar to the Bulk Routing with the following exceptions.

To set resource filters:

1. Navigate to the **Routing** screen.
2. In the row for the Immediate or urgent routing plan, click the **Properties** icon and select **Modify**.
3. In the Edit Routing Plan screen for Urgent and Immediate routing plan, expand the **Filters** section, set the filters as needed. The Filters section is similar to the Bulk Routing with the following exceptions:

- Only one predefined filter is available for non-scheduled activities in the routing bucket.
- You can't add other filters or delete existing filters.
- You can't add/modify/delete activity filters.

How do I implement Redwood styles in a custom plug-in?

If you've created a custom plug-in and want it to have the same look and feel as the other pages of Oracle Fusion Field Service, you can implement it.

You can use JET and standard JET styles to get a consistent look between the application and plug-ins. For more information, see the Use CSS and Themes in Oracle JET Apps section in the Oracle® JavaScript Extension Toolkit (Oracle JET) guide.

How do I add a shift?

Use this feature for special types of shifts that don't fall within the traditional 24-hour clock. You can create separate shifts for each working time pattern within your organization.

1. Click **Configuration**.
2. In the **General** section, click **Calendars**.
   The **Work Schedules** page appears.
3. Click **Shifts**.
   The **Shifts** page appears.
4. Click **Add new**.
   The **Add Shift** page appears.
5. Fill up these fields and then click **Add**:

Field	Description
Name	Enter a name for the shift, as it appears in the application.
Label	A unique identifier for this shift.
Active	Click the check box to activate (make available for use) this shift.
Organization	Select the organization to which you want to add the shift. For example, if you operate in different countries, select the organization that's specific to the country in which the shift is used.
Type	Select the type of shift from the drop-down list. Common shift types include **Regular** for standard periods of time, or **On-call** for longer time frames that a resource might be available, after the regular shift ends. Select the color coded on-call icon that you want to attach to the shift. When you add this shift to a resource, this icon is displayed on the Dispatch Console, Manage, Calendar, and Resource Calendar pages, and on the resource avatar.

Field	Description
Time From	Enter the start time for this shift.
Time To	Enter the end time for this shift.
Points	Within the application, points are used as limiters. If activities are assigned point values (based on different completion durations, complexity, value, and so on.), then assignment caps can be determined on a shift-by-shift basis. Once point thresholds are reached for a resource to which that shift is assigned, then routing will allocate no more activities to that resource.

How do I create and use a PIN?

The Personal Identification Number (PIN) feature in Oracle Fusion Field Service enhances data security and allows Field Resource users who authenticate with Single Sign-On (SSO) to unlock the application in offline mode. The PIN ensures secure access when offline and unable to authenticate with SSO.

How the PIN works

- When signing in with SSO for the first time, the application prompts you to create a PIN.

- If you're offline and unable to authenticate through SSO, the application prompts you to enter your PIN to unlock access. This lets you work with locally stored data without an internet connection.

Changing the PIN

You can update your PIN at any time from the **Preferences** page.

1. Navigate to the **Preferences** page.
2. Click **Change PIN**.
3. Enter and confirm your new PIN.

   Note: You can only change your own PIN. Resetting PIN for other users isn't supported.

What are user type settings?

Use user types to manage permissions and restrictions for all users. You can create user types for your business that correspond to your existing business roles. If your organization adds a new business role, you must create and configure a new user type for it. Similarly, if you alter a business role, you must change the corresponding user type settings.

Each user type has a profile that defines security and display permissions, such as the user's sign in method, the ability to use certain functions, and access to menu items and properties. They might also include custom context layouts. You assign each user only one user type. You can add or change user types at any time, and delete those which are no longer needed. You can also copy existing user type configurations to make new ones. This makes it easy to create multiple user types that share similar configuration settings.

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For each page or function that you want to make available for a user type, you set the visibility to **Read-only** or **Read-write**. If you don't define a visibility value, that page or function is hidden for that user type. Access to a page or tab automatically includes access to the actions on that page.

Changes to a user type assigned to Oracle Fusion Field Service Core Application users are applied shortly after they're saved on the **User Types** page. Changes to a user type assigned to Oracle Fusion Field Service Mobile for Android and iOS users are applied after the next synchronization.

User type settings fall into these categories, which appear as tabs:

- **General**

  These basic settings define the user type options regarding resource types and other users, and the user type access to the application and its functions.

- **Screens**

  These settings define the pages, windows, context menus, and other elements visible to a user type and supports the context layout editor where the content, arrangement, and visibilities of each context are set.

- **Restrictions and Filters**

  These settings define the restrictions on the activities and fields that are visible to the users of the current type.

How do I create a user type?

A user type is a template that specifies permissions and page configurations. These permissions and configurations are applicable to all the users of the user type. Oracle Fusion Field Service includes a default user type, you can create more user types based on your business requirements.

Before you start

You must be logged into Oracle Fusion Field Service as an administrator.

When you create a user type that isn't copied from an existing one, most of the options are disabled, so you must define the settings manually. When you use a copy, the new user type inherits all the settings from the copy.

Here's what to do

1. Open the **User Types** page.
2. Click **Add User Type**.

   The **Add User Type** dialog box appears.
3. Enter a **Label** for the user type.

   This is a unique string identifier of the user type, which is used in APIs.
4. Enter a **Name** for the user type.

   This is a human-friendly name, which is displayed in the list of user types.
5. To copy settings from an existing user type .
   a. Select an existing user type from the **Copy from User Type** drop-down list.
   b. Optionally, click **Copy or Share → Copy from User Type**. The **Copy screen configuration from User Type** appears.

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6. To share settings from an existing user type

   a. You can select the **Share screen configuration** option if you want to the new user type to have the same page configuration options as the copied user type. By default, the **Share screen configuration** with user types option is available for all user types. If you change a shared page configuration, the change applies to all user types that use the configuration.

   Optionally, click **Copy or Share → Share with User Type**. The **Share screen configuration with User Type** appears.

   > **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

7. Click **Add**

   The **User Type Settings** page appears.

8. Edit the user type values as necessary.

9. Click **Save**.

   Changes to a user type that's assigned to manage users are applied shortly after they're saved. Changes to a user type assigned to Oracle Fusion Field Service Mobile for Android and iOS users are applied after the next synchronization.

How do I view the statistical parameters?

You can view the settings based on which Oracle Fusion Field Service collects statistical data. Some settings are duration parameters, travel time parameters, activity travel keys, and resource travel keys. Be aware that if you try to adjust the settings, it may significantly change the workload for each resource, and significantly impact the logic of gathering statistics for the work done.

1. Click **Configuration**.
2. In the **Subsystems and Integrations** section, click **Statistics**.

   The **Statistics** page appears. Complete these fields and click **Apply Changes**:

Field	Description
Duration parameters	
Minimum relevant duration time in minutes Maximum relevant duration time in minutes	To ensure that outlier activity durations (sometimes due to non-compliance) don't adversely affect statistical calculations, durations with values less than or more than the minutes entered in these fields will be ignored by the statistics engine.
Lower limit for personal ratio to calculate duration (%) Upper limit for personal ratio to calculate duration (%)	The lower and upper limit percentages are about the company level duration for an activity. If the duration estimated for a resource's assigned activity is beyond the lower or upper limit, the estimate is corrected so that it lies within the set limits. The Lower limit default value is 50 with an available range from 0-100. The Upper limit default value is 200 with an available range from 100-999. If the preference is always to use the personal learned duration without any lower or upper limits applied, the ranges must be set for the outer extremes with the lower limit set to 0 and the upper limit set to 999. Example: Suppose the company-level estimation for an activity is 50 minutes and the lower limit percentage is set to 80%. If the estimation for a resource is 30 minutes, the final estimation for the

Field	Description
	activity will be calculated as the maximum of 30 minutes and 80% of 50 minutes, which will be 40 minutes. The lower limit would be in effect and 40 minutes would be assigned to the activity.
Travel time parameters	
Default travel time	The average value and standard deviation (in minutes) used for travel time prediction when there isn't statistical data for travel between two specific travel statistics keys.
Minimum relevant travel time in minutes Maximum relevant travel time in minutes	To ensure that outlier travel durations (sometimes due to non-compliance) will not adversely affect statistical calculations, durations with values less than or more than the minutes entered in these fields are ignored by the statistics engine.
Airline distance method weight	This parameter defines the weighting proportion between the statistic (average travel time) and coordinate methods (straight line/airline) of calculating/predicting travel time between two locations. The options are as follows: ○ 0 = Use only travel key based estimation. Oracle Fusion Field Service uses the statistics based estimation if coordinates are available. If not available, then it uses the default values. ○ 0.001 = Prefer travel key based estimation. Oracle Fusion Field Service uses the statistics based estimation if coordinates are available. If not available, then it uses the airline distance. If even airline distance isn't available, then it uses the default values. ○ 0.5 = Use both estimations evenly. ○ 0.999 = Prefer Airline distance method based estimation. Oracle Fusion Field Service uses the airline distance based estimation if coordinates are available. If not available, then it uses statistics. If even statistics aren't available, then it uses the default values. ○ 1 = Use only Airline distance method based estimation. Oracle Fusion Field Service uses the airline distance based estimation if coordinates are available. If not available, then it uses the default values.
Calculate airline distance based travel at key level	If this checkbox is selected, travel key parameters are used to calculate the airline distance based travel estimation. The application acts as before if this checkbox is deselected.
Adjust travels estimated by map service	Adjusts the travel time provided by the map service provider to include extra time for other activities such as parking, check in, and departure time. This means, the application applies a learned adjustment to all map-based travel times including SLR, real-time traffic, and point-to-point travel. The learned adjustment is calculated based on the average historical difference in durations reported by mobile workers. You must also configure the minimum and maximum values for this adjustment.
Min and max adjustment to travels estimates	Decides the final corrected duration range after adjusting the duration received from SLR. This field is displayed when you select the Adjust travels estimated by map service checkbox.
Delivery Window Parameters	
Delivery window factor	Decides how much deviation should affect the calculation of future delivery windows based on their ETAs.
Delivery window granularity	This defines the number of minutes to which delivery window values will be rounded.
Delivery window minimal size	When delivery window is calculated, this is the smallest value (in minutes) that will be provided.
Delivery window maximal size	When delivery window is calculated, this is the largest value (in minutes) that will be provided.
Delivery window start time	Prevents the delivery window from starting outside the service window agreed to earlier. When the option is enabled, the statistically calculated delivery window can't start earlier than the specified number of minutes before the service window or SLA window start.
Stats Fields	

Field	Description
Activity duration stats fields Activity travel stats fields Resource travel stats fields	This group represents the formation of the keys (made up of fields) used for the grouping of work duration and travel duration values to find the averages. The user-defined activity keys make it possible to sort the collected statistical data according to various activity characteristics, such as work order type, activity properties, activity postcode, etc.

Note: You can specify durations for specific activities and mobile workers through APIs. For more information, see the REST API for Oracle Field Service guide.

Related Topics
- How is activity duration calculated?

What's a custom property?

A custom property is an attribute of an entity that's unique to each client. You can create a custom property through the user interface or through an API, or you can import it from another environment. Once added, the custom property is available for use in page configurations, filters, and many configuration areas (for example, search fields, duration field, and so on).

You can create these types of properties:

- String: These are custom properties that require alphanumeric entries. These can include free text boxes, URLs, phone numbers, or email addresses.

- Integer: These are custom properties that require numeric entries. This option can also be used for check boxes.

- Enumeration: These are custom properties that require selections from fixed lists. Option buttons and combo (drop-down lists) boxes are common examples of this property type.

- File: These are custom properties that require some type of file upload. These could include MIME types such as .gif, .jpg, .pdf, .mpeg, .zip, html, .wav, or .doc. Examples of File properties could be customer signatures or even mobile worker photos.

  Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

- Attachments: The **Attachments** form element is available in configuration of forms and user types. The element allows to configure corresponding properties for a form or a standard screen. Unlike other form elements, the **Attachments** form element doesn't work without a property thus it's required to select a property when dropping the element on the screen.

  The system will show validation errors for empty 'Attachment' elements when clicking while publishing configuration changes or moving to the form's preview screen.

Each entity (for example, activity, resource, inventory, and users) contains a set of associated attributes. For example, resource records might contain attributes such as name, contact information, and physical attributes such as gender or a photograph. These attributes within Oracle Fusion Field Service are combinations of fields or custom properties.

Properties with the Type "Field" are the native system properties that are available for the specified entities. For example, Name (property label, cname) is associated with an Activity, and Serial Number (property label, invsn) is associated with Inventory. Field type of properties can be mapped with similar client properties.

> **Note:**
> - Multiple fields or properties with the same name can exist. For example, Name can be a customer's name (property label, cname) or a resource's name (property label, pname). In this example, each Name property is assigned to a different entity and has a different property label.
>
> - When custom property values exceed 255 bytes, the entire value is shown in the activity details, API responses, and Outbound Messages. However, only the first 255 bytes are used for search, visibility conditions, activity inventory list columns and their sorting, travel, activity duration, visit, and Work Zone Keys. If you create a condition with long values, only the first 255 bytes are used with historic data; all the long values that are added after you create the new condition will use the full set of data. Further, if a field with a long value is added to a page such as **List view**, only the first 255 characters are shown.

How do I configure the Where Is My Technician theme?

Before you start

> **Note: Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Configure Where is My Technician*. We recommend that you update your bookmarks accordingly.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

You must configure a theme after you create it. You configure a theme to select a template, specify your branding details, select the tracking details, and decide whether you want to let customers provide feedback for the mobile worker and the service.

Before you add the **Feedback** page, ensure that you've created the custom properties to store the feedback comments and rating. You can create the custom properties on the **Configuration** > **Properties** page.

Here's what to do

1. Click **Configuration** > **Themes**.
2. In the **Where is My Technician** section, click **Edit** on the Actions icon for the Where is My Technician theme of your choice.

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3. To add branding to the theme, click **Branding** and complete these fields:

Field Name	Action or Description
Theme description	Enter a description for the theme that helps you identify its purpose.
Template	Select the template that you want to use from Bright, Hero, and Minimal templates. Notice that the Scheduled, Days before, On the way, Arrived, and Feedback pages refresh with each detail that you add to the theme.
Main color	Click the hexadecimal number and select a color of your choice. Depending on the template you select, the Main color applies to the elements on the page and some text that must be highlighted. Some text is inverted based on the background color and the placement of the text. If the background is dark then the text can be white, if the background is light colored, then the text is black.
Background color	Click the hexadecimal number and select a color of your choice. This is the background color of the page. Your customers may access this page from their mobile phones and the screen width is limited, so choose the colors carefully. If you've selected the Hero template, then the **Background picture** field becomes available and you can upload a custom picture.
Company logo	Click **Browse** and select a file with the extension JPEG, PNG, GIF, TIFF, or SVG. You can select a file of maximum size 100 KB. This logo is displayed at the top of the page.
Company favicon	Click **Browse** and select a file with the extension ICO or PNG. You can select a file of maximum size 30 KB. This is the small icon is displayed on the web page header. It is typically a smaller image of your organization or product logo. You can configure the browser tab name in the **Company** field on the **Localization** tab. It will be shown next to the favicon.
Custom domain name	Enter the domain name that you want to use in the Where is My Technician URL. For example, https://wmt.example.com/k694jg. Here, k694g is the unique token. **Note:** If the Custom domain name field is empty, then the Where is My Technician URL can't be opened in an iFrame.

4. To add a banner to the Where is My Technician page, click **Banner**.

   For more information, see the *Add a Banner to the Where is My Technician Pages* topic.

5. To specify attributes such as arrival time and mobile worker's photo, click **Attributes** and complete these fields:

Field Name	Action or Description
Arrival time	Select one of these values to define the mobile worker's time of arrival: o Do not display: Select this option to hide the arrival time on the Where is My Technician page.

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Field Name	Action or Description
	o Communicated Window, Delivery window, Service window: Select this option to let the application choose the available value according to the activity status, value availability, and their priority: - Communicated Window: o Delivery Window o ETA o Service Window o Value returned through an outbound response message - Delivery Window - Service Window You can configure the arrival time further using the {ARRIVAL_TIME_RANGE} place holder. For more information on the {ARRIVAL_TIME_RANGE} place holder on the Localication tab, see the Available Placeholders on the Localization Tab topic. o Communicated Window: Select this option to display the time you've informed your customer that the mobile worker would arrive. The application doesn't update this value automatically. The options are: - Delivery Window - ETA - Service Window - Value returned through an outbound response message o Delivery window o Service window o ETA You can configure the 'ARRIVAL_TIME_RANGE' placeholder to configure the value that you want to use for Communicated Window. If the Delivery Window, Service window, or ETA is empty, then the arrival time isn't shown on the page.
Type of service	Select one of these values: o Do not display: Select this option to hide the type of service that the mobile worker is going to perform. o Activity type: Select this option to display the activity type as the type of service.
Customer address	Select one of these values: o Do not display: Select this option to hide the customer's address. o Customer address: Select this option to display the customer's address on the Where is My Technician page. This field includes the Address, City, ZIP/Postal Code, and State fields. If any of these values is empty, then it isn't shown on the page.
Mobile Worker name	Select whether you want to display the mobile worker's name or the credence. You can choose any custom resource property that has the GUI set as Text element. Note: The Where is My Technician functionality isn't available for Contingent Workers.
Show mobile worker photo	Select the check box to display the mobile worker's photo. If you don't select the check box, no photo is shown. Be aware that the photo available in the **Avatar** field of the **Resource Info** page is used as the mobile worker's photo.

6. To add the map details, click **Map** and complete these fields:

Field Name	Action or Description
Customer position	Select one of these values: ○ Do not display: Select this option to hide the customer's coordinates on the map. When you select this option, the mobile worker's position is also hidden. Use the **Customer address** field on **Attribute** tab to hide the customer's address on the page. ○ Exact: Select this option to display the exact position of the customer on the map. ○ Approximate: Select this option to display a bubble around the customer's location on the map.
Customer icon	Select an icon from the drop-down list or, click **Browse** and select a custom icon. This icon indicates the location of the activity. If you select an icon from the drop-down list, its color changes according to the color you've selected in the **Branding** tab. If you select a custom icon, you can also select the position of the icon on the map.
Mobile Worker position	Select one of these values: ○ Do not display: Select this option to hide the mobile worker's coordinates on the map. ○ Show with driving track: Select this option to display the mobile worker's driving track, while showing the exact position of the customer on the map. ○ Show without driving track: Select this option to display the mobile worker icon without the driving track, when you've selected the customer position as 'Exact' or 'Approximate'. When you've selected the customer's position as Approximate, the mobile worker icon is available till the mobile worker hits the bubble on the map. After that the mobile worker icon is hidden. If Google sends the navigation details and the mobile worker has shared their location, Oracle Field Service uses that data. If the mobile worker hasn't shared their location, or if Google hasn't sent the navigation details, Oracle Field Service uses the ETA (Start Time - Current-Time) to derive the estimated duration. The behavior is further clarified here: ○ Shows the ETA (expected time of arrival) from Oracle Field Service (StartTime - Current time), if Google hasn't yet sent the navigation details and ETA. In this case, only the customer icon shows on the map and ETA from Oracle Field Service. ○ Shows Google ETA as soon as it's available, then the route is available on the map, with the ETA from Google. In this case, the mobile worker icon with route displays on map and ETA updates to Google's ETA. ○ If the mobile worker becomes offline, the last position is remembered and shown. In this case, the user who opens the link sees the ETA to the mobile worker's last position and as soon as the mobile worker becomes online, the ETA is updated. This means that the ETA may be about 4 hours and may suddenly become about 20 minutes, because the mobile worker's actual position is updated.
Do not show position	Enter the number of minutes for which you want to hide the mobile worker's position after they complete the previous appointment or after they activate the route. The activity status of the previous activity can be Complete, Note done, Canceled, Suspended, or the activity is reordered. As soon as the set time is over, the mobile worker icon is shown on the map. This helps you hide the coordinates of the previous customer or the mobile worker's home location. This field is set to 0 (zero) by default, which means, the mobile worker's position is shown immediately after the mobile worker completes the previous appointment.
Mobile Worker icon	Select an icon from the drop-down list or, click **Browse** and select a custom icon. This icon indicates the mobile worker's location. If you select an icon from the drop-down list, its color changes according to the color you've selected in the **Branding** tab. If you select a custom icon, you can also select the position of the icon on the map. You can use real car icons and show the car changing direction according to the route. Be aware that the anchor for these icons is in the center. If a mobile worker doesn't share the location, or is offline for a long time, then only the customer's location is displayed on the map. If neither the mobile worker's location nor the customer's location is available, only a blue map is displayed.

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7. To change the text that's displayed on the Where is My Technician page, click **Localization** and complete these steps:

   a. Click **Locale** and select the locale based on which you want to display the date and time. For more information on the languages and locales supported, see Default Translations and Date-Time Format.

   b. In each field, enter the text that you want to display, based on your business requirements. These values are always displayed in English.

   c. Click the question mark icon to view the description and default text of the field.

   d. Place the cursor at the required position, click the question mark, and then click **Available placeholders**. The data field is inserted at the selected location. Let's say you want to change '{TECHNICIAN_NAME} is your mobile worker.' to 'Your mobile worker is '{TECHNICIAN_NAME}'. Delete the existing text and add 'Your mobile worker is'. Place the cursor after 'is'. Click the question mark icon and then click '{TECHNICIAN_NAME}' under **Available placeholders**.

   e. Optionally, clear the custom text to view the default text.

8. To add the **Feedback** page, click **Feedback** and complete these fields:

Field Name	Action or Description
Enable feedback	Select this check box to let your customers send feedback. Your customers can see the **Feedback** page even after the appointment is completed. You can configure the duration for which the page is available using the **Allow offline sync and update activities after overnight within the following amount of hours** setting on the **Business Rules** page. The duration within which your customers can save the feedback is calculated as the sum of the values of the **Overnight work** and **Allow offline sync and update activities after overnight within the following amount of hours** settings on the **Business Rules** page and your organization's time zone difference. If the **Allow offline sync and update activities after overnight within the following amount of hours** setting isn't enabled, or the time range that's specified on the **Business Rules** page is over, then the **Feedback** page isn't displayed.
Feedback mode	Select how you want to receive the feedback. You can choose from Comment and Rating, Comment, and Rating.
Property for saving comments	Select the property that you want to use to store the comments. Use only string type of custom activity properties for comments.
Property for saving rating	Select the property that you want to use to store the ratings. Use only integer type custom activity properties that have the GUI as Text for ratings.
Localization	Change the text that you want to display on the **Feedback** page. For more information on this, see Step 6.

9. To provide more options to your customers on the Where is My Technician page, click **Interaction** and complete these fields:

Field Name	Action or Description
Enable Cancel	Select this check box to let your customers cancel the activity. Then, add the text for the confirmation page. **Cancel** is available for an activity that's in Pending status. **Cancel** is hidden as soon as the activity status changes to Started. For more information about how to use the feature for specific activity types, see the *Enable the Cancel Feature for Specific Activity Types* topic.
Enable chatbot	Select this check box to let your customers chat with a chatbot. Ensure that you've a license for Oracle Digital Assistant. Verify that your administrator has created a web channel and configured the chatbot flow in Oracle Digital Assistant. Get the values of Channel URI and Channel ID from Oracle Digital Assistant.

10. Click **Save**.

Your settings are saved and the Where is My Technician theme is created.

Related Topics
- Available Placeholders on the Localization tab

How do I add a banner to the Where is My Technician pages?

> **Note: Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Configure Where is My Technician*. We recommend that you update your bookmarks accordingly.

The Add a Banner feature in Where is My Technician (WMT) pages allows administrators to insert visual banners that can display targeted messages to customers during their tracking experience. These banners can be informational, promotional, or interactive, and can link to external web pages for further engagement.

Business Benefits

- Enhanced Customer Engagement – Display timely and relevant messages to customers while they track their technician.

- Cross-Promotion – Showcase related services, upgrades, or seasonal offers to a captive audience.

- Real-Time Updates – Quickly inform customers about operational updates such as, delays, safety measures.

- Improved User Experience – Add a visual touchpoint that personalizes the tracking page.

- Increased Conversions - Use clickable banners to drive traffic to targeted landing page.

Use Cases

- Communicate Service Updates or Delays
    - Scenario: A technician is running late due to traffic or scheduling issues.
    - Banner Impact: Display a real-time message like "Your technician is delayed by 15 minutes."
    - Benefit: Reduces customer anxiety and inbound calls, keeping them informed proactively.

- Highlight Special Instructions
    - Scenario: Customers need to prepare something before the technician arrives (for example, clear access to equipment).
    - Banner Impact: Use a banner with the instruction: "Please ensure the garage door is unlocked for access."
    - Benefit: Improves first-visit success rate and reduces technician delays.

- Promote Branding and Campaigns
    - Scenario: Companies want to reinforce their brand or highlight promotions during service updates.
    - Banner Impact: Include company colors, logos, or brief promotional messages.

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- o Benefit: Strengthens brand identity and provides subtle marketing opportunities.

- Notify About Service Policies or Alerts
    - o Scenario: Customers need reminders about safety guidelines, COVID precautions, or warranty details.
    - o Banner Impact: A prominent banner displays the alert directly on the WMT page.
    - o Benefit: Ensures critical information is seen and understood without relying on email or calls.

- Guide Customer Actions
    - o Scenario: Customers can take certain actions like rescheduling, confirming arrival, or giving feedback.
    - o Banner Impact: Highlight actions with messages like "Tap here to confirm your appointment."
    - o Benefit: Improves interaction rates and ensures the process is smoother for both the customer and the technician.

- Reinforce Positive Customer Experience
    - o Scenario: After service completion, companies want to thank the customer.
    - o Banner Impact: Display a thank-you message or quick survey link.
    - o Benefit: Leaves a positive impression and encourages feedback or repeat business.

To add a banner to the Where is My Technician page:

1. Go to **Configuration** > **Themes**.
2. Open an existing Where is My Technician theme or click **Add WMT theme**.
3. Click **Banners** > **Add Banner**.
4. Complete these fields:
    - o **Position**: Select the position of the banner, which will be applied across all banners.
    - o **Banner**: Browse and select or drag a file that you want to display as the banner. You can select only a .png, .jpeg, .gif, or .svg file and the maximum file size is 150 KB. The recommended banner height is 48px and width is 768px. Based on the size of the mobile device the banner might be trimmed down to 320px. Consider using a scaled-up version for high-DPI (Retina) screens.
    - o **Banner hint**: Enter a description for the image. This is displayed when the user hovers mouse over it or read when the user uses accessibility readers.
    - o **Screens**: Select the Where is My Technician pages on which you want to display the banner. You can display the same banner on multiple pages. If you don't select any page, the banner isn't displayed.
    - o **Web page**: Type the URL of the web page to be opened when the user clicks the banner. Leave it empty if you don't want the banner to be clicked.
5. To add another banner, click **Add Banner**.

   You can add a maximum of five banners per Where is My Technician theme.
6. Use the **Preview** section at the top of the configuration page to verify the appearance of the banners. Click a page to enlarge and scroll through the configured banners.
7. Click **Save**.

   The banners are saved. If you add multiple banners to the same page, they rotate dynamically every five seconds. Users accessing the Where is My Technician URL on mobile devices can swipe through the banner. On desktop devices, users can change the banners by clicking the arrow buttons, which become visible when the user hovers over the banner area.

What placeholders are available on the Localization tab?

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This table gives the placeholders that you can add to the text on the **Localization** tab of the Where is My Technician theme.

Placeholder	When You Can Use	Values
{TECHNICIAN_NAME}	Available in all activity statuses except "notAssigned". Can be used for translations: • First line of status text shown when the activity is already assigned to a mobile worker Default value: Will arrive between • Second line of status text shown when the activity is already assigned to a mobile worker Default value: {ARRIVAL_TIME_RANGE} • First line of status text shown when the mobile worker is on the way Default value: Arriving in about • Second line of status text shown when the mobile worker is on the way Default value: {ETA} • Mobile worker info text when the appointment is assigned Default value: {TECHNICIAN_NAME} is your mobile worker • Mobile worker info text when the mobile worker is on the way Default value: {TECHNICIAN_NAME} is on the way • Mobile worker info text when the mobile worker has arrived Default value: {TECHNICIAN_NAME} has arrived • Feedback form ratio field title Default value: How was {TECHNICIAN_NAME}'s service?	Holm, Billy Mr. Billy Billy
{ETA}	Available for "onTheWay" activity status. ETA is calculated based on Google data. If Google data is not available, then Oracle Fusion Field Service ETA is used. Can be used for translations: • First line of status text shown when the mobile worker is on the way Default value: Arriving in about • Second line of status text shown when the mobile worker is on the way Default value: {ETA} To use the {ETA} placeholder, you must ensure that the resource and your customer are in the same time zone.	2 hours 42 minutes less than 1 minute The ETA is always displayed in English.

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Placeholder	When You Can Use	Values
{ARRIVAL_TIME_RANGE}	This place holder is applicable only if you select the 'Time notified, Delivery window, Service window' option for **Arrival time** on the **Attributes** tab. Available for "notAssigned" and "assigned" activity statuses and when delivery window or service window are not empty. Can be used for translations: • For "notAssigned" activities the arrival window is used according to the availability of these values and their priority: a. Time Notified: i. Service window ii. Value returned using Outbound response message b. Service Window Default value of the first line of the status text shown when the activity is ordered and isn't assigned to a mobile worker yet: A mobile worker will arrive between. Default value of the second line of the status text shown when the activity is ordered and isn't assigned to a mobile worker yet: {ARRIVAL_TIME_RANGE} • For the activities assigned to a mobile worker, the arrival window is used according to the availability of these values and their priority: a. Time Notified: i. Delivery Window ii. ETA iii. Service Window iv. Value returned using Outbound response message b. Delivery Window c. Service Window Default value of the first line of the status text shown when the activity is already assigned to a mobile worker: Will arrive between Default value of the second line of the status text shown when the activity is already assigned to a mobile worker Default value: {ARRIVAL_TIME_RANGE}	8:15 AM – 8:45 AM

How do I use 'Communicated Window'?

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> **Note: Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Configure Where is My Technician*. We recommend that you update your bookmarks accordingly.

You can show **Communicated Window** on the {ARRIVAL TIME RANGE} placeholder. You can set the value for **Communicated Window** through a Message Step with the Outbound API using 'send_message'. If you set the value, it will be used on the Where's My Technician page, instead of the Delivery Window or Service window. If **Communicated Window** isn't populated, then Delivery Window or Service window is shown. You can choose to use ETA, Delivery Window, or Service Window as **Communicated Window**. For example, you can save the ETA, which you communicated to your customer the Where is My Technician page shows this time, even if the mobile worker adjusts the previous activity. This way, the feature also prevents the application from updating the agreed time automatically.

Advantages:

- Customer Confidence: Displays the exact arrival window promised to the customer, reinforcing trust.
- Brand Control: Prevents the system from automatically overriding a communicated time, maintaining alignment with your service commitments.
- Flexibility: Lets you choose whether the Communicated Window is based on ETA, Delivery Window, or Service Window.
- Operational Consistency: Ensures that changes to technician assignments or activity movements don't unintentionally update customer-facing times.

Use Cases:

- A customer service representative shares an ETA with a customer during a support call. By saving that ETA as the Communicated Window, WMT will display the same promised time—even if the technician reschedules.
- A business wants to show a custom arrival range communicated via outbound messaging rather than the system's calculated Service Window.
- Preventing automatic updates to displayed arrival times in cases where business processes prioritize consistency over real-time changes.

Here's how can use the Communicated Window:

1. Go to **Configuration** > **Message Scenarios**.
2. Open the message scenario that you've configured for Where is My Technician.

   If not configured, set the Recipient to **Customer** in the **Settings** Tab.
3. Select the **Customer notification time** field and select the value that you want to display for Communicated Window.

   You can select either Service window, Delivery Window, or ETA. You can set a custom window using the Outbound API 'send_message'. For using 'send_message', see the Outbound API documentation.
4. Open the Where is My Technician theme and go to the **Localization** tab. Click the **{ARRIVAL TIME RANGE}** placeholder.

   {ARRIVAL TIME RANGE} is available only for "Not Assigned" and "assigned" activity statuses. The value you've selected for **Customer notification time** in the message scenario is shown on the Where is My Technician page.

If you've configured the **Communicated Window** field to receive the value from an outbound API response using 'send_message', it's displayed.

The {ARRIVAL TIME RANGE} shows the arrival window according to availability of these values and their priority:

> **Note:** If 'Communicated Window' is set with a custom window, this value isn't removed or changed if the activity is moved to another resource or bucket. You must consider this behavior in your design and make any necessary updates to the window according to your business process.

Page	Activity on the Bucket (Not Assigned)	Activity Assigned to a Mobile Worker (Assigned)
Days before screen	a. Communicated Window: - Service window - Value returned via Outbound response message b. Service Window	a. Communicated Window - Delivery window - ETA - Service window - Value returned via Outbound response message b. Delivery Window c. Service window

> **Note:** The Communicated Window functionality is designed for customer-facing activities to record the time that was communicated to the customer. For single-day internal activities, the Communicated Window fields work as expected and you can pin them to specific times. However, the Communicated Window fields aren't intended to be used for repeating internal activities such as trainings, lunches, or warehouse tasks. These activities are treated as phantom activities in future routes until at least one customer-facing or internal activity is assigned to the resource's queue for that date. As a result, their pinned time will not be held.

How do I hide activities and activity fields for specific user types?

You can hide activities and activity fields from users. For example, you can stop contingency workers from viewing their activities starting tomorrow, or you can hide the customer rating field from mobile workers.

1. Click **Configuration** > **User Types**.
2. Select the user types for which you want to hide activities or activity fields.
3. Go to the **Restrictions and Filters** tab.
4. To hide the activities, select **Hide all activities**. Click the drop-down list and select either 'starting tomorrow' or 'starting day after tomorrow'.

5. To hide specific activity fields, select **Hide activity fields**. Click the drop-down list and select either 'starting tomorrow' or 'starting day after tomorrow'.

    a. To configure the fields that you want to hide, click the **activity fields** link.

    b. On the **Field restrictions** context layout structure, click **Click to add** and select the properties and buttons that you want to hide.

    c. To add the visibility, click the property or button, click **Add new visibility**. Select **Hidden** and then add any conditions based on which you want the property or button to be hidden.

    d. Click **Save**.

6. To filter the visible activities on the current route, click the pencil icon in the **Filter restricting visible activities** section. Select the filters to apply and click **Select**.

    The filters must be created on the **Configuration** > **Filters** page.

7. On the **Restrictions and Filters** page click **Save**.

How do I view the hierarchy or map of application pages?

You can view the hierarchy or the map of the application pages on the **Screen configuration** page.

To view the **Screens** tab, click **Configuration** > **User Types**. Screen configuration settings define the page, dialog boxes, context menus, and other elements visible to a certain user type. You must have the **Access to Web application** option selected for your user type, for you to see the **Screens** tab.

You can use these sections on the **Screens** tab to define the content, arrangement, and visibilities of each context (or page):

- **Application screens**: Use this section to change the contexts or pages used in Core Application.

- **Collaboration and Identifiers**: Use this section to change the contexts or pages used in Oracle Fusion Field Service Collaboration Service and to define the entity identifiers.

How's the Screen configuration page organized?

The settings are organized hierarchically and show the relationship between different contexts. All context names are links to the context layout editor pages. Links to new (not edited) or empty contexts and the links to edited contexts are shown in different colors. If you remove all the elements from a context, its link color changes from blue to red to indicate that the context is now empty. If you create a user type without copying the settings of another user type, all contexts are shown in red.

The hierarchy of contexts starts from the **Main menu items** context that defines the navigation menu items being available or unavailable for the current user type. Each navigation menu element opens a certain page and, therefore, provides access to its functionality. If a certain page has been made available for a user type, all users of such type have access to the entire functionality implemented on that page. Similarly, if a page has been made unavailable for a user type, all users of such type don't have access to the functionality implemented on that page.

Context Layout Structure and Visual Form Editor

The links to contexts are connected with arrows showing the relation between the contexts. Hovering the mouse over an arrow highlights it in red for better visibility. Click a link to open the **Context layout structure** page and define the fields and actions of the context, and their visibilities for the user type. You can copy a context layout to another user

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type if the other user type uses the same or slightly modified layout of the same page. For this purpose, the **Context layout structure** page has the **Copy to** button, which opens the list of all user types in the application.

For the **form** type contexts, the link leads to the **Visual Form Editor** page, where you can edit context layouts in an easier and more transparent manner. You can delete the default Read/Write visibility on the sections and tabs in the Visual Form Editor. Also, Read/Write visibility isn't added after migration. When the visibility condition for a property is required and the property value is cleared, the value is set to null and the visibility is selected.

Copying and sharing

If you've shared the configuration for the current user type with one or more other user types, such user types are preselected in the **Copy to** list. If the user type selected in the list shares its configuration with other user types, such user types are automatically selected as well. The current context layout is applied to the selected user types and it replaces the previous context layout settings, if any.

When a context layout is copied for another user type, only the current context is copied, while the rest of the configuration remains unchanged. When a context layout is copied, two separate identical context layouts are created. You can edit each layout independently without affecting the other one. However, if the destination configuration is shared with other user types, the current context layout is copied to all user types sharing the same configuration.

Example of changing the visibility

You can change the visibility of the **Message Scenarios** menu item to **Read-write** to let the user view and edit all elements of a message scenario. With the **Read-only** visibility, they can only view them.

> **Note:** Text formatting such as modifying the text size, bold/non-bold, italic, or coloring or properties isn't supported.

How do I configure Collaboration chat properties?

You can use the **Collaboration** section on the **Screens** tab to define the information that your users can see on the Collaboration chat messages.

1. Click **Configuration** > **User Types.**
2. Select the user type for which you want to define the chat properties.
3. Open the **Screens** tab.
4. To define the activity details that users can see on the Collaboration chat, click **Activity Details in Chat**.
   a. Click **Click to add**.
   b. Select the required properties and click **OK**.
   c. Click **Add new visibility** on the **Context layout structure** page.
   d. Click **Add new condition** and add the conditions based which you want the activity details to be displayed.
   e. Click **Save**.
5. To define the inventory details that users can see on the Collaboration chat, click **Inventory Details in Chat**. Follow the steps 4 a to 4 e.
6. To define the resource details that users can see on the Collaboration chat, click **Resource Details in Chat**. Follow the steps 4 a to 4 e.

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How do I configure Collaboration chat notifications?

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You can get notifications about the new message arrivals, group conversations and conference chat invitations, based on your notification settings. Unread chat messages are displayed with a colored dot in the left pane of the **Notifications** tab.

Notifications provide you information about a new message arrival. You can set up the chat notifications such as sound, vibration, and pop-up notifications from the **Edit Resource/User** Visual Form Editor:

- **Sound:** There are four sound options available— Off, Quiet, Loud, Persistent (repeating sound notifications of an incoming message.) The persistent notification option works only in the Mobility application. By default, the sound notification is set to **Quiet**. The notification sounds when:
    - A user is invited to a conversation or conference
    - A new message is received in an inactive conversation window
    - An activity is reassigned or the inventory transfer is requested
    - The transferred inventory is failed/cancelled/rejected
    - The Helpdesk receives a new request
- **Vibration:** Setup vibration mode for the devices that support vibration alerts.
- **Pop-up Notifications:** Select this option if you want to receive notifications as messages.

How do I locate nearby resources?

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You can use Collaboration to quickly locate resources near you or near another selected resource. This is useful when you need to reach out to nearby team members for assistance, coverage, or coordination.

If your administrator has enabled the "Allow initiation of chat with all visible resources" option for your user type, you can not only see nearby resources but also start chats with them directly even if they are not part of a Collaboration Group or Favorite.

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> **Note:**
>   - A dash (–) in the selection box indicates that some, but not all, nearby users in that bucket or org unit are selected.
>   - Only the chat initiator can add nearby users to an ongoing group conversation. Other participants can add members only from their Collaboration Groups.

This capability makes it easier for dispatchers and supervisors to communicate instantly with mobile workers in the area without creating new Collaboration Groups.

1.

Open the **Collaboration** window and click the new conversation icon   📝 .

2. Click **Who's Nearby**.

The **Nearby** window opens with:

   - A list of users whose latest geo location uploaded to the application is close to yours is displayed under **Based On Your Physical Location** sub-header.
   - The users are arranged according to their distance from your location. Distance is displayed on the right side of the contact name. Users who are within 1000 KM (or Miles, as defined for **Distance measurement units** on the **Business Rules** page) range from your current location are considered.
   - Initially, ten closest users are displayed. You can click **show more** to view more users. Be aware that you can see only those users to whom the you have the permission to chat. This screenshot shows the Nearby section:
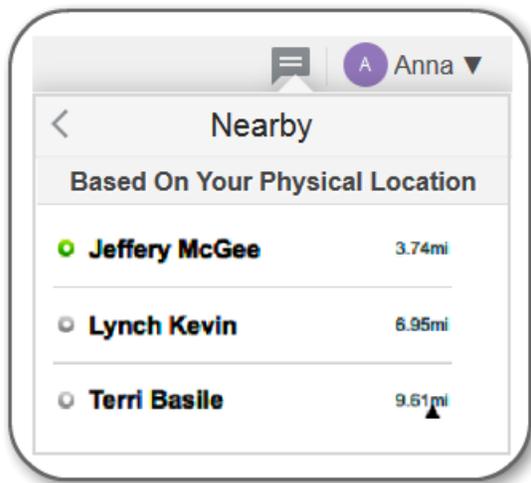
3. Click the appropriate user's name from the list to start the chat.

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How do I capture geolocations in iOS and Android apps?

These are the rules based on which the geolocation is captured in iOS and Android apps.

- Geolocation is captured only if the route is active.
- The application can capture the coordinates only if the mobile worker provides the required location permissions to the app. If the app has only been given permissions to capture the location when the app is being used, locations will not be captured if the app is in the background.
- Generally, the location is captured more frequently when a mobile worker travels and less frequently when the application identifies that the techician is not travelling.
- The application tries to send at least one coordinate per minute. If the accuracy of the coordinates is low, the application captures the most accurate coordinate within that minute.
- If the mobile worker is travelling, and the accuracy of coordinates is good, the application may capture the coordinates as frequently as every 10 seconds. Fewer coordinates are captured per minute as the movement reduces.
- When the mobile worker is not travelling, the application captures one location per minute.
- On the Android app, the logic of capturing coordinates is similar regardless of whether the app is in the background or the foreground.
- On the iOS app, if the app is in the background and the application identifies that the mobile worker is not moving significantly, no coordinates are captured or sent until the mobile worker starts moving or the app is brought to the foreground.
- If the mobile worker is offline, the points are sent in bulk only when the mobile worker comes back online. If the app is closed in between, the points are sent only when the app is launched again.

How do I add a shift to a work schedule?

After you've created a work schedule, you can add the shifts and non-working times that will be included in the overall period of time.

1. Click **Configuration**.
2. In the **General** section, click **Calendars**.

   The **Work Schedules** page appears.
3. In the **Action** column, click the **Items** icon to the right of the work schedule for which you want to add a shift.

   The **Work Schedule Item** page appears.
4. Click the **Add New**.

   The **Add Work Schedule Item** page appears.
5. Click **Shift** and select a shift.

   This list includes:

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- o   Shifts that aren't related to any Organization (empty Organization field).

- o   Shifts within the same Organization that are configured for the schedule.

- o   Shifts that are currently configured for the selected schedule, even if the Organization in the schedule and shift differ.

- o   All active shifts, if no Organization is configured for the schedule.

6. In the **General** section, click the **Shift** drop-down list and select a shift.

7. Select a **Start Date** and **End Date**.

   The start and end dates define the period for which this shift is associated with the work schedule. Leaving the **End Date** field empty implies that the shift is part of the work schedule indefinitely.

8. Add any comments for clarification or detail.

9. Select one of these options in the **Recurrence** drop-down list:

   - o   Daily – Allows for inclusion of the shift such as every other day or every third day. This option requires a value in the field labeled every _____ day(s).

   - o   Everyday – The shift applies to everyday without exception.

   - o   Weekly – Allows for shifts that are used on a regular weekly pattern. Select the days that apply to this shift using the check boxes for the individual days. Indicate the frequency of this pattern weekly by adding a value to the every _____ weeks(s) field.

   - o   Yearly – Select a date range for the shift that will recur every year.

10. Click **Add**.

    The shift is added to the work schedule.

11. Repeat the steps for each shift that you want to apply to this work schedule.

    Be aware that if you add two shifts that have the same priority to a weekday, only the shift that was created most recently is assigned.

How do I configure my display preferences?

You can change some display options to suit how you work and how you prefer to view information.

Depending on your company's configuration and your user type, display options might differ.

1. Click the menu icon and then click **Preferences**.

   The **Preferences** page displays.

2. Complete these fields:

   - o   **Language**: The language you want to use.

   - o   **Time format**: Either 12- or 24-hour mode. This affects an activity's start and end times.

   - o   **Date format**: The date format you want to use.

   - o   **Mobile Activity Count**: The number of activities that's displayed on the landing page and in the activities list. The number of activities displayed on the landing page includes the activities in Started and Pending statuses. The default number is 5. If there are more activities than the configured number, **View more** is displayed. Filters restricting the visibility of activities may reduce the maximum number of activities displayed on the landing page and the activity list. If you don't see this field (which means if the field isn't added to the **Preferences** page by your administrator), the number of activities you see on the landing page is based on the number defined for the **Number of activities per page** field on the **Configuration >**

Display page. Further, if you set the value for this field and then the field is removed from the page, Oracle Fusion Field Service still uses the value you'd set before the field was removed.

- o **Mobile Inventory Count**: The number of inventory items you want to see on each page.

- o **Design Theme**: The way you want your mobile application to look. You've two options:

  - Classic theme: The classic style theme displays tabs with text.
  - Vanilla theme: The Vanilla theme displays icons in the header region for the most frequently accessed screens. It has a menu to the left of the screen, which provides access to the remaining screens.

- o **Photo**: Your photo.

3. Click **Submit**.

The amount of information will not change, only the way in which it displays on your screen changes.

Why do I see the 'Replace OFS Metadata' warning?

If you use at least one Login Policy with SAML authentication, you might see a warning to replace the OFS metadata. This warning appears if the current certificate, which is used by your identity provider, is about to expire or has expired.

When you see this warning, you must replace the metadata before the date specified in the message. For more information about how to download the metadata and apply it to your identity provider, see the knowledge article **Certificate Renewal for SAML Login Policy (Doc ID 2973643.1)** on My Oracle Support.

How do I search for activities using ad hoc filter?

The Ad Hoc Filter lets you search for activities on the Dispatch Console based on criteria of your choice, rather than relying on pre-configured filters. This option is accessible from the **View** menu in the **Dispatch Console** and is private to you, meaning it can't be shared with others.

1. Select **Dispatch Console** from navigation menu.
2. Click **View**.
3. Select **Ad hoc Filter** from the **Filters** drop-down list.

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4. Select a field to use as search criteria from the **Select field** drop-down list.

   ○ Only fields configured for the List View are displayed.

   ○ If no value is provided for a field, it will not be included in the search criteria.

   ○ You can add up to 10 fields as search criteria.

   ○ The following fields aren't available for filtering:
      - Position in the route
      - Duration
      - Activity ID
      - Traveling Time
      - Points
      - Time Notified
      - Service Window
      - Start
      - End
      - Delivery Window
      - SLA Start
      - SLA End
      - Activity Time of Booking
      - Activity Time of Assignment

   ○ For string fields, you can provide multiple values separated by commas.

   ○ For enumeration fields, you can select multiple values using checkboxes.

   ○ If multiple values are provided, the filter uses an "OR" condition to include activities that match at least one value.

   ○ If multiple fields are added, the filter uses an "AND" condition, displaying only activities that satisfy all the criteria.

   ○ Your ad hoc filter configuration is preserved between sessions. Upon reopening the Dispatch Console after logging out, the initial filter is *****. When you select the Ad Hoc Filter, the fields you configured earlier will be displayed.

5. Repeat steps 3 and 4 to add additional fields and values to the search criteria.

   To remove a field from search criteria, click the **Remove field** icon next to it.

6. Click **Apply** to display the activities matching the search criteria.

Which activity fields are available while integrating with external applications?

This section provides the activity fields that you can use while integrating Oracle Field Service with other applications.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

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Field	Label	Data Type	Required	Description
Account Number	appt.customer_number	VARCHAR2		String with name of customer account i
Activity ID	appt.aid	INTEGER	true	Unique numeric identifier of the activity
Activity Time of Assignment	appt.atime_of_assignment	DATE		Date/Time when the last move/resched
Activity Time of Booking	appt.atime_of_booking	DATE		Date/time when the activity was booked
Activity Type	appt.atype	VARCHAR2		Primary type of the activity (prework, re
Activity Work Type	appt.aworktype	VARCHAR2		Identifier of the activity type defined for
Activity Workflow	appt.activity_flow	VARCHAR2		Activity workflow assigned to the activit
Activity Work Zone	appt.aworkzone	VARCHAR2		Work zone which is defined for the activ
Activity status	appt.astatus	VARCHAR2		Status of the activity.
City	appt.ccity	VARCHAR2		City name, part of Customer address
Coordinate X	appt.acoord_x	FLOAT		X coordinate received from geocoding r
Coordinate Y	appt.acoord_y	FLOAT		Y coordinate received from geocoding r
Customer Email	appt.cemail	VARCHAR2		Email of the customer for whom the act
Customer Language	appt.clanguage	VARCHAR2		Message language of the customer for v
Customer Name	appt.cname	VARCHAR2		Name of the customer for whom the act
Customer Phone	appt.cphone	VARCHAR2		Phone number of the customer for who
Customer Time Zone	appt.c_zid	VARCHAR2		Time Zone ID of the customer for whom

Field	Label	Data Type	Required	Description
Delivery Window End	appt.delivery_window_end	DATE		End time for activity Delivery Window
Delivery Window start	appt.delivery_window_start	DATE		Start time for activity Delivery Window
Delivery address	appt.caddress	VARCHAR2		Customer address (except City, Zip/Pos
Duration	appt.length	INTEGER		Activity length in minutes. Filled when a
Estimated Time of arrival	appt.ETA	DATE		ETA date/time. Can be empty for Regula time when activity is started. For Cance was Canceled
First Manual Operation	appt.first_manual_operation	VARCHAR2		The name of the first manual reschedul
First Manual Operation (User ID)	appt.first_manual_operation_user_id	VARCHAR2		The interface the first manual reschedu
Master Activity ID	appt.amaster_aid	INTEGER		ID of main activity for prework, reassign
Mobile Phone	appt.ccell	VARCHAR2		Mobile phone number of the customer
Points	appt.apoints	INTEGER		Number of points that represent efforts
Postal Code	appt.czip	VARCHAR2		ZIP/Postal code of customer for whom t
Reminder	appt.cmessagetime	INTEGER		Number of minutes before Delivery Win
Reported End Time of Activity Delivery	appt.time_delivered_end	DATE		End date/time of activity which is delive
Reported Start Time of Activity Delivery	appt.ctime_delivered_start	DATE		Start date/time of activity which is deliv
Resource External ID	provider.external_id	VARCHAR2		External system identifier for the resou
Resource ID	provider.pid	INTEGER		ID of resource the activity is assigned to

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Field	Label	Data Type	Required	Description
Route Date	queue.date	DATE		Date of the route the activity is assigne
SLA End	appt.sla_window_end	DATE		End date and time of Service Level Agre
SLA Start	appt.sla_window_start	DATE		Start date and time of Service Level Agr
Service Window End	appt.service_window_end	VARCHAR2		End time of Service Window
Service Window Start	appt.service_window_start	VARCHAR2		Start time of Service Window
State	appt.cstate	VARCHAR2		State (Geographic area) of the custome
Teamwork ID	appt.a_teamid	VARCHAR2		ID of team for teamwork activities
Time Slot ID	appt.a_tsid	VARCHAR2		Time Slot assigned to the activity
Traveling Time	appt.travel	INTEGER		Time of travel from a previous activity/
Work Order	appt.appt_number	VARCHAR2		Identifier of the activity (string, value of
*	Activity Custom Fields			

How do I add a delivery channel?

Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

Add delivery channels for message scenarios on the **Delivery Channels** page.

1. Click **Configuration** > **Message Scenarios**. The **Message Scenarios** page appears
2. Click **Channels**.
   The **Delivery Channels** page opens and lists the existing delivery channels.
3. Click the plus sign.

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4. Type the name of the delivery channel in the **Name** field.

5. Select the required option from the **Status** drop-down list.

> **Note:** If notification scenarios contain at least one message step that uses an internal delivery channel (email or voice) then that channel is accessible in the list of channels. A user with appropriate permissions can select **Active** or **Inactive** to resume or stop the message delivery for any external or internal channel. For example, you can block a channel using the Inactive option in Test environments to disallow test messages to reach real customers. Messages that aren't delivered due to inactivated delivery channel get the status 'obsolete' with the description, EXTERNAL_NOTIFICATION_ARE_DISABLED. Note that the 'set property' messages don't have a delivery channel and can't be handled this way.

6. Type a value between 1 and 10,000 in the **Bulk Size** field to define the maximum number of messages per request. The default value is 10, which is also the recommended value.

7. Type the host details in the **Host/Port** field using the **example.com** format.

8. Type a port number in the section of the **Host/Port** field that appears after the colon.

9. Type a URL in the **URL Path** field.

10. Type a user name in the **User** field.

11. Type the user's password in the **Password** field.

12. Re-type the user's password in the **Confirm Password** field.

13. Select the **Allow basic access authentication** check box to implement HTTP basic authentication while integrating with external systems.

When you select the check box, the outbound methods (such as send_message, drop_message, get_message_status methods) send the standard HTTP header "Authorization" with base64-encoded user credentials (standard basic access authentication). Also, the <user> SOAP structure is sent in the body of the request. The client application can either use the standard HTTP header "Authorization" or the <user> SOAP structure to send user credentials in the request.

> **Note:** When the check box isn't selected, the standard HTTP header isn't used in the request and the client application can use the <user> SOAP structure for authentication. For more information, see the *Integrating with Outbound API Guide*.

14. Click the **Connection** menu and select an encryption method for the connection. The options include:
    - Not encrypted
    - Default encryption
    - SSL 3
    - TLS 1.0
    - TLS 1.1
    - TLS 1.2

15. If you selected any option except **Not encrypted**, the **Advanced settings** section opens to let you enter certificates and a client private key. Complete some or all the following fields:

- ○ x509 Trust File:
- ○ x509 CRL File
- ○ Client Certificate
- ○ Client Private Key

The format of the files in the Advanced Settings is PEM. You don't have to complete all fields. However, the **Client Certificate** and **Client Private Key** fields must both be either empty or completed.

> **Note:** To configure and use mTLS connections for sending messages from Oracle Fusion Field Service to external systems, see *How do I configure an mTLS connection?*

16. Click **Save**.

The newly created delivery channel appears.

How do I configure an mTLS connection?

You can configure the application to send the messages using mTLS connection. With mutual TLS authentication (mTLS), not only does the service side prove its identity by exposing a certificate, but also the clients prove their identity to the servers by exposing a client-side certificate.

In this reference the term "client" refers to Applications Interface, which performs an API call to a "server" (external system), which receives the message and provides the result back in the response. To use mTLS connection, perform these steps and settings:

- Generate root certificate (root ca) and private key for the certificate.
- Generate client private key and client certificate signed with root ca.
- Generate server private key and client certificate signed with root ca.

To set up a channel through Oracle Fusion Field Service, follow these steps.

1. Click Configuration, Message scenarios, Delivery Channels to open the Delivery Channels screen. Select or create the necessary delivery channel.

For more information see *How do I add a delivery channel?*.

2. Configure the connection point with the host and port of the server.

3. Set "TLS 1.2" value in the Connection menu.

4. For the x509 Trust File set content of the root ca file.

5. Set content of client certificate for Client Certificate.

6. Set content of client private key for Client Private Key

> **Note:** root ca, client certificate and client key files must be in pem format.

7. Check if your server uses mTLS connection:

- **a.** To check that server supports mtls, run the following command (in linux terminal) against the server:

```
openssl s_client -connect
SERVER_HOST:PORT -key
```

```
/path_to_client_key_dir/client.key.pem -cert
/path_to_client_cert_dir/client.cert.pem -CAfile
/path_to_rootca_cert_dir/cacert.pem -state
```

Open ssl will print information about mtls connection establishing, the output should not have any error messages.

b. To check that generated certificates are ok, run openssl server:

```
openssl s_server -accept PORT -CAfile
/path_to_rootca_dir/cacert.pem -cert
/path_to_server_cert_dir/server.cert.pem -key
/path_to_server_key_dir/server.key.pem -state
```

c. Make request from openssl client and then check logs.

How do I create a Form?

You create a Form so that Mobile Workers can fill it to capture statutory or business data required for an activity. This is a custom form that's available only for your organization.

1. Click **Configuration** > **Forms & Plugins**.
2. Click **Add Form**.

   The Add Form dialog box appears.
3. In the **General Settings** section, do the following:
   a. In the **English** field, enter a name for the form in English.
   b. Enter names in other required languages.
   c. In the **Label** field, enter a label for the form.
4. In the **Cache the Form for Organizations or User Types** section, select **Configure Offline Caching** to configure forms for offline use. For more information, see *Configure Forms for Offline Use in Plugins*.

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5. In the **Generate PDF** section, select any of the following PDF Options:

Generate PDF

The system will generate PDF files using data submitted from this form and either attach them to Fusion work orders, upload them to OCI Object storage or provide them locally on a mobile device.

This functionality is available in iOS and Android installed apps.

PDF Options
Do not Generate PDF Files ▼

Do not Generate PDF Files

Generate PDF for Printing and Sharing

Generate PDF and Upload to OCI Object Storage

Generate PDF and Upload to Fusion Attachments

    a. **Do not Generate PDF Files** : Default. Select this option if you don't want to create PDF files for this form.

    b. **Generate PDF for Printing and Sharing**: Select this option to generate PDF files and make it available on the device for printing at customer sites or sharing with clients using other applications.

        i. In PDF Options, when you select **Generate PDF for Printing and Sharing** option, the HTML Template for PDF Generation section appears.

Generate PDF

The system will generate PDF files using data submitted from this form and either attach them to Fusion work orders, upload them to OCI Object storage or provide them locally on a mobile device.

This functionality is available in iOS and Android installed apps.

PDF Options
Generate PDF for Printing and Sharing ▼

Files will be generated on demand; users can save files on devices locally if needed.

HTML Template for PDF Generation

PDF files will be generated based on the attached HTML template. The template can include branding and should define the layout and fields for the printable document.

You can keep just one template for the form at time. To attach another template you have to delete the previous one.

+ Attach HTML Template

Maximum file size is 500 KB.

        ii. Click **Attach HTML Template** to attach the template that you want to be used to generate PDFs for printing and sharing.

            Note: Ensure the attached template is an **HTML file** and its size is not more than **500 KB**. Form settings are not editable until a template is attached.

    c. **Generate PDF and Upload to OCI Object Storage**: Select this option to generate and automatically upload PDF files to OCI Object Storage.

        i. In PDF Options, when you select **Generate PDF and Upload to OCI Object Storage,** the application requires you to specify the OCI Object Application name.

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Generate PDF

The system will generate PDF files using data submitted from this form and either attach them to Fusion work orders, upload them to OCI Object storage or provide them locally on a mobile device.

This functionality is available in iOS and Android installed apps.

PDF Options
Generate PDF and Upload to OCI Object Storage ▼

Application ▼

🚫 This field cannot be empty.
Select the application connected to Object storage. You can create a new application on the 'Applications' screen.

HTML Template for PDF Generation

PDF files will be generated based on the attached HTML template. The template can include branding and should define the layout and fields for the printable document.

You can keep just one template for the form at time. To attach another template you have to delete the previous one.

＋ Attach HTML Template

Maximum file size is 500 KB.

    ii. In the **Application** drop-down list, select the application connected to Object storage.

    iii. Click **Attach HTML Template** to attach the template that you want to be used to generate PDFs.

       Note: Ensure the attached template is an **HTML file** and its size is not more than **500 KB**. Form settings are not editable until a template is attached.

d. **Generate PDF and Upload to Fusion Attachments**: Select this option to generate PDF files upon form submission and attach the files to the associated Service or Maintenance work order in Fusion.

    i. In PDF Options, when you select **Generate PDF and Upload to Fusion Attachments ,** the application requires you to configure the following Attachments property to set up connectivity to storage.

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ii. In the **Application** drop-down list, select the application to connect to Fusion API.

iii. In the **Fusion Business Object** drop-down list, select either Service work order or Maintenance work order.

iv. In the **Attachments Category** drop-down list, select a category from Fusion to upload PDF files.

v. Click **Attach HTML Template** to attach the template that you want to be used to generate PDFs.

Note: Ensure the attached template is an **HTML file** and its size is not more than **500 KB**. Form settings are not editable until a template is attached.

> **Note:** If you are using Oracle Fusion Field Service and assigned the following roles:
> - ○ ORA_MNT_MAINTENANCE_MANAGER_JOB – for Maintenance Work Orders
> - ○ ORA_SVC_CUSTOMER_SERVICE_MANAGER_JOB – for Service Work Orders
>
> a. In **PDF Options**, when you select Generate PDF and Upload to Fusion Attachments, the application requires you to configure the following Attachments property to set up connectivity to storage.

> b. In the **Fusion Business Object** drop-down list, select either Service work order or Maintenance work order.
> c. In the **Attachments Category** drop-down list, select a category from Fusion to upload PDF files.
> d. Click **Attach HTML Template** to attach the template that you want to be used to generate PDFs.

6. Click **Add**.

   The Form is saved. The next step is to add elements to the Form.

   Download a Form Template

   You can click the download icon to download the attached form template.

   Delete a Form Template

   You can click the delete icon to delete the attached form template.

How do I configure the Form elements?

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

After you create a Form, you must add elements to it. Form elements are the fields in which a Mobile Worker can display and capture the required data. Some form elements that you can add are date and time fields, barcode scanners, text boxes, and check boxes.

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1. Click **Configuration** > **Forms & Plugins**.

2. Click the stack icon and click **Modify content** for the Form that you want to edit.

   The **Visual Form Editor** page appears and displays an accordion type panel with these options to help you add, edit, and search for elements:

   - **New element:** All the element types that you can use in this context are listed here. To add a new element, drag it to the desired location on the form. You can also use the search option to search for an element within this section. If you add a List element, the values you added for it display in alphanumeric order.

   - **Data fields:** All the data fields that you can use in this context across all element types are listed in this section. Drag an element from this section and drop it to the form, to add the data field with a preconfigured binding to the data source. You can also use the search option to search for a data field within this section.

   - **Content navigator:** All the fields you've used in the layout. Each field has an icon representing the GUI type of the element that's defined when you bind the field to a data source. The features of this section are:

     - Clicking an item scrolls the content to the appropriate item in the layout and highlights it without opening the context menu editor.
     - Clicking an item in the layout focuses the list to the appropriate item, if the panel is active (not collapsed).
     - If a field is present more then once in the content, you see a marker in a format (n / m). For example, (1 / 3) means first of the three occurrences. Clicking the marker takes you to the item on the layout.
     - The order in the list is according to the appearance on the configured form, top to bottom, left to right.
     - The search option lets you search for a field within this section.

   Another way to open this page is when you add the Form to a page. If you're configuring a page and there's a button that's configured to open a Form, then you can use the **Modify Form content** option. In this case, a new editor session is opened with the specified Form content. Ensure that you've saved all the changes to the page configuration before you click **Modify Form content**.

3. Drag the element that you want to add to the Form. For example, add a section, a text box, a checkbox, or a other available element type.

   Here are some special elements that you can add:

   - **Form Field:** Adds a field such as text box, list, checkbox and so on, to the Form. This type of fields exist on the Form only for presenting and gathering information. The data entered in Form fields will only be captured in a screenshot of the Form when the Form is Submitted. This data isn't stored in the application. However, data for other fields and properties is captured as normal.

     > **Note:** You must add an instance of a property, button, or field only once in a form. More than one instance of a field, button, or property on a form might lead to application error such as property not being saved or the action being denied.

   - **Barcode/QR Code/ NFC Tag Scanner:** Adds an icon to the Form, using which users can scan a barcode, a QR code, or an NFC tag. The embedded scanning functionality (that's, camera) on the resource's mobile device is used to scan the code. The results of the scan is populated automatically in the associated field. This option is available as part of the **Input** element. You can add the scanner any number of times on a form. Before using the scan option, users must ensure that the Android and iOS app that's installed on their devices has access to the device's camera. In Core Application, Barcode/QR scanner is displayed as a text box.

     > **Note:** When you add multiple scanner check boxes on a form or page, ensure that the section contains only the scanner check boxes and Text elements. If the section contains any other type of element, the scanner isn't triggered.

     ◦ **Date and Time:** Adds a date, time, or date and time field to the Form. The format of data in the data and time field is controlled by user settings. Specifically 'Time' (sudate_fid) and 'Date' (sudate_fid) user fields. The data captured from 'Date', 'Time', and 'DateTime' components is stored and exposed through the 'formSubmitted' event of Events API in a predefined format. Date and Time are form fields and not available for binding to a custom property. The formats are:

        - yyyy-mm-dd for 'Date'

        - HH:mm for 'Time'

        - yyyy-mm-dd HH:mm for 'DateTime'

     Integrators must convert data into other formats, if required.

     ◦ **Hidden value:** Adds a field to:

        - Include calculated values, which aren't required to be displayed when the Form is filled.

        - Include prepopulated values by open parameters. The values for these parameters are configured on the Form button. When the user opens the Form, these values are populated on the Form.

        - Use in other expressions, whose values will be included into the submitted Form data with the values of all other Form elements.

4. In the **Data binding** section, bind the elements to appropriate entities and fields:

    a. Click the Form field drop-down list and select the entity and start entering the entity name that defines the data source.

    The application displays only those fields that contain the entered text in their label or caption.

    b. Select the field that you want to define as the data source.

    The application populates the Type field automatically, based on the field you select as the data source. If you don't bind your field to any entity, then you can use the text as a form field label.

    c. Optionally, click the pencil icon. In the **Data field** list, select the specific field that you want to associate with the selected element.

    If the **Show only fields appropriate for element type** checkbox is selected, only the fields that are appropriate for the selected entity and the element type are displayed. If the checkbox isn't selected and a different type of field is selected, the element type is changed accordingly. For example, if your element type is Input and you select Activity Type [aworktype], then the element type is changed to the one that the Activity Type belongs to.

    d. Click **OK**.

5. In the **Visibility** section, configure the visibility settings.

    a. To change the visibility, click **Add new**. In the **Access mode** section, select the required visibility.

    b. To add any conditions to make the element visible, click the plus icon.

    c. Add the required condition and click **Save**.

  The visibility is Read-write (RW) by default.

6. In the **Translations** section, add the labels for the field in the required languages.

  The number of languages in this section is same as the number of languages you've configured on the **Configuration** > **Display** page. The application adds a label by default and you can change it here. You can use this

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label in default expressions and in the visibility conditions of other Form items. Further, you can use this label to refer to the submitted values in APIs. Here's the screenshot that shows Form elements:
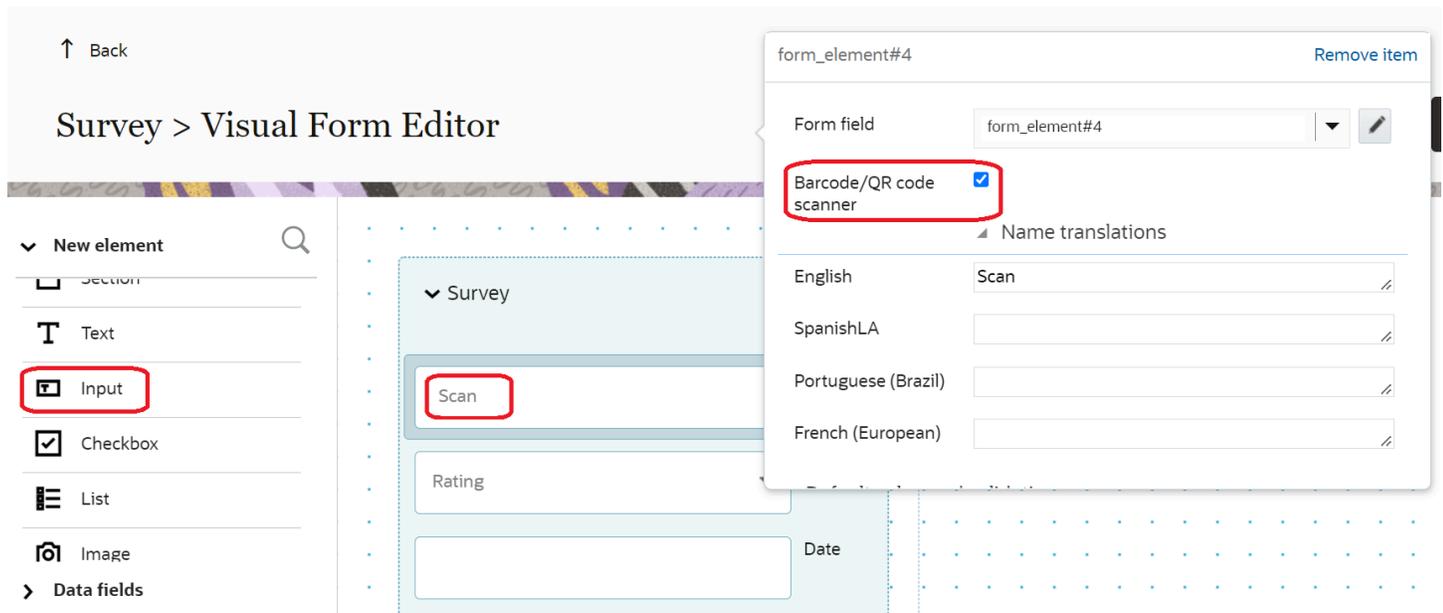
7. Click **Actions** on the Visual Form Editor page, and do the following:
   a. Click **Validate** to validate your Form's configuration.
   b. Click **Attach HTML Template** to update/replace the old template with a new one.
8. To view the form as your end-users see it and to verify upcoming configuration changes, click **Preview**.

   The preview includes all fields, except those that are Read-Only and don't have any data currently. Within the form preview:
   - You can enter values into the required and optional fields.
   - Any default values that are configured are calculated and displayed in the fields.
   - Any configured visibility conditions are applied.
   - Any validation rules that are set up are applied and the relevant validation messages are triggered.
   - Any regular expressions configured for custom properties validate the data you've entered and trigger error messages, if necessary.
   - The preview includes the saved and unsaved changes.
   - The data you enter while viewing the preview is saved and displayed the next time you open the preview.
   - You can clear the data you had entered in the preview page and start again, using the **Start Over** button.
   - Any visibility conditions configured for the **Submit** and **Dismiss** buttons are applied.
9. Click **Publish** on the **Visual Form Editor** page.

   The Form elements are published to the users of the selected user type. The next step is to add the Form to a context layout through a User Type page configuration.

How do I configure default values and validation rules?

When you configure fields on the **Visual Form Editor**, you can add a default value or a validation rule for fields and properties. You can also use formulas to configure visibility and visibility value.

1. Click **Configuration**.
2. Click **User Types** in the **Users, Security, Integration** section.
3. Click **Screens**.
4. Under the **Main** section and click the page that you want to change.
5. Select the field for which you want to add a default value or a validation rule. If the field isn't added to the context layout, drag it to the work area.

   By default, the field is assigned with a visibility of Read-Write (RW).
6. Follow these steps to change the default visibility:
   a. Click **Add New** in the **Visibility** section.

      The **Visibility settings** dialog appears.
   b. Select the required option in the **Access mode** section.
   c. To change the visibility based on a condition, add it in the **Conditions** section.

      You can add a formula to determine the condition for visibility. The conditions entered here are given priority over the visibility inherited by the field or property.

      > **Note:** When setting up the visibility for a specific property, you can't create a visibility condition based on the property itself. For example, suppose that you want to set up the visibility of the property "City" as Read Write. You can't set up a condition such as "City contains New York". Further, ensure that there are no circular dependencies. For example, the Customer Name field is displayed if the Customer Address field is filled and the Customer Address field is displayed if the Customer Name field is filled. Although the application doesn't display an error message when you configure such fields, the page on which the fields appear might not work properly.

   d. Click **Show conditions as formula** to view the conditions as a formula.

      These rules apply to showing conditions as formula:
      - If you click **Show conditions as formula**, the standard conditions constructor hides and a text area appears containing the auto-generated formula of the conditions.
      - If you don't change the auto-generated formula, the formula isn't saved. **Show conditions as list** is shown, so you can switch back.
      - If you change the formula and it differs from the auto-generated content, **Show conditions as list** is disabled.
      - If you change the formula and save the changes, the next time this dialog opens with the formula without the **Show conditions as list** link.
7. Follow these steps to add a default value or a validation rule:
   a. Expand the **Default value and validation** section.
   b. Enter a value in the **Default value** field.
   c. Enter a validation for the value in the **Validation** field.

      You can use arithmetic operators, comparison operators, or functions to form the validation rule.
8. Click **Save**.

   The details are saved and enforced when a user edits the corresponding page the next time.

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Related Topics

- Supported Default Value and Validation Rules Fields
- Default Values and Validation Rules
- Examples of Validation Rules
- Language Expressions

What are the examples of validation rules in Oracle Fusion Field Service?

Scenario 1: Report Gas Consumption

Let's say an activity contains information about gas consumption. There are three of types of consumption: predicted, actual, and removed. The 'predicted' amount of consumed gas is saved in the activity. When a Mobile Worker chooses to report the actual information about the consumed gas, then the difference between 'actual' and 'predicted' data must be calculated automatically. If the actual consumption exceeds the predicted consumption by more than 20 cubic meters and the conditions of the gas counter are good, then the 'Reporting notes' property is displayed.

Prerequisites: Let us assume that 'Predicted gas consumption', 'Actual gas consumption', 'Difference', 'Counter is not broken' and 'Reporting notes' string-type properties are configured in the application. And, there is the 'Counter is not broken' integer property with a check box on the GUI.

Configuration: Configure the expressions in the 'Default' field for the 'Difference' property. For example: activity.real_consumption-activity.predicted_consumption

Visibility: Set the visibility for 'Reporting notes' as Read/Write with the same formula as the condition: (activity.real_consumption-activity.predicted_consumption) >20 AND activity.counter_conditions=1

Scenario 2: Checking Ratio

A Mobile Worker has to enter the Upstream Signal-to-Noise ratio to complete an activity (it is mandatory). The range must not be seen and it has to be anywhere between +32 to 52 dBmV. When the Mobile Worker enters a value of 55dBmV, which is not in the range then the Mobile Worker must know that is not the range and has to try again. The Mobile Worker measures again and enters 51dBmV, which is in the range allowing to complete the activity.

Prerequisites: Let's assume that the Upstream Signal-to-Noise' property is configured in the application. The 'Upstream Signal-to-Noise' property is configured on the 'Complete activity' page as mandatory.

Configuration: Configure the expression in the 'Validation' field for the 'Upstream Signal-to-Noise' property. For example: this BETWEEN (32,52).

Configure the custom error message in the corresponding field to be displayed to the technician.

Scenario 3. Set Current Datetime

Each inventory contains a custom property that identifies its status. The list of statuses is different from those present in OFSC. The field worker selects a status from the list when working on the activity. The date and time when the status change has been performed is filled automatically.

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Pre-conditions: Let's assume that "Protection type" and "Date of action" properties configured in the system. By default "Protection type" is not selected and technician should choose any of statuses from below when installing inventory:

- Protection aluminum

- Protection plastic

- Protection fibro cement

Configuration: Configure the expression in the "Default" field for the "Date of action" property. For example:

if(NOT empty(inventory.protection_type), now("dd/MM/yyyyy HH:mm:ss"), "Status is not set, date is not collected")

Scenario 4. Report removed Counter Data

The activity contains information about gas counters. There are three of them: predicted, real and removed. By default only predicted counter information is shown. When a field worker selects a checkbox "Report removed counter data?" then the section with the property for removed counter data is shown and the property is pre-filled from predicted counter section.

Pre-conditions: Let's assume that "Predicted gas consumption", "Real gas consumption","Removed gas consumption" and "Report removed counter data?" properties exist in the system. The "Report removed counter data?" is the integer type property represented as checkbox.

Configuration: Configure the expression in the "Default" field for the "Removed gas consumption" property. For example:

if(activity.report_removed_counter_data=1,activity.predicted_gas_consumption,"")

Scenario 5. Cost Calculation

Technician has to examine electricity counter and fill in usage of electricity for previous month. Then tech should present to the customer the value of used electricity and cost. Tech could charge the customer for additional services but that price cannot be more then 30% of electricity cost. If tech tries charge incorrect price for services it cannot continue and has to re-enter the value. The customer should be presented with the total price of electricity and services.

Pre-conditions: Let's assume that "Prior Meter Read", "Current Meter Read", "Usage (kWh)", "kWh cost", "Electricity cost", "Services cost" and "Total price" properties configured in the system.

"Usage (kWh)" calculation is based on ['current - previous']

"Electricity cost" calculation is based on [Usage * Kwh Cost]

Configuration: For that case formulas are required for several properties.

Default value for the "Usage (kWh)": activity.current_meter_read-activity.previous_meter_read

Default value for the "Electricity cost": activity.usage*activity.kwh_cost

Validation rule for the "Services cost": this <= activity.electricity_cost / 100 * 30

Default value for the "Total price": activity.electricity_cost+activity.services_cost

The "Services cost" should be set with Mandatory visibility and custom error message should be configured to let tech know that entered value doesn't fall into the validation conditions.

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What are the miscellaneous blocking conditions available for message scenarios?

There are some blocking conditions that aren't related to a specific area. For example, day of the week, day changed, and property blocking conditions. Messages aren't sent, or are blocked, when these conditions are true.

Application blocking condition

Fields	Description
Condition name	[application]
Condition type	Other
Description	Checks the application ID which generated the message.
Valid values/format	Value of the application ID set on the Configuration, Applications screen.
Case sensitive?	Yes
Notes	The value in the Application field is empty in the following cases: • If the message is generated by a user action in the Core app or Legacy app. • If the message is generated by the Oracle Fusion Field Service application. • If the message is generated by a REST API call that uses the OAuth2 assertion grant with a user identity in the assertion for authentication. The value in the Application field is present in the following cases: • SOAP API call • REST API call authenticated through HTTP basic authentication • REST API call authenticated through OAuth2 with client_credentials grant or with the assertion grant without the user identity in the assertion.

Day of Week blocking condition

Fields	Description
Condition name	`[day_of_week]`
Condition type	Other
Description	Checks the day of the message
Valid values/format	`sun, mon, tue, wed, thu, fri, sat`
Case sensitive?	No
Suggested functions	`IN, NOT IN`

Interface blocking condition

Fields	Description
Condition name	`[interface]`
Condition type	Other
Description	Checks the interface where the message was created.
Valid values/format	`web, soap, wap, xhtml, file_upload`
Case sensitive?	No
Notes	The interface will be empty if the message is initiated by the server. • web: Corresponds to operations performed from Legacy Manage. • soap: Corresponds to both SOAP (except Inbound API) and REST APIs. • wap: Corresponds to operations performed from Core Application and Android and iOS applications. • xhtml: not in use. • file_upload: Corresponds to Inbound API. • mobile: not in use.

Day Changed? blocking condition

Fields	Description
Condition name	`[is_day_changed]`
Condition type	Other
Description	Checks whether the day has changed.
Valid values/format	`1, <empty>`
Suggested functions	`IS NULL, IS NOT NULL`
Notes	This function is mainly intended to be used in the `move` scenario. It can't be used to detect the `move/reschedule` actions for the `Add` launch condition messages.

