This document accompanies Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0).

This document contains the following sections:

- Section 1, "What is a Patch Set?"
- Section 2, "About This Patch Set"
- Section 3, "Patch Set Documentation"
- Section 4, "Patch Set Requirements"
- Section 5, "Patch Set Application"
- Section 6, "Postapplication Tasks"
- Section 7, "Known Issues"
- Section 8, "Fixed Platform-Specific Bugs for Microsoft Windows (32-Bit)"
- Section 9, "Patch Set Components"
- Section 10, "Documentation Accessibility"

1 What is a Patch Set?

Patch sets are a mechanism for delivering fully tested and integrated product fixes. Patch sets include all files that have been rebuilt to implement the bug fixes. All of the fixes in the patch set have been tested and are certified to work with one another. Because this patch set includes only low impact fixes, you are not required to certify applications or tools against the server (unless specifically instructed by your software vendor).

This patch set is cumulative and includes all of the fixes from Oracle Application Server 10g Release 3 (10.1.3) Patch Set 1 (10.1.3.1.0), Oracle Application Server 10g Release 3 (10.1.3) Patch Set 2 (10.1.3.2.0), and Oracle Application Server 10g Release 3 (10.1.3) Patch Set 3 (10.1.3.3.0).

Patch sets contain generic fixes that apply to all platforms and may also include platform-specific fixes.
2 About This Patch Set

This section provides the following important information about Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0):

- Section 2.1, "Oracle Application Server Releases Supported by This Patch Set"
- Section 2.2, "What Happens When You Apply the Patch Set"

2.1 Oracle Application Server Releases Supported by This Patch Set

Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) is not a complete software distribution. You must install this patch set over an existing installation. Specifically, this patch set can be applied only to the following Oracle Application Server releases:

- Oracle Application Server 10g Release 3 (10.1.3.0.0)
- Oracle Application Server 10g Release 3 (10.1.3.1.0), which included the Oracle SOA Suite
- Oracle Application Server 10g Release 3 (10.1.3.2.0), which included the Oracle WebCenter Suite
- Oracle Application Server 10g Release 3 Patch Set 3 (10.1.3.3.0)
- Any Oracle Application Server 10g Release 3 (10.1.3.n) standalone installation
- Any Oracle Application Server 10g Release 3 (10.1.3.n) that has been patched with 10g Release 3 (10.1.3) Patch Set 1 (10.1.3.1.0), 10g Release 3 (10.1.3) Patch Set 2 (10.1.3.2.0), or Oracle Application Server 10g Release 3 (10.1.3) Patch Set 3 (10.1.3.3.0).

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**Note:** Oracle BAM 10.1.3.4.0 can only be applied on Oracle BAM 10.1.3.3.0.

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Refer to the following sections for specific information about applying and using the patch set with supported Oracle Application Server release:

- Section 2.1.1, "Notes When Applying the Patch Set to a 10g Release 3 (10.1.3.0.0) Oracle Home"
2.1.1 Notes When Applying the Patch Set to a 10g Release 3 (10.1.3.0.0) Oracle Home

Oracle Application Server 10g Release 3 (10.1.3.0.0) was a significant new release that provided a complete Java 2 Platform, Enterprise Edition (J2EE) 1.4-compliant environment.

Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) updates specific software and configuration files contained in your existing 10g Release 3 (10.1.3.0.0) Oracle home. The result is improvements to the reliability and performance of the software.

In addition, Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) provides additional functionality to several key Oracle Application Server 10g Release 3 (10.1.3.0.0) features. For example, the -Xm[sx] flag specifies the initial size, in bytes, of the memory allocation pool for each OC4J instance. This value must be a multiple of 1024, and greater than 1MB. Append the letter k or K to indicate kilobytes, or m or M to indicate megabytes. The default value is 2MB if nothing is specified. It is the same as specifying –Xms2M. Note there is no space between –Xms, the number and the letter.

Table 1 provides a summary of the additional features available after you apply this patch set to a 10g Release 3 (10.1.3.0.0) Oracle home.

<table>
<thead>
<tr>
<th>Feature Description</th>
<th>More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Application Server Control Console features, including the ability to create OC4J instances, organize them into OC4J groups, and the ability to review and configure ports, routing IDs, and application server instances in a cluster topology.</td>
<td>&quot;Introduction to Administration Tools&quot; in the Oracle Application Server Administrator's Guide</td>
</tr>
<tr>
<td>Support for OC4J Java Single Sign-On (Java SSO), a lightweight single sign-on solution supplied with OC4J.</td>
<td>&quot;Configuring Instances to Use OC4J Java Single Sign-On&quot; in the Oracle Application Server Administrator's Guide</td>
</tr>
<tr>
<td>Support for Web Services Inspection Language (WSIL), a lightweight Web services directory protocol that provides an extensible schema for a single document catalog of services</td>
<td>&quot;Web Service Inspection Language 1.0&quot; in the Oracle Fusion Middleware Developer's Guide for Oracle Web Services</td>
</tr>
</tbody>
</table>

In addition, after you apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to your 10g Release 3 (10.1.3.0.0) Oracle home, you have the option of installing a set of Service Oriented Architecture (SOA) components (the Oracle SOA Suite) that developers can use to build and deploy industry-standard, SOA applications.
To support the new features provided by Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), the patch set installation automatically updates the opmn.xml file in the 10g Release 3 (10.1.3.0.0) Oracle home as follows:

- The default group name is changed from OC4J to default_group.
- The rmi entries are changed to rmis.
- Each instance (except home) is put into a group of the same name as the instance.

For more information about managing Oracle Application Server instances, OC4J instances, and groups in 10g Release 3 Patch Set 3 (10.1.3.3.0), refer to the Oracle Application Server Administrator’s Guide in the 10g Release 3 (10.1.3.2.0) Documentation Library on the Oracle Technology Network (OTN):

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

You can also refer to the Oracle Enterprise Manager 10g Application Server Control online help.

2.1.2 Notes When Applying the Patch Set to a 10g Release 3 (10.1.3.1.0) Oracle Home

Oracle Application Server 10g Release 3 (10.1.3.1.0) was an update to the 10g Release 3 (10.1.3.0.0) release that improved the reliability and performance of 10g Release 3 (10.1.3.0.0) and provided some additional functionality.

Oracle Application Server 10g Release 3 (10.1.3.1.0) was designed specifically:

- For administrators who use OC4J to deploy and manage J2EE applications
- As a platform for developing and deploying service-oriented architecture (SOA) applications

You can apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to a 10g Release 3 (10.1.3.1.0) Oracle home or to a 10g Release 3 (10.1.3.0.0) Oracle home that has been patched to 10g Release 3 (10.1.3.1.0).

Note: If you performed an Oracle Application Server 10g Release 3 (10.1.3.n) standalone installation on top of a 10g Release 3 (10.1.3.n) installation, then this patch updates the core and standalone products only.

2.1.3 Notes When Applying the Patch Set to a 10g Release 3 (10.1.3.2.0) Oracle Home

Oracle Application Server 10g Release 3 (10.1.3.2.0) provides the 10g Release 3 (10.1.3.1.0) core J2EE functionality (OC4J, its related technologies and Oracle HTTP Server), and also provides support for the Oracle WebCenter Suite. Oracle WebCenter Suite includes Oracle WebCenter Services and Oracle Content DB.

If you installed Oracle Application Server 10g Release 3 (10.1.3.2.0) and the Oracle WebCenter Suite, then Oracle recommends that you apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to update the core J2EE components.
2.1.4 Using Oracle Web Cache with Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)

Oracle Web Cache is not included in Oracle Application Server 10g Release 3 (10.1.3). However, Oracle Application Server 10g Release 2 is fully compatible with release 3 (10.1.3) and this patch set.

Customers who require Oracle Web Cache in a release 10.1.3 environment should download Oracle Web Cache release 10.1.2, and apply the latest patch set for release 10.1.2. Oracle Web Cache must be installed in a separate Oracle home.

2.2 What Happens When You Apply the Patch Set

When you apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), the application program updates specific software and configuration files contained in the selected Oracle Application Server middle-tier Oracle home. The Oracle home is the full path of the Oracle directory that contains the Oracle Application Server installation. ORACLE_HOME will be used in this documentation to refer to the directory where the product is installed.

Note: ORACLE_HOME should be replaced with the full path name of the installed Oracle Application Server instance.

This patch set updates the J2EE software for all the installation types for each of the supported releases. The patch set application procedure automatically determines which set of software patches is appropriate for your installation.

For a list of products included in this patch set, see the Section 9, "Patch Set Components" section.

2.2.1 Changes to Oracle JDeveloper

The following is a change for Oracle JDeveloper:

- In the MQOutboundHeader.wsdl file, there is no element named CodedCharSetId. This needs to be added manually for Oracle JDeveloper. If you want to assign the CodedCharSetId element to the outbound WSDL, then do the following:

  1. After creating the Outbound service for MQAdapter, open the MQAdapterOutboundHeader.wsdl file and add the following to the MQOutboundHeader element:

     <element name="CodedCharSetId" type="string" minOccurs="0" />

  2. Restart Oracle JDeveloper.

  3. Create an Invoke activity, and in the Adapters tab, create an Outbound header variable.
4. Use the Outbound Header variable created in Step 3 to assign the CodedCharSetID element for Outbound.

3 Patch Set Documentation

There are two documents related to this release of the Oracle Application Server patch set:

- **Oracle Application Server Patch Set Notes 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) for Linux x86 and Microsoft Windows (32-Bit)** (this document). It provides the following information:
  - System requirements and instructions needed to apply or remove the patch set.
  - A list of known issues related to the Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0).

  The Linux document is contained in the file `/OracleAppServer10g_10.1.3.4_Linux_Patchset/doc/readme.html` in the patch set distribution.

  The Microsoft Windows document is contained in the file `\OracleAppServer10g_10.1.3.4_Windows_Patchset\doc\readme.html` in the patch set distribution.

- **Oracle Application Server Fixed Bugs List 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)**. It provides a list of all generic (common to all operating systems) bugs related to Oracle Application Server that have been fixed in this release, sorted by product group.

  The Linux document is contained in the file `/OracleAppServer10g_10.1.3.4_Linux_Patchset/doc/bugsfixed.html` in the patch set distribution.

  This Microsoft Windows document is contained in the file `\OracleAppServer10g_10.1.3.4_Windows_Patchset\doc\bugsfixed.html` in the patch set distribution.

In addition, the following OracleMetaLink notes have information related to this patch set:

- **OracleMetaLink Note 727068.1 Oracle Application Server Patch Set Notes Addendum 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)**

- **OracleMetaLink Note 397022.1 Oracle Application Server 10g Release 3 (10.1.3) Support Status and Alerts**

OracleMetaLink is available at [http://metalink.oracle.com](http://metalink.oracle.com)

4 Patch Set Requirements

Refer to your installation guide and release notes for the base requirements for your system.

Refer to the following sections for detailed patch set requirements:

- **Section 4.1, "Required Software"**
Section 4.2, "Preinstallation Requirements"

Note: If your system does not meet one of the minimum requirements listed in this section, then log a service request to request assistance with this patch set.

4.1 Required Software

The following is a list of the required system software that must be installed before installing this patch set:

- Oracle Application Server 10g Release 3 (10.1.3.0.0), Oracle Application Server 10g Release 3 (10.1.3.1.0), 10g Release 3 (10.1.3.2.0) or 10g Release 3 Patch Set 3 (10.1.3.3.0).

