Oracle® SOA Suite

Installation Guide for Oracle WebLogic Server

10*g* Release 3 (10.1.3.5.1) for UNIX and Microsoft Windows

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Oracle SOA Suite Installation Guide for Oracle WebLogic Server, 10*g* Release 3 (10.1.3.5.1) for UNIX and Microsoft Windows

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Contents

1

Preface

This guide is the primary source of installation information for Oracle SOA Suite with Oracle WebLogic Server.

This preface contains these topics:

Audience

Oracle SOA Suite Installation Guide for Oracle WebLogic Server is intended for customers who want to install Oracle SOA Suite.

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- *Oracle Application Server Installation Guide* for your platform
- *Oracle Database Administrator's Guide*

In North America, printed documentation is available for sale in the Oracle Store at

`http://oraclestore.oracle.com/`

To download free release notes, installation documentation, white papers, or other collateral, please visit the Oracle Technology Network (OTN). You must register online before using OTN; registration is free and can be done at

`http://www.oracle.com/technology/membership`

If you already have a username and password for OTN, then you can go directly to the documentation section of the OTN Web site at

`http://www.oracle.com/technology/documentation`

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.

1 Overview

Oracle WebLogic Server enables you to set up, operate, and integrate e-business applications across multiple computing platforms using Web technologies. The Oracle WebLogic Server includes both the run-time components and the tools to develop and design applications.

Oracle SOA Suite provides a complete set of service infrastructure components for designing, deploying, and managing composite applications. Oracle SOA Suite enables services to be created, managed, and orchestrated into composite applications and business processes. Composites enable you to easily assemble multiple technology components into one service oriented architecture (SOA) composite application. Oracle SOA Suite plugs into heterogeneous information technology infrastructures and enables enterprises to incrementally adopt SOA.

The following components comprise Oracle SOA Suite:

- Oracle Enterprise Service Bus (ESB)
- Oracle BPEL Process Manager (BPEL)
- Human Task
- Oracle Web Services Manager (OWSM)
- Oracle Business Rules

Oracle BPEL Console is the monitoring environment for Oracle BPEL Process Manager. You can run, manage, and test your deployed BPEL process using the Oracle BPEL Console. Oracle BPEL Console provides a Web-based interface for management, administration, and debugging of processes deployed to Oracle SOA Server.

2 Installation

This chapter describes how to install Oracle SOA Suite with Oracle WebLogic Server. It includes the following topics:

2.1 Installation and Configuration Step Overview

This section describes the steps involved in installing and configuring the Oracle Database, creating a schema in the Database, and installing and configuring Oracle WebLogic Server.

Perform the following steps in order:

1. Install Oracle WebLogic Server 11g (Section 2.3)
2. Create SOA Schemas using Base IRCA from Installer (Section 2.4)
3. Download Oracle SOA Suite 10.1.3.5.1 for Oracle WebLogic Server 11g (Section 2.5)
4. Install Oracle SOA Suite with Oracle WebLogic Server (Section 2.6)
5. Execute configureSOA wrapper script (configures SOA and invokes WLS ConfigWizard) (Section 2.7)
6. Create SOADomain using ConfigWizard (Section 2.8)

See Also: Oracle recommends reviewing the following documentation after you completing installation configuration:

- *Oracle BPEL Process Manager Quick Start Guide*
- *Oracle BPEL Process Manager Order Booking Tutorial*
- *Oracle BPEL Process Manager Developer's Guide*
- *Oracle Application Server Adapter for Files, FTP, Databases, and Enterprise Messaging User's Guide*
- *Oracle Application Server Adapter Concepts*

The 10*g* Release 3 (10.1.3.1) documentation library is available on the Oracle Technology Network (OTN):

http://www.oracle.com/technology/documentation/appserver10131.html

2.2 System Requirements, Prerequisites and Certification

Before performing any installation you should read the system requirements and certification documentation to ensure that your environment meets the minimum installation requirements for the products you are installing.

The system requirements document covers information such as hardware and software requirements, minimum disk space and memory requirements, and required system libraries, packages, or patches:

http://www.oracle.com/technology/software/products/ias/files/oracle_soa_requirements_101310.html

The certification document covers supported installation types, platforms, operating systems, databases, JDKs, and third-party products:

http://www.oracle.com/technology/software/products/ias/files/oracle_soa_certification_101310.html

Note: Once you install Oracle SOA Suite with Oracle WebLogic Server you cannot uninstall it.

2.3 Install Oracle WebLogic Server

Before installing Oracle SOA Suite, you must first install Oracle WebLogic Server.

Refer to *Oracle Fusion Middleware Installation Guide for Oracle WebLogic Server* for more information on installing Oracle WebLogic Server.

2.4 Create SOA Schemas using Base IRCA from Installer

This section describes how to create SOA schemas using the base IRCA from the installer.

Note: The scripts to configure Oracle SOA Suite on the Oracle WebLogic Server require that the `JAVA_HOME` environment parameter is set prior to running the script.

1. Navigate to the `install\soa_schemas\irca` folder in the Oracle SOA Suite Installer directory.
2. Set `SOA_ORACLE_HOME` to point to the Oracle Database Installation location.

   For example, for Microsoft Windows:

   ```
   set SOA_ORACLE_HOME=c:\Oracle10g
   ```

   For UNIX:

   ```
   setenv SOA_ORACLE_HOME /Oracle10g/
   ```

3. Set the JDK.

   For example, for Microsoft Windows:

   ```
   set JAVA_HOME=<MW_HOME>/jdk160_11
   ```

   For UNIX:

   ```
   setenv  JAVA_HOME <MW_HOME>/jdk160_11
   ```

4. Enter `irca.bat` on Microsoft Windows and `./irca.sh` in UNIX.

   This runs the irca script to create the schemas required for BPEL, ESB, and OWSM.
5. Enter the following information when prompted by the installer:
   - Database Host Name: your database host name
   - Port Number: the port number for your database
   - Service Name: the service name for your database
   - `sys` password: the password to acces your database
6. Enter the following information when prompted by the installer:
   - Would you like to load ORABPEL schema (y /n)

     Select **yes** and then enter your `orabpel` schema password
   - would you like to load ORAESB schema (y /n)

     Select **yes** and then enter your `oraesb` schema password
   - would you like to load your ORAWSM schema (y /n)

     Select **yes** and then enter your `orawsm` schema passsword

   Additionally, you can pass your system information to the installer as a command line parameter. Refer to the command line help for `irca.sh` to utilize this functionality.

   The `orabpel`, `oraesb`, and `orawsm` schemas are loaded on the Oracle Database.

2.5 Oracle SOA Suite 10.1.3.5.1 for Oracle WebLogic Server

Insert the Oracle SOA Suite 10.1.3.5.1 CD-ROM or download the installer from the following URL:

http://www.oracle.com/technology/software/products/ias/htdocs/101310.html

2.6 Install Oracle SOA Suite with Oracle WebLogic Server

This section describe how to install the Oracle SOA Suite with Oracle WebLogic Server.

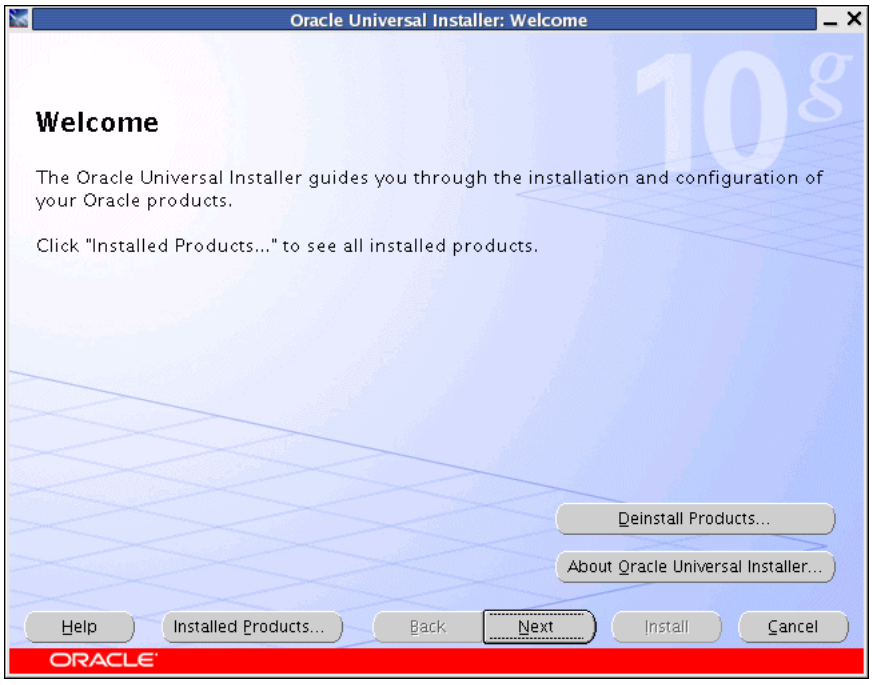
Note: Oracle Home directories referenced in this document are as follows:

- `MW_HOME` - (for example, `/home/user/Oracle/Middleware`)
- `WL_HOME` - (for example, `/home/user/Oracle/Middleware/wlserver_10.3`)
- `SOA_ORACLE_HOME` - (for example, `/home/user/Oracle/Middleware/OracleAS_1`)

Complete the following steps to install Oracle SOA Suite with Oracle WebLogic Server:

1. Go to the directory where you downloaded the Oracle SOA Suite with Oracle WebLogic Server installation package.
2. Select with the `<Download Location>Disk1/setup.exe` (Microsoft Windows) or `<Download Location>Disk1/runInstaller.sh` (Linux) file to begin the installation.
3. Review the Welcome screen.

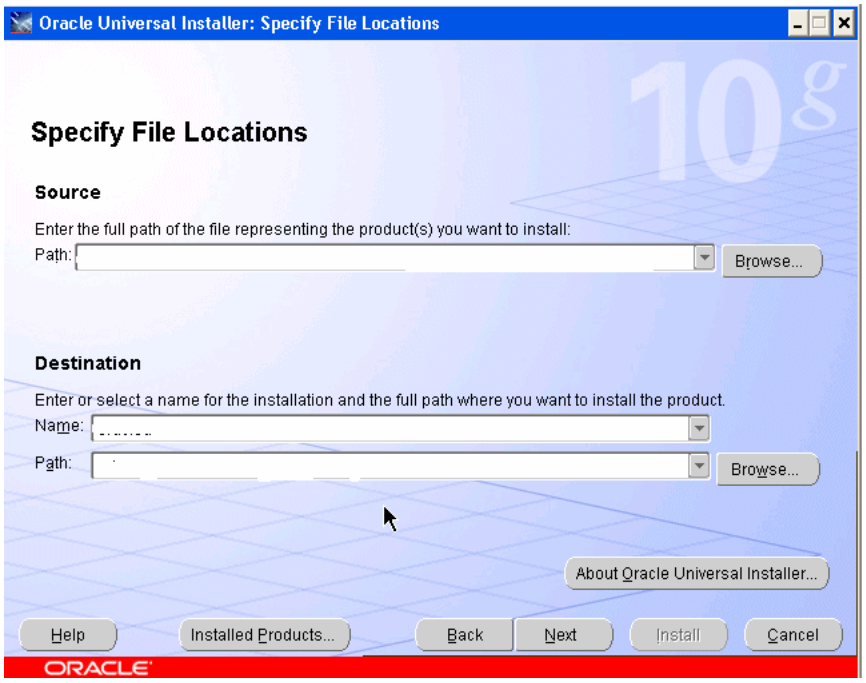
Figure 2–1 Welcome Screen



Click **Next**.

4. Review the Specify File Locations screen.

Figure 2–2 Specify File Locations Screen



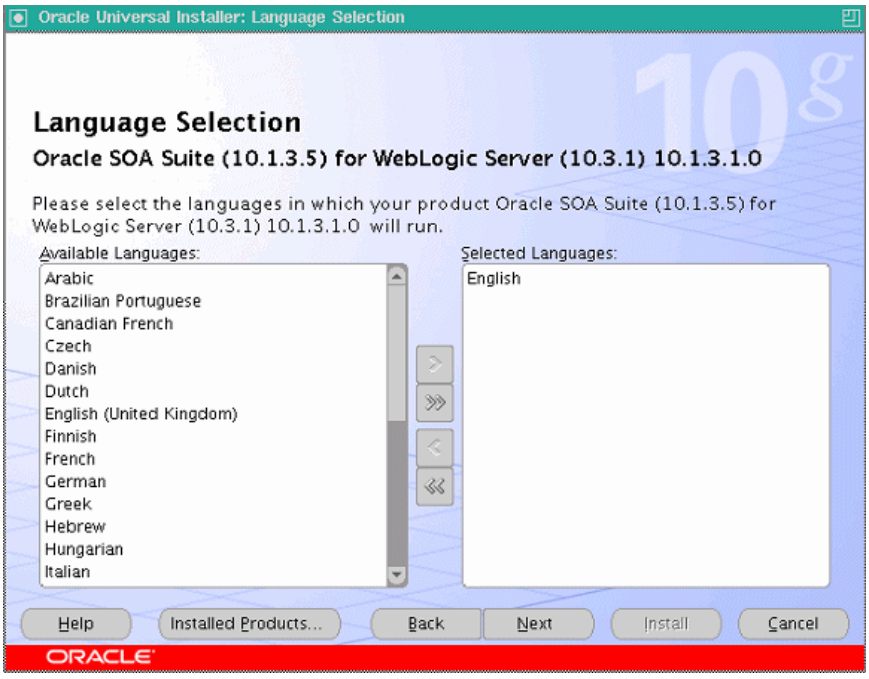
Enter the following information:

- Name: the name for the Oracle SOA Suite with Oracle WebLogic Server installation.
- Path: the full path where you want to install Oracle SOA Suite with Oracle WebLogic Server.

  The Oracle SOA Suite installation path must be located within the `MW_HOME` directory.