Resource Changed? blocking condition

Fields	Description
Condition name	`[is_provider_changed]`
Condition type	Other
Description	Checks whether the resource has changed.
Valid values/format	`1, <empty>`
Suggested functions	`IS NULL, IS NOT NULL`

Fields	Description
Notes	This function is mainly intended to be used in the **move** scenario. It can't be used to detect the **move/reschedule** actions for the **Add** launch condition messages.

Message Day blocking condition

Fields	Description
Condition name	**[message_day]**
Condition type	Other
Description	Checks if the day of the message is a holiday
Valid values/format	**holiday, regular**
Case sensitive?	No
Suggested functions	**IN, NOT IN**

Previous Message Data blocking condition

Fields	Description
Condition name	**[prev_data]**
Condition type	Other
Description	Checks the data of the previous message
Valid values/format	Message data
Notes	Can be used to implement the following condition: all **failed** except **failed/INVALID_PHONE_NUMBER**

Previous Message Description blocking condition

Fields	Description
Condition name	**[prev_desc]**
Condition type	Other
Description	Checks the description of the previous message
Valid values/format	Message descriptions
Notes	Can be used to implement the following condition: all **failed** except **failed/INVALID_PHONE_NUMBER**

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Previous Message Status blocking condition

Fields	Description
Condition name	`[prev_status]`
Condition type	Other
Description	Checks the status of the previous message
Valid values/format	`new`, `sending`, `failed`, `sent`, `delivered`, `falsemethod`, `obsolete`
Notes	Can be used to implement the following condition: all `failed` except `failed/INVALID_PHONE_NUMBER`

Property blocking condition

Fields	Description
Condition type	Other
Description	Checks the property value for an entity related to the message. Supports resource, activity, inventory, and support request properties.
Valid values/format	Format according to a property type.
Notes	Use `index` values for enumeration properties, rather than their translation.

How do I configure Oracle Fusion Service?

You can use the 'Oracle Fusion Service to Oracle Fusion Field Service Integration OIC Recipe' for real-time data updates between Oracle Fusion Service and Oracle Fusion Field Service. You can enable this recipe by configuring a new Application Type namely 'Fusion Service' from within the Oracle Fusion Field Service **Applications** page.

To enable the integration flow from Oracle Fusion Field Service:

1. Configure the Oracle Integration Cloud (OIC) application from within the **Applications** page.

   This is used as the integration channel between Oracle Fusion Service and Oracle Fusion Field Service, follow these steps:

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2. Configure a new application of type 'Oracle Fusion Service'.

    a. Navigate to the **Configuration** page.

    b. Click **Applications**.

        This screenshot shows the **Applications** page.
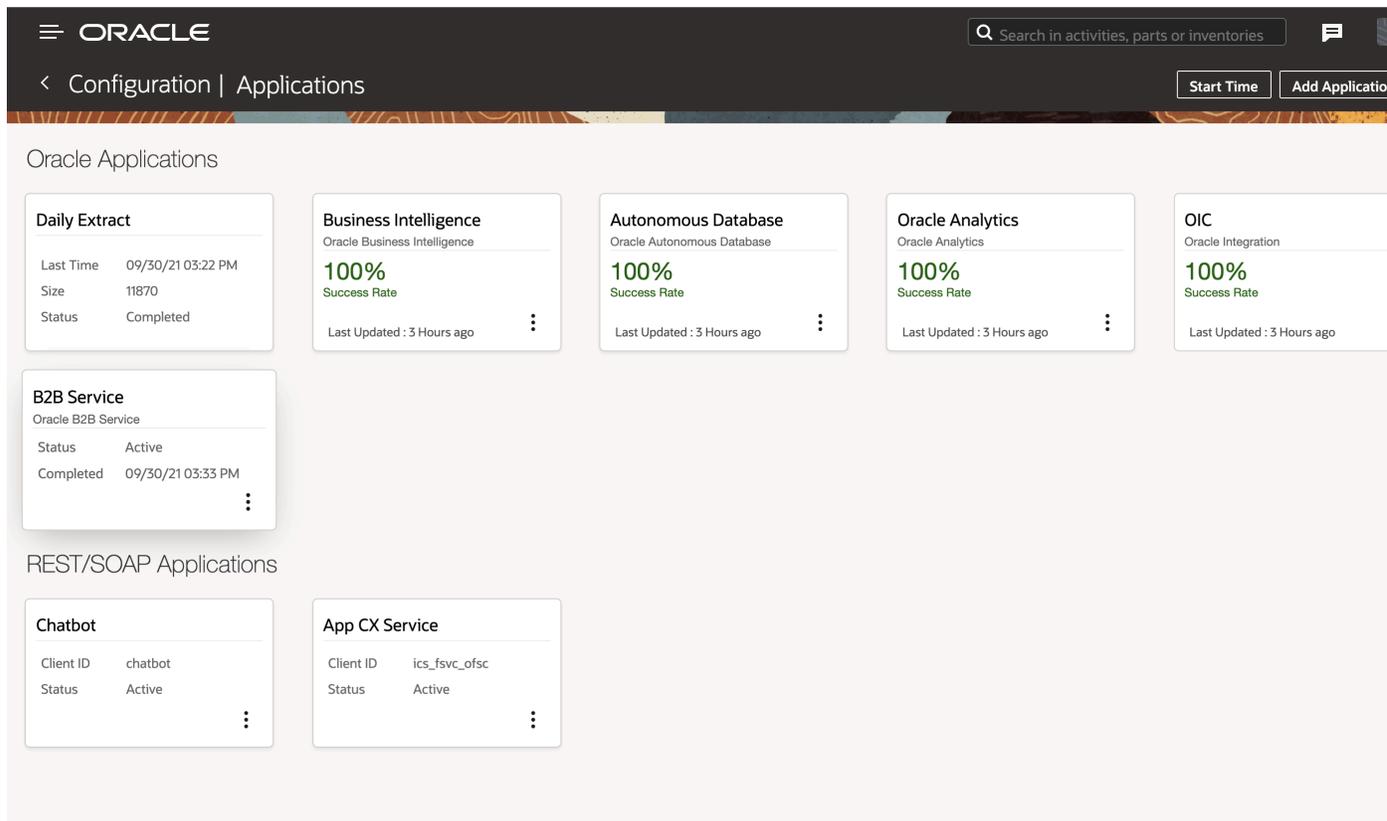
    c. In the Applications page, click **Add Application** on the header.

        The **Add Application** dialog box is displayed.

    d. Select **Oracle Fusion Service and Service Logistics** as the Application Type.

    e. Configure the end point details of Oracle Fusion Service.

        This table lists the end point details to be provided on the **Add Application** dialog box.

Field	Description
Application Name	Name of the application to be displayed on the Applications page.
URL	Oracle Fusion Service application URL . Note: This field supports URL of the format 'https://<host>' only.
User Name	Oracle Fusion Service user with '*IT Security Manager*' job role. With privileges for:

Field	Description
	o Setup and Maintain Applications o Setup Service o Setup Service Work Order
Password	Password for this user.

3. Select an existing channel in the **Oracle Integration** field.
4. Check the connectivity using the test connection button and make sure that the end points configured are valid.

   If the host is invalid, the message 'Host unreachable'. Please check credentials' is displayed.

What to do next

This table lists the validations and warnings:

Warnings	Description
Host unreachable. Please check credentials	"Endpoints for configuring CX Service is not reachable."
The service is temporarily unavailable. Please try again later	"CX Service is temporarily down."
Configuration is in progress.	"CX Service configuration is in progress"
Unable to configure the service. Please retry	"CX Service configuration failed. You can retry the configuration by clicking the option menu or by clicking the retry button inside the application details page."
Configured successfully	"CX Service configuration completed"

How do I use the openLink procedure in the callProcedure method?

The openLink procedure provides a common way to open external URLs from Oracle Fusion Field Service Core Application run either in a web browser or in the Oracle Fusion Field Service Mobile for Android and iOS app. If Oracle Fusion Field Service Core Application is run in the Oracle Fusion Field Service Mobile for Android and iOS app, the URL is opened in a new web browser window. If not, it's opened as a new browser tab.

Example of the *callProcedure* Message

```
{
 "apiVersion": 1,
 "method": "callProcedure",
 "procedure": "openLink",
 "callId": "123abc",
 "params": {
 "url": "https://play.google.com/store/apps/details?id=com.oracle.ofs"
 }
}
```

Result of the Procedure

The result is sent through the *callProcedureResult* message, just to indicate that the procedure is run successfully. The *resultData* param doesn't contain any data.

How do I create a Daily Extract file?

You can configure the Daily Extract from the **Applications** page and create or change the set of files for the Daily Extract and their content. You can export a daily extract file immediately after creating, or schedule the extraction.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

The **Daily Extract** page lists the files that are extracted. Each row shows an entity and the exported file name. The menu icon lets you display the fields associated with the entity in the extraction file, and lets you remove the file.

To create daily extract files:

1. Click **Configuration** > **Application** > **Daily Extract**.
2. On the **Daily Extract** page, click **Add new**.
3. In the Add Configuration dialog box, select the entity containing the data you want to extract.
4. Click **Add**. The Add Field dialog box appears.
5. Select the fields that you want to extract.

   For more information on the fields associated with the entities, refer to the Examples for all entities in the corresponding topics in Chapter 2 Data Sets.
6. Click **Add Field**.

   The new configuration appears in the list on the **Daily Extract** page. The scheduled extraction runs at the time you specify on the **Configure Start Time** page.
7. To export the data immediately, click **Export**.

   All Daily Extract files are created in the XML format.

What data sets are available for extraction?

Data sets are groups of details from extracted data that are related to the same entity. You can select the fields that you want to extract and schedule the extraction. For example, you can select activity fields, resource fields, inventory fields, message fields, or GPS fields. The following important note applies to all the topics in the Daily Extract and Data Sets sections.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

Data from several data sets can't be extracted in one file, but data from one data set can be divided to be extracted in several files. For example, the file created for the Activity Fields entity can't also include data for the Resource Fields entity. At the same time, one file can see several database tables according to the exported field's configuration. For example, an Activity Fields file might include data from the Queue Fields table, when configured so.

You can configure the list of data sets you want to export. Data sets associated with entities configured in Business Rules are deleted within 90 days (or sooner) as defined in Retention period. For more information, see the **Retention period** section in the "How do I configure Business Rules?" topic.

The data sets available for export is listed below. The data set name is a link that opens more details and an example:

- Activity Fields—Data on all fields/properties assigned by the end of extraction period to activities processed in the application during the extraction period (activities that were to be performed or were performed during the extraction period).

- Activity Link Fields—Details of all links between activities defined in the application by the end of extraction period.

- Activity Work Skill Fields—Details of work skills per activity at the time of extraction.

- Manual Move Fields—Details of the fields related to activities that were manually moved in the application during the extraction period.

- GPS Details—Details of all GPS data gathered during the data extraction period, including gpstracks.

  ○ GPS Track Fields (gpstracks)—Data calculated based on the GPS data in Oracle Field Service in fixed format native for Oracle Field Service. All GPS data collected for each resource for the extraction period is gathered.

- Inventory Fields—Data on all fields and properties assigned to all inventory items, except inventory in resources' pools, available in the application by the end of extraction period.

- Message Details—Data on all messages generated (all messages that were sent or were to be sent by the application) during the extraction period divided into two data sets.

- Message Fields—Basic details of the messages excluding the actual text of the message.

- Message Text Fields—Parameters of the text of each message.

- PAS Answers Fields—Details of customer's answers to questions asked in the Post Appointment Survey that are present in the application with status 'Delivered' at the time of extraction.

- PAS Questions Fields—Details of questions for Post Appointment Surveys at the time of extraction.

- Property Fields—Details of all fields and custom properties available in the application by the end of the extraction period.

- Property File Fields—Contents of file properties (for example, images) available in the application by the end of the extraction period.

- Property Lookup Fields—Sets of values that can be used to identify a field or custom property for all fields and custom properties available in the application by the end of extraction period.

- Resource Fields—Details of the properties of all resources available in the application by the end of the extraction period (including inactive resources) and their position in the Resource Tree.

- Resource Location Fields—Details of the locations defined for each resource in the application by the end of the extraction period.

- Resource Property Fields—Details of all properties defined for each resource in the application by the end of the extraction period.

- Resource Work Skill Fields—Details of work skills per resource at the moment of extraction.

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- Route Fields—Data on all fields/properties assigned to the routes processed in the application during the extraction period (routes that were to be executed during the extraction period), including all fields and properties assigned to resources, to which a route is directly assigned by the end of the extraction period.

- Routing Run Result Fields—Details of the routing run results, including numeric statistics on the business parameters of the routes.

- Service Request Fields—Details of service requests created in the application during the extraction period.

- Time Slots Fields—Details of time slots defined in the application by the end of extraction period.

- Type List Fields—Sets of values used to identify the type of entity by its ID for all types available in the application by the end of the extraction period.

- User List Fields—Details of all users existing in the application by the end of the extraction period.

- User-Resource Relation Fields—Details of resources visible to each user as defined in the application by the end of the extraction period.

Note: The Daily Extract processes property labels regardless of whether any special symbols or capital letters.

How do I add a new user to the Cloud Account?

After you sign in to your Cloud Account, you can see the Oracle Field Service application that you've bought. You must create a user within the Oracle Field Service application in Oracle Cloud Console (Cloud Console) who can work with the Service Console.

Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

For more information about creating a user in the Cloud Console to use with Oracle Fusion Field Service, see the Adding Oracle Cloud Console Users section in the Oracle Cloud Infrastructure documentation.

1. Sign in to Cloud Console.
2. Click **Applications**.
3. Click **Quick Actions** > **Add a user to your tenancy**.
4. Click **Create user** and complete these fields on the **Create user** page:
   a. Type the first and last names of the user in the respective fields.
   b. If you want the email address of the user to be the user name to access Cloud Console, add it in the **Username/Email** field. Then, select **Use the email address as the username**.
   c. If you want the user name to be different from the email address, type a unique user name in the **Username/Email** field. Then, deselect **Use the email address as the username**. Type the email address in the **Email** field.
   d. To provide administrative privileges to the user, select **Assign cloud account administrator role**.
   e. In the Groups section, select the user group to which you want to assign the user.
   f. Click **Create**.
5. After the user is added, click **Identity** > **Domains** > **Default Domain**.
6. Click **Oracle Cloud Services** > **FIELDSERVICETOA**.

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7. Click **Application Roles**.
8. In the OFSC_APP_ADMINISTRATOR row, click the arrow and expand the row.
9. Click **Manage** next to **Assigned users**.
10. Click **Show available users** and select user that you added in Step 4.
11. Click **Assign**.

   The selected Oracle Cloud Services user is assigned to work with the Service Console of Oracle Field Service.

How does moving activities work?

When you identify an activity or a group of activities that are in jeopardy, you can move the activities to another resource or a bucket for re-assignment at a later time. To move an activity that's En route, you must stop the travel, change its status to Pending, and then move it.

You can move activities from three different locations in the interface:

- *List view*: You can move one activity or multiple activities at once. The application proposes resources that might be a good match for the activity. You can also choose where a new activity fits in the new resource's schedule.

- *Time view*: From this view, you can drag an activity from one resource to another. You can move only one activity at a time. The application chooses the best time in the resource's schedule and automatically moves the job to that time slot.

- *Map view*: From this view, you can drag an activity from one resource to another. You can move only one activity at a time. The application chooses the best time in the resource's schedule and automatically moves the job to that time slot.

Here are some reasons for which you want to move activities from resources back to the bucket:

- A resource called in sick and you've already assigned a route to the resource.

- A resource is assigned activities that might place them in an overtime situation.

- An activity is in jeopardy after routing.

- A resource requested a particular day off, but the calendar doesn't reflect it as a non-working day and a route has already been assigned to the resource.

If you try to move 1000 and more activities at once from a bucket to a resource, the **Activity Details** page might not open from the **Dispatch Console** or the **Routing Report** page. Oracle Fusion Field Service Core Application dowloads information about recently moved activities to the mobile device.

The best practice is to move not more than 100 activities at once from a bucket to a resource's route. For resources with over 200 activities, you can see only the number of activities moved, but not the detailed routes.

Related Topics
- How do I move an activity using the Assignment Assistant?

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How do I move an activity using the Assignment Assistant?

You can move activities from one resource to another, one bucket to another, a bucket to a resource, or a resource to a bucket using the Assignment Assistant. You can move a single activity or multiple activities at once. For your convenience, the procedure to move activities is split between two pages, Main and Route details. Use the Main page to find the specific resource for which you can assign the activity. And, use the **Route details** page to make additional changes such as reordering or setting as not ordered. To move an activity that's En route, you must stop the travel, change its status to Pending, and then move it. This procedure describes how to move a single activity; you can use the same procedure to move multiple activities.

1. Select the activity that you want to move from the **Activity details**, activity hint on the **Dispatch Console**, **List view**, or **Map view** page.

   The **Assignment Assistant** appears and shows the resources that match all the criteria required to move the activity. The resources are sorted on the route impact; the resource with the most optimal route impact is at the top. The order of resources is affected by these factors:
   - Route impact (activity duration + travel time)
   - Resolved activity coordinates
   - Distance from the selected activity to the activities in the resource's route and Start/End/Home location
   - Resource Work Zone match
   - Accuracy of the travel statistics data

   If you move an activity by dragging and dropping and the target resource matches all the criteria, then the application simply moves the activity to the target, without displaying the **Assignment Assistant**. If you move an activity between resources on the same date, then the current resource's name and details are displayed at the top. In addition, the selected activity is highlighted with a dark border. If you reorder an activity within a resource's route, then Assignment Assistant displays the route impact before and after reordering.

2. Review the route impact and the idle time of the resources.

   Scroll forward beyond midnight if activities extend into the next day. You can scroll up to 24 hours into the following day. If you move an activity between resources on the same date, the routes impact column contains the summary impact on the routes of both the resources (existing and target). In addition, the route impact hint shows how both the routes are impacted:
   - How the activity duration and travel time of the current owner reduce after the activity is reassigned.
   - How the activity duration and travel time of the target resource increase after the activity is reassigned.

   The current resource details aren't displayed when you move an activity:
   - From a bucket
   - From a non-scheduled pool
   - To another date
   - From multiple mobile workers

   In these cases, the route impact hint and column show how only the target resource's route is impacted.

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3. By default **Show all** is disabled. Click it to view all the resources, regardless of whether they match the required criteria.

   Alerts for resources are displayed below the resource names only when **Show all** is selected.

4. Determine the best resource to which you can assign the activity and click **Continue**.

5. On the **Select Move Reason** dialog box, select the reason for moving the activity.

   The reason is required when there's at least one active Move Reason for the current move type (for example, resource to resource). When you move several activities with different Move Reasons, then all the corresponding reasons are available for selection. You'll not see this field if you belong to a User Type that's excluded from providing a Move Reason.

6. Click **Assign**.

   The activity is assigned to the selected resource. The activity that's moved is highlighted with a darker background. When you move a not ordered activity, it's shown as ordered on the Main page and the **Route details** page. Therefore, the count of not ordered activities isn't changed on the Main page. However, when you move a not ordered activity to a bucket, the activity status ordered or not ordered is retained.

   If you try to assign activities with a total duration of more than 12 hours to a single resource's route, a warning message appears. The message doesn't appear when you assign activities to a bucket or to the non-scheduled pool of a resource. If you try to move more than 200 activities, then only the duration of the first 200 is displayed in the warning message.

7. Make further changes using the **Route details** page:
   a. To set the activity as not ordered, just drag the activities to the **Not ordered** section. Or, click the stack icon and then click **Set not ordered**.
   b. To cancel the move, click the stack icon and then click **Do not move**. The activity is removed from this page and isn't assigned to mobile worker. Don't move is not available when only one moved activity remains on the page.
   c. To reorder the activities within the route, simply drag the activities to the required position.
   d. To save the changes, click **Assign**. Let's say you've moved a not ordered activity and you haven't set it as not ordered on the Route details page. The activity is added as ordered and is shown in the appropriate position on the route.
   e. To go to the Main page without saving the changes, click the back arrow.

How do I lock preassigned activities in bulk routing?

You can prevent preassigned activities from being unscheduled or rescheduled during optimization by a bulk routing run. This eliminates unnecessary changes in the activity assignment and retains the existing activities in the route.

Changes have been made to the translations within the filter section of Optimization Strategy section. This table lists the old and new translations within the filter section:

Old translation	New translation
Filter parameters	Preassigned activities handling rules
Activities	Preassigned activities filter
Destination	Possible routing actions

Old translation	New translation
Destination of unassigned activities	Possible routing actions
Non-scheduled activities in the routing bucket	Unschedule and move to the routing bucket
Activities in the routing bucket	Move to the routing bucket
Preassigned non-scheduled activities	Unschedule and leave in the same route
Resources' routes	Reassign to another route
Prevent optimization *	Do not move to the routing bucket and do not reassign
To reorder activities, drag and drop the grid rows	To reorder rules, drag and drop the grid rows

To prevent rescheduling selected activities to another resource or day or to prevent unscheduling of selected activities to bucket by means of bulk routing, follow these steps:

1. Make sure you've a filter describing such activities.
2. Select the **Do not move to the routing bucket and do not reassign** option for the Possible routing actions of the given Optimization strategy filter.
3. Corresponding activities may not be assigned to another resource due to routing optimization. Routing engine doesn't change the planned start time of such activities. However, Routing may insert other activities before if there's enough time for them.
4. You may use this functionality effectively to lock the activities or to imitate the En route status for activities not eligible for fully pledged En route status usage.

For example, you may like to create a special property Locked (Yes/No) for an activity, and have two action buttons - Lock and Unlock, setting the property values correspondingly. If you've filter Locked activities, filtering those activities having Locked set to Yes, you may add this filter to the Optimization strategy filters for a routing plan allowing activities to be moved between routes and/or being reordered within the same route.

Mobile Workers may lock the activity by clicking Lock when it was aligned with the customer that this particular resource at this particular time will do the activity.

Then, activities having Locked = Yes before routing will retain their ETA and resource assignment unchanged. Moreover, if an activity has had Locked = No when routing started, but changed the Locked value to Yes after routing started, but before routing results were applied, such an activity will not be changed by the routing results and thus retain the same ETA and assignment it had.

However, a manual intervention to routes during the time of routing run may lead to suboptimal routing results, so ensure that you've regular recurrent routing runs to constantly re-optimize the routes.

You can prevent activities from being reassigned or their ETA changed. Follow these steps:

1. Navigate to the Optimization strategy filter.
2. In the **Preassigned activities handling rules** dialog box, click the **Do not move to the routing bucket and do not reassign for the Possible routing actions** check box of the selected Optimization strategy filter.

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How do I add a work zone to a resource?

Work zones define the regional areas in which resources are allowed to work. You can add a work zone that the resource uses only on weekdays, a work zone only for weekends, or a temporary work zone which is assigned for a short period. When you add a work zone to a resource, any work zone shape or custom map layer that's added to the work zone is displayed on the map. Work zone shapes and custom map layers help you visualize your work area better.

If you don't assign a work zone either to a resource or to any of its parents, the application considers that the resource has no work zones and is thus incompatible with all activities.

1. Open the **Resource Info** page for a resource.

   When a resource doesn't have any work zones assigned directly, but inherits work zones from one of its parent entities, then the message, "Applied from <bucket_name>" appears on the Work Zones tile, where <bucket_name> is the parent resource. When a resource has been assigned with several work zones, then the Map isn't shown on the tile. Instead, a list of up to 10 assigned work zones appears.

2. Click the title of the Work Zones tile.

   When resources have work zones added but shapes aren't populated, or no work zones are added either for the resource AND all its parents, then the map on the **Resource Work Zones** page doesn't display. Only the list of work zones is displayed in full-screen mode. After you add new work zones that have shapes, the page is refreshed and the map is displayed. When a resource doesn't have any directly-assigned work zones, then a search field is displayed and the message, "No work zones are added for the resource. Work zones are applied from <bucket_name>" is displayed where <bucket_name> is the parent resource.

3. On the **Resource Work Zones** page, click **Add**.

   The **Add Work Zones** dialog box appears.

4. Complete these fields:

Field	Description
Work zone	Select one or more work zones from the drop-down list. The list includes Work Zones that aren't related to any Organization, Work Zones that are configured for the Organization the current resource belongs to, all active Work Zones (when no Organization is configured for the current resource), default Work Zones, and other Work Zones. The **Default Work Zones** section contains active work zones that are added to the resource's bucket or organization unit. When the bucket or organization unit isn't assigned to a work zone, then the work zones of its parent are considered. The **Other Work Zones** section contains other active work zones that aren't considered as default.
Ratio	Type a value between 1 and 100. A higher number increases the likelihood that this resource is assigned activities in this work zone. If this is a work zone the resource works in daily, or if it's a preferred zone for the resource, enter a higher number. If this resource works in this work zone occasionally or only by exception, enter a lower number. You can assign multiple work zones with different ratios to one resource.
Temporary	Select this check box to assign a temporary work zone for a specified period of time.
Start date	Enter the date that this work zone assignment starts.
End date	[Optional] If this is a temporary assignment, enter the date that this work zone assignment ends.

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Field	Description
Recurrence	Set the schedule for the work zone if the resource is alternating between work zone assignments. Resources can cover different work zones on different days of the week. Use this feature to change a resource's work area on certain days of the week. Select the frequency of recurrence and the days on which to recur.
Days between occurrences	Enter the number of days after which the assignment repeats. If you've selected Repeat Weekly in the earlier field, select the days of the week on which the assignment repeats.

5. Click **Submit**.

The work zone is added to the resource. If any work zone shapes are added to this work zone, they're displayed on the map.

What are the conditions under which messages are removed?

There are several actions in the application that might remove the existing messages, based on certain conditions. The messages are removed only if they haven't been sent.

Activity Start action

Event/Action	Description
Removed Messages	`Reminder, Change, Day before`
Status	`obsolete`
Description	`ACTIVITY_WAS_STARTED`

Activity Cancelation action

Event/Action	Description
Removed Messages	All
Status	`obsolete`
Description	`ACTIVITY_WAS_CANCELED`

Activity Notdone action

Event/Action	Description
Removed Messages	All
Status	`obsolete`

Event/Action	Description
Description	`ACTIVITY_WAS_NOT_DONE`

Deletion of a Pending Activity action

Event/Action	Description
Removed Messages	All
Status	`obsolete`
Description	`ACTIVITY_WAS_DELETED`

Activity Suspend action

Event/Action	Description
Removed Messages	`Started`
Status	`obsolete`
Description	`ACTIVITY_WAS_SUSPENDED`

Activity Reschedule action

Event/Action	Description
Removed Messages	All except `SLA Warning`
Status	`obsolete`
Description	`ACTIVITY_WAS_RESCHEDULED`

Activity Move action

Event/Action	Description
Removed Messages	`Reminder, Change, Not started, Service window warning, Call ahead, Add`
Status	`obsolete`
Description	`ACTIVITY_WAS_MOVED`

Reminder message creation action

Event/Action	Description
Removed Messages	`Customer` messages: Recipient = `Customer`

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Event/Action	Description
Status	`obsolete`
Description	`NEW_CUSTOMER_MESSAGE_WAS_CREATED`
Notes	The `Reminder` launch condition is not invoked if the existing customer messages cannot be dropped using the `drop_message` call (if required).

Change message creation action

Event/Action	Description
Removed Messages	`Customer` messages: Recipient = `Customer`
Status	`obsolete`
Description	`NEW_CUSTOMER_MESSAGE_WAS_CREATED`
Notes	The `Change` launch condition is not invoked if an incomplete `Reminder` exists, or if the existing customer messages cannot be dropped using the `drop_message` call (if required).

Cancel visit action

Event/Action	Description
Removed Messages	All (visit related)
Status	`obsolete`
Description	`VISIT_WAS_CANCELED`

Delete visit action

Event/Action	Description
Removed Messages	All (visit related)
Status	`obsolete`
Description	`VISIT_WAS_DELETED`

Start visit action

Event/Action	Description
Removed Messages	`Visit reminder`, `Visit change #`, `Visit day before`
Status	`obsolete`
Description	`VISIT_WAS_STARTED`

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Applying new visit formulas action

Event/Action	Description
Removed Messages	All (visit related)
Status	**obsolete**
Description	**VISIT_WAS_RECALCULATED**
Notes	The messages are only removed if the visit is removed as the result of applying formula changes.

Block/Shift messages action

Event/Action	Description
Removed Messages	N/A
Status	**false**
Method Description	**NONWORKING_DAY**
Notes	This removal is performed if message sending of is not allowed for a non-working day (or a holiday) and such message cannot be shifted to an appropriate working day.

On what pages are default value and validation rules supported?

You can configure default values and validation rules only on these fields:

Property name	Property label	Type	Entity	GUI
Account Number	customer_number	field	activity	text
Activity Type	aworktype	field	activity	combobox
Address	caddress	field	activity	text
Appointment Number	appt_number	field	activity	text
City	ccity	field	activity	text
Customer Email	cemail	field	activity	email
Customer Mobile Number	ccell	field	activity	phone
Customer Phone Number	cphone	field	activity	phone

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Property name	Property label	Type	Entity	GUI
Duration	length	field	activity	text
Time Slot	time_slot	field	activity	text
Inventory Type	invtype	field	inventory	combobox
Name	cname	field	activity	text
Points	apoints	field	activity	text
Quantity	quantity	field	inventory	text
Serial Number	invsn	field	inventory	text
Service Request Type	srtype	field	service request	combobox
State	cstate	field	activity	text
ZIP/Postal Code	czip	field	activity	text

Related Topics

- Default Values and Validation Rules
- Configure Default Values and Validation Rules
- Language Expressions

How do I create labels to identify activities?

You must configure the activity labels that you want to see in Activity time view label.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to configure the activity labels.
4. Under **Main** and click **Activity time view label**.
5. Click **Click to Add**. On the **Add property** window, select the properties that you want to display as labels.

   Note: You could even add symbols instead of abbreviations — like a cup of coffee for Lunch activities, a wrench for Repairs, a car for Relocation jobs, and more.

6. Click **OK**.
7. In the [property] visibility section, click **Add new visibility**.

   Read-Only is selected by default.

8. Click **Save**.
9. Click **Add new value visibility** in the [property] value visibilities section. By default, all the values for the property are visible. If you want to have it that way, click **Save**. If you want to add visibility to specific values, select the values and then click **Save**.

10. Click **Close**. Go to the Activity time view in **Dispatch Console**.

The labels are displayed.

What are the available launch conditions for Route and Activity actions?

Most of these action-driven launch conditions are invoked by the resources manual action.

Following is the brief overview of the launch conditions:

- **Activate** – invoked on a route activation
- **Deactivate** – invoked on a route deactivation
- **Reactivate** – invoked on reactivation of a previously deactivated route
- **Add** – invoked when a new activity is added or an existing activity is moved to a different day or resource. This launch condition is not invoked for prework activities (regular and reopened only).
- **Start** – invoked on activity start. This launch condition is not invoked for prework activities (regular and reopened only)
- **Complete** – invoked on completion of a started activity
- **Cancel** – invoked when an activity is canceled
- **Not done** – invoked when the status of a started activity is changed to not done
- **Delay** – invoked on activity routing run delays if the activity duration after the `Delay` action exceeds the threshold value (in minutes)
- **Suspend** – invoked when a started or a pending activity is suspended. This launch condition is not invoked for pre-work activities

Note: If the suspend action is performed for a started activity, a new `suspended` activity is created, and the launch condition is invoked for the newly-created activity (with the suspended status). In this case, both the pending and the suspended activities have the same property values, and the suspended activity has no inventory. However, once an activity is created it is a separate activity, so when a message executed a few seconds later it is going to be applied only to one of these activities, but not to the both of them.

A *Move activity* is invoked when an existing activity is moved to another resource or day. This launch condition is not invoked for prework activities.

The messages generated by the Move activity launch condition refer to the origin resource. In order to retrieve information about the destination resource, use the `destination_resource` block

In order to retrieve information about the destination resource and date, use the following placeholders:

- `destination_resource_id`
- `destination_resource_external_id`
- `destination_resource_name`
- `destination_date`

The `Resource changed?` and the `Day changed?` message blocking conditions can be used to determine if the move is to be performed to another resource or to another day. For more information, see *Working with Launch Conditions*.

How do the launch conditions work?

Launch conditions are the system events that trigger a message scenario. The Message Scenarios page displays information about launch conditions for the selected scenario.

Message scenarios are not initiated unless and until something happens to trigger them. The event that sets the message scenario in motion is called a launch condition, and these events are predefined by Oracle Fusion Field Service. Launch conditions include events such as the delay of an estimated arrival time, the reassignment of an activity, or the installation of inventory. You define the launch condition that sends a specific message to a designated recipient using the delivery channel you identify at the time you want it to be sent.

You can specify multiple launch conditions for a single message scenario, and whenever one of those conditions is detected, the message scenario begins to run through the steps of the scenario. However, while message scenarios can have multiple launch conditions, each launch condition can be associated with only one message scenario because the system has to know which scenario to launch when the launch condition is detected.

The two types of launch conditions include action-driven and condition-driven. Action-driven launch conditions are those events that immediately launch the message scenario when they occur, for example, activating a route or completing an activity. Condition-driven launch conditions are determined by polling the system periodically to see if certain conditions have been fulfilled and, if they have, then launching the message scenario. For example, Oracle Fusion Field Service checks to see whether the current time is within a notification window for the start of a delivery window or in the time frame during which an escalation notice should be sent. So there is not a specific action that launches the message scenario for condition-driven launch conditions, but rather the passage of time that indicates the message should be sent now.

The **Launch conditions** section displays the scenario's existing launch conditions and lets you add and remove conditions. A numeric indicator lets you know how many messages are in the queue for each of the launch conditions and lets you estimate the potential results of any changes you make to the scenario.

> **Note:** If the number of messages is greater than 999, the indicator displays the number in thousands, denoted by the letter k. For example, 5,000 messages will be indicated as 5k. If the number of messages is 1,000,000 or greater, the indicator displays the number in millions, denoted by the letter m. For example, 12,000,000 messages is displayed as 12m.

You can remove a launch condition by clicking the x in the upper right corner of the condition indicator.

How do I change resource type of a Manager, a Dispatcher, or an Administrator?

Sometimes, you may have to change a Manager, a Dispatcher, or an Administrator to a field resource. When you do this, the mobile worker is created and the Manager, Dispatcher, or Administrator is not available anymore.

1. Click the hamburger icon and then click **Resources**.
2. Type the resource name for which you want to change the Resource Type in the **Search** field.
3. In the search results, click the required resource name.

4. On the **Resource Info** page, click the stack icon and then click **Edit**.

5. In the **Resource Type** field, select a field resource.

6. Click **Submit**.

   The mobile worker is created and the Manager, Dispatcher, or Administrator is not available anymore on the **Resources** page.

Related Topics
   • Change the Resource Type of a Mobile Worker

How do I add an activity bundling rule to optimize the workload?

When you create an activity bundling rule to optimize workload, activities that satisfy the rule are assigned to the same resource, so that the resource performs the activities in a single visit. You can achieve this either using automatic scheduling by Routing or by assigning the activities manually through the Assignment Assistant. This way you reduce the duration of same-site activities and improve the utilization of resources.

1. Click **Configuration** > **Bundling Rules**.

2. Click **Add Bundling Rule**.

3. Complete these fields:

   ○ **Label:** Enter a label for the activity bundling rule. APIs use this label to identify the bundling rule.

   ○ **Active:** Select the check box to make the activity bundling rule Active. The application calculates activity bundles only for the rules that have a status of Active.

   ○ **Name:** Enter a name for the activity bundling rule in the English language and other languages that are required by your organization.

4. To add the activity bundling keys, click **Add Key**.

   a. On the **Add bundling key** dialog box, select the activity property that you want to identify as the bundling key.

      Among the standard fields you can select appt_number, caddress, ccity, czip, customer_number, and aworktype. Among the custom properties you can select string, integer, and enum types of properties.

      Routing compares the values defined in the activity fields against the specified criterion. Activities are grouped together as a visit, only if the values of all activity bundling keys match the specified criterion. For example, if you select Work Order [appt_number] as the bundling key, Routing bundles all the activities that have this work order.

   b. Select Take the entire value of short fields to define the maximum limit of characters that's taken from the value of a field or property selected as the bundling key. Deselect this check box to define the maximum length manually.

   c. Enter the maximum length of the field or property to be considered as the bundling key in the Length field. This number must be between 1 and 64.

5. To create a bundling key to optimize the workload, select **Group same-site activities into a Visit**.

   Routing identifies future activities based on the bundling keys and schedules them to the same day and assigns them to the same mobile worker. You can create only one bundling rule for optimizing workload.

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6. Use the slider and set the lower and upper limits of ratio for the duration of bundled activities.

This is the ratio of the average duration of activities that are part of a bundle (except for the first one) to the duration that's currently estimated for such activities. This ratio is applied to the original estimate to get the estimated duration of bundled activities. The ratio isn't applied to the estimated duration of the first activity of the bundle. The first activity continues to have the same duration as a similar standalone activity. You can also see the value calculated by the application based on the duration reported by the mobile workers. The final ratio that's applied to the estimated durations of the bundled activities, which isn't the first, is within the lower and upper limits set here. So, if the calculated ratio lies within the limits, that value is used. If not, then the limit closet to the calculated value is used.

You can use the limits to override the ratio to be used for the duration of non-first bundled activities. To override, set both the lower and upper limits to the value that you want to use. Because, the application always respects the limits, it uses the value you've set. For example, if your desired ratio is 80%, then set both the lower and upper limits to 80% to use this always, regardless of what the calculated value is. Similarly, to disable this feature and to have the application behave the way it used to, set the lower and upper limits to 100%.

For more information, see the Bundling of Activities section in the Using Routing guide.

7. Click **Add**.

The activity bundling rule is added; you can't add anymore rules to optimize workload.

How do I format date and time in a Message Scenario?

The message content generator can use the date and time formatting patterns listed here. Content for all the below listed patterns are generated using the locale en_us utf-8. For information about the default values and validation rules for date and time fields, for more information, see *Default Values and Validation Rules*.

To use the pattern, write it after the placeholder, using the '|' sign as the delimiter. For example:

```
{date} = 2006-07-19
{ETA} = 16:00

{ETA|%R} = 16:00
{ETA|%H:%M} = 16:00

{ETA|%r} = 04:00:00 PM
{ETA|%I:%M %p} = 04:00 PM
{ETA|%I:%M:%S %p} = 04:00:00 PM

{date|%A, %d %b %G} = Wed, 19 Jul 2006
{ETA|%A, %d %b %G %I:%M} = Wednesday, 19 Jul 2006 04:00 PM
```

Format	Description
%A	Replaced with the full weekday name.
%a	Replaced with the abbreviated weekday name.
%B	Replaced with the full month name.
%b	Replaced with the abbreviated month name.
%C	Replaced with (year / 100) as decimal number; single digits are preceded by a zero.

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Format	Description
`%c`	Replaced with the time and date.
`%D`	equivalent to %m/%d/%y.
`%d`	Replaced with the day of the month as a decimal number (01-31).
`%E, %O*`	POSIX locale extensions. The sequences `%Ec %EC %Ex %EX% Ey %EY %Od %Oe %OH %OI %Om %OM %OS %Ou %OU %OV %Ow %OW %Oy` are supposed to provide alternate representations. Additionally, `%OB` is implemented to represent alternative months names (used Standalone, without day mentioned).
`%e`	Replaced with the day of month as a decimal number (1-31); single digits are preceded by a blank.
`%F`	Equivalent to `%Y-%m-%d`.
`%G`	Replaced with a year as a decimal number with century. This year is the one that contains the greater part of the week (Monday as the first day of the week).
`%g`	Replaced with the same year as in %G, but as a decimal number without century (00-99).
`%H`	Replaced with the hour (24-hour clock) as a decimal number (00-23).
`%h`	Same as %b.
`%I`	Replaced with the hour (12-hour clock) as a decimal number (01-12).
`%j`	Replaced with the day of the year as a decimal number (001-366).
`%k`	Replaced with the hour (24-hour clock) as a decimal number (0-23); single digits are preceded by a blank.
`%l`	Replaced with the hour (12-hour clock) as a decimal number (1-12); single digits are preceded by a blank.
`%M`	Replaced with the minute as a decimal number (00-59).
`%m`	Replaced with the month as a decimal number (01-12).
`%n`	Replaced with a new line.
`%O*`	Same as `%E*`.
`%p`	Replaced with either "ante meridiem" or "post meridiem" as appropriate.
`%R`	Equivalent to `%H:%M`.
`%r`	Equivalent to `%I:%M:%S %p`.
`%S`	Replaced with the second as a decimal number (00-60).
`%s`	Replaced with the number of seconds since the Epoch, UTC (see mktime(3)).
`%T`	Equivalent to `%H:%M:%S`
`%t`	Replaced with a tab.
`%U`	Replaced with the week number of the year as a decimal number (00-53) with Sunday being the first day of the week.
`%u`	Replaced with the weekday as a decimal number (1-7) with Monday being the first day of the week.

Format	Description
`%V`	Replaced with the week number of the year as a decimal number (01-53) with Monday being the first day of the week. If the week containing January 1 has four or more days in the new year, then it is week 1; otherwise it is the last week of the previous year, and the next week is week 1.
`%v`	Equivalent to `%e-%b-%Y`
`%W`	Replaced with the week number of the year as a decimal number (00-53) with Monday being the first day of the week.
`%w`	Replaced with the weekday as a decimal number (0-6) with Sunday being the first day of the week.
`%X`	Replaced with the time.
`%x`	Replaced with the date.
`%Y`	Replaced with the year with century as a decimal number.
`%y`	Replaced with the year without century as a decimal number (00-99).
`%+`	Replaced with the date and time (the format is similar to that produced by date(1)).
`%-*`	Suppress padding when performing numerical outputs.
`%_*`	Explicitly specify space for padding.
`%0*`	Explicitly specify zero for padding.
`%%`	Replaced with `%`.

How do I create a property in Oracle Field Service that accepts both file attachments and URLs?

Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

The File property type supports transferring of files such as documents, photos, or signatures. This means, you can upload MIME types such as .gif, .jpg, .pdf, .mpeg, .zip, html, .wav, or .doc files for activities.

Note: You can create a string property if you want to include free text boxes, URLs, phone numbers, and email addresses. For more information, refer to *Create and Format a String Property*.

1. Click **Configuration** > **Properties**.
2. Click **Add New**.
3. Select **File** from the **Property Type** drop-down list.
4. Enter a name for the property in the **Property Name** field. Enter the name in English and in all the languages that are active in the application.

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This is the name that's displayed on the context layout structure and any page to which the property is added.

5. Enter a label for the property in the **Property label** field.

6. Enter a hint that you want to display when a user hovers over the field name in the **Property hint** field. Enter the hint in English and in all the languages that are active in the application.

7. Select the entity to which the property belongs, in the **Entity** field.

8. Select one of these options for the **GUI** field:

Option	Description
File element	Select this option to upload a file. When uploaded, the file displays as a text link in the user interface. These fields are displayed: ○ **File size limit:** Select the maximum file size you want to allow for File elements in Oracle Fusion Field Service Mobile for Android and iOS and Oracle Fusion Field Service Core Application. This field is displayed only for the File element option. The default and the maximum size allowed is 5 MB. This limitation doesn't apply to the APIs. ○ **Allowed MIME types delimiter:** Select whether you want to display separate allowed MIME types with commas, or you want to display each allowed MIME type on a new line. ○ **Allowed MIME Types:** Click the required types of files you want to allow for upload.
Signature element	Select this option to capture the resource's signature. **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.
Image element	Select this option to enable the user's device to capture and upload the user's photo, and to display the image as a thumbnail. These fields are displayed: ○ **Allow draw on image:** Select this check box to let the user draw on the captured image using a stylus. ○ **Show on map:** Select this option to show the image on the map. ○ **Watermark images with coordinates and date time:** Select this option to add a watermark to an image. The watermark includes the current date and time, UTC offset, and the latitude and longitude. The date and time are recorded in the user's time zone and displayed in the format configured for the user. When the application is opened in a browser, the watermark is added to the image that's selected from the gallery. When the application is opened from the installed app on a mobile device, the watermark is added when a photo is captured using the device. The watermark isn't added for those images that originate from a plug-in. You must add this property to a standard action page for the application to add the watermark. ○ **Maximum picture width (in pixels):** Enter the maximum width the captured image can have. The recommended width is 1000 pixels. ○ **Maximum picture height (in pixels):** Enter the maximum height the captured image can have. The recommended height is 1000 pixels. Maximum resolution limits should be exceed 5000x5000 pixels. The Minimal value is 10 pixels.

9. Select whether you want to copy the property data when an activity is reopened or has a prework activity in the **Clone property data on Reopen or Prework** field.

10. Click **Add**.

The new property type is added. Add this property to the context layout of the page for the user profile for which you want to display.

Related Topics
- File Property MIME types

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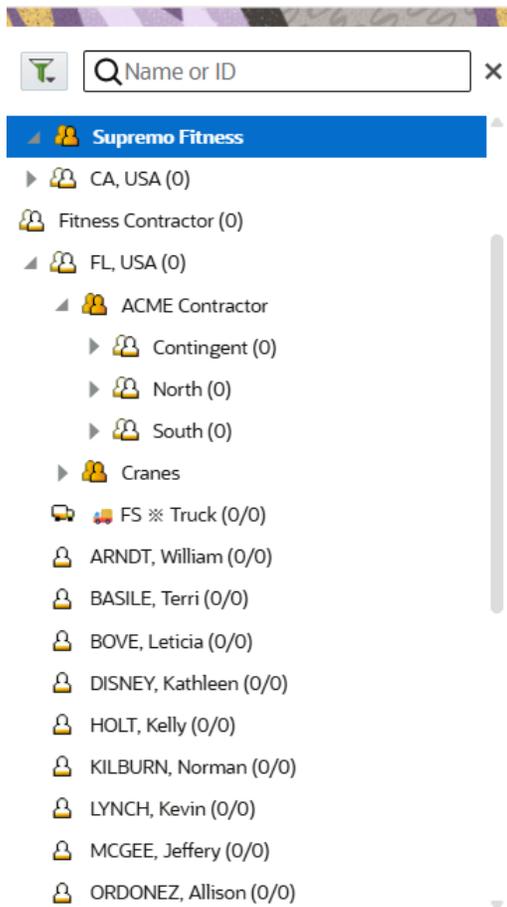# How do I enable quota management at the bucket level?

You can enable quota management only at a bucket level.

> **Note:** Forecasted data is available only for the quota enabled bucket. If the user clicks a group/parent resource, the following message is shown: Select a Quota Management enabled Bucket. By default, the first available bucket in the tree is loaded.

You can manage quota for a:

- **Region:** Create a group for all the resources of a specific region and then create a bucket inside that group to use it for the quota management.

- **Workforce:** Create a single bucket for the entire workforce and then divide the workforce into various groups within the bucket.

The bucket structure looks like this:

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Quota of a group or a bucket with the "child" capacity areas display the sum of quota of all the child buckets. You can't edit quota at the aggregate level.

To enable quota management at a bucket level:

1. Sign in to **Oracle Fusion Field Service** as a user who has access to the **Quota** module.
2. Select **Navigation Menu** and click **Quota**.
3. Select **Configuration** and click the plus icon (+) in the left pane.
4. In the **Add Capacity Area** dialog, select the bucket that you want to use as a capacity area.
5. Click **Add**.

   The quota management feature is enabled for this bucket and the bucket is displayed in the resource tree. The **Quota Configuration** page is displayed.
6. Configure the quota bucket as required, and click **Save**.

   To stop using a bucket as a capacity are, select the bucket in the resource tree on the **Quota** page and click the minus (-) icon. This operation doesn't remove the bucket from the **Dispatch Console** resource tree, but it only disables the bucket from being used as a capacity area.

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What details are displayed on the Map view?

Use the **Map view** to see the day's activities, a resource's route, near by resources, non-scheduled and not assigned activities. Activities for the selected resource appear both on the map, and in a chronological list on the right side of the page. Non-scheduled and not unassigned activities are marked based on the settings that your administrator has configured.

This screenshot shows the Map view for a resource:
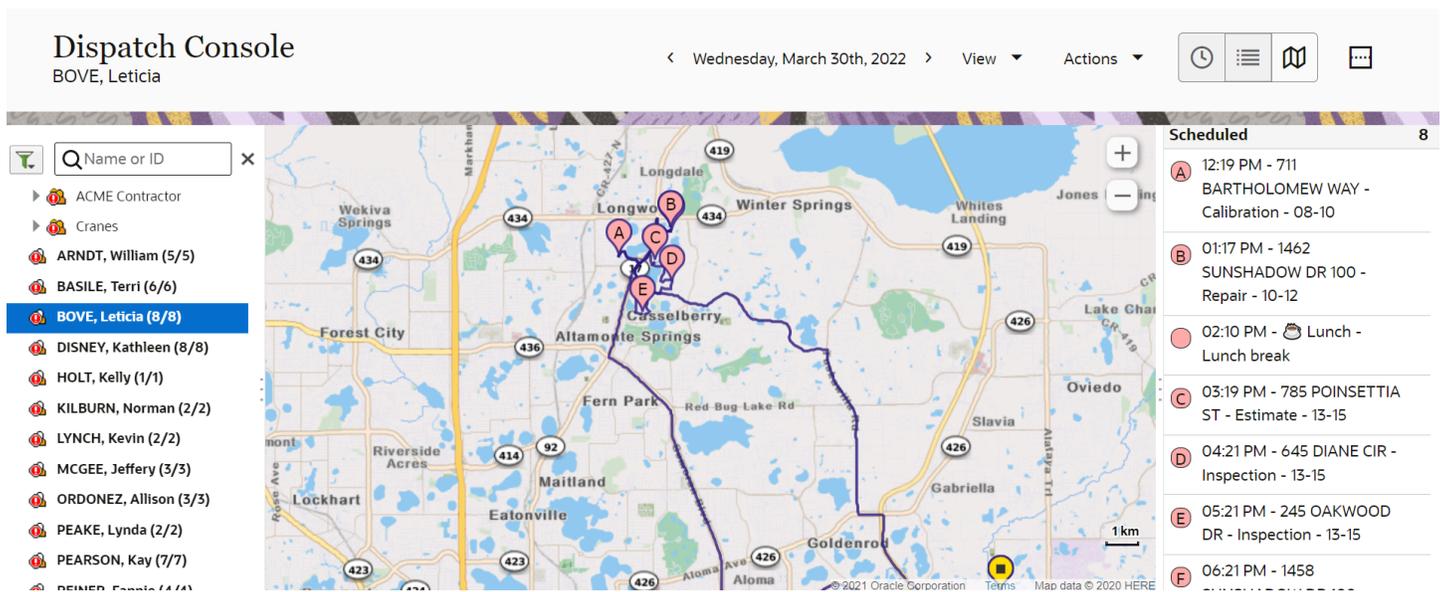
The map view highlights:

- Activities assigned to the resource
- Route to reach the activity location

The Map view also supports the following capabilities for better navigation and readability:

- **Street Names:** The display of street names provides better visibility and readability, helping you easily identify streets and navigate your route.
- **Map Tiles:** The map tiles provide sharper, crisper and detailed visuals for an overall clearer and more readable map experience.
- **One-Way Street Arrows:** The visibility of one-way street arrows makes it easier to interpret the direction of traffic flow on the map.

Note: When the **Location is private** setting is enabled, the resource's Start or End location is hidden from the Dispatch Console and Route Map for all other users. This setting helps protect home addresses or other sensitive locations. The logged-in resource can still view their own location on the Route Map. For more information, see the Manage Resource Locations section in the Using Core Application guide.

The map view uses the same color codes as the other views. The map view displays only the activities for addresses that can be found. Resolved addresses are marked with a letter or a plus (+) sign while the unresolved addresses appear in the list without a marker. If Google maps is enabled during set up, a satellite view layer icon is shown.

The activity marker varies based on location accuracy:

- If the activity has **high accuracy coordinates**, it's indicated with a bubble map pin showing the address, intersection, or the location provided by the customer.

- If the activity **doesn't have high accuracy coordinates** and is located within a relatively small area (3 kms and less) , a bubble map pin with a blue radius indicating the size of the area is displayed.

- Activities located in vast areas (larger than 3 kms), such as large regions or city-level accuracy, aren't displayed on the map. These thresholds might vary by region or activity type.

A red border around an activity marker indicates that the location is outside of the company boundaries, as configured in **Business Rules**. The coordinate status for these activities might show as invalid. The GPS travel-related complaints and alerts are disabled for activities with multiple travel segments.

This view helps visualize activity distribution within a geographical region, making it easier to understand how a resource moves through the route.

Oracle Fusion Field Service includes HERE Maps support for operations in Japan. When the application is configured with Japan as the default geocoding country, maps automatically display higher street-level detail, improved road geometry, and clearer visual representation of activity and resource locations. This enhancement requires no additional configuration or action and improves clarity across both web and mobile experiences. Using the HERE Maps for operations in Japan, you can:

- Read streets, intersections, and local geography more easily when viewing Japan-based locations.

- Interpret nearby surroundings faster because the map presents cleaner and more recognizable street layouts.

- Confirm an activity's exact location more confidently because surrounding roads and landmarks appear clearly.

- Assess the travel environment more easily, especially in dense or complex areas.

- Distinguish activity clusters and nearby routes more effectively because the map shows road networks with greater clarity.

- Make dispatch decisions with more confidence by seeing how work is distributed across the region.

How do I display activity markers on the map?

You can display activity markers on the map, to differentiate between activities, and to view specific activities such as activities that are at risk.

1. To view the markers for non-scheduled activities in the Dispatch Console:
    a. Go to **Dispatch Console**.
    b. Click a bucket or group in the Resource tree.
    c. Click the **Map** icon and then select **Non-Scheduled** or **Not Assigned**.
2. To view the markers on the Route map:
    a. Click a bucket or group icon on the Resource tree.
    b. In the hint, click the **Route** icon.
    c. Click the map icon and then select the **Scheduling layer**.

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Results:

Higher priority markers display on the map, when these two conditions satisfy:

- There are many activities in the same location, or activities are displayed in a clustered location.

- Activities have different map marker priorities.

Markers with different priorities display separately in clustered locations as you zoom in on the map, unless the location is the same. Activities that are at risk and are displayed as pink markers have higher priority than normal activities with configured markers. When an activity has no resolved coordinates, then it's marked with a crossed bubble in the right panel.

How do I configure the Equipment List page?

You must configure the Inventory identifier Context Layout Structure page to view the inventory details on the Equipment List page.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to configure the **Inventory identifiers** page.
4. Under the Inventory section, click **Identify equipment by**.

   The **Inventory Identifier** Context Layout Structure appears.
5. To add a new column to the inventory table, add a new property.
6. Click **Add new visibility** and add rules to hide or show the columns.
7. Change the order of properties to the order in which you want to display the columns of the table.

   The columns are added to the inventory table.
8. Click **X** or **Close**.

   These rules apply to the columns that you configure here:
   - The columns of the table don't support custom styles.

   - The column order corresponds to the order you've configured here.

   - If a column name is longer than the column width, then the full name shows as a tool tip.

   - If there are more columns than can be shown on the page, the horizontal scroll bar appears.

   - By default, Quantity is shown as the extreme right column and is fixed on the right side of the page, if there's a scroll bar.

   - Required inventory displays first with the columns Inventory type, Inventory Model, Missing Quantity, and Quantity. You can't configure the columns for this section.

   - Pool statements are expanded by default and saved after you collapse or expand them.

   - You can hide the columns using the visibility conditions on the 'Inventory identifier' context layout, if there's no value.

How do I create a Where is My Technician theme?

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> **Note: Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Configure Where is My Technician*. We recommend that you update your bookmarks accordingly.

You must create a theme for Where is My Technician to add the details that you want to show your customers. You can create multiple themes such as themes according to the services you provide (for example, telephone services, computer repair services), themes based on regional languages, or themes based on the preferences (such as location tracking enabled, feedback enabled). Users with the Oracle Fusion Field Service Professional subscription can create a maximum of five themes. And, users with the Oracle Fusion Field Service Enterprise subscription can create a maximum of 25 themes.

1. Click **Configuration** > **Themes**.
2. Under **Where is My Technician**, click **Add WMT theme**.
3. On the **Add WMT Theme** page, enter a label for the theme.
   Later, you have to add this label to a message scenario to get the URL, so enter a meaningful label.
4. Enter a description for the theme.
5. Click **Add**.
   The **Edit theme** page appears. You can continue with creating the theme, or you can click **Save** and edit it later.

How do I reset password for an admin user?

You can reset the password for an existing administrator from the Oracle Fusion Field Service Service Console.

To reset the password for an existing administrator :

1. Sign in to Oracle Fusion Field Service with your credentials and open **Service Console**.
2. Click the menu on the right of the environment for which you want to reset the admin password.
   The **Reset Admin User** dialog box appears.
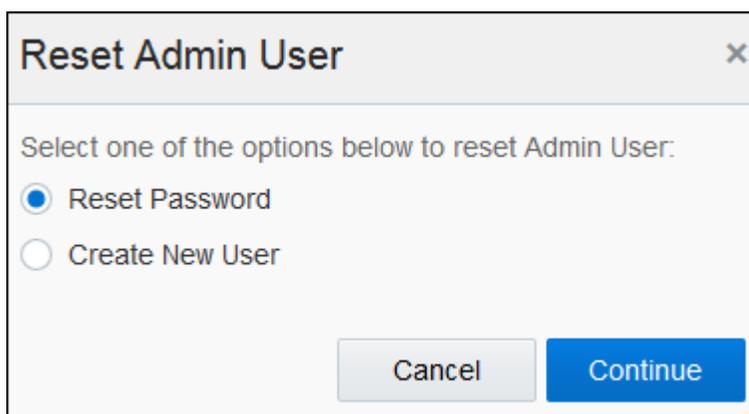
3. Select **Reset Password** and click **Continue**.
4. Enter the admin user name in the **Username** field.

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5. Click **Generate Password**.
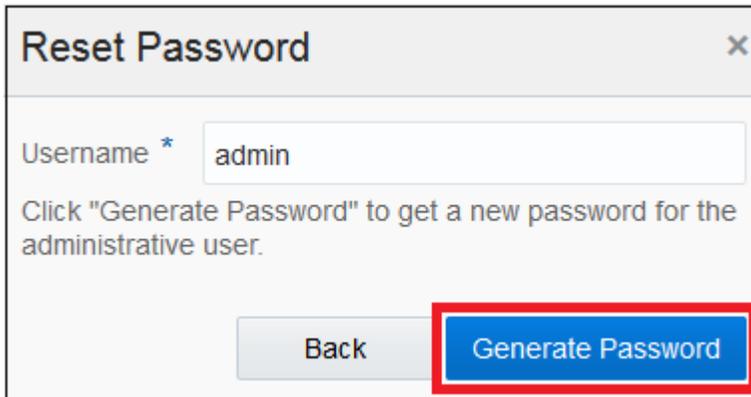
A confirmation window appears.

> **Note:** You can't reset the password for users that are associated with the 'SAML', 'LDAP', and 'OpenID' Login policies.

How do I create a new admin user?

You can create a new admin user from the Oracle Fusion Field Service Service Console.

To create a new admin user:

1. Log in to Oracle Fusion Field Service with your credentials and open **Service Console** .

2. Click the menu on the right of the environment for which you want to create a new admin user.
   The **Reset Admin User** dialog box appears.

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3. Select **Create New User** and click **Continue**.

   The Create Admin User dialog box appears.
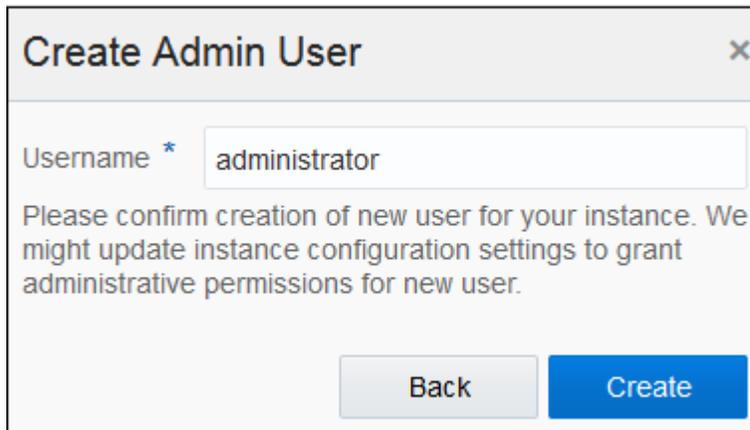
4. Click **Create**.

   A confirmation dialog appears and shows 'Admin user has been created successfully'.

How do I change the user type of a resource in Oracle Field Service?

Sometimes, you may have to change a mobile worker to a dispatcher or manager. When you do this, the resource becomes inactive and a user is created.

1. Click the hamburger icon and then click **Resources**.
2. Type the resource name for which you want to change the Resource Type in the **Search** field.

   The matching results appear.
3. Click the required resource name.

   The **Resource Info** page appears, with all the details of the resource.
4. Click the stack icon and then click **Edit**.

   The **Edit Resource** page appears.
5. In the **Resource Type** field, select Manager/Dispatcher/Admin.
6. Click **Submit**.

   The resource becomes inactive, and a user is created.

Related Topics

- Change the Resource Type of a Manager, a Dispatcher, or an Administrator

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How do I optimize travel key configuration?

For accurate estimations of activity and travel durations, you must configure the activity and travel duration keys in such a way that the key values generated are neither too specific nor too broad. If the key values are too specific, Oracle Fusion Field Service wouldn't have enough reported data to estimate durations for each key value. If the key values are too broad, the accuracy of the estimations might be compromised.

For example, if the configured travel key generates travel key values that are too specific, each travel key value covers only a small geographical area. This leads to a situation where there are too few activity locations in each travel key, resulting in very little reported data between different pairs of travel keys. The application would take a longer time to generate accurate travel estimations between all pairs of travel keys and would also use the default travel duration very often, since there wouldn't be enough activity locations and reported travel data for each travel key.

On the other hand, if the configured travel key is too broad, each travel key value covers a large geographical area. This results in a huge variation in the reported travel data from one travel key to another. This variation affects the overall accuracy of the travel estimations.

This is also true for activity duration keys if they're too specific or too broad.

Conditions for a Key to be Considered Sub-Optimal

The conditions for a key to be considered sub-optimal are:

Activity Duration Key

- An active activity duration key is considered as too broad if it generates five (5) or fewer unique activity duration key values and shows very high variations in the reported durations for the activities belonging to the same key value.

- The key is considered as too specific if more than 40% of the activities don't have enough reported data (at least 25 activities) for the key they belong to.

Travel Duration Key

- A Travel duration key is considered as too broad if more than 40% of activities use keys that are very large (greater than 200 sq km/75 sq mi).

- A Travel duration key is considered as too specific if more than 40% of activities use keys that don't have enough reported data (at least 15 activities) for the key they belong to.

Notification Message

Oracle Fusion Field Service notifies Administrators if the configured activity or travel duration keys are either too specific or too broad to provide accurate duration estimations. If the configured keys are found to generate keys that are too specific or too broad, a banner message is displayed on the Configuration page. You can click 'Configure' to open the Statistics page and modify the keys appropriately. A similar banner is also displayed on the Statistics page.

The notification helps you take corrective actions based on the suggestions provided in the message. It also ensures that good quality of duration keys are available, which helps in estimating more accurate activity and travel duration.

You can see more details about the corrective actions below the configured keys. Apart from the banners, the administrator who last modified the key gets a notification in the Collaboration > Notification tab informing about the configured keys being sub-optimal.

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Are the configured keys too specific or too broad is checked either when the daily statistics are calculated automatically, or when the administrator applies the configuration changes manually on the Statistics page. This check is performed only for the 'Active' activity duration key. The inactive duration keys aren't checked.

How do I avoid data mismatch when working with Oracle Autonomous Data Warehouse?

This section provides a list of user list fields.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

Name	Label	Data Type	Required	Description
End of blocking	security_user.login_blocked_to	DATE		User is blocked until the specified date
Failed login attempts	security_user.login_attempts	INTEGER		Number of consecutive sign in tries fo
Last login	security_user.last_login	DATE		Date and time when the user last logg
Last password change	security_user.last_password_change	DATE		Date and time when the user has char
Name	security_user.uname	VARCHAR2		Name of the user.
Registered	security_user.sucreated	DATE		Date and time when the user was crea
Resource External ID	provider.external_id	VARCHAR2		External application identifier for the r field can be empty, if the main resourc
Resource ID	provider.pid	INTEGER		Unique internal identifier for the resou can be empty, if the main resource isn
Resource Time Zone	time_zone.name	VARCHAR2		Standard Oracle Time zone name
Status	security_user.sustatus	VARCHAR2		Status of the user (active, inactive or c

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Name	Label	Data Type	Required	Description
Updated	security_user.suupdated	DATE		Date and time when the user was upd...
User Login	security_user.ulogin	VARCHAR2	True	The User Login serves as the primary ... might cause a new row to be created i... record.
User Type Label	user_type.label	VARCHAR2		Label of User Type for which the user i...
Week Start	security_user.suweek_start	VARCHAR2		Starting day of the week for the user
*	User custom properties			

How do I use the Language Expressions in default values and validation rules?

The language containing operators and functions is used for configuring default values, validation rules, and visibility of fields and properties.

The "Default Values", "Validation Rules", and "Visibility" fields of Visual Form Editor only work with an enumeration property's index and not its actual value. You cannot use the value in functions such as if, concat, or in various operators. If feasible, you can try setting the same string for both, the value and index for the properties you must use in the "Default Values", "Validation Rules", and "Visibility" fields.

The language is described in this table:

Argument	Description	Usage Pattern	Use in		
			Default rules	Validation rules	Visibility
Variables, entities, and properties					
this	Value of current element	this > 100	No	Yes	No
entity.property entity.`label`	Value of property of entity. Use for wrapping labels with spaces.	activity.aworktype = 1	Yes	Yes	Yes
White spaces and comments					

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Argument	Description	Usage Pattern	Use in		
[space], [tab], [line break]	Assuming multiple white spaces as single space. Assuming white space as separator.	this + 100	Yes	Yes	Yes
/* Any comment */	Assuming comment block as single white space.	activity.PROP_A1 > 77 /* 77 - is predefined parameter */	Yes	Yes	Yes
Logical operators (case sensitive, operands will be converted to Boolean)					
OR	Logical disjunction	a OR b	Yes	Yes	Yes
AND	Logical conjunction	a AND b	Yes	Yes	Yes
Unary operators					
NOT	Logical not (operand will be converted to Boolean)	NOT (a AND b)	Yes	Yes	Yes
—	Arithmetic inversion (operand will be converted to Number)	- activity.PROP_A1 this * (- activity.PROP_A2)	Yes	Yes	Yes
Equal Comparison Operators (case sensitive for Strings). Operands will be converted to String					
=	Equal to	a = b	Yes	Yes	Yes
<>	Not equal	a <> b	Yes	Yes	Yes
Comparison Operators (case sensitive for Strings). Lexicographic ordering is used to compare strings. Use toNumber() for arguments if number comparison is needed.					
<	Less than	a < b	Yes	Yes	Yes
>	Greater than	a > b	Yes	Yes	Yes
<=	Less than or equal to	a <= b	Yes	Yes	Yes
>=	Greater than or equal to	a >= b	Yes	Yes	Yes
Arithmetic Operators (all operands will be converted to Number, any arithmetic operation with Infinity/NaN returns Infinity/NaN)					
+	Addition	a + b	Yes	Yes	Yes
-	Subtraction	a — b	Yes	Yes	Yes
*	Multiplication	a * b	Yes	Yes	Yes
/	Division **Division by zero:** Division by zero returns infinity, which will be converted to "" (empty string).	a / b	Yes	Yes	Yes

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Argument	Description	Usage Pattern	Use in		
Additional Operators (case sensitive)					
string CONTAINS needle	Return true if `string` contains `needle` (operands will be converted to String)	this CONTAINS "A0" activity.PROP_A1 CONTAINS concat("-", this) NOT activity.PROP_A2 CONTAINS activity.PROP_A3	Yes	Yes	Yes
value IN (value1[, value2, [, valueN]]) maximum 1000 arguments	Returns true if `value` is equal to any `value1`... `valueN` (value will be converted to String)	this IN (1, 2, 3, 4) activity.PROP_A1 IN ("value1", "value2") NOT activity.PROP_A2 IN ("value1")	Yes	Yes	Yes
value BETWEEN (min, max)	Returns true if `value` is equal to `min`, equal to `max` or between them. The same as: value >= min AND value <= max (operands will be converted to Number)	1 BETWEEN (0, 100) NOT 200 BETWEEN (99, 100)	Yes	Yes	Yes
Functions (case sensitive)					
if(condition, value1, value2)	Function which returns value1 argument if condition is true and value2 argument if condition is false (condition will be converted to Boolean)	if(activity.PROP_A1 > 0, 1, 0)	Yes	No	No
now(string)	Returns current date in required format. View corresponding section for details	now("yyyy-MM-dd HH:mm:ss")	Yes	No	No
toNumber(value)	Formatting object to required number format	toNumber(activity.PROP_A1) toNumber("123.45")	Yes	Yes	Yes
toString(value)	Formatting object to string	toString(activity.PROP_A1) toString(123.45)	Yes	Yes	Yes
concat(string1, string2 [... ,stringN]]) maximum 20 arguments	Concatenate strings (all operands will be converted to String)	concat(this, "#", activity.PROP_A1)	Yes	Yes	Yes
toLowerCase(string)	String to lower case (operand will be converted to String)	toLowerCase(activity.PROP_A1)	Yes	Yes	Yes

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Argument	Description	Usage Pattern	Use in		
toUpperCase(string)	String to upper case (operand will be converted to String)	toUpperCase(activity.PROP_A1)	Yes	Yes	Yes
empty(value)	Returns true if `value` is undefined or empty string or NaN or Boolean, false in all other cases	empty(activity.PROP_A1) NOT empty(activity.PROP_A2)	Yes	Yes	Yes

How is my idle time calculated?

You can view your idle time in a separate tile, Idle Time.

The idle time may occur:

- Before the next activity in the route
- Between the current activity and the next activity
- After the last activity in the route

    Idle time is calculated as the time period between the end of one activity (projected or actual) and the beginning of travel to another activity. So, if one activity is expected to end at 9 AM, the next activity is scheduled for 11 AM, and the projected travel time between the activities is 30 minutes, the idle time is one hour and thirty minutes.

How do I optimize route for a fleet with limited range?

The routing dispatchers can now control the mobile workers' travel time and travel distance in a routing plan. The Street Level Routing (SLR) feature helps to optimize the route of a mobile worker using electric vehicles or similar type of fleet with limited range.

You can manage mobile workers' travel time and travel distance in a routing plan using the Street Level Routing (SLR) feature. It helps to optimize the route of a mobile worker who uses electric vehicles or any vehicle with limited range. To optimize daily travel of mobile workers who uses vehicles with limited travel range:

1. Navigate to the **Routing Profiles** page.
2. Select the routing profile to which you want to add the routing plan.
3. Click **Add routing plan** from **Actions**.

    Note: Currently this option is available only for bulk routing plans. If you want to update an existing bulk routing plan, select the routing plan and click **Modify** from **Actions**.

4. On the **New routing plan** screen, expand **Travel time** to see the available settings. If you're modifying an existing routing plan, scroll down the routing plan screen to see the Travel time section.
5. Select **Use SLR** and configure the following settings:

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- Select **Daily travel limit, kilometers and enter a value between 0 and 9,999 kilometers**.

    This sets the maximum daily travel to the specified distance if the route isn't activated yet. For the activated routes, the travel distance is recalculated for the started, completed, and en-routed activities and the daily limit is reduced to the specified value. If a higher value is set for individual mobile workers, the balance value is sent to routing as an individual limit for the respective mobile worker for the day.

- Select **Travel segment limit, kilometers and enter a value between 0.1 and 9,999 kilometers**.

    This sets the maximum distance limit for each segment of travel in a mobile worker's route. This limit helps in optimizing mobile worker's schedules by ensuring that travel between jobs is efficient and within acceptable parameters.

- Set **SLR time limit, %** value to specify the total routing plan runtime to be spent on obtaining SLR data. Recommended value is 70%.

- Select the **optimization goal** to minimize either total travel time or total travel distance for all resources. The available options are:

    - Prefer fastest routes, even if it means the increase of a total travel distance
    - Prefer shortest routes, even if it means the increase of a total travel time

6. Configure other settings as needed and select **Add**. If you're updating an existing routing plan, select **Update**.

How do I view, download, or remove images?

Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

You can download the images taken by mobile workers or view the images in their full-size dimensions. Field workers can view the photos and download them on their mobile devices, if needed. The Download and Clear options are available automatically when you add an image element to a Visual Form Editor. The Download and Clear options are also available for the File attachment and Signature elements.

1. Sign in to Core Application or the installed application.
2. Open the **Activity details**, **Inventory details**, or the **Form history** page.
3. To view the image in full-size, click it.

    The image is displayed in its real size, overlapping the page. Here, real size means:

    - For custom properties: The dimensions specified in the property configuration.

    - For form elements: The default dimensions.

    - Compression applied by the application.

4. To download the image, click the download icon below the image.

    The image is downloaded to your device.

5. To remove the image from the activity or the Form, click the clear icon.

    The image is deleted from the application. The clear icon is available for the fields that have Read-Write or Mandatory visibility.

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How do I use collaboration as a delivery channel?

You can use collaboration as a delivery channel to send alerts of different types of events or situations in Oracle Fusion Field Service to collaboration users (for example, mobile workers, help desk operators, and resources). Also, you can broadcast notifications or alerts to collaboration user groups or help desk groups on occurrence of an event or when a predefined condition is met in Oracle Fusion Field Service.

Before you start

- Subscribe to Collaboration to view the Collaboration option as a delivery channel in the message scenario. View the About page in your environment to verify whether the service is enabled.

- Create collaboration users, user groups, or help desk groups.

  > **Note:** For more information on configuration settings, see the *Configuring Collaboration* section in the *Oracle Fusion Field Service Collaboration Service Guide.*

For example, assume that you want to notify the resource using collaboration as a delivery channel when a activity is created in Oracle Fusion Field Service. Assume that the message scenario, `new appt` is associated with the `Activity is Created` launch condition and has a scenario step, Collab Alert.

Here's what to do

1. Log in to Oracle Fusion Field Service as a Administrator.
2. Click **Configuration**, **Message Scenarios**.
3. Select the **Collab Alert** scenario step.
4. Select Collaboration from the **Delivery Channel** drop-down list in the **Settings** tab.
5. Select one of these options from the **Recipient** drop-down list:
    - Resource: Delivers message to the resource associated with the launch condition. By default, Oracle Fusion Field Service considers the language and time zone of the user associated with the resource. If the collaboration permission isn't configured for the resource, then the message scenario displays a False Method status in the **Messages** tab of the **Activity Details** page for the scenario step.
    - use static address: Enables you to send the message to specific users, user groups, and helpdesks. Click **Add New** and search for the required users, user groups, and helpdesks. Select the required users, user groups, and helpdesks to add them to the **Recipients** section. You must enter at least three letters in the **Search** field to search for the required users, user groups, and helpdesks.
6. Enter the message content in the **Subject** and **Body** fields of the **Patterns** tab.

   The default language of the company is configured on the **Preferences** page, **Language** drop-down list and is selected as the language for the message content. For example, if English is configured as the default language and if the **Subject** and **Body** fields in the **Patterns** tab are populated is English, then regardless of the user's language, the message is sent to the recipient in English.

   However, you can use the **Pattern** tab to specify another language for the message content. You can specify any one of the languages selected from the **Preferences** setting as the language for the message content. For example, if English is configured as the default language and the **Subject** and **Body** fields in the **Patterns** tab is populated is Spanish, then the message is sent to the recipient user in Spanish. However, be aware that the placeholders aren't

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translated; they're always in English. For example if there's a placeholder {activity_status}, it will not be translated; it will be in English.

If the default language isn't configured then English is considered as the default language of the recipient and the message is sent to the recipient in English.

7. Configure the required fields and click **Save**.

The details such as sending time and the selected delivery channel are updated for the Scenario step.

Assume that a new activity is assigned to the resource, Phillip. The message scenario is triggered and the **Collab Alert** scenario step is displayed with the New status in the **Messages** tab of the **Activity Details** page.

When the message alert is sent to the resource, the status in the **Messages** tab of the **Activity Details** page changes to Sent.

> **Note:** If the scenario step isn't configured properly or if the message alert isn't sent to the resource, the status in the **Messages** tab of the **Activity Details** page changes to Failed. However, if a message is invalidated because of an activity-related operation in Oracle Fusion Field Service (such as delete, move, suspend activity), the status in the **Messages** tab of the **Activity Details** page changes to Obsolete.

To view the message alert, log in to Oracle Fusion Field Service using resource's login credentials.

For more information, see the *About Collaboration Window* section in the *Oracle Fusion Field Service Collaboration Service Guide.*

How do I install the asset details plug-in?

Asset Details is available as a Standard plugin in Oracle Fusion Field Service. You can install it from the **User Types & Screens** page.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. Go to **Activity->Asset Details**.

   The **Asset Details Activate Screen** page appears and these sections are displayed:
   - **Properties will be added**. These are the properties that are automatically installed with the plugin. These properties will be available on the **Configuration > Properties** page. If you de-install this plugin in the future, these properties will still remain on the Properties page. Make sure you configure Note Type as a plugin parameter. Note type is the comma separated note type codes of asset notes. You can access Note type codes from the Fusion Manage Contract Note Types.
   - **Existing properties to be used**. These are the properties that are required for the plugin and are currently present in Oracle Fusion Field Service.
   - **Applications**.

     The plugin requires connection to REST API. Select the following applications:
     - Fusion application configured in the OFS Applications screen to authenticate the plugin.
     - Oracle Fusion Field Service application configured in the OFS Applications screen to authenticate the plugin.

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4. Click **Activate** and confirm the activation.

A message similar to "Asset Details Successfully activated" is displayed after the activation.

The following **Activity entity** properties are installed and used as part of Asset Details plugin.

Name	Label	Type	GUI	Description
Asset Id	wo_asset_id	string	text	The asset id of install base asset associated with the activity. This custom property will be populated when the work order sync happens. See, Work Order Created Field Mappings R13 (1.0) in the Integrating Fusion Service with Field Service guide.
Work Order Number	wo_number	string	text	The Fusion work order number associated with the activity. This custom property will be populated when the work order sync happens. See, Work Order Created Field Mappings R13 (1.0) in the Integrating Fusion Service with Field Service guide.
Date	date	field	text	Date when the activity was assigned to route. Based on the activity date, you can view the history, warranty information, future work orders, and past work orders.

How do I refresh an environment with the data from another environment?

You can refresh an environment by replacing the existing data of your Oracle Field Service environment with the data from another environment.

1. Open the Service Console.

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2. Click **Refresh from Another Environment**.

This screenshot shows the Refresh from Another Environment dialog box:

3. Complete these fields:

Field	Action
Source environment	Select the environment from which you want to create a new environment.
Data to copy	Select the type of data you want to copy over to the new environment. The options are: ◦ Configuration ◦ Configuration and data for future ◦ Configuration, data for future, and 7 days from the past You can select the **Configuration** option only when you refresh a production environment. Some configuration elements are included and some aren't when you refresh an environment from another environment. See the Data Copied and Not Copied when Refreshed from Another Environment topic.
Version	Select how you want to handle the version. You can't view this field when the versions of both the environments (source and target) are same. Further, you can't copy the version from the source environment when you refresh a 'Test preview' environment.

