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Administrator's Troubleshooting Guide
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Provides administrative troubleshooting information.

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Preface

This guide describes how to troubleshoot the Oracle Fusion Applications environment. It is meant to be a companion of *Oracle Fusion Applications Administrator's Guide*.

Audience

This document is intended for administrators of the Oracle Fusion Applications environment.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit

<http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

For more information, see the following documents in the Oracle Fusion Applications documentation set:

- *Oracle Fusion Applications Installation Guide*
- *Oracle Fusion Applications Administrator's Guide*

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.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

Convention	Meaning
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

What's New in This Guide

The following topics introduce the new and changed features of Oracle Fusion Applications and other significant changes that are described in this guide, and provides pointers to additional information.

New and Changed Features for 11g Release 8 (11.1.8)

Oracle Fusion Applications 11g Release 8 (11.1.8) includes the following new and changed administrative features for this document:

- New `BUSINESS FLOW TROUBLESHOOTING` job role, which lets administrators grant Oracle Fusion Applications users temporary access to the commands in the **Troubleshooting Options** dialog. See [Section 2.3.1](#).

Other Significant Changes in this Document for 11g Release 8 (11.1.8)

For 11g Release 8 (11.1.8), this guide has been updated in several ways. Following are the sections that have been added or changed.

- The chapter on content movement has been removed.
- Updated references to changed menus. For example, some menu commands that previous releases listed in the **Help** menu are now listed in the **Settings and Actions** menu.

Introduction to Troubleshooting

This chapter provides a summary of Oracle Fusion Applications information.

This chapter contains the following topics:

- [Section 1.1, "Where to Find Detailed Troubleshooting Information"](#)
- [Section 1.2, "Basic Tasks for Troubleshooting"](#)
- [Section 1.3, "Resolving Common Oracle Fusion Applications Problems"](#)

In addition to the tasks in this guide, refer to the following documentation for tasks that you may need to perform, depending on your business needs:

- "Managing Oracle Fusion Applications Log Files" chapter in the *Oracle Fusion Applications Administrator's Guide* for information about using log settings and log files to monitor normal operations for Oracle Fusion Applications.
- "Managing Oracle Fusion Applications Diagnostic Tests" chapter in the *Oracle Fusion Applications Administrator's Guide* for information about using diagnostic tests to monitor normal operations for Oracle Fusion Applications, and for information about how log files and diagnostic tests are related to each other.
- *Oracle Fusion Applications Common User Guide* in the Oracle Fusion Applications Help for information about using log settings, log files, and diagnostic tests to monitor normal operations for Oracle Fusion Applications, and for information about how log files and diagnostic tests are related to each other

1.1 Where to Find Detailed Troubleshooting Information

[Table 1–1](#) provides information on where to find troubleshooting information for your Oracle Fusion Applications environment.

Table 1–1 Troubleshooting Documentation Resources

Troubleshooting Area	Documentation
Oracle Fusion applications	Section 1.3, "Resolving Common Oracle Fusion Applications Problems"
Installation	The <i>Oracle Fusion Applications Installation Guide</i> includes validation steps throughout the provisioning and post-install processes.
Patching	The "Monitoring and Troubleshooting" chapter in the <i>Oracle Fusion Applications Patching Guide</i> .
Upgrade	The "Troubleshooting the Upgrade" chapter in the <i>Oracle Fusion Applications Upgrade Guide</i> .
Performance, scalability, reliability	"Troubleshooting Process" chapter in the <i>Oracle Fusion Applications Performance and Tuning Guide</i>

Table 1–1 (Cont.) Troubleshooting Documentation Resources

Troubleshooting Area	Documentation
Component Areas	
Oracle Business Intelligence	Oracle BI Enterprise Edition and Oracle Business Intelligence Publisher: Chapter 3, "Troubleshooting Oracle BI EE, Oracle BI Publisher, and Oracle BI Applications" Oracle Enterprise Performance Management: Chapter 6, "Troubleshooting Oracle Enterprise Performance Management" Oracle Transactional Business Intelligence: Chapter 8, "Troubleshooting Oracle Fusion Transactional Business Intelligence"
Oracle Data Integrator	Chapter 4, "Troubleshooting Oracle Data Integrator"
Oracle Enterprise Crawl and Search Framework	Chapter 5, "Troubleshooting Oracle Enterprise Crawl and Search Framework"
Oracle Enterprise Scheduler	Chapter 7, "Troubleshooting Oracle Enterprise Scheduler"
Oracle Identity Management	Chapter 9, "Troubleshooting Oracle Identity Management"
Oracle Metadata Repository	Chapter 10, "Troubleshooting Oracle Metadata Repository"
Oracle SOA Suite	Chapter 11, "Troubleshooting Oracle SOA Suite"
Oracle WebCenter Content	Chapter 12, "Troubleshooting Oracle WebCenter Content"
Oracle WebCenter Portal	Chapter 13, "Troubleshooting Oracle WebCenter Portal"

1.2 Basic Tasks for Troubleshooting

From time to time, you may receive a user complaint or an automatically generated incident notification about a problem with a particular Oracle Fusion application. For any problem that does not have an immediate and obvious solution, you can diagnose and resolve the problem more effectively by becoming familiar with incident functionality and by using a systematic process for troubleshooting.

While any problem may have unique features, the information that you gather systematically is likely to be useful during the troubleshooting process. The recommended process varies somewhat depending on whether or not your Oracle Fusion Applications environment includes Oracle Enterprise Manager Cloud Control.

1.2.1 Process for Investigating, Reporting, and Solving a Problem Using Cloud Control

If your Oracle Fusion Applications environment includes Cloud Control, you can use the **Problem Analysis** and **Analyze Logs** options in Cloud Control to help you focus your investigation on the log messages and metrics that are most likely to help you determine the cause of the problem. You can also use **Problem Analysis** to make quick assessments of the health of your system, when no problems have been reported. For more information about using **Problem Analysis** for general monitoring, see the "Monitoring the Oracle Fusion Applications Middle Tier" chapter in *Oracle Fusion Applications Administrator's Guide*.

To help diagnose and address a problem in an Oracle Fusion Applications environment that includes Cloud Control, use the process steps described in the following table:

Table 1–2 Tasks for Troubleshooting Oracle Fusion Applications Using Cloud Control

Task	Description	Documentation
Prerequisite	Before you diagnose a problem, familiarize yourself with the known issues for Oracle Fusion Applications with the Oracle Fusion Applications release notes.	Oracle Fusion Applications release notes
1 - Note error message details	If an Oracle Fusion application user reports an error message to you, make a note of any specific information that the error message may have provided, such as Incident ID, Server Domain, Server Instance, or Application Name.	Not applicable
2 - Use Problem Analysis to get details about specific metrics	If there is an alert for a particular metric, then use the Problem Analysis option in Cloud Control to scan performance metric charts, target status tables, and relevant log portions for indications of problem causes.	For information about using the Problem Analysis option, see Section 2.2.6 .
3 - Make sure there is an incident record associated with the error or problem	If no incident was generated, create an incident manually. Using incidents for all problems helps you organize the information that you gather during the troubleshooting process.	For information about creating an incident manually, see Section 2.2.2.4 .
4 - Perform relevant diagnostic dumps	If the cause of the problem is still uncertain, manually perform any relevant diagnostic dumps, assigning the dump results to the incident you created.	For information about performing Oracle Fusion Middleware dumps, see the "Working with Diagnostic Dumps" section in the <i>Oracle Fusion Middleware Administrator's Guide</i> .
5 - Examine dumps, diagnostic test results, and other incident information	Examine any incident information that has been collected, such as any QuickTrace dumps or diagnostic test results that are associated with the incident, whether those dumps and test results were collected automatically or manually. You can view the results of diagnostic tests that are associated with an incident either from the Incident Detail page in Support Workbench or from the Diagnostic Dashboard application.	For more information about working with QuickTrace dumps, see Section 2.2.3 . For more information about viewing incident details from Support Workbench, see Section 2.2.2.1 . For more information about using the Diagnostic Dashboard application to view diagnostic test results, see the "Viewing the Results of Diagnostic Tests" section in the <i>Oracle Fusion Applications Administrator's Guide</i> .

Table 1–2 (Cont.) Tasks for Troubleshooting Oracle Fusion Applications Using Cloud

Task	Description	Documentation
6 - Review log file entries	If the cause of the problem is still uncertain, view recent information in the standard log files for any of the following that may be relevant: Oracle Fusion Applications Oracle Fusion Middleware Oracle Business Intelligence Oracle Enterprise Scheduler Service Oracle Service-Oriented Architecture (SOA) Suite	For more information about locating log files for Oracle Fusion Applications, see the "Typical Log File Locations" section in the <i>Oracle Fusion Applications Administrator's Guide</i> . For more information about locating log files for Oracle Fusion Middleware components, see the "Log File Location" table in <i>Oracle Fusion Middleware Administrator's Guide</i> . For more information about locating log files for Oracle Enterprise Scheduler, see the "Managing Logging for Oracle Enterprise Scheduler" or "Managing Log File Space Usage for C Applications," sections in <i>Oracle Fusion Applications Administrator's Guide</i> , or Section 2.5.4.2 .
7 - Associate additional diagnostic test results with the incident	If you want to run more diagnostic tests for the relevant Oracle Fusion application or attach the results of such manually-run diagnostic tests to the incident, navigate from Cloud Control to the Diagnostic Dashboard application to perform those tasks.	For information about obtaining or granting access to the Diagnostic Dashboard application, see the "Controlling Access to Diagnostic Testing Functionality" section in the <i>Oracle Fusion Applications Administrator's Guide</i> . For information about navigating from Cloud Control to the Diagnostic Dashboard application, see the "Navigating to the Diagnostic Dashboard Application from Cloud Control" section in the <i>Oracle Fusion Applications Administrator's Guide</i> . For information about using the Diagnostic Dashboard application to run diagnostic tests, see the "Using Diagnostic Tests to Monitor Normal System Health" section in the <i>Oracle Fusion Applications Administrator's Guide</i> . For information about the individual diagnostic tests that are provided with this release, see the <i>Oracle Fusion Applications Common User Guide</i> in Oracle Fusion Applications Help. For information about adding diagnostic test results to an incident, see Section 2.6.3 .

Table 1–2 (Cont.) Tasks for Troubleshooting Oracle Fusion Applications Using Cloud

Task	Description	Documentation
8 - Adjust log settings to gather more information and attempt to replicate the problem	<p>If necessary, change the setting that governs the amount of information to be logged, try to replicate the problem, and inspect the newly logged information.</p> <p>The steps for increasing the amount of information to be logged may vary depending on the application involved:</p> <p>For most Oracle Fusion applications, standardized logging mechanisms place information in log files that you can view from Fusion Applications Control. You can increase the amount of information to be gathered for a particular user or for a whole site.</p> <p>If the problem occurred in an application that uses nonstandard mechanisms for logging, such as certain Oracle Fusion Incentive Compensation batch jobs, certain Oracle Fusion General Ledger batch jobs, or the AutoInvoice portion of the Oracle Fusion Receivables application, then you may need to turn on a logging facility that is normally disabled and specify the kind of information you want to gather.</p>	<p>For more information about logging more information from an Oracle Fusion application that uses standard logging mechanisms, see Section 2.3.1 and the "Using Profile Options to Configure Standard Log Settings" section in the <i>Oracle Fusion Applications Administrator's Guide</i>.</p> <p>For more information about logging more information from an Oracle Fusion application or component that uses nonstandard logging mechanisms, see the "Using Additional Settings to Configure Logs for Selected Components" section in the <i>Oracle Fusion Applications Administrator's Guide</i>.</p>
9 - Search My Oracle Support for related information and solutions	<p>If the cause of the problem is still uncertain, click My Oracle Support Knowledge in the Problem Details or Incident Details page and log in to the My Oracle Support knowledge base to search for related information and solutions.</p>	<p>For more information about using My Oracle Support, see Section 14.1.</p>
10 - File a service request with Oracle Support, including all relevant information	<p>If you have not succeeded in resolving the problem, use Support Workbench to package the problem or incident along with all related dump files and diagnostic reports and then send the package to Oracle Support as a Service Request.</p>	<p>For more information, see Section 2.2.2.5 and the topic "Problem Details Page" in the Cloud Control online help.</p>

1.2.2 General Process for Investigating, Reporting, and Solving a Problem

To help diagnose and address a problem in an Oracle Fusion Applications environment that does not include Cloud Control, use the process steps described in the following table:

Note: All Oracle Fusion Applications customers can use the Automatic Diagnostic Repository Command Interpreter (`adrci`) to work with incidents. However, if your Oracle Fusion Applications environment includes Cloud Control, it is recommended that you use Support Workbench to work with incidents, as it provides more convenient ways to perform operations that otherwise require knowledge of specific (`adrci`) commands.

Table 1–3 Tasks for Troubleshooting Oracle Fusion Applications Without Cloud Control

Task	Description	Documentation
Prerequisite	Before you diagnose a problem, familiarize yourself with the known issues for Oracle Fusion Applications with the Oracle Fusion Applications release notes.	Oracle Fusion Applications release notes
1 - Note error message details	If an Oracle Fusion application user reports an error message to you, make a note of any specific information that the error message may have provided, such as Incident ID, Server Domain, Server Instance, and Application Name.	Not applicable
2 - Search for any applicable error message documentation	Check whether the specific error message you are troubleshooting is documented.	For information about Oracle Fusion Middleware error messages, see the <i>Oracle Fusion Middleware Error Messages Reference</i> . For information about error messages that are specifically related to Oracle Fusion Applications, see any of the later chapters of this book that relate to the problem you are troubleshooting.
3 - Make sure there is an incident record associated with the error or problem	If no incident was generated automatically, use Oracle WebLogic Scripting Tool (WLST) to create an incident manually. Using incidents for all problems helps you organize the information that you gather during the troubleshooting process.	For information about creating an incident manually, see the "Creating an Incident Manually" section in the <i>Oracle Fusion Middleware Administrator's Guide</i> .)
4 - Perform any additional relevant diagnostic dumps and assign the results to the incident	If the cause of the problem is uncertain, manually perform any relevant diagnostic dumps, assigning the dump results to the incident you created.	For information about performing Oracle Fusion Middleware dumps, see the "Working with Diagnostic Dumps" section in the <i>Oracle Fusion Middleware Administrator's Guide</i> .

