

## **Oracle® Fusion Middleware**

Installation and Upgrade Guide for Oracle Application Integration  
Architecture Foundation Pack

11g Release 1 (11.1.1.7)

**E17949-08**

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Documentation for installers that describes how to install Oracle Application Integration Architecture (AIA) Foundation Pack, perform post-installation configurations, and verify the installation. Describes how to install process models. Describes how to uninstall Oracle AIA Foundation Pack. Describes how to upgrade Oracle AIA Foundation Pack 11g Release 1 from (11.1.1.5.0/ 11.1.1.6.x to 11.1.1.7).

Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack, 11g Release 1 (11.1.1.7)

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# Preface

Welcome to the *Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack*. This guide describes the Oracle Application Integration Architecture (AIA) Foundation Pack installation and upgrade processes.

## Audience

This document is intended for users installing Oracle AIA Foundation Pack 11g Release 1 (11.1.1.7). It is also intended for users upgrading from Foundation Pack 11g Release 1 (11.1.1.5.0/11.1.1.6.x) to Foundation Pack 11g Release 1 (11.1.1.7).

## Using This Guide

Follow the steps mentioned while installing Oracle AIA for a faster and smoother installation.

1. Perform the required pre-installation checks discussed in *Required Verifications Before Starting AIA 11g Foundation Pack Installation*, available in article ID 1298426.1 on My Oracle Support:  
<https://support.oracle.com/epmos/faces/DocumentDisplay?id=1298426.1>.
2. Ensure that you are reading the latest version of this guide. Access the latest of the *Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack*.
3. Review the release notes for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.7) available on Oracle Technology Network at  
<http://www.oracle.com/technetwork/middleware/docs/soa-aiafp-knowmissuesindex-364630.html>.
4. Fulfill the hardware requirements discussed in [Section 1.3, "Hardware Requirements."](#)
5. Fulfill the software requirements discussed in [Section 1.2, "Software Requirements."](#)
6. Collect the information discussed in [Section 2.1, "Collecting Field Value Information for Installation and Deployment of Foundation Pack."](#)
7. Fulfill pre-installation configurations discussed in [Section 2.2, "Performing Pre-Installation Configurations."](#)

8. Install Foundation Pack using instructions provided in [Chapter 3, "Installing and Deploying Using AIA Foundation Pack Installer"](#) or [Chapter 4, "Installing and Deploying using Manual Steps."](#)
9. Perform post-installation tasks discussed in [Chapter 5, "Post-Installation Configurations."](#)
10. Verify the installation using instructions provided in [Chapter 6, "Verifying the Installation."](#)
11. Install Reference Process Models using instructions provided in [Chapter 8, "Installing Reference Process Models."](#)

If you are migrating from Foundation Pack 2.4 or 2.5, see *Oracle Fusion Middleware Migration Guide for Oracle Application Integration Architecture*.

## Oracle AIA Guides

In addition to this Installation and Upgrade Guide, we provide the following Oracle AIA guides for this 11.1.1.7 release:

- *Oracle Fusion Middleware Concepts and Technologies Guide for Oracle Application Integration Architecture Foundation Pack*
- *Oracle Fusion Middleware Developer's Guide for Oracle Application Integration Architecture Foundation Pack*
- *Oracle Fusion Middleware Infrastructure Components and Utilities User's Guide for Oracle Application Integration Architecture Foundation Pack*
- *Oracle Fusion Middleware Reference Process Models User's Guide for Oracle Application Integration Architecture Foundation Pack*
- *Oracle Fusion Middleware Migration Guide for Oracle Application Integration Architecture*
- *Oracle Fusion Middleware Product-to-Guide Index for Oracle Application Integration Architecture Foundation Pack*

## Related Guides

The following guides are relevant to Oracle AIA development activities and are provided as a part of the overall Oracle Fusion Middleware 11.1.1.7 documentation library:

- *Oracle Fusion Middleware Installation Guide for Oracle SOA Suite and Oracle Business Process Management Suite*
- *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*
- *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*
- *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*
- *Oracle Fusion Middleware User's Guide for Oracle Enterprise Repository*

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## Conventions

The following text conventions are used in this document:

<b>Convention</b>	<b>Meaning</b>
<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.



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# What's New in This Guide for Release 11.1.1.7

This guide has been updated. The following table lists the content that has been added or changed.

For a list of known issues (release notes), see the "Known Issues for Oracle SOA Products and Oracle AIA Foundation Pack" at <http://www.oracle.com/technetwork/middleware/docs/soa-aiAFP-knownissuesindex-364630.html>.

Sections	Changes Made	February 2013
<a href="#">Chapter 9, "Upgrading Foundation Pack"</a>	This chapter discusses how to upgrade Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.5.0 or 11.1.1.6.x) to Foundation Pack 11g Release 1 (11.1.1.7).	X





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# Understanding the Oracle AIA Foundation Pack Installation Process

This chapter introduces AIA Installer and discusses software and hardware requirements for installing AIA Foundation Pack. This chapter includes the following sections:

- Section 1.1, "Introduction to AIA Foundation Pack Installer and Installation"
- Section 1.2, "Software Requirements"
- Section 1.3, "Hardware Requirements"
- Section 1.4, "Installation and Deployment Topologies"

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**Note:** Ensure that you access the latest *Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.7)* on Oracle Technology Network at <http://www.oracle.com/technetwork/index.html>.

Ensure that you review the release notes for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.7) available on Oracle Technology Network at <http://www.oracle.com/technetwork/middleware/docs/aiasoarelnotes-196861.html>.

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## 1.1 Introduction to AIA Foundation Pack Installer and Installation

AIA Foundation Pack Installer is built on Oracle Universal Installer and enables you to install products included in AIA.

Foundation Pack provides:

- Standard business data object/service definitions: Enterprise Business Objects (EBOs), and Enterprise Business Messages (EBMs).
- Core Infrastructure components that include the Composite Application Validation System (CAVS), Project Lifecycle Workbench, Error Handling and Logging Framework.
- Oracle's best-practice service-oriented architecture (SOA) programming model and the AIA reference architecture, which are based on a profound service-oriented foundation running on Oracle's best-in-class Fusion Middleware.

For more information about core infrastructure components, see *Oracle Fusion Middleware Infrastructure Components and Utilities User's Guide for Oracle Application Integration Architecture Foundation Pack*.

AIA Installer is platform independent. For information about system requirements and supported platforms for Oracle Application Integration Architecture Foundation Pack 11gR1, search for System Requirements and Supported Platforms for Oracle Application Integration Architecture Foundation Pack 11gR1 on <http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html> and download the xls file.

## 1.2 Software Requirements

This section details the software requirements for Foundation Pack.

1. Oracle Database and Oracle Fusion Middleware.

For complete Oracle Database and Oracle Fusion Middleware certification information for Foundation Pack on each platform, see [http://www.oracle.com/technology/software/products/ias/files/fusion\\_certification.html](http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html)

2. Oracle Enterprise Repository 11g R1 (optional).

**Note:** OER is an optional component for AIA Foundation Pack and Process Integration Packs. You can install and use AIA products without OER. To use OER to obtain visibility to objects, services, composites, and so forth throughout the SOA lifecycle, you must purchase a Full Use License (FUL) of OER.

3. Oracle Service Registry (OSR) (optional)

**Note:** OSR is an optional component for AIA Foundation Pack and Process Integration Packs. You can install and use AIA products without OSR. To use OSR to manage only AIA objects and services at run time, a Restricted Use License (RUL) of OSR is included. The RUL enables you to view or edit objects and services included with AIA products.

To use OSR to manage other content than standard out-of-the-box AIA artifacts, you must purchase a Full Use License (FUL) of OSR. For license details on OSR see [Licenses](#)

4. JDK 1.6 and above.

### Interim Patch Process

Any interim patches that you receive for AIA can be applied using Oracle's interim patch installer, OPatch. OPatch tool is available under AIA\_HOME/OPatch. Follow the readme with your AIA patch for the exact steps

## 1.3 Hardware Requirements

- To install and deploy the AIA Foundation Pack 11g Release 1 (11.1.1.7) you need at least 2 GB of space.
- On the server where AIA Foundation Pack 11g Release 1 (11.1.1.7) is being deployed you require of 4 GB of the available memory.

## 1.4 Installation and Deployment Topologies

There are several installation and deployment topologies possible using AIA Foundation Pack Installer. Choose the installation that best suits your need. Refer to the whitepaper *AIA 11gR1 Installation and Deployment – Flexibilities, Topologies, Architecture and Tools* on

<http://www.oracle.com/technetwork/testcontent/aia-11gr1-installation-and-deployme-130315.pdf> for more details.



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## Preparing for Foundation Pack Installation

This chapter introduces screens in AIA Installer, provides worksheets to collect field values information for the Foundation Pack screens in AIA Foundation Pack Installer and discusses pre-installation configurations. This chapter includes the following sections:

- [Section 2.1, "Collecting Field Value Information for Installation and Deployment of Foundation Pack"](#)
- [Section 2.2, "Performing Pre-Installation Configurations"](#)
- [Section 2.3, "Installation Process"](#)

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**Note:** Ensure that you access the latest *Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.7)* on Oracle Technology Network at <http://www.oracle.com/technetwork/index.html>.

Ensure that you review the release notes for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.7) available on Oracle Technology Network at <http://www.oracle.com/technetwork/middleware/docs/aiasoarelnotes-196861.html>.

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### 2.1 Collecting Field Value Information for Installation and Deployment of Foundation Pack

The AIA Foundation Pack Installer screens prompt you to enter the data required for successful installation and deployment of Foundation Pack. Complete this section, print it and keep it ready when you run AIA Foundation Pack Installer. This enables faster and error free installation.

#### 2.1.1 Installation Location Screen

On this screen you set the home directory for installation. [Table 2-1](#) lists the fields located on the **Installation Location screen**.

**Table 2–1 Fields in Installation Location Screen**

Field	Description
AIA Home	This is the logical name given to the current AIA Installation under the Oracle Inventory. Do not include spaces in the name and do not include any special characters apart from underscore(_). Example: AIAFP. AIA Home directory name is _____
AIA Home Path	This is the full file path where the AIA Foundation Pack Installer installs the Foundation Pack product files. Select an empty directory location. AIA Home Path is _____
AIA Instance Name	If you are doing multiple deployments of AIA Foundation Pack for the same installation, AIA Instance Name helps you identify these different AIA Foundation Pack deployments. If you are installing and deploying Foundation Pack on this server for the first time, provide a logical name that can identify your deployment.  The name given can be up to 10 characters in length with no spaces. Underscore (_) is the only allowed special character. Example ORDER2CASH. AIA Instance Name is _____
AIA Instance for Upgrade	This field becomes active when you choose AIA Home for upgrade. AIA Instance for Upgrade is _____
Java Home	This is the path of Java home. This can be the JDK location/JRockit location delivered with Oracle Fusion Middleware in the Middleware Home of your FMW Installation.  The version supported is JDK 1.6 and above. Java home is _____
Complete Installation	If you choose <b>Complete Installation</b> , the Installer installs the selected products at the specified directory.
Copy AIA Software Only	If you choose <b>Copy AIA Software Only</b> , the Installer copies the complete AIA software to the specified directory. You must manually complete the installation following tasks described in <a href="#">Chapter 4, "Installing and Deploying using Manual Steps"</a> .

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**Note:** Do not use existing home directories to reinstall Foundation Pack. Uninstall Foundation Pack using instructions provided in [Chapter 7, "Uninstalling Oracle AIA"](#) and then install using instructions provided in the respective installation chapters.

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## 2.1.2 SOA Server Details Screen

All artifacts associated with the Foundation Pack infrastructure components are deployed to the SOA Suite server. This screen contains the fields listed in [Table 2–2](#).

