

ORACLE FIELD SERVICE  
CONFIGURATIONS

FOR

ORACLE UTILITIES NETWORK  
MANAGEMENT SYSTEM INTEGRATION  
TO ORACLE FIELD SERVICE

(ALSO APPLICABLE TO NETWORK MANAGEMENT  
SYSTEM)

SETUP GUIDE

21C



## Disclaimer

Oracle Field Service Configurations for Oracle Utilities Network Management System Integration to Oracle Field Service, Setup Guide, Release 21C

March 2022

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# Preface

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Welcome to the Oracle Field Service Setup Guide for Oracle Utilities Network Management System Integration to Oracle Field Service.

This document focuses on the Oracle Field Service configurations and administration information required for this integration. The preface includes the following:

- [Audience](#)
- [Documentation and Accessibility](#)
- [Abbreviations](#)

## Audience

This document is intended for anyone implementing the integration between Oracle Utilities Network Management System and Oracle Field Service.

## Documentation and Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

## Access to Oracle Support

Oracle customers have access to electronic support for the hearing impaired. Visit:

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or  
<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs>

## Abbreviations

Term	Expanded Form
OFS	Oracle Field Service
NMS	Oracle Utilities Network Management System
OIC	Oracle Integration Cloud Service

# Chapter 1: Accelerator Overview

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This chapter focuses on the software requirements for Oracle Field Service and provides an overview of the configuration. It includes the following sections:

- [Configuration Overview](#)
- [Accelerator Package](#)
- [Accelerator Activity Types](#)

**Note that the** screenshots/images provided in this document are sample references based on the current release of Oracle Field Service. They may change based on the changes in the future releases.

## Configuration Overview

This chapter includes basic Oracle Field Service configurations, such as Activity Types, User Types, Properties, UI screens, validations for these UIs, plugins, and resource configurations.

## Accelerator Package

The accelerator package includes various user types, properties, and plugins. This document explains the configurations for other elements such as activity types, work zones, work skills, work conditions and outbound channel.

The package helps customers to configure and set up Oracle Field Service to be used in the Network Management System integration to Oracle Field Service as the package contains only Network Management System and Oracle Integration Cloud configuration files and instructions. It is used (in addition) to the integration package that provides a complete end-to-end set up for the integration.

The contents of the package are:

- **User Types** – Define layouts and UI screens. Refer to the [User Types](#) section for more details.
- **Properties** – Create layouts and mapping. Refer to the [Properties](#) section for more information.
- **Plugins** – The plugins that are part of this integration are incidents and restoration data. Refer to the [Forms & Plugins](#) section for more information.

## Accelerator Activity Types

This accelerator is a sample and supports a few Activity Types in this release. More activity types can be added based on the requirement.

## Chapter 2: Installing the Basic Accelerator Package

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This chapter focuses on importing the files that come as a part of the package and configuring them in the Oracle Field Service environment for the integration to run successfully. Make sure to follow the same sequence for successful configuration.

The chapter includes the following:

- [Order of Importing the Package](#)
- [Activity Types](#)
- [Properties](#)
- [Forms & Plugins](#)
- [User Types](#)

### Order of Importing the Package

Make sure to import the package in the following order:

- Activity Types
- Properties Incidents Plugin
- Restoration Data Plugin
- Failed Equipment Form
- Event Details Form
- NMS OFSC User Type
- NMS OFSC Dispatcher User Type

### Activity Types

Activity types define the categories of the activity supported by Oracle Field Service (in this case, Oracle Utilities Network Management System Integration to Oracle Field Service). In the activity type, various fields (such as time slots and activity status) are denoted using colors and features that each activity type supports. They can be customized for each activity type.

To create an activity type,

1. Navigate to the **Configuration** page > **Resources, Activities, Inventories** > **Activity Types**.
2. Click **Add Group**.
3. Enter "NMS-OFSC" in the Label field. Enter "NMS-OFSC" as the English translation value. Skip this step if the values already exist.

4. Click **Add Activity Type**.

NMS-OFSC (ID: 116) <a href="#">Rename</a>				
ID	Status	Activity Type Name ▲	Activity Type Label	Actions
117	✓	NMS Trouble Activity	NMS-TROUBLE	<a href="#">Modify</a> <a href="#">Clone</a>

1-1 of 1

5. Enter “NMS Trouble Activity” as the name of the activity type. Include other details and click **Add**.

6. To add other activity types, clone and modify the name and details as required.

Make sure to have corresponding lookup values in OUTL-BRT-NMS\_OFSC\_ActivityType lookup for all activity types in Oracle Integration Cloud.

7. Add only those Activity Types that are needed and specific to the customers.

**\* Label**

**\* Name**

  \* English

  SpanishLA

  Portuguese (Brazil)

**Active**

**Group**  ▼

**\* Default Duration**  **minutes**

**Color scheme**

**Copy from**  ▼

**Pending**

**Completed**

**Warning**

**Suspended**

**Not Done**

**Not Ordered**

**Started**

**En route**

**Cancelled**

**Available time slots**

08-10 (08:00 AM - 10:00 AM) - disabled

Allow mass activities

Teamwork

Enable segmenting and extended duration

Allow move between resources

Allow creation in buckets

Allow reschedule

Support of not-ordered activities

Allow non-scheduled

Support of work zones

Support of work skills

Support of time slots

Support of inventory

Support of links

Support of preferred resources

Allow Repeating Activities

Calculate travel

Calculate activity duration using statistics

Allow to search

Allow to create from Incoming interface

Enable 'day before' trigger

Enable 'reminder' and 'change' triggers

Enable 'not started' trigger

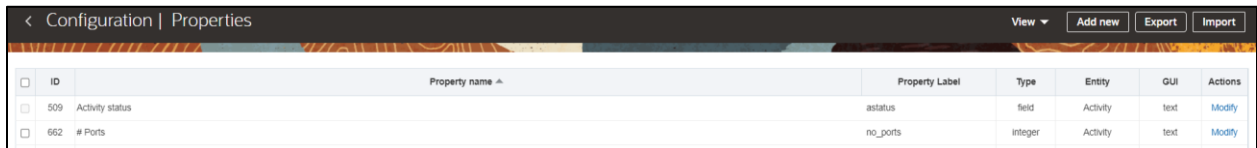


## Properties

Properties enable the integration specific UIs created and map the Oracle Field Service UI element with a property. Each property is classified into types such as field, integer, enumeration, string based on requirements and should be addressed using this property.

To import the property file included in the accelerator package:

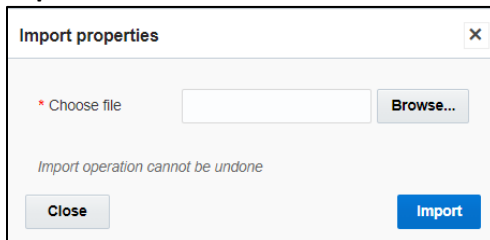
1. On the **Configuration** page, select **Resources, Activities, Inventories > Properties**.
2. Click **Import**.



The screenshot shows the 'Configuration | Properties' page. At the top right, there are buttons for 'Add new', 'Export', and 'Import'. Below is a table with the following data:

ID	Property name	Property Label	Type	Entity	GUI	Actions
509	Activity status	astatus	field	Activity	text	Modify
662	# Ports	no_ports	integer	Activity	text	Modify

3. Browse to the location of the properties file “NMS\_OFSC\_Properties.xml” to be imported and click **Import**.



The 'Import properties' dialog box contains a 'Choose file' label, a text input field, and a 'Browse...' button. Below the input field, it says 'Import operation cannot be undone'. At the bottom, there are 'Close' and 'Import' buttons.

