

## **JD Edwards EnterpriseOne**

Application Development Framework (ADF) Configuration Guide

Tools Release 9.1.x

**E61893-03**

July 2015

Describes the configuration of the Application Interface Services (AIS) Server which provides the communication interface between JD Edwards EnterpriseOne ADF enterprise applications and JD Edwards EnterpriseOne.

E61893-03

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# Preface

Welcome to the *JD Edwards EnterpriseOne JD Edwards EnterpriseOne Application Development Framework (ADF) Configuration Guide*.

## Audience

This document is intended for administrators who have experience with setting up and administering the EnterpriseOne system. In particular, you should have experience using Server Manager to deploy and manage server instances and EnterpriseOne administration applications to set up security and processing options.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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## Related Information

For additional information about JD Edwards EnterpriseOne applications, features, content, and training, visit the JD Edwards EnterpriseOne pages on the JD Edwards Resource Library located at: <http://learnjde.com>

## Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

Convention	Meaning
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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# Introduction

This chapter contains the following topics:

- [Section 1.1, "Overview"](#)
- [Section 1.2, "Configuration Checklist"](#)
- [Section 1.3, "Accessing Minimum Technical Requirements \(Certifications\)"](#)

## 1.1 Overview

This guide describes the configuration of the Application Interface Services (AIS) Server which provides the communication interface between JD Edwards EnterpriseOne ADF enterprise applications and JD Edwards EnterpriseOne. It also contains information about additional setup tasks that must be performed in EnterpriseOne to determine the data that ADF users can access and work with in ADF enterprise applications.

## 1.2 Configuration Checklist

As you read through the contents of this guide and the *Oracle® Fusion Middleware: Developing Applications for Oracle Weblogic Server 12c Release 1 (12.1.1) guide*, use the following list of tasks as a checklist for setting up ADF enterprise applications:

- Setting Up and Configuring AIS Server
- Setting Up and Configuring ADF
- Building and Deploying EnterpriseOne ADF Applications
- Building and Deploying EnterpriseOne ADF Container

## 1.3 Accessing Minimum Technical Requirements (Certifications)

The following list contains references to the minimum technical requirements for the AIS Server for ADF:

- Customers must conform to the supported platforms for the AIS Server, which can be found in the Certifications tab on My Oracle Support:  
<https://support.oracle.com>.

For more information about JD Edwards EnterpriseOne Minimum Technical Requirements, see the following document on My Oracle Support:

JD Edwards EnterpriseOne Minimum Technical Requirements Reference:

[https://support.oracle.com/epmos/faces/CertifyHome?\\_adf.ctrl-state=15rchn2zj3\\_14&\\_afrLoop=384218244947223](https://support.oracle.com/epmos/faces/CertifyHome?_adf.ctrl-state=15rchn2zj3_14&_afrLoop=384218244947223)

See certifications for JD Edwards EnterpriseOne ADF Foundation.



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## Configuring the Application Interface Services (AIS) Server

This chapter contains the following topics:

- Overview of the AIS Server Configuration for EnterpriseOne ADF Enterprise Applications
- Deploying and Managing the AIS Server through Server Manager
- Additional Required Server Configurations

### 2.1 Overview of the AIS Server Configuration for EnterpriseOne ADF Enterprise Applications

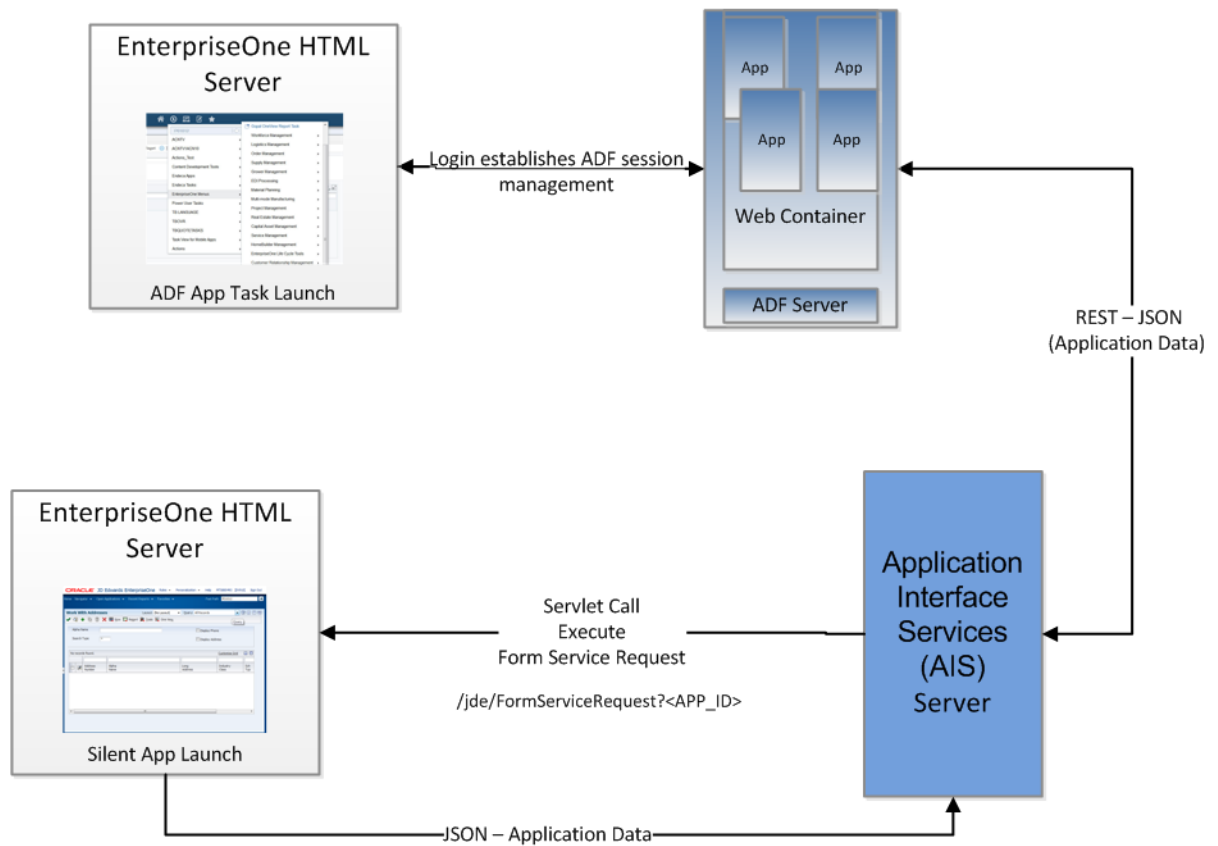
The Application Interface Services (AIS) Server provides a JSON over REST interface to EnterpriseOne applications and forms through the EnterpriseOne HTML Server. The AIS Server exposes this interface to enable communication between ADF applications and EnterpriseOne.

The AIS Server includes support for JSON representation of form service requests so ADF applications can easily format requests. The AIS Server submits these ADF application requests to the EnterpriseOne HTML server.

The AIS Server maintains sessions for ADF applications. You can configure the session timeouts for the AIS Server through Server Manager following this guideline:

EnterpriseOne HTML server session timeout < EnterpriseOne ADF Container session timeout < AIS server session timeout

The following illustration shows how the AIS Server functions as the interface between ADF applications and the EnterpriseOne HTML Server.

**Figure 2–1 JD Edwards EnterpriseOne AIS Server for ADF Architecture**

## 2.2 Deploying and Managing the AIS Server through Server Manager

Deploy the AIS Server as a managed instance through Server Manager. You can deploy the AIS Server on Oracle Weblogic Server.

When deploying the AIS Server, remember the URL because it will be used during configuration/deployment of the ADF Container. You will need to populate this into the build.properties file. See [Table 5–2](#).

For instructions on how to deploy the AIS Server as a managed instance, see "Create an Application Interface Services (AIS) Server as a New Managed Instance" in the *JD Edwards EnterpriseOne Tools Server Manager Guide*.

### 2.2.1 Managing the AIS Server through Server Manager

Server Manager provides settings and features that enable you to configure and manage the AIS Server. These include:

- Configuration group settings to determine whether the Environment and Role fields and the Single Sign On option are displayed or hidden on the ADF application login screen. The configuration group settings also include settings for controlling session timeouts and other configuration options.

See "Configuration Groups" in the *JD Edwards EnterpriseOne Tools Server Manager Guide* for more information about configuration groups for all EnterpriseOne server types.

- Starting with Tools Release 9.1 Update 5, runtime metrics to show various user and server-related information, which enable you to view a list of users connected to the AIS Server and monitor user activity.

See "Application Interface Services Server Runtime Metrics" in the *JD Edwards EnterpriseOne Tools Server Manager Guide* for more information.

- Starting with Tools Release 9.1 Update 5, configuration group settings for the AIS Server. These settings include display options, AIS Server and HTML Server communication options, security options, and logging options.

See "EnterpriseOne Application Interface Services" in the *JD Edwards EnterpriseOne Tools Server Manager Guide* for more information.

## 2.3 Additional Required Server Configurations

After deploying the AIS Server through Server Manager, perform the following tasks in this section to complete the configuration between the AIS Server and EnterpriseOne HTML Server:

- [Configuring the Allowed Hosts Setting for the EnterpriseOne HTML Server](#)
- [Configuring SSL for the AIS Server](#)

### 2.3.1 Configuring the Allowed Hosts Setting for the EnterpriseOne HTML Server

In Server Manager, configure the Allowed Hosts setting for the EnterpriseOne HTML Server to specify the AIS Server host from which the EnterpriseOne HTML Server will receive requests.

1. In Server Manager, access the EnterpriseOne HTML Server managed instance.
2. Expand the Form Service area, and in the Allowed Hosts field, enter the IP Address of the AIS Server.
3. Restart the server for the changes to take effect.

---

**Note:** If the ADF enterprise application fails to connect to the server, verify that the IP Address of the AIS Server has been entered correctly in the Allowed Hosts field. If the IP Address is correct and the connection still fails, then enter an \* (asterisk) in the Allowed Hosts setting, which enables the EnterpriseOne HTML Server to accept requests from any host.

---

### 2.3.2 Configuring the Keep JAS Session Open Setting for the AIS Server

In Server Manager, ensure that the Keep JAS Session Open setting for the AIS Server is set to True/Checked.

### 2.3.3 Configuring SSL for the AIS Server

The availability of the AIS Server port number can enable ADF client access to the AIS Server without the use of a VPN. To protect information sent between the ADF client and the AIS Server, you should use SSL when configuring the AIS Server. If you enable the AIS Server for SSL (HTTPS), you must use a valid certificate. The encryption algorithm for the certificate must be supported in Java 1.6.