**Table 2–2 Fields in SOA Server Details Screen**

Field	Description
Admin Host Name	<p>This is where the admin server resides. This can be a remote server or the same system where the installer is launched. Example: <code>server1.company.com</code>.</p> <p>Provide real host name. Installation fails if you opt for redirection load balancer or proxy.</p> <p>The Admin Host Name is _____</p>
Admin Port	<p>This is the port number on which WebLogic Admin server is started. To find this value contact WebLogic administrator. Example: 7001.</p> <p>Provide real port number. Installation fails if you opt for redirection load balancer or proxy.</p> <p>The Admin Port is _____</p>
Domain Name	<p>This is WebLogic server domain corresponding to the Admin Server. Example: <code>domain1</code></p> <p>The Domain Name is _____</p>
Admin User	<p>This value is the WebLogic admin username. To find this value contact your WebLogic administrator.</p> <p>The Admin User is _____</p>
Admin Password	<p>This value is the WebLogic admin password. To find this value contact your WebLogic administrator.</p> <p>The Admin Password is _____</p>
Managed Server	<p>After you enter the Admin Hostname, Admin Port, Domain Name, Admin Username and Admin Password, this field gets populated with healthy and valid SOA servers. Select the Managed Server from the list. If you are deploying AIA Foundation Pack to a SOA cluster, you should select the cluster name in this field.</p> <p>The Managed Server is _____</p> <p>AIA Foundation Pack creates JMS persistent store on each individual managed server. To use the automatic JMS failover feature, manually configure the file store to point to a folder in the shared memory location.</p> <p>For information on how to do this, refer to Extending the Domain for SOA Components using the Configuration Wizard in <i>Oracle Fusion Middleware Enterprise Deployment Guide for Oracle SOA Suite</i>.</p>
Managed Port	<p>This field gets updated automatically after you select the managed server. If you have configured a SOA Cluster, the field gets defaulted to 0 and becomes non editable as cluster does not have a port.</p>
Remote Installation	<p>If you are deploying AIA Foundation Pack on a remote server, which is different from the system where this installer is launched, then check this check box. When you choose this option, AIA Foundation Pack Installer enables you to install AIA Foundation Pack (that is, create AIA Foundation Pack HOME) on the system where you have launched the installer and deploy AIA Foundation Pack to a remote server mentioned in the Admin Host Name field.</p> <p>If you are deploying AIA Foundation Pack on the server where you are launching the Installer, leave this field unchecked.</p>
Local JDEV Home	<p>If you select the <b>Remote Installation</b> option, you are prompted for Local JDeveloper Home. Browse and select the JDeveloper Home from your local system.</p> <p>You can leave the field empty if you are not doing remote deployment.</p> <p>The Local JDev Home is _____</p>

**Table 2–2 (Cont.) Fields in SOA Server Details Screen**

Field	Description
Cluster Installation	This option gets selected automatically when you choose a cluster as the target managed server.
SOA Home	If you are doing a cluster installation, you are prompted for SOA Home. Browse and select the SOA Home from your local system. You can leave the field empty if you are not doing cluster deployment. The SOA Home is _____
Cluster Proxy Hostname	The field is enabled only when you select the <b>Cluster Installation</b> option. This value is the loadbalancer host name which you have configured to loadbalance incoming requests to web servers that ultimately reach the SOA managed servers. The Cluster Proxy Hostname is _____
Proxy Port	This field is enabled only when you select the <b>Cluster Installation</b> option. This value is the port number of the proxy server. The Proxy Port is _____

---

**Note:** Before you deploy AIA Foundation Pack on SOA cluster, you must configure the SOA Cluster. For instructions on configuring SOA Cluster, refer to *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle SOA Suite*.

After configuring, access appropriate URLs (like EM Console) from all hosts participating in the cluster, deploy sample artifacts shipped along with SOA Suite bundle, and perform standard failover tests to ensure that the SOA cluster configuration is successful.

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When you click **Next**, Foundation Pack Installer checks whether the node manager service is reachable. Also check whether the node manager service is reachable from Oracle WebLogic Admin server Console. If your node manager is not reachable in the admin console, refer to *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server* for troubleshooting.

### 2.1.3 AIA Database Details Screen

Configure the following database schemas for installation of AIA. These schemas are displayed in the screen. The AIA Instance name that you have provided (see [Table 2–1](#)) is prefixed to the schema names. The following are the AIA related schemas:

- **<INST>\_AIA:** Holds error handling setup information, system setup information, CAVS data, and so on.
- **<INST>\_XREF:** Holds the cross-reference information.
- **<INST>\_AIALIFECYCLE:** Holds information created for AIA project lifecycle workbench application.
- **<INST>\_JMSUSER:** For JMS usage in AIA.

To configure these schemas you need JDBC connection details, passwords for the schemas, and SYS user credentials (if you want AIA Foundation Pack Installer to create the schema and underlying tables). Keep the information ready before you run the Installer.



When you configure the schemas you can:

- Choose the same JDBC information for one or more schemas. The schemas can reside in many or one physical database server.
- Choose to connect to an existing AIA schema (created manually using scripts). This means a particular schema holds information common to multiple installations. For example: AIALIFECYCLE.

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**Note:** If you are not sure whether you must provide the same information for all schema types or different information, select all schema types. You can modify the schema information at any point post-installation.

---

Fill out the information below for all the AIA schemas.

### Database Connection Details

You can either **Enter Custom JDBC URL** or enter the required details in **Host Name**, **Port** and **Service Name** fields. When you opt for custom JDBC URL, the other three fields disappear. This is useful when connecting to Oracle RAC databases.

Enter the Custom JDBC URL, as shown in [Table 2-3](#).

**Table 2-3 Fields in Database Details Screen - Custom JDBC URL**

Fields	Description
Enter Custom JDBC URL	When you select the <b>Enter Custom JDBC URL</b> check box, a field appears prompting you to enter the JDBC URL. To find this value, contact the database administrator. Example: <b>jdb:oracle:thin:@&lt;host&gt;:&lt;port&gt;/&lt;service name&gt;</b> The Custom JDBC URL is _____
Use RAC Database	When you check this check box, a new screen is displayed after you finish configuring your database details screen. The screen asks you to input individual Oracle RAC node details.

Or

Enter Database Connection Details, as shown in [Table 2-4](#).

**Table 2-4 Fields in Database Details Screen - Database Connection Details**

Fields	Description
Host Name	To find this value, contact the database administrator. Example: server1.company.com. The Host Name is _____
Port	To find this value, contact the database administrator. Example: 1521. The Port is _____
Service Name	This is the service name as found in the tnsnames.ora for that database. To find this value, contact the database administrator. Example: orcl. The Service Name is _____

### Schema Details

If you choose to connect to an existing schema, you are prompted to enter username and password.

If you choose to create a schema, you are prompted to enter the admin user name and password required to create the required schema. This is typically *SYS*.

The database chosen here can be the same server as the database server that SOA Suite uses, or it can be different physical database server.

### Connect to Existing Schema

Connect to existing schema, as shown in [Table 2-5](#).

**Table 2-5 Fields in Database Details Screen - Connect to Existing Schema**

Fields	Description
Username	This value is the database username. To find this value, contact the database administrator. Example: apps.  This value is read only and is the same in the table above. If this is not your existing schema name, then change the value in the Schema Type table above.  The Username is _____
Password	To find this value, contact the database administrator.  The Password is _____

Or

### Create New Schema

Create new schema, as shown in [Table 2-6](#).

**Table 2-6 Fields in Database Details Screen - Create New Schema**

Fields	Description
Schema Name	The schema name is populated with the instance name prefixed for each schema.
Schema Password	Create a password for the schema.
Confirm Schema Password	Confirm the new password that you created.
Admin User	To find this value, contact the database administrator. The username should have system DBA privileges. Example: sys.  The Admin User is _____
Admin Password	To find this value, contact the database administrator.  The Admin Password is _____
Default Tablespace and Temporary Tablespace	If you do not enter Default and Temporary Tablespace values, the schemas and the artifacts are created in database defaults.

## 2.1.4 RAC Database Details Screen

This screen appears only if you have selected Use RAC Database option under **Database Connection Details** in [Section 2.1.3, "AIA Database Details Screen"](#). Enter you Oracle RAC Database details in this screen.

Select the schema type from the options on the top and click **Add Instance** button. A new instance row is created with editable fields that are described in [Table 2-7](#). Ensure that each of the Oracle RAC nodes is up before you begin installation.

**Table 2–7 Fields in RAC Database Details Screen - Create New Instance**

Fields	Description
Service Name	This is the universal service name for Oracle RAC Database. To find this value contact database administrator. The Service Name is _____
Instance Name	This is the instance name of your Oracle RAC Database. To find this value contact database administrator. The Instance Name is _____
Host Name	To find this value, contact the database administrator. Example: server1.company.com. The Host Name is _____
Port	To find this value, contact the database administrator. Example: 1521. The Port is _____

## 2.1.5 Metadata Service Repository Screen

This is the location where AIA Foundation Pack Metadata Artifacts are stored. Though the screen contains multiple fields, you must provide only the password. Data in the other fields normally populates automatically. If it does not, then you must enter the data manually. The screen contains the fields listed in [Table 2–8](#).

---

**Note:** Clean MDS, if you are reinstalling after deleting the AIA Home by following the steps in [Section 7.4.1, "Cleaning the MDS"](#).

---

**Table 2–8 Fields in Metadata Service Repository Screen**

Field	Description
MDS Repository URL	This is where the MDS repository resides. If this value is not populated automatically, enter the jdbc URL of the database on which MDS partition of SOA Suite resides. Example: jdbc:oracle:thin:@<host>:<port>/<service name> The MDS Repository URL is _____
MDS Username	This value is MDS Schema Username.
MDS Password	To find this value, contact the MDS administrator. The MDS Admin Password is _____

---

**Note:** If you are doing cluster installation on Oracle RAC database, you must enter Oracle RAC database URL manually in the following format: jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS\_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=dbhost1)(PORT=1521))(ADDRESS=(PROTOCOL=TCP)(HOST=dbhost2)(PORT=1521))(FAILOVER=on)(LOAD\_BALANCE=off))(CONNECT\_DATA=(SERVER=DEDICATED)(SERVICE\_NAME=dbservice))) and then enter MDS Username and MDS password.

---

## 2.1.6 Oracle Enterprise Repository Details Screen (Optional)

Oracle Enterprise Repository is a product separate from AIA Foundation Pack and is an optional component in the context of AIA Foundation Pack installation and execution.

If you do not want to adopt Oracle Enterprise Repository at this time, click **Next** to skip this page.

During AIA Foundation Pack installation, provide the Oracle Enterprise Repository-related information when prompted by the AIA Foundation Pack Installer. The screen contains the fields listed in [Table 2–9](#).

**Table 2–9 Fields in Oracle Enterprise Repository Screen**

Field	Description
OER URL	This value is typically the system name, port number on which OER is installed. Provide URL in this format: http://<hostname>:<port>/oer. The OER URL is _____
OER Username	To find this value, contact the system administrator. The OER Admin Username is _____
OER Password	To find this value, contact the system administrator. The Password is _____

When you click **Next**, Foundation Pack Installer prompts you to enable **Remote JDBC**. For harvesting, Remote JDBC must be enabled before invoking Harvester.

Click **OK** and continue with installation.

Run-time service information is not automatically available in Oracle Enterprise Repository after AIA Foundation Pack installation. Populating this information is a post-install activity.

For more information about adopting Oracle Enterprise Repository after AIA Foundation Pack has been installed, see "Harvesting Oracle AIA Content" in *Oracle Fusion Middleware Developer's Guide for Oracle Application Integration Architecture Foundation Pack*.

## 2.2 Performing Pre-Installation Configurations

This section discusses the recommended configurations to optimize Oracle SOA Suite performance and enable your AIA Foundation Pack implementation to run smoothly. This section includes the following topics:

- [Section 2.2.1, "Enabling Unicode Support"](#)
- [Section 2.2.2, "Ensuring Correct Settings for Node Manager Startup"](#)
- [Section 2.2.3, "Performing Prerequisites for Cluster Installation"](#)
- [Section 2.2.4, "Creating AIA schemas \(Optional\)"](#)
- [Section 2.2.5, "Administering MDS Tablespace"](#)

## 2.2.1 Enabling Unicode Support

For information about enabling Unicode support, see Oracle Fusion Middleware System Requirements and Specifications, "System Requirements for UNIX Operating Systems," Enabling Unicode Support.

## 2.2.2 Ensuring Correct Settings for Node Manager Startup

### To ensure correct settings for Node Manager startup:

1. Navigate to the `$MW_HOME/wlserver_10.3/common/nodemanager`.
2. Open the `nodemanager.properties` file and verify the value for `StartScriptEnabled` property.
3. If it is `false` change to `StartScriptEnabled=true`
4. If you changed the above value, restart Node Manager by navigating to `$MW_HOME/wlserver_10.3/server/bin` and using the appropriate commands.
5. While starting the node manager, ensure that you set the listen address different from `localhost`. It is preferred to give the fully qualified name of the system.

