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

Upgrade Guide

Release 25.4

**G35532-01**

June 2025

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Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service Upgrade Guide

# Contents

# Preface

Welcome to the Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service Upgrade Guide for release 25.4. This document guides you through the process of planning and executing the integration between Oracle Utilities Work and Asset Cloud Service and Oracle Field Service.

> **Note that** 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 integration between Oracle Utilities 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 | https://docs.oracle.com/en/industries/energy-water/integrations-index.html |
| Oracle Utilities Work and Asset Cloud Service documentation | https://docs.oracle.com/en/industries/energy-water/work-asset-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.<br><br>Refer to the Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1) to determine if support for newer versions of the listed products is included. |
| Oracle University for training opportunities | http://education.oracle.com/ |

# 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 |
| --- | --- |
| **boldface** | Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary. |
| *italic* | 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 |
| OIC | Oracle Integration Cloud |
| ICS | Integration Cloud Service |
| DVM | Domain Value Map (Lookup) |
| WACS/OUWACS | Oracle Utilities Work and Asset Cloud Service |

# Chapter 1

## Upgrade Overview

**Note that** this document focuses only on Oracle Integration Cloud and Oracle Field Service *accelerator* package upgrades and does not apply to Oracle Integration Cloud and Oracle Field Service *application* upgrades.

This chapter provides an overview of the artifacts required before upgrading the integration and merging the customizations to the latest version. It focuses on the prerequisites and upgrade matrix necessary for the integration.

**Important!** For all annual releases (an "A" release), upgrade the following packages:

- Oracle Field Service Accelerator
- Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Cloud OIC Accelerator

Also, upgrade the following applications:

- Oracle Utilities Work and Asset Cloud Service
- Oracle Field Cloud

For the other releases ("B" or "C"), you can choose to only upgrade Oracle Utilities Work and Asset Cloud Service.

The chapter includes the following:

- Prerequisites
- Upgrade Matrix

# Prerequisites

Download the following artifacts related to the version to which the product should be upgraded:

- Oracle Integration Cloud Pre-built Integration Accelerator Project
- Oracle Field Service Accelerator Package

To upgrade the integration to 25.4, download the 25.4 pre-built integration and 25.4 Oracle Field Service Accelerator packages. It is applicable to other versions as well.

> **Note**: Marketplace will include only the latest releases of Oracle Integration Cloud and Oracle Field Service Accelerator. To upgrade to earlier versions, raise a service request with My Oracle Support at https://support.oracle.com/portal/. Artifacts for the requested version will be shared through the service request.

# Upgrade Matrix

The following upgrade matrix provides details about the mandatory version upgrade, the supported, and not supported integration package versions (that include both Oracle Integration Cloud prebuilt and Oracle Field Service accelerator packages) with respect to the Oracle Utilities Work and Asset Cloud Service application version.

| Application Version/Package Version | WACS-OFS 23B | WACS-OFS 23C | WACS-OFS 24A | WACS-OFS 24B | WACS-OFS 24C | WACS-OFS 25.4 |
|---|---|---|---|---|---|---|
| WACS 23B | ✔ | ✘ | ✘ | ✘ | ✘ | |
| WACS 23C | ✔ | ✔ | ✘ | ✘ | ✘ | |
| WACS 24A | ✔ | ✔ | ✔ | ✘ | ✘ | |
| WACS 24B | ✔ | ✔ | ✔ | ✔ | ✘ | |
| WACS 24C | ✔ | ✔ | ✔ | ✔ | ✔ | |
| WACS 25.4 | | | | | | |

- "✔" indicates the supported integration and application package versions applicable for upgrade.
- "✘" indicates the integration and application package versions for which upgrade is not supported.

# Chapter 2

## Upgrading the Integration

This chapter focuses on the process to upgrade the product integration from other versions to 25.4.

Before proceeding with the upgrade, please note that the best practice is to create a backup (including Oracle Field Service custom plugins) to retain all the previous customizations of Oracle Integration Cloud pre-built integration/Oracle Field Service accelerator package).

The chapter includes the following:

- Upgrade Process Overview
- Creating a Backup
- Removing Old References
- Integration Upgrade Process

# Upgrade Process Overview

The integration upgrade mainly consists of the following steps:

1. Make sure to take a backup of the integration, including Oracle Field Service custom plugins. For more details, see Creating a Backup.

2. Remove all the references to the previous version available for lookups and libraries. See Removing Old References for more details.

3. After the integration project import is completed, validate the components for a successful upgrade. Refer to Chapter 3: Validations for more details.

4. Merge all customizations for which you have taken the backup. Refer to Chapter 4: Merging the Customizations for more information.

# Creating a Backup

Take a backup of the following:

- **Oracle Integration Cloud Pre-built Integration Project**: If the accelerator is project-based, export the Oracle Integration Cloud project. Click **Export** on the navigation bar for the respective project.

  To export the project:

  a. Login to Oracle Integration Cloud.

  b. Navigate to **Projects**.

  c. Select the project to be exported.

  d. Click **Export** on the navigation bar list.