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**Note:** If you are using the same AIS server for EnterpriseOne ADF and EnterpriseOne Mobile support, you must use one of the following three types of encryption algorithm for the certificate:

- Signature.MD2withRSA
  - Signature.MD5withRSA
  - Signature.SHA1withRSA
- 
-

---

## Setting Up and Configuring Application Development Framework (ADF)

This chapter contains the following topics:

- [Downloading ADF Runtime](#)
- [Installing ADF Runtime Libraries on Weblogic \(WLS\)](#)
- [Configuring ADF Runtime](#)

### 3.1 Downloading ADF Runtime

Access the download using the following link:

<http://www.oracle.com/technetwork/developer-tools/adf/downloads/index.html>

From the drop-down menu, select the release that corresponds to the MTRs located in this section, and then click the Download File button.

The appropriate Oracle ADF Runtime Distribution will download.

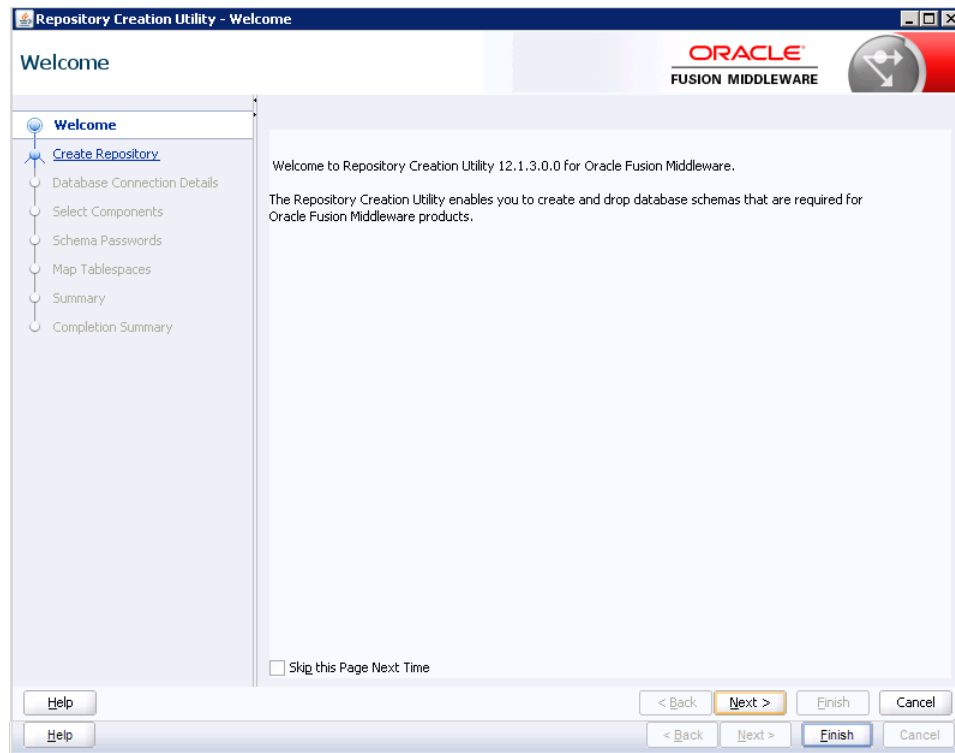
### 3.2 Installing ADF Runtime Libraries on Weblogic (WLS)

Now, to Weblogic, install the ADF Runtime Libraries you downloaded in [Section 3.1](#), "Downloading ADF Runtime".

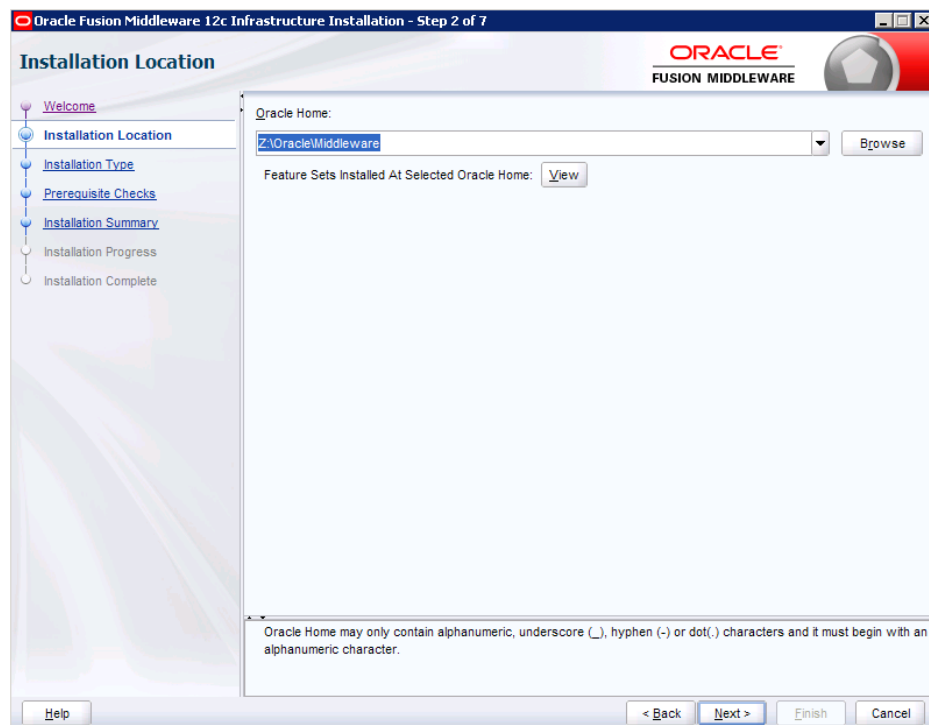
#### 3.2.1 Installing ADF Runtime

To install ADF Runtime:

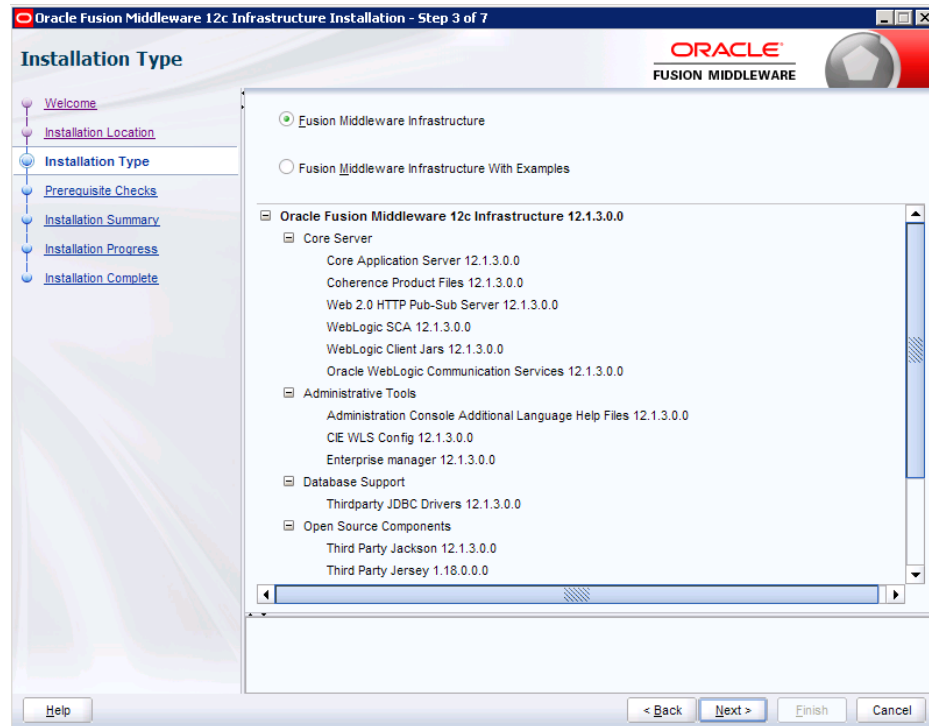
1. Change directory to java\bin folder.
2. Execute java-jar fmw\_12.1.3.0.0\_infrastructure.jar file.



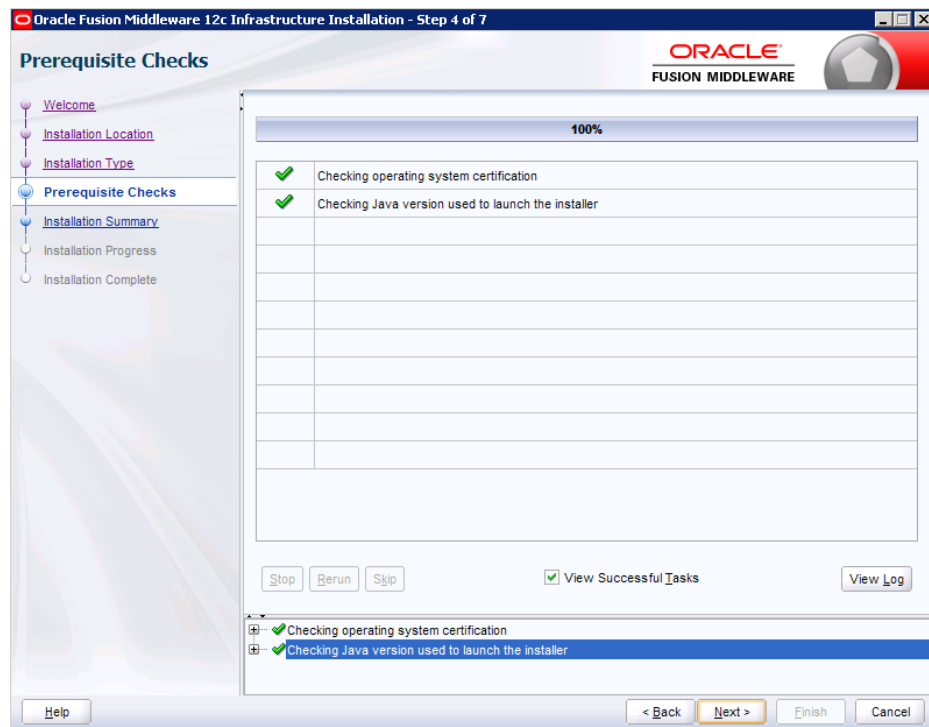
3. Click Next on the Welcome screen.