Table 1–3 (Cont.) Tasks for Troubleshooting Oracle Fusion Applications Without Cloud

Task	Description	Documentation
5 - Examine dumps, diagnostic test results, and other incident information	Examine any information that was collected and stored in the incident directory, such as QuickTrace dumps, Oracle Fusion Middleware dumps, and the results of any Oracle Fusion Applications diagnostic tests that may have been run, whether the tests and dumps were run automatically or were created manually.	For more information about incident directory locations, see Section 2.2.2 . For more information about how to work with QuickTrace dumps, see Section 2.2.3 .
6 - Review log file entries	If the cause of the problem is still uncertain, view recent information in the log files for any of the following that may be relevant: Oracle Fusion Applications Oracle Fusion Middleware components	For more information about locating log files for Oracle Fusion Applications, see the section "Typical Log File Locations" in <i>Oracle Fusion Applications Administrator's Guide</i> . For more information about locating log files for Oracle Fusion Middleware components, see the "Log File Location" table in the <i>Oracle Fusion Middleware Administrator's Guide</i> . For more information about locating log files for Oracle Enterprise Scheduler, see the "Managing Logging for Oracle Enterprise Scheduler," "Managing Log File Space Usage for C Applications," or Section 2.5.4.2 .

Table 1–3 (Cont.) Tasks for Troubleshooting Oracle Fusion Applications Without Cloud

Task	Description	Documentation
7 - Associate additional diagnostic test results with the incident	Using the Diagnostic Dashboard application, search for and run any additional diagnostic tests that are related to the Oracle Fusion application feature in which the problem occurred, inspect the results, and manually associate the results with the incident.	<p>For information about obtaining or granting access to the Diagnostic Dashboard application, see the "Controlling Access to Diagnostic Testing Functionality" section in the <i>Oracle Fusion Applications Administrator's Guide</i>.</p> <p>For information about navigating to the Diagnostic Dashboard application, see the "Navigating to the Diagnostic Dashboard Application from an Oracle Fusion Application" section in the <i>Oracle Fusion Applications Administrator's Guide</i>.</p> <p>For information about using the Diagnostic Dashboard application to run diagnostic tests, see the "Using Diagnostic Tests to Monitor Normal System Health" section in the <i>Oracle Fusion Applications Administrator's Guide</i>.</p> <p>For information about the individual diagnostic tests that are provided with this release, see the <i>Oracle Fusion Applications Common User Guide</i> in Oracle Fusion Applications Help.</p> <p>For information about adding diagnostic test results to an incident, see Section 2.6.3.</p>

Table 1–3 (Cont.) Tasks for Troubleshooting Oracle Fusion Applications Without Cloud

Task	Description	Documentation
8 - Adjust log settings to gather more information and attempt to replicate the problem	<p>If necessary, change the setting that governs the amount of information to be logged, try to replicate the problem, and inspect the newly logged information.</p> <p>The steps for increasing the amount of information to be logged may vary depending on the application involved:</p> <p>For most Oracle Fusion applications, standardized logging mechanisms place information in log files that you can view from Fusion Applications Control. You can increase the amount of information to be gathered for a particular user or for a whole site.</p> <p>If the problem occurred in an application that uses nonstandard mechanisms for logging, such as certain Oracle Fusion Incentive Compensation batch jobs, certain Oracle Fusion General Ledger batch jobs, or the AutoInvoice portion of the Oracle Fusion Receivables application, then you may need to turn on a logging facility that is normally disabled and specify the kind of information you want to gather.</p>	<p>For more information about logging more information from an Oracle Fusion application that uses standard logging mechanisms, see Section 2.3.1 and the "Using Profile Options to Configure Standard Log Settings" section in the <i>Oracle Fusion Applications Administrator's Guide</i>.</p> <p>For more information about logging more information from an Oracle Fusion application or component that uses nonstandard logging mechanisms, see the "Using Additional Settings to Configure Logs for Selected Components" section in the <i>Oracle Fusion Applications Administrator's Guide</i>.</p>
9 - Search My Oracle Support for related information and solutions	If the cause of the problem is still uncertain, search the My Oracle Support knowledge base for related information and solutions.	For more information about using My Oracle Support, see Section 14.1 .
10 - File a service request with Oracle Support, including all relevant information	If you have not succeeded in resolving the problem, use the Automatic Diagnostic Repository Command Interpreter (<code>adrci</code>) to package the problem or incident along with all related dump files and diagnostic reports, and then send the package to Oracle Support as a Service Request.	For more information about adding files to an incident and packaging the incident into a zip file, see the "Packaging an Incident" section in the <i>Oracle Fusion Middleware Administrator's Guide</i> .

1.3 Resolving Common Oracle Fusion Applications Problems

The following resources provide common Oracle Fusion applications issues users may encounter:

- "Troubleshooting Customizations" section in the *Oracle Fusion Applications Extensibility Guide for Developers*
- "Troubleshooting UI Shell Issues" section in the *Oracle Fusion Applications Developer's Guide*

This section describes additional application-specific errors you can resolve for end users:

- [Section 1.3.1, "File Uploads Fail"](#)

- [Section 1.3.2, "Search Is Not Available for an Oracle Fusion Application"](#)

1.3.1 File Uploads Fail

Problem

When the end user attempts to upload a file that is too large, the application displays the following message:

Warning: The file upload failed.
The file could not be uploaded because it is too large.

Solution

Replace the entire `org.apache.myfaces.trinidad.webapp.UploadedFileProcessor` class with the `<uploaded-file-processor>` element in the `trinidad-config.xml` configuration files. see the "What You May Need to Know About Temporary File Storage" section in the *Oracle Fusion Middleware Web User Interface Developer's Guide for Oracle Application Development Framework*.

1.3.2 Search Is Not Available for an Oracle Fusion Application

Problem

The **Search** area in the global area of an Oracle Fusion application does not display



Solution

To resolve this problem, perform the procedure in the "Enable the Oracle Fusion Applications Search UI" section of the *Oracle Fusion Applications Administrator's Guide*.

Troubleshooting Oracle Fusion Applications Using Incidents, Logs, QuickTrace, and Diagnostic Tests

This chapter describes how to use incidents, log settings, log files, QuickTrace, and diagnostic tests to help diagnose and resolve problems with Oracle Fusion Applications.

This chapter also describes how incidents are related to log files, QuickTrace output, and diagnostic tests.

This chapter contains the following topics:

- [Section 2.1, "Understanding Troubleshooting Using Incidents, Logs, QuickTrace, and Diagnostic Tests"](#)
- [Section 2.2, "Investigating, Reporting, and Solving a Problem"](#)
- [Section 2.3, "Configuring Log, QuickTrace, and Incident Settings for Troubleshooting"](#)
- [Section 2.4, "Configuring the Diagnostic Testing Framework for Troubleshooting"](#)
- [Section 2.5, "Troubleshooting Using Log Settings"](#)
- [Section 2.6, "Troubleshooting Using the Diagnostic Testing Framework"](#)

For information about using log settings and log files to monitor normal operations for Oracle Fusion Applications, see the "Managing Oracle Fusion Applications Log Files" chapter in the *Oracle Fusion Applications Administrator's Guide*.

For information about using diagnostic tests to monitor normal operations for Oracle Fusion Applications, and for information about how log files and diagnostic tests are related to each other, see the "Managing Oracle Fusion Applications Diagnostic Tests" chapter in the *Oracle Fusion Applications Administrator's Guide*.

For more information about the individual diagnostic tests that are provided with this release, see the *Oracle Fusion Applications Common User Guide* in Oracle Fusion Applications Help.

2.1 Understanding Troubleshooting Using Incidents, Logs, QuickTrace, and Diagnostic Tests

Whenever you encounter a problem with Oracle Fusion Applications, it is recommended that you use incidents to organize your troubleshooting process. Incidents are collections of information about problematic system events. For effective

troubleshooting, you use incidents along with log files, QuickTrace dumps, and diagnostic tests.

2.1.1 Understanding Incidents

Incidents are collections of information about problematic system events. Incidents can be created automatically or manually. Most automatically created incidents contain information about the state of a particular Oracle WebLogic Server domain at the time when a specific problem occurred. Monitoring for and responding to incidents is a standard activity for help desk staff who support Oracle Fusion Applications in organizations that use Information Technology Infrastructure Library (ITIL) best practices.

You can use incidents to diagnose and resolve problems, or to supply your help desk personnel or Oracle Support personnel with information about more complex problems. Oracle developers set up error messages in such a way that incidents are created automatically when certain high-priority error conditions occur. If a problem occurs for which no incident is created automatically, then it is strongly recommended that you create an incident manually and use that incident to help organize the information that you gather as you troubleshoot the problem.

Most automatically created Oracle Fusion Applications incidents include diagnostic dump files. Dump files are provided to assist you in resolving incidents for your organization and to assist Oracle representatives in providing you with effective support when needed. The types of dump files provided depend on the nature of the incident. Some incidents include Oracle Fusion Middleware dump files such as Oracle WebLogic Server diagnostic images, Java Virtual Machine thread dumps, and Dynamic Monitoring Service metric dumps. For more information about Oracle Fusion Middleware dumps, see the "Diagnosing Problems" chapter in the *Oracle Fusion Middleware Administrator's Guide*.

Note: Each Oracle Fusion Applications module is written in one of the following code languages: Java, SOA, PL/SQL, or C. The amount and type of information automatically included with an incident may vary depending on the coding language of the relevant application module.

In general, you can administer Oracle Fusion Applications without knowing which programming language implements particular modules. However, to monitor and diagnose all types of incidents successfully, it is important to become familiar with all of the incident configuration settings and the types of diagnostic dump files that are automatically provided for different kinds of incidents.

For more information about incident configuration settings for Oracle Fusion Applications, see [Section 2.3.4](#).

Oracle Fusion Applications incidents may also contain diagnostic log excerpts and diagnostic test results that are specific to Oracle Fusion Applications. Before you transmit incident information to Oracle Support personnel, you can add more information (such as screen shots or more log file information) to incidents that were created either automatically or manually.

2.1.2 Relationships Between Incidents, QuickTrace Dumps, Log Files, and Diagnostic Tests

Incidents are designed to work along with other diagnostic features in your Oracle Fusion applications:

- **Error-handling:** The Oracle Fusion Applications code that handles errors is designed so that errors that need quick attention automatically create incidents. When an incident is automatically created, log file excerpts are collected and associated with the incident automatically. Depending on your system configuration and the type of error, QuickTrace buffer contents and the results of automatically triggered diagnostic tests may also be collected and be associated with the incident automatically.
- **Diagnostic tests:** Oracle developers create tests that you can use to help diagnose and resolve Oracle Fusion application problems. A diagnostic test may or may not be associated with a particular error message. If Java or SOA code in an Oracle Fusion application handles a particular error in a way that triggers the creation of an incident, then any diagnostic tests that are associated with the error message for the incident run automatically. The test results are associated with the incident and the identity of the user who received the error message is recorded.
- **Log files:** By default, whenever an Oracle Fusion Applications incident is created automatically, an `INCIDENT_ERROR` level entry is recorded in the standard Oracle Fusion Applications log file and a copy of that log file is included with the incident. If the incident occurs in Oracle Fusion Middleware code, then two different kinds of log information are automatically included with the incident: a dump file containing all log entries for the relevant execution context ID (ECID) and either a complete log file or a log file excerpt starting 5 minutes before the incident.

For some incidents, you may find all of the information that you need to resolve the problem in the log or dump files automatically included with the incident. In other cases, you may need to configure your system to log more detailed information, attempt to reproduce the problem, and then use the more detailed information in the log to diagnose the problem.

- **QuickTrace:** If you need to troubleshoot a problem that has generated an incident, and if the information in the relevant Oracle Fusion application log file is insufficient to resolve the problem, then a QuickTrace dump file included with the incident information may supply you with the additional information you need. If so, you can avoid increasing the amount of information to be logged and then attempting to reproduce the problem. (In general, you should increase the level of detail that you collect in your Oracle Fusion Applications logs only when absolutely necessary, because collecting additional information may decrease system performance.)

By default, QuickTrace continuously records a specified level of log detail in an area of memory, generally at a more granular level of detail than is recorded in Oracle Fusion application log files. The memory that QuickTrace uses is recycled on an ongoing basis, with the oldest information being overwritten first. Because QuickTrace does not format information and because it writes to memory instead of to a log file, it can gather operational information continuously without significantly affecting system performance. The information that QuickTrace stores in memory is written to disk only when an incident occurs or when an administrator manually dumps the contents of a QuickTrace buffer.

Note: The same commands in Oracle Fusion Applications code cause messages to be logged both in Oracle Fusion application diagnostic log files and in QuickTrace dumps. However, your system may gather different amounts of detail for the two kinds of output. At default setting levels, QuickTrace stores much more detailed information than diagnostic log files do.