**For Example:** `./startNodeManager.sh` for Linux and `startNodeManager.bat` for Microsoft Windows.

Before running the command, navigate to the WebLogic console, click **Machines**, **Nodemanager**. Here ensure that the value of **Listen** address and **Listen** port are the fully qualified name of the system and port number respectively.

6. Ensure that you start the SOA Server using the Node manager.

### To ensure correct settings for Node Manager startup in production environment:

Check whether the node manager service is active from Oracle WebLogic Admin server Console. If your node manager is not active in the admin console, refer to [http://download.oracle.com/docs/cd/E13222\\_01/wls/docs92/server\\_start/nodemgr.html](http://download.oracle.com/docs/cd/E13222_01/wls/docs92/server_start/nodemgr.html) for troubleshooting.

## 2.2.3 Performing Prerequisites for Cluster Installation

To perform prerequisites for cluster installation:

1. Open admin console
2. Click **View Changes and Restart** in **Change Center**.
3. Click **Restart Checklist**.
4. Ensure that there is no admin server or any of the `soa_servers` of the cluster on the restart checklist.
5. If there are any servers listed, restart the mentioned server.

If you are installing only Foundation Pack on cluster, then:

1. Open the `<WebTier_HOME>/instances/<instances_name>/config/OHS/ohs1/mod_wl_ohs.conf` file.
2. Add the following code.

```
<Location /AIA>
SetHandler weblogic-handler
WebLogicCluster <machine1_hostname>:<port>,<machine2_hostname>:<port>
```

```

WLogFile /tmp/web_log.log
</Location>
<Location /AIAValidationSystemServlet>
SetHandler weblogic-handler
WebLogicCluster <machine1_hostname>:<port>,<machine2_hostname>:<port>
WLogFile /tmp/web_log.log
</Location>
<Location /MirrorServlet>
SetHandler weblogic-handler
WebLogicCluster <machine1_hostname>:<port>,<machine1_hostname>:<port>
WLogFile /tmp/web_log.log
</Location>

```

3. When you set up the SOA cluster following the instructions in the Oracle Fusion Middleware Enterprise Deployment Guide for Oracle SOA Suite, the following entry gets added

```

# UMS prefs
<Location /sdpmessaging/userprefs-ui>
SetHandler weblogic-handler
WebLogicCluster <machine1_hostname>:<port>,<machine2_hostname>:<port>
</Location>
sdpmessaging/

```

Change the location to /sdpmessaging from /sdpmessaging/userprefs-ui

## 2.2.4 Creating AIA schemas (Optional)

AIA Foundation Pack Installer gives you the flexibility to choose the schema name, password along with the default and temporary tablespace on which the schemas have to be created.

In addition to that, AIA Foundation Pack enables you to create AIA Schemas and other DB artifacts in a manner that best fits your organization standards and advanced database options. AIA schemas along with the database artifacts can be created using the SQL script templates shipped with the AIA Foundation Pack installation bundle under **<shiphome>/cd/Disk1/misc/sql** of your AIA Foundation Pack Installation CD. These SQL scripts should be executed for creating the schemas before launching the Installer.

Follow the below steps before you launch the installer.

1. Create AIA, XREF, AIALIFECYCLE, JMS schemas. The scripts located under **<shiphome>/cd/Disk1/misc/sql** folder that is, **createAIASchema.sql**, **createJMSSchema.sql**, **createLifecycleSchema.sql**, **createXRefSchema.sql** can be used as templates to create the schemas.
2. Execute populate data scripts as described below:
  - a. **populateAIASchema.sql** against AIA schema.
  - b. **populateJMSSchema.sql** against JMS schema.
  - c. **populateLifecycleSchema.sql** against AIALIFECYCLE schema.
  - d. Execute **SOA\_HOME/rcu/integration/soainfra/sql/xref/createschema\_xref\_oracle.sql** against XREF Schema.

After you finish the above process, launch the installer and in the **Database Details Screen**, choose **Connect To** option to connect to the schema that was created. For other

---

schema types for which the SQL scripts were not executed manually choose the **Create New Schema** option.

### 2.2.5 Administering MDS Tablespace

AIA Foundation Pack loads a lot of data to MDS as a part of deployment. The default tablespace allocated may not be sufficient when multiple repetitive AIA Foundation Pack deployments are done on the same server. This may cause the error

**"Unable to extend tablespace "**

If you see the message you can increase the tablespace size.

If you have cleared a large amount of data from a data object, and expect the tablespace to have more data, you may still see this error. The tablespace release is not synchronous, and you must run command `ALTER TABLE table_name SHRINK SPACE.`

## 2.3 Installation Process

To install Foundation Pack using AIA Foundation Pack Installer, go to [Chapter 3, "Installing and Deploying Using AIA Foundation Pack Installer"](#).

To install Foundation Pack by running manual scripts, go to [Chapter 4, "Installing and Deploying using Manual Steps"](#).

If you are installing AIA Foundation Pack for the first time, Oracle recommends that you use AIA Foundation Pack Installer.





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## Installing and Deploying Using AIA Foundation Pack Installer

There are several installation and deployment topologies possible using AIA Foundation Pack Installer. This chapter discusses how to install and deploy the Foundation Pack using basic, remote and cluster installation options, perform silent installation of AIA Foundation Pack or copy only AIA file without installing or deploying Foundation Pack.

This chapter includes the following sections:

- Section 3.1, "Installing and Deploying Foundation Pack Using Basic/Remote/Cluster Installation Options"
- Section 3.2, "Performing Silent Installation and Deployment of Foundation Pack"
- Section 3.3, "Copying only AIA Files"

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**Note:** Ensure that you access the latest *Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.7)* on Oracle Technology Network at <http://www.oracle.com/technetwork/index.html>.

Ensure that you review the release notes for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.7) available on Oracle Technology Network at <http://www.oracle.com/technetwork/middleware/docs/aiasoarelnotes-196861.html>.

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**Note:** Choose the installation that best suits your need. Refer to the whitepaper *AIA Installation and Deployment -Strategies, Topologies and Flexibilities* on <http://www.oracle.com> for more details.

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### 3.1 Installing and Deploying Foundation Pack Using Basic/Remote/Cluster Installation Options

The section discusses the installation process. The screens in AIA Installer prompt you to enter data for successful installation of AIA Foundation Pack. Keep the completed worksheet of AIA Foundation Pack screens ready before you launch the Installer.

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**Note:** Before you launch the installer ensure that SOA Server is configured and running. Also ensure that your Node manager is running. You can deploy a few sample composites and other SOA artifacts to ensure that the SOA Installation is successful. **Remember** to start the SOA Server using the Node manager.

For information on how to start and stop managed servers from the Administration Console and Node Manager, see "Configuring Node Manager to Use Start and Stop Scripts" in *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server*.

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### 3.1.1 Launch the Oracle AIA Foundation Pack Installer

**To launch the Oracle AIA Foundation Pack Installer:**

1. Navigate to **aiafp/Disk1**.
2. Follow the launch instructions for your platform. [Table 3–1](#) lists the steps that you must use based on your platform.

**Table 3–1 Commands to Launch Oracle AIA Foundation Pack Installer**

Platform	To launch the Oracle AIA Foundation Pack Installer:
Linux Solaris SPARC HP-UX IBM AIX Based Systems	At the command line prompt, enter:  <pre>./runInstaller -invPtrLoc &lt;Soa_Home&gt;/oraInst.loc -jreloc &lt;location of the jre specific to your operating system. This directory should have /bin/java&gt;</pre>
Microsoft Windows	Double-click <b>setup.exe</b>

3. If you are prompted for the JRE location, provide the JRE that you have downloaded earlier. This JRE should be the version specific to your Operating System.
4. Click **Next**.

### 3.1.2 Check Prerequisites

**To confirm whether the prerequisites for installing AIA are met:**

1. Review prerequisites in the **Prerequisite Checks** screen.
2. Click **Next**.

### 3.1.3 Specify Installation Location

**To specify installation location:**

1. Enter a name for install directory in the **AIA Home** field.
2. Enter a path for the install location in the **AIA Home Path** field.
3. Provide **AIA Instance** name.
4. Provide **Java Home** path.

This can be the JDK location delivered with Oracle Fusion Middleware in the Middleware Home of your FMW Installation. Ensure that JDK version is 1.6 and above.

5. Select **Complete Installation** option.

AIA Foundation Pack Installer provides two installation options, **Copy AIA Software Only** and **Complete Installation**.

- When you choose **Complete Installation**, the Installer installs the selected products at the specified directory.
- When you choose **Copy AIA Software Only**, the Installer copies the complete AIA software to the specified directory. You must manually complete the installation.

6. Choose **Complete Installation** and click **Next**.

### 3.1.4 Specify SOA Server Details

**To specify SOA Server details:**

1. Enter information about Oracle SOA server installation in the **SOA Server Details** screen.

All artifacts associated with the Foundation Pack infrastructure components will be deployed to the SOA Suite server. This screen helps you choose among **Basic**, **Remote**, and **Cluster** installations.

2. Click **Next**.

When you click **Next**, Foundation Pack Installer checks whether the node manager service is available. Also check whether the node manager service is active from Oracle WebLogic Admin server Console. If your node manager is not active in the admin console, refer to *Oracle Fusion Middleware Node Manager Administrator's Guide for Oracle WebLogic Server* for troubleshooting.

### 3.1.5 Validate SOA Server

**SOA Server Validation** screen validates the SOA server. You can either wait till the SOA server is validated or you can skip the screen. AIA recommends that you do this validation.

**To validate SOA server:**

1. Wait till the installer validates the SOA server.

The validation process takes a few minutes.

2. Click **Next**.

---



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**Note:** If the validation fails you can either retry validation or skip and move to the next screen.

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### 3.1.6 Specify AIA Database Details

**To specify AIA database details:**

1. Enter database connection details and create new schema or connect to an existing schema using the **AIA Database Details** screen, as shown in [Figure 3-1](#).

This screen enables you to configure multiple schema types at the same time. You can provide input to the fields in several iterations or all at once.

In each iteration select only the schema type(s) that must be configured. You can select one or more or all schema type(s) at a time.

The schema names are automatically prefixed to the AIAInstance name. To change the schema name to another schema name, click in the table, modify and press **Enter** in your keyboard.

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---

**Important:** The option to change the schema name is useful when you make two installations pointing to the same database schema. For example when you have an existing AIA1\_XREF schema which was created using an earlier run of the installation and want to connect to the same in this installation (for which AIA Instance is AIA2), the default value that appears is AIA2\_XREF. Modify this value in the table to AIA1\_XREF and then use the **Connect to** schema option.

---

---

After you choose the schema types, provide the **Database Connection Details** and **Schema Details** for the selected schema types.

If you have not configured all schema types, clear the configured schema types and select a new set of schema types and provide information for the same. You must provide information for all schema types.

---

---

**Note:** If you are not sure whether you must provide the same information for all schema types or different information, select **All schema types**. You can modify the schema information provided here after installation.

---

---

Figure 3–1 AIA Database Details screen

**AIA Database Details**

ORACLE 11g APPLICATION INTEGRATION ARCHITECTURE

[Welcome](#)  
[Prerequisite Checks](#)  
[Installation Location](#)  
[SOA Server Details](#)  
[SOA Server Validation](#)  
**[AIA Database Details](#)**  
[Metadata Service Repository Details](#)  
[Oracle Enterprise Repository Details](#)  
[Installation Summary](#)  
[Installation Progress](#)  
[Configuration Progress](#)  
[Installation Complete](#)

	Schema Type	Schema Name	Schema Passwo...	JDBC URL
<input checked="" type="checkbox"/>	AIADB	AIAFP_AIA		
<input checked="" type="checkbox"/>	Cross Reference	AIAFP_XREF		
<input checked="" type="checkbox"/>	AIA_LIFECYCLE	AIAFP_AIALIF...		
<input checked="" type="checkbox"/>	JMSDB	AIAFP_JMSUSER		

Enter Database Connection Details for the selected Schema type(s)

Enter Custom JDBC URL
  Use RAC Database

Host Name :  Port :

Service Name :

Enter Schema Details for the selected Schema type(s)

Connect to Existing Schema
  Create New Schema

Schema Name :

Schema Password :  Confirm Schema Password :

Admin User :  Admin Password :

Default Tablespace :  Temporary Tablespace :

Elapsed Time: 3m 41s

2. Click Next.

### 3.1.7 Specify RAC Database Details

This screen appears only if you have selected Use RAC Database in [Section 3.1.6, "Specify AIA Database Details"](#) screen.