5. Language Selection screen.

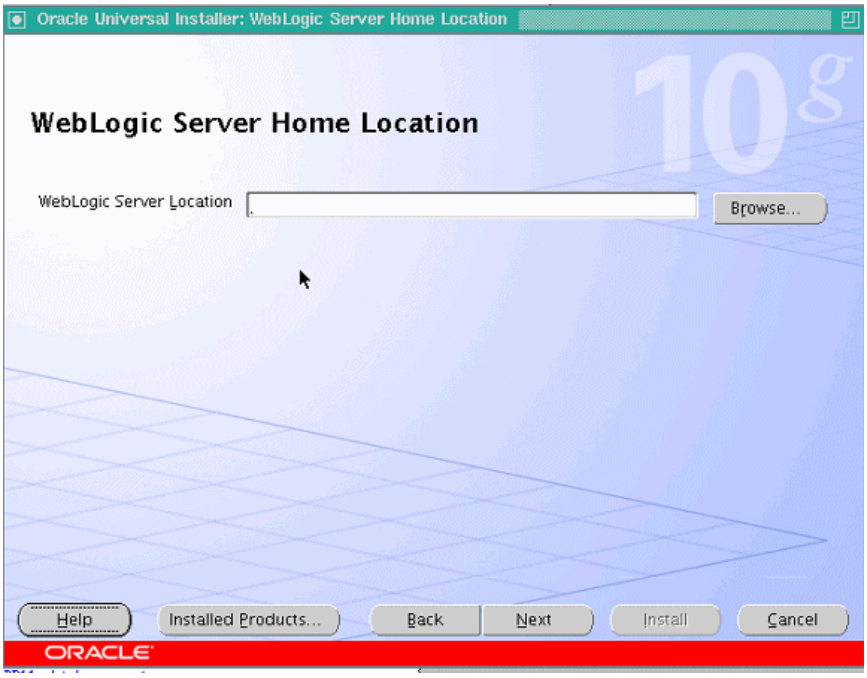
Figure 2–3 Language Selection Screen



Select the language(s) which will be used for your installation.

6. Oracle WebLogic Server Home Location screen

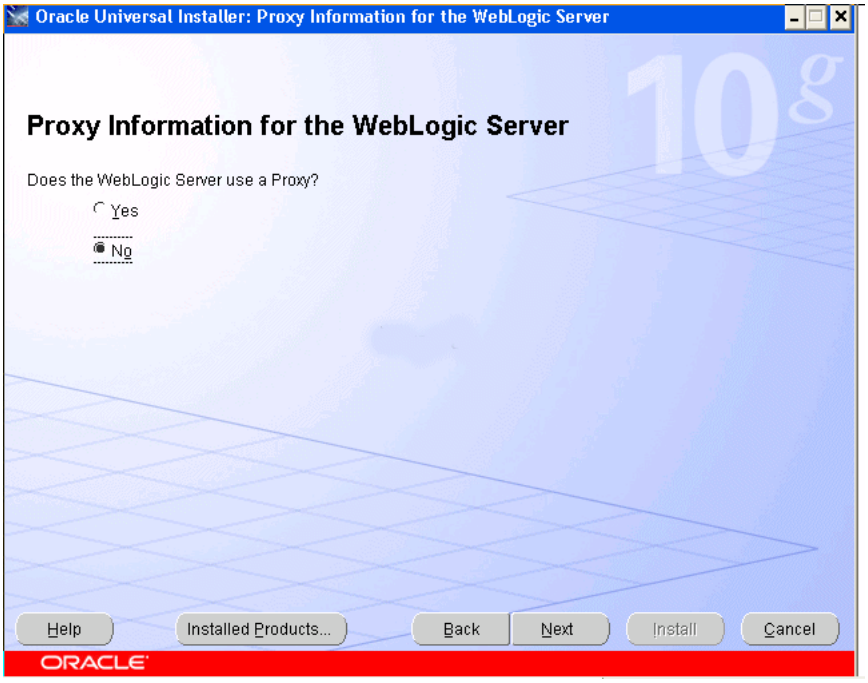
Figure 2–4 Oracle WebLogic Server Home Location Screen



Oracle WebLogic Server must point to the `wlserver_10.3` directory in the `MW_HOME` directory.

7. Proxy Information for WLS screen.

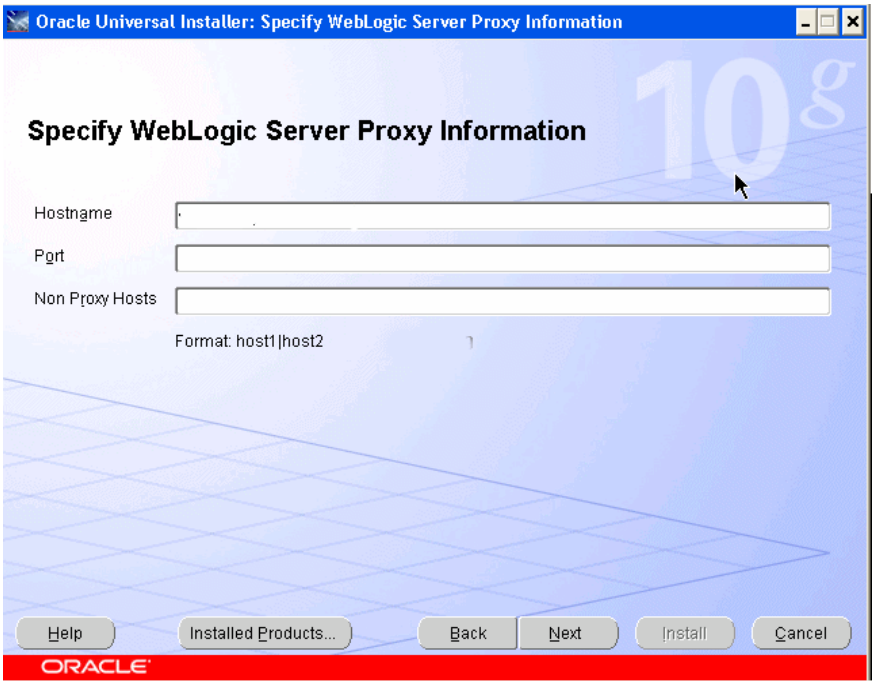
Figure 2–5 Proxy Information for WLS Screen



Does your WLS use a proxy: select yes or no

8. Specify Oracle WebLogic Server Proxy Information screen.

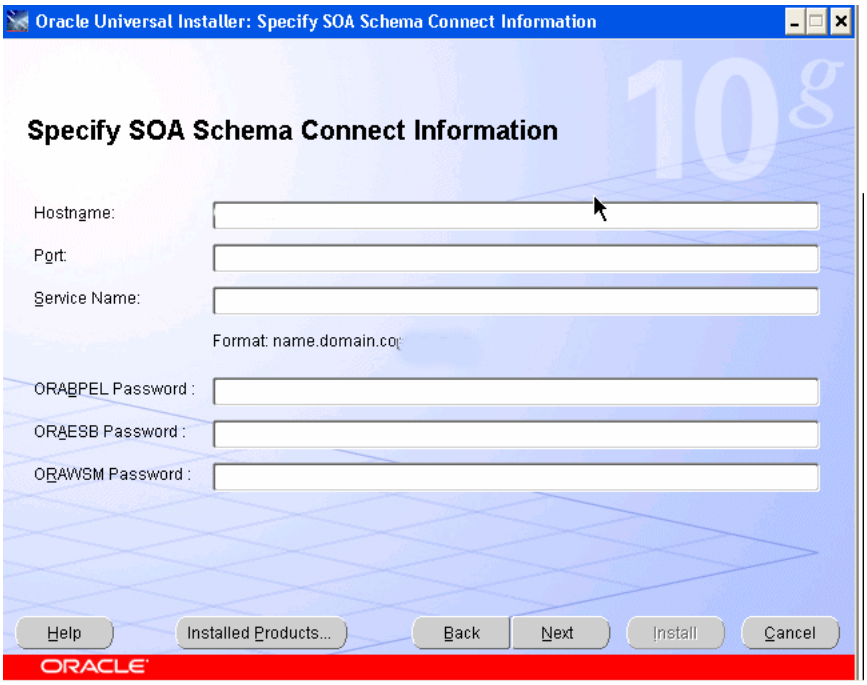
Figure 2–6 Specify Oracle WebLogic Server Proxy Information Screen



Enter the Hostname and port and non proxy host for your installation. The Proxy hosts are in the format of `host1|host2`.

9. Specify SOA Schema Connect Information.

Figure 2–7 Specify SOA Schema Connect Information Screen

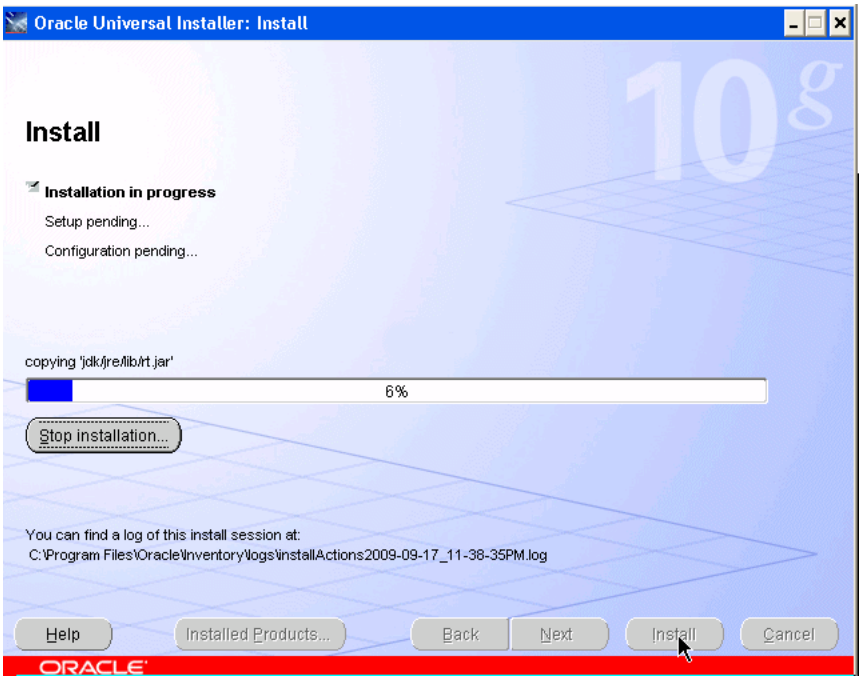


Enter the following information for your Oracle database:

- Hostname: the host name for your database
- Port: the port for your database installation
- Service Name: the service name for your database installation
- `orabpel` Password: the password for the `orabpel` schema
- `oraesb` Password: the password for the `oraesb` schema
- `orawsm` Password: the password for the `orawsm` schema

10. Installation progress screen.

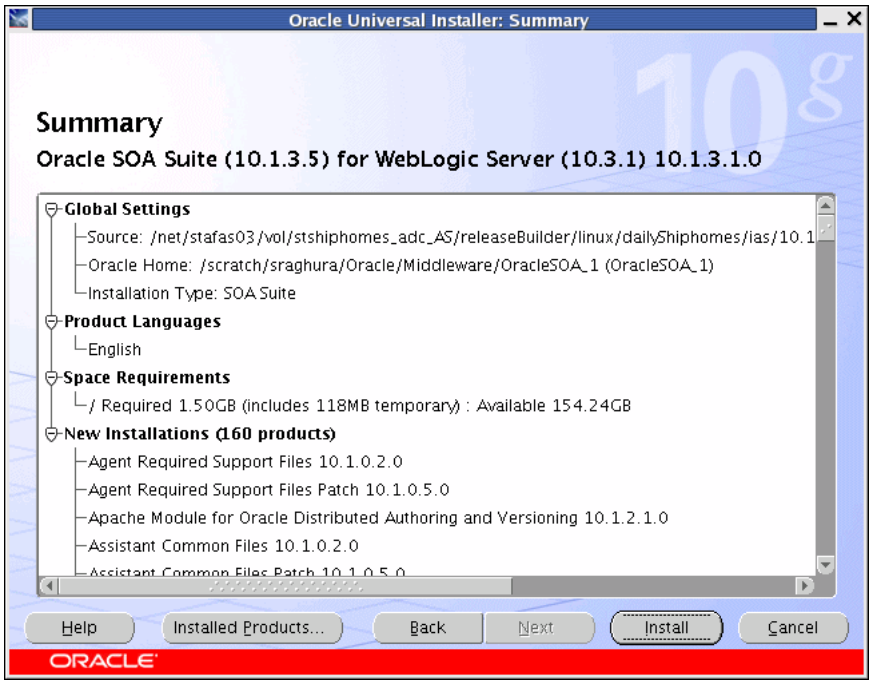
Figure 2–8 Installation Progress Screen



This screen indicates install progress.

11. Summary Screen.

Figure 2–9 Summary Screen



This screen appears at the conclusion of installation and provides details of the installation.

2.7 Execute configureSOA wrapper script

The section describes how to execute the `configureSOA` wrapper script.

To execute the configureSOA script, perform the following steps:

1. Go to the `SOA_ORACLE_HOME/config` folder where you installed Oracle SOA Suite with Oracle WebLogic Server.
2. Locate and execute the `./configureSOA.sh` (Linux with xterm) or `configureSOA.bat` (Microsoft Windows).
3. Enter your OWSM password when prompted by the `configureSOA` script.