- **Oracle Integration Cloud Pre-built Integration Package**: If the accelerator is package based, export the Oracle Integration Cloud package and integration flows from Oracle Integration Cloud and store them in the local folder.

  **Note**: If the base project is cloned and customizations are included in the cloned flows or if an older version of the project existed before consuming Oracle Integration Cloud accelerator project (outl.ba.wacs_ofsc.01_24_3000.car), take a backup of the Oracle Integration Cloud project.

  To export the package and integration flows:

  a. Login to Oracle Integration Cloud.

  b. Navigate to **Packages** from integrations.

  c. Select the required package to be exported.

  d. Browse to the path where the package should be exported to and click **Export**.

- **Oracle Field Service Properties**: Export the Oracle Field Service properties that start with "wam_" and store/save them in the local folder.

- **Oracle Field Service User Type**: Export the user type file from the Oracle Field Service environment.

- **Oracle Field Service Plugin**: Export the Oracle Field Service plugin from the Oracle Field Service environment.

For detailed steps to create a backup, refer to the *Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service Configuration Guide* included in this release. The documentation is available on Oracle Help Center.

# Removing Old References

After creating a backup of the required items, remove all the references to lookups and libraries related to the older/previous version.

> **Important!** Make sure to perform this step accurately since merging the changes from one version to another version for lookups and libraries is not taken care in the upgrade process.

## Deleting References to Lookups

To remove references to lookups related to the older integration version for package-based accelerators:

1. Login to Oracle Integration Cloud.
2. Navigate to **Integrations** > **Lookups**.
3. Select all lookups related to the integration.
4. From the **Options** menu, click **Delete** to delete the selected lookups.

For a list of lookups in the integration, refer to Lookups in Chapter 3: Validations.

> **Note**: The current integration version might not include the same list of lookups as the previous integration version. A few of them might be included or deprecated. To get a list of lookups, refer to the respective documentation for the integration version that you are running.

## Deleting References to Libraries

To remove the references to libraries related to the older version of integration for package-based accelerators:

1. Login to Oracle Integration Cloud.
2. Navigate to **Integrations** > **Libraries**.
3. Select all libraries related to the integration.
4. From the **Options** menu, click **Delete** to delete the selected libraries.

For a list of libraries in the integration, refer to Libraries in Chapter 3: Validations.

> **Note**: The current integration version might not include the same list of libraries as the previous integration version. A few of them might be included or deprecated. To get a list of libraries, refer to the respective documentation for the integration version that you are running.

# Integration Upgrade Process

The integration between Oracle Utilities Work and Asset Cloud Service and Oracle Field Service can happen in any of the following ways.

### Upgrading the edge applications (WACS/OFS) and using the Oracle Integration Cloud accelerator

In this scenario, edge applications are upgraded and Oracle Integration Cloud accelerator is used as it is. Since the Oracle Integration Cloud accelerator is on the lower version, enhancements released as part of the edge application will not be supported.

For information about supported features, refer to the version specific release notes. The documentation is available on Oracle Help Center.

### Upgrading Oracle Utilities Work and Asset Cloud Service only

In this scenario, only Oracle Utilities Work and Asset Cloud Service is upgraded. New features released as part of Oracle Utilities Work and Asset Cloud Service will not be supported, as it requires both Oracle Integration Cloud and Oracle Field Service accelerator upgrades.

For information about supported features, refer to the version specific release notes. The documentation is available on Oracle Help Center.

### Upgrading Oracle Field Service Accelerator only

In this scenario, Oracle Field Service is upgraded to the latest version.

> **Caution!** There will be a loss of functionality/errors in the situation where:
> - Oracle Field Service accelerator has the latest version.
> - Oracle Integration Cloud accelerator and Oracle Utilities Work and Asset Cloud Service have lower versions.
> - Refer to the Upgrade Matrix for more details.
>
> **Recommendation**: Make sure both Oracle Integration Cloud and Oracle Field Service accelerator are on the same version.

### Upgrading Oracle Integration Cloud accelerator and using the edge applications (WACS/OFS)

**Note that** this is not a recommended approach. When you upgrade Oracle Integration Cloud accelerator and use the end-point application as is, some of the features or flows released as part of the Oracle Integration Cloud accelerator will not be supported. It needs edge application enhancements.

### Upgrading the integration

To upgrade the integration between Oracle Utilities Work and Asset Cloud Service and Oracle Field Service:

1. Select the upgrade type.

2. For feature enhancements, do the following:

   a. Select the desired integration package/project version.

   b. Select the current edge application version and query the required component version to support the feature.

   c. If the required component is not listed or if you experience an issue, contact My Oracle Support through a service request.

3. For required/planned upgrade, all components should be upgraded to version 'A'. Perform the following:

   a. Select the current edge application version.

   b. Select the current integration package/project.

   c. If the new accelerator is available, proceed with the upgrade.

   d. If you experience an issue, contact My Oracle Support through a service request.