4. Click **Continue**.

5. On the confirmation page, click **Refresh** to continue with your selection or click **Back** to change your selection.

You can use the **Start Over** option any number of times for an environment. However, you can use the **Refresh from Another Environment** option for an environment only once a day. If you refresh an environment using the **Refresh From Another Environment** option, it takes more time to process the data. For example, you've three TEST

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environments – Test1, Test2, and Test3. You request refreshing Test2 from Test1, which means you can't request refreshing Test2 on the same day. However, you can request for refreshing Test3 from Test2.

How do I calculate quota for other activities?

Other activities are regular booked activities that don't belong to a capacity category for the selected capacity area. Other activities can be repeating activities (such as lunch breaks) or bulk activities (such as meetings) or shift activities (that are automatically created for different working-time patterns in your org). The Max available and Quota values for repeating, bulk, and shift activities aren't updated immediately because such activities are recalculated periodically.

The minutes used to estimate other activities when service SLA window starts/ends with a given hour:

- If an activity has a **service/SLA window end** value within a given hour, the system tries to use all the remaining minutes from the "window end" till the end of this hour.

- If an activity has a **service/SLA window start** value within a given hour, the number or minutes that can be used in this hour is calculated so as to not exceed the time remaining from the "window start" till the end of this hour.

The 'Other activities' parameter is used in the following calculation:

```
Maximum capacity - Other activities = Activities that can be booked within this time slot
```

The calculated value includes the activities that:

- Are not part of the capacity management

- Belongs to the other time slots

The algorithm performs the following actions for the selected capacity time slot and activity:

- It determines the interval of the working hours (including overnight) affected by the capacity time slot. The interval is equal to the value used for calculating the maximum capacity.

- On the other hand, the algorithm calculates the expected used capacity of an activity for a particular hour is assumed to have started within such hour. The result of this step is the expected used capacity calculated on an hourly basis.

- The resulting Other activities value is calculated as the sum of the expected used capacity values for the hours affected by this time slot.

- If working day is started within a given hour, the number minutes that can be used within this hour is calculated to not exceed the time remaining from the "start" value till the end of the given hour.

- If working day is ended within a given hour, the system tries to use all the remaining minutes from the "end" value till the end of the given hour.

What is the default color scheme configured for activity statuses when creating a new activity type?

Activities that display are classified by color, providing you with a quick view of the status of the day's schedule.

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Your organization chooses the color codes during implementation to suit the colors you prefer.

Color Code	Activity Status
Color: Yellow; Hex: FFDE00	Pending activity (on time)
Color: Pink; Hex: FFAAAA	Pending activity (in jeopardy of being late)
Color: Light Orange; Hex: FFCC99	Not ordered activity
Color: Lime Green; Hex: CCFF00	Pending internal activity or teamwork
Color: Green; Hex: 5DBE3F	Started activity or teamwork
Color: Blue; Hex: 79B6EB	Ended activity
Color: Electric blue; Hex: 99FFFF	Suspended or cancelled activity or teamwork
Color: Humming Bird; Hex: C0FFEE	Travel time
Color: Gray; Hex: CCCCCC	Ended activity
Color: Turquoise; Hex: 60CECE	Not done activity
########	Pre-work, or re-opened activity

How do I export activities from dispatch console?

You can export activities from the Dispatch Console for your business analysis. The activities that you select for exporting can be scheduled for the current, future, or a past date.

1. Open the Dispatch Console.
2. Select a resource or bucket in the resource tree.

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3. Click the date editor and select a past or future date.

   The past date you can select depends on the retention period that's selected on the **Business Rules** page.

4. Click **View** and select **Apply Hierarchically**.

   When you select **Apply Hierarchically**, the report includes the activities of the child resources of the selected resource or bucket.

5. Click **Actions** > **Export**.

   In Time View you can export activities only for a unique date. You can export activities for the current date or a date in the past or future.

6. To export non-scheduled activities, go to **List view** and select **Non-Scheduled** in the date editor.

   The activities for the selected resource or bucket and period are exported as a .csv file. Your administrator can change the fields to be exported from the List view columns context layout page. You can see the progress bar when the .csv file is being generated. If the file can't be generated fully, you can see an error message. If you cancel the export operation, the partially generated file is still available.

How do I enable or disable activation of the route for a user type?

You can now enable or disable activation or reactivation of the route for a particular user type:

To enable or disable activation or reactivation of the route for a user type, use these steps.

1. Sign in to Oracle Field Service as Dispatcher.
2. Click the navigation menu and select **Configuration**.
3. In the **User Types** configuration page, select the desired user type.
4. Click the **Enable GPS Telemetry** checkbox under the **Permissions** section.
5. To enable route activation, clear the **Disable route activation if geolocation is not enabled on device** checkbox
6. To disable route activation, click the **Disable route activation if geolocation is not enabled on device** checkbox

   This indicates that the route is not activated. Location services are turned off on the device.

Results:

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When you sign in to Oracle Fusion Field Service and try activating the route, you'll see a warning message to enable location services first. Warning messages are as follows:

- Browser:

    o Error Message:

    Route Activation requires your location.

    o Action:

    Enable location sharing on your device. Once enabled, refresh the browser page and "allow" location access when requested.

- iOS app:

    o Error Message:

    Route Activation requires your location.

    o Action:

    Enable location access in your iOS settings.

    To enable location services, navigate to Device Settings, Privacy, Location Services

- Android app:

    o Error Message:

    Route Activation requires your location.

    o Action:

    Click the Enable Now button to turn on location services.

How do I turn on smart location?

Before resources, dispatchers and other users can use the Smart Location features, you must turn them on.

To enable the features:

1. Click the navigation button to open the side bar menu and click **Configuration**.
2. Click **User Types** under Users and Security.
3. Click the **Enable Smart Location alerts** check box listed under **Permissions** section.

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How do I receive collaboration notifications in iOS device?

When a new collaboration message triggers from Oracle Field Service, you'll get an update in the notification area of the mobile app installed on iOS.

This happens even if you're not using the application, but the application is active in the background. You'll find the events related to collaboration messages, activity updates, and so on displayed in the notification area of the iOS app. You can find the notifications in the status bar as an icon.

To receive collaboration notifications on your iOS device:

- You must have enabled the Remote Notifications option on your mobile device.
- The installed app must be run at least once on your mobile device.
- On supported iOS devices, you can also use voice commands to act on Collaboration notifications.

What are the key components of collaboration notification message?

By default, all the collaboration notification messages contain some components.

- **Header area** — This component contains App Icon, App Name, and Timestamp.
- **Content Area** — This component displays Content Title and Content Text. The Content Title differentiates the type of Collaboration messages such as:
  - Name of the sender - in case of a one to one message
  - Conference - in case of a conference message
  - Broadcast - in case of a broadcast message
  - New activity - in case of activity broadcast message

The title also contains a count of unread chats in that particular conversation.

- **A Context Text** — This can be the content of the text.

What are the types of collaboration notifications?

You can receive different types of collaboration notification on your installed app.

Badge Notification

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The badge present on the application launcher icon is updated with the unread collaboration chats as notifications. These badges appear automatically when you receive a new collaboration notification and disappear when you click the application or notification banner.

Grouped Notification

A grouped notification has multiple notifications from Collaboration bundled together on the Lock screen. You can tap a set of notifications or expand them to see all the notifications in your list. The group summary provides the number of unread notifications. For example, "3 more notifications."

> **Note:** For any app that supports notifications, you can enable or disable the feature entirely. You can also enable or disable the visibility in Notification Center, on the lock screen, app icon badging, and choose one of the notification styles. You cannot view the notifications if you haven't configured the mandatory settings in your mobile device.

Multiple Notifications

When you receive multiple Collaboration messages of the same category, the messages are grouped and summarized in the notification area. You can also view the information about the unread notifications. You can expand the view and see all the remaining notifications by tapping the notifications.

How do I receive collaboration notifications in Android devices?

When a Collaboration event occurs, users of the installed app receive an update in the notification area of their mobile device even when the application is running in the background.

Here are the prerequisites to enable Collaboration notifications:

- The Remote Notifications option must be enabled on the mobile device.
- The user must be logged in and the application must be running in the background.

Notification Behavior and Use

- Notifications appear in the status bar as an icon.
- Notifications are displayed on the lock screen.
- A sound or vibrating alert is present as part of the notification.
- A new notification appears on the current page.

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How do I receive notifications when Field Service application is running in the background?

Collaboration notifications are available as push notifications within the Oracle Field Service Android and iOS apps. With this feature, you can receive a notification when the application is running in the background.

Collaboration notification provides timely alerts for new Collaboration messages for native mobile app users, whether they are using the application or not.

Note: Such collaboration notifications are displayed only when the app runs in the background.

Prerequisites:

Here are the conditions to use this feature:

- Do not disable remote notifications on the device or for the application.
- Run the application at least once on the device.
- When Oracle Field Service triggers a new Collaboration event, it sends a notification to the Oracle Field Service app (Android OS). The notification alerts the participants of this event who are using the mobile app (Android OS), if the application is running in the background.

Notification Features

Here is a list of notification features:

- Notifications appear on the status bar as an icon.
- Notifications appear on the lock screen.
- A sound or vibrating alert is present as part of the notifications.
- A new notification appears on the current page.
- A new notification alerts the user by blinking the device's LED.
- If a user force-quits the app using the app multitasking UI, the app does not receive remote notifications until the user relaunches it.
- If the application is running in the foreground, the user doesn't receive notifications.

Notification Message Structure

Key components of a notification message include:

- **Header Area**

  The header includes these items:
  - App icon.
  - App Name ("Field Service").
  - Header text (It shows the total number of unread messages and the total number of unread chats at this moment.).
  - Time stamp with an expander icon.

- ○ An indicator to represent the number of pending notification from the same application.
- ○ The structure of the Header area includes:

  - Header area structure when the application is unlocked:

    This image shows the structure of the Header area for an unlocked application:
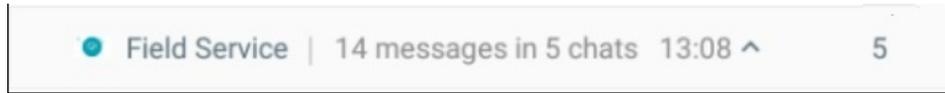
  - Header area structure when the application is locked

    This image shows the structure of the Header area for a locked application:

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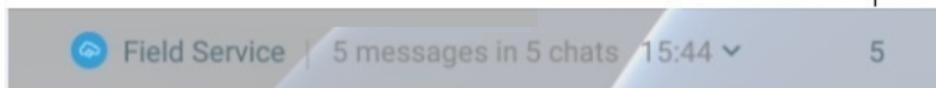
- **Content Area**
  The content includes the most important part of the message - content title and text.
  - ○ The structure of the Header area includes:
    - − Content area structure when the application is unlocked:
      This image shows the structure of the Content area for an unlocked application:
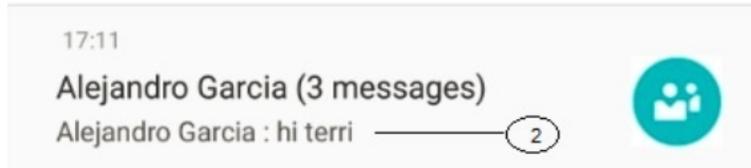
    - − Content area structure when the application is locked
      This image shows the structure of the Header area for a locked application:
      This image shows the structure of the Content area for an unlocked application:
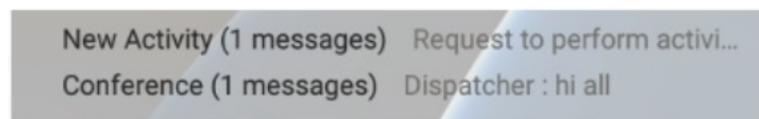
  - ○ The structure of the notification includes:
    - − Content Title: Headline for the collaboration notification is defined in such a way that it should differentiate the type of collaboration messages such as these:
      - ○ Name of the sender- in case of a one to one message.
      - ○ Conference -in case of a conference message.
      - ○ Broadcast -in case of a broadcast message.
      - ○ New activity - in case of activity broadcast message.
      - ○ The title also contains a count of unread chats in that conversation.
    - − Content Text: This can be the content of the text.

Multiple Notifications

When the app displays multiple Collaboration messages of the same type, it bundles and summarizes them as follows:
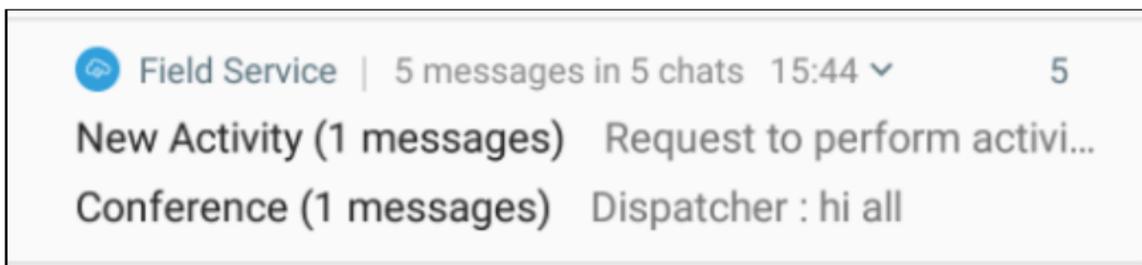
The application can display multiple notifications in a hierarchical way:

- A parent notification displays a summary of its child notifications.

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- If the user expands the parent notification, it expands to display all child notifications.
- The user can expand child notifications to review its entire content.
- The app may display child notifications without the duplicate header information.
- If there is only one child notification, it appears outside the group.

Expanded view

Notification has an expand indicator in the header part of the message, and users can tap the indicator or swipe down the notification body to expand it.

This image shows the notification message details that appear when you expand a message:
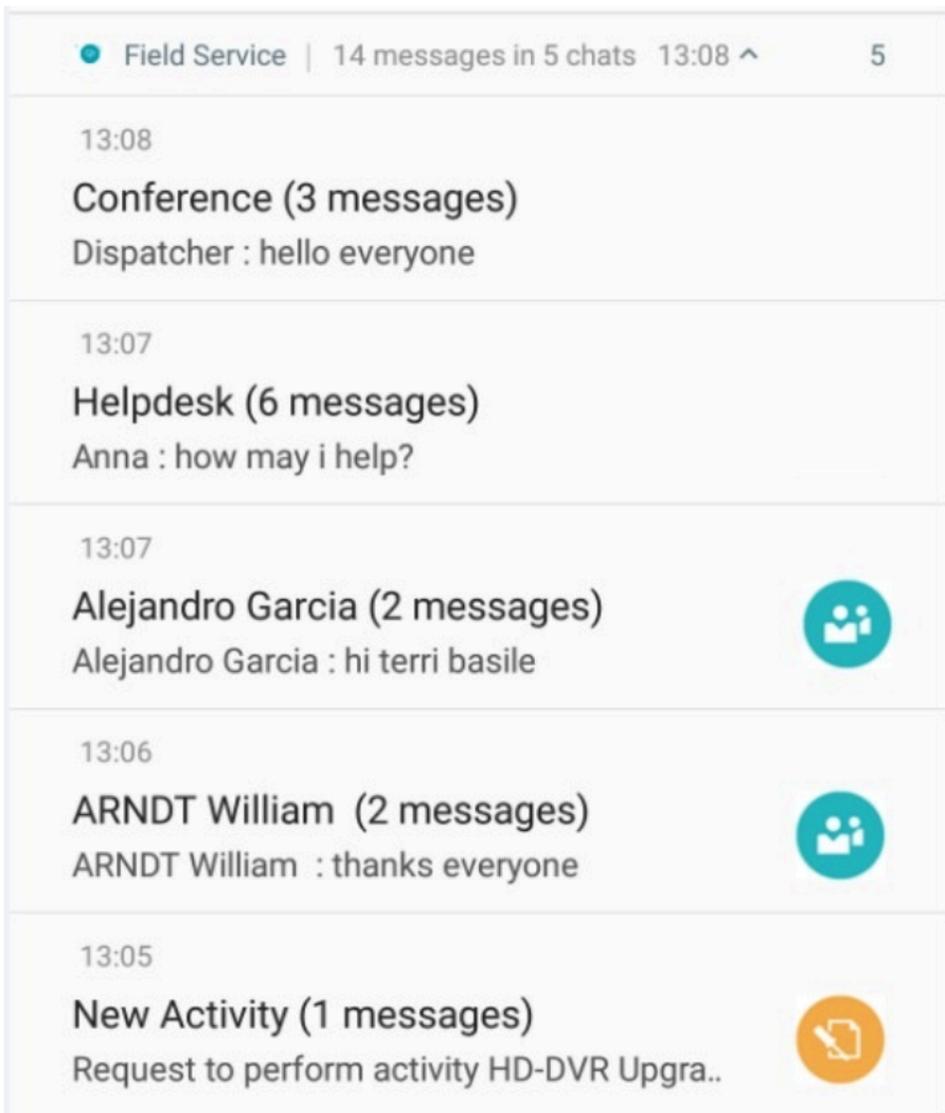
These types of messages are sent as push notifications in the Android and iOS apps.:

- One-to-One conversation between two users:

   This image displays an example of a one-to-one conversation.
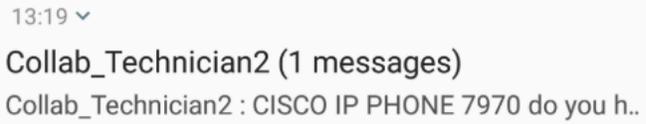
- Conference:

  This image displays an example of a conference message.
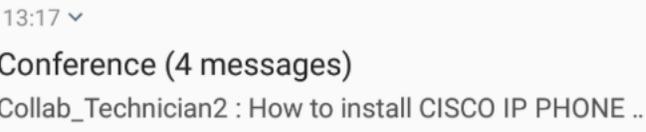
- Broadcast message:

  This image displays an example of a broadcast message.
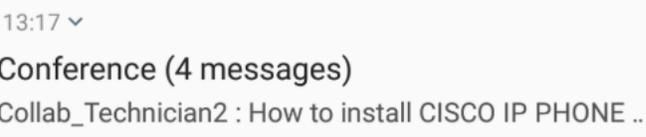
- Automatic broadcasting:

  This image displays an example of an automatic broadcasting message.
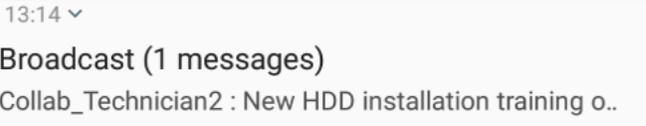
- Collaboration Message from Message Scenario:

  This image displays an example of a Collaboration message.
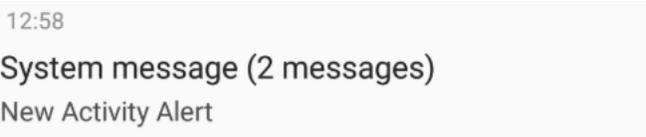
- Share location between users:

  This image displays an example of location sharing between users.

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- Location sharing in Conference:

  This image displays an example of location sharing in a conference.
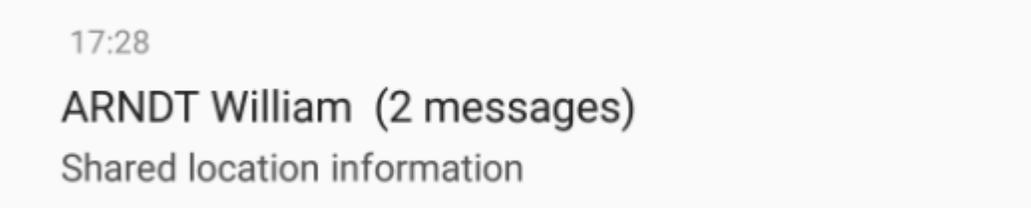
  17:28

  Conference (2 messages)

  ARNDT William shared location information with you
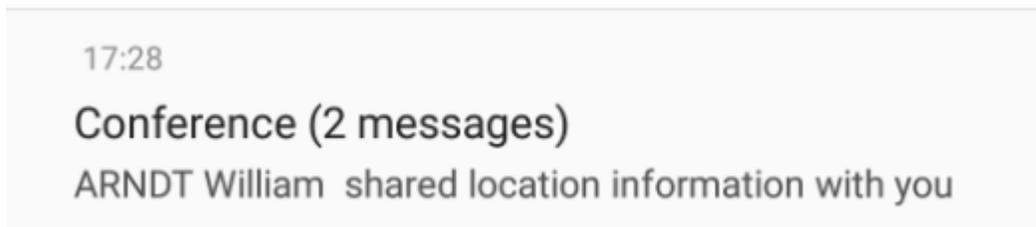
- Inventory Sharing:

  This image displays an example of inventory sharing.

  17:29 ⌃

  Broadcast (2 messages)

  ARNDT William shared inventory information
  Internet - 8779808797

  17:29 ⌃

  Conference (3 messages)

  ARNDT William shared inventory information
  Internet - 8779808797

  17:29 ⌃

  ARNDT William (3 messages)

  Shared inventory info
  Internet - 8779808797
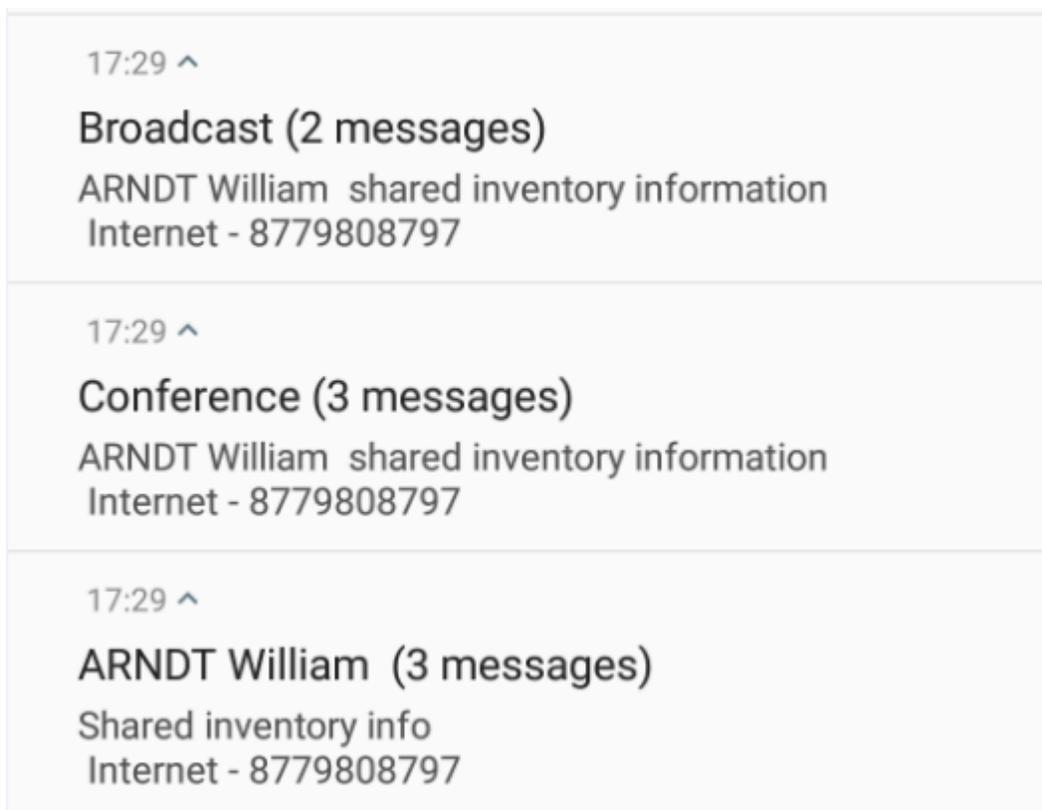
- Helpdesk Notification:

  This image displays an example of a helpdesk notification.

  Field Service (dev) 13:21
  Helpdesk (1 messages)
  How can i help you?
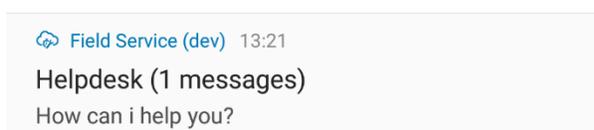
Notification as a badge

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The badge in the application launcher icon gets updated with the unread Collaboration chats as notifications in the application.

This image shows a notification badge:

These badges appear automatically when a new Collaboration notification appears and disappears when the user clicks the application or notification banner.

You can do these actions to enable notifications:

- Follow these steps when the screen is locked:
  - Double tap or single tap the notification and unlock device based on the Android version used.
  - Once unlocked, the Collaboration User interface opens.
- Follow these steps when the screen is unlocked:
  - Tap the notification.
  - The Collaboration user interface opens.

How do I enforce input restrictions for external IDs, allowing only numeric values for field resources and letters/alphanumeric characters for buckets/groups?

You can configure restrictions for the users to specify for external IDs.

You can configure restrictions for the users to specify for external IDs, allowing only numeric values for field resources and letters/alphanumeric characters for buckets/groups using the User Types configuration page.

1. Click **Configuration** > **User Types**.
2. Select the user type for which you want to provide the access.
3. Go to the **Screens** tab and click **Resources** under **Main**.
4. Click **Click to add** and select **Activate**, **Deactivate**, **Delete**, **Set Collaboration Group**, and **Unlock**.
5. For each button that you just added, click **Add new visibility** and then click **Save**.

    You can apply the following visibility rules

    - **Visibility Rule for Text Notice**: Create a visibility rule that checks if the resource External Id contains numeric data. Apply this rule to the Text notice component to display it only when valid data is present.
    - **Visibility Rule for Submit Button**: Use the same visibility rule from step 1. Apply it to the Submit button to prevent submission when invalid data is detected.

You can use the following formula that checks the resource type and validates that the external ID is not empty.

```
resource.external_id <> toNumber(resource.external_id) AND resource.ptype = "<Resource Type Label>" AND NOT
empty(resource.external_id)
```

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For more information, refer to the Examples of Validation Rules topic in the Administering Oracle Field Services Guide.

How do I upgrade the installed Android and iOS apps?

Most devices come with the "Enable auto update" feature turned on for Android, while iOS devices have the "App Updates" setting activated. This means that the apps will update automatically without the user needing to do anything. However, if a user hasn't turned on these options, they will be notified when an update is available.

When you log in to the Oracle Field Service app, a prompt to upgrade the installed app to the latest major version is displayed if the current version of the installed Android and iOS app is at least one major version lower than the latest available version of the app.

Click the **Update** button to update the app from Google Play or App Store.

> **Note:** If you select **No Thanks** or **Not Now**, then the prompt doesn't display until the next major Oracle Fusion Field Service version is released.Alternatively, you can directly visit the Google Play or App Store whenever required and upgrade the app if the installed app version is lower than the one available on the store.

How do I adjust planned travel time for resources who either use public transport or walk between activities?

Oracle Fusion Field Service lets you check the impact of changes to statistical parameters by applying them on a Test environment before applying them to a Production environment. Let's say you override travel and activity duration values using the Statistics APIs, or add an additional field under **Activity travel stats fields**, or increase the number of characters of the ZIP code to be considered. You can check the impact of these changes on a Test environment before applying them on a Production environment. However, for the overrides to take effect, you must run the stats agent on that environment. You can use the **Apply Changes** button on the **Statistics** page to apply the overrides and check the impact.

In a test environment, where sufficient data isn't available to calculate statistics meaningfully, you can apply the overrides and generate statistics before running routing.

1. Click **Configuration** > **Statistics**.
2. Change the values in the **Duration parameters** and **Travel time parameters** sections as required.
3. Click **Apply Changes**.
4. Choose one of these options:
   - **Save configuration changes only**: Select this option to save the changes. This option is disabled, if there are no changes to the configuration.
   - **Apply Statistics API overrides and Recalculate Statistics**: Select this option to apply the overrides that you've added using the following Statistics API methods manually:
     - Update activity duration statistics
     - Update activity travel statistics
     - Update airline distance based travel

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When you use this option in a test environment, it applies the statistical overrides and recalculates all statistical data based on:

- Newly reported data from mobile workers.
- Travel data received from location services, including pre-calculated point-to-point travel estimations for up to 60,000 travel keys.

> **Note:** When refreshing the environment, if the active travel key or activity duration key configuration is modified after the statistical data has been copied, selecting this option will delete the copied data. If no key configuration changes are made, this option will update the data without deleting the previously copied data, ensuring accuracy and consistency.

This option is available only in test environments. In production environments, you can use the Apply Statistics API overrides only option to apply overrides for any keys, even if no prior activity exists, and immediately start using overridden values for new keys that have not been used before.

- **Save and apply configuration changes**: Select this option to recalculate the travel duration statistics or the activity duration statistics (or both) depending on the fields you've modified. If you've modified the **Activity duration stats fields** or any field under **Duration parameters**, all activity durations are recalculated. Similarly, if you've modified the **Activity travel stats fields**, **Resource travel stats fields** or any field under **Travel time parameters**, all travel durations are recalculated. If you've modified the fields related to activity duration and travel duration, then both activity duration and travel durations are recalculated. If there are unsaved changes, the option reads as **Save and apply configuration changes**. In this case, all the change are first saved and then applied. If you've saved the changes, but haven't yet applied them, the option reads as **Apply configuration changes**. In addition, a message stating whether Activity duration, Travel duration, or both will be updated is displayed.

> **Note:** The functions of these options is the same on a Test environment. However, the description given below each option is different, because the daily recalculation of statistics doesn't happen on Test environments. Therefore, the changes aren't applied automatically by the next day. You can use this feature to apply changes to statistics configurations manually on Test environments.

5. Click **Apply**.

   A message displays indicating whether the changes were applied successfully or not. If you open the **Statistics** page after the changes are applied, a message shows the last operation and the timestamp of when changes were applied.

How do I configure and view the calendar without granting access to other settings?

You can configure and view the commercial calendar without granting access to other settings.

Typically, individuals with the Manager/Dispatcher resource type have the ability to configure and view the calendar without granting access to other settings.

To configure and view calendar

1. Click **Configuration**.
2. In the **Users, Security, Integrations** section, click **User Types**.

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3. Go to the **General** tab and select **Allow changes in Working Calendar** option under the **Resource Management** section. Enabling this setting allows you to update work schedules for resources.

4. Next, in the **Screens**tab, click the **Configuration** under the **Main menu**. Ensure that the Calendar [Visibility] option is set. This will enable you to configure or add new work schedules and work shifts.

Results:

For more information, refer to the Calendars, Work Schedules, and Shifts topic in the **Administering Oracle Field Service Guide**.

How do I unschedule activities that are scheduled and in pending status?

The set_property method unschedules a pending regular and reopened activity with the unschedule_activity action. The message should contain "action" in the subject and the name of the action to be performed ('unschedule_activity') in the message body. Note that the unschedule_activity action is not supported for individual segments and segmentable activities. After processing, the message is assigned one of the following statuses with its corresponding description:

Status 'delivered'

Status	Description
Status	delivered
Description	
Notes	The action is performed successfully.

Status 'Failed'

Status	Description
Status	failed
Description	INVALID_RESOURCE_TYPE
Notes	This action is not supported for this type of resource. For example, the resource or its type are reconfigured and activities cannot be assigned to it anymore.

Status 'Failed'

Status	Description
Status	failed
Description	NO_PERMISSION
Notes	This user does not have access to the specified resource or activity.

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Status 'Failed'

Status	Description
Status	failed
Description	RESOURCE_NOT_FOUND
Notes	The system is unable to find the resource the message refers to.

Status 'Failed'

Status	Description
Status	failed
Description	ACTIVITY_NOT_FOUND
Notes	The system is unable to find the activity the message refers to.

Status 'Failed'

Status	Description
Status	failed
Description	INACTIVE_RESOURCE
Notes	The resource is inactive.

Status 'Failed'

Status	Description
Status	failed
Description	ACTION_ON_PAST
Notes	The activity is located in a route for a day in the past that cannot be changed.

Status 'Failed'

Status	Description
Status	failed
Description	INVALID_ACTIVITY_STATUS
Notes	This action is not supported for an activity with such status. Only `pending` activities can be unscheduled.

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Status 'Failed'

Status	Failed
Status	failed
Description	INVALID_ACTIVITY_STATUS
Notes	This action is not supported for an activity with such status. Only `pending` activities can be unscheduled.

Status 'Failed'

Status	Description
Status	failed
Description	INVALID_ACTIVITY_TYPE
Notes	This action is not supported for this type of activity. Only `regular` and `reopened` activities can be unscheduled.

Status 'Failed'

Status	Description
Status	failed
Description	NON_MOVABLE_ACTIVITY
Notes	This type of activity cannot be moved to another resource or day. For example, this error can appear for a not-scheduled activity.

Status 'Failed'

Status	Description
Status	failed
Description	RESCHEDULE_IS_NOT_ALLOWED
Notes	This type of activity cannot be rescheduled to another day. For example, this error can appear for a not-scheduled activity.

Status 'Failed'

Status	Description
Status	failed

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Status	Description
Description	NOT_SCHEDULED_IS_NOT_ALLOWED
Notes	This type of activity cannot be not-scheduled. For example, this error can appear for a not-scheduled activity.

How do I determine the Oracle data center where my environment is hosted?

You can determine the Oracle data center hosting your Oracle Fusion Field Service environment through the Oracle Cloud portal.

1. Navigate to the Oracle Cloud sign-in page.
2. Provide the name associated with your Oracle Cloud account and click **Next**.
3. Enter your email address and password for your cloud account. The Oracle Cloud homepage appears.
4. **Access the Field Service Console:**
   - Click the **Menu** icon in the top-left corner.
   - Under **Services**, select **Field Service**. This will take you to the Field Service Console.
5. On the **Available environments** tab, you will find information indicating the specific data center that hosts your environments.

When Oracle Fusion Field Service environments are provisioned, you typically have the option to select a geographical region. For example, North America, EMEA, APAC. Each of these regions contains multiple data centers. During the provisioning process, Oracle generally assigns the data center with the fewest hosted environments at that time.

Why is the Cancel button not showing on List view when multiple resources are selected?

You can configure the Group Actions such as Change, Cancel, Move and so on that display on the List views to suit your business requirements.

1. Click **Configure** > **User Types**.
2. Select the type of user for which you want to configure the views and click **Screens ->List view columns** in the **Dispatch Console** tree.

   Context layout structure opens and displays the default items available on the page. You can add more static text or action items to it.
3. Click **Click to Add** in the **Group Actions** section and select the required items.

   The items in the **Group Actions** are static text items.

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How do I end an activity spcecifying earlier time?

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

After you've completed the work, you must close the *activity* in the application. Depending on your business, ending the activity might include assigning codes, notes and reasons, and obtaining a customer signature.

1. Click **Complete** for the current activity on your home page.

   The **End Activity** page displays.

2. Select the time of completion from the **Completion Time** drop-down list.

   By default, the list displays your current time. You can change it, or leave it as it is.

   If the activity for that route is still in a pending status, the mobile worker or any authorized user can start and complete the activity later in the day specifying the earlier time when it was actually performed. This is supported only when the **Set Action Time** feature is enabled for the assigned User Type on the **Configuration** > **User Types** > page. When this feature is active, the user will be prompted to choose the time to be recorded for the action. If the selected time is more than an hour in the past or future, the user will need to confirm that this is indeed the desired time. However, once an activity has been started or completed, it isn't possible to change or revert the recorded time.

3. Select the appropriate options in the remaining fields and then click **Submit**.

   The activity is marked with a **Completed** status, and appears in blue on the list view in the **Closed** section. You can't update the inventory details for a completed activity. In addition, if you're using a touch screen device, the app detects touch as the method to fill the signature. In such cases, you can't use the mouse to fill the signature.

How do I view and change available quota?

The **Quota** page lets you view and manage quota for up to 100 days, including a specific day or week. It also lets you manage capacity categories.

You can change quota values in the **Quota%**, **Min Quota**, **Daily Quota %**, **Quota** and **Stop Booking at** columns for the present and future dates. Based on the edited values, the values in the **Quota** column is recalculated. Also, when you click the **Quota History** button after you edit the quota values for capacity categories and click **Save**, the edited quota values display in the **Quota History** window.

For example, if you enter **80%** in the **%Quota day** column for the category, Deinstall and select a date, then you can only use 38352 mins for performing Deinstall activities on the selected date. However, if you enter **95%** in the **Stop Booking at** column and select a date, then you can only book Deinstall activities that consume 45543 mins on the selected date.

To view and change available quota:

1. Select **Quota**.

2. Select a capacity area from the left-hand pane.

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3.
   Select the **Quota** ⊙ icon.

   The Quota page displays.
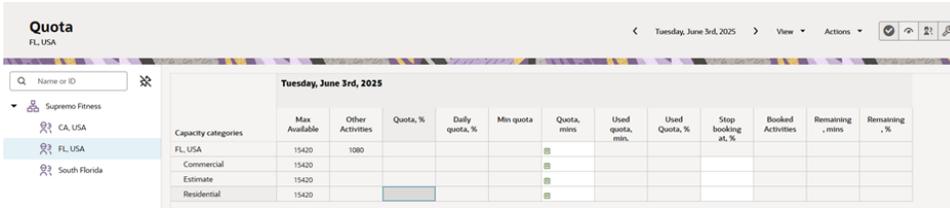
4. Select a category from the **Category** drop-down list to view the quota information for the selected category. Also, you can select the required columns that you want to display on the **Quota** page. The following columns display on the **Quota** page:

Column	Description
Max Available	The maximum capacity that's available according to working calendars of resources working in the capacity area. This column is available regardless of the configured capacity area.
Planned Max Available	The maximum planned capacity according to the values entered as working time plans in the capacity area. Displayed only if the quota is entered in percent of planned capacity.
Other Activities	This is the capacity consumed by activities that don't match any capacity category configured for the capacity area. This column is available regardless of the configured capacity area and calculated on the "day" level.
Quota	If the column is read-only, then based on the configuration of the capacity area, the Quota value is calculated as: <Quota> = MAX (<% Quota> * <Base>, <Min Quota>) Where depending on the capacity category and the configuration of the capacity area, the <Base> value is a <Quota> value from the day level or is the <Max available> value for the same category or is calculated as <Max Available> - <Other Activities>. ○ If Man-days is selected as a measurement unit for Quota from the **Business Rules** page, then quota is calculated as follows: Quota = (hours of max available/ Number of hours per man-day) ○ You can also enter a value in the **Quota** column to determine the quota for a specific capacity category. ○ When the % Quota value is empty in the Quota by category screen and if the time slot based quota is enabled, then the Quota value is presented as a sum of quota values for each capacity category. ○ If the Quota value is empty (for example, if quota % isn'tpopulated or if a negative value of quota is populated when value of Other Activities is more than the value of Max Available), then the Quota value is presented as a sum of all subsequent quota values for each capacity category. ○ When using booking interval based buckets, 100% and empty values are treated differently. An empty value means there are no restrictions on the cell it applies to. This is used specifically for the "stop booking at" feature, where the percentage of the used quota for a particular day is calculated relative to the quota value defined for that day.
%Quota	This is the % of Quota. Depending on the configuration of the capacity area, it can be read-write or read-only.

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	○ Day level If it's read-only, it's calculated as: <Quota> / (<Max available> - <Other activities>) **Note:** Note that there's a option to not subtract the <Other activities> value. ○ Category level If it's read-only, it's calculated as: <Quota (category)> / <Max available (category)>
Category / % Quota (day)	Depending on configuration of the capacity area, it can be read-write or read-only. If it's read-only, it's calculated as: <Quota (category)> / <Quota (day)>.
Min Quota	This value is to be used when the quota is defined as a percent. When a calculated quota value is below the minimum, the system uses this minimum value instead of the calculated one. Calculated as: <Quota> = MAX(<% Quota> * <Base>, <Min Quota>).
Used Quota	Quota used by activities that match capacity categories configured for the capacity area.
Used Quota %	Calculated as: <Used quota> / <Quota>
% to Stop Booking at	This is only available on the category level. It's used to stop booking of activities in a given category when <Used quota %> on the day level exceeds the <% to stop booking value>. It allows implementing a reservation of remaining quota in other categories.
Booked Activities	Indicates the number of booked activities.

How do I add time to an activity?

If a resource can't complete an activity by the estimated end time, then they can add time to the activity. If necessary, you can add time to the activity on behalf of the resource. You can add time only to started activities.

1. Sign in to Oracle Field Service as Dispatcher.
2. Click the navigation menu and then click **Dispatch Console**.
3. Select the resource for which you want to add time to an activity in the **Resource Tree**.
4. From **List** or **Time** tab, locate the activity in **Started** status, for which you want to add time.
5. Click **Adjust time** in the activity hint.
6. On the **Adjust time** page, select the estimated time by when the resource can leave the activity site.
7. Click **OK.**
   The application automatically recalculates the activities that follow according to these changes.

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How do I configure standard action screen for inventory actions?

If your mobile workers use inventory to complete the activities assigned to them, you must add the required buttons to the Equipment page. These could be buttons that open the pages such as Install and Deinstall. You can also add the **Update Inventory** button to change inventory properties.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to add the inventory pages.
4. Under **Inventory** section, click **Add/Details inventory**.
5. Drag the **Button** element to the required position.
6. Click **Button** and then click the pencil icon in the **Standard action screen** field.
7. Select the required inventory-related page, for example, install_inventory.

   To enable mobile workers to update customer inventory information when changes are required, you can create a new tab in the Add/Details Inventory layout. Drag the properties you want to edit into this tab. This will add the **Update Inventory** button (or the name you assign to the tab) on the **Equipment Details** page. Mobile workers can use this button to update the properties and save the changes.
8. Add the required visibility conditions for the page.

   For example, Activity type (aworktype) in (equal) Cardio Equipment Installation.
9. Click **Save** on the Visibility Settings dialog box.
10. Click **Save** on the Visual Form Editor.

   Users of the selected User Type can see the Install button on the **Equipment** page for the Cardio Equipment Installation type of activity. Further, users can see the button only when the basic conditions such as activating the route and starting the activity are fulfilled.

How do I start a video call to collaborate with other mobile workers?

> **Note:** **Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Collaboration*. We recommend that you update your bookmarks accordingly.

You can start a video call to collaborate with other mobile workers, supervisors, or help desk operators. Oracle Field Service opens the default video calling app of the device—either Google Meet or FaceTime based on your device's operating system.

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Prerequisites: Your administrator has selected the **Allow initiation of video call** option for your user type on the **Configuration** > **User Types** > **General** page.

The following things can ensure good video quality:

- You must close all applications that use the internet (especially those playing music or video).
- You must use a 4G network provider.
- You must not have any ongoing file transfers.
- You must ensure that the network bandwidth is greater than 2000 Kbps.
- You might experience low quality video call if you use VPN to connect to the office network.

1. Do one of these:
   - Sign in as a mobile worker and start a one-to-one chat with another mobile worker.
   - Sign in as a help desk operator and start a one-to-one chat with a mobile worker.
   - Sign in as a help desk operator and start a one-to-one chat with another help desk operator.
   - Sign in as a mobile worker or a help desk operator and start a one-to-one video call with a member within a conference chat.

     Note: The video call option isn't available to mobile workers when engaging with a help desk operator, either through a one-to-one chat or through the user information in a conference. In this scenario, only the help desk operator can start a video call.

2. If you're in a one-to-one chat, click the video call icon. If you're in a conference, click **Start Video Call** from the user info of the required participant within the list of participants.

   The video call starts when both you and your recipient have access to the same service (Google Meet or FaceTime) that's used to start the video call from your device.

   For iOS devices, the video call option is available and started through FaceTime, if either the phone number (pphone field) or email (email field) of your recipient is available in Oracle Field Service.

   For non-iOS devices, the video call is started through Google Meet service by default. You must start the call manually once Google Meet is launched.

   If Google Meet or FaceTime isn't installed, it's opened through the browser.

What is a Parts Catalog in Oracle Field Service?

Mobile workers use the Parts Catalog to remotely access and search their company's spare parts inventory when working on maintenance and repair jobs.

Mobile workers assigned to installation jobs usually know which inventory they're installing, and they load the resources on their trucks accordingly. However, they can decide the parts necessary for replacement only at the customer's site after tests and diagnostics. Mobile workers can use the Parts Catalog to:

- Look up the spare part required for replacement.
- Discuss the replacement terms (for example, price, period) with the customer.
- Order for the spare part.

- Find an alternative for a part, if the customer doesn't accept the initial offer.

- Issue an invoice.

The Parts Catalog updates automatically every 30 minutes after the application is launched, and supports both online and offline operations.

How to call the barcode scanner from a custom plugin?

Parts and equipment usually have barcodes printed on their package. The *scanBarcode* procedure provides the barcode and 2D (for example, QR, DATAMATRIX) code scanner functionality that helps searching for items in the inventory pools easy.

When the plugin calls this procedure, the scanner window opens and shows the live camera picture. When the barcode is recognized, the scanner window closes, and the result is sent to the plugin through the *callProcedureResult* method. If the barcode scanner is unavailable or Oracle Fusion Field Service Core Application isn't run inside the Oracle Fusion Field Service Mobile (for Android or iOS) application, an error code is returned to the plugin through an error message. For more information about the *callProcedureResult* method, see the callProcedureResult Method topic in the Mobile Plug-in Framework guide.

> **Note:** You must have the Oracle Fusion Field Service Mobile (for Android or iOS) application to use the Barcode Scanner through the plugin API and to search by barcode.

Supported Barcode and 2D Code Types

This table provides the barcode and 2D code types:

Barcode Type	Android	iOS
QR_CODE	Yes	Yes
DATA_MATRIX	Yes	Yes
UPC_A	Yes	Yes
UPC_E	Yes	Yes
EAN_8	Yes	Yes
EAN_13	Yes	Yes
CODE_39	Yes	Yes
CODE_93	Yes	No
CODE_128	Yes	Yes
CODABAR	Yes	No
ITF	Yes	Yes

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Barcode Type	Android	iOS
RSS14	Yes	No
PDF417	Yes	No
RSS_EXPANDED	Yes	No

Example of the *callProcedure* Message

```
{
  "apiVersion": 1,
  "method": "callProcedure",
  "procedure": "scanBarcode",
  "callId": "123abc"
}
```

Result of the *callProcedure* Procedure

For this procedure, the resultData param of the callProcedureResult message is an object, which contains these fields:

Parameter	Type	Description
apiVersion	String	Plugin API version.
format	String	Type of recognized barcode. See Supported barcode and 2D code types.
cancelled	String	Equals true if user closed the scanner window before the code's recognized.

Example of the *callProcedureResult* Message

When the barcode is scanned successfully:

```
{
  "apiVersion": 1,
  "method": "callProcedureResult",
  "callId": "123abc",
  "resultData": {
  "text": "PT9012308",
  "format": "QR_CODE",
  "cancelled": false
  }
}
```

When user cancels scanning:

```
{
  "apiVersion": 1,
  "method": "callProcedureResult",
  "callId": "123abc",
  "resultData": {
  "text": "",
  "format": "",
  "cancelled": true
  }
}
```

When is callProcedureResult Method used?

A message with the *callProcedureResult* method is sent by Oracle Fusion Field Service to a plug-in when Oracle Fusion Field Service calls a procedure using the *callProcedure* method successfully. The message data contains the *callId* field, which is same as the *callId* parameter of the *callProcedure* message, so that the request and response can be unambiguously associated with each other.

callProcedureResult Method Parameters

Here are the parameters of the *callProcedureResult* method:

Parameter Name	Mandatory	Type	Description
apiVersion	Yes	Integer	Plugin API version.
method	Yes	String	*callProcedureResult*.
procedure	Yes	String	Procedure name.
callId	Yes	String	Id of the procedure call, for which the result is returned. This is same as the received *callId* param of the *callProcedure* method.
resultData	No	String	Result of running the procedure.

Example of the *callProcedureResult* Message

```
{
 "apiVersion": 1,
 "method": "callProcedureResult",
 "callId": "1111111111",
 "resultData": {
 "token": "...",
 "status": "success",
 "detail": ""
 }
}
```

For more information about the possible responses, see the description of procedures in the callProcedure section.

What are the available property message placeholders?

These are message placeholders related to properties.

Placeholders for properties

Placeholder	Description
exprnum _label	Value of the property identified by the label. It works with `string`, `int`, `enum` and `file` properties. It does not support properties of the `field` type. In case of a `file` property the printed value contains a name of the file. By default the text representation of an `enum` property is printed. The `prnum_` prefix allows to retrieve ID of a lookup for an `enum` property. The `ex_` prefix is only applicable to the `inventory_exchange` launch condition or in the `exchanged_inventory` block. It provides access to properties of the deinstalled inventory in case of an exchange operation. Use `pr_` as the prefix with custom properties that are created to use with Where is My Technician.

How do I install the Oracle Field Service app on an Android device?

You can install the Oracle Field Service app from the Google Play Store.

Before you start

- Check the compatibility of your device on https://support.oracle.com article ID 2924910.1.
    - **Minimum supported operating system:** Android 7 or later.
    - **Android Auto** requires Android 8 or later.
- Ensure that you're using an Android device with an active internet connection and you've access to Google Play Store.

Here's what to do

1. From your Android mobile device, open Google Play Store.
2. Search for **Oracle Field Service** and select it.
3. Click **Install**.

   Alternatively, you can also download the mobile application directly from this link: *https://play.google.com/store/apps/details?id=com.oracle.ofsc*

How do I install the Oracle Field Service app on an iOS device?

You can install Oracle Field Service Cloud app from the Apple App Store.

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Before you start

- Check the compatibility of your device on https://support.oracle.com (article ID 2924910.1).
  - **Minimum supported operating system:** iOS 15 or later.
  - **Apple CarPlay** requires iOS 16 or later.

- Ensure that you're using an iOS device with an active internet connection and you've access to Apple App Store.

Here's what to do

1. From your iOS mobile device, open App Store.
2. Search for **Oracle Field Service Cloud** and select it.
3. Click **Install**.

   Alternatively, you can also download the mobile application directly from this link: *https://apps.apple.com/us/app/oracle-field-service/id1363168467*.

How do I configure Quota options?

Quota configuration helps optimizing the allocation of resources by controlling the availability of mobile workers within defined parameters. Quota configuration provides flexibility in assigning activities to available resources, with different configuration options depending on whether booking is based on direct assignment or quota management. Further, by using quotas, the service activities are booked as per the specified criteria such as time intervals or time slots.

1. Select **Quota** from the navigation menu.
2. Expand capacity area and select a bucket.
3. Click the **Configuration** icon.

   The Configuration page for the selected bucket displays.
4. Select a **Booking** option:
   - **Use Direct Assignment**: Specifies that the activities are booked directly on mobile workers' routes. If you've configured a capacity area for booking using direct assignment, the activity is created (or reassigned) in a mobile worker's route. The activity is created, only if the mobile worker meets the activity requirements and has enough time to complete it.
   - **Use Quota Management > Based on Booking Intervals**: Specifies that the activities are booked based on the booking intervals selected on this page. When you select this option, the activity is created on a bucket that's associated with the capacity area.
   - **Use Quota Management > Based on Time Slots**: Specifies that the activities are booked based on the selected time slots. When you select this option, the activity is created on a bucket that's associated with the capacity area.

     For more information, see the Activity Booking section.
5. Select the configuration options displayed based on the booking option that you selected and click **Save**.

Parameter	Options
Use Direct Assignment	

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Parameter	Options
Booking	o **Show recommendations in activity booking screen** Defines whether you want to show the booking recommendations. When you select this check-box, the Book Activity page might show a time slot with a special icon, indicating a recommendation. The recommendation is a time slot that has a bigger probability of decreased overall travel expenses. For more information, see the Booking Recommendations topic. o **Optimization goal** Allows choosing between Default (early scheduling) or Optimize Travel. o **Use forecasted activities during booking** Option to consider forecasted activity flows during booking. - **Forecast the activity flow within the days range** Defines the forecast range in days, with minimum and maximum values from 0 to 31. A value of 0 indicates the current day. This option is visible only when the **Use forecasted activities during booking** option is selected. Choose the forecast range carefully based on operational needs. A broader range improves optimization but might increase processing time. o For dates before the range, only routes that already contain activities close to the booking are suggested. o For dates within the range, the activity flow forecast is applied in a way that additional travel in the proposed routes is close to the per-bucket average. o For dates after the range ends, all the feasible route positions are returned. o **Time slots** Defines the time-slots during which resources can book activities. > **Note:** The list is automatically synchronized between the connected capacity area and capacity area using the Resource Info page. When you select **Use forecasted activities during booking**, the scheduling options returned would be different from the default settings. The behavior of returned schedule options varies based on the date range as follows: o **Dates Before the Minimum Day of the Range:** - Returned options include routes where: o The activity is adjacent to an existing activity on the route. o The additional travel caused by adding the activity to the route is under 120% of the average per-bucket travel, suggesting close proximity to existing activities on the route. - Additional travel is calculated as the difference in total travel on the route with and without the new activity. - Additional travel to and from the given activity is estimated using the airline distance method.

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Parameter	Options
	o **Dates Within the Range (from Minimum to Maximum Day):**
	- Returned options include routes where:
	o The activity is adjacent to an existing activity with the same travel key.
	o The additional travel caused by adding the activity to the route is under 120% of the average per-bucket travel, suggesting close proximity to **existing** activities on the route.
	o Options where the average additional travel is less than 120% of the average per-bucket travel suggesting close proximity to **forecasted** activities on the route.
	- The expected number of activities in the future is determined by multiplying the average number of activities booked per day for the specific travel key by the number of days from today until the scheduled option date.
	- Additional travel To and From the given activity is estimated using airline distance method. To estimate travels between activities in the same travel key, the average travel per travel key is used.
	- Additional travel for forecasted activities is estimated using statistical data. If sufficient data is unavailable, the dates within the range are processed using the same logic as 'Dates Before the Minimum Day of the Range,' meaning no forecasted activities are considered.
	- Additional travel is calculated as follows:
	o First, calculate the total travel distance in the route, including the given activity at the proposed location in the route along with the expected number of activities for the same travel key after the given one.
	o Then, calculate the total travel distance in the route if the given activity is excluded.
	o Subtract the second value (without the given activity) from the first value (with the given activity).
	o Finally, divide this difference by the expected number of activities + 1 (to account for the added activity).
	o **Dates After the Maximum Day of the Range**
	- All possible route options are returned, following the standard `findMatchingResources` API behavior without activity flow forecasting.
	For example, in an environment where:
	o Activity flow forecast is enabled by default.
	o Scheduling has a range of 2 to 7 days.
	o Two activities are scheduled with the same travel key - one for Monday and one for Thursday.
	o One mobile worker is available with the required skills.
	o According to historical data:
	- Average activity creation rate for this travel key is 0.75 activities per day over the last 30 days.
	- The travel key is classified as distant, with travel times estimated to be 1.5 times longer than the bucket average.
	o According to travel statistics the average travel per travel key is 0.33 times of the bucket average.
	The activity flow forecast outcome would be as follows:
	o **Monday (Day 1)**
	- The activity is planned either **next to** or **before** the existing activity in the same travel key.
	o **Tuesday**
	- No options are returned. There are no activities in the route with the same travel key.

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Parameter	Options
	o **Wednesday** - No options are returned. By Wednesday, the system expects two activities to be booked. The average additional travel would exceed by 122% of the average per-bucket travel. - Calculation: $$Additional\ Travel = \frac{Travel\ to\ distant\ key\ +\ Avg.\ tra}{Expected}$$ - Substituting Values: $$Additional\ Travel = \frac{(1.5 \times avg.\ bucket\ travel) + 2(}{}$$ $$Additional\ Travel =$$ o **Thursday** - The activity is planned either next to or before the existing activity in the same travel key. o **Friday** - Options fitting four activities in a row are returned. - The application expects three activities to be booked. Travel efficiency improves with this forecast, as the additional travel is less than the bucket travel average. - Calculation: $$Additional\ Travel = \frac{(1.5 \times avg.\ bucket\ travel) + 3(0.3}{}$$ $$Additional\ Travel =$$ o **Saturday and Sunday** - Options fitting four activities in a row are returned, as this number of activities provides acceptable travel efficiency. o **Next Monday and Beyond** - All options fitting at least one activity are returned. - No forecast is applied beyond the configured day range.
Use Quota Management - Based on Booking Interval	
Booking	The following options are available: o **Allow to close booking on work zone level** Defines whether booking can be closed on a particular work zone level. o **Show recommendations in activity booking screen** Defines whether you want to show the booking recommendations. When you select this check-box, the Book Activity page might show a time slot with a special icon, indicating a recommendation. The recommendation is a time slot that has a bigger probability of decreased overall travel expenses.

Parameter	Options
	o **Optimization goal** Allows choosing between Default (early scheduling) or Optimize Travel. o **Use forecasted activities during booking** Option to consider forecasted activity flows during booking. o **Forecast the activity flow within the days range** Defines the forecast range in days, with minimum and maximum values from 0 to 31. A value of 0 indicates the current day. This option is visible only when the **Use forecasted activities during booking** option is selected. Choose the forecast range carefully based on operational needs. A broader range improves optimization but might increase processing time. - For dates before the range, only routes that already contain activities close to the booking are suggested. - For dates within the range, the activity flow forecast is applied in a way that additional travel in the proposed routes is close to the per-bucket average. - For dates after the range ends, all the feasible route positions are returned. o **Activity starting threshold, %** Adjust the starting threshold to ensure activities have adequate time buffers and avoid overlaps with other bookings. This works same as LateStartMitigation parameter in the showBookingGrid and activityBookingOptions operations within the Capacity APIs. When the value is greater than 0, the application refrains from suggesting bookings for activities expected to start within the last defined threshold percentage of the time slot duration. This functionality optimizes resource utilization and improves the customer experience by reducing late starts. o **Booking intervals** Defines a list of time intervals to be used to manage booking. **Note:** - The default values are automatically synchronized with the Business Rules time intervals. You can adjust the values for the individual bucket. - During upgrade, if you select available capacity based quota management, then the application migrates to Booking Intervals based quota with either quota in absolute time units or quota in percent of available capacity (depends on the quota by day settings). - To change the number of hours per day (used to recalculate working time plans (or number of resources) to Max Available (hours/minutes) or vice versa), navigate to Business Rules page, select "man-days" in the **Measurement units for Quota and Available Capacity** field and change the value of number of hours per man-day. o **Override intervals** This value is used to show Booking status. If no values are defined, the default Capacity intervals configured on Business rules level are used. Allows you to add, modify, or revert to default booking intervals. When you select **Use forecasted activities during booking**, the scheduling options returned would be different from the default settings. The behavior of returned schedule options varies based on the date range as follows:

Parameter	Options
	○ **Dates Before the Minimum Day of the Range:** - Returned options include routes where: ○ The activity is adjacent to an existing activity on the route. ○ The additional travel caused by adding the activity to the route is under 120% of the average per-bucket travel, suggesting close proximity to existing activities on the route. - Additional travel is calculated as the difference in total travel on the route with and without the new activity. - Additional travel to and from the given activity is estimated using the airline distance method. ○ **Dates Within the Range (from Minimum to Maximum Day):** - Returned options include routes where: ○ The activity is adjacent to an existing activity with the same travel key. ○ The additional travel caused by adding the activity to the route is under 120% of the average per-bucket travel, suggesting close proximity to **existing** activities on the route. ○ Options where the average additional travel is less than 120% of the average per-bucket travel suggesting close proximity to **forecasted** activities on the route. - The expected number of activities in the future is determined by multiplying the average number of activities booked per day for the specific travel key by the number of days from today until the scheduled option date. - Additional travel To and From the given activity is estimated using airline distance method. To estimate travels between activities in the same travel key, the average travel per travel key is used. - Additional travel for forecasted activities is estimated using statistical data. If sufficient data is unavailable, the dates within the range are processed using the same logic as 'Dates Before the Minimum Day of the Range,' meaning no forecasted activities are considered. - Additional travel is calculated as follows: ○ First, calculate the total travel distance in the route, including the given activity at the proposed location in the route along with the expected number of activities for the same travel key after the given one. ○ Then, calculate the total travel distance in the route if the given activity is excluded. ○ Subtract the second value (without the given activity) from the first value (with the given activity). ○ Finally, divide this difference by the expected number of activities + 1 (to account for the added activity). ○ **Dates After the Maximum Day of the Range** - All possible route options are returned, following the standard `findMatchingResources` API behavior without activity flow forecasting. For example, in an environment where: ○ Activity flow forecast is enabled by default. ○ Scheduling has a range of 2 to 7 days. ○ Two activities are scheduled with the same travel key - one for Monday and one for Thursday. ○ One mobile worker is available with the required skills. ○ According to historical data: - Average activity creation rate for this travel key is 0.75 activities per day over the last 30 days. - The travel key is classified as distant, with travel times estimated to be 1.5 times longer than the bucket average. ○ According to travel statistics the average travel per travel key is 0.33 times of the bucket average. The activity flow forecast outcome would be as follows: ○ **Monday (Day 1)** - The activity is planned either **next to** or **before** the existing activity in the same travel key. ○ **Tuesday** - No options are returned. There are no activities in the route with the same travel key.

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Parameter	Options
	o **Wednesday** - No options are returned. By Wednesday, the system expects two activities to be booked. The average additional travel would exceed by 122% of the average per-bucket travel. - Calculation: $$Additional\ Travel = \frac{Travel\ to\ distant\ key\ +\ Avg.\ tra...}{Expected\ ...}$$ - Substituting Values: $$Additional\ Travel = \frac{(1.5 \times avg.\ bucket\ travel) + 2(0...}{...}$$ $$Additional\ Travel = ...$$ o **Thursday** - The activity is planned either next to or before the existing activity in the same travel key. o **Friday** - Options fitting four activities in a row are returned. - The application expects three activities to be booked. Travel efficiency improves with this forecast, as the additional travel is less than the bucket travel average. - Calculation: $$Additional\ Travel = \frac{(1.5 \times avg.\ bucket\ travel) + 3(0.3...}{...}$$ $$Additional\ Travel = ...$$ o **Saturday and Sunday** - Options fitting four activities in a row are returned, as this number of activities provides acceptable travel efficiency. o **Next Monday and Beyond** - All options fitting at least one activity are returned. - No forecast is applied beyond the configured day range.
Capacity Management	The following options are available: o **Capacity categories** Defines a list of capacity categories that you want to use for the capacity area. **Note:** The list is automatically synchronized between the connected capacity category and capacity area using the Resource Info page.

Parameter	Options
	o **Working time unit** Select one of the following options to define the column in which you want to display the planned values in the Available Capacity screen: - **hours:** The planned amount of working time is displayed in hours in the Capacity column. > **Note:** The Hours, Minutes, or Man-days option displays based on the option selected from the **Measurement units for Quota and Available Capacity** drop-down list in the Business Rules page. - **resources:** The planned amount of resources are displayed in the Resources column. o **Start of day travel time is included in the used time** Select the check-box to include the resource's first travel time for calculating the Used Quota parameter. The first travel time in a mobile worker route is defined as the time required to travel from the mobile worker's start location to the first activity location. > **Note:** By default, the check-box is enabled to maintain backward compatibility with all capacity areas. o **End of day travel time is included in the used time** Select the check-box to include the resource's final travel time for calculating the Used Quota parameter. The final travel time in a mobile worker route is defined as the time required to travel from the mobile worker's final activity location to the mobile worker's end location configured in the application.
Quota management > Manage quota by day	Defines how quota is entered by day. The following options are available: o **Enter quota as % of capacity defined by calendar and then switch to the working time plans** Allows to use the available capacity for a specified number of days and then switch back to planned capacity. Select the number of days in the **For the next days** field. o **Enter quota as % of capacity defined by calendar** Select this option to use available capacity for booking. This means the application adjusts quota based on the maximum available quota during the day. For example, if a resource is sick, quota is reduced correspondingly. o **Enter quota as % of working time plans** Select this option to use planned capacity for booking. o **Quota is entered in minutes** Select this option to enter quota values in minutes. o **Reduce quota by the total duration of activities not assigned to any capacity category** Select this option to reduce quota by volume of activities not assigned to any capacity category. Visible when one of the following options is selected: - Enter quota as % of capacity defined by calendar and then switch to the working time plans - Enter quota as % of capacity defined by calendar - Enter quota as % of working time plans
Quota management > Manage quota by capacity category	Defines how quota is entered by capacity category. The following options are available:

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Parameter	Options
	o **Quota is entered as % of maximum capacity available in this category**If this option is enabled, the quota is defined as % of capacity available by calendar in this capacity category. o **Quota is entered as % of quota defined on parent level**If this option is enabled, the quota is defined as % of quota defined on the day level. o **Quota is entered in minutes**Select this option to enter quota values in minutes.
Quota management > Manage quota on the level of booking intervals	Ensure that limits are defined for all booking intervals and capacity categories. Otherwise, missing values will be replaced with "zero quota limit", which means that booking is prohibited for such categories and intervals. Visible when one of the following options is selected: o **Enter quota as % of capacity defined by calendar and then switch to the working time plans** o **Enter quota as % of working time plans**
Use Quota Management - Based on Time Slots	
Booking	o **Allow to close booking on work zone level** Defines whether booking can be closed on a particular work zone level. o **Show recommendations in activity booking screen** Defines whether you want to show the booking recommendations. When you select this check-box, the Book Activity page might show a time slot with a special icon, indicating a recommendation. The recommendation is a time slot that has a bigger probability of decreased overall travel expenses. For more information, see the Booking Recommendations topic. o **Optimization goal** Allows choosing between Default (early scheduling) or Optimize Travel. o **Use forecasted activities during booking** Option to consider forecasted activity flows during booking. o **Forecast the activity flow within the days range** Defines the forecast range in days, with minimum and maximum values from 0 to 31. A value of 0 indicates the current day. This option is visible only when the **Use forecasted activities during booking** option is selected. Choose the forecast range carefully based on operational needs. A broader range improves optimization but might increase processing time. - For dates before the range, only routes that already contain activities close to the booking are suggested. - For dates within the range, the activity flow forecast is applied in a way that additional travel in the proposed routes is close to the per-bucket average. - For dates after the range ends, all the feasible route positions are returned. o **Time slots** Defines the time-slots during which resources can book activities. **Note:** The list is automatically synchronized between the connected capacity area and capacity area using the Resource Info page. When you select **Use forecasted activities during booking**, the scheduling options returned would be different from the default settings. The behavior of returned schedule options varies based on the date range as follows:

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Parameter	Options
	○ **Dates Before the Minimum Day of the Range:**
	- Returned options include routes where:
	○ The activity is adjacent to an existing activity on the route.
	○ The additional travel caused by adding the activity to the route is under 120% of the average per-bucket travel, suggesting close proximity to existing activities on the route.
	- Additional travel is calculated as the difference in total travel on the route with and without the new activity.
	- Additional travel to and from the given activity is estimated using the airline distance method.
	○ **Dates Within the Range (from Minimum to Maximum Day):**
	- Returned options include routes where:
	○ The activity is adjacent to an existing activity with the same travel key.
	○ The additional travel caused by adding the activity to the route is under 120% of the average per-bucket travel, suggesting close proximity to **existing** activities on the route.
	○ Options where the average additional travel is less than 120% of the average per-bucket travel suggesting close proximity to **forecasted** activities on the route.
	- The expected number of activities in the future is determined by multiplying the average number of activities booked per day for the specific travel key by the number of days from today until the scheduled option date.
	- Additional travel To and From the given activity is estimated using airline distance method. To estimate travels between activities in the same travel key, the average travel per travel key is used.
	- Additional travel for forecasted activities is estimated using statistical data. If sufficient data is unavailable, the dates within the range are processed using the same logic as 'Dates Before the Minimum Day of the Range,' meaning no forecasted activities are considered.
	- Additional travel is calculated as follows:
	○ First, calculate the total travel distance in the route, including the given activity at the proposed location in the route along with the expected number of activities for the same travel key after the given one.
	○ Then, calculate the total travel distance in the route if the given activity is excluded.
	○ Subtract the second value (without the given activity) from the first value (with the given activity).
	○ Finally, divide this difference by the expected number of activities + 1 (to account for the added activity).
	○ **Dates After the Maximum Day of the Range**
	- All possible route options are returned, following the standard `findMatchingResources` API behavior without activity flow forecasting.
	For example, in an environment where:
	○ Activity flow forecast is enabled by default.
	○ Scheduling has a range of 2 to 7 days.
	○ Two activities are scheduled with the same travel key - one for Monday and one for Thursday.
	○ One mobile worker is available with the required skills.
	○ According to historical data:
	- Average activity creation rate for this travel key is 0.75 activities per day over the last 30 days.
	- The travel key is classified as distant, with travel times estimated to be 1.5 times longer than the bucket average.
	○ According to travel statistics the average travel per travel key is 0.33 times of the bucket average.
	The activity flow forecast outcome would be as follows:
	○ **Monday (Day 1)**
	- The activity is planned either **next to** or **before** the existing activity in the same travel key.
	○ **Tuesday**
	- No options are returned. There are no activities in the route with the same travel key.

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Parameter	Options
	o **Wednesday** - No options are returned. By Wednesday, the system expects two activities to be booked. The average additional travel would exceed by 122% of the average per-bucket travel. - Calculation: $$Additional\ Travel = \frac{Travel\ to\ distant\ key\ +\ Avg.\ tra}{Expected\ }$$ - Substituting Values: $$Additional\ Travel = \frac{(1.5 \times avg.\ bucket\ travel) + 2(}{}$$ $$Additional\ Travel =$$ o **Thursday** - The activity is planned either next to or before the existing activity in the same travel key. o **Friday** - Options fitting four activities in a row are returned. - The application expects three activities to be booked. Travel efficiency improves with this forecast, as the additional travel is less than the bucket travel average. - Calculation: $$Additional\ Travel = \frac{(1.5 \times avg.\ bucket\ travel) + 3(0.3}{}$$ $$Additional\ Travel =$$ o **Saturday and Sunday** - Options fitting four activities in a row are returned, as this number of activities provides acceptable travel efficiency. o **Next Monday and Beyond** - All options fitting at least one activity are returned. - No forecast is applied beyond the configured day range.
Capacity management	o **Capacity categories** Defines a list of capacity categories that you want to use for the capacity area (that's, capacity area). > **Note:** The list is automatically synchronized between the connected capacity category and capacity area using the Resource Info page.

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Parameter	Options
	o **Working time unit**Select one of the following options to define the column in which you want to display the planned values in the Available Capacity screen:
	- **hours:** The planned amount of working time is displayed in hours in the Capacity column.
	Note: The Hours, Minutes, or Man-days option displays based on the option selected from the **Measurement units for Quota and Available Capacity** drop-down list in the Business Rules page.
	- **resources:** The planned amount of resources are displayed in the Resources column.
	o **Start of day travel time is included in the Used time**
	Select the check-box to include the resource's first travel time for calculating the Used Quota parameter. The first travel time in a mobile worker route is defined as the time required to travel from the mobile worker's start location to the first activity location.
	Note: By default, the check-box is enabled to maintain backward compatibility with all capacity areas.
	o **End of day travel time is included in the Used time**
	Select the check-box to include the resource's final travel time for calculating the Used Quota parameter. The final travel time in a mobile worker route is defined as the time required to travel from the mobile worker's final activity location to the mobile worker's end location configured in the application.
Quota management > Manage quota by day	Select this option to use available capacity for booking. This means the application adjusts quota based on the maximum available quota during the day. For example, if a resource is sick, quota is reduced correspondingly.
	When selected the following options become visible:
	o **Quota is entered as % of capacity defined by calendar**
	If this option is enabled, the quota is defined as % of daily capacity available by calendar.
	When selected the following additional option is displayed:
	- Reduce quota by the total duration of activities not assigned to any capacity category
	Select this option to reduce quota by volume of activities not assigned to any capacity category.
	o **Quota is entered in minutes**
	If this option is enabled, the quota is defined as a number of minutes available for this day.
Quota management > Manage Quota by Capacity Category	When selected the following options become visible:
	o **Quota is entered as % of maximum capacity available in this category**
	If this option is enabled, the quota is defined as % of quota defined on the day level.

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Parameter	Options
	o **Quota is entered as % of quota defined on parent level** If this option is enabled, the quota is defined as % of quota defined on the day (time slot) level. - **Estimate quota based on historical data** This parameter defines whether the application must estimate the '% Quota' values based on the historical data. o **Historical values to be used** This parameter defines if the 'Quota %' or 'Used capacity %' values should be processed for the "estimate quota" functionality. o **Processing historical data period (same weekdays)** Select One week or One month or Two months to set the length of historical data period to be analyzed. - **Automatically adjust 'Quota. %' values to keep their total equal to 100%** This parameter defines if the total sum of the '% Quota' values should always be equal to 100%. o **Quota is entered in minutes** If this option is enabled, the quota is defined as a number of minutes available in this category for this day.
Quota management > Manage Quota by Time Slot	o **Quota is entered as % of capacity available by calendar** If this option is enabled, the quota is defined as % of time slot capacity calculated by calendar. o **Quota is entered as % of quota defined on parent level** If this option is enabled, the quota is defined as % of quota defined on the day level. o **Quota is entered in minutes** If this option is enabled, the quota is defined as a number of minutes available for this time slot.

What is a Favorite group of resources?

Use the **Favorites** option to get quick access to the most often used resources such as bucket, mobile worker, organization unit, tool, or vehicle. You can create as many Favorite groups as required.

When a user adds a resource to a Favorite group, the star is filled. Favorite groups are shown at the top of the resource tree and are saved for a specific user (not a company level configuration).

The favorites group has these characteristics:

- You can view only the Favorites group in the resource tree.
- All warnings shown on the resource icon and resource hint in the resource tree are supported for Favorite resources.
- Actions available in the main resource tree such as drag and filter are supported for the Favorites group as well.
- When searched for a resource, Favorites and the main resource tree resources are searched.
- When searched by activity, the main resource tree resource is considered, and the Favorites group is avoided.
- Favorites are available on these pages in the interface:

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- Activities
- Daily
- Dashboard
- Reports
- Resource info
- Resource calendars
- Inventories
- Locations
- Resource work zones
- Users

- Favorites aren't available on these pages:
  - Quota
  - Forecasting
  - Routing

Sometimes you might notice that the time zone of a resource added to the Favorites group is different from that of a resource that isn't added. This is because, the Favorites group isn't a resource type like a bucket or an org unit. Therefore, it uses the time zone from a resource assigned to you or, if you don't have any resources assigned, the it uses your browser's time zone.

How do I receive notifications on the locked screen of an iPad?

You can receive notifications on the locked screen of an iPad in certain scenarios.

There are two types of notifications to consider:

- Notification for chat messages sent through the Collaboration Module
- In-App notifications within the application

For the first type, when a new Collaboration chat message is received by the device, it triggers a pop-up notification on the device's lock screen. For example, if someone sends a message to the user, it will be displayed on the lock screen.

For the second type, the notifications that appear under "Notifications" are not shown on the lock screen.

You can refer to the topic *Notifications in the Collaboration Window* for more details on these notifications. These notifications are only validated when the user reopens the app and brings it to the foreground.

Note that these are in-app notifications, which require the user to bring the app to the foreground. At that point, Oracle Field Service will check the current route status and, if necessary, generate notifications for the user. For example, if a new activity is added to the user's route while the app is in the background, a notification will inform the user of the new activity once the app is brought to the foreground.

Additionally, there is an alternative method where actions performed on an activity can be turned into Collaboration chat messages using Outbound/Message Scenarios. For more information, refer to *Use Collaboration as a Delivery Channel* topic.

If Oracle Field Service outbound is configured and a message is sent using Collaboration, it is treated as a Collaboration chat message to the user/technician, thus falling under the first type and triggering a pop-up notification for the user.

What type of notifications can I receive in the Collaboration Window?

You can view the notifications such as activity and location alerts, help desk chats in the **Collaboration** window. All the notifications are consolidated in one area under the chat icon in the header. This consolidation makes it easier for you to manage your read and unread messages.

If your user type is not configured with Collaboration, you can still get the notifications under the same icon. However, you cannot see the Collaboration features such as chats, helpdesk chats, and historical messages. Instead of the **Collaboration** window, you see the **Notifications** window and it lists all the available notifications.

> **Note:** The notification messages are available on the **Notification** tab for an active session. The messages disappear if you refresh the page. If you log in to the application again, you will get new notifications as part of the new active session.

This screenshot shows the Notifications tab in the Collaboration window, as seen in a browser:

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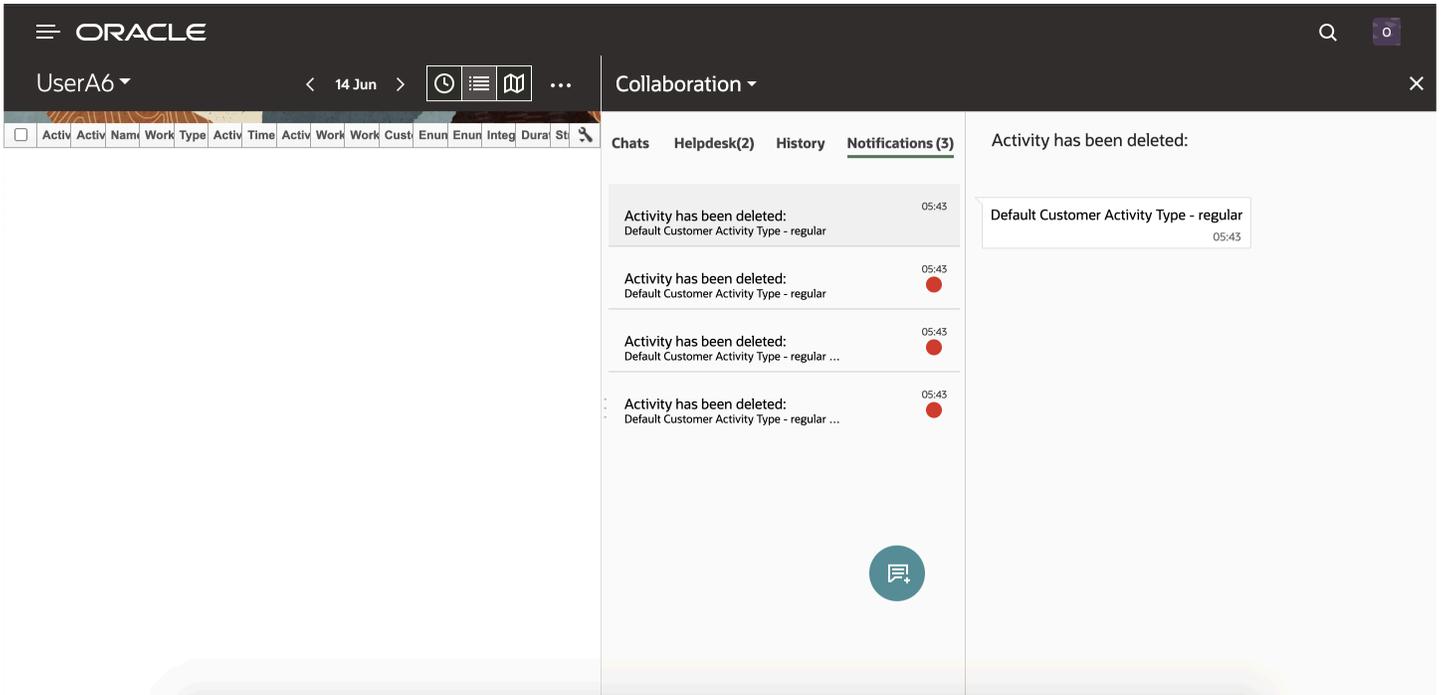
This screenshot shows the Collaboration window with the Notifications tab in the installed app:

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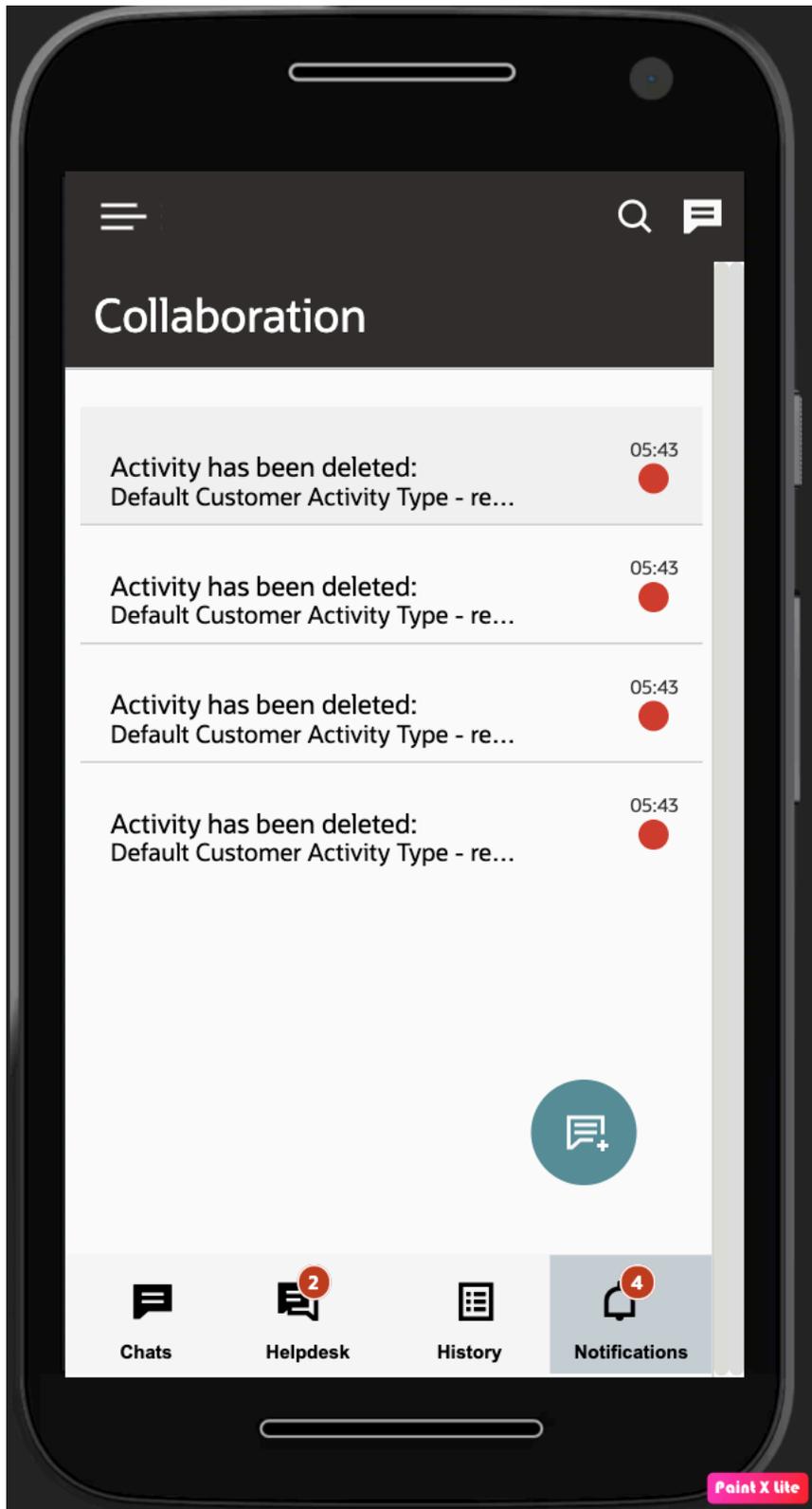
These are the features of notifications:

- You can see the Notification tab only when you activate your route.

