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Application Adapter for SAP R/3 Installation Guide WebLogic Integration 10*g* Release 3 (10.3.1)

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Oracle Application Adapter for SAP R/3 Installation Guide, WebLogic Integration 10g Release 3 (10.3.1)

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Preface

This Preface contains the following topics:

- Audience
- Documentation Accessibility
- Conventions

Audience

The Oracle Application Adapter for SAP R/3 (WebLogic Integration 10g Release 3) Installation Guide is intended for system administrators who install and configure the SAP R/3 application adapter.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible to all users, including users that are disabled. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at http://www.oracle.com/accessibility/.

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Introduction

This chapter provides an overview of the Oracle Application Adapter for SAP R/3 (WebLogic Integration 10g Release 3). It contains the following topics:

- Oracle Application Adapter for SAP R/3 Overview
- Oracle Application Adapter for SAP R/3 System Requirements

Oracle Application Adapter for SAP R/3 Overview

Oracle WebLogic Integration connects to a SAP R/3 system through Oracle Application Adapter for SAP R/3. Oracle Application Adapter for SAP R/3 is an application adapter that provides connectivity and carries out interactions on a SAP R/3 system.

Types of Installation

Oracle Application Adapter for SAP R/3 can be deployed as a:

- J2CA 1.0 resource adapter and test servlet for J2CA deployments
- Web services servlet within Oracle WebLogic Integration, which is known as Oracle Adapter Business Services Engine (BSE)

Oracle Adapter Application Explorer (Application Explorer) is also provided to configure the Oracle Application Adapter for SAP R/3 (for J2CA and BSE deployments).

Oracle Application Adapter for SAP R/3 System Requirements

The following sections describe the system requirements for installing the Oracle Application Adapter for SAP R/3:

- Hardware Requirements
- Software Requirements

Hardware Requirements

Table 1–1 lists the hardware requirements for the computer where Oracle Application Adapter for SAP R/3 will be installed.

Table 1–1 Hardware Requirements

Hardware	Windows 2000	Solaris	Linux
Disk Space (to install all adapters)	200 MB	200 MB	200 MB
Memory	256 MB	256 MB	256 MB

Software Requirements

The following section describes the software requirements for Oracle Application Adapter for SAP R/3:

Operating System Requirements

Table 1–2 lists the operating system requirements for the computer where the adapter will be installed.

Table 1–2 Operating System Requirements

Operating System Version	
HP-UX	HP-UX (PA-RISC) 11.11, 11.23
Linux (x86)	Red Hat Enterprise Linux 3.0, 4.0
	SuSE SLES8, SLES9
	See Also: Oracle WebLogic Server Installation Guide for Microsoft Windows for Linux x86 for information about any required operating system patches and packages and kernel parameter settings
Sun SPARC Solaris	Sun SPARC Solaris 8, 9, 10
	See Also: Oracle WebLogic Server Installation Guide for Microsoft Windows for Solaris for information about any required operating system patches and packages, swap space requirements, and kernel parameter settings
Microsoft Windows	Windows XP Professional, Windows 2000 (SP3 or later), Windows 2003
	See Also: <i>Oracle WebLogic Server Installation Guide for Microsoft Windows</i> for information on processor, TEMP directory, virtual memory, and swap space requirements

Installing the SAP Java Connector

This section describes how to install and verify the SAP Java Connector (SAP JCo), which is required on your system before installing the Oracle Application Adapter for SAP R/3. It contains the following topics:

- Overview
- Verifying the SAP Java Connector (SAP JCo)

Overview

SAP Java Connector (SAP JCo) is a middleware component that enables the development of SAP-compatible components and applications in Java. SAP JCo supports communication with the SAP Server in both directions: inbound calls (Java calls ABAP) and outbound calls (ABAP calls Java). SAP JCo can be implemented with Desktop applications and with Web server applications.

Information on the current set of SAP connectors is available at http://service.sap.com/connectors.

The SAP Java connector Version 2.1.8 (typically named sapjco.jar) can be downloaded from the SAP site. A valid SAP service ID is required to access this file. Follow the instructions provided on the SAP Java Connector (SAP JCo) overview page to download the current version. For more information, contact your SAP BASIS Administrator.

For more information about installing SAP JCo, refer to the following Web site:

```
http://help.sap.com/saphelp_
nw04/Helpdata/EN/47/80f671ee6e4b41b63c0fe46bd6e4f8/content.htm
```

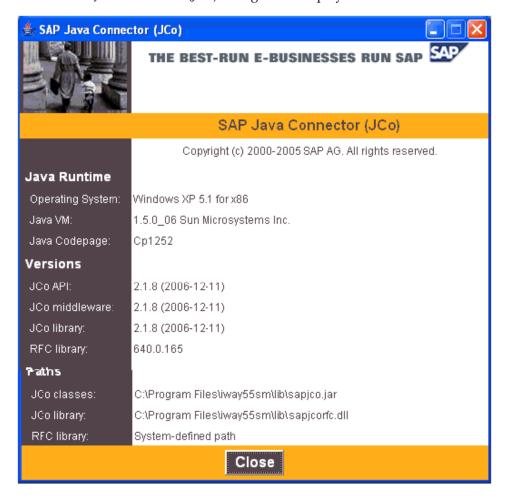
Verifying the SAP Java Connector (SAP JCo)

Once you have installed the SAP Java Connector (SAP JCo), as a best practice, you can verify the connector to make sure it is installed correctly and that all the required SAP JCo library files are available.

Verifying SAP JCo on Windows Platforms

Perform the following steps to verify SAP JCo on Windows:

- Navigate to the directory where the sapjco.jar file is located.
- Right-click the sapjco.jar file, select Open With from the context menu, and click Java 2 Platform Standard Edition binary.



The SAP Java Connector (JCo) dialog box is displayed.

All the required information that pertains to the SAP Java Connector on your Windows platform is provided.

Once you have reviewed the SAP Java Connector files, click Close.

Verifying SAP JCo on UNIX Platforms

Perform the following steps to verify SAP JCo on UNIX:

- **1.** Navigate to a UNIX command prompt.
- **2.** Execute the following command:

```
$ java -jar sapjco.jar -stdout
All the required information that pertains to the SAP Java Connector on your
UNIX platform is provided, as shown in the following example.
```

```
| SAP Java Connector (JCo) |
 Copyright (c) 2000-2005 SAP AG. All rights reserved.
| Version Information |
Java Runtime:
Operating System: SunOS 5.7 for sparc
Java VM: 1.4.0-beta3 Sun Microsystems Inc.
Java Codepage: ASCII
Versions:
```

```
JCo API: 2.1.8 (2006-12-11)
JCo middleware: 2.1.8 (2006-12-11)
JCo library: 2.1.8 (2006-12-11)
RFC library: 640.0.165
Paths:
JCo classes: /u4/fpgjpr/iWay55sm/lib/sapjco.jarJCo library:
/u4/fpgjpr/iWay55sm/lib/libsapjcorfc.so
RFC library: System-defined path
______
Manifest
______
Manifest-Version: 1.0
Ant-Version: Apache Ant 1.6.4
Created-By: 1.3.1_18-b01 (Sun Microsystems Inc.)
Specification-Title: SAP Java Connector
Specification-Version: 2.1.8
Specification-Vendor: SAP AG, Walldorf
Implementation-Title: com.sap.mw.jco
Implementation-Version: 20070108 2139 [2.1.8 (2006-12-11)]
Implementation-Vendor-Id: com.sap
Implementation-Vendor: SAP AG, Walldorf
Main-Class: com.sap.mw.jco.About
```

3. Review the information for the SAP Java Connector on your UNIX platform.

Installing the Oracle Application Adapter for SAP R/3

This chapter describes how to install the Oracle Application Adapter for SAP R/3. It contains the following topics:

- Installing Oracle Application Adapter for SAP R/3
- Postinstallation Considerations
- Uninstalling Oracle Application Adapter for SAP R/3
- Configuring Oracle Application Adapter for SAP R/3

Installing Oracle Application Adapter for SAP R/3

Oracle Application Adapter for SAP R/3 can be installed with Oracle WebLogic Integration 10g Release 3 (10.3.1).