You can verify the release number by checking the release number in the following properties file:
- For Linux x86:
  \$ORACLE_HOME/config/ias.properties
- For Microsoft Windows (32-Bit):
  \$ORACLE_HOME/config\ias.properties

- One of the following supported operating systems:
  - Linux x86
  - Microsoft Windows (32-Bit)

Note: Oracle BAM 10.1.3.4.0 can only be applied on Oracle BAM 10.1.3.3.0. See the 10.1.3.4.0 Release Notes and New Features document for the platforms supported by Oracle BAM 10.1.3.4.0.

4.2 Preinstallation Requirements

The following list is the preinstallation requirements for this patch set:

- Ensure the system configuration meets the recommended system configuration described in your documentation.

- Ensure the environment variables for the `tmp` and `temp` directories for Microsoft Windows are set as described in the Oracle Application Server Administrator’s Guide.

- Back up your Oracle software and inventory before applying this patch set, or before making any other changes to your existing Oracle software. Refer to your administrator’s guide for instructions on backing up your Oracle software and inventory.

Depending on your environment, you may need to perform the following procedures before applying the patch:

- Section 4.2.1, "Run Upgrade Scripts on Oracle Application Server 10g Release 3 (10.1.3.1.0)"
4.2.2 "Run Upgrade Scripts on Oracle Application Server 10g Release 3 Patch Set 3 (10.1.3.3.0), 10g Release (10.1.3.3.1) or MLR-patched Instance"

4.2.1 Run Upgrade Scripts on Oracle Application Server 10g Release 3 (10.1.3.1.0)

Before applying 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to a Oracle Application Server 10g Release 3 (10.1.3.1.0) instance, do the following procedure:

1. Connect to the Oracle database as the orabpel user.

2. Run the following script based on your database and operating system for your BPEL environment:
   - For Linux x86: upgrade_10131_10134_oracle.sql
     The preceding script is located in the SHIPHOME/Disk1/install/soa_schema_upgrade/bpel/scripts directory.
   - For Microsoft Windows (32-Bit) with Oracle Database: upgrade_10131_10134_oracle.sql
     The preceding script is located in the SHIPHOME\Disk1\install\soa_schema_upgrade\bpel\scripts directory.
   - For Microsoft Windows (32-Bit) with Oracle Database Lite: upgrade_10131_10134_olite.sql
     The preceding script is located in the SHIPHOME\Disk1\install\soa_schema_upgrade\bpel\scripts directory.

3. Connect to the Oracle database as the oraesb user.

4. Run the following script based on your database and operating system for your ESB environment:

   - For Linux x86: upgrade_10133_10134_oracle.sql
     The preceding script is located in the SHIPHOME/Disk1/install/soa_schema_upgrade/esb/sql/oracle directory.
   - For Microsoft Windows (32-Bit) with Oracle Database: upgrade_10133_10134_oracle.sql
     The preceding script is located in the SHIPHOME\Disk1\install\soa_schema_upgrade\esb\sql\oracle directory.
   - For Microsoft Windows (32-Bit) with Oracle Database Lite: upgrade_10133_10134_olite.sql
     The preceding script is located in the SHIPHOME\Disk1\install\soa_schema_upgrade\esb\sql\other directory.

5. Restart the instances.
4.2.2 Run Upgrade Scripts on Oracle Application Server 10g Release 3 Patch Set 3 (10.1.3.3.0), 10g Release (10.1.3.3.1) or MLR-patched Instance

Before applying 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to an Oracle Application Server 10g Release 3 Patch Set 3 (10.1.3.3.0), 10g Release 3 (10.1.3.3.1), or an MLR-patched instance, you must do the following procedure:

1. Connect to the Oracle database as the orabpel user.
2. Run the following script based on your database and operating system for your BPEL environment:
   - For Linux x86: upgrade_10133_10134_oracle.sql
     The preceding script is located in the $SHIPHOME/Disk1/install/soa_schema_upgrade/bpel/scripts directory.
   - For Microsoft Windows (32-Bit) with Oracle Database: upgrade_10133_10134_oracle.sql
     The preceding script is located in the $SHIPHOME\Disk1\install\soa_schema_upgrade\bpel\scripts directory.
   - For Microsoft Windows (32-Bit) with Oracle Database Lite: upgrade_10133_10134_olite.sql
     The preceding script is located in the $SHIPHOME\Disk1\install\soa_schema_upgrade\bpel\scripts directory.
3. Run the following script based on your database and operating system for your ESB environment. You will be prompted to log in as the oraesb user, with the oraesb password:
   - For Linux x86: upgrade_10133_10134_oracle.sql
     The preceding script is located in the $SHIPHOME/Disk1/install/soa_schema_upgrade/esb/sql/oracle directory.
   - For Microsoft Windows (32-Bit) with Oracle Database: upgrade_10133_10134_oracle.sql
     The preceding script is located in the $SHIPHOME\Disk1\install\soa_schema_upgrade\esb\sql\oracle directory.
   - For Microsoft Windows (32-Bit) with Oracle Database Lite: upgrade_10133_10134_olite.sql
     The preceding script is located in the $SHIPHOME\Disk1\install\soa_schema_upgrade\esb\sql\other directory.
4. Restart the instances.

5 Patch Set Application

This section contains the following topics:
Section 5.1, "Applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)"

Section 5.3, "Silent and Non-Interactive Patch Application"

Section 5.2, "Applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) Oracle Business Activity Monitoring (BAM)"

Section 5.4, "Applying the Patch Set in a Clustered Environment"

Section 5.5, "Applying the Patch Set to a 10g Release 3 (10.1.3.1.0) Enterprise Deployment Topology"

Section 5.6, "Re-application of the Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)"

5.1 Applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)

This section describes the application procedure for Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0). It includes the following steps:

- Section 5.1.1, "Back up Your Existing Environment"
- Section 5.1.2, "Apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)"

5.1.1 Back up Your Existing Environment

There is no automatic procedure for removing 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0). Oracle strongly recommends that you make a backup of your existing environment before you install Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0). If you choose to remove Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), or if you encounter a problem with application of the patch, then you can restore your original environment.

You must make a back up of the database schema that is being used so that the database can be reverted back to the original state.

See Also: "Introduction to Backup and Recovery" in the Oracle Application Server Administrator’s Guide for complete information about Oracle Application Server Backup and Recovery.

5.1.2 Apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)

The following procedure describes how to apply the patch set:

1. If you are applying 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to a 10g Release 3 (10.1.3.0.0) Oracle home and your system uses Enterprise JavaBeans 3.0 applications, then you must undeploy your applications before applying the patch.

   This step is not necessary if you are applying the patch set to a 10g Release 3 (10.1.3.1.0) or 10g Release 3 (10.1.3.2.0) Oracle home.

   The following procedure describes how to undeploy the applications:

   a. Log in to the Application Server Control Console as the same user name as the one used for the original installation. If the application is deployed to a specific OC4J instance, then navigate to the OC4J Home page for the
OC4J instance. If the application is deployed to a group, then navigate to the Group page.

**See Also:** "Introduction to Administration Tools" in the *Oracle Application Server Administrator’s Guide* for more information about Application Server Control

b. Click **Applications** to display a list of the applications.

c. Select the EJB 3.0 applications.

d. Click **Undeploy**.

2. If you use JDK release 1.4.2 with an OC4J instance, then you will need to perform the following steps to replace JDK release 1.4.2 before applying the patch set. After applying the patch, you will replace release 1.5 with release 1.4.2.

a. Stop Oracle Process Manager and Notification Server and all managed processes.

b. Back up the `ORACLE_HOME/opmn/conf/opmn.xml` file.

c. Remove Java system properties in the `<data>` element with the `id=java-bin`. The `<data>` element is in the `<category id="start-parameters">` element in the `opmn.xml` file.

For example, if the opmn.xml has the following lines:

```xml
<ias-component id="default_group">
  <process-type id="test_oc4j_instance" \
  module-id="OC4J" status="enabled">
    <module-data>
      <category id="start-parameters">
        <data id="java-bin" value="/myhost/jdk1.4.2/bin/java" />
        <data id="java-options" value="-server \
          -XX:MaxPermSize=512M -ms512M -mx1024M"/>
      </category>
    </module-data>
  </process-type>
</ias-compent>
```

You should edit the file to look like the following:

```xml
<ias-component id="default_group">
  <process-type id="test_oc4j_instance" \
  module-id="OC4J" status="enabled">
    <module-data>
      <category id="start-parameters">
        <data id="java-options" value="-server \
          -XX:MaxPermSize=512M -ms512M -mx1024M"/>
      </category>
    </module-data>
  </process-type>
</ias-compent>
```

d. Restart Oracle Process Manager and Notification Server and all managed processes.

3. If you are applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to a 10g Release 3 (10.1.3.0.0) Oracle home and your
environment uses OracleAS Cold Failover Cluster topology, then you will need to perform the following steps:

a. Open the `opmn.xml` file and search for the following line in the notification-server section:
   
   ```xml
   <ipaddr remote="virtual_hostname" request="virtual_hostname"/>
   ```
   
   If this entry does not appear, then add it to the `opmn.xml` file. In the preceding example, `virtual_hostname` is the actual virtual hostname. It should be the same as the VIRTUAL_HOSTNAME variable.

b. Restart Oracle Process Manager and Notification Server (OPMN).

4. If you have edited the `dsa.conf` file, then make a copy of it. The file will be over-written during patch application.

5. If you use adapters, then make copies of the `oc4j-ra.xml` files. The files will be over-written during patch application.

6. Ensure the following values are set in the `ORACLE_HOME/owsm/bin/install.properties` file:
   
   ```java
   install.http.host=hostname
   install.http.port=7777
   ```

7. Ensure the OC4J instances are running. You can check the status using the following command:
   
   - For Linux x86:
     
     ```bash
     ORACLE_HOME/opmn/bin/opmnctl status
     ```
   
   - For Microsoft Windows (32-Bit):
     
     ```bash
     ORACLE_HOME\opmn\bin\opmnctl status
     ```

8. Insert Disk1 of the Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) media, or navigate to the Disk1 subdirectory in the directory that contains the unpacked patch set software.

9. Start Oracle Universal Installer:
   
   - For Linux x86:
     
     Run the `runInstaller` command.
   
   - For Microsoft Windows (32-Bit):
     
     Double-click `setup.exe`.

Table 2 describes the steps and screens you will encounter during the application of the patch set.

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**Note:** The online help available during the installation procedure provides information for both a full installation of Oracle Application Server 10g Release 3 (10.1.3.1.0), as well as the patch set installation. As a result, it is not specific to the patch set installation procedure. Refer to Table 2 for specific information on using the Oracle Universal Installer screens to install 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0).
## Screens Displayed while Applying Oracle Application Server Patch

<table>
<thead>
<tr>
<th>Screen</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome</td>
<td>Review the Oracle Universal Installer Welcome screen and click Next.</td>
</tr>
<tr>
<td></td>
<td>The Welcome screen provides information about Oracle Universal Installer.</td>
</tr>
<tr>
<td></td>
<td>The following buttons appear on the installation screens:</td>
</tr>
<tr>
<td></td>
<td>- <strong>Deinstall Products</strong>: Deinstall individual components or the entire product. This button appears only on the Welcome screen.</td>
</tr>
<tr>
<td></td>
<td>- <strong>About Oracle Universal Installer</strong>: View the release number of the installer.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Help</strong>: Access detailed information about the functionality of each screen.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Installed Products</strong>: View currently installed products or deinstall the entire product or components.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Back</strong>: Return to the previous screen. This button is disabled on the Welcome screen.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Next</strong>: Proceed to the next screen.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Install</strong>: Install the selected product. This button is disabled on the Welcome screen.</td>
</tr>
<tr>
<td></td>
<td>- <strong>Cancel</strong>: Quit the installation process and exit the installer.</td>
</tr>
</tbody>
</table>

### Specify File Locations

The Specify File Locations screen allows you to verify the full path for the source and select a destination location for Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0):

- **Source**: This is the full path to the `products.xml` file from which the product will be installed. If you started the installer by using the `runInstaller` command or the `setup.exe` file, then the installer detects and uses the default values of the `products.xml` file. Do not change the path.

