

**Oracle Field Service Configurations for
Oracle Utilities Customer Cloud Service
Integration to Oracle Field Service**

Setup Guide

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Oracle Field Service Configurations for Oracle Utilities Customer Cloud Service Integration to Oracle Field Service Setup Guide

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Preface

Welcome to the Oracle Field Service Configurations for Oracle Utilities Customer Cloud Service Integration to Oracle Field Service Setup Guide for release 24A. This document covers relevant information to manage and configure Oracle Field Service as required by the integration.

Note: The screenshots and images provided in this document are sample references based on the current release of Oracle Field Service Configurations for Oracle Utilities Customer Cloud Service Integration to Oracle Field Service. They may change based on changes in future releases.

The preface includes the following:

- [Audience](#)
- [Documentation and Resources](#)
- [Updates to Documentation](#)
- [Documentation Accessibility](#)
- [Conventions](#)
- [Acronyms](#)

Audience

This document is intended for anyone implementing the Oracle Utilities Integration for Customer Cloud Service and Oracle Field Service.

Documentation and Resources

For more information regarding this integration, foundation technology and the edge applications, refer to the following documents:

Product Documentation

Resource	Location
Oracle Utilities Customer Cloud Service Integration to Oracle Field Service documentation	https://docs.oracle.com/en/industries/energy-water/integrations-index.html
Oracle Utilities Customer to Meter documentation	https://docs.oracle.com/en/industries/energy-water/c2m/
Oracle Utilities Customer Cloud Service documentation	https://docs.oracle.com/en/industries/energy-water/customer-cloud-service/index.html
Oracle Field Service documentation	https://docs.oracle.com/en/cloud/saas/field-service/index.html

Additional Documentation

Resource	Location
Oracle Integration Cloud Service documentation	Refer to the OIC documentation at: https://docs.oracle.com/en/cloud/paas/integration-cloud/index.html
Oracle Support	Visit My Oracle Support regularly to stay informed about updates and patches. Access the support site for the edge application Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1) .
Oracle University for training opportunities	http://education.oracle.com/

Updates to Documentation

The complete Oracle Field Service Configurations for Oracle Utilities Customer Cloud Service Integration to Oracle Field Service documentation set is available from Oracle Help Center at <https://docs.oracle.com/en/industries/energy-water/index.html>.

Visit [My Oracle Support](#) for additional and updated information about the product.

Documentation 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>

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Acronyms

The following terms are used in this document:

Term	Expanded Form
OUCCS/CCS	Oracle Utilities Customer Cloud Service
OFS	Oracle Field Service
OIC	Oracle Integration Cloud
OUC2M/C2M	Oracle Utilities Customer to Meter

Chapter 1

Accelerator Overview

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

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

Configuration Overview

This section covers 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 configure and set up Oracle Field Service used in Oracle Utilities Customer Cloud Service Integration with Oracle Field Service. The integration project contains only Oracle Utilities Customer Cloud Service and Oracle Integration Cloud configuration files and instructions hence this document is used in addition to the integration project 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. The new Service Point Details, New Meter Details and Existing Meter Details UIs are linked to user types. For more details, see the User Types section.
- **Properties:** Create layouts and mapping. For more information, see the Properties section.
- **Plugins:** The Device Verification, Unrelated Pickup Query (service point query), Service History, Attachments and Validate Completion plugins are part of the package. The Device Verification plugin takes badge number and returns the device details if a corresponding device exists. The Unrelated Pickup Query plugin gets the service points based on the search criteria. The Service History plugin is to track the service or maintenance performed on an asset. For more information, see the Forms and Plugins section.

Accelerator Activity Types

Make sure to take a backup of the Oracle Field Service accelerator before importing the latest version artifacts in to the Oracle Field Service environment.

Creating Properties Backup

In versions below 21A, create a backup of the properties data added during the execution.

To create a backup of properties:

1. Login to Oracle Field Service.
2. Navigate to **Configuration > Resources, Activities, Inventories > Properties**.
3. Search the properties with “c2m_”.
4. Click **Export**. The filtered properties are saved to your local machine.

5. After the new package properties are imported, the properties for which backup was created can be re-imported.

Note: For Oracle Field Service accelerator version 21 A or higher, it is not necessary to perform these steps. The admin sync flow will synchronize the admin data from Oracle Utilities Customer Cloud Service to Oracle Field Service.

Creating User Type File Backup

Since there is a possibility of the existing customizations to be overridden with the new user type import, make sure to create a backup of user type before importing the latest version user type.

To create a user type file backup:

1. Login to Oracle Field Service.
2. Navigate to **Configuration > Users, Security, Integrations > User Type**.
3. Select the "C2M OFSC" user type and click **Export**. The selected user type file is downloaded to your machine.
4. Add the customized sections back to the latest user type file.

Create a Plugin Backup

Since there is a possibility of the existing customizations to be overridden with the new plugin import, make sure to take a backup of the plugin before importing of latest version.

To create a plugin backup:

1. Login Oracle Field Service.
2. Navigate to **Configuration > Displays > Forms & Plugins**.
3. Select the plugin for which you need a backup and click **Export**. The XML file is downloaded to your machine.
4. Click the plugin and download the zip from the **Version History** section. The .zip file is downloaded to your machine.

In the Admin Sync flow, if the “som.adminsync.activitytypes.sync” property value is set to 'true' in the Configuration Properties (SOMOFSC_ConfigProps) OIC integration lookup, all the required activities will be synchronized to Oracle Field Service. If you are an existing customer already running on old version of Oracle Utilities Customer Cloud Service integration to Oracle Field Service, make sure to take a backup of the required Activity types before doing this step. Also, make sure to use the names mentioned below in Oracle Field Service and Oracle Integration Cloud Activity Type lookup.

Oracle Field Service accelerator is a sample and supports the following Activity Types:

- Install Meter
- Disconnect SP Meter and Remove Meter
- Disconnect SP from Item and Remove Item
- Read Meter

- Exchange Meter
- Connect SP to Item
- Connect SP at Device (not item)
- Disconnect SP at Device and Remove Device
- Disconnect Warning
- Item Exchange
- Turn on pilot light
- Trim Tree
- Service Investigation
- Inspect Meter
- Test Meter

Chapter 2

Installing Basic Accelerator Package

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. It includes the following:

- [Activity Types](#)
- [Properties](#)
- [Forms and Plugins](#)
- [User Types](#)

Activity Types

Activity types define the categories of the activity supported by Oracle Field Service (in this case, Oracle Utilities Customer Cloud Service Integration to Oracle Field Service). The activity types in Oracle Utilities Customer Cloud Service are sync to the Oracle Field Service part of the Admin Sync flow.

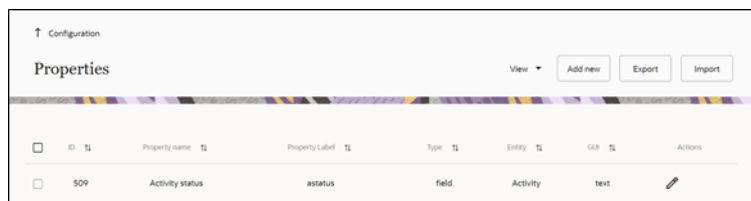
Activity Type Name	Activity Type Label
Turn on Pilot light	Turn on Pilot light
Service Investigation	Service Investigation
Trim Tree	Trim Tree
Disconnect SP at Device and Remove Device (Item)	Disc SP Dev Rem Dev
Item Exchange	Item Exchange
Connect SP at Item	Connect SP at Item
Exchange Meter	Meter Exchange
Read Meter	Meter Read
Disconnect SP at Meter and Remove Meter	Disc SP Met Rem Met
Install Meter	Meter Install
Disconnect Warning	Disconnect Warning
Inspect Meter	Meter Inspect
Test Meter	Meter Test

Properties

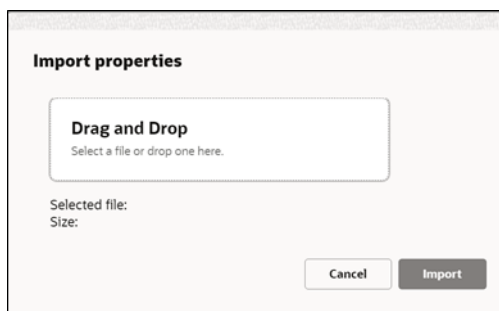
Properties are customs fields used to enable the Utility Integration specific UIs created, and to map the Oracle Field Service UIs. Each property is classified into types (such as field, integer, enumeration and string) based on the requirements. They should be addressed using this property.

To import the property file that is a part of the accelerator package:

1. Navigate to the **Configuration** page.
2. In the **Resources, Activities, Inventories** section, click **Properties**, and then click **Import**.



3. Browse to select the file to be imported. Click **Import**.



4. Verify the successful import of the file. Successfully imported should be 365 and Imported with warnings to be 0 and Not imported to be 0. Click **Close**.

Forms and Plugins

Use the plugins modify screen and data based on their type and status of target and parent object. They invoke the response for badge number input from Oracle Utilities Customer Cloud Service in the device verification plugin and retrieve the service points from Oracle Utilities Customer Cloud Service based on the search criteria by the crew in Oracle Field Service to create unrelated pickup activity using unrelated pickup activity plugin.

The Device Verification plugin accepts badge number of the device and in response sends various parameters from Oracle Utilities Customer Cloud Service, such as unit of meter, time of use, read sequence, dials, and decimals and SH data if available after verifying the badge number in the Oracle Utilities Customer Cloud Service environment.

Crew populates the search criteria in the Unrelated Pickup Activity. The plugin fetches service points from Oracle Utilities Customer Cloud Service and displays this information in Oracle Field Service. Crew can select the service point that needs to create an unrelated pickup activity.

The Service history plugin tracks the service or maintenance performed on an asset. The crew can add/save/complete/delete the service history of a meter/item/equipment.

The Attachments plugin helps crew to upload any files that are related to the activity.

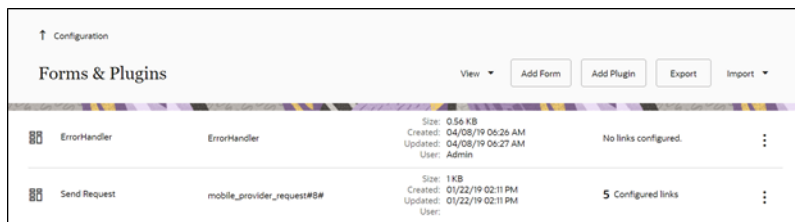
The validate completion plugin helps crew to validate the eligibility to the activity to complete.

Device Verification Plugin

To configure a Device Verification plugin:

1. Navigate to **Configuration > Displays > Forms and Plugins**.

- Click the **Import Plugins** button to import the Device Verification plugin provided in the package.



- In the **Plugin Settings** pane, do the following:
 - Enter the OIC username and password.
 - Select VerifyDevice in plugin XML file.
 - Select “HTML5” from the **Type** drop-down list.
 - Configure the following secure parameters before using the Device Verification plugin.

Parameter Name	Value	Comments
oic_username	Username	Configure OIC user name
oic_password	Password	Configure OIC password
oic_int_url	https://oichostname:port/ic/api/integration/v2/flows/rest/project/OUTL-BA-CCS_OFSC/OUTL-BA-CCS_OFSC_DEVICE_VERIFY/1.0/	Configure the OIC end point URL of Device Verification flow

Plugin parameters
+

Duplicate names are not allowed. Overall size should not exceed 5 KB.

oic_int_url		
oic_username		
oic_password		

- Make sure the **Available Properties** tab is populated with all the properties shown below.

Available Properties

Select values

C2M DOWNTIME REASON [c2m_downtime_reason] x

Device Valid Service History Types [c2m_dev_valid_service_history_types] x

Meter Type [c2m_ert_meter_type] x

Existing Meter Badge Number [c2m_meter1_number] x

Item Number [c2m_item_nbr] x

Device Service History Types [c2m_dev_service_history_types1] x

New Device Valid Service Histories [c2m_new_dev_valid_service_history_types] x

Activity type [aworktype] x

c2m_verifyStatusFlag [c2m_verifyStatusFlag] x

1Current Index [c2m_meter1_current_index] x

2Meter # [c2m_meter2_number] x

Service Point ID [c2m_service_pt_id] x

New Item Number [c2m_new_item_nbr] x

1Meter Upper Limit [c2m_meter1_upper_limit] x

New Meter Lower Limit [c2m_meter1_lower_limit] x

New Meter Lower Limit [c2m_meter1_lower_limit2] x

New Meter Lower Limit [c2m_meter1_lower_limit3] x

1Meter Upper Limit 2 [c2m_meter1_upper_limit2] x

1Meter Upper Limit 3 [c2m_meter1_upper_limit3] x

2Current Index [c2m_meter1_current_index2] x

3Current Index [c2m_meter1_current_index3] x

New Meter Lower Limit [c2m_meter1_lower_limit4] x

New Meter Lower Limit [c2m_meter1_lower_limit5] x

1Meter Upper Limit 4 [c2m_meter1_upper_limit4] x

1Meter Upper Limit 5 [c2m_meter1_upper_limit5] x

4Current Index [c2m_meter1_current_index4] x

5Current Index [c2m_meter1_current_index5] x

ExistingMtrTOU [c2m_existing_meter_TOU3] x

ExistingMtrTOU [c2m_existing_meter_TOU2] x

Offline Mode [c2m_offline_mode_override]	x
New Meter Dials [c2m_meter1_dials]	x
New Meter Dials [c2m_meter1_dials2]	x
New Meter Dials [c2m_meter1_dials3]	x
New Meter Dials [c2m_meter1_dials4]	x
New Meter Dials [c2m_meter1_dials5]	x
New Meter Decimals [c2m_meter1_numberofDecimals]	x
New Meter Decimals [c2m_meter1_numberofDecimals2]	x
New Meter Decimals [c2m_meter1_numberofDecimals3]	x
New Meter Decimals [c2m_meter1_numberofDecimals4]	x
New Meter Decimals [c2m_meter1_numberofDecimals5]	x
Enable Register [c2m_enable_register]	x
New Meter Read sequence [c2m_meter1_read_seq]	x

New Meter Read Sequence [c2m_meter1_read_seq4]	x
New Meter Read Sequence [c2m_meter1_read_seq5]	x
Custom Device Verify Activity types [c2m_device_verify_act_types]	x
Activity Level Equipment Action [c2m_ert_activity_action]	x
ERT Move Custom Act Types [c2m_ert_custom_move_act_types]	x
New Meter Type [c2m_new_meter_type]	x
New Meter UOM [c2m_meter1_uom]	x
New Meter UOM [c2m_meter1_uom2]	x
New Meter UOM [c2m_meter1_uom3]	x
New Meter UOM [c2m_meter1_uom4]	x
New Meter UOM [c2m_meter1_uom5]	x
New Meter Manufacturer [c2m_newmeter_manufacturer]	x
New Item Manufacturer [c2m_newitem_manufacturer]	x

New Meter Model [c2m_newmeter_model] x
New Item Model [c2m_newitem_model] x
New Meter SQL [c2m_meter1_sqi] x
New Meter SQL [c2m_meter1_sqi2] x
New Meter SQL [c2m_meter1_sqi3] x
New Meter SQL [c2m_meter1_sqi4] x
New Meter SQL [c2m_meter1_sqi5] x
New Meter TOU [c2m_meter1_TOU1] x
New Meter TOU [c2m_meter1_TOU2] x
New Meter TOU [c2m_meter1_TOU3] x
New Meter TOU [c2m_meter1_TOU4] x
New Meter TOU [c2m_meter1_TOU5] x
New Item Type [c2m_new_item_type] x
New Serial Number [c2m_new_meter_serial] x
New Item ID [c2m_new_item_id] x
Failure Information [c2m_failure_info] x

New Device Failure Information [c2m_new_dev_failure_info] x
Device Type [c2m_deviceTypeDescription] x
Device Type [c2m_item_device_type_description] x
Device Type [c2m_newitem_deviceTypeDescription] x
Device Type [c2m_newmeter_devicetypedescription] x
Equipment Failure Info [c2m_equip_failure_info] x
Meter Type [c2m_ert_meter_type1] x
Equipment Histroy Types [c2m_eqp_valid_service_history_types] x
Equipment Service History Types [c2m_equip_service_history_types1] x
Equipment Valid History Type [c2m_equip_valid_service_history_types] x
Service History Status [c2m_ert_vsh_status] x
Serial Number [invsn] x
Inventory pool [invpool] x
Inventory Type [invtype] x
Activity Id [inv_aid] x
Resource Id [inv_nid1] x

6. Click **Device Verification** to configure the plugin.
7. On the **User Type** screen configurations, select **Device Verification** to connect it to the specific field on the UI in the **Mobility** page.