   This `configureSOA` script performs the following tasks:

   - configures the `SOA_ORACLE_HOME` and `WL_HOME` directories
   - automatically invokes the WLS Config Wizard

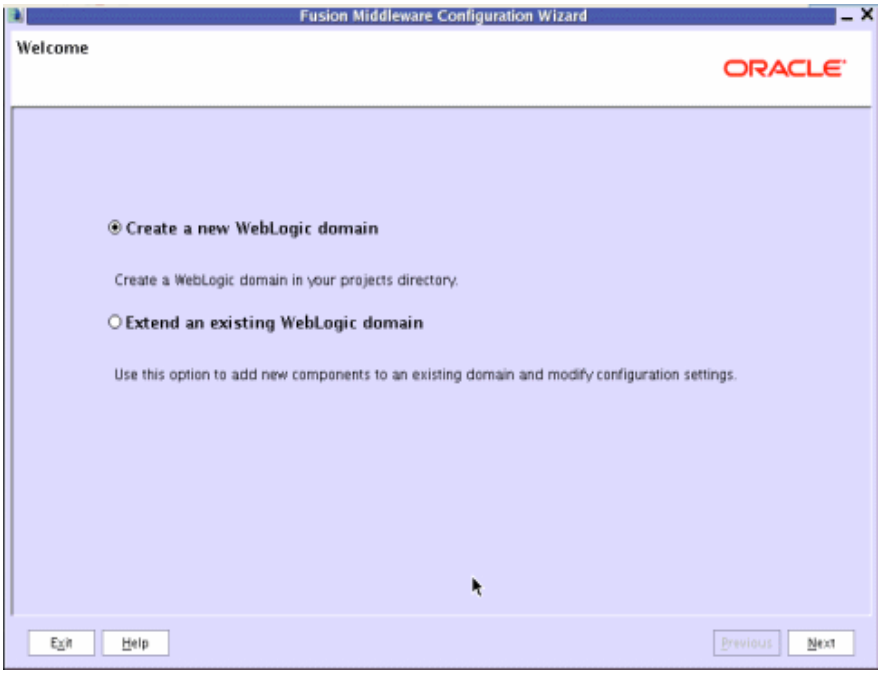
2.8 Create WLS Domain for Oracle SOA Suite

After the `configureSOA wrapper` script has run successfully, the WLS Configuration Wizard is invoked automatically.

Complete the following steps to create the SOA Domain using the Configuration Wizard:

1. Welcome Screen

Figure 2–10 Create a New WebLogic Domain Screen

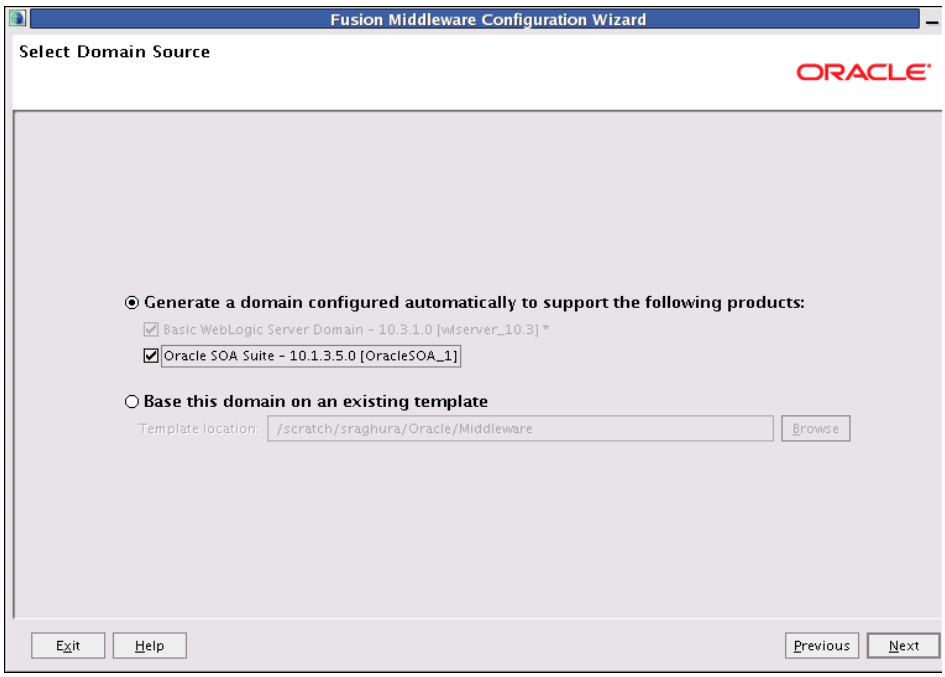


Select **Create a New WebLogic Domain**.

Click **Next**.

2. Select Domain Source Screen

Figure 2–11 Select Domain Source Screen



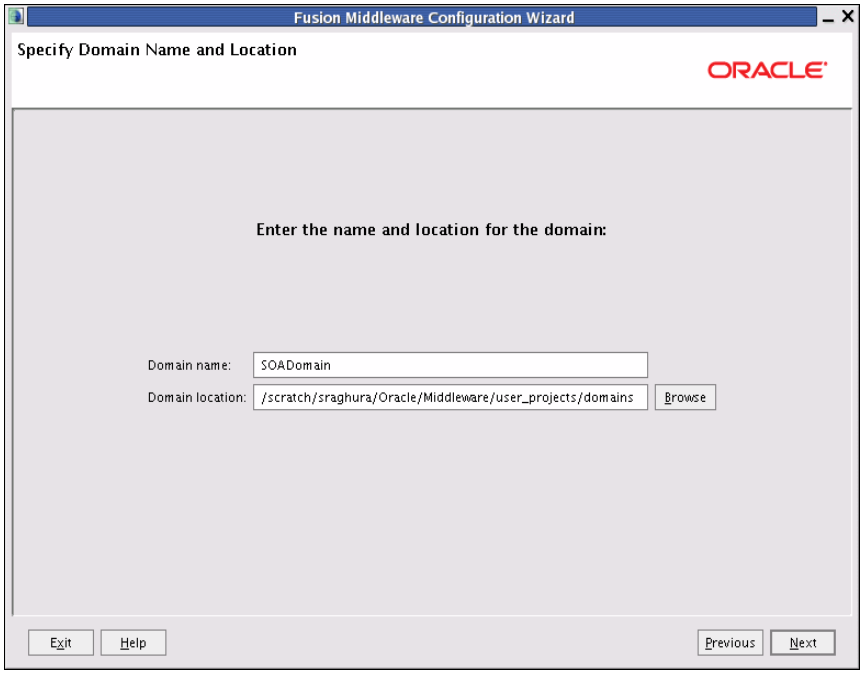
Select **Generate a domain configured automatically to support the following products**, then select the following product:

- Oracle SOA Suite - 10.1.3.5.1 (Oracle_SOA1)

Click **Next**.

3. Specify Domain Name and Location Screen

Figure 2–12 Specify Domain Name and Locations Screen



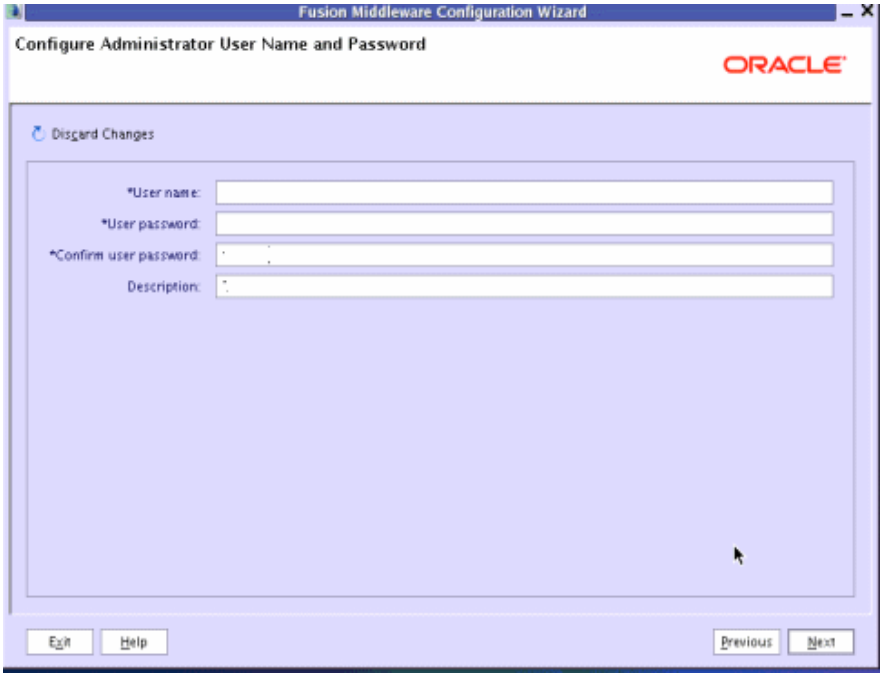
Specify the following domain information:

- **Domain name:** The name of the domain you want to create. The default name is `base_domain`.
- **Domain location:** The absolute path to the directory where this domain should be created. The default location is `SOA_ORACLE_HOME/user_projects/domains` (for UNIX) or `SOA_ORACLE_HOME\user_projects\domains` (for Microsoft Windows).

Click **Next**.

4. Configure Administrator Username and Password Screen

Figure 2–13 Configure Administrator Username and Password Screen



Specify the following credentials for your administrator:

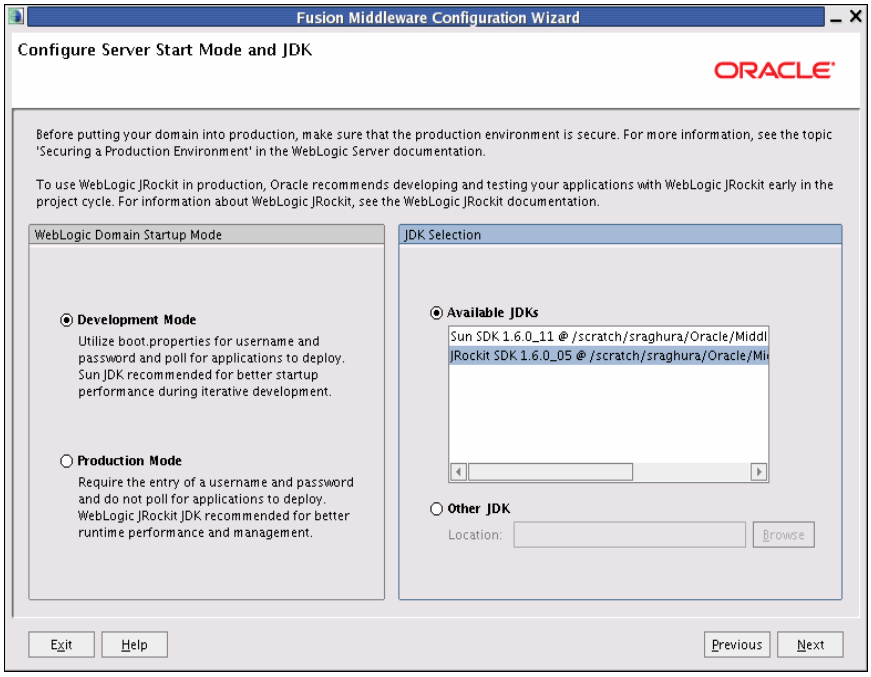
- **User name:** The name of the administrator for this domain. The default name is `weblogic`.
- **User password:** The administrator's password.
- **Description:** Enter a description for this user, or leave the default description as is. This field is optional.

The password chosen for the `weblogic` user is also set for the `soaadmin` user.

Click **Next**.

5. Configure Server Start Mode and JDK Screen

Figure 2–14 Configure Server Start Mode and JDK Screen



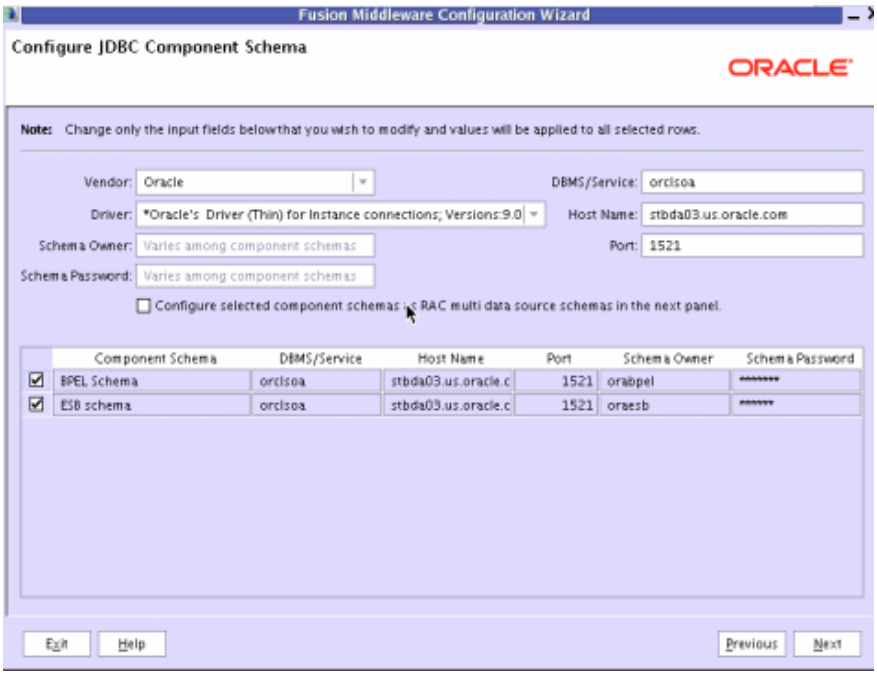
In the "WebLogic Domain Startup Mode" portion of the screen, Select either **Production Mode** or **Development Mode**.

In the "JDK Selection" portion of the screen, select Sun SDK 1.6.0_11 from the list of available JDKs. This was one of the JDKs installed on your system when you installed Oracle WebLogic Server.

Click **Next**.

6. Configure JDBC Component Schema Screen

Figure 2–15 Configure JDBC Component Schema Screen



Configure the schema information for each data source listed on this screen. When you make changes to any field on this screen, the changes are applied to selected data sources only. For fields that are common with all data sources (for example, all data sources reside on the same database), you should select all of the data sources and make your changes. The changes are saved automatically as you type.

After all of the information that is common to all data sources has been specified, then you will need to select individual or smaller groups of data sources and enter information that is specific to them (for example, the schema owner).