#### To specify RAC Database Details:

1. Enter RAC Database information in the **RAC Database Details** screen.
2. Click Next.

### 3.1.8 Specify Metadata Service Repository Details

#### To specify Metadata Service Repository details:

1. Enter Metadata service repository password in the **Metadata Service Repository Details** screen.
2. Click Next.

### 3.1.9 Specify Oracle Enterprise Repository Details (Optional)

**To specify Oracle Enterprise Repository (OER) details:**

1. Enter the Oracle Enterprise Repository information in the Oracle Enterprise Repository Details screen.

Ensure that you enter the system host name, and not the local host name. For example, enter `http://<host>:<port>/oer`.

2. Click **Next**.

### 3.1.10 Complete Installation

**To complete installation:**

1. Review the install information on the **Installation Summary** screen.

---

---

**Note:** To make changes to the configuration before starting the installation, use the navigation pane on the left and select the topic you want to edit.

You can also create a response file based on the input provided and use it in future. For more information, see [Section 3.2, "Performing Silent Installation and Deployment of Foundation Pack"](#).

When you create a response file through OUI, passwords get stored as **<SECURE>**. Replace the password fields with actual passwords in the response file.

---

---

2. Click **Install** to accept this configuration and begin the installation.

The system displays installation progress on the Install screen.

The system displays any warnings or errors as necessary. You can review the install process log for additional details.

---

---

**Note:** It is normal for the servers to stop and restart during the configuration phase.

---

---

3. After installing the files, AIA Installer deploys Foundation Pack components to Fusion Middleware server. The progress is displayed in **Configuration Progress** screen. This screen starts automatically after installer installs the Foundation Pack files.
4. When installation process finishes without errors, the AIA Foundation Pack Installer displays the **Installation Complete** screen.

---



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**Note:** At this stage you Install and Configure AIA products. If it fails, check the error in the log that appears in the Installer, rectify it and click **Retry**.

If you are unable to fix the issue and must attempt a fresh Installation, click **Finish** and exit the Installer (if you have it open) and use the AIA Deinstaller to uninstall as described in [Chapter 7, "Uninstalling Oracle AIA"](#).

After you uninstall, follow the cleanup steps in [Section 7.4, "Cleaning The Environment"](#) to clean the environment and then attempt a fresh installation of AIA.

---



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5. Click **Exit** to close the AIA Foundation Pack Installer.
6. Verify the installation using steps in [Chapter 6, "Verifying the Installation"](#).

## 3.2 Performing Silent Installation and Deployment of Foundation Pack

The Silent Installation option helps you install Foundation Pack without the use of the GUI based Installer.

To perform a silent Foundation Pack installation, you invoke the Installer with the **-silent flag** and provide a response file from the command line. The **response file** is a text file containing variables and parameter values (validations) that provide answers to Installer prompts.

This section includes the following tasks for the silent installation of Foundation Pack.

- [Section 3.2.1, "Creating Oracle Inventory"](#)
- [Section 3.2.2, "Creating a Response File"](#)
- [Section 3.2.3, "Installing Foundation Pack \(Running Installation Scripts\)"](#)

### 3.2.1 Creating Oracle Inventory

#### For UNIX based Installations

AIA Foundation Pack Installer uses the Oracle inventory directory to keep track of all Oracle products that are installed on the systems. The inventory directory is stored in a file named **oraInst.loc**. If this file does not exist on your system, you must create it before starting a silent installation.

#### To create the oraInst.loc file:

1. Log in as root user.
2. Use a text editor such as vi or emacs and create the **oraInst.loc** file in any directory.
3. Added the following two lines:

```
inventory_loc=oui_inventory_directory
inst_group=oui_install_group
```

- Replace `oui_inventory_directory` with the full path to the directory where you want the AIA Foundation Pack Installer to create the inventory directory.

- Replace `oui_install_group` with the name of the group whose members have write permissions to this directory.
- 4. Exit from the root user.

**For Windows based installations**

If you have not installed AIA on your system, then you must create the following Registry key and value:

`HKEY_LOCAL_MACHINE / SOFTWARE / Oracle / inst_loc = [inventory_directory]`

Replace `inventory_directory` with the full path to your installer files. For example: `C:\Program Files\Oracle\Inventory`.

**3.2.2 Creating a Response File**

Response files are text files that contain information related to validations required for installation of Foundation Pack. Before you perform a silent installation, you must create a response file. You can create response files in either of the two ways:

- Modify the response file template **SampleAIAFP\_CompleteResponse.rsp** available in the installation media under the `cd/Disk1 /misc/responseFiles`.
- Enter validation information in the AIA Foundation Pack Installer wizard and click **Save** when you complete installation in the **Installation Summary** screen.

For details, see [Section 3.1.10, "Complete Installation"](#).

**3.2.2.1 Securing Response File**

Your response files can contain passwords and other key information required by the Installer. To minimize security issues, AIA recommends the following guidelines:

- Set the permissions on the response files so that they are readable only by the operating system user who is performing the silent installation.
- Remove the response files from the system after the silent installation is completed.

**3.2.3 Installing Foundation Pack (Running Installation Scripts)**

**To run the installation script:**

1. Navigate to `cd/Disk1`
2. Run the command to initiate installation. [Table 3–2](#) lists the commands that you must use based on your platform.

**Table 3–2 Commands to Run Installation Scripts**

Platform	To initiate installation:
Linux	At the command line prompt, enter:
Solaris SPARC	<code>./runInstaller -invPtrLoc &lt;Soa_Home&gt;/oraInst.loc -jreloc</code>
IBM AIX Based Systems	<location of the jre specific to your operating system. This directory should have <code>/bin/java&gt;-silent -responseFile &lt;file_name with fully qualified directory path&gt;</code>
HP-UX	



**Table 3–2 (Cont.) Commands to Run Installation Scripts**

Platform	To initiate installation:
Microsoft Windows	At the command line prompt, enter:  setup.exe -silent -responseFile <file_name with fully qualified directory path>

- After the Installation is triggered, you need not interact with the installation process.
  - The brief logs can be seen on the command line and the system prompts when the installation is complete.
  - Post-installation, verify the installation logs as detailed in [Section 6.2, "Verifying File Creation and Logs"](#).
3. Verify the installation using steps described in [Chapter 6, "Verifying the Installation"](#).

For information on how to deploy custom built services, refer to "Generating Deployment Plans and Deploying Artifacts" in *Oracle Fusion Middleware Developer's Guide for Oracle Application Integration Architecture Foundation Pack*.

### 3.3 Copying only AIA Files

You can choose to copy only the AIA files and customize Foundation Pack Deployment Plan. After you copy the files you can either:

- Deploy using manual steps.
- Browse AIA delivered EOL, Process models. This enables you to look at and modify the content on any system without an actual server.

#### 3.3.1 Launch the Oracle AIA Foundation Pack Installer

##### To launch the Oracle AIA Foundation Pack Installer:

1. Navigate to cd/Disk1.
2. Follow the launch instructions for your platform. [Table 3–3](#) lists the commands you must use based on your platform.

**Table 3–3 Commands to launch Oracle AIA Foundation Pack Installer**

Platform	To launch the Oracle AIA Foundation Pack Installer:
Linux Solaris SPARC IBM AIX Based Systems HP-UX	At the command line prompt, enter:  ./runInstaller -invPtrLoc <Soa_Home>/oraInst.loc -jreloc  <location of the jre specific to your operating system. This directory should have /bin/java>
Microsoft Windows	Double-click <b>setup.exe</b>

3. If you are prompted for JRE location, provide the JRE that you downloaded earlier. This JRE should be the version specific to your Operating System.
4. Click **Next**.

### 3.3.2 Check Prerequisites

**To check whether the prerequisites are met:**

1. Review whether prerequisites are met in the **Prerequisites Check** screen.
2. Click **Next**.

### 3.3.3 Copy AIA Software

**To copy AIA Software:**

1. Specify the home directory for the product files in the **Installation Location** screen.
2. Select **Copy AIA Software Only**.
3. Click **Next**.

### 3.3.4 Complete Copying Files

**To complete copying files:**

1. Review the install information and verify your selections on the **Summary** screen.
2. Click **Install** to proceed with the file creation and installation of the listed products and components.

The system displays installation progress on the Install screen.

The system displays any warnings or errors as necessary. You can review the install process log for additional details.

3. When the file installation process finishes without errors, the AIA Foundation Pack Installer displays the **Installation Complete Screen**.
4. Click **Exit** to close the AIA Foundation Pack Installer.

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**Note:** Deployment is not complete. To deploy, follow the instructions in [Chapter 4, "Installing and Deploying using Manual Steps"](#).

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## Installing and Deploying using Manual Steps

This chapter provides an overview of manual deployment of AIA artifacts and discusses how to deploy AIA artifacts manually without using the installer.

This chapter includes the following sections:

- [Section 4.1, "Manual Deployment of AIA Artifacts Overview"](#)
- [Section 4.2, "Deploying Foundation Pack Using Scripts"](#)

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**Note:** Ensure that you access the latest *Oracle Fusion Middleware Installation and Upgrade Guide for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.7)* on Oracle Technology Network at <http://www.oracle.com/technetwork/index.html>.

Ensure that you review the release notes for Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.7) available on Oracle Technology Network at <http://www.oracle.com/technetwork/middleware/docs/aiasoarelnotes-196861.html>.

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---

### 4.1 Manual Deployment of AIA Artifacts Overview

Manual deployment of AIA delivered products is not a common scenario unless there is a need to do automation. You can do a manual installation after you **Copy AIA Files** using AIA Foundation Pack Installer and execute the Installation driver. This is explained in this chapter.

You can also deploy fully or partially build AIA content.

For information on how to deploy custom built services, refer to "Generating Deployment Plans and Deploying Artifacts" in *Oracle Fusion Middleware Developer's Guide for Oracle Application Integration Architecture Foundation Pack*.

Installing fully or partially custom-built AIA content is a more common scenario. This mode of installation enables you to select the specific AIA components (SOA Composites, JMS queues, and so on) you want to install and deploy. This content could be fully custom-built content for a specific business integration scenario or a combination of custom built content and Oracle AIA delivered content.

AIA makes available all tools and utilities required to build your custom installation. These are the same tools used by Oracle to deliver pre-built integrations, Foundation Pack and the AIA Demo. These tools allow you to focus on the "what-to-deploy" and not the "how-to-deploy", thereby allowing custom content to be deployed easily and in the same manner as AIA recommends.

AIA Project Lifecycle Workbench enables you to manage your project. Using this application you can define your custom content, browse existing content, and create and maintain an AIA project. After a project is defined you can select all elements or a subset of elements to auto generate a deployment plan. The deployment tool deploys this plan to the specified servers.

## 4.2 Deploying Foundation Pack Using Scripts

Perform the following steps to complete manual deployment of Foundation Pack.