To install the adapter, perform the following steps:

1. Install Java Development Kit (JDK) version 1.6 on the machine, if required. Oracle Application Adapter for SAP R/3 is certified with JDK version 1.6.

> **Note:** JDK 1.6 is already installed when you install Oracle WebLogic Integration.

To verify the JDK version, at the prompt, enter: **java -version**

To use the existing JDK instance, you can enter one of the following commands at the prompt.

On UNIX:

bash-3.2\$. BEA_HOME/user_projects/domains/<domain name>/bin/setDomainEnv.sh

bash-3.2\$. BEA_HOME/wlserver_10.3/common/bin/commEnv.sh

On Windows:

BEA_HOME\user_projects\domains\<domain name>\bin>setDomainEnv.cmd

BEA_HOME\wlserver_10.3\common\bin\commEnv.cmd

2. Ensure that the JDK is added to your system PATH or on one of the pre-defined paths.

If you have multiple JDK versions other than 1.6 installed on your system, ensure that JDK 1.6 is listed first in your system PATH. The installation program should install the adapter only with JDK 1.6. The adapter should not be installed with any other JDK version.

- **3.** Navigate to the location on your system where the installation executable file, iwosb.erp-adapters.win32.exe, is located. You can download this installer file from http://download.oracle.com/otn/nt/ias/101310/
- **4.** Double-click this file to start the Oracle Application Adapter for SAP R/3 installation program.

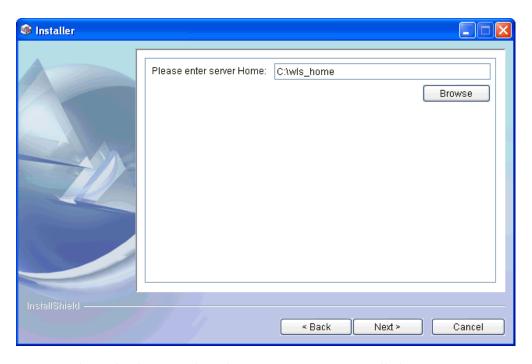
The installation program uses the JDK version that is available in your system PATH or on one of the pre-defined paths.

The Welcome screen is displayed as shown in the following image.



5. Click Next.

The Oracle WebLogic Integration Home screen is displayed as shown in the following image.



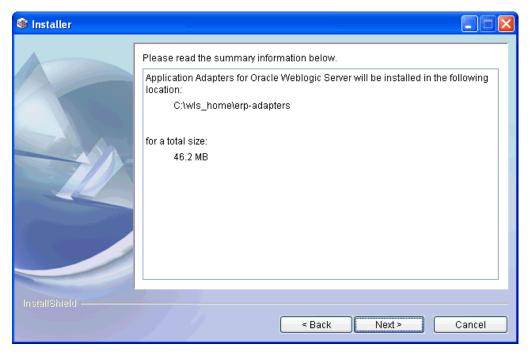
Enter the path where Oracle WebLogic Integration is installed on your system. For example:

C:\wls_home

The installation program will create a subdirectory called erp-adapters under the Oracle WebLogic Integration home where all the files for Oracle Application Adapter for SAP R/3 are installed.

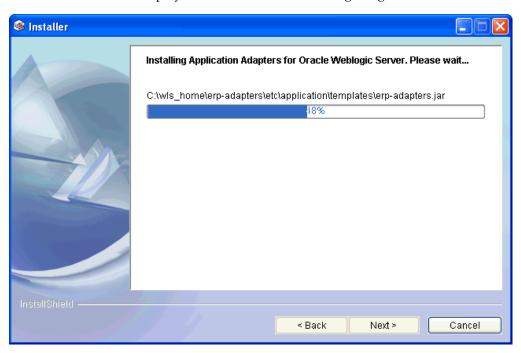
7. Click Next.

The Summary screen is displayed as shown in the following image.

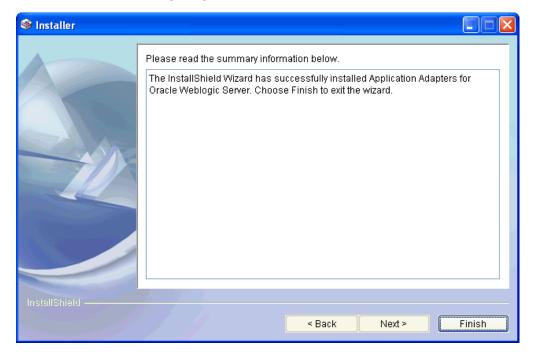


8. Review specific details on the Summary screen, including the disk requirements to ensure that you have sufficient disk space, and click Next to begin the installation.

A Status screen is displayed as shown in the following image.



After the installation is complete, an Install Confirmation screen is displayed as shown in the following image.



Click Finish.

The Oracle Application Adapter for SAP R/3 is now installed on your system in the following directory:

C:\wls_home\erp-adapters

Running the Installation Program From a Command Line

If you want the installation program to use a JDK version in a specific path, you can invoke the installer by performing the following steps:

- Navigate to the command prompt for your system.
- Enter the following command:

```
iwosb.erp-adapters.win32.exe -is:javahome c:\myfolder\jdk1.6
```

In this example, the installation program will run using JDK version 1.6.

Updating the SAP Adapter JAR File

After you install the Oracle Application Adapter for SAP R/3, you need to run a WLI-specific patch to update the SAP adapter JAR file, iwafjca.jar. Use the Smart Update tool to apply the patch with the following details:

Patch ID: 1PAJ

Patch Code: H1UZS9VD

For information about using Smart Update to apply patches, see Oracle Smart Update Installing Patches and Maintenance Packs.

After applying the patch, the iwafica.jar file is copied to the <BEA_

HOME>\erp-adapters\iwafjca.rar\, <BEA_

HOME>\erp-adapters\iwafica.war\WEB-INF\lib\, and <BEA_

HOME>\erp-adapters\lib folders.

Postinstallation Considerations

This section includes postinstallation considerations for the Oracle Application Adapter for SAP R/3, which include:

- **Directory Structure**
- Copying the Library Files

Directory Structure

The Oracle Application Adapter for SAP R/3 is installed into the erp-adapters subdirectory of your Oracle WebLogic Integration home directory. The following table shows the directory structure.

Table 3–1 Packaged Application Adapter Directory Structure

Subdirectory	Description
_uninst	Contains the uninstallation files
config	Contains the <i>J2CA_SampleConfig</i> subdirectory and the XML-file-based repository for OracleWLS Adapter J2CA
etc	Contains the ibse.ear, iwafjca.ear, iwafjca.rar, and iwse.ora files
ibse.war	Contains the BSE application and repository configuration
iwafjca.rar	Contains the J2CA application and repository configuration
iwafjca.war	Contains the J2CA Installation Verification Program (IVP)
lib	Contains library files

Table 3–1 (Cont.) Packaged Application Adapter Directory Structure

Subdirectory	Description
tools	Contains the Application Explorer graphical user interface

Copying the Library Files

Oracle Application Adapter for SAP R/3 requires you to copy library files to specific directories.

- **1.** Copy the library files for the adapter into the WLS_HOME/erp-adapters/lib directory.
- **2.** Copy the library files into the lib directory for your domain. For example:

WLS_HOME/user_projects/domains/domain_name/lib

Adapter

Library Files

Oracle Application Adapter for SAP R/3 Use any archive tool and open the archive containing the SAP JCo, sapjco.jar, and extract the runtime files. The file names can vary by operating system, but typically are contained in the root of the archive.