4. Verify the successful import of the file.  
The **Successfully Imported** message with number of properties imported is displayed. Make sure the **Imported with warnings** and **Not imported** count is 0.

## Forms & Plugins

Plugins are used to make changes to screen and data, based on their type and status of target and parent object. Plug-ins in Oracle Field Service perform actions not found in the standard solution. They appear as selectable links on the application. They open a new window, tab, or frame in a browser where an external HTML5 application is executed.

For more information on the Oracle Field Service plugin framework, refer to latest Oracle Field Service documentation at:

<https://docs.oracle.com/en/cloud/saas/field-service/21c/fapcf/overview-of-the-plugin-api.html#overview-of-the-plugin-api>


Each plugin contains a JavaScript file that has the main business logic required for functionality of the plugin. The data required for each plugin is available through the properties that are added for the plugin. XML data obtained through properties is parsed and appropriate XSL is applied to it to render each UI.

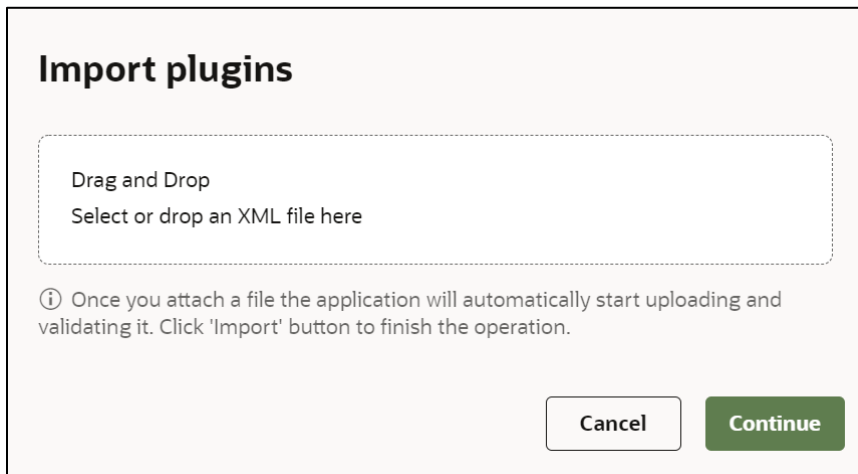
Following are the plugins and forms that needs to be present or imported if not yet.

## Incidents Plugin

Incidents plugin is used to show calls or incidents logged into Network Management System for an event. If there is an outage, customer can call support who may log the call against an incident using Web Call Entry interface. This update will trigger an outbound from Network Management System to Oracle Field Service with the updated call details. In Oracle Field Service side, crew can visit the activity associated with the event and view all calls logged against it.

To import plugins:

1. Login to Oracle Field Service with valid credentials.
2. Click the  icon on left of the Home page.
3. Navigate to **Configuration > Displays > Forms & Plugins**.
4. Click **Import > Plugins** from the drop-down list.
5. Select or drag and drop XML file “NMS\_OFSC\_Incidents\_Plugin.xml” to select **Incidents** plugin provided with accelerator package. Click **Continue**.



**Import plugins**

Drag and Drop  
Select or drop an XML file here

*i* Once you attach a file the application will automatically start uploading and validating it. Click 'Import' button to finish the operation.

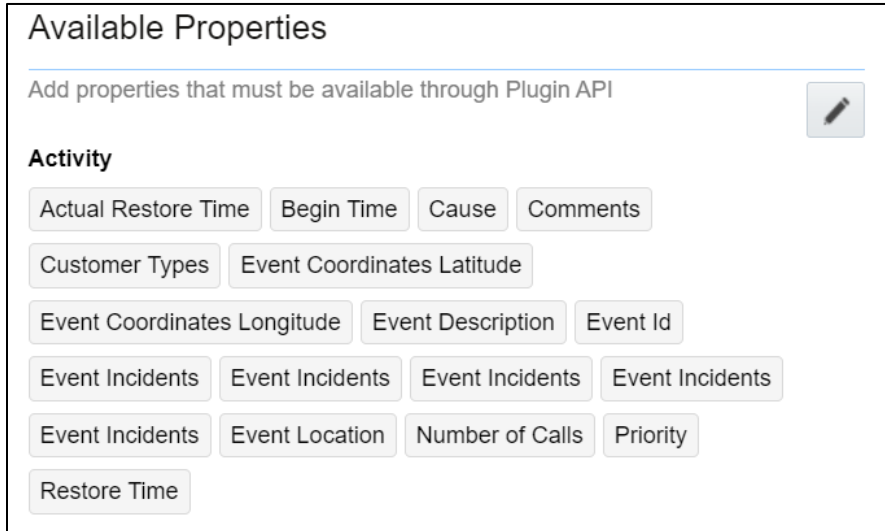
Cancel Continue

Oracle Field Service validates the plugin and the number of valid items should be ‘1’.

6. Click **Apply**. Make sure the “Number of imported” is 1 and “Number of not imported” is 0. After the successful import of the plugin, Oracle Field Service displays the following details.



7. Find and click the **Incidents** plugin to make sure the **Available Properties** tab is populated with all properties if any.

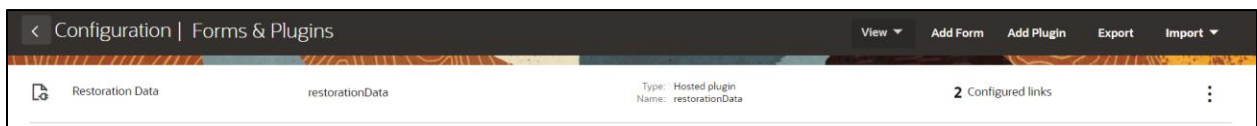


## Restoration Data Plugin

This plugin will be used by crew to capture periodic restoration information after the activity assigned to the crew is started in Oracle Field Service. Once the restoration is complete, crew can capture the same with completion timestamp and send it across to Network Management System. Information updated by this plugin also causes Network Management System to send an outbound message back to Oracle Field Service with updated information.


To import the plugin:

1. Repeat steps 1 to 5 from the [Incidents Plugin](#) section.
2. Click **Import Plugins** to import the **Restoration Data** plugin provided in the package.



3. Find and click the **Restoration Data** plugin to make sure the **Available Properties** tab is populated with the following properties.

### Available Properties


Add properties that must be available through Plugin API 

**Activity**

- Activity Status
- Actual Restore Time
- Device Alias
- Device Confirmation
- Device Type
- Event Description
- Event Display Address
- Event Operator comments
- Event Type
- Job comments
- Restoration
- Restore Time
- Updated In OFSC
- Work Order

## Failed Equipment Form

The Failed Equipment form is used by crew to enter the failed equipment details after an activity is started. It is a synchronous call and data is synchronized with Network Management System at runtime.


1. Login to Oracle Field Service with valid credentials.
2. Click the  icon on left of the Home page.
3. Navigate to **Configuration > Displays > Forms & Plugins**.
4. If the form does not exist, click **Add Form**. Else, go to step 6.




5. Enter the details as shown in the following figure. Click **OK**.

### Add form

English*	Failed Equipment
SpanishLA	
French (European)	
Portuguese (Brazil)	
Chinese (Traditional)	
Label*	failedEquipment

6. Go the form and click the  icon and select **Import Content**.

figured. 