- Version information: If you request assistance from Oracle Support to resolve an incident, you may be asked to provide information about the Oracle product versions you are running along with the incident information. In your Oracle Fusion applications, you can obtain some product version information by selecting *About Applications* from the **Settings and Actions** menu. Additional version information can be obtained from Oracle Configuration Manager (OCM) and from Remote Diagnostic Agent (RDA) reports. For more information about OCM, see the *Oracle Configuration Manager Installation and Administration Guide*. For more information about RDA, see the "Generating an RDA Report" section in the *Oracle Fusion Middleware Administrator's Guide*.

You may also find it helpful to view the performance metrics provided by the Dynamic Monitoring Service (DMS). For more information, see the chapter about the Oracle Dynamic Monitoring Service in the *Oracle Fusion Middleware Performance and Tuning Guide*.

2.1.3 Introduction to the Oracle Fusion Middleware Diagnostic Framework

The Oracle Fusion Middleware Diagnostic Framework provides most of the technologies for creating and handling incidents for Oracle Fusion Applications. For information about the Oracle Fusion Middleware Diagnostic Framework, see the "Understanding the Diagnostic Framework" section in the *Oracle Fusion Middleware Administrator's Guide*.

2.1.4 Standard Incident Administration Tasks and Tools

The following administrative tasks are part of administering incidents:

- Adjusting configuration settings for incidents
- Using Oracle Enterprise Manager Fusion Applications Control (Fusion Applications Control) to monitor for incidents that are created automatically
- Creating incidents manually (if a problem occurs without creating an incident manually)
- Using incident information to diagnose and resolve the problems that are reported in incidents
- Adding additional diagnostic information (such as additional log file excerpts or screen shots) to existing incidents
- Packaging incident information and sending it to Oracle Support as part of obtaining assistance in resolving problems

The standard tools that you use to complete these tasks include:

- Fusion Applications Control user interface (for configuring incident settings)
- Log Viewer (part of Application Server Control, for viewing log files that you may add to incidents)

- Automatic Diagnostic Repository Command Interpreter (ADRCI) utility (for viewing and packaging incidents, provided with each instance of the Automatic Diagnostic Repository (ADR) in Oracle Fusion Applications, Oracle Fusion Middleware, and Oracle Database)

For more information about using ADRCI, see [Section 2.2.2](#), the "ADRCI Command-Line Utility" section in the *Oracle Fusion Middleware Administrator's Guide*, and the "ADRCI: ADR Command Interpreter" chapter of *Oracle Database Utilities*.

- Oracle WebLogic Scripting Tool (WLST) commands related to incidents provided by the Oracle Fusion Middleware Diagnostic Framework.

For more information about these commands, see the "WLST Commands for Diagnostic Framework" section in the *Oracle Fusion Middleware Administrator's Guide*.

- SQL Trace (for assessing the efficiency of the SQL statements that Oracle Fusion applications are running)

For more information about SQL Trace, see the "Using SQL Tracing" section in the *Oracle Fusion Applications Administrator's Guide*.

2.2 Investigating, Reporting, and Solving a Problem

From time to time, you may receive a user complaint or an automatically generated incident notification about a problem with a particular Oracle Fusion application. For any problem that does not have an immediate and obvious solution, you can diagnose and resolve the problem more effectively by becoming familiar with incident functionality and by using a systematic process for your troubleshooting process.

2.2.1 Process for Investigating, Reporting, and Solving a Problem

When you become aware of a problem with a particular Oracle Fusion application, you can use a systematic process to help diagnose and address the problem. While any problem may have unique features, the information that you gather systematically is likely to be useful during the troubleshooting process. For information about the process to use, see [Section 1.2](#).

2.2.2 Managing Oracle Fusion Applications Problems and Incidents

All Oracle Fusion Applications customers can use the ADRCI utility to work with incidents. However, if your Oracle Fusion Applications environment includes Oracle Enterprise Manager Cloud Control (Cloud Control), then it is recommended that you use Support Workbench to work with incidents, because it provides more convenient ways to perform operations that otherwise require knowledge of specific ADRCI commands.

Regardless of which tool you use to work with incidents, for Oracle Fusion Applications, Oracle Fusion Middleware, and Oracle Database, incidents are stored in the `incident` subdirectories of the Automatic Diagnostic Repository (ADR) home directories. However, the location of the appropriate ADR home directory for a given incident depends on the environment from which the incident was created. In all cases, incidents are stored separately from log files.

Paths to directories that contain incident information begin with the path to the ADR base directory, where *domain* is the full path to an Oracle Fusion Applications domain, including the name of the physical Oracle WebLogic Server domain:

(UNIX) `domain/servers/managed_server_name/adr`
(Windows) `domain\servers\managed_server_name\adr`

The ADR base directory path is followed by the path to one of several possible incident directories.

For an incident that involves Oracle Fusion Middleware code, the incident information is stored under the following location, where, *domain_name* is the name of the Oracle Fusion Applications domain, and *server_name* is the name of the server where the incident occurred:

(UNIX) `ADR_base_directory/diag/ofm/domain_name/server_name/incident`
(Windows) `ADR_base_directory\diag\ofm\domain_name\server_name\incident`

For an incident that involves Java code or a SOA composite in an Oracle Fusion application, the incident information is stored under the following location, where *application_name* is the name of the Oracle Fusion application that was executing when the incident occurred:

(UNIX) `ADR_base_directory/diag/ofm/fusionapps/application_name/incident`
(Windows) `ADR_base_directory\diag\ofm\fusionapps\application_name\incident`

For an incident that involves PL/SQL code in an Oracle Fusion application, the incident information is stored under the following location:

(UNIX) `ADR_base_directory/diag/ofm/db_server_name/database_instance/incident`
(Windows) `ADR_base_directory\diag\ofm\database_server\database_instance\incident`

For an incident that involves Oracle Database code, the incident information is stored under the following location:

(UNIX) `ADR_base_directory/diag/rdbms/db_server_name/database_instance/incident`
(Windows) `ADR_base_directory\diag\rdbms\database_server\database_instance\incident`

For an incident that involves C code in an Oracle Fusion application, the incident information is stored on the Java application server that runs C batch jobs using Oracle Enterprise Scheduler. On that server, the incidents are stored under the following location, where *ess_hosted_app_name* is the name of the Oracle Fusion application that starts batch jobs:

(UNIX) `ADR_base_directory/diag/ofm/fusionapps/ess_hosted_app_name/incident`
(Windows) `ADR_base_directory\diag\ofm\fusionapps\ess_hosted_app_name\incident`

The exact name of the application that starts batch jobs depends upon which product family is in use. Typical values include **FinancialsEssApp**, **HcmEssApp**, **CrmEssApp**, **ProjectFinancialsEssApp**, **ProcurementEssApp**, and **ScmEssApp**. You can determine the correct *ess_hosted_app_name* name for your Oracle Fusion application by using Fusion Applications Control for the application. In the navigation pane, if you expand the folder that is labeled with the product family name and then expand the **Fusion Applications** folder, the *ess_hosted_app_name* is the name under **Fusion Applications** that contains **EssApp**.

2.2.2.1 Viewing Incidents Using Support Workbench

If your Oracle Fusion Applications environment includes Cloud Control, it is recommended that you use Support Workbench to work with incidents, because it is simpler to use than ADRCI.

Note: To use Support Workbench with Oracle Fusion Applications, you must obtain and install Cloud Control.

As part of viewing problem or incident details using Support Workbench, you must supply credentials both to connect to the Oracle WebLogic Server on which the relevant Oracle Fusion application is running, and to connect to the host machine on which that Oracle WebLogic Server is running.

To view Oracle Fusion Applications incidents using Support Workbench:

1. In Cloud Control, select one of the following Oracle Fusion Applications target types:
 - Oracle Fusion Applications instance
 - Product family
 - Cluster application
 - J2EE application

Note: You can find cluster application and J2EE targets in navigation hierarchical trees under the product family name and the Fusion Applications folder. If the tree you are viewing includes Oracle Fusion Applications instance names, you must click a product family name to navigate to a page that displays cluster application and J2EE targets in the navigation tree.

2. From the dynamic dropdown menu, choose **Diagnostics > Support Workbench**.

If you selected a J2EE application as your target, then the **Login to Support Workbench** page appears. Skip to Step 6.

If you selected an Oracle Fusion application instance target, an Oracle Fusion product family target, or an Oracle Fusion Applications cluster application target, then the rollup page for Support Workbench appears, summarizing the Support Workbench problems that are related to your target.

Note: If you want to return to this Support Workbench rollup page at a later time, from another Support Workbench page (such as **Incident Details** or the page that summarizes problems for a selected Fusion J2EE Application target), you can do so by clicking the **Diagnostics** link in the **Related Links** section of the page that corresponds to your selected target type:

- **Fusion Instance Diagnostics**
 - **Fusion Product Family Diagnostics**
 - **Fusion Cluster Application Diagnostics**
-
-

3. From the **View By** dropdown list, select **Deployed Application**.

Note: In order for this page to display links for the number of problems and incidents for Oracle Fusion Applications targets, you must view the data by deployed application, rather than by product. The links for number of problems and incidents that appear in the **Support Workbench Infrastructure Problems and Incidents** table at the bottom of this page are for Oracle WebLogic Server targets, rather than Oracle Fusion Applications targets.

4. From the **View Data** dropdown list, select the time frame that contains the problem or incident that interests you.
5. In the **Problems and Incidents** table, click a link for the number of problems or incidents that interests you.
The **Login to Support Workbench** page appears.
6. In the **Host Credentials** area of the page, use one of the following methods to select credentials for connecting to the machine that hosts the Oracle WebLogic Server on which the Oracle Fusion application was running when the problem or incident occurred:
 - If appropriate credentials were saved as preferred credentials, then select **Preferred** in the **Credential** field.
 - If appropriate credentials were saved as named credentials, then select **Named** in the **Credential** field and then select the specific credentials from the **Credential Name** dropdown list.
 - If appropriate credentials were not set, then select **New** in the **Credential** field and complete the following substeps:
 - a. In the **UserName** and **Password** fields, enter credential values for connecting to the host machine.
 - b. Inspect the default credential name supplied by Support Workbench in the **Save As** field, and modify the credential name if you prefer.
 - c. If you want the credentials you are entering to be the preferred credentials, then select the **Set as Preferred Credentials** checkbox.
The Preferred Host Credential is checked against the host machine's user names and passwords, but the preference is only set for the currently selected WebLogic server, even if multiple WebLogic servers run on that host machine.
 - d. If you want to verify that the credentials you entered work correctly, then click **Test**.
7. In the **WebLogic Server Credentials** area of the page, use one of the following methods to select credentials for connecting to the Oracle WebLogic Server where the Oracle Fusion application was running when the problem or incident occurred:

Note: If you are not prompted for **WebLogic Server Credentials**, then that indicates that the relevant Oracle WebLogic Server is currently unavailable. Some operations cannot be done when the server is unavailable, such as creating user-reported problems and performing additional diagnostic dumps. For information about restarting an Oracle WebLogic Server, see the "Starting and Stopping Servers" chapter in *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic Server*.

- If appropriate credentials were saved as preferred credentials, then select **Preferred** in the **Credential** field.
 - If appropriate credentials were saved as named credentials, then select **Named** in the **Credential** field and then select the specific credentials from the **Credential Name** dropdown list.
 - If appropriate credentials were not set, then select **New** in the **Credential** field and complete the following substeps:
 - a. In the **UserName** and **Password** fields, enter credential values for connecting to the Oracle WebLogic Server.
 - b. Inspect the default credential name supplied by Support Workbench in the **Save As** field, and modify the credential name if you prefer.
 - c. If you want the credentials you are entering to be the preferred credentials for the currently selected Oracle WebLogic server, select the **Set as Preferred Credentials** checkbox.
8. Click **Continue**.
- A Support Workbench page that summarizes problems related to your target now appears.
9. Click the **Problems** tab and select the relevant time period from the **View** dropdown list.
10. In the **Details** column of the table, click **Show** for the problem that interests you.
11. In the list of incidents for the problem you selected, click the **Incidents** link for the incident that occurred at the time that interests you.
- The **Incident Details** page appears.
12. In the **Dump Files** table, inspect the list of dump files that are associated with this incident, click the **View Contents** link for any dump file that interests you, and use standard operating system steps to indicate whether to open the file or download it.
13. If you want to create an additional dump file, then click the **Additional Diagnostics** tab, select the kind of dump you want to create, and click **Run**.
14. In the **Run User Action** page, enter any required input parameters and choose when to create the dump, and click **Submit**.
15. Click **OK** to dismiss the confirmation message that appears when the dump operation completes.
16. To view the new dump file, repeat Step 12.
17. To create additional dump files, repeat Steps 13 through 15.

For information about using Support Workbench to package an incident and send it to Oracle Support, see [Section 2.2.2.5](#).

2.2.2.2 Viewing Incidents Using the Automatic Diagnostic Repository Command Interpreter (ADRCI)

If your Oracle Fusion Applications environment does not include Cloud Control, then you must use the ADRCI utility to work with incidents.

To view incidents using the ADRCI utility:

1. Log in to the server that contains the Automatic Diagnostic Repository (ADR) that was mentioned in any incident notifications you received.

This may be a repository for either Oracle Database or Oracle Fusion Middleware. The notification may be either a message received by an Oracle Fusion Applications user or an alert email that Oracle Enterprise Manager sent to designated administrators.