Note: All operating systems: You must place the sapjco.jar file in the BEA_HOME\erp-adapters\lib directory. Then, you must add the sapjco.jar to the Oracle WebLogic Server classpath.

On Windows, librfc32.dll should be placed in the %WINDIR%\system32 directory and sapjcorfc.dll should be placed in the same directory as sapjco.jar (BEA_ HOME\erp-adapters\lib). On other platforms, use the corresponding location. These library files vary by operating system. For example:

Linux/Solaris/OS400:

- libsapicorfc.so
- librfccm.so

- librfccm.sl
- libsapjcorfc.sl

AIX:

- librfccm.so
- libsapjcorfc.so

On UNIX platforms, the directory in which the shared library files are located must be added to the shared library variable applicable to the operating system. The following is a list of platforms and associated variables

AIX:

LIBPATH

HP-UX:

SHLIB PATH

Other UNIX Platforms

LD LIBRARY PATH

Solaris: The following are the two supported methods for specifying the SAP library files:

- Copy the SAP JCO files (sapjco.jar, librfccm.so, and libsapjcorfc.so) to jdk/jre/lib/sparc/server
- Copy the SAP JCO files to /usr/j2sdk1.4.2_ 09/jre/lib/sparcv9/server

Alternatively, you may add the path to these files to your environment variable definition using the Application Server Control console. For details on application server administration options, see Oracle Application Server Administrator's Guide

Refer to Oracle Application Adapter for SAP R/3 (WebLogic Server 10gr3) *User's Guide* for any additional steps required for SAP R/3.

Uninstalling Oracle Application Adapter for SAP R/3

To uninstall Oracle Application Adapter for SAP R/3 on a Windows platform, perform the following steps:

- Undeploy the Oracle Adapter J2EE Connector Architecture (J2CA) and J2CA Installation Verification Program (IVP) using the Oracle WebLogic Server Administration Console.
- Undeploy Oracle Adapter Business Services Engine (BSE) using the Oracle WebLogic Server Administration Console.

- **3.** Stop the Oracle WebLogic Server.
- Navigate to the following directory:

WLS_HOME\erp-adapters_uninst

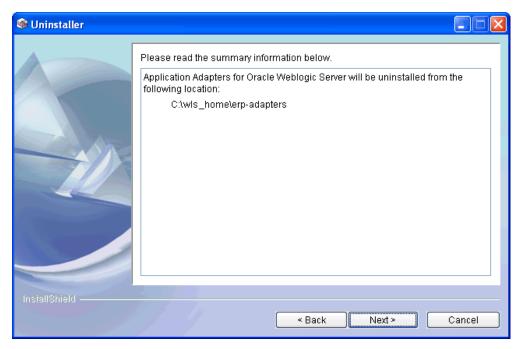
5. Double-click the **uninstaller.exe** file.

The Application Adapters for Oracle WebLogic Server Uninstallation Welcome screen is displayed as shown in the following image.



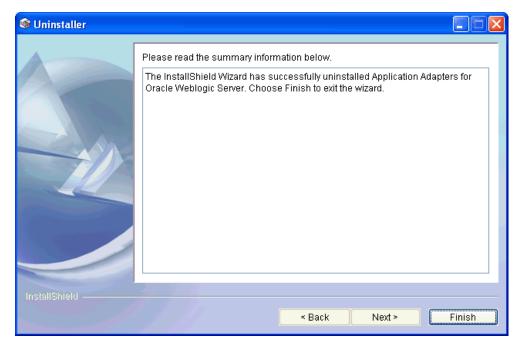
Click Next.

The following Summary screen opens, which indicates the path to the Oracle Application Adapter for SAP R/3 that will be uninstalled.



7. Click Next.

The Oracle Application Adapter for SAP R/3 is uninstalled. When the uninstallation process is finished, the following screen is displayed.



Click Finish.

To uninstall Oracle Application Adapter for SAP R/3 on UNIX and Linux platforms, perform the following steps:

- Undeploy the J2CA Connector Application and J2CA Installation Verification Program (IVP) using the Oracle WebLogic Server Administration Console.
- Undeploy Business Services Engine (BSE) using the Oracle WebLogic Server Administration Console.
- Stop the Oracle WebLogic Server.
- **4.** Navigate to the following directory:

```
WLS_HOME/erp-adapters/_uninst
```

Enter the following command at the prompt to begin the uninstallation process:

```
java -jar uninstall.jar
```

Configuring Oracle Application Adapter for SAP R/3

After Oracle Application Adapter for SAP R/3 is installed for WebLogic Integration, you can configure the appropriate repositories and deploy the J2CA connector application and OracleWLS Adapter Business Services Engine (BSE).

You must create a repository where your Web services are stored. Since you can deploy Application Explorer using the Oracle Adapter Business Services Engine (BSE) or Oracle Adapter J2CA, each implementation requires you to configure a specific repository before you can explore Enterprise Information System (EIS) metadata. The information in the repository is also referenced at run-time.

The BSE exposes, as Web services, enterprise assets that are accessible from the adapter regardless of the programming language or the particular operating system. In addition, you can use BSE as a stand-alone Java application running in Oracle WebLogic Integration.

The J2CA runs in J2EE Connector Architecture compliant application servers and uses the Common Client Interface (CCI) to provide integration services using Oracle Application Adapter for SAP R/3. After you deploy the connector, you can access the adapter.

Configuring Repositories

Application Explorer is used to configure SAP R/3 connections, browse SAP R/3 objects, configure services, and configure listeners to listen for SAP R/3 events. Metadata created while you perform these operations are stored in a repository. A repository is also used to store the SAP R/3 connection information and the Web Service Definition Language (WSDL) for services.

This section describes how to configure the appropriate repositories for Oracle Application Adapter for SAP R/3.

Configuring a File System Repository

If you do not have access to a database for the repository, you can store repository information in an XML file on your local system. However, a file system repository is less secure and efficient than a database repository. When BSE is first installed, it is automatically configured to use a file system repository.

Note: Do not use a file repository for BSE in production environments.

The default location for the repository on Windows is:

wls_home\erp-adapters\ibse.war\ibserepo.xml

On other platforms, use the corresponding location.

If you are using a file system repository, you are not required to configure any additional BSE components.

Configuring the Oracle Database Repository for J2CA

1. Execute the iwse.ora SQL script on the machine where the database is installed.

The iwse.ora SQL script is located in the following directory:

```
wls_home\erp-adapters\etc
```

This script creates the required tables that are used to store the adapter configuration information in the database. These tables are used by Application Explorer and by the adapter during design time and runtime. It is recommended that you use the same credentials to create the database repository and also in the ra.xml file for database user credentials.

```
C:\wls_home\erp-adapters\etc>sqlplus
```

```
SQL*Plus: Release 10.1.0.2.0 - Production on Tue Dec 27 18:10:44 2005
Copyright (c) 1982, 2004, Oracle. All rights reserved.
```

Enter user-name: scott

Enter password: scott1

Connected to:

Oracle Database 10g Enterprise Edition Release 10.1.0.2.0 - Production With the Partitioning, OLAP and Data Mining options

SOL>@ iwse.ora

2. Create the jcatransport.properties file and save it in the following directory:

wls_home\erp-adapters\config\J2CA_SampleConfig

Note: The jcatransport.properties file is required for each J2CA configuration that is created using Application Explorer. The J2CA configuration folder, for example, J2CA_SampleConfig, is named according to the configuration name that is specified in Application Explorer.

3. Enter values for iwafjca.repo.url, iwafjca.repo.user and iwafjca.repo.password fields in the newly created jcatransport.properties file, as shown in the following example:

iwafjca.repo.url=jdbc:oracle:thin:@90.0.0.51:1521:orcl

iwafjca.repo.user=scott

iwafjca.repo.password=scott1

The following table lists the parameters with descriptions of the information to provide.

