

Oracle Process Integration Pack for Oracle Utilities Field Work

Upgrade Guide

Release 12.2

G37433-01

June 2017
(Updated July 2025)

Oracle Process Integration Pack for Oracle Utilities Field Work, Release 12.2 Upgrade Guide

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Preface

Welcome to the Oracle Process Integration Pack for Oracle Utilities Field Work Upgrade Guide for release 12.2.

The preface includes the following:

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

Audience

This document is intended for anyone implementing the Oracle Process Integration Pack for Oracle Utilities Field Work.

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 Process Integration Pack for Oracle Utilities Field Work documentation | https://docs.oracle.com/en/industries/energy-water/integrations-index.html |
| Oracle Utilities Operational Device Management documentation | https://docs.oracle.com/en/industries/energy-water/operational-device-management/index.html |
| Oracle Utilities Meter Data Management documentation | https://docs.oracle.com/en/industries/energy-water/meter-data-management/index.html |

Additional Documentation

| Resource | Location |
|--|---|
| SOA Suite 12c documentation | Refer to the SOA documentation . |
| 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 Technology Network (OTN) for latest versions of documents | http://www.oracle.com/technetwork/index.html |
| Oracle University for training opportunities | http://education.oracle.com/ |
| Web Services Security | For more information about Web services security using Oracle Fusion Middleware 12c, refer to https://docs.oracle.com/middleware/12211/cross/webservicetasks.htm . |
| Oracle Fusion Middleware 12c documentation | Refer to the Oracle applications documentation page. |

| Resource | Location |
|---|---|
| For additional information on the type of database to use, see the “Standards Support, Supported Configurations and WebLogic Server Compatibility, Database Interoperability” section in Oracle Fusion Middleware What’s New In Oracle WebLogic Server . | http://docs.oracle.com/middleware/1221/wls/NOTES/toc.htm |
| Instructions to install this integration on non-Windows/Linux platforms. | Visit My Oracle Support regularly to stay informed about updates and patches. |
| | Access the support site for the 1349320.1 Doc ID. |

Updates to Documentation

The complete Oracle Process Integration Pack for Oracle Utilities Field Work 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. |

Abbreviations

The following terms and acronyms are used in documentation related to this media pack.

Applications

| Abbreviation | Expanded Form |
|--------------|--|
| CC&B/CCB | Oracle Utilities Customer Care and Billing |
| MWM | Oracle Utilities Mobile Workforce Management |
| WAM | Oracle Utilities Work and Asset Management |
| ODM | Oracle Utilities Operational Device Management |

Terms for Orders by Edge Application

Orders are referred to in different terms in each of the applications involved in this integrated product. In each of these systems, an order translates to:

| Abbreviation | Order Name | Application |
|--------------|-----------------|-------------------------|
| FA | Field Activity | CC&B and WAM/ODM v2.1.x |
| SR | Service Request | WAM v1.9.1.x |
| A | Activity | MWM |

General Terms

| Abbreviation | Expanded Form |
|------------------|---|
| ABCS | Application Business Connector Services |
| AOL | Application Object Library |
| CM | Customer Modification |
| CSR | Customer Service Representative |
| DB | Database |
| DVM | Domain Value Map |
| EBM | Enterprise Business Messages - Packets of data which the Mediator accepts from requesters and routes to providers. They carry the pieces of data needed for the requests to be understood and serviced. |
| EBO | Enterprise Business Object |
| EBSL | Enterprise Business Service Library |
| Edge Application | The applications that are involved in the integration - CC&B, MWM, and WAM/ODM |
| EM | Enterprise Manager |

| Abbreviation | Expanded Form |
|---------------------------|---|
| EOL | Enterprise Object Library |
| ESL | Extension Service Library |
| FP | Foundation Pack |
| IWS | Inbound Web Service |
| JMS | Java Message Service - The JMS producers are responsible for posting the message to the Consumer JMS Queue for the corresponding target application. |
| MDS | Metadata Store |
| NDS | Notification Download Staging |
| Participating Application | One of the three applications involved this integration - CC&B, MWM, or WAM/ODM |
| PIP | Process Integration Pack |
| SA | CC&B Service Agreement |
| SCE | SOA Core Extensions |
| SOA | Service-Oriented Architecture - Software modules that are provided as services can be integrated or used by several applications using SOA, even if their respective architectures are substantially different. Rather than defining an API, SOA defines the interface in terms of protocols and functionality. |
| SOAP | Simple Object Access Protocol. It is a protocol specification for exchanging structured information in the implementation of Web Services in computer networks. |
| SP | CC&B Service Point |
| XAI | XML Application Integration |
| XSD | A schema definition file |
| XSL | Extensible Style Language |

Data Mapping

Data mapping information for each integration point is provided in the Excel spreadsheet format. Please refer to the release specific *Data Mapping Guide* on the [Integrations](#) page on [Oracle Help Center](#).

