Oracle® Application Server

Release Notes

10*g* Release 3 (10.1.3.1.0) for Linux x86

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Oracle Application Server Release Notes, 10*g* Release 3 (10.1.3.1.0) for Linux x86

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Preface

This preface includes the following topics:

Audience

This document is intended for users of Oracle Application Server 10*g*.

Documentation Accessibility

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Related Documents

For more information, see these Oracle resources:

- Oracle Application Server Documentation on Oracle Application Server Disk 1
- Oracle Application Server Documentation Library 10*g* Release 3 (10.1.3.1.0)

Conventions

The following text conventions are used in this document:

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

1

What's New in the *Oracle Application Server Release Notes for Microsoft Windows?*

This chapter provides a listing of new topics introduced with this version of the *Oracle Application Server Release Notes*. The new topics are in the following chapters:

- Chapter 3, "Installation Issues"
- Chapter 7, "Oracle Enterprise Service Bus"
- Chapter 8, "Oracle BPEL Process Manager"
- Chapter 10, "Oracle Business Activity Monitoring"
- Chapter 14, "OracleAS Disaster Recovery"

1.1 Chapter 3, "Installation Issues"

- Section 3.1.11, "Icon and URL Link Errors in Spanish and Brazilian Portuguese Language Locales"
- Section 3.1.12, "Oracle HTTP Server Welcome Page Displays Only In English"
- Section 3.1.13, "opmnctl Command Time Out with Old Data"
- Section 3.1.14, "Exception in Error Log when Installing MainCD"

1.2 Chapter 7, "Oracle Enterprise Service Bus"

- Section 7.3.2, "Oracle Enterprise Service Bus and Oracle Application Server Integration B2B"

1.3 Chapter 8, "Oracle BPEL Process Manager"

- Section 8.1.7, "Deploying BPEL Processes to All Nodes in a Cluster"
- Section 8.1.8, "Installation Impact on Adapter Endpoint Activation Topologies"
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- Section 8.8.9, "Error Messages Returned by Oracle Web Services Manager to Oracle BPEL Process Manager"
- Section 8.10.3, "Installing Oracle BPEL Process Manager for Traditional Chinese on Linux"
- Section 8.10.4, "Western European Number Format Issue in Transformations"
- Section 8.12.1, "ASSIGNMENT_FILTER_ALL Is Not Supported"
- Section 8.12.2, "Correct Argument for oracle.bpel.services.workflow.query.ITaskQueryService.queryViewTasks"

1.4 Chapter 10, "Oracle Business Activity Monitoring"

- Section 10.1.13, "Globalization and Localization Support Limitations"
- Section 10.5.7, "Columnar Report and View Limitations"

1.5 Chapter 14, "OracleAS Disaster Recovery"

- Section 14.1.11, "ASG Operations Fail if Multiple DB ORACLE_HOMEs Exist on the Same System"
- Section 14.1.12, "Known Issue with Disaster Recovery Cloning on Windows"

2 Introduction

This chapter introduces Oracle Application Server Release Notes, 10*g* Release 3 (10.1.3.1.0). It includes the following topics:

2.1 Latest Release Information

This document is accurate at the time of publication. Oracle will update the release notes periodically after the software release. You can access the latest information and additions to these release notes on the Oracle Technology Network at:

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

2.2 Purpose of this Document

This document contains the release information for Oracle Application Server 10*g* Release 3 (10.1.3.1.0). It describes differences between Oracle Application Server and its documented functionality.

Oracle recommends you review its contents before installing, or working with the product.

2.3 Operating System Requirements

Oracle Application Server installation and configuration will not complete successfully unless users meet the hardware and software pre-requisite requirements before installation. See the *Oracle Application Server Installation Guide* for a complete list of operating system requirements.

2.4 Certification Information

The latest certification information for Oracle Application Server 10*g* Release 3 (10.1.3.1.0) is available at:

`http://metalink.oracle.com`

2.5 Licensing Information

Licensing information for Oracle Application Server is available at:

`http://oraclestore.oracle.com`

Detailed information regarding license compliance for Oracle Application Server is available at:

`http://www.oracle.com/technology/products/ias/index.html`

3

Installation Issues

This chapter describes installation and their workarounds associated with Oracle Application Server. It includes the following topics:

3.1 Installation Issues

This section describes issues with installation of Oracle Application Server. It includes the following topics:

3.1.1 Set Kernel Parameter Prior to Installation of Oracle HTTP Server on Red Hat Linux 4.0

Prior to installation of Oracle HTTP Server as part of an Oracle Application Server installation on Red Hat Linux 4.0, set the following kernel parameter:

```
file-max >= 131072
```

Failure to set the preceding parameter may result in an error in installation of Oracle Application Server.

3.1.2 Asian Languages Do Not Display Correctly with Java 5.0

Asian language characters including Japanese, Korean, Traditional Chinese, and Simplified Chinese are not displayed on SuSE platform due to lack of support of JDK.

To resolve this issue, you can modify the `font properties/config` files. Refer to the following Sun Microsystems Java Web site URL for details:

`http://java.sun.com/j2se/1.5.0/docs/guide/intl/fontconfig.html`

However, both Sun and Oracle do not support these modifications and if you need support, then you will need to reproduce the product functional errors with an unaltered JDK.

3.1.3 Japanese Characters Affected on Red Hat Linux

On Red Hat Linux Release 4 (Nahant Update 1) and Red Hat Linux Release 3 (version older than Taroon Update 3), Japanese (`ja_JP`) characters appears as square boxes on the Oracle Universal Installer installation screens for Oracle Application Server 10*g* Release 3 (10.1.3.1.0). This issue is due to the use of the Java Runtime Engine (JRE) version that is shipped with Oracle Application Server; 1.4.2_05 or an earlier version of the JRE.

To work around this issue use version number1.4.2._06 or a newer version of the JRE.

3.1.4 Check gcc Version Before Installing 10.1.3 on a Host with a 9.0.4 Installation

Oracle Application Server 10*g* Release 3 (10.1.3.1.0) requires a version of `gcc` that depends upon your operating system. See *Oracle Application Server Installation Guide* 10*g* Release 3 (10.1.3.1.0) for Linux x86 for the version of `gcc` required for your operating system.

If your host contains an Oracle Application Server 10*g* (9.0.4) installation, you may have installed `gcc-2.95` or `gcc-2.96` on your system, as outlined in *Oracle Application Server Quick Installation and Upgrade Guide 10g (9.0.4) for Linux x86*. The procedure involved creating symbolic links for `/usr/bin/gcc` and `/usr/bin/cc` to the appropriate version of the executables.

To check whether these links exist:

```
ls -l /usr/bin/gcc /usr/bin/cc
```

Check if the `gcc` and `cc` commands are symbolic links, for example:

```
gcc -> /opt/gcc295/bin/gcc
cc -> /opt/gcc295/bin/gcc
```

If the links exist, remove them and create new links to the version of gcc required for 10.1.3:

1. Install the version of `gcc` required for your version of Linux. For example:

   ```
   /opt/gcc323
   ```

2. Remove the existing symbolic links:

   ```
   rm /usr/bin/gcc
   rm /usr/bin/cc
   ```

3. Create links to the new version of `gcc`:

```
ln -s /opt/gcc323/bin/gcc /usr/bin/gcc
ln -s /opt/gcc323/bin/gcc /usr/bin/cc
```

4. Install Oracle Application Server 10*g* Release 3 (10.1.3.1.0).

3.1.5 Install Software Packages for Red Hat Linux

If you are installing on Red Hat Enterprise Linux AS/ES 4.0, Update 1 or higher, certified on AMD64 and Intel EM64T, the following packages (or higher versions) are required:

- glibc-2.3.4-2.9.i686.rpm (32-bit)
- glibc-2.3.4-2.9.x86_64.rpm
- glibc-common-2.3.4-2.9.x86_64.rpm
- glibc-devel-2.3.4-2.9.i386.rpm (32bit)
- glibc-devel-2.3.4-2.9.x86_64.rpm
- gcc-3.4.3-22.1.x86_64.rpm
- gcc-c++-3.4.3-22.1.x86_64.rpm
- gnome-libs-1.4.1.2.90-44.1.x86_64.rpm
- libstdc++-3.4.3-22.1.i386.rpm (32-bit)
- libstdc++-3.4.3-22.1.x86_64.rpm
- libstdc++-devel-3.4.3-22.1.i386.rpm (32-bit)
- libstdc++-devel-3.4.3-22.1.x86_64.rpm
- make-3.80-5.x86_64.rpm
- pdksh-5.2.14-30.x86_64.rpm
- sysstat-5.0.5-1.x86_64.rpm
- binutils-2.15.92.0.2-13.x86_64.rpm
- compat-db-4.1.25-9.i386.rpm (32-bit)
- compat-db-4.1.25-9.x86_64.rpm
- control-center-2.8.0-12.x86_64.rpm
- xscreensaver-4.18-5.rhel4.2.x86_64.rpm
- setarch-1.6-1.x86_64
- openmotif21-2.1.30-11.RHEL4.4.i386.rpm (32-bit)

3.1.6 Error Messages after Setting VIRTUAL_HOST_NAME

After successfully completing the Basic Installation with the `VIRTUAL_HOST_NAME` environment variable set, you may find the following error messages in `ORACLE_HOME\opmn\logs\default_group~home~default_group~1`:

```
Warning: Unable to set up connection factory for a resource adapter in esb-dt:
Error creating a ResourceAdapter implementation class.
Error creating a JavaBean of class
'oracle.tip.esb.server.bootstrap.DesignTimeResourceAdapter:
java.lang.RuntimeException: failed to get ESB_HOME:
```

```
java.lang.NullPointerException
Warning: Unable to set up connection factory for a resource adapter in esb-rt:
Error creating a ResourceAdapter implementation class.
Error creating a JavaBean of class
'oracle.tip.esb.server.bootstrap.RuntimeResourceAdapter:
java.lang.RuntimeException: failed to get ESB_HOME: java.lang.NullPointerException
log4j:WARN No appenders could be found for logger
(org.quartz.simpl.SimpleThreadPool).
log4j:WARN Please initialize the log4j system properly.
```

These error messages are benign and can be safely ignored.

3.1.7 Error Message in application.log File

After successful installation of Oracle Application Server, you may find the following error message in the `application.log` file:

```
javax.servlet.ServletException:
ORABPEL START-UP ERROR!!!!!!!!
OraBPEL run-time expected system environment property "orabpel.home".
```

This error message is benign and can be safely ignored.

3.1.8 Tool and Script Failure

Multiple Oracle Application Server tools and scripts will fail during Oracle Application Server installation due to the incorrect setting of the `ANT_HOME` environmental variable.

To workaround this issue, unset the `ANT_HOME` environmental variable prior to installing Oracle Application Server.

After you have unset the `ANT_HOME` environmental variable, you can either:

- remove the `/etc/ant.conf` file
- comment out the line in the `/etc/ant.conf` file that incorrectly sets the `ANT_HOME` environmental variable

3.1.9 Middle Tier Installation Failure for Turkish Locale

Installation of an Oracle Application Server middle-tier fails for Turkish locale.

Oracle recommends that you avoid running the Oracle Universal Installer to install Oracle Application Server using the Turkish locale because some of the installation screens will not be displayed properly and will not be usable.

Oracle Application Server components such as OWSM and BPEL are not functional for the Turkish locale.

3.1.10 Recommended Locales for Simplified Chinese and Traditional Chinese

To avoid issues with installation of Oracle Application Server in locales using simplified Chinese and Traditional Chinese, Oracle recommends using:

- `zh_CN.gbk` instead of `zh_CN.gb18030` for Simplified Chinese
- `zh_TW.big` instead of `zh_TW.eucTW` for Traditional Chinese

3.1.11 Icon and URL Link Errors in Spanish and Brazilian Portuguese Language Locales

In advanced Oracle Application Server installations in Spanish and Brazilian Portuguese Language locales, the Rules Control icon is not displayed.

Additionally the URL link to Oracle Application Server is not placed correctly.

There is no Rules control link in Brazilian Portuguese locale installations.

3.1.12 Oracle HTTP Server Welcome Page Displays Only In English

Oracle HTTP Server Welcome page displays in English only following installation of Oracle Application Server.

In order to view the translated Oracle HTTP Server Welcome page, you need to enter you installation information in the following format where <lang> is the language you would like to use to view the Welcome page:

```
http://<host>.<port>/index.html.<lang>
```

For example,

`http://<host>.<port>/index.html.ja` (Japanese)

`http://<host>.<port>/index.html.ko` (Korean)

`http://<host>.<port>/index.html.zh_TW` (Traditional Chinese)

`http://<host>.<port>/index.html.zh_CN` (Simplified Chinese)

`http://<host>.<port>/index.html.de` (German)

`http://<host>.<port>/index.html.fr` (French)

`http://<host>.<port>/index.html.it` (Italian)

`http://<host>.<port>/index.html.es` (Spanish)

`http://<host>.<port>/index.html.pt_BR` (Brazilian Portuguese)

3.1.13 opmnctl Command Time Out with Old Data

The `opmnctl stopall` command times out if the BPEL schema in your OracleAS Metadata Repository Database contains old schemas.

To workaround this issue, run the production IRCA (???) to load new schemas in the OracleAS Metadata Repository.

3.1.14 Exception in Error Log when Installing MainCD

After successful installation of Oracle Application Server SOA MainCD, you may find the following Exception message in the oraInstallyyyy-mm-dd_hh-mm-ssAM/PM.err file:

```
java.lang.NumberFormatException: For input string: ""80""
at java.lang.NumberFormatException.forInputString(Unknown Source)
......
Returning 0 instead
```

This exception message is benign and can be safely ignored.

4

General Management and Security Issues

This chapter describes management and security issues associated with Oracle Application Server. It includes the following topics:

- Section 4.1, "General Issues and Workarounds"
- Section 4.2, "Clustering and Replication Issues"
- Section 4.3, "Documentation Errata"

4.1 General Issues and Workarounds

This section describes general management and security issues. It includes the following topics:

- Section 4.1.1, "Limited Management Support for Multiple-JVM OC4J Instances"
- Section 4.1.2, "OC4J Restart Required When Changing the Name or URL of a JDBC Data Source or Connection Pool"
- Section 4.1.3, "Problem Removing a Property from a Native Data Source"
- Section 4.1.4, "Use the Command-Line to Restart Standalone OC4J Instances"
- Section 4.1.5, "TopLink Sessions Not Available in Application Server Control Console"
- Section 4.1.6, "Unable to Receive MBean Notification Using OPMN to Start or Stop OC4J"
- Section 4.1.7, "Using the Java Server Pages Standard Tag Libraries"
- Section 4.1.8, "RMD Conditional Does Not Fully Evaluate"

4.1.1 Limited Management Support for Multiple-JVM OC4J Instances

With Oracle Application Server 10*g* Release 3 (10.1.3.1.0), you can configure any OC4J instance to use multiple Java Virtual Machines (JVMs). You can perform this configuration change by using the Application Server Control Console or by setting the `numprocs` argument in the `opmn.xml` file to a number greater than one (1).

The `opmn.xml` file is located in the following directory in your Oracle Application Server Oracle home:

```
ORACLE_HOME/opmn/conf/
```

To set the number JVMs in the Application Server Control Console, see "Creating Additional JVMs for an OC4J Instance" in the Application Server Control online help.

To set the number of JVMs by editing the `numprocs` argument in the `opmn.xml` file, refer to the following example, which shows the `numprocs` entry you must modify:

```
<ias-component id="OC4J">
   <process-type id="home" module-id="OC4J" status="enabled">
         .
         .
         .
      <process-set id="default_group" numprocs="2"/>
   </process-type>
</ias-component>
```

Note, however, that this feature is not supported by Application Server Control. Specifically, Application Server Control (represented by the `ascontrol` application) cannot run on an OC4J instance that is running multiple JVMs. As a result, be sure that you do not configure multiple JVMs for the administration OC4J instance (the OC4J instance that is hosting the active ascontrol).

If you choose to configure the number of JVMs for the administration OC4J to more than one (1), then you must use command line tools to manage your Oracle Application Server environment. For example, you must use:

- `admin_client.jar` for deployment, re-deployment, undeployment, start and stop applications, and shared library management
- Apache Ant for deployment, redeployment, and undeployment of your applications
- `opmnctl` commands for starting, stopping, and other life cycle operations on the Oracle Application Server

Further, if you are using multiple JVMs on the administration OC4J and, as a result, the Application Server Control Console is not available, then you must make any Oracle Application Server instance configuration changes manually. Manual configuration changes often require you to shut down the Oracle Application Server instance, manually configure the relevant XML files, and then restart Oracle Application Server.

4.1.2 OC4J Restart Required When Changing the Name or URL of a JDBC Data Source or Connection Pool

If you modify the name or the connection URL of a JDBC data source or JDBC connection pool, then you must restart the OC4J instance; otherwise the changes you make will not take effect.

For example, if you use the JDBC Resources page in the Application Server Control Console to change the connection URL of a JDBC connection pool, you will not be prompted to restart the OC4J instance, but the restart is required. If you do not restart the OC4J instance, any deployed applications that require the data source will attempt to use the original connection URL.

> **See Also:** "Managing Data Sources and JDBC Connection Pools" in the Application Server Control online help

4.1.3 Problem Removing a Property from a Native Data Source

If you use the Application Server Control Console to remove a property from a native data source, Enterprise Manager does not remove the property from the underlying connection factory. As a result, the property (and its current value) is not changed.

This is expected behavior. To set a value on the underlying connection factory, use the `setProperty` operation of the `JDBCDataSource` MBean for the native Data Source to do this. You can use the MBean Browser, which is available in the Application Server Control Console, to invoke an MBean operation.

> **See Also:** "About the MBean Browser" in the Application Server Control online help

4.1.4 Use the Command-Line to Restart Standalone OC4J Instances

Some OC4J configuration pages in the Application Server Control Console (including the JTA Administration and Oracle Internet Directory Association pages) require a restart of the OC4J instance for changes to take affect. Users are notified of this with on screen warnings during configuration operations on these components.

If are using the Application Server Control Console in a standalone OC4J environment, and you use the **Restart** link, which is displayed after applying changes to one of these pages, the operation may take a few minutes because it performs an internal restart of the OC4J instance. As a result, instead of using the **Restart** link, Oracle recommends that OC4J standalone users use the command line to restart the OC4J instance.

4.1.5 TopLink Sessions Not Available in Application Server Control Console

If the TopLink Sessions for a TopLink-enabled application are not available in Application Server Control Console, check to be sure the TopLink session is configured to create the MBeans at login time. This is done by ensuring that the application has a `serverPlatform` class defined, and that the `ServerPlatform` class has its is `RuntimeServicesEnabled` flag enabled.

For Oracle Application Server 10*g* Release 3 (10.1.3.1.0), you should be using the following platform class, which can be set in the `sessions.xml` or through the session API:

```
oracle.toplink.platform.server.oc4j.Oc4j_10_1_3_Platform
```

When developing a TopLink-enabled application using Oracle JDeveloper, make sure to use version 11 or higher.

> **See Also:** "Configuring the Server Platform" in the *Oracle TopLink Developer's Guide*

4.1.6 Unable to Receive MBean Notification Using OPMN to Start or Stop OC4J

You will not be able to receive notification from the `ias:j2eeType=J2EEServer,name...` MBean entity if you start or stop Oracle Containers for J2EE (OC4J) using OPMN. This happens using either the Application Server Control or the `opmnctl stop` or `opmnct start` command from the command line.

There is presently no workaround for this issue.

4.1.7 Using the Java Server Pages Standard Tag Libraries

The Java Server Pages Standard Tag Library (JSTL) makes use of Jaxp 1.2 classes that are packaged with Java Developer Kit 1.4.

Oracle Application Server 10*g* Release 3 (10.1.3.1.0) makes use of JDK 1.5 which uses Jaxp 1.3 classes. However, the JSTL still requires the Jaxp1.2 classes. If you run the JSTL with XML related tags in JDK 1.5 you may receive an error message similar to:

```
: missing class org.apache.xpath.encounter failure.
```

To avoid JSTL failure, include the `xalan.jar` file in the required `.war` file. Add the `xalan.jar` file into your `/WEB-INF/lib` directory with the `.war` file and then re-package.

For more information refer to the JSTL release notes at:

`http://java.sun.com/webservices/docs/1.6/jstl/ReleaseNotes.html`.

4.1.8 RMD Conditional Does Not Fully Evaluate

As documented in the *Oracle Process Manager and Notification Server Administrator's Guide* and functional specifications for Dynamic Resource Management (DRM), a Resource Management Directive (RMD) conditional can have a fully qualified path. However, the conditional may not evaluate at all. It may fail to trigger any action or exception even though the `opmn.xml` file is valid.

RMD definitions can be either:

- Hierarchical: if defined at the `ias-instance` level or lower. Hierarchical RMDs assume an association within the OPMN configuration components in which they are defined.
- Global: if defined at the `process-manager` level. Global RMDs require explicit OPMN component specifications.

If you are referencing a hierarchical RMD, instead of a fully qualified path use a hierarchical relative reference.

For example, if the average request time is greater than 500 milliseconds for at least 60 seconds and there are less then 4 processes running for the `process-set` at which the hierarchical RMD was configured for OC4J, you would use the following in the `opmn.xml` file:

```
([process].avgReqTime > 500 {duration(60)})&([process-set].numProcs < 4)
```

If you are referencing a global RMD use a global absolute reference.

For example, if the heap size of a Java Virtual Machine (JVM) has exceeded 500 MBs, you would use the following in the `opmn.xml` file:

```
[process-set=home][process].heapSize > 500000
```

Note that the `opmn.xml` file is located in the following directory in your Oracle Application Server Oracle home:

```
ORACLE_HOME/opmn/conf/
```

4.2 Clustering and Replication Issues

This section describes clustering and replication issues. It includes the following topic:

- Section 4.2.1, "Using Oracle Universal Installer Provided Sample Cluster Discovery Address May Inadvertently Cluster Servers"

4.2.1 Using Oracle Universal Installer Provided Sample Cluster Discovery Address May Inadvertently Cluster Servers

Oracle Universal Installer provides an example cluster discovery address as part of the advanced installation option. The provide example discovery address is

225.0.0.1:6789. This *is not* a recommended address; rather it is an example intended to provide the type of cluster discovery address users may ask for from their network administrator.

Because the cluster configuration of Oracle Application Server is fully dynamic it is possible for installations using the example cluster discovery address (225.0.0.1:6789) to be inadvertently clustered with other servers installed with the same example cluster discovery address.

The cluster discovery address of a specific Oracle Application Server instance can be set from the command line using the following opmnctl command:

```
> $ORACLE_HOME/opmn/bin/opmnctl config topology update discover=<cluster config
address>
```

For example, to update a cluster discovery address in a specific Oracle Application Server instance to be 225.0.0.1:9876, the command would be:

```
> $ORACLE_HOME/opmn/bin/opmnctl config topology update discover="*225.0.0.1:9876"
```

Details on configuring topologies and the cluster discovery address can be found in Chapter 8, "Configuring and Managing Clusters" of the *Oracle Containers for J2EE Configuration and Administration Guide*.

4.3 Documentation Errata

The section describes documentation errata in management documentation. It includes the following topics:

- Section 4.3.1, "Valid Range of Multicast Addresses is Incorrect in the Application Server Control Online Help"
- Section 4.3.2, "Correction About Configuring Oracle Application Server 10.1.2 with Oracle Application Server 10.1.3"
- Section 4.3.3, "Additional Information for Changing Hostname"
- Section 4.3.4, "Additional Information for Cloning"

4.3.1 Valid Range of Multicast Addresses is Incorrect in the Application Server Control Online Help

The following topics in the Application Server Control online help incorrectly state the valid range of addresses you can use for a multicast address when configuring an Oracle Application Server 10*g* Release 3 (10.1.3.1.0) cluster topology:

- "Tips When Configuring the Cluster Topology"
- "Summary of the Supported Cluster Topologies"

The multicast address must be within the following range: 224.0.1.0 to 239.255.255.255.

4.3.2 Correction About Configuring Oracle Application Server 10.1.2 with Oracle Application Server 10.1.3

To use the latest J2EE features of Oracle Application Server, 10*g* Release 3 (10.1.3.1.0), with existing Oracle Application Server, Release 2 (10.1.2), components and applications, you can use the Oracle HTTP Server from an Oracle Application Server, Release 2 (10.1.2), middle tier as the front-end for your Oracle Application Server, 10*g*

Release 3 (10.1.3.1.0), middle tier. Section 6.4 of the *Oracle Application Server Administrator's Guide* describes how to do this.

However, in that section, the following command is incorrect:

```
ORACLE_HOME_SERVER2/opmn/bin/opmnctl config port update ias-component=OC4J
process-type=instance name portid=default-web-site protocol=ajp
```

The command should be:

```
ORACLE_HOME_SERVER2/opmn/bin/opmnctl config port update ias-component=default_
group process-type=instance name portid=default-web-site protocol=ajp
range=12501-12600
```

4.3.3 Additional Information for Changing Hostname

If your environment includes Oracle Enterprise Service Bus, the following describes additional information that is not currently documented in Section 7.2.2 of the *Oracle Application Server Administrator's Guide*:

- In Task 9, Step 1 describes editing the `esbparam.properties` file to change the DT_OC4J_HOST property. Additionally, if the port number changed, you must change the DT_OC4J_HTTP_PORT property.
- After you import the `esbparam.properties` file as described in Step 3, you must redeploy all applications, including Oracle BPEL Process Manager applications.

4.3.4 Additional Information for Cloning

If your environment includes Oracle Enterprise Service Bus, the following describes additional information that is not currently documented in Section 9.5.6 of the *Oracle Application Server Administrator's Guide*:

- In the part that describes steps to take on the cloned instance, step 2 describes editing the `esbparam.properties` file on the cloned instance to change the DT_OC4J_HOST property to the new hostname. Note that if the cloned instance is located on a remote host, you must change both the DT_OC4J_HOST and DT_OC4J_HTTP_PORT properties. If the cloned instance is on the same node as the source instance, you must change the DT_OC4J_HTTP_PORT property.
- After you import the `esbparam.properties` file as described in Step 4, you must redeploy all applications, including Oracle BPEL Process Manager applications.

5

Oracle JDeveloper

This chapter describes issues associated with Oracle JDeveloper. It includes the following topics:

5.1 Introduction

For additional information not available at the time of this document's publication. Please review the Oracle JDeveloper (10.1.3.1.0) Release Notes Addendum at `http://www.oracle.com/technology/products/jdev/htdocs/10.1.3.1/index.html`.

For more information and technical resources for JDeveloper, visit the JDeveloper product center on the Oracle Technology Network at `http://www.oracle.com/technology/products/jdev/101`.

5.2 General IDE Issues and Workarounds

This section describes general IDE issues and workarounds. It includes the following topic:

5.2.1 Incompatibility Between Internal CVS Client and CVSNT Server

In some cases binary files can become corrupted when using JDeveloper's internal CVS client against a CVSNT server. The workaround is to use CVSNT's client within JDeveloper. This can be configured on the **Versioning | CVS** panel of IDE preferences.