- **Name**: Select the name of the Oracle home you want to patch.

Oracle homes are identified by name. When you select a name from the drop-down menu, the **Path** field is updated automatically to show the location of the selected Oracle home.

- **Path**: This field is filled in automatically when you select an existing Oracle home from the **Name** drop-down menu.

- **Browse**: Use this button to navigate the file system and select the source or destination locations.

Click **Next** after specifying the file location.

### Administrator (oc4jadmin) Password

Enter the `oc4jadmin` user password for the Oracle Application Server instance that is being patched.

Click **Next**.

### Prompt

This screen informs you that the middle tier will be shutdown.

Click **OK**.

### Summary

Verify your selections and click **Install**.
10. Replace the current dsa.conf file with the copy made in step 4.

11. Replace the oc4j-ra.xml files with the copies made in step 5.

5.2 Applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) Oracle Business Activity Monitoring (BAM)

This section describes the procedure for applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to an Oracle Business Activity Monitoring (BAM) 10.1.3.3.0 installation.

Note that to patch Oracle BAM installations, you cannot double-click setup.exe or run it directly. To patch your Oracle BAM installation, apply 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) as instructed in the following sections:

- Section 5.2.1, "Back up Your Existing Oracle Business Activity Monitoring 10g Release 10.1.3.3.0 Environment"
- Section 5.2.2, "Apply the Patch Set to an Oracle Business Activity Monitoring (BAM) Installation"

5.2.1 Back up Your Existing Oracle Business Activity Monitoring 10g Release 10.1.3.3.0 Environment

The following steps include how to make a back up of the Oracle Business Activity Monitoring 10g Release 10.1.3.3.0 environment:
1. Stop all the Oracle BAM services and Internet Information Services (IIS).

2. Make a back up of any customized configuration files, image files and database files.

   Note that the Oracle BAM configuration files that may have been modified will be preserved when uninstalling Oracle BAM in the following folder:

   \ORACLE_HOME\ConfigFilesBackup

   This folder is not removed when uninstalling Oracle BAM. However, you may move the files to another location.

   Additionally, you must make a back up of the images folder if any reports or views use image files for background. The images folder is also preserved in folder ORACLE_HOME\BAM\images when uninstalling Oracle BAM.

3. Make a full backup of the Oracle BAM Active Data Cache database by using Oracle database tools.

4. If Oracle Enterprise Link for BAM is installed, make note of any Enterprise Link Data Flow Service settings.

5.2.2 Apply the Patch Set to an Oracle Business Activity Monitoring (BAM) Installation

   Note: In the Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), Oracle BAM is available for Microsoft Windows (32-Bit) only. See the Oracle BAM section of the 10.1.3.4 Release Notes and New Features document for the platforms supported by Oracle BAM 10.1.3.4.0.

The following procedure describes how to apply the patch set:

1. Open a DOS command window.

2. Insert Disk1 of the Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) media, or navigate to the Disk1\bam subdirectory in the directory that contains the unpacked patch set software.

3. Run the setup_bam.bat file using the following format:

   setup_bam.bat BAM_location

   Note: Use Oracle Database Data Pump expdp utility instead of exp, to avoid binary_double support issues.
5.3 Silent and Non-Interactive Patch Application

This section describes how to apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) either by silent or non-interactive methods:

- Use silent patch application when you want to do similar applications to more than one computer. You can also use silent patch application to apply the patch from a remote location using the command line.
- Use non-interactive patch application when you want to see specific screens, or when you want to enter some information interactively.

To do a silent or non-interactive patch application, you supply the installer with a text file called a response file. The installer uses the variables and parameter values in the response file to provide responses to some or all of the installer prompts.

This section includes the following topics:

- Section 5.3.1, "Silent Installation"
- Section 5.3.2, "Non-interactive Installation"
- Section 5.3.3, "Response Files"
- Section 5.3.4, "Performing Silent or Non-interactive Patch Application"

5.3.1 Silent Installation

With silent installation, you do not need to monitor the installation because you do not enter information, and you do not have a graphical user interface to watch.

To do a silent installation, supply the installer with a response file and specify the -silent flag on the command line.

5.3.2 Non-interactive Installation

With non-interactive installation, the installer displays a graphical user interface as in a normal installation. If your response file does not have an entry for a particular installer prompt, then you must provide the response during the installation.

5.3.3 Response Files

You must create a response file before you apply the patch set. You can edit the response files with any text editor. Start by copying the response file template oracle.as.j2ee.patchset.Custom.rsp provided in the following directory of your Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0):

- For Linux x86: Disk1/stage/Response
- For Microsoft Windows (32-Bit): Disk1\stage\Response

In the template, parameters have three types of values:

- Constants
The following sections describe the parameters.

- **Optional Values**
- **Required Values**

These are text or Boolean values that are pre-set to give you a successful patch set application. Unless you are an advanced user, do not change these values.

**Examples:**
- **Linux x86 example:**
  
  `FROM_LOCATION="/disk1/stage/products.xml`  
  `SHOW_SUMMARY_PAGE=false`

- **Microsoft Windows (32-Bit) example:**
  
  `FROM_LOCATION="E:\disk1\stage\products.xml`  
  `SHOW_SUMMARY_PAGE=false`

**Optional Values**

When a parameter is set to the string `<Value Unspecified>`, the installer ignores the parameter. The installer either uses the default value for the parameter, or obtains the value from your current Oracle Application Server installation. Unless you are an advanced user, do not change these values.

**Examples:**
- **Linux x86 example:**
  
  `UNIX_GROUP_NAME=<Value Unspecified>`

- **Microsoft Windows (32-Bit) example:**
  
  `RESTART_SYSTEM=<Value Unspecified>`

**Required Values**

When a parameter is set to the string `<Value_Required>`, you must replace the string with a text or Boolean value. For a silent patch application, if you do not supply a value, then the process will fail. For a non-interactive patch application, if you do not replace the string with a text or Boolean value, then the process will pause and display the normal screen that prompts for this value.

The Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) application requires values for the following parameter:

- **ORACLE_HOME**
  
  This is the full path of the Oracle home directory that contains the Oracle Application Server installation you want to patch.

  * For a silent patch application, you must update the entry
    `ORACLE_HOME=<Value_Required>`

    with the path to your Oracle home, as follows:

    For Linux x86: `ORACLE_HOME="/private/oracle/AppSrvHome"`
For Microsoft Windows (32-Bit): ORACLE_HOME="C:\private\oracle\AppSrvHome"

If you do not update the entry, then the process will fail.

* For a non-interactive patch application, if you do not update the entry, then the installer will pause and display the File Locations dialog.

5.3.4 Performing Silent or Non-interactive Patch Application
The following procedure describes how to perform silent or non-interactive patch application:

---

**Note:** If any files are in use during a silent patch application, such as a user has an open file, then the process may terminate. If that happens, then the open file must be determined and its corresponding process shut down. The patch application can be restarted after shutting down the process.

---

1. Copy the response file template from the product installation media to your computer.
2. Make the necessary changes to the copy of the file, and save it.
3. If you have edited the dsa.conf file, then make a copy of it. The file will be over-written during patch application.

4. If you use adapters, then make copies of the oc4j-ra.xml files. The files will be over-written during patch application.

5. Start the patch application. Specify the response file path and filename as the value of the installer's responseFile parameter. For a silent installation, also specify the silent parameter. In the following Microsoft Windows examples, E is the installation media drive.

Examples:

- **Silent patch application:**
  - For Linux x86:
    
    ```
    > ./runInstaller -silent -responseFile absolute_path_and_filename
    ```
  - For Microsoft Windows (32-Bit):
    
    ```
    E:/> setup.exe -silent -responseFile absolute_path_and_filename
    ```

- **Non-interactive patch application**
  - For Linux x86:
    
    ```
    > ./runInstaller -responseFile absolute_path_and_filename
    ```
  - For Microsoft Windows (32-Bit):
    
    ```
    E:/> setup.exe -responseFile absolute_path_and_filename
    ```

---
6. Check the log files in your inventory directory for any errors. The log files are located in the following directory:
   - For Linux x86:
     /oracle_inventory_path/logs/installAction{todays_date_time}.log
     /oracle_inventory_path/logs/silentinstall{timestamp}.log

     The value of oracle_inventory_path is stored in the following file:
     /var/opt/oracle/orainst.loc

   - For Microsoft Windows (32-Bit):
     C:\oracle_inventory_path\logs\installAction{todays_date_time}.log
     C:\oracle_inventory_path\logs\silentinstall{timestamp}.log

     The value of oracle_inventory_path is the following directory:
     C:\Program Files\Oracle\Inventory

     In the preceding examples, the C:\ drive is assumed to be the location of the file. To determine the location of the file, check the HKEY_LOCAL_MACHINE\SOFTWARE\Oracle\inst_loc registry entry.

     The log file name has the format installActions{todays_date_time}.log.

7. Replace the current dsa.conf file with the copy made in step 6.

8. Replace the oc4j-ra.xml files with the copies made in step 4.

5.4 Applying the Patch Set in a Clustered Environment

If you are managing Oracle Application Server 10g Release 3 (10.1.3.0.0), 10g Release 3 (10.1.3.1.0), 10g Release 3 (10.1.3.2.0), or 10g Release 3 (10.1.3.3.0) cluster topology, then you can apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to each application server instance in the cluster, as follows:

   See Also: Refer to Oracle Application Server Enterprise Deployment Guide 10g Release 3 (10.1.3.1.0) for more information about configuring ESB runtime instances.
1. Review the information in Section 2, "About This Patch Set" that applies specifically to the release you are updating.

For example, if you are applying the patch set to a 10g Release 3 (10.1.3.0.0) environment, then be sure to carefully review the information in Section 2.1.1, "Notes When Applying the Patch Set to a 10g Release 3 (10.1.3.0.0) Oracle Home".

2. Use the instructions in Section 5.1, "Applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)" to apply the patch set to one application server instance in the cluster.

3. After the patch is applied, verify that the newly-patched instance is up and running.

For example, navigate to the Application Server Control Console and verify that the newly-patched instance is listed as a member of the cluster. Verify that the instance is up, and then drill down to the application server home page or the OC4J Home page for that instance.

4. Perform any tasks described in Section 6, "Postapplication Tasks" that apply to your environment.

5. Repeat steps 2 through 4 for the remaining application server instances in the cluster.

---

**Note:** If you are patching a 10g Release 3 (10.1.3.0.0) cluster, then be sure to refer to the Oracle Fusion Middleware Upgrade Guide for Enterprise Deployments in the 10g Release 3 (10.1.3.1.0) documentation library for more information.

---

### 5.5 Applying the Patch Set to a 10g Release 3 (10.1.3.1.0) Enterprise Deployment Topology

This section describes how to apply 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to a 10g Release 3 (10.1.3.1.0) Enterprise Deployment topology with minimum downtime. During patch application, the installer will patch all containers in an Oracle home.

#### 5.5.1 Before You Apply this Patch Set

Before you apply the patch set, review the information in Oracle Application Server Enterprise Deployment Guide 10g Release 3 (10.1.3.1.0).