### 4.2.1 Fulfill Prerequisites for Script Based Deployment

To fulfill the prerequisites for script based deployment of Foundation Pack configure the following environment variables:

1. Set **MW\_HOME** (where you have installed FMW 11g).
2. Set **SOA\_HOME** to the directory where you have installed SOA 11g. For example `c:\MW_HOME\AS11gR1SOA`.
3. Set **AIA\_HOME** to the directory where you have copied AIA software. For example `d:\AIA_HOME`.
4. Set **JAVA\_HOME** to directory where you have installed Java.
5. Set **ANT\_OPTS**="`-Xms512m -Xmx1024m -XX:MaxPermSize=512m`".
6. Set **ORACLE\_HOME**=\$**SOA\_HOME**.
7. Set **WEBLOGIC\_HOME**=\$**MW\_HOME**/wls`server_10.3`.
8. Set **HARVESTER\_HOME**=\$**AIA\_HOME**/Infrastructure/LifeCycle/AIAHarvester.
9. Set **ANT\_HOME**=\$(**MW\_HOME**)/modules/org.apache.ant\_<version number>. For example, 1.7.1.
10. Set **PATH**=./**JAVA\_HOME**/bin;**ANT\_HOME**/bin;**PATH**.
11. Set **CLASSPATH**=./{**WL\_HOME**}/server/lib/weblogic.jar:  
 {**AIA\_HOME**}/lib/aia.jar: {**AIA\_HOME**}/lib/aia-utils.jar:  
 {**MW\_HOME**}/modules/net.sf.antcontrib\_1.1.0.0\_1-0b2/lib/ant-contrib.jar:  
 {**MW\_HOME**}/oracle\_common/modules/oracle.mds\_11.1.1/mdsrt.jar:  
 {**MW\_HOME**}/oracle\_common/modules/oracle.osdt\_11.1.1/osdt\_xmlsec.jar:  
 {**MW\_HOME**}/oracle\_common/modules/oracle.jps\_11.1.1/jps-e.jar:  
 {**MW\_HOME**}/oracle\_common/modules/oracle.jps\_11.1.1/jps-common.jar:  
 {**MW\_HOME**}/oracle\_common/modules/oracle.jps\_11.1.1/jps-internal.jar:  
 {**MW\_HOME**}/oracle\_common/modules/oracle.jps\_11.1.1/jps-unsupported-api.jar:  
 {**MW\_HOME**}/oracle\_common/modules/oracle.pki\_11.1.1/oraclepki.jar:  
 {**MW\_HOME**}/oracle\_common/modules/oracle.idm\_11.1.1/identitystore.jar:  
 {**MW\_HOME**}/oracle\_common/modules/oracle.xdk\_11.1.0/xmlparserv2.jar:  
**CLASSPATH**.

### 4.2.2 Create AIA Instance

**To create AIA instance:**

1. Copy `AIAHome/Infrastructure/Install/templates/AIAInstallProperties.xml.tmpl` to `AIAHome/config/AIAInstallProperties.xml`.
2. Update `AIAInstallProperties.xml` to reflect to target server details.

3. Navigate to AIAHome/Infrastructure/Install/AID.
4. Run the following command to create an AIA Instance:  

```
ant -f AIACreateInstance.xml -DPropertiesFile=<location of  
the AIAInstallProperties.xml file>
```

### 4.2.3 Run Installation Scripts

**To run the installation script:**

1. Navigate to AIA\_HOME/aia\_instances/<instance\_name>/bin.
2. Run the command  

```
. aiaenv.sh (for UNIX based)  
aiaenv.bat (for windows)
```
3. Navigate to AIA\_HOME/Infrastructure/Install/AID.
4. Run the following command to initiate installation:  

```
ant -f AIAInstallDriver.xml  
-DPropertiesFile=$AIA_HOME/aia_instances/<Instance  
Name>/config/AIAInstallProperties.xml  
-logfile $AIA_HOME/aia_instances/<Instance Name>/logs/FPInstall.log  
-DDeploymentPlan=$AIA_HOME/aia_instances/<Instance  
Name>/config/FPInstallDP.xml
```
5. Verify the installation using steps in the Verifying the Installation chapter.



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## Post-Installation Configurations

This chapter discusses how to set up Oracle JDeveloper, how to set up AIA Roles, how to modify passwords used for AIA deployments, how to add Foundation Pack content to a new node of an existing SOA cluster after installing Foundation Pack.

This chapter includes the following sections:

- [Section 5.1, "Setting up Oracle JDeveloper 11g for AIA"](#)
- [Section 5.2, "Setting up AIA Roles"](#)
- [Section 5.3, "Modifying Passwords Used for AIA Deployments"](#)
- [Section 5.4, "Adding Foundation Pack Content to a New Node of an Existing SOA cluster Install"](#)

### 5.1 Setting up Oracle JDeveloper 11g for AIA

Oracle JDeveloper enables you to modify AIA delivered content, or develop and deploy custom AIA content. AIA uses custom XPath functions and it is necessary to import these into the JDeveloper library. You can import these using either of the following procedures:

- In JDeveloper, navigate to **Tools, Preferences, SOA** and add the library **aia.jar**. The aia.jar is available under AIA\_HOME/lib directory
- If you download the AIA plugin from update center to use AIA service constructor, navigate into **Tools, Preferences, SOA** and add `<JDEV_HOME>/jdeveloper/lib/aia.jar` to make the functions available to all projects.

Now you can modify AIA delivered processes.

All SOA Composites delivered with AIA products include the JDeveloper projects (.jpr files) along with the source code.

#### To modify AIA delivered processes:

1. Copy the content from AIAHOME to the JDeveloper workspace.
2. All AIA delivered composites are available in AIA\_HOME and also include the JDeveloper projects (.jpr files). Copy this content to JDeveloper workspace.
3. Modify the composites as per your requirements.
4. Deploy the composites from the JDeveloper context menu.
5. Review your changes and copy the contents back to AIA\_HOME to the same folder where you copied it from.

This ensures that the modified code is made available to subsequent deployments in other environments.

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**Note:** If you are maintaining source control for AIA\_HOME contents, you must check-in code to version control at this stage.

---

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## 5.2 Setting up AIA Roles

### To set up AIA roles on WebLogic server:

1. Login to the WebLogic server using the appropriate port *http://<hostname>:<port number>/console*
2. Click **Security Realms** on the left panel.
3. Click **myrealm** (or the realm with *true* in the Default Realm column) in the list.
4. Click the **Users and Groups** tab.
5. Click the **Groups** tab.
6. Add the following roles (in JDeveloper they are **Roles**; in WebLogic Server they are **Groups**)

For AIA Lifecycle:

- **AIALifecycleUser**

Assigning users to this role enables them to access all aspects of the Project Lifecycle Workbench, excluding bill of material generation. Typically, you would assign this role to solution architects and functional product managers.

- **AIALifecycleDeveloper**

Assigning users to this role enables them to access all aspects of the Project Lifecycle Workbench, excluding bill of material generation. Typically, you would assign this role to integration developers.

- **AIALifecycleInstallDeveloper**

Assigning users to this role enables them to access all aspects of the Project Lifecycle Workbench, *including* bill of material generation. Typically, you would assign this role to installation developers.

---

---

**Note:** Each of these AIA Lifecycle roles are included in the Administrators role. If a user has been assigned the Administrators role, the user inherits all the privileges provided by these AIA roles.

---

---

For CAVS

- **AIAApplicationUser**

### To add the roles:

1. Click the **New** button.
2. Enter the role in the **Name** field.
3. Click **OK**.

Now you must assign groups to the roles.



**To assign groups to a roles:**

1. Click **Security Realms** on the left panel.
2. Click **myrealm** (or the realm with *true* in the Default Realm column) in the list.
3. Click the **Users and Groups** tab.
4. Click the **Users** tab.
5. Select the weblogic user (or add your own).
6. Select the **Groups** tab.
7. Move the desired groups to the chosen list.
8. Click **Save**.

## 5.3 Modifying Passwords Used for AIA Deployments

The passwords specified at the time of AIA installation can be changed post-installation. To help you change passwords, AIA provides a utility called **UpdateStore**. AIA stores its passwords in **Keystore**. This utility can modify the existing passwords in the Keystore.

In order to run this utility, the AIAIntallProperties.xml properties file should exist in the corresponding AIAHOME/AIA\_INSTANCE/<Instance name>/config folder. Also the password being modified must exist in the file.

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**Note:** This utility only updates encrypted passwords in AIA Installation. It does not change passwords of the SOA Server or the Database schemas.

---



---

**To modify passwords:**

1. Source the **aiacenv.sh** in the AIA\_INSTANCE/bin.
2. Browse to **AIA\_HOME/util/**.
3. Execute `ant -f updateStore.xml updateStore -DAdminUsername=<weblogic adminusername> -DAdminPassword=<weblogic admin password>`

**Update AIA Keystore** screen appears.

4. Enter the **Existing Username**, **Existing Password**, **New Username** and **New Password** and the Xpath of the password which you want to change.

[Example 5-1](#) shows the expected value of the Xpath.

---



---

**Note:** This utility modifies the username and the password in the AIAInstallProperties.xml. This does not sync the AIAInstallProperties.xml in the MDS. You must do it manually.

---



---

**Example 5-1 Xpath for Changing Passwords**

```
<properties>
<pips>
<o2c>
<username>scott</username>
<password>[C76sjg98</password>
```

```

</o2c>
</pips>
</properties>

```

To change the password under the o2c tag, enter the following values in the screen that appears.

**Existing Username:** scott

**Existing Password:** welcome1

**New Username:** scott1

**New Password:** welcome

**XPath:** /properties/pips/o2c/password

## 5.4 Adding Foundation Pack Content to a New Node of an Existing SOA cluster Install

1. Follow instruction in *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle SOA Suite* and add a new node to a SOA cluster.

2. Navigate to <AIA\_INSTANCE>/AIAMetaData/config folder and edit the AIAConfigurationProeprties.xml file to modify the following property.

```

<Property name="EH.JNDIURL">t3://<existing list of soa server
details>,<newsoa server host>:<newsoa server port></Property>

```

3. Navigate to <AIA\_INSTANCE>/config folder and open the AIAInstallProperties.xml file. Add the following information under the "/properties/fp/server/jndi-url" tag.

```

<jndiurl>t3://<existing list of soa server details>,<newsoa server host>:<newsoa
server port></jndiurl>

```

4. Start the new Node.

When you start the new node, you notice errors pertaining to Foundation Pack in the server logs. Ignore them for now.

5. Navigate to <AIA\_HOME>/aia\_instances/<instance name>/bin and source aiaenv.sh/bat.

6. Navigate to <AIA\_HOME>/Infrastructure/Install/AID and execute the following command.

```

ant -f AIAInstallDriver.xml
-DDeploymentPlan=<AIA_HOME>/Infrastructure/Install/config/FPAddNodeToClusterDP.
xml -DPropertiesFile=<AIA_HOME>/aia_instances/<instance
name>/config/AIAInstallProperties.xml

```

---

---

## Verifying the Installation

This chapter discusses various options for verifying the Oracle AIA Foundation Pack installation like how to review install and patch information, how to verify file creation and logs and how to verify the installation.

This chapter includes the following sections:

- [Section 6.1, "Reviewing Installation and Patch information"](#)
- [Section 6.2, "Verifying File Creation and Logs"](#)
- [Section 6.3, "Verifying Foundation Pack Installation"](#)

### 6.1 Reviewing Installation and Patch information

You can view all the information related to installation using the AIA web interface. You can also verify patch information when you successfully apply them.

**To verify installation and patch information:**

1. Navigate to the **AIA Console**: `http://<managed server name>:<managed server port number>/AIA/`.
2. Login using the appropriate user which you have created using the pre-installation steps.
3. Navigate to **CAVS**, **AIA Setup**, and **AIA Lifecycle UI**. Verify if the tabs are accessible.

### 6.2 Verifying File Creation and Logs

AIA Foundation Pack Installer displays warning and errors messages in log files. You can also check whether the home directory that you defined was created and populated with applicable product files.

- To check log files and verify file creation, open the log files from `AIAHome/cfgtoollogs/oui/install.<timestamp>.out` after you close OUI.
- You can also check the logs under `AIAHome/aia_instances/<instance_name>/logs`. These logs are descriptive.
- If you have done the script base installation, then the log file will be in the location that you mentioned in the arguments **-logfile** of the installation command.

## 6.3 Verifying Foundation Pack Installation

### To verify Foundation Pack installation:

1. Login to **Oracle Enterprise Manager**: `http://<server name>:<port number>/em /`.
2. Log in using the appropriate user which you have created using the pre-installation steps.
3. Navigate to **Farm**.
4. Expand **Farm\_soa\_domain**, **SOA**, **soa infra** in the left panel.
5. Navigate to **Deployed Composites** in the main panel and confirm that you can view the following composites:
  - AIAB2BErrorHandlerInterface
  - AIAB2BInterface
  - ReloadProcess
  - AIAAsyncErrorHandlingBPELProcess
  - AIAReadJMSNotificationProcess
  - AIAErrorTaskAdministrationProcess

### 6.3.1 Validating Security Policies

All SOA composites are protected by Global Policies provided by Foundation Pack as defined in the Security section of the Developer Guide.

