

**Oracle Utilities Work and Asset Cloud  
Service Integration to Oracle Field  
Service**

Customizations Guide

Release 24A

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# Preface

Welcome to the Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service Customizations Guide for release 24A.

This document provides high-level steps to add custom element mappings in Oracle Integration Cloud and Oracle Field Service layers.

**Note:** The screenshots and images provided in this document are sample references based on the current release of Oracle Utilities Work and Asset 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 Work and Asset 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

| Topic   | Location  |
|---|---|
| Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service documentation | <a href="https://docs.oracle.com/en/industries/energy-water/integrations-index.html">https://docs.oracle.com/en/industries/energy-water/integrations-index.html</a>                         |
| Oracle Utilities Work and Asset Cloud Service documentation                                     | <a href="https://docs.oracle.com/en/industries/energy-water/work-asset-cloud-service/index.html">https://docs.oracle.com/en/industries/energy-water/work-asset-cloud-service/index.html</a> |
| Oracle Field Service documentation  | <a href="https://docs.oracle.com/en/cloud/saas/field-service/index.html">https://docs.oracle.com/en/cloud/saas/field-service/index.html</a>   |

### Additional Documentation

| Resource   | Location   |
|--|--|
| Oracle Support   | Visit My Oracle Support at <a href="https://support.oracle.com">https://support.oracle.com</a> regularly to stay informed about updates and patches. |
| Oracle Technology Network (OTN) for latest versions of documents | <a href="http://www.oracle.com/technetwork/index.html">http://www.oracle.com/technetwork/index.html</a>  |
| Oracle University for training opportunities                     | <a href="http://education.oracle.com/">http://education.oracle.com/</a>  |

## Updates to Documentation

The complete Oracle Utilities Work and Asset 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  |
|-----------------|--|
| <b>boldface</b> | 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                                 |
|-------------|---|
| OFS         | Oracle Field Service                          |
| OUWAM/WAM   | Oracle Utilities Work and Asset Management    |
| OIC         | Oracle Integration Cloud Service              |
| OUWACS/WACS | Oracle Utilities Work and Asset Cloud Service |

# Chapter 1

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## Customizations

The integration between Oracle Utilities Work and Asset Cloud Service and Oracle Field Service allows users to add customizations, such as adding new elements in both Oracle Utilities Work and Asset Cloud Service and Oracle Field Service applications.

Add a new element to the Oracle Utilities Work and Asset Cloud Service outbound schema and create the new property in Oracle Field Service to send the value from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service and vice versa. Then, add the mapping for the new elements in Oracle Integration Cloud integration flows.

The following customizations are included:

- [Oracle Integration Cloud \(OIC\) Customizations](#)
- [Oracle Utilities WACS OFSC Activity Process](#)
- [Oracle Utilities OFSC WACS Activity Complete](#)
- [Oracle Utilities WACS OFSC Admin Data Sync](#)
- [Oracle Integration Cloud GEN2](#)
- [Oracle Integration Cloud GEN 3](#)
- [Moving from GEN2 to GEN3](#)
- [User Defined Fields](#)
- [Oracle Field Service Customizations](#)
- [Taking a Backup of Plugins](#)
- [Adding Customizations](#)

# Oracle Integration Cloud (OIC) Customizations

The WACS OFS OIC packages include the following integrations flows:

- Oracle Utilities OFSC WACS Activity Complete (01.24.1000)
- Oracle Utilities OFSC WACS Activity Interim Status (01.24.1000)
- Oracle Utilities OFSC WACS Activity Pull Update (01.24.1000)
- Oracle Utilities OFSC WACS Asset Query (01.24.1000)
- Oracle Utilities OFSC WACS Resource Usage Details (01.24.1000)
- Oracle Utilities OFSC WACS Route Activation (01.24.1000)
- Oracle Utilities OFSC WACS Storeroom Sync (01.24.1000)
- Oracle Utilities OFSC WACS Work Order (01.24.1000)
- Oracle Utilities OFSC WACS Work Request (01.24.1000)
- Oracle Utilities WACS OFSC Activity Process (01.24.1000)
- Oracle Utilities WACS OFSC Admin Data Sync (01.24.1000)
- Oracle Utilities WACS OFSC Schedule Storeroom Sync (01.24.1000)
- Oracle Utilities WACS OFSC Storeroom Admin Sync (01.24.1000)

## Oracle Utilities WACS OFSC Activity Process

The Oracle Utilities WACS OFSC Activity Process integration flow is the main activity create flow and it maps the activity information from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service.