The following assumptions are used for the patch application procedure:

- It is assumed that you are applying the patch to the 10g Release 3 (10.1.3.1.0) mySOACompany topology as described in Oracle Application Server Enterprise Deployment Guide 10g Release 3 (10.1.3.1.0).

- The 10g Release 3 (10.1.3.1.0) mySOACompany topology contains only Oracle homes that were created by using the standalone BPEL, ESB, and OWSM installers. If you created any Oracle homes by running the consolidated Oracle SOA Suite installer and disabling the unused components, you may still follow the procedure. However, you should make sure that you perform all of the application tier steps that apply to the enabled components before applying the patch. Refer to Chapter 3, "Installing and Configuring the mySOACompany Web and Application
Tiers” in *Oracle Application Server Enterprise Deployment Guide* for more information.

- Perform a complete backup of all Oracle homes and all oraInventory information in your topology. Refer to *Oracle Application Server Administrator’s Guide 10g Release 3 (10.1.3.1.0)* for more information.

### 5.5.2 Applying the Patch Set

The following procedure describes how to apply 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to your 10g Release 3 (10.1.3.1.0) mySOACompany Enterprise Deployment Topology:

1. Run the following upgrade script based on your database and operating system for your BPEL environment. You will be prompted to log in as the ORABPEL user.

   - For Linux x86: `upgrade_10133_10134_oracle.sql`
     
     The preceding script is located in the `SHIPHOME/Disk1/install/soa_schema_upgrade/bpel/scripts` directory.

   - For Microsoft Windows (32-Bit) with Oracle Database: `upgrade_10133_10134_oracle.sql`
     
     The preceding script is located in the `SHIPHOME\Disk1\install\soa_schema_upgrade\bpel\scripts` directory.

   **Note:** Do not restart the instances until you have applied 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0).

2. Run the following upgrade script based on your database and operating system for your ESB environment. You will be prompted to log in as the ORAESB user.

   - For Linux x86: `upgrade_10133_10134_oracle.sql`
     
     The preceding script is located in the `SHIPHOME/Disk1/install/soa_schema_upgrade/esb/sql/oracle` directory.

   - For Microsoft Windows (32-Bit) with Oracle Database: `upgrade_10133_10134_oracle.sql`
     
     The preceding script is located in the `SHIPHOME\Disk1\install\soa_schema_upgrade\esb\sql\oracle` directory.

   **Note:** Do not restart the instances until you have applied 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0).

3. Choose one middle-tier instance to patch first. It can be a BPEL, ESB Runtime (ESBR), or ESB Design Time (ESBD) instance.
4. Modify the routing ID of the instance you are patching, by performing the following steps. This prevents any new HTTP requests from being accepted and avoids any undesired execution of processes by the instance.

a. Make a backup copy of the `opmn.xml` file. The value of `ORACLE_HOME` corresponds to `ORA-HOME1`, `ORA-HOME2`, or `ORA-HOME3`, as referenced in `Oracle Application Server Enterprise Deployment Guide`, depending on the instance you are patching. For example:

   ```
cp ORACLE_HOME/opmn/conf/opmn.xml ORACLE_HOME/opmn/conf/opmn.xml.backup
   ```

b. Edit the `opmn.xml` file and modify the routing ID for the instance you are patching. For example, if you are patching the `OC4J_SOA` instance, add a line specifying the routing ID as shown in bold. Note that you may be running BPEL, ESB, or OWSM in this instance.

   ```
   <ias-component id="default_group">
   <process-type id="OC4J_SOA" module-id="OC4J" status="enabled">
     <module-data>
       <category id="start-parameters">
         <data id="routing-id" value="Y"/>
       </category>
     </module-data>
   </process-type>
   ...
   ```

**Note:** Oracle recommends you use the routing ID to prevent routing to OC4J instead of modifying the hardware LBR. If you change your LBR configuration, then you are only preventing routing to Oracle HTTP Server. However, the other Oracle HTTP Server instances in the configuration can cross-route requests to the OC4J to which you are applying the patch. Note that this method prevents the execution of any new HTTP requests. Other invocations, such as JMS, will continue to be served until the container is stopped.

5. For ESB Design Time (ESBD) instances only:

Edit the `opmn.xml` file and remove the service failover configuration. This reverts the instance to the non-active-passive configuration for ESBD. For example, if your file contains the following entry:

   ```
   ...
   <process-type id="OC4J_ESBDT" module-id="OC4J" service-failover="1" status="enabled">
   ...
   <process-set id="ESBDT_GROUP"/>
   ...
   ```

Modify it as follows:

   ```
   ...
   <process-type id="OC4J_ESBDT" module-id="OC4J" status="enabled">
   ...
   <process-set id="ESBDT_GROUP" numprocs="1"/>
   ...
   ```

6. Modify the database information for the instance you are patching. This prevents any transactions from the SOA components into the database while you are applying the patch.
a. In the **ORACLE_HOME** of the instance you are patching, make a backup copy of `data-sources.xml`. For example:

```bash
cp ORACLE_HOME/j2ee/OC4J_SOA/config/data-sources.xml \\
ORACLE_HOME/j2ee/OC4J_SOA/config/data-sources.xml.backup
```

b. Edit the `datasources.xml` file to point to a non-existent database. One way to do this is to change the database port number to a different, intentionally incorrect port number. For example, if you are using database port 1521, change all references to port 1522, as shown in bold:

```xml
<connection-factory factory-class="oracle.jdbc.pool.OracleDataSource" url="jdbc:oracle:thin:@
  (DESCRIPTION=(ADDRESS_LIST=(LOAD_BALANCE=on)
    (ADDRESS=(PROTOCOL=tcp)
      (HOST=dehyd.us.oracle.com)
      (PORT=1522))
    (CONNECT_DATA=(SERVICE_NAME=orcl))))"
  user="oraesb" password="->esb_password"/>
```

7. Set `numprocs=1` in the `opmn.xml` file.

8. Stop the instance you are patching. You can leave the other instances running.

---

**Note:** For any ongoing HTTP synchronous requests, the stop will be graceful. The stop operation does not consider any other type of requests, such as JMS calls, to make the stop gracefully.

9. Apply 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to the Oracle home.

10. Disable any SOA components in the instance that you were not using before applying the patch. If you do not disable them, then they will be started when you restart the instance.

    For example, if ESB is not used, you can stop the ESB services by using selecting ClusterTopology from ASControl, then selecting Applications, and then selecting Stop.

11. Change the instance routing ID back to its original value. For example,

```xml
<data id="routing-id" value="g_rt_id"/>
```

    where the original value can be determined from the backup copy of the `opmn.xml` file. This step is a reverse of the procedure mentioned in step b.

12. For ESB Design Time instances, enable OPMN service failover by performing the following two steps:

   a. Add `service-failover="1"` in `process-type` tag for `OC4J_ESBDT`.

   b. Remove `numprocs="1"` in `process-set` tag for `ESBDT_GROUP`, that is, change `<process-set id="ESBDT_GROUP"/>` back to its original value, `<process-set id="ESBDT_GROUP" numprocs="1"/>`.

13. Set the value of `numproc` back to its original value in the `opmn.xml` file.

14. Change the instance data source configuration back to its original state by restoring the backup copy of `data-sources.xml` you created in step 6.

```bash
cp ORACLE_HOME/j2ee/OC4J_SOA/config/data-sources.xml.backup ORACLE_HOME/j2ee/OC4J_SOA/config/
```
15. Restart the instance.
16. Repeat steps 3 - 15 for the other BPEL, ESB Runtime (ESBR), and ESB Design Time (ESBD) instances, patching one ORACLE_HOME at a time.

5.6 Re-application of the Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)

During re-application of Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), the **Available Product Components** screen is displayed. To continue with patch application, you must expand the component tree and manually select all of the components for patch re-application. Failure to do so will prevent successful re-application of Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0).

6 Postapplication Tasks

This section describes postapplication tasks for Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0). It contains the following topics:

- Section 6.1, "Perform a Complete Backup"
- Section 6.2, "Enable PHP"
- Section 6.3, "Restore JDK to Release 1.4.2"
- Section 6.4, "Change JDBC factoryClass in BPEL Connection Pool"
- Section 6.5, "Redeploy Applications that Use Custom Security Settings"
- Section 6.6, "Enable Java Single Sign-On"
- Section 6.7, "Deploy Your Enterprise Javabeans 3.0 Applications"
- Section 6.8, "Deploy the WSIL Application Manually"
- Section 6.9, "Update Oracle Enterprise Service Bus Services"
- Section 6.10, "Run the ADF Installer for WebCenter Applications"
- Section 6.11, "Migrate and Redeploy Oracle ADF Applications"
- Section 6.12, "Postapplication Tasks For Oracle WebCenter Applications"
- Section 6.13, "Disable HTTP TRACE Support"
- Section 6.14, "Uninstalling Oracle BAM 10.1.3.4.0"

6.1 Perform a Complete Backup

It is necessary to perform a complete backup of your Oracle Application Server environment after installing the patch set. This will ensure you can restore the newly-patched environment. In addition, if you are patching a 10g Release 3 (10.1.3.0.0) environment, then note that earlier backups will not work with the 10g Release 3 (10.1.3.2.0) Oracle Application Server Backup and Recovery Tool.
6.2 Enable PHP

After applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), you should enable PHP. The following procedure describes how to enable PHP:

1. Make the following modifications to the Oracle HTTP Server `httpd.conf` configuration file:
   a. Locate and open the Oracle HTTP Server configuration file:
      - For Linux x86:
        `ORACLE_HOME/Apache/Apache/conf/httpd.conf`
      - For Microsoft Windows (32-Bit):
        `ORACLE_HOME\Apache\Apache\conf\httpd.conf`
   b. Use the comment character (#) to comment the following PHP 4.0 directive:
      - For Linux x86:
        `#LoadModule php4_module libexec/libphp4.so`
        `#AddModule mod_php4.c`
      - For Microsoft Windows (32-Bit):
        `#LoadModule php4_module modules/php4apache.dll`
        `#AddModule mod_php4.c`
   c. Add the following PHP 5.0 `LoadModule` directive:
      - For Linux x86:
        `LoadModule php5_module libexec/libphp5.so`
        `AddModule mod_php5.c`
      - For Microsoft Windows (32-Bit):
        `LoadModule php5_module modules/php5apache.dll`
        `AddModule mod_php5.c`
   d. Add the following `AddType` directives:
      `AddType application/x-httpd-php .php .php5`
      `AddType application/x-httpd-php-source .phps`
   e. Save and close the `httpd.conf` file.

2. Set the `PHPRC` environment variable to point to the `php5.ini` file:
   - For Linux x86:
     `setenv PHPRC ORACLE_HOME/Apache/Apache/conf/php5.ini`
   - For Microsoft Windows (32-Bit):
     `set PHPRC = ORACLE_HOME\Apache\Apache\conf\php5.ini`
6.3 Restore JDK to Release 1.4.2

After applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), you will need to restore JDK to release 1.4.2. The following procedure describes the procedure:

1. Stop Oracle Process Manager and Notification Server and all management processes.

2. Remove the line -XX:AppendRatio=3 from the <data id="java-options"> element in the opmn.xml file for the particular OC4J instance that was changed in Section 5.1.2, "Apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0)".