### To validate locally attached security policies:

1. Login to EM Console
2. Navigate to **WebLogic Domain**, **soa\_domain**, **Web Services**, **Policies**.
3. Verify **Service Policy** attachment.
  - a. Find the service policy in the list of policies.
  - b. Click the number in **Attachment Count** column.  
This opens **Usage Analysis** screen.
  - c. Change the **Subject Type** list box to **SOA Service**.
  - d. Validate that all the composites are listed with local attachment to this service policy.

**Table 6–1 Service Policies**

Composite	Service	Security Policy
AIAAsyncErrorHandlingBPELProcess	client	oracle/aia_wss_saml_or_username_or_http_token_service_policy_OPT_ON
AIAB2BErrorHandlerInterface	ReadB2BError	N/A
AIAB2BErrorHandlerInterface	ReadOracleB2BError	N/A
AIAB2BErrorHandlerInterface	enrichaiafaultprocess_client	None

**Table 6–1 (Cont.) Service Policies**

Composite	Service	Security Policy
AIAB2BInterface	ProcessB2BDocument_ep	oracle/aia_wss_saml_or_use rname_token_service_policy _OPT_ON
AIAB2BInterface	receiveMessageFromB2B	N/A
AIAErrorTaskAdministrationProcess	aiaerrortaskadministrationprocess_ep	oracle/aia_wss_saml_or_use rname_token_service_policy _OPT_ON
AIAB2BInterface	consumeFaultMessage	N/A
ReloadProcess	reloadconfigurationprocess_client_ep	oracle/aia_wss_saml_or_use rname_token_service_policy _OPT_ON

#### 4. Verify **Client Policy** attachment

- a. Navigate back to **Policies** screen and find the client policy
- b. Click the number in **Attachment Count** column.

This opens **Usage Analysis** screen.

- c. Change the **Subject Type** list box to *SOA Reference*.
- d. Validate that all the composites are listed with local attachment to this client policy and attached to the correct references.

**Table 6–2 Client Policies**

Composite	Reference	Security Policy
AIAAsyncErrorHandlerBP ELProcess	N/A	N/A
AIAB2BErrorHandlerInterface	ReadOracleB2BErrorDetails	N/A
AIAB2BErrorHandlerInterface	AIAAsyncErrorHandlerProcessingService	None
AIAB2BErrorHandlerInterface	EchoServletService	None
AIAB2BInterface	SendMessageToB2B	N/A
AIAB2BInterface	X12ProcessSalesOrderReqB2BCSImplService	oracle/aia_wss10_saml_token_client_policy_OPT_ON
AIAErrorTaskAdministrationProcess	N/A	N/A
AIAB2BInterface	AIAErrorTaskAdministrationProcess	oracle/aia_wss10_saml_token_client_policy_OPT_ON

For more information about security validation, see “Working with Security” in *Oracle® Fusion Middleware Developer’s Guide for Oracle Application Integration Architecture Foundation Pack*.

## 6.3.2 Verifying the Functionality of Accessibility Features

**To verify whether accessibility features are working:**

1. Navigate to the AIA Console: `http://<managed server name>:<managed server port number>/AIA/`.
2. Click on the **Accessibility** link on the top right corner.

This opens **Accessibility Preferences** screen. This screen has the following options

- **Screen Reader:** This option enables your screen reader to access and read all components of the application.
  - **High Contrast Colors:** This option enables application to be viewed in high-contrast-friendly visual content. The high-contrast makes the application compatible with operating systems or browsers that have high-contrast features enabled.
  - **Large Fonts:** This option enables application content to be viewed in large fonts.
3. To verify them, select any or all options.
  4. Click **OK** and check whether the feature works.

---

---

## Uninstalling Oracle AIA

This chapter provides an overview of Oracle AIA Uninstallation and discusses various uninstallation options of Foundation Pack like how to uninstall Foundation Pack using AIA Deinstaller, how to uninstall specific instances of Foundation Pack using manual steps, how to clean the environment post installation and finally how to whether verify uninstallation is complete.

This chapter includes the following sections:

- [Section 7.1, "Overview of Oracle AIA Uninstallation"](#)
- [Section 7.2, "Uninstalling Foundation Pack using AIA Deinstaller"](#)
- [Section 7.3, "Undeploying a Specific Instance of AIA Foundation Pack Using Manual Steps"](#)
- [Section 7.4, "Cleaning The Environment"](#)
- [Section 7.5, "Uninstalling Security Policies"](#)
- [Section 7.6, "Verifying Uninstall Processes"](#)

### 7.1 Overview of Oracle AIA Uninstallation

If you have multiple AIA instances, you must manually uninstall the specific AIA instance that you want to undeploy.

Refer to [Section 7.3, "Undeploying a Specific Instance of AIA Foundation Pack Using Manual Steps."](#)

To completely uninstall AIA (which means undeploying all AIA instances and removing AIA Home), then you must undeploy all AIA instances except for one instance and then use the De-installer.

If you have deployed the Foundation Pack Demo, undeploy it before you uninstall Foundation Pack, because it does not get undeployed automatically when you uninstall Foundation Pack.

**Tip:** Before launching the Deinstaller, ensure that the SOA server is running.

### 7.2 Uninstalling Foundation Pack using AIA Deinstaller

**To uninstall Foundation Pack using AIA Deinstaller:**

1. Navigate to `AIAHOME/oui/bin`.
2. Launch **Deinstaller**.

Follow the launch instructions for your platform. [Table 7-1](#) lists the commands you must use based on your platform.

**Table 7-1 Commands to launch Oracle AIA Deinstaller**

Platform	To launch the Oracle AIA Foundation Pack Installer:
Linux Solaris SPARC IBM AIX Based Systems HP-UX	At the command line prompt, enter:  <pre>./runInstaller -invPtrLoc &lt;SOA_HOME&gt;/oraInst.loc -deinstall -jreloc &lt;location of the jre specific to your operating system. This directory should have /bin/java&gt;</pre>
Microsoft Windows	At the command line prompt, enter:  <pre>setup.exe -deinstall</pre>

AIA Deinstaller launches the **Welcome** screen.

**3. Click Next.**

AIA Deinstaller displays the installed products.

**4. Select the instance to be uninstalled by clicking once on the Instance name.**

---

**Note:** After you select the instance, the deinstaller picks up the server details from the AIAInstallProperties.xml file and prompts the user for the admin username and password for the server in order to confirm deinstall.

---

**5. Click Deinstall.**

**6. AIA Deinstaller displays a warning message with the following deinstallation options:**

- Deinstall and delete AIA Home directory. To deinstall and delete AIA Home directory, click **Yes**.

---

**Note:** If multiple AIA Instances that are using the same AIA Home exist, then manually undeploy other AIA instances before you delete AIA Home directory using deinstaller.

---

- Deinstall without deleting AIA Home directory. To deinstall without deleting the AIA Home directory, click **No**.

**7. Choose one of the options.**

**8. Click Finish in the Deinstallation Complete screen.**

---

**Note:** After you uninstall, follow the cleanup steps in [Section 7.4, "Cleaning The Environment"](#) to clean the environment and then attempt a fresh installation of AIA.

---



## 7.3 Undeploying a Specific Instance of AIA Foundation Pack Using Manual Steps

### To uninstall Foundation Pack using manual steps:

1. Navigate to `AIA_HOME/aia_instances/<instance_name>/bin`.

2. Run the following command:

```
. aiaenv.sh (for UNIX based)
aiaenv.bat (for windows)
```

3. Navigate to `AIA_HOME/Infrastructure/Install/AID`.

4. Run the following command to initiate uninstallation:

```
ant -f AIAInstallDriver.xml
-DPropertiesFile=$AIA_HOME/aia_instances/<Instance
Name>/config/AIAInstallProperties.xml
-logfile $AIA_HOME/aia_instances/<Instance Name>/logs/FPUnInstall.log
-DDeploymentPlan=$AIA_HOME/aia_instances/<Instance
Name>/config/FPUnInstallDP.xml
```

---

**Note:** After you uninstall, follow the cleanup steps in [Section 7.4, "Cleaning The Environment"](#) to clean the environment and then attempt a fresh installation of AIA.

---

## 7.4 Cleaning The Environment

Clean the environment after you uninstall AIA Foundation Pack.

### To clean the environment:

1. Navigate to WebLogic console and click **Deployments** in the left navigation bar.
2. Select all AIA related deployments if they exist (ideally they get removed during uninstallation) and click **Delete**.
3. Repeat Step 2 for Datasources, JMS modules and JMS resources if they exist.
4. Navigate to **Security Realms** and select your realm (*myrealm*).
5. Click the **Users and Groups** tab and remove *AIA users* and *AIA groups*.
6. Shutdown the SOA managed server and then shutdown the Admin server.
7. Start the Admin server.
8. Open the console, and verify whether you have any changes to activate in the **Activation** center. If there are any, activate them. If they do not get activated, undo all changes.
9. Open the folder `Middleware/domains/<your_domain>` and remove the file `edit.lok`.
10. Open the folder `Middleware/domains/<your_domain>/pending`, and remove all files.
11. Restart the SOA Server.

Clean MDS following the steps given in the [Section 7.4.1, "Cleaning the MDS"](#) before attempting a fresh installation. Also ensure that you have completed all pre-installation steps before attempting the installation.

## 7.4.1 Cleaning the MDS

### To clean the MDS:

1. Execute `SOA_HOME/common/bin/wlst.sh`
2. Connect to admin server by running `connect()`
3. Enter the domain config by running `domainConfig()`
4. Delete Metadata by running `deleteMetadata('soa-infra', 'soa_server1', '/apps/AIAMetaData/**')`

---

---

**Note:** For cluster, replace 'soa\_server1' with running managed server that is a part of the cluster.

---

---

## 7.5 Uninstalling Security Policies

Security policies do not get uninstalled when you uninstall Foundation Pack using deinstaller. You must manually uninstall them.

### To uninstall security policies:

1. Login to Oracle Enterprise Manager.
2. Expand **WebLogic Domain** and click **<Your Domain Name>** on the navigation tree.
3. Click **Weblogic Domain** menu on the top of the right panel and navigate to **Web Services, Policies**.
4. Select **All** from **Applies To** dropdown list, and click the **Search** button next to the **Name** field.
5. Select `oracle/aia_wss_saml_or_username_token_service_policy_OPT_ON` and click the **Delete** button in the menu on the top.
6. Repeat step 5 to remove the following policies

`oracle/aia_wss_saml_or_username_or_http_token_serivce_policy_OPT_ON`

`oracle/aia_wss10_saml_token_client_policy_OPT_ON`

## 7.6 Verifying Uninstall Processes

### To verify uninstallation:

1. Navigate to **AIA Console** `http://<server name>:<port number>/AIA/` and confirm that this page is not available.
2. Log in to Oracle Enterprise Manager `http://<server name>:<port number>/em /`.  
Log in using the appropriate user which you have created using the pre-install steps.
3. Navigate to **Farm**.

4. Expand **Farm\_soa\_domain**, **SOA**, **soa infra** in the left panel.
5. Navigate to **Deployed Composites** in the main panel.  
You should not be able to view any AIA related composites.



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# Installing Reference Process Models

This chapter provides an overview of the Reference Process Model linkage to the Oracle Enterprise Repository (OER) and the installation process. It discusses how to manually upload reference process models to Business Process Publisher, how to configure AIA Redirect Servlet and how to configure AIA Redirect Servlet.

This chapter includes the following sections:

- [Section 8.1, "Understanding Reference Process Model Linkage to Oracle Enterprise Repository"](#)
- [Section 8.2, "Understanding the Installation Process"](#)
- [Section 8.3, "Manually Uploading Reference Process Models to Business Process Publisher"](#)
- [Section 8.4, "Configuring the AIA Redirect Servlet"](#)
- [Section 8.5, "Configuring the Tomcat Redirect Servlet"](#)

## 8.1 Understanding Reference Process Model Linkage to Oracle Enterprise Repository

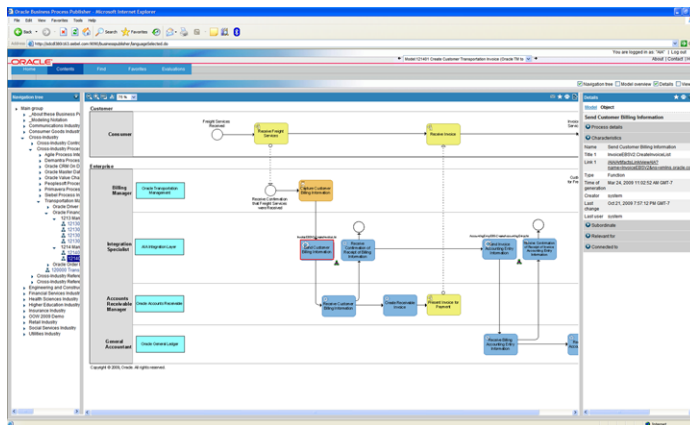
Oracle has created and delivered conceptual horizontal logical reference process models, as well as reference process models for those processes supported by Oracle Application Integration Architecture (AIA) releases. The reference process models for Foundation Pack (FP) or a pre-built integrations enable you to see and understand how AIA provides application integration solutions for your business processes.