2. At an operating system prompt, navigate to the directory that contains a copy of the ADRCI utility that is associated with the ADR home for the incident.
 - If the incident notification referred to an Automatic Diagnostic Repository for Oracle Database, then navigate to `DB_ORACLE_HOME/bin` (for UNIX) or `DB_ORACLE_HOME\bin` (for Windows), where `DB_ORACLE_HOME` is the home directory for Oracle Database. For information about home directories for Oracle Database, see the "Overview of Oracle Database Installation" chapter in the *Oracle Database Installation Guide for Microsoft Windows*.
 - If the incident notification referred to an Automatic Diagnostic Repository for Oracle Fusion Middleware, then navigate to `WL_HOME/server/adr` (for UNIX) or `WL_HOME\server\adr` (for Windows), where `WL_HOME` is the home directory for the Oracle WebLogic Server. For more information about the structure of home directories for Oracle Fusion Applications, see the "Provisioned Oracle Fusion Applications Home Directories" section in the *Oracle Fusion Applications Administrator's Guide*.
3. At the prompt, enter `adrci`.
4. Determine where the incident information is stored.
 - a. At an `adrci` prompt, enter `show base` to display the path to the Automatic Diagnostic Repository (ADR) base directory.
 - b. At an `adrci` prompt, enter `show homes` to display the path to the ADR home directory, under the ADR base directory.
 - c. Make a note of the location of the incident directory, which is a subdirectory of the ADR home directory.
5. At an `adrci` prompt, enter `show incident`.

This command lists all the incidents that were created in the incident subdirectory of the ADR home directory.

6. If you already know the ID number of the incident you are investigating, skip to Step 8.

Otherwise, inspect the appropriate `diagnostic.log` file and make a note of either the `incident_ID` value or the `incidentCustomId` value in the relevant log message.

Note: Due to a technical limitation, incidents that are created from PL/SQL code log `incidentCustomId` values rather than `incident_ID` values.

For more information about viewing `diagnostic.log` files, see the "Viewing and Searching Log Files During Normal Operation" section in the *Oracle Fusion Applications Administrator's Guide*.

7. If the `diagnostic.log` file supplies the relevant `incident_ID` value, skip to Step 8.

Otherwise, enter the following command at an `adrci` prompt, substituting the appropriate `incidentCustomId` value, and inspect the output for the `incident_ID` value:

```
show incident -mode detail -p "ERROR_ARG1='incidentCustomID'";
```

8. To view detailed information about the incident for which you now know the incident ID number, enter the following command at an `adrci` prompt, substituting the appropriate incident ID number:

```
show incident -mode DETAIL -p "incident_id=incident_id"
```

9. To display a list of the dump files that are associated with the `incident_ID` incident, enter the following command at an `adrci` prompt:

```
show tracefile -i incident_ID
```

10. To view information in a particular dump file for a particular incident, enter one of the following commands at an `adrci` prompt:

- To view a copy of the information in your default editor, enter:

```
show trace filename
```

- To view the information without using an editor:

```
show trace filename -term
```

2.2.2.3 Recovering from Incidents Generated During SOA Operations

In some cases in which an Oracle Fusion Applications incident is generated during an operation that involves a SOA composite, the application code may let you manually recover the operation and resume processing at the point where the incident occurred.

To determine whether you can recover or resume processing of an interrupted SOA composite operation:

1. Log on to the server where the incident was logged as a user that has the Oracle Fusion Middleware role of Administrator.
2. Navigate to the directory where the information about the incident is stored.
For information about typical locations for incidents, see [Section 2.2.2](#).
3. Inspect the `readme.txt` file in the incident directory and make a note of the `composite_instance_id` and `composite_name` values.

For example, the `readme.txt` file might include the following lines:

```
composite_instance_id: 10009
composite_name: FinApInvTransactionsInvoiceApprovalComposite
```

4. In the navigation pane of Fusion Applications Control, expand the hierarchical tree as needed to locate and select the SOA composite that was mentioned in the `readme.txt` file for the incident.

For example, you might expand `Farm_soa_domain_new`, and then expand `SOA`, and then expand `soa_infra (soa_server1)`, and then expand `default`, and finally select `FinApInvTransactionsInvoiceApprovalComposite`.

5. If it is not already selected, then click the **Dashboard** tab.
6. In the **Recent Instances** table in the content pane, click the **Instance ID** value that matches the `composite_instance_id` value that you saw in the log.

The **Flow Trace** page appears.

7. If you have not already done so, then use the information on the **Flow Trace** page to determine how to correct the problem that generated the incident, then repeat steps as needed to return to the **Flow Trace** page.

For more information about troubleshooting SOA operations, see [Chapter 11](#).

8. Inspect the **Recovery** column of the **Faults** table for a row that contains a **Recoverable** link.
 - If the **Recovery** column contains a **Recoverable** link, then you may be able to resume processing of the SOA operation at the point where it previously failed. Click **Recoverable** to display more details about the recoverable instance and continue to Step 9.
 - If the **Recovery** column does not contain a **Recoverable** link, then the SOA operation is not recoverable. Do not proceed with these instructions. Instead, have an appropriate Oracle Fusion Applications user restart the sequence of operations that led to the incident, beginning as close to the point of failure as is practical.
9. In the list of faults for the instance in question, select the row that contains the word **Recoverable** in the **Recovery** column, and then click **Recover** in the page area below the list.
10. In the Confirmation dialog, click **Yes**.

If the recovery process succeeds, the following message is displayed:

```
Action completed successfully.
```

Click **OK** to dismiss this message, which marks the completion of the recovery task.

If the recovery process does not succeed, the list of faults with the word **Recoverable** in the **Recovery** column remains visible. This indicates that you have not succeeded in addressing the underlying cause of the original problem.

Double-check your fix for the problem or try another approach. When you believe that you have addressed the problem successfully, return to the **Flow Trace** page and repeat Step 8 through Step 10.

2.2.2.4 Creating Incidents Manually Using Support Workbench

If you discover an issue with your Oracle Fusion applications that you want to gather data about, and if the system has not created an incident for it automatically, then it is recommended that you create an incident for it. Using incidents for all problems helps you organize the information that you gather during the troubleshooting process.

If your Oracle Fusion Applications environment includes Cloud Control, it is recommended that you use Support Workbench to work with incidents.

Note: To use Support Workbench with Oracle Fusion applications, you must obtain and install Cloud Control.

If your Oracle Fusion applications environment does not include Cloud Control, then you must use the ADRCI utility to work with incidents, instead of Support Workbench. For more information, see [Section 2.2.2.6](#).

When you use Support Workbench to create an incident manually, the process of creating the incident automatically creates a new problem listing that is associated with that incident.

To create a new incident and a new problem listing, manually, using Support Workbench:

1. If you have not already done so, in Cloud Control, select the Fusion J2EE Application target that is associated with the issue for which you are creating an incident.
2. From the dynamic dropdown menu, choose **Diagnostics > Support Workbench**.
3. In the **Host Credentials** area of the page, use one of the following methods to supply credentials for connecting to the machine that hosts the Oracle WebLogic Server that is associated with the incident you are creating.
 - If appropriate credentials were saved as preferred credentials, then select **Preferred** in the **Credential** field.
 - If appropriate credentials were saved as named credentials, then select **Named** in the **Credential** field and then select the specific credentials from the **Credential Name** dropdown list.
 - If appropriate credentials were not set, then select **New** in the **Credential** field and complete the following substeps:
 - a. In the **UserName** and **Password** fields, enter credential values for connecting to the host machine.
 - b. Inspect the default credential name supplied by Support Workbench in the **Save As** field, and modify the credential name if you prefer.
 - c. If you want the credentials you are entering to be the preferred credentials for the relevant host, then select the **Set as Preferred Credentials** checkbox.
 - d. If you want to verify that the credentials you entered work correctly, then click **Test**.
4. In the **WebLogic Server Credentials** area of the page, use one of the following methods to supply credentials for connecting to the Oracle WebLogic Server that is associated with the incident you are creating.

Note: If a **WebLogic Server Credentials** area is not visible on the page, that indicates that the relevant Oracle WebLogic Server is unavailable. Some operations cannot be done when the server is unavailable, such as creating user-reported problems and performing additional diagnostic dumps. For information about restarting an Oracle WebLogic Server, see the "Starting and Stopping Servers" chapter in *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic Server*.

- If appropriate credentials were saved as preferred credentials, then select **Preferred** in the **Credential** field.
 - If appropriate credentials were saved as named credentials, then select **Named** in the **Credential** field and then select the specific credentials from the **Credential Name** dropdown list.
 - If appropriate credentials were not set, then select **New** in the **Credential** field and complete the following substeps:
 - a. In the **UserName** and **Password** fields, enter credential values for connecting to the Oracle WebLogic Server.
 - b. Inspect the default credential name supplied by Support Workbench in the **Save As** field, and modify the credential name if you prefer.
 - c. If you want the credentials you are entering to be the preferred credentials, then select the **Set as Preferred Credentials** checkbox.
5. Click **Continue**.
- A Support Workbench page that summarizes problems related to your target now appears.
6. On the page that summarizes problems for the selected target, scroll down to the **Related Links** section and click **Create User-Reported Problem**.
7. On the **Create User-Reported Problem** page, select the **Other** issue type and click **Continue with Creation of Problem**.
8. On the **Problem Details** page, perform the following substeps, as needed:
- a. If you want to associate the new incident with an existing Oracle Service Request, then click **SR# Edit**, enter the Service Request number, and click **OK**.
 - b. If you want to associate the new incident with an existing bug, then click **Bug#**, enter the bug number, and click **OK**.
 - c. On the **Incidents** tab, if you want to see more information about the incident you are creating, such as user impact, checker findings, and purge date, then click **Show** in the appropriate row of the table, or click **Show All Details** in the table header.
 - d. If you want to change which incidents are displayed in the table, then select a new value from the **Data Dumped** dropdown list and click **Go**.
 - e. If you want to see the list of Oracle Fusion Middleware diagnostic dumps that are created automatically when you manually create an incident, or if you want to run any additional Oracle Fusion Middleware diagnostic dumps, then select your incident in the table and click **View** to display the **Incident Details** page.

For more information about using this page, see the topic "Incident Details Page" in the Cloud Control online help. For more information about Oracle Fusion Middleware dumps, see the "Diagnosing Problems" chapter in the *Oracle Fusion Middleware Administrator's Guide*.

2.2.2.5 Packaging Incidents Using Support Workbench

If you discover an issue with your Oracle Fusion applications that you want to gather data about, and if the system has not created an incident and problem for it automatically, then it is recommended that you create an incident for it.

If your Oracle Fusion Applications environment includes Cloud Control, it is recommended that you use Support Workbench to work with incidents. For more information about using Support Workbench to create incidents manually, see [Section 2.2.2.4](#). The process of manually creating an incident using Support Workbench automatically creates an associated problem listing.

Note: To use Support Workbench with Oracle Fusion Applications, you must obtain and install Cloud Control.

If your Oracle Fusion applications environment does not include Cloud Control, then you must use the ADRCI utility to work with incidents, instead of Support Workbench. For more information, see [Section 2.2.2.6](#).

As part of creating and packaging incidents using Support Workbench, you must supply credentials both to connect to the Oracle WebLogic Server on which the relevant Oracle Fusion application is running and to connect to the host machine on which that Oracle WebLogic Server is running.

Various kinds of incidents can be packaged in Support Workbench. For Oracle Fusion Applications performance incidents, in particular, it is recommended that you use the wizard that is specifically designed for packaging Oracle Fusion Applications incidents, because that wizard simplifies the process of gathering the information that Oracle Support is likely to need when working on your problem. However, you can also use general Support Workbench functionality to package Oracle Fusion Applications incidents.

2.2.2.5.1 Packaging Oracle Fusion Applications Incidents Using a Wizard If your Oracle Fusion Applications environment includes Cloud Control, it is recommended that you package Oracle Fusion Applications performance incidents using the special Support Workbench wizard for this incident type. The wizard provides a convenient way to include various file types that Oracle Support may need to resolve your problem.

Note: To use the wizard for packaging Oracle Fusion Applications performance incidents, the relevant incident must already exist. If you need to create an incident manually, see [Section 2.2.2.4](#).

Note: When you plan to package an Oracle Fusion Applications incident, it is recommended that you perform the following actions before you begin the process of packaging the incident:

- Use the Oracle Fusion Applications Diagnostic Dashboard application (Diagnostic Dashboard) to perform any diagnostic tests that are specific to that Oracle Fusion application and that are relevant for the selected incident. For more information, see the "Using Diagnostic Tests to Monitor Normal System Health" section in the *Oracle Fusion Applications Administrator's Guide*.
- Associate the diagnostic test results with the selected incident. For more information, see [Section 2.6.3](#).

The packaging procedure does not automatically include the results of manually run Oracle Fusion Applications diagnostic tests unless those results are already associated with the incident being packaged.

To package incidents using the Support Workbench wizard for Oracle Fusion Applications incidents:

1. If you have not already done so, in Cloud Control, select a target that is associated with the problem or incident that you want to package.

Make sure that you choose one of the following target types:

- An Oracle Fusion Applications instance target
- An Oracle Fusion Applications product family target
- An Oracle Fusion Applications cluster application target

Note: The Support Workbench wizard for Oracle Fusion Applications incidents is unavailable when an Oracle Fusion application instance (**J2EE Fusion Application**) target is selected.