3. Set the Java system properties in the <data> element where the id attribute is java-bin. The following is how the file should look after you have edited it:

   <ias-component id="default_group">
     <process-type id="test_oc4j_instance" module-id="OC4J" status="enabled">
       <module-data>
         <category id="start-paramters">
           <data id="java-bin" value="/myhost/jdk1.4.2/bin/java" />
           <data id="java-options" value="-server \\n             -XX:MaxPermSize=512M -ms512M -mx1024M"/>
         </category>
       </module-data>
     </process-type>
   </ias-component>

4. Restart Oracle Process Manager and Notification Server and all managed processes.

6.4 Change JDBC factoryClass in BPEL Connection Pool

Edit the data-sources.xml file to change the JDBC factoryClass parameter from oracle.jdbc.OracleDriver to oracle.jdbc.pool.OracleDataSource for the BPELPM_CONNECTION_POOL parameter. The following example shows, in bold, what should be set in the file:

   <connection-factory factory-class="oracle.jdbc.pool.OracleDataSource" url="jdbc:oracle:thin:scott/tiger@stadd14:1521:db5617"/>

You can edit the data-sources.xml file directly, or use Oracle Enterprise Manager, as described in Oracle Containers for J2EE Resource Adapter Administrator’s Guide.

6.5 Redeploy Applications that Use Custom Security Settings

If your applications were configured with custom security settings, such as using Oracle Single Sign-On, then you must reconfigure the applications and redeploy them after applying 10g Release 3 (10.1.3.4.0).

6.6 Enable Java Single Sign-On

If you apply 10g Release 3 (10.1.3.3.0) to Oracle Application Server 10g Release 3 (10.1.3.0.0) installation, then you will need to edit the jazn.xml file enable Java Single Sign-On. After editing the jazn.xml file, you will need to restart the
instance. Detailed instructions are provided in "Chapter 14 OC4J Java Single Sign-On" in Oracle Containers for J2EE Security Guide 10g (10.1.3.1.0).

6.7 Deploy Your Enterprise Javabeans 3.0 Applications
If you are patching a 10g Release 3 (10.1.3.0.0) environment and you undeployed Enterprise Javabeans 3.0 applications before applying the patch set, then you must deploy them again after applying the patch set. The following procedure describes how to deploy an application:

1. Log in to the Application Server Control Console.
2. If the application will be deployed on a specific OC4J instance, then navigate to the OC4J Home page for the OC4J instance. If the application will be deployed to a group, then navigate to the Group page.
3. Click Applications.
4. Click Deploy and follow the instructions on the screen. If you need more information, then click Help.

6.8 Deploy the WSIL Application Manually
Oracle Application Server 10g Release 3 (10.1.3.1.0) and later support Web Services Inspection Language (WSIL). WSIL allows you to inspect all the Web services deployed on your instance.

If you are patching a 10g Release 3 (10.1.3.0.0) environment and you want to take advantage of WSIL, then you will need to deploy it manually. The following procedure describes how to deploy the WSIL application. It is assumed that you have a running instance of OC4J.

1. Log in to the Application Server Control Console.
2. Click Applications on the OC4J Home Page. This allows you to view the list of deployed applications.
3. Click Deploy to display the Deploy: Select Archive page.
4. Perform the following steps on the Deploy: Select Archive page:
   a. Select Archive is already present on the server where Application Server Control is running.
   b. Enter the following path to the wsil-ias.ear file:
      ..../webservices/lib/wsil-ias.ear
   c. Click Next to display the Deploy: Application Attributes page.
5. Perform the following steps on the Deploy: Application Attributes page:
   a. Enter a name for the WSIL application in the Application Name field.
   b. Ensure that Parent Application is set to default.
   c. Ensure that Bind Web Module to Site is set to default-web-site.
   d. Ensure that Context Root is set to /inspection.wsil.
   e. Click Next to open the Deploy: Deployment Settings page.
6. Click Next to deploy the WSIL application. The Confirmation Page will report that the WSIL application deployed successfully.
7. You can now access the WSIL application at the following Web address:

http://hostname:port/inspection.wsil

In the preceding URL, hostname is the host name of the server running OracleAS Web Services and port is the port number of the server running OracleAS Web Services.

6.9 Update Oracle Enterprise Service Bus Services

If Oracle Enterprise Service Bus is installed, and you plan to clone or change the IP or hostname of the machine that is hosting any of your middle-tier installations, then you must perform the following procedure:

See Also: For more information about updating Oracle Enterprise Service Bus services, refer to Oracle Application Server Administrator’s Guide 10g Release 3 (10.1.3.1.0).

1. Run the following script to set the Oracle Home and system variables:
   - For Linux x86:
     ORACLE_HOME/integration/esb/bin/esbdevprompt.sh
   - For Microsoft Windows (32-Bit):
     ORACLE_HOME\integration\esb\bin\esbdevprompt.bat

2. In the command-line window from which you ran the script, run the following command to export the Oracle Enterprise Service Bus services:

   ant export-params
   -Dparamfile ORACLE_HOME/integration\DateTimeStamp\esbparam.properties
   -DDB_URL=jdbc_connectString://hostname:port/db_service_name
   -DDB_USER=oraesb -DDB_PASSWORD=esb_password
   -DDB_DRIVER=oracle.jdbc.driver.OracleDriver

   In the preceding command, hostname is the host containing the repository for Oracle Enterprise Service Bus, port is the port for the repository, db_service_name is the database service name, and esb_pwd is the password for the ORAESB user. For example, on Windows:

   ant export-params
   -Dparamfile ORACLE_HOME/integration\20060828_1503\esbparam.properties
   -DDB_URL=jdbc:oracle:thin:@//sta.example.com:1521/oexam.us.example.com
   -DDB_USER=oraesb -DDB_PASSWORD=esb_password
   -DDB_DRIVER=oracle.jdbc.driver.OracleDriver

3. Make the updates to your operating system to properly change the hostname, domain name, or both.

4. Restart the host, if necessary for your operating system.

5. Verify that you can ping the host from another host in your network. Be sure to ping using the new hostname to make sure everything is resolving properly.

6. Edit the esbparam.properties file as follows:
   - If you are changing the IP address or hostname, then change the DT_OC4J_HOST property to the new hostname. For example, if the new
hostname is newhost.example.com, then the value of the property would be:

DT_OC4J_HOST=newhost.example.com

- If you are cloning a local machine, then update the DT_OC4J_HTTP_PORT to the new port.
- If you are cloning a remote machine, then update the DT_OC4J_HOST property to the new hostname and the DT_OC4J_HTTP_PORT property to the new port.

7. Run the following command from the same command-line window used in step 2:

```bash
ant import-params
-Dparamfile ORACLE_HOME\integration\DateTimeStamp\esbparam.properties
-DDB_URL=jdbc_connectString://hostname:port/db_service_name
-DDB_USER=oraesb -DDB_PASSWORD=esb_password
-DDB_DRIVER=oracle.jdbc.driver.OracleDriver
```

In the preceding command, hostname is the host containing the repository for Oracle Enterprise Service Bus, port is the port for the repository, db_service_name is the database service name, and esb_pwd is the password for the ORAESB user. For example, on Windows:

```bash
ant import-params
-Dparamfile ORACLE_HOME\integration\20060828_1503\esbparam.properties
-DDB_URL=jdbc:oracle:thin:@//sta.example.com:1521/oexam.us.example.com
-DDB_USER=oraesb -DDB_PASSWORD=PASSWORD
-DDB_DRIVER=oracle.jdbc.driver.OracleDriver
```

8. Start each middle-tier instance on your host by running the following command in each Oracle home:

- For Linux x86:
  ```bash
  ORACLE_HOME/opmn/bin/opmnctl startall
  ```
- For Microsoft Windows (32-Bit):
  ```bash
  ORACLE_HOME\opmn\bin\opmnctl startall
  ```

9. If you disabled any processes to automatically start Oracle Application Server at the beginning of this procedure, then enable them.

10. Verify that the services are listed in the ESB Console and the applications run correctly.

6.10 Run the ADF Installer for WebCenter Applications

After you install 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), you must run the ADF installer against all OC4J instances you have created for your WebCenter applications. If you do not, then your custom applications will not have access to the latest ADF shared libraries.

For information on running the ADF installer, see section 34.2 "Installing the ADF Runtime Libraries" in Oracle Fusion Middleware Fusion Developer’s Guide for Oracle Application Development Framework.
6.11 Migrate and Redeploy Oracle ADF Applications

To ensure you apply all the bug fixes available with this patch, you must migrate and redeploy your Oracle ADF applications after applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0). The following procedure describes how to migrate and redeploy the applications:

1. Download Oracle JDeveloper 10.1.3.3.0 from Oracle Technology Network (OTN) at http://www.oracle.com/technology/index.html

2. Migrate the workspaces as follows:
   - If you are installing Oracle JDeveloper 10.1.3.4.0 on the same system as Oracle JDeveloper 10.1.3.2.0, then click Yes at the prompt, "Do you want to migrate from a previous version of JDeveloper?", and point to the system folder from the 10.1.3.2.0 JDeveloper build. This will migrate user settings, including database connections to JDeveloper 10.1.3.4.0.
   - If you are installing Oracle JDeveloper 10.1.3.4.0 on a different system than Oracle JDeveloper 10.1.3.2.0, then click No at the prompt, "Do you want to migrate from a previous version of JDeveloper?". (In this case, database connections are not migrated to Oracle JDeveloper 10.1.3.4.0. In JDeveloper 10.1.3.2.0, database connections were stored in IDEConnections.xml, which is located under the Oracle JDeveloper system directory. Therefore, for Oracle JDeveloper 10.1.3.4.0 to access database connections from Oracle JDeveloper 10.1.3.2.0, you must migrate the system directory.) Copy the workspaces for any Oracle ADF applications from the Oracle JDeveloper 10.1.3.2.0 instance to the Oracle JDeveloper 10.1.3.4.0 environment, and open the application workspaces. When the prompt, "Do you want to migrate the workspace from a previous version?", is displayed, click Yes.

3. Repackage the Oracle ADF applications to new EAR files using Oracle JDeveloper. This will update the contained JAR files.

4. Deploy the EAR files to the target instance. See the Oracle Application Development Framework Developer’s Guide for the deployment steps to be performed.

6.12 Postapplication Tasks For Oracle WebCenter Applications

After applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), you must perform the following tasks before using your Oracle WebCenter applications:

- Section 6.12.1, "Migrate and Redeploy Oracle WebCenter Applications that Use JCR Data Controls"
- Section 6.12.2, "Redefine Page Permissions for Migrated Applications"
- Section 6.12.3, "Copy Portlet Customizations from a 10g Release 3(10.1.3.2.0) Instance"
- Section 6.12.4, "Migrate Applications that Consume Portlets from Preconfigured OC4J"
- Section 6.12.5, "Migrate Applications that Consume OmniPortlets and WSRP Portlets from Preconfigured OC4J"
Section 6.12.6, "Reconfigure Proxy Settings for Omniportlet and Web Clipping Producers"

Section 6.12.7, "Re-create Export EAR Files with 10.1.3.4.0 Predeployment Tool"

6.12.1 Migrate and Redeploy Oracle WebCenter Applications that Use JCR Data Controls

If you have used JCR Data Controls to integrate and publish decentralized content in your Oracle WebCenter application, then to ensure that you can access the content repositories after applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), you must perform the following steps:

1. Perform steps 1 and 2 in Section 6.11, "Migrate and Redeploy Oracle ADF Applications".

2. Create an application server connection by performing the following steps:
   a. In the Connections Navigator, right-click Application Server and select New Application Server Connection.
   b. If you are on the Welcome page, click Next to display the Type page.
   c. In the Connection Name field, specify a name for your connection.
   d. From the Connection Type list, select Standalone OC4J 10g 10.1.3.
   e. Click Next to display the Authentication page.
   f. Specify the user name and password to be used for authentication to the OC4J instance.
   g. Click Next to display the Connection page.
   h. Specify the host name and port number to be used for accessing the OC4J instance. Specify the host name to be localhost if the OC4J instance is installed on the same computer as Oracle JDeveloper.
   i. Click Finish.