5.3 Deployment Issues and Workarounds

This section describes general deployment issues and workarounds. It includes the following topic:

- Section 5.3.1, "EJB Web Service Fails to Deploy to JDeveloper's Embedded Server"
- Section 5.3.2, "ADF Web Application with Ejb3 Model Project Dependency Fails to Deploy"
- Section 5.3.3, "Deploying JDeveloper Deployment Profiles to Archive Files on the File System"

5.3.1 EJB Web Service Fails to Deploy to JDeveloper's Embedded Server

JDeveloper may exceed the length of the path names permitted by Windows when you compile an EJB session bean with a web service annotation. The path name JDeveloper generates for the web service class file is concatenated from three elements: the path to the application-deployment folders (set by system and not editable), the path to the web service source folder (also set by system), and the path to the class file specified by its package name (set by user and must be as short as possible).

For example, the following path would be created for a web service class file, where the user-specified portion of the path name is based on the package name `com.oracle.myapp.ejb.webservice.test`.

```
<JDev_
Install>jdev\system\oracle.j2ee.10.1.3.37.58\embedded-oc4j\appli
cation-deployments\\current-workspace-app\MyApplication_
MyProject\ws-src\com\oracle\myapp\ejb\webservice\test
```

and results in the exception:

```
oracle.j2ee.ws.common.tools.api.SeiValidationException:
Interface <classname>.SessionEJBBeanPortType: The class could
not be loaded from the class path.
```

You can workaround this limitation by shortening the name of the package you enter when you create the EJB session bean. For example, instead of `com.oracle.myapp.ejb.webservice.test`, as shown in the above example, the package name com.oracle.myapp will result in a legal class path length.

5.3.2 ADF Web Application with Ejb3 Model Project Dependency Fails to Deploy

When you deploy an ADF web application WAR file to Standalone OC4J you may encounter the following error due to multiple persistence unit definitions resulting from an EJB3 model project dependency:

```
DeployerRunnable.run[application1:ejb3_mdnav_adffaces] -
Multiple persistence units with name "model" are defined at the
same scope.oracle.oc4j.admin.internal.DeployerException:
[application1:ejb3_mdnav_adffaces] - Multiple persistence units
with name "model" are defined at the same scope.
```

To avoid this error, update the ViewController project settings to remove the dependency on the Model project before deploying the ADF Web application to Standalone OC4J.

5.3.3 Deploying JDeveloper Deployment Profiles to Archive Files on the File System

When deploying JDeveloper deployment profiles to an archive file the default behavior is to deploy the archive as standard J2EE. In order to deploy an archive to a file for a specific application server platform to incorporate platform specific descriptor handling, the user must set the Target Connection in the **Deployment Profiles - Platform page**. The Target Connection can only be set to something other than the default (J2EE) after creating an application server connection in the connection navigator.

5.4 Database Issues and Workarounds

This section describes database issues and workarounds. It includes the following topic:

5.4.1 Entity Created Only for First Table in Entity Beans from Tables in Oracle Lite

Oracle Lite version 10.2.0.2 does not support standard JDBC metadata for column definitions, resulting in an inability to create EJB entities. Oracle expects this to be fixed in Oracle Lite 10.2.0.3.

5.5 Modeling Issues and Workarounds

This section describes modeling issues and workarounds. It includes the following topic:

5.5.1 Refactoring Context Menu and UML

From the Application Navigator context menu, the refactoring submenu is visible for navigator packages containing UML artifacts. However, refactoring the package will NOT cause UML artifact to be refactored, though Java and other types will be refactored as expected.

5.5.2 Java Modeler Accessibility

The Java Modeler's popup code editor is not currently accessible when using the JAWS screen reader. The workaround is to invoke **Go To Source** instead of **Edit** for Java elements on the diagram, which will invoke the main code editor.

5.6 Toplink Issues and Workarounds

This section describes Toplink issues and their workarounds. It includes the following topics:

5.6.1 Importing Tables with Multibyte Characters

When importing database tables named with multibyte characters, you must change the JDeveloper encoding to UTF-8.

1. Select **Tools > Preferences > Environment**.
2. Change **Encoding** to **UTF-8**.
3. Restart JDeveloper, then import the tables.

5.7 EJB Issues and Workarounds

This section describes EJB issues and their workarounds. It includes the following topics:

5.7.1 EJB 3.0 Application Migration Issue (10.1.3 to 10.1.3.1)

In 10.1.3.1 the life span of an entity's Persistence Context is strictly tied to the life span of its associated transaction, since by default, a PersistenceContext's type is `PersistenceContextType.TRANSACTION`.

This requirement was relaxed in JDeveloper 10.1.3, and some applications were found to be dependent on this requirement not being met.

To operate under the stricter requirement in JDeveloper 10.1.3.1, EJB 3.0 Stateless Session beans migrated from JDeveloper 10.1.3 and interacting with web clients may need to be changed to Stateful Session beans.

In addition to this change, the generated statement:

```
@Resource
EntityManager em;
```

should be changed to:

```
@PersistenceContext(type=PersistenceContextType.EXTENDED)
EntityManager em;
```

to allow web clients to perform additional operations on entities returned from the (newly Stateful) Session bean.

5.7.2 Running EJB 3.0 Applications

EJB 3.0 runtime is different between JDeveloper 10.1.3 and JDeveloper 10.1.3.1. An EJB 3.0 application that was created in JDeveloper 10.1.3 will only work with Oracle Application Server 10.1.3, and an EJB 3.0 application created in JDeveloper 10.1.3.1 will only work with Oracle Application Server (SOA) 10.1.3.1.

You can migrate EJB 3.0 applications from JDeveloper 10.1.3 to JDeveloper 10.1.3.1 by following the instructions in the online help topic *Migrating EJB 3.0 Applications from Oracle JDeveloper 10g Release 10.1.3 to 10.1.3.1* by selecting **Getting Started with Oracle JDeveloper > Migrating to Oracle JDeveloper 10g** .

5.8 Web Services Issues and Workarounds

This section describes Web Services issues and their workarounds. It includes the following topics:

5.8.1 Top-Down SOAP 1.2 Services Changed to SOAP 1.1 after Editing

If you create a web service top-down from a WSDL that contains SOAP 1.2 bindings, then modify that service in the web service editor, the bindings are changed to SOAP 1.1.

The workaround is in the Web Services Editor dialog, manually deselect SOAP 1.1 Binding and select SOAP 1.2 Binding instead.

5.8.2 Top-Down Service with One-Way Operations Changed to Two-Way Methods after Editing

If you create a top-down web service that has one-way operations, then use the Web Service Editor to change the service or invoke **Regenerate Web Service from Source**, the one-way operations are changed to two-way operations.

The workaround is in the Web Services Editor dialog, manually select the **Create One-Way Operations From Void Methods** checkbox.

5.8.3 Top-down Web Services Generated with Enumerated Types Fail Validation

When you generate a top-down web service a WSDL with enumerated types, subsequent changes made to the service in the Web Service Editor cannot be committed due to an error in validation.

5.8.4 Deleting InitParam or Header in a Web Service Handler Causes an Error

If you have created a web service handler that uses an InitParam and/or a Header, and you subsequently edit the handler to remove the InitParam or the Header, JDeveloper displays an error message.

The workaround is to remove the handler, then recreate it without the initial parameter.

5.8.5 Web Service Proxy Fails when Running with Reliability Settings

When you run a proxy to a web service that has reliability enabled, you may find that it fails, and on examination with the HTTP Analyzer the SOAP message returned from the server has an empty body. This can occur because the default value of **Expiry Time** on the **Operation Settings** tab of the Proxy Reliability wizard.

The workaround is to increase the expiry time to 2 seconds or more.

5.8.6 'Invoke' Button Not Present in Enterprise Manager for Testing EJB3.0 Web Service on External OC4J

If you deploy an EJB3.0 web service to external OC4J, and try to test it from Oracle Enterprise Manager, the **Invoke** button is not always present.

There is no workaround.

5.8.7 Invalid Web Service Endpoint in Generated Proxy for Multi-Port WSDLs

When you create a proxy to a web service with more than one port, the proxy may be generated with an invalid endpoint for the web service.

The workaround is to examine the WSDL to find the correct endpoint URL, and paste this into the generated proxy class.

5.8.8 Runtime Exception when More than One Web Service Exists in a Project

If you create two or more web services in a project that use the same mapping file, you will get a runtime exception.

The workaround is:

- For bottom-up web service generation, specify a `serviceName` argument value that does not already exist for the second web service.
- For top-down web service generation, make sure the web services are each in a different WAR for deployment so that the same deployment descriptor is not used.

5.9 JavaServer Faces (JSF) Issues

This section describes JavaServer Faces issues and workarounds. It includes the following topic:

- Section 5.9.1, "In JSF 1.1_02 Pages under /WEB-INF Fail to Load"

5.9.1 In JSF 1.1_02 Pages under /WEB-INF Fail to Load

JDeveloper 10.1.3.1 upgrades to the JavaServer Faces reference implementation version 1.1_02. This maintenance release of the JSF runtime from Sun introduces a new restriction preventing the processing of any JSF page located in the `./WEB-INF` directory (or subdirectory thereof). If your JSF applications contain pages in the `WEB-INF` directory, you will need to move those pages to another directory under the web root other than `WEB-INF` for them to function correctly. If your JSF pages use ADF Model data binding, after moving the JSP/JSPX pages from `./WEB-INF` (or subdirectory) to a new directory under your web root, you will need to reflect the change in the "path" value inside the <pageMap> section of your DataBindings.cpx file. For example, if your page previously had a "path" value of `/WEB-INF/page/Test.jspx` and you moved this Test.jspx page to `./public_html/page/Test.jspx`, where `./public_html` is the HTML root directory of your view controller project -- then you must edit the value of the path and change it from `/WEB-INF/page/Test.jspx` to `/page/Test.jspx`.

5.10 Miscellaneous Issues and Workarounds

This section describes documentation errata. It includes the following topic:

- Section 5.10.1, "Using JAZNMigrationTool with JDeveloper"
- Section 5.10.2, "Running ADF Installer against Application Server 10.1.2 Instance"
- Section 5.10.3, "Restore Option Does Not Restore bc4j.ear"

5.10.1 Using JAZNMigrationTool with JDeveloper

The JAZNMigrationTool provides a way to migrate the contents of one store to another that can then be loaded to the LDAP directory. The command to be used is:

```
java JAZNMigrationTool -D binddn -w passwd [-h ldaphost] [-p ldapport]
[-sf filename] [-df LDIF_filename]
[-sr source_realm] [-dr dest_realm]
[-m policy|realm|all]
[-help]
```

Below is an example of migrating all users, roles, and JAAS policies from embedded-oc4j\config\system-jazn-data.xml to j2ee\home\config\system-jazn-data.xml

```
set CLASSPATH=JDEV_HOME\j2ee\home\jazn.jar;%CLASSPATH%JDEV_
HOME\jdk\bin\Java oracle.security.jazn.tools.JAZNMigrationTool
-w welcome -sf JDEV_
HOME\jdev\system\oracle.j2ee.xxxx\embedded-oc4j\config\system-ja
zn-data.xml -df JDEV_HOME\j2ee\home\config\system-jazn-data.xml
-dt xml
```

Note that JDEV_HOME should be the directory where they install JDeveloper. XXXX represents the final build number.

For more information issue `Java JAZNMigrationTool -help`.

5.10.2 Running ADF Installer against Application Server 10.1.2 Instance

When running the ADF installer within JDeveloper (**Tools | ADF Installer**) against an Oracle Application Server 10.1.2 instance, you may encounter the error `Cannot finish the installation` even if the server is shut down. In addition to stopping the Application Server instance, you must also shut down the Application Server Control Manager (Enterprise Manager) service before running the ADF Installer against the Oracle Application Server 10.1.2 instance.

5.10.3 Restore Option Does Not Restore bc4j.ear

Use of the restore facility does not redeploy bc4j.ear to the Oracle Application Server 10.1.3.0.0. This should not affect functionality, as `datatags.ear` is the same as bc4j.ear. However, if required, bc4j.ear must be manually deployed using the Enterprise Manager console.

6

Oracle Application Server Adapters

This chapter describes issues associated with Oracle Application Server Adapters. It includes the following topics:

6.1 Oracle Application Server Adapter for Files/FTP Issues and Workarounds

This section describes the following issue and workaround:

6.1.1 Using CorrelationSets With File Adapter

If `CorrelationSets` are used with file adapter (starting with empty bpel project template), then the `PropertyAliases` get created in the partnerlink wsdl files. However, if you edit the adapter partnerlink, the `propertyaliases` are removed from the wsdl file, and this leads to compilation issues for the bpel project.

To overcome this issue you must edit the adapter partnerlinks files(wsdl files) manually instead of going through the wizard.

6.2 Oracle Application Server Adapter for JMS Issues and Workarounds

This section describes the following issues and workarounds:

6.2.1 JMS adapter in an XA scenario against AQ-JMS (OJMS)

You must use separate Resource Providers for inbound and outbound AQJMS Adapters:

1. You must set a new partnerlink property (BPEL) or endpoint property (ESB) called "`cacheConnections`" to `false`. If this is not specified, then the default value is `true` (which is the default in both 10.1.2 and 10.1.3).
2. You should use separate OJMS resource providers (defined `J2EE_HOME/config/application.xml`) for inbound and outbound JMS destinations (queues or topics) participating in the same global transaction.

6.2.2 ESB Cannot Run JMS Adapter (OEMS JMS provider) in Non-Managed Mode

JMS Adapter cannot use connection information from WSDL to run in non-managed mode. It reports missing connection factory.

Even in non-managed mode, some adapters have pre-requisites; you should not assume that non-managed equates no server configuration is required. For instance, the JMS Adapter requires a resource provider to be configured in`application.xml` and potentially `data-sources.xml` (if the resource provider refers to a data source). If these pre-requisites exist ahead of time, then non-managed mode would also work for ESB. Exact same issue pertains to BPEL as well. Note that this is applicable only for OEMS JMS provider.

6.2.3 Regression Stress - Dequeue Fails with AQJMSException in AQJMS Advanced Scenario

Under heavy system load, that is, when the load for inbound and outbound for AQ JMS adapters is high, dequeue fails with an `AQjmsException`.

To address this issue, use the following workaround:

Create two separate physical connection pools (that is, use two separate (AQ) JMS resource providers). Each `JMS WSDL` (Enqueue and Dequeue) then points to a different `JCA JNDI` Connection Factory, which in turn would point to two separate JMS connection factories, each using one of the two resource providers, as shown in the following examples:

Enqueue WSDL

```
<jca:address location="eis/aqjms1" />
```

Dequeue WSDL

```
<jca:address location="eis/aqjms2" />
```

JmsAdapter/oc4j-ra.xml

```
<connector-factory location="eis/aqjms1" ...
     <config-property name="connectionFactoryLocation"
value="java:comp/resource/aqjms1/QueueConnectionFactories/qcf"/>
     ...
<connector-factory location="eis/aqjms2" ...
<config-property name="connectionFactoryLocation"
value="java:comp/resource/aqjms2/QueueConnectionFactories/qcf"/>
...
```

j2ee/home/config/application.xml

```
<resource-provider class="oracle.jms.OjmsContext" name="aqjms1">
   <description>OJMS Context using thin JDBC</description>
   <property name="url"value="jdbc:oracle:thin:scott/tiger@localhost:1521:ORCL" />
<resource-provider class="oracle.jms.OjmsContext" name="aqjms2">
   <description>OJMS Context using thin JDBC</description>
  <property name="url" value="jdbc:oracle:thin:scott/tiger@localhost:1521:ORCL" />
```

Note: Even when the scenario works fine under regression stress, you will still see the `AQJMSException` in the log. You can use this workaround to avoid this exception.

6.2.4 When using Topics with OJMS (AQ based JMS), AQ JMS Topic Hangs, and Ceases to Dequeue

When using Topics with OJMS (AQ based JMS), AQ JMS Topic hangs, and does not dequeue even though there are messages at topic.

The JMS adapter *subscriber* (inbound) WSDL should use a JCA connection factory (for example, `eis/OJms/myConnectionFactory1`) which uses an OJMS resource provider (for example, `resprov1`), which is based on a URL (for example, `jdbc:oracle:thin:@host:1521:orcl`).

The following list exemplifies the workaround mentioned in the preceding paragraph:

- **`MyJmsSubsriber.wsdl`**

```
...
<service name="JmsSubscribe">
  <port name="jmsSubscribe_pt" binding="tns:jmsSubscribe_binding">
    <jca:address location="eis/OJms/myConnectionFactory1"/>
  ...
```

- **`J2EE_HOME/application-deployments/default/JmsAdapter/oc4j-ra.xml`**

```
<connector-factory location="eis/OJms/myConnectionFactory1" connector-name="Jms
Adapter">
   <config-property name="connectionFactoryLocation"
           value="java:comp/resource/resprov1/QueueConnectionFactories/myQCF"/>
```

- **`J2EE_HOME/config/application.xml`**

```
<orion-application  ...
    ...
    <resource-provider class="oracle.jms.OjmsContext" name="resprov1">
        <property name="url" value="jdbc:oracle:thin:@host:1521:orcl" />
        <property name="username" value="scott" />
        <property name="password" value="tiger" />
    </resource-provider>
```

6.3 Oracle Application Server Adapter for AQ Issues and Workarounds

This section describes the following issue and workaround:

- Section 6.3.1, "Dequeuing in the AQ Adapter is Very Slow for Large Numbers of Messages"

6.3.1 Dequeuing in the AQ Adapter is Very Slow for Large Numbers of Messages

When there are large number of messages (more than 100K) in an AQ queue, dequeuing in the AQ adapter can be very slow. The problem is a performance issue with the 10.x.x version of the database. However, the previous versions of the database work fine.

When you encounter this issue, run one of the following commands to generate statistics for the queue or topic table:

```
dbms_stats.gather_table_stats('JMSUSER', 'QTAB')
```

or

```
dbms_stats.gather_schema_stats('JMSUSER')
```

where `QTAB` is the Queue/Topic table and `JMSUSER` is the user/schema. Note that statistics should be refreshed every time a large number of rows are updated, inserted, or deleted.

6.4 Oracle Application Server Adapter for Database Issues and Workarounds

This section describes the following issues and workarounds:

- Section 6.4.1, "DB Adapter Wizard Shows Empty (Blank) Page After Creating DB Connection"
- Section 6.4.2, "Faulted DBAdapter Instances Do Not Appear in BPEL Console"

6.4.1 DB Adapter Wizard Shows Empty (Blank) Page After Creating DB Connection

After migration of 10.1.2.0.2 `122.DBAdapter/InsertWithCatch` (when you open in JDeveloper 10.1.3.1), if you open the project, and double-click the DB adapter partnerlink, then you will get a message stating that your UI connection is missing. After you create the UI connection, and click the **Next** button, you will get a blank page.

The issue here is that the **Next** button should be disabled, which in this case, isn't. The workaround is ensure a connection exists and is selected, and not to click the **Next** button otherwise.

6.4.2 Faulted DBAdapter Instances Do Not Appear in BPEL Console

Faulted DBAdapter instances do not appear in BPEL console because the BPEL auditing is tied to the JTA transaction, that is, auditing can only occur if the JTA transaction commits.

The faulted instance does not appear if a XA/JTA DBAdapter invoke fails, and the JTA transaction cannot (must not) be committed. This problem also occurs with server timeouts, where the JTA transaction is marked `rollback only`. However, in 10.1.3.1 DBAdapter is configured for JTA out of the box so this problem is now apparent all the time.

Report of success or failure has to be tied to JTA, but you cannot report failure and rollback the transaction at the same time. If the instance is successful you must audit through JTA, but if unsuccessful you theoretically cannot (you are writing as part of a transaction which can never commit.)

7

Oracle Enterprise Service Bus

This chapter describes issues associated with Oracle Enterprise Service Bus. It includes the following topics:

7.1 General Issues and Workarounds

This section describes general issue and workaround. It includes the following topic:

7.1.1 The SOA Basic Installation Type Should be Used Instead of the ESB Standalone Developer Installation Type

The Oracle Application Server SOA Suite Basic Install type should be used for development and pre-production testing. The Oracle Enterprise Service Bus standalone Developers installation type is not a supported option.

For information on installing the SOA Suite Basic Install type, see *Oracle Application Server Installation Guide* or *Oracle Application Server Installation Guide for Linux x86*.

7.1.2 Performance Degradation of Dequeuing Operations Against AQ When Using an Oracle 10.2.0.2 Database

When there is a large number of outstanding messages (more than 100K) in an AQ queue, dequeuing in the AQ adapter can be very slow with an Oracle 10.2.0.2 database.

You can remedy the problem by running `dbms_stats.gather_table_stats` or `dbms_stats.gather_schema_stats` to analyze the queue tables for query optimization.

7.1.3 Memory Usage Grows Gradually in Default Installation at High Volume

In high volume, high throughput environment, you might notice that the memory usage of the container is growing gradually. This might be a result of the instance tracking data not being flushed from the in-memory data structure fast enough. You can tune (reduce, in this case) the flush interval with a SQL statement executed against the ESB_PARAMETER table in the ORAESB schema as follows:

```
INSERT INTO ESB_PARAMETER (PARAM_NAME, PARAM_VALUE)
       VALUES ('TrackingMessageFlushInterval', '500');
```

The PARAM_VALUE in the SQL statement represents 500 milliseconds.

If a value already exists, use the SQL UPDATE statement to update the parameter value, as follows:

```
UPDATE ESB_PARAMETER SET PARAM_VALUE = '500'
       WHERE PARAM_NAME = 'TrackingMessageFlushInterval';
```

After modifying the ESB_PARAMETER table, you need to restart the ESB Server.

7.1.4 Filter Expression Only Supports XPath Functions that are Included in the XPath 1.0 Specification

Filter expressions, XSL data transformations, and tracking fields do not support any XPath functions that are not part of the XPath 1.0 specification. The header support functions are an exception and are supported as Preview features. For information about Preview features, see Section 7.3.1, "Some Oracle Enterprise Service Bus Features are in Preview Mode".

7.1.5 External Dependencies Used at Design Time Must Be Available at Deployment Time

Ensure that all external dependencies that are used at design time, such as hosted WSDLs and XSDs, are available at the time of deployment. The deployment engine uses these artifacts to generate metadata. The deployment engine will try to access the artifacts until they are available or the engine times out.

7.1.6 Multibyte Characters Are Not Supported in Some ESB Component Names

The Oracle Enterprise Service Bus project, schema, service, and system names do not support multibyte characters. Use ASCII characters for those names.

Oracle Enterprise Service Bus does support multibyte character set payloads (data). The restriction on multibyte characters only applies to configuration data.

7.2 Configuration Issues and Workarounds

This section describes configuration issues and their workarounds. It includes the following topics:

7.2.1 ESB Server Displays a Warning Message When Shut Down

A warning message might be displayed when the ESB Server shuts down. This occurs because the ESB runtime process interrupts the worker threads while shutting down.

The warning message has no impact and is safe to ignore.

7.2.2 Oracle ESB Control Does Not Display Correctly For Some Window Sizes

When resizing Oracle ESB Control, sometimes the scroll bar is missing and other layout issues might occur. To display the correct layout, maximize the Oracle ESB Control window.

7.2.3 Access Problem After Logging into Oracle ESB Control Using Internet Explorer

If you are having problems accessing the Oracle ESB Control with Internet Explorer, you can reconfigure the security options to add your domain to the local intranet zone.

From the Internet Explorer toolbar, select Tools > Internet Options > Security > Local intranet > Sites > Advanced, then add your domain in the entry field. For example, if your server hostname is `esbserver.oracle.com`, add `*.oracle.com` to the local intranet zone.

7.2.4 Timeout Exceptions When Using Oracle Enterprise Service Bus

You should make both of the updates described in this section to avoid time out errors when either ESB or another application, such as BPEL, starts a transaction. The time out error for an OC4J transaction applies to all applications and the time out error while deploying from Oracle JDeveloper only applies to Oracle Enterprise Service Bus. Note that the time out value set in the `esb_config.ini` file takes precedence when ESB starts the transaction.

If an OC4J transaction time out error occurs while importing metadata into the ESB Server, you need to increase the value of the `transaction-timeout` parameter in the *`Oracle_Home`*`/j2ee/home/config/transaction-manager.xml` file. The error can occur for various reasons, such as a BPEL or an external service WSDL is not available or slow.

If a time out error occurs while deploying from Oracle JDeveloper, you need to increase the value of the `xa_timeout` parameter in the *`Oracle_Home`*`/integration/esb/esb_config.ini` file. After modifying the file, you need to restart the ESB Server.

7.2.5 Missing pc.properties After Completing the ESB Standalone Installation

After completing the Oracle Enterprise Service Bus standalone installation, the following error message might occur:

```
Could not locate file pc.properties in classpath
```

To create the `pc.properties` file for your system, perform the following:

1. Copy *`Oracle_Home`*`\integration\esb\config\pc.properties.esb` to *`Oracle_Home`*`\integration\esb\config\pc.properties`.
2. Edit `pc.properties` according to your system requirements.
3. Restart the ESB Server.

7.2.6 An Inbound Adapter Service and its Corresponding Routing Service Should Reside in the Same ESB System

An inbound adapter service and its corresponding routing services are considered peer entities that should be deployed together in the same ESB system.

7.2.7 Configuration of an Additional Design Time Instance in a High Availability Deployment Requires Additional Configuration

If you install multiple ESB repositories against the same database, the second repository installation overwrites the existing ESB metadata configuration residing in the `ESB_PARAMETER` table. In order to preserve the old values, you need to export the `ESB_PARAMETER` table before installing the second repository, then import the `ESB_PARAMETER` table after completing the installation of the second repository.

For information about exporting and importing the `ESB_PARAMETER` table, see "Updating the ESB Metadata" in *Oracle Application Server Enterprise Deployment Guide*.

7.2.8 New Parameters in the ESB_PARAMETER Table are Required for a Non-default OC4J JMS Setup

When using a non-default JMS setup, you need to specify several parameters in the `ESB_PARAMETER` table to indicate JNDI locations for the topic and connection factory. The parameters are:

- `PROP_NAME_ERROR_XATCF_JNDI`

  Description: XA JMS connection factory for error topic

  Example: `OracleOJMS/XATCF`

- `PROP_NAME_ERROR_TCF_JNDI`

Description: Non-XA JMS connection factory for error topic

Example: `OracleOJMS/TCF`

After modifying the `ESB_PARAMETER` table, you need to restart the ESB runtime and design time servers.

7.2.9 Non-transactional MQ Adapter Incorrectly Configured as Transactional

At installation time, the MQ Adapter is incorrectly registered with Oracle Enterprise Service Bus as transactional. This leads to the display of an incorrect status in Oracle ESB Control when transactions are rolled back.

The `IS_TRANSACTIONAL` columns in the `ESB_SERVICE_TYPE` table should be set to `N` (not `Y`) when `SERVICE_TYPE` is equal to `MQ`. You can fix the ESB service configuration in the `ESB_SERVICE_TYPE` table using the following SQL statement:

```
UPDATE ESB_SERVICE_TYPE SET IS_TRANSACTIONAL = 'N' WHERE SERVICE_TYPE = 'MQ';
```

After modifying the table, you need to restart the ESB Server.