- Supervisors, dispatchers, or admin users who manage multiple users can see the notifications of their teams, when the manager (user) views the Activity List of a resource, only when the mobile worker's route is activated.

- The Notifications displays the count of unread notifications.

- The left pane of the Collaboration window contains the notification title, the time of arrival of the notification, and a colored dot to indicate unread notifications.

- The right pane of the Notification tab contains the details about the notification with a header as the title of the notification.

- The Collaboration icon shown in the header shows the sum of all unread chats and notifications when Collaboration is not open on the page.

- Each notification appears as an individual item within the Notification tab.

If you are using the native application in Android devices, you can get the Collaboration notifications even when the app is running in the foreground. That way, you get the new Collaboration notifications on any page within the Oracle Field Service app. You can click **Back** from the Collaboration chat list page and navigate back to the previous Oracle Fusion Field Service page from where you had opened Collaboration. If you are in the detail pages of Collaboration, you are navigated back to the previous page.

In-app notifications are notifications that are sent to the user, while the user is using the app in the foreground. Note these points:

- In-app notifications are not available on iOS devices.

- In-app notifications are not available when you are working within the Collaboration pages.

- In-app notifications include all activity and location alerts that are displayed in the **Notifications** tab within Collaboration. Further, they also include all Collaboration related notifications such as new message, broadcast, helpdesk, group messages, and message scenarios.

How do I use Collaboration as a Delivery Channel?

You can use collaboration as a delivery channel to send alerts of different types of events or situations in Oracle Fusion Field Service to collaboration users (for example, mobile workers, help desk operators, and resources). Also, you can broadcast notifications or alerts to collaboration user groups or help desk groups on occurrence of an event or when a predefined condition is met in Oracle Fusion Field Service.

Before you start

- Subscribe to Collaboration to view the Collaboration option as a delivery channel in the message scenario. View the About page in your environment to verify whether the service is enabled.

- Create collaboration users, user groups, or help desk groups.

  Note: For more information on configuration settings, see the *Configuring Collaboration* section in the *Oracle Fusion Field Service Collaboration Service Guide.*

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For example, assume that you want to notify the resource using collaboration as a delivery channel when a activity is created in Oracle Fusion Field Service. Assume that the message scenario, `new appt` is associated with the `Activity is Created` launch condition and has a scenario step, Collab Alert.

Here's what to do

1. Log in to Oracle Fusion Field Service as a Administrator.
2. Click **Configuration**, **Message Scenarios**.
3. Select the **Collab Alert** scenario step.
4. Select Collaboration from the **Delivery Channel** drop-down list in the **Settings** tab.
5. Select one of these options from the **Recipient** drop-down list:
   - Resource: Delivers message to the resource associated with the launch condition. By default, Oracle Fusion Field Service considers the language and time zone of the user associated with the resource. If the collaboration permission is not configured for the resource, then the message scenario displays a False Method status in the **Messages** tab of the **Activity Details** page for the scenario step.
   - use static address: Enables you to send the message to specific users, user groups, and helpdesks. Click **Add New** and search for the required users, user groups, and helpdesks. Select the required users, user groups, and helpdesks to add them to the **Recipients** section. You must enter at least three letters in the **Search** field to search for the required users, user groups, and helpdesks.
6. Enter the message content in the **Subject** and **Body** fields of the **Patterns** tab.

   The default language of the company is configured on the **Preferences** page, **Language** drop-down list and is selected as the language for the message content. For example, if English is configured as the default language and if the **Subject** and **Body** fields in the **Patterns** tab are populated is English, then regardless of the user's language, the message is sent to the recipient in English.

   However, you can use the **Pattern** tab to specify another language for the message content. You can specify any one of the languages selected from the **Preferences** setting as the language for the message content. For example, if English is configured as the default language and the **Subject** and **Body** fields in the **Patterns** tab is populated is Spanish, then the message is sent to the recipient user in Spanish. However, be aware that the placeholders are not translated; they are always in English. For example if there is a placeholder {activity_status}, it will not be translated; it will be in English.

   If the default language is not configured then English is considered as the default language of the recipient and the message is sent to the recipient in English.

7. Configure the required fields and click **Save**.

   The details such as sending time and the selected delivery channel are updated for the Scenario step.

Assume that a new activity is assigned to the resource, Phillip. The message scenario is triggered and the **Collab Alert** scenario step is displayed with the New status in the **Messages** tab of the **Activity Details** page.

When the message alert is sent to the resource, the status in the **Messages** tab of the **Activity Details** page changes to Sent.

> **Note:** If the scenario step is not configured properly or if the message alert is not sent to the resource, the status in the **Messages** tab of the **Activity Details** page changes to Failed. However, if a message is invalidated because of an activity-related operation in Oracle Fusion Field Service (such as delete, move, suspend activity), the status in the **Messages** tab of the **Activity Details** page changes to Obsolete.

To view the message alert, log in to Oracle Fusion Field Service using resource's login credentials.

For more information, see the *About Collaboration Window* section in the *Oracle Fusion Field Service Collaboration Service Guide.*

How do I configure the reasons to move activities manually?

When dispatchers move activities manually using the **Assignment Assistant**, they add the reasons for moving. Dispatchers can select the reasons only if you have configured them on **Business Rules**.

1. Click **Configuration** > **Business Rules**.
2. Scroll down to the **Assignment Assistant** section.
3. Click **Add New**.

   You can use the pencil icon to edit an existing move reason.
4. Complete these fields on the **Add Move Reason** dialog box:
   a. In the English field, type a reason for moving an activity. For example, Non-availability of resource.
   b. Provide the translation names in the required languages.
   c. Set the status as Active (or inactive). Only Active reasons are available for selection on the **Assignment Assistant**.
   d. Select at least one move condition from these options:
      - Moving from bucket to resource
      - Moving from resource to resource
      - Moving from resource to bucket
      - Moving from bucket to bucket
      - Reordering within route
   e. Click **Submit**.
5. Click the pencil icon in the **Move Reasons are not applicable for selected User Types** field. Select the User Types that need not provide a reason while moving activities. For example, contractors.

   Users that belong to the User Types selected here do not see the **Move Reason** field on the **Assignment Assistant**.
6. Click **Save** on **Business Rules**.

   The Active move reasons are now available for selection on the **Assignment Assistant**. On the **Business Rules** page, Move Reasons are sorted alphabetically and Inactive reasons are displayed in the end, highlighted with the **Inactive** label. Further, the **Conditions** column is blank when all the move conditions are enabled for a Move Reason.

How do I add a Resource Type for Contingent Worker?

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

Contingent (or Infrequent) Workforce is one where the workers don't work directly for the company. They're contractors that may not have dedicated or assigned routes everyday. They will be assigned work infrequently on an ad-hoc basis.

1. Click **Configuration**.
2. Click **Resource Types** in the **Resources, Activities, Inventories** section.
3. Click **Add resource type**.
4. Complete these fields:

Field	Description
Name (mandatory)	Enter a name for the resource type. All supported languages are listed.
Label (mandatory)	A unique identifier for the resource type that is mapped to the REST API.
Active	By default, the Active check box is selected and the resource type is activated.

5. Select **Field Resource** from the **Role** drop-down list.
6. Select the **Resource is a contingent worker** check box.

   The remaining check boxes are grayed out. These rules apply to contingent worker resources:
   - When the Resource is a contingent worker check box is selected, the Role can't be anything other than "Field Resource".
   - This resource can't participate in teamwork.
   - This resource can't access resources other than themselves.
   - Quota doesn't consider contingent workers while calculating the available capacity.
   - Bulk, urgent, and immediate routing don't assign activities to this resource.
   - The alert regarding route activation doesn't display for this resource.
   - Travel and activity duration from these resources aren't included in the company-wide statistics.

   Note: The **Resource is a contingent worker** check box is grayed out on the **Edit resource type** dialog box. This means, after you create a contingent worker resource type, you can't change it back to a normal resource. Further, a contingent worker resource can only be a mobile worker and this resource must have only one corresponding contingent worker user. Contingent workers are automatically removed from the application, if they've not activated a route in 12 continuous months.

How do I prioritize an activity using Activity Priority setting in Routing?

Activity priority used by Routing to assign urgent activities is defined for the whole company as one of the Business Rules settings.

By setting the activity priority the company defines the activity property and its values which will make the activity urgent. For example, the company must always perform repairs as soon as possible to reduce service disruptions to the minimum. In this case the company may select **Activity Type** as the property and **Repair** as its value to consider an activity urgent. Only one activity property can be used to identify urgent activities. Several values of the same property can be used as criteria of activity urgency. In this case the values must be separated by commas or carriage returns (new lines) in the **Urgent activities have the following values of the property** field. Values in the Normal activities have the following values of the property field define the values for the Activity Type field, to consider an activity as normal.

> **Note:** For enumeration properties, use the enumeration value Id to define activity urgency criteria.

The following figure shows the **Activity priority** section of the **Business Rules** page:

Activity priority
The configuration is used to define activities for: urgent activities assignment, immediate assignment and prioritization activities for self-assignment on the map

Property to define priority:

Severity [XA_SEVERITY]

Urgent activities have the following values of the property:

Critical (Urgent Routing)

Normal activities have the following values of the property:

Note: the values are sorted in descending order of priority

> **Note:** The order of property values defines the priority level. The value listed first will have the highest priority, with other values following in the descending order.

Priority activity ETA does not include SLA, it includes the service window. This may result in SLA violation. In priority activities, such SLA violations are considered to be expected behavior. However, SLA is included for all rest activities.

What Is Street-Level Routing (SLR) and How Does It Work with Historical Travel Data?

Street-Level Routing (SLR) maps the best path for a vehicle traveling from Point A to Point B, and then estimates the travel time. It computes the distance on roads considering turn-by-turn directions; this means, it's based on the actual road speed and the expected speed based on the type of road.

SLR provides the base travel duration used during routing. When historical travel adjustment is enabled, the application may increase this SLR-based duration using learned differences between travel reported by mobile workers and the travel estimated by the map provider. This helps produce more realistic travel times in routing plans.

You can manage mobile workers' travel time and travel distance in a routing plan using the Street Level Routing (SLR) feature. It helps to optimize the route of a mobile worker who uses electric vehicles or any vehicle with limited range.

The adjusted SLR travel estimation further improves routing accuracy in areas where mobile workers often face delays that map data does not reflect, such as parking time, walking distance to customer sites, or complex building access.

This feature can also be used with routing runs that run Manually, Once a Day, Recurrently and Sequentially; it is not available for Immediate routing runs. To improve the quality of the routing run with SLR, configure the plan with adequate time to gather enough SLR data. We recommend that you allocate a minimum of five (5) minutes for Once a day and Manual routing plans. This time will vary based on your business and the amount of activities to be optimized. You may increase the time if needed.

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The Run schedule section shows the Use SLR to obtain travel data check box. This indicates that the time limit includes extra time for SLR data.

1. Select the Use SLR to obtain travel data check box.
2. Select the duration in the Time limit field to adjust the time limit accordingly.

The routing run time includes both gathering SLR data and using that data to run Routing. When historical travel adjustment is enabled, the adjusted travel duration is applied to SLR-based values during routing. The application uses the SLR-computed travel time as the starting point and then applies the learned adjustment to produce the travel duration used for scheduling.

In some situations when there are several pending activities, every point to point travel combination can't be obtained in the allotted time period. When this occurs, routing will use SLR data and learning travel data to optimize the routes. This ensures routes are optimized quickly with the best combination of travel data. If historical travel adjustment is enabled, any SLR-based travel durations used in these fallback scenarios may also be increased using learned adjustment values. When limited or no historical data exists for a destination, the adjustment is treated as zero or is based on broader patterns learned for that travel key.

Can I include HTML templates in message configuration body?

You must first create a message scenario before you can define the launch condition, scenario steps, message, and delivery channel..

> **Note:** While creating a message scenario, ensure that no HTML content is included in the message scenario. Field Service does not support including any HTML templates in the message scenario pattern.

1. Click **Configuration**.
2. Click **Message Scenarios** under **Subsystems and Integrations**.

   The **Message Scenarios** screen opens.
3. Click the + icon in the left panel.

   The **Add Message Scenario** dialog box opens.
4. Type the name users will see on the **Message Scenarios** screen in the **Name** field.
5. Type a unique identifier for the message scenario in the **Label** field.
6. Type the date the scenario becomes active in the **Start Date** field or click the calendar icon and select a date.
7. To set an end date at which the scenario becomes inactive, select the **End Date** check box and type or select a date in the field.

   > **Note:** If you do not select the **End Date** check box, the scenario will run indefinitely.

8. Click **OK**.

Results:

The **Add Message Scenario** window closes and the message scenario you created appears in the list of scenarios on the left of the **Message Scenarios** screen. The scenario will display an error message in the scenario list because you have not yet defined a launch condition for it.

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What to do next

Now you can configure the message scenario.

How do I assign a warehouse to an activity?

If you're using a warehouse to manage inventory, you must assign a warehouse to each activity, so that mobile workers can pick up inventory only from the chosen warehouse.

1. Sign in as a dispatcher.
2. Search for the activity for which you want to add the warehouse.
3. Open the **Activity Details** page, click **Resource Preferences**.

   The **Resource Preferences** section is available only if your user type has the Read-Write permissions for this section.
4. On the **Resource Preferences** page, click > **Add Preference** > **Warehouse**.
5. Start typing the name of the warehouse and select it when listed.

   The warehouses you see here depend on the resources that are visible to you. They're set in the **Visible Resources** field on the **Resource Info** page.
6. Click **Add**.

   You can assign any warehouse to any resource's activity in the scope of your visible resources. A mobile worker can use the inventory of a warehouse even if it's out of their scope of visibile resources. So, they might not see a warehouse in the resource tree, but they can use the inventory from the warehouse while working with an activity.

   Using **Resource Preferences** gives you the flexibility to manage shared inventory. Resources can share inventory only in the scope of specific activities and not all activities.

How do I modify an existing application to update the configuration settings to a new fusion environment?

You can modify the existing endpoint configurations for an Oracle Integration application.

To update the existing endpoint configuration or application settings, select the **Modify** option. Here, you can adjust the Oracle Fusion Service Endpoints to ensure proper integration with the new Fusion environment. It's recommended to make these changes in a test environment that mirrors the production (PROD) environment before applying them to the actual production environment. This method allows for successful connection and testing in a controlled setting before implementation in the production environment.

Note: You can use the **Reconfigure** option to reconnect the application with current configuration.

1. Click **Configuration** > **Applications**.
2. On the **Applications** page, select the application to edit

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3. Click the Properties icon and select **Modify**.

The screenshot shows the Properties menu options for a selected application.
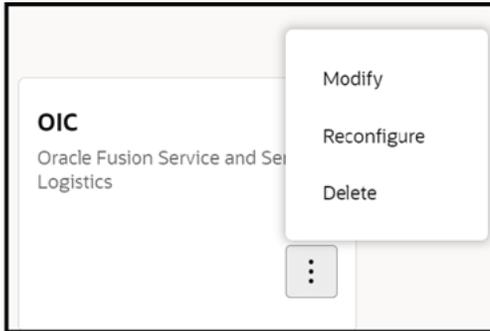
4. The **Modify Application** dialog box displays the options to edit the selected application.

5. Edit the following details as necessary:

> **Note:** To update the values in this dialog box, contact the Oracle Integration administrator.

Field Name	Action
Application Type	Select Oracle Integration from the drop-down list.
Application Name	Enter the name of the application you're integrating. This name will be displayed on the **Applications** page.
Host	Enter the host name of the Oracle Integration environment in the format `servername.oraclecloud.com`.
User Name	Enter the user name used to sign in to the Oracle Integration environment with the ServiceDeveloper role.
IDCS URL	Enter the base URL of the Oracle Identity Cloud Service Admin console in the format `https://example.identity.oraclecloud.com`.
Client ID	Enter the Client ID of the client application you've created in Oracle Identity Cloud Service.
Client Secret	Enter the Client Secret of the client application you've created in Oracle Identity Cloud Service.
Key ID	Enter the key that's used to verify the signature in Oracle Identity Cloud Service. It must match with the certificate alias uploaded in Oracle Identity Cloud Service.
Scope	Enter the scope of the Client Application that you've created in Oracle Identity Cloud Service. It must be in the format: `https://applicationid.integration.ocp.oraclecloud.com:443urn:opc:resource:consumer::all`

6. Click **Modify**.

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How do I create an enumeration property?

Option buttons and drop-down lists are examples of the enumeration property. This means, you can have a set of valid values and you can select only one value from the set. For example, you've four types of customers, Standard, Gold, Silver, and Bronze and you want to indicate the customer type on each activity record.

This example creates an enumeration property, Customer level with four values, Standard, Gold, Silver, and Bronze, and displays the property as a drop-down list in the user interface.

1. Click **Properties** in the **Resources, Activities, Inventories** section.
2. Click **Add New**.
3. Select **Activity** from the **Entity** drop-down list.
4. Enter **Cust_level** in the **Property label** field.
5. Enter **Customer level** in the **Property Name** field. Enter the name in English and in all the languages that are active in the application. The maximum length of an enumeration property name can be 500 characters.
6. Select **Enumeration** from the **Property Type** drop-down list.
7. Select **Combobox** from the **GUI** drop-down list.
8. Click **Add** in the **Enumeration values** section.

   The **Add enumeration value** dialog box appears with the **Active** check box selected. If you clear the **Active** check box and make a value inactive, the value is available for selection on the page to which you add the property.
9. Enter **Standard** in the **Enumeration Values** field and click **Add**.

   The values you add here display in alphanumeric order.
10. Repeat step 9 and add Gold, Silver, and Bronze.
11. Click **Add** on the **Add New Property** page.

   The "Default Values", "Validation Rules", and "Visibility" fields of Visual Form Editor only work with an enumeration property's index and not its actual value. You can't use the value in functions such as if, concat, or in various operators. If feasible, you can try setting the same string for both, the value and index for the properties you must use in the "Default Values", "Validation Rules", and "Visibility" fields.

What to do next

Enumeration Property Indexing

1. The application automatically assigns an **index value** to each enumeration value.
2. Index values are **case sensitive**.
3. APIs refer to enumeration values **by their index value**.
4. You can also add **index values manually**.
5. For better readability, use a custom code—e.g., use **CNH** (for "customer not home") instead of the default index value **1**, and map this code to your client system.
6. Once an index value is added, it **cannot be edited**.
7. Avoid using **0** or **-1** as index values—they're **reserved for internal use**.

   Note: If you want to display the values of an enumeration property in sorted order, use the Mongolian Vowel Separator (U+180E: #). By inserting it strategically, you can influence the sort order of items without altering their visible names or labels. You can copy and paste this character from a Unicode resource like the *Unicode Explorer*.

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How do I enable Activity Selection by Location?

Let's say a mobile worker is assigned with multiple activities in the same location. When the resource completes one of the activities, they can see the other activities in location, if you have configured the **Select activity at the same location to start** option. This functionality is available in the offline mode as well. An activity is considered to be at the same location, if the distance is within 'X meters, where X' is the Resource Parameter is defined under the Smart Location section.

1. Click **Configuration** > **User Types**.
2. Select the desired user type.
3. In the **Activity Management** section, verify **Select activity at the same location to start** option is available.
4. Click **Update**.
5. To configure the Resource Parameter, click **Configuration** > **Business Rules**.
6. Go to the Maps and Geocoding section. In the **Resource is considered to be at the activity location if the distance to it is less than** field, enter the distance in meters.

   A resource is considered to be at the activity location if the distance to it is less than X meters. If you do not have a license for Smart Location / Professional/ Enterprise Cloud services, then the value is set to 100 meters; you cannot change this value.

How do I configure the Available Reports for a User Type?

User types control the access to configure available reports for a user type in Core Application. The user (preferably, Administrator with configuration permission) can grant permissions to configure available reports in Dashboards. To configure available reports for a user type, you require permissions to access Dashboards from the Configuration page.

To set up Dashboards as a menu item for a user type configuration page for a user type:

1. Click the navigation menu and select **Configuration**.
2. In the Configuration page, select **User Types**.
3. In the User Types page, select **Screens**.
4. In the Main section, select the Configuration menu item:
5. In the configuration menu context layout, click **Click to add**. The Add menu item dialog box is displayed.
6. In the Add menu item dialog box, select the **Dashboards** check box and click OK

   The Dashboards menu item is now added to the Navigation pane. Users can access dashboards and reports from this Dashboards page.
7. To configure available reports for a user type, click the navigation menu and select Dashboards from the Configuration menu.

   When the user opens the Dashboards page for the first time, reports or dashboard charts will not be available for the selected user type.
8. You may add available reports to the Dashboards page.

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How do I view the Capacity by Category Report?

The **Capacity by category** report shows the expected duration in minutes and the quota (amount of work performed) for a specific work type and time slot. You can view this report only when selecting a quota enabled bucket.

To view the Capacity By Category report:

1. Click **Dashboard** to open the Dashboard.
2. Select a quota enabled bucket.
3. Select the **Capacity by category** chart from the Dashboard.

   The title bar of the chart displays a set of icons.

4. Click the **Options** icon to display the options for the chart.
5. Select the following **Date** options from the drop-down list:
   - **Selected Day**– Reports for the day selected in the calendar
   - **Day before selected** – Reports for the day before the day selected in the calendar
6. Select the following **Capacity category** type from the drop-down list:
   - **Any Capacity Category**– Average values for all work types will be calculated
   - **Specific Capacity Category**– Values for any specific work type that applies to this Resource will be calculated
7. Do one of the following
   a. In the **Time slots** field, select a time-slot option from the drop-down list:
      - **All**– Average values for all time slots will be calculated
      - **Specific time slot**– Values for any specific time slot can be calculated
   b. In the **Booking intervals** field, select an option from the drop-down list.

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8. Modify the following values, if necessary

- ○ **Major Capacity Usage**

- ○ **Critical Capacity Usage**

This figure shows the Capacity by category report that appears as a gauge.
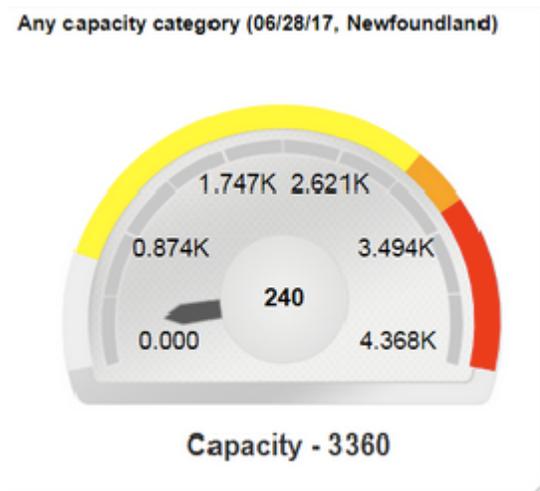
The gauge shows in minutes the anticipated total activity duration (based on work orders) and the amount of quota assigned for each specific time slot and work type:

- ○ The gauge is set up with 0 in the lower left quadrant.

- ○ The hand of the gauge sweeps from left (0) to right as capacity is used, pointing to the current amount of capacity that has been consumed.

- ○ The higher value is determined automatically by multiplying Capacity and 1.3 shown in the lower right quadrant.

- ○ The space between capacity and the higher value represents the point at which the number of work orders for that work type has exceeded quota. If the hand moves into this area (as a result of those additional minutes being consumed) the area will be highlighted in red. Apart from differentiating the capacity change in colors, you can also view the capacity value as text.

9. The minute hand in the Capacity by category report changes with higher capacity.

Consider an example where the gauge shows the following information:

- Time Slot is 8-10.

- Date is 06/18/09.

- Capacity (based on available resources and their calendars) is 1100 minutes and is shown as a tic mark highlighted in yellow at the outer edge. Apart from highlighting the capacity in yellow color, the capacity is also shown as text in the center of the gauge.

The hand points to the current capacity that has been consumed (415 minutes). The current capacity value is also shown at the bottom of the gauge.

How do I navigate the Dashboard in Oracle Field Services?

Use the navigation icons in the screen to navigate the Dashboard.

To navigate the Dashboard:

1. Click the navigation button and click **Dashboards**.
2. Open a report.
3. Click the **Preferences** icon.

   You can see the options to set the report to open with the selected resource, organization, or bucket.

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4. Optionally, set values for these fields.

   a. Click **Always show report for resource** check box to ensure that the most current chart data displays whenever you open the Dashboard.

   b. Select a date from the drop-down list.

   By default, the chart displays statistics for the current day. This screenshot shows the **Always show report for resource** setting:

   c. Click **Save**.

   This chart always displays in your Dashboard for the selected resource, bucket, or organization, regardless of the entity you selected in the resource tree.

5. Click the **Minimize** icon to hide the chart from view.

   See the Modify Dashboard Reports in the Configuring and Using Reports Guide for details about minimizing charts.

6. Click the **Close** icon to close the Dashboard.

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How do I provide access to a Main Menu item to a specific User Type?

You can configure the main menu using the **Main Menu** context layout structure. The configuration affects the Supervisor view. The Manage, Maps, Calendars, and Resources menus are pre-configured for this layout and are available by default.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. Select a user type for which you want to add the main menu.
4. Under the Main section, click **Main menu**.
5. Click the **Click to add** button and add any item that you want to display on the main menu.

   New layout items are available as Read-Only.
6. Click **Save name** or **Use original name**.
7. Update the Add Items visibility.
8. Click **X** at the top-right corner.
9. Sign out and sign in to the application.

   The newly configured main menu appears.

How do I cancel a segmentable activity?

You can cancel a pending segmentable activity or a *pending* segment within the activity when it's no longer required.

1. Click the hamburger icon and then click **Dispatch Console**.
2. Select a bucket or resource in the resource tree.
3. In the List view, select the segment or the activity that you want to cancel.
4. Click **Cancel**.

   The **Cancel Segment** window opens for a segment and **Cancel Activity** window opens for a non-scheduled activity.

5. If you wish to cancel the entire activity with the current segment, then select the **Segmentable activity is finished** checkbox.

   If you select this checkbox, the **Time to complete** field is hidden. You can delete an activity that has all its segments in the **Pending** status in an inactive route, and has no canceled segments. In such case the **Cancel Segment** window displays the **Segmentable activity status** field to select the final status of the activity as deleted or canceled.
6. Select the **Segmentable activity status** from the drop-down list and click **OK**.

Option	Description
Deleted	Denotes that the activity is deleted.

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Option	Description
Canceled	Denotes that the activity is canceled.

If the segmentable activity has at least one segment in start status, the remaining pending segments can only be canceled individually. You must first change the started segment to a final status. You also can't cancel the entire activity. You can adjust the time to complete to cancel or delete the activity.

The activity is marked canceled/ deleted.

7. Adjust the **Time to complete** .
8. Select the **Segmentable activity is finished** checkbox to finish the entire segmentable activity, regardless of any time left on the activity itself. Click **OK**.

The selected segment is canceled based on these constraints:

- If you cancel the last segment of an activity and the time to complete expires simultaneously, then the activity is marked complete.
- If you cancel the segment before the completion of the time to complete, the remaining duration is moved either to non-scheduled pool or to the new segment on the next day, depending on where the activity was created, and the activity is marked as canceled.
- The **Segmentable activity is finished** checkbox should be marked for the last segment of the activity.
- If you cancel the entire activity along with the current segment, which isn't the last segment of the activity, all the segments are merged to form a single entity and is marked as canceled.
- If you cancel only the current segment and don't select the **Segmentable activity is finished** checkbox, the **Cancel segment** window shows the **Time to complete** field with the remaining duration of the activity.
- When a segmentable activity has a started segment, you must cancel all subsequent pending segments individually. In this case, there's no option in the **Cancel activity** window to cancel the entire activity. You can cancel or delete the selected segment by changing the **Time to complete** field, if needed.

Follow the same procedure to cancel a non-scheduled segmentable activity. The application creates this activity as a single entity without splitting into segments, so you can cancel it only entirely.

How do I manage working time plans on available capacity page?

Working Time is the period of time that a resource spends performing activities and tasks. You can use the Planned Capacity editor in Available Capacity screen to view and manage working time plans of resources for capacity areas and organization units on a day level.

Before you start

The editor displays either on the Resources or Capacity column based on the option selected from the **Working time unit** drop-down list on Quota Configuration page.

As a quota or capacity manager, you can perform the following actions:

- Enter the capacity plan either on resource basis (in resource units) or on capacity basis (in man-hours, days, minutes) to cater to the business needs.
- View previously entered plans for capacity area.

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> **Note:** The users who have access to the Available Capacity page can view and edit the working time plans.

To add, edit, or view working time plans:

Here's what to do

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Select the **Available Capacity** icon.

   The Available Capacity page displays.
4. Click on the value that is displayed on the Capacity or the Resources column for the capacity area.

   The Planned Capacity editor displays an empty field for the capacity area and for each organization unit within the capacity area.
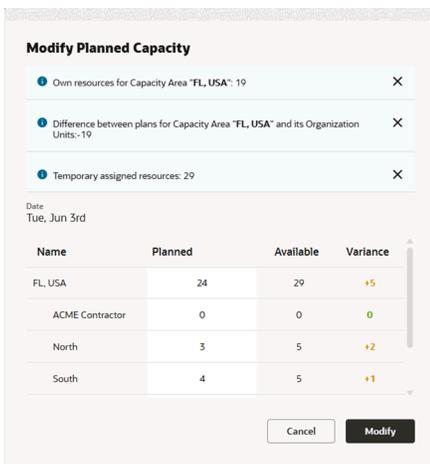
Also, these columns are displayed for both Capacity and Resources column:

- o **Available**: Represents the available capacity for the capacity area and its organization units.

- o **Planned**: Represents the working time plans that is defined for the capacity area and its organization units. You can enter or edit the values (must be whole numbers within the range of 0 to 65535) and the difference between planned and available capacity is recalculated automatically. When you click **Save planned values**, only the value of the Variance column for the capacity area is displayed on the Capacity or Resources column.

- o **Variance**: Represents the difference between the values of the Available and Planned columns.

For example, assume that the available capacity for a capacity area in the Available column is set as 853 hours. You estimate 850 hours for the capacity area and enter the planned value as 850 in the Planned column. Since the available capacity for the capacity area is more than the planned value, the Variance column displays +3 in orange color which means there is enough capacity available. If the planned value is entered as 856 hours, then the Variance

column displays –3 in orange color which means there is not enough capacity available. If the values in the planned and available capacity are the same, then 0 is displayed in the Variance column.

Also, the above logic applies for all the organization units within the capacity area. If the planned and the available capacity are the same, then a green check mark is displayed on the Capacity column.

Similarly, assume that the available capacity for a capacity area in the Resources column is set as 97. You estimate 96 resources for the capacity area and enter the planned value as 96 in the Planned column. Since the available resources for the capacity area is more than the planned value, the Variance column displays +1 in orange color which means there are enough resources for the capacity area. If a negative value displays in the Variance column then it means that there are not enough resources for the capacity area.

Also, the above logic applies for all the organization units within the capacity area. If the planned and the available capacity are the same, then a green check mark is displayed in the Resources column.

> **Note:** The organization units within the capacity area are displayed as a plain list rather than a tree structure. Also, if you have opted for temporary assigned resources using the **Use resources outside the capacity area** check box, then the number of resources that are temporarily assigned to a capacity area is displayed on the editor.

5. Select a previous date to view the previously entered plans for the capacity area.

> **Note:** The planned capacity editor has the same functionality if you select multiple days.

Example 1:

The difference between the planned values for the capacity area and its organization units are displayed on the bottom of the editor. For example, consider the following scenario:

- The available capacity for the capacity area is 853 hours and you enter a value as 852 hours. The Variance column displays +1.

- The available capacity for the organizations units, for example, Organization A and Organization B is 351 and 279 hours respectively and you enter values of 350 and 278 hours respectively. The Variance column displays +1 for both the organization units.

However, a message "The difference between plans for capacity area and its Organization Units is -1" displays on the editor which means that there is not enough planned capacity for the organization units.

Example 2:

The difference between the planned values for the capacity area and its organization units are displayed on the bottom of the editor. For example, consider the following scenario:

- The available capacity for the capacity area is 97 resources and you enter a value as 96. The Variance column displays +1.

- The available capacity for the organizations units, for example, Organization A and Organization B is 75 and 65 resources respectively and you enter values of 74 and 64 respectively. The Variance column displays +1 for both the organization units.

However, a message "The difference between plans for capacity area and its Organization Units is -1" displays on the editor which means that there are not enough planned resources for the organization units.

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Why can't I change the activity status on the same-site activity prompt?

Oracle Field Service prevents other activities from being in the 'Started' status if there is already a 'Started' or 'En route' activity on the technician's route. This is because, although activities might be at the same location, they typically involve different customers. For example, in an apartment building with multiple customers, each customer is considered a separate entity even though they share the same location.

An activity is considered to be in the same location only if the following conditions are true:

- scheduled for the current day

- has resolved coordinates

- has a status of Pending

- must be located in the same location — distance to the next activity must not exceed 'X' meters, where 'X' is the Resource Parameter

- not blocked by other linked activity

If a technician is En route to another activity, notifications may have already been triggered and informed this customer a technician is on the way but, if the technician arrives and switches to another activity on the same location, the initial customer is still expecting the technician to arrive.

This can be resolved by

1. **Solution 1**: The user should use the **Stop travel** option to move the activity back to **Pending** status. This will allow them to start another activity on the route.
2. **Solution 2**: Disable the **Select an Activity to Start from Multiple Activities** option. To do this, follow these steps:
   a. Navigate to **Configurations > User Type**.
   b. Select the User Type for which you want to remove this functionality.
   c. Under Activity Management, uncheck the **Select activity at the same location to start**option.

Why do I see the Manage menu option although it is not configured?

The Manage menu option can be available to users even though it is not configured.

Users can see the Manage menu option even if it is not configured or has been removed from the User Type configuration. This occurs when the logged-in user has visibility to more than one resource, indicating they can manage those resources. The Manage menu is the only way to perform this management, so the system displays this option regardless of its removal from the Menu configuration for the logged-in user.

If you want to ensure a user does not see the **Manage** menu upon login, do the following:

- Navigate to the **Main menu** configuration for the User Types.

- Under the Applications, click **Main menu**. The Main menu page appears.
- Under the **Layout Structure** section, select Manage, and then click **Delete** to remove the **Manage** option.
- Next, navigate to **Resource/Information/Resource Info** page.
- On the **Resource/Information/Resource Info**page, click **Visible Resources**. The Visible Resources dialog box appears.
- Select any additional visible resources from the Visible Resources dialog box and ensure only the user's own resource remains visible and click **Delete**.
- Ensure that the user logs out and then log back in to apply the changes in their new session.

How can I locate the Oracle Fusion Field Service Tenant ID?

For Oracle Fusion Field Service, the identifier you need is called the **Environment Name**. This Environment Name is automatically assigned during the environment provisioning process and acts as your unique identifier.

To locate your Environment Name in Oracle Fusion Field Service:

1. Log into your Oracle Fusion Field Service environment.
2. Click the **User Menu** avatar at the top right corner of the main page.
3. Select **About** from the drop-down menu.
4. On the About page, you will find the Environment Name displayed. This **Environment Name** serves as your Oracle Fusion Field Service tenant identifier and uniquely identifies your provisioned Oracle Fusion Field Service environment.

How do I add inventory types for the plug-in?

You can now add invetory types for the plug-in. You must add inventory types (part, ordered part, and received part) to capture information about the materials ordered and received for completing the activity. The plug-in stores the reported information about materials ordered and received in the resource and customer pools, respectively.

1. Log in to the application as administrator.
2. Navigate to Configuration, Inventory Types, and click Add New.
3. Add the Part inventory type as follows:
   a. Enter part in the Label field.
   b. Enter Part in the Name field.
   c. Select Part_Item+Revision (unique identifier for the Part Item field) from the Model Property drop-down list.
   d. Enter **ea** in the Unit of measurement field.
   e. Click Save.
4. Add the Ordered Part inventory type as follows:
   a. Enter ordered_part in the Label field.
   b. Enter Ordered Part in the Name field.

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      c. Select Part_Item+Revision (unique identifier for the Part Item field) from the Model Property drop-down list.

      d. Enter **ea** in the Unit of measurement field.

      e. Click Save.

5. Add the Received Part inventory type as follows:

      a. Enter received_part in the Label field.

      b. Enter Received Part in the Name field.

      c. Select Part_Item+Revision (unique identifier for the Part Item field) from the Model Property drop-down list.

      d. Enter **ea** in the Unit of measurement field.

      e. Click Save.

Is it possible to restrict a time slot for a specific user type?

You can enable a time slot for a specific user type by creating a new time slot and then assigning the new time slot for a specific activity type and then ensure that this activity type is only worked on by the user type you want to restrict access to that time slot.

You can create and restrict a time slot for a specific user type by

1. Creating a new time slot

      a. Click **Configuration -> Time Slots**. The Time slots page opens.

      b. Click **Add New**. The Add time slot window opens.

      c. Specify the detail as required. For more information, refer to the Create a Time Slot topic in the Using Capacity Service User Guide.

2. After you create the time slot, assign this newly created time slot to a specific activity.

      a. Click **Configuration → Activity Types**.

      b. Select an Activity Type from the list for which you want to map the newly defined time slot.

      c. Click the pencil icon under the **Action** column and then select the time slot that you want to restrict from the **Available time slots** area. For more information, refer to the *Add an activity type* topic.

3. Next, map this activity type to the user type who is going to use this using the Screen configuration tab.

      a. Click **Configuration → User Types**.

      b. Select a User Type for which you want to add the Activity Type. Click the **Screens** tab.

      c. Click **Activity > Activity list**.

      d. Click the **Click to add** button and then select the specific Activity type that you want to map with this user.

      e. Click **X** at the top-right corner.

      f. Sign out and sign in to the application.

4. The newly created timeslot is now available for a specific user type.

How do I use placeholders in the URL?

You can use several placeholders in the plugin's URL. The placeholders are replaced with the values of the corresponding properties and are processed by the server that hosts the plugin

This table describes the placeholders.

Placeholder	Description
{user_id}, {uid}	ID of current user
{date}	current date
{uname}	User name
{ulanguage}	ID of user language
{ulogin}	User login
{su_zid}	User timezone
{allow_desktop_notifications}	Parameter defining whether the user allows HTML5 notifications
{allow_vibration}	Parameter defining whether the user allows vibration alerts

What types of plug-ins are available for Oracle Field Service?

You can add a hosted plugin, an external plugin, or an external application as a plugin. You can also download and use sample plugins that are shipped with Oracle Fusion Field Service.

Oracle Fusion Field Service supports the following type of plugins:

- **Plugin Archive:** An archive plugin is hosted in Oracle Fusion Field Service and uses the Plugin API to interact with Oracle Fusion Field Service. This means, if your plugin consists only of HTML, CSS, and JavaScript files and doesn't contain server-side files, then you can host it in Oracle Fusion Field Service. No other hosting is required. The plugin framework handles the communication between the hosted plugin and Oracle Fusion Field Service.

- **External Plugin:** An external plugin is hosted elsewhere and communicates with Oracle Fusion Field Service through the Plugin API. You add only a link to the plugin here.

- **External Application:** An external application can be added as a plugin and it will be opened as a web page in a new window, or the same window within Oracle Fusion Field Service.

- **Sample Plugin**: There are some sample plugins such as Meter Reading plugin that you can use. You can download the sample plugins from the *https://www.oracle.com/downloads/samplecode/ofsc-samplecode-*

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downloads.html page. You may need to use the secure protocol https and a user account to access this site. Unless explicitly identified as such, the sample code available on this page isn't certified or supported by Oracle; it's intended for educational or testing purposes only.

Migration of Standard Plugins

Standard Plugins are integrated into the main structure of the application. They can now be found under **Configuration->Displays→ Screen** in the following sections:

- **Asset Details, Debriefing** - located in the Activity section
- **Parts Ordering** - located in the Inventory section

This change means that the concept of Standard Plugins has been discontinued and is replaced by a set of default screens, but you can add more by creating forms or plugins.

> **Note:** Asset Details, Debriefing, and Parts Ordering require additional setup before mobile workers can use them. For more information, refer to the activation steps mentioned in their sections.

What are the rules based on which resource locations are decided?

When a resource is in the field, the application sends the GPS coordinates of the resource to the routing engine, if they're available. This helps Routing decide the location of the resource.

These rules are used:

Activity Status	Scenario	Coordinates Sent
Route isn't yet started or no activity is started on the route	The resource's GPS coordinates are obtained between 0–20 minutes.	The GPS coordinates are used.
	No GPS coordinates are available, or GPS coordinates are greater than 20 minutes.	The resource's Start Location is used if it's available.
	No GPS coordinates are available, or GPS coordinates are greater than 20 minutes, and no Start Location is assigned to the resource.	The resource's location remains undefined.
Route has a started or a completed activity	The resource's GPS coordinates are newer than the address of the started or completed activity and the resource is at a distance more than 20 minutes from the address of the started or completed activity (using airline distance and default company airline distance speed).	The GPS coordinates are used.
	No GPS coordinates are available, or GPS coordinates are older than the address of the started or completed activity, or the resource is at	The address of the started or completed activity is used.

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Activity Status	Scenario	Coordinates Sent
	a distance less than 20 minutes from the address of the started or completed activity (using airline distance and default company airline distance speed).	
SLR is enabled and resource completes a non-travel activity or an activity that doesn't include address coordinates	Resource proceeds for the next activity that involves travel.	The current GPS location of the resource after the route is activated is used as the starting point of travel.

How is travel time estimated?

A correct estimation of the average travel time is important to prevent over-booking and under-booking the activities. The travel time is estimated based on the actual activity records (started activities). This topic describes how travel time is estimated with examples.

There are several cases when Capacity/Quota Management uses the travel time estimation for:

- The booking of a new activity (get_capacity function)
- The calculation of "Used" value
- The Calculation of "Other activities" value

The application implements one approach to estimate time for the ordered activities in the mobile workers' routes and another approach for an unknown location where it's necessary to estimate an average travel time value for different kind of activities such as:

- Activities that needs to be booked (get_capacity function)
- Activities in buckets
- Not-scheduled activities
- Not-ordered activities

Travel Time Estimation Updates for Pending Activities:

Oracle Fusion Field Service periodically updates travel time estimates using historical data reported by field resources. For pending, not-scheduled, or not-ordered activities, travel time estimates are updated more frequently, often as part of overnight processes. These updates use average durations associated with the travel key and minor variations of one or two minutes are expected. These updates generally do not apply to in-progress or suspended activities.

When real travel data is limited or not yet available, the application may generate temporary or simulated travel durations using navigation services or statistical estimates. Once sufficient actual activity data is collected, these temporary estimates are automatically updated with learned values.

Travel Time Estimation Algorithm:

Let's say you've a bucket for which no 'from' location is available and only the 'to' location is available. Travel estimation for the activities that are assigned to this bucket is based on the reported durations of mobile workers belonging to this

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bucket alone, if enough reported data exists. This method of travel estimation is independent of the configured Travel areas and depends only on these:

- Travel key (based on configured Activity travel stats fields)
- Bucket to which the activity is assigned

This improves the travel estimations when multiple buckets operate in the same area and reduces the dependency on the configured Travel areas. This reduction of dependency is beneficial when the Travel areas cover a large area with high variation in reported travel durations within it.

The logic to estimating travel when there's no 'from' location, typically when activities are assigned to a bucket, is as follows:

- If enough data is present, travel estimation is based on the bucket and travel key combination. Only data reported for the activities in that particular bucket and with the same travel key is used to estimate travel. This estimate is arrived at, only if there are at least seven such valid reported travel durations.

- If not enough data is present for that bucket and travel key, reported durations for activities with that travel key within the parent bucket of the assigned bucket is used. If there are at least seven reported durations at the parent bucket level for the travel key, the travel is estimated based on those reported travels. If not, then this process continues by going further up in the bucket hierarchy, till the level where enough data exists. Only parent buckets are considered in such cases and not organization units.

- If still not enough data is present at the parent bucket levels for activities with the same travel key, the travel estimation is based on all the reported travel durations for the activities under the original bucket, irrespective of the travel keys of those activities. Here too, if there isn't enough data within a particular bucket, the reported durations of its parent bucket are used, if it has enough reported durations.

- If enough data isn't present even then, the default travel duration configured is used.

- For all the above cases, only the durations reported by mobile workers for whom **Use data reported to enhance company-wide estimations** is selected at the Resource Type level, is used as input data. Only valid reported data that look realistic based on the distance and speed is considered. Data from external data sources, or those based on location services aren't used. This is done so that only real travels completed are used for estimations at the bucket level.

- The same logic is followed for estimating travel for not-ordered activities in the mobile worker's queue. Here, the same data calculated for the bucket to which the field resource belongs, is used. As noted above, pending, not-scheduled, or not-ordered activities may receive updates more frequently (often overnight), whereas in-progress or suspended activities do not receive travel time updates.

Examples: Let's say an activity with a Travel key value '12345' is assigned to Bucket A. Assume that the parent of Bucket 'A' is Bucket 'B' and the parent of bucket 'B' is an Org Unit (which doesn't have a parent).

Case 1: Enough data is present within the bucket for the activities with the same travel key.

Element	Value
Travel key	12345
Bucket	A
No. of valid reported durations within: • Bucket 'A' for Travel key '12345'	10
Learned Estimation:	18 minutes

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Element	Value
• Bucket 'A' for Travel key '12345'	
Estimated travel for the activity in Bucket 'A'	**18 minutes**

Use Learned estimation of Bucket 'A' for Travel key '12345'.

Case 2: Not enough data is present within the bucket for the activities with the same travel key.

Element	Value
Travel key	12345
Bucket	A
No. of valid reported durations within: • Bucket 'A' for Travel key '12345' • Bucket 'B' (parent of 'A') for Travel key '12345'	• 3 • 15
Learned Estimation: • Bucket 'A' for Travel key '12345' • Bucket 'B' for Travel key '12345'	• 18 minutes • 16 minutes
Estimated travel for the activity in Bucket 'A'	**16 minutes**

Use Learned estimation of Bucket 'B' for Travel key '12345'.

Case 3: Not enough data is present for the activities with the same travel key even at higher bucket levels.

Element	Value
Travel key	12345
Bucket	A
No. of valid reported durations within: • Bucket 'A' for Travel key '12345' • Bucket 'B' (parent of 'A') for Travel key '12345' • Org Unit (parent of 'B') for Travel key '12345' • Bucket 'A' without considering value of Travel key	• 1 • 2 • 10 • 23
Learned Estimation:	• 18 minutes

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Element	Value
• Bucket 'A' for Travel key '12345' • Bucket 'B' for Travel key '12345' • Bucket 'A' without considering value of Travel key	• 16 minutes • 23 minutes
Estimated travel for the activity in Bucket 'A'	**22 minutes**

Use Learned estimation of Bucket 'A' without considering the value of Travel key.

Case 4: Not enough data is present for activities with the same travel key even at higher bucket levels and not enough data at bucket level.

Element	Value
Travel key	12345
Bucket	A
No. of valid reported durations within: • Bucket 'A' for Travel key '12345' • Bucket 'B' (parent of 'A') for Travel key '12345' • Org Unit (parent of 'B') for Travel key '12345' • Bucket 'A' without considering value of Travel key • Bucket 'B' without considering value of Travel key	• 1 • 2 • 10 • 4 • 32
Learned Estimation: • Bucket 'A' for Travel key '12345' • Bucket 'B' for Travel key '12345' • Bucket 'A' without considering value of Travel key • Bucket 'B' without considering value of Travel key	• 18 minutes • 16 minutes • 22 minutes • 24 minutes
Estimated travel for the activity in Bucket 'A'	**24 minutes**

Use Learned estimation Bucket 'B' without considering value of Travel key.

Case 5: Not enough data is present at any level (typically a new Org or a new customer).

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| Element	Value
Travel key	12345
Bucket	A

No. of valid reported durations within:
  • Bucket 'A' for Travel key '12345'
  • Bucket 'B' (parent of 'A') for Travel key '12345'
  • Org Unit (parent of 'B') for Travel key '12345'
  • Bucket 'A' without considering value of Travel key
  • Bucket 'B' without considering value of Travel key
	• 1
	• 2
	• 10
	• 3
	• 5

Learned Estimation:
  • Bucket 'A' for Travel key '12345'
  • Bucket 'B' for Travel key '12345'
  • Bucket 'A' without considering value of Travel key
  • Bucket 'B' without considering value of Travel key
	• 18 minutes
	• 16 minutes
	• 22 minutes
	• 24 minutes

Configured default travel duration	28 minutes
Estimated travel for the activity in Bucket 'A'	**28 minutes**

Use the configured default travel duration.

How do I delete properties field and data field in Oracle Field Service?

You can remove the properties and data fields in Oracle Field Service if they're no longer needed. However, these fields can only be deleted if they aren't being used in Forms or any other page configurations. You must ensure these fields are removed from all areas of the Oracle Field Service configurations before deletion if they have been used elsewhere. If you previously submitted a Form containing a property or data fields, this property is likely to be "protected" due to the retention period set in your Business Rules, typically 90 days. After this period, you can attempt to delete the required property again.

1. To delete properties
   a. Click **Configuration**.
   b. In the Resources, Activities and Inventories section, click **Properties**.

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      c. Select the checkbox next to the properties that you want to delete.

      d. Click the **Delete** button that appears next to the header. A confirmation message appears.

      e. Click **Delete**.

2. To delete data fields from a Form

      a. Select and click the Data Fields that you want to remove from the Form.
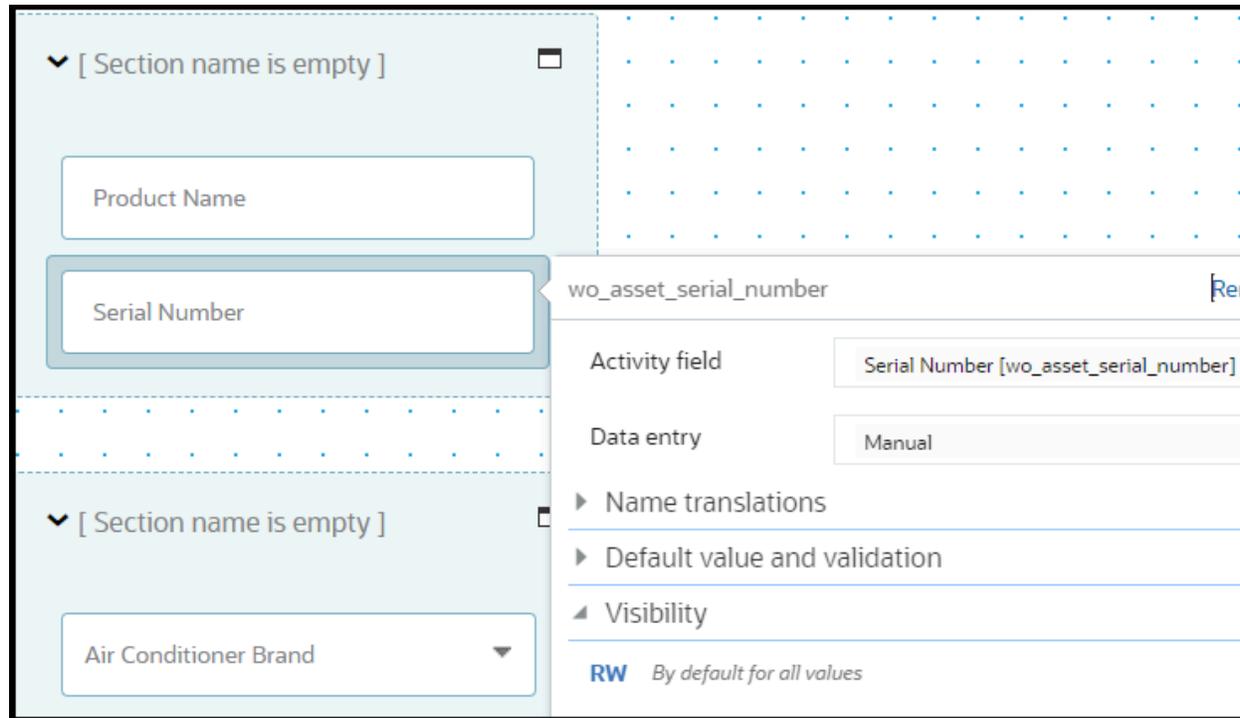
      b. Click **Remove item**. A confirmation message appears.

      c. Click **Delete**.

How do I restrict the visibility of activities for a particular user profile?

Administrator can set the restrictions on activities and fields visible to the users of the current type.

The **Field Restrictions** includes **Filters restricting visible activities** section.

Options in the **Filters restricting visible activities** section define whether the users of the current type can view the entire routes, or only some activities. Before you set the visibility restrictions, ensure that you have configured the applicable filters correctly.

You must define a filter as applicable for the **activity** in the **Add Filter** window, to use it as a restriction on the visible activities. In addition, you must select the **Restriction on visible activities** option. Clicking **Add** displays the current filter as a visibility restriction filter for the user type.

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The filters you add then display in the list of available filters in the **Filters restricting visible activities** field of the user type configuration.

When you set a filter for a user type, all users of such type see only the activities defined in the filter settings, according to the conditions set in the filter configuration. The **User Types** section of the filter does not apply when setting restrictions on the visible activities. The User Types section is inactive only when you select the Restriction on visible activities option. However, it is used in configuring the filter to be used on **List/Time/Map/Daily** pages. When you select the **List/Time/Map/Daily** option, the User Types section becomes active.

When you define a filter as a filter for **List/Time/Map/Daily** for a user type, it appears in the **View** menu on the **Activities and Daily** pages for the users of such type. The list includes only the filters configured as described earlier.

> **Note:** If you define a filter as applicable for both **List/Time/Map/Daily** and as a **Restriction on visible activities**, it works for two different groups of user types. The **List/Time/Map/Daily** filtering is available for the user types selected in the same filter configuration dialog box. However, the **Restriction on visible activities** is set for the user types for which this filter is selected in the **Restrictions and Filters** settings.

How do I configure travel time parameters for travel time prediction?

Oracle Fusion Field Service uses time-based prediction for travel time. This topic describes how travel time is calculated in the application.

Travel time between two activities is calculated as a combination of:

- Statistical "Learned" estimation
- "Straight-Line" estimation

> **Note:** You can specify durations for specific activities and mobile workers through APIs. For more information, see the REST API for Oracle Field Service guide.

Statistical "Learned" Estimation

Statistical Learned estimation is based on the historical travel times between two locations. These locations are represented by geographical areas, termed as Travel Keys. A Travel Key is typically a part of or the entire Post Code or ZIP Code. When a resource records travel between two locations, the values are added to the statistics to produce a learned estimate of the travel between that set of Travel Keys. To produce and use a Statistical Learned Estimate for the travel time between two activities, both activities must contain a value that's part of the Travel Key and the Travel Keys must have enough historical travel data.

Note:

- The travel time between two Travel Keys is adjusted over time as more data is collected.

- The travel time for an activity is considered to be the time between the end of the previous activity and the start of the current activity. If there's idle time after the end of the previous activity (before the start of predicted travel to the current activity; for example, the current activity was assigned to the route after the previous activity ended), then the recorded travel time isn'tconsidered for the statistics.

Airline Distance Method

Oracle Fusion Field Service calculates the airline speed and parking time for each travel key individually. If one travel key encompasses an urban area, where speeds are low and parking times are high, while another key is found in a rural area with higher speeds and minimal parking times, travel time estimations using company-wide values might not be as exact as possible. Estimations are likely to be more exact when the airline distance speed and departure, or parking time are based on the values collected for individual travel keys. If there's enough reported data for a travel key, the airline speed and parking time is estimated based on the collected data. If there isn't enough reported travel data, the travel time estimate uses the default airline speed and parking time, as defined for the entire organization on the **Configuration** > **Statistics page.**

For travel within a travel key, the travel time estimate is the straight-line distance divided by the airline distance speed of the travel key plus the departure or parking time of the travel key.

```
Travel time estimate = Distance/Airline distance speed + parking time
```

For travel between two travel keys, the travel time estimate is the average of the travel time estimates calculated using each of the keys.

```
Travel time estimate = 0.5 * (Distance/Airline distance speed of key 1 + parking time of key 1) + 0.5 *
  (Distance/Airline distance speed of key 2 + parking time of key 2)
```

The final estimated travel time might be based on the airline distance estimation combined with statistically calculated travel durations.

Override Airline Distance Based Travel

You can use the Statistics API to override the travel estimations based on airline distance with any value you deem appropriate for each travel key. If a calculated override value exists, that value will be used to decide the travel time. For more information on the API, see the REST API for Oracle Fusion Field Service guide.

Travel time estimation

Oracle Fusion Field Service uses a parameter called Coordinated Travel Weight (CTW) to combine the two methods of estimations described earlier. CTW is a company–level value and is calculated using the **Coordinate calculation weight** parameter. **Coordinate calculation weight** is configured at the company level, in the **Statistics** page. The formula is:
```
Travel Time = Statistical x (1-CTW) + Straight Line x CTW
```

For example, if you set CTW to 0.5, the travel time is the average of the two.

Exceptions:

- If the CTW value is 0.0, only the Statistical Learned estimation is used. If no Travel Key is available, the **Default Travel time** is used.

- If the CTW value is 1.0, only the Airline Distance Method is used. If coordinates aren't available for both activities, the **Default Travel time** is used.

- If neither Statistical Learned estimation nor Airline Distance Method is available, the **Default Travel time** is used. The **Default Travel time** is a single configuration at the company level.

Additional adjustments

After routing is performed, the application might adjust Travel Time further for activities that are pending and ordered on a route. This change might occur when the application is unable to find a Statistical "Learned" record that matches the pair of Travel Keys in these cases:

1. When only the Airline distance method is used.
2. When the "default" value is used.

When either of the above occurs, the application tries to adjust travel time using two methods:

- Generate "actual travel" data: The application submits the origin and destination addresses to the Oracle Spatial and Graph Route Server, if the accuracy level of each activity = "address". The application calculates the travel time between the activities, adds the results to the temporary statistics, and recalculates the travel time on the route using the updated statistics.

- Generate "street/post code level" estimate travel between post codes

  - This method requires post or zip code to be configured as the travel key.

  - The application submits the origin and destination post or zip codes to the Oracle Spatial and Graph Route Server and the application calculates the travel time between them. The returned information is used to improve the quality of the temporary statistics.

    > **Note:** When the post code is the same for both the activities, this method isn'tused.

Temporary statistical travel data is calculated and used until real data is accumulated. This is accumulated as resources record travel between two locations based on the status of the activity. As soon as actual resources learned statistics are obtained, the temporary record is deleted. The Daily Extract - Appt data set contains the 'travel_estimation_method' field, which identifies what travel method was used for the travel time estimation. This field is only available in the Daily Extract file. These values can be present:

Values for the Travel estimation method field

Value	Description
0 – travel isn't calculated	Travel isn't calculated. This isn't calculated because the Activity Type feature = "Calculate travel" isn't selected.
1 – company default	Travel estimation uses the company default found in "Configuration - Statistics"
2 – statistics only	Travel estimation uses only the Statistical Learned estimation. This could be a result of an activity not being geocoded or the Coordinated Calculation Weight parameter set to 0.
3 – expansion statistics only	Travel estimation is based on the expansion statistics. See 2A above for a definition.
4 – initial statistics only	Travel estimation is based on the temporary statistics that were generated based on the results received from street level routing.

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Value	Description
5 - coordinates only	Travel estimation only uses the Airline Distance Method. This could be a result of an activity not having a physical address or the Coordinated Calculation Weight parameter set to 0.
6 - statistics + coordinates	Travel estimation is based on a combination of the Statistical Learned estimation and Airline Distance Method using the 'Coordinate calculation weight' setting.
7 - expansion statistics + coordinates	Travel estimation is based on a combination of expansion statistics and the Airline Distance Method using the 'Coordinate calculation weight' setting.
8 - initial statistics + coordinates	Travel estimation is based on the statistics that were generated as part of the results received from street level routing and the Airline Distance Method using the Coordinate calculation weight setting.
9 - "manual" adjustment	Travel estimation is based on the value that was updated using an API. This value can be set via Core API (update activity). For this goal, "manual" should be passed as a value of the "setTravelTime/source" field.
10 - "street level" adjustment	Travel estimation uses the street level estimations provided by Location Services between coordinates of locations. This is used when you use SLR for Routing.
11 - "externally estimated value provided via API" adjustment	Travel estimation is based on the value that was updated using an API. This value can be set via Core API (update activity). For this goal, "manual" should be passed as a value of the "setTravelTime/source" field.
12 - same location	Travel wasn't calculated because the location is the same based on address or geocode. (Travel = 0)
13 - statistics (not-ordered, bucket, not-scheduled)	Travel estimation only used the Statistical Learned estimation. In this case the origin location of the travel is still unknown and the application estimates an average traveling time value. A presence of these estimations is important for capacity management.
14 - company default value (not-ordered, bucket, not-scheduled)	Travel estimation used the company default found in "Configuration - Statistics". In this case the origin location of the travel is still unknown.
15 - GPS coordinates	Travel estimation uses the Airline Distance Method between the GPS based location of the resource and the Activity location.
16 - Point to point adjustment	Travel estimation is adjusted using point to point estimations provided by location services based on coordinates of locations.
17 - Real time traffic	Travel estimation is adjusted using the real-time traffic data estimations provided by the location services, based on the activity coordinates or resource locations.
18 - Travel Key based Airline Distance	Travel estimation uses the Airline distance based estimation using the coordinates of the medians of travel keys. This could be the result of a location not having valid coordinates and not having learned statistics between the locations.

This important note applies to Daily Extract files:

Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

How do I add a barcode, QR code, or NFC scanner field to a custom form?

You can add a barcode, QR code, or an NFC scanner field in a custom form to help mobile workers populate data from these scanners. The camera on the resource's mobile device scans the code and fills the field.

1. Click **Configuration** > **Forms & Plugins**.
2. On the **Forms & Plugins** page, add a new form or click **Modify Content** for the form to which you want to add the scanner fields.
3. Drag an **Input** element.

   You can also configure these fields as barcode, QR code, or NFC scanner fields:
   - Product fields of type Text
   - Custom string properties with GUI defined as Text element

4. Complete these fields on the new element window:
   - Form field: Select the data source that you want to bind the new element. Click the drop-down list and select a field. Or, click the pencil icon, select the type of field, and the field.
   - Data entry: Select one of these options:
     - Manual: Select this option to type the value in the field. This is the default option.
     - Barcode/QR code scanning: Select this option to scan a barcode or QR code.
     - NFC scanning: Select this option to scan an NFC tag.
   - Name translations: Add the name translations for the element in the required languages.
   - Default value and validations: Add any default value or validation for the new element.
   - Visibility: Add a visibility for the new element. RW (Read-Write) is the default option.

5. Click **Close** on the new element window.

   Note: When you add multiple scanner fields on a form or page, ensure that the section contains only the scanner fields and Text elements. If the section contains any other type of element, the scanner isn't triggered.

6. Click **Save** on the form Visual Form Editor.

   The scanner fields are displayed with a special icon. In the browser application, these fields are displayed as text boxes.

How do I identify overnight activities in dispatch console list view?

If business rules allow overnight work, activities might be scheduled to start after regular work hours. These overnight activities are marked with an asterisk (*) in the service window column of the List View.

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The asterisk (*) serves as a visual cue to identify activities that extend into the next day but remain part of the current day's operations. Even though these activities occur after the current day ends, they're still linked to the current route date, meaning they're relevant to today's schedule.

You can also view these overnight activities in Time View by scrolling horizontally beyond regular work hours.

Can Oracle Field Service be accessed in offline mode?

You can access the application features offline, only if you have subscribed to Oracle Fusion Field Service Professional, Enterprise, and/or Mobility Cloud Service.

This table lists the tasks that you can and cannot perform offline:

Tasks You Can Perform Offline	Tasks You Cannot Perform Offline
For the route, you can: • Activate/deactivate/reactivate route • Browse the activities list • Print the route • Add activities • Send resource requests • Browse the resource-request list • Browse resource-request details **For scheduled activities, you can:** • Change activity order/position in the route • Browse activity details • Edit activity details • Set an activity to started/completed/canceled/delayed/suspended/not done • Delay/adjust time • Create/complete/delay pre-work • Send activity requests • Browse the activity-request list • Browse activity-request details **For non-scheduled activities, you can:** • Send activity requests • Cancel activities • Browse activity details • Edit activity details **For inventory, you can:** • Browse the inventory list	**For resources, you cannot:** • Log in/log out **Note:** If you close and then reopen your browser during the time you are offline but are within the session expiration time, the browser restarts and the offline session resumes. Enter the URL of any page to access the **Restore** page. • Change your password • View maps, directions, or map layers • View calendars • Select a resource or change users • Change options • Manage activities not on today's route • Add a teamwork activity • Reschedule an activity • View nearby activities • View activity history • Download and view thumbnails of files, images, and signatures **Note:** You can add new files to the activity when you are offline, but they are synchronized only when you are back online. By design Filter restrictions are applied only when you are online. When you are offline, you can only use the options that were loaded in the filter till the time the device went offline. • Preview files that are already on the server • Use buttons that are only available for online use • Use Oracle Fusion Field Service Collaboration Service • Use Oracle Fusion Field Service Smart Location **Field managers cannot:**

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Tasks You Can Perform Offline	Tasks You Cannot Perform Offline

• Browse/edit inventory details
• Add/edit/install/deinstall/exchange inventory
• Send inventory requests
• Browse the inventory-request list
• Browse inventory-request details
 	
For other tasks, you can:
• Manage activity links (with some constraints)
• Search the Parts Catalog (if provisioned and cached)
• Work with segmentable activities (however, the number of segments cannot be calculated correctly)
	Note: These tasks are in addition to the ones listed above.
	
	• Move an activity to another resource (when move within a user's route is enabled)
	• View all resources on the resource selection page if all resources don't fit on a single screen
	• View the Manage page
	• Perform resource-management functions including, but not limited to:
	  o Create/edit groups
	  o Make calendar changes
	  o Use the team map
	  o Use the Gantt view
	
	Access Routing, Capacity, and Forecasting pages

How does routing consider work skills and work skill conditions?

Verify that the *work skills*, *work skill levels*, and the *work skill conditions* that you configured are correct. If you don't assign work skills to a resource, the application assumes that the resource has all the work skills at the highest level. If you add a specific temporary work skill between multiple date ranges to a resource, Routing considers it as a single work skill and not multiple work skills.

Work skills identify the expertise that a resource has and serve as the link that enables Oracle Fusion Field Service to match activities with resources.

Work skill conditions specify the skills necessary to complete each activity, ensuring that only qualified resources are assigned.

The **required level** setting and the **preferable level** settings in the work skill strongly impact routing. The required level ensures that a resource meets the minimum necessary skill level to be eligible for an activity, while the preferred level helps prioritize resources with higher skill levels. However, even when a mobile worker has a higher preferred skill level, routing doesn't guarantee that they will always be assigned to the activity. Instead, routing decisions take multiple factors into account, such as SLA compliance, travel efficiency, workload balancing, work zone distribution, and mobile worker availability, to ensure that the overall schedule is optimized. This means that a lower-skilled mobile worker might sometimes be assigned to an activity if it results in a more efficient routing outcome. The required level setting and the preferred level setting in the work skill strongly impact routing.

Routing balances work skill conditions with other assignment constraints to optimize workforce utilization holistically. It prioritizes skill levels while also considering factors such as proximity, minimizing travel time, and distributing workload efficiently across available mobile workers. If a lower-skilled resource is assigned instead of a higher-skilled one, it might be due to these other constraints, such as reducing idle time, improving route density, or ensuring timely service delivery. If the application can't match activities to resources, consider adjusting work skill levels and work skill conditions to allow for a broader set of eligible resources. However, if prioritizing skill levels is critical, fine-tuning

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workload balancing and routing strategy settings might be necessary to align assignments with skill preferences more effectively.

If unexpected assignments occur, reviewing the routing strategy settings and work skill level preferences can help identify whether constraints such as travel optimization, workload balancing, or scheduling efficiency are affecting the final assignment. Modifying these parameters might help ensure that higher-skilled mobile workers are prioritized when necessary. For detailed instructions on configuring work skills and work skill conditions, see the Using Capacity Guide.

What documentation is available for Oracle Work and Asset Cloud Service Integration with Oracle Field Service?

The documentation for the Oracle Work and Asset Cloud Service Integration with Oracle Field Service accelerator is available at: *https://docs.oracle.com/en/industries/energy-water/cloud-integrations/23c/wacs-ofs-setup-guide/index.html*

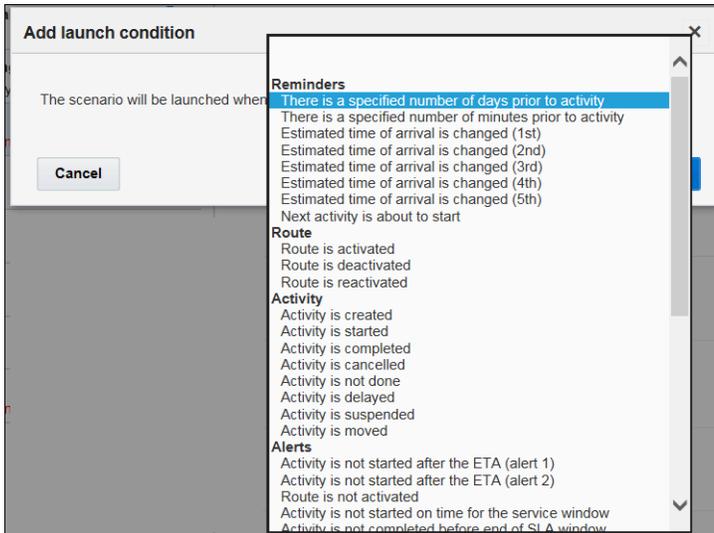# How do I add a launch condition for a Message Scenario?

A launch condition is the event that triggers a message scenario.

Launch conditions are configured on the **Message Scenarios** screen.

1. Click **Configuration** and select **Message Scenarios** in the Subsystems and Integrations heading.
2. On the **Message Scenarios** screen, select the scenario for which you want to define a launch condition.

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3. Click the **Add new** link for launch conditions.

The **Add launch condition** window opens. The window contains a drop-down list that, when clicked, lets you select the event that triggers the message scenario.

4. Select the launch condition for the message scenario, referring to the following table for a description of each condition.

5. Click OK.

Results:

Launch condition, associated scenarios, and description

Launch Condition	Scenario to be associated with *OR* Scenario will be launched when	Description
Reminders		For detailed information about how the reminder interval for message delivery is decided, see *Reminder and Change Notification Launch Conditions*
Day Before	There's a specified number of days before activity	Provides a proactive message to customers within the defined number of days before an activity is scheduled to start. The message is sent immediately at the specified time before a new or rescheduled activity. This launch condition isn't called for non-scheduled, reopened, or pre-work activities. It also applies only to activities that have the **Enable 'day before' trigger** field selected when the activity type is created or changed. Messages called by this launch condition become obsolete after the following activity-related actions: • Cancel

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Launch Condition	Scenario to be associated with *OR* Scenario will be launched when	Description
		• Delete • Start • Suspend • Reschedule No messages are generated when an activity is moved between resources on the same day.

Reminder	There's a specified number of minutes before activity	Provides a proactive message to customers within the defined number of minutes before an activity is scheduled to start. The message is sent immediately at the specified time before a new or rescheduled activity.
		
		This launch condition isn't called for non-scheduled, reopened, or pre-work activities. Messages called by this launch condition become obsolete after the following activity-related actions:
		
		• Cancel
		• Delete
		• Start
		• Suspend
		• Reschedule
		
		No messages are generated when an activity is moved between resources on the same day.
		
		More information is required when you select this launch condition:
		
		• Reminder time in minutes (Specify more than one reminder time by separating the values with commas)
		• How the time is calculated:
		
		    ○ Delivery window start
		    ○ Service window start
		    ○ ETA
		
		• Silent interval

Change 1 to Change 5	Estimated time of arrival is changed (1st) Estimated time of arrival is changed (2nd) Estimated time of arrival is changed (3rd)	Provides up to five proactive messages to customers when the estimated time of arrival for the activity has changed. More information is required when you select this launch condition: You'll be asked to specify the difference between when the time is calculated (delivery window start, service window start, or ETA) and when the last notification was delivered to the customer. You'll

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Launch Condition	Scenario to be associated with *OR* Scenario will be launched when	Description

	Estimated time of arrival is changed (4th)
	
	Estimated time of arrival is changed (5th)
		also define a window of time before the activity start for which the rule will apply.
		
		• How the time is calculated:
		
		   o Delivery window start
		
		   o Service window start
		
		   o ETA
		
		• The number of minutes between the time and the last time a message was delivered to the customer, at which point this message will be delivered
		
		• The range of minutes before the activity start during which the launch condition applies
		
		These launch conditions are called only for pending ordered activities (regular or reopened) in an activated route on the current workday; they don't apply when a reminder isn'tsent and the current time is within the silent interval, when an incomplete reminder exists, or when a change message was already sent and the last change message was sent by the same launch condition. It also applies only to activities that have the **Enable 'reminder' and 'change' triggers** field selected when the activity type is created or changed.
		
		Messages generated by these launch conditions are removed from the message queue if one of the following events occurs after their generation and sending:
		
		• The activity status is changed.
		
		• The activity becomes non-ordered.
		
		• The activity is moved.
		
		See *Reminder and Change Notification Launch Conditions*.

Call Ahead	Next activity is about to start	Provides a proactive message to customers when the next activity is about to start.
Route		
Activate	Route is activated	Called when a route is activated.
Deactivate	Route is deactivated	Called when a route is deactivated.
Reactivate	Route is reactivated	Called when a route is reactivated.