- Rename
- Modify Content
- Import Content**
- Export Content
- Delete

7. Select or drop the **Failed Equipment Json** file from provided accelerator package.

### Import form content

Drag and Drop  
Select or drop a JSON file here

ⓘ Once you attach a file the application will automatically start uploading and validating it. Click 'Import' button to finish the operation.

8. Click **Import**.  
Oracle Field Service validates the form and imports in the same step. Make sure the values for **Number of errors, warnings, notices are "0"** and **"Form content was imported/saved"**.

## Event Details Form

This form is used by crew to enter the event details after the activity is started.

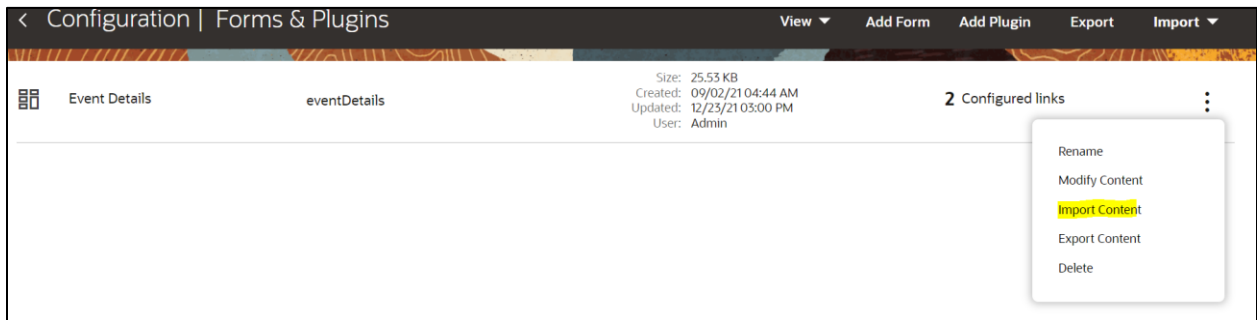
To create an event details form:

1. Repeat steps 1 to 3 from the [Failed Equipment Form](#) section.
2. Enter the details as shown below.

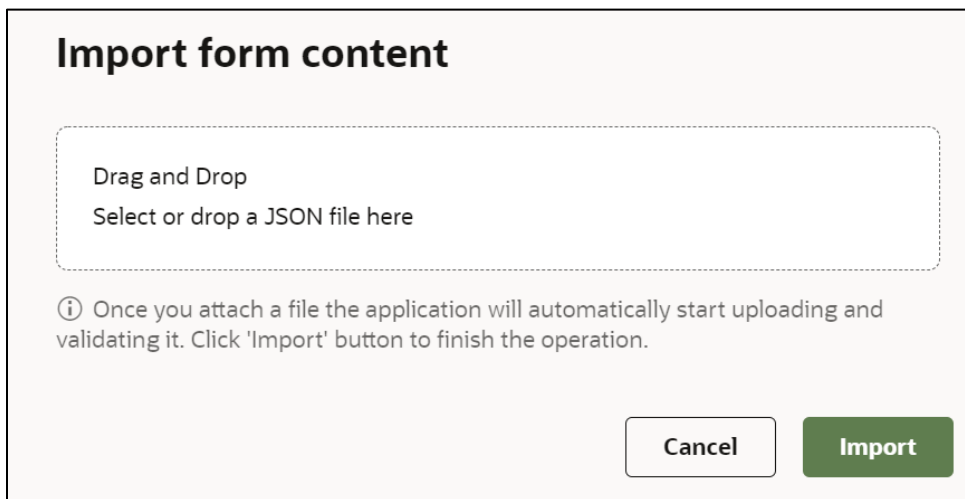
### Add form

English *	<input type="text" value="Event Details"/>
SpanishLA	<input type="text"/>
French (European)	<input type="text"/>
Portuguese (Brazil)	<input type="text"/>
Chinese (Traditional)	<input type="text"/>
Label *	<input type="text" value="eventDetails"/>

3. After creating the form, click the  icon and select **Import Content**.



4. Select and drop the **Event Details Json** file.



5. Click **Import**.  
Oracle Field Service validates the form and imports in the same step. Make sure the values for **Number of errors, warnings, notices are "0"** and **"Form content was imported/saved"**.

## User Types

The user types are used to manage permissions for all users. Each user type has a profile that defines security and display permissions, such as the user's login method, the ability to use certain functions, and access to menu items and properties. Screen-configuration settings define the screens, windows, pop-up windows and other elements visible to a certain user type. They also support the context layout editor, in which the content, arrangement, and visibilities of each context are set.


Use the user types to create custom screen context layouts for Network Management System integration to Oracle Field Service for Utilities by accessing the screen configuration settings in specific user types created.

The user types that are part of this integration are:

- NMS\_OFSC\_Dispatcher\_User\_Type
- NMS\_OFSC\_Mobile\_User\_Types

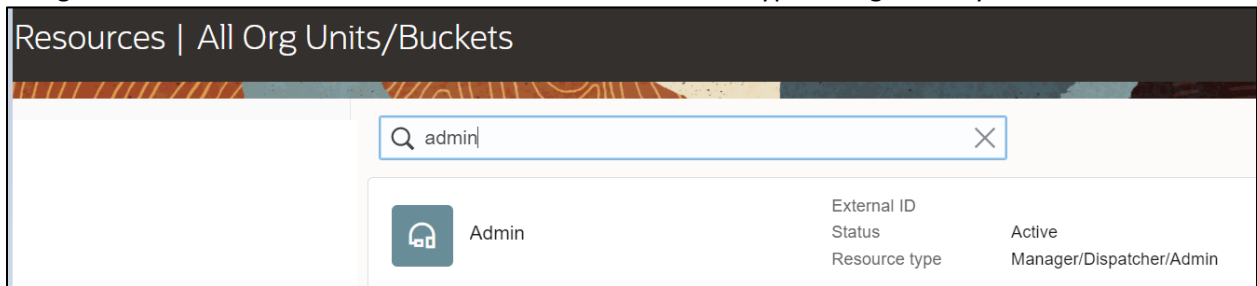
To setup the user types:

**Important!** Make sure to load the Properties, Activity Types, Plugins and Forms before proceeding.

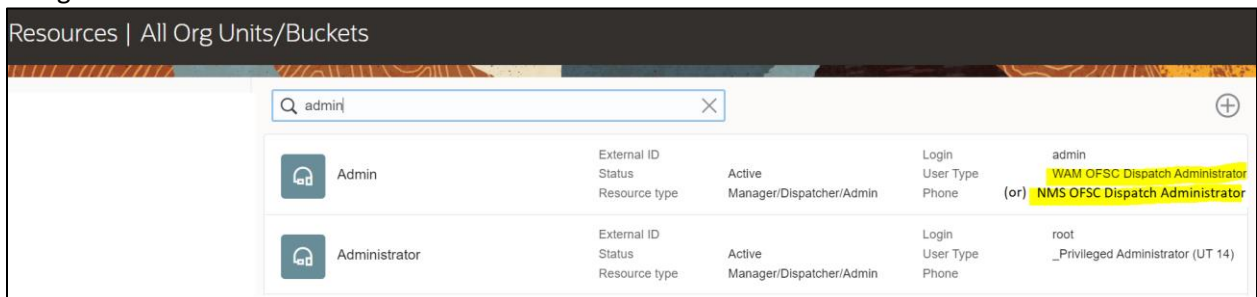
1. Login to Oracle Field Service.
2. Click  on the **Home** page.
3. Navigate to **Configuration** page > **Users, Security, Integrations** > **User Types**.
4. Click **Import** to import the user types.
5. On the **Choose file** field, click **Browse** to select **NMS\_OFSC\_Mobile\_User\_Types**.
6. Click **Validate**. Make sure “Successfully Imported” validation shows “1”.
7. Click **Import** and verify the import is successful. Make sure there are no “Imported with warnings” and “Not Imported” messages.
8. Repeat step 6 and 7 for **Import** > **NMS\_OFSC\_Dispatcher\_User\_Type**. Make sure that there are no “Imported with warnings” and “Not Imported” messages.