7.3 Documentation Errata

This section describes documentation errata. It includes the following topic:

- Section 7.3.1, "Some Oracle Enterprise Service Bus Features are in Preview Mode"
- Section 7.3.2, "Oracle Enterprise Service Bus and Oracle Application Server Integration B2B"

7.3.1 Some Oracle Enterprise Service Bus Features are in Preview Mode

Some Oracle Enterprise Service Bus features are available in Preview mode and will be supported in a later release.

Preview features in this release are:

- Endpoint properties
  - Adapter Endpoint properties
  - SOAP Endpoint properties
- Header Support
  - Header support for Adapters
  - Header support for SOAP Headers, such as security, encryption, and WS-Addressing
- Oracle Enterprise Service Bus to Oracle Application Server Integration B2B integration

7.3.2 Oracle Enterprise Service Bus and Oracle Application Server Integration B2B

The B2B WSIL Browser enables interoperability between Oracle Enterprise Service Bus and Oracle Application Server Integration B2B and is available through patch 5105622.

This feature are available in Preview mode and will be supported in a later release.

See Also:

- The README.txt file for patch 5105622. this patch is available from the following location:

  https://metalink.oracle.com/

- *Oracle Application Server Integration B2B User's Guide*

8

Oracle BPEL Process Manager

This chapter describes issues associated with Oracle BPEL Process Manager. It includes the following topics:

> **See Also:** Section 10.11, "BPEL-BAM Integration Issues and Workarounds"

8.1 Installation and Deinstallation Issues and Workarounds

This section describes the following issues and workarounds:

8.1.1 Installing Oracle Java Virtual Machine on Linux

If you want to use the CodeCoach and Profiling features of Oracle JDeveloper, you must install Oracle Client Java Virtual Machine (OJVM).

The `InstallOJVM` script installs OJVM in the specified JDK directory. Once installed, OJVM is the default virtual machine for every new project created in Oracle JDeveloper for the specified JDK.

1. Go to `$ORACLE_HOME/integration/jdev/ojvm_linux_x86`.
2. Run `installOJVM`, and specify the JDK root directory. For example:

   ```
   InstallOJVM $/OraBPELPM/integration/jdev/jdk
   ```

8.1.2 Use the SOA Basic Install Type Instead of the Oracle BPEL Process Manager for Developers Installation Type

Oracle recommends that you use the Oracle Application Server SOA Basic installation type instead of the Oracle BPEL Process Manager for Developers installation type.

8.1.3 Changes to ant-orabpel.properties Required for Certain Clustering Configurations

For Cold Failover configurations, you must manually edit the `ant-orabpel.properties` file as follows:

1. Find the properties `http.hostname` and `j2ee.hostname` in

   SOA_Oracle_Home`/bpel/utilities/ant-orabpel.properties`

2. Set both `http.hostname` and `j2ee.hostname` to the virtual hostname.

   See the chapter on active-passive topologies in *Oracle Application Server High Availability Guide* for more information.

8.1.4 EJB URL in wf_client_config.xml Is Incorrect After Installation

Do the following to avoid a connection failure error when using the worklist client code:

1. Go to

   SOA_Oracle_Home`\bpel\system\services\config\wf_client_config.xml`

2. Locate the entry

   ```
   servicesClientConfigurations\ejb\serverURL
   ```

3. Make the preceding entry the same as the `jndi.url` property in

   SOA_Oracle_Home`\bpel\utilities\ant-orabpel.properties`

   with `/hw_services` appended to it. For example:

   ```
   <serverURL>opmn:ormi://hostname:nnnnn:oc4j_soa/hw_services</serverURL>
   ```

4. Ensure that the following is in the classpath:

   SOA_Oracle_Home`\bpel\system\services\config\wf_client_config.xml`

8.1.5 Installing BPEL on OID-Associated J2EE

The following preinstallation steps are required for the environment in which you are using the 10.1.3.1 patch and a 10.1.3.1.0 BPEL J2EE standalone installation associated with the 10.1.2.0.2 infrastructure OID.

> **Note:** For the following preinstallation steps to work, OID must be seeded with workflow-related users running the config tool for workflow before you restart the BPEL server.

1. Shut down the instance by executing

   ```
   opmnctl stopall
   ```

2. Back up the `jazn.xml` file found at

   SOA_Oracle_Home\j2ee\home\config

3. In the same directory, rename `jazn.xml.save`*nnnn* to `jazn.xml`.

   This is the `jazn.xml` file before OID was associated with the J2EE instance.

4. Confirm that the contents of `jazn.xml` look something like the following. In particular, note that the entries in bold are as indicated.

   ```
   <?xml version = '1.0' encoding = 'UTF-8' standalone = 'yes'?>
   <jazn xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:noNamespaceSchemaLocation="http://xmlns.oracle.com/oracleas/schema/jazn-10
   _0.xsd" schema-major-version="10" schema-minor-version="0" provider="XML"
   location="./system-jazn-data.xml" default-realm="jazn.com"/> "
   ```

5. Start the instance by executing

   ```
   opmnctl startall
   ```

6. Install BPEL.
7. After completing the installation successfully, shut down the instance.
8. Rename `jazn.xml` to the new name (to keep as a backup).
9. Copy back the backed up copy of LDAP `jazn.xml` as the new `jazn.xml`.
10. Start the instance.
11. For Oracle BPEL Control to work, follow the manual steps required for OID setup with BPEL.

8.1.6 Error Message Can Be Ignored During BPEL Standalone Installation

You can ignore the following error messages for the environment in which you are using the 10.1.3.1 patch and a 10.1.3.1.0 BPEL J2EE standalone installation associated with the 10.1.2.0.2 infrastructure OID.

```
The operation is unsupported
```

This message appears when you type the password during installation (in the background console, from where Oracle Universal Installer was invoked).

8.1.7 Deploying BPEL Processes to All Nodes in a Cluster

When following the BPEL process clustering procedures in section "Task 4: Compiling and Deploying the BPEL Process" of *Oracle BPEL Process Manager Installation Guide*, ensure that you deploy the BPEL process to all nodes in the cluster.

8.1.8 Installation Impact on Adapter Endpoint Activation Topologies

The method by which you install Oracle BPEL Process Manager and Oracle Enterprise Service Bus can impact adapter endpoint activation. Review the following issues before performing an installation.

If you install the following components into the same Oracle home:

- Oracle Application Server 10.1.3.0
- Oracle Application Server Patch Set 10.1.3.1
- Oracle BPEL Process Manager for OracleAS Middle Tier from its own 10.1.3.1 software CD
- Oracle Enterprise Service Bus from its own 10.1.3.1 software CD

Or, if you install:

- J2EE and Web Server advanced install type of Oracle Application Server SOA 10.1.3.1
- Oracle BPEL Process Manager for OracleAS Middle Tier from its own 10.1.3.1 software CD
- Oracle Enterprise Service Bus from its own 10.1.3.1 software CD

Adapter end point activation is *successful* for the following scenarios:

- If Oracle BPEL Process Manager and Oracle Enterprise Service Bus are installed under the same default home OC4J container.
- If Oracle BPEL Process Manager and Oracle Enterprise Service Bus are installed under the same container (other than the home OC4J container) and under the same default group (as that of the home OC4J container).

See *Oracle Application Server Administrator's Guide* for details about OC4J groups.

8.2 Modeling and Design-Time Issues and Workarounds

This section describes the following issues and workarounds:

- Section 8.2.8, "Schema Names Do Not Support Multibyte Characters"

8.2.1 Dragging a Decision Service Icon into a BPEL Diagram Activities Area

As with the other services listed under **Services** in the **Component Palette** of Oracle JDeveloper, a decision service must be dragged into one of the **Services** swim lane. You cannot drag a service into the activities area of a BPEL diagram. However, the interface does not provide a visual indicator that you cannot drag a decision service into the activities area, except that nothing happens.

8.2.2 Decision Service Cannot Be Edited in Oracle JDeveloper

A decision service cannot be edited in Oracle JDeveloper. You must delete and re-create it.

8.2.3 Correlation Sets in Previously Deployed Versions May Be Overwritten

If correlation sets are changed between process versions, then the last deployed version overrides the correlation sets in previously deployed versions. This may be an issue if you have in-flight instances of version 1, followed by a newly deployed version 2, where the correlation set has changed.

8.2.4 Change in HeaderHandler from Release 10.1.2.0.2 to Release 10.1.3.1.0

The `HeaderHandler` interface from release 10.1.2.0.2 cannot be ported to the 10.1.3.1.0 environment. The following change in the method signature is required:

From this in release 10.1.2.0.2:

```
public void invoke(CXPartnerLink partnerLink, String operationName, Map payload,
Map header, Map callProps)
```

To this in release 10.1.3.0.1:

```
public void invoke(CXPartnerLink cXPartnerLink, String string, Map map, List list,
Map map1)
```

8.2.5 Online Help for Invocation Pattern Operations in a Decide Activity

The Edit Decide window enables you to select the operation of the invocation pattern to perform. The operations available for selection are based on the invocation pattern you selected in the Select a Ruleset or a Function window of the Decision Service wizard. For descriptions of these operations, perform either of the following:

- Click **Help** on the Select a Ruleset or a Function window of the Decision Service wizard and go to the Invocation Pattern section.
- See the "Decide Activity" section in Chapter 18, "BPEL Process Integration with Business Rules" of *Oracle BPEL Process Manager Developer's Guide*.

8.2.6 WSIF Bindings Generated from Oracle JDeveloper Are Not Interoperable with Oracle BPEL Process Manager

Oracle BPEL Process Manager is not interoperable with Oracle JDeveloper-created WSIF bindings, and cannot support Java beans or XDK JAXB objects passed into Java binding services.

You can select RPC type for the SOAP and WSIF bindings options when generating a Java Web service. The resulting WSDL with Java bindings is interoperable with Oracle

BPEL Process Manager. However, this works only if there are no complex type references in the Java code.

8.2.7 BPEL XPath Functions File and Console Link Location

For this release, the `xpath-functions.xml` file has been moved to the *`SOA_Oracle_Home`*`\bpel\system\config` directory. In addition, the console link to these functions now appears in the Oracle BPEL Admin Console (`http:\\`*`hostname:port`*`\BPELAdmin`) under the **XPath Library** link.

8.2.8 Schema Names Do Not Support Multibyte Characters

When you create a BPEL process, the XSD file name does not support multibyte characters.

8.3 Deployment and Run-Time Issues and Workarounds

This section describes the following issues and workarounds:

8.3.1 Missing ORMI Message

If the ORMI URL used for deployment in your network environment does not use the hostname, but rather uses the localhost (for example, in a DMZ network configuration), then you may see the following error:

```
...Missing ormi[s]://<host>:<port>
```

You may need to change the value of the property `hostname` to the localhost, in

SOA_Oracle_Home\bpel\utilities\ant-orabpel.properties

8.3.2 Directory Reference for File Adapter Not Updating Correctly

In a BPEL process that uses multiple file adapter ports (receives), using the Update Descriptor feature of Oracle BPEL Control to change directory reference information does not update the `bpel.xml` file correctly. For example, assume the file adapter uses a logical name for the directory path (rather than a physical path), and that after deploying your BPEL process, you want to change from the logical directory property value to the actual physical directory. The update process from Oracle BPEL Control adds a new property with the physical directory value, and the existing property for the logical name remains as well. At run time, the change does not take effect.

You must redeploy a BPEL process that uses multiple file adapter ports if you update directory information for the incoming files using the Update Descriptor feature of Oracle BPEL Control.

8.3.3 Reportees of the Topmost User in a Hierarchy Are Not Always Displayed

This note applies to the topmost user in any hierarchy. The user cdickens (the topmost user in the demo user community) is used in this discussion.

In the Identity lookup dialog, when you select **cdickens** from the **Search user** list and click **Hierarchy**, you see the message "No reportees for cdickens." This is incorrect because wfaulk reports to cdickens. However, when you select cdickens and click **Reportees**, wfaulk is correctly displayed.

8.3.4 TaskManager Is Not Listed Under Deployed Processes in Oracle BPEL Control

TaskActionHandler and TaskManager should appear as deployed processes in Oracle BPEL Control. If TaskManager does not appear, do the following:

1. Stop Oracle BPEL Control.
2. Copy `bpel_TaskActionHandler.jar` as follows:

   From *SOA_Oracle_Home*`/bpel/install/extensions`

   To *SOA_Oracle_Home*`/bpel/domains/default/deploy`
3. Restart Oracle BPEL Control.

8.3.5 Adapter-Based Application Deployment in OracleAS Integration InterConnect-Oracle BPEL Process Manager Environment Throws Exception

You may see the following error message when you deploy an application in an environment in which OracleAS Integration InterConnect publishes a message, using the AQ adapter, and Oracle BPEL Process Manager subscribes to that message.

```
<2006-09-25 04:10:36,421> <ERROR> <default.collaxa.cube.engine>
<DomainObserverRegistry::notify> Error while notifying observer class
com.collaxa.cube.ws.soap.oc4j.BPELOC4JServlet$1 with aspect class
com.collaxa.cube.engine.observer.ProcessInitAspect
oracle.webservices.provider.ProviderException: No service
@ {http://xmlns.oracle.com/pcbpel/adapter/ic/implement/Item/Is_Item_Available/OA
I/V1}Item defined in the WSDL at
oracle.j2ee.ws.server.provider.ProviderConfigImpl.getServiceName(ProviderConfigImp
```

```
l.java:312)
. . .
```

You can ignore the error message. The application deploys and the BPEL process executes successfully.

8.3.6 BPEL Compiler Error When No Partner Link Exists

If you create an empty BPEL process and start creating a partner link by invoking a Java Web service creation wizard, then you will get a compilation error when the partner link has not yet been created.

You can do one of the following instead:

- Create the Java Web service separate from and before creating the partner link. Use the Create Partner Link dialog box and the Service Explorer to get the WSDL file.
- Start with a synchronous or asynchronous template and create a partner link. You can subsequently delete the client partner.

8.3.7 Unit Test Does Not Support Iterative Partner Invocations

The generate unit test feature does not work correctly if the BPEL process contains invoke and receive activities in a loop.

8.3.8 OBANT.SH Does Not Handle JSSO Login If the HW_Services Application is JSSO Enabled

In JSSO mode, the `deployProcess` task (invoked by `obant`) gets a JSSO login form to fill out as a reply from Oracle HTTP Server. The task does not handle it. The task responds that the task was successfully deployed. However, the hw_services application cannot be JSSO enabled.

8.3.9 ClassCastException Error Message with 10.1.2 Application Server Connections

In release 10.1.2, the connection manager worked in standalone mode and communicated directly with Oracle BPEL Server without establishing an application server context. Consequently, you were prompted for your username and password at deployment.

In release 10.1.3.1.0, the connection manager gets username, password, URL and other information from the application server connection. Consequently, you must create an application server connection before an integration connection is built. The data stored in the application server connection is used by the connection manager to deploy business processes. Because the username and password are already known to the application server connection, the connection manager does not prompt you for a username or password at deployment.

Because of this change, 10.1.2 connections are invalid in 10.1.3.1.0 and will produce a `ClassCastException` error message.

8.3.10 Unique IP Address Is Needed to Create an Application Server Connection

In Oracle JDeveloper, when you create a connection to a 10.1.3 application server that has multiple IP addresses, the Test Connection function returns the following error message:

```
Error getting OC4J Process for: ... : Error connecting to OPMN (is it running?):
Connection refused: connect
```

You must specify a unique IP address when creating a connection to the server from Oracle JDeveloper.

8.3.11 Changing IP Requires Manual Deletion of tmp Directory

If you use the `chgiphost` command, you must also do the following:

1. Stop Oracle BPEL Server.
2. Remove the `tmp` directory, if present.

   SOA_Oracle_Home`/bpel/domains/`*domain_name*`/tmp/`

3. Restart Oracle BPEL Server and redeploy all processes.

In the case of remote cloning, also follow the preceding steps.

See *Oracle Application Server Administrator's Guide* for information about changing the hostname or domain name of a host that contains any of the middle-tier installation types. The section "Task 8: Redeploy Oracle BPEL Process Manager Applications" describes how to remove the Oracle BPEL Process Manager `tmp` directory, if it is exists in the cloned instance.

8.3.12 Enterprise Manager Control Does Not Provide Some Oracle BPEL Process Manager Functions

For this release, note the following:

- Enterprise Manager does not show a custom BPEL page. This is now tracked tracked through OC4J.
- Enterprise Manager does not show adapter metrics. This is now available in Oracle BPEL Control.
- Notification parameters are updated using properties. For example, if you want to change the notification service retry default of 3 (to 5, for example), you can add the following property in *SOA_Oracle_Home*`/bpel\system\services\config\wf_config.xml` and restart Oracle BPEL Server.

  ```
  <property name="oracle.bpel.services.notification.maxattempt" value="5" />
  ```

  See the chapter on notification service in *Oracle BPEL Process Manager Developer's Guide* for more information.

8.3.13 Changing Proxy Settings When Referring to an External WSDL When Using Linux

bug 5240140

When using Linux, you may see an HTTP 502 error if your BPEL process includes a partner link that refers to an external WSDL. You must configure proxy server settings in `opmn.xml` as follows:

1. Run the following command:

   ```
   prompt> Oracle_Home/opmn/bin/opmnctl stopall
   ```

2. To set the proxy server for BPEL, modify the following lines in the *SOA_Oracle_Home*`/bpel/bin/obsetenv.sh` file:

```
PROXY_SET="true"
...
if [ "${PROXY_SET}" = "true" ]
then
    OB_JAVA_PROPERTIES="-Dhttp.proxySet=true -Dhttp.proxyHost=proxy_server_
hostname -Dhttp.proxyPort=proxy_server_port -Dhttp.nonProxyHosts=localhost|non_
proxy_host|other_non_proxy_hosts"
```

3. To set the proxy server for OC4J, modify the following lines for the OC4J module in the *Oracle_Home*/opmn/config/opmn.xml file:

```
<process-type id="oc4j_instance_name" module-id="OC4J" status="enabled">
  <module-data>
    <category id="start-parameters">
      <data id="java-options" value= ...
        -Dhttp.proxySet=true -Dhttp.proxyHost=proxy_server_hostname
        -Dhttp.proxyPort=proxy_server_port
        -Dhttp.nonProxyHosts=localhost|non_proxy_host|other_non_proxy_hosts"/>
    </category>
```

4. Restart the OC4J application server:

```
prompt> Oracle_Home/opmn/bin/opmnctl startall
```

These instructions are also documented in *Oracle Application Server Installation Guide for Linux x86*.

8.3.14 Starting Oracle BPEL Process Manager Through Oracle Enterprise Manager

In this release, Oracle BPEL Process Manager is an application named `orabpel` that resides under the parent OC4J container instance (for example, named `home` or `oc4j_soa`). To restart Oracle BPEL Process Manager through Oracle Enterprise Manager 10*g* Application Server Control Console, you must restart either the parent OC4J container instance in which Oracle BPEL Process Manager is installed or the entire Oracle Application Server instance. This action ensures that all related applications are restarted (such as `hw_services` for human workflow) and that all deployed BPEL processes display in Oracle BPEL Control.

If you only restart the `orabpel` or `hw_services` application, not all BPEL processes are loaded and viewable through Oracle BPEL Control.

8.4 Workflow and Worklist Issues and Workarounds

This section describes the following issues and workarounds:

8.4.1 Manually Configuring Oracle BPEL Process Manager on Oracle Application Server to Support Identity Management

If you want to install Oracle BPEL Process Manager on an Oracle Application Server to use an Identity Management and metadata repository, you must manually configure Oracle Internet Directory as a postinstallation step if the underlying Oracle Application Server is not configured with Identity Management.

If you are using an Oracle Application Server middle tier already configured with Identity Management, do *not* perform this postinstallation step; configuration is automatically performed during installation.

For example, since the Portal and Wireless middle-tier installation type requires Oracle Internet Directory, configuration is automatically performed during installation of Oracle BPEL Process Manager on this type of middle tier.

Replace the values shown in italics below with ones appropriate to your environment.

1. Ensure that *SOA_Oracle_Home*`\j2ee\OC4J_BPEL\config\jazn.xml` contains the following `jazn provider` element entries:

```
<jazn provider="LDAP" location="ldap://host:port" default-realm="us">
   <property name="ldap.user" value="cn=orcladmin"/>
   <property name="ldap.password" value="!welcome1"/>
</jazn>
```

2. Ensure that *SOA_Oracle_Home*`\bpel\system\services\config\is_config.xml` contains the following `provider` element entries:

```
<provider providerType="JAZN" name="oid">
   <connection url="ldap://host:port" binddn="cn=orcladmin"
                                      password="welcome1" encrypted="false"/>
</provider>
```

3. Ensure that *SOA_Oracle_Home*\j2ee\OC4J_BPEL\application-deployments\hw_services\orion-application.xml contains the following `jazn provider` element entries:

```
<jazn provider="LDAP" location="ldap://host:port" default-realm="us" >
   <jazn-web-app auth-method="SSO"/>
</jazn>
```

4. If the `bpelportlet.ear` Web provider is to be deployed through Oracle Enterprise Manager, manually configure *SOA_Oracle_Home*\j2ee\OC4J_BPEL\application-deployments\bpelPortlet\orion-application.xml as follows:

```
<jazn provider="LDAP" location="ldap://host:port" default-realm="us" >
   <jazn-web-app auth-method="SSO"/>
</jazn>
```

8.4.2 Deploying BPEL Projects with Workflow from Oracle JDeveloper

You must deploy BPEL projects with workflow from Oracle JDeveloper. Do not use a command line tool such as `obant`. JSP features such as the payload display do *not* work if command-line deployment is used.

8.4.3 Workflow Names Must Not Include Periods

Do *not* enter a name that includes periods in the **Workflow Name** field of the Workflow Pattern window of the Workflow wizard.

8.4.4 Compilation Warning Messages That Can Be Ignored

When you compile a BPEL process with a user task activity, you can ignore warnings similar to the following that appear in the log window of Oracle JDeveloper:

```
Warning(443):
[Error ORABPEL-10041]: Trying to assign incompatible types
[Description]: in line 443 of
"C:\apr20\integration\jdev\jdev\mywork\Application1\BPELProcess4\BPELProcess4.bpel
",<from> value type "{http://www.w3.org/2001/XMLSchema}anyType" is not compatible
with
<to> value type "{http://www.example.org}book anonymous type".
```

This indicates that `anyType` is being assigned to an `anonymous` type. These warnings can be ignored. Ensure that the return value of the `from-spec` query is compatible with the `to-spec` query.

8.4.5 Deleting an Entire User Task Activity

If you want to delete and re-create a user task activity, perform the following steps:

1. Go into the diagram view of the BPEL project.
2. Delete the scope activity and switch activity of the user task activity. These activities were created in the project when you ran the Workflow wizard of the user task activity.
3. Delete the partner links.
4. Delete the WSDL/XSD files from the project (recommended, but not required).
5. Create a new user task activity in which to design the workflow.

8.4.6 Using the Category List in Oracle BPEL Worklist Application

The **Category** list of Oracle BPEL Worklist Application enables you to select the category of users, groups, or titles to search (**Group**, **Reportees**, and others). Note that the values of previous search results are also displayed. For example, assume that you first search on the **Group** category and that the results are displayed. If you next search on **Reportees**, then both the initial search results and the next search results are displayed. This is the expected behavior. Use **Check All** and **Uncheck All** to do a bulk select or unselect of the selections. Note that both these buttons only appear when there are two or more users in the selected list.

8.4.7 Getting Task Details with the getWorklistTaskDetails API

This issue applies only if you are still using the worklist 10.1.2 APIs.

When you get a task listing, each task object contains only summary information, and not detailed information such as payload, attachments, history, and so on. To get the details of a task, explicitly call the `getWorklistTaskDetails()` API inside a loop.

Note that looping while getting task details is a resource intensive action. You typically view details one task at a time. Call this method only for the task in which you are interested. Modify your `for` loop code as follows (adding one extra line to get the task details):

```
for (int i=0; i<tasks.size(); i++)
  {
      IWorklistTask thisTask = (IWorklistTask)tasks.get(i);
      if ( <condition> ) { // task matches some condition
          thisTask = wlSrvc.getWorklistTaskDetails(ctx, thisTask.getTaskId());
          ....
          Form form = null;
          form = PayloadFormGenerator.getMappingForm(thisTask);
          ....
      }
  }
```

8.4.8 Adding Delays to Task Operations

This issue applies only if you are still using the worklist 10.1.2 APIs.

In some cases, automated clients can perform task operations faster than Oracle BPEL Server. This can potentially result in messages being lost. While this issue is being addressed, the workaround is to add a small delay (about five seconds) between the task operations, as shown in the following example:

```
client.updateTask(ctx, task);
Thread.sleep(5000); // sleep for 5000 milliseconds
client.customTaskOperation(ctx, taskId, "DONE");
```

8.4.9 Using the Custom Identity Service Provider Plug-in Sample on the Middle Tier

To use the custom identity service provider plug-in sample on the Oracle Application Server middle tier, you must make the following edits to the `build.xml` file:

1. Open the *`SOA_Oracle_Home`*`\bpel\samples\hw\isplugin\db\build.xml` file.
2. Change line 15 from:

   ```
   <pathelement location="${classpath}" />
   ```

to:

```
<pathelement location="${client.classpath}" />
```

3. Change line 67 from:

```
<sysproperty key="java.naming.provider.url" value="ormi://${hostname}"/>
```

to:

```
<sysproperty key="java.naming.provider.url" value="${jndi.url}"/>
```

8.4.10 Configuring the TaskActionHandler and TaskManager Services to Support SSL

If you configure Oracle BPEL Process Manager for Oracle Application Server Middle Tier with Secure Socket Layer (SSL) support, you must make the following changes to ensure that the TaskActionHandler and TaskManager services load correctly for BPEL processes.

1. Delete the `.bpel_TaskManager_1.0.jar` and `.bpel_TaskActionHandler_1.0.jar` directories under *`SOA_Oracle_Home`*`\bpel\domains\`*`domain_name`*`\tmp`.
2. Restart Oracle BPEL Server.

These steps recreate the correct service bindings and WSDL files for TaskManager and TaskActionHandler processes and make them available from HTTP/S-based endpoints.

> **Note:** If your Oracle BPEL Process Manager installation exists as part of a BPEL cluster, you must perform these steps on each BPEL cluster node after you create a BPEL cluster.

8.4.11 Full Path Name Needed for Task Attachment Stylesheet

In the advanced settings of the Task Editor, when you browse for an `XSL` file to specify for task attachment, the text field accepts the `.xsl` file name, but not the full directory path. However, without the full directory path, the file is not found at run time and a parsing error occurs.

To avoid a run-time error, first copy the stylesheet to the project workflow directory where the task file is located. Then browse for the stylesheet in the Task Editor.