3. Repackage the Oracle WebCenter application to a new EAR file using Oracle JDeveloper. This will update the contained JAR files.

4. Deploy the EAR file to the target instance. See the Oracle WebCenter Framework Developer’s Guide for the deployment steps to be performed.

**Note:** You must first associate the new application server connection with the Oracle WebCenter application. To do this, perform the following steps:

1. Under the Resources node, right-click the deployment profile that was created for the Oracle WebCenter application.
2. In the WAR Deployment Profile Properties dialog box, select Platform in the left pane, and under Target Connection, select the application server connection you just created.
3. Click OK.

6.12.2 Redefine Page Permissions for Migrated Applications

When you migrate your applications to 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), authorization information about secured pages is not migrated along
with the applications. Therefore, if you had defined ADF security for the application before upgrading, then you must redefine page permissions in the 10g Release 3 (10.1.3.4.0) instance. See Oracle WebCenter Framework Developer’s Guide for the steps to be performed.

6.12.3 Copy Portlet Customizations from a 10g Release 3(10.1.3.2.0) Instance
Customizations made to PDK-Java portlets deployed to the preconfigured OC4J, are stored within the PDK-Java application. Therefore, when you patch the Oracle Application Server instance from 10g Release 3 (10.1.3) Patch Set 2 (10.1.3.2.0) to 10g Release 3 (10.1.3.4.0), the customizations you made for 10g Release 3 (10.1.3) Patch Set 2 (10.1.3.2.0) are not available. If you want these customizations to be available for 10g Release 3 (10.1.3.4.0) environments, you must perform the following steps:

1. Export the customizations using the portlet-client-deploy.jar file.
   See Oracle WebCenter Framework Developer’s Guide for the steps to export and import customizations.

2. Re-run the portlet-client-deploy.jar file on EAR file and import the customizations.

3. Restart the OC4J_WebCenter instance.

6.12.4 Migrate Applications that Consume Portlets from Preconfigured OC4J
Perform this task if you clicked No to the prompt, ”Do you want to migrate from a previous version of JDeveloper?” when you started the Oracle JDeveloper after applying 10g Release 3 (10.1.3.4.0).

Customizations made to portlets deployed to the preconfigured OC4J are stored within the PDK-Java application. If you did not migrate from the previous release of Oracle JDeveloper, then the portlet customizations made in the previous installation are not available in the new Oracle JDeveloper installation. If you want these customizations to be available, then you must manually copy the customizations to the application in the new Oracle JDeveloper installation.

Customizations made to Omniportlet, WebClipping, WSRP, and PDK sample portlets can be manually copied from the previous JDeveloper_home/portal/portletdata directory to the new Oracle JDeveloper installation. If you have custom PDK-Java portlets deployed to the preconfigured OC4J, refer to ”Portlets Preference Store Migration Utilities” in Oracle WebCenter Framework Developer’s Guide for information on preserving these customizations using Portlet Preference Store Migration Tool.

6.12.5 Migrate Applications that Consume OmniPortlets and WSRP Portlets from Preconfigured OC4J
Perform this task if you clicked Yes at the prompt, ”Do you want to migrate from a previous version of JDeveloper?” when you started the Oracle JDeveloper after applying 10g Release 3 (10.1.3.4.0).

In this case, customizations to most portlets deployed to the preconfigured OC4J will be automatically migrated as a part of the entire Oracle JDeveloper migration. However, customizations made to PDK-Java portlets must be manually copied to the 10.1.3.4.0 instance. Refer to ”Portlets Preference Store Migration Utilities” in Oracle WebCenter Framework Developer’s Guide for
information on how other PDK customizations can be preserved using Portlet Preference Store Migration Tool.

6.12.6 Reconfigure Proxy Settings for Omniportlet and Web Clipping Producers
If your application contains OmniPortlet and Web Clipping portlets, then you must reconfigure proxy settings for these portlets after applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0). This must be done because the provider configuration information is not migrated from the 10g Release 3 (10.1.3.2.0) instance.

Refer to the appendix "Additional Portlet Configuration" in the Oracle WebCenter Framework Developer’s Guide for information about configuring HTTP proxy settings for OmniPortlet and Web Clipping producers.

6.12.7 Re-create Export EAR Files with 10.1.3.4.0 Predeployment Tool
If you are transporting an Oracle WebCenter application from a 10g Release 3 (10.1.3.2.0) environment to a 10g Release 3 (10.1.3.4.0) environment, then when you export customizations using the predeployment tool to create an export EAR file, the .jspx pages are also exported. If you make changes to any .jspx pages during migration of your application using Oracle JDeveloper 10g Release 3 (10.1.3.4.0), then when you deploy the application and import customizations from the export EAR file created by 10g Release 3 (10.1.3.2.0), you will lose the page changes you made in Oracle JDeveloper. To avoid overwriting edited pages, copy the 10g Release 3 (10.1.3.4.0) version of the portlet-client-deploy.jar file to the 10g Release 3 (10.1.3.2.0) installation environment and re-create the export EAR file using the 10g Release 3 (10.1.3.4.0) predeployment tool.

See Oracle WebCenter Framework Developer’s Guide for information about how to export and import customizations using the predeployment tool.

6.13 Disable HTTP TRACE Support
The HTTP TRACE method returns the contents requested by client HTTP in the entity-body of the TRACE response. This behavior makes the confidential information contained in the HTTP headers of the request, such as cookies or authentication data vulnerable to attacks.

To avoid this problem, use the apache mod_write module to deny HTTP TRACE requests or to permit only the methods required to meet site requirements and policy. Add the following additional configuration information to the Apache HTTP Server’s configuration file:

```apache
RewriteEngine On
RewriteCond %{REQUEST_METHOD} ^TRACE
RewriteRule .* - [F]
```

6.14 Uninstalling Oracle BAM 10.1.3.4.0
You must perform the post application task if there is a need to uninstall Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) Business Activity Monitoring (BAM). This process includes uninstalling Oracle BAM 10.1.3.4.0 patch set and restoring Oracle BAM 10.1.3.3.0.

Note that, when you perform these steps, you will lose all the changes that you made in Oracle BAM 10.1.3.4.0.
The following are the steps to uninstall Oracle BAM 10.1.3.4.0 and restore Oracle BAM 10.1.3.3.0:

1. Stop all the Oracle BAM services and Internet Information Services (IIS).
2. Open the Control Panel, Add or Remove Programs and remove the Oracle BAM applications. The Active Data Cache database is not deleted.
3. Restart the host machine.
4. Use SQLPlus commands to drop, recreate, and reset privileges to the database account used for the Active Data Cache (and with Oracle Enterprise Link for BAM database account if necessary.)
5. Restore the backup of the Oracle BAM 10.1.3.3.0 Active Data Cache database schema by using Oracle database tools. This is the backup that you created prior to installing the Oracle BAM 10.1.3.4.0 Patch Set in Section 5.2.1, "Back up Your Existing Oracle Business Activity Monitoring 10g Release 10.1.3.3.0 Environment".
   Use the Oracle Data Pump Impdp utility for restoring the BAM Active Data Cache Database and also for restoring Oracle Enterprise Link for BAM repositories that are on Oracle databases.
6. Re-install Oracle BAM 10.1.3.3.0 environment.
   During installation, you may deselect Build or Upgrade options for the Active Data Cache and the Oracle Enterprise Link for BAM repository.
7. Restart the host system.
8. Restore the ConfigFilesBackup file and/or the images directory if they were moved from their original locations while making a back up of Oracle BAM 10.1.3.0. Also, restore any modified Oracle Enterprise Link for BAM Data Flow Service settings.

7 Known Issues

The following sections are known issues for Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0):

- Section 7.1, "Incompatibility Between Web Service and Client"
- Section 7.2, "Web Services Based on EJB 3.0"
- Section 7.3, "Testing Web Modules and Web Services When Using Oracle HTTP Server 10.1.2"
- Section 7.4, "File Name Change for bc4j.ear File"
- Section 7.5, "Applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) More than Once"
- Section 7.6, "Patch Application Messages"
- Section 7.7, "OC4J Transaction Support"
- Section 7.8, "Displaying Application Server Control Console After Applying the Patch Set"
- Section 7.9, "Redo Log Directories in a High Availability Disaster Recovery Setup"
7.1 Incompatibility Between Web Service and Client

After you apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to a 10g Release 3 (10.1.3.0.0) environment, note the following.

- If you regenerate and redeploy the Web service, then there will be changes to the generated WSDL.
- If you try to use the 10g Release 3 (10.1.3.0.0) client against the service, then communications will fail with compiler errors.

You can work around these issues in the following ways:

- Do not reassemble the Web service EAR file. The WSDL will remain unchanged and the client will still be able to communicate with the service.
- If you must regenerate the Web service EAR file, then regenerate the client and add the suffix "Element" to the names of the classes that use the wrapper. It is assumed that the client uses the wrapper classes that were assembled with unwrapParameters set to false.

7.2 Web Services Based on EJB 3.0

If you apply Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to a 10g Release 3 (10.1.3.0.0) environment, and you are working with a release 3 (10.1.3.0.0) Web service assembled from EJB 3.0, then the WSDL will change when you redeploy the service. In this case, you must regenerate the client code in order for it to communicate with the service.

7.3 Testing Web Modules and Web Services When Using Oracle HTTP Server 10.1.2

Oracle Enterprise Manager Application Server Control provides test pages, which allow you to test the Web Modules and Web Services that you have deployed to your application server environment. In most cases, the test page
provides a list of the Web sites and ports currently configured in your environment so you can select which Web site to use when testing the Web module or Web service URL.

See Also: "Testing a Web Service" and "Overview of Managing Web Modules" in the Enterprise Manager online help

If you are using Oracle HTTP Server 10g Release 2 (10.1.2) as a front end to OC4J, then the list of Discovered Web sites on the test page may be empty. In those cases, you cannot use Application Server Control to test the Web module or Web service URL. Instead, open a new browser window and enter the URL for the Web module or Web service in the Address field of the browser.

See Also: "Configuring Oracle Application Server 10.1.2 with Oracle Application Server 10.1.3" in the Oracle Application Server Administrator’s Guide in the 10g Release 2 (10.1.3.2) documentation library

7.4 File Name Change for bc4j.ear File

Oracle Application Server 10g Release 3 (10.1.3.0.0) uses and deploys the bc4j.ear file with the default home instance. After applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), the default file name for newly-created instances will be datatags.ear. There is no change in the content or functionality of the file.

7.5 Applying Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) More than Once

If you have applied Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0), then you should not apply the patch again. If you do, then you may get errors. For example, the following scenario is not supported by Oracle:

1. Installed Oracle Application Server 10g Release 3 (10.1.3) with the J2EE and Webserver option.
2. Installed Oracle Enterprise Service Bus 10g (10.1.3.1.0) standalone middle-tier option.
3. Applied Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0).
4. Installed Oracle BPEL Process Manager 10g (10.1.3.1) standalone middle-tier option or Oracle Web Services Manager 10g (10.1.3.1) middle-tier option.
5. Applied Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) to upgrade Oracle BPEL Process Manager to 10g Release 3 (10.1.3.4.0).

7.6 Patch Application Messages

The following error messages may occur during patch application:

- If you apply the patch to a system that has a standalone Oracle Containers for J2EE (OC4J) instance that is associated with Oracle Internet Directory 10g Release 2 (10.1.2.0.2) infrastructure, then the following message may be
displayed during patch application when prompting for the OC4J administrator’s password:

The operation is unsupported.