To add the activity/Inventory related customizations:

1. Clone the integration and fill in the following fields:
  - **Name:** Oracle Utilities WACS OFSC Activity Process
  - **Identifier:** OUTL-WACS\_OFSC\_ACTIVITY\_PROC\_CM
2. Navigate to the map activity where the custom mappings should be added.
3. Click **Edit** and select the **Code** tab. The xslt snippets are displayed.
4. Add the element mappings in the corresponding parent schema element.

Example: To add a custom element under the activity schema, add the mapping under the 'activities' parent element. Similarly, to add the mappings for asset, add them under the 'inventories' parent element.

**Note:** The customized flow end point URL changes after the activation. Make sure to configure the new end point URL in the application's message sender.



## Oracle Utilities OFSC WACS Activity Complete

The OFSC WACS Activity Complete flow is the main flow from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service. It sends the activity completion information from Oracle Field Service to Oracle Utilities Work and Asset Cloud Service.

After adding the customization in Oracle Field Service, to send the customized elements back to Oracle Utilities Work and Asset Cloud Service, customized mappings should be added to the Oracle Integration Cloud Completion flow.

To add customizations in the Oracle Integration Cloud Completion flow:

1. Clone the Integration and enter the following details:
    - **Name:** Oracle Utilities OFSC WACS Activity Complete
    - **Identifier:** OUTL-OFSC\_WACS\_ACTIVITY\_COMP\_CM
  2. Navigate to the map activity where the custom mappings should be added.
  3. Click **Edit** and select the **Code** tab. The xslt snippets are displayed.
  4. Add the customized mappings in the corresponding parent schema element.
- Follow these steps to add customizations to the other integration flows.

## Oracle Utilities WACS OFSC Admin Data Sync

The Admin Data Sync flow synchronizes the Oracle Utilities Work and Asset Management admin data that includes work skills, shift types, labor earning types, etc.,

To synchronize data to custom properties in Oracle Field Service:

1. Create the custom property in Oracle Field Service.
2. Clone the Integration and enter the following details:
  - **Name:** Oracle Utilities WACS OFSC Admin Data Sync
  - **Identifier:** OUTL-WACS\_OFSC\_ADMIN\_SYNC\_CM
3. Create the scope after the Oracle Utilities Work and Asset Management invoke activity.
4. Inside the scope, add the Oracle Field Service REST adapter to synchronize the data to the property.
  - a. Configure the REST adapter.
    - a. Provide the name of the end point.
    - b. Configure the relative Resource URI as below:
 

```
"/ofscMetadata/v1/properties/{custome_property_label_name}/enumerationList
```
  - b. Select "PUT" as the **Method**.
  - c. Select the **Configure Request Payload** and **Configure Response Payloads** check boxes and click **Next**.
  - d. On the **Request** page, select "JSON" from the **Request Payload** list. Add the following JSON sample in both request and response payloads.

```

{
  "items" : [ {
    "label" : "code1",
    "active" : true,
    "translations" : [ {
      "language" : "en",
      "name" : "Code 1"
    } ]
  }, {
    "label" : "code2",
    "active" : true,
    "translations" : [ {
      "language" : "en",
      "name" : "Code 2"
    }, {
      "language" : "fr",
      "name" : "Code two"
    } ]
  } ]
}

```

5. After the adapter configuration is successful, new mapper is generated.
6. Map the Oracle Utilities Work and Asset Management code element to the label element in the Oracle Field Service request mapper.
7. Map the Oracle Utilities Work and Asset Management description element to the name element in the Oracle Field Service request mapper.
8. Map the Oracle Utilities Work and Asset Management language to the language element in the Oracle Field Service request mapper.

**Note:** Refer to the existing enum element sync scope for more details. Make sure to add “cm\_” as a prefix for the custom element name.

## Oracle Integration Cloud GEN2

If the integration is implemented on Oracle Integration Cloud GEN2, you should clone the integration and add the respective customizations. However, customizations should be added to the integration again when the Oracle Integration Cloud package is being upgraded.

## Oracle Integration Cloud GEN 3

In Oracle Integration Cloud GEN3, customizations can be added to the accelerator flows by using Extendable group. Extendable group supports switch, stitch, for-each, mapper, invoke (external app API/service call), and integration action (to invoke other integration process) actions. These functionalities are released by Oracle Integration Cloud.