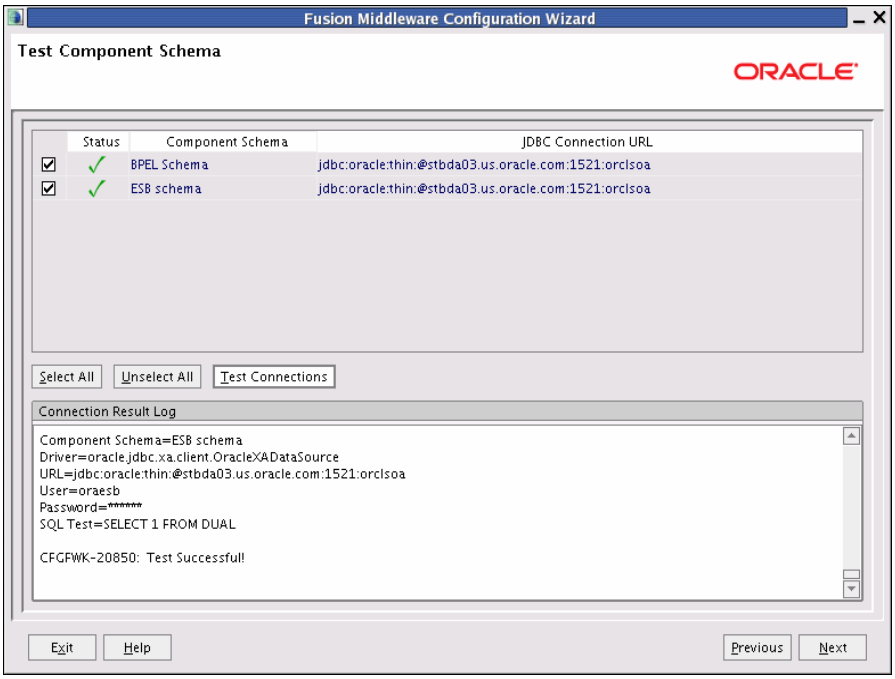
Review the table on this screen and identify which fields you need to modify:

- **Vendor**: Select the vendor for your database from the drop-down list.
- **Driver**: Select the driver type from the drop-down list.
- **Password**: Specify the password for the schema.
- **DBMS/Service**: Specify the service name for your database. This is the database on which the schema resides.
- **Host Name**: Specify the name of the machine where your database is running.
- **Port**: Specify the database listen port number.

Click **Next**.

7. Test Component Schema Screen

Figure 2–16 Test Component Schema Screen



Verify that the connections to your data sources are successful.

Click **Next**.

8. Select Advanced Configuration Screen

   Do not select anything on this screen.

   Use the default values for the below sections.

   Click **Next**.

   Go through the following steps a through i only if you want to change the default settings. Otherwise proceed to step 9:

   a. Configure the Administration Server:

   ```
   default listen port <adminport>
    SSL enabled = false
   ```

   The Admin Server of the created Domain will run on the newly selected port.

   b. Configure Managed Servers:

   ```
   soa10g_server1
   default listen port = 9700
   SSL enabled = false
   ```

   The Default port for `soa10g_server1` is 9700 and has a dependency with `configureSOA` Wrapper script.

   If you need to configure the `soa10g_server1` to run on any port other than 9700, for example 7777.

   Close this Config Wizard.

   Edit the `SOA_HOME/install/SOADomain.properties` file.

   Uncomment and update the `OVERRIDE_HTTP_PORT` property as follows.

```
OVERRIDE_HTTP_PORT=7777
```

Rerun the `configureSOA wrapper` script, (Section 2.7, "Execute configureSOA wrapper script").

Choose default listen `port = 7777` for `soa10g_server1`.

c. Configure Clusters

No clusters defined by default.

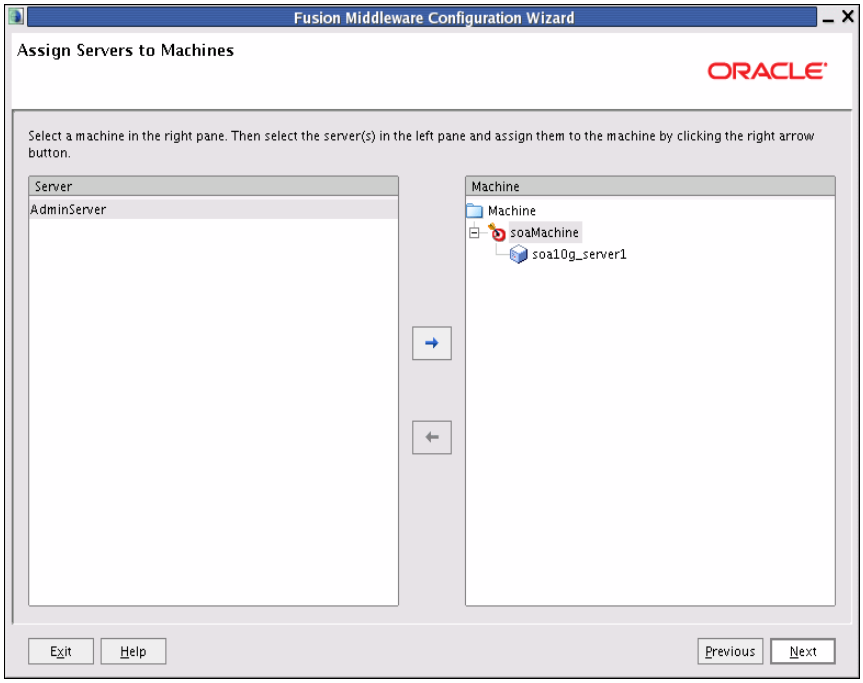
d. Configure Machines

`soaMachine`

`default Node Manager Listen Port = 5556`

e. Assign Servers to Machines Screen

Figure 2–17 Assign Server to Machines Screen

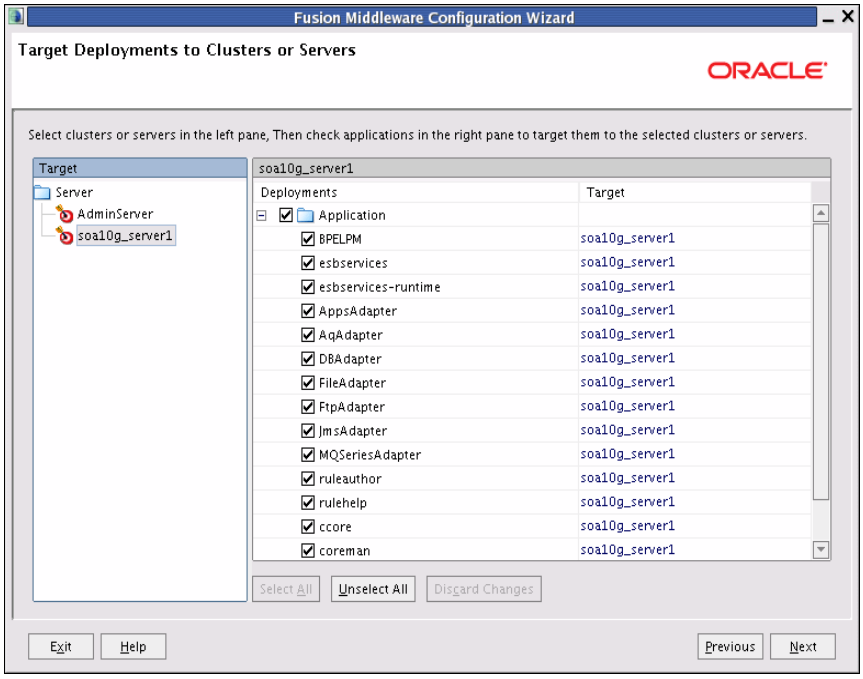


`soa10g_server1` is assigned to `soaMachine` by default

This setting should not be changed.

f. Target Deployments to Clusters or Servers

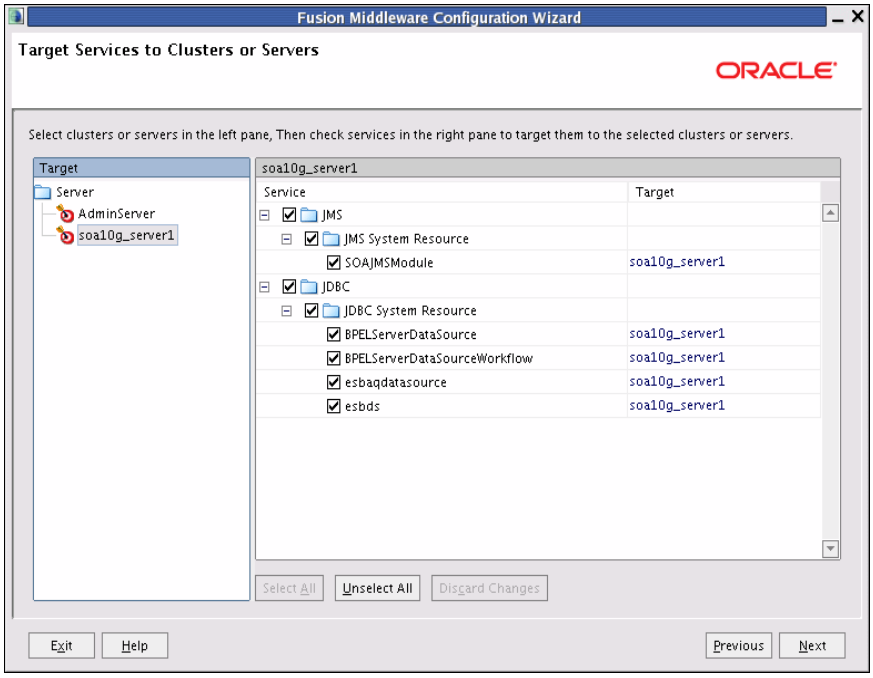
Figure 2–18 Target Deployments to Clusters or Servers Screen



All deployments are targeted to `soa10g_server1` by default. This setting should not be changed.

g. Target Services to Clusters or Servers

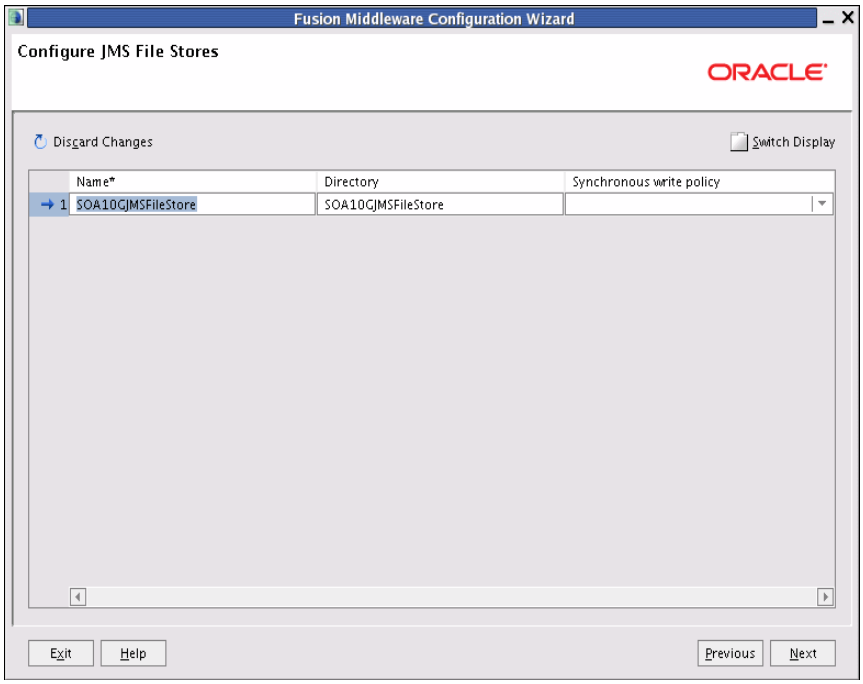
Figure 2–19 Target Services to Clusters or Servers Screen



All Services are targeted to `soa10g_server1` by default. This setting should not be changed.

h. Configure JMS File Stores

Figure 2–20 Configure JMS File Stores Screen



`SOA10GJMSFileStore` configured to use file store in the domain root directory.

The file store location is relative path from the domain root directory.

This can be changed if needed.

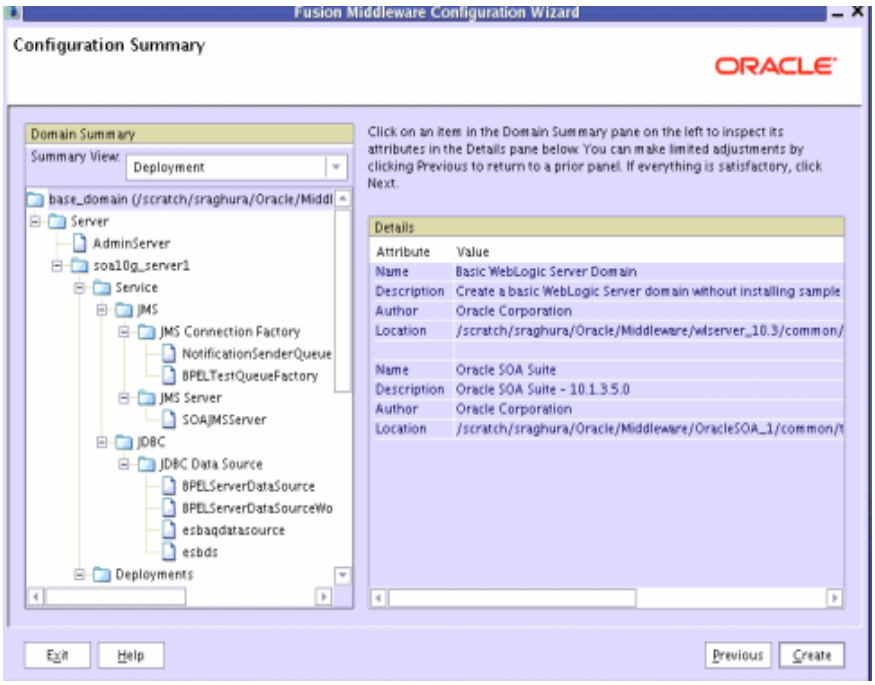
i. Configure RDBMS Security Store Database

The RDBMS Security Store is disabled

This setting should not be changed.