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Launch Condition	Scenario to be associated with *OR* Scenario will be launched when	Description
Activity		
Add	Activity is created	Called when a new activity is created or an existing activity is moved to a different day or resource. This launch condition is called only for regular and reopened activities, but not for prework or instances of mass repeating activities, such as lunches or meetings.
Start	Activity is started (activity status is Pending)	Called when an activity is started. This launch condition is called only for regular and reopened activities, but not for prework.
Complete	Activity is completed	Called when an activity is completed.
Cancel	Activity is canceled	Called when an activity is canceled.
Not done	Activity is not done	Called when the status of an activity is changed to **not done**.
Delay	Activity is delayed	Called when an activity is delayed beyond the number of minutes specified in the launch condition.
Suspend	Activity is suspended	Called when an activity is suspended. **Note:** If a started activity is suspended, a new suspended activity is created. This launch condition is then called for the new suspended activity. When this happens, both the pending and suspended activities have the same property values, and the suspended activity has no inventory.
Move Activity	Activity is moved	Called when an activity is moved to a different day or different resource. This launch condition is called only for regular and reopened activities, but not for prework. The messages that are generated with this launch condition refer to the origin resource. To retrieve information about the destination resource, use the destination_resource block. To retrieve information about the destination resource and date, use the following placeholders: • destination_resource_id • destination_resource_external_id • destination_resource_name

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Launch Condition	Scenario to be associated with *OR* Scenario will be launched when	Description
		• destination_date To control whether the activity can be moved to another resource or another day, use the **Resource changed?** or **Day changed?** blocking condition.
Alerts		
Not Started 1 Not Started 2	Activity is not started after the ETA (alert 1) Activity is not started after the ETA (alert 2)	Invoked when an activity has not been started within the number of minutes specified when defining the launch conditions. The two launch conditions are independent and can be generated for the same activity at the same time. They can be invoked only for pending ordered activities (regular or reopened) in an activated route that belongs to the current working day.
Not Activated	Route is not activated	Invoked when a route has not been activated within the number of minutes specified when defining the launch condition. This launch condition applies only once per day per route, and messages are not regenerated if the calendar changes. Any existing not-activated messages become obsolete at the moment of route activation. If the resource is new, the messages generated by this launch condition are not generated until the day after the resource is created. Additionally, the resource must be associated with a resource type that has the **Enable 'Not activated in time' alert and trigger** field selected when the resource type is created or modified.
Service Window Warning	Activity is not started on time for the service window	Invoked when an activity has not started within the number of minutes before the end of the service window that is specified when defining the launch condition. It is also invoked when an activity is scheduled after the end of the service window. The launch condition can be invoked only for pending ordered activities (regular or reopened) in an activated route with a service window that belongs to the current working day, and it is invoked only once per activity. The activity must be associated with an activity type that has the **Enable 'SW Warning' trigger** field selected when the activity type is created or modified.
SLA Warning	Activity is not completed before the end of SLA window	Invoked when a pending activity has not been started within the defined number of minutes before the end of the SLA window or when a started activity is not completed within the defined number of minutes before the end of the SLA window. The launch condition is invoked only once per activity unless the **SLA window end** changes after the generation of this alert, at which point it can be invoked again.
Service request		

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Launch Condition	Scenario to be associated with *OR* Scenario will be launched when	Description
Manual	Service request is created	Invoked when a service request is created. When you create the message, you can use placeholders related to the service request and its parent objects. For example, if the service request is for an activity, the content can contain placeholders related to the request, activity, route, and resource. See *What activity message placeholders are available?*. Use this launch condition for the following situations: • Inventory tracking and hardware testing • Starting SRO or sending any other form • Starting support requests • When a transaction is started without being related to the activity • Other activity or inventory requests
Inventory		The inventory launch conditions are used to communicate inventory operations to an enterprise resource planning system and perform automated provisioning.
Install Inventory	Inventory is installed	Called when inventory is moved from the **resource** pool to the **install** pool or when a new **install** inventory record is created.
Deinstall Inventory	Inventory is deinstalled	Called when inventory is moved from the **customer** pool to the **deinstall** pool or when a new **deinstall** inventory record is created.
Exchange Inventory	Inventory is exchanged	Called when inventory exchange between the **resource** pool and the **customer** pool is performed.
Undo Install Inventory	Undo install inventory performed	Called when inventory is moved from the **install** pool to the **resource** pool.
Undo Deinstall Inventory	Undo deinstall inventory is performed	Called when inventory is moved from the **deinstall** pool to the **customer** pool.
Move Inventory	Inventory is moved	Called when inventory is moved between different resources. The launch condition applies when a user moves an inventory item belonging to them to another resource using Collaboration Service. Depending on visibility restrictions, the destination resource may be invisible to the user who originates the move. The messages generated by this trigger refer to the **origin** resource. Use the **destination_resource** block to retrieve information about the **destination** resource. Use the following placeholders to retrieve information about the **destination** resource. • destination_resource_id

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Launch Condition	Scenario to be associated with *OR* Scenario will be launched when	Description
		• destination_resource_external_id • destination_resource_name
Visit		The visit launch conditions apply to groups of activities, called visits, which are a combination of several related activities for one customer. They're used to send proactive messages to customers for the entire visit, thus avoiding multiple messages for different activities within a single visit.
Visit Day Before	There's a specified number of days before visit	Provides a proactive message to customers within the defined number of days before a visit is scheduled to start. After a five-minute delay to allow the application to accept the other activities that comprise the visit, the message is sent at the specified time before a new or rescheduled visit. The delay also prevents generation of messages for temporary visits, which may be created with visit activities are moved between resources one by one.

Visit Reminder	There's a specified number of minutes before a visit	Provides a proactive message to customers within the defined number of minutes before a visit is scheduled to start. The message is sent immediately at the specified time before a new or rescheduled activity. The launch condition is called only for pending visits and only once for the same visit. The first customer-related activity in the visit must be an ordered activity in an activated route for the current working day.
		
		More information is required when you select this launch condition:
		
		• The time before the visit in minutes
		• How the time is calculated:
		
		  o Delivery window start
		  o Service window start
		  o ETA
		
		• Silent interval
		See *Reminder and Change Notification Launch Conditions* to understand when the message is sent.

Visit Change 1 — Visit Change 5	(For visit) Estimated time of arrival is changed (1st)	Provides up to five proactive messages to customers when the estimated time of arrival for the visit has changed. More information is required when you select this launch condition.

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Launch Condition	Scenario to be associated with *OR* Scenario will be launched when	Description

	(For visit) Estimated time of arrival is changed (2nd)
	
	(For visit) Estimated time of arrival is changed (3rd)
	
	(For visit) Estimated time of arrival is changed (4th)
	
	(For visit) Estimated time of arrival is changed (5th)
		- How the time is calculated:
		
		  o Delivery window start
		
		  o Service window start
		
		  o ETA
		
		- The number of minutes between the time and the last time a message was delivered to the customer, at which point this message will be delivered
		- The range of minutes before the activity start during which the launch condition applies
		
		These launch conditions apply only to pending visits, and the first customer-related activity in the visit must be an ordered activity in an activated route for the current day. They aren't called in the following circumstances:
		  - The **Visit reminder** isn't sent and the current time is within the silent interval for the visit reminder.
		  - An incomplete **Visit reminder** exists.
		  - The **Visit change** message has already been sent and the **Visit change** message was sent by the same visit change launch condition.
		
		For more information about the when the message is sent, see *Reminder and Change Notification Launch Conditions*.

Visit Cancel	Visit is canceled	Called when a visit is canceled.
Visit Complete	Visit is completed	Called when a visit is completed.

> **Note:** Messages configured in the **Add Launch** condition are triggered only when assigning an appointment to a resource. They will not be triggered when submitting actions directly from the Appointments page.

How do reminder and change launch conditions work?

Reminder and change are condition-driven launch conditions intended for use with PCC messages.

These launch conditions call message scenarios at the moment of time set in the launch condition configuration. The time is calculated in relation to the `Notification base` that is configured in the **Reminder and change notifications** selector. It can be one of the following activity fields:

- **ETA**
- **delivery window start**

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- **service window start**

The Reminder launch condition is intended to generate a reminder message to a customer which is to be sent within a fixed time before an activity. The **allowed reminder time** values (for example, **45**, **60**, **90**) will be shown as the **Reminder** field values in the **Activity details** screen.

> **Note:** Subject to user visibility settings, the **Reminder** field may appear in read-only mode.

There are up to five Change launch conditions which can be used to send a message if the activity delivery time has changed.

In order for the Reminder and Change messages to be sent, the **Enable reminder and change triggers** feature should be enabled for the corresponding activity type. At the same time, both launch conditions can be called only for a pending ordered activity (regular or reopened) in an activated route on the current working day. The `Reminder` message is generated within the time period from `Reminder Time + Reminder Time Adjust` to `Reminder Time – Reminder Silent Interval` before the activity Notification base.
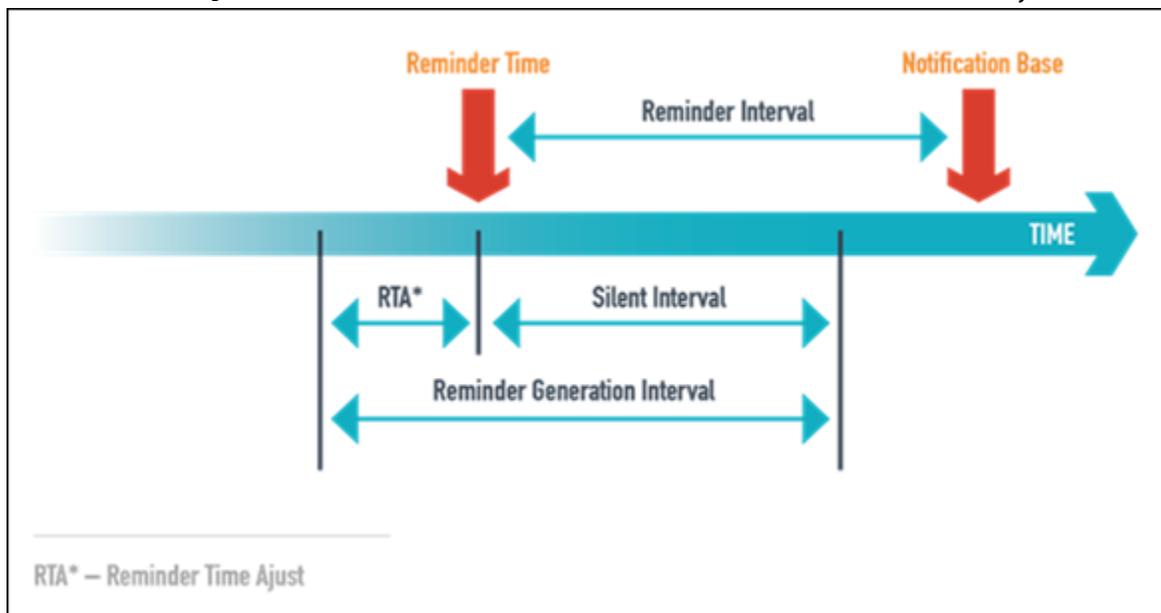
The `Reminder` time is defined on the activity level using the **Reminder** field in the **Activity** details screen. When the **Reminder** time is set to 0, the `Reminder` launch condition is disabled for the selected activity. The **Reminder Time Adjust** is the system predefined time shift for the reminder, which is used to eliminate the delay in message processing. For example, if **Reminder Time Adjust** = 3 minutes and **Reminder Time** = 60 minutes, the reminder will be generated 63 minutes before the Notification base. The value of **Reminder Time – Reminder Silent Interval** defines the minimal time before the Notification base is to generate the Reminder.

The Reminder launch condition can be called only once for the same activity. Each of the Change launch conditions is defined by its own time interval, based on the time remaining to the Notification base, and the threshold value (in minutes). The Change message is called when the current time is within a specific Change launch condition time interval, and the difference between the current value of the Notification base and the time reported to the customer earlier is equal or higher than the threshold.

The time intervals of different Change launch conditiontriggers should be configured in a way that they don't overlap. The Change launch condition isn't called if:

- the Reminder isn't sent and the current time is within the **Reminder Silent Interval**

- an incomplete Reminder exists

- a Change message has already been sent and the last Change message was sent by the same change trigger.

Before generating messages, the Reminder and Change launch conditions try to cancel all existing customer messages (if any). They use the `drop_message` SOAP function to cancel messages that are in the Sending status. If the corresponding agent isn't accessible, or it returns a result indicating that the message is under processing and can't be dropped, the generation of the Reminder and Change messages is stopped and will repeat during the next cycle.

Change and Reminder messages are removed from the message queue if one of the following events occurs after they've been generated and sent:

- the Activity status is changed

- the Activity becomes not ordered

- the Activity is moved

Note: For more information, see the *Add a launch condition for a message scenario* section.

What are the default values and validation rules for string and integer properties?

You can configure string and integer fields to include default values and validation rules. This helps when your business needs some fields to be populated by default and some fields to be calculated automatically, based on the value of another field. Further, this function is allowed only for `string`, `int` and `enum` custom properties.

You can configure the fields and properties in these ways:

- Add a default value: A default value is an auto-calculated value of a field or property. This value is based on certain business rules and depends on the values of other fields and properties. The default value is represented as formula filled in the corresponding configuration field. For example, when a property is filled with a specific value, another property is filled with the current date or time.

- Add a validation rule: A validation rule is a restriction based on certain business rules and depends on the values of other fields and properties. A validation rule is represented as a formula filled in the corresponding configuration field. For example, the value entered for a property (property A) falls within a specific range (between values of property B and property C).

- Use a formula for configuring the visibility and the value visibility: The formula is based on certain business rules and depends on the values of other fields and properties. The formula for the visibility of the field and its value must be filled in the corresponding configuration field. It's possible to transform an existing visibility configured through a constructor to a formula. The application uses this formula for calculating visibility as the primary path and visibility from the constructor as the secondary path.

Note:

- If a default expression is configured with an empty value for a read-only field or property, it will NOT be hidden on the page. This means, the user will see the field or property name on the page, but it will not have any value.

- For read-only fields, default values take priority over calculated values.

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Auto-Generated and Auto-Calculated Fields

Auto-generated and auto-calculated fields can have a visibility of Read-Only. Regardless of the configured visibility, the application displays such fields as Read-Only. Further, such fields aren't available for selection on the **Context Layout Structure** page of add pages such as, 'Add activity' and 'Add inventory'. The fields that can be set only as read-only are as given in this table:

Entity	Field	Description
ACTIVITY	ETA	Estimated time of arrival
	acoord_status	Coordinate status
	acoord_x	Coordinate X
	acoord_y	Coordinate Y
	activity_alerts	Activity alert
	activity_capacity_categories	Activity capacity categories
	activity_compliance	Activity compliance
	activity_workskills	Activity work skills
	aid	Activity ID
	astatus	Activity status
	atravelarea	Travel area
	atype	Activity Type
	auto_routed_to_date	Auto-routed to date
	auto_routed_to_provider_id	Auto-routed to Provider ID
	auto_routed_to_provider_name	Auto-routed to Provider name
	aworkzone	Work Zone
	date	Date
	delivery_window	Delivery window
	end_time eta_end_time	Estimated end time
	first_manual_operation	First manual operation after the automatic operation
	first_manual_operation_interface	First manual operation done through the interface after the automatic operation
	first_manual_operation_user_id	First manual operation done by (user ID) after the automatic operation

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Entity	Field	Description
	first_manual_operation_user_login	First manual operation done by (user's login) after the automatic operation
	first_manual_operation_user_name	First manual operation done by (user name) after the automatic operation
	service_window	Service window
	time_delivered	Time of delivery
INVENTORY	inv_aid	Activity Id
	inv_change_invid	Changed Inventory ID
	inv_pid	Resource Id
	invid	Inventory Id
	invpool	Inventory pool
REQUIRED INVENTORY	required_available_quantity	Quantity in Resource Pool
	required_model	Model
	required_quantity	Quantity
	required_type	Type
RESOURCE	alerts	(always hidden)
	calendar	Calendar
	oncall_calendar	On-call calendar
	pcapacity_bucket	Capacity area
	pending	Pending activity
	pid	ID
	pinitial_ratio	Initial ratio for activity duration
	p_rprid	Routing profile ID
	queue_status	Queue status
	reactivated	Reactivated
	resource_capacity_categories	Capacity categories
	resource_effective_workskills	Effective work skills
	resource_time_slots	Time slots

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Entity	Field	Description
	resource_workskills	Work skills
	resource_workzones	Work zones
	skip_days_for_stats	Working days left for reported data to start impacting duration estimation
	total	Total
	pcolor	(always hidden)
USER	last_login	Last login
	last_password_change	Last password change
	login_attempts	Login attempts
	login_blocked_to	Login blocked to
	main_resource_id	Main resource ID
	mobile_activity_count	Mobile activity count
	mobile_inventory_count	Mobile inventory count
	mobile_provider_count	Mobile provider count
	show_placeholder_id	Show placeholder ID
	sucreated	Registered
	sustatus	Status
	suupdated	Updated
	uid	User ID

Limitations

These limitations exist for default values and validation rules:

- Work skills and work zones aren't supported for default values and validation rules.

- Custom properties with the "Geolocation element" GUI isn't supported for default values and validation rules.

- These limitations are applied to the configuration of expressions:
    - 2000 characters for configuring default values
    - 2000 characters for configuring validation rules
    - 4950 characters for configuring visibility as an expression

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Supported Pages

You can configure default values and validation rules only on these Activity and Inventory pages:

Page	Label
Activity Details	mobile_activity_details
Cancel activity	mobile_cancel_activity
Delay activity	mobile_delay_activity
Complete activity	mobile_end_activity
End prework	mobile_end_prework
Not done activity	mobile_notdone_activity
Add activity	mobile_set_activity
Start activity	mobile_start_activity
Start prework	mobile_start_prework
Suspend activity	mobile_suspend_activity
Add Inventory, Inventory Details	mobile_add_details_inventory
Deinstall inventory	mobile_deinstall_inventory
Install inventory	mobile_install_inventory
Send/View activity request	mobile_activity_request
Add/View inventory request	mobile_inventory_request
Add/View resource request	mobile_provider_request
Edit Required Inventory	mobile_add_edit_required_inventory

Supported Fields

You can configure default values and validation rules only on these fields:

Property name	Property label	Type	Entity	GUI
Account Number	customer_number	field	activity	text
Activity Type	aworktype	field	activity	combobox
Address	caddress	field	activity	text

Property name	Property label	Type	Entity	GUI
Appointment Number	appt_number	field	activity	text
City	ccity	field	activity	text
Customer Email	cemail	field	activity	email
Customer Mobile Number	ccell	field	activity	phone
Customer Phone Number	cphone	field	activity	phone
Duration	length	field	activity	text
Time Slot	time_slot	field	activity	text
Inventory Type	invtype	field	inventory	combobox
Name	cname	field	activity	text
Points	apoints	field	activity	text
Quantity	quantity	field	inventory	text
Serial Number	invsn	field	inventory	text
Service Request Type	srtype	field	service request	combobox
State	cstate	field	activity	text
ZIP/Postal Code	czip	field	activity	text

Calculation Order

The result of a configured expression is calculated in this order:

1. Value (Number, String, variable, function, expressing in brackets)
2. Special operators (BETWEEN, IN, CONTAINS)
3. Unary operators (NOT, -)
4. Multiplicative operators (*, /)
5. Additive operators (+, -)
6. Comparison operators (=, <>, <, >, <=, >=)
7. Logical operator AND
8. Logical operator OR

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How do I create an activity that requires multiple resources?

Teamwork and Crew Management in Oracle Field Service provides a flexible framework for organizing mobile workers to efficiently handle activities that require multiple skills or resources. As a dispatcher, you can define and assign inventory activities in two ways: temporary teamwork, where you assign resources to assist a team leader for specific activities, and linked activities, where you sequence activities and assign them to individual mobile workers based on their skill requirements.

For more permanent needs, you can configure work crews, made up of mobile workers with specific skill combinations, and assign activities to the entire crew rather than individual mobile workers. You can also configure work skills, custom activity properties, and resource types, to ensure that tasks are matched with the right resources. You can optimize resource utilization, track task progress, and ensure successful project completion by leveraging routing, activity management, and reporting capabilities.

For more information, see Teamwork and Crew Management section in Oracle Field Service Optimization Best Practices guide (KB54339) available on Oracle Support site.

How do I manage inventory, tools, and vehicles?

Managing inventory, tools, and vehicles in Oracle Field Service is critical for optimizing field operations and ensuring that mobile workers have the right resources for each activity. As a dispatcher, you can define and assign inventory to activities, ensuring that both regular and required items are configured according to the activity type. By automating inventory verification, you'll receive notifications when mobile workers are missing essential resources.

Considering inventory availability, you can assign activities using Routing, and the application will automatically create inventory pickup activities when items are missing. Using Collaboration, you share and transfer tools and inventory between mobile workers in real time. Additionally, by integrating vehicles as resources within Teamwork you can manage inventory through vehicles and extend mobile workers' skill sets based on vehicle capabilities.

For more information, see "Manage inventory, tools, and vehicles" section in Oracle Field Service Optimization Best Practices guide (Document ID KB54339) available on Oracle Support site.

Why are the fields for document upload in Oracle Field Service not showing up in the data mapping section of Oracle Integration Cloud?

The Oracle Field Service Cloud Adapter is one of many predefined adapters included with Oracle Integration. You can configure the Oracle Field Service Cloud Adapter as a connection in an integration in Oracle Integration. For more information on Oracle Field Service Adapter, refer *https://docs.oracle.com/en/cloud/paas/integration-cloud/field-adapter/using-oracle-field-service-cloud-adapter-oracle-integration-generation-2.pdf*.

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When a new custom property is added in Oracle Field Service Cloud, you can view it in the mapper for an existing integration by clicking the Oracle Field Service Cloud Adapter and selecting Regenerate Artifact.

If you receive an error during regeneration, do not save the endpoint/mapping updates. Instead, close and discard the integration without saving, reopen the integration again for editing, and try regeneration again.

To regenerate a WSDL file for integrations:

1. In the left navigation pane, click **Home > Integrations > Integrations**.
2. Click the name of the integration in which to regenerate the WSDL. Customized integrations are designated with the words **BUILT BY ORACLE** and **Customized** to the right of the integration name. You can regenerate the WSDL for an individual endpoint or the WSDLs for all endpoints in an integration.
3. To regenerate the WSDL for a single endpoint in the integration, click the appropriate source, target, request enrichment, or response enrichment icon.
    a. Select **Regenerate**.

       You are prompted with a message indicating that WSDL regeneration impacts the mappings in the

       integration.
    b. Click **Regenerate**. This regenerates the WSDL and any dependent artifacts so that any custom elements appear during mapping. The imported mappings from any prebuilt integration are not deleted. The maps are validated and any warnings (identified by yellow icons) or errors (identified by red icons) for the impacted maps are displayed. If warnings and errors both exist for a single mapper, only a single error icon is displayed. Icons indicating that this mapper is customized (identified by the blue icons) are displayed at the bottom of the mapper.
4. To regenerate the WSDLs for all endpoints in the integration, select **Regenerate Endpoints** from the menu.
5. Click **Regenerate** when prompted with a message indicating that WSDL regeneration impacts the mappings in the integration. This regenerates the WSDLs and any dependent artifacts with the same behaviour.

Is the destination environment accessible when refreshing Oracle Field Service environment with the data from another environment?

You can refresh an environment by replacing the existing data of your Oracle Field Service environment with the data from another environment.

When you opt for a refresh, a 24-hour period is utilized for internal operations, during which the destination environment remains fully available. The actual configuration overriding operation will make the instance temporarily

unavailable, but this downtime is very brief and typically goes unnoticed by users. Thus, the environment refresh is essentially a near-zero-downtime operation.

However, during the latter half of the refresh operation, the destination environment enters maintenance mode for the database upgrade process. This phase is typically time-consuming, often taking 30 minutes or more to complete. For more information, refer to *Refresh from Another Environment*.

How do I add multiple conditions for a work skill?

A work skill condition correlates incoming activity skill requirements with the skills possessed by resources. Work skill conditions are used to determine which activities are assigned to which resources.

Before you start

You must add work skills before adding work skill conditions.

Here's what to do

1. Click **Configuration**.
2. In the **General** section, click **Work Skills**.
3. Click **Work Skill Conditions**.
   The **Work Skill Conditions** page appears.
4. Click **Add new**.
   The **Add Work Skill Condition** page appears.
5. Complete these fields:

Field Name	Description
Work skill name	The work skill for which you want to add a condition. These work skills are created in the **Add Work Skill** page.
Required level	The minimum qualification level of the skill a resource must have, to be considered for the activity. Only resources that have the required level or better skills are selected for the activity.
Preferable level	If more than one resource meets or exceeds the required level, then the one(s) with the level that is closest in number to the "preferable level" is selected for the activity.
Add new condition	A new condition for the work skill. Three new fields appear. Select the field for which you want to add the condition and select the condition.

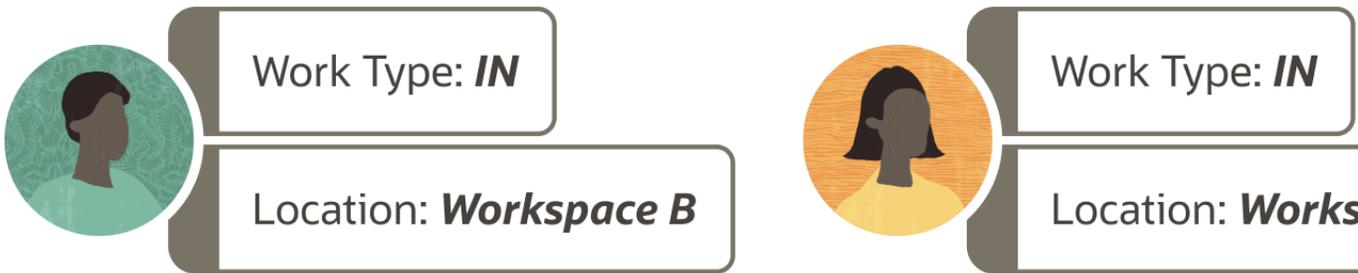**ORACLE**

6. Click **Add**.

The work skill condition is added.

When a new activity is added, these work skill conditions are used to determine which work skills are assigned to the activity. If two conditions are added to the same work skill condition, they are processed using the AND operator.
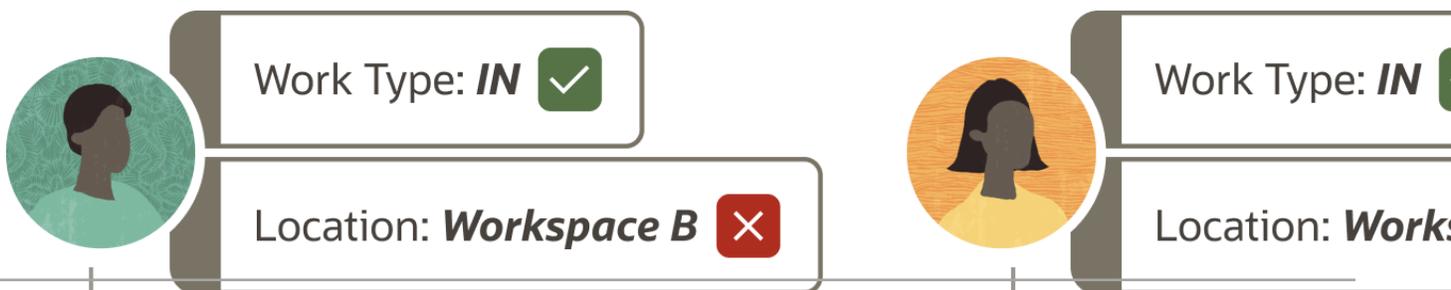
For example, suppose you want the work skill Install to be assigned to a mobile worker who has a minimum skill level of 75, for work order types IN. Select the Work skill name as Install, enter 75 for Required level, click Add new condition and then select W/O Type, In, and IN.

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Assigning Work-Skill
within the same work-skill, *Install*

Resources

Work Type: *IN*

Location: *Workspace B*

Work Type: *IN*

Location: *Works*

Assign to Activity if the resource has

Work Type: *IN* **AND** Location: *Workspace A*

Work Type: *IN* ✓

Location: *Workspace B* ✗

Work Type: *IN*

Location: *Works*

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Select

However, if the conditions are included in different work skill conditions, they are processed using the OR operator.

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Assigning Work-Skill
across different work-skills

Resources

Work skill: *Install* level: **80**

Work skill: *Repair* level: **78**

Work skill: *Inst...*

Work skill: *Rep...*

Assign to Activity if the resource has

Work skill: *Install* level: **75**   **OR**   Work skill: *Repair* leve...

Work skill: *Install* level: **80** ✅

Work skill: *Repair* level: **78** ❌

Work skill: *Inst...*

Work skill: *Rep...*

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Select

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How do I specify links between activities in Oracle Field Service?

Link Templates are link profiles that describe how activities are linked. The templates contain the type of link, constraints for the time between activities, scheduling constraints, and assignment constraints. Links between the activities are created with the help of Link Templates.

1. Click **Configuration**.
2. In the **General** section, click **Link Templates**.
3. Click **Add Link Template**.
   The **New Link Template** dialog box is displayed.
4. Select the appropriate icon that represents the way in which you want to link activities.
   The fields below the icons change based on your selection.
5. Complete these fields:

Field	Description
Minimum interval	Minimum time interval between activities. Select one of the options: ○ Adjustable: The time interval is adjustable with the specified default value. ○ Non-adjustable: The time interval is non-adjustable with the specified predefined value.
Maximum interval	Maximum time interval between activities. Select one of the options: ○ Adjustable: The time interval is adjustable with the specified default value. ○ Non-adjustable: The time interval is non-adjustable with the specified predefined value. ○ Unlimited: The time interval is unlimited, with no restrictions.
Assignment constraints	Whether there are any constraints in assigning the activities to resources. Click **Different resources** if the linked activities can be performed by different resources. Click **Same resource** if the linked activities must be performed by the same resource.
Scheduling constraints	Whether there are any constraints in scheduling the activities. Click **Different days** if the linked activities can be performed on different days. Click **Same day** if the linked activities must be performed on the same day.
Link for the 1st activity	Specifies translations for the first activity. English is set as a default language, unless other languages are specified. You must also specify the label for this link which will be used by external applications.
Link for the 2nd activity	Specifies translations for the second activity. English is set as a default language, unless other languages are specified. You must also specify the label for this link which will be used by external applications.
Label	A unique identifier for this Link template.
Status	Whether this activity link type is available for selection as an option on the Add link page.

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How do I manually select an enroute activity after completion?

You can enable selection of an activity which is available in enroute after completion an activity for a mobile worker. You can configure this option while creating the mobile worker user types.

Before you enable the manual selection of next activity for the mobile worker user type, you must ensure that the **Enroute Support** option under **Configuration->Business Rules** is selected. If **Enroute Support** is not enabled, you will need to disable the **Display and allow adjustment of remaining Travel Time** option to display the next activity in the complete context.

To allow manual selection of an activity

1. Sign in to Oracle Fusion Field Service as an administrator.
2. Click **Configuration → User Types**.
3. Click **Add User Types**. The Add User Type page appears.

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4. Specify the required details to create a mobile worker and then select these options under the **Activity Management** section of the **General** tab for the newly added user type.

   a. Select **Reorder Inside the Route** to allow the user to change the position of an activity in the route.

   b. Select **Selection Of Next Activity On Complete** to allow the user to select the next activity to start after completing an activity. Otherwise, only the next activity in the route can be started.

5. Click **Update**.

How do I work with multiple images in Oracle Field Service installed applications?

While working on activities, you take images and attach them. You can take either a single image or take multiple images and attach them to an activity. When you've to upload multiple images, you might upload them to a Fusion Attachment object or Oracle Cloud Object Storage, based on how your administrator has configured the fields.

Oracle Fusion Field Service can perform bi-directional communication with Fusion attachments, which means that Oracle Fusion Field Service users can not only to take photos and attach them to related Fusion work orders, but also view files attached to Service or Maintenance work orders inside Oracle Fusion Field Service activity and download them for further usage.

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Apart from viewing file attachments from Fusion Service or Maintenance Cloud, you can preview photos and PDF files in Oracle Fusion Field Service and download files locally for further usage.

For more information, see the Configure Oracle Fusion Field Service to Capture Multiple Photos section in Administering Oracle Fusion Field Service guide.

Using Fusion Attachment Object, you can:

- Take images during an activity and submit the page.

- Upload images to the Service or Maintenance work order related to activity

- Add images to the 'Attachments' section of the Fusion business object

- View and download attachments (images or files) related to Service or Maintenance work orders inside Oracle Fusion Field Service activity

- Preview images and PDF files in Oracle Fusion Field Service and download them locally.

Using Oracle Cloud Object Storage, you can:

- Take images while working on an activity and submit the page.

- Upload images to Oracle Cloud Object Storage.

- Link images to business objects in your system using a work order number

Note:
- Offline mode supports multiple attachments. Oracle Fusion Field Service stores the images in your mobile devices for up to 45 days and tries to push them to Fusion Attachments or Oracle Cloud Object Storage when connectivity is re-established.

- Oracle Fusion Field Service compresses the images before uploading, in accordance with the parameters configured by your administrator.

- Oracle Fusion Field Service supports all file types available in Fusion attachments. Photos taken directly in Oracle Fusion Field Service, are saved with a .jpg extension.

How do I configure the display page?

Note: This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

You configure the **Display** page to change the way the user interface appears. While you may retain the default settings for most of these settings, you can change a few settings during implementation based on your business needs.

The **Display** visibility profile permission controls the access to the **Display** page. You must set this permission for each user type that manages the Display settings. If you don't configure the permission or the visibility, the Display page

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isn't visible to the user. If you select ReadOnly, Display is placed into a view only mode. If you select Read/Write for this setting, the user can manage Display. To configure the display settings:

1. Click **Configuration**.
2. In the **Displays** section, click **Display**.
   The **Display** page appears.
3. Complete these fields:

Field	Description
General	
First day of the week	The week that the working week begins.
Time input	The way time is entered in the application-whether it is chosen from a drop-down list with fixed increments or is entered manually.
Allow application to be launched inside iframe	Select this option to launch the application in an iFrame.
Field Resource Landing Page	The page that must be displayed to mobile workers, when they log in to the installed app.
Sign-in Screen	**Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.
Enable password reset on Login screen	**Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page. Displays the **Can't sign in** link on the **Login** page, which helps users reset their passwords. Resetting the password is a global feature and is available only for users assigned to an Internal Login Policy. This isn't available for users assigned to LDAP, SAML, and OpenID Login Policies. Selecting this checkbox displays the **Email for password reset** field.
Email for password reset	**Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page. The source from which you want to get the email address of the user, who wants to reset their password. This field includes custom properties that can be chosen as the source of the email address to which the recovery email is sent. The custom properties are displayed only if these conditions are satisfied: o Entity = User o Type = String o GUI = Text or Email
Remember User Name on Login Screen or use Biometrics ID	**Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

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Field	Description
	The control to display the **Remember my username** check box on the **Login** page. Selecting the **Remember my username** check box saves the user name and populates it automatically, when a user uses the same device and browser to log in to the application. This feature is available only for users who have the Internal and LDAP login policies, and not for users who have the SAML or OpenID Connect policies. If a user's authentication fails, the user name isn't populated when the user logs in the next time. Users can save their fingerprint ID when they log in for the first time and then subsequently, log in using their fingerprint ID. However, the Enable Touch ID" (for iOS) and "Enable Fingerprint ID" (for Android) options have to be enabled on the device to use the fingerprint ID.
Sign-in Screen Language	The language used on the **Sign-in** page when accessing the application.
Activity and Inventory	
Number of activities per page	The number of activities or resources to appear on one page on the mobile device. Default value is 5.
Number of equipment per page	The number of equipment records to appear on one page on the mobile device. Default value is 10.
Number of Future Days to View in My Route and Activity List	The number of days to appear on the mobile device at a time. Default value is 14.
Idle Time Minimum on the Manage screen	The threshold under which idle time isn't displayed on the **Time View**.
Color for Travel Time in Dispatch	The color for travel time, if a visual of travel time is desired on the Time and List views.
Company time zones	
Time zones	The globally available times zones. Use the **Edit** icon to add the required timezones.
Company language	
Languages	The globally available languages. Use the **Edit** icon to add the required languages.
Quota settings	
Major Capacity Usage (%)	On the Quota grid, quota and minutes used display in brown once used = X% (major) of initial quota. Enter the percent of quota that indicates major capacity usage. Expected duration comprises [......] % of quota.
Critical Capacity Usage (%)	On the Quota grid, quota and minutes used display in bright red once used = X% (critical) of initial quota. Enter percent of quota that indicates critical capacity usage. Expected duration comprises [......] % of quota.
Show Planning	Whether a plan created in forecasting is available in the quota management page.
Alert settings	
Activity hasn't been started x minutes before the end of Service Window	The activity turns red and a Resource Tree warning appears based on the value set in this field. Enter the number of minutes preferred.
Activity hasn't been completed x minutes before the end of SLA Window	The activity turns red and a Resource Tree warning appears based on the value set in this field. Enter the number of minutes preferred.
Route hasn't been started x minutes after the start time of resource work day	A warning appears on the resource's record within the Resource Tree. Enter the number of minutes.

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Field	Description
Activity hasn't been started x minutes after ETA	A warning appears on the resource's record within the Resource Tree. Enter the number of minutes.
Resource Tree Visualization	
Show assistants	Shows assistants on the Resource Tree.
Show teams	Shows teams on the Resource Tree.
Show activity/teamwork counters	Shows the count of activities or teamwork on the Resource Tree.
Map	
Fade resources	Whether a resource becomes transparent after geolocation data update.
Fade resource time	The number of minutes after geolocation data update after which a resource's time becomes transparent.
Hide resource time	The number of minutes after geolocation data update after which a resource's time is hidden.
Activity History	
Monitored Activity Fields	The list of activity fields to be monitored. You can add as many fields as needed. The volume of data in the fields, rather than the number of fields themselves, might influence application performance. If one of these fields (or properties) is changed, a record is inserted into a corresponding history table. Use the **Edit** icon to add the required activity fields.
Monitored Inventory Fields	The list of inventory fields to be monitored. You can add as many fields as needed. If one of these fields (or properties) is changed, a record is inserted into a corresponding history table. Use the **Edit** icon to add the required inventory fields.
History User Type	The user type to be used to build the identifiers of objects (activities, inventory, and service requests) that are to be logged into the history.

4. Click **Save**.

   The settings are saved.

How do I assign activities to temporary resources?

Normally routing considers activities from a given bucket and routes it down through the children in the hierarchical tree. However, there could be a situation where a resource must be temporarily assigned to work in an area, which isn't part of the parent resource hierarchy. To handle such situations, routing can be configured to use resources from different parts of the resource tree.

To enable the feature, follow this process:

1. Select the **Work zone support** checkbox on the **Business Rules** screen.
2. Assign one (or more) work zones common with the routing bucket to the resource on the **Resource work zones** screen. You must assign the Work Zone to the resource, and not to the parent organization unit. Work Zones assigned to the parent Organization Unit (bucket or organization) will not be used for this purpose.
3. On the routing plan editor, open the **Filters** section and check the **Use resources outside the routing bucket** checkbox.

After you've followed the steps mentioned earlier, resources that are permanently located in the bucket and the resources that are temporarily assigned are treated equally while assigning activities. This is available for manual, once a day, recurrent or sequential routing plans. The Routing screen shows the number of resources available for the given bucket and routing plan. As with other routing plans, Routing takes into account the work skill levels, work zone ratios, work schedules, locations and all other parameters while routing activities for temporary resources.

> **Note:** The assign activities to temporary resources feature isn't available for immediate or urgent routing plans.

Suppose that you've enabled the **Organizations** option and you've more than one organization defined. In this case, the activities are routed to the temporary resource only if the resource's organization matches with either the bucket's organization or the organization of any bucket or organization unit down the hierarchical tree. Suppose that you run a routing plan simultaneously on two (or more) buckets, which could be at different levels, but share the same resources that are either temporarily assigned or present in the tree hierarchy. The subsequent plans are paused until the previous plans finish running. This might lead to a delay in displaying the routing run results.

How do I end a collaboration chat?

> **Note: Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Collaboration*. We recommend that you update your bookmarks accordingly.

When a chat or conference is completed, you can end the conversation and save the thread in your **History**.

If you leave a conversation, you aren't notified about the new messages in the conversation, but you can still view the conversation in the **History** tab. If you don't end the conversation, the thread is still active in the main window.

> **Note:** A conference doesn't end until the last user leaves the conversation. The conversation might continue after you leave. You can access the thread in History to view the complete conversation. If there are no messages for 12 days, the chat will automatically expire, and the end date will be updated accordingly.

1. Navigate to an active chat or conference.
2. From the Collaboration window, click the options menu ⋮ .
3. Click **Leave Conversation**.

   The sender is notified with the {User name} has left the conversation message. To keep chatting with a user who has left the conversation, type another message into the existing chat window. The addressee is re-invited to the chat.

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How do I create a plugin that work on Follow Up Work Order in Oracle Maintenance Cloud?

When a mobile worker receives an assignment for an activity, they can start working on the activity according to the schedule. Here are the actions that mobile workers or other users can perform on the activity once it is processed and the corresponding changes they can make to the work order:

- Activity Started: When the activity starts, the activity status changes from 'pending' to 'started'. The accelerator option allows configuring the work order status to display corresponding to Oracle Fusion Field Service status changes. You can change the work order status to an appropriate value based on the status configuration mapping table defined on the OIC accelerator. See the Work Order Status section for more details.

- Item/Material Installation: When a mobile worker or any other user installs an item or specific quantity of items, the accelerator reserves the corresponding quantity of items in the maintenance inventory management until the activity is complete. These items move to the 'installed' pool in Oracle Fusion Field Service. These items are not available qualities for Oracle Fusion Field Service. When the inventory items are synchronized, items in the reserved state don't sync to Oracle Fusion Field Service.

- Activity Completed:
  - The work order operation item updates with actual items installed, and the work order labor resource is updates with the labor usage (activity duration).
  - The accelerator updates the item master with actual quantities installed. Reserved item quantities are deducted from the actual quantities, and the item master is updated.
  - The accelerator performs the material transaction in Oracle Maintenance based on the total quantities of items installed for the final calculations.
  - The accelerator performs the actual labor transaction in Oracle Maintenance for the final calculations.
  - For a multi-segment activity, when individual segments are completed, the accelerator updates the labor resource usage and item consumption associated with that segment. When the segments are completed, the total labor usage is the sum of labor usage from individual segments. Similarly, the total item consumption is the sum of the items consumed by individual segments. For more information on multi-segment activity, refer to *Multi-Segment Activity Creation in*.

- Activity Canceled: If the work order contains a single operation resource and the corresponding activity is canceled, the work order is canceled with a cancellation reason, and the operation status remains as ready.

- Activity Deleted: When an activity is deleted in Oracle Fusion Field Service, the corresponding resource is deleted from Oracle Maintenance.

  Note: Only Optional Operations (Count Point and Automatically Transact are false) can be deleted from a work order in Oracle Maintenance. The best practice is that all Standard Operations restrict the visibility of the delete/cancel button in Oracle Fusion Field Service based on the value of Count Point and Automatically Transact Flag. Deleting an activity from Oracle Fusion Field Service results in an error in the integration flow, and the corresponding operations aren't deleted from Oracle Maintenance.

- Activity Suspended: The 'suspend' action in Oracle Fusion Field Service creates a clone of the activity in the same queue as a not-ordered activity in 'pending status'. When the activity becomes a not-ordered activity, the start date/time of the maintenance operation resource/operation is updated with the SLA start and end dates of the not-ordered activity.

- Activity Not Done: The 'not done' action in Oracle Fusion Field Service indicates that the activity couldn't be completed that day for various reasons, such as unavailability of parts, lack of time to finish, and so on. Oracle

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Fusion Field Service treats the 'not done' status as a 'complete' status, and the accelerator follows one of these flows:

- o If the activity is started and has the duration, the labor resource usage corresponding to the resource is updated in the operation resource.
- o If the installation/de-installation of materials is done before the 'not done' action, the material transactions are updated in Oracle Maintenance.
- o The operation status is updated as 'completed' if all the activities corresponding to the operation resources in Oracle Fusion Field Service are 'Not Done'.
- o To create a new work order, a new operation, or a new resource as part of the Not Done action, follow these steps:
    - i. Ensure that the activity properties "Maintenance Action Type" and "Maintenance Planned Date" are configured using the activity page.
    - ii. Provide the values of "New Work Order", "New Operation", or "New Resource" for the "Maintenance Action Type" property. Based on the value of this field, the accelerator creates a new work order, operation, or resource in the work order. The entry in the "Maintenance Planned Date" captures the due date on which the new work order, operation, or resource is created in Oracle Maintenance. Configure the "Maintenance Planned Date" field such that a user enters the due date in the format 'YYYY:MM:DD HH:mm:ss'.

- • Create a New Activity: While working on an activity, the user can create a new activity or a follow-up activity from Oracle Fusion Field Service. The accelerator can then create a corresponding new work order, work order operation, or operation resource in Oracle Maintenance.
    - o The accelerator creates a new activity property in Oracle Fusion Field Service called "Maintenance Action Type" (label 'mwo_action_type') of the enumeration type with a value of "New Work Order", "New Operation", or "New Resource".
    - o Based on the value of "New Work Order", "New Operation", or "New Resource" property, the accelerator creates a new work order, a new operation under the same work order, or a new resource under the work order operation.
    - o Make sure you mention the Parent Reference Work Order number whenever a new activity is requested, so that:
        - - The accelerator creates a new work order by using the work order type, work order subtype, and organization information from the reference work order.
        - - The accelerator creates a new work order operation under the reference work order if the request is to create a new operation.
        - - The accelerator creates a new resource under the reference work order if the request is to create a new resource.

If the Parent Reference Work Order number isn't present, the accelerator can't create a new work order, operation, or resource in Oracle Maintenance.

What is the appropriate date format for appending to the daily extract to ensure consistency with the activity delivery window extract?

The 'Activity Fields' data set contains values of the fields and custom properties assigned to activities processed in the application during the extraction period.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

Activity Fields are exported in the Daily Extract file for which 'Activity Fields' is selected as the entity. Most activity properties and fields available in Oracle Field Service (for example, 'Activity ID', 'Activity status', and 'Name'.) can be included in the Daily Extract by adding them to the file structure.

Depending on the requirements of the company, the list of exported properties and fields can be changed at any time by removing or adding certain fields.

Data can be retrieved as one or more XML files consisting of the 'appointments' root element which contains 'appointment' elements. The 'appointment' elements are sets of 'Field' elements whose attributes are names of the fields and custom properties defined for the activities and whose contents are their corresponding values.

All out-of-the box fields and custom properties get extracted to the 'Activity Fields' file from Daily Extract when the **appt.properties** field is configured.

This table provides the label and description of those fields in the Activity Fields data set that can be configured:

Field	Label	Description
Access Hours	appt.access_hours	Formatted string. Contains set of hours the activity is accessible at the day it is scheduled for (including overnight)
Access Schedule	appt.access_schedule	Formatted string. Contains schedule of access hours for the place where activity must be done.
Account Number	appt.customer_number	String with name of customer account in external system
Activity Features	appt.afeatures	Bitmask field that defines active features for this activity. This value is copied from selected activity type
Activity ID	appt.aid	Unique numeric identifier of the activity
Activity Location ID	appt.a_locationid	Activity location ID
Activity Number	appt.number	Identifier of the activity (string, value of DB field "number")
Activity Properties	appt.properties	List of all custom activity properties with their values

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Field	Label	Description
Activity Time of Assignment	appt.atime_of_assignment	Date/Time when the last move/reschedule/assign to resource operation was performed for the activity.
Activity Time of Booking	appt.atime_of_booking	Date/time when the activity was booked.
Activity Traveling Time	appt.continuous_traveling_time	Travel time between activities/locations with addresses/coordinates
Activity Type	appt.atype	Primary type of the activity (prework, reopened, regular...)
Activity Update Flag	appt.aupdate_flags	Bitmask field. Displays bit flags after updating the activity.
Activity Work Type	appt.aworktype	Identifier of the activity type defined for the activity.
Activity Workflow	appt.activity_flow	Activity workflow assigned to the activity
Activity Work Zone	appt.aworkzone	Work zone which is defined for the activity
Activity status	appt.astatus	Status of the activity
Auto-routed to Date	appt.auto_routed_to_date	The date the activity was scheduled for during the latest Routing run.
Auto-routed to Resource	appt.auto_routed_to_provider_id	ID of resource the activity was assigned to during the latest Routing run.
Auto-routed to Resource (Name)	appt.auto_routed_to_provider_name	Name of resource the activity was assigned to during the latest Routing run.
Capacity Bucket	provider.pcapacity_bucket	ID of capacity bucket for the resource for whom the activity is provided.
City	appt.ccity	City name, part of Customer address
Coordinate X	appt.acoord_x	X coordinate received from geocoding module for the activity

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Field	Label	Description
Coordinate Y	appt.acoord_y	Y coordinate received from geocoding module for the activity
Coordinate accuracy	appt.acoord_accuracy	Accuracy level of coordinates for the activity
Coordinate status	appt.acoord_status	Coordinate status for the activity
Country	appt.country_code	Country code for the activity
Customer Email	appt.cemail	Email of the customer for whom the activity is provided.
Customer Language	appt.clanguage	Message language of the customer for whom the activity is provided.
Customer Name	appt.cname	Name of the customer for whom the activity is provided.
Customer Phone	appt.cphone	Phone number of the customer for whom the activity is provided.
Customer Time Zone	appt.c_zid	Time Zone ID of the customer for whom the activity is provided.
Date format (Resource)	provider.pdate_fid	ID of date format for the resource for whom the activity is provided.
Day before	appt.cdaybefore_flag	Value of custom property "Day before". Present in the Initial DB, but may be removed. Flag indicates if 'Day Before' Notification must be used.
Delivery Window End	appt.delivery_window_end	End time for activity Delivery Window in 'HH:MM' format
Delivery Window start	appt.delivery_window_start	Start time for activity Delivery Window in 'HH:MM' format

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Field	Label	Description
Delivery address	appt.caddress	Customer address (except City, Zip/Postal code, State)
Duration	appt.length	Activity length in minutes. Filled when activity is finished. Value = end time - start time.
Email address	provider.email	Email address for the resource for whom the activity is provided.
Estimated time of arrival	appt.ETA	ETA date/time. Can be empty for Regular and Reopen activities if status is Pending or Suspended. For Started and Ended - time when activity is started. For Canceled can be empty or set, if set - it is time when provider started an activity before it was Canceled
First Manual Operation	appt.first_manual_operation	The code of the first manual reschedule/move/reorder operation performed after an automatic one. The list of possible codes: • 0 - Not Defined • 1 - Assigned • 2 - Bucket Changed • 3 - Reordered • 4 - Unscheduled • 5 - Unassigned • 6 - Rescheduled • 7 - Reassigned • 8 - Assigned by resource • 9 - Bucket changed by resource • 10- Unscheduled by resource • 11- Unassigned by resource • 12- Rescheduled by resource • 13- Reassigned by resource Points to note: • Difference between values 'Assigned & Assigned by resource' • Difference between values 'Bucket changed & Bucket changed by resource'

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Field	Label	Description
		• Difference between values 'Reordered & Reordered by resource' and so on: If a resource/mobile worker has permission to move activities between resources/buckets or reorder within the route, thus such actions will be logged as by resource, for example, "Assigned by resource" means that the resources assigned the activity by themselves.
First Manual Operation (Interface)	appt.first_manual_operation_interface	The interface in which the code for the first manual reschedule/move/reorder operation was performed from after an automatic one. The list of possible interfaces: • 1 - Legacy Manage • 2 - API • 3 - Core Application • 5 - Inbound API • 7 - Configuration Interface Differences between values 'API' and 'Inbound Interface': • API corresponds to API SOAP + REST APIs. • Inbound interface corresponds to 'file_upload' and Inbound API uploads data from external application to Oracle Field Service.
First Manual Operation (User ID)	appt.first_manual_operation_user_id	ID of the user who performed the first manual reschedule/move/reorder operation after an automatic one.
Initial Ratio for Activity Duration	provider.pinitial_ratio	Initial ratio for activity duration for the resource the activity belongs to.
Master Activity ID	appt.amaster_aid	ID of main activity for prework, reassigned and reopened activities
Message Language	provider.planguage	Language for resource the activity is assigned to.
Mobile Phone	appt.ccell	Mobile phone number of the customer for whom the activity is provided.

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Field	Label	Description
Organization	provider.organization_id	ID of organization for the resource the activity is assigned to.
Points	appt.apoints	Number of points that represent efforts required to perform the activity.
Position in Route	appt.position_in_route	Calculated field. Contains position of activity in the route.
Postal Code	appt.czip	ZIP/Postal code of customer for whom the activity is provided.
Reminder	appt.cmessagetime	Number of minutes before Delivery Window/ETA when reminder notification is sent.
Reported Start Time of Activity Delivery	appt.ctime_delivered_start	Start date/time of activity which is delivered to the customer.
Reported End Time of Activity Delivery	appt.ctime_delivered_end	End date/time of activity which is delivered to the customer.
Resource External ID	provider.external_id	External system identifier for the resource the activity is assigned to.
Resource ID	provider.pid	ID of resource the activity is assigned to.
Resource Name	provider.pname	Name (text identifier) of resource for whom the activity is provided..
Resource Parent	provider.parent	ID of parent resource for the resource the activity is assigned to.
Resource Phone	provider.pphone	Phone number of the resource for whom the activity is provided.
Resource Time Zone	time_zone.name	Standard Oracle Time zone name
Resource Time Zone Name	time_zone.zoneinfo_name	Standard IANA Time zone name

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Field	Label	Description
Resource status	provider.pactive	Resource status (active or inactive) for whom the activity is provided.
Resource type	provider.ptype	Resource type ID for the resource for whom the activity is provided.
Route Activation Time	queue.activated	Date and time of route activation for resource for whom the activity is provided.
Route Date	queue.date	Date of the route the activity is assigned to.
Route Deactivation Time	queue.deactivated	Date and time of route deactivation (for already activated route) for resource for whom the activity is provided.
Route ID	queue.qid	Unique internal identifier of the route the activity is assigned to.
Route Reactivation Time	queue.reactivated	Date and time of route reactivation (for already deactivated route) for resource for whom the activity is provided.
Routing profile	provider.p_rprid	ID of routing plan assigned to the resource for whom the activity is provided.
SLA End	appt.sla_window_end	End date and time of Service Level Agreement in 'YYYY-MM-DD HH:MM:SS' format
SLA Start	appt.sla_window_start	Start date and time of Service Level Agreement in 'YYYY-MM-DD HH:MM:SS' format
Service Window End	appt.service_window_end	End time of Service Window in 'HH:MM' format
Service Window Start	appt.service_window_start	Start time of Service Window in 'HH:MM' format
State	appt.cstate	State (Geographic area) of the customer for whom the activity is provided.

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Field	Label	Description
Teamwork ID	appt.a_teamid	ID of team for teamwork activities
Template ID	appt.a_templateid	ID of activity template for mass/repeating activities
Time Slot ID	appt.a_tsid	ID of Time Slot assigned to the activity
Time Zone (Resource)	provider.time_zone	ID of time zone assigned to the resource for whom the activity is provided.
Time format (Resource)	provider.ptime_fid	ID of time format for the resource for whom the activity is provided.
Travel Area	appt.atravelarea	ID of travel area the activity is belongs to.
Travel estimation method	appt.travel_estimation_method	Method that was used to make current traveling time estimation.Applicable for the activity.
Travel estimation method (final location)	queue.final_travel_estimation_method	Method that was used to make current traveling time estimation. Applicable for the final location.
Travel time adjustment: ID of previous activity	appt.travel_from_aid	ID of previous activity adjustment is entered for. Applicable for the activity.
Travel time adjustment: ID of previous activity (final location)	queue.final_travel_from_aid	ID of previous activity adjustment is entered for. Applicable for the final location.
Traveling Time	appt.travel	Time of travel from a previous activity/location.
Traveling time (final location)	queue.final_travel	Travel to the final location of resource for whom the activity is provided.
Visit ID	appt.a_visitid	ID of Visit for the activity.
Work Order	appt.appt_number	Identifier of the activity (string, value of field "Work Order")
Working Day End	queue.calendar_time_to	End of working day (Date and time) for the resource for whom the activity is provided.

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Field	Label	Description
Working Day Start	queue.calendar_time_from	Start of working day (Date and time) for the resource for whom the activity is provided.
First Manual Operation (User name)	appt.first_manual_operation_user_name	Name of the user performing the first manual reschedule/move/reorder operation after an automatic one.
First Manual Operation (User login)	appt.first_manual_operation_user_login	Login of the user performing the first manual reschedule/move/reorder operation after an automatic one.
Start - End	appt.eta_end_time	Real start time - end time for the activity
End	end_time	Estimated or real end time of activity. Calculated as ETA (Start time)+activity duration.
Activity Work Skills	activity_workskills	List of ID for Work Skills and Work Skill Groups for the activity
Capacity Categories	activity_capacity_categories	List of ID for Capacity Categories for the activity
Activity order	position_in_route	Order (sequence number) of the activity in the route for specified date

Custom activity and resource properties (except file properties) can be configured and extracted for the Activity Fields data set. File properties are extracted according to configuration defined in the Property File Fields data set.

Custom Properties

Type	Configurable
String	Yes
Integer	Yes
Enumeration	Yes

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Type	Configurable
File	No

Example: Activity Fields file

The following data is collected. Provide a meaningful name to the report.

- Unique internal identifier of the activity, for example, **Activity ID**
- Date of the route the activity is assigned to, for example, **Activity Date**
- Unique internal identifier of the route the activity is assigned to, for example, **Queue ID**
- Status of the activity, for example, **Activity Status**
- Name of the customer for whom the activity is provided, for example, **Customer name**

This example also includes a custom property called **Is a VIP** that has two values:

- 1: The customer for whom the activity is provided is a VIP customer
- 2: The customer for whom the activity is provided is not a VIP customer

The example files below contain data for two activities, 541118 and 56214, assigned on 2013-11-08 to the same route, 546278. Activity 54118 was provided for John Smith, who is not a VIP customer, and the activity was cancelled. Activity 56214 was provided for an unidentified VIP customer, and the activity was completed.

```xml
<?xml version="1.0" encoding="UTF-8"?>
<appointments>
 <appointment>
 <Field name="Activity ID">54118</Field>
 <Field name="Activity Date">2013-11-08</Field>
 <Field name="Activity Queue">546278</Field>
 <Field name="Activity Status">cancelled</Field>
 <Field name="Customer Name">John Smith</Field>
 <Field name="Is a VIP">1</Field>
 </appointment>
 <appointment>
 <Field name="Activity ID">56214</Field>
 <Field name="Activity Date">2013-11-08</Field>
 <Field name="Activity Queue">546278</Field>
 <Field name="Activity Status">completed</Field>
 <Field name="Customer Name" />
 <Field name="Is a VIP">2</Field>
 </appointment>
</appointments>
```

What is teamwork in Oracle Field Service?

Teamwork is a feature that allows a resource or group of resources to assist each other to complete work.

There are two roles to be aware of when setting up a teamwork situation:

- team leader – This is the resource who's being assisted.

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- assistant – The resource who's assisting.

The team leader and assistant(s) are visible in the **resource tree**. The assistant is shown with an arrow pointing to the team leader. In this screenshot, Billy Holm is assisting Kathleen Disney:
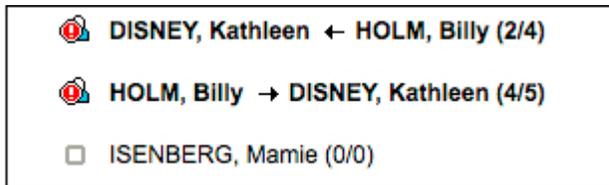
To enable the team collaboration view in the resource tree as shown in the screenshot, navigate to **Configurations** screen, select **Display**, locate the **Resource Tree Visualization** section, and select the **Show assistants** and **Show teams** options.

In the assistant's work order queue, time is reserved and marked as assisting (the team leader). The arrow points to the person who's in need of assistance.

You can assign teamwork in multiple ways:

- Use the **Assign to Team** link in the **Actions** menu.

- Use the **Assign to team** link in the **hints**.

- Drag into the resource tree.

Teamwork functions are very similar to regular activities. The team leader doesn't have to do anything different that they'd normally do since it's the job(s) on the team leader's route in which the resources are assisting. These rules apply for teamwork:

- Both the team leader and individual resources can start and complete teamwork on their mobile device. If a resource can't do this, the team leader can do it for them.

- The assistant can open a teamwork activity and see the route of the team leader on the day of the teamwork.

- The assistant can reschedule a scheduled regular activity assigned to the team leader within the day(s) of teamwork, but can't reschedule it to other day(s) when there's no teamwork.

- The assistant can't reschedule a scheduled regular activity assigned to the team leader to a non-scheduled pool.

- If the assistant tries to perform actions that aren't permitted with a scheduled regular activity assigned to the team leader, the message, "You are not authorized to move the activity" appears.

- When an assistant is set to inactive or has a non-working day, their work skills aren't shared with the team anymore. The 'Work Skills mismatch' alert is displayed on the Assignment Assistant, Time, List, Map views, and Manage pages.

- If you cancel a teamwork activity, the assistant is unassigned from the team.

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How do I cancel an activity?

You can cancel activities in Oracle Field Service based on their status and scheduling, with some actions varying depending on whether a mobile worker has activated their route.

Here's a summary of when and how you can cancel an activity:

1. Pending Activities:

- **Pending Scheduled Activities:** You can cancel these activities up until the end of the overnight period on their **Scheduled Day**.

- **Pending Non-Scheduled Activities:** You can cancel these activities **indefinitely**; there is no time limit.

2. Deleting Activities (Before Resource Activates Route):

- An activity can be **deleted** up until the point a mobile worker **activates their route**. Deleting an activity completely hides it from the UI, similar to being cancelled internally.

3. Non-Pending Activities:

Once an activity is no longer pending (typically after a mobile worker has activated their route on the Scheduled Day), direct cancellation is usually not possible.

- **En Route Activities:** You cannot directly cancel an En Route activity. However, you can convert it back to a **Pending** status by using the **Stop Traveling** action. Once it's pending, you can then cancel it.

- **Started Activities:** A Started activity **cannot be cancelled**. If it cannot be completed, you can mark it as **Not Done** instead.

4. Finalized Activities (Cannot Be Cancelled or Not Done):

- Activities that are already in a **Completed**, **Cancelled**, or **Not Done** status cannot be further cancelled or marked as Not Done.

    To cancel an activity

1. Click the Navigator and then click **Dispatch Console**.
2. In the resource tree, select the resource for which you want to cancel the activity.
3. Click the activity that you want to cancel and click **Cancel** in the activity hint.
4. On the **Cancel Activity** page, complete all required fields and select a **Cancellation Reason** from the drop-down list.

    The fields on this page vary based on the way the application is configured for your organization.
5. Click **OK**.

    The activity is removed from the time view, but still appears in the list view with a small block of time. If this is a teamwork activity, the assisting mobile worker is unassigned from the team.

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How can I turn off push notifications for changes to the Technician Route?

The **Notifications** panel notifies you about the route changes or activities that are no longer on your route. You cannot disable these activities in Oracle Fusion Field Service.

A *notification* can save you time by stopping you from driving to a canceled *activity*. All notifications become available as soon as you activate your *route*, and a bell icon appears on your **Activity details** page.

There are three types of notification messages:

- Activity has been added

- Activity has been deleted (that is, when an activity is removed from your route)

- Activity address has been updated

When an activity is added or removed from your route or when the address of an activity on your route changes, a number indicating how many notification messages you have displays on the bell icon.

Clicking the icon opens the **Notifications** panel and shows the notifications, as shown in these screenshots.
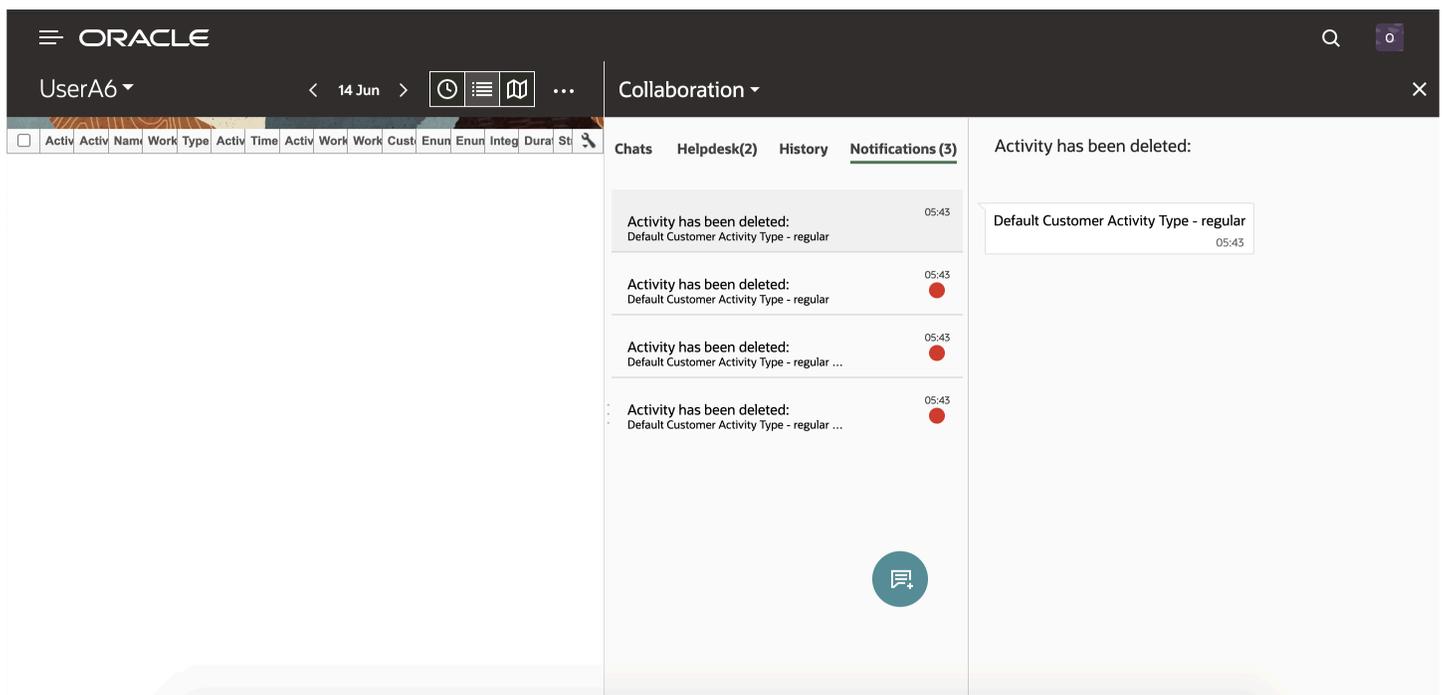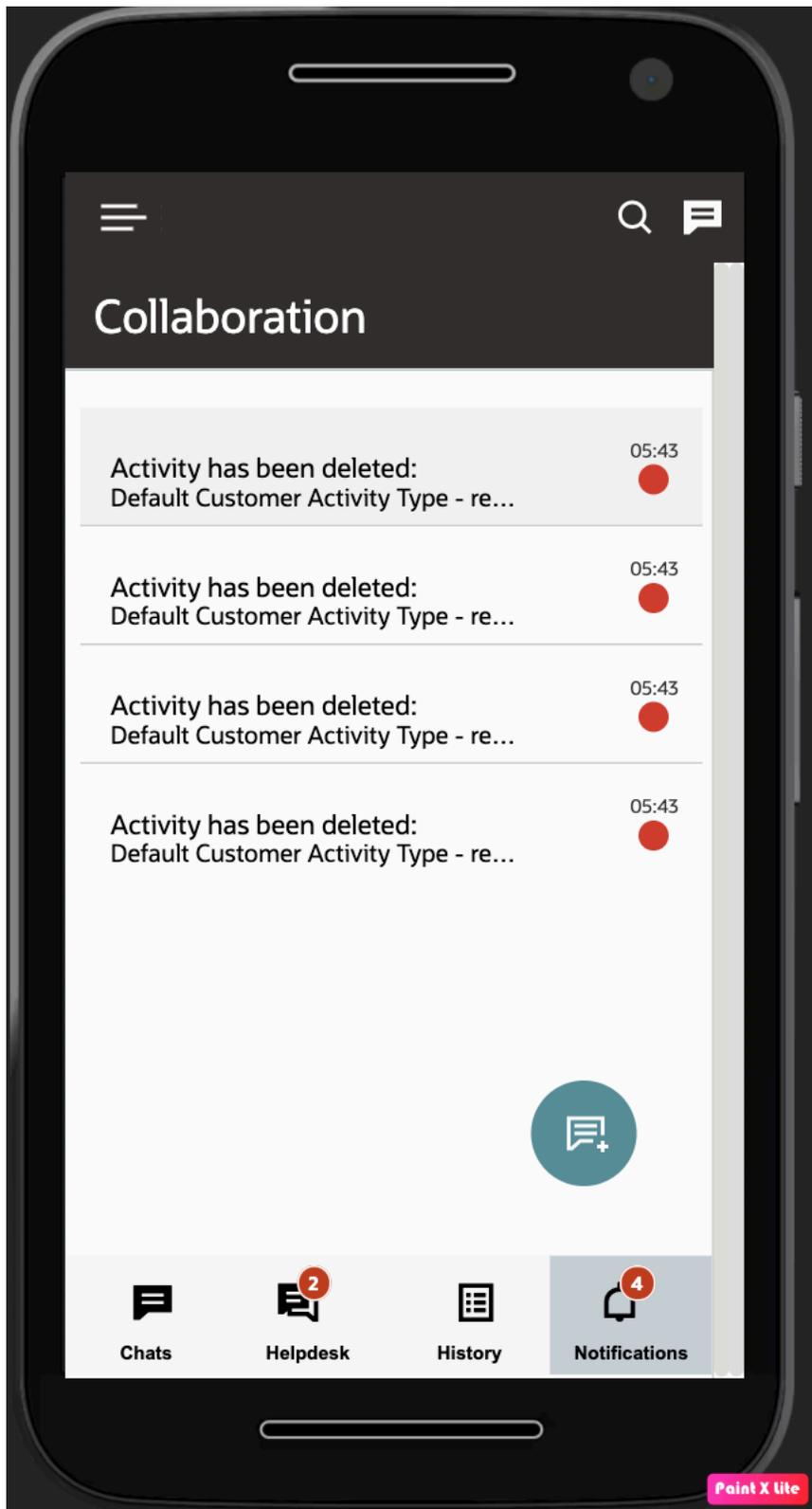
When you refresh your browser, messages that are read are not displayed on the page. If you are offline for some time, all notifications accumulated during that time display when you log in again.

Separate address-change notifications contain the updated information (in bold white text), as well as the old (in bold gray text).

You receive this type of notification when any of these information changes:

- Address
- City
- State
- ZIP/Postal code

If an address-change notification is longer than two lines, clicking the ellipsis (...) displays the full text of the message.

How can I notify the dispatcher via email when a technician checks a form field?

The `Manual` action-driven launch condition generates messages on the creation of a service request.

When creating a service request, a user should select the service request type and fill in the fields related to it. The message subject/body pattern for the `Manual` launch condition can contain placeholders that are related to the service request itself and to all its parent objects. For example, if the request is created on the activity level, the content can contain placeholders related to request, activity, route and resource.

The launch condition can be used in the following cases:

- inventory tracking and hardware testing
- I/initiating SRO or sending any other form
- initiating support requests
- manually generated cases when transaction is initiated by a person and is not related to the activity
- other activity or inventory requests

Note: For more information, see the *Add a launch condition for a message scenario* section.

How do I use the mass populate feature across quota and booking status pages?

The Mass populate feature lets you copy the values of the quota parameters to a future date. For example, you can copy values of the editable Quota% and Min Quota columns from a past or current date to the Quota% and Min Quota columns of a future date in the Quota page.

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Also, you can use the Mass Populate on Booking Status page for time-slot and availability (time-interval) based quotas to simultaneously change booking statuses for multiple levels (that's, day, time slot or time interval, or capacity category).

> **Note:** The Mass populate feature has replaced the **Automatic fill** functionality on the Quota page and the time-slot based Quota pages. The Autofill functionality does not work on the Booking Status page. Also, during Field Service installation, a unnamed group is created and the Mass Populate action link is moved under the unnamed group. You can navigate to the User Types page and add the Mass Populate action link to the group so that it displays under the icon for the required user type.

You can access the **Mass Populate** functionality from the **Quota** and **Booking Status** pages. The Mass populate page is available for the following pages:

- Availability (time-interval) based Quota page

  > **Note:** For availability based quota, you can mass populate all categories simultaneously and if you do not want to change the values in some categories then you need to manually reset their values after mass populate.

- Booking Status pages for time-slot based and availability (time-interval) based quota
- Time-slot based Quota pages (that is Quota by day, Quota by time slot, or Quota by capacity category pages)

For example, the following page displays in a time-slot based Quota page:
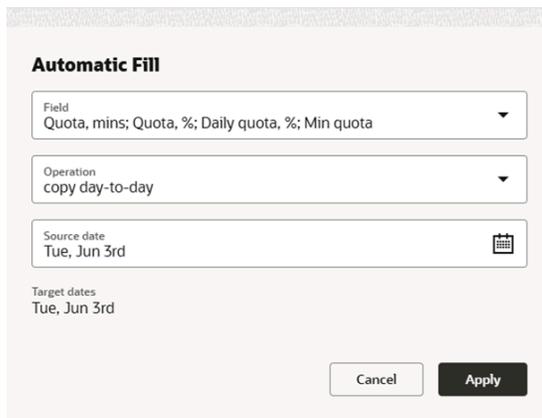
The following fields display on the Mass Populate page:

- **Field**: Indicates the editable quota fields and the fields that are locked.
- **Source date**: Indicates the date from which the values are copied.
- **Target dates**: Indicates the future dates to which the values are copied.
- **Operation**: See *Mass Populate Fields*.
- **Source**: Indicates the values that you want to copy. For example, if you want to use the values in the **Min Quota** column as the quota for the future dates, then you can select the Min Quota option to copy the values from the Min Quota column to the **Quota** column.

Recurring Autofill Enabled option

The **Recurring Autofill Enabled** option lets you schedule the autofill operations (that is, automatically copy the values of the quota parameters without using the Mass Populate button) to a future or today's date. For example, you can use the autofill option for the following tasks:

- Copy 'Min quota' values from a current day to future days.

- Copy 'Quota' values from a current day to future days.

- Copy 'Daily quota, %' values from a current day to future days.

- Copy 'Quota, %' values from a current day to future days.

- Shift the '% to stop booking at' parameter values by one day forward.

Click a cell from anyone of the following columns in the Availability (time-interval) based Quota and Time-slot based Quota pages to view the **Recurring Autofill Enabled** option:

- Quota, %

- Min quota

- Quota

- Daily quota, %

- % to stop booking at

How do I manage mass populate operations based on capacity area configurations?

The fields available in the **Field** drop-down list depends on the capacity area configuration at a specific quota level. Availability of a particular operation depends on the selected field.

Operation	Fields	Parameters	Description
Copy day-to-day	All	Date to be copied	Lets you to copy the values of a given field from one day to another day or for multiple days. You can use a past or a future date as a source date. For example, to perform Trouble Call activities on April 26, 2017, assume that you only have 75 mins in the 10-12 time-slot, 60 mins in the 13-15 time-slot, 50 mins in the 15-17 time-slot. Assume that you are expecting more trouble calls for the next three days in the above mentioned time-slots. Therefore, you want to use the same quota values (that is, 75, 60, 50 mins) in the Quota column in the Quota by Capacity Categories screen for the next three days for the same above mentioned time-slots. Use the Copy day-to-day operation as follows: 1. Select the date in the Quota by Capacity Categories screen to which you want to copy the quota values. For example, select April 27, 2017. 2. Click the ☰ icon and select **Mass Populate**.

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Operation	Fields	Parameters	Description
			3. Click **copy day-to-day** option. **Note:** The date, April 26 displays on the **Source Date** field and the date, April 27 displays on the **Target Dates** field. 4. Click **Apply**. 5. Click **Save**. The quota values are copied to the specified date in the **Target Dates** field.
Copy week-to-week	All	Week to be copied	Allows you to copy the values of a given field from one week to another or to the multiple weeks. The values are copied between same days of the week (Monday to Monday, Tuesday to Tuesday, etc.). There is no restriction on the week that can be used as a source of data for this operation. It can be from past or from the future date. The corresponding calendar control allows you to select the week by clicking on any day of this week. The week is represented by its first day.
Shift forward by one day	All	None	Shifts the value of a given field forward by one day. The corresponding option is available only if a continuous interval of days are selected on the **Quota** view. Please note that there is a common rule that the Mass-populate operation should update all the dates that are currently selected in the **Quota** view. Therefore, when you perform the shift forward operation, the value for the first selected/visible date is updated with a value from the previous day (which is invisible). If the view contains both past and future days, the future date will be the first one to get updated. It is updated with a value from the latest past date.
Shift backward by one day	All	None	Shifts the values of a given field backward by one day. Please note that it is mainly intended to rollback the results of a previous forward shift. This option is available only if a continuous interval of days are selected on the **Quota** view. Please note that there is a common rule that the Mass-populate operation should update all the dates that are currently selected on the **Quota** view. Therefore, when you perform the shift backward operation, the value of the last selected/visible date is updated with the value from the next day (which is invisible).
Next day value = previous day value * percent	• % to stop booking at • Quota • Min. quota • % Quota • Daily Quota, % (for availability based quota)	Percent	Available only when a continuous interval of days are selected in the timeslot or time-interval Quota view. In this case, the value of a given field is calculated from the value of the day before and the values of the current is used to derive the values of all the other next days. A value for a next day is calculated as a value for a previous one multiplied by a specified percentage.
Use estimation	% Quota	None	Copies the values from the **Estimated % quota** field to the **% Quota** field. Available only in the Quota by Capacity Categories screen.
Estimate future values based on past data (day-to-day)	Quota	• Number of previous days • Field to be used: Quota or Used	Lets you to estimate the values of a given field for one or several future days using the linear extrapolation algorithm. Only available in timeslot or time-interval Quota view.
Estimate future values based on past data (week-to-week)	Quota	• Number of previous weeks	Allows you to estimate the values of a given field for one or several future weeks using the linear extrapolation algorithm. A separate extrapolation trend is created for each day of the week (Monday, Tuesday, etc.).

Operation	Fields	Parameters	Description
		• Field to be used: Quota or Used	
close work zone	values matching the filter criteria	None	Lets you close booking statuses for a particular work zone in the Booking Status screen for time-slot and time-interval (availability) based quotas. You can close bookings for a particular day, for a particular week, for a particular month or you can select a set of dates from the Calendar option. Use the Close Work Zone operation as follows: 1. Select a day, a particular week, a particular month, or a set of dates from the Calendar option. 2. Click the ▤ icon and select **Mass Populate**. 3. Click **close work zone**option. **Note:** The selected dates from the Calendar option displays on the **Target Dates** field. 4. Select a work zone from the drop-down list. 5. Click **Apply**. 6. Click **Save**. The values matching the filter criteria are updated on the Booking Status screen.
open work zone	values matching the filter criteria	None	Lets you open booking statuses for a particular work zone in the Booking Status screen for time-slot and time-interval (availability) based quotas. You can open bookings for a particular day, for a particular week, for a particular month or you can select a set of dates from the Calendar option. Use the Open Work Zone operation as follows: 1. Select a day, a particular week, a particular month, or a set of dates from the Calendar option. 2. Click the ▤ icon and select **Mass Populate**. 3. Click **open work zone** option. **Note:** The selected dates from the Calendar option displays on the **Target Dates** field. 4. Select a work zone from the drop-down list. 5. Click **Apply**. 6. Click **Save**. The values matching the filter criteria are updated on the Booking Status screen.
close all	values matching the filter criteria	None	Lets you close all booking statuses in the Booking Status screen for time-slot and time-interval (availability) based quotas. You can close bookings for a particular day, for a particular week, for a particular month or you can select a set of dates from the Calendar option. Use the Close All operation as follows: 1. Select a day, a particular week, a particular month, or a set of dates from the Calendar option. 2. Click the ▤ icon and select **Mass Populate**.

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Operation	Fields	Parameters	Description
			3. Click **Close All** option. **Note:** The selected dates from the Calendar option displays on the **Target Dates** field. 4. Click **Apply**. 5. Click **Save**. The values matching the filter criteria are updated on the Booking Status screen.
open all	values matching the filter criteria	None	Lets you open all booking statuses in the Booking Status screen for time-slot and time-interval (availability) based quotas. You can close bookings for a particular day, for a particular week, for a particular month or you can select a set of dates from the Calendar option. Use the Open All operation as follows: 1. Select a day, a particular week, a particular month, or a set of dates from the Calendar option. 2. Click the ▤ icon and select **Mass Populate**. 3. Click **Open All** option. **Note:** The selected dates from the Calendar option displays on the **Target Dates** field. 4. Click **Apply**. 5. Click **Save**. The values matching the filter criteria are updated on the Booking Status screen.

Note: Please also note that all these operations ignore the locked flags. To apply locked flag, select the **Locked Flag** option in from the **Field** drop-down list. You can use the **Locked Flag** option only in the time-slot based Quota screens.

How do I manage non-scheduled activities in the dispatch console?

Non-scheduled activities are activities that aren't assigned to a specific date. These activities are displayed on the **Not assigned** panel on the **Map view** in the **Dispatch Console**. The visualization of non-scheduled activities on the map helps you manage them better.

You can perform these tasks with non-scheduled activities:

- View on the dispatch map
- View activity details
- Assign to resources
- Find activities for idle resources

The panel with not-assigned activities is displayed only when a bucket is selected in the Resource tree. It displays activities that are assigned to the bucket for the selected date. The **En route** and **Stop Travel** buttons aren't displayed in the activity hint for non-scheduled activities.