Crew could verify the existence of a device using the Device Verification feature where the search is based on Badge Number or Serial Number. Manufacturer and Model are part of Device Verification response from Oracle Utilities Customer Cloud Service and gets auto-populated in the respective fields.

To use this feature:

1. Select **Install Meter Activity > New Meter Details**.
2. Click **Verify Device** to view the existence of the device.

The **Device Details** page displays both **Badge Number** (mandatory) and **Serial Number** (optional).

If the device exists based on the search criteria, the **New Meter Details** page is displayed with auto populated details, including the register information sent by Oracle Utilities Customer Cloud Service.

Note: The Oracle Field Service mobile device application has the capability to search the meter badge number through barcode scanner. So that no need to enter meter badge number manually while doing the device verification.

Custom Activity Type Support

The Device Verification plugin supports custom activity types other than Meter Install and Meter Exchange.

Follow the below steps to support custom activity type:

1. Login to Oracle Field Service.
2. Navigate to **Configuration > Resources, Activities, Inventories > Properties**.
3. Search for the “c2m_device_verify_act_types” property.
4. Click **Modify**.
5. Add the **Enum** entry.
6. Enter the **Activity Type Label** in the **Index** field and **Device Type** in the **Value** field.

Index	Value	Status
CM_InstallMeter	Meter	Active

Unrelated Pickup Activity

To configure an unrelated pickup activity:

1. On the **Configuration** page, navigate to **Displays > Forms & Plugins**.
2. Click the **Import** icon to import the **Unrelated Pickup** plugin provided in the package.
3. Select the unrelated pickup plugin and enter the following details:

Parameter Name	Value	Comments
oic_int_url	https://oichost/ic/api/integration/v2/flows/rest/project/OUTL-BA-CCS_OFSC/OUTL-BA-CCS_OFSC_SP_QUERY/1.0/	Configure the activated service point url.
oic_username	User Name	Configure the OIC user name
oic_password	Password	Configure the OIC password
ofsc_username	OFS user name	Configure the OFS user name
ofsc_password	OFS password	Configure the OFS Password
ofsc_bucket	OFS Bucket External ID	Configure the OFS Bucket
ofsc_api_url	OFS REST API url Example: https://api.etadirect.com	Configure the OFS REST API url
latitude_format	Latitude format value Example: N2.7	Configure the format of latitude
longitude_format	Longitude format value Example: N3.7	Configure the format of longitude

Note: Username and password would be the client ID and client secret that can be retrieved from Oracle Field Service.

Plugin parameters +

Duplicate names are not allowed. Overall size should not exceed 5 KB.

oic_int_url		
oic_username		
oic_password		
ofsc_username		
ofsc_password		
ofsc_bucket		
ofsc_api_url		
latitude_format		
longitude_format		

4. Click **Configuration** and select the user type.
5. Navigate to the **Screen Configuration** tab.

6. Click **Application screens** to display the structure. Click **Activity list**.



7. On the left pane, click **Click to add** and select the unrelated plugin.

8. On the right pane, add new visibility.

9. Make sure the **Available Properties** tab displays all the properties as shown below.

- After the plugin is configured, select the XML file in the User Type Screen Configurations field to connect it to the specific field on the UI in the Mobility page.

CORS Setup

As part of the unrelated pickup functionality, from the plugin, there is an invocation call to OFSC REST API which needs CORS setup.

To call OFSC REST API from the plugin, set up cross-origin resource sharing (CORS) in Oracle Field Service as follows:

- Navigate to **Configuration > Applications > Additional restrictions**.
- Select **Allow Cross-origin resource sharing (CORS)** from the following web domains and provide the Oracle Field Service domain.
- If the domain details are unknown, enter an asterisk (*). For the actual Oracle Field Service domain contact the Oracle Field Service support team.

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:

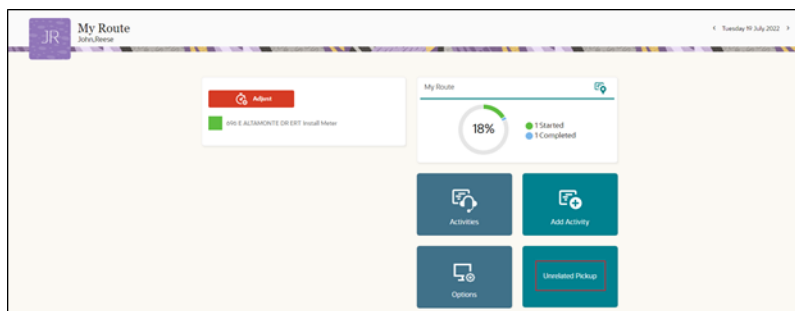
 https://www.example.com

 https://best.customer.com

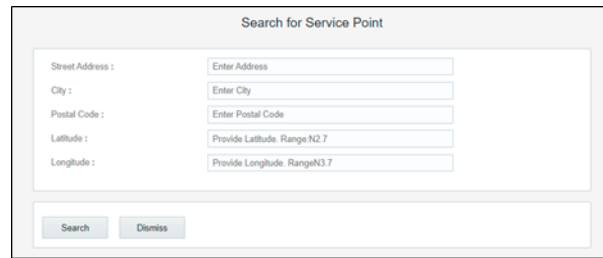
 https://bestcust.com

Crew can specify search criteria and send request to Oracle Utilities Customer Cloud Service for service points. From the retrieved service points, crew can select a service point and raise a service investigation activity. The search criteria includes address, city, postal code, latitude and longitude.

- On the Mobility page, select **Unrelated Pickup** to use this feature.



- On the **Unrelated Pickup** page search for service points.



Search for Service Point

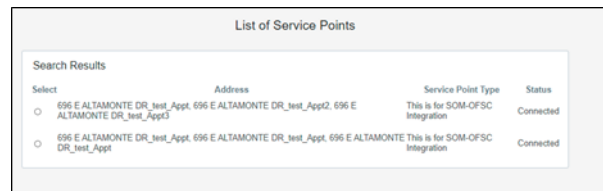
Street Address :

City :

Postal Code :

Latitude :

Longitude :

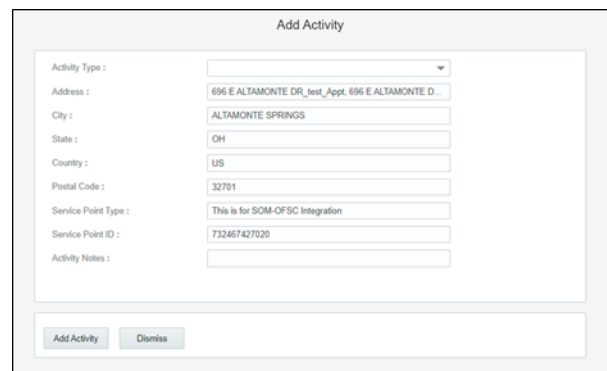


List of Service Points

Select	Address	Service Point Type	Status
☐	696 E ALTAMONTE DR_test_Appt. 696 E ALTAMONTE DR_test_Appt2. 696 E ALTAMONTE DR_test_Appt3	This is for SOM-OFSC Integration	Connected
☐	696 E ALTAMONTE DR_test_Appt. 696 E ALTAMONTE DR_test_Appt. 696 E ALTAMONTE DR_test_Appt	This is for SOM-OFSC Integration	Connected

- Select the desired service point from the list and click **Select**.
- Click **Add Activity** to create the activity.

After successful creation of the activity in Oracle Field Service, the corresponding activity is created in Oracle Utilities Customer Cloud Service.



Add Activity

Activity Type :

Address :

City :

State :

Country :

Postal Code :

Service Point Type :

Service Point ID :

Activity Notes :

User Types

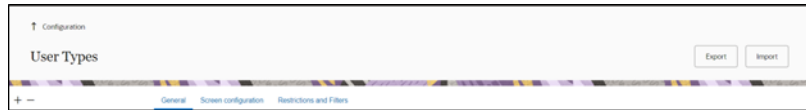
User types manage all user permissions. Each user type has a profile that defines security and display permissions, such as the user's login method, the ability to use certain functions, and access to menu items and properties. Screen-configuration settings define the screens, windows, pop-up windows 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 Screen Configuration settings in specific user types to create custom screen context layouts for the integration.

Prerequisite! Make sure the properties, activity types, and plugins are loaded before proceeding with the configuration.

To configure the user types:

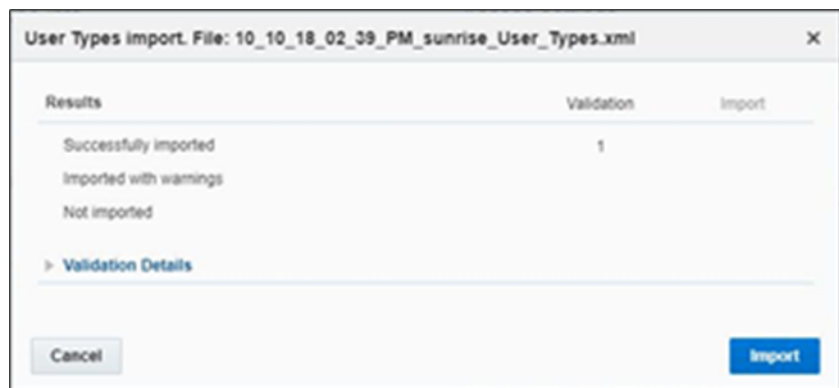
1. Navigate to **Configuration > Users, Security, Integrations**.
2. Click the **User Types** icon.
3. Click **Import** to import the user types.



4. On the **Choose file** field, click **Browse** to select the user type. Click **Validate**.



5. After successful validation, click **Import** to import the file.



6. Verify the successful import and click **Close**.

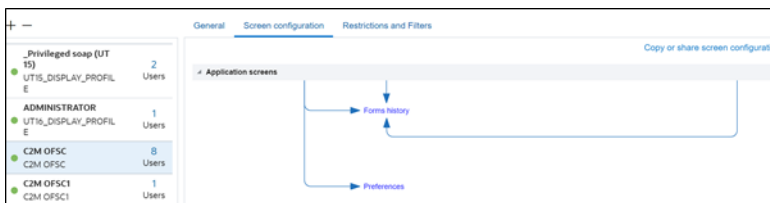


Configuring Time Format

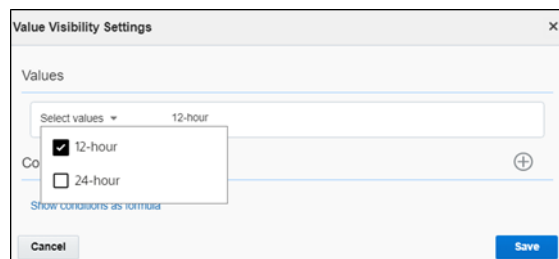
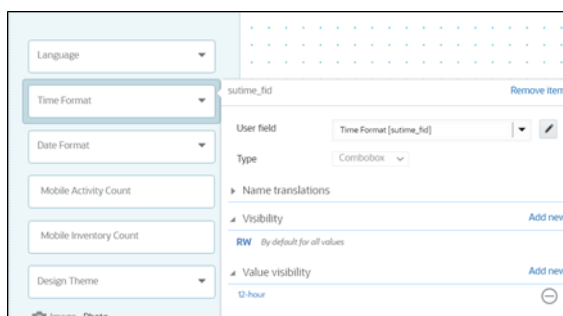
The time format can be changed from 12 hour to 24 hour. Oracle Fields Service has the provision to configure in the user type file. The user type file is in 12 hour format by default.

To change the time format:

1. Login to Oracle Field Service.
2. Navigate to **Configuration > User type > C2M OFSC**.
3. Click **Screen Configuration** and select **Preferences**.



4. Click **Property**, then click the value in the **Value visibility** section.



5. Click **Save**.

Chapter 3

Additional OFS Configurations

This chapter elaborates on the additional configuration of organization, work zones, outbound channels, and UI validations in user types. It includes the following:

- [Checklist](#)
- [Organization](#)
- [Work Zones](#)
- [Work Skills](#)
- [Activities and Scheduling Information](#)
- [Resource and Bucket Information](#)
- [Applications](#)
- [Offline vs Online Mode](#)
- [Display Profile](#)
- [Quota Configuration](#)
- [Creating Capacity Categories](#)
- [Adding Work Skill Groups to a Capacity Category](#)
- [Time Slots](#)
- [Enabling Quota Management at Bucket Level](#)

Checklist

Before getting started with Oracle Field Service configuration, verify that the following are complete.

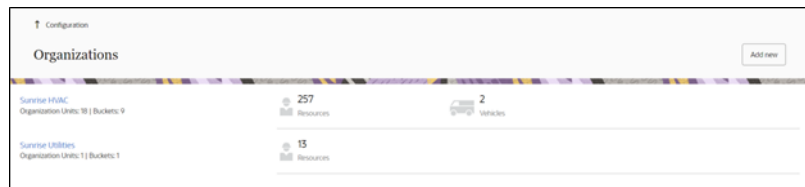
- All the Activity Types specific to customer are created
- Properties are imported
- Users and resources are configured
- User Types are imported
- Make sure the Quota has been allocated and doesn't need to be configured
- Plugin has been imported
- Name of Organization
- Work Skills to be created
- Name of the resources, work zones
- Details of Oracle Integration Cloud to create the Outbound Channel

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 before adding any type of resource:

1. Navigate to **Configuration > Users, Security, Integrations > Organizations**.
2. Click **Add New** to add a new organization.



3. Enter the name of the organization and click **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 Oracle Utilities Customer Cloud Service.

To configure a work zone:

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

ID	Status	Work zone name	Work zone keys	Actions	Shiges
1	Active	ALTAIR/ALTAIR SPRING	0700, 0701, 0714	View	Shiges

3. On the **Work Zones** page, 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 Ente
Work Zone Keys	32704 44720

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

Work Skills

Use the work skills to assign activities to workers. Incoming activities are also assigned work skills based on certain conditions being met, and are attached to resources with corresponding skills during routing.

The integration supports only two work skills at this time of release: Meter Services, Ops and Maintenance

To create work skills:

1. Navigate to **Configuration > General > Work Skills**.
2. Click **Add New**.

- Enter the details of the work skill. Add two work skills: Meter Services and Ops and Maintenance. Click **Save**.

- Click **Work Skill Condition**. Make sure “Meter Services” is listed and configured with respective details. The figure below shows the necessary values.

Property	Condition	Value	Actions
Activity type	In	Connect SP to Item, ZZ Disconnect SP from Item and Remove Item, Disconnect SP at Meter and Remove Meter, Disconnect SP, Disconnect Warning, Install Meter_del, ZZ Exchange Item, Test ZZ-C2MO- exchangemeter, Read Meter_del, Trim Tree	

Activities and Scheduling Information

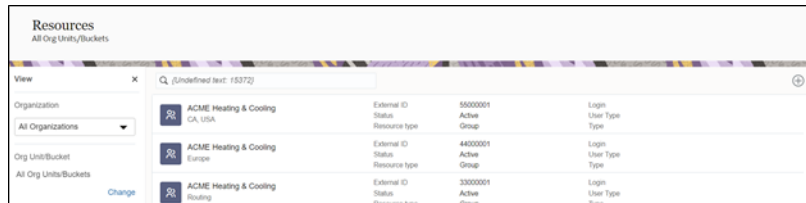
By default, the activities created from Oracle Utilities Customer Cloud Service to Oracle Field Service remain in 'non scheduled' state as expected. To schedule them refer to the Oracle Field Service documentation and use the routing option that suits the business need.

Resource and Bucket Information

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 Oracle Utilities Customer Cloud Service.