Parameter	Description
iwafjca.repo.url	Specify the JDBC URL to use when opening a connection to the database. For example, the following repository URL format is used when connecting to Oracle:
	jdbc:oracle:thin:@host name:port;SID
iwafjca.repo.user	Specify a valid user ID to use when opening a connection to the database.
iwafjca.repo.password	Specify a valid password that is associated with the user ID.

4. Navigate to the following directory:

WLS_HOME\erp-adapters\iwafjca.rar\META-INF

- **5.** Open the ra.xml file in a text editor.
- **6.** Provide the JDBC connection information as a value for the IWAYRepo_URL property.
- **7.** Provide a valid user name for the IWAYRepo_User property.
- Provide a valid password for the IWAYRepo_Password property.
- Save your changes to the ra.xml file.

Configuring the Oracle Database Repository for BSE

1. Execute the iwse.ora SQL script on the machine where the database is installed.

The iwse.ora SQL script is located in the following directory:

wls_home\erp-adapters\etc

This script creates the required tables that are used to store the adapter configuration information in the database. These tables are used by Application Explorer and by the adapter during design time and runtime. It is recommended that you use the same credentials to create the database repository and also in the web.xml file for database user credentials.

C:\wls_home\erp-adapters\etc>sqlplus SQL*Plus: Release 10.1.0.2.0 - Production on Tue Dec 27 18:10:44 2005 Copyright (c) 1982, 2004, Oracle. All rights reserved. Enter user-name: scott Enter password: scott1 Connected to: Oracle Database 10g Enterprise Edition Release 10.1.0.2.0 - Production With the Partitioning, OLAP and Data Mining options SQL>@ iwse.ora

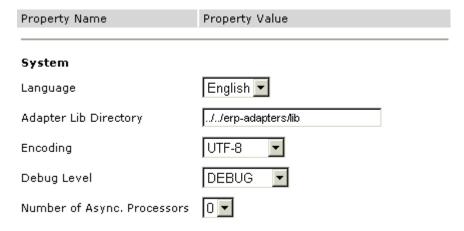
2. Display the **BSE configuration** page in a browser:

http://host name:port/ibse/IBSEConfig

Where host name is the system where BSE is installed and port is the port number on which BSE is listening.

Note: The server to which BSE is deployed must be running.

The BSE settings pane is displayed, as shown in the following figure.

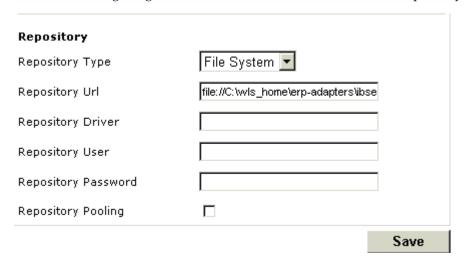


3. Configure the system settings.

The following table lists the parameters with descriptions of the information to provide.

Parameter	Description	
Language	Specify the required language.	
Adapter Lib Directory	Enter the full path to the directory where the adapter jar files reside.	
Encoding	Only UTF-8 is supported.	
Debug Level	Specify the debug level from one of the following options: None	
	• Fatal	
	Error	
	 Warning 	
	Info	
	 Debug 	
Number of Async. Processors	Select the number of asynchronous processors.	

The following image shows all fields and check boxes for the Repository pane.



4. Configure the repository settings.

BSE requires a repository to store transactions and metadata required for the delivery of Web services.

The following table lists the parameters with descriptions of the information to provide.

Parameter	Description
Repository Type	Select one of the following repositories from the list:
	Oracle
	 File (Do not use for BSE in production environments.)
Repository URL	Enter the JDBC URL to use when opening a connection to the database. For example, the following repository URL format is used when connecting to Oracle:
	jdbc:oracle:thin:@host name:port;SID

Parameter	Description
Repository Driver	Provide the driver class to use when opening a connection to the database (optional). For example, the following repository driver format is used when connecting to Oracle:
	oracle.jdbc.driver.OracleDriver
Repository User	Enter a valid user ID to use when opening a connection to the database.
Repository Password	Enter a valid password that is associated with the user ID.
Repository Pooling	If selected, repository pooling will be used. This option is disabled by default.

5. Click Save.

Configuring an HTTP Repository

J2CA users can create an HTTP repository connection, which enables them to generate and store WSDL documents remotely. Perform the following steps to create an HTTP repository connection in Application Explorer. To use the HTTP repository, make sure that the iwjcaivp test tool(jca-app-adapter-test) is successfully deployed and running.

1. Start the Application Explorer.

For more information, see Starting Application Explorer on page 3-14.

2. Right-click the **Configurations** node in the left pane and select **New**.

The New Configuration dialog box opens.

- **3.** Type a name for the configuration and click **OK**.
- **4.** Select **JCA** from the Service Provider list box and enter an HTTP target value in the Home field.

Use the following format for the HTTP target value:

http://host name:port/iwafjca/JCAServlet

For example:

http://iwserv14:7777/iwafjca/JCAServlet

5. Click OK.

The new HTTP repository connection is added to the Configurations node.

Once you connect to the remote server, you can create new Adapter targets, generate WSDL documents, and store them in the remote server.

Note: When you configure an Adapter target with the J2CA HTTP repository, you are not required to restart the Oracle WebLogic Server for run time purposes.

Application Explorer

Oracle Adapter Application Explorer (Application Explorer), a GUI tool which uses SAP R/3 object repository metadata to build XML schemas and Web services to handle adapter requests or event data.

Starting Application Explorer

To start Application Explorer:

- 1. Ensure the Oracle WebLogic Server is started where Application Explorer is deployed.
- **2.** On Windows, execute the ae.bat file, which is found under wls_ home\erp-adapters\tools\iwae\bin, where wls_home is the directory where Oracle WebLogic Server is installed.

On UNIX, load the iwae.sh script file, which is found under wls_ home/erp-adapters/tools/iwae/bin, where wls_home is the directory where Oracle WebLogic Server is installed.

Application Explorer starts. You are ready to create a configuration for Business Services Engine (BSE) or Oracle Adapter J2EE Connector Architecture (J2CA).

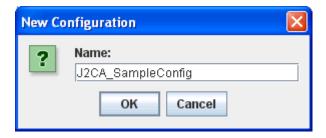
Creating a Configuration for J2CA Connector Application Using Application Explorer

To create a configuration for Oracle Adapter J2EE Connector Architecture (J2CA) using Application Explorer, you must first define a new configuration. This is a prerequisite for deploying J2CA as a Web application in Oracle WebLogic Integration.

Defining a New Configuration for J2CA

To define a new configuration for J2CA:

- 1. Start Application Explorer. For more information, see Starting Application Explorer on page 3-14.
- 2. Right-click Configurations and select New. The New Configuration dialog box is displayed.



Enter a name for the new configuration, for example, J2CA_SampleConfig, and click **OK**.

Please note that the name of the J2CA configuration that is specified here will be used during the J2CA deployment process.



From the **Service Provider** list, select JCA.

5. In the **Home** field, enter a path to your J2CA configuration directory where the repository, schemas, and other information is stored, for example:

```
wls_home\erp-adapters\
```

6. Click OK.

A node representing the new configuration appears beneath the root Configurations node.



Configuring and Deploying a J2CA Connector Application

This section describes how to configure and deploy a J2CA connector application.

Configuring Settings for the J2CA Connector Application

This section describes how to configure settings for the J2CA Connector Application and J2CA Installation Verification Program (IVP). Once the appropriate settings are configured according to your requirements, you must first deploy the J2CA Connector Application for use with Oracle WebLogic Integration using the Oracle WebLogic Server Administration Console. Once the J2CA Connector Application is deployed successfully, you can configure and deploy the J2CA Installation Verification Program (IVP).

