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## 1 Installing Oracle SOA Suite with SQL Server 2005 as BPEL Dehydration Store

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Index
This guide is the primary source of installation information for Oracle SOA Suite.

This preface contains these topics:

- **Audience**
- **Documentation Accessibility**
- **Related Documentation**
- **Conventions**

**Audience**

*Oracle SOA Suite Installation Guide for SQL Server 2005 as BPEL Dehydration Store* is intended for customers who want to install Oracle SOA Suite.

**Documentation Accessibility**

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Related Documentation
For more information, see these Oracle resources:

- 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/

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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:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td><strong>monospace</strong></td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
</tbody>
</table>
Installing Oracle SOA Suite with SQL Server 2005 as BPEL Dehydration Store

This chapter provides the requirements and procedures for installing Oracle SOA Suite with SQL Server 2005 as BPEL dehydration store.

This chapter contains the following topics:

- Overview of Oracle SOA Suite on SQL Server 2005
- System and Database Requirements
- Installation and Configuration
- Postinstallation Verification Tasks
- Limitations and Troubleshooting Tips

Overview of Oracle SOA Suite on SQL Server 2005

You can install and use Oracle SOA Suite with the SQL Server 2005 as BPEL dehydration store.

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 SOA composite application. Oracle SOA Suite plugs into heterogeneous IT infrastructures and enables enterprises to incrementally adopt SOA.

Oracle Business Rules (Business Rules) and Oracle Adapters plug into the Service Infrastructure, a normalized transport infrastructure, make up the Enterprise Service Bus (ESB). With the addition of the Oracle BPEL Process Manager (BPEL) and Human Task service components, the suite forms a complete Business Process Management (BPM) platform.

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

System and Database Requirements

Table 1–1 describes the system requirements for using Oracle SOA Suite with SQL Server 2005 as BPEL dehydration store.

<table>
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<tr>
<th>Element</th>
<th>Requirement</th>
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<tr>
<td>Oracle SOA Suite for OC4J</td>
<td>Apply SOA Suite patchset 10.1.3.3 on Oracle SOA Suite 10.1.3.1</td>
</tr>
<tr>
<td></td>
<td>Note: Refer to Step 1: Install Oracle SOA Suite Basic 10.1.3.1.0 for OC4J for installing Oracle SOA Suite for OC4J.</td>
</tr>
<tr>
<td>Web browsers</td>
<td>Internet Explorer 6.0 or Mozilla Firefox 2.0</td>
</tr>
<tr>
<td>Operating systems</td>
<td>Microsoft Windows 2003 Server (for Oracle SOA Suite and Microsoft SQL Server DB), Red Hat Enterprise Linux release 3, and Red Hat Enterprise Linux release 4 (for Oracle SOA Suite)</td>
</tr>
<tr>
<td>BPEL dehydration store database</td>
<td>Microsoft SQL Server 2005 SP2</td>
</tr>
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</table>

Installation and Configuration

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

This section contains the following topics:

- Step A: Install Oracle Express Edition (XE) Database (For Linux Operating System)
- Step B: Create the Oracle SOA Suite Schema in the Oracle XE Database (For Linux Operating System)
- Step 1: Install Oracle SOA Suite Basic 10.1.3.1.0 for OC4J
- Step 2: Apply SOA Suite Patchset 10.1.3.3
- Step 3: Apply Opatch on Oracle SOA Suite 10.1.3.3
- Step 4: Install SQL Server 2005 Database
- Step 5: Apply Service Pack 2 on SQL Server 2005 Database
- Step 6: Configure Oracle SOA Suite and Create SQL Server Database IRCA schema
Installation and Configuration

**Step A: Install Oracle Express Edition (XE) Database (For Linux Operating System)**

Perform the following steps:


**Step B: Create the Oracle SOA Suite Schema in the Oracle XE Database (For Linux Operating System)**

Perform the following steps:

1. Navigate to the Disk1\install\soa_schemas\irca folder in the Oracle SOA Suite installation setup files directory.
2. Set ORACLE_HOME to point to the Oracle XE Database installation location. For example, set ORACLE_HOME=/usr/lib/oracle/xe/app/oracle/product/10.2.0/server.
3. Enter ./irca.sh.
   This runs the irca script to create the schemas required for BPEL, ESB, and OWSM.
4. Enter the host, port, and SID values when prompted. The default SID created on XE database is "XE".
5. Enter the sys password when prompted.
   The orabpel, oraesb, and orawsm schemas are loaded into the Oracle XE Database.