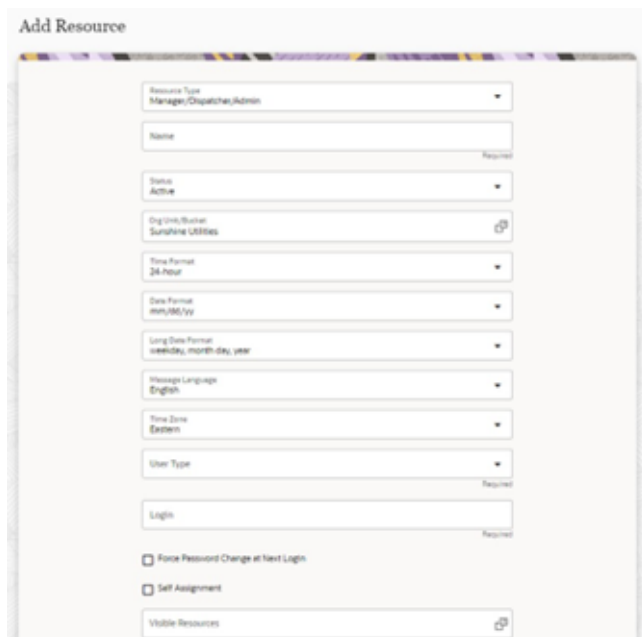
To configure resource and bucket information:

1. On the Oracle Field Service Home page, click the hamburger icon (three lines) on the top-left corner.
2. Click **Resources** and search for respective bucket.



Resources				
All Org Units/Buckets				
View	Organization	ACME Heating & Cooling	External ID	55000001
		CA, USA	Status	Active
			Resource type	Group
				Login User Type
				Type
	Org Unit/Bucket	ACME Heating & Cooling	External ID	44000001
		Europe	Status	Active
			Resource type	Group
				Login User Type
				Type
	Org Unit/Bucket	ACME Heating & Cooling	External ID	33000001
		Routing	Status	Active
			Resource type	Group
				Login User Type
				Type

3. Click **Add Child Resource**.
4. Select **Bucket** to add a new bucket in the **Resource type**.
5. Enter the required details and click **OK**.
6. Click **Add child resource** and select **Technician** from the **Resource type** drop-down list. Click **OK**.



Add Resource

Resource Type: Manager/Dispatcher/Address

Name:

Status: Active

Org Unit/Bucket: Sunshine Utilities

Time Format: 24-hour

Date Format: mm/dd/yyyy

Long Date Format: weekday, month-day, year

Message Language: English

Time Zone: Eastern

User Type:

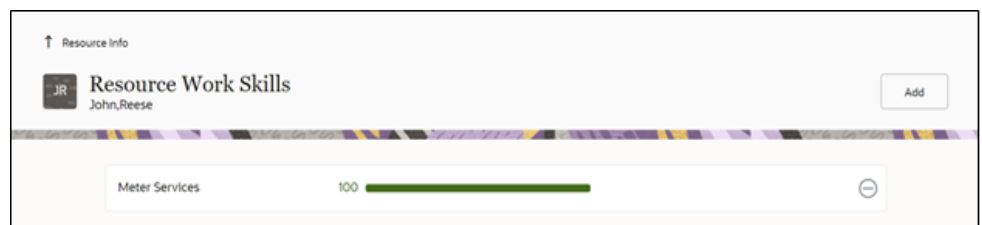
Login:

☐ Force Password Change at Next Login

☐ Self Assignment

Visible Resources:

7. Select the required work skills to this technician. Click **Save**.



↑ Resource Info

Resource Work Skills

John, Reese

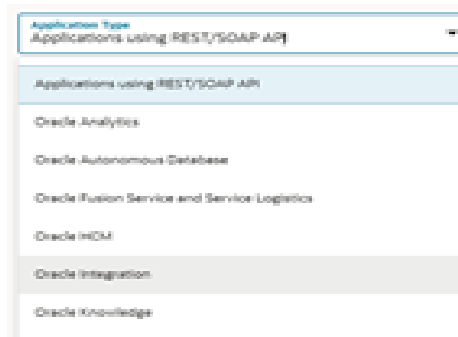
Meter Services: 100

Applications

This element is used to create an application to communicate with Oracle Utilities Customer Cloud Service through Oracle Integration Cloud. Various application types can be chosen, but since Oracle Utilities Customer Cloud Service integration to Oracle Field Service is through Oracle Integration Cloud, it is used as the application type.

To configure an outbound channel:

1. Navigate to **Configuration > Subsystems > Applications**.
2. Click **Add Application**. Enter the required details and click **ADD**.



Please note that starting Oracle Field Service 22D, the Basic Authentication support is no longer available for adding new applications to handshake with Oracle Integration Cloud. Create the application with OAuth 2.0 compliance.

If you are an existing customer, the current application will work fine with Basic Auth after the upgrade. If you are a new customer, perform the following steps:

1. Select **Oracle Integration** as the **Application Type**.
2. Enter the following details:
 - **Application Name:** Name of your choice
 - **OIC Host:** OIC host
 - **User Name:** OIC user
 - **IDCS URL:** OIC IDCS URL
 - **Client ID:** OIC Client ID from the application created.
 - **Client Secret:** OIC Client Secret from the application created.
 - **Key ID:** This is certificate alias, which is imported in OIC IDCS application.

- **Scope:** Scope of the client application you created in IDCS.
 - **Private Key File:** Drag and drop the private key file.
3. Click **Test Connection**, and then click **Add**.

For more information, refer to the Oracle Field Service and Oracle Integration Cloud documentation at: <https://docs.oracle.com/en/cloud/paas/integration-cloud/rest-adapter/authentication-support.html>

Offline vs Online Mode

When the crew is enroute to perform an activity in the field there are chances that the location might not have network (offline mode). In such scenarios, the crew cannot fetch device information and cannot send a request for device verification. To overcome this, the crew should manually do the entry and select appropriate configuration type which auto populates all the registers information.

Offline Mode Configurations

Since different customers have different configurations to auto populate the registers information, do the following:

1. Login to Oracle Field Service.
2. Navigate to **Configuration > Users, Security, Integrations > User Types**.
3. Navigate to **C2M OFSC** user type.
4. Click **Screen Configuration > Edit/View activity**.
5. Navigate to **Registers Information > New Meter Reading Details** and configure all register details as required.
6. Click **Read Sequence** and expand the **Default value and validation** section.

The screenshot displays the 'C2M OFSC > Edit/View activity' configuration page. On the left, the 'Registers Information' section is expanded, showing 'New Meter Reading Details' with a 'Read Sequence' dropdown. On the right, the 'Default value and validation' section is expanded, showing a default value expression: `if(activity.c2m_new_meter_type= ('INT-SOM-DC-MANUALMTR1'), 1,0 ) OR if(activity.c2m_new_meter_type= ('INT-OFSC-DC-MANUALMTR2'), 1,0 )` and a validation expression: `(activity.c2m_offline_mode_override='Yes')`. The 'Validation error message' field is also visible.

The default value code is displayed as:

```
if(activity.c2m_new_meter_type= ('INT-OFSC-DC-MANUALMTR1'), 1,0 ) OR
if(activity.c2m_new_meter_type= ('INT-OFSC-DC-MANUALMTR2'), 1,0 )
```

In the above code, `if(activity.c2m_new_meter_type= ('INT-OFSC-DC-MANUALMTR1'), 1,0 )` tells Oracle Field Service that if the meter type is "INT-OFSC-DC-MANUALMTR1" the Read Sequence value is 1; else it is 0.

7. To provide the value for “c2m_new_meter_type”, open the property and identify the default meter type to be used in the offline mode and use the respective Index value in the above condition.
8. To provide the default value for “c2m_meter1_read_seq”, open the property and view the index.

Example: “1” in the above condition represent the Index value in the “c2m_meter1_read_seq” enumeration property.

↑ Properties

Modify Property

General settings

Entity
Activity

Label
c2m_meter1_read_seq

Name: English
New Meter Read sequence

Name: French (European)

Name: Portuguese (Brazil)

Name: Greek

Property hint

Type and advanced settings

Property type
Enumeration

GUI
Combobox

☐ Clone property data on Reopen or Prework

Enumeration values

Index	Value	Status	Actions
1	1	Active	
2	2	Active	
3	3	Active	

9. Follow these steps to modify the display conditions for UOM, TOU, SQI, Dials, Decimals fields for all registers as required.

Note that no configurations are required for online mode.

To perform the offline operations:

1. Login to the mobile application.
2. From the activities assigned to the crew, select **Install Meter**.
3. Select **Meter Details** to enter the information.

If the device is offline, crew should select **Manual Entry** as **Yes** and select the configuration type.

Meter Information
New Meter Details

Manual Entry
☐ No
☒ Yes

Badge Number

Configuration Type

Meter Location

Manufacturer

Model

Status Left Required

New Meter Attachments

Dismiss Submit

- After the respective fields are selected based on pre-configuration the registers information is displayed as below. Click **Submit**.

Meter Details
chart, 07/19/22

Meter Information
New Meter Details

Manual Entry
☐ No
☒ Yes

Badge Number

Status
Verification Successful

Configuration Type
Electric Single Residential

Meter Location

Manufacturer
C2M - Electric Manufacturer

Model
C2M - Electric Model

Device Type
Electric Manual Read Meter - Analog

Status Left Required

New Meter Attachments Service Histories

Registers Information
New Meter Reading Details

Read Sequence
1

Unit Of Measure
Kilowatt Per Hour

Time Of Usage
Peak

SD
Peak

Date
3

Decimals
0

Reading Required

Lower Limit
0

Upper Limit
0

Dismiss Submit

Meter Read Override

This functionality is applicable in online mode only. Based on the type of activity crew enters the meter readings. The readings should be between the high/low boundaries received by Oracle Field Service from Oracle Utilities Customer Cloud Service after device verification. If the reading is outside of these limits, Oracle Field Service displays corresponding error messages. If the meter reading is actually outside the limits, select to override the readings and submit them.

To override meter read:

- Login to mobile application.
- From the activities assigned to the crew, select the required activity.

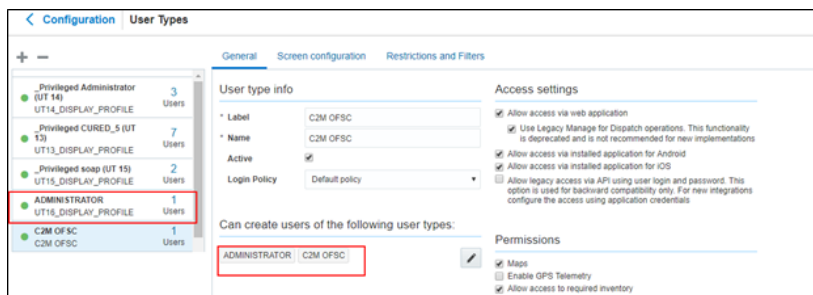
3. Select **Meter Details** and navigate to the user interface.

The lower and upper limit are part of message from Oracle Utilities Customer Cloud Service. It infers that reading should be ideally between these limits but a crew can always override the recommendations. If the reading is not between these limits the application displays an error.

4. To submit the reading, select **Override Reading** as “Yes” and click **Submit**.

Display Profile

This section is applicable to users with display profile other than "UT16_DISPLAY_PROFILE".



To change the display profile:

1. Open the usertype.xml file.
2. Search for “manger” and change the label based on the Oracle Field Service configuration.
3. Make sure to change the “managed_user_type” label.

```
<user_types>
  <user_type label="C2M OFSC" status="active" login_policy="Default policy" display_profile="display5d17997f7623f">
    <translations>
      <translation lang="en" value="C2M OFSC"/>
    </translations>
    <managers>
      <manager label="UT16_DISPLAY_PROFILE"/>
    </managers>
    <managed_user_types>
      <managed_user_type label="UT16_DISPLAY_PROFILE"/>
      <managed_user_type label="C2M OFSC"/>
    </managed_user_types>
  </user_type>
</user_types>
```

Quota Configuration

Oracle Field Service Capacity allows to achieve an optimal resource utilization. Use this feature to plan the resource capacity in advance, forecast the resource allocation, and identify where the quota is under utilized or over utilized.

Capacity Management: Manages the volume of workforce. Capacity ensures that there are enough qualified resources to implement the expected amount and type of work.

Quota Management: Allocates work across the shifts and time slots for the available field resources.

In Oracle Field Service, quota and capacity can be managed in the capacity management matrix. The quota matrix is generated with real-time data based on the requirements. Update quota values to the business needs using either time-slot based or time-interval based (availability-based) quota management.

The capacity components are described below:

- **Work Skills:** A client-specific set of skills assigned to the resources to determine their skill sets and the qualification level within each skill set.
- **Work Skill Conditions:** A set of rules defined to assign required work skills and work skill levels to the activities.
- **Capacity Categories:** A group of activities with similar work skill requirements. These are used for the quota management purpose.

- **Time Slots:** The amount of quota reserved for a capacity category at a specific time of the day. Time slots are associated with the buckets and individual capacity categories used to manage the capacity management grid. They are also used to manage the activities.
- **Time Intervals:** Define the configured time intervals for booking activities. This value is used to show available capacity, max available resources, and the value for Booking Status time intervals.

For steps to create work skills and work skill conditions, see the [Work Skills](#) section.

Creating Capacity Categories

To create a capacity category to configure work skills, work skill groups, and time slots:

1. Navigate to the **Configuration** page and click **Capacity Categories**.
2. Click **Add New**.
3. Enter the necessary details. The table below provides the fields available and the description of each field.

Field	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 checkbox to mark this capacity category as active. Only active capacity categories are used in the quota matrix.

4. Click **Save**.

After capacity category is created, add work skills, work skill groups and time slots to it.

Example:

↑ Configuration						
Capacity categories						View ▾ Add New
☐	ID	Name	Label	Status	Work Skills	Time slots
☐	157	Estimate	EST	✓	Estimate(1)	06-10, 10-12, 13-15, 15-17, All-Day

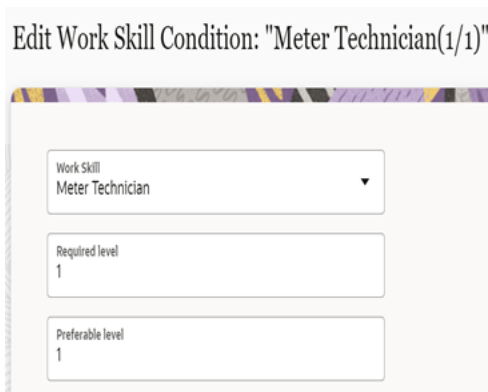
Adding Work Skill Groups to a Capacity Category

To assign work skills and work skill groups to a capacity category:

1. Navigate to **Configuration > General > Work Skills**.
2. Click **Work Skill Conditions** and then click the pencil icon to edit.

3. Select the work skill group and provide the work skill condition level value.

Edit Work Skill Condition: "Meter Technician(1/1)"



4. Click **Save**.

Time Slots

A time slot is a fixed time interval specified in the activity management to perform activities. It denotes the starting time and is assigned to a bucket in the capacity management.

Creating a Time Slot

To create a time slot:

1. Navigate to **Configuration > Resources, Activities, Inventories > Time Slots**.
2. Click **Add New**.
3. Enter the following details:

- **Name:** Name the time slot in the start time-end time format.

Example: 8-10

- **Time slot label:** Enter the specific label name for the time slot.
- **Status:** Select **Active** or **Inactive** from the drop-down list.

Note that Oracle Field Service assigns activities and capacity management to active time slots only.

- **All-day time slot:** Select it for the time slot to last the entire day.
- **Time from:** Enter the time to indicate when the time slot begins.
- **Time to:** Enter the time when the time slot ends.
- **Capacity Categories:** Select to add activity types and work skill types.

☐	ID ↕	Name ↕	Time slot label ↕	Status ↕	Time Slot ↕	Capacity Categories	Actions
☐	1	08-10	08-10	Active	08:00 AM - 10:00 AM	Commercial, Estimate, Residen...	

4. Click **Add**.

Adding Time Slots to a Capacity Category

To add a time slot to a capacity category:

1. Navigate to **Configuration > Resources, Activities, Inventories > Capacity Categories**.
2. Hover over the **Time Slot** column to view the pencil icon.
3. Click it to edit the time slot.
4. Select the required time slots to assign to the capacity category.
5. Click **Save**.

Enabling Quota Management at Bucket Level

Note that quota management can only be enabled at a bucket level. To do so:

1. Select quota, capacity area, resource info.
2. Select the **Use as Capacity Area** check box.

The quota Management feature is enabled for this bucket. You can now add the management information to your quota matrix.