Configuring Settings for the J2CA Connector Application

To configure settings for the J2CA Connector Application:

1. Locate the ra.xml file, which is located in the following directory:

```
wls_home\erp-adapters\iwafjca.rar\META-INF\ra.xml
```

- **2.** Open the ra.xml file in an editor.
- **3.** Enter a value for the IWayHome property.

This is the folder where the adapter is installed. For example:

```
<config-property>
   <config-property-name>IWayHome</config-property-name>
   <config-property-type>java.lang.String</config-property-type>
   <config-property-value>c:\wls_home\erp-adapters\</config-property-value>
</config-property>
```

4. Enter a value for the IWayConfig property.

This is the value that you specified when you created a new J2CA configuration using Application Explorer. For example:

```
<config-property>
   <config-property-name>IWayConfig</config-property-name>
   <config-property-type>java.lang.String</config-property-type>
   <config-property-value>J2CA_SampleConfig</config-property-value>
</config-property>
```

5. Enter a value for the Loglevel property.

This property can be set to DEBUG, INFO, or ERROR. For example:

```
<config-property>
   <config-property-name>LogLevel</config-property-name>
```

```
<config-property-type>java.lang.String</config-property-type>
   <config-property-value>DEBUG</config-property-value>
</config-property>
```

6. Save the ra.xml file and exit the editor.

Deploying the J2CA Connector Application Using the Oracle WebLogic Server **Administration Console**

To deploy the J2CA Connector Application:

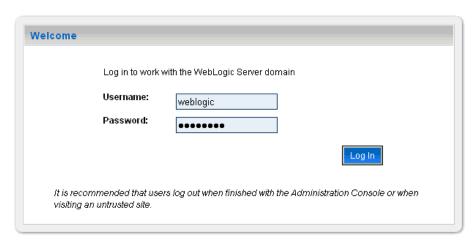
- Start the Oracle WebLogic Server for the Oracle WebLogic Server domain that you have configured.
- 2. Open the Oracle WebLogic Server Administration Console in a Web browser by entering the following URL:

http://hostname:port/console

Where hostname is the name of the machine where Oracle WebLogic Server is running and port is the port for the domain you are using. The port for the default domain is 7001.

The Oracle WebLogic Server Administration Console logon page is displayed.

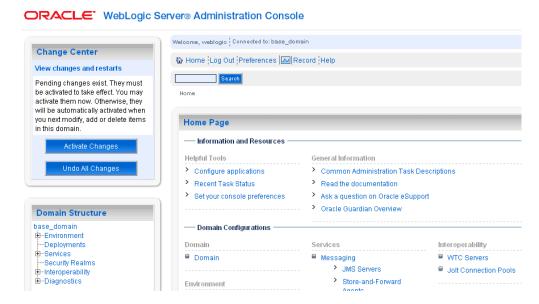
ORACLE WebLogic Server® Administration Console



WebLogic Server Version: 10.3.0.0 Copyright @ 1996,2008, Oracle and/or its affiliates. All rights reserved. Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners

Log on to the Oracle WebLogic Server Administrative Console using an account that has administrator privileges.

The Oracle WebLogic Server Administration Console home page is displayed.

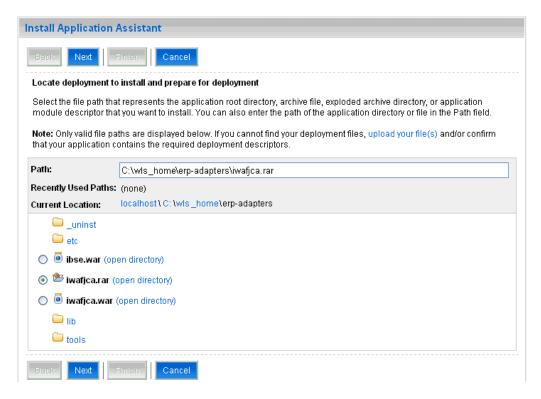


In the Domain Structure section in the left pane, click **Deployments** The Deployments page is displayed.



Click Install.

The Install Application Assistant page is displayed.

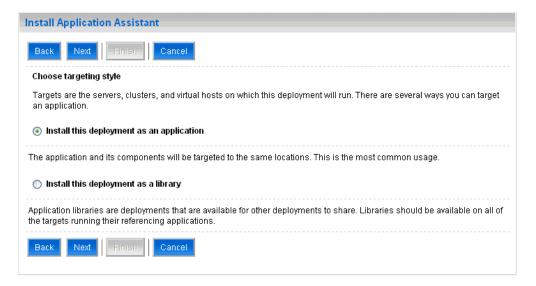


Browse to the following directory:

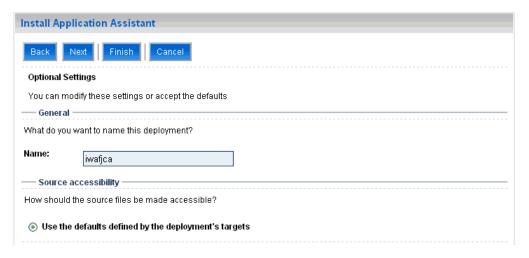
C:\wls_home\erp-adapters\iwafjca.rar

Select the radio button next to **iwafjca.rar** and click **Next**.

The Choose Targeting Style page is displayed.

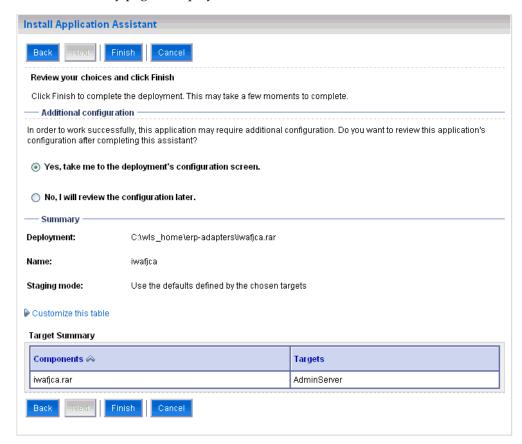


Leave the default Install this deployment as an application selected and click Next. The Optional Settings page is displayed.



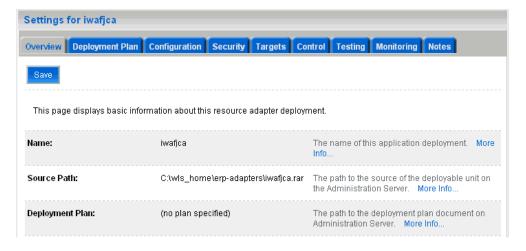
9. Click **Next** again leaving the default values.

The Summary page is displayed.



10. Click Finish.

The Settings page for the J2CA (iwafjca) Connector Application opens.



11. Click Save.

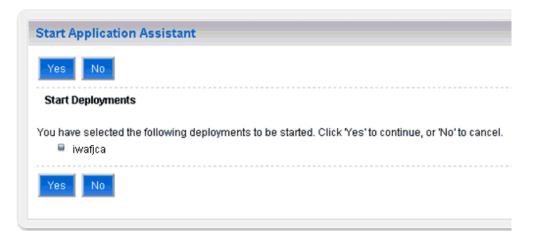
The following messages are displayed, which indicate a successful deployment.



- **12.** In the Domain Structure section in the left pane, click **Deployments**.
- 13. Navigate through the table that lists all the deployed applications until you find the J2CA (iwafjca) Connector Application.



- **14.** Select the check box next to **iwafjca**.
- **15.** Click the **Start** submenu (down arrow) and select **Servicing all requests**. The Start Application Assistant is displayed.



- **16.** Click **Yes** to start the selected deployment.
- 17. From the list of deployed applications, select iwafica.



The Settings page for the J2CA (iwafica) Connector Application opens.



18. Click the **Testing** tab.

The Outbound Connection Pools and Connections Testing page is displayed.