After the Dispatcher user type is set up, perform the following:

1. Make sure the Dispatcher user type import is successful without warnings.
2. Navigate to **Resources** > **Search for admin user**. Note the user type configured in your environment.



3. Navigate to **Configuration** > **User types** > **NMS OFSC Dispatch Administrator**.
4. On the **General** tab, configure the display profile as ‘NMS OFSC Dispatch Administrator’ and the profile that was configured to admin user.
5. Navigate to **Resources search** for admin and click **Edit**.



**Note:** If its already set for any of the existing integration you can skip this step.



6. Set the user type as 'NMS OFSC Dispatch Administrator'.
7. Enter the password and click **Submit**.

Make sure that the **Access** settings are selected for both the user types.

The screenshot shows the configuration page for a user type named 'NMS OFSC'. The page has three tabs: 'General', 'Screen configuration', and 'Restrictions and Filters', with 'General' selected. Under 'User type info', the 'Label' and 'Name' fields are both set to 'NMS OFSC'. The 'Active' checkbox is checked, and the 'Login Policy' is set to 'Default policy'. Under 'Access settings', three checkboxes are checked: 'Allow access via web application', 'Allow access via installed application for Android', and 'Allow access via installed application for IOS'. Under 'Permissions', the 'Maps' checkbox is checked.

The screenshot shows the configuration page for a user type named 'NMS OFSC Dispatch Administrator'. The page has three tabs: 'General', 'Screen configuration', and 'Restrictions and Filters', with 'General' selected. Under 'User type info', the 'Label' and 'Name' fields are both set to 'NMS OFSC Dispatch Administrator'. The 'Active' checkbox is checked, and the 'Login Policy' is set to 'Default policy'. Under 'Access settings', three checkboxes are checked: 'Allow access via web application', 'Allow access via installed application for Android', and 'Allow access via installed application for IOS'. Under 'Permissions', the 'Maps' checkbox is checked.

## Chapter 3: Additional OFS Configurations

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This chapter elaborates on the additional configuration of organization, work zones, outbound channel and UI validations in user types. Verify that the Oracle Integration Cloud connections and lookups are customized for the environment and all the Oracle Integration Cloud integrations are “active”.

It includes the following:

- [Sync Mobile Control Data Information from NMS to OFS](#)
- [Organization](#)
- [Work Zones](#)
- [Resource and Bucket Info](#)
- [Outbound Channel](#)
- [Crew Configuration](#)
- [Crew Time](#)
- [Inventory Types](#)
- [Checklist](#)
- [Assertion Key Generation](#)

### Sync Mobile Control Data Information from NMS to OFS

Information from Network Management System to be replicated to Oracle Field Service to provide the drop-down information used in the Oracle Field Service mobile application. Create work skills, work skill properties, and work skill conditions in Oracle Field Service to match activities with resources and for crew tracking.

As part of this accelerator, “**Oracle Utilities NMS OFSC Admin Sync**” deployed on Oracle Integration Cloud is provided to create these configurations automatically making migration of data easier and get rid of tedious manual work. This will run after the Oracle Field Service package is applied first. The forms are created before the User types and then perform the admin sync.

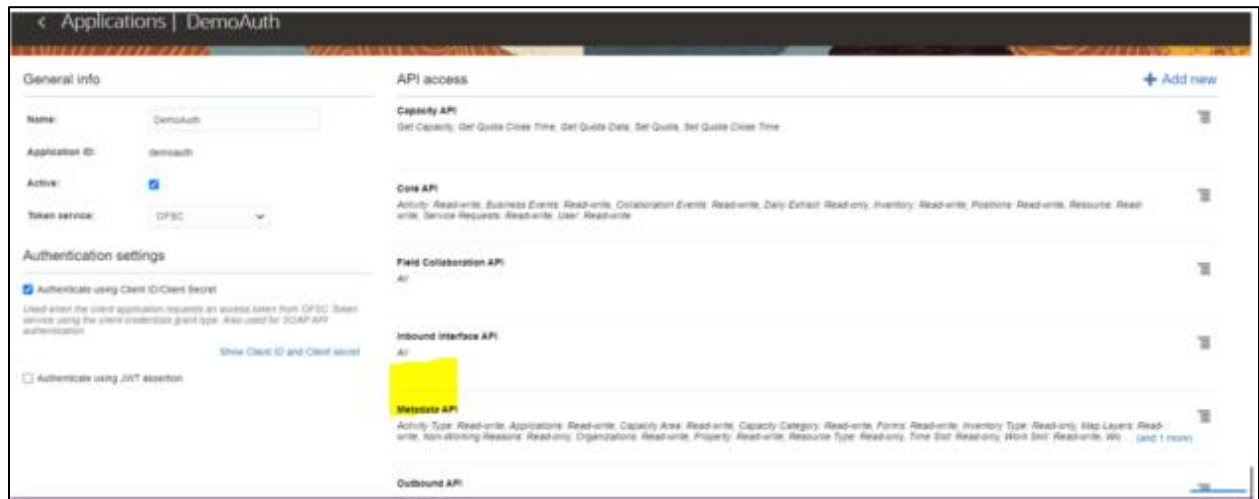
**Oracle Utilities NMS OFSC Admin Sync** needs to be run on initial installation or on a need to basis when new control data from Oracle Utilities Network Management System or work skill related configurations needs to be created or updated in Oracle Field Service.

This sync integration process is manually run in Oracle Integration Cloud or by scheduling the integration process to run on a scheduled date or selecting **Submit Now** from the menu of the activated sync integration process to initiate an instance of the integration. Enter an optional language parameter. It should be an ISO 2 letter language code, to determine the description to retrieve from Network Management System and in what language code the property name should be created in Oracle Field Service. If the language is not populated or blank, it is defaulted to English (en).

To verify the information synchronized from Network Management System to Oracle Field Service, navigate to the respective property and check the enumeration values. Click **Modify**.

To configure Oracle Field Service to run admin sync successfully:

1. Login to Oracle Field Service.
2. Navigate to **Configuration > Subsystems > Applications**.
3. Select the OFSC application with API access. Example below



4. Click **Metadata API** in the **API** section.
5. Select **Read-write** permission for all the entities listed.

## Available entities

Read-write	▼	Activity Type
Read-write	▼	Applications
Read-write	▼	Capacity Area
Read-write	▼	Capacity Category
Read-write	▼	Forms
Read-only	▼	Inventory Type
Read-write	▼	Map Layers
Read-only	▼	Non-Working Reasons
Read-write	▼	Organizations
Read-write	▼	Property
Read-only	▼	Resource Type
Read-only	▼	Time Slot
Read-write	▼	Work Skill
Read-write	▼	Work Zone

6. Click **Submit** and then click **Save**.

**Note:** After a resource is created in Network Management System, the resource code (craft code, equipment code and other resource code) cannot be changed. The sync integration process uses these resource codes to create the enumeration values for equipment type, craft and other resource type property in Oracle Field Service. Slash (/) should not be included in the resource code.