2. From the dynamic dropdown menu, choose **Diagnostics > Support Workbench**.
3. In the Support Workbench rollup page for your target, scroll down until the **Problem Summary** table is visible and select the problem that is associated with the incident that you want to package.
4. Click **Create Package**.
5. In the **Host Credentials** area of the **Create Package: Credentials** page, use one of the following methods to select credentials for connecting to the machine that hosts the Oracle WebLogic Server on which the Oracle Fusion application was running when the problem or incident occurred.
 - If appropriate credentials were saved as preferred credentials, then select **Preferred** in the **Credential** field.
 - If appropriate credentials were saved as named credentials, then select **Named** in the **Credential** field and then select the specific credentials from the **Credential Name** dropdown list.
 - If appropriate credentials were not set, then select **New** in the **Credential** field and complete the following substeps:

- a. In the **UserName** and **Password** fields, enter credential values for connecting to the host machine.
 - b. Inspect the default credential name supplied by Support Workbench in the **Save As** field, and modify the credential name if you prefer.
 - c. If you want the credentials you are entering to be the preferred credentials for the Oracle WebLogic Server, then select the **Set as Preferred Credentials** checkbox.
 - d. If you want to verify that the credentials you entered work correctly, click **Test**.
6. In the **WebLogic Server Credentials** area of the **Create Package: Credentials** page, use one of the following methods to select credentials for connecting to the Oracle WebLogic Server where the Oracle Fusion application was running when the problem or incident occurred.

Note: If a **WebLogic Server Credentials** area is not visible on the page, that indicates that the relevant Oracle WebLogic Server is currently unavailable. Some operations cannot be done when the server is unavailable, such as creating user-reported problems and performing additional diagnostic dumps. For information about restarting an Oracle WebLogic Server, see the "Starting and Stopping Servers" chapter in *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic Server*.

- If appropriate credentials were saved as preferred credentials, then select **Preferred** in the **Credential** field.
 - If appropriate credentials were saved as named credentials, then select **Named** in the **Credential** field and then select the specific credentials from the **Credential Name** dropdown list.
 - If appropriate credentials were not set, then select **New** in the **Credential** field and complete the following substeps:
 - a. In the **UserName** and **Password** fields, enter credential values for connecting to the Oracle WebLogic Server.
 - b. Inspect the default credential name supplied by Support Workbench in the **Save As** field, and modify the credential name if you prefer.
 - c. If you want the credentials you are entering to be the preferred credentials for the Oracle WebLogic Server, then select the **Set as Preferred Credentials** checkbox.
7. Click **Next**.
8. In the **Create Package: Package Details** page, specify the a name and description for the package you are creating, select the incidents to include in the package, and then click **Next**.
9. In the **Create Package: Dumps** page, select various kinds of dump files to add to the package and then click **Next**.

Note: Unless Oracle Support has given you other instructions, it is recommended that you select all of the types of dump fields that are listed on the page. If you select **Heap Dumps**, you must supply relevant file names and locations. If you select **AWR Reports**, you must specify the name of the relevant database instance and credentials for working with that database.

10. In the **Create Package: Review** page, decide whether to customize the package:
- If you need to customize the package, then select the **Customize Package** checkbox to display the **Customize Package** page, and go to Step 11.
 - If you do not need to customize the package, then click **Proceed to Send** and skip to Step 17.

11. On the **Customize Package: *PackageName*** page, review the current contents of the package, decide how you want to customize the package, and use the tabs, buttons, and links on the page to make the desired changes.

For more information about the settings and controls on this page, see the "Customize Package Page" topic in the Cloud Control online help.

For more information about customizing actions that you start on this page but complete on other pages, see any of the following Cloud Control online help topics that interest you:

- Add Incidents Page
 - Add Problems to Package Page
 - Exclude Problems Page
 - Package Manifest Page
 - Additional Dumps and Test Cases Page
 - Add External Files Page
 - Copy Out Files Page
 - Copy In Files Page
12. After you make the desired changes, click the **Finish Contents Preparation** link in the **Packaging Tasks** area of the page.

After a short wait, the page displays information about any additional relevant files that were added automatically.

13. In the **Packaging Tasks** area of the page, click the **Generate Upload File** link.

14. On the **Generate Upload File: *PackageName*** page, select whether the upload file should contain the entire contents of the package or only an incremental addition made since the last upload file was generated.

For more information about the settings on this page, see the topic "Generate Upload File Page" in the Cloud Control online help.

15. On the same page, specify whether to generate the package immediately or at a specified later time, and then click **Submit**.

It may take several minutes to generate the upload file. When the process is complete, a confirmation message is displayed. Click **OK** to dismiss it.

16. On the **Customize Package: *PackageName*** page, click either the **Send Upload Files** link or the **Send to Oracle** button in the **Packaging Tasks** area of the page.
17. On the **Send to Oracle** page, supply the necessary credentials for logging in to My Oracle Support, make sure that the package you want to upload is selected, and specify whether to send the package immediately or at a specified later time.

For more information about the settings on this page, see the topic "Send to Oracle Page" in the Cloud Control online help.

18. When you are satisfied with the composition of the package and the details for sending it to Oracle Support, click **Submit**.

After a brief wait, Support Workbench displays a message about whether the selected package was sent to Oracle successfully.

If the attempt to send the package was not successful, address any problem that the message describes, then try to send the package again.

2.2.2.5.2 Packaging Oracle Fusion Applications Incidents Using General Support Workbench Functionality If your Oracle Fusion Applications environment includes Cloud Control, then it is recommended that you package Oracle Fusion Applications performance incidents using the special Support Workbench wizard for that incident type, as described in [Section 2.2.2.5.1](#). For Oracle Fusion Applications incidents that do not concern performance, you can use general Support Workbench functionality to package Oracle Fusion Applications incidents.

Note: When you plan to package an Oracle Fusion Applications incident, it is recommended that you perform the following actions before you begin the process of packaging the incident:

- If no incident exists for the issue that you are investigating, then create one manually. For more information, see [Section 2.2.2.4](#).
- Use Diagnostic Dashboard to perform any diagnostic tests that are specific to that Oracle Fusion application and that are relevant for the selected incident. For more information, see the "Using Diagnostic Tests to Monitor Normal System Health" section in the *Oracle Fusion Applications Administrator's Guide*.
- Associate the diagnostic test results with the selected incident. For more information, see [Section 2.6.3](#).

The packaging procedure does not automatically include the results of manually run Oracle Fusion Applications diagnostic tests unless those results are already associated with the incident being packaged.

To package incidents using general Support Workbench functionality:

1. In Cloud Control, if you have not yet selected the J2EE Fusion Application target that is associated with the problem or incident that you want to package, then select that target and skip to Step 2.

If you have already selected the J2EE Fusion Application target that is associated with the problem and have already started working with Support Workbench, then complete the following substeps:

- a. Navigate to either the applicable **Problem Details** page or the Support Workbench rollup page that summarizes the problems that are related to your target.

- b. If you navigated to the Support Workbench rollup page, then skip to Step 6; otherwise, continue to the following substep.
 - c. If you navigated to the applicable **Problem Details** page, then click either **Quick Package** or the **Package the Problem** link in the **Investigate and Resolve** area of the page.

For more information about the Quick Package button and the Package the Problem link, see the topic "Problem Details Page" in the Cloud Control online help.
 - d. If you clicked the **Package the Problem** link, then skip to Step 9; otherwise, continue to the following substep.
 - e. If you clicked **Quick Package**, then skip to Step 10.
2. From the dynamic dropdown menu, choose **Diagnostics > Support Workbench**.
 3. In the **Host Credentials** area of the page, use one of the following methods to select credentials for connecting to the machine that hosts the Oracle WebLogic Server on which the Oracle Fusion application was running when the incident or issue occurred.
 - If appropriate credentials were saved as preferred credentials, then select **Preferred** in the **Credential** field.
 - If appropriate credentials were saved as named credentials, then select **Named** in the **Credential** field and then select the specific credentials from the **Credential Name** dropdown list.
 - If appropriate credentials were not set, then select **New** in the **Credential** field and complete the following substeps:
 - a. In the **UserName** and **Password** fields, enter credential values for connecting to the host machine.
 - b. Inspect the default credential name supplied by Support Workbench in the **Save As** field, and modify the credential name if you prefer.
 - c. If you want the credentials you are entering to be the preferred credentials for the relevant host, then select the **Set as Preferred Credentials** checkbox.
 - d. If you want to verify that the credentials you entered work correctly, then click **Test**.
 4. In the **WebLogic Server Credentials** area of the page, use one of the following methods to select credentials for connecting to the Oracle WebLogic Server where the Oracle Fusion application was running when the problem or incident occurred.

Note: If a **WebLogic Server Credentials** area is not visible on the page, then that indicates that the relevant Oracle WebLogic Server is unavailable. Some operations cannot be done when the server is unavailable, such as creating user-reported problems and performing additional diagnostic dumps. For information about restarting an Oracle WebLogic Server, see the "Starting and Stopping Servers" chapter in *Oracle Fusion Middleware Managing Server Startup and Shutdown for Oracle WebLogic Server*.

- If appropriate credentials were saved as preferred credentials, then select **Preferred** in the **Credential** field.
 - If appropriate credentials were saved as named credentials, then select **Named** in the **Credential** field and then select the specific credentials from the **Credential Name** dropdown list.
 - If appropriate credentials were not set, then select **New** in the **Credential** field and complete the following substeps:
 - a. In the **UserName** and **Password** fields, enter credential values for connecting to the Oracle WebLogic Server.
 - b. Inspect the default credential name supplied by Support Workbench in the **Save As** field, and modify the credential name if you prefer.
 - c. If you want the credentials you are entering to be the preferred credentials, select the **Set as Preferred Credentials** checkbox.
5. Click **Continue**.
- A Support Workbench page that summarizes problems related to your target now appears.
6. Click the **Problems** tab and select the relevant time period from the **View** dropdown list.
7. In the table that lists problems, select the checkbox for one or more relevant problems.
8. Click **Package**.
9. On the **Package: Select Packaging Mode** page, select the mode of packaging that you want to use, and then click **Continue**.

Note: If you selected multiple problems in Step 7, then you must select the **Custom Packaging** mode at this point.

For more information about packaging modes, see the topic "Package Page" in the Cloud Control online help.

If you select **Quick Packaging**, then continue to Step 10.

If you select **Custom Packaging**, then skip to Step 15.

10. On the **Quick Packaging: Create New Package** page, supply information about the name and description for the package, indicate whether you want the package to be sent to Oracle Support automatically, and then click **Next**.
- For more information about the fields on this page, see the topic "Quick Packaging Wizard" in the Cloud Control online help.
11. On the **Quick Packaging: View Contents** page, review the information about the incidents that will be included in the package, and click **Next** when you are satisfied.
12. On the **Quick Packaging: View Manifest** page, you can review information about the specific files to be included in the package.
- Click **Next** when you are ready to go to the next step in the packaging process.
13. On the **Quick Packaging: Schedule** page, specify whether to generate the package immediately or at a specified later time.

If, earlier, you elected to send the package to Oracle Support automatically, then the timing you specify for generating the package also applies to sending the package.

For more information about the fields on this page, see the topic "Quick Packaging Wizard" in the Cloud Control online help.

14. When you are satisfied with the composition of the package, click **Submit**.

If you selected **Quick Packaging** in Step 9, skip the remaining steps of this procedure.

15. If you selected **Custom Packaging** in Step 9, on the **Custom Packaging: Select Package** page, then either select an existing package to modify, or supply information about the name and description for a new package, and then click **OK**.

For more information about the settings on this page, see the topic "Custom Packaging Page" in the Cloud Control online help.

After a short wait, the page displays a message confirming either that the selected problem was added to an existing package, or that a new package was created.

16. On the **Customize Package: *PackageName*** page, review the current contents of the package, decide how you want to customize the package, and use the tabs, buttons, and links on the page to make the desired changes.

For more information about the settings and controls on this page, see the "Customize Package Page" topic in the Cloud Control online help.

For more information about customizing actions that you start on this page but complete on other pages, see any of the following Cloud Control online help topics that interest you:

- Add Incidents Page
- Add Problems to Package Page
- Exclude Problems Page
- Package Manifest Page
- Additional Dumps and Test Cases Page
- Add External Files Page
- Copy Out Files Page
- Copy In Files Page

17. After you make the desired changes, click the **Finish Contents Preparation** link in the **Packaging Tasks** area of the page.

After a short wait, the page displays information about any additional relevant files that were added automatically.

18. In the **Packaging Tasks** area of the page, click the **Generate Upload File** link.

19. On the **Generate Upload File: *PackageName*** page, select whether the upload file should contain the entire contents of the package or only an incremental addition made since the last upload file was generated.

For more information about the settings on this page, see the topic "Generate Upload File Page" in the Cloud Control online help.

20. On the same page, specify whether to generate the package immediately or at a specified later time, and then click **Submit**.

It may take several minutes to generate the upload file. When the process is complete, a confirmation message is displayed. Click **OK** to dismiss it.

21. On the **Customize Package: *PackageName*** page, click the **Send Upload Files** link in the **Packaging Tasks** area of the page.
22. On the **Send to Oracle** page, supply the necessary credentials for logging in to My Oracle Support, make sure that the package you want to upload is selected, and specify whether to send the package immediately or at a specified later time.

For more information about the settings on this page, see the topic "Send to Oracle Page" in the Cloud Control online help.

23. When you are satisfied with the composition of the package and the details for sending it to Oracle Support, click **Submit**.

After a brief wait, Support Workbench displays a message about whether the selected package was sent to Oracle successfully.

If the attempt to send the package was not successful, then address any problem that the message describes, and then try to send the package again.

2.2.2.6 Creating and Packaging Incidents Using the Automatic Diagnostic Repository Command Interpreter (ADRCI)

If you discover an issue with your Oracle Fusion applications that you want to gather data about, and if the system has not created an incident for it automatically, then it is strongly recommended that you create an incident for it.