Non-scheduled activities in Field Service remains in the application indefinitely even after the retention period ends, as this period only applies to activities with a scheduled date. Once non-scheduled activities are assigned a date and the retention period ends, all associated files are purged and can't be recovered.

How do I capture multiple images for an activity?

Sometimes you're required to attach multiple photos for an activity. For example, before and after photos of a broken equipment. This procedure describes how to take multiple photos for an activity and preview them.

1. Open the activity and go to the form (for example, Asset Validation) to which you want to add photos.
2. Click **Add Image**.
   Your device camera opens.
3. Use these options to capture the photos:

Use this option...	To do this...
Swap camera	Switch between front and back camera. This option is enabled only after you capture at least one photo. In addition, this button is replaced with Proceed and an photo counter.
Pinch	Zoom in/zoom out.
Tap	Focus on a specific point.
Capture	Capture the photo. When you capture an photo, the count of photos increases. When you reach the maximum number of photos required for an activity, Capture becomes unavailable.
Flash ON	Turn on flash permanently.
Flash OFF	Turn off flash permanently.
Flash Auto	Let the device choose the flash mode based on the ambient lighting.
Cancel	Cancel the operation and return to the form.
Proceed	Preview the photos. The color of Proceed indicates whether you've taken the minimum number of photos required for the activity. You can still proceed forward even if you haven't taken the minimum number of photos, since you might need to take photos in different places or different times during your activity. You can come back and take more photos, if required.
Done	Finish capturing the photos.

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4. Use these options to preview the photos:

Use this option…	To do this…
Swipe the image reel left or right	Move between photos.
X or Camera icon	Open the camera to take more photos.
Delete	Delete a photo.
Crop	Open a photo in Crop mode.
Proceed	Save changes after cropping.
Back	Cancel the crop operation.
Reset	Reset the crop operation.
Draw	Highlight parts of the photo.
Proceed	Save changes after highlighting.
Back	Cancel the highlight operation.
Reset	Reset the highlight operation.
Done	Finish capturing and adjusting the photos.

5. Click **Submit**.

The number of photos you've attached is validated based on the validation rule configured by your administrator and a corresponding message is displayed. For example, let's say the rule states that you must attach three to five photos for the current activity. If you've attached fewer than three photos a validation message advising on the minimum number of photos is displayed. Further, if the Attachment property is configured as ReadWrite, a warning message is displayed, but you can still submit the form. If the Attachment property is configured as 'Required', you can't submit the form unless you attach the required number of photos.

How do I upload multiple images for an activity?

When you capture images for an activity, they're uploaded to Fusion Attachments or Oracle Cloud Object Storage from your device only when you submit a page and when the internet connection is available. You can see an indicator for the upload progress when the images are still on your device and not fully uploaded. The images are cleared from your device after they're successfully uploaded.

File and Folder Names

Oracle Fusion Field Service generates unique names for folders and files using multiple parameters, depending on where your images are stored. However, work order is the most important parameter among all the attributes that are used to build names.

If you're storing images on Oracle Cloud Object Storage, then the images are uploaded to a folder. If you're storing images using Fusion Attachment object, there will be no folders as Fusion Attachment doesn't support a folder structure.

Here are some examples that describe the folder and file names:

Folder name: A folder name consists of four parameters. The first two parameters are the abbreviation of the Oracle Fusion Field Service Activity entity followed by a work order number and the label of the Attachments property in Oracle Fusion Field Service. For example, 1_4232069_WO40601202_Attachments)

> **Note:** Folders are created in Oracle Cloud Object Storage and aren't applicable to Fusion Attachments.

File name: A file name begins with the time stamp of when an image was taken, followed by a work order number. For example: 20240304184334571_WO40601202_4232069_1_Attachments.jpg.

For Oracle Fusion Field Service to generate correct folder and file names:

- Activities must contain work order numbers
- Work order numbers must match the business objects in your applications

All the images uploaded using the Attachments properties are displayed on the activity **History** page. Initially, the status is Pending; it's changed to Uploaded after the image is uploaded successfully.

You can add the Attachment properties to the list of monitored activity fields to see them in activity history. The monitored activity fields are managed on the **Configuration** > **Display** page.

How do I enable forecasting in Oracle Fusion Field Service?

Use the **Set Plan** option to modify the plan above or below the forecast by a given percentage. For example, make incremental changes to the plan in response to new information, such as severe weather predictions.

Before you set Forecasting, you must:

- Enable the **Recalculate data on a daily basis** setting on the **Configuration** > **Business Rules** page. This setting is deselected by default for test environments.
- Ensure there has been completed activities on this bucket on past dates. The Set Plan button is available only if a bucket has data for the 'forecasted workload'.

Use this feature to set the plan for the capacity bucket that you have selected.

1. Click **Forecasting**.

   The **Forecasting** window opens.

2. Click **Set Plan** to the set the plan for the desired bucket and date range.

3. Choose the time interval that corresponds to the one you chose in the calendar.

The **Set Plan** dialog is displayed, as shown in this screenshot:
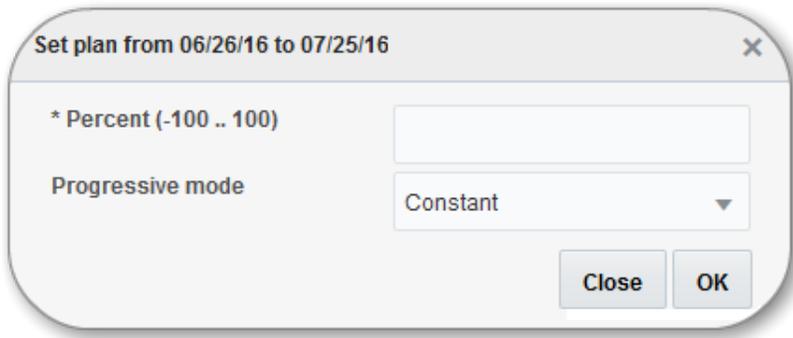
This screenshot shows the Demand forecaster with the new plan:
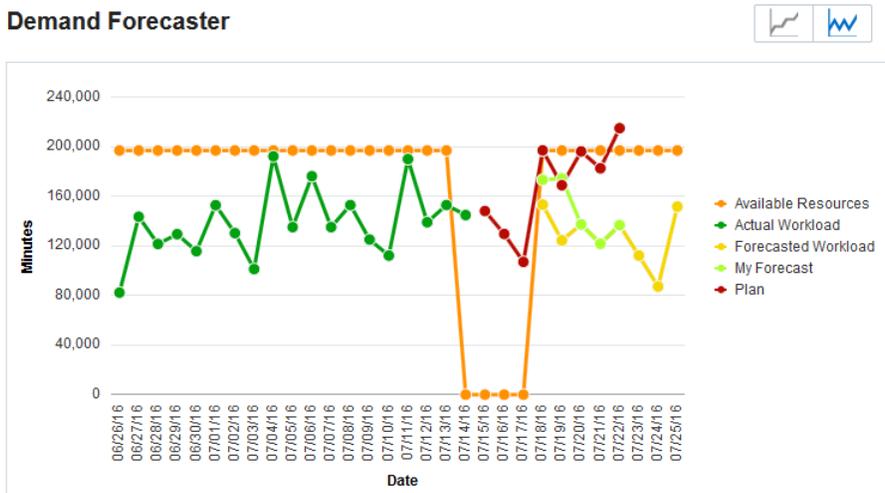
4. Enter a percent to set the desired difference between forecasting and planned values. The available range is from -100% to 100%.

For example, if you set the percent to -5, you are setting your plan to 5% less than the forecast. Setting 5% sets the plan to 5% more than the forecast.

5. Select a progressive mode to define how the planned values progress over time. Four mode options are available:

   ○ **Constant**: Plan values are calculated as the fixed difference from the forecasting values for the entire period

   ○ **Weekly**: Plan values increase by the specified percent on a weekly basis

   ○ **Monthly**: Plan values increase by the specified percent on a monthly basis

   ○ **Yearly**: Plan values increase by the percent annually

6. Click **OK** to create or update the plan.

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How do I view Activity history for standard actions?

You can see the same information about the history of an *activity* as the dispatcher/supervisor.

An activity's history displays when you click **History** on the **Activity details** page.

This image shows the activity history as viewed from Oracle Fusion Field Service Core Application. The tabbed options at the top of the page vary depending on the Monitoring Activity Field configuration in the Display page. You may not see all these tabs on your page.

When viewing the activity history from a mobile device, the page looks something like this:

How do I close bookings automatically?

When you close the booking for a capacity category, you prevent activity booking in that category, even if the capacity is available.

This functionality is useful in the scenarios such as:

- Automatically blocking activities in areas with safety concern during specific times.

- Prevent booking activities in school zones during morning and afternoon hours.

Quota management allows to optimize resource utilization and efficiently allocate resources to meet demand. You can manage time slots, capacity areas, and work zones with flexible booking controls and configuration settings.

- The Quota Close Time functionality allows to automatically close a quota up to 255 days before the specified close time, enabling long-term scheduling adjustments.

- This flexibility supports scenarios where specific locations require extended closure periods, such as areas unavailable for bookings during certain seasons or times.

- The Quota Close Time functionality aligns with API operations, facilitating seamless updates to quotas for specific time slots, capacity areas, or work zones.

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Follow these steps to close the booking automatically:

1. Select **Quota** from the navigation menu.
2. Select a capacity area from the left-hand pane.
3. Click the **Booking status** icon.

   The **Booking status** page displays.
4. Click a cell in the capacity category row for a particular time slot or interval.
5. On the **Close Time** window:

   ○ Select the **Close quota automatically at** field to set a time for all the work zones simultaneously.

   ○ Alternatively, specify close times for individual work zones using the **Close Quota automatically by Work Zone at** fields next to the desired areas.
6. Click **OK** to confirm your selection.
7. Click **Save** on the **Booking status** page.

   The selected quota will automatically close at the specified time, and the cell in the **Booking Status** page will display the date and time of the closure.

How are activities suggested when mobile workers are idle?

Oracle Fusion Field Service can suggest activities when mobile workers are idle and online. The suggested activities might include pending and unassigned activities that are close to the mobile worker's current location.

The activities are suggested only if these conditions are met:

- Your organization has configured the 'Suggest activity when idle' permission for the resource's user type.
- The activity type for the current activity has the **Calculate travel** checkbox selected.
- The current activity has coordinates.
- The current user has signed in with their resource credentials. Activities aren't suggested when you navigate to the route of another resource.

How are activities suggested?

When a mobile worker completes an activity or marks it as Not Done, the **Pick Activity on Your Way** page appears and shows a map. The map includes a maximum of three activities that are optimized based on the travel time from the mobile worker's current location. Travel time is estimated using real-time traffic data if the **Use real-time traffic data** option is selected for the resource's User Type. Mobile workers can also see the **Extra travel time** and **Expected arrival** fields on the map.

The current resource position that is gathered by the device is used as the starting point of travel. If the geolocation isn't gathered during the last minute, the coordinates of the completed (or Not Done) activity are used as the starting point of travel.

Mobile workers can review the details of each activity and then add an activity to their route. Such new activities don't result in violations and don't push activities on the route into jeopardy. This means, other activities from the current

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route aren't pushed out of their time slots, service windows, communicated windows, or SLAs. If an activity from a route was missing some time constraints, it isn't pushed forward further after a suggested activity is added.

Dispatchers can view the **Additional Jobs Accepted** report. This report shows the total number of suggested activities that are accepted when idle, per mobile worker for the selected month.

How do I add an activity suggested by the application to my route?

Oracle Fusion Field Service can suggest activities to you when you're idle and online. The suggested activities might include pending and unassigned activities that are close to your current location. The activities are suggested when you complete an activity or mark it as Not Done.

1. Sign in to Oracle Fusion Field Service as a mobile worker.
2. Complete an activity or mark it as Not Done.

   The **Pick Activity on Your Way** page appears and shows up to three activities that are suitable for your current route on a map.
3. Review the details of the suggested activities.

   Travel time is estimated using real-time traffic data if the **Use real-time traffic data** option is selected for your User Type. You can also see the **Extra travel time** and **Expected arrival** fields on the map.

   The current resource position that's gathered by your device is used as the starting point of travel. If your geolocation isn't gathered during the last minute, the coordinates of the completed (or Not Done) activity are used as the starting point of travel.
4. To skip adding an activity to your route, click **Skip**.

   If your organization has configured skip reasons, select a reason for not adding the activity in the **Skip suggested job** dialog box.
5. To add an activity, select it and then click **Add to Route**.

   The activity is added to the nearest position in the route. Further, the newly added activity is changed to En Route status if this functionality is enabled.

How do I add a dispatcher, manager, or an administrator user?

You use the **Add Resource** page to add a dispatcher, a manager, or an administrator user. This is also the user without a resource; that is, this user doesn't perform the duties of a mobile worker. This resource is typically used for back office work. However, if you want this resource to assign and process activities, you must set it up as a mobile worker with access to the appropriate buckets. For more information on how to add a mobile worker, see the *Add a Field Resource* topic.

1. Click the hamburger icon and then click **Resources**.
2. Click the plus icon.

   The **Add Resource** page appears.
3. Complete these fields:

Field name	Action
Resource Type	Select Manager/Dispatcher/Admin. The fields on the page change based on the option you select.
Name	Enter the resource name the way you want it to appear in the resource tree.
Org Unit/Bucket	Click the field and select the organization unit or bucket with which you want to associate the resource. Let's say you want to add a dispatcher who manages a bucket and the resources under the bucket. Select the bucket to place the dispatcher so that the user can see only the bucket and the resources under that bucket. If you want to create a manager who may see the entire enterprise, select the parent level of the organization structure to add the manager. The options available for you are configured by your administrator. If you don't select any organization unit or bucket, the resource is treated as unassigned to any organization.
Status	Select whether the resource is active or inactive. Inactive resources cannot log in to the application.
User Type	Select the user type for the resource. The permissions assigned to the selected user type applies to this resource. In other words, the user type selected here determines the pages and the options the resource can see. You can create and edit resources of only the user types that are selected in the **Configuration** > **User Types** > **General Can create users of the following user types** section. The user types that are not selected on the **General** page are not available here for selection. Further, you cannot edit the details on the **Resource Info** page of the resources of this user type.
Visible resources	Select the resources the current resource can view, from the organization structure. The resource can see the resources belonging to the selected organization, organization unit, or bucket.
Self assignment	If you are assigning this resource to a bucket, select this check box to determine the availability of activities and resources for this resource. For more information, see the How Self-Assignment Works topic.
Login	Enter the user name with which the resource can log in to Oracle Field Service. **Note:** Although you can change a user's Login (user name) after it is created, it is not advisable to do so. This is because, it may cause issues with integrations with other Oracle applications such as, DBaaS or Oracle Analytics Cloud, where this field is used as a primary key on some tables.
Password, Confirm Password	Enter the password that you want to set for the resource.
Force password change at next login	Select this check box, if you want the resource to change their password when they log in for the first time.
Collaboration group	Click and select the collaboration group that you want to add the resource to.
Message Language	Select the language in which you want the resource to see the error messages.
Time zone	Your (currently logged in user) time zone is populated, change it if required. This is the time zone that the resource sees and uses in the interface.
Time format	Your (currently logged in user) time format is populated, change it if required. This is the time format that the resource sees and uses in the interface. This can be either **12-hour** or **24-hour**.
Date format	Your (currently logged in user) date format is populated, change it if required. This is the date format that the resource sees and uses in the interface. This can be either **month-day-year** or **day-month-year**. The date format controls the display of dates in numeric format.

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Field name	Action
Long date format	Select the long date format that the resource views in the application. A long date is a date that includes words. For example, Wednesday, May 6, 2020.

4. Click **Submit**.

The new resource is added. If you have configured the Refresh Rate (refresh_rate) field for the user, it will not be used in Core Application.

How do I add a field resource?

You must add a field resource, before you can assign activities to them.

1. Click the navigator and then click **Resources**.
2. Click the plus icon.

   The **Add Resource** page appears.
3. Complete these fields:

Field name	Action
Resource Type	Select Mobile Worker. The fields on the page change based on the option you select.
Initial Ratio for Activity Duration	Select the default ratio that's used for the resource, if there isn't enough historical data for the resource for a particular type of activity. For such activities, the estimated duration of the mobile worker is the value of the Initial ratio * company wide estimation (provided "Personalize the estimation of activity duration" is selected). After the mobile worker completes at least one activity, the default ratio shows for the mobile worker based on the reported duration.
Type	Select whether the resource is an in-house resource, or a contractor.
Name	Enter the resource name the way you want it to appear in the resource tree.
External ID	Enter the ID number from an external application, such as the employee ID number. These IDs are optional. If you use them, each resource must have a unique ID.
Org Unit/Bucket	Click the field and select the organization unit or bucket with which you want to associate the resource. The options available for you're configured by your administrator. If you don't select any organization unit or bucket, the resource is treated as unassigned to any organization.
Status	Select whether the resource is active or inactive. Inactive resources can't sign in to the application.
Personal Info	Enter the personal information of the resource.
User Type	Select the user type for the resource. The permissions assigned to the selected user type applies to this resource. That is, the user type selected here decides the pages and the options the resource can see. You can create and edit resources of only the user types that are selected in the **Configuration** > **User Types** > **General Can create users of the following user types** section. The user types that aren't selected on the **General** page aren't available here for selection. Further, you can't edit the details on the **Resource Info** page of the resources of this user type.
Visible resources	When you create a Field Resource, the Visible Resources field is prepopulated with the current resource's name. So, it means that mobile workers can see themselves. Select more resources the

Field name	Action
	current resource can view, from the organization structure. The resource can see the resources belonging to the selected organization, organization unit, or bucket.
Self assignment	If you're assigning this resource to a bucket, select this checkbox to decide the availability of activities and resources for this resource. For more information, see the How Self-Assignment Works topic.
Login	Enter the user name with which the resource can sign in to Oracle Fusion Field Service.
Password, Confirm Password	Enter the password that you want to set for the resource.
Force password change at next login	Select this checkbox, if you want the resource to change their password when they sign in for the first time.
Collaboration group	Click and select the collaboration group that you want to add the resource to.
Message Language	Select the language in which the resource sees the error messages.
Time zone	Your (currently logged in user) time zone is populated, change it if required. This is the time zone that the resource sees and uses in the interface.
Time format	Your (currently logged in user) time format is populated, change it if required. This is the time format that the resource sees and uses in the interface. This can be either **12-hour** or **24-hour**.
Date format	Your (currently logged in user) date format is populated, change it if required. This is the date format that the resource sees and uses in the interface. This can be either **month-day-year** or **day-month-year**. The date format controls the display of dates in numeric format.
Long date format	Select the long date format that the resource views in the application. A long date is a date that includes words. For example, Wednesday, May 6, 2020.

4. Click **Submit**.

The new resource is added.

How do I optimize routes using continuous improvement?

The continuous improvement routing plan option optimizes resource routes continuously when new activities are added to the bucket, when there's an opportunity to assign activities to existing routes, or when an existing activity is in jeopardy. You can use the **Continuous Improvement** option instead of schedule-based routing runs, to get a new level of "just here, just now" optimization.

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Note:

- Re-optimization starts only if routing can assign more activities or optimize routes in some way.

- You can't have more than one continuous improvement plan per routing profile at the same time. It isn't a best practice to run other types of routing (except Immediate Routing for Urgent activities) while continuous improvement routing is active.

- For continuous improvement routing runs, the values for interval between runs in minutes, total runtime, and SLR time distribution are defined automatically.

- Some parameters are not available in continuous improvement runs, including:
  - Dynamic Routing
  - Try to schedule activities to service window start

Continuous improvement runs always accept results automatically; you cannot define acceptance criteria.

Continuous improvement runs may resolve excessive overtime assignments if overtime is limited or prohibited in the routing plan. Activities in overtime are shown as in jeopardy with warnings across the application.

Note: For overnight work, limit the overtime to six hours or less to ensure activities remain within the expected date and shift. Excessive overtime may result in activities being assigned to the previous day.

Continuous improvement combines the speed of Immediate Routing with the optimization level of Bulk Routing. If an activity is in jeopardy, the continuous improvement plan may reschedule it and return it to normal.

If you manually move an activity during a long Bulk Routing run, a continuous improvement plan may resolve conflicts automatically.

Pre-assigned activities with a **Do Not Assign** priority are now eligible for re-optimization. When re-optimization is enabled, these activities may be returned to the bucket or unscheduled if needed.

How it works

The continuous improvement run starts when certain conditions are met for the bucket. For example, when new activities are added, activities are canceled, or activities become jeopardized. If routing can't improve the situation at the first attempt, no further runs occur until another condition is met.

If Immediate Routing runs are scheduled at the same time, they run first, followed by continuous improvement. Other bulk routing plans (manual, recurrent, once a day) do not pause continuous improvement; instead, continuous improvement may start to handle activities created after the bulk run began.

Use Case

Let's say a company works with fitness equipment. Many activities for today are created from an ERP application at about 06:00, while mobile workers start their work typically at 07:00. Intraday activities are created at the rate of about

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20 per hour from 07:00 to 16:00 and must be assigned immediately such that it optimizes travel, due to high gas prices. A very small number of urgent activities must be routed immediately with no optimization, as the only criterion is the time to complete. All the activities left in the bucket or on routes at 18:00 must be moved to the next day.

In this case, the recommended routing plans are:

- Morning Routine: Once a Day routing plan at 06:05 to route all the activities to all mobile workers.

- Urgent Routing: Immediate routing plan for Urgent activities from 07:00 to 16:30.

- Intraday Routing: Continuous improvement routing plan from 07:00 to 16:30, with a filter that doesn't reorder Urgent activities and with the 'Minimize Total Travel' goal selected.

- Evening Routine: Once a Day multiday routing plan (2 days from today) at 17:00 to route activities from today to tomorrow.

- Manual Routing: A special routing plan to re-route activities manually, if needed.

How do I add an External plug-in in Oracle Fusion Field Service?

An external plugin is hosted elsewhere and communicates with Oracle Fusion Field Service through the Plugin API. You add only a link to the plugin here.

1. Click **Configuration** > **Forms & Plugins**.
2. Click **Add Plugin**.
3. Click **External Plugin** and then click **Next**.
4. Complete these fields:

Field Name	Description
General Information section	
Label	A mandatory field defining a unique action or a label for the plugin.
Entity	Entity (activity, inventory, required inventory, resource, service request, user) to which the action or plugin is to be related. For example, if you select Inventory, the action will appear only in the contexts related to inventory. Leave the field blank for the action to be available in all contexts of all the entities.
Visibility rules similar to	The base action from which the plugin is to be derived, if needed. When a base action is selected, the resulting plugin functions per the same rules as the base action. The base action affects only the visibility of buttons and not the functioning of the plugin. It appears only in the contexts in which the base action appears and is shown or hidden according to the same visibility conditions. For example, if start_activity is selected as the base action for a plugin, the plugin is only be shown in the context of a pending activity when there is no started activity in the same route, similar to the Start action. The list of available base actions is filtered according to the Entity that is selected.
Name (English)	A mandatory field defining the plugin name in the English language. The action or plugin appears under this name in the actual context.
Name (other languages)	Plug-in name translations to other languages, if used.

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Field Name	Description
Plugin settings section	
URL	The path to the URL of the external plugin. This URL processes the HTML5 application and it runs the plugin in the entire browser window. The URL must start with the protocol (https) and must point to the main file of the plugin. Oracle Fusion Field Service adds the backUrl parameter to the URL automatically. This parameter contains the address of the current page of Oracle Fusion Field Service.
Disable button in Offline	Determines whether you want to disable the plugin when Oracle Fusion Field Service is offline. Clear this check box for the plugin to work in offline mode.
Authentication	The type of authentication used by the external server hosting the plugin source to verify access to the plugin. Select one of these options: o Basic HTTP: The Basic Access Authentication method working over HTTP or HTTPS. The Basic HTTP authentication method requires a valid login and password. When the entered login and password are verified by the server, the server returns the plugin content. o HMAC: Hash-based message authentication code verifying that the data is received from an authorized source. HMAC authentication method requires a secret key configured for each plugin. This field is hidden, if **Hosted plugin** is selected. **Note:** The best practice is to use HMAC authentication instead of basic HTTP authentication. This is because, Google Chrome doesn't support the use of Basic HTTP authentication in sub-resources starting from release 59.
Login/Password	The user name and password to log in to the plugin. These fields are displayed only when Basic HTTP is selected for Authentication.
Plugin parameters	The section where sensitive information such as a user name and password that is used to access external sites is entered. Click plus to add the parameters. The **Add new parameter** dialog box appears with these fields: o Name: Enter a name for the parameter that is used to access an external application. For example, Client ID. o Value: Enter a value for the parameter. o Secure parameter: Select this check box to mask this value. When you save this value, the Edit Plugin and View Parameters pages show 'dots' in this field. o Click **Add**. The parameter is added to the plugin. You can add a maximum of 20 key-value textbox pairs, after which the icon is hidden. The maximum size of the parameters allowed is 5 KB. This size includes the data structure overhead and doesn't correspond to the length of keys and values of strings. Changes to the secure data are sent to Oracle Fusion Field Service during the next synchronization. The data is sent to the plugin when the next message is sent. If you open the values saved earlier, the application deletes them. You must add them again.
Available properties	The properties that you want to be passed to the plugin or updated by the plugin. These properties are added as read-only and are available through the Plugin API. Click the field to select the properties. You need not define the visibility for the properties explicitly. These properties can't be updated through the Plug-in API: o activity_capacity_categories o auto_routed_to_date o auto_routed_to_provider_id o aworkzone

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Field Name	Description
	o date
	o time_delivered
	You cannot add these properties to the list of Available properties:
	o activity_alerts
	o access_hours
	o activity_compliance
	o atravelarea
	o travel_estimation_method
	o service_window_end
	o service_window_start
	o eta_end_time
	o pid (it's still available for the Resource entity)

5. Click **Add**.

How to view an Oracle Integration Application Details?

You can view an Oracle Integration application on the **Applications** page to know its status and the data transfer success rate, if applicable.

Click **Configuration** > **Applications**.

The screenshot shows a newly added Oracle Integration application.
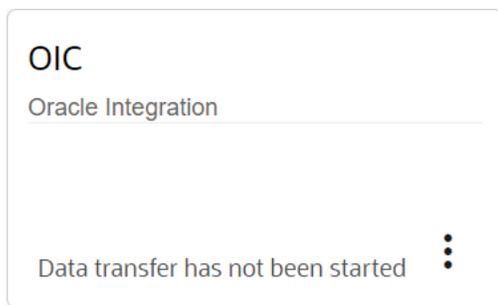
The application status indicates that the data transfer has not yet started.

Note: If you encounter an issue where the integration is active but no data transfer occurs, try deactivating and then reactivating it to create a new integration. Additionally, wait for a couple of hours for the events to start resending.

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After the data transfer starts, the status displays the time when the last update occurred. Here is an example of an

OIC

Oracle Integration

Last Updated : 9 Hours ago   ⋮
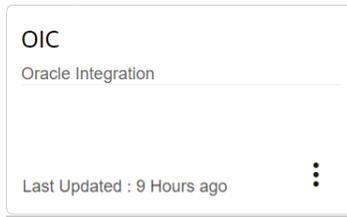
application with an active data transfer.

> **Tip:** Sometimes, the integration may not work and the events may not be transferred. One of the reasons for this could be the invalid characters in your custom properties. The best practice is to review the properties and remove such characters, if any.

Data Transmission Success Rate is the percentage of successfully transferred data. Data transmission success rate = (total.number of events successfully transferred / total.events selected). If an event fails, an error message is displayed on the application card. Here are some of the errors you may see:
   - HTTP STATUS 401: Authentication Failed. Please check credentials.
   - HTTP STATUS 403: Provided user is not authorized.
   - HTTP STATUS 404: Host unreachable. Please check your credentials.
   - HTTP STATUS 500: Connection failed. Please try again later.

How do I control resource overtime through a routing plan?

Overtime is calculated differently by each organization. Therefore, the Oracle Fusion Field Service Routing module doesn't calculate overtime as an absolute dollar value, but instead calculates it as time beyond a resource's assigned work schedule that might be required to fulfill an activity.

Using the **Resource overtime** options within the routing plan enables you to determine how activities that might extend past the end of the resource's shift are handled.

The following figure shows the **Resource overtime** settings:

Resource overtime

If the Routing engine identifies Overtime situation, due to overbooking, for example, do the following:

○ Assign activities even if the assignment causes overtime

○ Do not assign "overtime" activities and leave them in the bucket

◉ Do not assign activities unlikely to be finished with less than Allowed activity overtime

○ Do not assign activities unlikely to be finished earlier than Allowed completion threshold before end of resource day

Allowed activity overtime, minutes: 60   ⌄ ⌃

ⓘ Note: Overtime, as well as other Routing Plan metrics, are estimation-based and may still occur if real field data varies from plan. For example, if resource is delayed, routing may reorder activities so as not to lose service window of a higher-priority activity, and push lower priority activity into overtime. Overtime may also occur if the route was updated after creation, when an activity is added either manually or by an external system.

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Choose from the following options:

- **Assign activities even if the assignment causes overtime:** This option provides the best chance of getting many activities assigned, though some might extend past the end of a shift.

  For best results, don't use this setting if you've significantly more work than resources can complete in a regular workday. If you run routing, results will include a large amount of overtime. This setting is most useful for certain types of work where you're willing to incur the additional cost, for example VIP work.

- **Do not assign overtime activities and leave them in the bucket:** This means that any jobs that have service windows and/or predicted durations that could push a resource into overtime are left in the bucket.

- **Do not assign activities unlikely to be finished with less than Allowed activity overtime:** This enables you to control the amount of overtime allowed, essentially extending a shift in order to accommodate more work assignments. Specify duration in the **Allowed activity overtime, minutes** field.

- **Do not assign activities unlikely to be finished earlier than Allowed completion threshold before end of resource day:** This also limits the possibility of overtime, but with the consideration of whether a resource needs additional time (For example, return to depot or drive home) before the end of their shift. Specify duration in the **Activity completion threshold, minutes** field.

  > **Note:** If you use restrictive overtime settings, fewer good matches might be found and more activities could be left in the bucket to be routed manually.

How do I create operations as multi-segment activities in Oracle Fusion Field Service?

You can create operations as multi-segment activities in Oracle Fusion Field Service, if you've configured the standard operation as a multi-segment activity type in the OIC mapping table 'ORCL-BRT-ACT-TYPE-MAPPING'.

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> **Note:**
>
> - Ensure you've created a parent resource for the Maintenance organization in Oracle Fusion Field Service. The external ID is configured in the lookup 'ORCL-BRT-MNT-OFS-CONFIG' with the variable ParentResourceId. The accelerator creates the organization as a bucket in Oracle Fusion Field Service and maps it under this parent resource ID.
>
> - By default, the system creates activities in the bucket's non-scheduled pool. Once routed, it schedules and assigns the activity to the right mobile worker. A configuration within the accelerator called 'ScheduledActivityEnabled' controls the creation of activities in a non-scheduled pool in Oracle Fusion Field Service. You can create activities in the bucket on a specific date by configuring this field as' True'.
>
> - When you create a work order with a non-standard operation, or if the "ORCL-BRT-ACT-TYPE-MAPPING" lookup table doesn't define the standard operation, the system creates an activity with a default activity type.
>
> - You must configure these link templates in Oracle Fusion Field Service to create the link between activities:
>   - start-after
>   - start-together
>   - start-before

How do I export and import Daily Extract Configurations?

Daily extract/DBaaS configurations can be created or updated by importing the configuration from an external source. Daily extract configuration is imported as an XML file containing data of individual daily extract files. If the configuration to be imported contains the same file name as the existing daily extract configuration, the file is overwritten in the process of import. Also, field level validations are performed and errors and warnings are shown in the Import dialog box while importing files.

> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

To export or import configurations:

1. Click Configuration, **Applications**.

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2. On the Applications page, click Daily Extract or the application.

3. On the Application's page, for example Daily Extract page, click **Import**, browse and select the XML file to be imported.

4. Click **Validate**.

   The selected file is validated and the errors and warnings (if any) are shown on the Import window. This image shows the Import window:
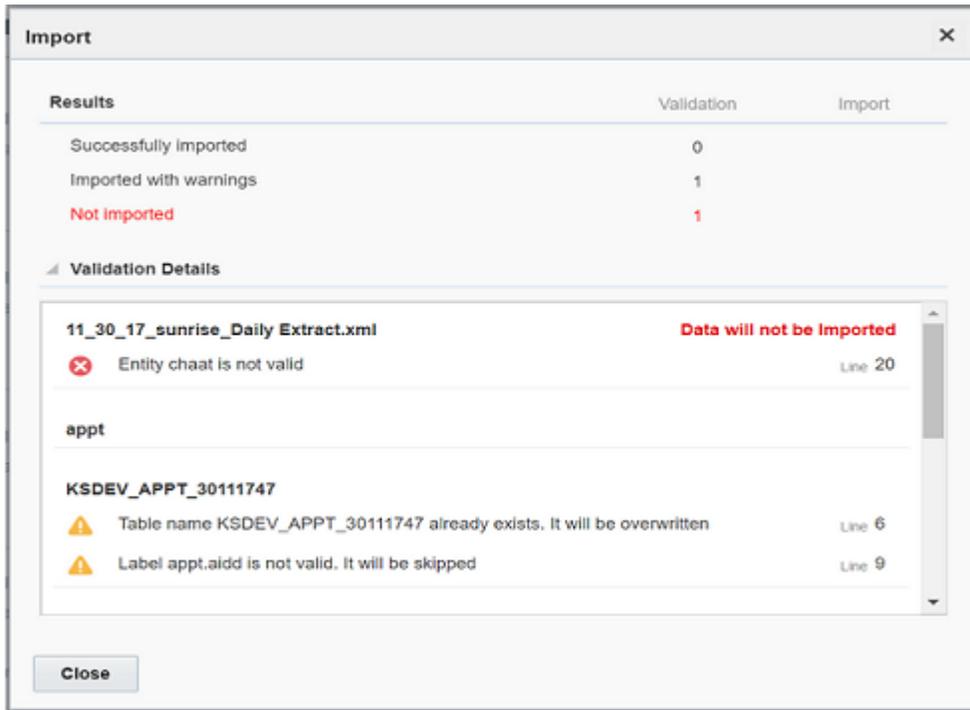
5. To export any configuration excluding Daily Extract, click **Export**.

   The configuration is exported as an XML file.

How do I redirect a plugin to another plugin?

After the *close* method is applied, Oracle Fusion Field Service Application closes the plugin and redirects the user to another page. By default, the user is redirected to the same page from which the plugin was opened. However, you can specify which page the user must be redirected to, by setting the value of the optional field, "backScreen" in the *close* message.

This table provides the possible values for the backScreen field:

Page Name	Required Parameters	Optional Parameters	Description
activity_by_id	backActivityId	None	Details page for the activity with the given ID. If there's no activity with the given ID in a queue, the user is redirected to

Page Name	Required Parameters	Optional Parameters	Description
			the previous page. ID of the activity must be sent in the field "backActivityId". If backActivityId contains ID of non-scheduled activity, user will be redirected to the details page of that activity only if it's visible on Activity list screen. If activity is not visible because of applied filter or because of "Mobile Activity Count" limitation, user will be redirected to the previous page.
next_activity	None	None	Details of the next pending activity by ETA, or the first pending activity, if there are no pending activities after the current activity. If there are no pending activities in a queue, user is redirected to the Activity List page.
activity_list	None	None	Activity List page
start_activity	backActivityId	None	Start Activity page
end_activity	backActivityId	None	Complete Activity page
cancel_activity	backActivityId	None	Cancel Activity page
notdone_activity	backActivityId	None	Not done Activity page
suspend_activity	backActivityId	None	Suspend Activity page
enroute_activity	backActivityId	None	En route page for the activity with the given ID. If there's no activity with the given ID in a queue or the activity is not Pending, the user is redirected to the previous page. ID of the activity must be sent in the *backActivityId* field.
stop_travel	backActivityId	None	Stop travel page for the activity with the given ID. If there's no activity with the given ID in a queue or the activity is not in the Enroute status, the user is redirected to the previous page. ID of the activity must be sent in the *backActivityId* field.
delay_activity	backActivityId	None	Adjust Time page
inventory_list	None	backActivityId	List of inventories. If no additional params sent, Inventory List is shown as if it was opened from Activity List. If "backActivityId" contains a valid id of an activity, which is in the current queue, Inventory List is shown as if it was opened from the Activity Details page of the given activity.
inventory_by_id	backInventoryId	backActivityId	Inventory Details page for an inventory with id equal to the value of the backInventoryId field. If no additional params are sent, the page is shown as if it was opened from Activity List > Inventories. If "backActivityId" contains a valid id of an activity, which is in the current queue, Inventory List is shown as if it was opened from the Activity Details page of the given activity.

Page Name	Required Parameters	Optional Parameters	Description
install_inventory	backInventoryId backActivityId	None	"Install" page for inventory with the id equal to the value of the backInventoryId field. After confirmation, inventory is installed to an Activity with an id which equals to the value of the backActivityId field.
deinstall_inventory	backInventoryId backActivityId	None	"Deinstall" page for inventory with the id equal to the value of the backInventoryId field. After confirmation, inventory is installed to an Activity with the id equal to the value of the backActivityId field.
plugin_by_label	backPluginLabel	backPluginOpenParams	The plugin with a label equal to the value of the "backPluginLabel" field. See "Navigation to another plugin" for details.

If the backScreen or other required parameters are inappropriate, or aren't set, the user is redirected to the previous page. Redirection to the 'reopen_activity' page is not available.

How do I navigate between plugins?

After a plugin page is closed, you can open the page of another or even of the same plugin. This allows you to implement complex business flows using several different plugins, or update Oracle Fusion Field Service entities without exiting the plugin's page. From the current plugin, you can redirect only to those plugins that use the Plugin API. The value of the **Disable Plugin in offline** option is not taken into account, so the plugin must handle the offline mode properly.

Additional Parameters for Plug-in on Redirection

List of all buttons that are configured for a plugin is sent to the plugin in the 'buttons' field of the 'init' message. This field is a list of objects that contains the 'buttonId' and 'params' fields. buttonId is the 'context layout item id' of the button. 'params' is an object that represents the parameters that are configured for the corresponding context layout item.

You can send additional parameters on redirection to a plugin using the *backScreen* param of the *close* message. With this, you can open the plugin in various states or show different pages of the plugin depending on the context. You can also use redirection to implement strict business flows using several plugins. Here are some examples:

- The plugin navigates to one of the many different plugins according to some business logic.

- The plugin shows some data only if it receives correct parameters from another plugin. It does not show the data if it's opened directly from a button, to force the user to follow business process.

- The plugin implements some business logic that is based on the data from another plugin, without the need to store this data in the entities' properties or the browser's local storage.

Navigation flow from plugin A to plugin B when sending parameters

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The navigation flow is as follows:

- Plug-in A sends the close message with the backpluginLabel and backpluginOpenParams fields. backpluginLabel equals to the label of plugin B. backpluginOpenParams is an object, which contains the data needed by plugin B.

- After successful processing of the close message, plugin A is closed.

- Plug-in B is opened immediately and is shown on the page after the ready message is received.

- Plug-in B receives the open message, which contains the openParams field. The value of this field equals to the value of backpluginOpenParams sent by plugin A.

Requirements for the "backPluginOpenParams" Field

The requirements are as follows:

- backPluginOpenParams is a plain object.

- The maximum number of the object's fields is 20.

- Each field of the object has a scalar value (string, number, bool, null, undefined). Nested objects are forbidden.

- The size is limited to 5 KB and includes JSON structure overhead. That is, the limit is applied to the length of the serialized JSON string.

Example of the *close* message sent by plugin A

```
{
 "apiVersion": 1,
 "method": "close",
 "entity": "activity",
 "backScreen": "plugin_by_label",
 "backPluginLabel": "plugin_b",
 "backPluginOpenParams": {
 "foo": "bar"
 }
}
```

Example of the open message received by plugin B

```
{
 "apiVersion": 1,
 "method": "open",
 "entity": "activity",
 "openParams": {
 "foo": "bar"
 }
 ...
}
```

Why Standard Plugin option is not visible in the Add Plugin page?

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Standard Plugins are integrated into the main structure of the application. They can now be found under **User types ➔ Screen** in the following sections:

- **Asset Details, Debriefing** - located in the Activity section
- **Parts Ordering** - located in the Inventory section

This change means that the concept of Standard Plugins has been discontinued and is replaced by a set of default screens, but you can add more by creating forms or plugins.

> **Note:** Asset Details (*Activate the Asset Details Plugin*), Debriefing (*Activate the Debrief plugin*) , and Parts Ordering (*Activate the Parts Ordering Plugin*) require additional setup before mobile workers can use them.

How do I add parts to activity in Oracle Field Service?

Parts Ordering is a standard plugin that comes with Oracle Fusion Field Service; it automates the process of ordering and receiving parts. You can use the plugin to order parts when the parts you need aren't available with nearby mobile workers, warehouses, or in your van.

You can see the **Parts Ordered** tile on the **My Route** page only if your administrator has added it. For more information, refer to **Add the Parts Cart and Ordered Parts Buttons**.

You can order for a part to perform a follow up activity for a customer, or to replenish the stock in your van. When you order a part, the plugin creates a not-ordered activity in Oracle Fusion Field Service and an order in Oracle Supply Chain & Manufacturing. Currently you can order parts only for yourself.

Here's a general outline of the process:

- **Install and Activate the Plug-In**: Ensure the Parts Ordering Plug-In is installed and activated in your system. For more information, see Activate the Parts Ordering Plugin.
- **Navigate to the Activity**: Log in as a technician or user with the appropriate permissions and locate the activity where you want to add parts. For more information, see Add the Activity Type Required for the Parts Ordered Plugin.
- **Order Parts**: Use the plugin to order the required parts. For more information, see Order a Part topic in the Using Core Application Guide.
- **Add Parts to the Activity**: Once the parts are ordered and received, you can associate them with the specific activity. For more information, see Receive an Ordered Part in the Using Core Application Guide.

How do I activate the Parts Ordering Plug-In?

Parts Ordering is a standard plugin that comes with Oracle Fusion Field Service; it automates the process of ordering and receiving parts. Mobile workers can use the plugin to order parts when the parts they need aren't available with nearby mobile workers, warehouses, or in their van.

High-level steps to activate the Parts Ordering plugin:

1. Create an application for Oracle Fusion Field Service REST API and add the required entities.
2. Activate the plugin.

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3. Add the activity and inventory types.
4. Add the buttons for the plugin on the pages that mobile workers need.
5. Register a parts catalog. See the **Register an Item Catalog** topic in the Administering Oracle Fusion Field Service guide and register the parts catalog that you want to use.
6. Optionally, integrate with Workflow Manager.

To activate the Parts Ordering plugin:

1. Create an application to connect to Oracle Fusion Field Service REST API from the **Configuration** > **Applications** page. This application is used to connect Oracle Fusion Field Service with Oracle Fusion.

    a. Select OFSC in the **Token Service** field and Authenticate using Client ID/Client Secret in the **Authentication settings** field.

    b. Provide ReadWrite access for Activity and Inventory entities in the **Core API** section.

2. Go to **Screens-> Inventory->Parts Ordering**.

    The **Parts Ordering Activate Screen** page appears and these sections are displayed:

    o Properties to be installed: These are the properties that are automatically installed with the plugin. These properties are available on the **Configuration** > **Properties** page. If you de-install this plugin in the future, these properties will remain on the **Properties** page.

    o Existing properties to be used: These are the properties that are required for the plugin and are currently present in Oracle Fusion Field Service.

    > **Note:** If a property has an incorrect configuration (for example, for property type or entity), then you'll see a corresponding message. Open the plugin's documentation, find the property requirements, and change the property settings accordingly.

3. Select the application that you created in Step 1.
4. Click **Activate** and confirm the activation.

    A message similar to, 'Parts Ordering Successfully activated.' is displayed after the activation. You can activate Parts Ordering plugin only once and the **Activate** button is activate button is not available. The plugins are supported only in the English language and the Parts Ordering plugin doesn't work in offline mode.

    Oracle Fusion Field Service creates the required properties automatically or notifies you that some existing properties will be used by the plugin, if they're already configured. If you've created the properties in the application with the corresponding names and labels, but with an improper configuration, you must change the property settings and install the plugin again. Here are the properties for activity and inventory entities that the plugin uses:

Name	Label	Type	GUI	Description
Resource entity				
External ID	external_id	field	text	External id of resource
Order Warehouse List	order_warehouse_list	string	text	Order Warehouse List
Activity entity				
Address	caddress	field	text	Address field
City	ccity	field	text	City field
ZIP/Postal Code	czip	field	text	ZIP/Postal Code field

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Name	Label	Type	GUI	Description
State	cstate	field	text	State filed
Activity status	astatus	field	text	Activity status field
Activity type	aworktype	field	combobox	Type of activity
Work Order	appt_number	field	text	Activity Work order filed
SLA End	sla_window_end	field	text	End of SLA window
Order Date	order_date	string	text	Date on which the requester at the destination wants the Order to be delivered at the destination. That is this is the Need By Date. This should include both date and timestamp.
Order Number	order_number	string	text	Activity ID of Receive Order activity
Order Items	order_items	string	text	Is filled by JSON array in Receive Order activity. Plugin uses this property for internal purposes.
Order Destination Type	order_destination_type	string	text	This specifies the destination type to which the Order is to be received. Current values are 'activity' and 'van'
Order Received Items	order_received_items	string	text	
Order Status	order_status	string	text	Duplicates Order Item Status inventory property in Receive Order activity
Order Arrival Date	order_arrival_date	string	text	Can be updated by external integration script. Represents approximate available date to receive ordered parts.
Order Follow-up Activity ID	order_followup_aid	string	text	Is filled by follow-up activity Id in Receive Order activity. If Order is created with follow-up activity.
Order Follow-up Activity Number	order_followup_apptnumber	string	text	Is filled by follow-up activity Work order in

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Name	Label	Type	GUI	Description
				Receive Order activity. If Order is created with follow-up activity.
Order Initial Activity ID	order_initial_aid	string	text	Is filled by id of activity which order was created for in Receive Order activity. If option 'Activity' is set in 'Order is for' plugin field.
Order Initial Activity Number	order_initial_apptnumber	string	text	Is filled by appt_number of activity which order was created for in Receive Order activity. If option 'Activity' is set in 'Order is for' plugin field.
Order Initial Activity Type	order_initial_type	string	text	Is filled by aworktype of activity which order was created for in Receive Order activity. If option 'Activity' is set in 'Order is for' plugin field.
Order Initial Activity Address	order_initial_address	string	text	Is filled by concatenation of Address, City, State, Zip/Postal code fields of activity which order was created for in Receive Order activity. If option 'Activity' is set in 'Order is for' plugin field.
Transfer Order Header	transfer_order_header_id	string	string	Can be updated by external integration script. Stores the value of Transfer Order Header ID filed
Inventory entity				
Serial Number	invsn	field	text	The serial number of inventory
Inventory pool	invpool	field	text	Inventory pool (Resource, Customer, Installed, Deinstalled)
Inventory Type	invtype	field	combobox	Type of inventory
Inventory Id	invid	field	text	Internal id of inventory

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Name	Label	Type	GUI	Description
Activity Id	inv_aid	field	text	Internal id of activity the inventory belongs to
Resource Id	inv_pid	field	text	Internal id of resource the inventory belongs to
Quantity	quantity	field	text	Describes how many parts have been installed or taken from the customer. It could be either counted or specified in "inches", "feets" etc. Quantity is defined as an integer number, fractions are unavailable.
Order Item Initial Activity ID	order_item_initial_aid	string	text	Contains Initial activity ID value when Ordered part is created
Order Item Status	order_item_status	string	text	Represents current status of ordered parts in SCM. Is updated by external integration script. Can be found in Transfer order line payload as 'FulfillmentStatusLookup'. Default value is 'WAIT_FULFILL' for parts ordered by the plugin. Possible values are 'WAIT_FULFILL', 'SHIPPED', 'SHIPPED_RECEIVED', 'RECEIVED', 'P_SHIPPED_RECEIVED', 'P_SHIPPED'. Technician can receive parts if value is 'SHIPPED_RECEIVED'.
Order Item Shipment Number	order_item_shipment_number	string	text	Is updated by external integration script by value of shipment number when it submitted in SCM.
Order Item Received Quantity	order_item_received_quantity	string	text	Describes how many parts have been Received. It could be either counted or specified in "inches", "feets" etc. Quantity is defined as an integer

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Name	Label	Type	GUI	Description
				number, fractions are unavailable.
Part Item + Revision	part_item_number_rev	string	text	*Part Item Number* concatenated with *Part Item Revision.*For example "FS908765A", where "FS908765" is a *Part Item Number* and "A" is a *Part Item Revision.* It's used to search for inventory.
Part Item Number	part_item_number	string	text	Defines the part number of the part that has been installed or taken from the customer. It's usually specified in the form of some code. For example: "FS908765".
Part Item Revision	part_item_revision	string	text	Usually a single letter code, e.g. "A" or "B". Also it is possible to have a single digit like "1" or "2". Usually, the inventory is fully identified by Part Item + Part Item Revision, but Item Revision is optional.
Order Item Details	order_item_details	string	text	Details of ordered item
Order Item Description	order_item_description	string	text	Description of ordered item

If mobile workers see an error and are unable to order for a part, the reason could be:

- A configuration item required for the plugin is missing in the environment.

- The parts catalog structure doesn't contain a required field.

- A required permission in the configuration of the activity or inventory types is missing.

Verify these thoroughly before adding the buttons for the plugin to any page.

How do I add the Activity Type Required for the Parts Ordered Plug-In?

You must add a new activity type ORD to capture the details of the orders placed using the Parts Ordering plugin.

1. Sign in to Oracle Fusion Field Service as an administrator.
2. Click **Configuration** > **Activity Types** > **Add New**.
3. Add the label as ORD.
4. Select the **Active** check box.
5. Add a name for the activity type in the English language and other required languages.
6. Select Customer in the **Group** field.
7. Enter 60 in the **Default duration, minutes** field.
8. Select these features: **Support of not-ordered activities**, **Allow non-scheduled**, **Support of inventory**, **Support of required inventory**, and **Allow to create from Incoming interface**.
9. Click **Add**.

How do I order a part for an activity?

When you arrive at an activity location and realize that you don't have a required part whether in your van or with nearby mobile workers, you can order for it using the Parts Ordered plug-in. The **Parts Ordered** tile must be added to the **My Route** page by your administrator. If you must stop working on the current activity to order a part, you can mark the current activity as Not Done and move to the next activity.

1. Search for the required part in the Parts Catalog and then go to **Part Details**.
2. Click **Order Part** and add the part to the cart.
3. Enter the quantity for the part.
4. To order a part for an activity:
   a. Select Activity for **What's is This Order for?**
   b. Choose an activity from the **Activity** list.

   > **Note:** The Activity option is available only if the mobile worker has at least one assigned activity with a valid address. If no such activity is assigned, the **Activity** option remains disabled. An activity is considered to have a valid address if the **Address**, **City**, and **Zip/Postal Code** fields are populated. The Activity list displays only those activities that are in **Pending**, **Started**, or **Not Done** statuses.

   c. Verify the address filled in the **Ship to** field. The address is populated automatically based on the activity selected. Typically, locations defined in Oracle Human Capital Management are used here.
   d. In the **Needed by date** field, specify the date by when you want the part to be delivered.
   e. Select **Create follow-up activity**.

5. To order a part for van replenishment:
    a. Select Van Replenishment for **What's is This Order for?** Technician address is populated in the **Ship To** field. This is the address of the location from where you start your day. Typically, locations defined in Oracle Human Capital Management are used here.
    b. In the **Needed by date** field, specify the date by when you want the part to be delivered.
    c. Select **Create follow-up activity**.
6. Click **Submit**.

When you submit the order:
  - A non-scheduled activity named Order is created in Oracle Fusion Field Service representing the order.
  - The ordered part is shown as an inventory item in the customer pool.
  - A follow-up activity is created in Oracle Fusion Field Service, if you select **Create follow-up activity** for the order. The follow-up activity is added as not-ordered in your route for the day specified in the **Needed by date** field.
  - If the follow-up activity date is a non-working day, you must either pick another date or update your calendar.
  - The order for the part is created in Oracle Supply Chain and Manufacturing.
  - A unique shipment number is generated. You can use this number to track the delivery of the part by external carriers.

If you unable to order for a part, the reason could be:
  - A configuration item required for the plugin is missing in the environment.
  - The parts catalog structure doesn't contain a required field.
  - A required permission in the configuration of the activity or inventory types is missing.

Contact your administrator to resolve the issue.

How do I receive a part for an activity?

Sometimes you might have used all the parts in your van and need to refill the stock. Or, you might have ordered a part for a specific activity. In either case, you can receive the parts using the Parts Ordered option on the My Route page.

1. Click **Parts Ordered** on the **My Route** page.
2. Search for the part that you want to receive using the part name, description, or the shipment number. Or, open the **Ordered Parts** page and review these sections:
    - Shipped: These are the parts that are shipped from a warehouse and might be received.
    - Ordered: These are the parts that you've ordered.
    - Received: These are the parts that you've received.

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3. Use these steps to receive the part:
    a. Receive parts manually:
        i. Expand the **Shipped** section and click **Select** for the required part.
        ii. Enter the quantity that you want to receive.
        iii. Click **Receive**.
    b. Receive parts by scanning a barcode:
        i. Use the scan icon in the **Search** field and scan the barcode of the received part. The **Receive Part** page opens if this part is ready for pickup and there's only one part of the current type.
        ii. To receive multiple parts, click **Receive** and scan next barcode and then scan the next barcode.

    What happens next:
    - The received part is moved to the **Received** section. It won't be displayed as available for pick up if you receive all the available quantity. If not, the part remains as available for pick up with the remaining quantity.
    - The received part is moved to the Resource pool of inventory with the Received status.
    - The non-scheduled Order activity that was created when the part was ordered is canceled, if there's just one part for the order and all the available quantity is received.
    - Oracle Supply Chain and Manufacturing shows that the part is received.

How do I configure Oracle Fusion Field Service to capture multiple attachments?

You can configure Oracle Fusion Field Service in three ways to enable mobile workers upload photos to activities from the installed apps—create a File property where a single photo can be captured, create an Attachment property and store the photos as Fusion attachments, create an Attachment property and store the photos in Oracle Cloud Infrastructure Object Storage for a specified period.

When can you use the File property?

You can use the **Create a File property** option when you want a single photo to be uploaded. The uploaded photo is stored within Oracle Fusion Field Service. You can use this method if you always capture photos using the browser-based application.

When can you use Fusion attachments?

You can use the **Create an Attachment property to use with Fusion attachments** option when you want multiple photos to be uploaded. For example, before and after photos of a broken equipment. You must use this option with other Oracle products such as Fusion Service or Oracle Maintenance. The photos taken are uploaded to the corresponding work order.

When can you use Oracle Cloud Infrastructure Object Storage?

You can use the **Create an Attachment property to use with Oracle Cloud Infrastructure Object Storage** option when you want multiple photos to be uploaded and retained for a specified period. For example, the photos of a technician with protective gear, which needs to be preserved for auditing for a specified period. This means, use this option for photos that require a shorter retention policy, for photos that are shared with third-parties, or for photos that require extra validation through AI. You can configure the period in Oracle Cloud Infrastructure Object Storage and have different periods for different customers. The photos taken are stored in Oracle Cloud Infrastructure Object Storage.

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For more information, see *Configure an Application for Oracle Cloud Infrastructure Object Storage*.

High-Level Steps to Configure Oracle Fusion Field Service to Capture Multiple Photos

For more information on how to create a File property, see the Create a File Property topic.

Steps to configure Oracle Fusion Field Service to capture multiple photos using Fusion attachments:

1. Configure an application for Fusion attachment.
2. Create an Attachment property.
3. Add the Attachment form element to the required pages and forms.
4. Select the Attachments property for this form element.

Steps to configure Oracle Fusion Field Service to capture multiple photos using Oracle Cloud Infrastructure Object Storage:

1. Configure an application for OCI Object Storage.
2. Create an Attachment property.
3. Add the Attachment form element to the required pages and forms.
4. Select the Attachments property for this form element.

How do I create an Attachment Property to use with Fusion Attachments?

You can create an Attachment property to use with Fusion Attachments when you want multiple images to be uploaded for an activity. The best practice is to use the Attachment option with an Oracle Fusion application such as Oracle Maintenance. In Oracle Fusion applications, an attachment is a document or an image that's uploaded to an object storage. The object storage is configured for a specific business object when you set up the Oracle Fusion application.

Prerequisites to enable attachment creation between Fusion and Oracle Fusion Field Service:

1. The integration between **Fusion Service** and **Service Logistics in Oracle Fusion Field Service** must be configured.
2. If **work orders are not synced** between Fusion and **Oracle Fusion** Field Service, **attachments will not be created** on the Fusion side.

   Note: You still need an Application when working in Oracle Field Service environments or with OCI Object Storage

To perform the required configuration, you'll need access to:

1. Oracle Fusion Field Service
2. Oracle Cloud Infrastructure (OCI) Identity/IDCS for the tenancy associated with your Fusion Applications

To configure the application in OCI Identity domain

1. Go to **OCI Identity > Domains > [your domain].**
2. Copy the domain URL. You'll need it when configuring Field Service.
3. From your domain, navigate to Integrated Applications.
4. Click **Add Application** and fill in the required details.
5. Add scope: Search for Oracle Applications Cloud (Fusion).

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6. If you can't find it, verify that you're using the correct OCI tenancy.
7. **Copy the highlighted scope value** for use in Oracle Fusion Field Service later.
8. After creating the **Confidential Application**, **activate it** and copy the **Client ID and Client Secret.**

To create an attachment property

1. Sign in as an administrator.
2. Click **Configuration** > **Properties**.
3. Click **Add New**.
4. Complete these fields:

Field	Action
Entity	Select the entity for which you want to create the Attachment property. Select Activity. Currently you can create an Attachment property only for Activity type of entity.
Property name	Enter a name for the property that you want to display to the user. Enter in English and in all the languages that are active in the application.
Property label	Enter a unique database identifier for the Oracle Field Service API.
Property hint	Enter a hint that you want to display when a user hovers over the field name. For example, Enter comments if any. Enter the text in English and in all the languages that are active in the application.
Property Type	Select Attachment and then select Fusion attachments.
Application	Select the Oracle Fusion application that you've implemented.
Fusion Business Object	Select the Fusion business object to sync the attachments. Choose either Service Work Order or Maintenance Work Order.
Attachment Category	Select the category to classify and secure attachments. These categories are added when you created the business object in Fusion. **Note:** When multiple properties share the same attachment category, all attachments in that category are visible under each property. However, you can only manage attachments uploaded through the property you are currently viewing.
Photo Resolution	Select the minimum and maximum resolution of the photos that users can upload. You can specify the resolution based on the mobile devices your users use. Specifying the limits here helps you control traffic volume and manage the time taken to upload to a storage.

5. Click **Add**.

The Attachment property is added to work with Fusion attachments.

> **Note:** 'Attachments' properties aren't supported in:
> - Plug-in API framework
> - Daily Extract
> - Inbound and outbound SOAP APIs
> - Filters, message scenarios, work skill conditions, and capacity categories

How do I add the Attachment Form Element to Required Pages and Forms?

After creating the Attachment property, you must add it to the required pages using a special type of Form element, namely Attachment element. This form element doesn't work without a property, so you must create the Attachment property before starting this procedure.

1. Sign in as an administrator.
2. Click **Configuration** > **User Types**.
3. Select the user type for which you want to add the Attachment form element.
4. Click **Screens** and select a custom form or a standard page (for example, Activity Details).
5. From the **New element** section, drag the Attachment property to the required section.
6. Expand the **Name translations** section and add a name for the new field in English and other required languages.
7. Expand the **Validation value and validation** section and set the validation rules for users to upload the photo.

    You can use the slider to define the minimum and maximum number of images that must be uploaded. The maximum range you can select is 1 to 20 and the default is 1 to 5 images.
8. Expand the **Validation error message** section and add a message that you want to display when the required number of images aren't uploaded.
9. Click **Publish**.

    The Attachment form element is added to the selected custom form or standard page. If you export the custom form or user types, the attachments and their validation of minimum and maximum images are also exported.

How do I create an Attachment Property to use with Oracle Cloud Object Storage?

You can create an Attachment property to use with Oracle Cloud Infrastructure Object Storage when you want multiple images to be uploaded and retained for a specified period.

1. Sign in as an administrator.
2. Click **Configuration** > **Properties**.
3. Click **Add New**.
4. Complete these fields:

Field	Action
Entity	Select the entity for which you want to create the Attachment property. Select Activity. Currently you can create an Attachment property only for Activity type of entity.
Property name	Enter a name for the property that you want to display to the user. Enter in English and in all the languages that are active in the application.

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Property label	Enter a unique database identifier for the Oracle Field Service API.
Property hint	Enter a hint that you want to display when a user hovers over the field name. For example, Enter comments if any. Enter the text in English and in all the languages that are active in the application.
Property Type	Select Attachment and then select OCI Object Storage.
Application	Select the Oracle Object Storage application that you created using the Configure an Application for Oracle Cloud Infrastructure Object Storage procedure.
Photo Resolution	Select the minimum and maximum resolution of the photos that users can upload. You can specify the resolution based on the mobile devices your users use. Specifying the limits here helps you control traffic volume and manage the time taken to upload to a storage.

5. Click **Add**.

The Attachment property is added to work with the Oracle Cloud Object Storage application. If you haven't configured the Oracle Cloud Object Storage application properly, the 'Property is misconfigured' warning appears for this property on the **Properties** page.

> **Note:** 'Attachments' properties aren't supported in:
> - Plug-in API framework
> - Daily Extract
> - Inbound and outbound SOAP APIs
> - Filters, message scenarios, work skill conditions, and capacity categories

How do I configure an application for Oracle Cloud Infrastructure Object Storage?

You must configure an application for Oracle Cloud Infrastructure Object Storage to save multiple images of an activity for a specified period.

1. Sign in as an administrator.
2. Click **Configuration** > **Applications**.
3. Click **Add New**.
4. Complete these fields on the **Add Application** page:

Field	Action
Application Name	Enter a name for the application. This name is displayed on the Applications page and helps you identify this application
OCI tenancy OCID	Enter the OCID (Oracle Cloud Id) of the tenancy assigned to you. To find the OCID, sign in to your Oracle Cloud Console and go to the Tenancy details page. The OCID is available in the Tenancy information section.

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User OCID	Enter the Oracle Cloud Id of the user calling object storage API. To access the user Oracle Cloud Id, sign in to your Oracle Cloud Console, select the required user, and go to user page. You can see the Oracle Cloud Id in the User information section.
OCI Region	Enter the geographic area where the Oracle Cloud infrastructure is located. You can see more information about the regions and availability domains in the Oracle Cloud Infrastructure documentation. See the region identifier column in the table described on the page.
Key Fingerprint	Provide the Finger Print for the public key associated with the user.
Namespace	Enter the Object Storage namespace. This namespace serves as the top-level container for all buckets and objects in a tenancy. To access the Namespace, sign in to your Oracle Cloud Console and go to Object Storage. Select the bucket and click Bucket Details. The Namespace is available in the Bucket Information section.
Bucket Name	Enter the Oracle Cloud Object Storage bucket name. Each bucket within a namespace must have a distinct name to avoid overlap and ensure clear identification. Use the name of the bucket you have configured in your Oracle Cloud Console. **Note:** You can create user groups and apply suitable identity and access management (IAM) policies to control access to an Object Storage bucket. To ensure users have the necessary permissions for the specified bucket, assign the following policies: ◦ Allow group `<Group_Name>` to manage buckets in tenancy where all `{target.bucket.name='<Bucket_Name>'`, any `{request.permission='BUCKET_READ', request.permission='PAR_MANAGE'}}` ◦ Allow group `<Group_Name>` to manage objects in tenancy where `target.bucket.name='<Bucket_Name>'` Replace `<Group_Name>` and `<Bucket_Name>` with your specific group and bucket names as needed.
API Signing Key	Drag the Private key used to sign the Oracle Cloud API requests. To download this API key, sign in to your Oracle Cloud Console and go to Users. Select the appropriate user and click Add API key from the Resources section.

5. Click **Test Connection**.

The connection between Oracle Fusion Field Service and Oracle Cloud Object Storage is tested.

6. Click **Add**.

A new application (tile) is created in the **Storage Applications** section of the **Applications** page with the name you've provided.

7. To change the details, click the tile and update the values.

   You can change all the details, except the application name.

   > **Note:** You can define a retention policy in Oracle Cloud Object Storage using Object Lifecycle Management. This helps you manage archiving and deletion of objects automatically. For more information, see the Oracle Cloud Infrastructure documentation.

How do I create a Rest API application using OAuth User Assertion?

You can configure Oracle Fusion Field Service application to obtain an access token from some Identity Provider.

1. Go to **Configuration → Applications**.
2. Click **Add Application**.
3. Select **Applications using REST/SOAP API**, and then specify an application name.
4. Select **OAuth User Assertion** type of application.
5. Complete the following fields

Field	Action
Resource URL	It is not a mandatory field. It represent the URL of OAuth 2.0 Resource Server (server which return the REST data). URL will be sent in "applications" section in "init" method in order not to hardcode the URL in the plugin.
Token URL	It is URL of OAuth 2.0 Authorization Server (Identity Provider) that returns an access token. In some cases OAuth 2.0 Resource Server and OAuth 2.0 Authorization Server could be on the same domain. Example: https://{idcsUrl}**/oauth2/v1/token**
User Name	Select what username will be used in assertion. "Predefined User" it is fixed username (usually applicable while testing). "Identify User based on Login" means that username is used from some user property of current logged in user (usually "Login").
Client ID	Enter Client ID (from Identity Provider configuration, generated during the creation of Application in Authorization Server).
Client Secret	Provide Client Secret (from Identity Provider configuration, generated during the creation of Application in Authorization Server) .
Scope	Enter Scope (from Identity Provider configuration) - the string usually divided by space and used to restrict access. Example: **urn:opc:resource:fusion:xxxxxxxx:field-service**
Download Certificate	Click **Download Certificate** to download the certificate that should be imported in Identity Provider configuration. Identity Provider will check the signature of assertion that Field Service signed by this certificate.

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How do I implement 24*7 work shift in Oracle Fusion Field Service?

Shifts are used to define the different working times as defined by an organization. They can be created once and used by various work schedules, simplifying the assignment of schedules. In addition to work schedules, shifts can also be assigned directly to organization units, buckets, or resources.

To implement a 24/7 work shift in Oracle Field Service, you can follow these general steps:

1. **Set Up Work Schedules**: Navigate to Calendars, create or modify a work schedule to include shifts that cover all 24 hours of the day, ensuring no gaps between shifts. For more information, refer to *Add a Work Schedule or a Shift*.
2. **Define Shifts**: Add shifts to the schedule, specifying start and end times. For 24/7 coverage, you might need three 8-hour shifts or two 12-hour shifts. For more information, see *Add a Shift to a Work Schedule* and *Add a Shift*.
3. **Assign Resources**: Allocate resources (employees or teams) to these shifts, ensuring adequate coverage for each time slot. For more information, see *Add a Shift to a Resource's Calendar*.

    You can also refer to the *Calendars, Work Schedules, and Shifts* topic for more information.

How do I add a Work Schedule?

You can assign a work schedule or a shift to a *resource*, *bucket,* or *group*. You can also define the on-call schedule of a resource using the Calendar view.

1. Click the hamburger icon and click **Calendars**.

    The calendar appears for the resources in your group or bucket.
2. For the resource for which you want to modify the calendar, click the shift for the required date.

    The modify calendar dialog box appears for the selected resource and date.
3. To change the work schedule or shift for the resource, update these fields:

Name	Description
Schedule	This list includes work schedules and shifts. Select the work schedule or shift that you want to apply to the resource. Select Default schedule, to set the default schedule for the resource. Default schedule is the working time configured for the whole organization, division, or for a particular geographic region. In other words, a default schedule is the working time added at the Organization unit or Bucket level, which is inherited by the child resources. A default schedule is displayed with a darker color on the calendar, and an individual schedule is displayed with a lighter color.
End date	The date on which the new work schedule or shift ends. Click **No date specified** to apply it for an indefinite time.
Comment	Enter any comments that you wish to provide, for example, the reason for changing the schedule.

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4. To add the details of on-call for the resource, click On-Call and update these fields:

Name	Description
On-Call Schedule	The field that specifies that the resource is on call. When you select an on-call shift, the on-call color coded icon that is attached to the shift appears. When you add this shift to a resource, this icon is displayed on the Dispatch Console, Manage, Calendar, and Resource Calendar pages, and on the resource avatar. Select On-Call. An On-Call shift shows the resources that are available to be contacted outside a regular working shift with the on-call icon. If you have not activated an On-Call shift, it is not suitable for activity assignment - either manually or in routing optimization, and is not used in capacity calculations. However, when you activate an on-call shift, activities can be assigned to the resource. If both regular and on-call shifts are assigned to a resource for a day, then the shift is automatically calculated based on these rules: ○ If the route is activated during the regular shift period, then the regular shift is activated. ○ If the route is activated outside of the regular shift period, then the shift with the closest start time is activated.
End Date	Select the date on which you want to end the new working time. Click **No date specified** to apply it for an indefinite time.
Repeat	Select the frequency (Daily, Weekly, Yearly) at the new working time must be repeated. Enter the number of days or select the day of the week on which you want the new working time to be repeated. If you have selected Yearly, select the end date for the recurrence of the new working time. The end date of the new schedule is displayed below the field.

5. Click **Submit**.

How do I configure pre-built data visualization reports for Oracle Analytics?

Oracle Fusion Field Service provides pre-built data visualization reports for Oracle Analytics. You can download these reports from Oracle Autonomous Database application, upload them to Oracle Analytics, and view them from Oracle Analytics Dashboard.

1.
> **Note:** This information only applies to Oracle Field Service environments. You can verify whether you've Oracle Field Service or Oracle Fusion Field Service, by signing in and checking on the **About** page.

1. Select **Navigation Menu** > **Configuration**.
2. Click **Applications**.
3. Select **Oracle Autonomous Database Application** and click **Modify**.
4. Select **Pre-built dashboards**. If this option was already selected while creating the application, skip to the next step.

This selection creates the tables `ORA_FS_ACTIVITIES` for the Activity Fields entity and `ORA_FS_TIME_SLOT` for Time Slot Fields entity, along with their respective columns, in Autonomous Database application. The pre-built data visualization reports display data from these tables. Data from Oracle Fusion Field Service is automatically synchronized with the Oracle Autonomous Database, ensuring up-to-date insights.

5. Click **Download reports and configure tables**.

This downloads the **.dva** file. Before downloading the file, the application creates the tables `ORA_FS_ACTIVITIES` for the Activity Fields entity and `ORA_FS_TIME_SLOT` for Time Slot Fields entity, along with their respective

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columns, in Autonomous Database application. The pre-built data visualization reports display data from these tables.

> **Note:** The application provides **in-app prompts and banners** to guide you through downloading and configuring the pre-built reports. The banner is shown only until the reports are first downloaded and configured in an environment. It does not reappear daily. To download the reports again, go to **Navigation Menu > Configuration > Applications**, select **Oracle Autonomous Database Application**, click **Modify**, and then click **Download reports**.

The downloaded .**dva** file includes the following pre-built data visualizations:

Report	Description
Total Activities	Total number of activities created for the organization in a selected date range
Late Arrivals (%)	Percentage of activities started late within a selected date range
Routing Assignment (%)	Percentage of activities assigned through routing
Activities by Status	Count of activities based on the activity status
Activity Type by Region	Count of activities based on the activity region (work zone)
Activity Type and Average Duration	Average duration of activities by activity type
Days to Service by Region	Activity duration (in days) by activity region
Average Travel Time by Region	Average travel time by activity region
Late Arrivals by Region	Activities started late across different regions

You can now upload the **.dva** file into Oracle Analytics and view the pre-built reports from Oracle Analytics dashboard.

How do I create a Logical Hierarchy in Oracle Fusion Field Service using OFS-Maintenance Accelerator?

This topic shows you how you can set up the Oracle Maintenance accelerator for Oracle Fusion Field Service.

> **Note:** After migration to Fusion all previous integrations are expected to work without need to migrate to new versions (basically Oracle Field Service and Oracle Fusion Field Service will have full compatibility from API standpoint).

Step 1 – Create Applications in Oracle Fusion Field Service

To establish a connection between Oracle Fusion Field Service and OIC, the you must create these applications in Oracle Fusion Field Service:

- OIC application with details about the OIC endpoint.

↑ Applications

Add Application

Application Type
Oracle Integration ▼

You can integrate with Oracle Integration platform to create integrations with cloud and on-premise applications.

Application Name

Required

OIC Host

Required

Host name of your Oracle Integration instance
Sample format: 'servername.oraclecloud.com'

User Name

Required

IDCS URL

Required

Base URL of Oracle Identity Cloud Service Admin console
Must have the format 'https://servername.oraclecloud.com'

Client ID

Required

Client ID of the Client application that you have created in IDCS

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- REST/SOAP API application which would be used on OIC to send data from OIC to Oracle Fusion Field Service. You've to make sure these Oracle Fusion Field Service APIs are configured with appropriate access privileges.

↑ Applications

Add Application

Configure these methods for the Core REST API for this application:

- Activity - RW
- Business Events - RW
- Inventory - RW
- Resource - RW
- User - RW

Configure these methods for the Metadata REST API for this application:

- Activity Types - RW
- Properties - RW
- Work Skills - RW
- Work Zones - RW,
- Inventory Types - RO

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To connect Oracle Integration with Oracle Fusion Cloud, create an integration user in Oracle Fusion Field Service with the username **FFS_APP_INTEG_ID**, and configure this user in the maintenance cloud connections of the accelerator.

> **CAUTION:** Oracle recommends using the username **FFS_APP_INTEG_ID** to connect Oracle Integration with Oracle Fusion Cloud. This specific username is referenced in the accelerator's echo suppression logic. If you use a different username, you must modify the prebuilt integration flows in Oracle Integration to ensure echo suppression works correctly.

Perform the following steps to create and configure a user in Accelerator:

1. **Create a custom Job Role**

   a. Sign in to Oracle Fusion Field Service.
   b. Navigate to the **Security Console** work area and click the **Roles** tab.
   c. Click **Create Role**.
   d. Specify the following and click **Next**.

Field	Value
Role Name	Field Service Integrator
Role Code	FFS_FIELD_SERVICE_INTEGRATOR_JOB
Role Category	CRM - Job Roles

   e. Navigate to the Role Hierarchy train stop Function Security Policies and add the following roles:

Role Name	Role Code	Description
Maintenance Management Web Service	ORA_MNT_MAINTENANCE_SERVICE_DUTY	Provides service access to maintenance asset management and work execution using the REST services
Inventory Administration	ORA_INV_INVENTORY_ADMINISTRATION_DUTY	Configures all setup-related activities for inventory management.
Inventory Transaction Management	ORA_INV_INVENTORY_TRANSACTION_MANAGEMENT_DUTY	Manages inventory transactions. Tasks include managing reservations and picks, editing pending transactions, and submitting transaction-related processes.
Inventory Management Web Service	ORA_INV_INVENTORY_MANAGEMENT_WEB_SERVICE_DUTY	Provides web service access to inventory management to perform activities such as creating inventory transactions, recording cycle counts, and performing pick transactions.
Supply Chain Common Web Service	Provides web service access to supply chain common to perform activities such as viewing inventory organizations,	ORA_RCS_SCM_COMMON_WEB_SERVICE_DUTY

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Role Name	Role Code	Description
	plant parameters, carriers, and units of measure list of values.	
Warehouse Manager	Manages and analyzes all warehouse activities including analyzing materials management and logistics performance, managing inventory transactions, managing cycle and physical counts, configuring warehouse setup, and reviewing inventory balances.	ORA_INV_WAREHOUSE_MANAGER_JOB

f. Navigate to the Role Hierarchy train stop Data Security Policies and add the following policies:

Business Object	Policy Description	Policy Store Implementation
Installed Base Asset	A Maintenance Manager can manage installed base asset for all installed base assets.	- **Privilege:** Manage Installed Base Asset; Read; Update - **Resource:** Installed Base Asset - **Data Set:** All values
Manufacturing Plant	A Manufacturing Engineer can manage the manufacturing plant for the manufacturing plants in which they can operate.	- **Privilege:** Manage Production Resource; Manage Standard Operation; Manage Work Center; Manage Work Order; Manage Work Order Material Transaction; Manage Work Order Resource Transaction; Manage Work Order Operation Transaction; - **Resource:** Manufacturing Plant - **Data Set:** All values
Inventory Organization	An Inventory Manager can manage item and inventory organization parameter for the inventory organizations in which they can operate.	- **Privilege:** Manage Maintenance Organization; Manage Inventory Transfer Order; Manage Inventory Reservation; Manage Inventory Transaction; Manage Item Locator; Manage Item Lot and Item Serial; Manage On-Hand Quantity; Manage Subinventory; Manage Unit of Measure Usage; - **Resource:** Inventory Organization - **Data Set:** All values
Item for Table EGP_SYSTEM_ITEMS_B	Defines the details of a transactable object. For example, an item can be any part, material, product, or service that's unique as compared with other items by nature of its attributes.	- **Privilege:** Maintain Item Basic; View Item Basic; - **Resource:** Item for Table EGP_SYSTEM_ITEMS_B - **Data Set:** All values

g. Navigate to the Role Hierarchy train stop and click **Add Role**.
h. Search for the **SOA** operator role and click **Add Role Membership**.
i. Click **Close**.

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  j. Navigate to the Summary train stop and verify all the privileges and SOA operator role.

  k. Click **Save and Close.**

  l. Click **OK** on the confirmation message.

2. **Create an Integration user account in Oracle Fusion Field Service**

  a. Sign in to Oracle Fusion Field Service.

  b. Navigate to the Security Console work area and click the **Users** tab.

  c. Click **Add User Account**.

  d. Enter the values in the required fields.

Field	Value
Last Name	FFS_APP_INTEG_ID
Email	Enter a valid email ID
User Name	FFS_APP_INTEG_ID
Password	<Enter password>
Confirm Password	<Re-enter password>

  e. Click **Add Role**.

  f. In the Add Role Membership dialog, search for the job role **Field Service Integrator(FFS_FIELD_SERVICE_INTEGRATOR_JOB)** and select the the role that you created in Step A.

  g. Click **Add Role Membership**.

  h. Click **OK** in the confirmation dialog.

  i. Repeat steps 6 through 8 to add the following additional roles. These roles are required to create leads from partner inquiries:

    - Resource (ORA_HZ_RESOURCE_ABSTRACT)

    - Employee (ORA_PER_EMPLOYEE_ABSTRACT)

  j. Click **Done**.

  k. Click **Save and Close**.

3. **Create Password Expiry Policy**

   You can create the FFS_APP_INTEG_ID user with a different password expiry policy. This ensures that the regular password expiry rules do not apply to this user. To achieve this, you need to assign the user to a separate user category.

   a. Sign in to Oracle Fusion Field Service.
   b. Navigate to the **Security Console** work area and click the **User Categories** tab.
   c. Click **Create**.
   d. Click **Edit** in the **User Category: Details** page.
   e. Enter a name in the **User Category Field**.
   f. Click **Save and Close**.
   g. Click **Password Policy**.
   h. Click **Edit**.
   i. Configure the fields for the **FFS_APP_INTEG_ID** user password expiry policy.
   j. Click **Save and Close**.

      Note: The maintenance workorder filtering logic in the accelerator works only based on the user name FFS_APP_INTEG_ID.