**Step 1: Install Oracle SOA Suite Basic 10.1.3.1.0 for OC4J**

The install instructions to install basic Oracle SOA Suite 10.1.3.1 for OC4J are available from the Oracle SOA Suite 10g Software Downloads Web site at http://www.oracle.com/technology/software/tech/soa/index.html

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**Note:** Installation of Oracle SOA Suite Basic 10.1.3.1.0 for OC4J on Linux requires an Oracle Database with Oracle SOA Suite Schema as a prerequisite. This installation cannot be performed connecting directly to the SQL Server 2005 database. Hence, if you are installing on Linux, you need to follow the additional Step A: Install Oracle Express Edition (XE) Database (For Linux Operating System) and Step B: Create the Oracle SOA Suite Schema in the Oracle XE Database (For Linux Operating System) prior to proceeding with Step 1: Install Oracle SOA Suite Basic 10.1.3.1.0 for OC4J.

If you are installing on Windows, then you can directly start with Step 1: Install Oracle SOA Suite Basic 10.1.3.1.0 for OC4J.
Step 2: Apply SOA Suite Patchset 10.1.3.3

You must download the Oracle SOA Suite patchset 10.1.3.3 from OracleMetaLink and then apply the patchset on Oracle SOA Suite 10.1.3.1. Perform the following steps:

2. Click Patches & Updates. The Patches & Updates page is displayed.
3. Click Simple Search.
4. In the Search By field, enter 6148874. The details of the patchset 6148874 are displayed.
5. Follow the instructions in the patchset to install the patchset on the Oracle SOA Suite 10.1.3.1.
6. Shut down the Oracle SOA Suite Post patch upgrade as follows:

For... | Run...
---|---
Windows XP | SOA_HOME\opmn\bin> opmnctl stopall
Linux | SOA_HOME\opmn\bin> ./opmnctl stopall

Step 3: Apply Opatch on Oracle SOA Suite 10.1.3.3

You must download the 6729033 patchset from OracleMetaLink and then apply the patchset on Oracle SOA Suite 10.1.3.3.

2. Click Patches & Updates. The Patches & Updates page is displayed.
3. Click Simple Search.
4. In the Search By field, enter 6729033. The details of the patch 6729033 are displayed.
6. Follow the instructions given in the Readme.txt file of patch 6729033 and apply the patch on Oracle SOA Suite 10.1.3.3.

Step 4: Install SQL Server 2005 Database

To install SQL Server 2005, follow the instructions given in the Microsoft SQL Server Web site at

http://www.microsoft.com/sql/default.mspx

Step 5: Apply Service Pack 2 on SQL Server 2005 Database

To apply Service Pack 2 on SQL Server 2005, follow the instructions given in the Microsoft SQL Server 2005 Service Pack 2 Web site at
Step 6: Configure Oracle SOA Suite and Create SQL Server Database IRCA schema


2. Download Microsoft SQL Server 2005 JDBC Driver 1.2 from the Microsoft SQL Server 2005 JDBC Driver 1.2 Web site at

3. Copy the sqljdbc.jar file from the downloaded driver pack found in the
   sqljdbc_1.2\enu\sqljdbc.jar directory into the Config_BPELPM_SQLServer2005\lib directory.

4. Create SQL Server database IRCA schema.
   a. Edit the Config_BPELPM_SQLServer2005\irca_sqlserver.properties file and supply the following SQL Server database parameters:
   b. For Windows, run the Config_BPELPM_SQLServer2005\irca_sqlserver.bat script, and for Linux, run Config_BPELPM_SQLServer2005/irca_sqlserver.sh.
   c. Verify the output log file at Config_BPELPM_SQLServer2005\logs\irca_sqlserver.out and check for any failures.

   The above script creates an ORCL database, ORABPEL schema, ORABPEL user and creates all the database objects required for BPEL dehydration store in the SQL Server database.

   a. Edit the Config_BPELPM_SQLServer2005\config.properties file and supply the following SQL Server database parameters:
   b. For Windows, run the Config_BPELPM_SQLServer2005\config.bat script, and for Linux, run Config_BPELPM_SQLServer2005/config.sh.
Postinstallation Verification Tasks

This section describes the postinstallation verification tasks to be performed:

3. Navigate to OC4J_HOME -> Administration -> JDBC Resources.
4. Verify that the BPELPM_CONNECTION_POOL connection pool points to the SQL Server database, as shown in Figure 1–1.

Figure 1–1 Oracle Enterprise Manager Console Window

Limitations and Troubleshooting Tips

This section describes the limitations for Oracle SOA Suite 10.1.3.1 on SQL Server 2005:

- Only the BPEL dehydration store is configured to use SQL Server as the database. If the basic version of Oracle SOA Suite has been installed on Windows, then ESB and OWSM will continue to run with OLite as the database.
- Due to syntax differences between Oracle and SQL Server database, particularly for OUTER JOIN statements, the dehydration database instance on SQL Server will be set to a database compatibility level of 80. Future versions of SQL Server database may not continue to support this compatibility.
Troubleshooting Tips
If the TaskManager and TaskActionHandler BPEL processes are not deployed in the default domain, then stop Oracle SOA Suite, copy the following bpel jars from $SOA_HOME/bpel/install/extensions to $SOA_HOME/bpel/domains/default/deploy, and start Oracle SOA Suite again.
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