The sync integration process cannot delete enumeration values added to a property in Oracle Field Service; the OFSC REST API that updates the enumeration values of a property does not allow it. The only way to delete an enumeration value(s) in a property is by deleting the property, recreate the property and run the sync to get the latest values.

## Organization

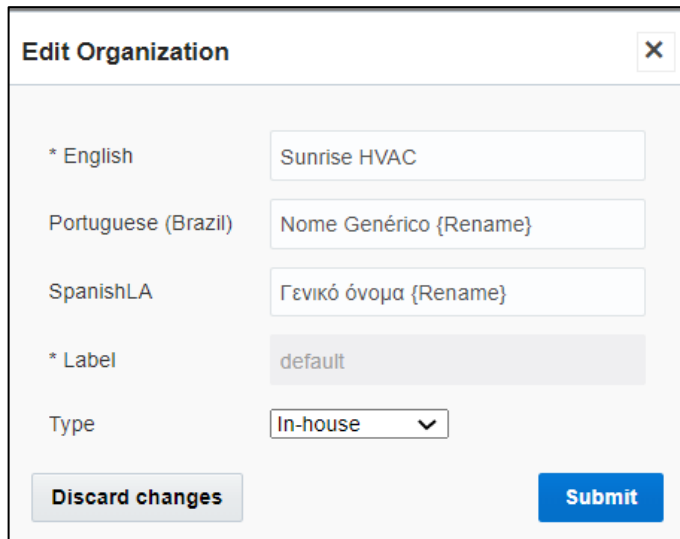
An organization can have buckets, organization units (Org Units), field resources, tools or vehicle associations. Create an organization before adding any type of resource.

To create an organization:

1. Navigate to the **Configuration** page > **Users, Security, Integrations** > **Organizations**.
2. If it does not exist, click **Add New** to add a new organization. Else, click the organization to show details as shown in step 3.



3. Enter the name of the organization and click **Submit** to save the details.

A screenshot of a modal form titled 'Edit Organization'. The form contains several input fields for localization: '\* English' with the value 'Sunrise HVAC', 'Portuguese (Brazil)' with 'Nome Genérico {Rename}', and 'SpanishLA' with 'Γενικό όνομα {Rename}'. There is also a '\* Label' field with the value 'default' and a 'Type' dropdown menu currently set to 'In-house'. At the bottom of the form, there are two buttons: 'Discard changes' and 'Submit'.

## Work Zones

Work zones are used to divide area in different zones for better scheduling of crews. Use the work zone keys to provide the ZIP/postal code to facilitate the division through the Service Point information that comes from Network Management System.

To add a work zone:

1. Navigate to the **Configuration** page > **General** > **Work Zones**.
2. Make sure the **Work Zone Key** (top left corner) is ZIP/Postal Code.

ID	Status	Work zone name ^	Work Zone Keys	Actions	Shapes
1	✓	ALTAMONTE SPRINGS	32701, 32714	Modify	Shape

- On the **Work Zone** page, if needed, click **Add new** to add the required postal codes in the **Work Zone Keys** field.

* Work zone name	STARK
* Work zone label	STARK
Status	Active ▼
Delimiter	New line ▼
Travel Area	Sunrise Ent ▼
Work Zone Keys	44708 44720
Work Zone Shapes	44708 44720

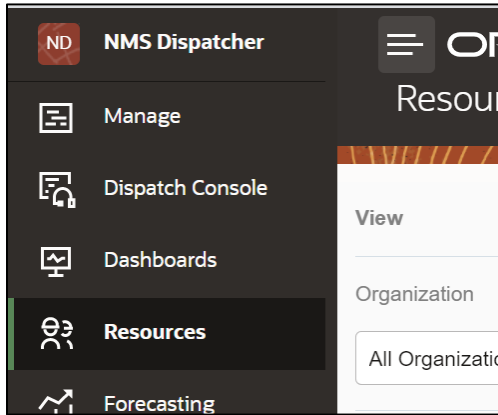
- Click **Add** to save the new work zone.

## Resource and Bucket Info

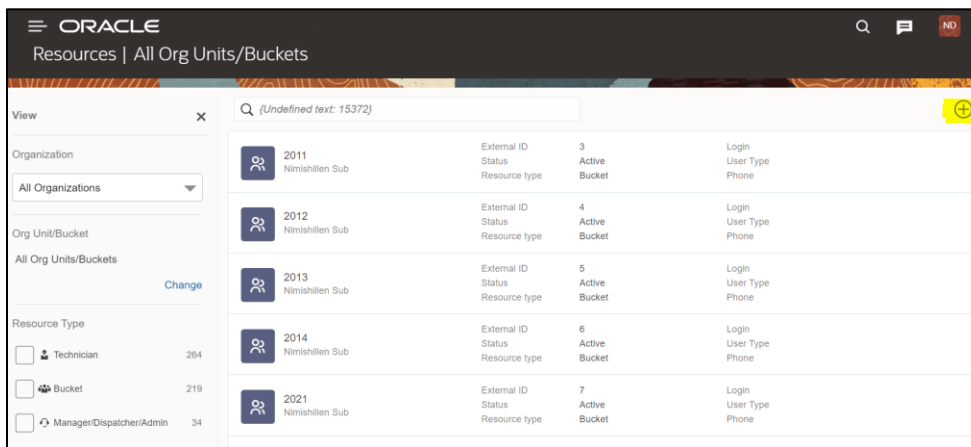
Oracle Field Service uses bucket and resources to categorize the resources. In this integration, use the bucket as a resource type to route the entire meter service tasks to workers. In the bucket, create two resources (field workers) who are assigned field activities coming from Network Management System.

To create resources in the bucket:

- On the Oracle Field Service Home page, click the three lines on the top left corner.



2. Click **Resources** and click **Add New**.



3. Select **Bucket** to add a new bucket in the **Resource type**.

4. Enter the required details and click **OK**.
5. Click the three lines on the top-right corner and click **Add child resource**.
6. Select **Technician** from the **Resource type** drop-down list and enter the required details. Click **OK**.
7. Select the required work skills to this Technician. Click **Save**.

- For NMS Crew, select the **Utilities Resources** as “NMS”.

- For Chat notification for Crew Members select the related chat collaboration group from the **Collaboration Group** drop-down list.

## Outbound Channel

This element is used to create a channel to communicate with Network Management System through Oracle Integration Cloud. You can choose various channel types, but since Network Management System integration to Oracle Field Service is through Oracle Integration Cloud, it is used as the channel type.

To add a communication channel:

- Navigate to the **Configuration** page > **Subsystems** > **Applications**.



**Add Application** [X]

Application Type: Oracle Integration

*You can integrate with Oracle Integration platform to create integrations with cloud and on-premise applications.*

\*Application Name:

\*Host:

\*User Name:

\*Password:

\*Confirm Password:

Close OK

2. Click **Add Application** and enter the required details. Click **OK**.

Application Type: Oracle Integration

Application Name: Name of your channel (Example: OIC)

Host: OIC host name

User Name: OIC user name

Password: OIC password

Confirm Password: OIC password

## Crew Configuration

To configure a crew:

1. Navigate to **Configuration** page > **Resources, Activities, Inventories** > **Resource Types**.
2. If needed, click **Add Resource Type**, or click **Modify** to view and update.