9. Configuration Summary Screen

Figure 2–21 Configuration Summary Screen

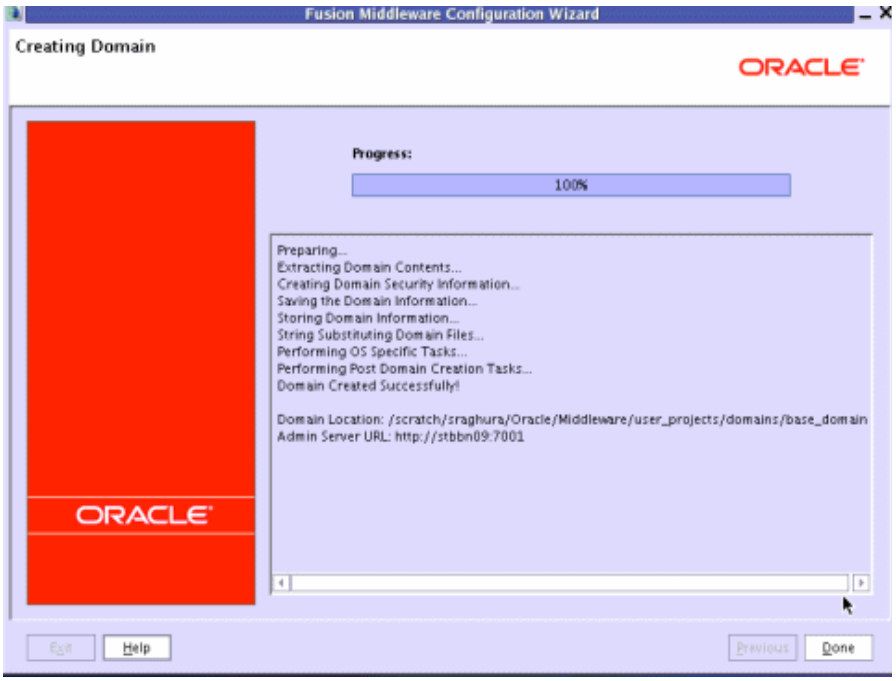


Verify the information on this screen. Use the navigation pane on the left or the **Previous** button if you want to return to a previous screen to alter some portion of the configuration.

If everything is correct, click **Create**.

10. Creating Domain Screen

Figure 2–22 Creating Domain Screen



When the domain has been successfully created, the progress bar will be at 100% and the **Done** button will be active.

The last line in the summary information is the URL of the Administration Server. You should make a note of this URL so that you can access the Administration Server after it has been started.

Click **Done** to dismiss the Configuration Wizard.

For more information about configuring WebLogic domains, refer to *Oracle WebLogic Server Creating WebLogic Domains Using the Configuration Wizard*.

2.9 Real Application Cluster Installation

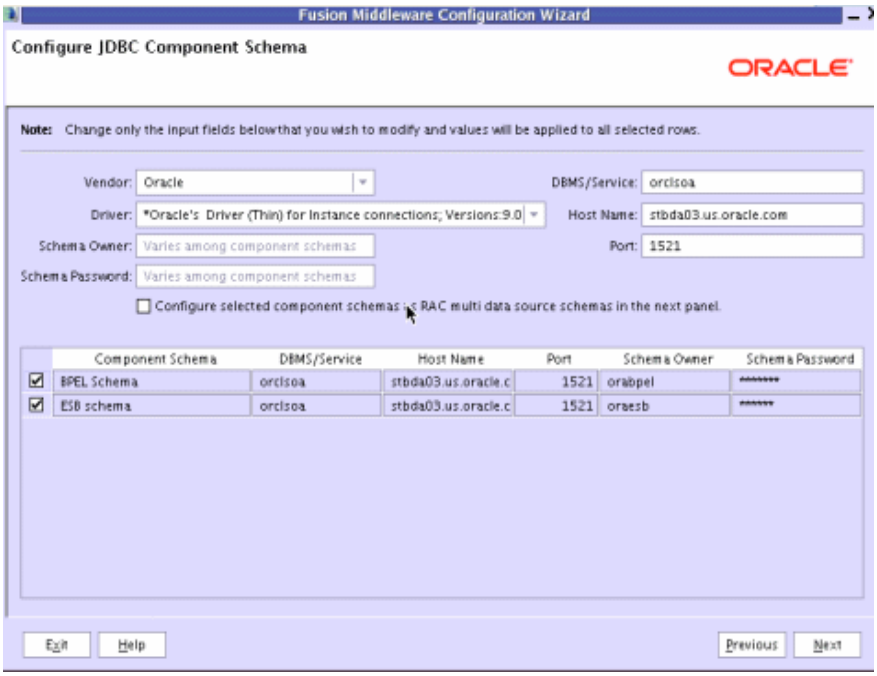
To install real application clusters (RAC) with the Oracle SOA Suite with Oracle WebLogic Server product perform the following steps:

1. Complete the steps described in Section 2.6, "Install Oracle SOA Suite with Oracle WebLogic Server".
2. Complete the steps described in Section 2.7, "Execute configureSOA wrapper script".
3. Complete steps 1 through 5 in Section 2.8, "Create WLS Domain for Oracle SOA Suite".

Then complete the following steps to install a RAC setup with Oracle SOA Suite with Oracle WebLogic Server:

1. Configure JDBC Component Schema Screen

Figure 2–23 Configure JDBC Component Schema Screen



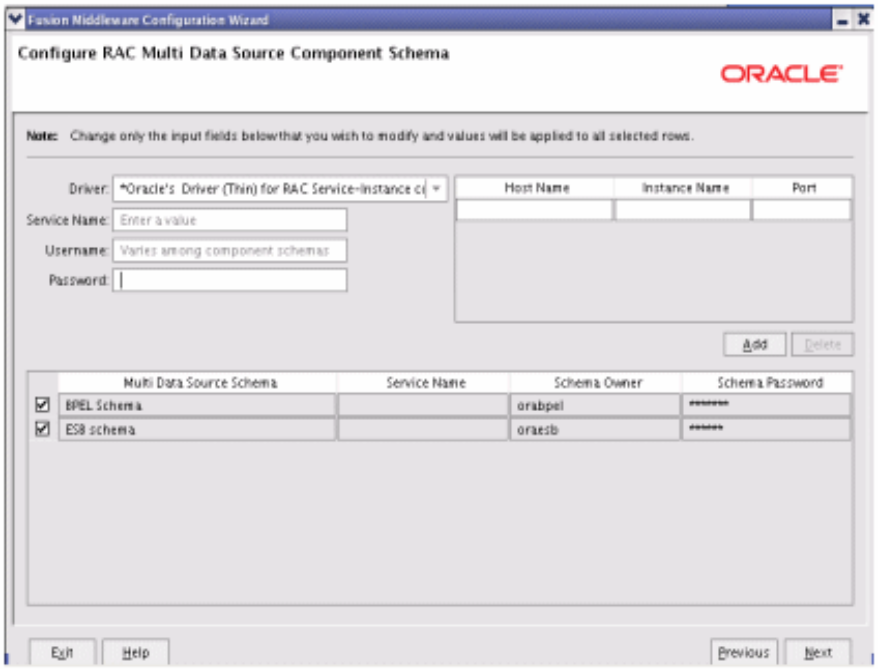
Select the Configure selected component schemas as RAC multi data source schemas in the next panel checkbox.

In this step, you change both BPEL and ESB schemas and select to configure RAC.

Click **Next**.

2. Configure RAC Multi Data Source Component Screen

Figure 2–24 Configure RAC Multi Data Source Component Screen



Select the BPEL Schema and enter the following information:

- Service Name
- User Name/Password

For each rack node

- Host Name
- Instance Name
- Port Number

Select ESB Schema and enter the following information:

- Service Name
- User Name/Password

For eachRAC node

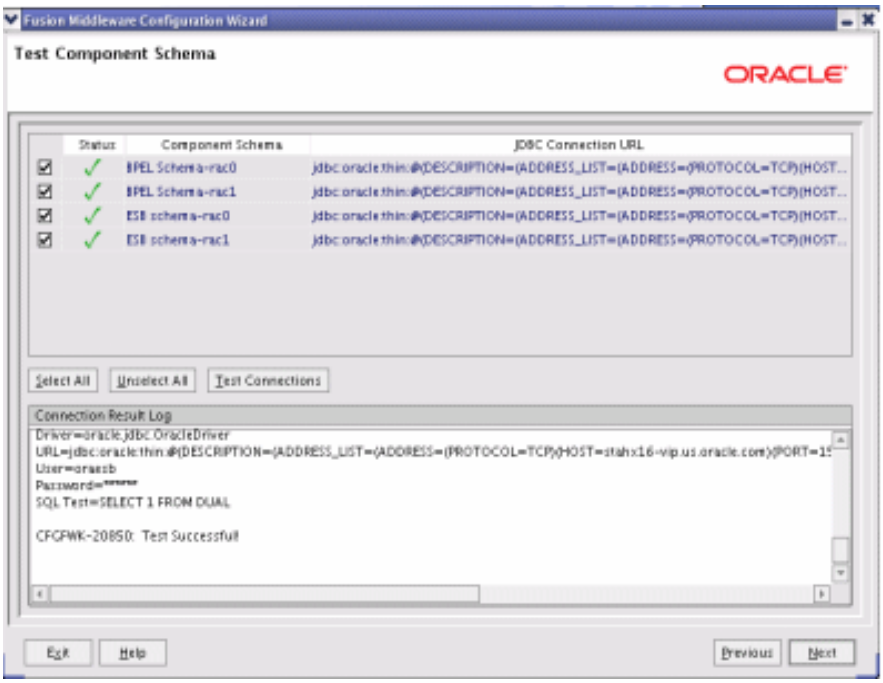
- Host Name
- Instance Name
- Port Number

Click **Next**.

3. Complete steps 7 through 9 as described in Section 2.8, "Create WLS Domain for Oracle SOA Suite".

4. Test Component Schema Screen

Figure 2–25 Test Component Schema Screen



Verify that the connections to your data sources are successful.

3 Installation Verification

This chapter describes installation verification of your Oracle SOA Suite for Oracle WebLogic Server installation.

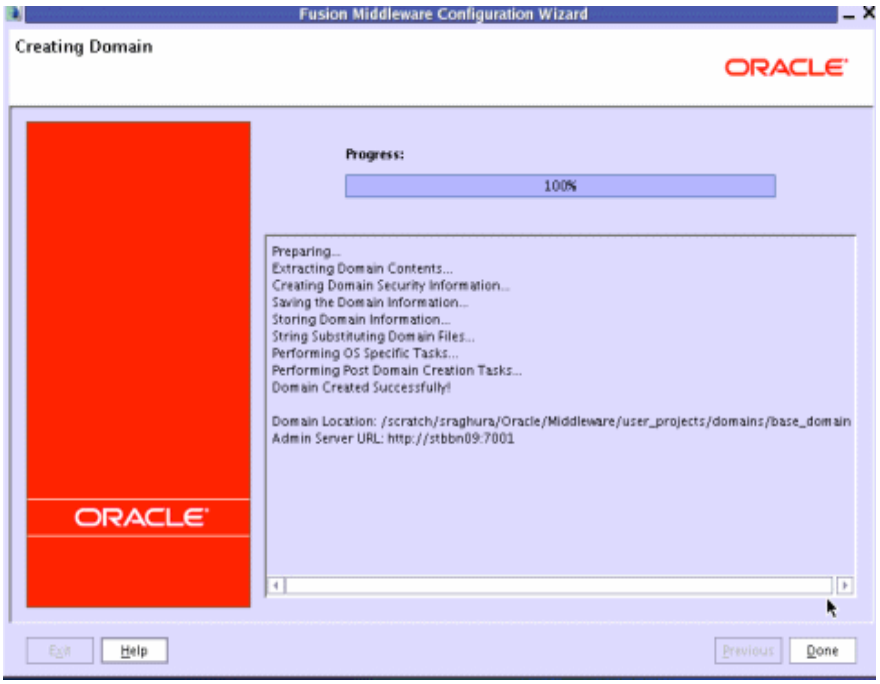
It includes the following topics:

- SOA Domain Created
- Servers created - AdminServer and soa10g_server1(managed server)
- Users Created - weblogic and soaadmin
- URL Access - BPEL Console, BPEL Admin, ESB Console, OWSM Console

3.1 SOA Domain Created

The following screen appears when the SOA Domain is created:

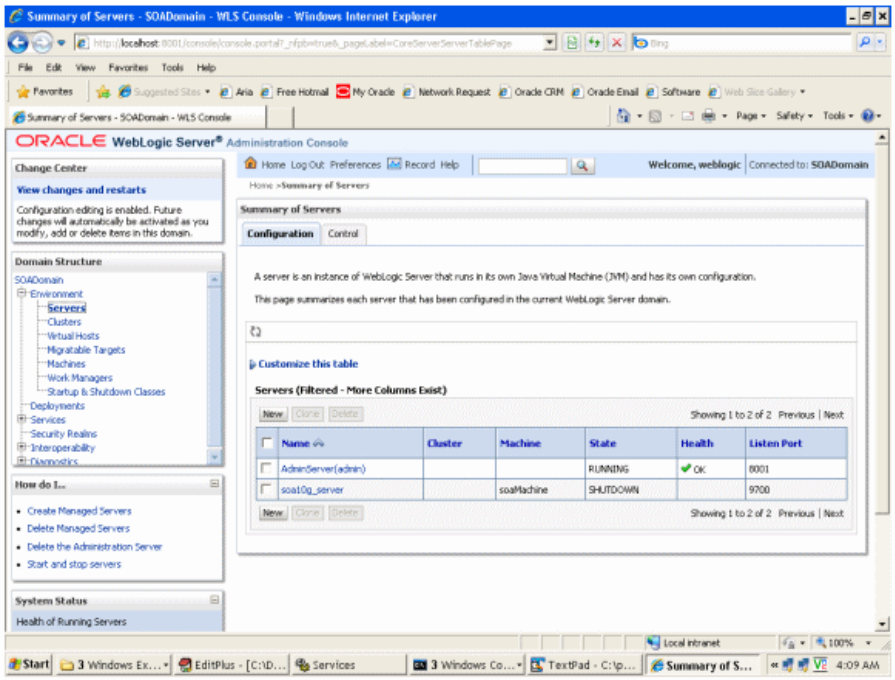
Figure 3–1 SOA Domain Created Screen



3.2 Servers created - AdminServer and soa10g_server1(managed server)

The following screen appears when the `AdminServer` and `soa10g_server` are created:

Figure 3–2 Servers Created Screen



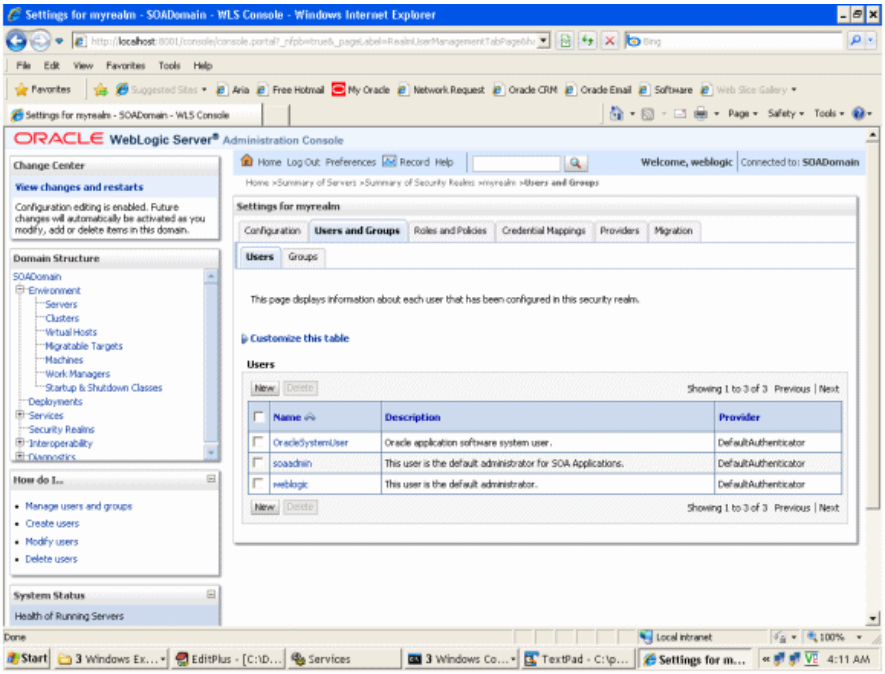
The screen appears when the `AdminServer` and `soa10g_server` are created.