8.4.12 Recovery from Internal Server Error in Worklist Application

While working in the Worklist Application, you may need to recover from an internal server error. For example, if you are redirected to the login page, but when you relog in, you get an "Internal Server Error" message asking you to click the **Back** button, then do the following to recover:

1. Open a Web browser (Internet Explorer 6.0 or Mozilla Firefox 1.0.4.).
2. Go to the Worklist Application URL:

   `http://`*`hostname`*`:`*`portnumber`*`/integration/worklistapp/Login`

   - *`hostname`* is the name of the host on which Oracle BPEL Process Manager is installed
   - The *`portnumber`* used at installation (typically 9700 or 8888) is noted in `bpelsetupinfo.txt`, at

SOA_Oracle_Home\install\

You can also select **Start**, then **All Programs**, then **Oracle - *Oracle_Home***, then **Oracle BPEL Process Manager**, and then **Worklist Application**.

3. Type the username and password, and click **Login**.
4. Continue with your transaction.

Note: This recovery also works for internal server errors after OC4J failover occurs.

8.4.13 Null Pointer Error During UpdateTaskOutcomeandRoute Call

In a human workflow task, if the `updateTaskOutcomeAndRoute` flag set to false and the `updateTaskOutcomeAndRoute` method is called on the task, then the following null pointer error is thrown instead of displaying the appropriate error message:

```
[java] Error in evaluating routing slip.
[java] Error while evaluating the routing slip
@ http://hostname:portnumber/orabpel/default/wfsvc1/1.0/HumanTask1/HumanTask1.task
This routing slip is used by workflow default_wfsvc1_1.0_HumanTask1
[java] Please check the underlying exception and correct the error in the routing
slip. Contact oracle support if error is not fixable.
```

The `updateTaskOutcomeAndRoute` method is not permitted if the corresponding flag is set to false.

8.4.14 Task Definition Within a Human Task Activity Is Not Created Correctly

When you drag a human task activity into a scope activity that includes *one other activity* (for example, an assign), you may see that the information you supplied to create the task definition does not appear; that is, when expanded, the human task activity appears to be empty.

To get the correct results, do one of the following:

- Drag an empty activity (essentially a no-op) into the scope, either above or below the activity that is already inside the scope. Then add the human task activity. You can delete the empty activity later.
- Or, ensure that the human task activity is dropped into the scope *first*, before any other activities.

8.4.15 Creation Dates Are Required for the Worklist Application Productivity Reports

Although the interface does not indicate that a creation date is required to generate a Worklist Application productivity report, a report is not generated unless you supply a creation date.

8.4.16 The Worklist Application Does Not Support SSO or JSSO Authentication

The Worklist Application is a sample application that does not support SSO or JSSO.

To avoid exposing a non-SSO-compliant application such as the Worklist Application in a production environment, do the following:

1. Open the *SOA_Oracle_Home*/j2ee/home/config/default-web-site.xml file.
2. Comment out or delete the following line that refers to the application:

```
<web-app application="hw_services" name="worklistapp" load-on-startup="true"
root="/integration/worklistapp" />
```

3. Restart the server.

8.4.17 High CPU Usage When Using a Human Task Activity

In some cases, you may experience a high CPU usage at the database access level when using a human task activity in BPEL. This generally happens if you have a very uneven distribution of task load—say a large number of tasks were created in a short time. This affects the database index behavior. To resolve this issue, your DBA can analyze the relevant tables either periodically (once a day) or when this problem occurs, as follows:

```
analyze table orabpel.wftask compute statistics;
analyze table orabpel.wfassignee compute statistics;
```

8.4.18 Use the Workflow Folder Context Menu (Especially for Form Generation Actions)

Use the workflow folder context menu. The `.task` level context menus do not work.

8.4.19 Human Task E-Mail Notification Does Not Support Multibyte Contents

The contents of an e-mail notification cannot contain multibyte characters.

8.5 Notification Issues and Workarounds

This section describes the following issues and workarounds:

- Section 8.5.1, "Some E-Mail Attachments Are Corrupted When Using ora:readFile"
- Section 8.5.2, "SMS Notification Requires workPhone Attribute"
- Section 8.5.3, "Notification Activity Contents Are Not Visible"

8.5.1 Some E-Mail Attachments Are Corrupted When Using ora:readFile

When sending attachments using `ora:readFile`, `.txt` and `.html` e-mail attachments are corrupted in the received e-mail. No problems occur with other attachment types such as `.pdf` and `.doc` attachments.

8.5.2 SMS Notification Requires workPhone Attribute

The SMS notification activity does not accept the `mobile` attribute of the user. Instead, use the `workPhone` attribute.

8.5.3 Notification Activity Contents Are Not Visible

If you create a notification activity (email, fax, pager, SMS, or voice) in the design view, and subsequently switch to the source view and return to the design view, then the notification activity, when expanded, appears empty. However, the details you supplied when you created the activity still exist. They appear in the source view, and the process will deploy correctly. If you are adding attachments to the email activity, for which you need to add assign statements inside the generated scope, then the

contents of the scope are also not visible in the design view after switching to the source view.

To view the details of any notification or scope activity that appears empty when expanded, double-click the icon to display the activity dialog. To add attachments to an email activity, use the source view.

8.6 Transformation Issues and Workarounds

This section describes the following issues and workarounds:

- Section 8.6.1, "Database Functions with JNDI Names Do Not Work Within a MapTest Window"

See Section 8.10.4, "Western European Number Format Issue in Transformations" for a transformation-related issue.

8.6.1 Database Functions with JNDI Names Do Not Work Within a MapTest Window

When you use JNDI names for database functions such as `query-database()`, `lookup-table()`, or `sequence-next-val()`, and try to test the map using the `MapTest` utility, no output is returned. The workaround is to use a JDBC string, instead of a JNDI name.

8.7 XPath Expression Builder Issues and Workarounds

This section describes the following issues and workarounds:

- Section 8.7.1, "Hyphens in XPath Expressions"
- Section 8.7.2, "Some Listed XPath Expressions Are Not Appropriate for Human Task Workflow"
- Section 8.7.3, "Null Pointer Error When Using a String Value in the XPath Expression Builder"

8.7.1 Hyphens in XPath Expressions

If you use the XPath Building Assistant to create an XPath expression with hyphens (for example, on the Create Copy Rule window of an assign activity), a blue line displays under the hyphenated element and an error message similar to the following appears:

```
(34) Message part of name xyz-pqr- xyz not found
```

If the hyphenated elements are nested, the XPath Building Assistant does not allow you to proceed with `bpws:getVariableData()`. For example:

```
bpws:getVariableData('ug_in_var','users-and-groups','')
```

This error is most likely encountered when using the Native Format Builder wizard with the file adapter, where the element name defaults to the hyphenated name of `Root-Element`.

In addition, if elements have long names that wrap such as `root = "publicKeyInfrastructureCertificateAuthorities"` and element = `"publicKeyInfrastructureCertificateAuthority"`, XPath expression building also fails. You receive the following error message:

```
"publicKeyInfrastructureCertificateAuthorities" not found
```

Instead, click the **Expression Builder** icon on the Create Copy Rule window to display the XPath Expression Builder window. This window enables you to create an expression that includes hyphens in elements and enables long names to wrap. For example, for hyphens:

```
bpws:getVariableData('ug_in_var','users-and-groups','/ns2:users-and-groups/ns2
:user-or-group/ns2:name')
```

8.7.2 Some Listed XPath Expressions Are Not Appropriate for Human Task Workflow

The XPath Expression Builder does not prevent you from selecting a contextually inappropriate XPath expression. For example, if you try to use `bpws:getVariableData()` within a task definition (to set early task expiration, for example), rather than the correct XPath expression, `hwf:getNumberOfTaskApprovals()`, the interface allows you to proceed until you eventually get an error message such as "Failed to initialize the XPath Expression Builder."

8.7.3 Null Pointer Error When Using a String Value in the XPath Expression Builder

When you use a string value in the XPath Expression Builder during a copy operation within an assign activity, the stack trace will show errors. However, the errors can be ignored. There is no loss of functionality.

8.8 Oracle BPEL Control and Oracle BPEL Server Issues and Workarounds

This section describes the following issues and workarounds:

8.8.1 Safari Browser Is Not Supported

Do not use the Safari browser to access Oracle BPEL Control. This browser is not supported. See *Oracle BPEL Process Manager Developer's Guide* or *Oracle BPEL Process Manager Installation Guide* for a list of supported browsers.

8.8.2 Oracle BPEL Control Reports

Note the following issues when using Oracle BPEL Control reports:

- The **End Date** field format in the **Query** section is **mm/dd/yy** for *all* languages.
- Activity sensor reports show only variables of type number (for example, integer, double, decimal, and float). Nonnumeric types are not supported for this release. In addition, data is only shown for activity sensors with **Evaluation Time** set to **All** in the Create Activity Sensor window of Oracle JDeveloper.
- If Albany fonts are not installed, fonts may not display properly for Asian languages in graphs (appear as squares). Albany fonts are automatically installed if you select the proper Asian language during installation.
- When clicking a bar in the performance report graph, the Instances page that appears sometimes does not display the correct list of instances. This is because the service level agreement (SLA) value in decimals is rounded off to the nearest integer. For example, assume there are two instances: one completes in three seconds and the other completes in two seconds. The SLA value is 2.6 seconds. The graph displays one instance in the green portion (indicating that the SLA value was satisfied) and the other in the red portion (indicating that the SLA value was not satisfied). Clicking the red portion does not show any instances. This is because the SLA value is rounded off to three seconds and therefore becomes equal to the completion time of the first instance.
- The default SLA value is shown in performance reports only when at least one instance of the business process is created.
- The **End Hour** field is used only for hourly reports, and *not* daily or weekly reports. For example, if you enter **07/29/05** as the end date, **22:00** as the end hour, **Weekly** as the time interval, and **3** as the time interval, the report is generated between **07/08/05** and **07/29/05**. Instances in any hour (even at 23:00 or 0:00) are also considered even though the end hour is 22:00. The same case exists for daily reports. Only with hourly intervals is report generation stopped at 22:00 hours.

8.8.3 Some Oracle BPEL Control Reports Are Unavailable with Oracle Lite Database

Process and performance weekly reports are unavailable from Oracle BPEL Control if you are using Oracle Lite Database.

8.8.4 Unable to Delete a Domain or Recreate a Domain with the Same Name

If you are unable to delete a domain or recreate a deleted domain with the same name in Oracle BPEL Admin Console (a message indicates the domain already exists), perform the following steps:

1. Go to Oracle BPEL Control.
2. Select the **BPEL Processes** tab, then select **Clear WSDL Cache**.

8.8.5 Error in Oracle BPEL Server Window When Reloading a BPEL Process Can Be Ignored

If you can ignore the following error. The class referred to is not being loaded.

```
***Unable to find class oracle.tip.tools.ide.pm.addin.BPELOptions.
***This object will be loaded as null.
```

8.8.6 Oracle BPEL Control Displays an Out-of-Memory Error and Oracle BPEL Server Restarts

From Oracle BPEL Control, you may see the following error message, followed by the server apparently restarting and the errors disappearing:

```
500 Internal Server Error java.lang.OutOfMemoryError: PermGen space" ...
```

Try changing the `MaxPermSize` JVM parameter in `opmn.xml` to a higher value, as in

```
<data id="java-options" value="-server -XX:MaxPermSize=128M
-ms512M -mx1024M -XX:AppendRatio=3
-Djava.security.policy=$ORACLE_HOME/j2ee/oc4j_soa/config/
java2.policy -Djava.awt.headless=true -Dhttp.webdir.enable=false -D
oraesb.home=/scratch/rxvenkat/soa/atsoa0701/integration/esb
-Dhttp.proxySet=false
-Doc4j.userThreads=true -Doracle.mdb.fastUndeploy=60
-Dorabpel.home=/scratch/rxvenkat/soa/atsoa0701/bpel
-Xbootclasspath^/p:/scratch/rxvenkat/soa/atsoa0701/bpel/lib/orabpel-boot.jar
-Dhttp.proxySet=false"/>
```

8.8.7 Logging In to Oracle BPEL Control Using Oracle Access Manager

Oracle BPEL Control uses the permission grants for users and roles that are provided in `system-jazn-data.xml`. If you log in to Oracle BPEL Control using Oracle Access Manager (formerly COREid), then the JAZN users and roles must be mapped to users recognized by COREid. The following example uses the OracleAS JAAS Provider Admintool to accomplish this. (The example assumes that the principal name is `orcladmin`.)

```
% java -jar jazn.jar -grantperm oracle.security.jazn.realm.CoreIDPrincipal\
orcladmin com.evermind.server.rmi.RMIPermission login
```

This results in the following configuration in the `system-jazn-data.xml` file.

```
<jazn-policy>
  <grant>
    <grantee>
      <principals>
        <principal>
          <class>oracle.security.jazn.realm.CoreIDPrincipal</class>
          <name>orcladmin</name>
        </principal>
      </principals>
    </grantee>
    ...
    <permissions>
      <permission>
        <class>com.evermind.server.rmi.RMIPermission</class>
        <name>login</name>
      </permission>
      ...
    </permissions>
    ...
  </grant>
  ...
</jazn-policy>
```

See *Oracle Containers for J2EE Security Guide* for more information on Oracle Access Manager and on granting RMI permission to Oracle Access Manager principals.

8.8.8 Creating BPEL Test Reports in Junit Format

To run BPEL tests, download the following Apache-licensed JAR files.

> **Note:** You must rename the downloaded JAR files as described in these steps.

1. Go to `http://www.apache.org/dyn/closer.cgi/xml/xalan-j`
2. Download `xalan-j_2_7_0-bin.zip` from the recommended mirror site.
3. Unzip the file.
4. Copy *`unzip_dir`*`\xalan-j_2_7_0\`**`serializer.jar`** to *`SOA_Oracle_Home`*`\bpel\lib\`**`serializer_2.7.0.jar`**.
5. Copy *`unzip_dir`*`\xalan-j_2_7_0\`**`xalan.jar`** to *`SOA_Oracle_Home`*`\bpel\lib\`**`xalan_2.7.0.jar`**.

8.8.9 Error Messages Returned by Oracle Web Services Manager to Oracle BPEL Process Manager

When Oracle BPEL Process Manager services are integrated and authenticated through Oracle Web Services Manager (OWSM), and an authentication or authorization error occurs in OWSM, a generic exception message is returned to the Oracle BPEL Process Manager instance. This message may not adequately describe the error.

8.9 Oracle BPEL Portlets Issues and Workarounds

This section describes the following issues and workarounds:

- Section 8.9.1, "Oracle BPEL Control Report Portlets"
- Section 8.9.2, "Oracle BPEL Worklist Application Portlets"

8.9.1 Oracle BPEL Control Report Portlets

Note the following issues when using Oracle BPEL Control report portlets:

- To use Oracle BPEL Control report portlets, move the `uix2.jar` file from *`SOA_Oracle_Home`*`\bpel\lib` to a different directory (for example, `C:\OraMidTier\bpel\temp-lib`) and include this library path in the *`SOA_Oracle_Home`*`\j2ee\OC4J_BPEL\config\application.xml` file:

  ```
  <library path="C:\OraMidTier\bpel\temp-lib"/>
  ```

- If you want to map portlet parameters with page parameters in Oracle Application Server Portal, the default value for the Oracle BPEL Control report portlet page parameter **Time Interval** parameter must always be in capital letters (for example, **DAILY**, **WEEKLY**, or **HOURLY**). Mapping portlet parameters with page parameters is described in section "Step 5: Mapping Portlet Parameters with Page Parameters" of the chapter "Oracle BPEL Portlets" of the *Oracle BPEL Process Manager Developer's Guide*.

8.9.2 Oracle BPEL Worklist Application Portlets

Note the following issues when using Oracle BPEL Worklist Application portlets:

- First deploy the Oracle BPEL Portlets through `dcmctl` or Enterprise Manager, and then run the following script:

  ```
  /SOA_Oracle_Home/bpel/system/services/install/ant-tasks/configure_oid.sh
  ```

  Next manually include the entry `<jazn provider="LDAP" jaas-mode="doAsPrivileged"/>` in the following file:

  ```
  SOA_Oracle_Home\j2ee\OC4J_BPEL\application-deployments\
  provider-name\orion-application.xml
  ```

  See the *Oracle BPEL Process Manager Developer's Guide* for instructions on deploying the Oracle BPEL Portlets with `dcmctl`.

- To use the Oracle BPEL Worklist Application portlets, move the `uix2.jar` file from *SOA_Oracle_Home*`\bpel\lib` to a different directory (for example, `C:\OraMidTier\bpel\temp-lib`) and include this library path in the *SOA_Oracle_Home*`\j2ee\OC4J_BPEL\config\application.xml` file:

  ```
  <library path="C:\OraMidTier\bpel\temp-lib"/>
  ```

- Long strings of more than 360 characters in portlet titles are not handled properly

  When specifying parameter values in the BPEL Worklist Portlet and BPEL Worklist Analysis Portlet, do not use long titles such as URL addresses in the **Title** field of the **Display Customization** sections. Long titles can disturb the portlet layout and cause the **Personalize** link in the upper right corner to not work.

- Worklist portlet title bar does not display the first time

  When you initially install Oracle Application Server Portal, register the Web provider, create an initial page group, and add the Oracle BPEL Worklist Application portlets to the page group, the title bar does not appear. This means you cannot access the Personalize link that appears in the upper right corner of the title bar. As a workaround, create a second page group and add the Oracle BPEL Worklist Application portlets to the group. This group, and all subsequent groups you create, display the title bar and the Personalize link.

- All task states display in BPEL Worklist Portlet

  When you select **All** or **Previous** in the **Category** list and **Assigned** in the **Status** list of the **Task Customization** sections of the BPEL Worklist Portlet, you see the state of *all* tasks, not just those identified as **Assigned**.

8.10 Globalization/Multibyte Character Issues and Workarounds

This section describes the following issues and workarounds:

8.10.1 Ruler Scale Is Not Multibyte-Compliant in the Native Format Builder Wizard

If you select the fixed length file type in the Native Format Builder wizard, the ruler on the Field Lengths window that enables you to specify field length for each record is not multibyte-compliant.

8.10.2 Encoding Issue for ora:readFile

The extended XPath function `ora:readFile` requires a file directory path as the first parameter. These functions read the specified file by using OS-default encoding. This is not an issue if the specified file is in the local file system. However, if the specified path is a URL, the target file is not always encoded in OS-default encoding.

8.10.3 Installing Oracle BPEL Process Manager for Traditional Chinese on Linux

If you want to install Oracle BPEL Process Manager for use in Traditional Chinese on Linux, you must use `zh_TW.big5` instead of `zh_TW.eucTW`.

8.10.4 Western European Number Format Issue in Transformations

In many Western European locales such as German or French, the default decimal point is a comma (,) instead of the dot (.). In that case, the mathematical function in a transform activity, such as `ADD` and `SUBTRACT`, gives an output using the comma as a decimal point, although the input numbers of the function are using a dot.

To work around this issue, add a decimal-format function to overwrite the default format. The following is an example for `ADDITION`.

```
<xsl:decimal-format name="usa" decimal-separator="."/>
<xsl:template match="/">
   <tns:Root-Element>
      <tns:Price>
         <tns:price1>
            <xsl:value-of select="/tns:Root-Element/tns:Price/tns:price1"/>
         </tns:price1>
         <tns:price2>
            <xsl:value-of select="/tns:Root-Element/tns:Price/tns:price2"/>
         </tns:price2>
         <tns:price3>
            <xsl:value-of
                select="format-number((/tns:Root-Element/tns:Price/tns:price1 -
                /tns:Root-Element/tns:Price/tns:price2), '#.00', 'usa')"/>
         </tns:price3>
      </tns:Price>
   </tns:Root-Element>
</xsl:template>
```

8.11 Sample Demos and Tutorials Issues and Workarounds

This section describes the following issues and workarounds:

- Section 8.11.1, "Missing Content in the readme.txt file for the XAInsert Sample"
- Section 8.11.2, "Further Explanation About the BankTransferFlow and BankTransferFlowWith Compensation Demos"
- Section 8.11.3, "No Audit Trail for the BankTransferFlow and BankTransferFlowWith Compensation Demos"

8.11.1 Missing Content in the readme.txt file for the XAInsert Sample

The following content is missing from the end of the `readme.txt` file for the XAInsert sample, found at

SOA_Oracle_Home\bpel\samples\tutorials\122.DBAdapter\advanced\dmlInvoke\XAInsert

After "The only way to debug the instance is to switch from using an XA data source to using a non-XA data source," add the following:

However, to set-up a nontransactional data source, if you have

```
xADataSourceName=""
dataSourceName="loc/BPELSamplesDataSource"
```

also configure the corresponding data source to have `tx-level="local"` in `data-sources.xml`, as in the following example:

```
<managed-data-source name="DBSamplesDataSource2"
connection-pool-name="dbSample_CONNECTION_POOL2"
jndi-name="jdbc/DBConnection2DataSource" tx-level="local"/>
```

8.11.2 Further Explanation About the BankTransferFlow and BankTransferFlowWith Compensation Demos

When you deploy the BankTransferFlow or BankTransferFlowWithCompensation demos, and initiate the deployed process from Oracle BPEL Control, you may not find a BPEL instance; rather, the process may appear as a recoverable process. The process was rolled back because the partner link is marked as participating in an XA transaction. Therefore, this is the correct behavior.

8.11.3 No Audit Trail for the BankTransferFlow and BankTransferFlowWith Compensation Demos

After executing the BankTransferFlow and BankTransferFlowWithCompensation demos, no audit trail is available from the Oracle BPEL Control **Audit** link.

The following error message appears:

```
Workitem binary deserialization failed. An attempt to deserialize the workitem
"40015-BpAss5-BpSeq3.3-5" from binary format failed. The exception reported is:
Scope not found. The scope "BpSeq3.3" has not been defined in the current
instance.
```

8.12 Javadoc Errata

This section describes the following issues and workarounds:

- Section 8.12.1, "ASSIGNMENT_FILTER_ALL Is Not Supported"
- Section 8.12.2, "Correct Argument for oracle.bpel.services.workflow.query.ITaskQueryService.queryViewTasks"

8.12.1 ASSIGNMENT_FILTER_ALL Is Not Supported

The following option is not supported in release 10.1.3.1.0 and beyond:

```
oracle.bpel.services.workflow.query.ITaskQueryService.ASSIGNMENT_FILTER_ALL
```

The Java documentation lists ASSIGNMENT_FILTER_ALL as one of the filters, but the service does not support this filter.

To fetch all tasks that you can view, you must fetch tasks using each of the applicable filter options repeatedly; for example, use ASSIGNMENT_FILTER_MY_AND_GROUP, then ASSIGNMENT_FILTER_REPORTEES, then ASSIGNMENT_FILTER_CREATOR, then ASSIGNMENT_FILTER_OWNER, and so on.

8.12.2 Correct Argument for oracle.bpel.services.workflow.query.ITaskQueryService.queryViewTasks

The Java documentation for the following method is incorrect:

```
oracle.bpel.services.workflow.query.ITaskQueryService.queryViewTasks
```

Incorrect second argument:

```
oracle.bpel.services.workflow.user.model.UserViewDetailType userViewDetail
```

Correct second argument:

```
java.lang.String viewId
```

The `viewId` is the ID of the view for which the tasks need to be retrieved.

9

Oracle Web Services Manager

This chapter describes issues associated with Oracle Web Services Manager (Oracle WSM). It includes the following topics:

9.1 General Issues and Workarounds

This section describes general issues and workaround. It includes the following topics:

9.1.1 Starting the Oracle WSM Server

There are two Readme files in the *ORACLE_HOME* directory: Readme.txt and OC4J_Readme.txt. There are instructions in the OC4J_Readme.txt file for starting the Oracle Application Server. If you have installed Oracle WSM as a standalone installation, these instructions will not start the Oracle WSM Server correctly.

For the standalone Oracle WSM installation, follow the instructions for starting the Oracle WSM Server in the file named Readme.txt, and refer to the *Oracle Web Services Manager Administrator's Guide* for additional information.

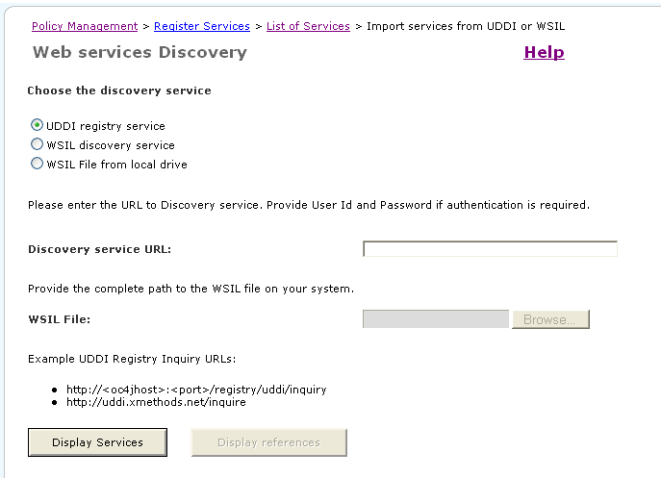
9.1.2 Error on Import Services Page

There is no User ID or Password field on the Web services Discovery page. However, you will see the following instruction on this page (Figure 9–1):

Please enter the URL to Discovery service. Provide User Id and Password if authentication is required.

Ignore the second sentence referring to the user ID and password.

Figure 9–1 Import Services Page



On the Import Services page, you can import a service in one of three ways: UDDI registry service, WSIL discovery service, or WSIL file from a local drive. If you select UDDI registry service, then you specify the URL for the service in the Discovery service URL field. The text on the screen says: "Please enter the URL to Discovery service. Provide User Id and Password if authentication is required." Disregard the instruction to provide the User ID and password; there are no User Id or Password fields.

****

9.1.3 Step Instance Creates One or More Long-Lived Connection to the Directory

Each policy step instance creates one or two long-lived connection to the Active Directory or LDAP directory. In a production environment, this may cause connection overloading during user authentication against an LDAP or Active Directory server.

The default value of the connection lifetime parameter, 0 milliseconds, ensures that the connection is never timed out.

To provide a workaround for this behavior, you need to tune the connection lifetime parameter as follows:

1. Open the following file:

   ORACLE_HOME`/opmn/conf/opmn.xml`

2. Find the `process-type id` whose value is the name of the instance in which Oracle Web Services Manager is installed. This may be `"home"`, or it could be another instance name. For example:

   ```
   ...
   <ias-component id="default_group">
      <process-type id="home" module-id="OC4J" status="enabled">
   ...
   ```

3. Find the `data id="java-options"` in the `category id="start-parameters"` section of the file.

   ```
   ...
   <category id="start-parameters">
   ```

```
   <data id="java-options" value="-server -XX:MaxPermSize=128M .../>
</category>
...
```

4. Add the connection lifetime parameter under java-options. For example:

   `-Doracle.wsm.directory.timeout=3600000`

   Talk to your Active Directory or LDAP system administrator for the value for timing out the connection.