ID	Resource type name	Status	Label	Role	Icons	Actions
3	Bucket	OK	BK	Bucket		Modify

3. Enter the required details and make sure the crew has 'PR' as the label. Save the record.

### Edit Resource Type

<h4>Resource Type Info</h4> <p><b>Name</b></p> <p>* English <input type="text" value="Technician"/></p> <p>SpanishLA <input type="text"/></p> <p>Portuguese (Brazil) <input type="text" value="Técnico"/></p> <p>French (European) <input type="text"/></p> <p>* Label <input type="text" value="PR"/></p> <p>Active <input checked="" type="checkbox"/></p> <hr/> <p><b>Load threshold</b></p> <p>Units of measurement <input type="text" value="number of activities"/></p> <p>Full load      If resource has <input type="text" value="10"/> or more activities</p> <p>Empty            If resource has <input type="text" value="0"/> or less activities</p>	<h4>Features</h4> <p>Role <input type="text" value="Field resource"/> </p> <p><input type="checkbox"/> Resource is a Contingent Worker</p> <p><input checked="" type="checkbox"/> Resource can participate in team</p> <p><input checked="" type="checkbox"/> Resource can be a teamholder</p> <p><input type="checkbox"/> Share inventory in teamwork</p> <p><input type="checkbox"/> Share geolocation in teamwork</p> <p><input checked="" type="checkbox"/> Share work skills in teamwork (team-member only)</p> <p><input checked="" type="checkbox"/> Used for Quota management</p> <p><input checked="" type="checkbox"/> Routing can assign activities</p> <p><input checked="" type="checkbox"/> Enable 'Not activated in time' alert and trigger</p>
--	--

### Adding Crew and Crew Member

To create resources for the crew member and crew itself:

1. Navigate to the **Configuration** page > **Resources, Activities, Inventories** > **Resources Types**.
2. If needed, click **Add Resource Type**, or click **Modify** to view and update.
3. Populate the required information and click **Add**.

### Add Resource Type

<h4>Resource Type Info</h4> <p><b>Name</b></p> <p>* English <input type="text" value="Crew"/></p> <p>SpanishLA <input type="text"/></p> <p>Portuguese (Brazil) <input type="text"/></p> <p>French (European) <input type="text"/></p> <p>* Label <input type="text" value="CR"/></p> <p>Active <input checked="" type="checkbox"/></p> <hr/> <p><b>Load threshold</b></p> <p>Units of measurement <input type="text" value="number of activities"/></p> <p>Full load      If resource has <input type="text" value="10"/> or more activities</p> <p>Empty            If resource has <input type="text" value="0"/> or less activities</p>	<h4>Features</h4> <p>Role <input type="text" value="Field resource"/> </p> <p><input type="checkbox"/> Resource is a Contingent Worker</p> <p><input type="checkbox"/> Resource can participate in team</p> <p><input checked="" type="checkbox"/> Resource can be a teamholder</p> <p><input checked="" type="checkbox"/> Share inventory in teamwork</p> <p><input type="checkbox"/> Share geolocation in teamwork</p> <p><input type="checkbox"/> Share work skills in teamwork (team-member only)</p> <p><input type="checkbox"/> Used for Quota management</p> <p><input checked="" type="checkbox"/> Routing can assign activities</p> <p><input type="checkbox"/> Enable 'Not activated in time' alert and trigger</p>
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**Travel Allowance**

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**Start of Day Travel**

Working Time does not include the Travel Time to the first activity

Working Time includes the Travel Time to the first activity

Working Time includes up to  minutes of the Travel Time to the first activity

**End of Day Travel**

Working Time does not include the Travel Time from the last activity to the Resources End Location

Working Time includes the Travel Time from the last activity to the Resources End Location

Working Time includes up to  minutes of the Travel Time from the last activity to the Resources End Location

---

**Statistic Parameters**

Personalize the estimation of activity duration

Use data reported to enhance company-wide estimations

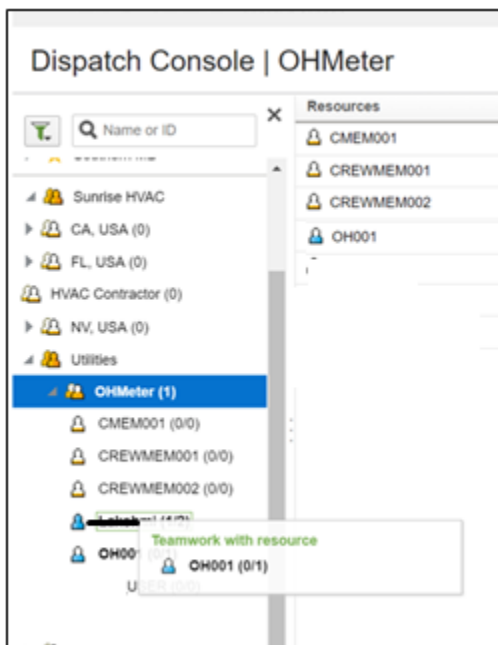
Do not consider reported data of the first  working days, for statistic estimations

- Repeat steps 2 and 3 to create resource types for crew members.

### Assigning Resources

To add multiple resources to a crew so that they can assist it in the completion of work:

- Navigate to the **Dispatch Console** page and observe various resources.
- Drag and drop the resources to the crew.



- On successful drag and drop, add activities to the crew.

4. Populate the required information and click **Submit**.

To display the activity in the Dispatch console, configure the Event ID in the Business Rule Search section. Follow these steps:

1. Login to Oracle Field Service.
2. Navigate to **Configuration > General > Business Rules > Search**.

3. Click **Edit**. Click **+** and select the **Event ID** check box.

4. Click **Add**.

## NMS Priority

This property is used to identify urgent activities.

1. Login to Oracle Field Service.
2. Navigate to the **Configuration** page > **General** > **Business Rules** > **Activity Priority**.
3. Configure the nms\_priority values.

Property: Priority [nms\_priority]

Urgent activities value: 100100, 100, 50100, 70100

**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:  
Priority [nms\_priority] ▼

Urgent activities have the following values of the property:  
100100, 100, 50100, 70100

Normal activities have the following values of the property:

Note: the values are sorted in descending order of priority

## Assertion Key Generation

This property is used to identify urgent activities.

1. Login to Oracle Field Service.
2. Navigate to **Configuration** > **Users, Security, Integrations** > **Applications**.
3. Click the required application, select the **Authenticate using JWT assertion** checkbox and upload the certificate under **Authentication Settings**.