3. In the **Quota Management** section, configure the following features:
 - **Time Slots:** Edit to add time slots to this bucket. If the time-interval (availability) based booking is configured, do not add time-slots.
 - **Capacity Categories:** Edit to define capacity category types.
4. Click **OK**.

Configuring Quota Options

To configure the quota management settings:

1. Navigate to the **Configuration** page.
2. Select **Time slot based quota** checkbox and select **Quota**.
3. Select a capacity area/bucket from the left-hand pane.
4. Click the **Configuration** icon.

5. On the bucket's **Configuration** page, configure the parameters as shown in the figure below.

The screenshot displays the Configuration page for a bucket, organized into three main sections: Booking, Quota management, and Capacity management.

Booking

- ☐ Use Direct assignment
- ☒ Use Quota management
 - ☐ Based on Booking intervals
Recommended for overlapped time slots or significant variety of work duration
 - ☒ Based on Time Slots
Recommended for long non-overlapping time slots with short work duration
- ☐ Allow closing of booking on work zone level
- ☒ Show recommendations in activity booking screen

Time Slots: 08-10 X 10-12 X 13-15 X 15-17 X All-Day X

Quota management

- ☐ Manage Quota by Day
- ☒ Manage Quota by Capacity Category
 - ☐ Quota is entered as % of maximum capacity available in this category
 - ☐ Quota is entered as % of quota defined on parent level
 - ☒ Quota is entered in minutes
- ☒ Manage Quota by Time Slot
 - ☐ Quota is entered as % of capacity available by calendar
 - ☐ Quota is entered as % of quota defined on parent level
 - ☒ Quota is entered in minutes

Capacity management

Capacity Categories: Estimate X Residential X Commercial X
Meter Services X

Working time unit: minutes

- ☒ Start of day travel time is included in the Used time
- ☐ End of day travel time is included in the Used time

Chapter 4

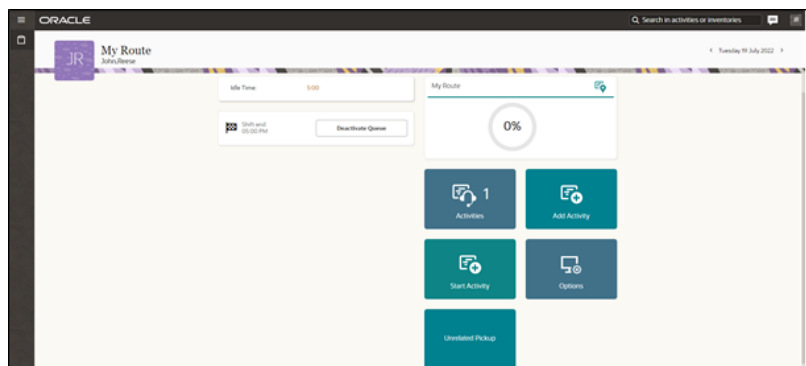
User Operations

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>.

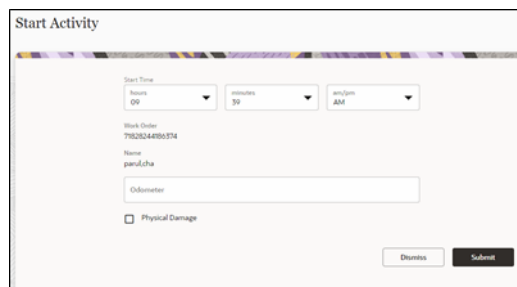
2. Access the **Mobility** page using the worker/technician's credentials. The page shows activities in the queue of the worker.
3. Click **Start** to start the activity in the worker's queue.



4. Click “>” against the activity. The options **Start**, **Cancel**, **Suspend**, **Map** and **Book Activity** are displayed.



5. Click **Start** to start the activity in the worker's queue.
6. Enter the odometer details and click **Submit**.



7. Click **Meter Details**. Enter the **Badge Number** and click **Submit**.

Meter Information

New Meter Details

Verify Device

Manual Entry

No

Yes

Bridge Number

Configuration Type

Meter Location

Manufacturer

Model

Status Left

Required

New Meter Attachments

Dismiss

Submit

- Click **Meter Details**, then click **Verify**. After the verification is successful, the meter reading information is displayed in the **Registers Information** section.

Device Details

Device Type:

Meter

Badge Number*:



Serial Number:



Submit

Dismiss

[illegible]

9. Enter the respective details in the **Meter Information** and **Registers Information** sections. Click **Submit**.

10. Click **Complete**.

Activity Details
John/Theresa, 03/17/22

Go back to Activities list, wait 10 seconds and come back to see newly populated information below

Service Information

Activity Type
Install Name

Site Address
400 E. ALTAIR DRIVE DR 207

CC Activity ID
12125340076425

SPIC Activity ID
4226378

System
Started

Scheduling Information

Start - End
09:48 AM - 10:32 AM

Duration
45 minutes

Traveling Time
1 minutes

Service Point Details

Service Point ID
35194678960

Service Point Name
Connected

Service Point Type
CCS-SPIC Service Point Type

Service Type
Single Family Home

Service Type
Electric Service

Life Support
Name

Service Location
Service Location Details

Warnings

Instructions
Instructions Details

Service Point Attachments

Dismiss Submit

11. On the **End Activity** page, enter the required details. Click **Submit**.

End Activity

Activity Type
Install

Activity Notes

SPIC Job ID
12125340076425

Customer Contact Comments

Remarks

Customer Signature

Dismiss Submit

Chapter 5

Customizations

Property additions and customizations help customers using this integration to enhance the functionality of the integration and increase the usability too. 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 their availability.

This chapter focuses on the following customizations:

- [Adding New Fields to Field Activity](#)
- [Adding New Fields and Lookup to Field Activity](#)
- [Adding New/Custom Activity Types](#)
- [Adding Enumeration Values to OFS Property](#)
- [Adding Fields to UI in OFS](#)

Adding New Fields to Field Activity

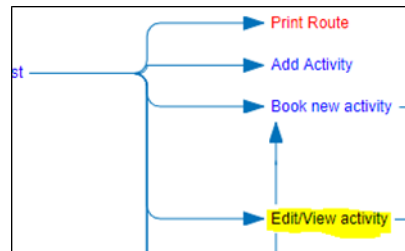
This section includes steps to add new fields to Field Activity. These fields are available but not present in Field Activity.

Oracle Field Service Configurations

1. Login to Oracle Field Service.
2. Navigate to **Configuration > Properties > Add New Property**.
3. Select the **Entity** and **Type of GUI**. Enter the enumeration values (example: customprop1 and customprop2).

The screenshot shows the 'Add New Property' configuration window. The 'General settings' tab is selected. Under 'Entity', 'Field Activity' is chosen. Under 'Type of GUI', 'Enumeration' is chosen. The 'Enumeration values' section is currently empty, with an 'Add' button. The 'Property hint' section has four input fields for different languages: 'Field Activity', 'Field Activity', 'Field Activity', and 'Field Activity'.

4. Click **Save**.
5. Navigate to **User Types** and select the required user type.
6. Navigate to **Screen Configurations** of the selected user type and open the **Edit/View activity** section.



7. In the **Add New Element** section, drag and drop a new 'Input' to add a new element.

- 8. Map the element to **Test Custom Property**. Save this screen configuration after mapping the field.

Service Point Details

Service Point ID:

Warnings:

Instructions:

Instruction Details :

Disconnect Location:

Life Support:

Service Point Type:

Premise Type:

Not Done Reason:

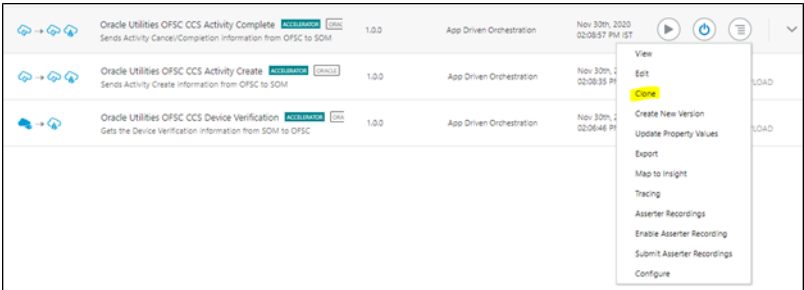
Test Custom Property:

Oracle Integration Cloud Configurations

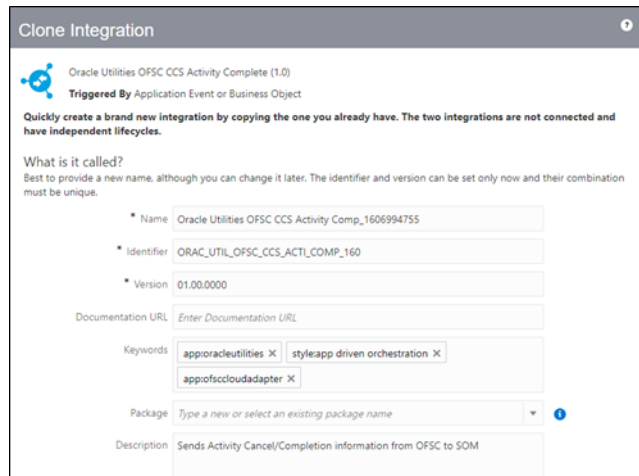
In Oracle Integration Cloud configurations use xsl files and not graphical mapper to include new properties. Since the changes are made in Oracle Field Service and the flow is from Oracle Field Service to Oracle Utilities Customer Cloud Service, modify the .iar file for Complete Activity.

For xsl files to include the new field mappings as properties in Oracle Field Service:

- 1. Login to Oracle Integration Cloud.
- 2. Navigate to **Integrations** and clone Oracle Utilities OFSC CCS Activity Complete (1.0).



- On the **Clone Integration** window, change the **Name** and **Identifier** as required.



Clone Integration

Oracle Utilities OFSC CCS Activity Complete (1.0)
 Triggered By Application Event or Business Object

Quickly create a brand new integration by copying the one you already have. The two integrations are not connected and have independent lifecycles.

What is it called?
 Best to provide a new name, although you can change it later. The identifier and version can be set only now and their combination must be unique.

* Name: Oracle Utilities OFSC CCS Activity Comp_1606994755
 * Identifier: ORAC_UTIL_OFSC_CCS_ACTL_COMP_160
 * Version: 01.00.0000

Documentation URL: Enter Documentation URL

Keywords: apporacleutilities X styleapp driven orchestration X
 appofsccloudadapter X

Package: Type a new or select an existing package name

Description: Sends Activity Cancel/Completion information from OFSC to SOM

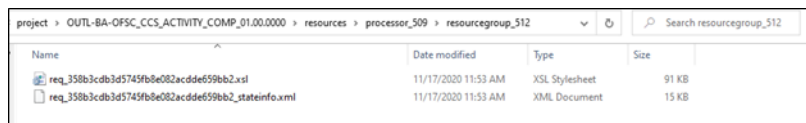
- Select the package or enter the package name. Click **Clone**.

The new cloned integration is created under the package name entered during the cloning of an integration.

- For Oracle Field Service response use the following xsl file. Navigate to the file location and select it.

OUTL-BA-OFSC_CCS_ACTIVITY_COMP_01.00.0000\icspackage\project\
 OUTL-BA-
 OFSC_CCS_ACTIVITY_COMP_01.00.0000\resources\processor_509\resourcegroup_512\req_358b3cdb3d5745fb8e082acdde659bb2.xml

For detailed information refer to *Oracle Customer Cloud Service Integration to Oracle Field Service Configuration Guide* included in this release.

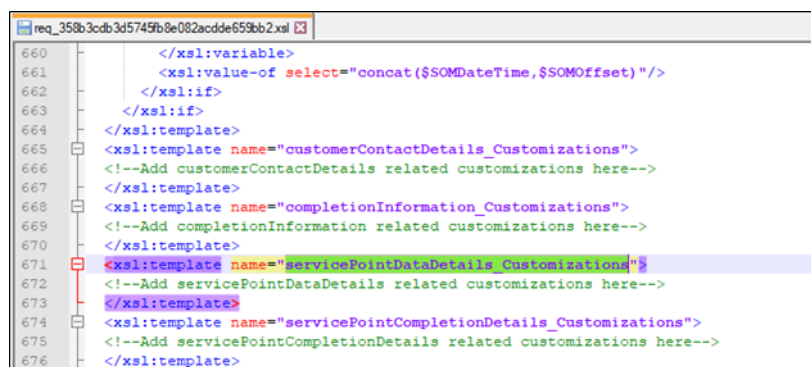


Name	Date modified	Type	Size
req_358b3cdb3d5745fb8e082acdde659bb2.xml	11/17/2020 11:53 AM	XSL Stylesheet	91 KB
req_358b3cdb3d5745fb8e082acdde659bb2_stateinfo.xml	11/17/2020 11:53 AM	XML Document	15 KB

- Navigate to `<xsl:template..>` tags towards the end of the file.
- Select the appropriate template tag based on the new UI property to be added in Oracle Field Service UI.

Example: To add a new field on the **Service Point Details** page, choose the following xsl tag:

```
<xsl:template name="servicePointDataDetails_Customizations">
```



```

660      </xsl:variable>
661      <xsl:value-of select="concat($SOMDateTime,$SOMOffset)"/>
662    </xsl:if>
663  </xsl:if>
664  </xsl:template>
665  <xsl:template name="customerContactDetails_Customizations">
666    <!--Add customerContactDetails related customizations here-->
667  </xsl:template>
668  <xsl:template name="completionInformation_Customizations">
669    <!--Add completionInformation related customizations here-->
670  </xsl:template>
671  <xsl:template name="servicePointDataDetails_Customizations">
672    <!--Add servicePointDataDetails related customizations here-->
673  </xsl:template>
674  <xsl:template name="servicePointCompletionDetails_Customizations">
675    <!--Add servicePointCompletionDetails related customizations here-->
676  </xsl:template>

```

8. Add the new customized property in this tag. The sample custom property named `u_custom` is as below:

```
<tns:custom1>
```

```
<xsl:value-of select="$invokeOFSCGetActivity/nsmpr0:canonical_GETResponse/  
nsmpr0:activities.definitions.getActivitySchema/nsmpr1:u_custom"/>
```

```
</tns:custom1>
```

```
<xsl:template name="servicePointDataDetails_Customizations">  
  <xsl:custom1>  
    <xsl:value-of select="$invokeOFSCGetActivity/nsmpr0:canonical_GETResponse/nsmpr0:activities.definitions.getActivitySchema/nsmpr1:u_custom"/>  
  </xsl:custom1>  
</xsl:template>
```

9. After editing, save the xsl and test the syntax by opening it in a web browser. It should open as shown without any errors.



10. To upload the xsl file in Oracle Integration Cloud, deactivate the integration, open the flow and select the mapping icon. Click **More Actions** and select **Import**. Browse the .xsl file and import it.



Adding New Fields and Lookup to Field Activity

This section focuses on adding new fields that are not available.

Oracle Field Service Configurations

For instructions see the Oracle Field Service Configurations section in [Adding New Fields to Field Activity](#). Add the property, drag and drop it on the UI screen where it is needed and save the UI screen in the user types.

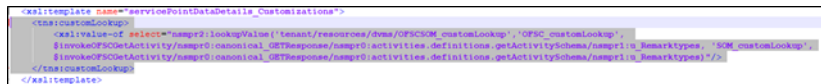
Oracle Integration Cloud Configurations

1. For a customized lookup in Oracle Field Service, follow the steps in the Oracle Integration Cloud Configurations section in [Adding New Fields to Field Activity](#).

Extract .iar and navigate to the required xsl tag (based on the location of the new lookup) in the xsl file you are editing as per the process flow.