# Chapter 3

# Validations

After the integration package/project import process is complete, validate the following components for a successful upgrade of the integration:

- Connections
- Integrations
- Lookups
- Agents
- Libraries

# Connections

If Oracle Integuition Cloud Accelerator is project-based, verify that the following connections should be in "configured" state as seen in the **Connections** section of the project. If the accelerator is package-based, verify connections related to the integration should be in "configured" state as seen in connections section in Integrations.

- Oracle Utilities REST for WACS-OFSC
- Oracle Utilities REST OFSC for WACS-OFSC
- Oracle Utilities OFSC for WACS-OFSC
- Oracle Utilities SOAP WACS for WACS-OFSC

# Integrations

If Oracle Integration Cloud Accelerator is project-based, verify that the following integrations should be in the "active" state as seen in the **Integrations** section of the project. If the accelerator is package-based, verify them in the **Integrations** section.

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

# Lookups

If Oracle Integration Cloud Accelerator is project-based, verify that the following lookups should be in "configured" state as seen in the **Lookups** section of the project. If the accelerator is package-based, verify whether they are in "configured" state in the **Lookups** section in integrations.

- WAMOFSC_ActivityType
- WAMOFSC_Email_ID
- WAMOFSC_ConfigProps
- WAMOFSC_Language

- WAMOFSC_AttachmentBO

- WAMOFSC_ActivityStatus

- WAMOFSC_SegmentedActivityTypes

- WAMOFSC_ActivityTypeConfigProps

- WAMOFSC_BacklogGroup

- WAMOFSC_ActivityLinkType

- WAMOFSC_SimplifiedWAMActivityStatus

# Agents

The agents should be in "configured" state. This is only applicable if you are using on-premises Oracle Utilities Work and Asset Management. Else, ignore this step.

# Libraries

If Oracle Integration Cloud Accelerator is project-based, verify that the following libraries should be in "configured" state as seen in the **Libraries** section of the project. If the accelerator is package-based, verify whether they are in "configured" state in the **Libraries** section in Integrations.

- WAMOFSC_AddOffsetTo DateTime

- WAMOFSC_ConcatAddress

- WAMOFSC_ReplaceSpecialCharacters

# Chapter 4

## Merging the Customizations

The current customizations are handled by place holders in xslts.

After the integration is successfully upgraded, merge all customizations for which a backup was created. See the Creating a Backup section in Chapter 2: Upgrading the Integration for more information.

This chapter focuses on the following:

- Merging the Oracle Integration Cloud Pre-built Customizations
- Merging the Oracle Field Service Customizations

# Merging the Oracle Integration Cloud Pre-built Customizations

**Note that** since the Oracle Integration Cloud package is delivered as accelerator, it cannot be modified.

After Oracle Integration Cloud accelerator package (20C or higher) is installed, do the following:

1. Clone the integration.

2. Export the respective cloned integration from Oracle Integration Cloud to your local machine.

3. Unzip the .iar file and identify the mapping/xsl file in which custom mappings should be added.

4. This integration has all mappers as import XSLs. To add a new mapping, edit the respective mapper/xsl file.

   Note that mappings cannot be added using the Mapper Design view.

5. In all integration mappings, a template is added under every complex element. Any custom elements under that complex element can be added directly in the template provided.

6. Add the mapping under the respective customization template. Save the changes.

7. In Oracle Integration Cloud, click the integration to add mappings for an extra element. Select the respective map activity.

8. Click **Import** and upload the updated mapper/xsl file.

9. Save and close.

10. Activate the integration to reflect the custom mappings.

**For Accelerator Project Customizations**

In Oracle Integration Generation 3, you can extend (customize) an integration in an accelerator project by adding and configuring an extension group. An extension group enables you to extend your integration by adding invoke connections; stitch, for-each, switch, map, and integration actions; and global variables to the integrations in your accelerator project.

For more details on how to perform these changes, refer to the Manage a Project section in Using Integrations in Oracle Integration 3.

In addition, a knowledge base article is available at: https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=407954934694303&id=3017378.1&_adf.ctrl-state=611abf54g_77

# Merging the Oracle Field Service Customizations

After the successful upgrade, add the following customizations:

- Properties
- User Type

## Properties

Re-import the properties that are not part of admin synchronization. The data will be synchronized to the admin sync properties.

## User Type

Add your customization back to the user type file on top of the latest code line.

To add customization from UI:

1. Navigate to the UI section of the user type file.

2. Add the customization manually.

To add customization by editing the user type file directly:

1. Open the user type file in a text editor and search for the section where the customization should be added.

2. Copy the customization from the old backup file and paste it into the latest user type section.

3. Repeat step 2 for those sections where customizations can be added.

For more details about Oracle Field Service accelerator customization, refer to the **Customizations** chapter in *Oracle Field Service Configurations for Oracle Utilities Work and Asset Cloud Service Integration to Oracle Field Service Setup Guide* included in this release. The documentation is available on Oracle Help Center at: https://docs.oracle.com/en/industries/energy-water/integrations-index.html