### Authentication settings

**Authenticate using Client ID/Client Secret**  
*Used when the client application requests an access token from OFSC Token service using the client credentials grant type. Also used for SOAP API authentication*

<b>Client ID</b>	loaderuser
<b>Client Secret</b>	3e2f3f6822819dbbfad3bcc1 019e9f8c9b1ebc131cb5458 fbbeebea1b0ac

[Regenerate](#)

[Hide Client ID and Client secret](#)

**Authenticate using JWT assertion**  
*Used when the client application requests an access token from OFSC Token service using JWT bearer assertion grant type.*

**Certificate**

*A certificate which contains a public key. When a client application requests an access token from OFSC token service, the public key is used to verify the assertion token signature.*

4. Configure the application as shown in the following figure.

**General info**

Name: testnet

Application ID: testnet

Active:

Token service: OPSC

**Authentication settings**

Authenticate using Client ID/Secret

Authenticate using JWT assertion

**API access**

Capabilities API:  All

Capacity API:  All

Case API:  All

Field Collaboration API:  All

Inbound Interface API:  All

Metadata API:  All

Outbound API:  All

Parts Catalog API:  All

Statistics API:  All

**Additional restrictions**

Allow access only to certain resources

Allow access only for certain IP addresses

Allow Cross-origin resource sharing (CORS) from the following web domains

Each line should contain one domain name

Example: https://www.oracle.com


https://www.oracle.com

https://www.oracle.com

https://www.oracle.com

5. Navigate to the [jwt.io](https://jwt.io) website with certificate and private key available. Fill the details as shown in the following figure.



- 
- Name of the organization
  - Name of the resources, work zones
  - Details of Oracle Integration Cloud used to create the outbound channel



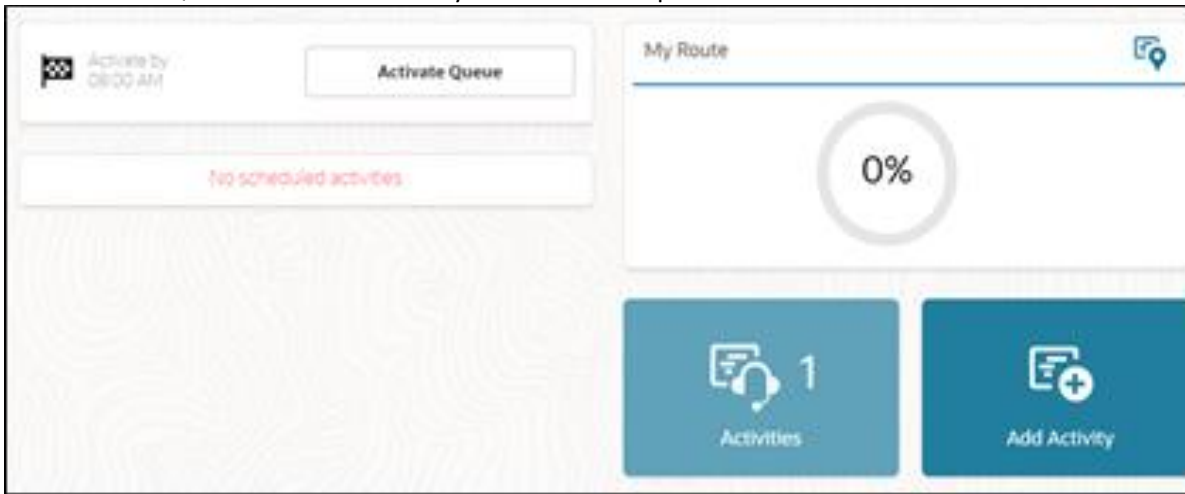
# Chapter 4: User Operations

This chapter provides step-by-step instructions for user operations.

1. Login to Oracle Field Service Mobility application.

You can access the application by adding '/m' to the Oracle Field Service URL <ofsc\_link/m>.

2. Access the **Mobility** page using the worker/technician's credentials. The page shows the activities in the queue of the worker.
3. Click **Activate Queue** to start the activity in the worker's queue.



4. Click the activity.



5. On the **Activity Details** page:

a. Click **Calls**.

Oracle Field Service displays all call records attached to it. It shows calls or incidents logged into Network Management System for an event. If there is an outage, customer can call support who in-turn may log the call against an incident using Web Call Entry interface.

### Quick Links

**Calls**   Details   Failed Equipment   Restoration Data

Event ID:	1792
Event Description:	Revised Prediction
Number of Calls:	8
Priority:	

**Critical First** Comments First

<b>Critical:</b>	Key
Customer Name:	ROBERT M + DEANNA YANIA
Address:	3901 SWEITZER ST NW, Lake Twp., OH, 44685, , - ,
Phone:	(330)2200685
Account:	2200685
Call Time:	07/28/2021 05:51 PM

<b>Critical:</b>	Key
Customer Name:	ROBERT M + DEANNA YANIA
Address:	3901 SWEITZER ST NW, Lake Twp., OH, 44685, , - ,
Phone:	(330)2200685
Account:	2200685
Call Time:	07/28/2021 05:43 PM

<b>Critical:</b>	Key
Customer Name:	ROBERT M + DEANNA YANIA
Address:	3901 SWEITZER ST NW, Lake Twp., OH, 44685, , - ,
Phone:	(330)2200685
Account:	2200685
Call Time:	07/27/2021 03:29 PM

b. Click **Details** in the **Quick Links** section.

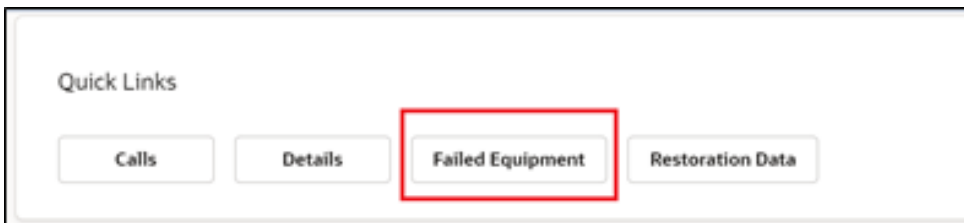


c. Enter the details on the **Activity Details** page.

A screenshot of the "Activity Details" form. The "Activity ID" field is populated with "4244908". Below it are several dropdown menus for "System", "Sub-System", "Type", "Failure\*", "Interrupting Device", "Primary Cause\*", "Weather", "Environment", "Vegetation", "Foreign Interference", "Defective Equipment", "Scheduled", "Utility Error", and "Other". The "Remedy\*" field is also a dropdown menu. The "User" field is populated with "NMSUSER1". A note at the bottom left states "\* Indicates critical fields for event".

6. To enter the failed equipment details:

a. Click **Failed Equipment** on the **Activity** page.



b. Add the details for the failed equipment and submit it.

**Equipment Failure**

Activity ID: 4244931

Item:

Manufacturer:

Serial #:

Primary Voltage:

Secondary Voltage:

Rating:

Rating Units:

Equipment Type:

Size:

Single Phase:

Three Phase:

formData.form\_element#1

07/26/21 05:29 AM

- c. Click **Submit**. The submitted records are synchronized to Network Management System.
7. To enter restoration data:
- a. Click **Restoration Data** on the **Activity** page.

**Quick Links**

[Calls](#) [Details](#) [Failed Equipment](#) [Restoration Data](#)

- b. Enter the details for restoration data to capture periodic restoration information after the activity assigned to the crew is started in Oracle Field Service.