19. Select the check box next to eis/OracleJCAAdapter/DefaultConnection and click Test.

The Test Result column indicates **Passed**, as shown in the following image.



The J2CA (iwafjca) Connector Application has been deployed successfully to Oracle WebLogic Server.

You are now ready to configure and deploy the J2CA Installation Verification Program (IVP).

Configuring Settings for the J2CA Installation Verification Program (IVP)

The J2CA Installation Verification Program (IVP) is used to test the functionality of the adapter framework based on the J2EE Connector Architecture. To configure settings for the J2CA Installation Verification Program (IVP):

Locate the **web.xml** file, which is located in the following directory:

```
wls_home\erp-adapters\iwafjca.war\WEB-INF\web.xml
```

- Open the **web.xml** file in an editor.
- Enter a value for the **iway.jndi** parameter.

This the J2CA connection factory URL for the J2CA connector. Enter the value exactly as shown in the following example:

```
<context-param>
  <param-name>iway.jndi</param-name>
   <param-value>eis/OracleJCAAdapter/DefaultConnection/param-value>
  JNDI name for the IWAF JCA Resource Adapter. If not
  provided, the application will create a new one based
  on iway.home, iway.config and iway.loglevel.
</description>
</context-param>
```

4. Save the **web.xml** file and exit the editor.

Deploying the J2CA Installation Verification Program (IVP) Using the Oracle WebLogic Server Administration Console

To deploy the J2CA Installation Verification Program (IVP):

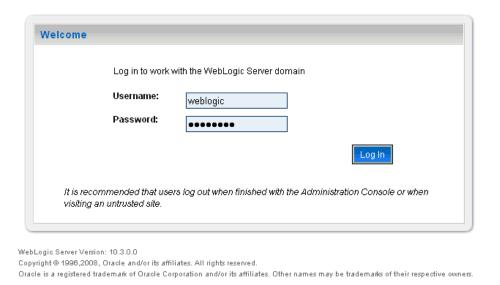
- Start the Oracle WebLogic Server for the Oracle WebLogic Server domain that you have configured.
- Open the Oracle WebLogic Server Administration Console in a Web browser by entering the following URL:

```
http://hostname:port/console
```

Where hostname is the name of the machine where Oracle WebLogic Server is running and port is the port for the domain you are using. The port for the default domain is 7001.

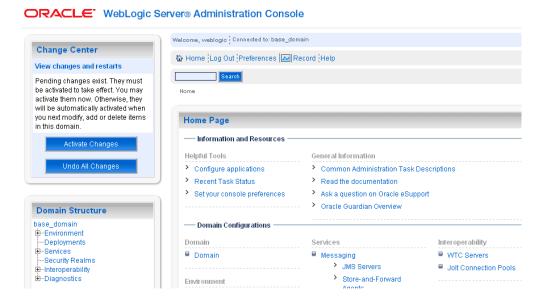
The Oracle WebLogic Server Administration Console logon page is displayed.

ORACLE WebLogic Server® **Administration Console**



Log on to the Oracle WebLogic Server Administrative Console using an account that has administrator privileges.

The Oracle WebLogic Server Administration Console home page is displayed.

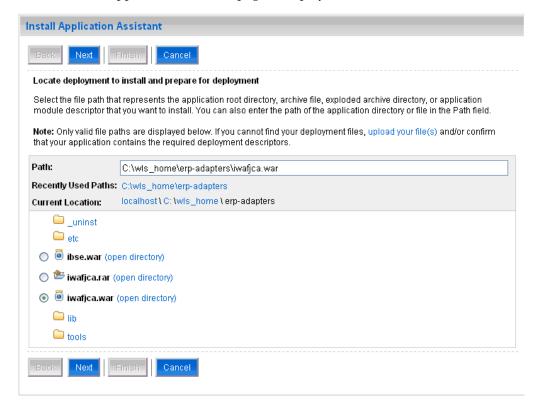


In the Domain Structure section in the left pane, click **Deployments** The Deployments page is displayed.



Click Install.

The Install Application Assistant page is displayed.

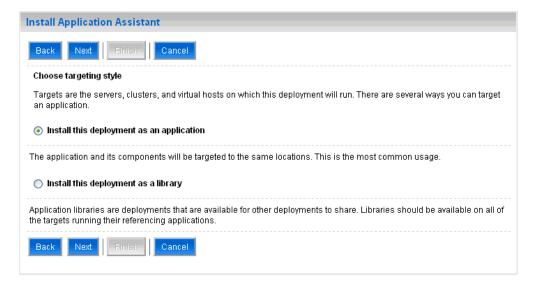


Browse to the following directory:

C:\wls_home\erp-adapters\iwafjca.war

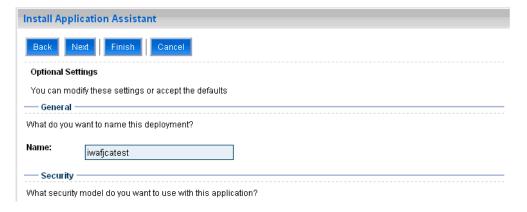
7. Select the radio button next to **iwafjca.war** and click **Next**.

The Choose Targeting Style page is displayed.



Leave the default **Install this deployment as an application** selected and click Next.

The Optional Settings page is displayed.

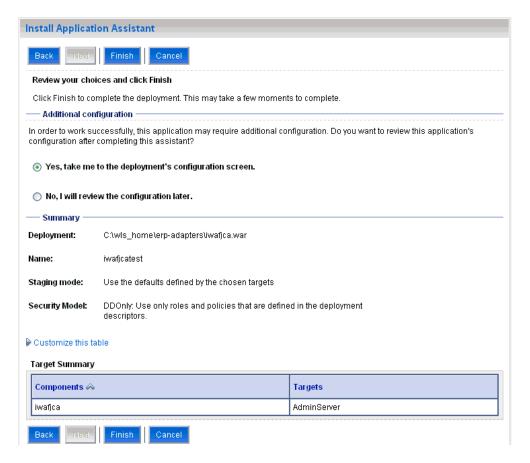


9. In the Name field, enter the following:

iwafjcatest

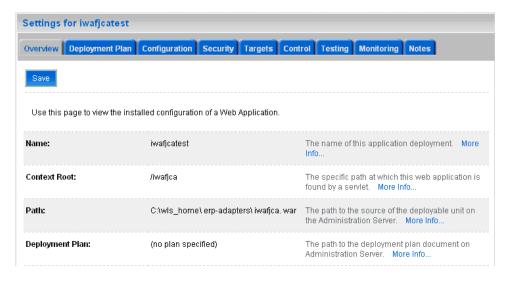
10. Click **Next** and leave the remaining default values unchanged.

The Summary page is displayed.



11. Click Finish.

The Settings page for the J2CA Installation Verification Program (IVP) opens.



12. Click Save.

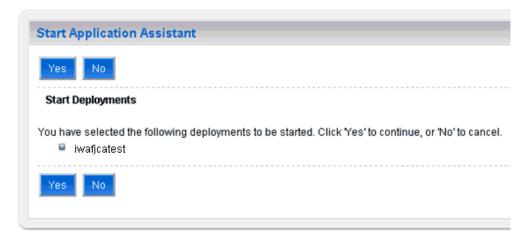
The following messages are displayed, which indicate a successful deployment.



- **13.** In the Domain Structure section in the left pane, click **Deployments**.
- 14. Navigate through the table that lists all the deployed applications until you find the J2CA (iwaficatest) Installation Verification Program (IVP).



- **15.** Select the check box next to **iwafjcatest**.
- **16.** Click the **Start** submenu (down arrow) and select **Servicing all requests**. The Start Application Assistant is displayed.



- 17. Click Yes to start the selected deployment.
- **18.** From the list of deployed applications, select **iwafjcatest**.



The Settings page for the J2CA (iwaficatest) Installation Verification Program (IVP) opens.