5. Restart the server for the configuration changes to take effect.

9.1.4 Deploying Oracle Web Services Manager Monitor

When you deploy the Oracle Web Services Manager Monitor on Linux, you get the following error: "Target 'install.deployCoreman' does not exist in this project. " The cause for this error is a typographical error in the Linux version of the Configuration Assistant (wsmadmin.sh). Edit the *ORACLE_HOME*/owsm/bin/wsmadmin.sh file, and replace both occurrences of the string "install.deployCoreman" with "install.deployMonitor". These should appear on lines 169 and 170 of the script.

This problem does not exist with the Windows version of the Configuration Assistant (wsmadmin.bat).

9.1.5 Accessing a Virtualized Web Service

When you try to access the WSDL for a Web service that has been virtualized by the Oracle Web Services Manager Gateway, you may get a "500 internal server error." This problem occurs if the gateway application is deployed with a new component ID. To correct this problem, restart the application server.

9.1.6 Valid User Names and Passwords

Using non-alphanumeric characters in user names, user passwords, and group IDs may cause errors. For example, backslashes (\) and single quotes (') are invalid characters. Therefore, Oracle recommends using only alphanumeric characters in user name, user passwords, and group IDs.

9.1.7 Multibyte User Names and Passwords

There is a limitation on the character set encoding of characters in the property files. You may use characters that belong to the ISO 8859-1 character set in the property files. If you want to use characters that belong to any other character set, you must convert them to escaped UTF-8 characters. For example, to use a multibyte character in a user name or password, you must convert the multibyte character to an escaped UTF-8 character. If you do not convert characters, you will not get the intended result.

9.1.8 Date and Time Format

Date and time format are not localized on the following pages of the Web Services Manager Control Console:

- Alarm List
- Stress Report
- Flow Detail
- My Views

Date and time always appear in the U.S. English locale. There is no workaround for this.

9.2 Configuration Issues and Workarounds

This section describes configuration issues and their workarounds. It includes the following topics:

9.2.1 XE DB Settings

Using an Oracle XE database with Oracle WSM may present connection problems. This is a known error that sometimes occurs with Oracle XE database client, but presents an intermittent problem for Oracle WSM.

To work around this limitation you may need to increase the value of the database parameter PROCESSES. The default value for this parameter setting is 40, but you may try to increase the value to 64. If required, you can further increase the value of this parameter.

9.2.2 Out of Memory Exception

You may get an out of memory exception if the Oracle WSM is configured so that its runtime memory requirements exceed the JVM default configuration. One known situation where this can occur is if you patch Oracle WSM 10.1.3 to 10.1.3.1.

To avoid this error, you need to increase the size of the Java heap.

To change the values of the Java heap

1. Log in to Oracle Enterprise Manager 10*g* Application Server Control.
2. In the Cluster Topology page, locate the Members section, and click **home.**
3. Click **Administration.**
4. Find Server Properties in the Task Name list, and click the **Go to Task** icon.
5. Edit the values for **Maximum heap size** (1024 Mb) and **Initial heap size** (512 Mb).
6. Add a row for the -XX:MaxPermSize (256 Mb) and -XX:PermSize (128 Mb) parameters and provide a value.
7. Click **Apply.**
8. Restart the server.

Note: The values in parentheses are provided as an example only. These values were derived assuming that all components in the Oracle Application Server 10*g* Release 3 (10.1.3.1.0), also known as the Oracle SOA Suite (10.1.3.1.0), are installed. Consult your OC4J administrator and the *Oracle Application Server Performance Guide* for the appropriate settings for your environment.

9.2.3 Web Browser Times Out

In situations where there is high network latency between Oracle WSM and Oracle Database, the Web browser may time out before it can retrieve the data from the database.

To prevent the browser from timing out, modify the browser time out setting.

For Internet Explorer

1. Edit the following registry key:

   HKEY_CURRENT_
   USER/Software/Microsoft/Windows/CurrentVersion/Internet Settings

2. Add the DWORD KeepAliveTimeout, and set the value in milliseconds.

For all other supported Web browsers, please consult the product documentation for the browser for information on setting the browser time out.

9.2.4 Oracle Access Manager SDK Path

When you configure the Oracle Access Manager Authenticate Authorize policy step, and you reconfigure the path to the Oracle Access Manager SDK, the new path does not take effect until you restart any agents or gateways that use this SDK.

Note: Oracle Access Manager SDK is the same as what has previously been referred to as Access Server SDK.

9.3 Documentation Errata

This section describes documentation errata. It includes the following topic:

9.3.1 Exporting Data from the Database

The `exportDBData` operation is described in the *Oracle Web Services Manager Deployment Guide*, Appendix A, "Oracle Web Services Manager WSMADMIN commands." However, the procedure described in the *Oracle Web Services Manager Deployment Guide* is missing a step.

The following procedure clarifies this omission in the documentation:

1. Perform the following operation:

   ```
   wsmadmin exportDBData database_server_password
   ```

2. Press `Enter` to proceed with the export data operation.

   The system displays the following message:

   ```
   "Warning!!! The data in the input directory will be deleted.
   Are you sure to continue? Y-Yes N-No:"
   ```

3. Select `Y` to proceed with the operation.

9.3.2 Correction to Command Syntax

There is an error in *Oracle Web Services Manager Administrator's Guide*, Chapter 6, "Monitoring Oracle Web Services Manager," in the section titled "Configuring Metrics Data Persistence."

In step 3 of the procedure, the correct command to redeploy the application is `wsmadmin deploy` *`application_server_password`* `monitor`.

9.3.3 Correction to Procedure for Deploying a Proxy Server

There is an error in *Oracle Web Services Manager Deployment Guide*, Chapter 2, "Implementing your Web Services Manager Deployment," in the section titled "Configuring Oracle WSM Behind a Proxy Server."

In the procedure, "To configure Oracle WSM behind a proxy when it is installed as part of the Oracle SOA Suite", steps 3 and 4 should be performed before step 2. The revised order for this procedure is as follows:

1. Open the following file:

   `ORACLE_HOME``/opmn/conf/opmn.xml`

2. Find the `process-type id` whose value is the name of the instance in which Oracle Web Services Manager is installed. This may be `"home"`, or it could be another instance name. For example:

   ```
   ...
   <ias-component id="default_group">
      <process-type id="home" module-id="OC4J" status="enabled">
   ...
   ```

3. Find the `data id="java-options"` in the `category id="start-parameters"` section of the file.

   ```
   ...
   <category id="start-parameters">
      <data id="java-options" value="-server -XX:MaxPermSize=128M .../>
   </category>
   ...
   ```

4. Add the following parameters under java-options:

   `Dhttp.proxySet = true`

   `Dhttp.proxyHost =` *`proxy_server`*

   `Dhttp.proxyPort =` *`listen_port`*

   `Dhttp.nonproxyHost =` *`host_name`*

Table 9–1 Parameter Settings for Oracle WSM installed as part of Oracle Application Server

Parameter Value	Description of Value
`true/false`	Set the value to true to enable the proxy server.
`proxy_server`	Name of the proxy server. For example, www-proxy.us.mycompany.com
`listen_port`	The port number on the proxy server where you wish to connect. For example, 80

Table 9–1 (Cont.) Parameter Settings for Oracle WSM installed as part of Oracle Application Server

Parameter Value	Description of Value
host_name	Hosts that connect directly without intervention from the proxy server. This value can be a list of host names separated by a `|`, or `*`. For example, `localhosts|*mycompany.com`

5. Restart the server for the configuration changes to take effect.

9.3.4 Correction to Information about importDBData

There is an error in *Oracle Web Services Manager Deployment Guide*, Appendix A, "Oracle Web Services Manager WSMADMIN Commands," in the section titled "importDBData."

The second bullet item under the heading "Usage" suggests that you "Ensure that the database schema is created before performing this operation." This suggestion is invalid, since the database schema is created during the importDBData operation.

10

Oracle Business Activity Monitoring

This chapter describes issues associated with Oracle Business Activity Monitoring. It includes the following topics:

10.1 General Issues and Workarounds

This section describes general Oracle Business Activity Monitoring issues and, where applicable, their workarounds. It includes the following topics:

10.1.1 Some Product Features Previews Only

Preview features are for evaluation only.

ICommand Web Service is a preview feature.

Saving reports in MHT format is a preview feature. Save Offline, emailing rendered reports, and emailing a report in Alerts save the report in the MHT format.

The following report views are preview versions: Funnel Chart, P-Chart, R-Chart, S-Chart, Columnar, Crosstab, Summary Crosstab, Matrix, Excel, Column Group, and Row Group.

10.1.2 Some Product Features Not Supported

Active Messenger and Collaboration Server are not supported as of 10*g* Release 2 (10.1.2), and they will be removed in future releases. Instead, use email accounts for alerting.

The Spreadsheet view is not supported, and it will be removed from future releases.

Enterprise Link VBA is not supported.

Enterprise Link Repositories are only supported on Oracle databases. All other database types for Enterprise Link Repositories are not supported.

Enterprise Link integrates with all enterprise message sources that adhere to the JMS 1.1 specification. Enterprise Link does not support the following enterprise message sources that appear in the Architect user interface: See Beyond JMS Intelligent Queue, Sonic MQ, Tibco Rendezvous, and WebMethods.

10.1.3 DateAdd Function in Filters Can Produce Incorrect Active Data

The `DateAdd()` function in filters produces incorrect active data with the last day of the month.

10.1.4 Report Cache Service May Not Restart Immediately

After viewing a report and leaving the report open, sometimes the Report Cache service may not restart. Wait 30-60 seconds before restarting the service, or end the ASP.NET process in the Task Manager and then restart.

10.1.5 Logging In Using "Run as" Not Supported

Logging into an Oracle Business Activity Monitoring application using "Run as" with a different user name than the currently logged-on user is not supported.

10.1.6 Install Complete IIS When MS Cluster Service Installed

If MS Cluster service is installed on a system some components of IIS get installed with it, this makes the BAM installer give a false result on IIS prerequisite check, that is it will say PASSED, even though IIS is not fully installed. Before installing Oracle Business Activity Monitoring, make sure to install IIS as detailed in section 2.2.2

"Installing Microsoft Internet Information Services" of the *Oracle Business Activity Monitoring Installation Guide*.

10.1.7 The Oracle BAM Active Data Cache Service May Fail to Start

You may encounter the following error when starting the Active Data Cache:

```
The Oracle BAM Active Data Cache service failed to start.
Oracle.BAM.ActiveDataCache.Common.Exceptions.CacheException: ADC Data Object could
not be loaded ---> System.NullReferenceException: Object reference not set to an
instance of an object.
```

If you have some rows of data in a data object, then attempt to change one of the populated fields to a non-nullable datatype (auto-incrementing or timestamp), it will throw an error saying "table must be empty."At that point, you will not be able to restart the ADC. If you do not restart the ADC everything continues to work without the changes to the data object. If you restart the ADC, it will not work, and there is no way to recover except to re-create the ADC or bring back the BAM schema from a database backup.

10.1.8 Testing a BAM Server Connection in JDeveloper

When creating an Oracle BAM Server connection in JDeveloper, select **Use secure HTTP protocol** check box only if you want to use secure HTTP (HTTPS) to connect to the Oracle BAM Server running on HTTPS. If this box is selected by mistake when Oracle Business Activity Monitoring is running on HTTP on port 80, Test Connection hangs.

When creating an Oracle BAM Server connection in JDeveloper on Windows XP, a message "Basic realm does not match with *'host.domain.com*'" can occur when you use Test Connection. There are domain and Realm options under Basic Authentication under Directory Security tab on IIS. When Oracle Business Activity Monitoring is installed, by default Realm is set to the domain name of the administrator who installed Oracle Business Activity Monitoring. To work around this issue, set Realm to an empty string.

10.1.9 ICommand: Exporting Reports with Background Images

Exporting reports with background images exports the name of the internal images file, and also imports it. If the original report still exists, then both reports are cross-linked to the same image. If the original report is not there, then the image is lost.

10.1.10 ICommand: Special Character in Parameter Value Causes Export Failure

ICommand export fails when exporting a parameterized alert with a special character in the parameter value.

10.1.11 Restricting BAM Web Services to BAM Users

Disable Automatic Addition of Users in order to prevent any authenticated user from invoking BAM web services. See "Disabling the Automatic Addition of Users" in Chapter 3 of the *Oracle Business Activity Monitoring Installation Guide* for more information.

10.1.12 Web Service Calls May Not Be Logged

Web service log entries are missing from WebApps.txt under certain scenarios. To enable logging do the following steps:

1. Exit all Oracle BAM browser windows, and stop all of the Oracle BAM services.
2. Optionally, edit web.config and set log level to debug: `<priority value="DEBUG" />`
3. Run `iisreset / kill aspnet_wp.exe`.
4. Do not open any Oracle BAM browser windows.
5. Invoke the Web services code.
6. Now open the Oracle BAM start page and any other browser windows.

It is very important to do step 5 before step 6, otherwise you will only see the Web applications entries in WebApps.txt, and the Web services entries never appear.

10.1.13 Globalization and Localization Support Limitations

Full globalization support of Oracle Business Activity Monitoring is not available in this release.

- All servers and clients running Oracle Business Activity Monitoring components should be set to the same locale.
- The Oracle Business Activity Monitoring applications will obey the globalization culture setting from the web.config file on the server, but not the client browser locale.
- This version of Oracle Business Activity Monitoring is not fully localized. Only Active Viewer is localized for the following languages: French, German, Italian, Portuguese(Brazil), Spanish, Japanese, Korean, Simplified Chinese, and Traditional Chinese.
- Render for e-mailing uses the time zone of the Web server. If a report has time zones set to client time zone, when viewing a report from a browser, the browser time zone is sent to the Report Server and used when formatting the datetime fields. There is no equivalent for the Event Engine's render for email, so it defaults to the Web server time zone.
- The Calculation Legend does not support multibyte characters. This field name is limited to 30 or fewer letters, numbers, and underscores. Spaces are not allowed.
- Report fields like View Titles may not correctly display Western European multibyte characters.
- Report names that include Western European multibyte characters may not appear correctly in the Select Report dialog. The Report may still be selected and opened in Active Viewer and Active Studio.

10.1.14 Accessibility Compliance Limitation

This version of Oracle Business Activity Monitoring does not comply with accessibility standards provided in other Oracle products. Future versions plan to comply with these standards.

10.2 General Active Studio Issues and Workarounds

This section describes general Active Studio issues and, where applicable, their workarounds. It includes the following topics:

10.2.1 Save As Dialog Box May Appear Inappropriately

An additional Save as dialog box displays after clicking **Cancel** on the original Save as dialog box.

10.2.2 Save Prompt Not Displayed When Closing Report After Deleting a View

Users are not prompted to save after deleting a view in a report. Save changes after deleting views.

10.2.3 ADC Exception on Adding Timestamp to a Non-Empty Data Object

Attempting to add a timestamp to a data object after a previous failure throws an Active Data Cache exception.

If you try to add timestamps when the data object is not empty and receive an error, use ICommand to export the data object, delete it, import it back in (as empty), and

add the non-nullable column. Only add timestamps as non-nullable columns, and only when the data object is empty.

10.2.4 BLANK Selection Not Supported in Oracle Database

Several places in the user interface, such as the Prompt and Parameters Wizard, allow BLANK as a valid selection. Oracle databases do not support empty strings and users should not enter BLANK.

10.2.5 Drill-through Fields Grayed Out After Editing Drill-through

Drill-through fields appear disabled (grayed out) even though the **Enable drill through to detail** check box is selected. To remove fields or change the order of the fields, uncheck the **Enable drill through to detail** check box and then check it again. The fields are accessible again.

10.2.6 Rank Column Not Available in Some Views

For OpenURL, ViewReport, and Insert action types, the **Rank** column cannot be used in an action or be formatted as links.

10.2.7 Use Global Change Data Object to Fix Reports Using Deleted Data Objects

Reports based on a data object that has been completely deleted can no longer be used or edited. You can use the Global Change Data Object action in the View Editor to assign a new data object to the views in the report.

10.2.8 Pause/Resume Active Data Does Not Work After Viewset Expires

When viewing multiple reports, pause/resume active data after the viewset expires does not work.

10.2.9 Changing Data Types in Data Object Can Break Reports

Reports can become unusable if you change the data type of columns used by the reports.

10.2.10 Using Default Report Name Can Generate an Error

Sometimes when saving a report as the default name, a message displays that incorrectly indicates that the report already exists. Specify a different name and save the report.

10.2.11 Active Data May Fail On Simultaneous Report Loading

If two Reports are opened on the same host and they both load at the same time, Active Data may fail to work. Note that it does not matter how the two separate Reports are hosted. It can be with any combination of Active Viewer, Active Studio, or portals and custom pages that host Reports.

10.2.12 Use Field IDs Instead of Field Names in Shortcut Report URL

Copy Shortcut requires a Field ID instead of a Field Name when using Field Parameters in a Report URL. You can look up the Field ID for any field in a data object in the Layout page for data objects in Architect.

10.2.13 Active Lookups Do Not Work With Deletes

If you create a report on a data object with a lookup and clear the source data object, no active data will appear. The lookup values will not change to NULL.

10.2.14 Multi-level Calculations in Combination with Other Data Manipulation

Aggregate values used at the detail level, also known as multi-level calculations, in lists and columnar reports cannot be combined with sorting, filters, groups, or Top N. This combination can display an error or prevent active data from displaying.

10.2.15 Errors When Fields Hidden or Revealed After View Design

Issues can occur when using a view, such as a Crosstab, Range Gauge, or Updating Ordered List, that contains fields that are hidden or unhidden after the design of the view. If the user wants to hide information in the view, first remove the field from the list of fields being shown in the view and then use Architect and make the field private.

10.2.16 Error When Group-by Data Crosses Year Boundary

Error while creating a report with group by data fields and group on Week-Month and Week-Quarter and data crosses the year boundary.

10.2.17 String Parameters Not Supported in Calculator

String fields are supported in the Calculator, but string parameters are not supported in the Calculator.

10.2.18 Show Details Does Not Work with Time Groups

When using Time Groups, Show Details is not working. No data is displayed. However, Show Details does work when using Time Series.

10.2.19 Error When Changing View Type

When changing the view type of an existing view, errors can occur.

10.2.20 Save Offline Limitations

- Users who only have Active Studio and report creation permissions assigned can also save reports offline. Only e-mailing rendered reports is managed as a separate permission.
- Saving a report offline closes the Active Studio in some cases. This is affected by a known issue using Internet Explorer on Microsoft XP Service Pack 2. For more information, see `http://support.microsoft.com/?kbid=896017`.
- When viewing saved offline reports, the report loading icon may sometimes not disappear; this can be ignored.
- Save Offline does not work if the report name has a semicolon.
- After you click Save Offline, a dialog box appears asking whether you want to Open, Save, or Cancel. Choose Save. When you return to the view, it appears empty. If you want to see data in the view again, close the report and reopen it.

- When saved offline, the Range Gauge can appear small in MHT format because it has a legend, and it is rendering into a fixed area.
- External Content views cannot always display images when saved offline or sent by email in MHT format.
- When Oracle Business Activity Monitoring is installed on the D: drive, an error can occur when attempting to open a report in MHT format sent in an Alert email. The error does not occur if the report is sent from Active Studio using **Email Report page**.

10.3 List View Issues and Workarounds

This section describes List view issues and, where applicable, their workarounds. It includes the following topics:

10.3.1 Streaming List Range Buttons May Not Appear at Times

Due to an Internet Explorer issue, sometimes the range buttons in a Streaming List do not display and an error can occur. A fix for Internet Explorer is available from Microsoft by referencing the article "Internet Explorer May Appear to Stop Responding When Requesting Many Objects" at the following URL:

`http://support.microsoft.com/?id=818506`

10.3.2 Updating Ordered List: Cancel Button Not Functional with Top N

Updating Ordered List views require a sort if Top N is applied. If you create an Updating Ordered List and apply Top N without sorting, and then click Cancel, an error displays when you save and view the report.

10.3.3 Heading Text Cannot Be Removed

In List views, you cannot remove heading text once it was specified. You can enter new text to replace the existing text.

10.3.4 Special Characters Affect Sort Order in Updating Ordered Lists

Updating Ordered Lists are not sorted correctly when the data contains specials characters.

10.4 Chart View Issues and Workarounds

This section describes Chart view issues and, where applicable, their workarounds. Funnel Chart and SPC Chart views are previews and should only be used for evaluation. It includes the following topics:

10.4.1 Timestamp on Axis Label Causes ADC Error

An error occurs in the Active Data Cache internal data access system when timestamp is selected in the axis label.

10.4.2 Data Labels Cut Off with Active Data

In charts with all three data label types displayed, the data labels can appear cut off when viewing the report with live data.

10.4.3 Null Values Incorrect When Grouping in Charts

When grouping in Charts, null values are not represented correctly.

10.4.4 Labels May Overlap in Charts

Under certain conditions, labels can overlap in charts.

10.4.5 Charts Using Top N May Fail with Active Data

Charts using Top N may fail with an error when using Active Data.

10.4.6 Grouping Can Cause Error

When working with Charts, the message, "If you group by field, you can only choose one summary function for one chart value" can display. Remove the group manually and click Apply to continue working.

10.4.7 Time Groups in Charts Must Use Default Date Format

When using Time Groups in Charts, overriding the default formatting for the date field does not work.

10.4.8 X-Axis May Not Clear Appropriately in Continuous Time Series

When you view a continuous time series chart and clear the underlying data, there are times when the x axis should clear and times when it should not. If the left edge and right edge of the x axis values are well-defined (using filters on both edges, or Active Now, or Time Groups), the data always clears correctly. If the left and right edge of the x axis are *not* well-defined (no filters, left filter only, or right filter only), it may result in just the labels being removed.

10.4.9 Stacked Bar Chart Legend May Be Obscured by Negative Values

Negative values can overlap in the legend in Stacked Bar Charts.

10.4.10 Target Lines Work Only in Bar Chart

Target lines are broken with Active Data for charts other than the Bar Chart.

10.4.11 Funnel Chart Limitations

- The Funnel Chart view is a preview feature in this release. Preview features are for evaluation only.
- Timestamp or datetime as a group field in Funnel Charts is displayed incorrectly.
- Funnel charts do not scale down to small screens well.
- Funnel charts do not support adding and removing groups or clearing the data while being viewed. You can close and reopen the report after any of these data conditions.

10.4.12 SPC Chart Limitations

- The SPC Chart views (S-Chart, R-Chart, and P-Chart) are preview features in this release. Preview features are for evaluation only.
- A field name including spaces in a Pass Filter will not pass. For SPC Charts, you must enclose a field name that contains spaces in quotes.
- The X-bar value for the S-Chart is calculated incorrectly.
- In an R-Chart combined with surface prompts, Active Data may reset the value displayed in the surface prompt to its default value, even though the last value submitted through the surface prompt is still in effect.

10.5 Miscellaneous View Issues and Workarounds

This section describes miscellaneous view issues and their workarounds. It includes the following topics:

10.5.1 Active Now May Show Wrong Results with KPI View in Report

When a report with a KPI view using an Active Now filter is opened in two Active Viewer browser windows, older data is not removed from the report, and reprompting and restarting the report does not correct the view. Close both Active Viewer browser windows and start only one Active Viewer to display the correct report results.

10.5.2 Faulty View Report Hyperlink in Action Form View

The View Report hyperlink in Action Forms returns an empty report if passing a parameter value with special characters. As a workaround, use Action Buttons instead of Action Links.

10.5.3 Surface Prompts View Does Not Render for Email

For Surface Prompts, the view does not render for email.

10.5.4 Resizing Column Group Moves Entire Group View

Using the view handle to resize a Column Group view causes the view to move around in the report. In order to properly resize a column group you need to select a view that is inside the Column Group view and then attempt to resize it.

10.5.5 Crosstab, Summary Crosstab, and Matrix View Limitations

The Crosstab, Summary Crosstab, and Matrix views are preview features in this release. Preview features are for evaluation only.

- Working with a continuous series when a category has a value of zero includes issues, such as an error if the user selects a time unit quantity other than 1, issues with the Crosstab view, and with filters. For Crosstabs, issues include continuous series handling where active data inserts, group ordering, and formatting might work incorrectly.
- For Crosstabs, when working in the View Editor to select columns and rows, the Script error "tdAddRemoveButtons.parentElement" displays if the data object has more than one datetime field. You can ignore the error and continue working in the View Editor.
- The Crosstab view type does not support e-mailing the report page.
- When a Matrix conditional formatting condition is set to **Is not equal to**, the color display is incorrectly applied.

10.5.6 Excel View Limitations

The Excel view is a preview feature in this release. Preview features are for evaluation only.

- Excel views do not support E-mailing and Save Offline.
- Double-clicking an XLS file in Windows Explorer while an Excel View is open in Active Studio causes Excel to hang. Excel will start working if you close the report in Active Studio. Excel does not hang if you open Excel, then select File > Open to open the XLS file.
- After data is in an Excel view, users can apply sorting using the Excel sorting functions. Excel does not resort data on each update. Because of this, sorted data compared between OWC Spreadsheet and Excel views will not match when data is first displayed.
- If you want to use Save As for an Excel view in Active Studio, view the report and then select File > Save As. Using Save As while the report is being edited can cause an error to display.

10.5.7 Columnar Report and View Limitations

The Columnar report and view are preview features in this release. Preview features are for evaluation only.

- Columnar reports and views support active data updates only, and only under the following conditions: the updates do not change the grouping of a record, and the report does not span multiple pages or frames.
- Aggregates and their labels are not listed in the lists on the Alignment and Fonts tabs in the View Editor. Use the toolbar buttons to format summaries and their labels.
- If you create a calculated field and apply formatting and then create an aggregate on the field, the formatting is removed.
- To apply a sort, use the toolbar buttons for sorting selecting fields, instead of the View Editor.
- You cannot apply borders or shading to header or footer fields.
- When you create a summary, you cannot delete the label, but you can delete the text with the cursor or Backspace key from the label.
- Using the alignment toolbar buttons on selected fields does not always behave as expected. Align things manually by selecting and dragging.
- If you manually move text fields and items in a header, and then open the View Editor and delete a summary field, the items move back to their original positions.
- When viewing a Columnar report or view that accesses 150,000 records, and clicking the Next Page button, an error may occur.
- Special characters in the data can interfere with sorting.
- Grouping on calculated fields can cause duplicate headers to display.
- Selecting a field and clicking the Group button can sometimes remove the field from the report. Add grouping by using the View Editor.
- If you create an aggregate field, and then delete the aggregate field and add another aggregate field, on the Formatting tab, both aggregates display.
- An error displays when grouping on all fields.
- An error can occur after applying a calculation, including it in a grouping and then renaming the calculated field.
- On the Text & Align tab, applying a width to detail and column headings has no effect. Instead, set the column width one column at a time.
- An error may occur when highlighting text.
- Script errors may occur after moving the Report Title and then loading more data.
- When using the Group Sort and Value Suppress tool bar button, value suppress on fields may incorrectly remove data. As a workaround, apply grouping in the View Editor and then using the Value Suppress toolbar button.
- Columnar reports and views do not support Emailing and Save Offline.