2. Instead of adding the custom property, modify the following:

```
<tns:customLookup>
<xsl:value-of select="nsmpr2:lookupValue('tenant/resources/dvms/
OFSCSOM_customLookup',
'OFSC_customLookup',
$invokeOFSCGetActivity/nsmpr0:canonical_GETResponse/
nsmpr0:activities.definitions.getActivitySchema/nsmpr1:u_Remarktypes,
'SOM_customLookup',
$invokeOFSCGetActivity/nsmpr0:canonical_GETResponse/
nsmpr0:activities.definitions.getActivitySchema/nsmpr1:u_Remarktypes)"/>
</tns:customLookup>
```



```
<?xml version="1.0" encoding="UTF-8" standalone="no"?>
<xsl:template name="servicePointDetails_customizations">
  <xsl:customLookup>
    <xsl:value-of select="nsmpr2:lookupValue('tenant/resources/dvms/OFSCSOM_customLookup', 'OFSC_customLookup',
      $invokeOFSCGetActivity/nsmpr0:canonical_GETResponse/nsmpr0:activities.definitions.getActivitySchema/nsmpr1:u_Remarktypes, 'SOM_customLookup',
      $invokeOFSCGetActivity/nsmpr0:canonical_GETResponse/nsmpr0:activities.definitions.getActivitySchema/nsmpr1:u_Remarktypes)"/>
    </xsl:customLookup>
  </xsl:template>
```

3. Upload the xsl file in Oracle Integration Cloud after verification in a browser.

Oracle Utilities Customer Cloud Service Configurations

To configure Oracle Utilities Customer Cloud Service with a new schema element:

1. Navigate to the “D1-FieldActivityOBComm” business object and identify the data area to add the new schema element.

Example: To make changes to the **Service Point Details** section, the data area to be modified is a custom data area created for Oracle Field Service.

DATA AREA	D1-NewOFSCDataAreaExt
DESCRIPTION	New OFSC DA added for extending the Service Point DA
OWNER	Customer Modification

Schema Designer ⓘ

View Mode
 TREE TEXT

```

1 <schema xmlns:suiHint="http://oracle.com/ouafUIHints">
2   <customField mdField="D1_CUSTOM_FIELD" dataType="string"/>
3 </schema>
4
```

- Extend the data area by adding the Service Point Details DA in the extended DA section.

- New schema element should now be displayed in BO schema.

```
<servicePointDataDetails mdField="D1 SO SP DATA DET LBL" >
  <disconnectLocation mdField="D1_DISCONNECT_LOCATION_CD" da
  <serviceWarnings mdField="D1_SERVICE_WARNINGS_CD" dataType
  <serviceInstructions mdField="D1_SERVICE_INSTRUCTIONS_CD"
  <instructionDetails mdField="D1_INSTRUCTION_DETAILS"/>
  <serviceAgreementStatus mdField="D1_SA_STATUS_FLG"/>
  <servicePointId mdField="D1_SERVICE_POINT_ID"/>
  <serviceAgreementId mdField="D1_SA_ID"/>
  <premiseId mdField="D1_PREMISE_ID"/>
</servicePointDataDetails>
<customField mdField="D1_CUSTOM_FIELD" dataType="string"/>
```

Adding New/Custom Activity Types

Oracle Field Service allows users to create/update or clone the activity types:

- [Creating an Activity Type](#)
- [Cloning an Activity Type](#)

Creating an Activity Type

To create an activity:

- Navigate to **Configuration > Resources, Activities, Inventories > Activity Types**.
- Click **Add Activity Type**.

The screenshot displays the Oracle Field Service Configuration interface for cloning an activity type. On the left, there is a list of activity types with columns for status, label, and time range. The 'Active' status is selected. Below this list is a 'Color scheme' section with a 'Copy from' dropdown and a list of color-coded activity types: Pending (FFDE00), Completed (79B6EB), Warning (FFAAAA), Suspended (99FFFF), Not Done (60CECE), Not Ordered (FFCC99), Started (50B83F), En route (FFFFFF), and Cancelled (80FF80). On the right, there is a configuration panel with various checkboxes for enabling features like 'Allow to search', 'Allow to create from Incoming interface', 'Enable 'day before' trigger', 'Enable 'reminder' and 'change' triggers', 'Enable 'not started' trigger', 'Enable 'SW warning' trigger', 'Calculate delivery window', 'SLA and Service window use customer time zone (required for routing)', 'Support of required inventory', and 'Disable resource tracking for this activity type'.

3. Enter the label and name for activity in the respective **Label** and **Name** fields.
4. Select **Activate** to activate the activity type.
5. Select the necessary features.

Cloning an Activity Type

To clone an activity type:

1. Navigate to **Configuration > Activity Types**.

- In the list of activity types, click **Clone** for the activity type to be cloned.

Configuration

Activity Types

View Add Group Add Activity Type

Customer (ID-1)	Rename	ID	Status	Activity Type Name	Activity Type Label	Actions
		115	✓	1Disconnect SP from Item and Remove Item	Disc SP Dev Rem Dev2	Modify Clone
		101	✓	2Disconnect SP from Item and Remove Item	Disc SP Dev Rem Dev1	Modify Clone
		135	✓	3Disconnect SP from Item and Remove Item	Disc SP Dev Rem Dev3	Modify Clone
		66	✓	Commercial Facility Maintenance	05	Modify Clone
		88	✓	Connect SP at Meter and Turn On	Conn SP Met Turn On	Modify Clone
		130	✓	Connect SP at Meter and Turn On	Conn SP Met Turn On3	Modify Clone
		100	✓	Connect SP at Meter and Turn On	Conn SP Met Turn On1	Modify Clone
		112	✓	Connect SP at Meter and Turn On	Conn SP Met Turn On2	Modify Clone
		128	✓	Connect SP to Item and Turn On	D1-ConnectSP&Dv&AndTurnOn	Modify Clone

After the clone is complete, all features of the existing activity are applied to the new activity type.

- Enter a new activity label and name. Click **Clone**.

Clone Activity Type

Activity type info

Label
Meter Install

☒ Active

Name: English
Install Meter_del

Name: Greek

Name: Portuguese (Brazil)

Name: French (European)

Group
Customer

Default duration, minutes
45

Available time slots

Status	Name	Time Slot
☐ Active	08-10	08:00 AM - 10:00
☐ Active	10-12	10:00 AM - 12:00 F
☐ Active	13-15	01:00 PM - 03:00 I

Features

☐ Allow mass activities
 ☐ Teamwork
 ☐ Enable segmenting and extended duration
 ☒ Allow move between resources
 ☒ Allow creation in buckets
Once selected, it cannot be modified for the Activity Type
 ☒ Allow reschedule
 ☒ Support of not-ordered activities
Once selected, it cannot be modified for the Activity Type
 ☒ Allow non-scheduled
Once selected, it cannot be modified for the Activity Type
 ☒ Support of work zones
 ☒ Support of work skills
 ☒ Support of time slots
 ☒ Support of inventory
Once selected, it cannot be modified for the Activity Type
 ☒ Support of links
Once selected, it cannot be modified for the Activity Type
 ☒ Support of preferred resources
Once selected, it cannot be modified for the Activity Type
 ☐ Allow Repeating Activities
 ☒ Calculate travel
 ☐ Calculate activity duration using statistics

Active Second Lunch Break 01:00 PM - 02:00 PM

Color scheme

Copy from

Pending #FDE00

Completed #986EB

Warning #FAAA

Suspended #0FFFF

Not Done #0CECE

Not Ordered #FCC99

Started #0BE3F

En route #FDE00

Cancelled #0FFB0

Enable 'reminder' and 'change' triggers

Enable 'not started' trigger

Enable 'SLW warning' trigger

Calculate delivery window

SLA and Service window use customer time zone (required for routing)

Support of required inventory

Disable resource tracking for this activity type

Cancel Done

Adding Enumeration Values to OFS Property

Oracle Field Service includes enum properties that need to add values to Oracle Utilities Customer Cloud Service, such as SQI, TOU, UOM, meter configuration type, etc.

To add values to the enum property:

1. Log in to Oracle Field Service.
2. Navigate to **Configuration > Resource, Activities, Inventories > Properties**.
3. Search for the property with label.
4. Click **Modify Property**.

Values field shows a combination of Description[id]. Example: Simple Electrical[E-DEFAULT]

5. In the **English** field, enter the description and code.
6. Enter "Item" to verify an item as part of custom activity and activity as part of ID.
Example: Item[Custom_item_activity_type]
7. Click **Add** to add the values to the **Values** list.
8. Click **Update** to save the value to the property.

The table below lists the properties to be updated to add custom values apart of the demo values that are part of the accelerator.

OFS Property	Oracle Utilities Customer Cloud Service Admin Table
Service Point Status Code	Service Point Status
New Item Type	Device Type
New Meter TOU	Time Of Use
Customer Contact Type	Customer Contact Type
New Meter SQI	Service Quantity Identifier
Disconnect Location	Disconnect Location
Service Point Instructions	Service Instructions
Service Point Warnings	Service Point Warnings
New Item Model	Model

OFS Property	Oracle Utilities Customer Cloud Service Admin Table
New Meter Model	Model
New Item Manufacturer	Manufacturer
New Meter Manufacturer	Manufacturer
New Meter UOM	Unit Of Measure
Item Configuration Type	Device Configuration Type
Unit Of Measure	Unit Of Measure
Time Of Use	Time Of Use
Premise Type	Premise Type
Service Point Type	Service Point Type
Meter Configuration Type	Device Configuration Type
Remark Type	Remark Type
Premise Warning	Service Point Warnings
Cancellation Reason	FA Cancel Reason
Customer Contact Type	Customer Contact Type
Meter ID Types	Meter ID Type
Read Type	Read Type

9. Add entry to the corresponding Oracle Integration Cloud look up.

Example: After adding value to the Manufacturer properties, add an entry to the SOMOFSC_Manufacturer Oracle Integration Cloud lookup.

To add an entry to the lookup:

1. Login to Oracle Integration Cloud.
2. Navigate to **Designer > Lookups**.
3. Search for the respective lookup.

Example: SOMOFSC_Manufacturer

SOMOFSC_Manufacturer		
Lookup		
Create a lookup to associate the different values used by your applications. When you create an integration, you can use the lookup to map the values.		
	SOM_Manufacturer	OFSC_Manufacturer
	INT-ELECTRIC MANUFACTURER	GE
	C2M_ELECTRIC_MANUFACTURER	ACCUMETER
	BEECO	BEECO
	SENSUS	SENSUS

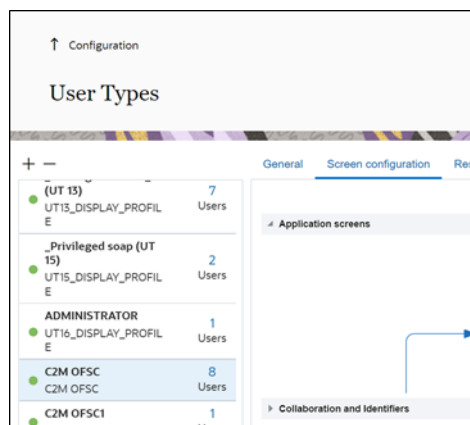
4. Click **+**.
5. Enter the SOM code in the **SOM_Manufacturer** column.

6. Enter the ofsc enum field ID in the **OFSC_Manufacturer** column.
7. Click **Save**.
8. Deactivate and activate the integration using the lookup.

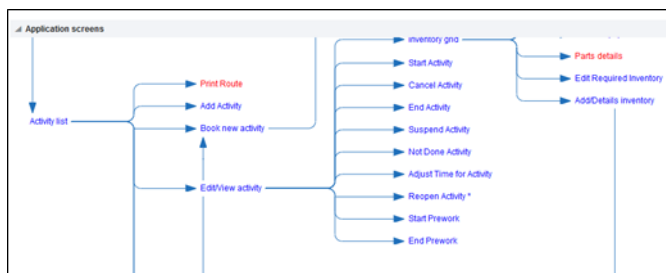
Adding Fields to UI in OFS

To add newly created properties to the Mobility/UI screen:

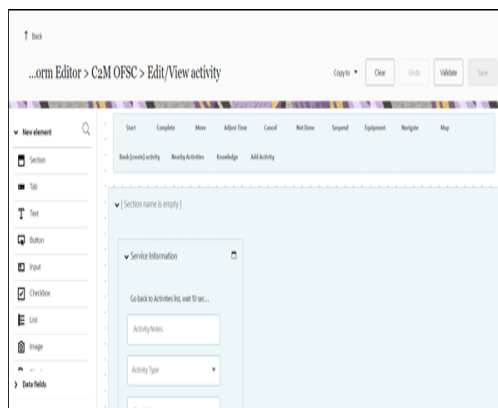
1. Login to Oracle Field Service.
2. Navigate to **Configuration > Users, Security, Integrations > User Types**.
3. Click the **C2M OFSC** user type and click **Screen configuration**.



The **Application screens** tab shows different screens.



4. Click **Edit/View Activity** to add a field to the activity level.
5. Drag and drop the elements available in the left pane as required



6. Select the required property from the **Activity field** drop-down list.

Field Remove item

Activity field

▲ Name translations

English

SpanishLA

Portuguese (Brazil)

▲ Visibility Add new

RW By default for all values

7. In the **Name translations** section, enter the label name in the respective language field.
8. In the **Visibility** section, enter if the property should be read or read-write.
9. Click **Save**.

Glossary Customization

The labels of equipment and install and detach screens can be changed using the glossary file available as part of the accelerator zip.

Category (ctg)	Identifier (id)	Type (tp)	ID/Label (lbl)	User Type English (en-US)
Glossary: mobile_shared_wap_inventory	glossary	translation	10109	Assets/Equipment
Glossary: mobile_shared	glossary	translation	10865	Assets/Equipment
Glossary: mobile_shared	glossary	translation	10767	Asset/Equipment Details
Glossary: wap_inventory	glossary	translation	10111	Existing

To change the label, modify the text in the English(en-us) column and re-import the glossary file.

Before changing the glossary file.

< Assets/Equipment Adjust Attach Equipment

Existing 1

Measuring Component Equipment: Badge No: ET2, Serial No: ET2, UOM: Kilowatt hour, TOU: Peak, SQ: 1

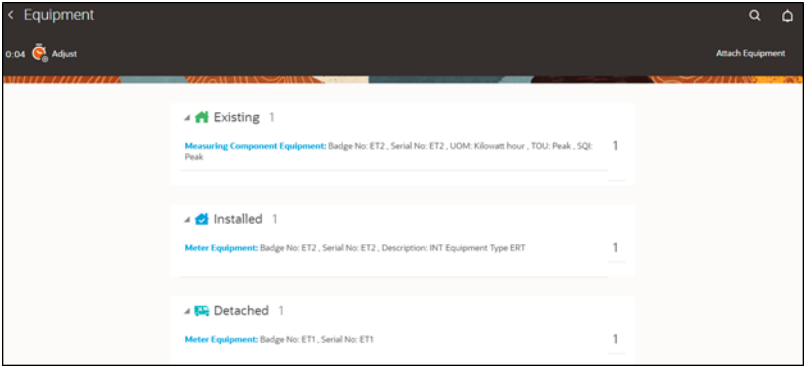
Installed 1

Meter Equipment: Badge No: ET2, Serial No: ET2, Description: INT Equipment Type ERT 1

Detached 1

Meter Equipment: Badge No: ET1, Serial No: ET1 1

After changing the glossary file.



Chapter 6

Hosting Plug-Ins in OFS

Plugins can be hosted within Oracle Field Service or externally.

Oracle Field Service has now the ability to host more than 10 plugins that can be hosted within Oracle Field Service. However, the plugin can be hosted on different server as well.

The steps to add, host, or configure a plug-in in Oracle Field Service are available in the [Mobile Plug-in Framework](https://docs.oracle.com/en/cloud/saas/field-service/fapcf/t-add-standard-plug-in.html#u30247985) documentation at: <https://docs.oracle.com/en/cloud/saas/field-service/fapcf/t-add-standard-plug-in.html#u30247985>

The plugins can be hosted externally on:

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

Additionally, if the plugins are hosted externally:

1. Navigate to **Configuration > Applications > Additional Restrictions**.
2. Select **Allow Cross-origin resource sharing (CORS)** from the following web domains and provide the domain of the server on which the plugins are hosted.

Hosting Files on a Web Server

Plugins 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 plugin files.

Please refer to the documentation of the webserver of choice on how setup and host the static content. The unzipped files of the plugin 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 plugin screen as defined in the [Mobile Plug-in Framework](https://docs.oracle.com/en/cloud/saas/field-service/fapcf/t-add-standard-plug-in.html#u30247985) documentation at: <https://docs.oracle.com/en/cloud/saas/field-service/fapcf/t-add-standard-plug-in.html#u30247985>

The externally hosted plugin can be secured and Oracle Field Service supports authentication mechanism as defined in the [Mobile Plug-in Framework](#) documentation.

Storing files on Object Storage

Before storing files in Object Storage make sure the basic administration tasks in Oracle Cloud Infrastructure related to Object Storage are complete and the compartments and buckets where the plugin files are stored are set up.