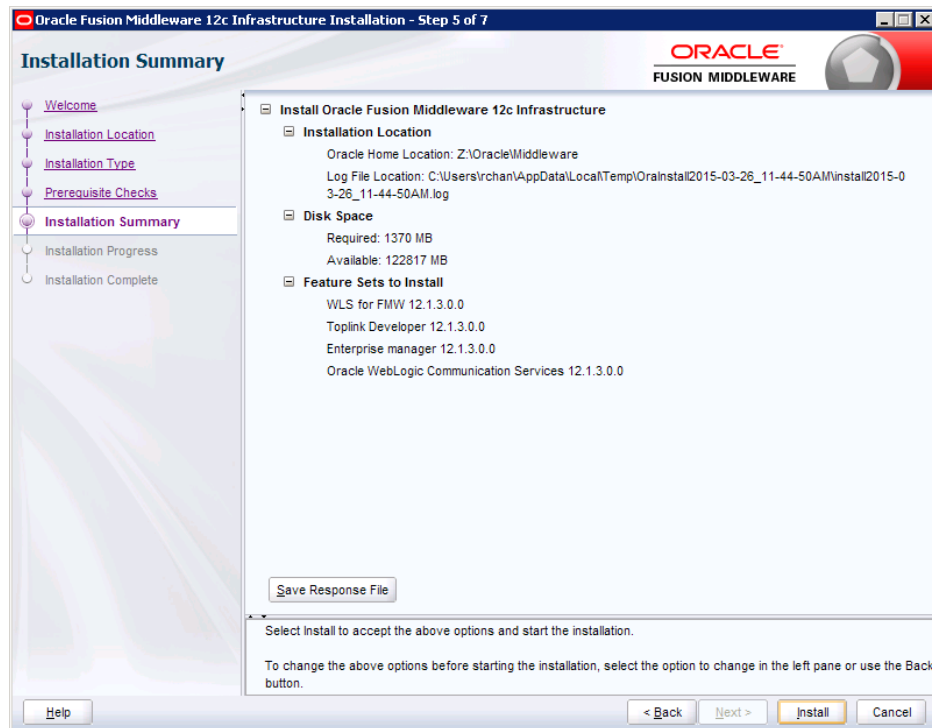
4. Enter the existing Oracle Home, for example, Oracle\Middleware)



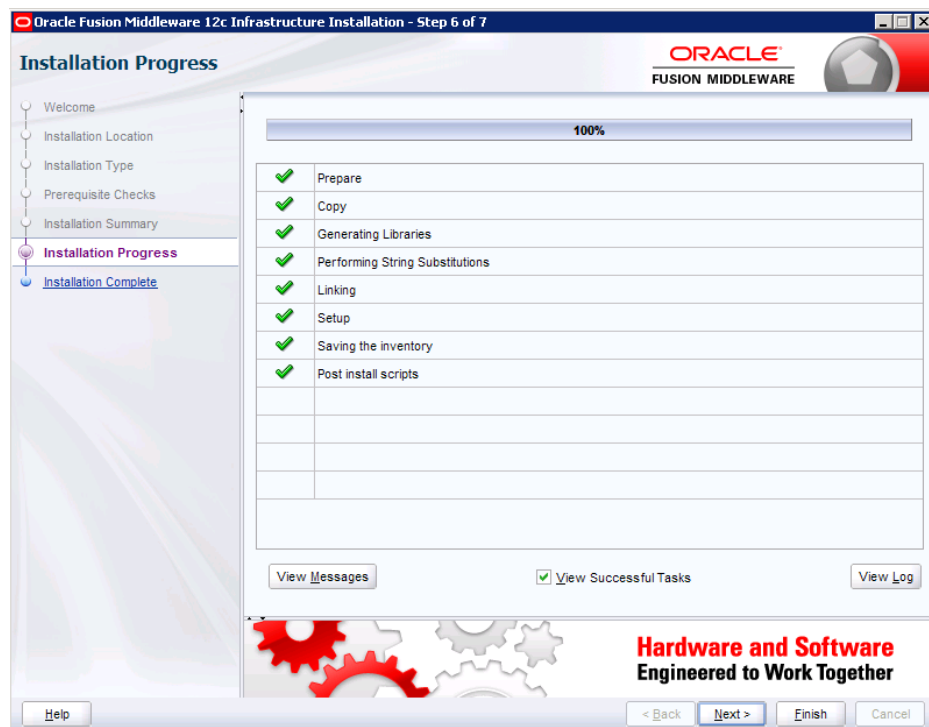
5. Select the Fusion Middleware Infrastructure option and click Next.



6. Click Next after the Prerequisite Checks.

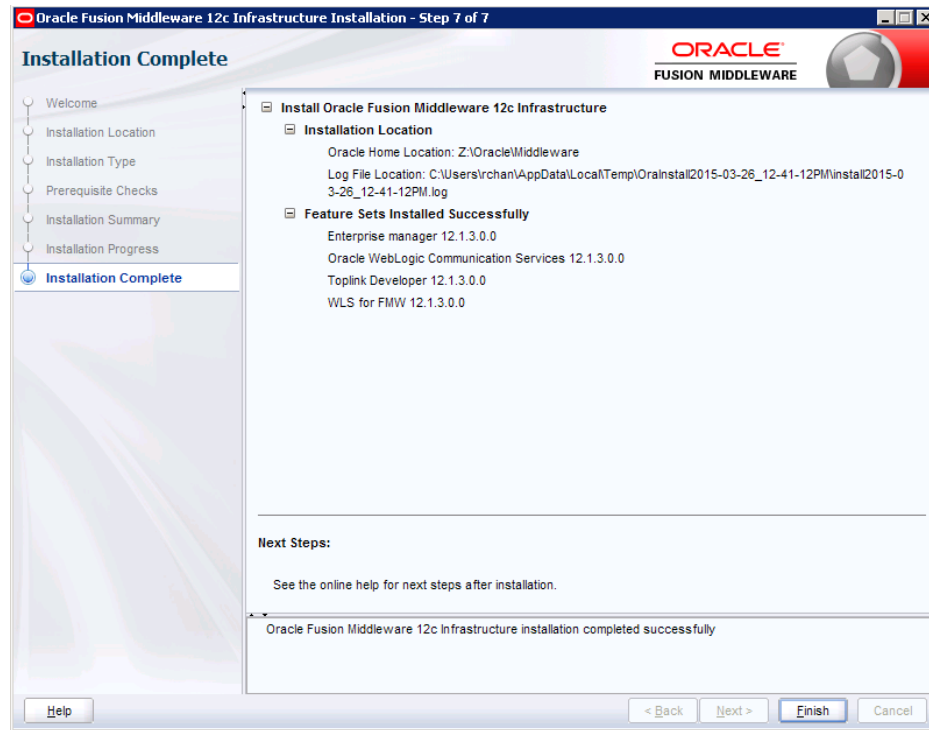


7. Review the installation summary, and then click Install.



8. Click Next when installation is completed.





9. Review the Installation Status and click Finish.

### 3.3 Configuring ADF Runtime

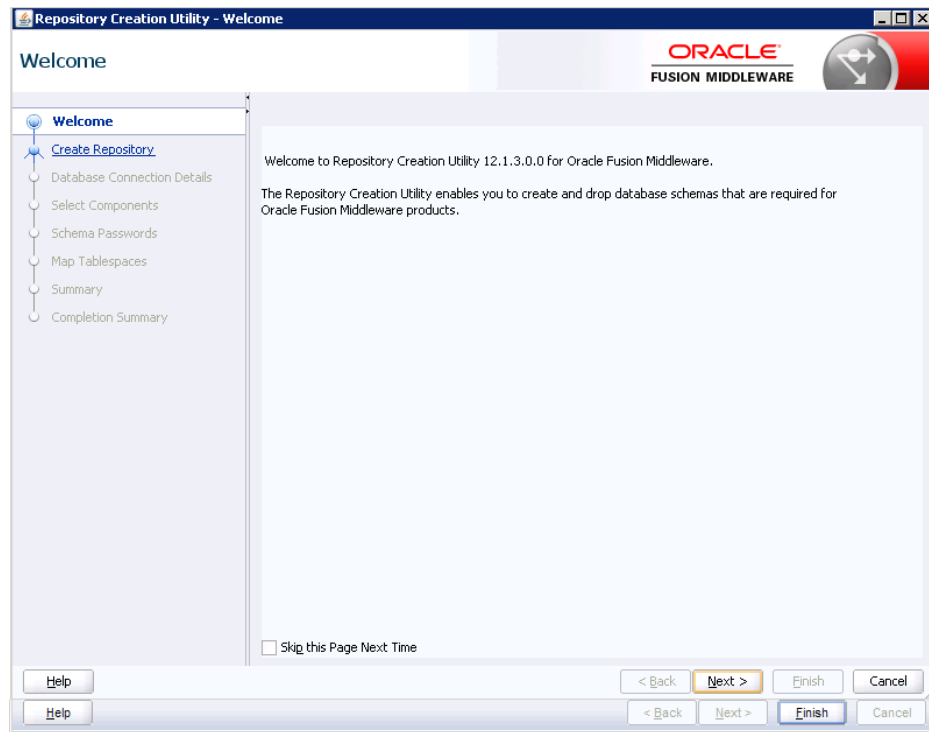
You configure the ADF runtime by completing the following tasks:

- Creating the Database Schemas using RCU
- Extending the Weblogic domain for ADF
- Creating a managed server
- Applying the JRF Template to the new managed Server

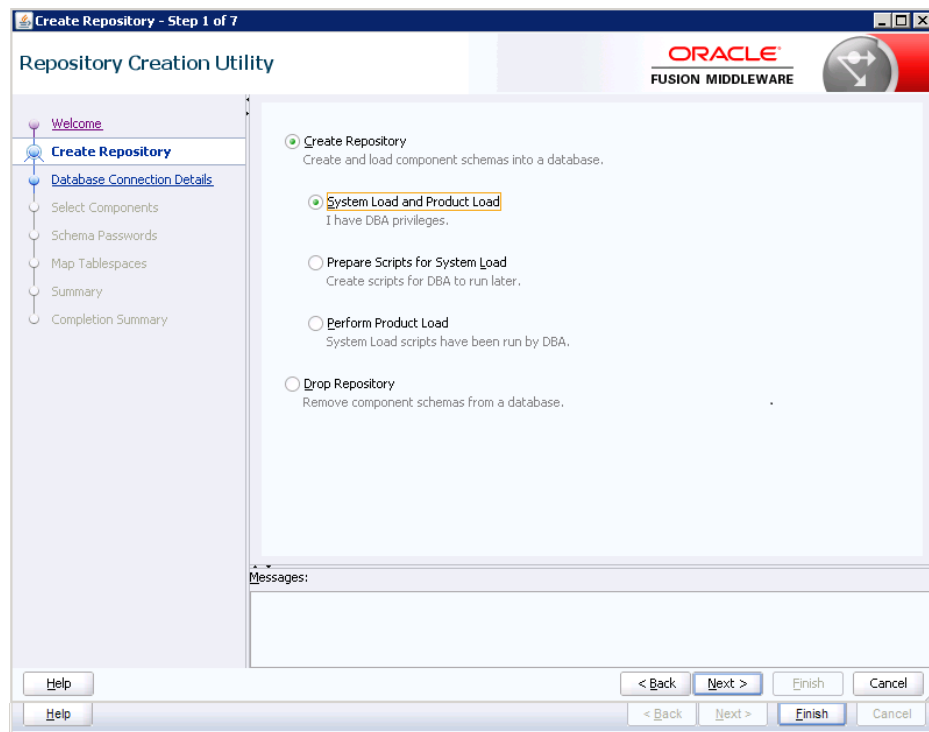
#### 3.3.1 Creating the Database Schemas using Repository Creation Utility (RCU)

To create the database schemas using RCU:

1. Execute the rcu.bat(sh) from the Oracle\_Home\oracle\_common\bin folder.



2. Click Next on the Welcome Screen.



3. Select the Create Repository, and System Load and Product Load options.

**Repository Creation Utility - Step 2 of 7**

Database Type: Oracle Database

Host Name:   
For RAC database, specify VIP name or one of the Node name as Host name.  
 For SCAN enabled RAC database, specify SCAN host as Host name.