The models combine the view of the business analyst with the view of the technical analyst and provide both a business and technical view of the process. Oracle uses a standard modeling notation and adds technical artifacts to the models at the lowest level of decomposition by linking the reference process models to the appropriate Enterprise Business Service (EBS) artifact in the OER.

The user experience enables you to:

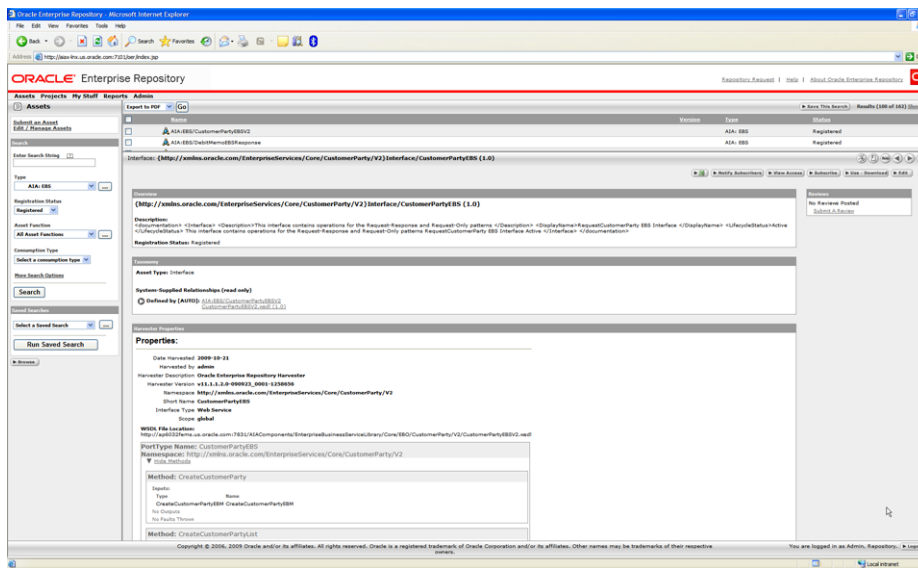
- Log in to the Business Process Publisher.
- Navigate to a process model.
- Drill down through the various process levels from L0 all the way to the lowest level, L2 or L3 as shown in [Figure 8-1](#).

**Figure 8–1 L3 Model with Technical Artifacts Viewed through Business Process Publisher**



- Click a link (relative URLs) to access the relevant EBS that supports the process within the OER, as shown in Figure 8–2.

**Figure 8–2 OER EBS for Artifact in L3 Model**



Because this feature requires UI linkages between two distinct products, Business Process Publisher and Oracle Enterprise Repository, the following mechanisms are in place:

- When users click the relative URLs in the process models inside the Business Publisher, HTTP requests are made to a **redirect servlet**. This servlet resides on the Tomcat application server of the Business Publisher; its sole purpose is to redirect the requests to another redirect servlet residing on the Oracle AIA side. This first redirect servlet will be called the **Tomcat redirect servlet** in the remainder of this chapter.
- The second servlet resides on the Oracle AIA side. Its purpose is to intercept the call and interpret the URLs. The URL is encoded and parameterized. As such, the URL is translated into an appropriate OER UI URL. This second redirect servlet will be called the **AIA redirect servlet** in the remainder of this chapter.

- At this point, OER UI is rendered in a pop-up browser.

## 8.2 Understanding the Installation Process

The reference process models are delivered in two forms:

- The source database file (.adb), which contains all models. These models can be modified through the use of a licensed copy of Oracle's Business Process Architect (OBPA)
- An export of all models, which are read only through the use of Oracle's Business Process Publisher.

The installation of the reference process models differs from the AIA installation. They use different installers and can be installed on different machines.

OER can be installed as an option during the AIA installation or separately from the AIA installation. If installing OER separately from the AIA installation, the **AIA redirect servlet** will have to be manually deployed on the WebLogic server where AIA is deployed.

### Options for Utilizing the Reference Process Models

The first option for utilizing the reference process models is through OBPA. OBPA allows for full access to the reference process models. If you do not have a copy of OBPA, contact Oracle Sales to purchase a licensed copy. Follow the instructions provided with the software to install the Architect and restore the models source database file. The source database file, *filename.adb*, is located in the `\<aia.home>\seeddata\BPM\ADB\` directory on the *Oracle AIA release media pack*. Included in this directory are the Oracle AIA filter and template files used to create the models. Refer to the software documentation for installing the filter and template. If you have a licensed copy of the Business Process Architect, you can obtain the credentials to log into the database from the My Oracle Support note 763620.1 titled *Login Credentials to open the AIA models within Oracle BPA Suite* on My Oracle Support.

The second option for utilizing the reference process models is through Oracle's Business Process Publisher. Unlike OBPA, Publisher allows read-only access to the process models. The Business Process Publisher is a *packaged component within an Oracle AIA release media pack*. The Business Process Publisher installation is described in the installation guide that comes with the Publisher. You must manually copy and upload the AIA reference process models onto the Business Publisher and implement and configure the Tomcat redirect servlet as discussed in the next sections, before you can view the models. The reference process model files that are required to be installed with the Publisher can be found in the `\<aia.home>\seeddata\BPM\Export` directory and the files to configure the Tomcat redirect servlet are in the `\<aia.home>\seeddata\BPM\Setup` directory.

---

**Note:** The installation of Business Process Publisher and the models is independent from the AIA installation. The current feature of uploading the reference process models onto the Business Process Publisher is supported only on a Microsoft Windows XP platform. Use the Business Process Publisher 11gR1 version 7.1.0.397082 packaged with the Foundation Pack to view the models.

---

## 8.3 Manually Uploading Reference Process Models to Business Process Publisher

### To manually upload Reference Process Models to the Business Process Publisher:

1. Download Business Process Publisher from the Foundation Pack media pack and unzip it on a local drive (that is, C:\).
2. Run the **setup.exe** from C:\<directory Publisher unzipped to>\Business Process Publisher\.
3. Accept all the defaults, except for when it asks for the database system. The default database system is Oracle database, choose Oracle Lite instead.
4. Restart your computer for the application to install successfully.
5. Shut down the Oracle Business Process Publisher Server 11g service using Windows Services.
6. Copy the RPM files from the \<aia.home>\seeddata\BPM\ to the appropriate directory as follows. Overwrite files if they exist.

**Table 8–1 Fields in Installation Location Screen**

File or Directory Name	From	To
webappserver.cfg file	\<aia.home>\seeddata\BPM\Export\config	C:\Program Files\Oracle BPA Suite11g\BPServer\tomcat\webapps\businesspublisher\config
exports directory	\<aia.home>\seeddata\BPM\Export\exports	C:\Program Files\Oracle BPA Suite11g\BPServer\tomcat\webapps\businesspublisher
bp71.obs and bp71.odt files	\<aia.home>\seeddata\BPM\Export\olitedata	C:\Program Files\Oracle BPA Suite11g\BPServer\olitedata

7. Restart the Oracle Business Process Publisher Server 11g service using Windows Services.
8. Log in to Business Publisher (username = AIA, password = Welcome1 and filter = Entire Method).

---

**Note:** You can view the models at this point with the **Entire Method Filter** or you can install the **AIA BPA Filter** and log in using it. You cannot view if you log in using any other filter because other filters do not have all objects that are used to create the AIA models. You cannot link to the EBS artifacts until you complete the OER installation and configure both redirect servlets.

---



## 8.4 Configuring the AIA Redirect Servlet

**To deploy the AIA redirect servlet on the WebLogic server where AIA is installed, perform these tasks after installing OER.**

1. Navigate to `$AIA_HOME/Infrastructure/Install/templates`.  
This folder contains `AIALifeCycleArtifactsLink.war` file.
2. Encrypt the `HarvesterSettings.xml`. To encrypt the file:
  - a. Update the `HarvesterSettings.xml` file under `$AIA_INSTANCE/Infrastructure/LifeCycle/AIAHarvester/Harvester` with the correct OER URL and login credentials (cleartext).
  - b. Encrypt this file using the `encrypt.sh` script under `$AIA_HOME/Infrastructure/LifeCycle/AIAHarvester/Harvester`.
  - c. `./encrypt.sh`  
`$AIA_INSTANCE/Infrastructure/LifeCycle/AIAHarvester/Harvester/HarvesterSettings.xml`  
`$AIA_INSTANCE/Infrastructure/LifeCycle/AIAHarvester/Harvester/HarvesterSettings.xml`
3. Add the `HarvesterSettings.xml` to `AIALifeCycleArtifactsLink.war` file.
4. Deploy the modified war file either from either from the WebLogic admin console or using the deployment plan. To deploy using the deployment plan:
  - a. Create a `DeploymentPlan.xml` file and paste the content shown in [Example 8-1](#).

### Example 8-1 DeploymentPlan.xml

```
<?xml version="1.0" standalone="yes"?>
<DeploymentPlan component="FP" version="3.0">
<Deployments>
<Application name="AIALifeCycleArtifactsLink"
fileLocation="{AIA_INSTANCE}/Infrastructure/Install/templates/AIALifeCycleArtifactsLink.war"
wlsrver="fp" failonerror="true" action="deploy"/>
</Deployments>
</DeploymentPlan>
```

- b. Ensure that the file location in `deploymentPlan.xml` file points to the location where the modified war file is located which is `$AIA_HOME/Infrastructure/Install/templates`.
5. Set the environment by running the following commands for your platform, as shown in [Table 8-2](#).

**Table 8-2 Commands for setting environment variables for configuring AIA Redirect Servlet**

Platform	To set the environment variables:
Linux	<code>\$AIA_INSTANCE/bin/aiaenv.sh</code>
Solaris SPARC	
HP-UX	
IBM AIX Based Systems	

**Table 8–2 (Cont.) Commands for setting environment variables for configuring AIA Redirect Servlet**

Platform	To set the environment variables:
Microsoft Windows	\$AIA_INSTANCE\bin\aiacenv.bat

6. Navigate to `cd $AIA_HOME/Infrastructure/Install/AID`
7. Run the following commands for your platform to configure redirect servlet, as shown in [Table 8–3](#).

**Table 8–3 Commands for configuring redirect servlet**

Platform	Command
Linux Solaris SPARC HP-UX IBM AIX Based Systems	<code>ant -f AIAInstallDriver.xml -DDeploymentPlan=&lt;location of DeploymentPlan.xml&gt; -DPropertiesFile=\$AIA_INSTANCE/config/AIAInstallProperties.xml</code>
Microsoft Windows	<code>ant -f AIAInstallDriver.xml -DDeploymentPlan=&lt;location of DeploymentPlan.xml&gt; -DPropertiesFile=\$AIA_INSTANCE\config\AIAInstallProperties.xml</code>

## 8.5 Configuring the Tomcat Redirect Servlet

**To configure the Tomcat redirect servlet on Business Publisher:**

---



---

**Note:** Install OER and the AIA redirect servlet before configuring the Tomcat redirect servlet on the Business Publisher.

You can find the Tomcat redirect servlet files in the `\<aia.home>\seeddata\BPM\Setup\` directory.