For more information on Oracle Cloud Object Storage setup for Oracle Utilities Cloud Services, refer to Oracle Utilities Cloud Services Object Storage Setup Guide at:

https://docs.oracle.com/cd/F35460_01/PDF/UGBU_Cloud_Services_Object_Storage_Setup_20C.pdf

Using Public Bucket

The unzipped plugin files can be uploaded into a public bucket in which case the files are not protected and is open to public. The URL to index.html in the public bucket is configured in URL field in Oracle Field Service.

Chapter 7

Equipment Support in OFS

The Oracle Field Service screens are enhanced to support equipment that includes attaching, detaching, and replacing or exchanging which comes as part of activity from the source application.

The equipment includes support at service point level, meter level measuring component level.

This chapter includes the following:

- [Pre-requisites](#)
- [Equipment Screens](#)
- [Undo Attach](#)
- [Replace Equipment](#)
- [Exchange Meter](#)

Pre-requisites

To support equipment in Oracle Field Service create the following inventory types:

- MERT
- SERT
- CERT

To create an inventory type:

1. Log in to Oracle Field Service with admin credentials.
2. Navigate to **Configuration > Resources, Activities, Inventories > Inventory types**.
3. Click **Add New**.

4. Enter 'MERT' in the **Label** field.
5. Select 'inventory_model' from the **Model Property** drop-down list.
6. Enter the name in the **Name** field against the language.
7. Click **Save**.
8. Repeat steps 4 to 7 to create other inventory types.

Equipment Screens

Oracle Field Service includes the following screens to attach an equipment:

- [Attach Equipment to Service Point](#)
- [Attach Equipment to Meter](#)
- [Attach Equipment to Measuring Component](#)

Attach Equipment

Equipment Level*: ▼

- Attach to Service Point
- Attach to Meter
- Attach to Measuring Component

Attach Equipment to Service Point

This screen allows to attach an equipment to the Service Point.

Equipment Details

Attach Equipment to Service Point

Badge Number*:

Serial Number:

Provide the badge number or serial number to verify the equipment. After the verification is successful, the equipment appears on the Attached screen labeled as 'SP'.

Assets/Equipment Attach Equipment

Installed	4
Measuring Component Equipment: Badge No: EQP2_BN, Serial No: EQP2_SN, Description: INT Equipment Type ERT, UOM: Kilowatt Per Hour, TORU Peak, SQF Peak	1
Meter	2
Meter Equipment: Badge No: EQP_BN2, Serial No: EQP_SN2, Description: INT Equipment Type ERT	1
Meter Equipment: Badge No: 3305_C, Serial No: 3305_C, Description: INT Equipment Type ERT	1
SP Equipment: Badge No: 3306_SP, Serial No: 3306_SP, Description: Test Item install without up	1

Attach Equipment to Meter

This screen allows to verify the attach. After the verification is successful, equipment will be attached to Meter.

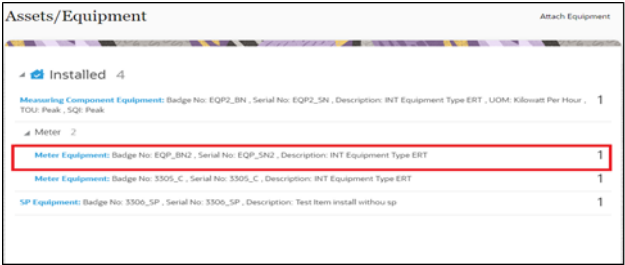
Equipment Details

Attach Equipment to Meter

Badge Number*:

Serial Number:

Provide the badge number and/or serial number and click **Submit**. After the verification is successful, equipment navigates to the Attached screen labeled with Meter.



Attach Equipment to Measuring Component

This screen allows you to verify the attachment. After successful verification, equipment will be attached to Measuring Component.

The form is titled 'Measuring Component Details' and contains the following fields:

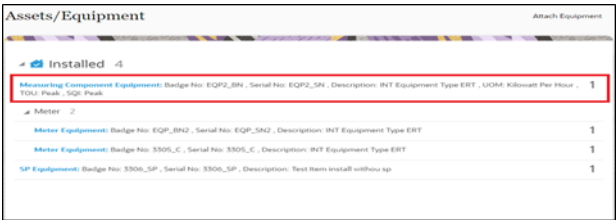
- Unit Of Measure*: Kilowatt hour
- Time Of Usage: Peak
- Service Quantity Identifier: Peak

Below these fields is the 'Equipment Details' section, which includes:

- Attach Equipment to Measuring Component
- Badge Number*: [Input field]
- Serial Number: [Input field]

At the bottom of the form are two buttons: 'Submit' and 'Dismiss'.

Enter the **Unit Of Measure**, **Time Of Usage**, **Service Quantity Identifier**, and **Badge Number or Serial Number**. Click **Submit**. After verification is successful, equipment navigates to the **Installed** screen labeled with **Measurement Component**.



Undo Attach

After attaching an equipment, it can be detached.

To undo an equipment attach:

1. Click the attached equipment. The equipment details are displayed along with the **Undo Attach** option.

Undo Attach	
Equipment Level:	Measuring Component
Badge Number:	C-ERT2
Serial Number:	C-ERT2
Device Type Description:	CCS-OFSC_Meter_Type
Unit of Measure:	KWH
Time of Use:	Peak
Service Quantity Identifier:	Peak

2. Click **Undo Attach**. A confirmation alert is displayed.
3. Click **Yes** to delete the equipment from the inventory.

Equipment C-ERT2 - C-ERT2 will be detached. Are you sure?

Yes No

Replace Equipment

The existing equipment can be replaced from the Service Point or Meter or Measuring Component level.

To replace an existing equipment:

1. Navigate to the **Existing** screen and click the equipment.

< Equipment

0:52 Adjust Attach Equipment

4 Existing 2

Measuring Component Equipment: Badge No: ET2, Serial No: ET2, UOM: Kilowatt hour, TOU: Peak, SQI: Peak 1

Meter Equipment: Badge No: ET1, Serial No: ET1 1

2. Click **Replace**.

< Asset/Equipment Details

0:52 Adjust Detach Replace

Equipment Level:	Meter
Badge Number:	ET1
Serial Number:	ET1
Attach Date Time:	2021-01-08 00:30:00

Detach Replace

Equipment Level:	SP
Badge Number:	R-SP-ERT
Serial Number:	R-SP-ERT
Attach Date Time:	2020-07-09 02:20:00

- Enter the **Badge Number** or the **Serial Number** values to verify. Click **Submit**.

Equipment Details
Replace Equipment at Meter

Badge Number*:

Serial Number:

The existing equipment is added to the **Detached** screen and the new equipment appears in the **Installed** screen.

< Equipment

0:31 Adjust Attach Equipment

Existing 1

Measuring Component Equipment: Badge No: ET2, Serial No: ET2, UOM: Kilowatt hour, TOU: Peak, SQ: Peak 1

Installed 1

Meter Equipment: Badge No: ET2, Serial No: ET2, Description: INT Equipment Type ERT 1

Detached 1

Meter Equipment: Badge No: ET1, Serial No: ET1 1

Exchange Meter

Meter from the Service Point can be exchanged with a new meter. You can either move all equipment attached to the existing meter to the new meter or attach new equipment to the new meter.

After verifying the new device, the **Equipment** screen displays the following options:

- [Attach Equipment](#)
- [Transfer Register Equipment](#)

Activity Details

Assets/Equipment Attach Equipment

Existing 2

Measuring Component Equipment: Badge No: ERT_MG_BD_No_08_01_2025_12_41_12, Serial No: ERT_MG_SR_No_08_01_2025_12_41_12, Description: INT-EquipmentType-ERT, UOM: KWH, TOU: OffPeak, SQ: Peak/Spe 1

Meter Equipment: Badge No: BD_No_12_08_2025_18_17_56, Serial No: SR_No_12_08_2025_18_17_56, Description: INT-EquipmentType-ERT 1

Attach Equipment

This attach screen is similar to the attach equipment screen that is used to verify the equipment and install the equipment to a new meter.

Transfer Register Equipment

This screen allows you to move register equipment attached to the existing meter to the new meter.

Assets/Equipment	Count
Existing 2	1
Meter Equipment	1

Click **Transfer Register Equipment** to move the register equipment of old meter to installed screen.

Assets/Equipment	Count
Existing 1	1
Installed 1	1

Note: To undo the Register Equipment move, click **Undo Register Equipment Transfer**.

Custom Activities Support for Transfer Register Equipment

Currently, the Exchange Meter and Meter Disconnect activities support the Move operation. It does not work for other operations.

To support custom activities:

1. Configure the Custom Activity property.
 1. Login to Oracle Field Service.
 2. Navigate to **Properties** and search for "c2m_ert_custom_move_act_types" property.

- Click **Modify** and add the custom activity to the property.

Syntax: [description][Activity type label]

- In the **English** field, enter the description and Activity type label.
Example: Move Registers[Move ERT Registers]
 - Click **Update**. The value is updated in the property list.
- Add the **Condition** to the **Move Register** operation in Inventory Grid.
- After adding the custom activity to property, add the custom activity type to the inventory grid condition.

- Login to Oracle Field Service.
- Navigate to **Configuration > User Type > C2M OFSC**.
- Navigate to **Screen Configuration > Inventory Grid**.

- Click **Transfer Register Equipment** operation and add the condition as below.

[Transfer Register Equipment] visibility			
Add new visibility			
Access Mode	Conditions	Action	
☐ Read-only	2Meter # is not empty , Activity Level Equipment Action not in (not equal) (Copy, Remove), Activity status in (equal) Started, Activity type in (equal) Exchange Meter	Modify	

[Transfer Register Equipment] parameters			
Add new			
Field name	Value	Action	
☐ equipment_action	CPERT	Modify	

5. Select the custom activity type from list of activity types available in the Oracle Field Service environment.
6. Click **Save**.
7. Add the same condition for the **Undo Register Equipment Transfer** operation.

Chapter 8

Attachments Support in OFS

The Oracle Field Service screens are enhanced to support attachments at service point level, existing meter/item/equipment level, new meter/item/equipment level and activity level.

This chapter includes the following:

- [Pre-requisites](#)
- [Attachment Screens](#)
- [Customer Signature](#)

Pre-requisites

To support attachments at various levels, import Attachments_Plugin.xml into the Oracle Field Service environment.

To import plugins into Oracle Field Service:

1. Login to Oracle Field Service with Admin credentials.
2. Navigate to **Configurations > Displays > Forms & Plugins**.
3. Click **Import Plugins**.



4. Upload the Attachments_Plugin.xml file and import.

Attachment Screens

As part of 20C changes, a technician can upload the attachments at the following levels.

- Attachments at Service point
- Attachments at New Device
- Attachments at Existing Device
- Attachments at Activity

Note: here device includes meter, item, and equipment.

Attachments at Service Point

The Technician can upload the attachments of below Mime types at Service Point level in Oracle Field Service.

- image/gif
- image/jpeg
- text/plain
- text/html
- video/mpeg
- audio/x-wav
- application/zip
- application/vnd.ms-excel
- application/pdf
- application/msword

The figure below shows the **Attachment** option available in the **Service Point** section.

The screenshot shows a 'Service Point Details' form. It contains the following fields and options:

- Service Point ID: 1664226779988
- Service Point Status: Connected
- Service Point Type: CCS-QPSC Service Point Type
- Premise Type: Apartment
- Service Type: Electric Service
- Life Support: None
- Device Location: (Dropdown menu)
- Device Location Details: (Text input field)
- Warnings: (Dropdown menu)
- Instructions: (Dropdown menu)
- Instruction Details: (Text input field)
- Service Point Attachments: (Button)
- Dismiss: (Button)
- Submit: (Button)

After uploading the attachments, saved and unsaved attachments can be viewed as shown below.

The screenshot shows an 'Attachment' modal. It includes the following elements:

- Attach: (Text label) Browse... (Button) Maximum file size limit is 5 MB.
- Comments: (Text area)
- Saved Attachments: 1.jpg -
- Unsaved Attachments: 2.jpg -
- Upload: (Button)
- Save: (Button)
- Dismiss: (Button)

Attachments at New Device

A Technician can upload the attachments of below Mime types at New Device level in Oracle Field Service.

- image/gif
- image/jpeg
- text/plain
- text/html
- video/mpeg
- audio/x-wav
- application/zip
- application/vnd.ms-excel
- application/pdf
- application/msword

The figure below shows the **Attachment** option available at the **New Device** section.

Meter Information
New Meter Details

Device Verification
Manual Entry
☒ No
☐ Yes

Badge Number
4415

Status
Verification Successful

Configuration Type
Electric Scalar Residential

Meter Location

Manufacturer
CZM - Electric Manufacturer

Model
CZM - Electric Model

Device Type
Electric Manual Read Meter - Analog

Status Left
On

New Meter Attachments Service Histories

After uploading attachments, saved and unsaved attachments can be viewed as below.

Attachment

Attach Maximum file size limit is 5 MB

Comments

Saved Attachments:
1 .png

Unsaved Attachments:
2 .png

Attachments at Existing Device

A Technician can upload the attachments of below Mime types at Existing Device level in Oracle Field Service.

- image/gif
- image/jpeg
- text/plain
- text/html
- video/mpeg
- audio/x-wav
- application/zip
- application/vnd.ms-excel
- application/pdf
- application/msword

The figure below shows the **Attachment** button in the **Existing Device** section.

Existing Meter Details

Badge Number
Asset2_BN

Configuration Type
INT-Electric Device Configuration Type1 with REGT Valid MCT for O F5C

Meter Location
Garage

Manufacturer
C2M - Electric Manufacturer

Model
C2M - Electric Model

Device Type
CCS OF5C Integration device type 1

Status Found Required

Status Left Required

Existing Meter Attachments Service Histories

After uploading attachments, saved and unsaved attachments can be viewed as below.

Attachment

Attach Browse... Maximum file size limit is 5 MB

Comments

Saved Attachments:
1.jpeg

Unsaved Attachments:
2.jpeg

Upload Save Dismiss

Attachments at Activity

A Technician can upload the attachments of below Mime types at Activity level in Oracle Field Service.

- image/gif
- image/jpeg
- text/plain
- text/html
- video/mpeg
- audio/x-wav
- application/zip
- application/vnd.ms-excel
- application/pdf
- application/msword

The figure below shows the **Activity Attachments** button..

Service Information

Go back to Activities list, wait 10 seconds and come back to see newly populated information below

Activity Type
Install Meter

Site Address
OHIO *

CCS Activity ID
0486-4195927631

OFSC Activity ID
4226397

Status
Started

Scheduling Information

Start - End
01:10 AM - 01:58 AM

Duration
48 minutes

[Activity Attachments](#)

[Meter Details](#)

After uploading attachments, saved and unsaved attachments can be viewed as below.

Attachment

Attach [Browse...](#) Maximum file size limit is 5 MB.

Comments

Saved Attachments:
1 .jpeg -

Unsaved Attachments:
[2 .jpeg](#)

[Upload](#) [Save](#) [Dismiss](#)

Customer Signature

As part of the 20C changes, Oracle Field Service is enhanced to allow technicians to take the customer signature before completing an activity and Oracle Integration Cloud sends the customer signature to Oracle Utilities Customer Cloud Service as part of activity completion information.

Customer Signature

After the customer signs in the **Customer Signature** field, the technician clicks **Submit** to complete the activity.

Note: Use **Clear** to clear the customer signature.

Customer Signature is also sent as an attachment in the Jpeg format to Oracle Utilities Customer Cloud Service as part of activity completion information.

Chapter 9

Admin Sync Support in OFS

As part of the 22A release, the Admin Sync flow was introduced to synchronize the service point data, activity types, activity data, device data and register data to Oracle Field Service. Hence, the end user need not configure any data on the Oracle Field Service side.

This chapter includes:

- [Service Point Data Sync](#)
- [Activity Types Sync](#)
- [Device Data Sync](#)
- [Register Data Sync](#)

Admin sync flow does not override existing data. However, it is recommended to take a backup of Oracle Field Service data for the customers who are already implementing Oracle Customer Care Cloud Service integration to Oracle Field Service before running the Admin Sync flow for the first time.

Service Point Data Sync

The service point data is synced to Oracle Field Service when the Admin Sync flow runs successfully. The Oracle Field Service enum properties shown below are updated with Admin data.