This message can be ignored.

- The following message may occur while stopping OPMN processes using the stopall command:

Error

--> Process (index=1, uid=1998741206, pid=13253) time out while waiting for
a managed process to stop Log: /example/product/10.1.3/OracleAS_3
/opmn/logs/default_group-oc4j_owsm~default_group-1.log opmnctl:
graceful stop of processes failed, trying forceful shutdown...

This message can be ignored.

7.7 OC4J Transaction Support

The OC4J transaction manager for Oracle Application Server 10g Release 3 (10.1.3.1.0) contains the feature called Recoverable Last Resource Commit (RLRC). The feature provides an enhanced recovery mechanism for Last Resource Commit (LRC) transactions and increases the overall performance of such transactions.

RLRC uses a database table to maintain a commit record of transaction IDs. This removes the need for a commit record in the OC4J transaction logs in the middle-tier. Writing commit records accounts for a large part of the performance cost of two-phase commit processing.

---

Note: Currently RLRC is available only when the non-XAResource participant is a database. In addition, because the commit record is maintained in this database, the database must be accessible in the event that recovery of such RLRC transactions is necessary.

---

Do the following procedure to set up the RLRC feature:

1. Stop the server if it is currently started.
2. Connect to the database that will persist the commit record, and run the following SQL script to install the required schema:

   J2EE_HOME/database/j2ee/jta/oracle/last_resource_commit.sql

3. Open the J2EE_HOME/config/data-sources.xml file. Edit or create a connection pool to access the commit record database and specify the commit-record-table-name attribute as part of the connection factory element.

   For example:

   

   [...
   <connection-pool name="Example Connection Pool"
   num-cached-statements='10'>
   <connection-factory factory-class="oracle.jdbc.pool.OracleDataSource"
   user="scott"
   password="password"
   url="jdbc:oracle:thin:@myServer:5521:main"
   ]
commit-record-table-name="scott.OC4J_TX_RLRC_LOG">
  <property name="connectionCachingEnabled" value="false"/>
  <property name="implicitCachingEnabled" value="true"/>
  <property name="maxStatements" value="50"/>
</connection-factory>
</connection-pool>

4. (Optional). Open the J2EE_HOME/config/transaction-manager.xml file and modify the runtime behavior of the RLRC feature.

For example:

  [...]
  <commit-coordinator>
    <middle-tier>
      <recovery retry-interval = "300" rlrc-min-purge-interval="10"
               rlrc-purge-size="1000">
      [...]
  </commit-coordinator>
  [...]

In the preceding example, the following parameters were used:

- **nrlrc-purge-interval** is the interval (in milliseconds) in which the batch purge of commit records in the database occurs.
- **nrlrc-purge-size** is the size of the batch that will be deleted during the batch purge of commit records in the database.

### 7.8 Displaying Application Server Control Console After Applying the Patch Set

If you are patching a 10g Release 3 (10.1.3.1.0) Oracle home and you selected the following installation options when you installed the 10g Release 3 (10.1.3.1.0) Oracle home, then you may have trouble displaying Application Server Control Console:

- You selected the **Advanced Install** option
- You selected the **J2EE Server, Web Server and SOA Suite** installation type
- You configured the instance to serve as an Administration OC4J instance.

If you selected all of these options while installing Oracle Application Server 10g Release 3 (10.1.3.1.0), then in rare circumstances the Application Server Control Console does not display when the installation is complete. This problem can also occur after applying the 10g Release 3 (10.1.3.4.0) patch set.

To correct this problem, you must verify that only one of the Application Server Control (ascontrol) applications deployed to your cluster topology is configured to be the active ascontrol application. The active ascontrol application is configured to start automatically and to receive requests from your Web server.
To verify that only one ascontrol application is configured to be the active Application Server Control:

1. Verify that the ascontrol application deployed to the home OC4J instance is configured to start automatically and to receive requests from the Web server:
   a. Use a text editor to open the server.xml file for the home OC4J instance:
      
      \texttt{ORACLE_HOME/j2ee/home/config/server.xml}
   
   b. Make sure that the server.xml for the home instance file contains an entry for the ascontrol application, and verify that the start="true" attribute is included in the ascontrol entry. For example:
      
      \begin{verbatim}
      <application name="ascontrol"
        path="../../home/applications/ascontrol.ear" parent="system"
        start="true" />
      \end{verbatim}
   
   c. Use a text editor to open the default-web-site.xml file for the home instance:
      
      \texttt{ORACLE_HOME/j2ee/home/config/default-web-site.xml}
   
   d. Verify that the ohs-routing="true" attribute is added to the ascontrol entry in the default-web-site file:
      
      \begin{verbatim}
      <web-app application="ascontrol"
        name="ascontrol"
        load-on-startup="true"
        root="/em"
        ohs-routing="true" />
      \end{verbatim}

2. Verify that the ascontrol application deployed to the oc4j_soa OC4J instance is configured so it does not start automatically and does not receive requests from the Web server:
   a. Use a text editor to open the server.xml file for the oc4j_soa OC4J instance:
      
      \texttt{ORACLE_HOME/j2ee/oc4j_soa/config/server.xml}

   b. Ensure that the start="false" attribute is included in the ascontrol entry in the server.xml file. For example:

\textbf{Note:} oc4j_soa is the default name of the second OC4J instance installed by the Advanced Install option. If you entered a different name for this instance on the Administration Settings screen of the installer, then replace oc4j_soa in the previous example with the name you entered on the Administration Settings page.
<application name="ascontrol"
path="../../home/applications/ascontrol.ear" parent="system"
start="false" />

c. Use a text editor to open the default-web-site.xml file for the home instance:

```
ORACLE_HOME/j2ee/home/config/default-web-site.xml
```

d. Verify that the ohs-routing="false" attribute is added to the ascontrol entry in the default-web-site file:

```
<web-app application="ascontrol"
name="ascontrol"
load-on-startup="true"
root="/em"
ohs-routing="false" />
```

3. Stop and then start both the home instance and the oc4j_soa instance.

**Caution:** To prevent this problem from happening again, do not use the opmnctl startall command to start the application server instance. Instead, each time you need to restart the application server instance, be sure to use the following separate commands to stop and restart each component of the application server:

```
opmnctl start
opmnctl startproc process-type=OC4J instance name 1
opmnctl startproc process-type=OC4J instance name 2
opmnctl startproc process-type=Oracle HTTP Server instance name
```

**See Also:** "Starting and Stopping" in the Oracle Application Server Administrator's Guide

The latest Oracle Application Server 10g Release 3 (10.1.3.1.0) Release Notes available in the 10g Release 3 (10.1.3.1.0) documentation library on Oracle Technology Network.

### 7.9 Redo Log Directories in a High Availability Disaster Recovery Setup

If the redo logs for the primary database are located in several directories, then the standby database must include the similar directories. If the standby database does not include the directories, then the create standby database command gives the following error:

```
standby: -->ASG_ORACLE-300: ORA-00301: error in adding log file
'/oradata/test123/redo010.log' - file cannot be created
standby: -->ASG_ORACLE-300: ORA-27040: file create error, unable to create file
standby: -->ASG_DUF-3700: Failed in SQL*Plus executing SQL statement: ALTER DATABASE ADD STANDBY LOGFILE GROUP 10
'/oradata/test123/redo010.log' SIZE 52428800 /*
ASG_DGA */;.
standby: -->ASG_DUF-3535: Failed to create standby redo log.
standby: -->ASG_DUF-3535: Failed to create standby redo log.
```
If this error occurs, then ensure that all the directories for the redo logs in the primary database also exist on the standby. This is applicable for Real Application Clusters (RAC) databases and non-RAC databases used with Oracle SOA Suite and Oracle WebCenter Suite installations.

7.10 TaskManager is Not Listed Under Deployed Processes in Oracle BPEL Control

TaskActionHandler and TaskManager should appear as deployed processes in OracleBPEL Control. If TaskManager does not appear, then refer to Section 8.3.4 in Oracle Application Server Release Notes 10g Release 3 (10.1.3.1.0).

7.11 OPMN Log Error Message after Patch Application on Oracle SOA Suite

An error message similar to the following will be in the OPMN log after patch application on Oracle SOA Suite:

```
08/03/31 00:44:44 WARNING: Application.setConfig Application: orabpel is in failed state as initialization failed.
java.lang.InstantiationException: Error initializing ejb-modules:
[orabpel:ejb_ob_engine:WorkerBean] - Unable to load ejb-class com.collaxa.cube.engine.ejb.impl.WorkerBean, see section 23.2 of the EJB 2.1 specification oracle.classloader.util.AnnotatedNoClassDefFoundError:

Missing class: com.collaxa.cube.engine.dispatch.BaseScheduledWorker
Dependent class: com.collaxa.cube.engine.ejb.impl.WorkerBean
  Loader: orabpel.root:0.0.0
  Code-Source:
  /example1/work/soa7264/j2ee/oc4j_soa/applications/orabpel 
  /ejb_ob_engine.jar
Configuration: <ejb> in 
  /example/work/soa7264/j2ee/oc4j_soa/applications/orabpel
```

This error message can be ignored.

7.12 BPEL Error Message during Shutdown

After applying the patch set, the following BPEL error may appear during shutdown. This message can be ignored.

```
INFO: AxisFault:
AxisFault
faultCode: {http://schemas.xmlsoap.org/soap/envelope/}Server.userException
faultSubcode:
faultString: java.lang.NullPointerException
faultActor:
faultNode:
faultDetail:
  (http://xml.apache.org/axis/)stackTrace: java.lang.NullPointerException
  at oracle.classloader.CodeSourceSearchPolicy$Linear.firstEntry(CodeSourceSearchPolicy.java:189)
  at
```
at
oracle.classloader.PolicyClassLoader.findLocalClass(PolicyClassLoader.java:1455)
at oracle.classloader.SearchPolicy$FindLocal.getClass(SearchPolicy.java:167)
at oracle.classloader.SearchSequence.getClass(SearchSequence.java:119)
at oracle.classloader.SearchPolicy.loadClass(SearchPolicy.java:645)
at oracle.classloader.SearchPolicy$CheckSharedLibraries.getClass(SearchPolicy.java:396)

7.13 OC4J_WebCenter Instance Log Error

The following error may appear in the OC4J WebCenter instance log. This message can be ignored.

