

**Oracle Process Integration Pack for Oracle
Utilities Field Work**

Upgrade Guide

Release 12.2

Updated May 2017

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

Copyright ©2009, 2017 Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

Upgrade Guide

Preface	i
Documentation and Resources	i
Documentation Accessibility	iii
Conventions.....	iii
Abbreviations	iii
Data Mapping.....	v
Upgrade Guide	1-1
Migrating Extended EBOs.....	1-1
Migrating Custom Composites.....	1-2
Migrating Custom XSLs	1-3
Migrating DVMs.....	1-3
Migrating AIAConfigurationProperties.xml.....	1-4

Preface

This guide is intended for anyone upgrading from 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 and needing to move customizations from the older version to the new version.

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

Topic	Description
Integration documentation:	
Oracle Process Integration Pack for Oracle Utilities Field Work Release Notes	
Oracle Process Integration Pack for Oracle Utilities Field Work Implementation Guide	
Oracle Process Integration Pack for Oracle Utilities Field Work Installation Guide	Refer to the Oracle Utilities applications documentation page: http://docs.oracle.com/cd/E72219_01/documentation.html
Edge application documentation:	
Oracle Utilities Operational Device Management	
Oracle Utilities Meter Data Management	

Additional Documentation

Resource	Location
SOA Suite 12c documentation	Refer to the SOA documentation at: http://www.oracle.com/technetwork/middleware/soasuite/documentation/index.html
Oracle Support	Visit My Oracle Support at https://support.oracle.com 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) or refer to the Oracle Utilities Integrations page at http://my.oracle.com/site/tugbu/productsindustry/productinfo/utilities/integration/index.htm
Oracle Technology Network (OTN) 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: http://docs.oracle.com/en/middleware/
Oracle Fusion Middleware “What's New In Oracle WebLogic Server” Section: Standards Support, Supported Configurations and WebLogic Server Compatibility, Database Interoperability	http://docs.oracle.com/middleware/1221/wls/NOTES/toc.htm
For additional information on the type of database to use.	
Instructions on installing this integration on non-Windows/ Linux platforms	Refer to Oracle Support Knowledge Article ID 1349320.1.

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

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

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
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 Excel spreadsheet format. Please refer to the .zip file included in the documentation package.

Upgrade Guide

This document provides information on moving 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.

The procedures described should be completed after installing the Oracle Process Integration Pack for Oracle Utilities Field Work v12.2 according to the instructions provided in the Installation Guide.

Note: Prior to upgrading to the 12c version, ensure that all of your in flight instances in the 11g version have completed successfully. For instance, make sure all open orders or activities are completed before switching to the 12c environment.

Migrating Extended EBOs

A custom schema definition file (XSD) is provided for every EBO that is shipped with the integration. The EBO can be modified by changing these custom files. The XSDs are incorporated into the EBOs so that any custom extensions that are added to the EBOs 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 for the 12c version.

1. Copy the modified EBO xsd file(s) to the correct location on the application server. in 12c.
Ex: <AIA_HOME>/AIAMetaData/AIAComponents/EnterpriseObjectLibrary/
<Path_to_xsd>
2. Update the modified xsd in the above step to the MDS Repository for the changes to take effect.
3. Follow the steps below to deploy the modified xsds:
 - a. Run the Middleware 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 Metadata using the following steps:
 - Browse to the folder at \$DOMAIN_LOCATION/soa/aia/MDSUtils/UpdateMetaDataDP.xml and open the deployment plan file, UpdateMetaDataDP.xml.
 - Update the file UpdateMetaDataDP.xml by inserting 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\ia\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 the transformations currently are either in xsl folder or under the composite directory, should be moved to 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.

Ensure that there are no errors and 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 the custom script 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\bin\AIAInstallProp
  erties.xml
```

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

Migrating Custom XSLs

Same Custom XSLs previously available in the 11g version are now available in the 12c version. In order to ensure that the source/target mapping feature is not lost, do not copy the XSL as is from the 11g version to the 12c version but 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 as specified above.

Migrating DVMs

Same DVMs previously available in the 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. The detailed steps to update MDS are specified in the section – Migrating Extended EBOs above where the appropriate DVM file locations are included in the *fileset* section.

Migrating AIAConfigurationProperties.xml

There is an equivalent AIAConfigurationProperties.xml that was available in the 11g version which is also available in the 12c version. Updating the ConfigurationProperties differs somewhat in SOA Suite 12c.

To update the configuration:

- 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\aiA\bin\AIAInstallProp
erties.xml
```

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

- Merge the changes from the 11g version into the downloaded file in \$AIA_HOME/config folder and run un the UpdateFieldWorkConfigFileDP.xml utility provided.

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\aiA\bin\AIAInstallProp
erties.xml
```