Port:

Service Name:

Username:   
User with DBA or SYSDBA privileges. Example:sys

Password:

Role: SYSDBA  
One or more components may require SYSDBA role for the operation to succeed.

Messages:

Help < Back Next > Finish Cancel

4. Enter the database connection information.

**Repository Creation Utility - Checking Prerequisites**

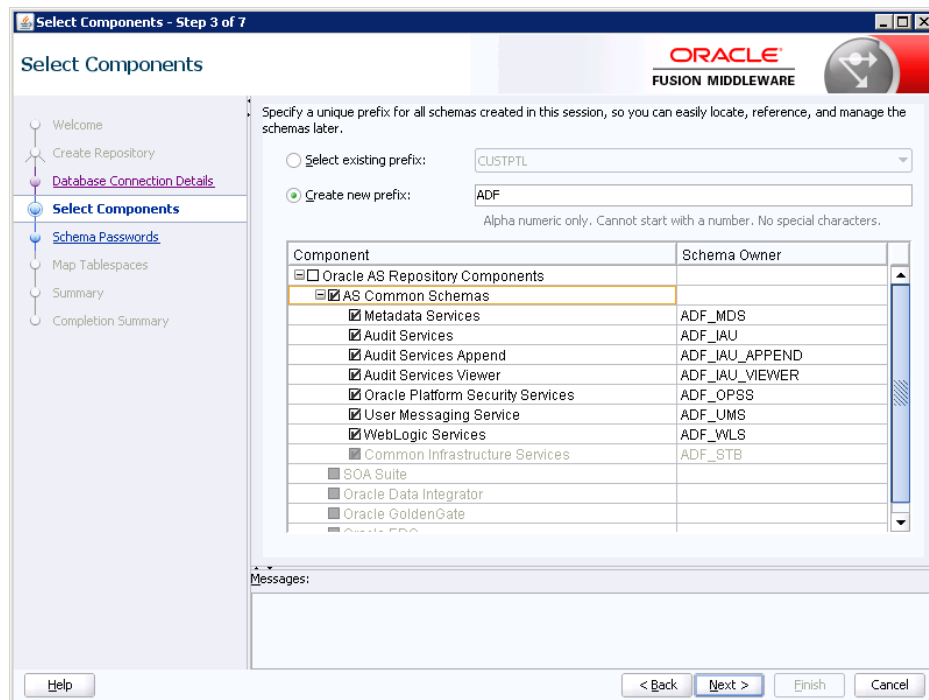
Checking Global Prerequisites

✓ Initializing repository configuration metadata	00:00.515(ms)
✓ Obtain properties of the specified database	00:00.109(ms)
✓ Check requirement for specified database	00:01.109(sec)

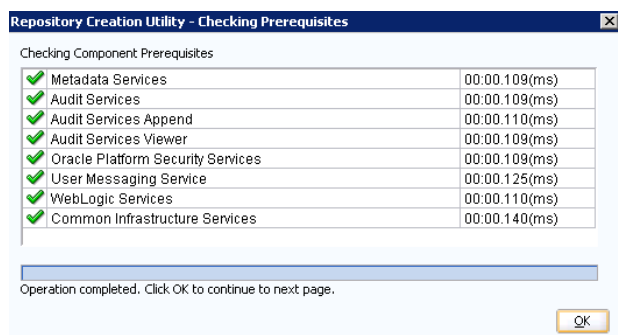
Operation completed. Click OK to continue to next page.

OK

5. Click OK after the Prerequisites Checks.



6. Enter a new schema prefix and select the AS Common Schemas.



7. The installer will perform a second check.

**Schema Passwords - Step 4 of 7**

Repository Creation Utility

Define passwords for main and auxiliary schema users.

☒ Use same passwords for all schemas

Password:

Alpha numeric only. Cannot start with a number.  
No special characters except: \$, #, \_.

Confirm Password:

☐ Use main schema passwords for auxiliary schemas

☐ Specify different passwords for all schemas

Messages:

Help < Back **Next >** Finish Cancel

8. Enter the password for all schemas.

**Map Tablespaces - Step 5 of 7**

Repository Creation Utility

Default and temporary tablespaces for the selected components appear in the table below.  
To create new tablespaces or modify existing tablespaces, use the 'Manage Tablespaces Button'

Manage Tablespaces

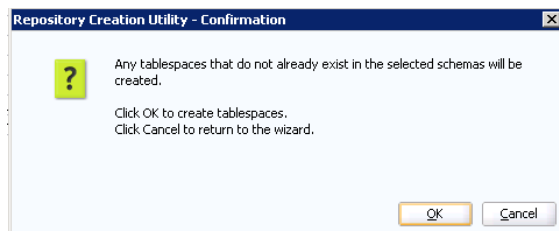
Component	Schema Owner	Default Tablespace	Temp Tablespace
Metadata Services	ADF_MDS	*ADF_MDS	*ADF_IAS_TEMP
Audit Services	ADF_IAU	*ADF_IAS_IAU	*ADF_IAS_TEMP
Audit Services Append	ADF_IAU_APPEND	*ADF_IAS_IAU	*ADF_IAS_TEMP
Audit Services Viewer	ADF_IAU_VIEWER	*ADF_IAS_IAU	*ADF_IAS_TEMP
Oracle Platform Securit...	ADF_OPSS	*ADF_IAS_OPSS	*ADF_IAS_TEMP
User Messaging Service	ADF_UMS	*ADF_IAS_UMS	*ADF_IAS_TEMP
WebLogic Services	ADF_WLS	*ADF_WLS	*ADF_IAS_TEMP
Common Infrastructur...	ADF_STB	*ADF_STB	*ADF_IAS_TEMP

\* Default tablespaces (specified in the configuration files) are to be created upon confirmation.

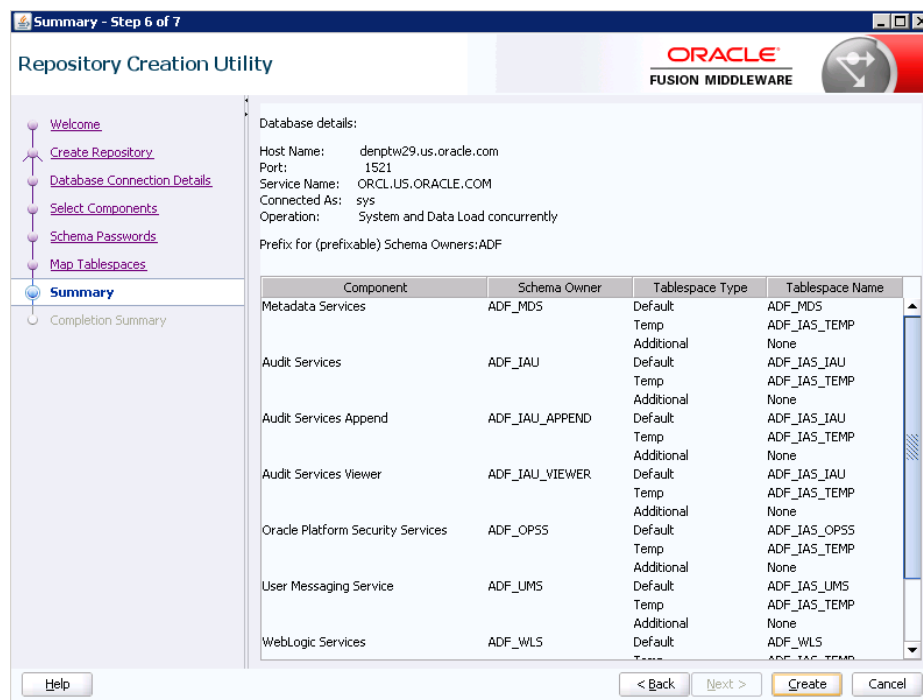
Messages:

Help < Back **Next >** Finish Cancel

9. Review the tablespaces information.



10. Click OK to confirm tablespaces creation.



11. Click Create.



12. Click Close when the tablespaces creation is completed.

### 3.3.2 Extending the Weblogic Server Domain for ADF Runtime

Since your ADF applications will be on the same domain as your ADF libraries, then you need to extend the Weblogic Server Domain for ADF Runtime.

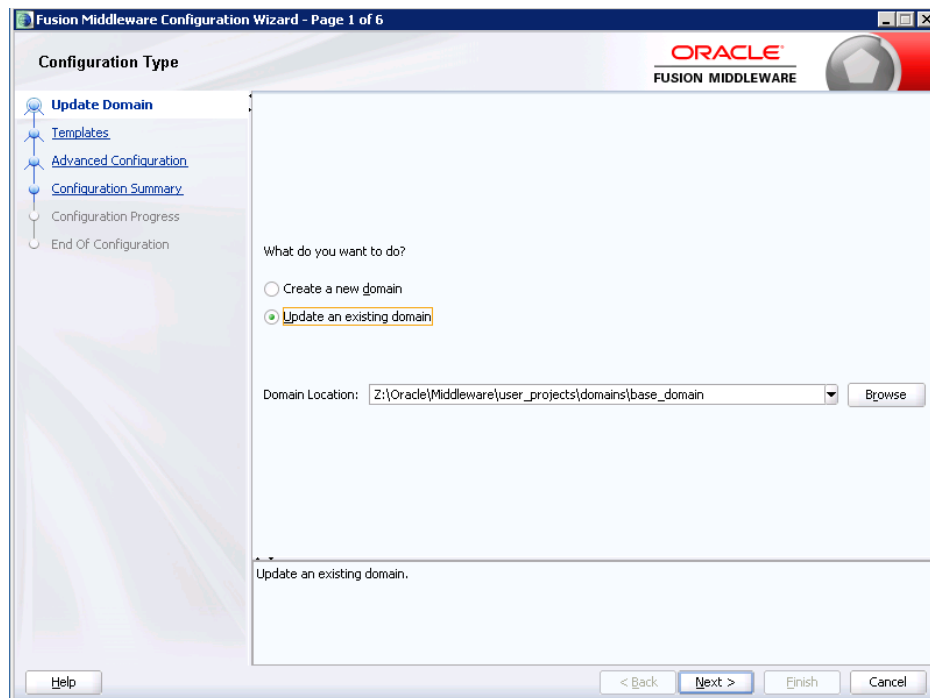
---

**Note:** If you have not yet created the WLS domain, you can choose "Create a new domain" instead of "Update an existing domain."