---



---

1. Place the **aia-redirect.jar** file in the Business Process Publisher lib folder.  
`\<Publisher install directory>\Program Files\Oracle BPA Suite11g\BPSServer\tomcat\webapps\businesspublisher\WEB-INF\lib.`
2. Reconfigure the Business Publisher **web.xml** file to trigger the filter logics implemented in the aia-redirect.jar.  
 The web.xml is located in the `\<Publisher install directory>\Oracle BPA Suite11g\BPSServer\tomcat\webapps\businesspublisher\WEB-INF` directory
3. Copy the contents of the **aia-web.xml** file and place them after the other filter parameters in the Business Publisher web.xml file.
4. Using [Example 8–2](#), modify the following parameter values, noted in bold, with the information from your AIA implementation:

**Example 8–2 aia-web.xml File**

```
<filter>
    <filter-class>com.oracle.aia.util.AIAServletRedirectFilter</filter-class>
    <init-param>
```

```

        <param-name>hostname</param-name>
        <param-value>{host.name}</param-value> Replace {host.name} with
hostname of OER server and delete this comment
    </init-param>
    <init-param>
        <param-name>port</param-name>
        <param-value>{http.port}</param-value> Replace {http.port} with SOA
port number of OER server and delete this comment
    </init-param>
    <init-param>
        <description>Version V1 or V2</description>
        <param-name>bsrversion</param-name>
        <param-value>{bsr.version}</param-value> Replace {bsr.version} with
v2 and delete this comment
    </init-param>
    <init-param>
        <description>The physical location of AIAComponents
directory</description>
        <param-name>aialocation</param-name>
        <param-value>{aia.location}</param-value>
    </init-param>
</filter>
<filter-mapping>
    <filter-name>AIARedirectFilter</filter-name>
    <url-pattern>/*</url-pattern>
</filter-mapping>

```

5. Restart the Business Publisher for Application service, Oracle Business Process Publisher Server 11g.
6. Confirm successful configuration.
7. Log in to the Business Publisher.
8. Navigate to an L3 model.
9. Click an object and view the attributes of the object in the **Details Object** pane.
10. Click the URL in the Link 1 field. An OER login screen pops up.
11. Log in (get the username and password information from your AIA implementer).
12. Check whether you can view the information for the EBS artifact you clicked.

---



---

**Note:** You must log in to OER only for the first URL link that you click; after that, OER refreshes the window with the new artifact information.

---



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# Upgrading Foundation Pack

This chapter discusses how to upgrade Oracle Application Integration Architecture Foundation Pack 11g Release 1 (11.1.1.5.0 or 11.1.1.6.x) to Foundation Pack 11g Release 1 (11.1.1.7).

---

---

**Note:** Oracle AIA Installer upgrades your existing version of Foundation Pack 11 g Release 1 (11.1.1.5.0 or 11.1.1.6.x) to Foundation Pack 11 g Release 1 (11.1.1.7). If you are using an AIA Foundation Pack release that is earlier than 11.1.1.5.0, first upgrade to release 11.1.1.5.0 or 11.1.1.6.x using the respective upgrade guides and then upgrade to 11.1.1.7 using this guide.

---

---

This chapter includes the following sections:

- [Section 9.1, "Copying Foundation Pack 11g Release 1 \(11.1.1.7\) Files to AIA\\_HOME"](#)
- [Section 9.2, "Update AIA Environment"](#)
- [Section 9.3, "Running the EOL Upgrade Utility"](#)
- [Section 9.4, "Running the Upgrade Script"](#)

## 9.1 Copying Foundation Pack 11g Release 1 (11.1.1.7) Files to AIA\_HOME

The section discusses the process for copying the Foundation Pack 11g Release 1 (11.1.1.7) files to AIA\_HOME using the AIA Installer. To copy Foundation Pack 11g Release 1 (11.1.1.7) files:

### 9.1.1 Launch the Oracle AIA Foundation Pack Installer

**To launch the Oracle AIA Foundation Pack Installer:**

1. Download Foundation Pack 11g Release 1 (11.1.1.7).
2. Unzip the installer zip file.
3. Browse to <Installer\_Unzip\_Location>/aiafp/Disk1.
4. Follow the launch instructions for your platform. [Table 9-1](#) lists the steps that must be used based on your platform.

**Table 9–1 Commands to Launch Oracle AIA Foundation Pack Installer**

Platform	To launch the Oracle AIA Foundation Pack Installer:
Linux Solaris SPARC HP-UX IBM AIX Based Systems	At the command line prompt, enter:  ./runInstaller -invPtrLoc <Soa_Home>/oraInst.loc -jreloc <location of the jre specific to your operating system. This directory should have /bin/java>
Microsoft Windows	Double-click <b>setup.exe</b>

The **Welcome** screen is displayed.

## 9.1.2 Check Prerequisites

**To confirm whether the prerequisites for upgrading AIA are met:**

1. Review prerequisites in the **Prerequisite Checks** screen.
2. Click **Next**.

## 9.1.3 Specify Installation Location

**To specify installation location:**

1. Specify installation location in the **AIA\_Home** field.
2. Select the AIA\_INSTANCE that you want to upgrade in the **AIA Instance Name for Upgrade** field.
3. Click **Next**.

A warning message that says that a previous version is installed in the selected AIA\_HOME is displayed. Click **Yes** and continue with upgrading your existing AIA\_HOME to Foundation Pack 11g Release 1 (11.1.1.7).

4. Click **Next**.

## 9.1.4 Complete Copying Files

**To complete copying the files:**

1. Review the information on the **Installation Summary** screen.
2. Click **Install** to begin copying the files.

The system displays installation progress on the **Install** screen.

3. After copying the files, AIA Installer updates the inventory and AIAInstallProperties.xml with the latest version of Foundation Pack. The progress is displayed in **Configuration Progress** screen. This screen starts automatically after installer installs the Foundation Pack files.
4. Click **Next**.
5. Click **Finish** to close the AIA Foundation Pack Installer in the **Installation Complete** screen.

---



---

**Note:** Installer takes a backup of \$AIA\_HOME/AIAMetaData under \$AIA\_HOME/AIAFPUpdates/Update\_AIAFP111170/backup.

---



---

## 9.2 Update AIA Environment

### To upgrade AIA environment:

1. Source aiaenv.sh from the <AIA\_HOME>/aia\_instances/<aia\_instance>/bin.
2. Browse to <AIA\_HOME>/AIAFPUpdates/Update\_AIAFP111170/config folder.
3. Execute the following script

```
ant -f UpdateEnvironment.xml
```

## 9.3 Running the EOL Upgrade Utility

The Enterprise Object Library (EOL) Upgrade Utility upgrades the latest EOL with customizations made to the previous EOL.

After you run the upgrade, the EOL Upgrade Utility generates the following reports:

- EOLMergeUtility\_AutoLog\_<TimeStamp>.log  
Captures all automated (trivial) merges.
- EOLMergeUtility\_ManualActionLog\_<TimeStamp>.log  
Captures all conflicts and the manual actions the user must perform.
- EOLMergeUtility\_DetailedLog\_<TimeStamp>.log  
Captures a detailed merge report, including post-merge validations.

The reports are generated in a default location of  
\${AIA\_INSTANCE}/logs/EOLUpgrade.

To generate these reports to a different directory, perform the following task before running the utility.

### To define your own EOL Upgrade Utility report generation location:

1. Browse to the <AIA\_HOME>/AIAFPUpdates/Update\_AIAFP111170/config folder.
2. Open EOLUpgradeUtility.xml in edit mode.
3. Modify the last argument of the Java task to reflect the desired report generation location.

```
<arg value="<Desired Location of the Report>"/>
```

### To run the EOL Upgrade Utility:

Foundation Pack recommends running the utility using the following two-step process.

1. Run the EOL Upgrade Utility in Report mode.

Reports are generated in the Report mode, and the utility does not do the actual merge. Refer to these reports to preview the changes that happen when you run the utility in Upgrade mode.

After you run the utility in Report mode, perform all the changes suggested in the generated `EOLMergeUtility_ManualActionLog_<TimeStamp>.log` before running the utility in Upgrade mode.

- a. Source `aiaenv.sh` from the `<AIA_HOME>/aia_instances/<aia_instance>/bin`.

---

**Note:** You must source `aiaenv.sh` as the file has been updated during [Section 9.2, "Update AIA Environment"](#) and some environment variables must be set again.

---

- b. Browse to the `<AIA_HOME>/AIAFPUpdates/Update_AIAFP111170/config` folder.
- c. Execute the following script

```
ant -f EOLUpgradeUtility.xml report
```

2. Run the utility in Upgrade mode to perform the actual merge process.

If you have addressed the manual changes suggested in the `EOLMergeUtility_ManualActionLog_<TimeStamp>.log` report generated in step 1, the report should not contain any issues after running the utility in Upgrade mode. This indicates that the merge was completed successfully.

- a. Access the `<AIA_HOME>/AIAFPUpdates/Update_AIAFP111170/config` folder.
- b. Execute the following script:

```
ant -f EOLUpgradeUtility.xml upgrade
```

## 9.4 Running the Upgrade Script

Run the upgrade script to complete the upgrade process. Before running the upgrade script perform the following tasks.

1. Navigate to `$AIA_INSTANCE/AIAMetaData/config`.
2. Open the `AIAConfigurationProperties.xml` file in edit mode.
3. Search for the **ModuleConfiguration** with the name **ErrorHandler**.
4. Add the following properties in the ErrorHandler ModuleConfiguration.
  - `<Property name="EH.RESUBMIT.SYS.METRICS">true</Property>`
  - `<Property name="EH.RESUBMIT.BIZ.METRICS">true</Property>`
  - `<Property name="EH.RESUBMIT.RES.CF">jms/aia/aiaResourceCF</Property>`
  - `<Property name="EH.RESUBMIT.ERR.CF">jms/aia/aiaErrorQueueCF</Property>`

### To run the upgrade script:

1. Source `aiaenv.sh` from the `<AIA_HOME>/aia_instances/<aia_instance>/bin`.
2. Browse to `<AIA_HOME>/AIAFPUpdates/Update_AIAFP111170/config` folder.
3. Execute the following script:

```
ant -f UpdateAIAFP111170.xml -DfromVersion=VERSION_NUMBER
```



---

---

**Note:** Replace the VERSION\_NUMBER with the Foundation Pack version number from which you are trying to upgrade. The valid values are 11.1.1.5.0/11.1.1.6.x.

Because you are manually invoking the AIA Installation Driver (AID), you are prompted for an administrator username and password. Provide valid credentials.

---

---

4. Validate the upgrade.
  - a. Access the Oracle Enterprise Manager (<http://<admin server hostname>:<admin port>/em/>) and log in using the valid credentials.
  - b. Navigate to Farm. Expand Farm\_soa\_domain, SOA, soa infra in the left panel. Navigate to Deployed Composites in the main panel and verify that you can view the following composites:
    - AIAB2BErrorHandlerInterface
    - AIAB2BInterface
    - ReloadProcess
    - AIAAsyncErrorHandlingBPELProcess
    - AIAReadJMSNotificationProcess
    - AIAErrorTaskAdministrationProcess
  - c. Navigate to the AIA Home Page (<http://<managed server hostname>:<managed server port number>/AIA/>) and log in using valid credentials. Navigate to the Composite Application Validation System, Project Lifecycle Workbench, and the AIA setup pages. Verify that the UI tabs for each application are accessible.



Other product licenses included with Foundation Pack are:

- Oracle Business Process Publisher 11g.  
Restrictions: None. Enables viewing of reference process models.

- Oracle Service Registry (OSR)  
Restrictions: A Restricted Use License is included.

You can use OSR for viewing and consuming Oracle AIA Content (Oracle Intellectual Property) available with your licensed AIA Foundation Pack and Process Integration Packs. The pre-built AIA content includes: Services/Binding Templates (WSDL), Schemas (XSD) and Transforms (XSLT/XQUERY)

You can make limited modifications and extensions to the AIA content only in accordance with the AIA extension mechanism, and not for other purposes:

- Adding custom attributes to the AIA schemas.
- Adding corresponding transforms for the custom attributes.
- Modifying out-of-the-box AIA services taxonomy/categorization.
- Modifying out-of-the-box AIA endpoint binding templates.
- Adding new taxonomies or models to categorize (1) the out-of-the-box and (2) the extended Oracle AIA content.

Any of the following conditions would require the FUL of OSR with AIA:

- Adding custom business services.
- Adding new operation to an existing service.
- Registering your own in-house services.
- Adding new taxonomies or models to categorize customer-specific content (from 1, 2, 3 above).
- Modifying attributes and other metadata in OSR other than through the AIA extension mechanism.



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