****

3.3 Users Created - weblogic and soaadmin

The following screen appears when `weblogic` and `soaadmin` users are created:

Figure 3–3 weblogic and soaadmin Users Created Screen



The screen appears when `weblogic` and `soaadmin` users are created.

****

3.4 URL Access - BPEL Console, BPEL Admin, ESB Console, OWSM Console

The following screens appear for URL access:

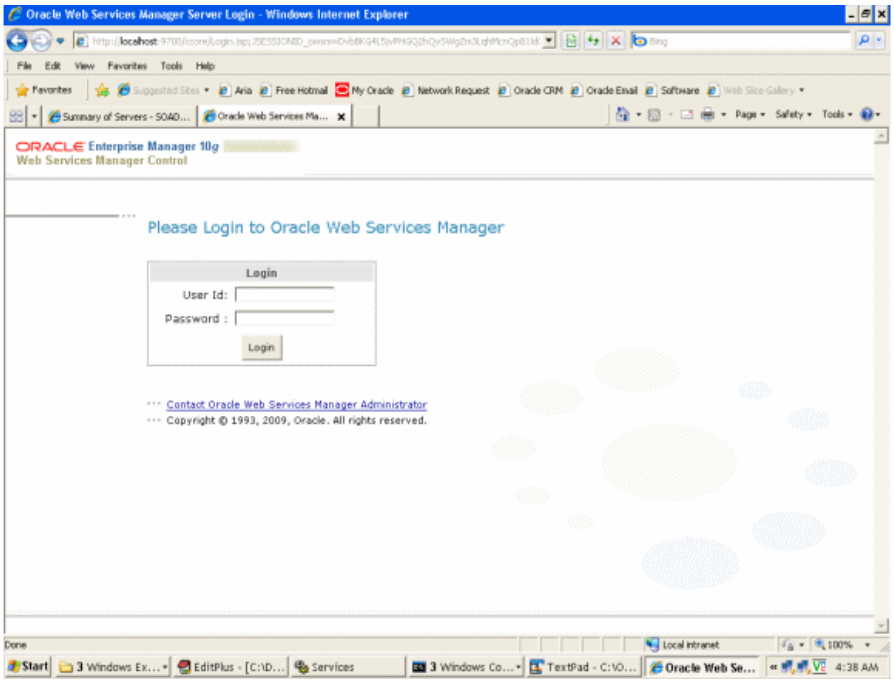
- BPEL Console Screen
- BPEL Admin Screen
- ESB Control Screen
- OWSM Console Screen

Figure 3–4 BPEL Console Screen

Figure 3–5 BPEL Admin Screen

Figure 3–6 ESB Control Screen

Figure 3–7 OWSM Console Screen



4 Post Installation

This chapter describes post install steps following installation of Oracle SOA Suite with Oracle WebLogic Server. It includes the following sections:

- Configuring BPEL Samples
- Configure ESB Systems using ESB Console
- Configuring ESB Design time Parameters
- Starting soa10g_server Using Node Manager Instead of the startManagedWeblogic script
- OWSM ServerAgent to secure BPEL Processes
- Changing dehydration store for BPEL, ESB and OWSM
- Client side Configurations for HWF API Clients
- Steps to Enable Notification
- Deploying Human Task and Decision Services `.ear` Files
- Verifying the OrderBooking Tutorial Sample
- Running Adapter Samples
- Design-time Deployment Support Oracle SOA Suite 10.1.3.5.1 on Oracle WebLogic Server 10.3.1
- Exception During Managed Server Shutdown

4.1 Configuring BPEL Samples

Complete the following steps to configure BPEL Samples and seed default JAZN Users for HWF and Worklist Application:

1. Update the `SOA_ORACLE_HOME/bpel/utilities/ant-orabpel.properties` file by setting the following properties values:
   - set the `admin.user` to `soaadmin`
   - set the `admin.password` to the cleartext password of `soaadmin`
2. Open a BPEL Dev prompt and navigate to the `SOA_ORACLE_HOME/bpel/samples` directory.
3. Execute the `obant.sh/bat install` script.

   The obant script will backup existing and unzip the latest samples.

- Set the tokenized parameters in the samples to values from the `ant-orabpel.properties` file.

  The steps seed the default `jazn` user community for `identity service/Workflow samples/worklistApp`.
- Change the `admin.password` to `admin.encrypted.password` based on the provided cleartext value.
- The steps seed the default `jazn` user community for `identity service/Workflow samples/worklistApp`.

4.2 Configure ESB Systems using ESB Console

Complete the following steps to configure ESB systems using ESB Console:

1. Change the ESB System configuration from the `esb` console
2. Ensure that the system information for the ESB services have the following values:
   - Virtual Host: The hostname of ESB design-time instance
   - Port: The port number of ESB design-time instance
   - Topic Location: `ESB_JAVA_DEFERRED`

The value of the `Connection Factory Location` parameter does not matter for ESB on Oracle WebLogic Server; this is because ESB, by default, uses AQ messaging. ESB also uses the AQ JMS API to connect to the AQ Messaging topics.

4.3 Configuring ESB Design time Parameters

Update the `ORAESB.ESB_PARAMETER` table to ensure that the values for `DT_OC4J_HOST` and `DT_OC4J_HTTP_PORT` are the same as the host name and port number of the managed server running ESB Services application.

The default values from the installation are:

- `DT_OC4J_HOST = localhost`
- `DT_OC4J_HTTP_PORT = 9700`

4.4 Starting soa10g_server Using Node Manager Instead of the startManagedWeblogic script

To start the managed server from the `AdminConsole` instead of from `startManagedWeblogic.sh/.bat` command, set the `StartScriptEnabled=true` parameter in the `nodemanager.properties` file.

Note that the nodemanager.properties file is only generated when you start NodeManager for the first time.

In order to generate the nodemanager.properties file:

1. Start NodeManager using in the `MW_HOME/wlserver_10.3/server/bin` directory using either the `startNodeManager.cmd` (Microsoft Windows) or `startNodeManager.sh` (Linux).
2. Edit the `MW_HOME/wlserver_10.3/common/nodemanager/nodemanger.properties` file, set the parameter `StartScriptEnabled=true`.

3. Terminate the node manager process.
4. Re-start the node manager again.

After completing these steps, you should be able to start and stop the managed server from the WebLogic Admin Console.

4.5 OWSM ServerAgent to secure BPEL Processes

The section describes how to enable the OWSM ServerAgent to secure BPEL processes. Complete the following steps:

1. Create the Server Agent from the OWSM user interface with `Container Type = OTHER`.

   Verify that you have created a new component. For example, `C0003003 service_agent Server Agent.`

   Be sure to add the Required Policies to the `ServerAgent`.

   Refer to step 6 for BPEL Process specific policies

2. Inject the `soabpel.ear` file with the `ServerAgent` using the `wsmadmin installAgent` with the following updates to `SOA_ORACLE_HOME/owsm/bin/agent.properties`:

   - `agent.componentType=serveragent`
   - `agent.containerType=WEBLOGIC`
   - `agent.containerVersion=10.3.1`
   - `webservice.application.input=SOA_ORACLE_HOME/soa/applications/soabpel-ServerAgent/soabpel.ear`
   - `webservice.application.webapp.name=startup.war`
   - `agent.component.id=C0003003`

   Verify that `- CoreSvFilter - ServletFilterHook` is added in the `soabpel./startup.war.xml` file.

3. Restart Oracle SOA Suite with Oracle WebLogic Server with the re-generated `soabpel.ear` file.
4. Initiate `async` and `sync bpel` from the Initiate page and `SoapUI HelloWorld CreditRatingService`.
5. Check the OWSM console for `service_agent` calls.

   Go to **Operation Management > Overall Statistics > Message Logs > service_agent**.

6. Verify that the ServerAgent processed calls from the message logs.

   For example:

```
1 /orabpel/default/HelloWorld/1.0  Tuesday, August 18, 2009 01:00:18 PM Request
2 /orabpel/default/HelloWorld/1.0 Tuesday, August 18, 2009 01:00:22 PM Response
3 /orabpel/default/CreditRatingService/1.0 Tuesday, August 18, 2009 01:04:14 PM
Request
4 orabpel/default/CreditRatingService/1.0 Tuesday, August 18, 2009 01:04:17 PM
Response
```

4.5.1 Policy Enforcements for the BPEL Process using ServerAgent

This sections describes how to add policy enforcements.

The following example shows how to add enforcements for the following 2 policies :

- `HelloPolicy`
- `CreditPolicy`

Select **Edit Mappings** for the component and add the following example mappings:

- `/orabpel/default/CreditRatingService/1.0  CreditPolicy`
- `/orabpel/default/HelloWorld/1.0 HelloPolicy`
- `* Default`
- `Component: ServerAgent C0003003`

Please note that the order is important; make sure the default mapping is last in order.

Verify that the policies are enforced based on the URL pattern and resultant BPEL Process.

The HelloPolicy should only be applied for calls to the `HelloWorld` process,

Use the `CreditPolicy` for the `CreditRatingService` process and the `Default` policy for all other process calls.

4.6 Changing dehydration store for BPEL, ESB and OWSM

For BPEL and ESB, the following steps describe how the dehydration store details can be changed from the WLS Admin console:

1. Login to WLS Admin console.
2. Goto **SOADomain -> Services -> JDBC -> Datasources**.
3. There are 5 datasources which are created for BPEL and ESB:
   - `BPELServerDataSource`
   - `BPELServerDataSource`
   - `Workflow`
   - `esbaqdatasource`
   - `esbds`
4. To change the dehydration store details click on each datasource link, go to **Connection Pool** and provide the appropriate information in the required fields.

For OWSM:

1. Change the database information in the install.properties file found in the `SOA_ORACLE_HOME/owsm/bin` directory.
2. Stop the managed server (`soa10g_server`).
3. From the command prompt, goto the `SOA_ORACLE_HOME/owsm/bin` directory.
4. Run `wsmadmin.bat(sh)` install.
5. This will update the OWSM configuration properties and regenerate the OWSM applications.
6. Start the managed server (`soa10g _server`).

4.7 Client side Configurations for HWF API Clients

To enable client side configuration for HWF API Clients:

1. Update the `SOA_ORACLE_HOME/bpel/system/services/config/wf_client_config.xml` file with a valid WLS user for SOADomain.

   For example:

   ```
   <user>soaadmin</user>
   <password>welcome1</password>
   ```

2. HWF clients should refer to the following in the classpath for HWF API over Remote/SOAP binding

   ```
   WLS_HOME/server/lib/weblogic.jar
   SOA_ORACLE_HOME/bpel/system/classes
   SOA_ORACLE_HOME/bpel/lib/orabpel.jar
   SOA_ORACLE_HOME/bpel/lib/orabpel-boot.jar
   SOA_ORACLE_HOME/bpel/lib/orabpel-exts.jar
   SOA_ORACLE_HOME/bpel/lib/orabpel-common.jar
   SOA_ORACLE_HOME/webservices/lib/saaj-api.jar
   SOA_ORACLE_HOME/webservices/lib/orasaaj.jar
   SOA_ORACLE_HOME/lib/xmlparserv2.jar
   SOA_ORACLE_HOME/lib/xml.jar
   SOA_ORACLE_HOME/bpel/lib/oracle_http_client.jar
   ```

3. HWF clients should define the following system properties for HWF API over Remote/SOAP binding:

   ```
   -Djavax.xml.parsers.DocumentBuilderFactory=oracle.xml.jaxp.JXDocumentBuilderFac
   tory
   -Djavax.xml.parsers.SAXParserFactory=oracle.xml.jaxp.JXSAXParserFactory
   -Djavax.xml.transform.TransformerFactory=oracle.xml.jaxp.JXSAXTransformerFactor
   -Djavax.xml.soap.MessageFactory=oracle.j2ee.ws.saaj.soap.MessageFactoryImpl
   -Djavax.xml.soap.SOAPFactory=oracle.j2ee.ws.saaj.soap.SOAPFactoryImpl
   -Djavax.xml.soap.SOAPConnectionFactory=oracle.j2ee.ws.saaj.client.p2p.HttpSOAPC
   onnectionFactory
   -Djavax.xml.soap.SOAPElementFactory=oracle.j2ee.ws.saaj.soap.SOAPFactoryImpl
   ```

4.8 Steps to Enable Notification

To enable Notification on your Oracle SOA Suite with Oracle WebLogic Server installation you need to obtain the `velocity-dep-1.5.jar` file. This file is required for the notification feature to work.