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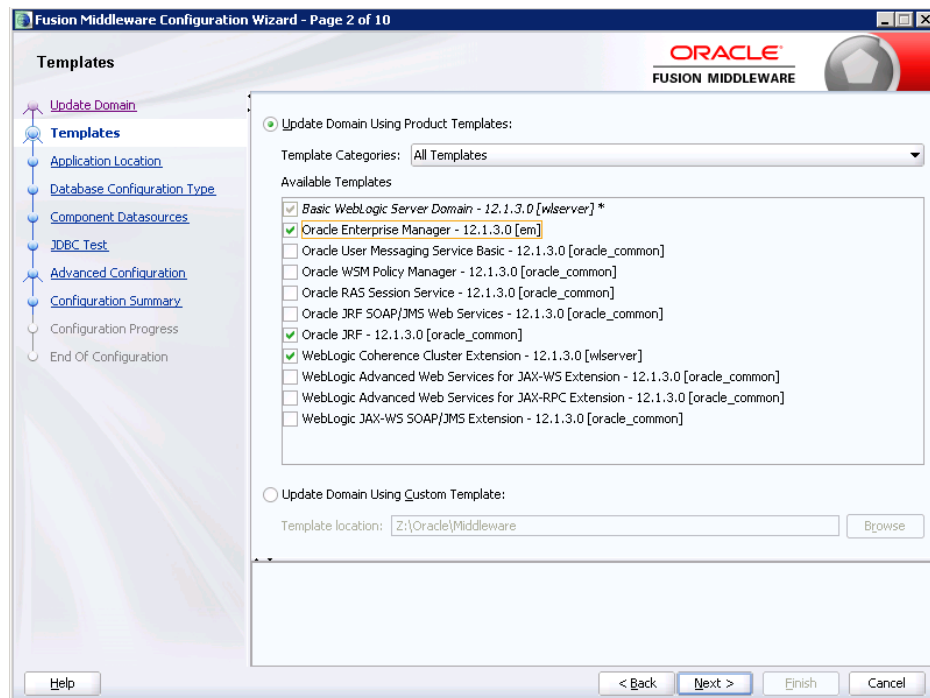
To extend the Weblogic server domain for ADF runtime:

1. Execute the config.cmd(sh) from Oracle\_Home\oracle\_common\common\bin folder.



2. Click the Update an existing domain option.

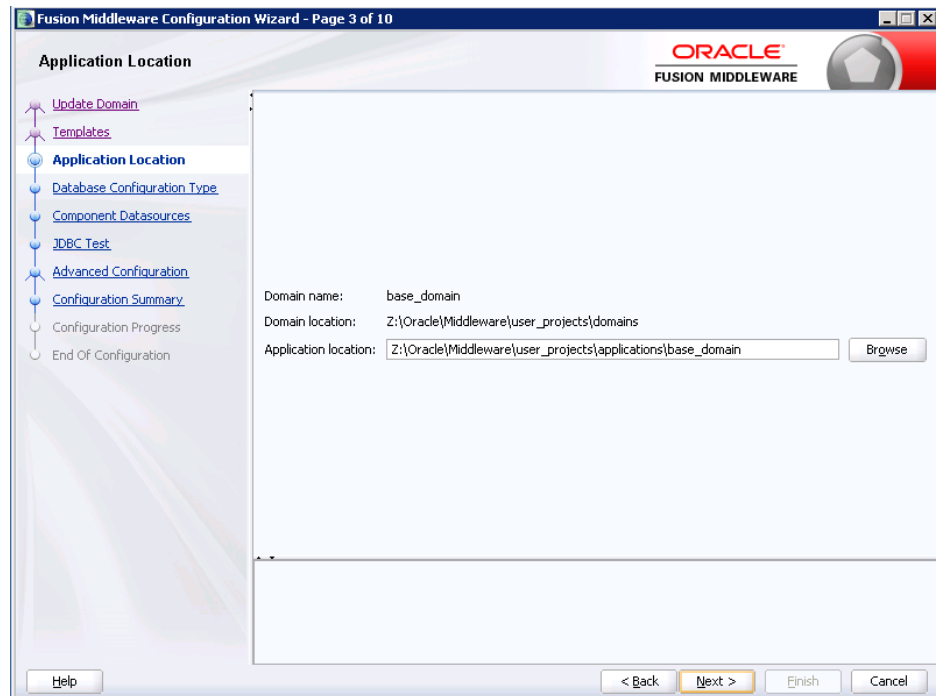
The Create a new domain will be similar.



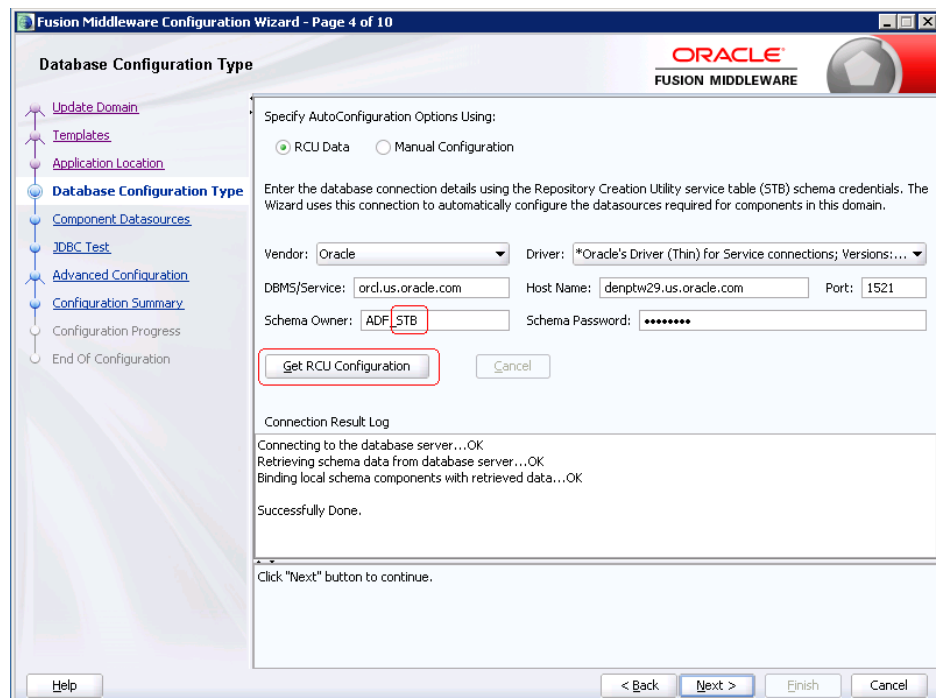
3. Select the Oracle Enterprise Manager option.

The other two options will be selected automatically.





4. Verify the Domain location, and then click Next.



5. Enter the Database Configuration.  
Be sure to use the *prefix\_STB* schema.
6. Click Get RCU Configuration to verify the connection.

**Fusion Middleware Configuration Wizard - Page 5 of 10**

**JDBC Component Schema**

Oracle FUSION MIDDLEWARE

Vendor:  Driver:

DBMS/Service:  Host Name:  Port:

Schema Owner:  Schema Password:

Oracle RAC configuration for component schemas:

☐ Convert to GridLink ☐ Convert to RAC multi data source ☐ Don't convert

Edits to the data above will affect all checked rows in the table below.

<input type="checkbox"/>	Component Schema	DBMS/Service	Host Name	Port	Schema Owner	Schema Password
<input type="checkbox"/>	LocalSvcTbl Schema	ORCL.US.ORAC	denptw29.us.orad	1521	ADF_STB	*****
<input type="checkbox"/>	OPSS Audit Schema	ORCL.US.ORAC	denptw29.us.orad	1521	ADF_IAU_APPE	*****
<input type="checkbox"/>	OPSS Audit Viewer Schen	ORCL.US.ORAC	denptw29.us.orad	1521	ADF_IAU_VIEW	*****
<input type="checkbox"/>	OPSS Schema	ORCL.US.ORAC	denptw29.us.orad	1521	ADF_OPSS	*****

Help < Back Next > Finish Cancel

7. Review the Data Source Components and verify that the connection info is correct.

**Fusion Middleware Configuration Wizard - Page 6 of 10**

**JDBC Component Schema Test**

Oracle FUSION MIDDLEWARE

<input checked="" type="checkbox"/>	Status	Component Schema	JDBC Connection URL
<input checked="" type="checkbox"/>	✓	LocalSvcTbl Schema	jdbc:oracle:thin:@//denptw29.us.oracle.com:1521/ORCL.US.ORACLE.COM
<input checked="" type="checkbox"/>	✓	OPSS Audit Schema	jdbc:oracle:thin:@//denptw29.us.oracle.com:1521/ORCL.US.ORACLE.COM
<input checked="" type="checkbox"/>	✓	OPSS Audit Viewer	jdbc:oracle:thin:@//denptw29.us.oracle.com:1521/ORCL.US.ORACLE.COM
<input checked="" type="checkbox"/>	✓	OPSS Schema	jdbc:oracle:thin:@//denptw29.us.oracle.com:1521/ORCL.US.ORACLE.COM

Test Selected Connections Cancel Testing

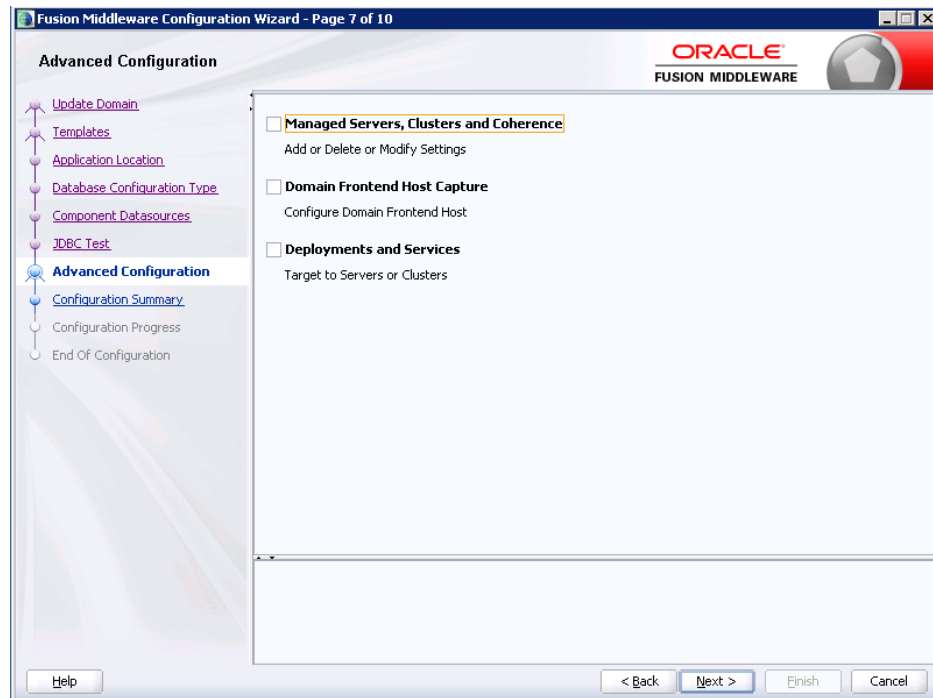
Connection Result Log

Component Schema=LocalSvcTbl Schema  
 Driver=oracle.jdbc.OracleDriver  
 URL=jdbc:oracle:thin:@//denptw29.us.oracle.com:1521/ORCL.US.ORACLE.COM  
 User=ADF\_STB  
 Password=\*\*\*\*\*  
 SQL Test=SELECT 1 FROM DUAL