10.6 Filter Issues and Workarounds

This section describes data filter issues and, where applicable, their workarounds. It includes the following topics:

10.6.1 BLANK Value in Prompt Causes Error

Creating a filter with a boolean data type and a prompt value displays an error if BLANK is allowed in the prompt and selected by the prompt user. In a filter with a datetime prompt that allows a BLANK value, clicking OK with no value displays an error. BLANK values should be disabled for all types besides strings.

10.6.2 "Is Like" Filter on Datetime Fields Does Not Work

In filters on datetime field types, you are unable to type a value for "is like" filters. You can create filters by selecting a specific date from the calendar, but you cannot type values or indicate wildcard characters.

10.6.3 Incorrect Daylight Savings Time May Be Displayed

If you are viewing filters using datetime fields, you may see discrepancies in the time selected during daylight savings changes. This can happen only if you are viewing a report when daylight savings change happens. The workaround is to reopen the report.

10.6.4 Cannot Create Filter When Field Changed to Lookup Field in Data Object

If you update a data object (change a normal field to a lookup field) which has a report based on it, you cannot create a filter that report.

10.7 Calculated Field Issues and Workarounds

This section describes calculated field issues and, where applicable, their workarounds. It includes the following topics:

10.7.1 In Some Cases Calculated Field Cannot Be Deleted

In some cases when the user has saved and edited the view, a calculated field cannot be deleted even if it is not used in the view.

10.7.2 Prompts and Parameters Wizard Does Not Include Calculated Fields

Calculated fields are not listed in the **From list** step in the Prompts and Parameters Wizard. However, the parameter and type in the prompt works fine with a calculated field.

10.7.3 Multi-level Calculation with Max or Min and Boolean Do Not Work

Multi-level calculated fields with Max() or Min() and Boolean do not work.

10.7.4 ADC Error on Division with Two Calculated Fields

Creating a calculated field to perform a division operation on two calculated fields, both of which use `CountDistinct`, can cause an Active Data Cache error.

The workaround is to create a calculated field such as:

```
CountDistinct({Recent Account Touch SID})/CountDistinct({Account SID})
```

The problem only exists when a calculated field does operations on other aggregate calculated fields.

10.8 Alert Issues and Workarounds

This section describes Alert issues and, where applicable, their workarounds. It includes the following topics:

10.8.1 Special Characters Can Cause Error When Editing Alerts

An error displays when editing an alert when a parameter value to pass to a plan has a special character.

10.8.2 Changing Event Type in Parameterized Alert Causes Exception in Event Engine

Changing to another event type does not remove the field parameters from a parameterized plan. You must manually remove the parameter if you change the event type.

10.8.3 Calculated Fields Do Not Appear in Alert Filters

You cannot create a row or group filter alert on a calculated field.

10.8.4 Filter Items May Appear Misaligned

Alignment issues occur for the Row and Group Filter tab in Alerts.

10.8.5 Alerts Not Deleted with Parent Reports

Alerts are not deleted when they are based on a report that has been deleted.

10.8.6 Cancel Does Not Work on Clear Alert History

If you click the **Clear alert history** link and then click **Cancel**, when you click the **Activate** checkbox for an alert, the alert history is cleared. Write alert history to the Event log to avoid mistakenly clearing it.

10.8.7 Invalid Windows File Name Characters in Report Name

Alerts do not launch if you select a report name that contains any of the invalid Windows file name characters such as \ / : * ? " < > |.

10.8.8 Alerts Still Launch After Report Is Deleted

Launched alerts that reference deleted reports behave inconsistently. Make sure the reports used by alerts still exist.

10.8.9 Orphaned Alert Not Marked

An alert is not marked as orphaned if a prompts or parameters is later created in a view other than the first view in a multi-view report.

10.8.10 Unique Naming Not Enforced on Alert Parameters

The Alert Parameter dialog incorrectly allows you to create two parameters with the same name.

10.8.11 Row-level Security Not Supported for Alerts on Data Change

Row level security is not respected for alerts on data changing in a data object. Also, the row level security of the alert owner is applied and not the message recipient.

10.8.12 Non-applicable Aggregates Included in Select Data Field Dialog

The Select Data Field dialog in Alert Rule Editor incorrectly allows users to select non-applicable aggregates. Select valid functions for data fields.

10.8.13 Duplicate Fields May Appear in Field Lists

When creating and editing alerts with groups and filters, duplicate fields may appear in the lists of fields.

10.8.14 Alerts on Aggregates May Misfire

Alerts on aggregates sometimes fire when they should not. For example, **alert me when SUM(Sales) changes** may fire when SUM(Sales) has not changed.

10.8.15 Calling .NET Web Service Directly Using External Action

When defining an External Action for Alerts in Architect, you can call a .NET web service if all of the following conditions are true:

- The namespace is the same as the one used in the proxy in Event Engine code: `http://mahamoti-djinn/ActionService`
- The method name is the same as `execute`
- The argument to the method `execute` is `ActionData`

A BPEL service does not have tight binding with namespaces and therefore can be called with just the method name, for example, `execute` or `initiate`. As long as the signature is the same (variable name can be different), XML data will go into the BPEL process.

10.8.16 Alert Actions Ignored if Previous Action Fails

If an Alert is configured with multiple actions, and one action fails, no other actions will be executed.

10.9 Administrator and Architect Issues and Workarounds

This section describes Administrator and Architect issues and, where applicable, their workarounds. It includes the following topics:

10.9.1 Plan Setting Check May Take a Long Time

When requesting a Plan settings check in Administrator, it may take a long time to determine if the monitoring settings for Plans have been changed.

10.9.2 Plan Does Not Restart When Plan Monitor Service Loses ADC Connection

When the Plan Monitor Service loses connectivity to the Active Data Cache, a Plan does not restart. Restart the Plan Monitor Service.

10.9.3 Cannot Edit Data Objects with Some Alerts

If a data object has an alert using **When this data field has a condition of x**, a message displays that the data object is in use if you try to edit the data object. To edit a data object that has alerts based on it, you must stop the Oracle BAM Event Service, make the edits, and restart it.

10.9.4 Permission Changes May Not Propagate to Lookup Objects

When you change permissions on a data object that has lookups written against it, you may also need to change permissions on the other data objects that are looking up against this data object. If a user builds a lookup field against a data object where they do not have read access, data will still be returned.

10.9.5 Invalid Lookups Prevent Deletes From Being Sent to the View

The Active Data Cache only supports lookups as inner joins that only match one value. No matches are invalid, and two or more matches are invalid. Ensure that a lookup matches one and only one row in the foreign table. If this is not true, then lookups on active data can include values that should be deleted.

10.9.6 Non-administrators Cannot Clear Data Objects with Joins

Logging on as a non-administrator user and trying to clear a data object containing joins results in an error. The Administrator must log on and clear the data object.

10.9.7 Lookups That Return Multiple Rows Not Supported

Active Data Cache lookups do not support returning multiple rows. However, it is not prevented, and when it does happen, the behavior is undefined.

10.9.8 Decimal with Scale 10 Allows Seven Digits Left of Decimal Point

The default scale setting for decimals is 10 which allows seven digits to the left of the decimal point and ten to the right for a precision total of 17. To increase the number of digits allowed to the left of the decimal point, decrease the scale value. For example, if scale is 3, you will have 14 digits left of the decimal.

10.9.9 Error May Occur When Deleting Row from Lookup Table

An error can occur when deleting a row from a lookup data object (that is not an external data object) when a report using a lookup field from the lookup data object is open. Close the error and refresh the contents. The row is deleted.

10.10 Enterprise Link Issues and Workarounds

This section describes Enterprise Link issues and, where applicable, their workarounds. It includes the following topics:

- Section 10.10.1, "Nonexistent Alert Does Not Cause Plan to Fail"
- Section 10.10.2, "GET Method Not Working in Enterprise Link Web Service"
- Section 10.10.3, ".NET Framework 2.0 Causes Error When Running Enterprise Link Plans"

10.10.1 Nonexistent Alert Does Not Cause Plan to Fail

A Plan does not fail if the Alert Transform is set to an alert that does not exist.

10.10.2 GET Method Not Working in Enterprise Link Web Service

Enterprise Link Web Service is not working with the GET method of sending data to the Enterprise Link Web service. HTTP Post and HTTP Get are disabled by default. For more information, see:

`http://support.microsoft.com/default.aspx?scid=kb;EN-US;819267`

10.10.3 .NET Framework 2.0 Causes Error When Running Enterprise Link Plans

Various errors including "Unhandled Exception: System.ArgumentOutOfRangeException: Ticks must be between DateTime.MinValue.Ticks and DateTime.MaxValue.Ticks. Parameter name: ticks" can occur when .NET 2.0 is installed on an Oracle Business Activity Monitoring host. This is a known Microsoft issue and requires a Microsoft hotfix. Documentation on this issue is available at the following URL:
`http://support.microsoft.com/?kbid=907262`

10.11 BPEL-BAM Integration Issues and Workarounds

This section describes BPEL-BAM integration issues and, where applicable, their workarounds. It includes the following topics:

10.11.1 10.1.3.1.0 BPEL and JDeveloper BPEL Plugin Must be Used

Oracle Business Activity Monitoring 10.1.3.1.0 needs to run with Oracle BPEL 10.1.3.1.0 and vice versa. Oracle JDeveloper must have the 10.1.3.1.0 BPEL plugin.

10.11.2 Unable to Flush BAM Batch

Run Orderbooking sample and create 30,000 instances. The following errors appear in BPEL opmn or domain logs:

```
Maximum request length exceeded
Unable to flush BAM batch
```

To workaround this issue, modify the IIS configuration on Oracle Business Activity Monitoring host:

C:\WINDOWS\Microsoft.NET\Framework\v1.1.4322\CONFIG\machine.config

Set maxRequestLength to 40MB from 4096(KB): `maxRequestLength="40960"`

10.11.3 Changing BAM Server From BPEL Console Takes No Effect at Runtime

Changing the Oracle BAM server details under the descriptor tab for deployed process through BPEL Console does not take effect at runtime, even after restarting the BPEL Server, and it continues to refer to the old Oracle BAM server at runtime. If you must modify the oracle BAM server details, you must do it at design time by loading the data object from the BAM sensor action pane, or change it manually in the bpel.xml file and deploy the process.

10.11.4 Batched Messages Lost On Restart

If you restart Oracle BPEL Server, any messages currently being batched are lost. Ensure that all messages have successfully published to Oracle Business Activity Monitoring Active Data Cache before restarting Oracle BPEL Server.

10.11.5 Data Object Read Permission Required for Updates/Upserts or Deletes

Read permission should be given with Update or Delete permissions on a data object for a given user, otherwise errors occur when attempting to update/upsert/delete into Oracle Business Activity Monitoring Active Data Cache data object using BPEL-BAM integration, and operation fails.

10.11.6 Duplicate Messages on IIS Restart

If Microsoft IIS restarts on the BAM server while messages are being published from BPEL, duplicate messages can show up in BAM. To avoid this issue, use non-batch mode for BAM sensor actions, and using Oracle BAM Architect, create an index on the **BPEL InstanceID** column in the database table to where messages are being written.

10.11.7 Sensor Actions Order is Not Guaranteed When Using Batch Mode

If you enabled batching on a BAM sensor action on the Create Sensor Action window, when a single BPEL process has a BAM Sensor Action with an Insert operation, followed by another BAM Sensor Action with an Update operation, Oracle Business Activity Monitoring may change the order in which these operations are executed. This can cause the updates to be lost. To work around, select only one type of sensor operation per BPEL process, such as Upsert. Also, using Oracle BAM Architect, make sure that the target data object **InstanceID** column is of type `Integer`, and create an index on the **InstanceID** column.

10.11.8 Western European Number Format Issue in Transforms

In many Western European locales such as German or French, the default decimal point is a comma (,) instead of the dot (.). In that case the mathematical function in a transform activity, such as `ADD` and `SUBTRACT`, will give an output using the comma as decimal point, although the input numbers of the function are using dot.

To work around this issue, add a decimal-format function to overwrite the default format. The following is an example for `ADDITION`.

```
<xsl:decimal-format name="usa" decimal-separator="."/>
<xsl:template match="/">
  <tns:Root-Element>
```

```
    <tns:Price>
      <tns:price1>
        <xsl:value-of select="/tns:Root-Element/tns:Price/tns:price1"/>
      </tns:price1>
      <tns:price2>
        <xsl:value-of select="/tns:Root-Element/tns:Price/tns:price2"/>
      </tns:price2>
      <tns:price3>
        <xsl:value-of
select="format-number((/tns:Root-Element/tns:Price/tns:price1 -
/tns:Root-Element/tns:Price/tns:price2), '#.00', 'usa')"/>
      </tns:price3>
    </tns:Price>
  </tns:Root-Element>
</xsl:template>
```

11

Oracle Sensor Edge Server

This chapter describes issues with Oracle Sensor Edge Server. It includes the following topics:

11.1 Installation and Configuration Issues

This section describes installation and configuration issues regarding Oracle Sensor Edge Server. It includes the following topics:

11.1.1 OC4J 10.1.2 Must be Stopped if Installing Against It

As noted in Oracle Sensor Edge Server Guide, you can install Oracle Sensor Edge Server along with OC4J 10.1.2 (versus the current 10.1.3 version). If you choose to install Oracle Sensor Edge Server with OC4J 10.1.2, ensure that OC4J is not running at the time. If OC4J 10.1.2 is running when you try to install Oracle Sensor Edge Server against it, the installation fails.

OC4J 10.1.3 standalone is also deployed in this release (it is in an ear file, and not deployed through Oracle Installed).

11.1.2 Default Database Tablespaces

The scripts included with Oracle Sensor Edge Server are for a simple, generic installations. Our testing is accomplished against such generic installations.

However, in enterprise environments, there may be many custom requirements and configurations that customers must design and implement themselves.

For this reason, please ensure that you are familiar with tablespace creation. To learn about database tablespace creation, see the *Oracle SQL Reference* and *Oracle Database Concepts* guides for your particular release.

Once you have set up your database (including the server, datafiles, and tablespaces across datafiles), you can modify Oracle Sensor Edge Server install scripts as needed.

`create_edg_user.sql` is used for SDS, and `create_edg_sda_user.sql`is used for SDR.

These scripts must be modified to use newly-created tablespaces for specific customer requirements.

Under the create user command where you specify which tablespace the user is to use, change the line containing 'create user' in the .sql scripts, according to the manual.

11.1.3 DBMS Lock Problem

In rare circumstances when Oracle Universal Installer is attempting to install the SDS into a database that already has an SDR installed, an error occurs. This happens due to a conflict in privileges for the components (you can see the specifics in `createedgeuser_SDS.log`). To resolve the problem, shut down any other Oracle Sensor Edge Server-related DBMS jobs, then try the installation again.

11.1.4 Unable to Create a JMX Connection

An error was reported in which users were not able to create a JMX connection. The error was caused by the client code trying to access an invalid OC4J instance. To avoid this problem, ensure that your code is connecting to a valid OC4J instance (verify that the name is correct).

11.1.5 Restart Server for Changes to Take Effect

OC4J Enterprise Manager does not automatically warn that the server must be restarted in order for changes to take effect. In order for your server changes to take effect, you must restart the server.

11.1.6 Oracle Sensor Edge Server Installation Fails

When installing the Oracle Sensor Edge Server, do not select the Oracle Containers for J2EE 10.1.3.0.0 option from the companion CD Oracle Universal Installer (OUI); selecting this option along with the SES option causes the Oracle Sensor Edge Server installation to fail. The valid OC4J instance is installed using the Oracle Application Server CD-ROM (or DVD-ROM), not the companion CD OUI. For more information, see the Oracle Application Server Installation Guide appropriate to your platform.

11.1.7 Resolving the Reboot Issue for XML Configuration

Error messages regarding invalid jms.xml typically occur because of an abnormal termination of OC4J, an OC4J crash, or the IP address of the server running OC4J changes.

If you encounter OC4J JMS Server startup problems after an abnormal shutdown, first check that no other OC4J JMS Server is running and using the same persistence files. Remove any.lock files from the ORACLE_HOME/j2ee/instance_name/persistence directory and then try restarting again.

If problems persist, confirm that the jms.xml file is valid.

If problems still persist, remove the jms.state file from the persistence directory and try again. Removing this file may result in the loss of transaction information. See also the section entitled "Abnormal Termination", located in the "Resource Providers" in "Chapter 3: Oracle Enterprise Messaging Service (OEMS)" of *Oracle Containers for J2EE Services Guide*.

In rare instances, one may be able to log in to Oracle Sensor Edge Server, but not into Oracle Enterprise Manager. If you encounter this problem, try to log in repeatedly (4-6 times); this will clear the error.

11.2 General Issues

This section describes general issues encountered in Oracle Sensor Edge Server. It includes the following topics:

- Section 11.2.1, "Using UTL_EDG.REMOVE_RULE Displays an Error"
- Section 11.2.2, "Adding a Rule Displays an Error"
- Section 11.2.3, "Localization -- Navigation Tree in the SES Console Renders as the Server Locale-Defined Character Set"
- Section 11.2.4, "Reassignment of Audio Event Type (207)"

11.2.1 Using UTL_EDG.REMOVE_RULE Displays an Error

When using the `API UTL_EDG.REMOVE_RULE`, an error may be encountered. This API only works if your rule was created through other Oracle Sensor Edge Server APIs.

11.2.2 Adding a Rule Displays an Error

In this release, be sure to use the syntax `':event'` instead of `'TAB.USER_DATA'`.

11.2.3 Localization -- Navigation Tree in the SES Console Renders as the Server Locale-Defined Character Set

The character set defined in the Server Locale overrides the characters set in the browser locale even when you switch the browser locale. For example, if you switch the browser locale to *Japanese*, the Server Locale is defined as traditional Chinese, the strings in the Navigation Tree of the SES Console (such as the *`Available Extensions`*, filters, devices, and device group nodes) and the error and confirmation messages render in traditional Chinese rather than in Japanese. To correct this problem, reset the Server Locale, or override the Server Locale-defined character set by overloading *`MsgTranslator`* methods to take locale. String literals in the SESConfig tree control must be non-static and fetched using *`Locale`* on each page request.

11.2.4 Reassignment of Audio Event Type (207)

The Audio Event Type (which is the event supported by the Simple Audio Driver) has been reassigned from *207* to *104*, and is now included in the group Generic Instructions to Devices (Event Types 100 - 199). Its Subtype remains *1* (*`Play audio jobs in the .xml file in the Datafield`*).

11.3 Documentation Issues

This section describes documentation issues regarding Oracle Sensor Edge Server. It includes the following topic:

- Section 11.3.1, "Documentation for Oracle Sensor Edge Server Extensions"
- Section 11.3.2, "Manually Deploying Sensor Data Streams Against an Existing Sensor Data Repository"

11.3.1 Documentation for Oracle Sensor Edge Server Extensions

Once the server is installed, you can see documentation for extensions at: *`http://<host on which SES is installed>:<oc4j port>/edge/extensions`*. Or, see Oracle Sensor Edge Server information on Oracle Technology Network at: `http://www.oracle.com/technology/products/sensor_edge_server/extensions.html`.

11.3.2 Manually Deploying Sensor Data Streams Against an Existing Sensor Data Repository

Oracle Sensor Edge Server Guide omits a step in describing how to manually deploy Sensor Data Streams if you have already created a Sensor Data Repository. The procedure for manually deploying Sensor Data Streams if the Sensor Data Repository exists is as follows:

1. Use SQL*Plus to connect to the database as *sysdba*, by running `sqlplus /nolog`.
2. Run sqlplus; connect as *`sys/your_pwd@your_db as sysdba`*.
3. Run the script `grant_edg_user.sql`, located in `Oracle_Home /edge/stage/sql/10.1.3`.
4. Disconnect as *sys* and then reconnect to the database as the *edge user*.
5. Run the script `edg_create_streams.sql`, located in `Oracle_Home /edge/stage/sql/10.1.3`.
6. Follow the procedure described in "Connecting Oracle Sensor Edge Server to Sensor Data Streams".

   When installing the SDS on an Oracle 10g database, this privilege must be granted to the EDGE database user. This step is not necessary on an Oracle 9i database. If you do it on an Oracle 9i database, you receive an error during user creation, but you may ignore the error message.

12

Oracle Containers for J2EE

This chapter discusses release notes for Oracle Containers for J2EE (OC4J) for 10.1.3.1.0. It includes the following topics:

You can access Oracle manuals mentioned in this document at the following URL:

`http://www.oracle.com/technology/index.html`

12.1 Configuration, Deployment, and Administration Issues and Workarounds

This section describes configuration, deployment, and administration issues for Oracle Application Server Containers for J2EE (OC4J). This section covers the following topics:

For information on configuring OC4J, see the *Oracle Containers for J2EE Configuration and Administration Guide* for OC4J at:

`http://www.oracle.com/technology/index.html`

12.1.1 Deprecated Environment Variables KeepWrapperCode, WrapperCodeDir, and DoNotReGenerateWrapperCode

System properties `KeepWrapperCode`, `WrapperCodeDir`, and `DoNotReGenerateWrapperCode` are deprecated.

These options apply only to EJB 2.1 CMP entity beans; they do not apply to session beans, message-driven beans, or EJB 3.0 entities. OC4J generates only one file per EJB 2.1 CMP entity bean. OC4J does not generate any artifacts if you use only EJB 3.0 entities. Because wrappers contain very little content, debugging them is not useful.

For more information, see "Debugging Generated Wrapper Code" in the *Oracle Containers for J2EE Enterprise JavaBeans Developer's Guide*.

12.1.2 Deprecated System Property ejb.batch.compile

System property `ejb.batch.compile` is deprecated.

To enable or disable batch compilation, use the `orion-application.xml` file `<orion-application>` element `batch-compile` attribute.

12.1.3 Desupported orion-ejb-jar.xml Attributes

The following `orion-ejb-jar.xml` file attributes are desupported:

- `max-instances-per-pk`
- `min-instances-per-pk`
- `disable-wrapper-cache`
- `instance-cache-timeout`
- `locking-mode="old_pessimistic"`

> **Note:** Do not use these attributes in this release. Doing so will lead to deployment failure.

12.2 Servlet Issues and Workarounds

This section describes release notes for servlets. It covers the following topic(s):

12.2.1 Servlet Invocation by Classname Disabled by Default

In the 10.1.3.x implementation, servlet invocation by class name is not enabled by default. Therefore, in default mode, you must use standard servlet configuration in `web.xml` before a servlet can be invoked. For example:

```
<servlet>
   <servlet-name>mytest</servlet-name>
   <servlet-class>mypackage.MyTestClass</servlet-class>
</servlet>
...
<servlet-mapping>
   <servlet-name>mytest</servlet-name>
   <url-pattern>/servlet/mytest</url-pattern>
</servlet-mapping>
```

Without this configuration, attempts to invoke the servlet will result in a `404 NOT FOUND` error. This differs from the default behavior in previous releases, where invocation by class name was enabled.

Alternatively, you can choose to enable invocation by class name when they start OC4J, by setting the `http.webdir.enable` property as follows:

```
-Dhttp.webdir.enable=true
```

12.2.2 Enabling Access Logging for Web Applications

In releases previous to 10.1.3.1.0, the default value of the `access-log` attribute of the `<web-app>` element of `*-web-site.xml` files was `true`. As of 10.1.3.1.0, the default value of `access-log` is `false`.

If you want to enable access logging, then set `access-log` to `true` in the appropriate `<web-app>` elements.

12.2.3 OC4J 10.1.3.1.0 Honors Session id Value Differently

In 10.1.2.x, If SSL is enabled and a session cookie (a cookie with the name `JSESSIONID`) is present in the request from the browser, OC4J will honor the value from the cookie over the session id embedded in the SSL stream. In 10.1.3.x, the behavior is reversed, so that OC4J will attempt to honor the value from the SSL stream first.

12.2.4 Exception and Stack Trace No Longer Displayed in HTML Error Page

In previous releases of OC4J, the default behavior when an error occurred in a Web application was to display both the exception and the stack trace in the HTML error page returned to the client.

This default behavior has changed and these details are no longer displayed by default; instead, a generic error message is displayed in the HTML error page. The exception and stack trace details are sent to the log file of the relevant application.

The previous behavior can be restored by setting the `development` attribute of the `<orion-web-app>` element to a value of "`true`" in the `orion-web.xml` file for the Web application, as in the following example:

```
<orion-web-app
    jsp-cache-directory="./persistence"
    jsp-cache-tlds="standard"
    temporary-directory="./temp"
    context-root="/myapp"
    development="true">
  ...
</orion-web-app>
```

See the "Web Module Configuration Files" appendix in the *Oracle Containers for J2EE Servlet Developer's Guide* for more information about the `development` attribute.

12.3 JavaServer Pages (JSP) Issues and Workarounds

This section describes release notes for JavaServer Pages. It covers the following topic(s):

- Section 12.3.1, "Workaround to View JSP Demo Files"
- Section 12.3.2, "Deprecated JSP Configuration Parameters"

12.3.1 Workaround to View JSP Demo Files

When you are running the JSP demos, if you receive a "Resource not found" exception when you attempt to view .jsp or .java files of the demo, then use the following workaround:

1. Add the following to the `web.xml` file located at `j2ee/ojspdemos/applications/ojspdemos/ojspdemos-web/WEB-INF/web.xml`.

```
<servlet-mapping>
   <servlet-name>viewsrc</servlet-name>
   <url-pattern>/servlet/ViewSrc/*</url-pattern>
</servlet-mapping>
```

2. Then, restart the OC4J server.

12.3.2 Deprecated JSP Configuration Parameters

The following JSP configuration parameters of the `<init-param>` element of the `global-web-application.xml` and `orion-web.xml` files are deprecated in release 10.1.3.1.0.

- `external_resource`
- `extra_imports`
- `forgive_dup_dir_attr`
- `old_include_from_top`
- `setproperty_onerr_continue`
- `jsp-print-null`

In addition, Oracle plans to remove the following JSP configuration parameters of the `<init-param>` element of the `global-web-application.xml` and `orion-web.xml` files in a future release. These parameters are the only way to implement their behaviors in release 10.1.3.1.0. If you implement their behaviors, you will have to modify your code when you upgrade to a release where these parameters are removed.

- `xml_validate`
- `no_tld_xml_validate`

12.4 EJB Issues and Workarounds

This section describes release notes for EJBs. It covers the following topics:

12.4.1 EJB 3.0 Support

In release 10.1.3.1.0, OC4J supports all but a small subset of the functionality specified in the final EJB 3.0 specification.

You may need to make code changes to your EJB 3.0 OC4J application when you upgrade your OC4J instance to 10.1.3.1.

For information on migrating a 10.1.3.0 JPA preview application to 10.1.3.1 JPA, see "Migrating From 10.1.3.0 TopLink JPA Preview Persistence" in the *Oracle Containers for J2EE Enterprise JavaBeans Developer's Guide*.

12.4.2 EJB 3.0 Interceptors Supported in JDK 1.5 Only

Most EJB 3.0 session bean and message-driven bean features are supported with deployment descriptors with JDK 1.4. However, you cannot use EJB 3.0 interceptors in JDK 1.4. This is due to the fact that `InvocationContext` method `getContextData()` returns a JDK 1.5 generic type.