4. **Configure the User Credentials**

   Configure the user credential in the following connections:
   - Oracle Maintenance Adapter Connection
   - Oracle Maintenance REST Connection

Step 2 - Configure Connections

1. **Oracle OFS Adapter Connection** - Enter the details from Oracle Fusion Field Service application that you created earlier.

2. **Oracle Maintenance OFS REST Connection** - Enter the details from Oracle Fusion Field Service application that you have created.
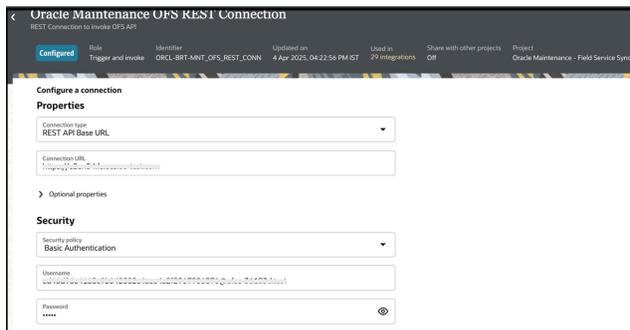
3. **Oracle Maintenance Adapter Connection** - Enter the details from Oracle Fusion that were created in Create Fusion user account.
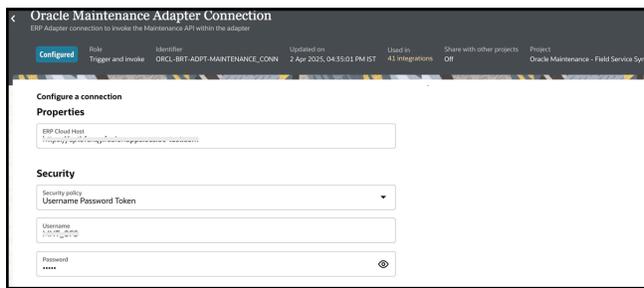
4. **Oracle Maintenance REST Connection** - Enter the details from Oracle Fusion that were created in the Create Fusion user account.
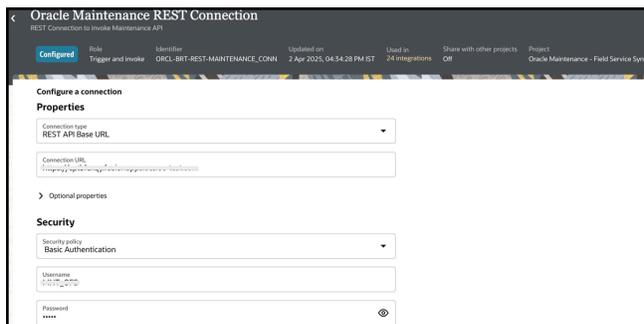
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5. **Oracle Maintenance OAuth REST Connection** - Enter the IDCS credentials of the OIC instance where this accelerator has been installed.
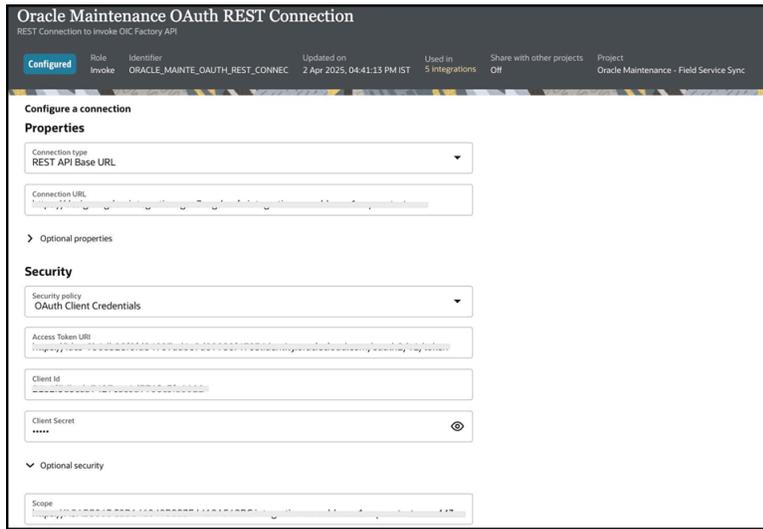
For more information about the steps to configure a trusted application in IDCS, click *here*.

Assign this Application Role to get the write access to the OIC Factory API:
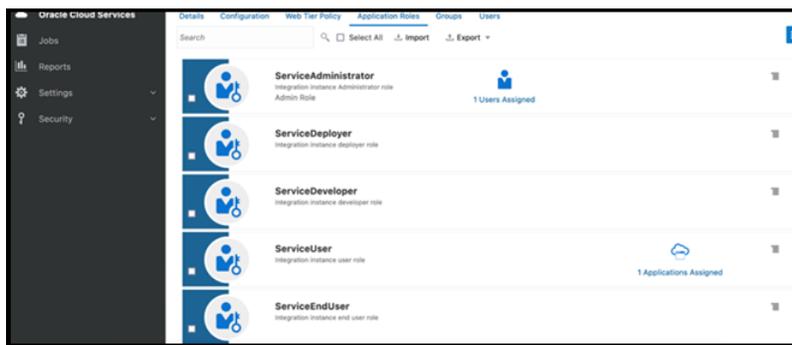
Oracle Maintenance OAuth REST Connection for Gen 2 version:

The OIC Factory API supports Basic Authentication in GEN 2 OIC instance.
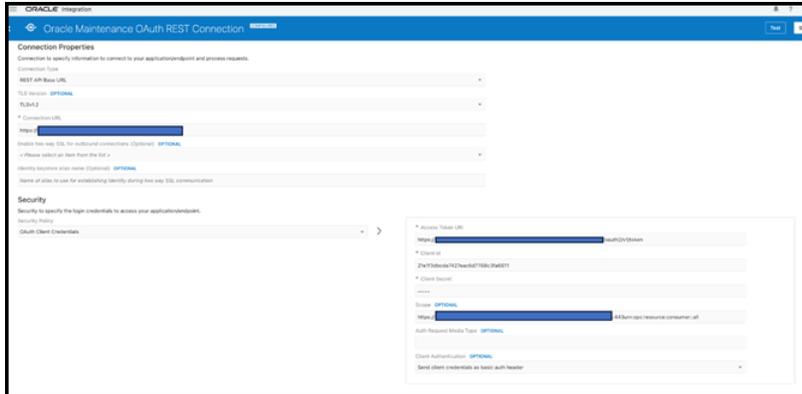
Step 3 - Create Resource Types and User Types in Oracle Fusion Field Service

The next step is to create these required resource types and user types within :

- A resource type with a role of 'bucket'. This is used to map the Maintenance Organization bucket in Oracle Fusion Field Service.

- A resource type with a role of 'Field resource'. This is used to map the mobile workers (resource instances from Oracle Maintenance) .

  Note: Make sure you have created a user type that can be assigned to the field resources.

- Inventory types 'part' and 'part_sn' must be created and mapped with the model property 'inventory_identifier'.

Step 4 - Configure Parent Resource in Oracle Fusion Field Service

1. Create a parent resource in Oracle Fusion Field Service that will encompass all other resources.

   Note: You can skip this step if the parent resource is already available in Oracle Fusion Field Service.

2. Configure the External ID of the resource in the Oracle Integration lookup ORCL-BRT-MNT-OFS-CONFIG → ParentResourceId. Based on this configuration, the accelerator will sync the values into Oracle Fusion Field Service.

The accelerator will then sync:

- Maintenance Organization as a bucket under this parent resource.
- Resource Instances as mobile workers under the created maintenance organization resources.

Step 5 - Create Properties Used by Integration

Activate the Oracle Maintenance OFS Property Create Helper and run the Oracle Maintenance OFS Property Setup integrations. The properties listed in this table are installed in Oracle Fusion Field Service automatically.

Property Label	Name	Entity	GUI	Type
mwo_op_seq_number	Operation Sequence Number	activity	text	string
mwo_workorder_id	Work Order ID	activity	text	string
mwo_workorder_type	Work Order Type	activity	text	string
mwo_operation_name	Work Order Operation Name	activity	text	string
mwo_workorder_priority	Work Order Priority	activity	text	string
mwo_operation_id	Work Order Operation ID	activity	text	string
mwo_workorder_subtype	Work Order SubType	activity	text	string
mwo_workorder_org_code	Maintenance Organization Code	activity	text	string
mwo_work_skill	Maintenance Work Skill	activity	text	string
mwo_work_zone	Maintenance Work Zone	activity	text	string
mwo_op_resourceid	Maintenance Resource ID	activity	text	string
mwo_resource_code	Maintenance Resource Code	activity	text	string
mwo_workorder_org_name	Maintenance Organization Name	activity	text	string
mwo_asset_number	Asset Number	activity	text	string
mwo_op_countpoint	Operation Count point	activity	text	string
mwo_subinventory	SubInventory	inventory	text	string
mwo_resource_organization	Maintenance Organization	resource	text	string
mwo_resource_subInventory	SubInventory	resource	text	string
mwo_appt_installed_inventory	Activity Installed Inventory	activity	text	string
mwo_inventory_sublnv	Inventory Source	inventory	text	string
mwo_operation_note	WO Operation Note	activity	text	string
mwo_op_resource_note	Operation Resource Note	activity	text	string

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Property Label	Name	Entity	GUI	Type
mwo_locator	Locator	inventory	text	string
mwo_status_change_reason	Status change Reason	activity	combobox	enumeration
mwo_planned_date	Maintenance Planned Date	activity	text	string
mwo_action_type	Maintenance WO Action	activity	combobox	enumeration Expected values • New Operation • New Resource • New Work Order
mwo_parent_ref_wo_num	Parent Reference Work Order	activity	text	string
mwo_workcenter_id	Maintenance Work Center Id	activity	text	string
mwo_wo_desc	Maintenance Work Order Description	activity	text	string
mwo_resource_requirement	Resource Requirement	activity	text	string
mwo_wc_enum	Maintenance Work Center	activity	combobox	enumeration
mwo_transaction_status	Operation Transaction Status	activity	text	string
mwo_parent_apptnumber	Parent Work Order	activity	text	string
mwo_resource_orgid	Maintenance Organization ID	resource	text	string
mwo_inventory_org	Inventory Organisation	inventory	text	string
mwo_asset_status	Asset Status	activity	combobox	enumeration
wo_asset_purchase_date	Purchase Date	activity	text	string
wo_asset_status	Asset Status	activity	text	string
wo_asset_install_date	Install Date	activity	text	string
asset_view_translation_placeholders	Asset View Placeholders	activity	combobox	enumeration
wo_asset_id	Asset Id	activity	text	string

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Property Label	Name	Entity	GUI	Type
wo_asset_products	Product	activity	text	string
mwo_meter_count	Meter Count	activity	text	string
mwo_meter_info	Meter Info	activity	text	string
mwo_resource_id	Resource ID	resource	text	string
part_item_number	Item Number	inventory	text	string
part_item_number_rev	Item Number with Revision	inventory	text	string
part_item_revision	Revision	inventory	text	string
part_item_rev_serial_num	Item Number with Revision and Serial Number	inventory	text	string
mwo_standard_op_code	Standard Operation Code	activity	text	string
wo_number	Work Order Number	activity	text	string
wo_asset_serial_number	Work Order Asset Serial Number	activity	text	string
wo_case_note	Work Order Case Note	activity	text	string
wo_asset_name	Work Order Asset Name	activity	text	string
mwo_cancel_reason	Cancel Reason	activity	text	string
mwo_repair_trans_code	Repair transaction code	activity	combobox	enumeration
mwo_work_accomp_code	Work to be accomplished code	activity	combobox	enumeration
mwo_inst_resource_code	Maintenance Instance Resource Code	resource	text	string
mwo_labour_identifier	Maintenance Labour Identifier	resource	text	string
external_id_identified_by	External ID Identified By	resource	text	string
mwo_inv_last_sync_time	Last Inventory Sync Time	resource	text	string
mwo_resource_instance_id	Resource Instance ID	resource	text	string
mwo_work_order_sync_orgs	Work Order Organisations	resource	text	string
mwo_resource_sync_orgs	Resource Organisations	resource	text	string

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Step 6 – Add Properties to be Indexed for Search

For the integration to function, add these properties as indexes for the activity search API in Oracle Fusion Field Service in the **Configuration** > **Business Rules** Search > Activity Search Fields section:

- Work Order Number (appt_number)
- MWO Operation Id (mwo_operation_id)
- Asset Id (wo_asset_id)
- MWO WorkOrder Id (mwo_workorder_id)

Step 7 – Configure Organizations filter properties in Oracle Fusion Field Service

1. After the Oracle Fusion Field Service properties get created, the below custom properties need to be enabled in the **Configuration → User Types → Administrator role → Edit Resource** page of the administrator user.

Property Label	Name	Description
mwo_work_order_sync_orgs	Work Order Organisations	Used to filter in the Maintenance workorder sync
mwo_resource_sync_orgs	Resource Organisations	Used to filter in the Resources, Activity Types and WorkCenter syncs

2. The administrator needs to configure the Fusion maintenance organizations in the property that needs to be filtered for syncing with Oracle Fusion Field Service. Customers can use this property to filter the maintenance organizations by configuring the organization code(s) that must be synced with Oracle Fusion Field Service, e.g., M001, M122.
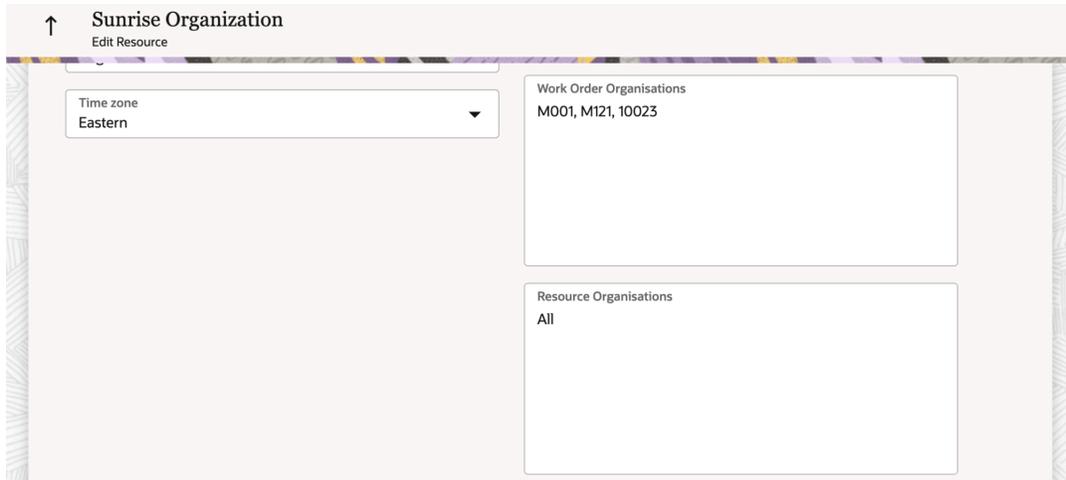
> **Note:** You can either provide a specific organization code, a comma-separated list of organization codes, or use "All" to synchronize data across all organizations. An empty value in this field will result in no data being synchronized.

Step 8 - Configure the 'ORCL-BRT-MNT-OFS-CONFIG' Lookup

The ORCL-BRT-MNT-OFS-CONFIG lookup contains the metadata used by the integration. You must configure this lookup for the integration to function properly. Because all the lookup configurations have default values, be sure to configure appropriate values per the business requirements for these lookups:

Name	Value to be inserted
IntegrationUser	The clientId/user used in the **Oracle Maintenance OFS Adapter Connection**.
LaborResourceType	The Oracle Fusion Field Service resource type associated with "Labor" resource instances in Oracle Maintenance (Created in step 4).
EquipmentResourceType	The Oracle Fusion Field Service resource type associated with "Equipment" resource instances in Oracle Maintenance (Created in step 4).
UserType	The Oracle Fusion Field Service user type which must be associated with "Labor" resource instances in Oracle Fusion Field Service (Created in step 4).
ParentResourceId	The external ID of the parent resource in Oracle Fusion Field Service (Created in step 3).
TravelArea	The travel area associated with work zones in Oracle Fusion Field Service (This is optional and is used only if you select Work Center → Work Zone sync).
DefaultActivityTypeLabel	This configuration is used to map a default activity type in Oracle Fusion Field Service if no match is found in ORCL-BRT-ACT-TYPE-MAPPING lookup. This isn't created in Oracle Maintenance as a standard operation.
WOStatusToSyncOFSActivity	This configuration is used in the activity creation flow to filter the work orders by status to sync with Oracle Fusion Field Service.

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Name	Value to be inserted
WO_STATUSES_ACTIVITY_CANCEL	This configuration is used to filter the work orders by status for Cancellation of Activities in Oracle Fusion Field Service.
WO_STATUSES_ACTIVITY_DELETE	This configuration is used to filter the work orders by status for Deletion of Activities in Oracle Fusion Field Service.
MNTSourceSystemCode	The Source System Code on Fusion. It is required for the transactions. This denotes the source system that started the transactions. This source system must be available in Fusion. Refer to the *documentation* to create a source system reference.
MNTSourceSystemType	The type of the source system, that is, INTERNAL/EXTERNAL value configured in Fusion.
EventsForWOUpdate	Enter one or more Field Service activity events, separated by commas. Supported values include, activitySuspended, activityMoved, activityStarted, activityNotDone, activityCanceled, activityCreated, and activityUpdated.
ActivityMoveConditions	Enter one or more move conditions, separated by commas. Supported values include, bucketToResource, resourceToBucket, resourceToResource, and bucketToBucket. If no value is specified, only bucketToResource and resourceToBucket will be handled by default.
EventsForMeterUpdate	Enter one or more Field Service activity events, separated by commas. Supported values include, activitySuspended, activityStarted, activityCreated, and activityUpdated.
EventsForDFFUpdate	Enter one or more Field Service activity events, separated by commas. Supported values include, activitySuspended, activityStarted, activityNotDone, activityCanceled, activityCreated, and activityUpdated. If the lookup is empty, DFF updates will occur only on the activityCompleted event.

Step 9 - Activating and Running the Prerequisite Integrations

After the you create prerequisite configurations, you can start running the integrations. Some of these integrations are to be run first so that the required data is added to Oracle Fusion Field Service.

1. As the first step, you can activate all the integrations given in the package (activating the integrations is NOT the same as running them). This ensures that all the sub-integrations are active when you run the prerequisite integrations.
2. [**Oracle Fusion Field Service only**] The Field resource user creation and management in Fusion Field Service are defined as per the Fusion Standards described *here*.
3. [**Oracle Fusion Field Service only**] Run the **Oracle Maintenance FFS Resource** integration to sync the below items.
   a. The maintenance organization defined in Oracle Maintenance is created as a bucket in Oracle Fusion Field Service.
   b. Maintenance Resources are created as work skills and associated to the corresponding Field resources
   c. Maintenance work centers are created as work zones and associated to the corresponding Field resources
   d. Maintenance equipment resource instances are created as tool resources
4. [**Oracle Field Service only**] Run the Oracle Maintenance OFS Resource Sync integration. This integration is responsible for syncing the resource instances and the maintenance organizations from Oracle Maintenance with Oracle Fusion Field Service.

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5. Run the Oracle Maintenance OFS Activity Types Sync integration. This integration is responsible for syncing the Standard Operations to activity types in Oracle Fusion Field Service. Map the Standard Operation to Activity Type in the new lookup ORCL-BRT-ACT-TYPE-MAPPING where you can specify what activity type the standard operation is mapped to. The integration then creates the necessary activity types in Oracle Fusion Field Service

6. [**Oracle Field Service only**] Run the Oracle Maintenance OFS WorkCenter Sync integration. This integration syncs the work centers in Oracle Maintenance with the resource instance's work zone. You must set the work zone key as the mwo_work_zone property for this integration to work.

How do I add work skills and work skill groups to a capacity category?

Once you create the capacity category, assign the work skills and work skill groups to it.

1. Click **Configuration** > **Capacity Categories**.

   The **Capacity categories** page opens.

2. Select a capacity category and click **Edit work skills** from **Actions**.
3. Select the work skills and work skill groups that you want to include in the category.

   The work skill groups will have square brackets [ ] around the names.

4. Optionally, type the work skill levels in the right-hand side field.

   Work skill levels assigned are used to limit the capacity categories to the activities that require a certain work skill level. For example, you might create two capacity categories for installations, one for simple installation and one for complex installation. Both the capacity categories requires the installation work skill, but the work skill level for the installation work skill will be lower for simple installation than it would be for the complex installation.

5. Click **Save**.

   > **Note:** When you create multiple capacity categories that share some same work skills, then Oracle Fusion Field Service treats all those work skills as one. When an activity is assigned to the work skills, Oracle Fusion Field Service consumes the minutes used from all the capacity categories sharing that work skill.

How do I define capacity categories for a resource?

Define capacity categories for a resource to calculate the maximum available capacity at a capacity category level.

Resources are assigned with certain work skills at a respective level. Capacity categories includes the work skills or work skill groups to which the minimum required level is defined. A resource is then matched with a capacity category if their work skills are equal or greater than those defined for the capacity category. If a capacity category is assigned with the work skill groups, a resource with at least one of the work skills matching with the group is allotted.

When no work skills are assigned, a capacity category includes all the activities with no specific work skills. Such activities can be assigned to any resource having any work skills, therefore, to all resources in the system. Resources with no work skills defined (effectively, having all work skills at the highest level) is matched with all the capacity categories in the system.

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Resource work skills can be viewed in the **Resource Info** screen or resource hint.
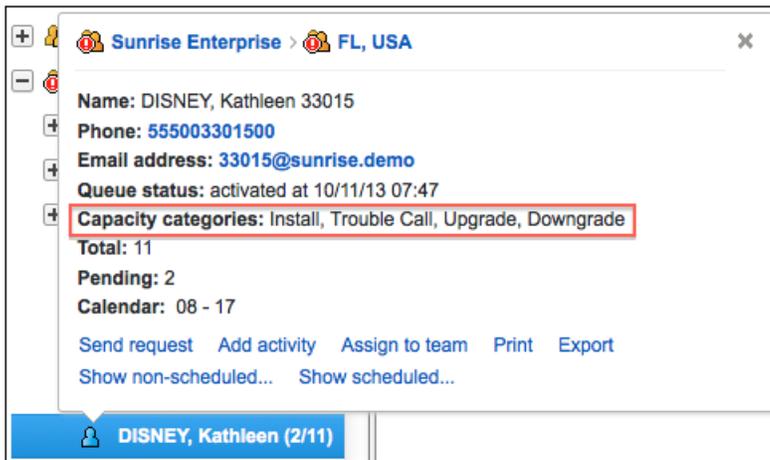
Capacity categories of a resource is recalculated automatically when the:

- Application server starts

- Resource cache reloads

- Resource work skill is modified

> **Note:** A resource appears in the quota for a bucket only when it matches the capacity category by work skills and belongs to the same work zones as the capacity area. If the work zones don't align, the application doesn't include the resource in the quota for that bucket.

How do I add icons to visually identify resources?

To easily identify key resource attributes such as vehicle type, you can represent them using icons. Emojis can be inserted into text fields across the application to display labels along with a visual indicator. Adding emojis to names or other free-text fields offers a simple, user-friendly way to enhance visual recognition. While filters and field-level hints are helpful, emojis provide an intuitive and consistent method to highlight important details throughout the UI.

For example, you can use emojis like:

- ▯ for electric vehicles

- ▬ for technicians with specialized tools

- ✂ for resources under maintenance

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How to Insert Emojis

To insert emojis:

1. Edit the desired text field. This could be a resource name, vehicle type, work skill, or any other label that you commonly use.
2. Use your system's emoji selector:
   a. On Windows, press **Windows** + **.** (period) or **Windows** + **;** (semicolon)
   b. On Mac, press **Control** + **Command** + **Space**
3. Select the emoji you want to insert.
4. Save your changes. The emoji displays as part of the text in the resource tree, list views, detail pages, and any other UI elements where the field appears.

How Emojis Work

- **Enhanced visual recognition**: Quickly identify resource types at a glance.

- **Consistent visibility**: Emojis appear across all relevant views in the application, including resource tree, lists, tiles, and tooltips.

- **Search and filtering**: Since emojis are part of the text string, they can impact sorting and search behavior. Consider placing them at the end of the field to minimize disruption.

Example Use Case: Highlight Electric Vehicles in the Dispatch Console

1. Go to **Resources** from the navigation menu.
2. Select **Truck** as the **Resource Type**.
3. Open a resource and click **Information** on the **Resource Info** page.
4. Edit the vehicle name field.
5. Open the emoji selector:
   o On Windows, press **Windows** + **.** (period) or **Windows** + **;** (semicolon)
   o On Mac, press **Control** + **Command** + **Space**
6. Select the emoji you want to display alongside the resource name.
7. Save the changes. The emoji becomes part of the resource name and displays in the **Dispatch Console** resource tree.

How do I update a custom property on activity entity from Oracle Fusion Field Service plugin?

You can change the activity status (such as start, suspend, complete activity) by simply updating the field 'astatus' taking into account the available status transitions. You can perform actions (such as install, deinstall inventory, undo install) on the inventory pool for serialized inventory by simply updating the field 'pool' taking into account the available pool transitions, and update the required fields for the pool (for example, inv_aid for install pool).

Order of Applying Changes to Entity Data Collections

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If a plugin sends a few collections such as, 'activityList', 'activity', 'inventoryList', and 'inventory' in the 'close' method, the application tries to apply the changes in this order:

1. 'activityList'
2. 'activity'
3. 'inventoryList'
4. 'inventory'

If a plugin receives the same activity changes in the 'activityList' and 'activity' entity data collections, only the changes from the 'activity' entity data collection are applied. The changes from the 'activityList' entity data collection are ignored. However, the current activity in the 'activityList' can be changed, if the 'activity' entity data collection is not sent to the plugin. This example shows the activity changes that can and cannot be applied:

```
{
  "apiVersion": 1,
  "method": "close",
  "backScreen": "default",
  "wakeupNeeded": false,
  "activity": {
  "aid": "8761055",
  "ACTIVITY_NOTES": "new changes 1" <--- these changes will be applied
  },
  "activityList": {
  "8761054": {
  "ACTIVITY_NOTES": "another activity"
  },
  "8761055": {
  "ACTIVITY_NOTES": "new changes 2" <--- these changes won't be applied, they will be ignored
  }
  }
}
```

If a plugin receives the same activity changes in the 'inventoryList' and 'inventory' entity data collections, only the changes from the 'inventory' entity data collection are applied. The changes from the 'inventoryList' entity data collection are ignored. However, the current inventory in the 'inventoryList' can be changed, if the 'inventory' entity data collection is not sent to the plugin. This example shows the inventory changes that can and cannot be applied:

```
{
  "apiVersion": 1,
  "method": "close",
  "backScreen": "default",
  "wakeupNeeded": false,
  "inventory": {
  "invid": "1055",
  "INVENTORY_NOTES": "new changes 1" <--- these changes will be applied
  },
  "inventoryList": {
  "1054": {
  "INVENTORY_NOTES": "another inventory"
  },
  "1055": {
  "INVENTORY_NOTES": "new changes 2" <--- these changes won't be applied, they will be ignored
  }
  }
}
```

Changing of Activity status

Activity status can be changed (e.g. start, suspend, complete activity) by simple update of field '*astatus*' regarding the available status transitions. This image shows the possible transitions between activity statuses:

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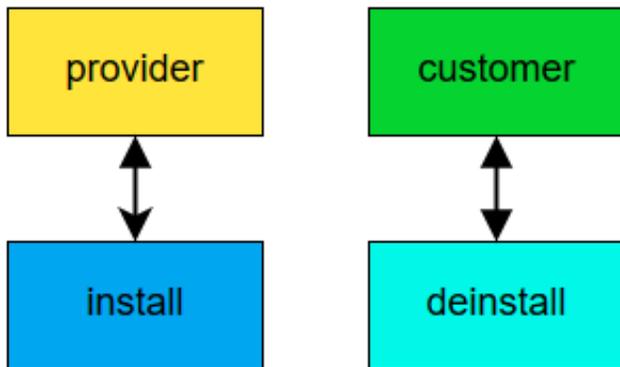
How do I configure group actions for resources?

You can provide access to users to select multiple resources of a user type to perform actions such as reassign user types, deactivate, unlock, delete, or activate.

If a user doesn't have the permissions to change the resources or users of a particular User type, then the user can't select such resources or users. Verify the **Can create users of the following user type** setting on the **Configuration** > **User Types** > **General** tab.

1. Click **Configuration** > **User Types**.
2. Select the user type for which you want to provide the access.
3. Go to the **Screens** tab and click **Resources** under **Main** section.
4. Under Group Actions, select **Activate**, **Deactivate**, **Delete**, **Set Collaboration Group**, **Set User Type**, and **Unlock**, and then click **Click to add**.
5. For each button that you just added, click **Add new visibility** and then click **Save**.

   The **Activate**, **Deactivate**, **Delete**, **Set Collaboration Group**, **Set User Type**,and **Unlock** buttons are displayed on the **Resources** page, when a user with this permission selects a resource.

Why does the list of Resource Types change when I edit a resource?

When you edit a resource, the list of Resource Types you see isn't grouped. Instead, the following factors determine which Resource Types are displayed:

1. Compatibility with the existing Resource Type: The list is filtered to show only Resource Types that are compatible with the one already selected for that resource.
2. Feature configuration within Resource Types: Compatibility depends on how features are configured within each Resource Type. Differences in these feature selections can make certain Resource Types incompatible.
3. User Roles: The User Roles linked to the resources can also influence which Resource Types are shown in the list.

Can Oracle Fusion Field Service users assign new asset numbers when splitting an asset?

In Oracle Fusion Field Service, there are no inherent restrictions preventing you from defining a new asset number when splitting an asset. However, it is essential to confirm whether any rules or limitations within your integrated asset management system may override or conflict with this capability in Oracle Fusion Field Service.

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How can I use the Oracle Fusion Field Service development sandbox?

The number of environments you get depends on the subscription.

Depending on the subscription, you get one production environment and at least two test environments. You can view the environment details by clicking **Open Service Console**.

The Open Service Console window shows the details of the environments related to the particular service.

> **Note:** Oracle Field Service doesn't offer dedicated sandbox environments. Instead, you have a Production environment and typically multiple Test environments (often named 'test1' and 'test2'). The exact number of Test environments available depends on your organization's purchase agreement. You'll have one Production instance, usually labeled 'Prod'.

Production Environment

The Production Environment has the following details:

- Subscription ID
- Environment Name
- Version
- URL

If the Production Environment is in configuration mode, the existing data in Production Environment is overwritten by the data copied from the Test Environment. When you move the environment to Production Go-Live mode, you can update the environment using the GUI, Export/Import, or using APIs only.

Test Environment

The Test Environment has the following details:

- Type
- Environment Name
- Version
- URL

How can I configure/view a report that lists all the user and security changes?

The Configuration History report displays the changes made to any of the Configuration pages within the application.

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> **Note:** Whenever a PATCH API is used to update a value for an Activity Duration or Travel Duration, the **Configuration History** report has an entry showing the number of records that were updated in addition to the Activity duration or Travel duration key.

To view the Configuration History report:

1. Click the navigation menu and select **Dashboards**.
2. Select **'Configuration History** from the navigation pane.

   The Configuration History report is displayed.
3. Review the following information in the report:
   a. **Action Time**—Specifies the date and time in the time zone and desired format of the user viewing the page when the change in Configuration was made.
   b. **Action**—Specifies either an Insert, Update or a Delete based on the operation carried out by the user.
   c. **Old value**—Displays the previous value of the fields related to the element in case of a Delete or an Update operation.
   d. **New value**—Displays one of the following:
      - In case of an Update operation, this column displays the modified value of fields related to the element.
      - In case of an Insert operation, this column displays the set value of the fields.
   e. **Element**—Displays the element or object that has been added, deleted or modified.
   f. **User**—Displays the user name of the user who made the modification. On mouse hover, the user name and the user ID are displayed.
4. To filter the report, click **View**.
   a. **Start Date** and **End Date**—Select the date range to filter the data.
   b. **Find** —Enter a string to search within the Old value and New value columns in the report.
   c. **Search Category**—Select an action to filter the report based on a category for example message type.
   d. **Rows**—Specify the number of rows to be displayed on each page of the report.

Results:

Changes made to these pages in the application are included in the Configuration History report:

- Business Rules
- Link Templates
- Work Schedules
- Work Zones
- Work Skills
- Properties
- Capacity Categories
- Time Slots
- Resource Types
- Activity Types
- Inventory Types
- Glossary

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- Action Management

- Display

- Filters

- Organizations

- Login Policies

- User Types

- Oracle Knowledge

- Statistics

- Applications

- Message Scenarios

- Holidays

- Resource Info

- Resource Calendars

- Locations

- Resource Work Zones

- Users (Except for Collaboration and Helpdesk groups)

- Daily

- Routing

- My Display

- Themes (only when default Theme is changed)

- Applications (limited to changes in the context of APIs)

Known Behaviors:

- The 'Find' option within 'View' is applicable only for the Old value and New value columns, it is not available for the Identifier column.

- You can search only Old value and New value columns using the value of the field and not the field name. For example: for the entry 'Activity Type: Install', you can search the word 'Install', but not on 'Activity Type'. You can search Users using the *User ID* ; you cannot search using the *User Name*.

- Some fields may display the IDs of the values, instead of the actual values. For example: Design Theme: 2 or Time Slots can have values like 2, 3.

- The Identifier column, in some cases may display IDs instead of or in addition to values. For example: 'Display Profile: UT16_DISPLAY_PROFILE**/26**' instead of 'Display Profile: UT16_DISPLAY_PROFILE' ID: 15497

- The Identifier may display just the Company name when the Business Rules screen is modified.

- In entries related to the Statistics page, the value of the Type displays the label instead of the text. For example: 'Type: appt_duration' instead of 'Type: Activity duration stats fields'

- The Context Layout displayed within the Identifier column shows the label instead of the text. For example: 'Display Context Layout: web_menu manage/540'

- In some cases, the number of rows displayed on the screen may be less than the configured number of rows. For example: The page may display only 18 rows on the screen though the user has set 20 as the number of rows.

- Sorting is only available using the Action Time and Operation columns.

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- Values of sensitive information like passwords, client secrets, and certificates are masked using * characters.

- Collaboration and Helpdesk groups are not shown in the Configuration History.

- Changes done to the SAML login policy using "Upload Metadata XML" are not logged.

Note: Configuration History Log information will be available for the past 90 days; information beyond 90 days is automatically removed.

How can I create a collaboration group?

Note: **Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Collaboration*. We recommend that you update your bookmarks accordingly.

You can communicate with other users in your organization and organize help desk activities using Oracle Fusion Field Service Collaboration. You can use the chat window to access data from the application, instead of using the Core Application interface. For example, you can share details about a resource, an activity, or an inventory item, or you can move activities and inventory. Oracle Fusion Field Service Collaboration is visible only if it is configured. This procedure describes how to create a group or help desk.

The **Collaboration** page shows settings that affect the way the user interface appears to the end user. While you may retain the default settings for most of these settings, you can change a few settings during implementation based on your business needs. Access to the **Collaboration** page is controlled by the **Collaboration** visibility profile permission. You must set this permission for each user type that manages Collaboration. If you don't configure the permission or define the visibility for a user type, users of this user type can't access Collaboration. If you select ReadOnly, Collaboration is placed into a view only mode. If you select Read/Write for this setting, users can manage Collaboration. To create a group or help desk:

1. Click **Configuration**.

2. In the **Subsystems** section, click **Collaboration**.

   The **Collaboration** page appears.

3. Click the + icon.

   The **New group** page appears.

4. Fill up these fields:

Field	Description
Name	Name of the group or help desk you're creating.
Type	Type of group you're creating—options are group and help desk.
Active	Specifies whether the group or help desk is active.
Description	A description for the group or help desk.
Allow chat between members of this group	The check box is selected by default for new and existing groups. Deselect this if you don't want users within this group to search for other members or start chats. However, they can still search

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Field	Description
	and start chats through other configurations, such as if they belong to another group with the option enabled or have the visibility based on the 'Collaboration with groups' configuration. For more information, see the Restrict Chat within Group Members topic.

5. If applicable, click the white space in the **Collaboration with groups** section to select the groups that the newly created group can collaborate with.

6. Select the required groups.

7. If applicable, click the white space in the **Assisting Helpdesks** section to select the help desks the newly created group can be assisted by.

8. Select the help desks.

9. Click **Save**.

In addition to assigning groups at the individual user level, you can also associate entire Buckets or Organizational Units (Org Units) with a Collaboration Group. When you do this, all users within the selected bucket or org unit, such as mobile workers, dispatchers, supervisors, and administrators are automatically included in the group. These memberships are dynamic: if users are added to or removed from the bucket or org unit, the group updates automatically without further administrator action.

When viewing a user's Collaboration Groups, any memberships inherited from buckets or org units are shown separately from groups that were explicitly assigned to the user, making it easy to distinguish inherited associations from direct ones. You can continue to assign Collaboration Groups directly to individual users as needed; in such cases, the user will belong to both their inherited and assigned groups.

Note: The option to assign at the bucket or org unit level applies only to Collaboration Groups. For Helpdesks, administrators must continue to assign users individually.

Related Topics

- Assign Users to the Collaboration Group
- Set Up Collaboration Tutorial

How do I assign users to an existing collaboration group?

Note: **Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Collaboration*. We recommend that you update your bookmarks accordingly.

You can add resources to Collaboration Groups or Helpdesks to control how they participate in chats, conferences, and broadcasts. You can assign individual users or entire buckets or organizational units so that all resources under them automatically become members of the group. This eliminates the need to manually maintain group membership as resources are added or removed.

1. Click **Resources** on the main menu.

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2. To add existing users:
   a. Use the Resource Type or User Type filters and filter the required resources.
   b. Select the check box against the desired resources.

      The number of resources you have selected is displayed in brackets for each group action.
   c. Click **Set Collaboration Group**.

      If you don't see the **Set Collaboration Group** option, add it to the **Group actions** section on the **Resources** Context layout structure for the selected user type.
   d. On the **Set Collaboration Group** dialog box, click the **Collaboration Group** field and select the required Collaboration groups.
   e. On the **Set Collaboration Group** dialog box, click the **Operator Helpdesk** field and select the HelpDesk for which you want to make the selected users as operators.
   f. Click **Apply**.

      The number of resources for which the Collaboration group is being added or that are made as Helpdesk operators is displayed in brackets on the **Apply** button.

3. To add a new user:
   a. On the **Add Resource** page, click the **Collaboration Group** field and select the required Collaboration groups.

      If you don't see the **Set Collaboration Group** option, add it to the **Edit Resource/user** Context layout structure for the selected user type.
   b. On the **Add Resource** page, click the **Operator of Helpdesk** field and select the required Helpdesks.
   c. Complete the remaining mandatory fields.
   d. Click **Submit**.

4. To Assign a Bucket or Org Unit:

   Instead of adding users one by one, you can assign an entire bucket or organizational unit (org unit) to a Collaboration Group.
   a. On the **Resources** page, select the bucket or org unit.
   b. Click **Set Collaboration Group**.
   c. Choose the Collaboration Groups to associate with the selected bucket or org unit.
   d. Save your changes.

   All users within that structure including mobile workers, dispatchers, supervisors, and admins are automatically added to the Collaboration Group. Membership is dynamic - if users are later added to or removed from the bucket or org unit, the group updates automatically.

5. To View Inherited Groups:

   When you view a resource's Collaboration Groups, the application shows:
   ○ Groups that are directly assigned to the user.

   ○ Groups that are inherited from the user's parent bucket or org unit.

   Inherited groups are listed separately at the top of the Collaboration Group list so that you can easily distinguish them from direct assignments.

   Note: You can combine both approaches: assign groups directly to individual users, and also assign groups at the bucket or org unit level. Users in this case will belong to both.

   This capability applies only to Collaboration Groups. For Helpdesks, you must continue to assign users individually.

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What are the different activity statuses in Oracle Fusion Field Service, and how does an activity move between them?

You can enable buttons like Start, Cancel, Reopen, and End on the activity screen in Oracle Fusion Field Service by configuring the screen layout for the relevant User Type.

Button Functions and When They Appear

Each button is linked to a standard action and is configured to appear based on the activity's status:

- **Start Button**: Triggers the **Start Activity** action (*start_activity*). It becomes visible when the activity is in a status that allows initiation, such as **Pending** or **Dispatched**.

- **Cancel Button**: Executes the **Cancel Activity** action (*cancel_activity*). This button appears when the activity is in a cancel status, including **Pending**, **Dispatched**, or **Started**.

- **Reopen Button**: Initiates the **Reopen Activity** action (*reopen_activity*). Visibility is set to display when the activity is in a closed status, such as **Completed**, **Not Done**, or **Canceled**.

- **End Button**: Performs the **End Activity** action (*end_activity*). This button becomes visible when the activity is already **Started** or in **Progress**.

To configure the button on activity screen, you need to repeat the steps as per your requirement.

1. Sign in to the application as an administrator.
2. Click **Configuration** > **Displays** > **Screens**. The **Screens** page appears.
3. In the left pane, select the user type for which you want to configure.
4. Under the **Activity** section, click the specific activity page you want to modify. This could be **Activity Details** or a similar page depending on your configuration.
5. Add the required button.
   a. Select **Standard action screen** as the screen type.
   b. Find and select the specific button you want to enable from the list of available actions.
   c. Click **OK** to add the button.
6. Configure Visibility (Recommended):
   a. Select the newly added button.
   b. In the Visibility Settings, click **Add new visibility** to add new visibility rules to control when the button is displayed.
   c. Define the conditions under which the selected button should be visible.
   d. Click **Save**.
7. Save your changes and click **Publish** to publish the configuration.

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How do I scan NFC tags?

You can scan Near Field Communication (NFC) tags to populate data in custom forms, or to write data to the tags using your installed app. In addition to using NFC scanning, you can type or edit the values in the fields configured for NFC scanning.

Conditions to use this option:

- Your administrator has configured the fields for NFC scanning.
- You are using the Update 22C Android or iOS installed app.
- Your device supports NFS scanning and it is enabled in Settings.
- The NFC tag contains a single field containing plain text.
- The format of the tag is NDEF.

1. Navigate to the page or form containing custom properties, product fields, or form fields that are configured for NFC scanning. These elements are indicated with a special icon.
2. Tap the NFC icon and hold your phone next to the tag.
   The app populates the data from the tag into the field. The app also displays typical warning or errors such as these:
   - Hold your phone near the tag.
   - Enable NFC scanning in your mobile device.

How do I call SOAP APIs from Oracle Fusion Field Service Hosted Plugins?

Oracle Fusion Field Service hosted plugins allows you to make SOAP API calls for external data exchange. The process involves constructing a request, sending it via JavaScript, and handling the response while ensuring security compliance.

Step 1: Construct the SOAP Request Message

- Create a SOAP XML request that specifies the action you want to perform.
- Include necessary parameters and data.
- Ensure the message follows proper XML formatting.

Step 2: Send the SOAP Request from Your Plugin

- Use JavaScript to send the SOAP request using fetch() (recommended) or XMLHttpRequest.
- Specify the request method (POST) and headers.

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Step 3: Process the Response

- Retrieve the API response, which is usually in XML format.

- Extract the required information using JavaScript.

Step 4: Ensure Security and Proper Setup

- Check Cross-Origin Resource Sharing (CORS) restrictions—SOAP API requests may be blocked by browsers. If the SOAP API you are trying to access resides on a different domain than your Oracle Fusion Field Service plugin's host, you will likely encounter CORS issues. Browsers restrict web pages from making requests to different origins for security reasons.

- Use secure authentication methods such as OAuth or API keys.

Resolve Cross-Origin Resource Sharing (CORS) restrictions

If the plug-ins are hosted externally:

1. Navigate to **Configuration > Application > Additional Resources**.
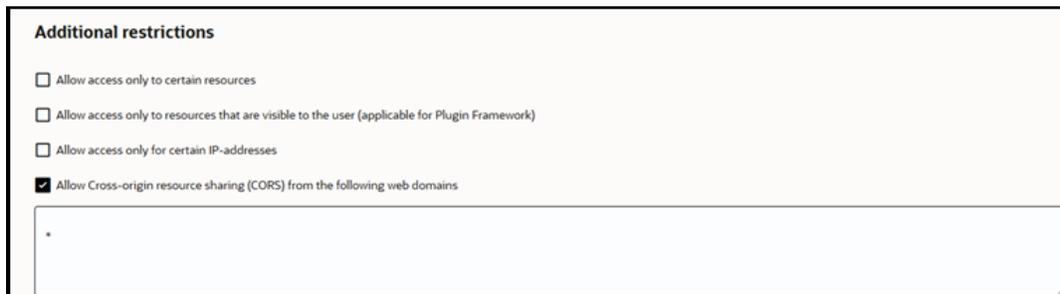
2. Select **Allow Cross-origin resource sharing (CORS) from the following web domains** and provide the domain of the server on which the plug-ins are hosted.

What is the recommended approach in Oracle Field Service to execute Set Property message steps against the original activity specifically when a started activity is subsequently suspended?

The recommended approach in Oracle Fusion Field Service to execute **Set Property** message steps against the **original Activity ID (AID)** when a started activity is subsequently **Suspended** involves the following steps:

1. **Set Property on Activity Start**
   - When the activity starts, configure a **Set Property** message steps triggered by the **'start' event**.
   - Apply the property directly to the original activity, ensuring it remains associated.

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2. **Ensure Property Retention on Suspension**

   ◦ Since the original activity retains properties set at the start, subsequent **Set Property** message steps triggered by **Suspend** can interact with the same property.

   ◦ This ensures workflows relying on suspension events function as expected.

3. **Optional Cleanup or Modification**

   ◦ Depending on business needs, configure another **Message step** triggered by **Complete or not-done** to reset or remove the property.

   ◦ This helps maintain data integrity and ensures the property is only active during necessary states.

What are the steps to block push notifications for future scheduled periods?

You can block push notifications for activities that are either not yet scheduled or are scheduled for a future date.

Block Notifications for Future Routed Dates

1. Navigate to the **Configuration > Message Scenario** and then open the specific Message Scenario responsible for the push notifications you want to control.
2. Locate the step within the Message Scenario that sends the push notification.

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3. **Configure the Settings tab:**

   a. Open the **Settings** tab for this message step.

   b. In the **Notification time** section, specify the **Sending time** option. Set the **Sending time** to **day of route**. This ensures the notification is primarily considered for sending on the day the activity is scheduled.

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4. **Configure a Blocking Condition for Future Dates.**

   a. Go to the **Blocking Conditions** tab of the message step and then click **Add new**. The Add Blocking Condition tab appears.

   b. In the Condition to block message section, in the **Field** list, select **"Calendar Days from Activity Assignment"** (`[calendar_days_from_activity_assignment]`). This property calculates the number of calendar days between the current date and the activity's assignment date.

   c. In the **Condition** field, select **>=**.

   d. In the **Value** field, enter **1**. This will block the notification if the activity's assignment date is one or more days in the future compared to the current date at the time of sending.

   e. In the **Moment of check** field, select this to **message sending**. This is crucial as it evaluates the condition right before the notification is about to be sent, ensuring it considers the current date.

   f. In the **Set message final status** section, select **Status (Result).** Choose a final status for the message when this condition is met (For example, **Failed** or **Obsolete**).

   g. In the **Description** field, add a description Block notification for future routed activities.

   h. Click **Add**.

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5. **Add Blocking Conditions for Route Activation**
    a. Go to the **Blocking Conditions** tab of the message step and then click **Add new**. The Add Blocking Condition tab appears.

    b. In the **Field** list, select a property **Route Activated** indicating if the route is activated.
    c. In the **Condition** field, select **<=**.
    d. In the **Value** field, enter **false** or the value representing a deactivated route.
    e. In the **Moment of check** field, select **message sending**.
    f. In the **Set message final status** section, select **Status (Result).** Choose a final status for the message when this condition is met (For example, **Failed** or **Obsolete**).
    g. In the **Description** field, add a description Block notification if route is deactivated.
    h. Click **Add**.

Blocking Notifications for Unscheduled Activities (Example: for a 9 PM Process)

1. Navigate to the **Configuration > Message Scenario** and then open the Message Scenario that runs around 9 PM and triggers notifications related to the next day's schedule or pending activities.
2. Locate the step responsible for sending these notifications.

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3. **Add a Blocking Condition for Unscheduled Activities:**
   a. Navigate to the **Blocking Conditions** tab.
   b. Click **Add new**. The Add Blocking Conditions tab appears.

   c. In the **Field** list, select **Activity scheduled?**.
   d. In the **Condition** field, select **Is empty**.
   e. In the **Moment of check** field, select this to **message creation and message sending**. This is crucial as message creation might prevent the message from even being generated for unscheduled activities, while message sending provides a final check.
   f. In the **Set message final status** section, select **Status (Result).** Choose a final status for the message when this condition is met (For example, **Failed** or **Obsolete**).
   g. In the **Description** field, add a description Block notification for unscheduled activities.
   h. Click **Add**.

How can I modify the icons and text of a plug-in tile?

You can implement a flexible flow for the buttons of a plugin on the Landing Page. You can change the icons on the buttons individually, or all at once. The icon can be changed when the Oracle Fusion Field Service Core Application is opened ('initEnd'), after plugin is closed ('close'), or when a plugin gets new data in the background mode ('sleep'). See the Example of Changing Buttons in a Plug-in topic to understand how it works.

List of all buttons that are configured for a plugin is sent to the plugin in the 'buttons' field of the 'init' message. This field is a list of objects that contain the 'buttonId' and 'params' fields. buttonId is the 'context layout item id' of the button. 'params' is an object that represents the parameters that are configured for the corresponding context layout item.

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The 'open' message contains the buttonId and openParams fields. buttonId is the 'context layout item id' of the button that the user clicks to open the plugin. openParams contains the parameters that are configured for this button.

If a plugin is opened by sending the backScreen: "plugin_by_label" from another plugin, the buttonId and openParams fields are sent in accordance with the backPluginButtonId param of the 'close' message. If the backPluginOpenParams field of the 'close' message contains the key, which is already configured for the button, the openParams field contains the value that's sent in backPluginOpenParams.

If backPluginButtonId was not set, the 'open' message doesn't contain the buttonId and openParams fields. This table shows the data in the 'init', 'open' and 'close' messages that is used for changing appearances:

Message Type	Field	Description
init	buttons	List of objects that contain the 'buttonId' and 'params' fields. • buttonId: Context layout item id of the button. • params: Object that represents the parameters, configured for the corresponding context layout item.
open	buttonId	Context layout item id of the button that the user clicks to open the plugin.
	openParams	The parameters that are configured for this button.
close	buttonId	Context layout item id of the button that the user clicks to open the plugin.
	openParams	The parameters that are configured for this button.
	backPluginButtonId	

init Message

```
{
"apiVersion": 1,
"method": "init",
"attributeDescription": {
"aid": {
"fieldType": "field",
"entity": "ENTITY_ACTIVITY",
"gui": "text",
"label": "aid",
"title": "Activity ID",
"type": "string",
"access": "READ_WRITE"
}
},
"buttons": [
{
"buttonId": "17155",
"params": {
"defaultScreen": "order-part",
"someOptions": "{showCart: true}"
}
},
{
"buttonId": "17156",
"params": {
"defaultScreen": "search-parts"
}
```

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```
      }
    ]
  }
```

open Message

```
{
"apiVersion": 1,
"method": "open",
"entity": "activityList",
"resource": {
"pid": 8100059
},
"activityList": {
"4225376": {
"aid": "4225376"
}
},
"inventoryList": {},
"buttonId": "17155",
"openParams": {
"defaultScreen": "order-part",
"someOptions": "{showCart: true}"
}
}
```

close Message: Navigate to Another Plug-in

```
{
"apiVersion": 1,
"method": "close",
"backScreen": "plugin_by_label",
"wakeupNeeded": false,
"backPluginLabel": "sample_plugin",
"backPluginButtonId": "17155",
"backPluginOpenParams": {
"someOptions": "{ anotherOption: 123 }",
"thirdParam": null
}
}
```

open Message: Navigated from Another Plug-In

```
{
"apiVersion": 1,
"method": "open",
"entity": "activityList",
"resource": {
"pid": 3000001
},
"activityList": {},
"inventoryList": {},
"buttonId": "17155",
"openParams": {
"defaultScreen": "order-part",
"someOptions": "{ anotherOption: 123 }",
"thirdParam": null
}
}
```

close Message: Update Icons

```
{
"apiVersion": 1,
"method": "close",
"backScreen": "default",
"wakeupNeeded": false,
"buttonsIconData": {
"17156": {
```