Event Type : PROBABLE\_DEVICE\_OUTAGE

Event Information : New Prediction

Event Location : 2414

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**Restoration Completion**

Restoration Complete:

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**Restoration Update**

Confirmation Device : T11115

Existing Operator Comments : NMSUSER2 (06/22/2021 01:01 AM): TestNew

New Operator Comments :

Estimated Restoration Time : 06/25/2021 03:50 AM

Confirm Device :

8. Click **Complete** to verify the eligibility of the activity to complete.

< Activity Details (07/26/21) [Search] [Home] [Messages]

0:47 [Adjust] **Complete** [Adjust Time] [Not Done] [Suspend] [Map] [Nearby Activities] [Activity Link] [History] [Knowledge] [More]

Activity Type:	NMS Trouble Activity
Activity ID:	4244990
Activity Status:	Started

Event Information

Event Id:	1502
Event type:	PROBABLE_SERVICE_OUTAGE
Priority:	101
Address:	344 WEST MAPLE ST, North Canton, OH, 44720
Substation/Circuit:	2612

9. On the **End Activity** page, click **Submit**.

Completion Time: 06 : 00 AM

[Dismiss] [Submit]

# Chapter 5: Customizations

Adding new properties according to the requirement and customizations help customers to enhance the functionality of the integration and increase the usability. The customizations are done in Oracle Integration Cloud, Oracle Field Service and Oracle Utilities Customer Cloud Service depending on the fields, elements, or properties to be added and whether they are available.

This chapter focuses on the following cases about customizations:

- [Adding New Fields to Field Activity](#)
- [Adding Custom Business Objects](#)
- [Plugins Rendering Data](#)
- [Validation for Completion](#)

## Adding New Fields to Field Activity

This section provides the steps to add a new field to the field activity already available but not present in the field activity.

### *Oracle Field Service Configurations*

1. Login to Oracle Field Service.
2. Navigate to **Configuration > Resources, Activities, Inventories > Properties.**



3. Enter the **Property name** and **Property Label**.
4. Select the entity, type of GUI, and add the enumeration values “customprop1” and “customprop2”.

**Modify Property**

Property type: Enumeration

\* Property name

\* English: Test Custom Property

SpanishLA:

Portuguese (Brazil):

\* Property Label: test\_customproperty

Property hint

English:

SpanishLA:

Portuguese (Brazil):

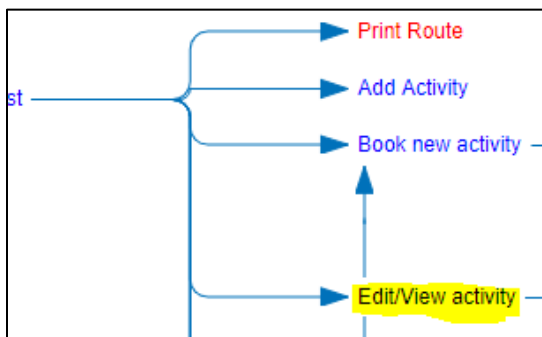
Entity: Activity

GUI:  Combobox  Radiogroup

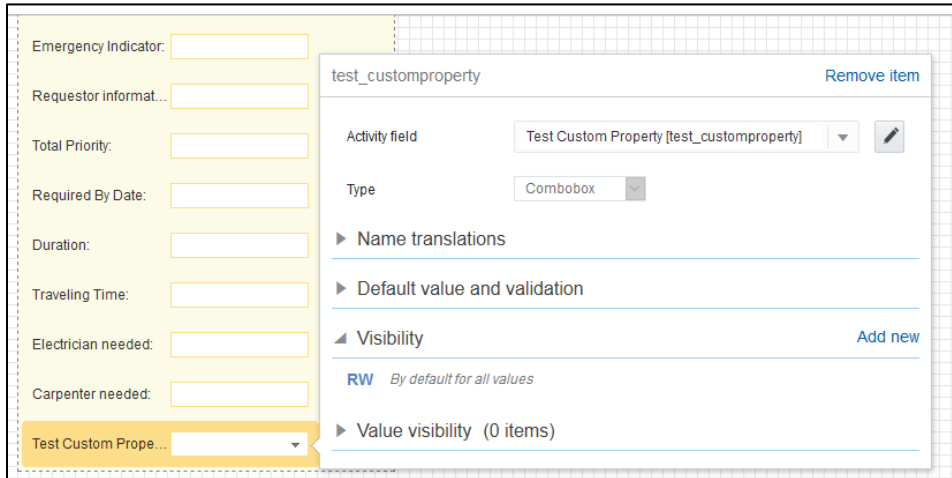
Clone property data on Reopen or Prework:

Enumeration values

5. Navigate to **Configuration > Users, Security, Integrations > User Types** and select the required user type.
6. Navigate to the screen configurations for the select user type and open the **Edit/View activity** section.



7. Add a new element by dragging and dropping a new 'Input' from the **Add New Element** section.
8. Map the element to the **Test Custom Property**. Save this configuration after mapping the field.



## Plugins/Forms Rendering Data

This section explains how each plugin renders the data.

### *Incidents Plugin*

- This plugin is used to show calls or incidents logged into Network Management System for an event. If there is an outage, customer can call support who in-turn may log the call against an incident using Web Call Entry interface. This update will trigger an outbound from Network Management System to Oracle Field Service with the updated call details. In Oracle Field Service side, crew can visit the activity associated with the event and view all calls logged against it.

### *Restoration Data Plugin*

- This plugin serves the purpose of reading and submission of restoration data. Network Management System crew will use this plugin to capture periodic restoration information after the activity assigned to the crew is started in Oracle Field Service. Once the restoration is complete, crew can capture the same with completion timestamp and send it across to Network Management System. Information updated by this plugin also causes Network Management System to send an outbound message back to Oracle Field Service with updated information.

### *Failed Equipment Form*

- This plugin serves the purpose of adding Failed Equipment Details for any activity which is added to the Crew bucket and in started status. Once the data is submitted by crew, it is a synchronous call and data will be synced with Network Management System in runtime.

### *Event Details Form*

- This plugin serves the purpose of adding Event Details for any activity which is added to the Crew bucket and in started status. Once the data is submitted by crew, it is a synchronous call and data will be synced with Network Management System in runtime.



## Chapter 6: Hosting Plug-Ins in OFS

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Plug-ins can be hosted within Oracle Field Service or externally.

Oracle Field Service has plug-ins that can be hosted within Oracle Field Service.

The steps to host a plug-in within Oracle Field Service is documented in [https://docs.oracle.com/en/cloud/saas/field-service/21c/fapcf/configure-and-use-plug-ins.html#c\\_hostingPlugins](https://docs.oracle.com/en/cloud/saas/field-service/21c/fapcf/configure-and-use-plug-ins.html#c_hostingPlugins)

The plug-ins can be hosted externally on

1. Any webserver (Example: Tomcat) running on a virtual machine either on premise or on cloud.
2. It can be stored In Object Storage on a cloud instance by uploading the files either in a public bucket.

Additionally, 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.

### Hosting Files on a Webserver

Plug-ins can be hosted on a webserver running on a virtual machine either on premise or on cloud. The mobile device or browser needs to be able to reach and communicate with the server hosting the plug-in files.

Refer to the documentation of the webserver of choice on how setup and host the static content. The unzipped files of the plug-in is then hosted on the webserver. The path to the index.html or the directory containing the index.html is configured in the URL field of the plug-in screen as defined in <https://docs.oracle.com/en/cloud/saas/field-service/21c/fapcf/configure-and-use-plug-ins.html#configure-and-use-plug-ins>

The externally hosted plug-in can be secured and Oracle Field Service supports authentication mechanism as defined in:

[https://docs.oracle.com/en/cloud/saas/field-service/21c/fapcf/configure-and-use-plug-ins.html#c\\_authentication](https://docs.oracle.com/en/cloud/saas/field-service/21c/fapcf/configure-and-use-plug-ins.html#c_authentication)