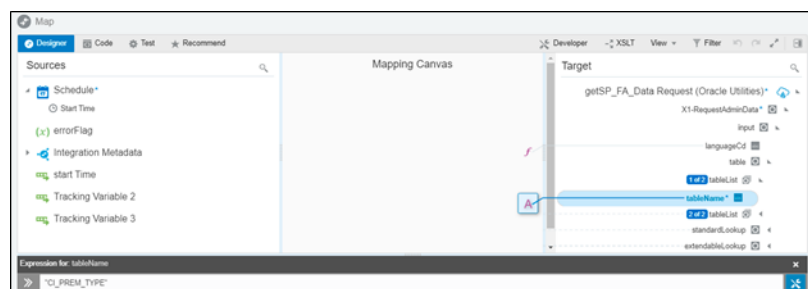
Property Label	Description
c2m_premise_type	Premise Type
c2m_Service_type	Service Type
c2m_SP_instructions	SP Instructions
c2m_SP_warnings	SP Warnings
c2m_disconnect_location	Disconnect Location

Example data of property:

Customization

If the end user wants to add new properties related to service point and the data should sync to the property through Admin Sync flow, follow the steps below.

1. Identify whether the data comes from a table, standard lookup or extendable lookup from Oracle Utilities Customer Cloud Service.
2. Navigate to the request mapper and hardcode the value based on the entities.



- Navigate to the SOMOFSC_Sync_ServicePointData lookup and add the tablename, standard lookup name or extendable lookup name in the **SOM_Entity** column and property label in the **property_label** column.

SOM_Entity	OFSC_PropertyLabel
CL_PREM_TYPE	c2m_premise_type
D1_SVC_TYPE	c2m_Service_type
D1-SPInstructionLookup	c2m_SP_instructions
D1-SPWarningLookup	c2m_SP_warnings
DISCONN_LOC_FLG	c2m_disconnect_location

Activity Types Sync

The Activity Types in Oracle Utilities Customer Cloud Service automatically syncs to Oracle Field Service when the Admin Sync scheduler OIC flow runs successfully. Hence, there is no need to create the activity types manually in Oracle Field Service.

For more information, refer to the **Admin Sync (Oracle Integration Cloud Initiated)** section in **Chapter 2: Business Flows** in the *Oracle Utilities Customer Cloud Service Integration to Oracle Field Service Configuration Guide* included in this release.

Customizations

The end user can skip the activity types sync using config property in SOMOFSC_ConfigProps lookup.

Config property: som.adminsync.activitytypes.sync

By default, the property value is delivered as 'false'. Change the property value to 'true' to sync activity types as part of Admin Sync. The activity type features/colors can be customized. These properties can be modified using the SOMOFSC_ActivityTypeConfigProps lookup.

Below are the some important properties and the values delivered in this release.

Property Name	Default Value	Comments
groupLabel	Customer	Change this value if end user wants to create activity types in another group.
timeslots.label	all-day	Change this value if end user want to set the another time slot by default.
Duration	48	Change this value if end user want to extend the activity duration
features.isTeamworkAvailable	FALSE	Change this value if the activity supports the team work

Property Name	Default Value	Comments
features.allowMoveBetweenResources	TRUE	Change this value if end user want to do not allow activity type between resources
features.supportOfTimeSlots	TRUE	Chang this value if activity type does not support time slots
features.supportOfWorkZones	TRUE	This property enables the works zone support.
features.supportOfWorkSkills	TRUE	This property enables the support of work skills
features.supportOfInventory	TRUE	This property enables the support of inventories.
features.allowCreationInBuckets	TRUE	This property enables the activity creation in buckets.

Note: As part of Admin Sync all activity types in the Field Task Type extendable lookup will be synced to Oracle Field Service when som.adminsync.activitytypes.sync OIC config property is set to 'true'.

Device Data Sync

The following device information will be synced in Oracle Field Service when the Admin Sync flow runs successfully. Hence, there is no need to add the data to the Oracle Field Service properties manually.

- Device Manufacturer
- Device Model
- Device Configuration Type
- Device Types
- Device Head End System

Device Manufacturer

The following Oracle Field Service properties will sync with device manufacturer data created in Oracle Utilities Customer Cloud Service.

Property Description	Property Label
New Item Manufacturer	c2m_newitem_manufacturer
Existing Item Manufacturer	c2m_item_manufacturer
New Meter Manufacturer	c2m_newmeter_manufacturer
Existing Meter Manufacturer	c2m_meter1_mfg

Device Model

The following Oracle Field Service properties will sync with device model data created in Oracle Utilities Customer Cloud Service.

Property Description	Property Label
New Meter Model	c2m_newmeter_model
Existing Meter Model	c2m_meter1_model
New Item Model	c2m_newitem_model
Existing Item Model	c2m_item_model

Device Configuration Type

The following Oracle Field Service properties will sync with device configuration data created in Oracle Utilities Customer Cloud Service.

Property Description	Property Label
New Meter Configuration Type	c2m_new_meter_type
Existing Meter Configuration Type	c2m_meter1_type
New Item Configuration Type	c2m_new_item_type
Existing Item Configuration Type	c2m_item_type

Device Types

The following Oracle Field Service properties will sync with device types data created in Oracle Utilities Customer Cloud Service.

Property Description	Property Label
New Meter Device Type	c2m_newmeter_devicetype
Existing Meter Device Type	c2m_devicetype
New Item Device Type	c2m_newitem_devicetype
Existing Item Device Type	c2m_item_device_type

Device Head End System

The following Oracle Field Service properties will sync with device head end system data created in Oracle Utilities Customer Cloud Service.

Property Description	Property Label
New Meter Head End System	c2m_newmeter_headend
Existing Meter Head End System	c2m_headendSystem

Customizations

To add new elements related to device data, such as manufacturer, model, configuration type, device types or head end system:

1. Create the property in Oracle Field Service.
2. Configure the property count in SOMOFSC_ConfigProps lookup.

Below are the configuration properties to be modified as part of the Device Data sync.

Property Name	Default Value	Comments
som.adminsync.configurationtype.properties.count	4	Change the value if you want to add new property for configuration type
som.adminsync.manufacturer.properties.count	4	Change the value if you want to add new property for manufacturer
som.adminsync.model.properties.count	4	Change the value if you want to add new property for model
som.adminsync.devicetypes.properties.count	4	Change the value if you want to add new property for device types
som.adminsync.headendsystem.properties.count	2	Change the value if you want to add new property for head end system

PropertyName	Value
som.adminsync.configurationtype.properties.count	4
som.adminsync.manufacturer.properties.count	4
som.adminsync.model.properties.count	4
som.adminsync.devicetypes.properties.count	4
som.adminsync.headendsystem.properties.count	2

3. Once the value of the configuration properties are changed based on the requirement, add the property label in the lookup based on the property that belongs to manufacturer, model or configuration type.
4. Add the property label to the lookup if the property belongs to Configuration type.

S.No	OFSC_PropertyLabel
1	c2m_meter_type
2	c2m_new_meter_type
3	c2m_item_type
4	c2m_new_item_type

5. Add the property label to the lookup if the property belongs to manufacturer.

SOMOFSC_Sync_DeviceManufacturerData
Maps Sequence number to OFSC Property Label.

[Configured - View only](#) Updated on Jul 8, 2024, 04:34:46 PM IST Used in 1 Integrations Project OU CCS OFSC

S.No	OFSC_PropertyLabel
1	c2m_newitem_manufacturer
2	c2m_item_manufacturer
3	c2m_newmeter_manufacturer
4	c2m_meter1_mfg

6. Add the property label to the lookup if the property belongs to model.

SOMOFSC_Sync_DeviceModelData
Maps Sequence number to OFSC Property Label.

[Configured - View only](#) Updated on Jul 8, 2024, 04:34:46 PM IST Used in 1 Integrations Project OU CCS OFSC

S.No	OFSC_PropertyLabel
1	c2m_meter1_model
2	c2m_newmeter_model
3	c2m_item_model
4	c2m_newitem_model

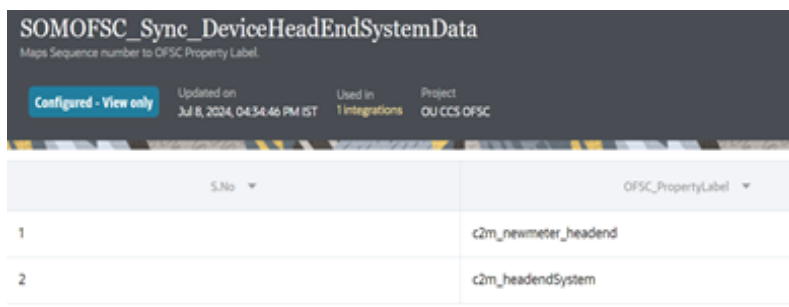
7. Add the property label to the below lookup if the property belongs to device types.

SOMOFSC_Sync_DeviceTypesData
Maps Sequence number to OFSC Property Label.

[Configured - View only](#) Updated on Jul 8, 2024, 04:34:46 PM IST Used in 1 Integrations Project OU CCS OFSC

S.No	OFSC_PropertyLabel
1	c2m_deviceType
2	c2m_newmeter_devicetype
3	c2m_item_device_type
4	c2m_newitem_deviceType

8. Add the property to the below lookup if the property belongs to head end system.



SOMOFSC_Sync_DeviceHeadEndSystemData
Maps Sequence number to OFSC Property Label.

Configured - View only Updated on: Jul 8, 2024, 04:34:46 PM IST Used in: 1 Integrations Project: OU CCS OFSC

S.No	OFSC_PropertyLabel
1	c2m_newmeter_headend
2	c2m_headendSystem

Register Data Sync

When the Admin Sync flow runs successfully, the following register data will be synced to Oracle Field Service. Hence, the data need not be entered manually at the Oracle Field Service side.

- Unit of Measure
- Time of Usage
- SQI

Unit of Measure

The following properties will be synced with unit of measure data in Oracle Utilities Customer Cloud Service:

Property description	Property label
Unit of Measure 1	c2m_meter1_uom
Unit of Measure 2	c2m_meter1_uom2
Unit of Measure 3	c2m_meter1_uom3
Unit of Measure 4	c2m_meter1_uom4
Unit of Measure 5	c2m_meter1_uom5
ERT Unit of Measure	c2m_ert_uom

Time of Usage

The following properties will be synced with time of usage data created in Oracle Utilities Customer Cloud Service:

Property description	Property label
Time of Usage 1	c2m_meter1_TOU1
Time of Usage 2	c2m_meter1_TOU2

Property description	Property label
Time of Usage 3	c2m_meter1_TOU3
Time of Usage 4	c2m_meter1_TOU4
Time of Usage 5	c2m_meter1_TOU5
ERT Time of Usage	c2m_ert_tou

SQI

The following properties will be synced with SQI data created in Oracle Utilities Customer Cloud Service.

Property description	Property label
SQI 1	c2m_meter1_sqi
SQI 2	c2m_meter1_sqi2
SQI 3	c2m_meter1_sqi3
SQI 4	c2m_meter1_sqi4
SQI 5	c2m_meter1_sqi5
ERT SQI	c2m_ert_sqi

Customizations

The end user can create property of UOM, TOU or SQI type.

To add to Admin Sync without touching the Admin Sync flow:

1. Create the property in Oracle Field Service.
2. Modify the value in the below configuration properties based on the property. These properties should be modified as part of register sync.

Property Name	Default value	Comments
som.admainsync.uom.properties.count	6	Change this value if the property is created for UOM.
som.admainsync.sqi.properties.count	6	Change this value if the property is created for SQI.
som.admainsync.tou.properties.count	6	Change this value if the property is created for TOU.

SOMOFSC_ConfigProps	
Maps PropertyName Column to the respective Value Column. Do not change the values in PropertyName column.	
Configured - View only Updated on Jul 8, 2024, 04:34:46 PM IST Used in 7 Integrations Project OU CCS OFSC	
PropertyName	Value
som.adminsync.uom.properties.count	0
som.adminsync.sql.properties.count	0
som.adminsync.tou.properties.count	0

3. Add the property label to lookup if the property belongs to UOM.

SOMOFSC_Sync_RegisterTOUData	
Maps Sequence number to OFSC Property Label.	
Configured - View only Updated on Jul 8, 2024, 04:34:46 PM IST Used in 1 Integrations Project OU CCS OFSC	
S.No	OFSC_PropertyLabel
1	c2m_meter1_TOU1
2	c2m_meter1_TOU2
3	c2m_meter1_TOU3
4	c2m_meter1_TOU4
5	c2m_meter1_TOU5

4. Add the property label to the lookup if the property belongs to TOU.

SOMOFSC_Sync_RegisterUOMData	
Maps Sequence number to OFSC Property Label.	
Configured - View only Updated on Jul 8, 2024, 04:34:46 PM IST Used in 1 Integrations Project OU CCS OFSC	
S.No	OFSC_PropertyLabel
1	c2m_meter1_uom
2	c2m_meter1_uom2
3	c2m_meter1_uom3
4	c2m_meter1_uom4
5	c2m_meter1_uom5

5. Add the property label to the lookup if the property belongs to SQL.

SOMOFSC_Sync_RegisterSQIData	
Maps Sequence number to OFSC Property Label.	
Configured - View only Updated on Jul 8, 2024, 04:34:46 PM IST Used in 1 Integrations Project OU CCS OFSC	
S.No	OFSC_PropertyLabel
1	c2m_meter1_sqi
2	c2m_meter1_sqi2
3	c2m_meter1_sqi3
4	c2m_meter1_sqi4
5	c2m_meter1_sqi5

Chapter 10

ODM Activity Support in OFS

As part of the Oracle Utilities Operational Device Management Activity support in Oracle Field Service, the Service History plugin is introduced to support the service history data at the Activity, Meter/Item, and Equipment level to Oracle Field Service. Also validate completion plugin is introduced to help crew to validate the eligibility to the activity to complete. Hence, the end user need not configure any data on the Oracle Field Service side.

This chapter includes:

- [Service History Plugin in OFS](#)
- [Meter/Item-Level Service Histories](#)
- [Equipment-Level Service Histories](#)
- [Planned Service History Plugin in OFS](#)
- [Activity-Level Service Histories](#)
- [Validate Completion Plugin in OFS](#)
- [ERT Plugin Changes in OFS](#)

Service History Plugin in OFS

As part of the 22A release, the Service History plugin was introduced to support the service history at the Meter/Item, and Equipment level in Oracle Field Service.

Configuration

To configure a Service History plugin:

1. Navigate to **Configuration > Displays > Forms and Plugins**.
2. Click the **Import Plugins** button to import the service history plugin provided in the package.

Forms & Plugins				
ErrorHandler	ErrorHandler	Size: 0.56 KB Created: 04/08/19 06:26 AM Updated: 04/08/19 06:27 AM User: Admin	No links configured.	⋮
Send Request	mobile_provider_request#B#	Size: 1 KB Created: 01/22/19 02:11 PM Updated: 01/22/19 02:11 PM User:	5 Configured links	⋮

3. Follow these steps to fill in the plugin page setting details:

Service History

Edit Plugin

General information

CCSServiceHistory

Entry equipment

visibility rules similar to the action

Name: English
Service History

Name: Greek

Name: Portuguese (Brazil)

Name: French (European)

Plugin settings

Plugin archive

Drag and Drop

Select a file or drop one here.

Selected file:

Size:

☐ Disable button in Offline

Applications

You can add an application that could be used to obtain JWT access token for authorization in direct REST API requests

Plugin parameters

Duplicate names are not allowed. Overall size should not exceed 5 KB.

Parameters are not configured yet

Available Properties

- a. Make sure the **Available Properties** tab is populated with all the properties shown below.