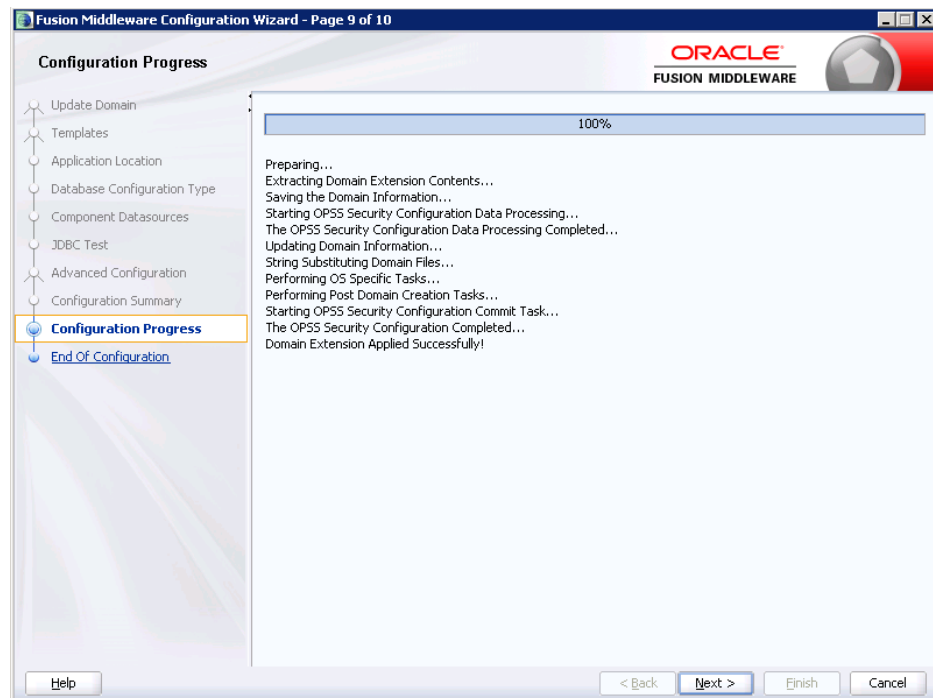
CFGFWK-64213: Test Successful  
 CFGFWK-64213: JDBC connection test was successful.

Help < Back Next > Finish Cancel

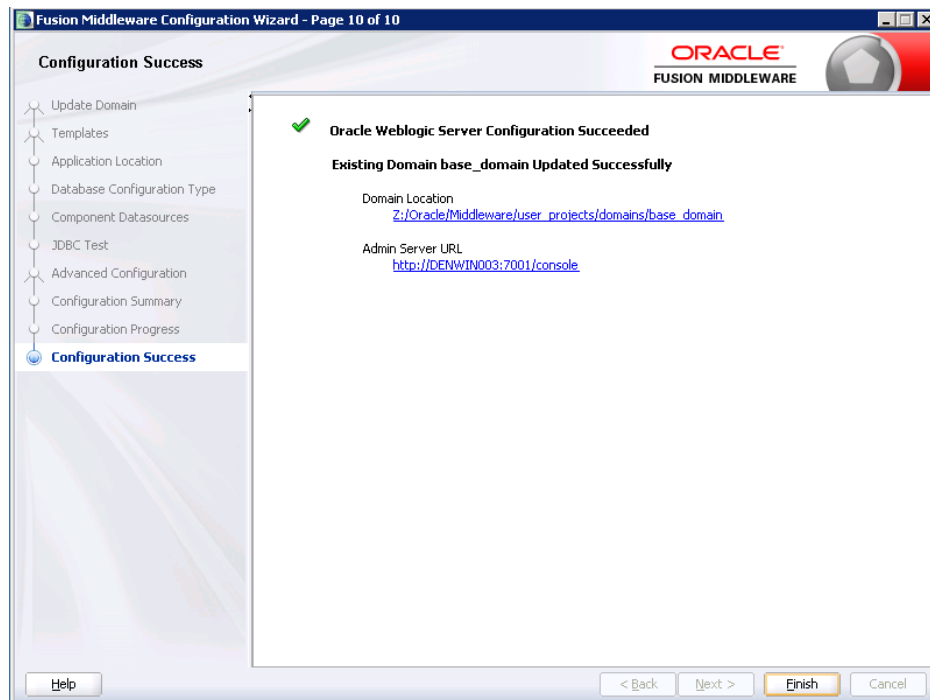
8. The test connection should return successfully.



9. Click Next without selecting any options.
10. Review the Configuration Summary, and then click Update.



11. Click Next when the upgrade process is completed.



12. Click Finish to exit the installer.

### 3.3.3 Creating a Managed Server

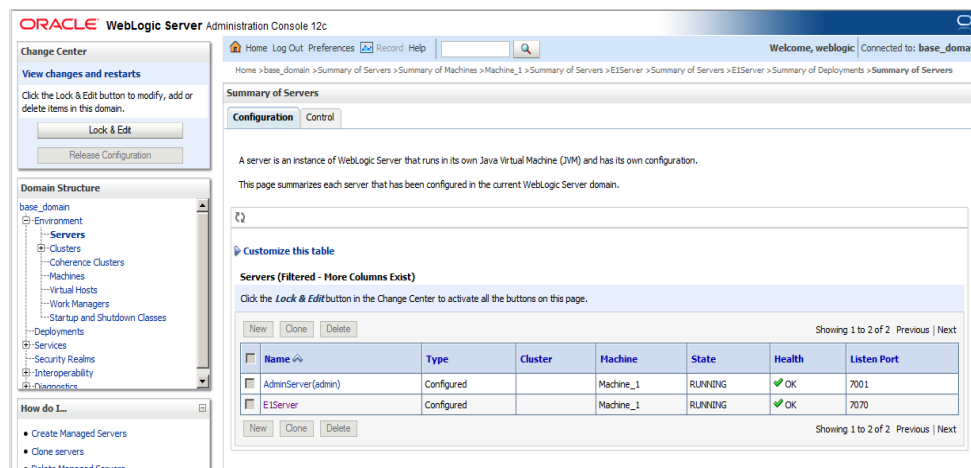
To create a managed server:

1. Launch the Weblogic Admin Console.
2. Click Server, and then click Lock and Edit.
3. Click New to create a Managed Server.

---

**Note:** If you have Server Manager agent installed and have registered the Weblogic instance to your Server Manager, you can create the J2EE container from Server Manager.

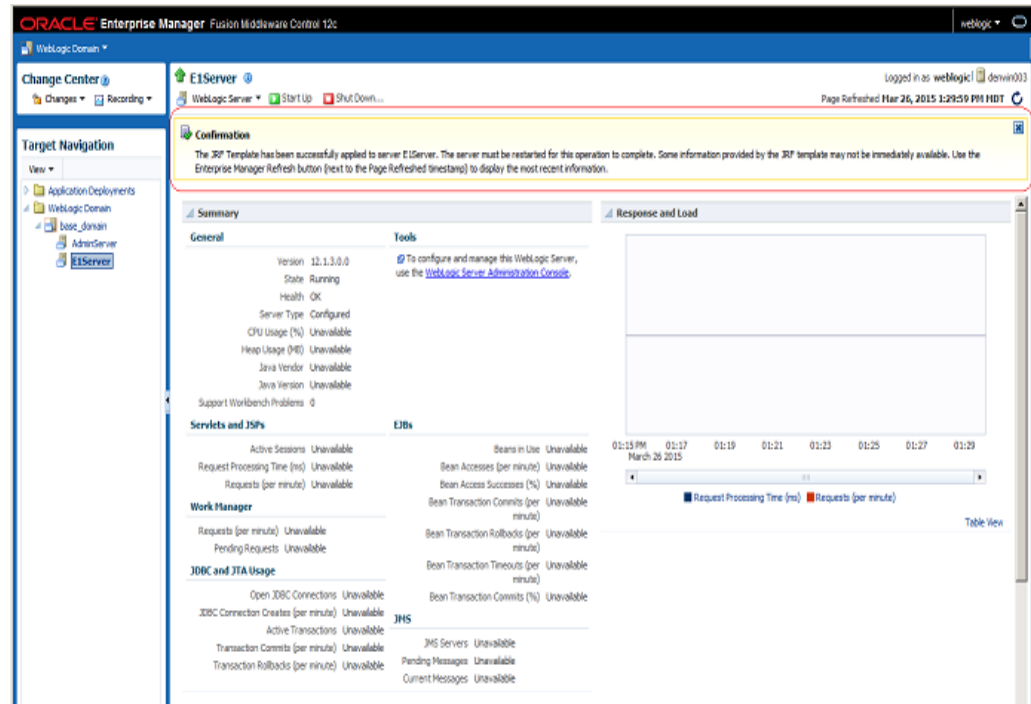
---



### 3.3.4 Applying the JRF Template to the New Managed Server

To apply the JRF template to the new managed server:

1. Sign on to Weblogic Enterprise Manager. <http://server:port/em>.
2. Select the Managed Server.
3. Click the JRF Template.



4. Review the Confirmation message.  
Now this server is ready for deployment.



---

# Building and Installing EnterpriseOne ADF Application

This chapter contains the following topics:

- Section 4.1, "Downloading EnterpriseOne ADF Foundation"
- Section 4.2, "Downloading EnterpriseOne ADF Applications"
- Section 4.3, "Installing EnterpriseOne ADF Applications"
- Section 4.4, "(Optional) Configuring EnterpriseOne ADF Applications"

## 4.1 Downloading EnterpriseOne ADF Foundation

To download the EnterpriseOne ADF foundation, complete the following steps:

1. Access the Oracle Update Center.  
<https://updatecenter.oracle.com>
2. Search for the ADF Par file, and download it to your destination server.  
Search for Type EnterpriseOne ADF.
3. Download the appropriate version of the E1 ADF Container.  
Unless otherwise noted, this will be the latest version.

### 4.1.1 Files Included in the Download

The following files will be downloaded to the directory you choose.