The BPEL notification feature is disabled by default. To enable the BPEL notification feature, you must download the velocity-dep-1.5.jar file.

To enable notification:

1. Download the velocity-dep-1.5.jar file from `http://archive.apache.org/dist/velocity/engine/1.5`.
2. Place the JAR file in the `$Oracle_Home/bpel/lib` directory (UNIX) or the `Oracle_Home\bpel\lib` directory (Microsoft Windows).
3. Restart the managed server for SOADomain.

This enables the BPEL notification feature to display in Oracle BPEL Control.

4.9 Configuring Identity Service with LDAP repository

Complete the following steps to use the Oracle Internet Directory LDAP provider:

1. Stop the managed server.
2. Backup the existing `SOA_ORACLE_HOME/bpel/system/services/config/is_config.xml` file.
3. Make a copy of `SOA_ORACLE_HOME/bpel/system/services/config/ldap/is_config_for_OID.xml` and rename it as `SOA_ORACLE_HOME/bpel/system/services/config/is_config.xml`.
4. Point `is_config.xml` to a valid Oracle Internet Directory repository.
5. Backup the existing `SOA_ORACLE_HOME/j2ee/home/config/jazn.xml` file as `.orig` in the same location.
6. In the `SOA_ORACLE_HOME/j2ee/home/config/jazn.xml` file, comment out the section using the XML provider and uncomment out the section using LDAP.
7. Provide the Oracle Internet Directory details as shown below.

   For example:

```
<jazn provider="LDAP" location="ldap://pdrab02-4.us.oracle.com:40864"
default-realm="us">
   <property name="ldap.user" value="cn=orcladmin"/>
   <property name="ldap.password" value="!welcome1"/>
   <property name="ldap.protocol" value="no-ssl"/>
</jazn>
```

8. Restart managed server

4.10 Deploying Human Task and Decision Services `.ear` Files

- Deploying Human Task Form EAR
- Deploying Decision Services `.ear`

4.10.1 Deploying Human Task Form EAR

To deploy human task form EAR:

1. Change to the ...`\public_html\...\` form in the directory of the sample.
2. Note the `.ear` file created in the directory.
3. Extract the `application.xml` file from the `.ear` into the META-INF folder. Open `application.xml` and add the following DTD to it.

```
<application version="1.4" xmlns="http://java.sun.com/xml/ns/j2ee"
(http://java.sun.com/xml/ns/j2ee)

xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
(http://www.w3.org/2001/XMLSchema-instance)

xsi:schemaLocation="http://java.sun.com/xml/ns/j2ee
http://java.sun.com/xml/ns/j2ee/application_1_4.xsd"
(http://java.sun.com/xml/ns/j2eehttp://java.sun.com/xml/ns/j2ee/application_1_
4.xsd)>
<application>
```

4. Add the modified `application.xml` back into the same folder structure in the META-INF folder.
5. Extract the `.war` file from inside the file. Extract the `web.xml` file from the `.war` into the WEB-INF folder. Open `web.xml` and add the following DTD to it.

```
<!DOCTYPE web-app PUBLIC "-//Sun Microsystems, Inc.//DTD Web Application
2.3//EN" "http://java.sun.com/dtd/web-app_2_3.dtd">
```

6. Put the modified `web.xml` back into the `.war` in the same folder structure under WEB-INF. Then, add the modified `.war` file back in to the `.ear`.

4.10.2 Deploying Decision Services `.ear`

To deploy decision services :

1. Change to the ..\decisionservices\.. directory of the sample.
2. Note the file created in the directory.
3. Create an exploded directory version of the Decisionservices file. For example, if the file in your machine is DecisionService., then the steps to create an exploded directory are as follows:
   a. Rename the `DecisionService.` to `DecisionService.zip`.
   b. Create a new folder with the name of the
   c. called **DecisionService**.
   d. Extract the `DecisionService.zip` to **DecisionService** folder that you created in Step b. The `META-INF` folder and `DecisionService-web.war` file is created in the **DecisionService** folder.
   e. Navigate to DecisionService folder and rename the `DecisionService-web.war` to `DecisionService-web.zip`.
   f. Create a new folder with the name of the war file called **DecisionService-web** in the **DecisionService** folder.
   g. Extract the DecisionService-web.zip to **DecisionService-web** folder that you created in Step e.
   h. Delete the DecisionService-web.zip from the DecisionService folder.
   i. Navigate to **DecisionService-web** folder, and you will notice the following three folders: `META-INF`, `public_html`, and `WEB-INF`.

Note: Here, WebLogic needs the decision services .ear to be deployed as an exploded directory version and not as an .ear file.

Repeat steps a to h to create an exploded directory version of the file that you would want to deploy.

4.11 Verifying the OrderBooking Tutorial Sample

The web application DTD link in the `web.xml` files included with Oracle SOA Suite must be modified before deployment to the WebLogic Server.

1. Search for the `web.xml` file in the `SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial\PriceQuote\SelectManufacturingUI\WEB-INF` directory.

2. Make the following change in the above mentioned `web.xml` file:

   - Move:

     ```
     SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial\PriceQuote\
     SelectManufacturingUI\WEB-INF\web.xml
     ```

     To:

     ```
     SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial\
     PriceQuote\SelectManufacturing
     UI\web.xml_oc4j
     ```

   - Move:

     ```
     SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial\PriceQuote\
     SelectManufacturingUI\web.xml_weblogic
     ```

     To:

     ```
     SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial\PriceQuote\
     SelectManufacturingUI\WEB-INF\web.xml
     ```

3. Create an `.xml` file named weblogic.xml in the `SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial\PriceQuote\SelectManufacturingUI\WEB-INF` directory.

   Add the following to the `weblogic.xml` file:

   ```
   <!DOCTYPE weblogic-web-app PUBLIC "-//BEA Systems, Inc.//DTD Web Application
   6.1//EN" "http://www.bea.com/servers/wls610/dtd/weblogic-web-jar.dtd">
   <weblogic-web-app>
      <reference-descriptor>
        <ejb-reference-description>
          <ejb-ref-name>ejb/remote/TaskServiceBean</ejb-ref-name>
           <jndi-name>ejb/bpel/services/workflow/TaskServiceBean</jndi-name>
          </ejb-reference-description>
      </reference-descriptor>
   </weblogic-web-app>
   ```

   Save the `weblogic.xml` file.

4. Rename `CompleteTask.jsp` to `CompleteTask_oc4j.jsp` in `SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial\PriceQuote\SelectManufacturingUI\` directory.

5. Copy `completeTask.jsp_weblogic` to `completeTask.jsp` in `SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial\PriceQuote\SelectManufacturingUI` directory

6. Open Bpel Dev prompt

7. Change directories to the following:

   ```
   SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial
   ```

8. Start SQL*Plus and run the following script:

   ```
   SQL> @PracticeFiles\insertTable.sql;
   ```

   This creates the required sample tables in the database.

9. Change all the BPEL partner links in the bpel.xml files to update to the default port, as defined in the `SOADomain.properties` file.

10. Run the following command:

    ```
    ant
    ```

    This compiles and deploys all projects dependent upon this tutorial. However, WAR files for `CreateOrderBookingUI`, `SelectManufacturingUI`, `default_SelectManufacturing_1_0_Approval.`, and `default_OrderApproval_1_0_OrderApproval.ear` for Human Workflow must be manually deployed into the Oracle WebLogic Server..

11. Change to the `<SOA_ORACLE_HOME>\j2ee\home\applications` directory.
12. Note the `CreateOrderBookingUI` and `SelectManufacturingUI` were created when you ran `ant` in Step 10.
13. Change to the `SOA_ORACLE_HOME\bpel\samples\tutorials\127.OrderBookingTutorial\OrderApproval\public_html\OrderApproval\form` directory.
14. Note the `default_OrderApproval_1_0_OrderApproval.ear` file that was created when you ran ant in Step 10.
15. Change to `Oracle_Home\bpel\samples\tutorials\127.OrderBookingTutorial\PriceQuote\SelectManufacturing\public_html\Approval\form` directory.
16. Note the `default_SelectManufacturing_1_0_Approval.ear` file that was created when you ran ant in Step 10.
17. Select **Install Application** in the Administrative Console to deploy the war files to the WebLogic Server.

    Access the Administrative Console at the following URL:

    `http://<hostname>:<adminport>/console`

18. Select `soa10g_server1` as the deployment target.
19. Restart `soa10g_server1` from the console.
20. Run the following OrderBooking Tutorial steps:
    a. Initiate the process using `http://<hostname>:<default_port>/CreateOrderBookingUI` where `default_port` is as defined in the `SOADomain.properties` file.
    b. Open the console in audit or flow mode. Follow the steps that appear on the console and click task links to complete the task.
    c. After the process moves beyond supplier selection, the human workflow is added, for manual user approval (or rejection). This process has a timeout of 5 minutes and defaults to order status is rejected. Follow this step by opening the worklist URL at `http://<hostname>:default_port/integration/worklistapp/Login` where `default_port` is as defined in the `SOADomain.properties` file.

4.12 Running Adapter Samples

Ensure that the outbound connection pool properties shown in Table 4–1 are modified.

4.12.1 Configuring Outbound Connection Pool for Adapters in Weblogic

You should create the required outbound connection pools that are used by BPEL Process Partnerlinks before deploying BPEL Processes using Adapters. Perform the following steps to create the required outbound connection pools:

1. Log in to `http://<hostname>:<adminport>/console`, using `weblogic` as the username and password.
2. Select **Deployments**, **`<adapter_name>`**, **Configuration**, and **Outbound Connection Pools**. The Outbound Connection Pool Configuration Table is dispalyed.
3. Click **Lock & Edit**.
4. Click **New**. The Create a New Outbound Connection page is displayed.
5. Select the outbound connection displayed in the Outbound Connection Group.
6. Click **Next**. The JNDI Name for Outbound Connection Instance page is displayed.
7. Enter the required JNDI name as referenced by the partnerlink WSDL of the BPEL process under jca:address location.
8. Click **Finish**. The Save Deployment Plan Assistant page is displayed.
9. Select a deployment plan location in the Location field, and click **Finish**. The Settings for <*adapter_name*> page is displayed.
10. Return to the Outbound Connection Pools page and select the outbound connection pool that you created under the Groups and Instances column. The Outbound Connection Properties page is displayed.
11. Click the respective property value column to update the properties.
12. Click **Save**.
13. Click the **Activate Changes** button to activate the changes you have made.

Table 4–1 Outbound Connection Pool Properties

Adapter Type	Properties
Database	▪ `driverClassName` ▪ `connectionString`
FTP	▪ `host` ▪ `port` **Note:** A new authentication alias must be created for connecting to the FTP server.
Applications	▪ `connectionString` ▪ `userName` ▪ `password`
AQ	▪ `connectionString` ▪ `userName` ▪ `password`

Table 4–1 (Cont.) Outbound Connection Pool Properties

Adapter Type	Properties
JMS	▪ connectionFactoryLocation ▪ isTopic ▪ isTransacted **Note:** The istopic property must be set to false for queues. The isTransacted property must be set to false for the JMS samples to run.
MQ	▪ channelName ▪ portNumber ▪ queueManagerName ▪ hostName

4.13 Design-time Deployment Support Oracle SOA Suite 10.1.3.5.1 on Oracle WebLogic Server 10.3.1

This section describes the various design-time support functions available on WebLogic Server, for the deployment of J2EE applications in JDeveloper. You can deploy BPELPM components on WebLogic Server by using the following two methods:

- From the BPELPM Developer Prompt Using Ant
- From JDeveloper

4.13.1 From the BPELPM Developer Prompt Using Ant

You can use ant in the BPELPM developer prompt to deploy J2EE applications. This section contains the following topics:

- Prerequisite Checks
- Steps to Deploy Using the BPELPM Prompt

4.13.1.1 Prerequisite Checks

1. Ensure that bpelPlatform is set to **weblogic_8** in the SOA_ORACLE_HOME\bpel\system\config\collaxa-config.xml file.
2. Ensure that the following properties are set in SOA_ORACLE_HOME\bpel\utilities\ant-orabpel.properties file:
   - platform to **weblogic_8**
   - admin.user to valid user in WebLogic realm
   - admin.encrypted.password to admin.password of the above user
   - jndi.url to **t3://<hostname>:9700**
   - jndi.InitialContextFactory to **weblogic.jndi.WLInitialContextFactory**

Note: If the admin.user property is not set correctly, then the deployment may throw authentication errors.

4.13.1.2 Steps to Deploy Using the BPELPM Prompt

Follow these instructions to deploy BPELPM from the developer prompt using ant:

1. Open a BPELPM Developer prompt.
2. Run `ant.sh/bat` from the `SOA_ORACLE_HOME\bpel\system\appserver\oc4j\ant\bin` directory of the BPEL application.

> **Note:** For more information, refer to `SOA_ORACLE_HOME\OraBPEL_OC4J\bpel\GETTING_STARTED.html`.

The only exceptions to be noted are as follows:

- If the BPEL Process contains any Decision Service applications, UI applications, or Work Flow applications, then these applications will not be automatically deployed in WebLogic Server by the `ant` script.
- The corresponding `.ear`/WAR files is custom built for WebLogic platform but must be manually deployed on the target server **soa10g_server1**.
- Use Weblogic Admin console (`http://<hostname>:<adminport>/console`) to deploy the `.ear`/WAR files to **soa10g_server1**.