```
    "color": "highlight",
    "text": "123",
    "image": {}
    },
    "17155": {
    "color": "default",
    "text": null,
    "image": {}
    }
    }
}
```

How do I assign resources to a team and support shared vehicle inventory?

You can assign mobile workers to a team using the Assign to Team option. This is often used to manage teamwork activities, where one mobile worker assists another for a specific job. This method can also be used to enable shared access to specialized vehicle inventory and tools.

Assigning Mobile Workers to Teamwork Activities

To assign a mobile worker as an assistant:

1. Select the Resource who will be the assistant from the **Resource Tree**.
2. In the resource hint, click **Assign to Team**.

   The **Assists to** context menu appears and displays the hierarchy of the resource tree up to the specific mobile worker that you can select as assisting. If you search for a resource, the search results display the matching resources, sorted in alphabetical order.

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3. On the **Add Activity** page, add assisting as an activity. Select the duration, time slot, and position of the assisting activity.

This screenshot shows the **Add Activity** page:

4. Click the Assists to Resource field to display the **Assists to resource** dialog box:
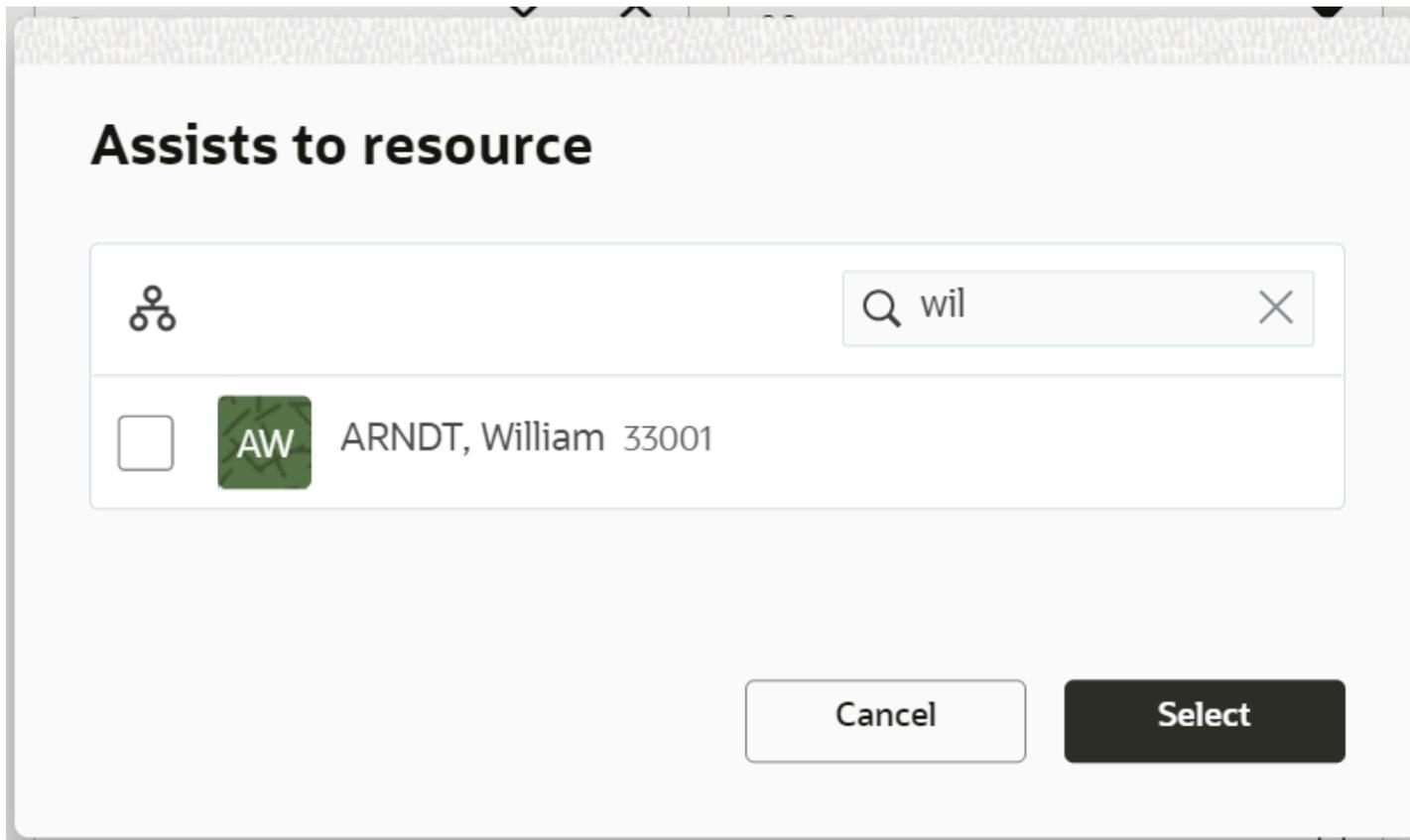
5. Choose one.
- o Use desired filters if necessary.
- o Type the resource name or ID in the search field.

6. Select your desired resource.

Descriptions of the fields on the **Assign resource to team** dialog box are listed below:

- o **Assists to**: Select the pencil to search for your desired resource. Start typing the name of the resource in the search field that the selected resource will be assisting (the Team Leader). the application searches and brings up resource options as you type. Or, you can click the name of the resource in the resource tree and it fills in the **Assists** to field.
- o **Position in Route**: Select the position of this activity in the route. You can select beginning of route, between other scheduled activities; end of route, or as a not ordered activity.
- o **Duration**: Enter the length of time this teamwork assignment will last by using the drop-down lists for hours and minutes. The initial duration is based on the assistant's calendar for that day, without consideration for what other activities might already be on the route (it's maximum amount of whole hours for the shift). This time is rounded up to the equivalent of whole hours. You can adjust the duration as needed.
- o **Time Slot**: Time Slot refers to a time window within which the teamwork must begin. If a time slot is configured, the duration begins within that window, unless a prior activity on the route pushes the

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teamwork to start past the defined window. The default is all day, but you can change to reflect a specific time slot. Click **Time Slot** to select the time slot in which you want this activity to be performed.

- ○ **Activity type**: Select the teamwork Activity Type from the drop-down list.

- ○ **Repeating Activity**: If this is repeating Teamwork, select **Repeating Activity**. You can indicate whether this Teamwork repeats daily or weekly and on which days or weeks it must repeat. The days and duration of repeating teamwork is based on when you created the activities. Changes made to a team leader's calendar or shift don't update the assistant's repeating teamwork activities. This screenshot shows the Repeating Activity section:
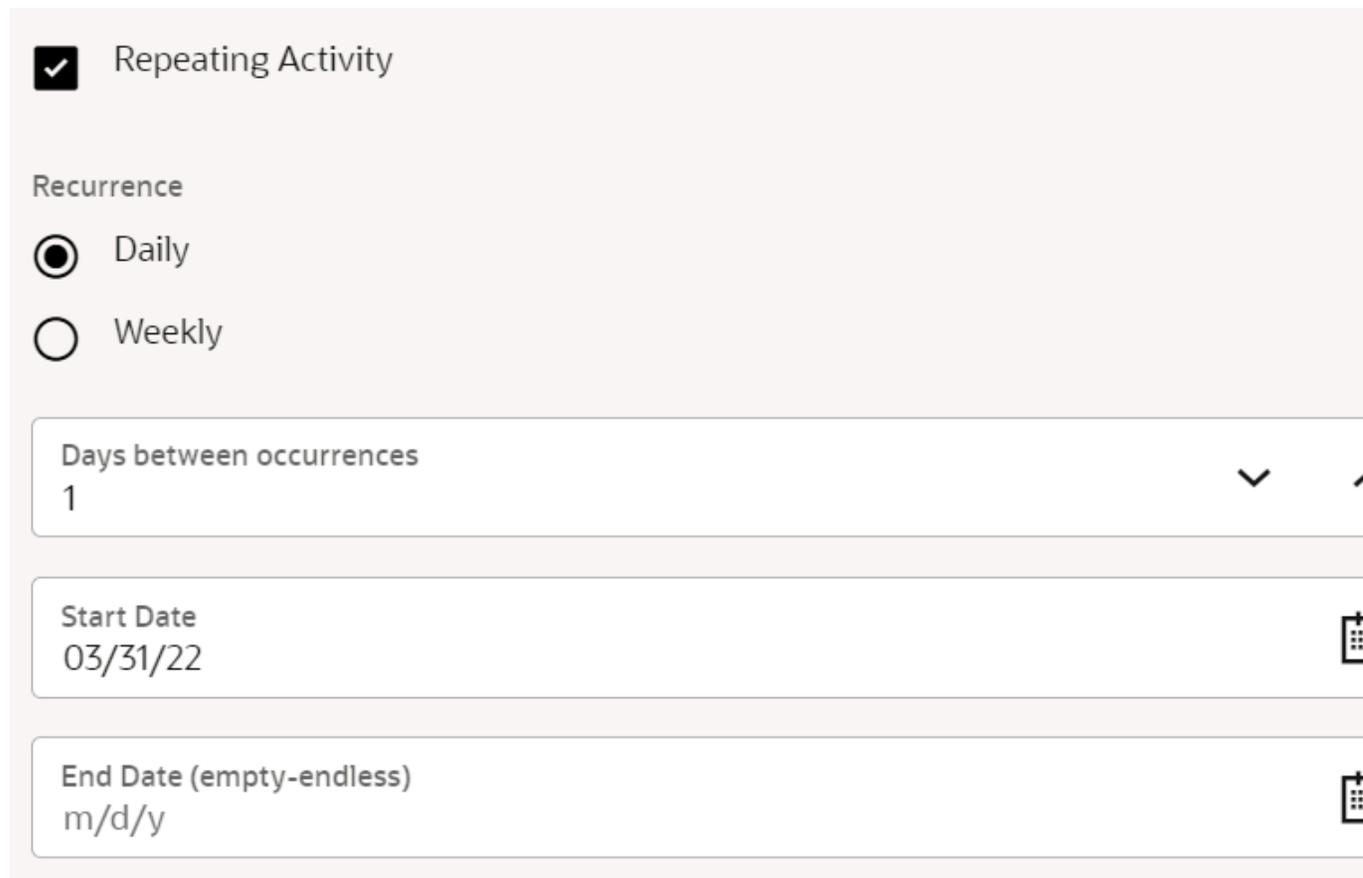
The **Assists to field** populates.

7. Once you've completed all required information, click **OK**.

Teamwork appears in the Assistant's work queue, and the **Resource Tree** indicates that the Team Leader is being assisted.

Using Teamwork to Share Inventory and Tools Across Resources

In some operational scenarios, specialized vehicles, such as trucks equipped with tools or parts, are shared among multiple mobile workers. These vehicles aren't assigned to a specific mobile worker but might support different mobile workers on different days.

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To support this, configure the truck as a resource and assign mobile workers to it using teamwork activities. When a mobile worker assists a vehicle resource:

- They temporarily gain access to the truck's inventory.
- They might also inherit qualifications (skills) assigned to the truck.

This approach supports inventory access without needing to reassign or transfer inventory permanently. It enables flexible vehicle usage while maintaining accurate inventory tracking.

To implement this:

1. Set up the truck as a resource (ideally in a separate vehicle bucket).
2. Use **Assign to Team** to link the mobile worker to the truck for the required period.
3. Define the appropriate **Activity Type** and **Duration** based on the planned usage.

How do I troubleshoot visit bundling errors?

Visit bundling in Oracle Fusion Field Service lets you group multiple activities into a single visit based on a shared bundling key. This approach helps reduce travel time and ensures related tasks are assigned to the same mobile worker in sequence. Bundling behavior is controlled through routing plan settings and can be fine-tuned using policies such as **Default** or **All or None**. If routing fails to assign bundled activities, you might encounter errors that point to conflicts in configuration or constraints.

6028 Unable to fit bundling policy constraints

If you encounter the error **6028 Unable to fit bundling policy constraints** during a routing run, it means that Routing was unable to assign all activities in a bundle to the same resource and day, as required by the selected bundling policy. This typically occurs when the **All or None** policy is used.

Common reasons for this error include:

- Bundle duration exceeds the working hours of the resource, including any permitted overtime.
- Skills, zones, or resource preferences prevent one or more activities in the bundle from being assigned to the same resource.
- Breaks such as lunch occur within the bundled time and can't be shifted.
- Incorrect bundling key configuration includes incompatible activity types or unintended activities.
- Other constraints such as required inventory or prohibited resource settings also impact routing decisions.

How to resolve the issue:

- Switch the bundling policy from **All or None** to **Default** in the routing plan to allow partial bundling. This helps identify which specific activities can't be routed together.
- Verify the total duration of the bundled activities and compare it against the resource's working time.
- Check activity eligibility to ensure all bundled activities share compatible skills, zones, and preferences.

Use the **All or None** policy only when the entire bundle must be routed together without exception. If some activities can remain unassigned due to constraints, the **Default** policy offers more flexibility by allowing partial assignment based on what fits into the mobile worker's route.

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How do I customize the built-in debrief plugin in Oracle Fusion Field Service?

You can change the code for a built-in Oracle Fusion Field Service standard plugins to suit your business requirements and upload it back as a Hosted plugin.

> **Note:** If you change the code for a plugin, the plugin becomes your custom plugin and it will no longer be supported by Oracle.

1. Click **Configuration** > **Forms & Plugins**.
2. Click **View** to search for the Standard plugin for which you want to change the code.
3. Click the actions icon and then click **Edit**.
4. On the **Edit Plugin** page, click **Download Source** and download the source files to the required folder.
5. Unzip the files and change the code as required.
6. Follow instructions in the README.md and create an archive to upload the plugin back as a Hosted plugin.
7. Follow the instructions in the Add a Hosted Plugin topic and add the modified plugin as a new hosted plugin.
8. Add a button for the plugin on the required page.
9. Open the plugin and test your scenarios.

How do I configure the Oracle Fusion Field Service Maintenance Accelerator to enable debrief data synchronization with Maintenance Cloud?

To record debrief information from Oracle Fusion Field Service and push it to Maintenance Cloud using the Oracle Fusion Field Service - Maintenance Accelerator, use these steps:

1. **Identify Target Properties** – Determine the specific fields or properties in Maintenance Cloud where you need to store the debrief information.

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2. **Check Accelerator Mappings** – Identify the corresponding Oracle Fusion Field Service properties that are linked to the target Maintenance Cloud fields. Then, populate these Oracle Fusion Field Service properties with the necessary debrief information, ensuring it adheres to the expected format.

   - If **already mapped**, identify which Oracle Fusion Field Service properties correspond to the target properties. Ensure that these Oracle Fusion Field Service properties are correctly populated with the required information in the expected format.
   - If **not mapped**:
     - Create new custom properties within OFS to hold the debrief data.
     - Map these newly created OFS properties to the desired target properties in the Maintenance Cloud using the accelerator's configuration.
     - Once mapped, proceed to populate the new OFS properties with the debrief information in the required format.

3. **Data Syncing to Maintenance Cloud** – Ensure the mappings are correctly configured so that information flows seamlessly from Oracle Fusion Field Service to Maintenance Cloud.

4. **API & Integration Checks** – Confirm that API calls and data flows align with the mapping configurations.

5. **Validation & Troubleshooting** – Test the process to verify data accuracy, adjusting if needed.

For more information, refer to the *Oracle Maintenance Accelerator for Oracle Fusion Field Service* Guide.

How can I resolve the issue where the activity moved message displays the date as 3000-01-01?

In Oracle Fusion Field Service, the "3000-01-01" date that appears in message scenarios for moved activities is an **internal system representation for non-scheduled activities**. This date is used by the application to categorize activities that don't have a specific scheduled date or time.

If this display is causing confusion or problems, you can make the message more user friendly by **modifying your message scenarios** within Oracle Fusion Field Service.

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You can create two copies of the message scenario and then

1. Add a blocking condition where **"activity scheduled?"** is **empty** for one scenario.

2. Add a blocking condition where **"activity scheduled?"** is **not empty** for the other scenario.

For non-scheduled activities, you can update the template to display **"Non-scheduled"** instead of **"Date: {date}"** to ensure clarity and avoid confusion.

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How do I synchronize Oracle Fusion Field Service holidays with mobile worker schedules?

There may be certain holidays when it would not be appropriate to send messages to customers. Use the **Holidays** section within Subsystems to set up the dates where certain outgoing messages will be blocked.

You can provide access to the **Holidays** page from the **Configuration** > **User Types** > **Configuration** context layout structure page. You must set this permission for each user type that you want to manage holidays. If you don't configure this item or don't define the visibility, Holidays is visible to the user. If you select the visibility as ReadOnly, Holidays is placed into a view only mode. If you select Read/Write, the user can manage Holidays.

> **Note:** The Holiday configuration is solely intended for managing message scenarios, and is used for blocking messages on the defined holidays if enabled. This ensure that message generation is restricted on designated holidays. It does not affect resource calendars, meaning holidays will not automatically be reflected there. Instead, you must define specific **Non-Working Reasons** entries to represent holidays and manually assign them to resources or Working Schedule definitions based on requirements. For more information, refer to Add a Non-Working Reason topic of the Administering Oracle Fusion Field Service Guide.

How can I integrate Oracle Fusion Field Service with an Oracle application?

You can add an Oracle Integration application to integrate Oracle Fusion Field Service with other applications such as Oracle Service Logistics.

Before you start

Make sure you've configured all the Prerequisites for **JWT User Assertion** based authentication as per this documentation *Prerequisites for JWT User Assertion* (Visit https://docs.oracle.com/en/cloud/paas/integration-cloud/rest-adapter/authentication-support.html#GUID-33BDEC15-CEC5-4535-8C71-FBA1A37BD7A3).

If you've an application that's configured with the Basic auth fields, you can change it to an OAuth based authentication. However, be aware that after you change an application from Basic authentication to OAuth, you can't change it back to Basic authentication.

Here's what to do

1. Click **Configuration** > **Applications**.

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2. On the **Applications** page, click **Add Application**.

The image shows the **Add Application** dialog box.

3. Complete these fields:

> **Note:** To update the values in this dialog box, contact the Oracle Integration administrator.

Field Name	Action
Application Type	Select Oracle Integration from the drop-down list.
Application Name	Enter the name of the application you're integrating. This name will be displayed on the **Applications** page.
Host	Enter the host name of the Oracle Integration environment in the format `servername.oraclecloud.com`.
User Name	Enter the user name used to sign in to the Oracle Integration environment with the ServiceDeveloper role.
IDCS URL	Enter the base URL of the Oracle Identity Cloud Service Admin console in the format `https://example.identity.oraclecloud.com`.
Client ID	Enter the Client ID of the client application you've created in Oracle Identity Cloud Service.
Client Secret	Enter the Client Secret of the client application you've created in Oracle Identity Cloud Service.

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Field Name	Action
Key ID	Provide the Certificate Alias you specified during the certificate import process while setting up the IDCS application. This alias serves as the Key ID. For more information see the *Create a Connection* topic in the Using the REST Adapter with Oracle Integration Generation 3 guide.
Scope	Enter the scope of the Client Application that you've created in Oracle Identity Cloud Service. It must be in the format: `https://` `applicationid.integration.ocp.oraclecloud.com:443urn:opc:resource:consumer::all`

4. Add the private key generated during IDCS Client/JWT assertion step as the private key. This private key is used to configure the Oracle Identity Cloud Service application.

   This option requires clients to generate a private key and certificate pair for the flow to work. You can generate the private key in client's application using tools such as, OpenSSL, keytool, ssh-keygen. For more information, see the *Create a Connection* topic in the Using the REST Adapter with Oracle Integration Generation 3 guide.

5. Click **Test Connection**.

   The connection is tested and errors, if any, are displayed. Fix the errors and test the connection again.

6. Click **Add**.

   The new application is added to the **Applications** page.

How can I enforce mobile workers to complete Debrief?

Enforcing mobile workers to complete debriefs in Oracle Fusion Field Service is crucial for accurate billing, inventory management, and service history. While Oracle Fusion Field Service provides the "Debrief" functionality, making it truly mandatory often involves a combination of configuration, process design, and potentially custom validations or reporting.

Here's how you can approach enforcing debrief completion by configuring a workflow where the steps become available one after the other. This workflow is available only for a specific group of users.

Preconditions:

- The workflow uses only forms, and you have configured all the forms.
- There are four steps within the workflow called Safety checklist, Verify Order, Debrief, and Submit.
- The workflow must work for the Technician user type.

Actions:

1. Add the new workflow and configure a condition using 'user.type IN ('Mobile Worker')'.
2. Add 'Safety checklist' as the first step and accept the default conditions.
3. Add 'Verify Order' as the next step and specify the "Safety checklist is completed' condition in the **Show available when** section.
4. Add 'Debrief' as the next step and specify the 'Verify Order is completed' condition in the **Show available when** section.
5. Add 'Submit' as the next step and specify the 'Debrief is completed' condition in the **Show available when** section.

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Result: This workflow will appear to users assigned with the 'Mobile Worker' user type, and the steps will become available one by one:

1. The first step is available from the beginning.
2. The second step becomes available when the first one is completed.
3. The third step becomes visible when the second step is completed.
4. The last step becomes available when the third step is completed.

How do I use segmentable activities for multi-day tasks?

Segmentable activities are activities that you can carry over to the next day. They're normal activities that are split into segments and managed individually. A *Segmentable activity* contains a set of activities, each representing a single-day task with definite start and end times.

You create a segmentable activity based on the total duration of the activity, number of segments, and the duration for each segment. You must also identify the route or the sequence of the segments in the activity. You can represent segmentable activities graphically and assigned them to one or multiple resources. Segmentable activities have these characteristics:

- These activities also respond to events that occur as the activity progresses.
- Mobile workers receive segments of segmentable activities in their routes and can handle them as regular single-day activities.
- Segmentable activities are represented as separate bars on the Time view, can be assigned to buckets or mobile workers, and support time monitoring and status changes.
- Segmentable activities can be linked with regular activities.
- Segments can be generated and planned for up to 99 days in the future.

How do I configure baseline settings for Routing?

The Routing functionality shows the savings achieved for the selected bucket as the result of Routing runs. This requires setting the average company parameters based on the existing statistics of the company business. In Oracle Fusion Field Service these parameters are called Baseline Settings.

To configure routing parameters:

1. Click **Baseline Settings** to open the list of parameters that need to be configured.
2. Set the following parameters:
    - **Fully-loaded resource hourly cost:** Cost of 1 hour of the resource's work based on the resource's salary, benefits, training, overhead costs, equipment costs or depreciation in US dollars. When the **Time savings view** is selected, this setting is disabled as it has no influence on time savings
    - **Cost per mile:** Cost of one mile of the resource's travel in US dollars (or cost of one kilometer of the resource's travel in your local currency). When the **Time savings view** is selected, this setting is disabled as it has no influence on time savings
    - **Overtime increase:** Resource's hourly cost increase in case of overtime in per cent

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- ○ **Average resource daily work time:** Average time the resource spends on activities performance in a day in hours
- ○ **Average resource daily travel time:** Average time the resource spends on travel between activities in a day in hours
- ○ **Average resource overtime:** Average acceptable overtime per resource in hours
- ○ **Travel speed:** Average speed with which resources travel in miles per hour

How can I ensure readiness for the transition of Oracle Integration and Oracle Fusion Field Service authentication from BASIC to OAuth 2.0?

OIC makes use of IDCS or Identity Domains to authenticate the users and it is same IDCS / Identity Domains which will act as the identity provider for OAuth 2.0 for Oracle Fusion Field Service to OIC integration.

If you've an application that's configured with the Basic authentication fields, you can change it to an OAuth based authentication. For OIC applications with Basic authentication configurations, there's a provision to switch to OAuth 2.0 from the **Modify Application** page. You can choose the authentication type through the Modify Application page and provide the additional details before saving the application update. However, be aware that after you change an application from Basic authentication to OAuth, you can't change it back to Basic authentication.

Refer to the following steps to configure an integrated application within Oracle Identity Cloud Service (IDCS) to enable the OAuth User Assertion flow and issue access tokens for use by Oracle Fusion Field Service.

1. Navigate to the identity domain configuration in IDCS.
2. Select the **Integrated Applications** section from the left pane.
3. Click **Add Application** at the top of the page. The **Add application** dialog box appears.
4. In the Add application dialog box, select **Confidential Application** and click **Launch Workflow**. The **Add Confidential Application** dialog box appears.
5. Provide a name for your new application.
6. Click **Submit**.
7. Next, click **Edit OAuth configuration** to proceed to the **Edit OAuth configuration** step.
8. In the Client Configuration section, select **Configure this application as a client now**.
9. Select the **JWT Assertion** grant type in the Authorization section. Leave all other grant types unchecked. In this example, only one grant type is used, but real integrations may involve multiple grant types for a single application.
10. In the **Client Type** section, select **Trusted**. Trusted clients can generate self-signed user assertions using the Field Service certificate.
11. Import the Field Service signing certificate, which can be downloaded from: **Configuration → Applications → Add Application (OAuth User Assertion support) → Download Certificate.**
12. In the **Allowed Operations** section, optionally select **On behalf of**. This allows the client application to access endpoints the user can access, even if the client doesn't have direct access.
13. In the **Token Issuance Policy** section, select **Add resources** if you want your application to access the APIs of other applications.
14. In the **Resources** section, click **Add Scope**. A list of applications appears in the Add scope dialog box.

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15. Select the scope of the target resource, such as Fusion Applications Cloud Service, and then click **Add**.

The selected application is added to the Resource scope.

> **Note:** If Fusion Applications Cloud Service is not listed as a resource, it indicates that Fusion Service is not linked to the IDCS domain. In this case, you must create the integrated application in the domain linked to Fusion Service.

16. Click **Finish** to complete the creation of the integrated application.

17. After creation, ensure that you activate the newly created IDCS application.

18. Once activated, your application appears as configured and ready for integration.
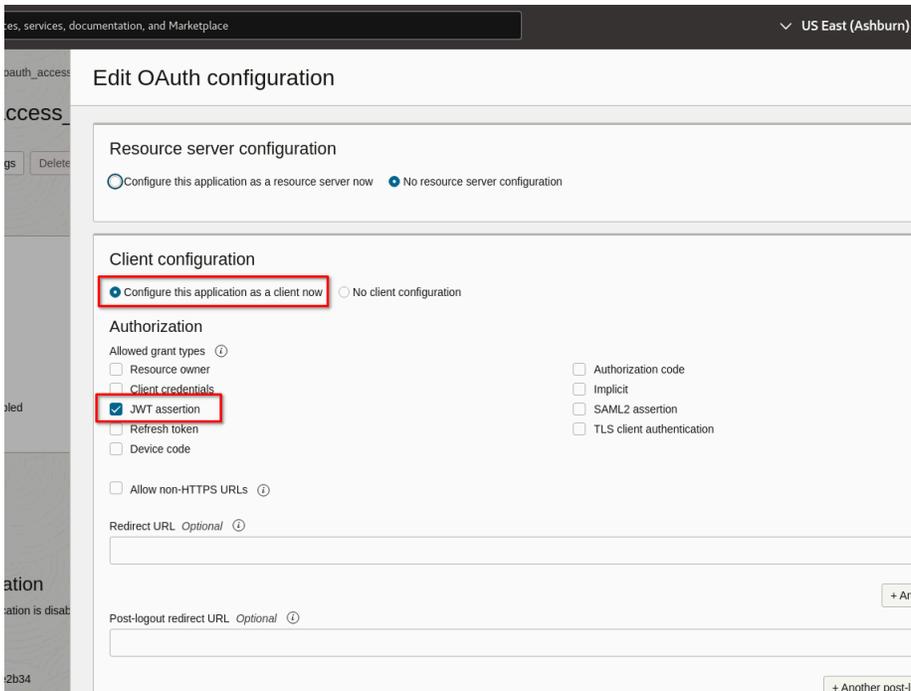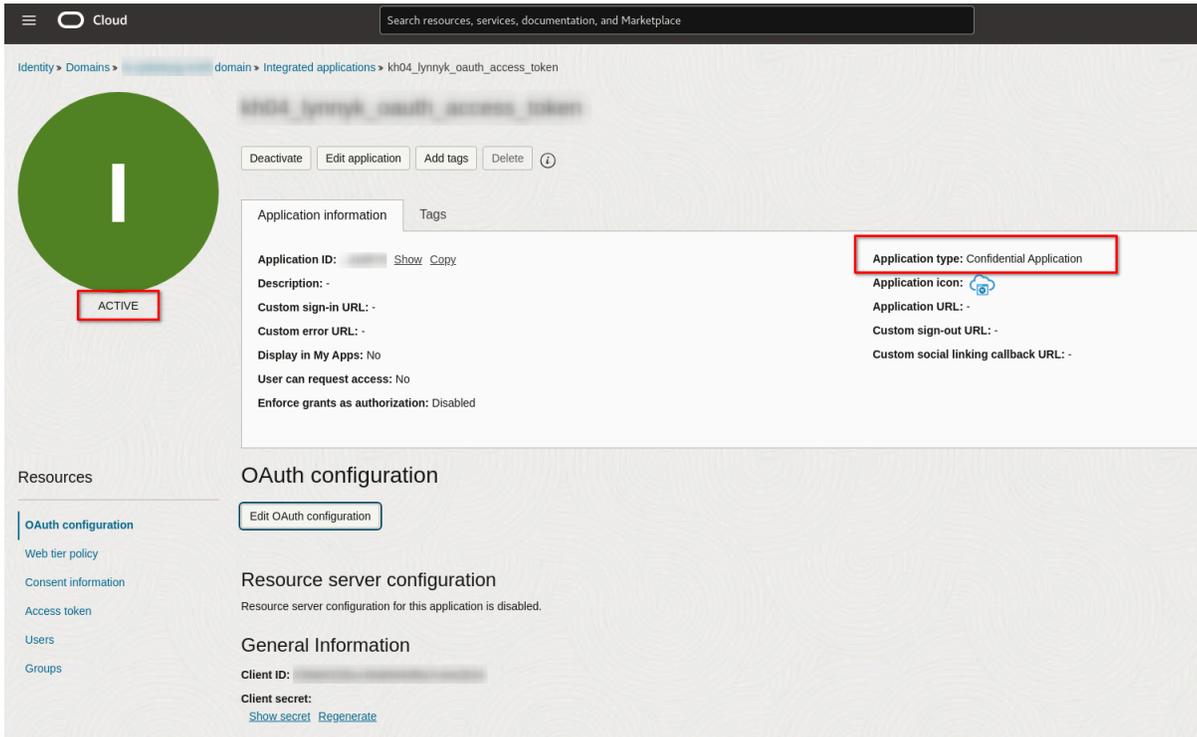
Enter the URL to be called during the logout process. When this URL is called, the resource owner session is terminated.

Client type ⓘ
● Trusted   ○ Confidential

Certificate
[Import certificate] 1 ✕

Allowed operations ⓘ
☐ Introspect
☐ On behalf of

ID token encryption algorithm

None

Select one of the available content encryption algorithms so that ID tokens passed through third parties, such as browsers, are encrypted.

Bypass consent

◯━

Turn on Bypass consent to overwrite the Require consent attribute for all the scopes configured for the application. Turning this option on means that no scope will require consent.

Client IP address
○ Anywhere   ○ Restrict by network perimeter

Token issuance policy

Authorized resources ⓘ
○ All   ● Specific

☑ Add resources
Add resources if you want your application to access the APIs of other applications.

Resources

[Add scope] [Remove]

	Resource	Protected	Scope
☐	Fusion Applications Cloud Service	No	

0 selected

☐ Add app roles
Add the application roles to assign to this application. For example, add the Identity Domain Administrator role so that all REST API tasks available to the identity domain administrator will be available to the ap

19. Now, open your Oracle Fusion Field Service application and follow these steps to create a new OIC application.
20. Click **Configuration** > **Applications**.

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21. On the **Applications** page, click **Add Application**.

The image shows the **Add Application** dialog box.

22. Complete these fields:

> **Note:** To update the values in this dialog box, contact the Oracle Integration administrator.

Field Name	Action
Application Type	Select Oracle Integration from the drop-down list.
Application Name	Enter the name of the application you're integrating. This name will be displayed on the **Applications** page.
Host	Enter the host name of the Oracle Integration environment in the format `servername.oraclecloud.com`.
User Name	Enter the user name which is used to log in to the Oracle Integration environment that has read/write permissions.
IDCS URL	Enter the base URL of the Oracle Identity Cloud Service Admin console in the format `https://example.identity.oraclecloud.com`.
Client ID	Enter the Client ID of the client application you've created in Oracle Identity Cloud Service.
Client Secret	Enter the Client Secret of the client application you've created in Oracle Identity Cloud Service.

Field Name	Action
Key ID	Provide the Certificate Alias you specified during the certificate import process while setting up the IDCS application. This alias serves as the Key ID. For more information see the *Create a Connection* topic in the Using the REST Adapter with Oracle Integration Generation 3 guide.
Scope	Enter the scope of the Client Application that you've created in Oracle Identity Cloud Service. It must be in the format: `https://` `applicationid.integration.ocp.oraclecloud.com:443urn:opc:resource:consumer::all`

23. Add the private key generated during IDCS Client/JWT assertion step as the private key. This private key is used to configure the Oracle Identity Cloud Service application.

This option requires clients to generate a private key and certificate pair for the flow to work. You can generate the private key in client's application using tools such as, OpenSSL, keytool, ssh-keygen. For more information, see the *Create a Connection* topic in the Using the REST Adapter with Oracle Integration Generation 3 guide.

24. Click **Test Connection**.

The connection is tested and errors, if any, are displayed. Fix the errors and test the connection again.

25. Click **Add**.

The new application is added to the **Applications** page.

Why can't I access the Oracle Fusion Field Service Console?

If you are unable to log in or access the console, you may not have the necessary privileges or registration in the Oracle Identity Cloud domain.

If you are an Admin user logged into the **Oracle Cloud Console** using the default domain, follow these steps to ensure proper access.

1. Navigate to the domain settings in your Oracle Cloud Console.
2. Select **OracleIdentityCloudDomain** as your active domain.
3. Click the **Users** tab.
4. Click **Create User** and enter the required details.
5. Now, login to www.cloud.oracle.com.
6. Ensure you use **OracleIdentityCloudDomain** as the domain during login.

How do I remove specific Resource Type options from the Resource Type list?

If you want to prevent users from selecting certain roles, such as **Manager**, **Dispatcher**, or **Admin**, when changing a user's resource type, use the below steps:

1. Open Oracle Fusion Field Service as an admin user.
2. Navigate to **User Types-> Screens**.
3. Under the **Resource, User** tile, click **Edit Resource/User**. The **Edit Resource/User Visual Form Editor** appears.
4. In the form editor, select and open the field named **Resource type**.

5. In the **Value visibility** list, remove the entries for **Manager/Dispatcher/Admin**.

How do I configure forms to generate PDFs?

You create a Form so that Mobile Workers can fill it to capture statutory or business data required for an activity. This is a custom form that's available only for your organization.

1. Click **Configuration** > **Forms & Plugins**.
2. Click **Add Form**.

   The Add Form dialog box appears.
3. In the **General Settings** section, do the following:
   a. In the **English** field, enter a name for the form in English.
   b. Enter names in other required languages.
   c. In the **Label** field, enter a label for the form.
4. In the **Cache the Form for Organizations or User Types** section, select **Configure Offline Caching** to configure forms for offline use. For more information, see *Configure Forms for Offline Use in Plugins*.

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5. In the **Generate PDF** section, select any of the following PDF Options:

a. **Do not Generate PDF Files** : Default. Select this option if you don't want to create PDF files for this form.

b. **Generate PDF for Printing and Sharing**: Select this option to generate PDF files and make it available on the device for printing at customer sites or sharing with clients using other applications.

    i. In PDF Options, when you select **Generate PDF for Printing and Sharing** option, the HTML Template for PDF Generation section appears.

    ii. Click **Attach HTML Template** to attach the template that you want to be used to generate PDFs for printing and sharing.

        Note: Ensure the attached template is an **HTML file** and its size is not more than **500 KB**. Form settings are not editable until a template is attached.

c. **Generate PDF and Upload to OCI Object Storage**: Select this option to generate and automatically upload PDF files to OCI Object Storage.

    i. In PDF Options, when you select **Generate PDF and Upload to OCI Object Storage,** the application requires you to specify the OCI Object Application name.

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ii. In the **Application** drop-down list, select the application connected to Object storage.

iii. Click **Attach HTML Template** to attach the template that you want to be used to generate PDFs.

   Note: Ensure the attached template is an **HTML file** and its size is not more than **500 KB**. Form settings are not editable until a template is attached.

d. **Generate PDF and Upload to Fusion Attachments**: Select this option to generate PDF files upon form submission and attach the files to the associated Service or Maintenance work order in Fusion.

   i. In PDF Options, when you select **Generate PDF and Upload to Fusion Attachments ,** the application requires you to configure the following Attachments property to set up connectivity to storage.

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Generate PDF

The system will generate PDF files using data submitted from this form and either attach them to Fusion work orders, upload them to OCI Object storage or provide them locally on a mobile device.

This functionality is available in iOS and Android installed apps.

PDF Options
Generate PDF and Upload to Fusion Attachments ▼

Application ▼

🚫 This field cannot be empty.
Select the application connected to Fusion API. You can create a new application on the 'Applications' screen.

Fusion Business Object ▼

Select Fusion business object to sync attachments for this property.

Attachment Category ▼

Select a category to classify and secure attachments.

HTML Template for PDF Generation

PDF files will be generated based on the attached HTML template. The template can include branding and should define the layout and fields for the printable document.

You can keep just one template for the form at time. To attach another template you have to delete the previous one.

╋ Attach HTML Template

Maximum file size is 500 KB.

ii. In the **Application** drop-down list, select the application to connect to Fusion API.

iii. In the **Fusion Business Object** drop-down list, select either Service work order or Maintenance work order.

iv. In the **Attachments Category** drop-down list, select a category from Fusion to upload PDF files.

v. Click **Attach HTML Template** to attach the template that you want to be used to generate PDFs.

Note: Ensure the attached template is an **HTML file** and its size is not more than **500 KB**. Form settings are not editable until a template is attached.

> **Note:** If you are using Oracle Fusion Field Service and assigned the following roles:
>
>   o ORA_MNT_MAINTENANCE_MANAGER_JOB – for Maintenance Work Orders
>
>   o ORA_SVC_CUSTOMER_SERVICE_MANAGER_JOB – for Service Work Orders
>
> a. In **PDF Options**, when you select Generate PDF and Upload to Fusion Attachments, the application requires you to configure the following Attachments property to set up connectivity to storage.

> b. In the **Fusion Business Object** drop-down list, select either Service work order or Maintenance work order.
> c. In the **Attachments Category** drop-down list, select a category from Fusion to upload PDF files.
> d. Click **Attach HTML Template** to attach the template that you want to be used to generate PDFs.

6. Click **Add**.

   The Form is saved. The next step is to add elements to the Form.

   Download a Form Template

   You can click the download icon to download the attached form template.

   Delete a Form Template

   You can click the delete icon to delete the attached form template.

What's the best way to hide a plugin for a specific user?

You can hide or modify the visibility of buttons within Oracle Fusion Field Service Cloud by adjusting form and plugin configurations.

1. Navigate to **Configuration → Forms and Plugins**.
2. Click **View** and search for the required plugin.
3. In the plugin list, click the number under **Items Configured**.

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4. Expand all groups and browse to find the interface where you want to hide the button.
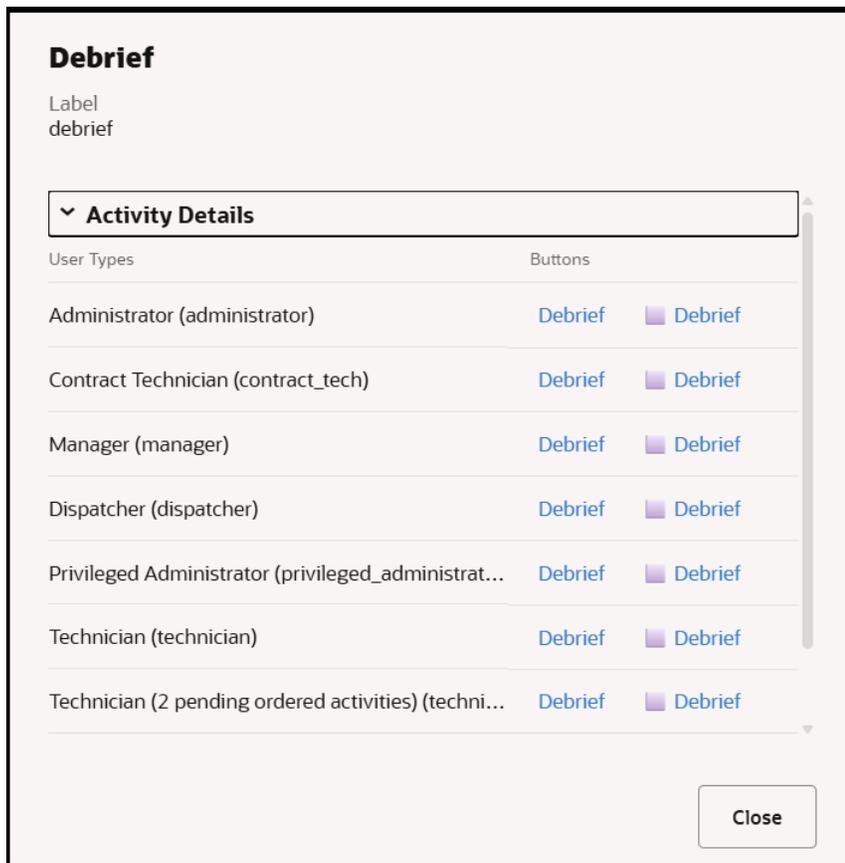
5. Select and click the specific button you want to hide or modify. For example, to hide or remove the button **Debrief** under the **Activity Details** page for the **Contract Technician** user type, select and click Debrief. The **Activity Details Visual Form Editor** appears.

6. Highlight and click the selected button in the configuration panel.

7. You have the following options to customize the visibility:

   1. ○ **Remove Item** – Completely removes the button for all users of this user type.

      ○ **Adjust Visibility Conditions** – If there are multiple conditions, you can remove one or more.

      ○ **Edit a Condition** – Click the condition type (e.g., RO) to modify it.

      ○ **Add a New Condition** – Define additional visibility rules as needed.

8. After making the required modifications, click **Publish** to publish the changes and then refresh your browser to see the updates take effect.

How can I confirm inventory items are added after completion?

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> **Note: Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Workflow Manager*. We recommend that you update your bookmarks accordingly.

Required inventory is the inventory necessary to complete a certain activity. If any required inventory is defined for an activity, such required inventory is regarded as one of the criteria of activity assignment to resources. The required inventory is checked against the resource's inventory to see whether the resource's inventory is sufficient to complete the activity. If the resource has no required inventory in their pool, the activity will not be assigned to such resource.

You can use the installation of required inventory as a workflow step. The application checks when all the required inventory items are installed and show the corresponding step within a workflow as completed.

1. Click **Configuration** > **Workflow Manager**.
2. Click the workflow for which you want to add install required inventory as a step.
3. Click the plus icon (**Add new**) in the right pane.
4. Complete the fields on the **Add step** dialog box with the values given this table:

Field	Action
This step will open	Select Standard action screens.
Screen	Select Inventory [list_inventories].
Position in workflow	Select the position of the step within the workflow. If you are adding the first step, 'First' is automatically populated. You can change the order of the steps on the Workflow page as well.
Name translations	Add the name of the step in the languages that you prefer. This name is displayed on the workflow panel.
Show available when	Select the visibility condition for the step. The condition can be based on a field or property, or a step in the workflow. This step is visible for end users only when the condition is satisfied. **Always available (no conditions)** means that a step is displayed for end users initially.
Show completed when	**Required inventory in (equal) installed** is displayed by default. If you want the step to be completed when the resource completes the inventory checklist, add the condition **Inventory checklist in (equal) completed**.

5. Click **Add**.

   The step is added.
6. Click **Save**.

   The workflow is saved. When a resource marks the inventory checklist as complete, the step is marked as complete.

How do I configure Oracle Fusion Field Service for using multi-attachment property with OCI?

Oracle Cloud Infrastructure (OCI) Object Storage is available on the application configuration page in Oracle Fusion Field Service to store the necessary parameters to connect to OCI object storage from Oracle Fusion Field Service. OCI Object Storage can be used for storing attachments, such as images, uploaded from Oracle Fusion Field Service.

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Prerequisites to enable attachment creation between OCI and Oracle Fusion Field Service:

- **OCI (Oracle Cloud Infrastructure)**: Application to gather authentication and storage details.

- **Oracle Fusion Field Service**: Application where the integration settings are applied.

To generate the required API keys and identity information from OCI

1. Open OCI and use the search bar to locate **My Profile**.
2. Under your profile, navigate to **API Keys > Add API Key**.
3. Click **Download Private Key**, then click **Add**.
4. After key creation, note down the following:
   - **Fingerprint**
   - **Tenancy OCID**
   - **Region**
   - **User OCID**

To access storage information needed for configuration:

1. In OCI, search for **Buckets**.
2. Open an existing bucket or create a new one.
3. Capture the following information:
   - **Bucket Name**
   - **Namespace**

To configure the Oracle Fusion Field Service application with information from OCI:

1. Navigate to **Oracle Fusion Field Service > Configuration > Applications > Add Application**.
2. Select the appropriate application type.
3. On the configuration page:
   - Fill in fields using the data collected from OCI
   - **Upload the private key**
   - Click **Test Connection**, then click **Add.**

To set up required properties in Oracle Fusion Field Service

1. Navigate to **Oracle Fusion Field Service > Configuration > Properties > Add New**.
2. Enter all required fields. For more information, see the Create an Attachment Property to use with Oracle Cloud Object Storage in Administering Oracle Fusion Field Service Guide.
3. Add the attachment property to the relevant page (for example: Activity Details).

Currently, attachments are accessible through the Oracle **Field Service mobile app** for **iOS** and **Android** platforms.

Security practices to be considered: For enhanced security:

- Create a dedicated user with restricted permissions.

- Generate API keys under this user via: **OCI > Identity > Domains > [Your Domain] > Users > [Your User].**

- The process for integrating with Oracle Fusion Field Service remains the same; only user credentials change.

How can I configure recurring non-working days based on specific week numbers and weekdays instead of using fixed calendar dates?

In addition to shifts, you may apply non-working time to certain work schedules. This could accommodate work schedules that include non-standard work time such as four-day workweeks or even holidays that occur on the same day every year. Keep in mind that many of the non-working reasons (illness, bereavement) tend to be used more frequently on a one-off basis for individual resources as days off occur.

1. Click **Configuration**.
2. In the **General** section, click **Calendars**.

    The **Work Schedules** page appears.
3. Under the **Action** column, click the **Items** icon to the right of the work schedule for which you want to add a non-working time.

    The **Work Schedule Item** page appears.
4. Click the **Add New**.

    The **Add Work Schedule Item** page appears.
5. In the **Item Type** section, click **Non-Working Time**.
6. In the **General** section, complete these fields:

    This table describes the fields when you add a non-working reason for a work schedule:

Field	Description
Shift Type	Select from **Regular** or **On Call** depending on the shift type for which you want the non-working reason.
Non-Working Reason	Select the applicable reason from the drop-down list. This list is populated from entries in **Company Settings**, **Non-Working Reasons**.
Start Date | End Date	Select the date range that this non-working time is valid for. Open-ended dates imply that the non-working reason is indefinitely associated with the work schedule.
Comments	Enter any comments about the non-working reason. If **Other** is selected as a reason, then the **Comments** field becomes mandatory.
Recurrence	Select the appropriate option from the drop-down list. Options are: o Repeat daily – Allows for inclusion of the shift such as every other day or every 3rd day. This option requires a value in the field labeled every _____ day(s). o Repeat everyday – The shift applies to everyday without exception. o Repeat weekly – Allows for shifts that are used on a regular weekly pattern. Select the days that apply to this particular shift using the check boxes for the individual days. Indicate the frequency of this pattern weekly by adding a value to the every _____ weeks(s) field.

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Field	Description
	o Repeat yearly – Select a date range for the shift that will recur every year. **Note:** When using the Repeat yearly option for holidays, remember it applies to a specific date. For example, setting a holiday for February 15th will ensure it recurs on February 15th every year. It won't automatically calculate dates for dynamic holidays. You'll need to manually update the date each year for these types of holidays.
Date Selections	Enter the date selections based upon the previous selection. Dates are inclusive.

7. Click **Add**.

The new non-working reason and period is added to the work schedule.

What should I do if I need to keep historical data or old files for more than two years?

Oracle Field Service is designed for speed and efficiency in managing your current and upcoming field operations. Storing an extremely large amount of historical data can slow down the system. To ensure the best performance, Oracle Field Service prioritizes recent operational data.

The way your files are stored and how long they remain in Oracle Field Service depends on the specific version of Oracle Field Service your organization uses:

- **If you are using a Oracle Field Service environment**:

You can use the **File properties** feature to attach documents directly to records within Oracle Field Service.

Note: These files are generally kept within Oracle Field Service for up to two years. If you need to keep them for a longer period, you must use the **Daily Extract** feature to download and store them outside of Oracle Field Service. This lets you save them in your own secure storage for as long as your organization requires.

- **If you are using Oracle Fusion Field Service environments:**

File properties are no longer used in Oracle Fusion Field Service environment.

Instead, your files are managed through *Fusion Attachments* or by leveraging *Object Storage*. These are robust solutions designed for more extensive and long-term storage of your documents or attachments.

What functionality does the Oracle HCM application provide when added to Oracle Field Service?

You can create the resources in Oracle Fusion Field Service through the resource management user interface or through REST APIs. You can now extract the employee details from Oracle HCM Cloud and update the details in Oracle Fusion

Field Service automatically using Oracle Integration. The integration is available as a sample recipe in Oracle Integration. You can download and use the 'Oracle HCM - Oracle Fusion Field Service I Create and manage OFS resources' recipe as a quick start reference for your integrations. You can also extend this recipe based on your specific business requirements.

> **Note:** To integrate Oracle Fusion Field Service with Oracle HCM Cloud, you must have a valid license for Oracle Integration, Oracle HCM Cloud Release 13 or later, and Oracle Fusion Field Service Update 21A. The integration is only from Oracle HCM Cloud to Oracle Fusion Field Service. This means, you can only extract the details from Oracle HCM Cloud and update it in Oracle Fusion Field Service. If you change the resource details in Oracle Fusion Field Service, it will not be updated in Oracle HCM Cloud automatically.

The 'Oracle HCM - Oracle Fusion Field Service I Create and manage OFS resources' recipe provides these key capabilities:

- Bulk-extract the field mobile worker employee details from Oracle HCM Cloud to Oracle Fusion Field Service.
- Extract employee work schedule details from Oracle HCM Cloud and update them in Oracle Fusion Field Service in a scheduled manner.
- Create a new resource in Oracle Fusion Field Service when a new employee is created in Oracle HCM Cloud.
- Update a resource in Oracle Fusion Field Service when an existing employee details are updated in Oracle HCM Cloud.
- Suspend a resource in Oracle Fusion Field Service when an employee is deleted in Oracle HCM Cloud.
- Fetch employee login details from Oracle HCM Cloud and update the details in Oracle Fusion Field Service. The integration fetches only the user's login name and not the password.

To install the HCM accelerator from Oracle Integration, see the Integrating with Oracle HCM Cloud Using an Oracle Integration guide.

How can I search activity using Activity ID?

By default, Oracle Field Service does not allow direct searching using the Activity ID (AID) field. For more information on the list of unavailable fields for filtering, refer to *Search for Activities using Ad hoc Filter* topic.

Step-by-Step Procedure

This topic outlines the steps to enable Activity ID search by storing the Activity ID in a custom property when the activity is created.

Step 1: Create a Custom Integer Property

This property will store the Activity ID for searching.

1. Navigate to **Configuration**, click **Properties**.
2. Click the **Add** button to create a new property.
3. Configure the new property with the following details:
   - **Name:** Enter a descriptive name (e.g., `Searchable_AID` or `Custom_Activity_ID`).
   - **Type:** Select Integer.
   - **Label:** Provide a user-friendly label that will appear in the UI.

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4. Click **Save** to create the property.

Step 2: Configure a Message Scenario Step to Set the Property

This step automatically populates your new custom property with the AID when an activity is created.

1. Navigate to **Configuration**, click **Message Scenarios**.
2. Locate and select the Message Scenario that is triggered by the **Add activity** event.

    o   *If no such scenario exists or you need a dedicated one:* Click **Add** to create a new scenario. Set its trigger to Add activity.
3. Within the selected Message Scenario, click the **Add New Scenario Steps** button.
4. In the **Settings** tab, configure the properties as shown below:

5. Configure the **Patterns** tab as shown below:

6. Configure the **Blocking Conditions** tab as shown below:

7. Click **Save** for the Message Scenario to apply the changes.

Step 3: Add the Custom Property to Activity Search Fields

This makes your new property visible and usable in the activity search interface.

1. Navigate to **Configuration**, click **Business Rules**. click on **User Types**.
2. Drill-down to the **Search** section and then locate the Activity Search Fields list.
3. Click the **Add** button to add a new search field.
4. From the drop-down list of available properties, select your custom integer property (for example, `Searchable_AID`).

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5. Click **Save** to apply the changes.

Once the above configuration steps are complete, you will be able to search based on your newly added custom property (for example `Searchable_AID`).

How can I assign mobile workers a temporary work zone?

You can assign a temporary work zone to a resource, allowing them to perform tasks outside their standard work zone. During the specified period, the temporary work zone takes precedence over the resource's regular work zones. In Oracle Field Service, each mobile worker (resource) can be assigned to only one bucket or organizational unit at a time within the hierarchy; assigning a resource to multiple buckets simultaneously is not supported. If your business operations require coverage in multiple areas, consider options such as temporary assignments, reallocating resources, or adjusting processes to suit your needs.

1. Select the appropriate resource from the Resource Tree.

2. On the Resource Info page, click **Work Zones**.

The **Resource Work Zones** page opens.

3. Click **Add**.

The **Add Work Zones** dialog box appears.

4. Select the **Work Zone** that you want to assign temporarily to the resource.

5. Select the **Temporary** check box.

6. Adjust the **Date Start** and **Date End** dates.

Date End is mandatory for temporary work zones.

7. Click **Add**.

The work zone is added.

Results:

There is no need to remove temporary work zones once the date has passed. They expire on the end date and the normal work zones take precedence. These rules apply to temporary work zones:

- The **End Date** is mandatory.

- You can assign temporary work zones only to resources. You can't assign them to buckets or groups.

- Only the **Everyday** recurrence is available for temporary work zones.

How can I notify the dispatcher when an activity is started but not completed using Message Scenario?

Configuring a scenario step is a process that offers maximum flexibility. The **Add scenario step** and **Modify scenario step** windows contain four tabs from which you can specify the settings related to message generation:

- The **Settings** tab contains the basic parameters of the message generated at a certain scenario step, that is, how, when, and where it should be sent.

- The **Patterns** tab defines the content of the message to be sent.

- The **Conditions** sets the blocking conditions, that is, the conditions under which the message should not be generated at this ste.p

- The **Next steps** tab defines the conditions of the subsequent steps run.

To configure a scenario step:

1. Click **Configuration**.
2. Click **Message Scenarios** under **Subsystems and Integrations**.
   The **Message Scenarios** screen opens.
3. Select the appropriate message scenario from the left panel.

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4. Do one of the following:

- ○ Click the scenario step name or click the action button and select **Modify** to open the **Modify scenario step** window with the Settings tab on top.
- ○ Click **Add new** to open the **Add scenario step** dialog box with the Settings tab on top:

5. Refer to *How do I configure the Settings tab?* and complete the fields on the Settings tab.

6. Click the Patterns tab and the type content into the **Subject** and **Body** fields. For information about how the Patterns tab differs for each of the delivery channels, refer to *How do I configure the subject and body of a message in the Patterns tab?*.

7. Click the **Conditions** tab and complete the fields. For information about the Conditions, refer to *How do I define the blocking conditions for a message scenario?*.

8. Click the **Next steps** tab and complete the fields. For more information, refer to Add Next Steps topic.

How can I generate a report that lists all activities that have been started but not yet completed?

The **Activities by Status** report shows the status of each activity within the reporting period. This report displays the number of activities assigned to the selected resource (or resources grouped by their type and final status within selected dates. This report does not include deleted activities.

The Activities by Statuses Dashboard report is displayed for:

- buckets/organizations
- individual resources

You can either view the report details as a pie chart or in a table.

To open the dashboard report, click **Dispatch** and then select **Dashboard**from the drop-down menu. The Activities by statuses dashboard report is represented with a pie chart.

The Activities by statuses dashboard report shows data for the day selected in the calendar. The chart options allow choosing the selected date or the date before it. You can filter to display data for a particular activity type group or for any activity types represented in the list of activities assigned to the selected resource.

This figure shows the Activities by statuses report as a pie chart. The list of statuses are displayed in the Legend.
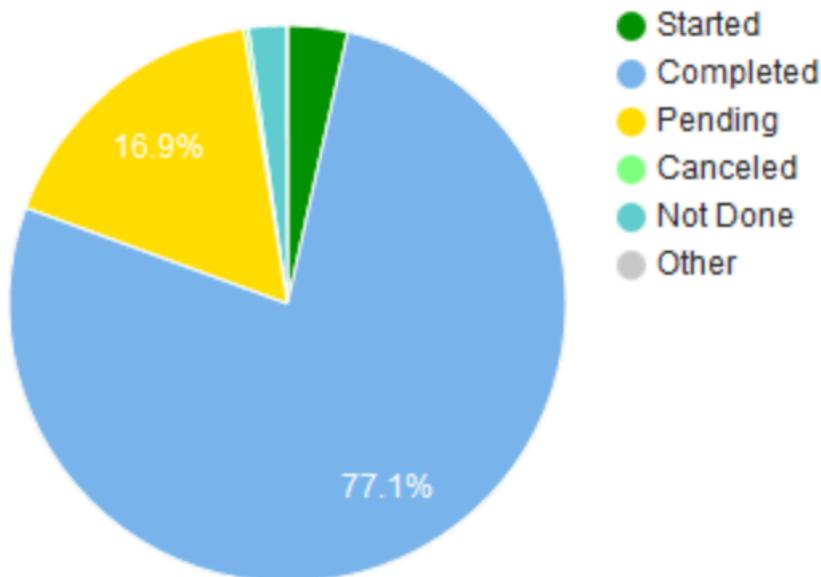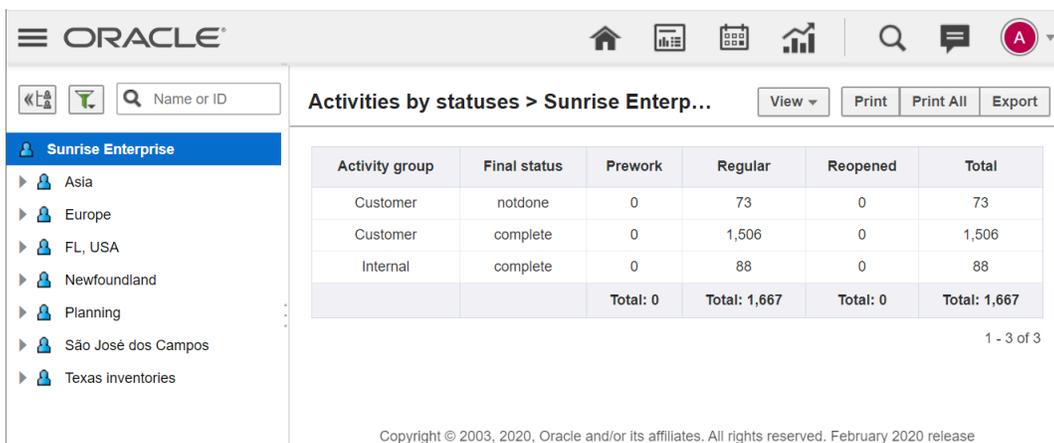
To view the Activities By Status report:

1. Click the navigation menu and select **Dashboards**.

2. Select **Activities by Status** to display the report. There are four types of activities: regular, reopen, activities or pre-work. The **Activities by Status** report displays the following information:

   ○ **Activity group:** Indicates the name of the activity group and decides the number of rows in the report. For example, if there are less number of final statuses in an activity group, the report will have few rows (one for each final status).

   ○ **Final status**—Shows the final status of the job or activity in the current activity group.

   ○ **Prework**—Indicates the number of prework activities for the current activity group and the final status.

   ○ **Regular**—Indicates the number of regular activities for the current activity group and the final status.

   ○ **Reopened** —Indicates the number of reopened activities for the current activity group and the final status.

   ○ **Total:** —Shows the total number of activities for the current activity group and the final status

Results:

This figure shows the Activities by Status report showing the activity group, final status and the total count of prework, regular, and reopened activities.

This table displays the Activities by statuses elements and their description.

Element	Description
Header	Displays the report name and date in parentheses.
Slices	The entire diagram represents all activities assigned to the selected resource on the specified day and is assumed to be 100%. Each colored slice represents the activities of a certain status showing the percentage share of such activities in the whole number. Apart from differentiating the activity statuses in colors, you can also view them as text in the chart hints.
Legend	Statuses of the activities assigned to: • the selected individual resource (if an individual resource is selected in the Resource Tree), or • all resources in the selected bucket/group (if a bucket or group is selected) If activities assigned to the selected resource belong only to some of the statuses existing in the system, the slices and the legend will contain only the statuses of the activities assigned to the resource.

Element	Description
Hint	Activity status, the number of such activities assigned to the resource and their percentage share in the whole number of activities.

How can I show the plugin in language preference of the user?

You can create a plugin in Visual Builder that supports multiple languages. Multilanguage is natively supported in Visual Builder, which lets you build and maintain a single plugin for users speaking different languages. For more information, see *Create a Multilanguage Application in Oracle Visual Builder: Create a Language Switcher*.

1. Add the ofsConnector.js and ofsInitConnector.js files into your plugin as described in the Build Your Application Using Oracle Visual Builder Studio section.
2. Add the following code to the ofsInitConnector file to apply a new language to the plugin:

```
setUserLocale(user)
{
 const currentLocale = window.localStorage.getItem('ofs_plugin_locale');

 const locale = user.locale || user.languageCode || window.navigator.language;

 if (currentLocale !== locale) {
 window.localStorage.setItem('ofs_plugin_locale', locale);
 window.location.href = this.getPluginUrl();
 }

 }
```

You can send the **locale** field through the Plugin API in the init message; the field belongs to the user collection. You can use it to apply the language selected in the Oracle Fusion Field Service UI to the plugin. This code snippet shows the **locale** field in the init message:

```
{
...,
"user": {
 "languageCode": "en",
 "locale": "en-US"
 }
}
```

Related Topics
- init Method

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How do I use the init method in the Plug-In API?

A message with the init method indicates that Oracle Fusion Field Service Core Application has started initializing the plugin.

The init message contains these fields:

```
{
 "apiVersion": 1,
 "method": "init",
 "attributeDescription": {}
}
```

attributeDescription

The attributeDescription field is an object that contains the descriptions of all the properties that are configured for the plugin.

List of all buttons that are configured for a plugin is sent to the plugin in the 'buttons' field of the 'init' message. This field is a list of objects that contains the 'buttonId' and 'params' fields. buttonId is the 'context layout item id' of the button. 'params' is an object that represents the parameters that are configured for the corresponding context layout item. Each enum items of the "aworktype" (Activity type) property contains the "features" object. If the "Enable segmenting and extended duration" option is enabled for the activity type, the "features" object contains the "isSegmentingEnabled" field with a value equal to true.

Example of the init method

```
{
 "apiVersion": 1,
 "method": "init",
 "attributeDescription": {
 "pid": {
 "entity": "ENTITY_PROVIDER",
 "fieldType": "field",
 "gui": "text",
 "label": "pid",
 "title": "ID",
 "type": "string",
 "access": "READ_ONLY"
 },
 "pname": {
 "entity": "ENTITY_PROVIDER",
 "fieldType": "field",
 "gui": "text",
 "label": "pname",
 "title": "Name",
 "type": "string",
 "access": "READ_ONLY"
 },
 "invtype": {
 "entity": "ENTITY_INVENTORY",
 "enum": {
 "NT": {
 "label": "NT",
 "text": "Internet"
 },
 "DT": {
 "label": "DT",
 "text": "Digital Telephony"
 },
```

```
"AT": {
"label": "AT",
"text": "Analog Telephony"
}
},
"fieldType": "field",
"gui": "combobox",
"label": "invtype",
"title": "Inventory Type",
"type": "enum",
"access": "READ_WRITE"
},
"invpool": {
"entity": "ENTITY_INVENTORY",
"fieldType": "field",
"gui": "text",
"label": "invpool",
"title": "Inventory pool",
"type": "string",
"access": "READ_WRITE"
},
"invsn": {
"entity": "ENTITY_INVENTORY",
"fieldType": "field",
"gui": "text",
"label": "invsn",
"title": "Serial Number",
"type": "string",
"access": "READ_WRITE"
},
"aid": {
"entity": "ENTITY_ACTIVITY",
"fieldType": "field",
"gui": "text",
"label": "aid",
"title": "Activity ID",
"type": "string",
"access": "READ_ONLY"
},
"aworktype": {
"entity": "ENTITY_ACTIVITY",
"enum": {
"27": {
"label": "27",
"text": "Multi-type Unwired Installs"
},
"55": {
"label": "55",
"text": "Maintenance"
},
"WH": {
"label": "WH",
"text": "Warehouse Activity"
},
"installation": {
"label": "installation",
"text": "Installation"
},
},
"fieldType": "field",
"groups": [
{
"label": "task",
"text": "Task",
"items": [
"55"
```

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```
  ]
},
{
"label": "teamwork",
"text": "Teamwork",
"items": [
"teamwork_type"
]
},
{
"label": "internal",
"text": "Internal",
"items": [
"WH"
]
},
{
"label": "customer",
"text": "Customer",
"items": [
"27",
"installation"
]
}
],
"gui": "grouped-combobox",
"label": "aworktype",
"title": "Activity type",
"type": "enum",
"access": "READ_ONLY"
},
"no_ports": {
"entity": "ENTITY_ACTIVITY",
"fieldType": "property",
"gui": "text",
"label": "no_ports",
"title": "# Ports",
"type": "int",
"access": "READ_WRITE"
},
"CANCEL_REASON": {
"entity": "ENTITY_ACTIVITY",
"enum": {
"1": {
"text": "M1 REQUESTED BY ISP"
},
"2": {
"text": "M2 PC INADEQUATE"
},
"3": {
"text": "M8 - TAP CHANGEOUT REQUIRED"
},
"4": {
"text": "SS - STORM SERVICE CALL FOLLOW-UP"
},
"5": {
"text": "W1 - JUST BROWSING AT THIS TIME"
}
},
"fieldType": "property",
"gui": "combobox",
"label": "CANCEL_REASON",
"title": "Cancellation Reason",
"type": "enum",
"access": "READ_WRITE"
}
```

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```
    }
  }
```

Activity type features in "init" message

The "attributeDescription" field of "init" message contains "features" object inside enum items of the "aworktype" (activity type) property. If the "Enable segmenting and extended duration" option is enabled for the activity type, the "features" object contains "isSegmentingEnabled" with value equal to true.

locale field

You can send the locale field through the Plugin API within the init message; the field belongs to the user collection. You can use it to apply the language selected in the Oracle Fusion Field Service UI to the plugin.

Example of "init" message

```
{
 "apiVersion": 1,
 "method": "init",
 "attributeDescription": {
 "WO_COMMENTS": {
 "fieldType": "property",
 "entity": "ENTITY_ACTIVITY",
 "gui": "text",
 "label": "WO_COMMENTS",
 "title": "WO Comments",
 "type": "string",
 "access": "READ_WRITE",
 "lines": 4
 },
 "aworktype": {
 "fieldType": "field",
 "entity": "ENTITY_ACTIVITY",
 "gui": "grouped-combobox",
 "label": "aworktype",
 "title": "Activity type",
 "type": "enum",
 "access": "READ_WRITE",
 "enum": {
 "5": {
 "label": "5",
 "text": "Inv Pick up",
 "features": {}
 },

 "VH": {
 "label": "VH",
 "text": "Vehicle Maintenance",
 "features": {}
 },
 "Multiday": {
 "label": "Multiday",
 "text": "Multi-day activities",
 "features": {
 "isSegmentingEnabled": true
 }
 },
 },
 "groups": [
 {
 "label": "internal",
 "text": "Internal",
 "items": [
 "VH"
```

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```
      ]
    },
    {
"label": "customer",
"text": "Customer",
"items": [
"5",
"Multiday"
]
    }
  ]
  }
},
"buttons": [
  {
"buttonId": "20348",
"params": {}
  }
]
"user": {
"languageCode": "en",
"locale": "en-US"
  }
}
```

# How can I use Signature field in Oracle Fusion Field Service?

To maintain signature functionality in Oracle Fusion Field Service, it is recommended to switch from using the signature file property to a signature form element instead. Currently, this is the supported approach for capturing signatures within Oracle Fusion Field Service. Keep in mind that form elements are limited to custom forms and are not compatible with standard out-of-the-box screens.

After you create a Form, you must add elements to it. Form elements are the fields in which a Mobile Worker can display and capture the required data.

1. Click **Configuration** > **Forms & Plugins**.
2. Click **Add Form** to create a new form. For more information, refer to the Create a Form topic in the Administering Oracle Fusion Field Service Guide.

3. Click the stack icon and click **Modify content** for the Form that you want to edit.

The **Visual Form Editor** page appears and displays an accordion type panel with these options to help you add, edit, and search for elements.
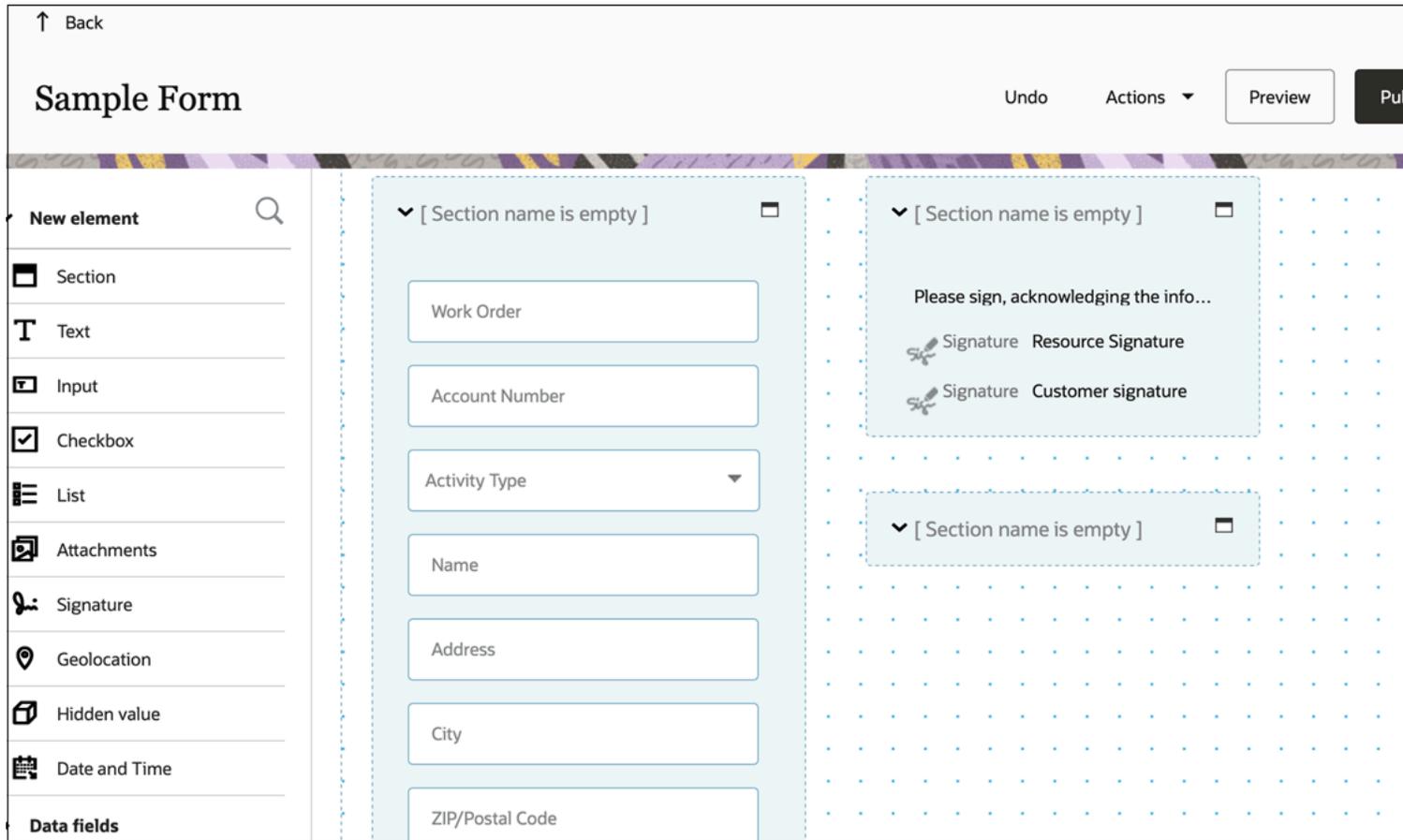
4. From the available **New Elements** fields, select the **Signature** element type and drag it to the desired location on the form and then click Publish on the Visual Form Editor page. The Form elements are published. For more information, refer to *How do I configure the Form elements?*

> **Note:** It is not necessary to map these signature fields to a specific property. They will function as standard form fields.

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5. Next, navigate to the **Screen** page and then open the **Activity Details** page to integrate the Form where you want the form to be displayed.
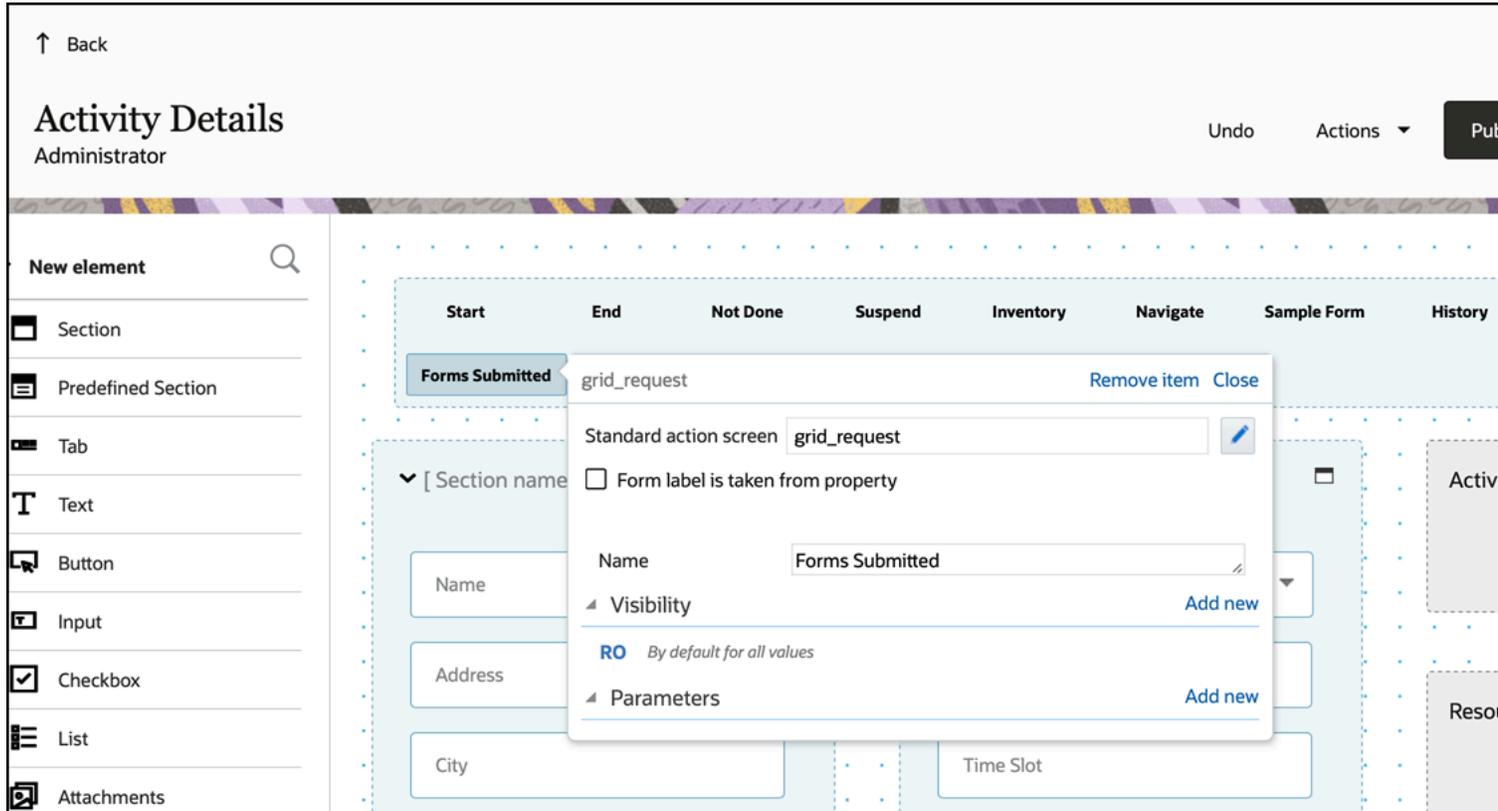
6. Add the newly created form with signature element to the Activity Details page.

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7. In addition to the form itself, ensure you add a Form Submitted property or element to the screen. This will be used to display and track submitted forms.

8. This provides a centralized location to view all the forms that have been completed and signed.

How to move pending activities to non-schedule activities using message scenario?

Once the day ends at midnight, the status of activities can no longer be updated, so what happens to activities that haven't been completed by the end of the workday?

If you've set a value other than 0 in the Overnight Work field on the Business Rules screen, your workday will end at that specified time instead of midnight.

To prevent having to manually create new work orders for activities that are still pending at the end of the day, you can set up a message scenario that runs just before the workday ends. This scenario will automatically mark those activities as non-scheduled using the unschedule_activity action. The activities will stay assigned to the same resource, but they'll no longer be tied to a specific time or route position.

How it works:

- The scenario runs shortly before the workday ends.
- It applies to all activities that are still pending in the day's routes.
- The trigger (launch condition) for this scenario is Activity is created.

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> **Note:** If you're already using the Activity is created condition in another scenario, you won't be able to create a new one with the same trigger. In that case, simply add the necessary steps to your existing scenario instead. Just open the scenario and start from Step 3 in the configuration process.

Here's what to do.

1. Navigate to **Configuration** and select **Message Scenarios**. Click + in the left column to add a scenario. Name it, create a label, and define the start date. If you want, add an end date as well. Click **OK**.
2. Select the new scenario from the list in the left column.
3. In **Launch Conditions**, click **Add New**, and then select the Activity is created launch condition. Click **OK**.
4. In the **Scenario Steps** section, click the **Add New** link to add the step that will set pending activities to non-scheduled. The **Settings** tab opens by default.
   a. Enter a name for the step, for example, **Move to non-scheduled**.
   b. Select **Start** in the Type drop-down list.
   c. Select **Set Property** in the Delivery Channel drop-down list.
   d. Select **Use static address** in the Recipient field, and then specify the time zone that is set for Overnight Work on the Business Rules screen.
   e. Select **day of route** for Sending time and leave the days setting at 0.
   f. Define the time in the Start time field at 10:30 p.m., with a Message expiration interval value of 1 hour and 30 minutes. Leave the rest of the settings at their defaults.

   > **Note:** You might consider setting the from time to even closer to the end of the day but be sure there's enough time to accommodate processing in case there are many activities still in Pending status at that time.

5. Now click the **Patterns** tab.
   a. Enter action for the Subject and unschedule_activity for the Body. This is the required method used to set a pending activity to non-scheduled.
   b. Select **Generate** content on message creation.

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What constraints apply when creating a segmentable activity?

When you create a segmentable activity, the application generates its segments automatically. While generating the segments, the application takes into account various constraints ensuring efficient task distribution and compliance with the customer agreements.

These constraints apply to a scheduled segmentable activity:

- When you assign a scheduled segmentable activity to a route, its segments are always generated starting from the date of the route. The first segment is always inserted on the day for which the activity is scheduled, regardless of whether a corresponding free time interval is available in the route.

- The minimum duration of a single segment is always observed. If the route for a particular day has no time interval for a minimal single segment, no segment is created for that day, except the first segment, which is always created on the selected date.

- If there is no interval available for assigning the remaining duration for 31 days after the last assigned segment is created, the remaining duration is moved to the non-scheduled pool of the same resource making the activity partially scheduled.

- The service window constraint applies only to the first segment of a segmentable activity in the route.

- When creating a segmentable activity, the application should observe the service window constraint not only for the segmentable activity but also for other activities in the route. However, the less time that remains from ETA to the service window end, the higher is the probability of service window overdue. To reduce the overdue probability, the application reserves 20% of the service window scheduling the activity only to the first 80% of the service window interval.

- In addition to the service window reservation, the **Service Window Warning** parameter defined on the **Display** page also controls the service window compliance.

- If the **SLA start** corresponds to the day on which the segmentable activity is started, this value is used as the minimum ETA for the first created segment of such activity.

- No segmentable activity segments are created on non-working days. If a non-working calendar is assigned to a resource after the segmentable activity is created, the segment assigned to that day is not moved automatically. An alert is displayed, indicating that a manual action is required. Such behavior is intended to prevent unnecessary segment changes, or removals when the calendar is changed only temporarily.

- On-call calendar is ignored in segmentable activity segment creation.

- When a segmentable activity is non-scheduled, no segments are created. Segments are created as soon as the activity is scheduled to a particular day.

- Segmentability is defined at the activity type level and cannot be changed after the activity is created. For activities that may potentially span multiple days, it is a best practice to use a segmentable activity type from the beginning, with appropriate minimum and maximum segment durations configured. If an activity was created as non-segmentable and later needs to be segmented, the recommended approach is to close or cancel the original activity and create a new one using a segmentable type.

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How do I configure assignment and fallback options for activity broadcasting?

The Assignment and Fallback section is displayed when you create a routing profile with the option, immediately from the **Run routing** drop-down list.

> **Note:** You must enable the Collaboration service to view the **Assignment and Fallback** section. View the **About** screen to verify whether the service is enabled.

The **Assignment and Fallback** section is used to configure the following settings:

- To trigger activity broadcasting to multiple users, use one of the following options:
  - **Automatic**: Assigns activity directly to matching resources in the bucket.
  - **via Collaboration**: Triggers activity broadcasting to all users in the assigned collaboration group. The activity is offered to group members during the specified timeout period, and the first user to accept it gets the assignment. This method is particularly useful when you want to distribute work dynamically across a shared pool of users, such as during end-of-day backlog handling or when routing fails to find a matching resource.
    - This option can be used in Immediate Routing Plans to automatically send multiple unassigned activities to collaboration without manual intervention.
    - In the UI, manual transfer to collaboration must be done one activity at a time.
    - The Bundling feature is not supported when assigning activities using **via collaboration**.
- Enter the time in minutes in the **Activity should be assigned in _ minutes** field to set the time out period for broadcasting. If no user accepts the activity within the defined period, broadcasting is timed out. Limit is set to 99 minutes.
- **Fallback** option: Select the configured message scenario for the **Fallback** option that must run when the activity fails or when the system times out. The configured message scenario sends the failure message to the user.

How can I use the Where is My Technician feature to communicate directly with technicians?

> **Note:** **Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Configure Where is My Technician*. We recommend that you update your bookmarks accordingly.

You can integrate the Where is My Technician (WMT) page with Oracle Digital Assistant (ODA) to provide customers with a conversational interface. This allows users to perform key service-related tasks through natural language interactions, enhancing engagement and self-service capabilities.

Business Benefits:

- Improves customer experience by enabling real-time, conversational self-service.

- Reduces call center load by automating routine requests such as rescheduling or canceling appointments.

- Enhances brand visibility by sharing positive feedback across company profiles and social platforms.

- Ensures better communication between customers and mobile workers.

Use Cases:

- **Reschedule an appointment**: Oracle Digital Assistant suggests the available time, asks the user for a reason, and confirms the rescheduling.

- **Cancel an appointment**: Oracle Digital Assistant asks a user for the reason of and confirms the cancellation.

- **Leave Feedback**: Oracle Digital Assistant thanks for a good rating and asks the reason for bad feedback.

- **Share the good Feedback on company sites**: Oracle Digital Assistant asks for posting good feedback on your organization's profiles such on Google, Twitter, Amazon, and so on.

- **Notify a mobile worker about the details**: Oracle Digital Assistant can send a message from the user. This is saved as a note for the mobile worker.

Note: The Sample skill is sample code and demonstrates how Oracle Digital Assistant can help users on the Where is My Technician page. It's neither maintained nor supported by Oracle as a licensed product.

How can I audit User Type changes not shown in Resource History tab?

The Resource History Tab in Oracle Field Service Cloud does not track all field changes, and User Type may not be among the fields it logs for audit purposes.

You can audit User Type changes using one of two methods: the **Configuration History report** or the **Daily Extract** feature.

Method 1: Using the Configuration History Report

1. Navigate to **Menu > Dashboards > Configuration History**.
2. The report will display a list of all configuration changes.
3. You can view details for each change, including the old and new values, the time of the change, and the user who made the update.

Method 2: Using the Daily Extract feature

1. Navigate to **Menu > Configuration > Applications > Daily Extract**.
2. Use this feature to generate data exports.
3. By comparing these exports over time, you can identify and track specific changes made to the **User Type** field.

How do I view the inventory in a warehouse resource?

When you use a warehouse to manage inventory, you can view its available stock to verify items before assigning activities or for reporting purposes. Each activity associated with a warehouse enables mobile workers to pick items from that warehouse.

1. Sign in as a dispatcher.
2. Go to the **Resources** page and search for the warehouse type of resource.
3. Click the warehouse for which you want to view the inventory.
4. Click **Resource Inventory**.
5. On the **Equipment List** page search for specific inventory.

   Note: The number of items displayed on the **Equipment List** page depends on the **Mobile Inventory Count** setting on the **Preferences** page. While there's no limit to how many items a warehouse can hold, mobile workers can search and operate on the first 999 items.

How do I verify resource compliance in the time view?

Oracle Fusion Field Service Smart Location provides details in the Time view of the Web interface showing resource compliance.

To verify resource compliance in Time view:

1. View a resource in **Time View**.
2. Click **View** and then select **Show Resource Trace**.

   The application provides a compliance bar showing the resources trace. The colors represent the following statuses:
   - Blue indicates locations that the GPS device sent to the application where there are no compliance alerts.
   - Red indicates the location that the GPS device sent to the application:
     - where the resource has started the activity outside of the defined radius
     - where the resource has completed the activity outside of the defined radius
     - where the resource left the location without completing the activity
   - Yellow indicates locations that the GPS device sent to the application where the resource has exceeded the defined idle time.

Apart from differentiating the resource's location in color, you can also view them as text in the map hints. For example, if the mobile worker starts the first activity, the ETA (Estimated Time of Arrival) becomes the actual Start time. Ideally, the mobile worker should have completed the first activity, driven to the second activity, and started the second activity at the End time. However, if the mobile worker remains on the location of the first activity after the End time, the location is indicated in red. If he mobile worker suspends the first activity, the location is indicated in blue. This change

in color indicates that the mobile worker continues with the first activity and was on that activity location. Apart from differentiating the resource's location in color, you can also view them as text in hints in the Time view.

- When reviewing the route for past date, Time view contains:
  - actual activity start time
  - actual travel time
  - activity duration
  - actual statuses of resource's positions.

- When reviewing the route for current date, Time view contains a mix of actual information for already completed activities and prognosis for pending activities such as ETA, estimated travel time. The prognosis is updated with each action of the mobile worker. Hence, ETA changes to actual start time once mobile worker starts the activity.

- The statuses (colors) of resource's positions change and prognosis becomes reality.

- This figure shows an example of Time view before and after mobile worker starts an activity.

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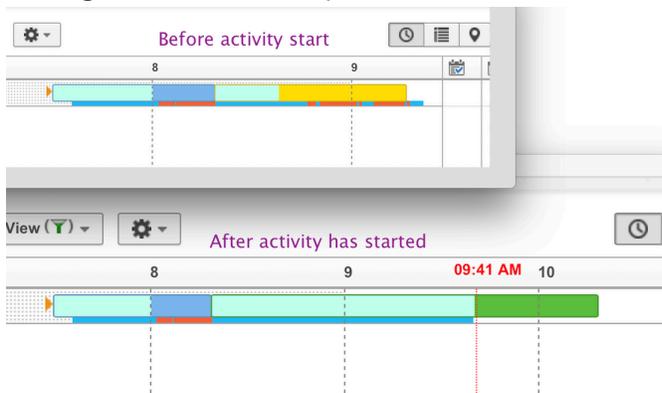
- Now, the ETA for the second activity was approximately 08:30 AM. In fact, it was started at 09:40 AM. Time View is updated immediately after the tech started the activity. The resource coordinates collected within estimated activity duration are mostly red since the mobile worker is progressed to be out of activity:
  - o This figure shows resource coordinates after the Mobile Worker started the activity:
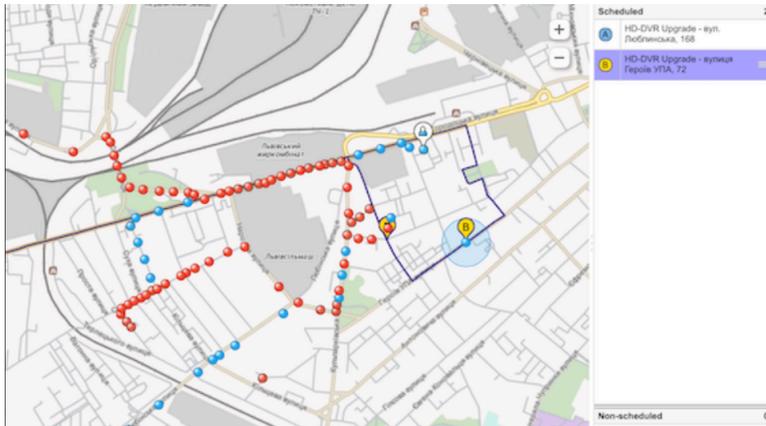
  - o The situation changes when the mobile worker suspends the first activity. The resource coordinates turn blue (normal) because the mobile worker is traveling to the second activity.
  - o This figure shows resource coordinates after the mobile worker suspended the first activity:
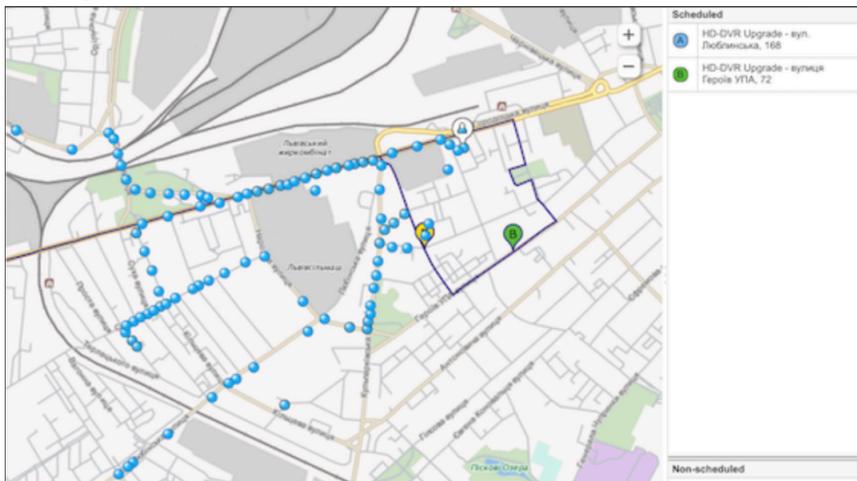
Note:

  - o When the **Location is private** setting is enabled, the resource's Start or End location is hidden from the Dispatch Console and Route Map for all other users. This setting helps protect home addresses or other sensitive locations. The logged-in resource can still view their own location on the Route Map. For more information, see the Manage Resource Locations section in the Using Core Application guide.
  - o Your user type must have the **Display Current Position of Resources on Maps** and **Display Resource Trace on Dispatch Console** permissions configured to access these capabilities.

Oracle Fusion Field Service includes HERE Maps support for operations in Japan. When the application is configured with Japan as the default geocoding country, maps automatically display higher street-level detail, improved road geometry, and clearer visual representation of activity and resource locations. This enhancement requires no additional

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configuration or action and improves clarity across both web and mobile experiences. Using the HERE Maps for operations in Japan, you can:

- Verify whether a resource arrived or traveled as expected with clearer street-level reference points.
- Interpret movement patterns faster, particularly in urban zones.
- Identify where the resource is positioned relative to nearby streets and landmarks more quickly.
- Understand the resource's surroundings at a glance, without relying on external map tools.

What is the standard process and sequence for creating Oracle Fusion Field Service resources when syncing employee data from an external HR system?

The **Retrieve Latest LDAP Changes** process syncs users, roles, and role assignments between your LDAP directory and Oracle Fusion Applications. You must run this process once during initial setup. After the first run, synchronization happens automatically. It's also a best practice to run this process after each release update, or if you notice any issues with user or role data.

> **Note:** **Navigator** > **My Enterprise** > **Setup and Maintenance** > **Users and Security**

To run the User and Roles Synchronization process:

1. Click **Run User and Roles Synchronization Process**.
2. (Optional) To get a notification when the process is complete, select **Notify me when this process ends**.
3. Click **Submit** and then **OK** to return to the **Functional Areas** task list.
4. To schedule this process to run automatically after each release, click the **Advanced** tab after step 4 and select **Using a schedule**. Then set the dates and times that fit your update schedule.

Is it possible to include HTML content, images, or attachments in Message Scenario emails?

You must first create a message scenario before you can define the launch condition, scenario steps, message, and delivery channel..

> **Note:** While creating a message scenario, ensure that no HTML content is included in the message scenario. Field Service does not support including any HTML templates in the message scenario pattern.

1. Click **Configuration**.
2. Click **Message Scenarios** under **Subsystems and Integrations**.

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The **Message Scenarios** screen opens.

3. Click the + icon in the left panel.

   The **Add Message Scenario** dialog box opens.

4. Type the name users will see on the **Message Scenarios** screen in the **Name** field.

5. Type a unique identifier for the message scenario in the **Label** field.

6. Type the date the scenario becomes active in the **Start Date** field or click the calendar icon and select a date.

7. To set an end date at which the scenario becomes inactive, select the **End Date** check box and type or select a date in the field.

   > **Note:** If you do not select the **End Date** check box, the scenario will run indefinitely.

8. Click **OK**.

Results:

The **Add Message Scenario** window closes and the message scenario you created appears in the list of scenarios on the left of the **Message Scenarios** screen. The scenario will display an error message in the scenario list because you have not yet defined a launch condition for it.

What to do next

Now you can configure the message scenario.

Is it possible to allow users choose from multiple subinventories in Oracle Fusion Field Service activities when using the Maintenance Accelerator?

With the Oracle Maintenance Accelerator for Oracle Fusion Field Service, you can map each subinventory (such as different mobile workshops) as a warehouse resource in Oracle Fusion Field Service. When creating a maintenance work order, associate the relevant subinventory. This creates an activity in Oracle Fusion Field Service linked to the mapped warehouse, allowing the technician to view and select the correct subinventory and its inventory directly from the activity's inventory page.

Here's how it works:

- Map each subinventory as a warehouse resource, For example, each mobile workshop as a "Truck" type warehouse) in Oracle Field Service.

- In Oracle Maintenance, link the required subinventory to the maintenance work order. This will generate an activity in OFS that references the preferred warehouse (subinventory).

- When the activity is assigned to a technician, they will see the associated subinventory and its stock in the activity inventory page of OFS and can select/install inventory as needed.

- Ensure that items are properly synced to each mapped warehouse/subinventory so inventory availability is correctly reflected.

How do I add a label to a hyperlink instead of displaying the full URL?

You can add an external application as a plugin and it will be opened as a web page in a new window, or the same window within Oracle Fusion Field Service.

1. Click **Configuration** > **Forms & Plugins**.
2. Click **Add Plugin**.
3. Click **External Application** and then click **Next**.
4. Complete these fields:

Field Name	Description
General Information section	
Label	A mandatory field defining a unique action or plugin label.
Entity	Entity (activity, inventory, required inventory, resource, service request, user) to which the action or plugin is to be related. For example, if you select Inventory, the action will appear only in the contexts related to inventory. Leave the field blank for the action to be available in all contexts of all the entities.
Visibility rules similar to	The base action from which the plugin is to be derived, if needed. When a base action is selected, the resulting plugin functions per the same rules as the base action. The base action affects only the visibility of buttons and not the functioning of the plugin. It appears only in the contexts in which the base action appears and is shown or hidden according to the same visibility conditions. For example, if start_activity is selected as the base action for a plugin, the plugin is only be shown in the context of a pending activity when there is no started activity in the same route, similar to the Start action. The list of available base actions is filtered according to the Entity that is selected.
Name (English)	A mandatory field defining the plugin name in the English language. The action or plugin appears under this name in the actual context.
Name (other languages)	Plug-in name translations to other languages, if used.
Plugin settings section	
Fields for the Open as Web Link Option	
Open as Web Link	Shows the fields to open an external web page from the plugin.
URL	The path to a URL for the external plugin. This URL processes the HTML5 application and it runs the plugin in the entire browser window. The URL must start with the protocol (https) and must point to the main file of the plugin. Oracle Fusion Field Service adds the backUrl parameter to the URL automatically. This parameter contains the address of the current page of Oracle Fusion Field Service.
POST Data	The data that you want to be sent to the external plugin.
Disable button in Offline	Determines whether you want to disable the plugin when Oracle Fusion Field Service is offline. Clear this check box for the plugin to work in offline mode.

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Field Name	Description
Open inside Field Service	Determines whether the plugin uses the iframe layout. If the field is cleared, the plugin's URL is opened in a new browser tab or window.
Show scrollbars on Dialog	Determines whether the window in which the plugin runs has scroll bars. This setting is applicable to the Legacy Manage application.
Dialog Width in Pixels/ Dialog Height in Pixels	The width and height of the plugin window in pixels. This setting is applicable to the Legacy Manage application.
Fields for the Open as another Application on the same device Option	
Open as another Application on the same device	Shows the fields to open a native app from the plugin.
Native application name	The name of the application to be launched by the plugin.
User-Agent string mask	The browser in which the application is to be launched. The Native application link will be available in GUI, if the browser user agent matches the specified mask. For example, Safari, Android, iPad, iPhone.
Launch application URL	The template for building the external application URL from properties. The URL template contains parameters key and placeholders for parameters value. Properties are interpolated with placeholders, surrounded with braces "{" and "}". For example: http://www.example.com/android?type=LOCATION'&'action=View'&'alt={acoord_y}'&'long=| {acoord_x}'&'address={caddress|url}'&'city={ccity|url}'&'state={cstate}'&'zip={czip}
Add	The button to add another User-Agent string mask.

5. Click **Add**.

What does the car icon (with or without a weather symbol) mean in Oracle Fusion Field Service, and is any setup required?

About the Car Icon

- The car icon shows when a technician is traveling between jobs. If a weather symbol appears with the car icon, it means travel conditions may be affected by weather.

- This feature helps you see where technicians are and if they might experience delays.

Do I Need to Set It Up?

- The car icon and travel status are available by default—no setup is needed for standard use.

- If your organization uses the weather overlay, setup may be needed by your administrator. Most users do not need to take any action.

How do I configure workflow to the Activity Details page in Oracle Fusion Field Service?

> **Note: Updated Content Available**: As part of our ongoing initiative to consolidate our documentation with up-to-date use cases, this page is being transitioned. The latest content is available in *Workflow Manager*. We recommend that you update your bookmarks accordingly.

There are some best practices that you can use to configure the **Activity Details** page (**Activity Details** Visual Form Editor) when using workflows.

Here are the best practices:

- You must build this page from the information perspective, which means it should contain all the useful information that a resource might require in the field. That is, information about the environment, technical limitations, neighbors, links to useful knowledge on external resources, and so on.

- You must present all of the forms and plug-ins required for an activity within the workflow.

- Buttons on **Activity Details** must lead to those pages that aren't a part of a workflow (that is, **Inventory list**, **History**).

- There is no strict relation between the visibility of the **Start activity** and **Complete activity** page and the completion of the workflow steps. You must configure the visibility conditions for these buttons separately on the **Activity Details** Visual Form Editor.

- You can add inventory into a workflow as a plug-in that manages equipment. Workflow Manager doesn't support the standard inventory pages. Therefore, you must configure the inventory-related pages as buttons on the **Activity details** page.

- Keep the **Start activity** and **Complete activity** pages as simple as possible, so that resources spend very little time to perform these actions.

This helps the resource view the majority of pages they interact with while working on an activity within the workflow. This way, the workflow navigates the resource throughout the process of the activity. Everything else is side information that might be important, but cannot be considered as tasks that must be performed to finish an activity.

Related Topics
- Add a Workflow Step

What's the best way to permanently hide most activity fields on Assist Tasks in Oracle Fusion Field Service?

You can hide fields on **Assist Tasks**, depending on how you identify those tasks:

1. If **Assist Tasks** are a different activity type:

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  ○ Set the visibility condition for properties you want to hide to: `ReadWrite if aworktype NOT IN {aworktype_label of Assist Task}`

  This ensures these fields are not displayed for Assist Tasks, but they remain visible for other activity types.

2. If **Assist Tasks** are identified by the XA_ENG_ASSISTING_FLAG property:

  ○ Set the visibility of those properties to: `ReadWrite if XA_ENG_ASSISTING_FLAG is empty`

  The fields will be displayed only if the XA_ENG_ASSISTING_FLAG property has no value. If it is populated, the fields will be hidden.

Are Oracle Fusion Field Service Forms supported in offline mode on the mobile application?

Yes, Oracle Fusion Field Service with Data Fields and Form Fields are generally supported in Offline Mode.

Offline Mode allows mobile workers to access, complete, and save Forms (including with Data Fields and Form Fields) even when lacking connectivity. All data is cached locally on the device. Offline Mode in Oracle Fusion Field Service enables mobile workers to continue working when connectivity is unavailable.

Forms, including those with Data Fields and Form Fields, can be accessed, filled out, and saved while offline.

All data entered in forms during offline periods will be cached locally on the device. Once the device reconnects to the network, these entries will be synchronized with the Oracle Fusion Field Service server.

> **Note:** Real-time validations, live lookups, or data population from external sources that require a live connection won't function fully offline. Always advise mobile workers to sync their devices before going offline to ensure they have the latest form configurations.

Best Practices and Additional Guidance:

- Use Native iOS and Android Apps: For optimal consistency and background sync capability, it is highly recommended to use the native Oracle Fusion Field Service app (available for iOS and Android). Native apps can sync data automatically in the background when connectivity resumes, even without user interaction.

- Web App Limitation: The web app requires the user to be actively using the app for syncing; background sync is not supported as with the native app.

- Expiration Period for Unsynced Data: Unsynced data stored on the device has an expiration period, which is configured in Business Rules and can be set for up to 999 hours (about 7 weeks).

- Device Loss Scenario: If a user starts work on one device, goes offline, and then switches to a new device without ever reconnecting the original device, any unsynced data on the original device will be lost—it must connect online to sync.

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How do I configure Dispatch filters to show only activities for resources with a specific route status?

You can focus the Activities view (List, Time, or Map) in the Dispatch Console on work assigned to resources whose route is in a particular operational state. For example: Started, Not started, or Suspended by creating and applying an activities filter that uses the resource's Route status field.

This filtering is essential for focusing dispatching efforts, such as:

- Prioritizing first jobs to crews that haven't started yet (**Route status = Not started**).

- Focusing on active routes during the workday (**Route status = Started**).

- Reviewing work tied to routes that are temporarily on hold (**Route status = Suspended**).

To create and apply Activities filter based on Route Status:

> **Note: Important considerations or limitations for using the Route Status filter**
> - **Unassigned Activities:** Route status does **not** apply to activities that have not yet been assigned to a resource. You must handle those separately (e.g., through an *Unassigned queue view*).
>
> - **Terminology:** Status labels may be localized, so ensure you select the values exactly as they are labeled in your specific environment.
>
> - **Consistent View:** For a fully focused view, it's highly recommended to pair your **Activities filter** (by Route status) with a corresponding **Resource filter** (by the same Route status).
>
> - **Permissions:** If you are unable to save or share a filter, you may need to ask an administrator to grant your user type the appropriate permissions.

1. Open the **Dispatch Console**.
2. Select the Date, Region, and/or Bucket that corresponds to the routes you wish to filter, as **Route status is date specific**.
3. Create a New Activities Filter:
    a. Go to **Filters**panel.
    b. Select New filter. Or, go to **Manage filters > Create**.
    c. Choose the **Activities** filter type.
4. Add the Route Status Condition:
    a. Select **Add condition**.
    b. Navigate to **Resource/Route fields** and select **Route status**.
    c. Choose the appropriate operator (**Equals** or **In**) and select the required status values (e.g., **Not started**, **Started**, **Suspended**, **Completed**).

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5. Refine (Optional):
    a. You can narrow your results further by combining the Route status condition with other conditions like **Activity Status** (e.g., *Pending*), **Work Zone**, **Bucket/Organization**, or **Activity Type**.
    b. To also limit the resources shown in the Resource list, create a separate **Resource filter** using the same **Route status** condition and apply both filters.
    c. To also limit the resources shown in the Resource list, create a separate **Resource filter** using the same **Route status** condition and apply both filters.
6. Save and Share the Filter:
    a. Set the visibility (**Private** or **Shared**).Note: Permissions to save or share depend on your user type.
    b. Set the visibility (**Private** or **Shared**). Note: Permissions to save or share depend on your user type.
7. Apply the newly created filter to the Dispatch Console and confirm that the Activities list, time view, and map now only display activities associated with routes in the chosen status. Consider enabling **Auto-refresh** so the view updates as route statuses change.

How do I enable quota management for a capacity area at work zone level?

Work zones define the regional areas in which resources are allowed to work. You can allocate quota for a capacity area at work zone level.

1. Create an organization unit for the state. For example, Florida.
2. For the organizational unit, create a separate bucket as a child resource for each work zone. For example, South Florida, Central Florida, and North Florida.
3. Associate the relevant work zone with each bucket.
4. Enable the required settings for each bucket on the **Quota** > **Configuration**.
5. Define the required capacity or quota values for each bucket.
6. If multiple providers share the same work zone, enable the **Use resources outside the capacity area** option on the **Configuration** > **Business Rules** page to allow resources across capacity areas to cover shared work zones.