Available Properties

Select values

Failure Information [c2m_failure_info] x

Activity type [aworktype] x

Work Order [appt_number] x Activity ID [aid] x

Device Type [c2m_deviceTypeDescription] x

Device Type [c2m_item_device_type_description] x

Device Type [c2m_newitem_deviceTypeDescription] x

Device Type [c2m_newmeter_devicetypedescription] x

Activity status [astatus] x

1Serial# [c2m_meter1_serial] x

New Serial Number [c2m_new_meter_serial] x

Item ID [c2m_item_id] x

New Item ID [c2m_new_item_id] x

Existing Meter Configuration Type [c2m_meter1_type] x

New Meter Type [c2m_new_meter_type] x

New Item Type [c2m_new_item_type] x

Existing Item Type [c2m_item_type] x

Device Service History Types [c2m_dev_service_history_types1] x

C2M new device SH output [c2m_new_dev_service_history_output1] x

New Device Valid Service Histories [c2m_new_dev_valid_service_history_types] x

Existing Meter Badge Number [c2m_meter1_number] x

2Meter # [c2m_meter2_number] x

Service Point ID [c2m_service_pt_id] x	
Activity Valid Service History Types [c2m_act_valid_service_history_types]	x
Activity Service History Types [c2m_act_service_history_types1]	x
Device Valid Service History Types [c2m_dev_valid_service_history_types]	x
Service History Output [c2m_service_history_output1]	x
Service History BO [c2m_service_history_bo] x	
C2M activity SH output [c2m_act_service_history_output1]	x
C2M device SH output [c2m_dev_service_history_output1]	x
Item Number [c2m_item_nbr] x	
New Item Number [c2m_new_item_nbr] x	
New Device Failure Information [c2m_new_dev_failure_info]	x
1 HighRead [c2m_high_read] x	
C2M DOWNTIME REASON [c2m_downtime_reason] x	
Equipment Failure Info [c2m equip_failure_info] x	
Badge Number [c2m_ert_badgeNumber] x	
c2m_ert_dev_description [c2m_ert_dev_description] x	
Equipment Service History Types [c2m equip_service_history_types1]	x
C2M equipment SH putput [c2m equip_service_history_output1]	x

Item Number [c2m_item_nbr] x

New Item Number [c2m_new_item_nbr] x

New Device Failure Information [c2m_new_dev_failure_info] x

1 HighRead [c2m_high_read] x

C2M DOWNTIME REASON [c2m_downtime_reason] x

Equipment Failure Info [c2m equip_failure_info] x

Badge Number [c2m_ert_badgeNumber] x

c2m_ert_dev_description [c2m_ert_dev_description] x

Equipment Service History Types [c2m equip_service_history_types1] x

C2M equipment SH putput [c2m equip_service_history_output1] x

Equipment Valid History Type [c2m equip_valid_service_history_types] x

Serial Number [invsn] x Inventory Id [invid] x

Inventory Type [invtype] x

- b. Click **Service History** to configure the plugin.
- c. On the **User Type** screen configurations, select **Service History** to connect it to the specific field on the UI in the **Mobility** page.

CCSServiceHistory Remove item

Plugins CCSServiceHistory

▶ Name translations

▲ Visibility Add new

RO	Device Valid Service History Types	is not empty
	Existing Meter Badge Number	is not empty

▲ Parameters Add new

meter	existing
-------	----------

Service History Data is supported at the Meter/Item, and Equipment level to Oracle Field Service. Hence, the end user need not configure any data on the Oracle Field Service side.

- [Meter/Item-Level Service Histories](#)
- [Equipment-Level Service Histories](#)

Meter/Item-Level Service Histories

The service history types are synchronized to Oracle Field Service when the activity is created successfully with added Service History Data to asset from Oracle Utilities Customer to Meter. The Oracle Field Service input properties are updated with activity level service history data.

Property Type	Property Label	Level
Input	c2m_dev_valid_service_history_types	Activity
Output	c2m_dev_service_history_output1	Activity

Existing Meter

For an existing meter, the **Service History** button is displayed if the asset has the valid service history types in Oracle Utilities Customer to Meter.

Click **Service History**. It loads the Service History plugin and displays the **Service History** screen with the list of supported service history types of this asset.

When service histories are added for different services history types for new and existing meters, and are completed in the Service History plugin, the service history data is saved to the respective output property.

New Meter

For a new meter:

1. Click **Verify Device** to verify the details of the new device/item.
2. If the device has valid service history types in Oracle Utilities Customer to Meter, the **Service Histories** button is displayed along with the device details.
3. Click **Service Histories** to display the list of service histories of this asset.

The Service History plugin is loaded and the details are displayed on the **Service History** screen.

4. Add the service history details related to the service history types shown in the figure above. Click **Complete All** to save and complete them.

Equipment-Level Service Histories

The service history types are synchronized to Oracle Field Service when the crew queries for it. Equipment data won't be synchronized to OFSC when the activity is created, even though the equipment from Oracle Utilities Customer to Meter has the Service history

data. The Oracle Field Service the below input property is updated with equipment level service history data.

Property Type	Property Label	Level
Input	c2m_equip_valid_service_history_types	Activity
Output	c2m_equip_service_history_output1	Activity

When service histories added for different services history types are completed in the Service History plugin, that service history data is saved to the respective output property.

Existing Equipment

This section focuses on fetching service history data for the existing equipment (sent from Oracle Utilities Customer to Meter as part of activity create/update message).

As Oracle Utilities Customer to Meter sends the equipment's service history data only on a need basis, crew has to fetch the service history data explicitly.

1. For an existing equipment “GetServiceHistory” button is displayed by default.
2. Click **Get Service History** to request for the service history data from Oracle Utilities Customer to Meter.
3. If Oracle Utilities Customer to Meter returns any service history data for this equipment, the **Service History** button is displayed.

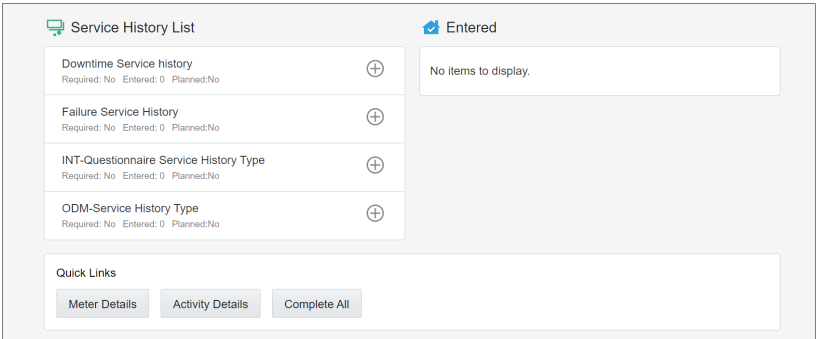
Asset/Equipment Details

Equipment Level:	Meter
Badge Number:	EQP_BN2
Serial Number:	EQP_SN2
Attach Date Time:	2022-02-17 07:13:00

GetServiceHistory

Service History

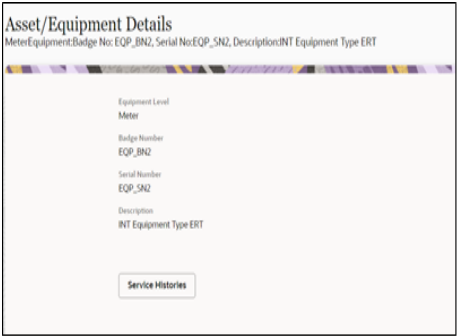
- 4. Click **Service History** to load the service history plugin. The following **Service History List** screen is displayed.



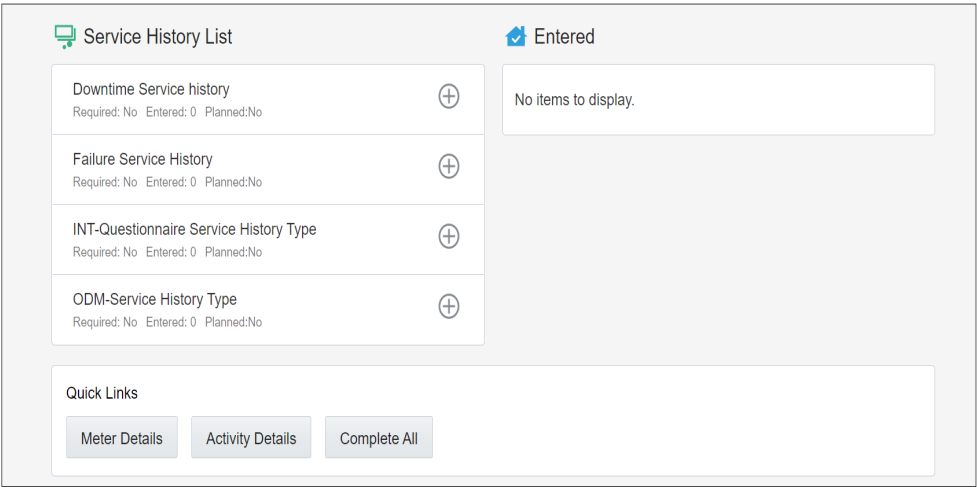
- 5. Add service histories related to above service history types. Click **Complete All** to save and complete them.

New Attached/Installed Equipment

- 1. When the crew attaches or installs new equipment, if that equipment has service history types added in Oracle Utilities Customer to Meter, the Service History button is displayed.



- 2. Click **Service History** to load the service history plugin. The following service history screen is displayed.



- 3. Add service histories related to above service history types. Click **Complete All** to save and complete them.

Planned Service History Plugin in OFS

As part of 22C release, Planned Service History plugin is introduced to support the service history at the Activity level in Oracle Field Service.

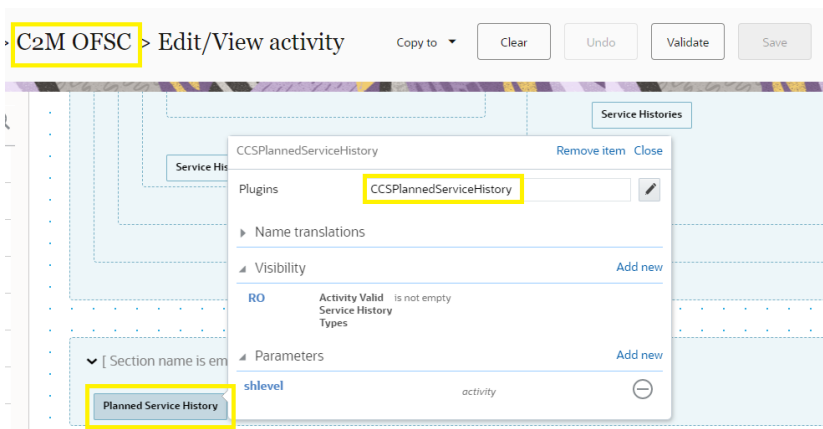
To configure a Planned Service History plugin:

1. Navigate to **Configuration > Displays > Forms and Plugins**.
2. Click **Import Plugins** to import the Planned Service History plugin provided in the package.
3. Enter the respective plugin details.

- a. Make sure the **Available Properties** tab is populated with all the properties shown below.

- b. Click **Planned Service History** to configure the plugin.

- c. On the **User Type** screen configurations, select **Planned Service History** to connect it to the specific field on the UI in the **Mobility** page.



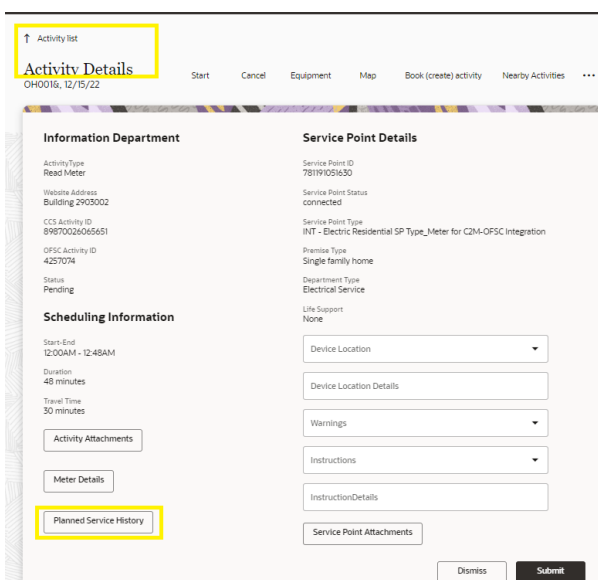
Activity-Level Service Histories

The activity-level service history types are synchronized to Oracle Field Service when the activity is created successfully with added planned Service History Data at activity from Oracle Utilities Customer Cloud Service/Oracle Utilities Customer to Meter.

The Oracle Field Service input properties are updated with activity level service history data.

Property type	Property label	Level
Input	c2m_act_valid_service_history_types	Activity
Output	c2m_act_service_history_output1	Activity

The **Planned Service History** button is displayed if the activity has valid service history types in Oracle Utilities Customer to Meter.



Click **Planned Service History**. It loads the **Planned Service History** plugin and displays the **Activity-level Service History** screen with a list of supported service history types of this activity.

When service histories are added for different services history types for this activity, and are completed in the Planned Service History plugin, the activity level service history data is saved to the respective output property.

Validate Completion Plugin in OFS

The Validate Completion plugin is introduced to help crew to validate the eligibility to complete activity like if there is any pending service history data in Oracle Field Service. Hence, the end user need not configure any data on the Oracle Field Service side.

Validate Completion plugin validates the service history data from above meter/item/equipment service history output and complete the activity when there are no pending service histories.

Validate Completion Plugin

To configure a Validate Completion plugin:

1. Navigate to **Configuration > Displays > Forms and Plugins**.

- Click the **Import** icon to import the Validate Completion plugin provided in the package.

Configuration				
Forms & Plugins				
View		Add Form	Add Plugin	Export Import
	ErrorHandler	ErrorHandler	Size: 0.54 KB Created: 04/08/19 06:26 AM Updated: 04/08/19 06:27 AM User: Admin	No links configured.
	Send Request	mobile_provider_request#B#	Size: 1 KB Created: 01/22/19 02:11 PM Updated: 01/22/19 02:11 PM User:	5 Configured links

Validate Completion

Edit Plugin

General information

CCSValidateCompletion

Entity: Activity

Visibility rules similar to the action:

Name: English
Validate Completion

Name: Greek

Name: Portuguese (Brazil)

Name: French (European)

Plugin settings

Plugin archive

[Show info](#)

Drag and Drop

Select a file or drop one here.

Selected file:

Size:

☐ Disable button in Offline

Applications

You can add an application that could be used to obtain JWT access token for authorization in direct REST API requests

Plugin parameters

Duplicate names are not allowed. Overall size should not exceed 5 KB.

Parameters are not configured yet

3. Make sure the **Available Properties** tab is populated with all the properties shown below.

Available Properties

Select values

Activity ID [aid] x

Date [date] x

Existing Meter Badge Number [c2m_meter1_number] x

2Meter # [c2m_meter2_number] x

Service Point ID [c2m_service_pt_id] x

1Serial# [c2m_meter1_serial] x

C2M new device SH output
[c2m_new_dev_service_history_output1] x

Item ID [c2m_item_id] x

New Item ID [c2m_new_item_id] x

New Meter Type [c2m_new_meter_type] x

Activity Service History Types
[c2m_act_service_history_types1] x

Device Valid Service History Types
[c2m_dev_valid_service_history_types] x

Device Service History Types
[c2m_dev_service_history_types1] x

Meter Type [c2m_ert_meter_type] x

activity service history
[c2m_valid_service_history_types] x

ValidateCompletion [c2m_validateCompletion_flag] x

Validation SH Data [c2m_valid_sh_data] x

C2M activity SH output
[c2m_act_service_history_output1] x

C2M device SH output
[c2m_dev_service_history_output1] x

- On the **User Type** screen configurations, select **Validate Completion** to connect it to the specific field on the UI in the **Mobility** page.

ERT Plugin Changes in OFS

As part of the 22A release, the new code was added in ERT plugin to handle the changes in Oracle Field Service.

Existing Equipment

For the existing equipment:

1. Click **GetServiceHistory** to get the service history data from Oracle Utilities Customer to Meter if service history type is attached to equipment.
2. If the service history data is available, the **Service History** button is displayed.

Asset/Equipment Details	
Equipment Level:	Meter
Badge Number:	EQP_BN2
Serial Number:	EQP_SN2
Attach Date Time:	2022-02-17 07:13:00
GetServiceHistory Service History	

New Equipment

When you attach/install a new equipment in Oracle Field Service, if the equipment is attached with a service history type, then the **Service History** button displayed on the **Equipment** screen.

Asset/Equipment Details	
MeterEquipment:Badge No: EQP_BN2, Serial No:EQP_SN2, Description:INT Equipment Type ERT	
Equipment Level	Meter
Badge Number	EQP_BN2
Serial Number	EQP_SN2
Description	INT Equipment Type ERT
Service Histories	