19. Click the **Testing** tab.

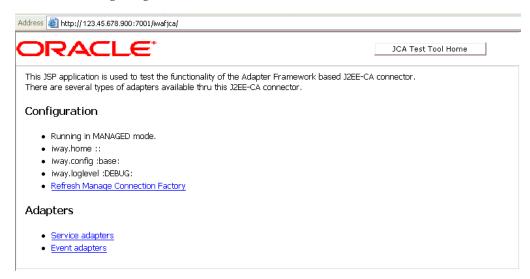
The Deployment Tests page is displayed.



20. Click the following link:

http://123.45.678.900:7001/iwafjca

The Oracle J2CA Test Servlet page opens in a new browser window, as shown in the following image.



Once adapter targets are created using Application Explorer, you can select these targets and test outbound connections from the Oracle J2CA Test Servlet. Please note that Oracle WebLogic Server must be restarted after adapter targets are created using Application Explorer. For more information on creating SAP R/3 targets using Application Explorer, see the Oracle Application Adapter for SAP R/3 User's Guide.

The J2CA (iwaficatest) Installation Verification Program (IVP) has been deployed successfully to Oracle WebLogic Server.

Connecting to a J2CA Configuration Using Application Explorer

To connect to a new J2CA configuration:

- Right-click the configuration to which you want to connect, for example, J2CA_ SampleConfig.
- **2.** Select **Connect**.

Nodes appear for Adapters and Events. Please note that you can configure events using a J2CA configuration only.

The following is an example of a J2CA configuration named J2CA_SampleConfig:



- Use the **Adapters** folder to create inbound interactions with Oracle Application Adapter for SAP R/3. For example, you can use the SAP node in the Adapters folder to configure a service that updates SAP R/3.
- Use the **Events** folder to configure listeners that listen for events in SAP $\mathbb{R}/3$.

You can now define new targets to Oracle Application Adapter for SAP R/3. For more information, see the Oracle Application Adapter for SAP R/3 User's Guide.

Creating a Configuration for Business Services Engine Using Application Explorer

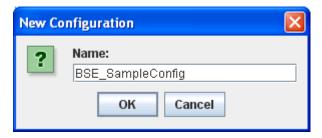
To create a configuration for Oracle Adapter Business Services Engine (BSE) using Application Explorer, you must first define a new configuration. This is a prerequisite for deploying BSE as a Web application in Oracle WebLogic Integration.

Defining a New Configuration for BSE

To define a new configuration for BSE:

- Start Application Explorer.
 - For more information, see Starting Application Explorer on page 3-14.
- **2.** Right-click **Configurations** and select **New**.

The New Configuration dialog box is displayed.



Enter a name for the new configuration, for example, BSE_SampleConfig, and click **OK**.

Please note that the name of the BSE configuration that is specified here will be used during the BSE deployment process.



- From the **Service Provider** drop-down list, select **iBSE**.
- In the iBSE URL field, accept the default URL or replace it with a different URL with the following format:

http://host name:port/ibse/IBSEServlet

Where host name is the system on which Oracle WebLogic Integration resides and port is the HTTP port number where Oracle WebLogic Integration is listening.

Click **OK**.

A node representing the new configuration appears beneath the root Configurations node.



Configuring and Deploying Business Services Engine

This section describes how to configure and deploy Business Services Engine (BSE).

Configuring Settings for Oracle Adapter Business Services Engine (BSE)

To configure settings for BSE:

1. Locate the **web.xml** file, which is located in the following directory:

```
wls_home\erp-adapters\ibse.war\WEB-INF\web.xml
```

- Open the **web.xml** file in an editor.
- Enter a value for the **ibseroot** parameter.

This is the folder where the BSE files are stored in subdirectories for each adapter. For example:

```
<context-param>
  <param-name>ibseroot</param-name>
   <param-value>C:\wls_home\erp-adapters\ibse.war</param-value>
   <description>ibse root directory</description>
</context-param>
```

Enter a value for the **iway.home** parameter.

This is the folder where the adapter is installed. For example:

```
<context-param>
   <param-name>iway.home</param-name>
   <param-value>c:\wls_home\erp-adapters</param-value>
   <description>license file location</description>
</context-param>
```

5. Enter a value for the **iway.config** parameter.

This is the value that you specified when you created a new BSE configuration using Application Explorer. For example:

```
<context-param>
  <param-name>iway.config</param-name>
   <param-value>BSE_SampleConfig</param-value>
   <description>Base Configuration</description>
</context-param>
```

- **6.** Save the **web.xml** file and exit the editor.
- **7.** From the same directory, open the **ibseconfig.xml** file in an editor.
- Enter a value for the **afroot** parameter, which is the path to the adapter lib directory. For example:

```
<param name="afroot" type="string" required="false" value="c:\wls_</pre>
home\erp-adapters\lib"/>
```

9. Save the **ibseconfig.xml** file and exit the editor.

Deploying OracleWLS Adapter Business Services Engine (BSE) Using the Oracle WebLogic Server Administration Console

To deploy BSE:

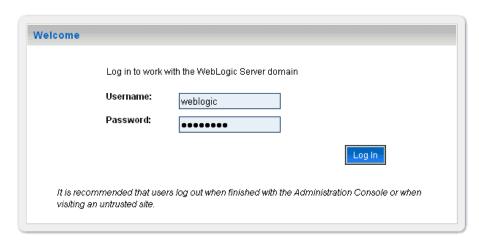
- 1. Start the Oracle WebLogic Server for the Oracle WebLogic Server domain that you have configured.
- 2. Open the Oracle WebLogic Server Administration Console in a Web browser by entering the following URL:

```
http://hostname:port/console
```

Where *hostname* is the name of the machine where Oracle WebLogic Server is running and port is the port for the domain you are using. The port for the default domain is 7001.

The Oracle WebLogic Server Administration Console logon page is displayed.

DRACLE WebLogic Server® Administration Console



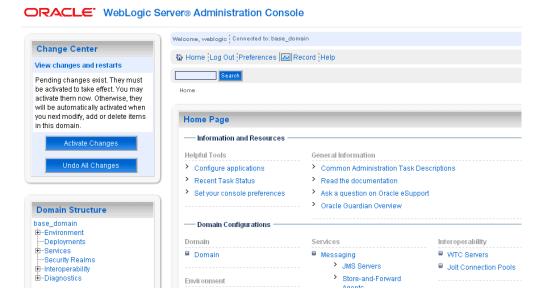
WebLogic Server Version: 10.3.0.0

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Log on to the Oracle WebLogic Server Administrative Console using an account that has administrator privileges.

The Oracle WebLogic Server Administration Console home page is displayed.

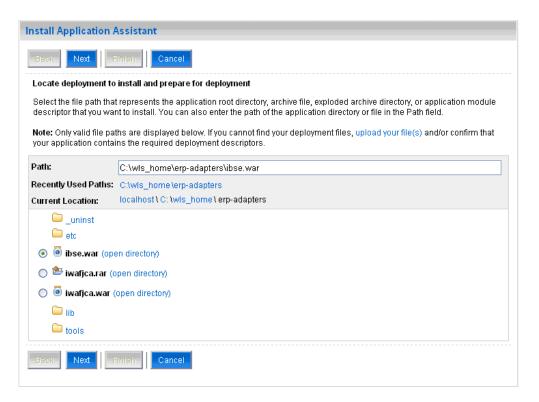


In the Domain Structure section in the left pane, click **Deployments** The Deployments page is displayed.



Click Install. 5.

The Install Application Assistant page is displayed.