---

**Note:** The E1UserSession.jar provides classes required for creating E1 ADF applications. See the *JD Edwards EnterpriseOne Tools Developing and Customizing EnterpriseOne Simplified User Applications Guide* for more information.

---

- E1 ADF Container/build.xml
- E1 ADF Container/build.properties
- E1 ADF Application/build.xml
- E1 ADF Application/build.properties
- JDEADFContainer.ear

To locate the download on the **JD Edwards Update Center**, use the Type field to search on EnterpriseOne ADF. The download is available in a package titled E1\_ADF\_Foundation\_1.1.0. The download contains the following files:

- Ant Build Scripts (Ant build/deploy scripts for EnterpriseOne ADF applications and JDEADFContainer.ear).
- JDEADFContainer.ear (EnterpriseOne ADF Container web application)
- E1UserSession.jar (Helper classes required for developing EnterpriseOne ADF applications)

## 4.2 Downloading EnterpriseOne ADF Applications

To download the EnterpriseOne ADF applications, complete the following steps:

1. Access the Oracle Update Center.  
<https://updatecenter.oracle.com>
2. Use Type EnterpriseOne ADF to see the list of available EnterpriseOne ADF applications.  
Search for Type EnterpriseOne ADF.
3. Download the latest version of the EnterpriseOne ADF Applications, unless otherwise noted.

### 4.2.1 Files Included in the Download

The ADF Library JAR files will be downloaded to the directory you choose.

## 4.3 Installing EnterpriseOne ADF Applications

EnterpriseOne ADF applications are ADF bounded task flows packaged into ADF library jar files. They are not separate web applications and cannot run outside of the EnterpriseOne ADF Container (JDEADFContainer). Therefore, you must deploy EnterpriseOne ADF applications in a library WAR file on the same domain for them to run inside the EnterpriseOne ADF Container web application.

### 4.3.1 Using EnterpriseOne ADF Application Build Script to Build the EnterpriseOne ADF Applications Library

The build script uses the `wldeploy` task to deploy artifacts to server instances or clusters on a Weblogic server. The following list contains facts you need to know:

- The scripts must execute on a machine with a Weblogic install to access the `wldeploy` task definition class. This install can be the integrated Weblogic instance included with a JDeveloper install, or a standalone Weblogic server.
- Before executing the deploy targets from the Ant scripts using the command line, the environment must be setup to use the `wldeploy` task, according to instructions in the Basic Steps for Using `wldeploy` section of the "wldeploy Ant Task Reference" chapter in the *Oracle® Fusion Middleware: Developing Applications for Oracle Weblogic Server12c Release 1(12.1.1)* guide.
- These scripts will only deploy to Weblogic servers.



- The following instructions execute the build script from the command line. Alternatively, you can execute the build script from within JDeveloper. See [Section 7.3, "Executing the Build Script from JDeveloper"](#).

### Build Directories and Contents

Prior to executing the build script to generate the library WAR file, the build location needs to include the following files and directory, where the directory contains the ADF library jar files to include in the library WAR file.

**Table 4–1**

Name	Type
E1 ADF Application/ADFLibraryJARs	File Folder
E1 ADF Application/build.properties	PROPERTIES File
E1 ADF Application/build.xml	XML Ant Script File

### build.properties file

The properties listed in the following table are located in the build.properties file. These properties should be populated prior to running the script to deploy so that the EnterpriseOne ADF applications library manifest file is updated with the correct settings.

**Table 4–2**

Ant Script Property	Description
implementation.version	Identifies the implementation version of the library WAR file
specification.version	Identifies the specification version of the library WAR file
created.by	Identifies the entity that created the library WAR file

The build.properties file can be modified to point to a different JAR directory, if desired. However, you should not modify the extension-name property. The JDEADFContainer requires a library WAR file that matches the name specified for this property.

### Running the Build Script

Once the properties are set in the build.properties file, you can execute the script at the command line using the following commands:

**\$ant**

or

**\$ant build**

These commands will execute the build target in the Ant script, which packages the bounded task flow library jar files from the ADFLibraryJARs directory into a deployable library WAR file created in the deploy directory.

**Table 4–3**

Name	Type
E1 ADF Application/ADFLibraryJARs	File folder
deploy	File folder
build.properties	PROPERTIES File
build.xml	XML Ant Script File

The JDETaskFlowLibrary.war file in the deploy directory can then be manually deployed to a Weblogic server instance or cluster or can be automatically deployed, as described in section [Section 5.1.2, "Using EnterpriseOne ADF Container Build Script to Install/Deploy the EnterpriseOne ADF Container to a Weblogic Server"](#).

### 4.3.2 Using EnterpriseOne ADF Application Build Script to Install/Deploy the EnterpriseOne ADF Applications Library to a Weblogic Server

This section explains how to install and deploy EnterpriseOne ADF Applications Library to a Weblogic Server.

#### Build Directories and Contents

Prior to executing the build script to install/deploy the EnterpriseOne ADF Applications to a Weblogic server, the build location needs to include the files as described in [Table 4–3](#).

#### build.properties file

The Ant script can also be used to immediately deploy the JDETaskFlowLibrary.war file to a Weblogic Server instance or cluster once the build process has completed.

The following table lists properties in the build.properties file that need to be populated prior to running the script to deploy:

**Table 4–4**

Ant Script Property	Description
weblogic.server.host	The host on which the Administration Server is running.
weblogic.server.port	The port which the Administration Server is listening.
weblogic.deploy.targets	A comma-separated list of the target servers, clusters, or virtual hosts to which the JDE task flow library is deployed.
weblogic.debug	Enables wldesploy debugging messages.
weblogic.verbose	Specifies whether wldesploy displays verbose output messages.
weblogic.remote.deploy	Specifies if the server is located on a different machine. This affects how filenames are transmitted. The default value is true for this property.
weblogic.upload.war	Specifies if the JDETaskFlowLibrary.war file is copied to the Administration server's upload directory prior to deployment. The default value is true for this property.

**Running the Build Script**

Once the properties are set in the build.properties file, you can execute the script at the command line in the directory that contains the build.xml script file using one of the following commands:

**\$ant deploy**

or

**\$ant build-and-deploy**

The first command will execute the script's deploy target only and attempt to deploy the JDETaskFlowLibrary.war to the specified Weblogic servers and/or clusters. If the library war file does not exist, an error message is displayed, instructing the user to run the build target first. The second command will first launch the script's build target and then the deploy target, if the JDETaskFlowLibrary.war file was successfully created. The user will be prompted to enter the Weblogic server username and password during deployment.

## 4.4 (Optional) Configuring EnterpriseOne ADF Applications

This section describes how to configure EnterpriseOne ADF applications.

### 4.4.1 EnterpriseOne ADF Application Security

**Setting up Security for ADF/Proxy Applications**

When you create an EnterpriseOne ADF application, you associate it with a proxy application, which is a standard EnterpriseOne application (Form Design Aid (FDA) application). You configure security on the proxy application through the Security Workbench (the same as all FDA applications).

### 4.4.2 EnterpriseOne ADF Application Versions

You can create different versions of the proxy application associated with an EnterpriseOne ADF application. See the *JD Edwards EnterpriseOne Tools Developing and Customizing EnterpriseOne Simplified User Applications* guide for details about this.

### 4.4.3 EnterpriseOne ADF Application Processing Options

You can define a different set of processing options for each version of an EnterpriseOne ADF application. See the *JD Edwards EnterpriseOne Tools Developing and Customizing EnterpriseOne Simplified User Applications* guide for details about this.



---

# Building and Deploying EnterpriseOne ADF Container

This chapter contains the following topics:

- [Installing EnterpriseOne ADF Container](#)

## 5.1 Installing EnterpriseOne ADF Container

This section describes how to install EnterpriseOne ADF Container.

---

**Important:** You must have completed the steps to install the JDETaskFlowLibrary.war file outlined in Chapter 4.

---

### 5.1.1 Using EnterpriseOne ADF Container Build Script to Update the e1adf.ini Settings

The build script uses the wldeploy task to deploy artifacts to server instances or clusters on a Weblogic server. The following list contains facts you need to know:

- The scripts must execute on a machine with a Weblogic install to access the wldeploy task definition class. This install can be the integrated Weblogic instance included with a JDeveloper install, or a standalone Weblogic server.
- Before executing the deploy targets from the Ant scripts using the command line, the environment must be setup to use the wldeploy task, according to instructions in the Basic Steps for Using wldeploy section of the "wldeploy Ant Task Reference" chapter in the *Oracle® Fusion Middleware: Developing Applications for Oracle Weblogic Server 12c Release 1 (12.1.1)* guide.
- These scripts will only deploy to Weblogic servers.
- The following instructions execute the build script from the command line. Alternatively, you can execute the build script from within JDeveloper. See [Section 7.3, "Executing the Build Script from JDeveloper"](#).

#### Build Directories and Contents

Prior to executing the Ant script to update the e1adf.ini values, the build location needs to include the following files:

**Table 5–1 Build Location Files**

Name	Type
E1 ADF Container/build.xml	XML Ant Script File

**Table 5–1 (Cont.) Build Location Files**

Name	Type
E1 ADF Container/ build.properties	PROPERTIES File
E1 ADF Container/JDEADFContainer.ear	EAR File

**build.properties file**

Before the JDEADFContainer.ear file can be deployed, the e1adf.ini file needs to be configured so the web application can communicate with the EnterpriseOne JAS. An Ant script is used to update the following values in the e1adf.ini file:

**Table 5–2**

e1adf.ini Property	Ant Script Property	Description
aisServer	ais.server	The URL of the AIS server used to populate data in the ADF applications. Usually this AIS server is configured to point to the same JAS server where Simplified UI is configured. Use the URL you kept track of from section 2.2 for this property.
deviceName	device.name	The device name sent with every request to the AIS Server (AIS requires it).
jasWhitelist	jas.whitelist	Comma-delimited list of JAS URLs that are allowed to imbed this EnterpriseOne ADF Container when Simplified User Interface is configured on the JAS server.  The whitelist needs a comma-delimited list of server URLs for JAS. The server URL should be of the form <Protocol>://<IP Address/Fully Qualified Domain Name>:<Port>.  The IP Address/Fully Qualified Domain Name value depends on how the server has been set up and what URL the client (browser) sees as the server's origin. There is no penalty for an incorrect value being part of the whitelist, as long as the correct value is also present.
injectIframeBustingHeaders	inject.framebusting.headers	When set to true Content Security Policy (CSP) headers are included on every response from the ADF server, false indicates no CSP headers are added.  The recommended setting is True.
sessionTimeout	session.timeout	The amount of time the E1 ADF Container session stays alive while the user is not interacting with it, expected in milliseconds - recommended to be longer than E1 HTML Server.  Be sure to define the EnterpriseOne ADF Container session timeout following this guideline:  EnterpriseOne HTML server session timeout < EnterpriseOne ADF Container session timeout < AIS server session timeout

You need to update the build.properties file for each of the Ant Script Property entries listed in [Table 5–2](#).