If your Oracle Fusion Applications environment includes Cloud Control, it is recommended that you use Support Workbench to create and package incidents. For more information, see [Section 2.2.2.4](#) and [Section 2.2.2.5](#).

If your Oracle Fusion Applications environment does not include Cloud Control, you must use WLST to create incidents and ADRCI commands to package them. For more information, see the "Creating an Incident Manually" section in the *Oracle Fusion Middleware Administrator's Guide*.

After creating the incident manually, you can add files to it. For example, you might want to add Oracle Fusion Applications diagnostic test results, Oracle Fusion Middleware diagnostic dumps, excerpts from downloaded log files, information from Oracle Configuration Manager (OCM), and Remote Diagnostic Agent (RDA) reports to the incident. You might also want to add a `Readme.txt` file containing information for Oracle Support.

After you add files to an incident, you can package the incident into a ZIP file for transmission to Oracle Support. For more information about adding files to an incident and packaging the incident into a ZIP file, see the "Packaging an Incident" section in the *Oracle Fusion Middleware Administrator's Guide*.

2.2.3 Working with Automatically Created QuickTrace Dumps

As part of assisting you with resolving incidents, Oracle representatives often examine any dump files that were automatically created when the incident occurred, including QuickTrace dump files.

When a QuickTrace dump file is automatically created as part of an incident, the file is stored in the incident directory along with any other dump files that are related to that incident. QuickTrace dump file names begin with `odl.quicktrace`.

2.2.3.1 Viewing Automatically Created QuickTrace Dump Files Using Oracle WebLogic Scripting Tool

You can use the following standard Oracle WebLogic Scripting Tool commands to view information about automatically created QuickTrace dump files:

- Use the `listIncidents` command to view a list of incidents.
- Use the `showIncident` command to view details about a particular incident, including a list of dump files associated with that incident.
- Use the `getIncidentFile` command to view a specified dump file such as a QuickTrace dump file.

For more information about using these commands, see the "Viewing Problems and Incidents" section and the "Working with Diagnostic Dumps" section in the *Oracle Fusion Middleware Administrator's Guide*.

2.2.3.2 Viewing Automatically Created QuickTrace Dump Files Using the Automatic Diagnostic Repository Command Interpreter (ADRCI)

You can use the following standard ADRCI utility commands to view information about automatically created QuickTrace dump files:

- Use the `show homes` command to view a list of Automatic Diagnostic Repository (ADR) home directories. Depending on the configuration of your system, QuickTrace dumps may be located under one or more of these ADR home directories.
- Use the `set home directory_path` command to indicate which repository you want to work with, replacing `directory_path` with one of the locations from the output of the `show home` command.
- Use the `show incdir -i incdir_incident_number` command to view a list of files associated with the incident that `incident_number` identifies, including any QuickTrace dump files for that incident. QuickTrace dump file names start with `odl_quicktrace` and end with `.dump`.
- Use the `show tracefile -i incident_number` command to view a list of just the dump files associated with the incident that `incident_number` identifies.
- Use the `show trace filename` command to view the contents of the QuickTrace dump file that you specify.

For more information about using ADRCI, see [Section 2.2.2](#) and the chapter about the ADR Command Interpreter in *Oracle Database Utilities*.

2.2.3.3 Viewing Automatically Created QuickTrace Dump Files Using Support Workbench

If your Oracle Fusion Applications environment includes Cloud Control, then you can use Support Workbench to view Oracle Fusion Applications incident information, including automatically created QuickTrace dumps.

To view automatically created QuickTrace dump files using Support Workbench:

1. In Oracle Enterprise Manager, select an Oracle Fusion applications instance, product family, or cluster application target.
2. From the dynamic dropdown menu, choose **Diagnostics > Support Workbench**.
3. From the **View Data** dropdown list, select the time frame that contains the problem for which you want to inspect a QuickTrace dump.

4. Scroll down to the **Support Workbench Problems Summary** table and click the **Incident** count for the problem that interests you.
5. Click the **Incidents** tab in the **Problem Details** page.
6. Click the **Summary** of the incident that interests you.
7. In the **Guided Resolution** area of the **Incident Details** page, click **View Diagnostic Data**.
8. In the **Dump Files** table, locate a row that contains a **File Name** that starts with `odl_quicktrace`.
9. Scroll to the right and click the **View Contents** icon in that row.
10. Inspect the information in the **View Log File** page for the dump file, and click **Download** if you want to download the file.

2.2.4 Working with Manually Created QuickTrace Dumps

Oracle Support may occasionally prompt you to perform a manual dump of QuickTrace buffers as part of work to resolve a problem that did not generate an incident automatically.

To create a QuickTrace dump manually:

1. Decide whether you want to associate the QuickTrace dump file with an existing incident at the time when you perform the dump:
 - If you want to associate a new QuickTrace dump file with an existing incident at the time when you perform the dump, then make a note of the relevant incident ID. This can either be an automatically created incident or a manually created incident. For more information about creating incidents manually, see [Section 2.2.2.4](#) and [Section 2.2.2.6](#).
 - If you currently do not want to associate a new QuickTrace dump with an incident, then decide where you will store the dump file.
2. Use the Oracle WebLogic Scripting Tool `executeDump` command to perform an `odl.quicktrace dump`, choosing appropriate syntax for your needs:
 - If you want to associate the dump file with an existing incident, then use the `id` argument. This allows you to retrieve the dump file, later, using the `getIncidentFile` argument
 - If you would rather associate the dump file with an incident at a later time, then use the `outputFile` argument to specify an output file location at the time when you execute the dump.

For more information about using the `executeDump` command and its arguments, see the "Executing Dumps" section in the *Oracle Fusion Middleware Administrator's Guide*.

2.2.5 Working with Other Diagnostic Dumps

In some troubleshooting situations, you may find it useful to locate or obtain Oracle Fusion Middleware diagnostic dumps such as Oracle WebLogic Server diagnostic images, Java Virtual Machine thread dumps, and Dynamic Monitoring Service metric dumps.

Oracle Fusion Applications incidents that are generated from Java code (including SOA) automatically execute these kinds of dumps and include the results in the

incident data. Oracle Fusion Middleware diagnostic dumps are not available for Oracle Fusion Applications incidents that are generated from PL/SQL or C code.

If you troubleshoot an Oracle Fusion Applications problem that did not generate an incident automatically, it is recommended that you create an incident manually, then execute diagnostic dumps manually, and examine the dump files for information that may help you to resolve the problem. If you need to work with Oracle Support to resolve the problem, it is recommended that you include manually executed dump results in the incident data package that you send to Oracle for review. For information about how to list available diagnostic dumps, view dump descriptions, and manually execute selected dumps for Oracle Fusion Middleware, see the "Working with Diagnostic Dumps" section in the *Oracle Fusion Middleware Administrator's Guide*.

2.2.6 Working with Cloud Control Problem Analysis and the Analyze Logs Options

If your Oracle Fusion Applications environment includes Cloud Control, you can use the **Problem Analysis** and **Analyze Log** options in Cloud Control to help you inspect metrics, target status information, and logs during troubleshooting.

To inspect metrics, status information, and logs using Cloud Control:

1. Use one of the following methods to select a target for which you want to use problem analysis or analyze logs:
 - Navigate to **Incident Manager** and select the incident that interests you.
 - Navigate to the home page of an Oracle Fusion Applications product family and locate a metric chart in the **Performance Indicators** section.
 - From the home page of any Fusion Instance, Product Family, Product, Fusion Cluster Application, or Fusion J2EE Application, choose **Monitoring > Key Performance Indicators** or **Monitoring > System Performance** and then locate a metric chart.
2. Use one of the following methods to display **Problem Analysis** pages for Oracle Fusion Applications targets:
 - In Incident Manager, click **Problem Analysis** in the **Guided Resolution** pane.
 - On a home page or a metrics page such as a **Key Performance Indicators** or **System Performance** page, under or adjacent to any metric chart, click a link to display the **Additional Information** pop-up menu and then click **Problem Analysis**.

The name and location of the link that displays the **Additional Information** pop-up menu varies depending on the page and metric chart you are viewing. For example, some typical link names are:

- **Request Processing Time** (for **Response and Load** metric charts)
- **Payables Invoice Validation Run Time** (for an Oracle Fusion Financials **Key Performance Indicator** metric chart)

In the **Problem Analysis** page, the **Source Metric** chart displays the type of metric for which the incident was automatically created or the type of metric for which you clicked **Request Processing Time**.

3. Near the top of the **Metric Dependency Charts** pane, click the time period for which you want the charts to display data, or click and drag within a metric chart to indicate the time period you want to inspect.
4. Inspect the charts for unusual increases in recorded metrics such as request processing time, CPU usage in storage units or percent utilized, number of

requests per minute, Java Virtual Machine heap memory usage, or server memory usage.

If you find that request processing time increased due to a high number of requests per minute, you may need to increase the capacity of your system.

5. If the metric charts do not indicate the cause of the problem, scroll down to the **Related Information** pane and inspect the **List of Related Targets To Analyze** table for information about target health (status) and recent configuration changes.
6. If you want to see a reminder of the topology of the components for which data is being displayed, click the **Related Targets Topology** tab.
7. If the **List of Related Targets to Analyze** table does not indicate the cause of the problem, scroll up and click a link adjacent to one of the metrics and then click **Analyze Logs** in the **Additional Information** pop-up menu to display log messages for the selected target and its members during the selected time period.
8. To display log messages in the selected time period for all targets related to the relevant incident or starting metric, scroll up to the **Metric Dependency Charts** pane header and click **View Related Log Messages**.
9. Inspect any log messages that are displayed for possible causes of problems.

2.3 Configuring Log, QuickTrace, and Incident Settings for Troubleshooting

You may find it helpful to change log profile options or QuickTrace properties to gather more information during troubleshooting.

Ordinarily, the default configuration settings for incidents are appropriate for both normal operations and troubleshooting. It is possible to disable incident creation by using configuration settings, but it is recommended that you use the default incident configuration values unless Oracle Support specifically recommends changes to these settings.

2.3.1 Assisting Users in Gathering Data Using Troubleshooting Options

Oracle Fusion Applications provides a Troubleshooting Options dialog that you can display by choosing the **Troubleshooting Options** command in the Troubleshooting section of the Oracle Fusion Applications **Settings and Actions** menu. The Troubleshooting Options dialog provides ways to adjust the following kinds of settings for the current Oracle Fusion Applications user:

- Database trace (optionally capturing bind variables or wait events)
For more information about Database Trace, see the chapter about using application tracing tools in the *Oracle Database Performance Tuning Guide*.
- PL/SQL profiler
For more information about PL/SQL profiler, see the chapter about the PL/SQL hierarchical profiler in the *Oracle Database Advanced Application Developer's Guide*.
- Applications logging Severity Level
- Applications logging Modules

However, the **Settings and Actions** menu displays the Troubleshooting section and the **Troubleshooting Options** command only for end users who have a job that is mapped to the following three duty roles:

- Supportability Level Management Duty (CRM) (FND_SET_SUPPORTABILITY_LEVEL_DUTY_CRM)
- Supportability Level Management Duty (FSCM) (FND_SUPPORTABILITY_LEVEL_MANAGEMENT_DUTY_FSCM)
- Supportability Level Management Duty (HCM) (FND_SUPPORTABILITY_LEVEL_MANAGEMENT_DUTY_HCM)

By default, only the following job roles are mapped to the Supportability Level Management Duty duty roles:

- Application Administrator (FND_APPLICATION_ADMINISTRATOR_JOB)
- Application Diagnostics Administrator (FND_DIAG_ADMINISTRATOR_JOB)

These two job roles have broad administrative privileges, so it is recommended that you assign them only to administrative personnel. To give other users access to the Troubleshooting Options dialog, it is recommended that you use a job role that is specifically intended for troubleshooting and that is mapped to the three Supportability Level Management Duty duty roles. You can either use the BUSINESS FLOW TROUBLESHOOTING job role, which is provided in seed data, or you can create such a job role. After the troubleshooting job role is chosen or made available, you can assign users to that job role as needed.

To grant a user access to the **Troubleshooting Options** command and dialog, and assist the user to gather data for troubleshooting:

1. Decide whether to use the BUSINESS FLOW TROUBLESHOOTING job role (also called an external role) or to use Oracle Identity Manager to create a similar job role that you can assign to users who need access to the **Troubleshooting Options** command and dialog.

For more information about creating job roles, see the "Creating Roles" section in the *Oracle Fusion Middleware User's Guide for Oracle Identity Manager*.

2. If you created a job role in Step 1, use Oracle Authorization Policy Manager to map the job role to the following three duty roles:
 - Supportability Level Management Duty (CRM) (FND_SET_SUPPORTABILITY_LEVEL_DUTY_CRM)
 - Supportability Level Management Duty (FSCM) (FND_SUPPORTABILITY_LEVEL_MANAGEMENT_DUTY_FSCM)
 - Supportability Level Management Duty (HCM) (FND_SUPPORTABILITY_LEVEL_MANAGEMENT_DUTY_HCM)

Note: To make sure that the job role you create can be used for troubleshooting any Oracle Fusion application, be sure to map the job role to all three of the Supportability Level Management Duty duty roles. Each of these duty roles provides the needed functionality for a different application stripe. An application stripe is a subset of policies in the policy store that is used by a particular application or group of applications.

For more information about mapping job roles to duty roles, see the Oracle Fusion Applications security guides. In Oracle Identity Management (OIM) and Oracle Authorization Policy Manager (APM), job roles are external roles and duty roles are application roles.