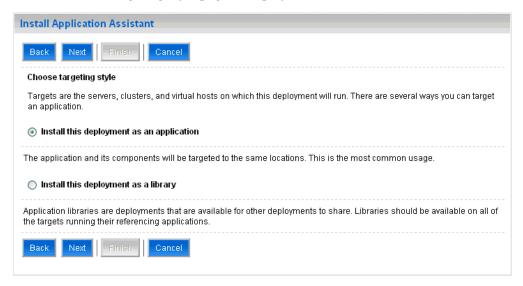


Browse to the following directory:

C:\wls_home\erp-adapters\ibse.war

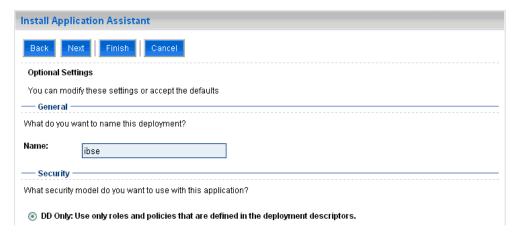
Select the radio button next to **ibse.war** and click **Next**.

The Choose Targeting Style page is displayed.

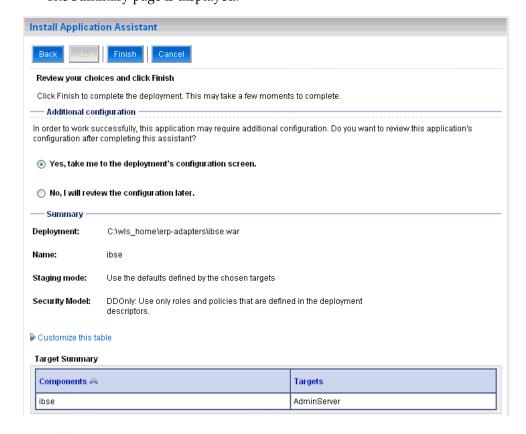


8. Leave the default Install this deployment as an application selected and click Next.

The Optional Settings page is displayed.

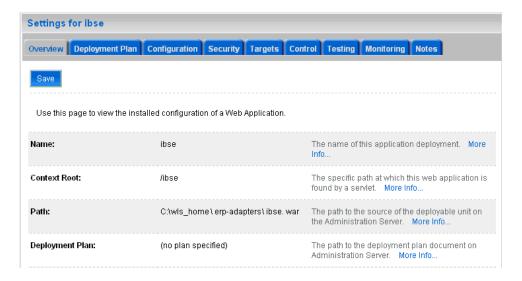


Click **Next** and leave the remaining default values unchanged. The Summary page is displayed.



10. Click Finish.

The Settings page for the BSE (ibse) Application opens.



11. Click Save.

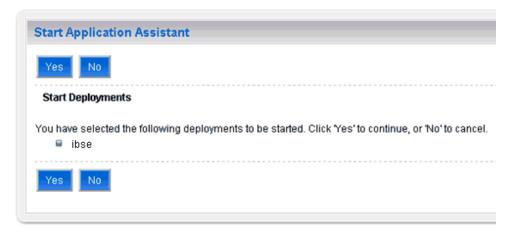
The following messages are displayed, which indicate a successful deployment.



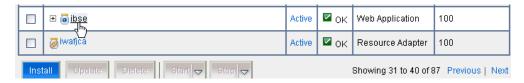
- **12.** In the Domain Structure section in the left pane, click **Deployments**.
- 13. Navigate through the table that lists all the deployed applications until you find the BSE (ibse) Application.



- **14.** Select the check box next to **ibse**.
- **15.** Click the **Start** submenu (down arrow) and select **Servicing all requests**. The Start Application Assistant is displayed.



- **16.** Click **Yes** to start the selected deployment.
- **17.** From the list of deployed applications, select **ibse**.



The Settings page for the BSE (ibse) Application opens.



18. Click the **Testing** tab.

The Deployment Tests page is displayed.



19. Click the following link:

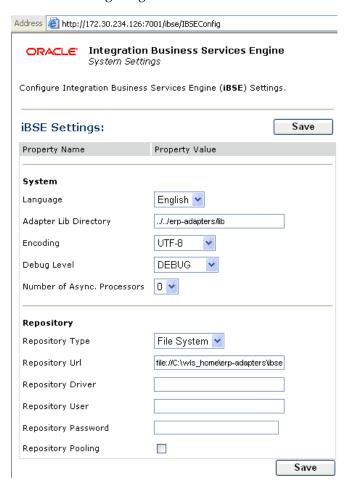
http://123.45.678.900:7001/ibse

The following logon window is displayed.



- 20. Enter the user name and password that you configured for the Oracle WebLogic Server domain.
- 21. Click OK.

The Oracle BSE Configuration page opens in a new browser window, as shown in the following image.



22. Make the necessary changes according to your specific requirements and click Save when you are finished.

For more information about repository configuration, see Configuring Repositories on page 3-10.

The Oracle BSE Test Servlet page opens.

Integration Business Service Engine ORACLE' Listening on IBSEServiet

The following licenses are available on IBSEServlet

- **IYP** ፒlm IVP License is installed by default. It is used to install pledefined Integration Business Services Engine Services.
- The test License is installed by default. It is used to test Integration Business Services Engine Services.
- production The production License is installed by default. It is used for production purpose.
- **23.** Click the **IVP** license.

The following list of available Web services for the IVP license is displayed.

Integration Business Services ORACLE" Licensed under *IVP*

The IVP License is installed by default. It is used to install predefined Integration Business Services Engine Services.

The following web services are available under license IVP

- This hervice is used to verify the installation of the Integration Business Services Engine . The methods provided by this service are predefined by the installation.
- **24.** Click the **iwayivp** Web service.

The following list of available methods for the iwayivp Web service is displayed..

ORACLE' iwayivp

An Integration Business Service

This service is used to verify the installation of the Integration Business Services Engine . The methods provided by this service are predefined by the installation.

The following operations are supported. For a formal definition, please review the Service Description.

- मिन् method takes no parameters and returns the current datetime and current version of the system.
- **25.** Click the **ivp** method.

The following Test page for the ivp method is displayed.

ORACLE iwayivp

An Integration Business Service

Click here for a complete list of operations.

ivp

This method takes no parameters and returns the current date-time and current version of the system.

Test

To test the operation using the **SOAP protocol**, click the 'Invoke' button.



26. Click Invoke.

The following output response is displayed.

```
<?xml version="1.0" encoding="UTF-8" ?>
<SOAP-ENV:Envelope xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
  instance" xmlns: SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
- <SOAP-ENV:Bodv>
 - <ivpResponse xmlns="urn:iwaysoftware:ibse:jul2003:ivp:response" cid="4AFACFF72D01EFB6288EF200B5D1397F">
     <CurrentTime>2009-04-10T19:48:29Z</CurrentTime:
     <Version>IWAY5.5</Version>
   </ivpResponse>
</SOAP-ENV: Envelope>
```

The BSE (ibse) Application has been deployed successfully to Oracle WebLogic Integration.

Connecting to a BSE Configuration Using Application Explorer

To connect to a new BSE configuration:

- Right-click the configuration to which you want to connect, for example, BSE_ SampleConfig.
- 2. Select Connect.

Nodes appear for Adapters, Events, and Business Services (also known as Web services). The Business Services node is only available for BSE configurations.

Events are not applicable when using a BSE configuration. You can configure events using a J2CA configuration only. As a result, you can disregard the Events node that appears for a BSE configuration.

The following is an example of a BSE configuration named BSE_SampleConfig:



Use the **Adapters** folder to create inbound interaction with Oracle Application Adapter for SAP R/3. For example, you can use the SAP node in the Adapters folder to configure a service that updates SAP R/3.

- Do not use the **Events** folder with a BSE configuration, since events are not supported with BSE. To configure events, you must use a J2CA configuration.
- Use the **Business Services** folder (available for BSE configurations only) to test Web services created in the Adapters folder. You can also control security settings for the Web services by using the security features of the Business Services folder.

You can now define new targets to Oracle Application Adapter for SAP R/3.

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