To add customizations in GEN 3:

1. Add the Extendable group before invoking the mapping.
2. For complex or simple mapping use the STITCH function inside the extendable group.
3. Map the source element to the target element.

4. Click **Save**.
5. Activate the Integration.

In GEN3, existing customizations will not be overridden when the Oracle Integration Cloud package is being upgraded. The existing customizations will automatically merge to the higher version flows.

## Moving from GEN2 to GEN3

While moving from GEN2 to GEN3, make sure to take the new Oracle Integration Cloud package and add customizations using the extendable functionality. Refer to the [Oracle Integration Cloud GEN 3](#) section for more details.

The customizations will automatically merge to higher version flows when the Oracle Integration Cloud package is upgraded.

## User Defined Fields

In Oracle Utilities Work and Asset Cloud Service, the Work Activity schema has been extended to include user-defined fields. It will allow implementers to pass additional data to Oracle Field Service and other solutions without a need to change integration layer.

Following is the list of UDF properties available in Oracle Field Service:

- wam\_activity\_UDF1 to wam\_activity\_UDF10
- wam\_activity\_location\_UDF1 to wam\_activity\_location\_UDF10
- wam\_asset\_UDF1 to wam\_asset\_UDF10
- wam\_asset\_location\_UDF1 to wam\_asset\_location\_UDF10

Currently, Process Activity and Asset Query integrations support sending UDF data from Oracle Utilities Work and Asset Cloud Service to Oracle Field Service.

When UDF values are populated in Oracle Utilities Work and Asset Cloud Service, these are mapped to UDF/custom properties defined in Oracle Field Service at Activity, Activity Location, Asset, and Asset Location Level accordingly.

## Oracle Field Service Customizations

Oracle Field Service customizations include creating a new property and adding it to either User Type or Plugins.

**Note:** Make sure to prefix “cm\_” to the customized element names.

### Customizing User Types

The user type plays a key role in displaying information to mobile worker. Use this to display new data or hide the old data from the mobile worker.

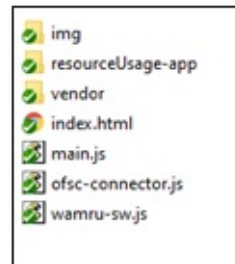
To customize the user type:

1. Login to Oracle Field Service.

2. Navigate to **Configuration > User Types**.
3. Click WAM OFS user type. It has two sections:
  - Activity
  - Inventory
4. Click **Edit/View Activity Details**.
5. Add the new property and click **Save**.
6. Click **Add/Details Inventory**.
7. Add the new property and click **Save**.
8. After the custom changes are complete, click **Validate**, and then click **Save**.

### Adding Customizations on Plugin

All the Oracle Field Service plugins have the following Node js structure:



## Taking a Backup of Plugins

Make sure to take a backup of the plugin before adding the customizations.

To take a backup:

1. Login to Oracle Field Service.
2. Navigate to **Configuration > Forms & Plugins**.
3. Search the plugin for which you need to take the backup.
4. Click **Export Plugin**.
5. Save the plugin in your local folder.

## Adding Customizations

Make sure to add comments in the plugin wherever the customization snippet is added.

To add a customization:

1. Navigate to “-app” folder > “xsl-stylesheet” folder.

A list of style sheets is displayed in the folder. Each style sheet is used to display specific screens in the plugin.

2. To add a read-only property:

- a. Add the label and xpath of the element.
  - b. Click **Save** to save the xsl sheet.
  - c. Navigate to the **app.js** file.
  - d. Search and find the “inputXML” text.
  - e. Add the element in the form of XML data.  
"<elementName> [OFSC Property value]</elementName>"
3. Save the **app.js** file and run the grunt command to generate the build.
  4. Upload the build file to the Oracle Field Service plugin.
  5. Add the customized property to plugin properties.
  6. To add an editable property:
    - a. Add the label and input the type elements.
    - b. Save the XSL file.
    - c. Navigate to the **app.js** file.
    - d. Search and find the “inputXML” text.
    - e. Add the element in the form of XML data.  
"<elementName> [OFSC Property value]</elementName>"
    - f. Go to the completionText property to get the value of the property and assign it before sending it back to Oracle Field Service.
  7. Save the **app.js** file and run the grunt command to generate the build.
  8. Upload the build file to the Oracle Field Service plugin.
  9. Click **Save** to save the plugin.