Chapter 1

Upgrading the Integration

This chapter describes the steps to move customizations from the Oracle Process Integration Pack for Oracle Utilities Field Work V3.1 running on SOA Suite 11g to Oracle Process Integration Pack for Oracle Utilities Field Work V12.2 running on SOA Suite 12c.

Important! These steps must be completed after installing the Oracle Process Integration Pack for Oracle Utilities Field Work V12.2. Refer to the *Installation Guide* included in this release for more information.

Before upgrading to the 12c version, make sure that all of your in-flight instances in the 11g version have completed successfully. Example: Make sure all open orders or activities are completed before switching to the 12c environment.

The chapter includes:

- [Migrating Extended Enterprise BOs](#)
- [Migrating Custom Composites](#)
- [Migrating Custom XSLs](#)
- [Migrating DVMs](#)
- [Migrating AIAConfigurationProperties.xml](#)

Migrating Extended Enterprise BOs

A custom schema definition file (XSD) is provided for every Enterprise business object shipped with the integration. The Enterprise business object can be modified by changing these custom files. The XSDs are incorporated in the Enterprise business object so that any custom extensions that are added to them are protected when patches or upgrades are applied.

Any changes made to these custom XSDs in the 11g version should be manually merged to the code line in the 12c version.

To migrate the extended Enterprise BOs:

1. Copy the modified the Enterprise business object XSD file(s) to the correct location on the application server in 12c.

Example: <AIA_HOME>/AIAMetaData/AIAComponents/
EnterpriseObjectLibrary/<Path_to_xsd>

2. Update the modified XSD (in step 1) to MDS repository for changes to take effect.
3. To deploy the modified XSDs:

- a. Run the middleware. Run the Home/user_projects/domains/soa_domain/soa/aia/bin aiaenv.bat or aiaenv.sh depending on the operating system.

This sets the environment variables required by the build process.

- b. Update the metadata:
 - a. Browse to the folder at \$DOMAIN_LOCATION/soa/aia/MDSUtils/UpdateMetaDataDP.xml and open the deployment plan file UpdateMetaDataDP.xml.
 - b. Update the UpdateMetaDataDP.xml file. Insert include tags for each resource group that you want to add to the MDS.

Example to update XSD file:

```
<fileset dir="${env.SERVICES_LOCATION}/AIAMetaData">
<include name="AIAComponents/ EnterpriseObjectLibrary/
Industry/Utilities/Custom/EBO/WorkOrder/V1/
CustomWorkOrderEBO.xsd" />
</UpdateMetadata>
</Configurations>
</DeploymentPlan> "Run the update utility.
```

Linux:

```
ant -f $SOA_HOME/aiafp/Install/AID/AIAInstallDriver.xml -
DDeploymentPlan=$DOMAIN_LOCATION/soa/aia/MDSUtils/
UpdateMetaDataDP.xml
```

Windows:

```
ant -f %SOA_HOME%\aiafp\Install\AID\AIAInstallDriver.xml -
DDeploymentPlan=
%DOMAIN_LOCATION%\soa\ai\MDSUtils\UpdateMetaDataDP.xml
```

This process prompts for the user name and password. Enter these details to complete the process.

Migrating Custom Composites

All Requester and Provider ABC Services provided with this integration pack have extension points available to extend the functionality using custom composites.

All custom extension composites can be migrated from the 11g version to the 12c version. Ensure you have a proper backup of the 11g process before doing the upgrade from the 11g version to the 12c version.

Open the 11g composite in Jdeveloper 12.2.1 and save the composite. The directory structure of the composite changes and some files are added and deleted.

Manual changes to be made when migrating from the 11g version to the 12c version:

1. All transformations currently are either in the XSL folder or under the composite directory. They must be moved to the **Transformations** folder and all references in the .bpel file should be changed accordingly.
2. Move all the WSDLs to the **WSDLs** folder.
3. Move all BPEL to the **BPEL** folder.
4. Move all schemas to the **Schemas** folder.
5. Move all the adapter related files to the **Adapters** folder.
6. Move all human task related artifacts to the **HumanTasks** folder.
7. Move all the mediator artifacts to the **Mediators** folder.