WARNING: Code-source
/example/work/portal3861/j2ee/OC4J_WebCenter/applications/jpdk/pdkstruts
/WEB-INF/lib/commons-logging.jar (from WEB-INF/lib/ directory in
/example/work/portal3861/j2ee/OC4J_WebCenter/applications/jpdk/pdkstruts
/WEB-INF/lib) has the same filename but is not identical to
/example/work/portal3861/webservices/lib/commons-logging.jar (from
<code-source> (ignore manifest Class-Path) in META-INF/boot.xml in
/example/work/portal3861/j2ee/home/oc4j.jar). If it contains different
versions of the same classes, it will be masked as the latter is already
visible in the search path of loader jpdk.web.pdkstruts:0.0.0.
<init>
INFO: Initializing, config='org.apache.struts.util.LocalStrings',
returnNull=true
<init>
INFO: Initializing, config='org.apache.struts.action.ActionResources',
returnNull=true
<init>
INFO: Initializing,
config='oracle.portal.sample.v2.devguide.struts.messages', returnNull=true
/example/work/portal3861/j2ee/OC4J_WebCenter/application-deployments/portletapp/wsrp-samples/oasis/names/tc/wsrf
/v2/bind/runtime/WSRP_v2_PortletManagement_Binding_SOAP_Tie.java:930: cannot find symbol
symbol : method getPortletLifetime(javax.xml.soap.SOAPElement)
location: interface
oracle.portlet.wsrp.v2.soap.WSRP_v2_PortletManagement_PortType
_response =
{oracle.portlet.wsrp.v2.soap.WSRP_v2_PortletManagement_PortType
getTarget()}.getPortletLifetime(mySOAPElement);
^
1 error
WARNING: Code-source
/example/work/portal3861/j2ee/OC4J_WebCenter/applications/richextportlet
/richextportlet/WEB-INF/lib/adfshare.jar (from WEB-INF/lib/ directory in
/example/work/portal3861/j2ee/OC4J_WebCenter/applications/richextportlet
/richextportlet/WEB-INF/lib) has the same filename but is not identical to
/example/work/portal3861/BC4J/lib/adfshare.jar (from <code-source> in /example/work/portal3861/j2ee/OC4J_WebCenter/config/server.xml). If it contains different versions of the same classes, it will be masked as the latter is already visible in the search path of loader richtextportlet.web.richtextportlet:0.0.0.
/example/work/portal3861/j2ee/OC4J_WebCenter/application-deployments/richtextportlet/richtextportlet/oasis/names /tc/wsrp/v2/bind/runtime/WSRP_v2_PortletManagement_Binding_SOAP_Tie.java:1256: cannot find symbol
symbol : method getPortletLifetime(javax.xml.soap.SOAPElement)
location: interface oracle.portlet.wsrp.v2.soap.WSRP_v2_PortletManagement_PortType
_response = ((oracle.portlet.wsrp.v2.soap.WSRP_v2_PortletManagement_PortType)
getTarget()).getPortletLifetime(mySOAPElement);
1 error'

7.14 Display of BC4J -JSP Application Error Page

When running a BC4J-JSP application which includes charts, an application error may display an error page with unneeded system information / directory paths. The system information should not be displayed to the user.

Workaround

There are two options for the error page. One option is to edit the error page to remove the system information. The other option is to edit the error page and provide an appropriate error message. The following describes both options:

- To remove the system information, edit the error-page.jsp page to comment out the error message, such as the following:
  ```html
  <%-- Error Message: = exception.getMessage() --%>
  ```

- To provide an appropriate error message, edit the error-page.jsp page to include the message such as the following:
  ```html
  Error Message: This error is due to a problem with the chart. Please contact support for more information.
  ```

7.15 Oracle Process Manager and Notification Server Log Errors During Patch Application

The following errors may appear in the Oracle Process Manager and Notification Server log. These messages can be ignored.

- Error when the SOA instance is being patched to 10g Release 3 (10.1.3.4.0):
  ```
  Syntax error on line 278 of c:/work/portal2959/apache/apache/conf/httpd.conf:
  Cannot load c:/work/portal2959/apache/apache/modules/apachemoduleossl.dll into server: (127) The specified procedure could not be found.
  ```

- Error when Oracle BPEL is being patched to 10g Release 3 (10.1.3.4.0):
  ```
  ```
7.16 Oracle Business Rules Help Error Messages (Microsoft Windows (32-Bit) only)

During application of 10g Release 3 (10.1.3.4.0) on Microsoft Windows (32-Bit), an error similar to the following will also be logged when undeploying Oracle Business Rules help. Warning messages will be logged when redeploying Oracle Business Rules help. These error messages and warnings can be ignored.

WARNING: ApplicationUnDeployer.removeFiles WARNING: Unable to remove appDir C:\WORK\soa623\j2ee\home\applications\rulehelp : Unable to remove C:\WORK\soa623\j2ee\home\applications\rulehelp\rulehelp.java.io.IOException: Unable to remove C:\WORK\soa623\j2ee\home\applications\rulehelp\rulehelp at oracle.oc4j.util.FileUtils.recursiveRemove(FileUtils.java:258)

Also during installation, the following error will be logged for the OC4J instance running Oracle Business Rules. This error can be ignored.

critical error in OHW configuration. Config URL:
file:/C:/WORK/soa3597/j2ee/home/applications/rulehelp/rulehelp/helpsets/ohwconfig.xml:HelpSet 'ruleauthor' : Unknown error when parsing hs file: No toplevel tag in helpset file"

7.17 ESB Ant Task EXTRACTESBDEPLOYMENTPLAN Fails On DB/JMS Adapter

The following error may be encountered after applying Oracle Application Server 10g Release 3 (10.1.3.4.0) and then running the ant test.ExtractESBDeploymentPlan command:

javax.xml.bind.JAXBException: Unable to locate jaxb.properties for package oracle.tip.esb.client.metadata.deploymentplan.model

To resolve this error, do the following:

1. Use the ESBMetadataMigration.jar file from Oracle Application Server 10g Release 3 (10.1.3.3.0) SOA Oracle home located in ORACLE_HOME\integration\esb\deployment\documentation.zip. You will need to unzip the file to extract the jar file.

2. If you use Ant 1.6, then set the classpath variable before you run the ant command. This classpath should contain all jars mentioned in the ESBMetadataMigrationTaskdefs.xml file under classpath element.

7.18 Default Web Application Examples are Removed During Patch Application

The Oracle Containers for J2EE default Web application (<code>default-web-app</code>) examples, including directories associated with the example, are removed during patch application. Back up any changes made to the examples, as well as any files stored in the related directories, before installing the patch. The latest version of the examples can be installed using the <code>ExampleInstaller</code> installer.
Custom examples, or a specific version of an example, should be installed in a different application rather than the `<code>default-web-app</code>` Web application to ensure that they are not effected by the changes introduced by other patches.

### 7.19 Cannot Login When Applications are Authenticated by JSSO

The following are the options to disable JSSO in order to use the product:

**Option 1**

If you have **not** restarted the SOA application after installing the patch, then use the following steps to disable JSSO:

1. Login to EM.
2. Click **Java SSO Configuration**.
3. Click the **Participating Applications** tab.
4. De-select all boxes under the Java SSO Enabled column.
5. Restart all processes to see the changes.

**Option 2**

If you have already restarted the SOA application, then use the following steps to disable JSSO:

1. Edit
   
   $OH/j2ee/home/application-deployments/ascontrol/orion-application.xml.

   In the orion-application.xml file, disable the following code snippet:

   ```
   <!--
   <jazn provider="XML">
     <jazn-web-app auth-method="CUSTOM_AUTH" />
   </jazn>
   -->
   ```

   2. Restart all processes.

3. Follow steps 1 through 5 mentioned in **Option 1** to disable JSSO in other applications.

### 8 Fixed Platform-Specific Bugs for Microsoft Windows (32-Bit)

*Table 3* describes the bugs fixed for Microsoft Windows (32-Bit) in the Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0).

<table>
<thead>
<tr>
<th>Bug Number</th>
<th>Fixed in Release</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1.3.1</td>
<td>4496308</td>
<td>Timeouts occur erroneously or do not occur at the correct time</td>
</tr>
</tbody>
</table>
9 Patch Set Components

The following table provides a list of patch set components. Note that the components updated by previous patches are also included here because this is a cumulative patch set.

Table 4  Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) Components

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apache Module for Oracle Distributed Authoring and Versioning</td>
<td>10.1.3.1</td>
</tr>
<tr>
<td>HTTP Server Files for 2.0</td>
<td>2.2.0.0.0</td>
</tr>
<tr>
<td>Java Runtime Environment</td>
<td>1.4.2.0.4</td>
</tr>
<tr>
<td>LDAP Required Support Files</td>
<td>10.1.4.0.2</td>
</tr>
<tr>
<td>Oracle Apache Modules</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle Application Development Framework</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle Application Development Framework Library</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle Application Server</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle Application Server Guard</td>
<td>10.1.3.1</td>
</tr>
<tr>
<td>Oracle Application Server Guard Client</td>
<td>10.1.3.1</td>
</tr>
<tr>
<td>Oracle Application Server Guard Common</td>
<td>10.1.3.1</td>
</tr>
<tr>
<td>Oracle Application Server Guard Server</td>
<td>10.1.3.1</td>
</tr>
<tr>
<td>Oracle Application Server High Availability Components</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle Application Server J2EE</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle Application Server Kernel Common</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle Application Server Middle Tier</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle Application Server Port Tunnel</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle Application Server Welcome Pages</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle BPEL Process Manager and Enterprise Service Bus</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle Business Activity Monitoring</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle Business Rules</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle Containers for J2EE (OC4J)</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle Distributed Software Assistant Client Patch</td>
<td>10.1.3.3</td>
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<tr>
<td>Oracle Distributed Software Assistant Common Patch</td>
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</tr>
<tr>
<td>Oracle Distributed Software Assistant Patch</td>
<td>10.1.3.3</td>
</tr>
</tbody>
</table>
### Table 4 (Cont.) Oracle Application Server 10g Release 3 (10.1.3) Patch Set 4 (10.1.3.4.0) Components

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Distributed Software Assistant Server Patch</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle Dynamic Monitoring Service</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle Enterprise Manager 10g Application Server Control</td>
<td>10.1.3.1</td>
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<tr>
<td>Oracle Enterprise Manager 10g Change IP</td>
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<td>Oracle Enterprise Manager Application Server Control</td>
<td>10.1.3.3</td>
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<tr>
<td>Oracle Enterprise Service Bus Process Manager</td>
<td>10.1.3.3</td>
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<td>Oracle Extended Windowing Toolkit</td>
<td>3.4.43.0.0</td>
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<tr>
<td>Oracle HTTP Server</td>
<td>10.1.3.3</td>
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<td>Oracle HTTP Server Files</td>
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<tr>
<td>Oracle iappcore</td>
<td>10.1.3.4</td>
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<tr>
<td>Oracle Identity Management Support Files</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle Java Object Cache</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle LogLoader</td>
<td>10.1.3.1</td>
</tr>
<tr>
<td>Oracle mod_plsql Gateway</td>
<td>10.1.3.3</td>
</tr>
<tr>
<td>Oracle Notification Service</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle One-off Patch Installer</td>
<td>10.1.0.6.0</td>
</tr>
<tr>
<td>Oracle Process Manager and Notification Server (OPMN)</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle Real Application Clusters High Availability Support Files (Microsoft Windows (32-Bit) only)</td>
<td>10.1.0.5.0</td>
</tr>
<tr>
<td>Oracle Real Application Clusters Support Files (Microsoft Windows (32-Bit) only)</td>
<td>10.1.0.5.0</td>
</tr>
<tr>
<td>Oracle Security Developer Tools</td>
<td>10.1.4.0.1</td>
</tr>
<tr>
<td>Oracle TopLink</td>
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</tr>
<tr>
<td>Oracle TopLink Developer</td>
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<tr>
<td>Oracle TopLink Runtime</td>
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</tr>
<tr>
<td>Oracle Universal Installer</td>
<td>10.1.0.6.0</td>
</tr>
<tr>
<td>Oracle Web Services Manager</td>
<td>10.1.3.4</td>
</tr>
<tr>
<td>Oracle XML Developer’s Kit</td>
<td>10.1.3.1</td>
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<tr>
<td>Oracle XML Query Service</td>
<td>10.1.3.4</td>
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<td>Oracle XML SQL Utility</td>
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<tr>
<td>Sun JDK</td>
<td>1.5.0.0.15</td>
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<tr>
<td>XDK Support Files</td>
<td>10.1.3.1</td>
</tr>
<tr>
<td>XML Parser for Java</td>
<td>10.1.3.1</td>
</tr>
</tbody>
</table>

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