12.4.3 Remote EJB 3.0 Stateful Session Bean Does Not Failover When Using Extended Persistence

The EJB 3.0 specification states: "Propagation of persistence contexts only applies within a local environment. Persistence contexts are not propagated to remote tiers."

In a clustered OC4J environment, this means that an EJB 3.0 stateful session bean with a remote interface using an extended persistence context does not failover.

To work-around this limitation, you must configure your stateful session bean to use the `ejbPassivate` callback to null out any references to entities managed in the extended persistence context and then re-establish them in the `ejbActivate` callback.

12.4.4 Orion CMP Is Deprecated

The Orion persistence manager is deprecated. Oracle recommends that you use OC4J and the TopLink persistence manager for new development. Using the TopLink migration tool, you can migrate an existing OC4J application that uses EJB 2.0 entity beans with the Orion persistence manager to use EJB 2.0 entity beans with the TopLink persistence manager.

For more information, see "Migrating OC4J Orion Persistence to OC4J TopLink Persistence" in the *Oracle TopLink Developer's Guide*.

12.5 Web Services Issues and Workarounds

This section describes release notes for Web Services. It covers the following topics:

Note: You can exercise your Web service and pinpoint errors by running it with a client created by WebServicesAssembler or JDeveloper. For more information on creating clients, see the *Oracle Application Server Web Services Developer's Guide* and the JDeveloper online help.

12.5.1 Configuration Issues

This section describes problems that might arise as a result of incorrect configuration:

- Section 12.5.1.1, "Installation Fails in Web Services Inspection Language (WSIL) Configuration"

12.5.1.1 Installation Fails in Web Services Inspection Language (WSIL) Configuration

The Ant scripts used to install the WSIL-App component are sensitive to certain external configuration options. If Ant is not configured correctly, then the WSIL install might fail with a `NoClassDefFound` error.

When deploying the WSIL application using Ant, you must be sure that you are using the Ant distribution that is provided with OracleAS Web Services 10g. This release contains all of the Ant tasks needed for deployment.

For more information about the contents and functionality of the Ant distribution that is provided with OracleAS Web Services 10*g*, see the *Oracle Containers for J2EE Deployment Guide*.

12.5.2 WebServicesAssembler Issues

This section describes problems that might arise in the operation of WebServicesAssembler.

- Section 12.5.2.1, "Multiple Service Elements in Top Down Web Service Assembly"
- Section 12.5.2.2, "Relative Path Names Are Not Supported in WSDL or XSD Imports"
- Section 12.5.2.3, "WebServicesAssembler Requires Schema Imports in the WSDL to Be Qualified by the schemaLocation Attribute"

12.5.2.1 Multiple Service Elements in Top Down Web Service Assembly

WebServicesAssembler does not support multiple service elements for the `topDownAssemble` command.

12.5.2.2 Relative Path Names Are Not Supported in WSDL or XSD Imports

WebServicesAssembler does not support relative path names, such as the following, in WSDL or XSD files.

```
<import location="../../file" ...>
```

As a work around use the WebServicesAssembler `fetchWsdl` command or the `fetchWsdlImports` argument. The `fetchWsdl` command is used in top down Web service assembly to copy the base (or top level) WSDL file and all of its imported and included WSDLs and schemas into a specified output directory. The boolean `fetchWsdlImports` argument indicates whether you want to make a local copy of the WSDL and everything it imports.

12.5.2.3 WebServicesAssembler Requires Schema Imports in the WSDL to Be Qualified by the schemaLocation Attribute

The `schemaLocation` attribute provides hints to a schema processor about where to find the schema for one or more namespaces. Values are provided as a list of URIs, separated by white-space characters. URIs must appear in pairs—first the namespace URI, then the location of the schema document for that namespace.

To process a schema successfully, WebServicesAssembler requires schema imports to be qualified by the `schemaLocation` attribute.

The following example specifies the schema location for the WS-I Basic Profile.

```
<xsd:import namespace="http://ws-i.org/profiles/basic/1.1/xsd"
schemaLocation="http://ws-i.org/profiles/basic/1.1/xsd"/>
```

12.5.3 WSDL-Related Issues

This section describes problems that might arise in how OracleAS Web Services interprets WSDL files.

- Section 12.5.3.1, "Support for Globalization Support (NLS) Characters in the WSDL"
- Section 12.5.3.2, "Services that use Multiple Message Formats Cannot be Deployed in a Single Web Application"

12.5.3.1 Support for Globalization Support (NLS) Characters in the WSDL

Globalization Support (also known as" NLS" or "National Language Support") characters that occur in names in the WSDL, such as in the name of a service, port type, operation, binding or port, are not supported. This may also result in errors on the Web Services Test Page.

12.5.3.2 Services that use Multiple Message Formats Cannot be Deployed in a Single Web Application

Multiple message formats, such as RPC-encoded and document-literal, are not supported in a single Web application.

To avoid this problem, ensure that your Web application defines only one message format.

12.5.4 Schema Features Limitations

This section describes Web Services schema features limitations. It covers the following topics:

- Section 12.5.4.1, "RPC Encoded Does Not Support Complex Types With Attributes"
- Section 12.5.4.2, "XML Types xsd:choice and xsd:group Are Not Supported for Proxy or Top Down Web Service Assembly"

12.5.4.1 RPC Encoded Does Not Support Complex Types With Attributes

If the schema contains a binding with an RPC-encoded message format and WebServicesAssembler encounters a `complexType` with attributes, then it will throw an "unsupported type encountered" error message.

12.5.4.2 XML Types xsd:choice and xsd:group Are Not Supported for Proxy or Top Down Web Service Assembly

If you are assembling Web services to- down or assembling Web service proxies, WebServicesAssembler cannot consume WSDLs that contain the `xsd:choice` or `xsd:group` XML types. If you want to consume a WSDL that contains these XML types, set the WebServicesAssembler `dataBinding` argument to `false` and code the `SOAPElement` so that the payload conforms to the schema definition in the WSDL file.

12.5.5 Test Page Issues

This section describes Web Services test page issues. It covers the following topics:

- Section 12.5.5.1, "Recursive Schema Definitions Are Not Supported in the Web Services Test Page"
- Section 12.5.5.2, "Formatted XML Content Returned from a Service Invocation on the Web Services Test Page May Be Shown Incorrectly"
- Section 12.5.5.3, "Test Page May Not Show Errors Originating from an Invalid Web Service WSDL"
- Section 12.5.5.4, "Invalid Values in a Web Services Test Page Form Field May Result in an "Unable to get header stream in saveChanges" Error"
- Section 12.5.5.5, "Web Services Test Page Does Not Support Globalization Support (NLS) Characters in User Name or Password"
- Section 12.5.5.6, "Web Services Test Page Does Not Support the Schema Features: group, choice, union, or Derived Simple Types as Attributes"
- Section 12.5.5.7, "Test Page Stress Test Report May Be Displayed Incorrectly Under Firefox or Mozilla"

12.5.5.1 Recursive Schema Definitions Are Not Supported in the Web Services Test Page

Services that use recursive schema definitions are not fully supported from the Web Services Test Page. The HTML form in the Test Page allows you to add a recursive element, but when the message is sent, the recursive elements will be empty. An example of a recursive schema definition is shown below, where the element with the name of list has a reference back to itself:

```
<xs:element name="list">
      <xs:complexType>
          <xs:sequence>
                <xs:element ref="list" minOccurs="0" maxOccurs="unbounded"/>
          </xs:sequence>
          <xs:attribute name="name" type="xs:string" use="required"/>
          <xs:attribute name="value" type="xs:string"/>
      </xs:complexType>
 </xs:element>
```

If you wish to construct a message in the Test Page that contains a recursive element, then you must select the **XML Source** radio button and enter the contents of the message manually.

12.5.5.2 Formatted XML Content Returned from a Service Invocation on the Web Services Test Page May Be Shown Incorrectly

The returned content on the Formatted XML Test Page may be missing or display incorrectly if it includes a string containing XML entities for greater than (`>`) or less than (`<`) characters.

To check the content of the returned content, switch to the **XML Source** view.

12.5.5.3 Test Page May Not Show Errors Originating from an Invalid Web Service WSDL

If the Web Services Test Page invokes a service with an invalid WSDL, then you may see an empty or broken page. Neither the Test Page nor the logs will display any WSDL errors when such a service is invoked.

You can pinpoint WSDL errors in a Web service in any of the following ways:

- Generate a service client with JDeveloper or with WebServicesAssembler.
- Use the WSDL validation command in JDeveloper.
- Use the WS-I validation tool in JDeveloper.

12.5.5.4 Invalid Values in a Web Services Test Page Form Field May Result in an "Unable to get header stream in saveChanges" Error

If you submit an invalid value in one of the Web Services Test Page's form fields, the field will be highlighted in red. If you submit the Test Page with an invalid value, then you may receive the following response:

```
Unable to get header stream in saveChanges
```

To avoid this error, correct invalid entries before submitting the page for execution.

12.5.5.5 Web Services Test Page Does Not Support Globalization Support (NLS) Characters in User Name or Password

If you include Globalization Support (also known as "NLS" or "National Language Support") characters in a user name or password for authentication in the Web Services Test Page, then authentication may fail with the following message:

```
Unable to authenticate <username>
```

In addition, the Test Page displays Globalization Support characters in the user name as "?" (question marks).

12.5.5.6 Web Services Test Page Does Not Support the Schema Features: group, choice, union, or Derived Simple Types as Attributes

If the Web Services Test Page encounters any of the following schema features: `group`, `choice`, `union`, or derived simple type as an attribute, then the HTML form will not display input controls for them.

For example, if the schema contains the following code:

```
<xsd:element name="workflowContext" type="workflowContextType"/>
   <xsd:complexType name="workflowContextType">
     <xsd:choice>
       <xsd:element name="credential" type="credentialType"/>
       <xsd:element name="token" type="xsd:string"/>
     </xsd:choice>
   </xsd:complexType>
```

The HTML form will not display an input control for `workflowContext`.

As a work around, you can select the **XML Source** radio button and enter the message content manually.

12.5.5.7 Test Page Stress Test Report May Be Displayed Incorrectly Under Firefox or Mozilla

If you run the Web services stress test from the Test Page in the Firefox or Mozilla browsers, then the report that is returned may not show correct aggregate values. To obtain the correct aggregate values, use the Internet Explorer browser instead.

12.5.6 Deployment Issues

This section describes problems that might arise during Web services deployment:

- Section 12.5.6.1, "EJB 2.1 Web Services Deployed with an Invalid oracle-webservices.xml File"

12.5.6.1 EJB 2.1 Web Services Deployed with an Invalid oracle-webservices.xml File

If an EJB 2.1 Web service is not available after you deploy it, then check whether the service deployment descriptor file, `oracle-webservices.xml`, is valid. It is possible to deploy a service with invalid resource references without an alert being sent.

12.5.7 Other Issues

This section describes other problems that might arise during the operation of OracleAS Web Services:

- Section 12.5.7.1, "Get NodeLists by Using getFirstChild and getNextSibling Instead of getChildNode"

12.5.7.1 Get NodeLists by Using getFirstChild and getNextSibling Instead of getChildNode

You may see a performance degradation when iterating over a `NodeList` obtained by using `node.getChildNode()`. This degradation will only be significant for a `NodeList` with a very long length.

Instead of using the `NodeList` obtained by `node.getChildNode()`, the current Oracle XDK implementation offers an optimization of navigating a list of child nodes by using `node.getFirstChild()` and looping over `node.getNextSibling()`. The following code sample illustrates this technique.

```
Node n = ...;
if (n.hasChildNodes()) {
   for(Node nd=n.getFirstChild(); nd!=null; nd=nd.getNextSibling()){
         nd.getValue(); // do something with nd
      }
}
```

12.6 OC4J Services Issues and Workarounds

This section describes release notes for OC4J Services. OC4J Services include: Java Naming and Directory Interface (JNDI), Oracle Enterprise Messaging Service (OEMS),

Data Sources, Remote Method Invocation (ORMI and IIOP), OC4J Transaction Support, Java Object Cache (JOC), XML Query Service (XQS), and Application Client Container.

The section contains release notes for the following OC4J Services:

12.6.1 JNDI

This section describes release notes for JNDI. It covers the following topics:

12.6.1.1 Spaces in Application Names

In this release, when accessing an application through OPMN using ORMI, an application's name cannot contain spaces. For example:

```
opmn:ormi://<host>:<port>:home/my deploy
```

If the application name contains spaces, the following exception is thrown:

```
StrangeAppName not found
```

Remove any spaces in the name of the application to work around this issue.

12.6.1.2 Wrong Provider URL in the jndi.properties File

In this release, when you deploy a client JAR to a clustered server, the `jndi.properties` file written to the `/applications/appname/appname_client` directory does not have the correct provider URL to connect to one of the clustered instances. The correct provider URL for accessing an application instance in a cluster is:

```
java.naming.provider.url=opmn:ormi://myhost:6003:home/appname
```

The example assumes the OPMN port is `6003` and the instance name is `home`.

12.6.1.3 New Package Names for RMI and Application Client Initial Context Factories

In this release, the following `InitialContext` factories are deprecated:

- `com.evermind.server.RMIInitialContextFactory`

- `com.evermind.server.ApplicationClientInitialContextFactory`
- `com.oracle.iiop.server.IIOPInitialContextFactory`

The new package names for the initial context factories are:

- `oracle.j2ee.rmi.RMIInitialContextFactory`
- `oracle.j2ee.naming.ApplicationClientInitialContextFactory`
- `oracle.j2ee.iiop.IIOPInitialContextFactory`

12.6.1.4 Deprecated JNDI Environment Variables

In this release, the JNDI environment variables `dedicated.connection`, `dedicated.rmicontext`, and `LoadBalanceOnLookup` are deprecated.

To configure replication-based load balancing, use environment variable `oracle.j2ee.rmi.loadBalance` with the settings that Table 12–1 lists.

Table 12–1 Settings for Environment Variable oracle.j2ee.rmi.loadBalance

Setting	Description
`Client`	The client interacts with the OC4J process that was initially chosen at the first lookup for the entire conversation (Default)
`Context`	The client goes to a new server when a separate context is used (similar to deprecated `dedicated.rmicontext`).
`Lookup`	The client goes to a new server for every lookup.

12.6.2 Oracle Enterprise Messaging Service (OEMS)

This section describes release notes for the Oracle Enterprise Messaging Service (OEMS). It covers the following topics:

- Section 12.6.2.1, "Error Starting OC4J after OracleASjms is Undeployed"
- Section 12.6.2.2, "OC4J May Fail to Restart after Abnormal OC4J Shutdown"
- Section 12.6.2.3, "XA-styled JMS Connections Not Supported Between OC4J Versions"
- Section 12.6.2.4, "JMS Auto-Enlisting in Global Transactions is Desupported"

12.6.2.1 Error Starting OC4J after OracleASjms is Undeployed

In this release, additional changes are necessary to start OC4J when the default instance of the OracleASjms resource adapter is undeployed.

The following additional changes must be made:

- In `$J2EE_HOME/config/application.xml` comment out the following lines:

```
<web-module id="jmsrouter_web" path="../../home/applications/jmsrouter.war" />
<ejb-module id="jmsrouter_ejb" path="../../home/applications/jmsrouter-ejb.jar"
 />
```

- In `$J2EE_HOME/config/default-web-site.xml`, comment out the following line:

```
<web-app application="default" name="jmsrouter_web" root="/jmsrouter"
 load-on-startup="true" />
```

If these changes are made, OC4J may be started, but the OracleAS JMS Router will not work.

To reinstate the JMS Router:

1. Fully redeploy the OracleASjms resource adapter instance.
2. Uncomment the lines mentioned above in `$J2EE_HOME/config/application.xml` and `$J2EE_HOME/config/default-web-site.xml`.

When OC4J is restarted, the OracleAS JMS Router should be available.

12.6.2.2 OC4J May Fail to Restart after Abnormal OC4J Shutdown

There are situations where you may encounter OC4J JMS Server startup problems, such as the following, after an abnormal OC4J shutdown:

```
(SEVERE) Failed to set the internal configuration of the OC4J JMS Server with:
XMLJMSServerConfig[file:/D:/oas0104_web/j2ee/BLUE/config/jms.xml]
WARNING: Application.setConfig Application: default is in failed state as
initialization failed.
```

If this occurs, check that no other OC4J JMS Server is running and using the same persistence files. Then remove any `.lock` files from the following directory:

ORACLE_HOME`/j2ee/`*instance_name*`/persistence`

And try restarting again.

If problems persist, confirm that the `jms.xml` file is valid.

If problems still persist, remove the `jms.state` file from the persistence directory and try again, but be aware that removing this file may result in loss of transaction information. For additional information, see the section "Abnormal Termination" in the "Oracle Enterprise Messaging Service" chapter of the *Oracle Containers for J2EE Services Guide*.

12.6.2.3 XA-styled JMS Connections Not Supported Between OC4J Versions

In this release, Oracle Application Server does not support XA-styled JMS connections with Oracle Application Server 10.1.2.

12.6.2.4 JMS Auto-Enlisting in Global Transactions is Desupported

For backward-compatibility reasons, it is still possible (but discouraged) to use the auto-enlisting feature in this release. The feature is disabled by default. Applications that previously relied on the auto-enlist feature to enlist XA and non-XA JMS connection into a global transaction, must now set the `oc4j.jms.pseudoTransactionEnlistment` configuration property to `true` in the `jms.xml` configuration file.

12.6.3 Data Sources

This section describes release notes for Data Sources. It covers the following topics:

- Section 12.6.3.1, "The oracleFatalError method is no Longer Available"
- Section 12.6.3.2, "OracleConnectionCacheImpl Deprecated"
- Section 12.6.3.3, "Orion CMP Fails Due to JDBC Driver Clash"

12.6.3.1 The oracleFatalError method is no Longer Available

The `com.evermind.sql.DbUtil.oracleFatalError()` method is no longer available for retrieving fatal errors (e.g. during RAC failover scenarios). The method has been replaced by the `oracle.oc4j.sql.DataSourceUtils.isOracleFatalError()` method. This is an internal method that is not intended for public use and should only be used for backwards compatibility. The method should not be used for new development.

12.6.3.2 OracleConnectionCacheImpl Deprecated

The class `oracle.jdbc.pool.OracleConnectionCacheImpl` has been deprecated because it does not support multiple schemas. When defining the `factory-class` for connection factories and `data-source-class` for native data sources, use `oracle.jdbc.pool.OracleDataSource`.

12.6.3.3 Orion CMP Fails Due to JDBC Driver Clash

Oracle CMP only works correctly with the default JDBC driver that is supplied with this release. Problems will arise if another version of the Oracle JDBC driver is added to an OC4J instance, such as through the OC4J Shared Library feature, and configured for use by the application using Orion CMP.

When using Orion CMP, always use the Oracle JDBC driver that is shipped with OC4J.

12.6.4 OC4J Transaction Support

This section describes release notes for OC4J Transaction Support. It covers the following topic:

- Section 12.6.4.1, "The In-DB Coordinator Is Deprecated"

12.6.4.1 The In-DB Coordinator Is Deprecated

The use of the in-database transaction coordinator by OC4J is deprecated as of release 10.1.3. Oracle recommends that the middle-tier transaction coordinator be used going forward.

12.6.5 RMI

This section describes release notes for OC4J Remote Method Invocation (RMI and IIOP). It covers the following topics:

- Section 12.6.5.1, "RMI Recommendations"
- Section 12.6.5.2, "Incorrect "Provider URL..." Error Message"

12.6.5.1 RMI Recommendations

In this release, note the following recommendations:

- The RMI port is sometimes not released immediately.
- Old tunneling is deprecated. Use the new URL format, as described in the "Configuring ORMI Tunneling through HTTP" section of the "RMI" chapter of the *Oracle Containers for J2EE Services Guide*.

12.6.5.2 Incorrect "Provider URL..." Error Message

In certain cases when there is something wrong with the provider URL format, the following incorrect error message is displayed:

```
" Provider URL must be of the form
[opmn:]corbaname::host:port#/appname"
```

The URL format in the error message is incorrect. The correct URL format is:

```
[opmn:]corbaname::host:port#[instancename#]appname
```

12.6.6 XQS

This section describes release notes for the OC4J XML Query Service (XQS). It covers the following topics:

- Section 12.6.6.1, "Updated XQS Client API"
- Section 12.6.6.2, "SQL Usage has Changed"

12.6.6.1 Updated XQS Client API

The XQS Client API now includes the `XQSFactory` class. The factory provided by this class is used to create instances of the new main XQS client interfaces:

- `oracle.xqs.client.QueryParameterI`
- `oracle.xqs.client.XQSFacadeI`

The previous classes have been deprecated:

- `oracle.xds.client.QueryParameter`
- `oracle.xds.client.XQSFacade`

12.6.6.2 SQL Usage has Changed

The `<xqsview-source>` element is now used to define SQL queries for database access. The `<wsdl-source>` element is no longer used. The `<xqsview-source>` element is defined as part of a SQL-based XQS view.

12.6.7 Application Client Container

This section describes release notes for OC4J Application Client Container. It covers the following topics:

- Section 12.6.7.1, "Custom Security Callback Handler Fails"

12.6.7.1 Custom Security Callback Handler Fails

In this release, when implementing a custom security callback handler for an application client, the handler must set all three callback objects (`NameCallback`, `PasswordCallback`, and `TextInputCallback`). If you do not set all three objects, a `java.lang.NullPointerException` is given when trying to instantiate the remote connection to the OC4J server and the JNDI context setup fails.

12.7 J2EE Connector Architecture (J2CA) Issues and Workarounds

This section describes release notes for J2EE Connector Architecture (J2CA). It covers the following topics:

- Section 12.7.1, "New Class Loader Architecture for Standalone Resource Adapters"
- Section 12.7.2, "Deployment Dependencies between Standalone Resource Adapters"
- Section 12.7.3, "Class Not Found Exceptions"

12.7.1 New Class Loader Architecture for Standalone Resource Adapters

In this release, standalone resource adapters are no longer added to the default application's class loader (except for the internal JMS and data source resource adapters). Instead, standalone resource adapters are added as shared libraries that (by default) are available to all applications. The new architecture allows multiple versions of a standalone adapter to be deployed in OC4J. See the *Oracle Containers for J2EE Resource Adapter Administrator's Guide* for detailed information.

12.7.2 Deployment Dependencies between Standalone Resource Adapters

In this release, a standalone resource adapter can only import previously deployed standalone resource adapters. Therefore, a standalone resource adapter must be deployed prior to any dependent standalone resource adapter. This is different than the behavior in 10.1.3 where a standalone resource adapter can lookup and use a standalone resource adapter which was deployed after itself.

12.7.3 Class Not Found Exceptions

Starting in this release, resource adapters that rely on the default class loader to resolve non shared-library dependencies at runtime will fail. Dependencies on libraries and other standalone resource adapters are configured explicitly by importing shared libraries. A standalone resource adapter's proprietary deployment descriptor (`oc4j-ra.xml`) is used to import shared libraries. See the *Oracle Containers for J2EE Resource Adapter Administrator's Guide* for detailed information on importing shared libraries.

12.7.4 Restart of Default Application Required After Redeploying or Undeploying Internal Resource Adapters

For the Oracle Application Server 10.1.3.1.0 implementation, you no longer need to restart the default application after deploying, redeploying, undeploying standalone resource adapters in an OC4J instance. You should restart any dependent J2EE applications that take advantage of the standalone resource adapter.

However, there are cases where a restart of the default application is still required. Specifically, if you perform a deployment operation on the adapters for accessing Oracle Enterprise Messaging Service (OEMS) file and memory based provider (`OracleASjms.rar`) or the OEMS database persistence provider (`ojms.rar`), then you will be required to restart the default application.

These adapters are Oracle-internal resource adapters for JMS connectivity and have administrative tasks that may require additional deployment and redeployment operations.

12.8 General OC4J Issues and Workarounds

This section discusses general OC4J issues:

12.8.1 OutOfMemoryError on Multiple Restarts of Standalone OC4J through Application Server Control

If you restart a standalone OC4J instance multiple times through Application Server Control, you may encounter the error `java.lang.OutOfMemoryError`, reported on the server console, and the OC4J instance will be unusable.

The workaround is to manually stop and restart the OC4J instance.

13

Oracle TopLink

This chapter describes issues associated with Oracle TopLink (TopLink). It includes the following topic:

- Section 13.1, "General Issues and Workarounds"

13.1 General Issues and Workarounds

This section describes general issues and workarounds. It includes the following topic:

- Section 13.1.1, "Object-Relational Issues"
- Section 13.1.2, "Object-XML (JAXB) Issues"
- Section 13.1.3, "Miscellaneous Issues"

13.1.1 Object-Relational Issues

This section contains information on the following issues:

- Section 13.1.1.1, "Incorrect outer join SQL on SQLServer2005"
- Section 13.1.1.2, "UnitOfWork.release() not Supported with External Transaction Control"
- Section 13.1.1.3, "ReportQuery Results for Aggregate Functions may be Truncated"
- Section 13.1.1.4, "Attribute Joining of One-to-One Mappings not Supported with Inheritance"
- Section 13.1.1.5, "Using Oracle Database Advanced Data Types may Fail with Some Data Sources"
- Section 13.1.1.6, "Returning Policy with Optimistic Locking"
- Section 13.1.1.7, "Using Timestamp"
- Section 13.1.1.8, "Configuring Sequencing in sessions.xml"

13.1.1.1 Incorrect outer join SQL on SQLServer2005

TopLink generates incorrect outer join for SQL Server v2005. The outer join syntax generated is correct for earlier versions of this database. To work around this limitation, reconfigure the database compatibility (refer to the SQLServer documentation for details). Alternatively, you can use a custom TopLink database platform.

13.1.1.2 UnitOfWork.release() not Supported with External Transaction Control

A unit of work synchronized with a Java Transaction API (JTA) will throw an exception if it is released. If the current transaction requires its changes to not be persisted, the JTA transaction must be rolled back.

When in a container-demarcated transaction, call `setRollbackOnly()` on the EJB/session context:

```
Stateless
 public class MySessionBean implements SomeInterface {
 .
  @Resource
  SessionContext sc;
  .
  public void someMethod() {
  ...
  sc.setRollbackOnly();
  }
  }
```

When in a bean-demarcated transaction then you call `rollback()` on the UserTransaction obtained from the EJB/session context:

```
Stateless
TransactionManagement(TransactionManagementType.BEAN)
  public class MySessionBean implements SomeInterface {
  .
    @Resource
    essionContext sc;
  .
  public void someMethod() {
    sc.getUserTransaction().begin();
    ...
    sc.getUserTransaction().rollback();
  }
 }
```

13.1.1.3 ReportQuery Results for Aggregate Functions may be Truncated

When using a ReportQuery to return calculated values, the data type of the column is used to convert the returned results. As a result, values returned for mapped attributes using average, variance, and standard deviation will be converted into the mapped attribute type and could result in loss of precision through truncation.