3. For any user who currently needs access to the Troubleshooting Options dialog, use Oracle Identity Manager to assign the job role that you chose or created in Step 1 to the user.

For more information, see the "Assigning Members to a Role" section or the "Adding and Removing Roles" section in the *Oracle Fusion Middleware User's Guide for Oracle Identity Manager*.

4. To make sure that the user has access to the new job role assignment, direct the user to log out from their Oracle Fusion application and log back in.
5. Direct the user to choose **Troubleshooting Options** from the Troubleshooting section of the **Settings and Actions** menu and to modify **Troubleshooting Options** settings as needed for the specific problem you are troubleshooting:

Note: If the user does not see **Troubleshooting Options** or the Troubleshooting section in the **Settings and Actions** menu and if you performed Step 2 of this procedure within the last few minutes, direct the user to wait a few more minutes and then log out and log in again. When you map a job role to one or more duty roles, the change may take effect a few minutes later, after Oracle Authorization Policy Manager refreshes the server cache.

- a. If you want to enable all of the available troubleshooting options, then direct the user to select the **Enable all** checkbox.
- b. If you want to enable Database Trace, then direct the user to select the **Database trace** checkbox.

For more information about Database Trace, including the options of capturing bind variables or wait events, see the chapter about application tracing tools in the *Oracle Database Performance Tuning Guide*.

- c. If you want to enable the PL/SQL profiler, then direct the user to select **PL/SQL profiler**.

For more information, see the section about using the PL/SQL hierarchical profiler in the *Oracle Database Advanced Application Developer's Guide*.

- d. If you want to log information for the user's actions at a level of detail that is different from the logging done for other users at the same site, then direct the user to select the **Applications logging** checkbox and to select the appropriate level of detail from the **Severity Level** dropdown list.

This user action is equivalent to an administrator setting the value of the `AFLOG_LEVEL` profile option for that user. For more information about the available logging severity levels, see the "Standard Logging Levels" section in the *Oracle Fusion Applications Administrator's Guide*.

- e. If you want to limit the logging for the user's actions to operations that use one or more particular code modules, and if you know the name of those code modules, then direct the user to enter the module names in the **Modules** field, separating the names using commas without spaces.

The user can use the % wildcard to represent part of a module name or to represent all module names.

- f. Direct the user to click **OK**.

Note: Users who change the **Applications logging Severity Level** may need to log out from their Oracle Fusion application and log in again to have the changes take effect. It is recommended that you direct the user to do so at this point in the process.

6. Direct the user to try to reproduce the problem.
7. Verify that the additional information you wanted was collected.
8. Unless the user needs ongoing access to the Troubleshooting Options dialog, use Oracle Identity Manager to revoke the user's assignment to the job role that you chose or created in Step 1.

2.3.2 Configuring the Oracle Fusion Middleware Diagnostic Framework

As part of the infrastructure for creating and handling incidents, the Oracle Fusion Middleware Diagnostics Framework includes settings that you can configure to affect functionality areas such as the following:

- Whether multiple incidents that originate from Java or PL/SQL code can be created for the same problem within a particular time period, and, if so, how many (flood control).
- The total amount of space allocated for storage of information about incidents that originate from Java or PL/SQL code. (Older incidents are purged automatically when the allocated space limit is reached.)

For more information about these Oracle Fusion Middleware Diagnostic Framework settings, see the "Configuring the Diagnostic Framework" section in the *Oracle Fusion Middleware Administrator's Guide*. For information about flood control and disk space management for incidents that originate from PL/SQL code, see [Table 2-1](#).

2.3.3 Precedence and Log Settings for Troubleshooting

During troubleshooting in a production environment, you will normally use profile options to increase or decrease the amount of information gathered in standard Oracle Fusion Applications log files. Where feasible, you will change profile option values at the `USER` level, rather than at the `SITE` level. This allows you to log more detailed information for a specific user who attempts to reproduce a problem, without cluttering your log file with unnecessarily detailed information for other users.

For Oracle Fusion applications that are written in Java or SOA, it is also possible for the `odlLevel` setting for the `oracle.apps.appslogger logger` in the `logging.xml` configuration file to affect the level of detail that is logged. If both the `odlLevel` setting and the `AFLOG_LEVEL` profile option have defined values, then the minimum of those two values takes precedence.

Note: Unless Oracle Support advises you to change the value of the setting, it is strongly recommended that you keep your `odlLevel` setting for the `oracle.apps.appslogger logger` set to a value of `All`.

2.3.4 Default System Settings for Incident Creation and QuickTrace

The default profile option configuration settings for incident creation and QuickTrace profile options are shown in [Table 2-1](#). For information about additional QuickTrace properties, see [Section 2.3.7](#).

Table 2–1 Profile Options for Oracle Fusion Applications Incidents and QuickTrace

Profile Option Name (and Display Names)	Environment	Description	Possible Values or Example	Applicable Profile Hierarchy Levels	Default Value
AFLOG_INCIDENT_ENABLED (Incident Enabled)	Java, PL/SQL, C, and SOA	Enables or disables incident creation for Oracle Fusion Applications. (This profile option does not affect Oracle Fusion Middleware incident creation functionality.) A value of Y allows incident creation at runtime. A value of N prevents incident creation. This profile option is available for SITE but is not available for USER. AFLOG_INCIDENT_ENABLED is a new profile that was introduced in Oracle Fusion Applications to support application incident creation.	Y, N	Site	Y
AFLOG_PLSQL_FLOOD_CONTROL_ENABLED (FND: Incident Flood Control Enabled)	PL/SQL	Determines whether to restrict the collection of diagnostics if multiple PL/SQL incidents occur within a set time period for the same problem. Specify Y to restrict diagnostic collection and N to leave it unrestricted.	Y, N	Site	Y
AFLOG_PLSQL_FLOOD_CONTROL_INC_COUNT (FND: Total number of incidents for problem key)	PL/SQL	When AFLOG_PLSQL_FLOOD_CONTROL_ENABLED is set to Y, the value of this setting determines the number of PL/SQL incidents with the same problem key for which diagnostics are collected during a set time period. If the number of incidents with the same problem key exceeds the value of this setting during the time period specified by AFLOG_PLSQL_FLOOD_CONTROL_INC_TIMEPERIOD, an incident is created, but no diagnostics are captured.	Positive integers	Site	5
AFLOG_PLSQL_FLOOD_CONTROL_INC_TIMEPERIOD (FND: Flood control time period)	PL/SQL	When AFLOG_PLSQL_FLOOD_CONTROL_ENABLED is set to Y, the value of this setting specifies the time period in minutes during which diagnostics are not collected if the number of PL/SQL incidents that occur for the same problem exceeds the value of AFLOG_PLSQL_FLOOD_CONTROL_INC_COUNT.	Positive integers	Site	60

Table 2–1 (Cont.) Profile Options for Oracle Fusion Applications Incidents and QuickTrace

Profile Option Name (and Display Names)	Environment	Description	Possible Values or Example	Applicable Profile Hierarchy Levels	Default Value
AFLOG_PLSQL_MAX_TOTAL_INC_SIZE (FND: Total size of incident files)	PL/SQL	<p>Sets the amount of disk space in megabytes that is allocated for PL/SQL incident data storage. When incidents use more than this amount of disk space, the oldest incident that is no longer needed is automatically purged.</p> <p>Whether an older incident is still needed is determined by checking the incident's status in the Automatic Diagnostic Repository (ADR). If the status of the incident is 3, or KEEP, or tracking, then that incident is not purged.</p> <p>If the allocated disk space is full and if all stored incidents are still needed, a new, empty incident directory called <code>inc_incident_ID_number</code> is created, and log file messages may refer to that location, but diagnostic log excerpts are not saved to that incident directory.</p>	Positive integers	Site	500 (MB)
AFLOG_QUICKTRACE_ENABLED (QuickTrace Enabled)	Java and SOA	Enables QuickTrace in-memory logging to occur at runtime.	Y, N	Site	Y
AFLOG_QUICKTRACE_LEVEL (QuickTrace Level)	Java and SOA	<p>Specifies the minimum level for tracing.</p> <p>This setting is similar to the AFLOG_LEVEL profile option for standard Oracle Fusion Applications logging to log files, but the two settings operate independently.</p>	1000 (SEVERE), 900 (WARNING), 800 (INFO), 700 (CONFIG), 500 (FINE), 400 (FINER), 300 (FINEST) and 0 (OFF)	Site	500 (FINE)

2.3.5 Adjusting Incident Settings for Troubleshooting

By default, incident creation functionality for Oracle Fusion Applications is enabled, and it should ordinarily remain enabled. However, if Oracle Support directs you to disable incident creation, you can use the `AFLOG_INCIDENT_ENABLED` profile option to do so. You can use the Manage Administrator Profile Values task in the Setup and Maintenance work area to set the value of this profile option. For more information about this setting, see [Table 2–1](#).

Incident creation functionality is also enabled by default for the Oracle Fusion Middleware Diagnostic framework. In addition, various Oracle Fusion Middleware profile options govern the details of how incidents are collected and stored. In general, troubleshooting will not require you to change these settings. For more information,

see the "Configuring the Diagnostic Framework" section in the *Oracle Fusion Middleware Administrator's Guide*.

2.3.6 When Changes to Incident Configuration Settings Take Effect

Changes to incident profile options ordinarily take effect as follows:

- User sessions: Changes to site-level incident profile options take effect for any user session that is started after the setting has been changed. Changes to site-level log file profile options do not affect any user sessions that are already in progress when the change is made.
- PL/SQL and C processes such as scheduled jobs: Changes to site-level incident profile options take effect for any C or PL/SQL processes that are started after the setting has been changed. Incident profile option changes do not affect C or PL/SQL processes that are already running.

2.3.7 Adjusting QuickTrace Configuration Settings for Troubleshooting

By default, QuickTrace functionality for Oracle Fusion Applications is enabled at the FINE logging level. QuickTrace should ordinarily remain enabled. However, if Oracle Support directs you to disable QuickTrace, or if you want to change the amount or organization of the information that QuickTrace collects, you can adjust the values of the following profile options either by using Fusion Applications Control or by using the Manage Administrator Profile Values task in the Setup and Maintenance work area:

- QuickTrace Enabled (`AFLOG_QUICKTRACE_ENABLED` profile option): Governs whether QuickTrace gathers any information
- QuickTrace Level (`AFLOG_QUICKTRACE_LEVEL` profile option): Specifies the level of detail at which QuickTrace gathers information

Note: Because the QuickTrace Enabled and QuickTrace Level profile options apply at the site level, either all of the site's Managed Servers capture QuickTrace information in memory buffers or none of the Managed Servers do so. Similarly, the QuickTrace Level value sets the level of detail that QuickTrace gathers for all of the site's Managed Servers.

For more information about these settings, see [Table 2-1](#).

In addition, [Table 2-2](#) shows QuickTrace property settings that you can change using Fusion Applications Control.

Table 2–2 QuickTrace Properties

Property Name	Description	Server Restart Required	Default
Buffer Size (bufferSize)	<p>Approximate size in bytes of each circular QuickTrace buffer. Each buffer's actual memory use may be less but not more than the specified value.</p> <p>By default, each Oracle WebLogic Server has a single <code>COMMON</code> QuickTrace buffer for storing multiple users' log records in memory.</p> <p>If you want to store particular users' log records in individual buffers (one buffer for each user you specify), then you can allocate additional buffers of the same size by setting <code>Enable User Buffer</code> to true, restarting the server, and setting the value of <code>User Names for Reserve Buffer</code> to a comma-separated list of those users.</p>	Yes	5242880
Enable User Buffer (enableUserBuffer)	<p>When this property is set to false, each QuickTrace handler uses a single <code>COMMON</code> buffer to cache log messages for all users.</p> <p>When this property is set to true, each QuickTrace handler maintains an individual buffer for each user who is listed in the <code>User Names for Reserve Buffer</code> (<code>reserveBufferUserIDs</code>) property. Log messages for users who are not listed in that property are cached in the <code>COMMON</code> buffer.</p> <p>To determine in which buffer to place a particular log message, QuickTrace examines the log message for an application user name value. If the log message does not include a user name value, QuickTrace examines it for a user ID value provided by the server. If the log message does not include either a user name or a user ID, then QuickTrace caches the message in the <code>COMMON</code> buffer.</p>	Yes	false
User Names for Reserve Buffer (reserveBufferUserIDs)	<p>Holds a list of application user name or server user ID values separated by commas. When the <code>Enable User Buffer</code> (<code>enableUserBuffer</code>) property is set to true, for each listed application user name or server user ID, any log messages associated with that user are cached in an individual QuickTrace user buffer. Log messages that are associated with other users are cached in the <code>COMMON</code> buffer.</p> <p>When the <code>Enable User Buffer</code> (<code>enableUserBuffer</code>) property is set to false, this property has no effect.</p>	No	null

You can also change the properties in [Table 2–2](#) by using the Oracle WebLogic Scripting Tool (WLST) `configureLogHandler` command. For more information, see the "configureLogHandler" section in the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

To change the QuickTrace profile option and property settings using Fusion Applications Control:

1. From the navigation pane, select a product family target such as **Financials**.
2. In the context pane, from the target type dropdown menu, choose **Logs > Log Configuration**.