### Running the Build Script

You execute the script at the command line from the directory that contains the build.xml script file using either of the following commands:

**\$ant**

or

**\$ant build**

These commands execute the build target in the Ant script, which unpackages the JDEADFContainer.ear file, updates the e1adf.ini file, and repackages the .ear file in a new deploy directory, as listed in the following table:

**Table 5–3**

Name	Type
E1 ADF Container/deploy	File Folder
E1 ADF Container/build.properties	PROPERTIES File
E1 ADF Container/build.xml	XML Ant Script File
JDEADFContainer.ear	EAR File

The JDEADFContainer.ear file in the deploy directory can then be manually deployed to a Weblogic server instance or cluster, or follow the instructions in section [Section 4.3.2, "Using EnterpriseOne ADF Application Build Script to Install/Deploy the EnterpriseOne ADF Applications Library to a Weblogic Server"](#).

## 5.1.2 Using EnterpriseOne ADF Container Build Script to Install/Deploy the EnterpriseOne ADF Container to a Weblogic Server

Prior to deploying the EnterpriseOne ADF Container to a Weblogic server, you must have followed the instructions in section [Section 5.1.1, "Using EnterpriseOne ADF Container Build Script to Update the e1adf.ini Settings"](#).

### Build Directories and Contents

Prior to executing the Build script to install/deploy the EnterpriseOne ADF Container to a Weblogic server, the build location needs to include the files as described in [Table 5–3](#).

### build.properties file

Use the build script to deploy the updated JDEADFContainer.ear file to a Weblogic Server instance or cluster once the build process has completed.

The following table lists properties in the build.properties file that need to be populated prior to running the script to deploy:

**Table 5–4**

Ant Script Property	Description
weblogic.server.host	The host on which the Administration Server is running.
weblogic.server.port	The port which the Administration Server is listening.

**Table 5–4 (Cont.)**

<b>Ant Script Property</b>	<b>Description</b>
weblogic.deploy.targets	A comma-separated list of the target servers, clusters, or virtual hosts to which the JDEADFContainer web application is deployed.
weblogic.debug	Enables wldeploy debugging messages.
weblogic.verbose	Specifies whether wldeploy displays verbose output messages.
weblogic.remote.deploy	Specifies whether the server is located on a different machine. This affects how filenames are transmitted. The default value is true for this property.
weblogic.upload.ear	Specifies whether the JDEADFContainer.ear file is copied to the Administration Server's upload directory prior to deployment. The default value is true for this property.

**Running the Build Script**

Once the properties are set in the build.properties file, you can execute the script at the command line in the directory that contains the build.xml script file using one of the following commands:

**\$ant deploy**

or

**\$ant build-and-deploy**

The first command will execute the script's deploy target only and attempt to deploy the JDEADFContainer.ear file to the specified Weblogic servers and/or clusters. If the ear file does not exist, an error message displays instructing the user to run the build target first. The second command will first launch the script's build target and then the deploy target, if the JDEADFContainer.ear file was successfully created. The user will be prompted to enter the Weblogic server username and password during deployment.



---

## Configuring the EnterpriseOne Java Application Server (JAS)

In Server Manager, you need to populate the following settings for your EnterpriseOne HTML client jas.ini file based on your installation of the EnterpriseOne ADF Container.

### Security Settings

#### Server Manager HTML Client Settings Security Category

##### SimplifiedUXWhitelist

This option is a comma-delimited list of approved Simplified UX Framework web containers.

The whitelist needs a comma-delimited list of server URLs for ADF. The server URL should be of the form <Protocol>://<IP Address/Fully Qualified Domain Name>:<Port>.

The IP Address/Fully Qualified Domain Name value depends on how the server has been set up and what URL the client (browser) sees as the server's origin. There is no penalty for an incorrect value being part of the whitelist as long as the correct value is also present.

### Runtime Settings

#### Server Manager HTML Client Settings Web Runtime Category

These settings apply to the ADF server where the EnterpriseOne ADF Container has been installed.

- SimplifiedUXProtocol  
Designate the Simplified UX Framework's host server protocol (http or https).
- SimplifiedUXHost  
Designate the Simplified UX Framework's host server name.
- SimplifiedUXPort  
Designate the Simplified UX Framework's host server's port name (an integer).
- SimplifiedUXContextRoot  
Designate the context root of Simplified UX Framework.  
Use the default setting in server manager because it matches the setting provided during the EnterpriseOne ADF Container build and deploy.
- SimplifiedUXHandShake

---

Designate the handshake name of Simplified UX Framework.

Use the default setting in server manager because it matches the setting provided during the EnterpriseOne ADF Container build and deploy.

- **SimplifiedUXWebApp**

Designate the web app name of Simplified UX Framework.

Use the default setting in server manager in order to match the setting updated during the EnterpriseOne ADF Container build and deploy.

### **Timeout Settings**

[CACHE]

UserSession

Be sure to define the UserSession timeout following this guideline:

EnterpriseOne HTML server session timeout < EnterpriseOne ADF Container session timeout < AIS server session timeout

---

## Troubleshooting

This chapter contains the following topics:

- [Section 7.1, "Manually Deploying the EnterpriseOne Container and ADF Application to Weblogic"](#)
- [Section 7.2, "Build Scripts Additional Information"](#)
- [Section 7.3, "Executing the Build Script from JDeveloper"](#)
- [Section 7.4, "EnterpriseOne ADF Deployment Additional Information"](#)
- [Section 7.5, "Error Messages and their Meanings"](#)
- [Section 7.6, "ADF Charts"](#)
- [Section 7.7, "Host Verification Errors, or Failure to Open ADF Application"](#)

### 7.1 Manually Deploying the EnterpriseOne Container and ADF Application to Weblogic

This section describes how to deploy the JDEADFContainer .EAR file.

1. Open the Weblogic Server application.
2. In the Domain Structure area located on the left side of the screen, click Deployments.
3. In the Change Center area located on the left side, above the Deployments area, click the Lock & Edit button.
4. In the Summary of Deployments area, click the Install button.  
The Install Application Assistant displays.
5. In the Deployment Archive section, click the Choose File button.
6. Locate the JDEADFContainer.ear file, select it, and then click the OK button.
7. Click the Next button.
8. Click the Next button.
9. Click the Next button.
10. In the Available targets for JDEADFContainer-2 section, select the ADF server to which you want to install the JDEADFContainer.ear file, and then click the Next button.
11. Click the Finish button.

The JDEADFContainer.ear file installs on the ADF server.

12. After the JDEADFContainer.ear file installs, in the Change Center area located on the left of the screen, click the Activate Changes button.
13. On the Control tab located in the center of the screen, select the ADF Server you just installed, and then select the Servicing all Request option located on the corresponding drop-down menu.
14. Click the Yes button to start the JDEADFContainer.ear file.  
The Start Deployments screen displays.
15. Click the Yes button.
16. Verify that final state of the container is Active.

## 7.2 Build Scripts Additional Information

There are two Ant scripts required to install and deploy ADF libraries on a Weblogic server. Both Ant scripts use the wldeploy task to deploy artifacts to server instances or clusters on a Weblogic server. Both of the Ant scripts provide these additional targets:

Ant Script Target	Description
clean	Removes the build and deploy directories.
usage	Displays a list of command line options that will provide additional information about Ant or the build scripts.
undeploy	Removes the JDEADFContainer.ear or the JDETaskFlowLibrary.war from Weblogic server, depending on which ant script is executed.

## 7.3 Executing the Build Script from JDeveloper

The JDE Ant build files can be executed from within JDeveloper by adding the Ant targets to the Tools menu as External Tool executables.

To execute Ant Targets from JDeveloper menu

1. In JDeveloper, click Tools, then External Tools, and then select New from the External Tools dialog box.
2. Click Next.
3. Browse to the Ant build file you want to run, and click Next.
4. Move the build-and-deploy target to the Selected Targets field, and then click Next.
5. Set the Weblogic username and password properties needed for the build-and-deploy, deploy, and undeploy targets only. For any other Ant target in the script, these properties are not used.  
The administrative username - weblogic.username  
The administrative password - weblogic.password
6. Select the Use Default Ant Version option, and then click Next.
7. Specify the options for the Ant process, and then click Next.
8. The Weblogic.jar includes the class definition for the wldeploy Ant task used to deploy/undeploy files to/from a Weblogic server. The Weblogic.jar file can be found in the <Weblogic\_HOME>/server/lib directory, where Weblogic\_HOME is

the top-level directory of your Weblogic Server installation. This step is not necessary for any other Ant target in the build scripts.

9. Enter a caption for the menu item, and then click Next.
10. Select the Tools Menu option for the Add Items to Menus list, and then click Next.
11. Select Always, and then click Finish.

Once the Ant target is added, it can be executed from the Tools menu. During execution, the Apache Ant log will display the Ant target's status and display messages if any exceptions are thrown.

## 7.4 EnterpriseOne ADF Deployment Additional Information

EnterpriseOne ADF application deployment supports clustering.

## 7.5 Error Messages and their Meanings

This section describes error messages you may see and provides an explanation of what they mean:

1. Error: System issues prevent the application from opening. Please contact your system administrator.

The EnterpriseOne HTML server Jas log would contain additional information: "The external application launch has failed. The handshake id is null or never completed its initialization. Verify that your system is running and its ini settings are properly configured."

As the message notes, the handshake ID is either null or blank. Potential reasons for this situation could be 1. jasWhitelist on ADF server is not configured correctly and 2. AIS or ADF server(s) is (are) down.

2. Error: Invalid application data. Please contact your system administrator.

Ensure that the proxy application associated with the EnterpriseOne ADF application is properly defined and secured. Users could see this error message if the EnterpriseOne task containing the EnterpriseOne ADF application lacks a proxy app and/or task flow path/url. See the *JD Edwards EnterpriseOne Tools Solution Explorer* guide for additional details on this EnterpriseOne ADF application task).

## 7.6 ADF Charts

The ADF charts continue trying to load when there is not a monitor associated with the server. When this happens, the following error appears in the Weblogic Server Diagnostic logs:

Can't connect to X11 window server using '10.111.111.150:0.0' as the value of the DISPLAY variable.

To fix this circumstance, configure the server instances with the following Java property set to "true":

```
-Djava.awt.headless=true
```

Setting this property to "true" prevents the Java runtime from attempting to find a monitor to get the DISPLAY variable.

**To configure this property in WebLogic Server:**

1. On the Server Start tab, add `-Djava.awt.headless=true` in the Arguments field.
2. Click Save.
3. Restart the managed instance.

## **7.7 Host Verification Errors, or Failure to Open ADF Application**

If you have configured a reverse proxy and enabled Secure Sockets Layer (SSL), ensure that the Host Verification setting is set to None. You can locate this setting on your Web Logic Server, on the SSL tab, in the Advanced section.