4.13.2 From JDeveloper

You can also deploy J2EE applications from JDeveloper. This section contains the following topics:

- Prerequisite Checks
- Steps to Deploy Using JDeveloper

4.13.2.1 Prerequisite Checks

1. Download JDeveloper Studio 10.1.3.5 (`jdevstudio10135.zip`) from

   For Windows - *http://www.oracle.com/technology/software/products/jdev/htdocs/soft10135.html*.
2. Modify the following properties in the `<JDEV_HOME>\integration\bpel\utilities\ant-orabpel.properties` file:
   - `platform` to **weblogic_8**
   - `admin.user` to valid user in WebLogic realm
   - `admin.encrypted.password` to `admin.password` of the above user
   - `jndi.url` to **t3://<hostname>:9700**
   - `jndi.InitialContextFactory` to **weblogic.jndi.WLInitialContextFactory**

Creating Connections to Oracle SOA Server

Follow the steps below to create an application server connection and an integration server connection:

1. Create an application server connection of the Standalone OC4J 10.1.3 type.
   - Choose OC4J standalone as server type as there is no plugin available for WebLogic

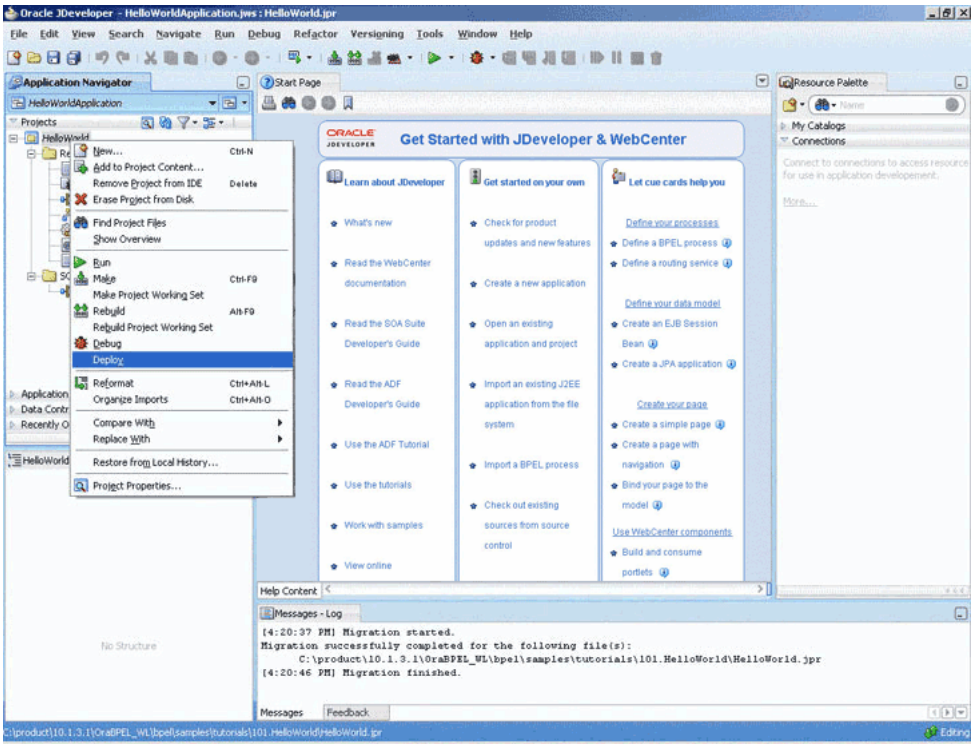
- Ignore errors when testing this connection. This is due to OPMN absent on WebLogic

2. Create an Integration Server connection to **<hostname>:<default_port>**. The default port is as mentioned in the `SOADOMAIN.properties` file.
   - Choose the above-created AppServer connection
   - BPEL and ESB should pass when this connection is tested

4.13.2.2 Steps to Deploy Using JDeveloper

Follow these instructions to deploy BPELPM from the developer prompt using JDeveloper:

1. From JDeveloper, right-click and deploy the BPEL application into the required domain.



The only exceptions to be noted are as follows:

- If the BPEL Process contains any Decision Service applications, UI applications, or Work Flow applications, then these applications will not be automatically deployed in WebLogic Server by JDeveloper.
- The corresponding `.ear/WAR` files is custom built for WebLogic platform but must be manually deployed on the target server **soa10g_server1** in WebLogic.
- Use Weblogic Admin console (`http://<hostname>:<adminport>/console`) to deploy the `.ear/WAR` files to **soa10g_server1**.

4.14 Exception During Managed Server Shutdown

When you shut down the ESB Managed server you will may receive the following exception message:

```
SEVERE: ESB server shutdown: Failed to stop one or more System
```

```
java.lang.NullPointerException
```

This ESB server shutdown exception occurs when you have wrong data. For example, `TOPIC_NAME`, `HOSTNAME`, and `PORT` to any one or more ESB Systems in the ESB console.

When you correct the data values to ESB Systems the change will not take effect until you restart the server.

Set following values in ESN console for everty ESB Service:

- `Virtual Host`: The hostname of ESB design-time instance
- `Port:` The port number of ESB design-time instance
- `Topic Location:` `ESB_JAVA_DEFERRED`

5

5SOA Domain Tuning

The chapter describes SOADomain tuning.

It includes the following topic:

- Stuck Thread Errors and Tuning Parameters

5.1 Stuck Thread Errors and Tuning Parameters

The health status of the `soa10_server` (SOA managed server) may show a warning message due to Stuck Threads.

If you go to **managed server->Monitoring->Threads** from admin console, you will notice after browsing through all the threads that a few threads may be reported as stuck.

ESB uses Work threads for queueing and dequeueing from ESB topics. If these threads are inactive for more than 600 seconds they are considered "stuck' by Oracle WebLogic Server. Since ESB does not release these Work threads for the lifetime of the Server, the above errors are expected and benign in nature.

The stuck threads max time can be increased for the managed server from the **managed server->configuration-tuning** menu.

Increase the `Stuck Thread Max Time` parameter to a large value (for example, 2147483647 seconds) to delay Oracle WebLogic Server indicating that the threads are "stuck".

6 Silent Installation

The chapter describes silent installation of Oracle SOA Suite for Oracle WebLogic Server.

It includes the following topics:

- Silent Installation
- Preinstallation
- Create the Response File
- Configure Oracle SOA Suite for Oracle WebLogic Server
- Create SOA 10.1.3.5 Domain for Oracle WebLogic Server

6.1 Silent Installation

Silent installation eliminates the need to monitor the Oracle Application Server installation because there is no graphical output and no input by the user.

Silent installation of Oracle Application Server is accomplished by supplying the Oracle Universal Installer with a response file and specifying the `-silent` flag on the command line. The response file is a text file containing variables and parameter values which provide answers to the installer prompts.

For Microsoft Windows systems, if this is a first time installation of Oracle Application Server, you must create the registry keys before starting. Registry key creation is described in Section 6.2, "Preinstallation"

For Unix systems, following installation of Oracle Application Server, you need to run the `root.sh` script as the root user. The `root.sh` script detects settings of environment variables and enables you to enter the full path of the local bin directory.

Use silent installation of Oracle Application Server when there are similar installations on more than one computer. Additionally, use silent install when performing the Oracle Application Server installation from a remote location using the command line.

6.2 Preinstallation

Complete the following steps for your operating system:

- Microsoft Windows Systems
- Unix Systems

6.2.1 Microsoft Windows Systems

For Microsoft Windows systems:

If you have not installed Oracle Application Server on your computer, then you need to create the following Registry key and value:

```
HKEY_LOCAL_MACHINE / SOFTWARE / Oracle / inst_loc = Inventory_
Directory
```

The `Inventory_Directory` is the full path to your installer files.

For example:

```
C:\Program Files\Oracle\Inventory
```

6.2.2 Unix Systems

For Unix systems:

1. Log in as the root user.

   ```
   prompt> su
   ```

2. As root user, create the `/var/opt/oracle` directory, if it does not already exist.

   ```
   # mkdir /var/opt/oracle
   ```

3. Create the file. This file specifies the inventory directory that the installer will use.

   Using a text editor such as vi or emacs, enter the following line in the file:

   ```
   inventory_loc=oui_inventory_directory
   ```

   Replace *oui_inventory_directory* with the full path to the directory where you want the installer to create the inventory directory. For example:

   ```
   inventory_loc=/opt/oracle/oraInventory
   ```

   Make sure that the `oinstall` operating system group has write permissions to this directory.

4. Create an empty file.

   ```
   # touch /oratab
   ```

5. Exit from the root user.

   ```
   # exit
   ```

6.3 Create the Response File

Before doing a silent or non-interactive installation, you must provide information specific to your installation in a response file. The installer will fail if you attempt an installation using a response file that is not configured correctly. Response files are text files that you can create or edit in a text editor.

Templates for response files are available in the `/install/Response` directory on Disk 1 of the Oracle Application Server CD-ROM.

See the template files for descriptions of the parameters in the file.

Note: For Boolean parameters, specify either "true" or "false".

6.4 Configure Oracle SOA Suite for Oracle WebLogic Server

This section describes how to silently configure Oracle SOA Suite for Oracle WebLogic Server.

Update the `$SOA_ORACLE_HOME/install/SOADomain.properties` file. Add the following properties with the noted assigned values:

- `OVERRIDE_ORAWSM_DB_PASSWORD=<password for orawsm schema>`
- `OVERRIDE_INVOKE_CONFIG_WIZARD=false`

The first property ensures that `configureSOA.sh` does not need the user to enter the `orawsm` password from the prompt.

The second property ensures that WLS Config Wizard tool is not invoked after `configureSOA.sh` runs.

The following example is an excerpt of a sample `ant` script used to update the `SOADomain.properties` file and invoke the `configureSOA.sh` script:

```
<target name="InvokeConfigureSOASilent">
   <propertyfile file="${SOA10G_ORACLE_HOME}/install/SOADomain.properties">
      <entry  key="OVERRIDE_ORAWSM_DB_PASSWORD" value="orawsm"/>
      <entry  key="OVERRIDE_INVOKE_CONFIG_WIZARD" value="false"/>
   </propertyfile>
  <exec executable="configureSOA.sh" dir="${SOA10G_ORACLE_HOME}/config" />
</target>
```

6.5 Create SOA 10.1.3.5 Domain for Oracle WebLogic Server

You can customize and use the following WLST scripts provided with the product to create and configure the SOA Domain on Oracle WebLogic Server.

The order of executing the scripts using the WLST command line tool are:

1. `create_domain.py`
2. `config_soa.py`

For example, you would invoke the scripts with following commands:

- `WL_HOME/common/bin/wlst.sh  create_domain.py`
- `WL_HOME/common/bin/wlst.sh  config_soa.py`

using the following example script:

```
#######################################
#create_domain.py:
#######################################
#!/usr/bin/python
import os, sys
readTemplate(r'/home/user/Oracle/Middleware/wlserver_
10.3/common/templates/domains/wls.jar')
cd(r'/Security/base_domain/User/weblogic')
cmo.setPassword('welcome1')
cd(r'/Security/base_domain/User')
create('soaadmin','User')
cd('soaadmin')
```

```
cmo.setPassword('welcome1')
cd(r'/Server/AdminServer')
cmo.setName('AdminServer')
cmo.setListenPort(17449)
cmo.setListenAddress('host.domain.com')
create('AdminServer','SSL')
cd('SSL/AdminServer')
cmo.setEnabled(true)
cmo.setListenPort(16771)
cmo.setHostnameVerificationIgnored(true)
cmo.setHostnameVerifier(None)
cmo.setTwoWaySSLEnabled(false)
writeDomain(r'/home/user/Oracle/Middleware/user_projects/domains/SOADomain')
closeTemplate()
exit()
#######################################
#config_soa.py
#######################################
#!/usr/bin/python
import os, sys
try:
WL_HOME = "/home/user/Oracle/Middleware/wlserver_10.3"
DOMAIN_HOME = "/home/user/Oracle/Middleware/user_projects/domains/SOADomain"
MW_HOME = "/home/user/Oracle/Middleware/OracleAS_1"
SOA_ORACLE_HOME = "/home/user/Oracle/Middleware/OracleAS_1"
if DOMAIN_HOME is None:
sys.exit("Error: Please set the environment variable DOMAIN_HOME")
if WL_HOME is None:
sys.exit("Error: Please set the environment variable WL_HOME")
if MW_HOME is None:
sys.exit("Error: Please set the environment variable MW_HOME")
if SOA_ORACLE_HOME is None:
sys.exit("Error: Please set the environment variable SOA_ORACLE_HOME")
except (KeyError), why:
sys.exit("Error: Missing Environment Variables " + str(why))
readDomain('/home/user/Oracle/Middleware/user_projects/domains/SOADomain')
addTemplate(r'/home/user/Oracle/Middleware/OracleAS_
1/common/templates/applications/oracle.soa_template_10.1.3.5.0.jar')
cd('/Server/soa10g_server1')
cmo.setListenPort(17575)
create('soa10g_server1','SSL')
cd('SSL/soa10g_server1')
cmo.setEnabled(true)
cmo.setListenPort(22782)
assign("User", "soaadmin", "Group", "SoaGroup")
assign("User", "soaadmin", "Group", "BpelGroup")
assign("User", "soaadmin", "Group", "EsbViewerGroup")
assign("User", "soaadmin", "Group", "EsbAdminGroup")
assign("User", "soaadmin", "Group", "OwsmAdminGroup")
assign("User", "soaadmin", "Group", "rule-administrators")
cd('/JDBCConnectionPool/esbds')
cmo.setDriverName('oracle.jdbc.xa.client.OracleXADataSource')
cmo.setPassword('welcome1')
set("Properties","user=oraesb;portNumber=dbport;SID=dbsid;serverName=dbhost")
cmo.setURL('jdbc:oracle:thin:@dbhost:dbport:dbsid')
cd('/JDBCConnectionPool/esbaqdatasource')
cmo.setDriverName('oracle.jdbc.xa.client.OracleXADataSource')
cmo.setPassword('welcome1')
set("Properties","user=oraesb;portNumber=dbport;SID=dbsid;serverName=dbhost")
cmo.setURL('jdbc:oracle:thin:@dbhost:dbport:dbsid')
```

```
cd('/JDBCConnectionPool/BPELServerDataSourceWorkflow')
cmo.setDriverName('oracle.jdbc.OracleDriver')
cmo.setPassword('welcome1')
set("Properties","user=orabpel;portNumber=dbport;SID=dbsid;serverName=dbhost")
cmo.setURL('jdbc:oracle:thin:@dbhost:dbport:dbsid')
cd('/JDBCConnectionPool/BPELServerDataSource')
cmo.setDriverName('oracle.jdbc.xa.client.OracleXADataSource')
cmo.setPassword('welcome1')
set("Properties","user=orabpel;portNumber=dbport;SID=dbsid;serverName=dbhost")
cmo.setURL('jdbc:oracle:thin:@dbhost:dbport:dbsid')
updateDomain()
closeDomain()
exit()
#######################################
```

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