Make sure that there are no errors. Deploy directly from JDev or using the CustomDP file.

Steps to deploy using the custom DP script for deployment:

An example of FieldWorkCustomDP.xml file to deploy and undeploy composite files is found in \$AIA_HOME/pips/FieldWork/DeploymentPlans/FieldWorkCustomDP.xml.

```
<DeploymentPlan component="FieldWork" version="3.0">
  <Deployments>
    <Composite compositeName="<processname>" compositedir="${AIA_HOME}/
services/industry/Utilities/OUCCB/RequestorABCS/<processname>"
revision="1.0" wlserver="pips.FieldWork" action="deploy" />
  </Deployments>
</DeploymentPlan>
```

Once the custom script is ready, execute it using the following command:

Linux:

```
ant -f $SOA_HOME/aiafp/Install/AID/AIAInstallDriver.xml -
DDeploymentPlan=$AIA_HOME/pips/FieldWork/DeploymentPlans/
FieldWorkCustomDP.xml -DPropertiesFile=$DOMAIN_LOCATION/soa/aia/
bin/AIAInstallProperties.xml
```

Windows:

```
ant -f %SOA_HOME%\aiafp\Install\AID\AIAInstallDriver.xml -
DDeploymentPlan=%AIA_HOME%\pips\FieldWork\DeploymentPlans\Fi
eldWorkCustomDP.xml -
DPropertiesFile=%DOMAIN_LOCATION%\soa\AIA\bin\AIAInstallProperties
.xml
```

This process prompts for the user name and password. Enter these details to complete the process.

Migrating Custom XSLs

The custom XSLs previously available in 11g version are now available in the 12c version. To make sure that the source/target mapping feature is not lost, do not copy the XSL as is from the 11g version to the 12c version. Instead, manually merge those changes from the 11g version of XSL to the 12c version of XSL.

Redeploy the modified processes either from JDEV or using the custom DP file.

Migrating DVMs

The DVMs previously available in 11g version are now available in the 12c version. In addition, there are a few more DVMs that have been created in the 12c version. Move the DVMs manually from the 11g version to the 12c environment.

Update the MDS using UpdateMetaDataDP.xml. For steps, refer to the [Migrating Extended Enterprise BOs](#) section. The appropriate DVM file locations are included in the *files* section.

Migrating AIAConfigurationProperties.xml

The AIAConfigurationProperties.xml that was available in the 11g version is also available in the 12c version. Updating the ConfigurationProperties differs in SOA Suite 12c.

To update the configuration:

1. Download the configuration properties file from MDS using GetFieldWorkConfigFileDP.xml.

Linux:

```
ant -f $SOA_HOME/aiafp/Install/AID/AIAInstallDriver.xml -
DDeploymentPlan=$AIA_HOME/pips/FieldWork/DeploymentPlans/
GetFieldWorkConfigFileDP.xml -DPropertiesFile=$DOMAIN_LOCATION/
soa/aia/bin/ AIAInstallProperties.xml
```

Windows:

```
ant -f %SOA_HOME%\aiafp\Install\AID\AIAInstallDriver.xml -
DDeploymentPlan=%AIA_HOME%\pips\FieldWork\DeploymentPlans\Ge
tFieldWo rkConfigFileDP.xml -
DPropertiesFile=%DOMAIN_LOCATION%\soa\bia\bin\AIAInstallProperties
.xml
```

This process prompts for user name and password. Enter these details to complete the process.

2. Merge the changes from 11g version into the downloaded file in \$AIA_HOME/config folder. Run the UpdateFieldWorkConfigFileDP.xml utility.

Linux:

```
ant -f $SOA_HOME/aiafp/Install/AID/AIAInstallDriver.xml -
DDeploymentPlan=$AIA_HOME/pips/FieldWork/DeploymentPlans/
UpdateFieldWorkConfigFileDP.xml -DPropertiesFile=$DOMAIN_LOCATION/
soa/aia/bin/ AIAInstallProperties.xml
```

Windows:

```
ant -f %SOA_HOME%\aiafp\Install\AID\AIAInstallDriver.xml -
DDeploymentPlan=%AIA_HOME%\pips\FieldWork\DeploymentPlans\Up
dateField WorkConfigFileDP.xml -
DPropertiesFile=%DOMAIN_LOCATION%\soa\bia\bin\AIAInstallProperties
.xml
```