To work around this issue, use the field instead of the attribute's query key. For example:

- Using the attribute's query key results in truncated value:

  ```
  rq.addAverage("salary");
  ```

- Use the database column instead to avoid truncation:

  ```
  rq.addAverage("salary", eb.getField("SALARY.SALARY"));
  ```

13.1.1.4 Attribute Joining of One-to-One Mappings not Supported with Inheritance

It is not possible to execute a query on a class involved in an inheritance hierarchy which also has one-to-one joined attributes configured. This issue has already been addressed in TopLink Essentials and the solution will be available in the next release or a patch-set of this release.

13.1.1.5 Using Oracle Database Advanced Data Types may Fail with Some Data Sources

When using Oracle9i and Oracle10*g* database platform-provided advanced data types with some data source implementations, failures may occur. The platform does not or cannot correctly unwrap the raw Oracle specific JDBC connection and cannot complete the necessary conversions. To avoid this issue, you can use TopLink internal connection pooling.

13.1.1.6 Returning Policy with Optimistic Locking

The returning policy, which allows values modified during INSERTs and UPDATEs to be returned and populated in cached objects, does not work in conjunction with numeric version optimistic locking. The value returned for all UPDATEs is **1** and does not provide meaningful locking protection.

Do not use numeric optimistic locking in conjunction with a returning policy.

13.1.1.7 Using Timestamp

TopLink assumes that date and time information returned from the server will use `Timestamp`. If the JDBC driver returns a `String` for the current date, TopLink will throw an exception. You should use a driver that returns `Timestamp` or change the policy to use local time instead of server time.

13.1.1.8 Configuring Sequencing in sessions.xml

When configuring a custom sequence table for a session, TopLink Workbench will throw an exception and your edits will not be written to the `sessions.xml` when it is saved. As a workaround, configure sequencing at the project level. See "Configuring Sequencing at the Project Level" in the *Oracle TopLink Developer's Guide* for details.

13.1.2 Object-XML (JAXB) Issues

This section contains information on the following issues:

- Section 13.1.2.1, "Using Non-ASCII Characters with a JAXB 1.0 TopLink Project"
- Section 13.1.2.2, "XML Document Preservation"
- Section 13.1.2.3, "Multiple Composite Object Mappings Using Self "." XPath not Supported"
- Section 13.1.2.4, "Marshalling a Non-root Object with Document Preservation"

13.1.2.1 Using Non-ASCII Characters with a JAXB 1.0 TopLink Project

When you generate class and method names that include non-ASCII characters, TopLink will throw an exception. This problem occurs when creating a JAXB 1.0 TopLink project from an XML schema that contains non-ASCII characters. Ensure that your XML schema does not contain any non-ASCII characters.

13.1.2.2 XML Document Preservation

When using the Preserve Document option with an XML descriptor, you must also set the option on all other root descriptors.

13.1.2.3 Multiple Composite Object Mappings Using Self "." XPath not Supported

TopLink supports only a single composite object mapping using the self (".") XPath. This does not restrict the number of composite object mappings, only the number of

mappings where the composite object is mapped into the parent element instead of a child element.

13.1.2.4 Marshalling a Non-root Object with Document Preservation

When using document preservation (see "Configuring Document Preservation" in the *Oracle TopLink Developer's Guide*), only a root object can be marshalled. Attempting to marshal a non-root object with document preservation on will result in an exception.

13.1.3 Miscellaneous Issues

This section contains information on the following issues:

- Section 13.1.3.1, "Shared Installation"
- Section 13.1.3.2, "Welcome Page"

13.1.3.1 Shared Installation

By default, the TopLink installation allows *only the user who performed the installation* to access the installed files. If your TopLink installation is in a shared environment you must manually change the file permissions for all files in the `<ORACLE_HOME>` directory after completing the installer. Executable files require **read and execute** access; non-executable files require **read** access. Refer to your operating system documentation for information on setting file permissions.

13.1.3.2 Welcome Page

After installing Oracle TopLink, the Welcome page will appear in English – regardless of the language you selected during installation. To display your language-specific select the appropriate file in the `<ORACLE_HOME>\toplink\doc\` folder.

14

OracleAS Disaster Recovery

This chapter describes issues related to highly available topologies using the OracleAS Disaster Recovery solution. This chapter contains the following issues:

- Section 14.1, "General Issues and Workarounds"
- Section 14.2, "Configuration Issues and Workarounds"

14.1 General Issues and Workarounds

This section describes general issues and workarounds. It includes the following topic:

- Section 14.1.1, "Adding an Instance from a Remote Client Adds an Instance on the Local Instance and Not on the Remote Instance"
- Section 14.1.2, "Switchover Operation in an Asymmetric Topology Requires All Components to be Shutdown on Instances on the Primary Site that Do Not Have a Standby Peer"
- Section 14.1.3, "HTTP Server Configuration When Using a Server Load Balancer"
- Section 14.1.4, "Problem Performing a Clone Instance or Clone Topology Operation"
- Section 14.1.5, "OracleAS Guard Release 10.1.2.1.1 Cannot Be Used with Oracle RAC Databases"
- Section 14.1.6, "OracleAS Guard Returned an Inappropriate Message When It Could Not Find the User Specified Database Identifier"
- Section 14.1.7, "Database Instance on Standby Site Must Be Shutdown Before Issuing an asgctl create standby database Command"
- Section 14.1.8, "Problem in an Oracle RAC-non Oracle RAC Environment with Naming Conventions"
- Section 14.1.9, "In an Oracle RAC-non Oracle RAC Environment, an asgctl create standby database Operation Returns an Inappropriate Error When the Database Is Already in a Physical Standby State"
- Section 14.1.10, "GNU Tar is Required for ASG Clone Topology or Clone Instance Operations"
- Section 14.1.11, "ASG Operations Fail if Multiple DB ORACLE_HOMEs Exist on the Same System"
- Section 14.1.12, "Known Issue with Disaster Recovery Cloning on Windows"

14.1.1 Adding an Instance from a Remote Client Adds an Instance on the Local Instance and Not on the Remote Instance

When using the asgctl `add instance` command, the OracleAS Guard client must be run from a system that is already included in the topology.

For example, when an OracleAS Guard client is connected to the OracleAS Guard server that is to be added to an existing topology, the following error is returned:

```
ASG_IAS-15785: ERROR: The topology is missing the instance that exists in the home
where the ASG server is running.
You must first discover or add the instance in home
```

The workaround to this problem is to use an OracleAS Guard client from a system that is already included in the topology to perform the asgctl `add instance` command to add an instance to the topology.

14.1.2 Switchover Operation in an Asymmetric Topology Requires All Components to be Shutdown on Instances on the Primary Site that Do Not Have a Standby Peer

Prior to performing an asgctl switchover operation in an asymmetric topology for instances that do not have a standby peer, you must perform an opmnctl stopall command to shutdown all components on each of these ignored instances on the primary site.

When an XML policy file is in use for an asymmetric topology and has the <instanceList successRequirement ="Ignore" set for an instance, for example, as shown in the following example, then in a switchover operation OracleAS Guard ignores that instance:

```
.
.
.
<instanceList successRequirement = "Ignore">
  <instance>instance B</instance>
</instanceList>
.
.
.
```

OracleAS Guard, on a switchover operation, shuts down all components on the old primary site except for OracleAS Guard and OPMN and ignores instance B because the policy file specifies to do so. The switchover operation fails because all components are not shut down on the primary site, in this case instance B because the policy file specifies to ignore instance B on the primary site, which has no standby peer.

To workaround this problem, the OracleAS Disaster Recovery Administrator must perform an opmnctl stopall operation for all components on instance B prior to the switchover operation in order for the switchover operation to succeed in this asymmetric topology.

14.1.3 HTTP Server Configuration When Using a Server Load Balancer

If you are using a Server Load Balancer to direct HTTP requests to multiple Oracle HTTP Server instances, Web access to some applications (such as the Application Server Control console and Oracle Web Services Manager) may be redirected to the physical HTTP Server hosts.

To ensure that redirected requests are always sent to the load balancer, configure an Oracle HTTP Server virtual host for the load balancer.

For example, if Oracle HTTP Server is listening on port 7777 and a load balancer called `bigip.acme.com` is listening on port 80, then consider the following entry in the `httpd.conf` file:

```
NameVirtualHost *:7777
<VirtualHost *:7777>
ServerName bigip.us.oracle.com
Port 80
ServerAdmin youyour.address
RewriteEngine On
RewriteOptions inherit
</VirtualHost>
```

14.1.4 Problem Performing a Clone Instance or Clone Topology Operation

At the current time, the semantics of an asgctl clone topology operation will not clone databases that are outside of the Oracle Application Server home, thus only the default database installed into the Oracle Application Server home by some infrastructure installation types will be cloned. The asgctl create standby database command should be used by users not familiar with Oracle Data Guard.

14.1.5 OracleAS Guard Release 10.1.2.1.1 Cannot Be Used with Oracle RAC Databases

OracleAS Guard version shipped with this release is 10.1.2.1.1. This version of OracleAS Guard cannot be used with Oracle RAC Databases. For all other purposes, this OracleAS Guard version is completely supported by Oracle.

To use OracleAS Guard with an Oracle RAC database, it is recommended to use Release 10.1.2.2 stand alone version of OracleAS Guard with this release. OracleAS Guard 10.1.2.2 version (with instructions) is available for download from Oracle OTN as an OracleAS Guard stand alone install, or please contact Oracle Support for further instructions.

14.1.6 OracleAS Guard Returned an Inappropriate Message When It Could Not Find the User Specified Database Identifier

When adding an Oracle RAC instance to the topology using the OracleAS Guard add instance command and OracleAS Guard could not find the user specified identifier, an inappropriate error message was returned. If the user had entered the database name rather that the Oracle instance SID, there was no indication that this was the problem.

Now if OracleAS Guard is unable to locate the oratab entry (on Unix) or the system registry service (on Windows) for the user specified database identifier, the following ASG_SYSTEM-100 message now precedes the existing ASG_DUF-3554 message and both messages will be displayed to the console:

```
On Unix systems:

ASG_SYSTEM-100: An Oracle database is identified by its database unique name (db_
name)
ASG_DUF-3554: The Oracle home that contains SID <user specified identifier> cannot
be found

On Windows systems:
```

```
ASG_SYSTEM-100: An Oracle database is identified by its system identifier (SID)
ASG_DUF-3554: The Oracle home that contains SID <user specified identifier> cannot
be found
```

14.1.7 Database Instance on Standby Site Must Be Shutdown Before Issuing an asgctl create standby database Command

Oracle recommends that you shut down the database on the standby site if it is up and running before issuing the asgctl create standby database command; otherwise, the following error is returned:

```
ASG_DGA-12500: Standby database instance "<instance_name>" already exists on host
"<hostname>"
```

14.1.8 Problem in an Oracle RAC-non Oracle RAC Environment with Naming Conventions

There is a problem with the naming conventions used in the Oracle RAC/non Oracle RAC environment. The asgctl set primary database command must be issued for both the primary and standby site within asgctl to define the service name mapping within OracleAS Guard before attempting an asgctl create standby database command; otherwise, the following error message is returned.

```
ASG_DUF-4902: Object not found in clipboard for key "orcl1keySourceDb".
```

14.1.9 In an Oracle RAC-non Oracle RAC Environment, an asgctl create standby database Operation Returns an Inappropriate Error When the Database Is Already in a Physical Standby State

An error ora-01671 will occur, when attempting to perform an asgctl create standby database operation from a database that is already in 'physical standby' state. An appropriate error message should be echoed indicating that a standby database is already running, rather than returning this error. This is a known issue.

14.1.10 GNU Tar is Required for ASG Clone Topology or Clone Instance Operations

When using the ASG clone topology or clone instance operations, the tar utility is utilized. The target system(s) of these operations must have a version of GNU tar in the default PATH of the system user account in which the standalone ASG install runs.

GNU tar can be obtained at the following location:

```
http://www.gnu.org/software/tar/
```

14.1.11 ASG Operations Fail if Multiple DB ORACLE_HOMEs Exist on the Same System

If you have multiple ORACLE_HOME directories on the same system in a disaster recovery setup, the `set primary database` command fails with the following error:

```
prodnode1: -->ASG_DUF-4950: An error occurred on host "stama03v1" with IP
"XXX.XX.XX.XXX" and port "7890"
prodnode1: -->ASG_ORACLE-300: ORA-12514: TNS:listener does not currently know of
service requested in connect descriptor
prodnode1: -->ASG_DUF-3700: Failed in SQL*Plus executing SQL statement:
```

```
connect sys/******@rac as sysdba;.
prodnode1: -->ASG_DUF-3502: Failed to connect to database orcl.
prodnode1: -->ASG_DUF-3027: Error while executing  at step - Default Step.
.
The database credentials have been set successfully, but they have not been
validated
```

To work around this issue, make sure you have only one database on the system sharing the same inventory for a disaster recovery setup.

14.1.12 Known Issue with Disaster Recovery Cloning on Windows

If you do not add the directory that contains the jar utility to the PATH when installing a JDK on the standby system, the ASG on the standalone system cannot access the jar.exe utility, and you receive the following error while cloning :

```
stajx12: -->ASG_SYSTEM-100: operable program or batch file.
stajx12: -->ASG_DUF-4040: Error executing the external program or script.
The error code is "1"
stajx12: -->ASG_IAS-15690: Error running the restore script
stajx12: -->ASG_IAS-15698: Error during backup topology operation - copy step
stajx12: -->ASG_DUF-3027: Error while executing Clone Instance at step -
unpack step.
```

If you receive this error, add the jar utility to the PATH on the standby system and restart the ASG server.

14.2 Configuration Issues and Workarounds

This section describes configuration issues and their workarounds. It includes the following topics:

14.2.1 The asgctl shutdown topology Command Does Not Shut Down an MRCA Database That is Detected To Be of a repCa Type Database

The asgctl shutdown topology command only handles non-database instances. Thus, in a repCA environment when OracleAS Guard detects an instance and determines it to be a repCa type database, its instance is ignored in a shutdown topology operation. Any repCA type database is considered to be managed outside of OracleAS Guard.

Therefore, within an environment where an MRCA database has been added to the topology, the database will not be handled by the asgctl shutdown topology command.

14.2.2 Only One Oracle RAC Node with an Instance on the New Primary Site Is Started Up Following an asgctl switchover Operation

In a Disaster Recovery environment that involves Oracle RAC databases, after a switchback operation(`switchover topology to <primary site>`), the database will be started up on only one of the Oracle RAC nodes by OracleAS Guard; however, the remaining Oracle RAC instances on the primary site must be started up manually.

14.2.3 An asgctl add instance Operation from a Remote Client Adds an Instance on the Local System Rather than on the Intended Remote System

After performing an asgctl add instance operation from a remote client, it was noted that the instance was being added to the local system rather than to the intended remote system.

As a workaround to this problem, the Disaster Recovery Administrator must first perform an asgctl discover topology operation on the local client system before attempting to perform an asgctl add instance operation to add an instance to the remote system.

14.2.4 Connecting to an OracleAS Guard Server May Return an Authentication Error

When a user connects to an OracleAS Guard server and gets an authentication error even though the correct user name and password were entered, the user should try to put the following flag in the `dsa.conf` file in the `<ORACLE_HOME>/dsa` directory and try the operation again: `dsa_realm_override=1`.

Note that this DSA configuration file parameter is not documented in the "OracleAS Guard Configuration File Parameters" section of the OracleAS Guard Release Information `readme.txt` file.

14.2.5 All emagents Must Be Shut Down Before Performing OracleAS Guard Operations

Before performing any OracleAS Guard operations, you must shut down the emagents. This operation is required for OracleAS Guard commands that recycle

OracleAS services. You can issue the asgctl run command in a script to perform this operation from within OracleAS Guard. See the OracleAS Disaster Recovery chapters in the *Oracle Application Server High Availability Guide* for more information.

Otherwise, for example you may get an "ORA-01093: ALTER DATABASE CLOSE only permitted with no sessions connected" error message.

Shutting down emagents is only described for performing a switchover operation. However, it applies to all OracleAS Guard operations. The documentation will be updated in a future release.

14.2.6 Procedure to Patch a 10.1.2.0.0 Disaster Recovery Setup with a 10.1.2.1.0 Patchset

Assuming you already have an existing Disaster Recovery Setup for a 10.1.2.0.0 production database, follow these conceptual steps to apply a 10.1.2.1.0 Disaster Recovery Patchset:

1. Break the Disaster Recovery setup. Perform an asgctl failover command.
2. Apply the patch 10.1.2.1.0.
3. Recreate the Disaster Recovery setup. Perform an asgctl create standby database command followed by an asgctl instantiate topology command. Alternatively, see the Oracle Data Guard documentation for more information about how to reestablish the standby database.

14.2.7 Running Instantiate Topology Across Nodes After Executing a Failover Operation Results in an ORA-01665 Error

If you attempt to perform an asgctl instantiate topology operation immediately following an asgctl failover operation, an "ORA-01665: control file is not a standby control file" error message is returned.

To work around this problem, you must first perform an asgctl create standby database command to create the standby database on the remote host.

14.2.8 OracleAS Guard Is Unable to Shutdown the Database Because More Than One Instance of Oracle RAC is Running

When you are running OracleAS Guard in an Oracle RAC environment, you should have only one Oracle RAC instance running while performing OracleAS Guard operations. Otherwise, an error will occur where the primary database will complain that it is mounted by more than one instance, which will prevent a shutdown.

For example, when performing an OracleAS Guard create standby database operation in an Oracle RAC environment with more than one Oracle RAC instance running, the following error will be seen:

```
ASGCTL> create standby database orcl1 on stanb06v3
.
.
.
      This operation requires the database to be shutdown. Do you want to
continue? Yes or No
y
      Database must be mounted exclusive
stanb06v1: -->ASG_DUF-4950: An error occurred on host "stanb06v1" with IP
 "141.86.22.32" and port "7890"
```

```
stanb06v1: -->ASG_DUF-3514: Failed to stop database orcl1.us.oracle.com.
stanb06v1: -->ASG_DGA-13002: Error during Create Physical Standby:
Prepare-primary processing.
stanb06v1: -->ASG_DUF-3027: Error while executing Creating physical standby
 database - prepare phase at step - primary processing step.
```

14.2.9 Add Instance Adds an Instance to Topology with Empty Instancename

When you create a new database instance using the Database Configuration Assistant (DBCA), the SID defaults to the database name. If you enter a name in the SID field other than the database name, and then later add this database to the Disaster Recovery topology, the instancename in the topology added is empty.

To avoid this problem, make sure the DBName (without domain) and DBSID are the same when creating the database for a Disaster Recovery setup on primary or standby sites.

14.2.10 Create Standby Fails with if Initiated on a Different ASGCTL Shell

The `create standby` database command fails if initiated by ASG clients from any node other than the source primary node where the database resides. To avoid the problem, run the `create standby` command from the same primary (source) node, where the database for the primary site resides.

For example, if you ran the `create standby` command from the production database to the standby database where prodnode1 is the primary site database nodename and standbynode1 is its standby database nodename. The `ASGCTL shell` should always be invoked and connected to prodnode1. If you try to run `ASGCTL shell` from standbynode1 and connect to prodnode1, the `create standby` command fails.

14.2.11 Resolve Missing Archived Logs

If a `sync topology` command in a RAC-RAC Linux environment fails and you receive missing archive logs errors (as shown below), ping the standby node using tnsping. If you are unable to ping the rstandby node, stop and restart the listener for that node and retry the tnsping.

```
ASG_SYSTEM_-100: Please resolve missing archived logs and try again.
```

14.2.12 Heartbeat Failure After Failover in Alert Logs

The following warning appears in the alert logs of the database after a failover scenario, where the new primary database fails to tnsping its remote database instance.

```
Errors in file c:\oracle\product\10.2.0\admin\orcl\udump\orcl1_rfs_1816.trc:
 ORA-16009: remote archive log destination must be a STANDBY database
 .
 Fri Sep 08 09:11:13 2006
 Errors in file c:\oracle\product\10.2.0\admin\orcl\bdump\orcl1_arc1_496.trc:
 ORA-16009: remote archive log destination must be a STANDBY database
 .
 Fri Sep 08 09:11:13 2006
 PING[ARC1]: Heartbeat failed to connect to standby 'orcl1_remote1'. Error is
16009.
 Fri Sep 08 09:11:50 2006
```

```
Redo Shipping Client Connected as PUBLIC
-- Connected User is Valid
RFS[67]: Assigned to RFS process 628
RFS[67]: Database mount ID mismatch [0x4342404d:0x4341ffb0]
Fri Sep 08 09:11:50 2006
Errors in file c:\oracle\product\10.2.0\admin\orcl\udump\orcl1_rfs_628.trc:
ORA-16009: remote archive log destination must be a STANDBY database
.
Redo Shipping Client Connected as PUBLIC
-- Connected User is Valid
RFS[68]: Assigned to RFS process 2488
RFS[68]: Database mount ID mismatch [0x4342404d:0x4341ffb0]
Fri Sep 08 09:12:05 2006
Errors in file c:\oracle\product\10.2.0\admin\orcl\udump\orcl1_rfs_2488.trc:
ORA-16009: remote archive log destination must be a STANDBY database
.
Fri Sep 08 09:12:14 2006
Errors in file c:\oracle\product\10.2.0\admin\orcl\bdump\orcl1_arc1_496.trc:
ORA-16009: remote archive log destination must be a STANDBY database
```

To avoid these error messages in the alert logs, null the log_archive_dest_2 parameter using the following commands:

```
alter system set log_archive_dest_2='SERVICE=null LGWR ASYNC REOPEN=60';
alter system set log_archive_dest_state_2='defer';
```

14.2.13 Create Standby Database Fails If Database Uses OMF Storage or ASM storage

The `create standby database` command fails with ASG_ORACLE-300: ORA-01276 errors if the database storage option uses OMF (Oracle Managed Files) or ASM (Automatic Storage Management).

To work around the problem, create a new database instance using DBCA on the primary site with alternate storage options before running the`create standby database` command.

14.2.14 Database Already Exists Errors During Create Standby

If you run a `create standby` command to overwrite an existing database, you get the following error messages:

```
Checking whether standby instance already exists
proddnode1: -->ASG_DUF-4950: An error occurred on host "proddnode1" with IP
"a.b.c.d" and port "7891"
standbynode1: -->ASG_DUF-4950: An error occurred on host "standbynode1" with IP
"e.f.g.h" and port "7891"
standbynode1: -->ASG_DGA-12500: Standby database instance "db102" already exists
on host "standbynode1".
standbynode1: -->ASG_DGA-13001: Error during Create Physical Standby:
Prepare-check standby.
standbynode1: -->ASG_DUF-3027: Error while executing Creating physical standby
database - prepare phase at step - check standby step.
```

Use the `oradim -delete -sid <DBSID>` command on Windows, or remove the database entry from oratab on Unix platforms to make sure entries in the standby site for the database do not exist. Now rerun the create standby database to overwrite any existing database successfully.

15

Oracle Application Server Portal

This chapter describes issues associated with OracleAS Portal. It includes the following topics:

- Section 15.1, "Portlet and Provider Issues and Workarounds"
- Section 15.2, "Documentation Errors"

15.1 Portlet and Provider Issues and Workarounds

This section describes issues and workarounds related to OmniPortlet, Web Clipping, Simple Parameter Form, Page portlet, and WSRP providers. This section includes the following topic:

- Section 15.1.1, "Error Configuring OC4J Standalone for OmniPortlet Deployment"

15.1.1 Error Configuring OC4J Standalone for OmniPortlet Deployment

As part of the procedure to deploy OmniPortlet in a multiple middle-tier environment, you are required to create a database preference store to store the OmniPortlet preference information.

If you installed OC4J release 10.1.3, and added a `data-source` entry in the `data-sources.xml` file, then you will get errors. This is because data sources are defined differently in OC4J release 10.1.3 due to a change in the format of the `data-sources.xml` file.

To configure OC4J release 10.1.3 for OmniPortlet deployment, perform the following steps:

1. Add a new entry in the `data-sources.xml` file as described in step 8 under Section 6.3.2, "Configuring OC4J Standalone" in *Oracle Application Server Portal Developer's Guide*.
2. Edit the `provider.xml` file located in the directory, *`ORACLE_HOME`*`/j2ee/OC4J_Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet`. Edit the `preferenceStore` tag as shown in bold:

```
<provider class="oracle.webdb.reformlet.ReformletProvider">
   <vaultId>0</vaultId>
   <session>true</session>
   <preferenceStore
class="oracle.portal.provider.v2.preference.DBPreferenceStore">
      <name>omniPortletprefStore</name>
      <connection>jdbc/PooledConnection</connection>
   </preferenceStore>
```

3. Restart OC4J.

15.2 Documentation Errors

This section describes known errors in OracleAS Portal documentation. It includes the following topic:

- Section 15.2.1, "Edit Defaults Mode"

15.2.1 Edit Defaults Mode

In *Oracle Application Server Portal Developer's Guide*, the last list item under Section 3.2.6, "Edit Defaults Mode" reads as follows:

Configure OmniPortlet to use the DBPreferenceStore, and follow the steps in Section "5.3.6 Step 6: Configure Portal Tools and Web Providers (Optional)" of *Oracle Application Server Portal Configuration Guide*.

These steps in *Oracle Application Server Portal Configuration Guide* are applicable *only* for OC4J versions prior to 10.1.3. This list item should read as follows:

Configure OmniPortlet to use the database preference store. Depending on the version of OC4J that you have installed, perform either of the following:

- If you have installed an OC4J release prior to 10.1.3, then perform the steps described in section "5.3.6 Step 6: Configure Portal Tools and Web Providers (Optional)" of Oracle Application Server Portal Configuration Guide.
- If you installed OC4J release 10.1.3, then perform the following steps:

  1. Add a new entry in the `data-sources.xml` file as described in step 8 under Section 6.3.2, "Configuring OC4J Standalone" in *Oracle Application Server Portal Developer's Guide*.
  2. Edit the `provider.xml` file located in the directory, *`ORACLE_HOME`*`/j2ee/OC4J_Portal/applications/portalTools/omniPortlet/WEB-INF/providers/omniPortlet`. Edit the `preferenceStore` tag as shown in bold:

     ```
     <provider class="oracle.webdb.reformlet.ReformletProvider">
        <vaultId>0</vaultId>
        <session>true</session>
        <preferenceStore
     class="oracle.portal.provider.v2.preference.DBPreferenceStore">
           <name>omniPortletprefStore</name>
           <connection>jdbc/PooledConnection</connection>
        </preferenceStore>
     ```

  3. Restart OC4J.

16

Oracle Business Rules

This chapter describes issues associated with Oracle Business Rules. It includes the following topic:

- Section 16.1, "Standalone OC4J Rule Author Installation"

16.1 Standalone OC4J Rule Author Installation

To install Rule Author in a Standalone OC4J, do the following:

1. Deploy Rule Author EAR, found in `/Disk2/rules/webapps/ruleauthor_s.ear`.
2. Create a security group "rule-administrators".
3. Create a Rule Author user, for example, `ruleadmin`, and add this user to the "rule-administrators" group.
4. Copy the "rules" directory from an installation of Oracle Application Server into the ORACLE_HOME of the Standalone OC4J install.
5. Stop and restart OC4J.