3. In the Logging Profile Configuration dialog, click the **Site-Level** tab.
4. Expand the **Advanced Configuration** area of the dialog.
5. Expand the **Java Settings** portion of the **Advanced Configuration** area.
6. Expand the **Other QuickTrace Settings** portion of the **Java Settings** area.
7. In the **Java Settings** portion of the **Advanced Configuration** area, change the QuickTrace profile settings, as needed:
 - a. To disable QuickTrace, clear the **QuickTrace Enabled** checkbox. To enable QuickTrace, make sure that the **QuickTrace Enabled** checkbox is selected.
 - b. To change the amount of information QuickTrace gathers, select a logging level from the **QuickTrace Level** dropdown list.
8. In the **Other QuickTrace Settings** portion of the **Java Settings** area, change the QuickTrace property settings, as needed:
 - a. If you intend to use any QuickTrace property value that is not the default value listed in [Table 2-2](#), then select the **Override Settings** checkbox.
 - b. In the **Buffer Size** field, enter the desired QuickTrace buffer size in bytes.

Note: If you increase the value of the **Buffer Size** setting, QuickTrace uses more memory, which may affect system performance.

- c. If you want QuickTrace to store information in separate buffers for selected individual users, then select the **Enable User Buffer** checkbox.
- d. In the **User Names for Reserve Buffer** field, enter comma-separated Oracle Fusion Applications user names for all of the users for whom QuickTrace should store information in individual buffers.

Note: The values in the **User Names for Reserve Buffer** field are used only if the **Enable User Buffer** checkbox is selected.

9. Click **Apply**.

Note: Changes to **QuickTrace Enabled** and **QuickTrace Level** settings take effect immediately for the user session in which the changes were made, but the changes do not affect other user sessions that are in progress when the changes are made. To use the changed settings for a different user session, log out from your Oracle Fusion application and log back in.

For each particular Managed Server that runs an Oracle Fusion application, changes to the QuickTrace properties **Buffer Size** and **Enable User Buffer** do not take effect until the server is restarted.

If a value of `true` is already in effect for the **Enable User Buffer** property, then changes to the **User Names for Reserve Buffer** property take effect as soon as you click **Apply**. Otherwise, you must set the **Enable User Buffer** property to `true` and restart the server to have changes to the **User Names for Reserve Buffer** property take effect.

2.3.8 Adjusting Standard Log Levels for Troubleshooting

If you encounter a situation in which an incident does not provide enough information to allow you to resolve the problem, then you may need to increase the standard logging level for the relevant Oracle Fusion application and the application user who will try to reproduce the problem. For information about the available log levels, see the "Standard Logging Levels" section in the *Oracle Fusion Applications Administrator's Guide*. For information about setting the logging profile options, see the "Using Profile Options to Configure Standard Log Settings" section in the *Oracle Fusion Applications Administrator's Guide*.

2.3.9 Adjusting ApplSession Log Levels for Troubleshooting

The logging functionality for the application user session (ApplSession) component is different from the standard logging functionality for Oracle Fusion Applications.

In the current release, the ApplSession component uses Oracle Fusion Middleware logging functionality, which lets you adjust the amount of detail to log for the component without requiring a server restart. Also, you can now use Oracle Enterprise Manager to view ApplSession log messages. For more information about Oracle Fusion Middleware logging functionality, see the "Managing Log Files and Diagnostic Data" chapter of the *Oracle Fusion Middleware Administrator's Guide*.

By default, the ApplSession component records messages at the `WARNING` level. If you need to log additional details about ApplSession operations as part of troubleshooting, then you can use Oracle Enterprise Manager Fusion Applications Control to adjust the amount of information that ApplSession gathers for a particular Managed Server.

To use Fusion Applications Control to adjust the amount of ApplSession information to be logged for troubleshooting:

1. From the navigation pane, expand the farm, then **WebLogic Domain**, and then the name of the domain in which the problem occurred.
2. Select a Managed Server for the domain (for example, `CrmCommonServer_1`) and choose **Logs > Log Configuration** from the dynamic dropdown menu.
3. In the **Log Configuration** page, click the **Log Levels** tab and select **Loggers with Persistent Log Level State** from the **View** dropdown list.
4. Expand the hierarchical tree as needed to display the row for the `oracle.apps.fnd.applcore.common.session` logger.
5. In the row for that logger, from the **Oracle Diagnostic Logging Level (Java Level)** dropdown list, select a value that reflects the amount of information that you want ApplSession to log.

For example, select `TRACE:1 (FINE)` to enable standard session debugging. For more information about the available values, see "Setting the Level of Information Written to Log Files" in the *Oracle Fusion Middleware Administrator's Guide*.

Note: The **Log Level** value that you specify applies to all loggers that are associated with the `odl-handler` log file. The specific logger for ApplSession logging is `oracle.apps.fnd.applcore.common.session`.

6. Click **Apply**.
7. In the confirmation window, click **Close**.
8. Try to replicate the problem.

9. Return to the Fusion Applications Control page, and, from the navigation pane, expand the farm, then **WebLogic Domain**, and then the name of the domain in which the problem occurred.
10. Select a Managed Server for the domain (for example, *CrmCommonServer_1*) and choose **Logs > View Log Messages** from the dynamic dropdown menu.
11. In the **Log Messages** page, expand **Selected Targets** and click the **Target Log Files** icon in the row for the Managed Server (for example, *CrmCommonServer_1*).
12. On the **Log Files** page, locate and select the log file called *ServerName-diagnostic.log* (where *ServerName* is the name of the Managed Server) and click **View Log File**.
13. In the table on the **View Log Files** page, locate and select any message to display the message details below the table.

Repeat this step as needed.

Note: After you gather the detailed information that you need, remember to repeat Step 1 through Step 7 of this procedure to return the **Log Level** setting to the value that meets your day-to-day information needs.

2.3.10 Adjusting Oracle Fusion Global Payroll Log Settings for Troubleshooting

Some logging functionality for the Oracle Fusion Global Payroll application is separate from the standard logging functionality for Oracle Fusion Applications. By default, Oracle Fusion Global Payroll processes that are submitted using Oracle Enterprise Scheduler do not write log entries.

For optimum performance and log file sizes, it is recommended that you enable logging functionality for such Oracle Fusion Global Payroll processes only when you are troubleshooting an existing problem in collaboration with Oracle Support. Performance is particularly critical for Oracle Fusion Global Payroll because processing must be completed quickly to make sure that payments are made on the correct banking date. Managing log file size is particularly critical for Oracle Fusion Global Payroll because, depending on the log settings you choose, Oracle Fusion Global Payroll log entries can use more than 2 GB of disk space per employee paid.

Oracle Support may ask you to use the logging parameter values shown in [Table 2-3](#) to enable logging functionality and obtain certain kinds of log data for Oracle Fusion Global Payroll processes that are submitted using Oracle Enterprise Scheduler. You must specify the logging parameter values in a configuration group—either the default configuration group or another configuration group. You can specify the parameter values in any order.

After the logging parameter values are set, you must arrange for the specified Oracle Fusion Global Payroll process or processes to be run using the configuration group that includes those logging parameter values, and then provide the logged results to Oracle Support for interpretation.

Note: Depending on your payroll size and the type of problem you are troubleshooting, Oracle Support may recommend that you run one or more Oracle Fusion Global Payroll processes for all employees who are listed on the payroll, or that you place only a small number of employees in the payroll relationship group for which you will collect log entries. When practical, running the process for a small number of employees helps to optimize the troubleshooting process and manage the amount of disk space used by the logged information.

Note: The complete task flow for Oracle Fusion Global Payroll typically consists of multiple processes, with only the final process in the flow involving actual payments. To troubleshoot without making unintended payments, one possibility is to use a debugging instance of your Oracle implementation, if one is available to you. Another possibility is to use your production Oracle implementation, but run only the processes that do not involve payment. After gathering the log data requested by Oracle Support, arrange for an Oracle Fusion Global Payroll user to roll back the processes that were run for troubleshooting purposes.

Table 2–3 Logging Parameter Values for Oracle Fusion Global Payroll Application

Parameter	Definition
B	Balance maintenance information: Provides output information that shows the creation and maintenance of balances used during Oracle Fusion Global Payroll processing.
C	C cache structures information: Provides output information that shows details of the Oracle Fusion Global Payroll cache structures and changes to the entries within the structures. While working on a service request, Oracle may ask you to use this parameter to gather additional information.
E	Element entry information: Provides output information that shows the state of the element entries in the process memory after the entries are retrieved from the database. The information is provided whenever data for an entry is changed during processing.
F	Formula information: Provides output information that shows details of formula execution, including formula contexts, input, and output.
G	General logging information: Provides general information, rather than a specific information type. This parameter does not provide sorted output. In general, it is recommended that you choose parameters that provide specific types of information.
I	Balance output information: Provides output information that shows details of values written to the database from the balance buffers.
L	Balance fetching information: Provides output information that shows the balances retrieved from the database and whether the process will use those balances. (If balances such as Year To Date totals have expired because the year has changed, the process resets them and uses the new balance.)

Table 2–3 (Cont.) Logging Parameter Values for Oracle Fusion Global Payroll

Parameter	Definition
M	<p>Entry or exit routing information: Provides output information that shows when any function is entered or exited, using messages such as the following:</p> <p>In: pyippee Out: pyippee.</p> <p>The information is indented to show the call level, and can be used to trace the path taken through the code at the function call level. This parameter is typically used when trying to diagnose a problem such as a core dump.</p>
P	<p>Performance information: Provides output information that shows the number of times certain operations take place at the assignment and run levels, and why those operations took place. For example, this parameter provides information about the balance buffer array write operation.</p>
Q	<p>C cache query information: Provides output information that shows the queries being performed on the Oracle Fusion Global Payroll cache structures. While working on a service request, Oracle may ask you to use this parameter to gather additional information.</p>
R	<p>Run results information: Provides output information that shows details of run results and run result values just as they are about to be written to the database from the Run Results buffer or the Values buffer, to allow verification that buffer contents were correct.</p>
S	<p>C Cache ending status information: Provides output information that shows the state of the Oracle Fusion Global Payroll cache before the process exits, whether that process ends with success or an error. While working on a service request, Oracle may ask you to use this parameter to gather additional information.</p>
T and Z	<p>PL/SQL detail and PL/SQL output: To obtain detailed information about the PL/SQL calls made by the Oracle Fusion Global Payroll application, use the combination of the T parameter and the Z parameter. This combination is typically used to obtain information about Oracle Fusion Global Payroll processes that use a large amount of PL/SQL code, such as Prepayments and Archive. The output from using these parameters is buffered while the process is running and is placed at the end of the log file after processing is complete.</p> <p>Each Oracle Fusion Global Payroll process instance has its own log file, located under the <code>log</code> subdirectory for the particular <code>ProcessId</code>.</p>

To configure logging for the Oracle Fusion Global Payroll application:

1. Determine what kinds of information you need to log, and make a note of the corresponding parameter values from [Table 2–3](#).
2. If you know of an Oracle Fusion Global Payroll configuration group that already has logging parameters set to the values you need, then skip to Step 9.
If you know of no existing configuration group that has the logging parameter values you need, then continue to Step 3.
3. Sign in to the Oracle Fusion Global Payroll application using an account that has the Manage Payroll Process Configuration privilege.
Accounts that have this privilege typically include Payroll Manager, Human Capital Management Application Administrator, and Payroll Administrator.
4. Use the following substeps to navigate to the **Manage Payroll Process Configuration** screen.
 - a. From the **Tools** section of the **Navigator** menu, choose **Setup and Maintenance**.
 - b. In the **Overview** screen that appears, click the **All Tasks** tab.

- c. In the **Match** field of the **Search** panel, select **All**.
 - d. In the **Search** field, select **Task Lists and Tasks**.
 - e. In the **Name** field, enter `Manage Payroll Process Configuration`.
 - f. Click **Search**.
 - g. In the **Search Results** panel, click the **Go to Task** icon for **Manage Payroll Process Configuration**.
5. Decide for which configuration group you will set the logging parameter values:
- If you want to change the logging parameter values for all of the Oracle Fusion Global Payroll processes that are submitted using Oracle Enterprise Scheduler without a specific configuration group being specified, and that are submitted after you change the parameter values, then continue to Step 6 to set the parameter values for the **Default Group**.
 - If you want to change the logging parameter values only for future Oracle Fusion Global Payroll processes that are submitted using Oracle Enterprise Scheduler and that are submitted for a particular existing configuration group that is not the **Default Group**, then skip to Step 7 to set the parameter values for the configuration group you select.
 - If you want to create a new configuration group specifically to use for this troubleshooting process, then skip to Step 8 to create the group and set its logging parameter values.
6. Complete the following substeps to change the logging parameter values for the **Default Group**.

As soon as the changes are made, the new settings automatically take effect for Oracle Fusion Global Payroll processes that are submitted using Oracle Enterprise Scheduler without a specific configuration group being specified.

- a. Click the **Default Group** tab.
- b. In the **Parameter Name** column of the table, look for the following words:

Logging Category Detailed information that is used for investigating problems. Default: no logging.

If those words are not present, continue to substep c.

If those words are present, skip to substep g.
- c. To add the parameter, click the **Create** icon to display the **Add Parameter** dialog.
- d. From the **Parameter Name** dropdown list, select **Logging Category Detailed information that is used for investigating problems. Default: no logging**.
- e. In the **Default Value** field, enter the parameter values that you noted in Step 1, as a continuous string of characters, in any order. Do not use spaces or other characters as delimiters between parameter values.
- f. Click **Save and Close**, and then skip to substep j.
- g. To edit an existing **Logging Category Detailed information that is used for investigating problems. Default: no logging** parameter, select it in the table and click the **Edit** icon to display the **Edit Parameters** dialog.

- j. Continue to Step 9.
9. Complete the following substeps to execute the payroll run or other Oracle Fusion Global Payroll process for which you want the logged information, using the configuration group that has the desired logging parameter values.

Note: Depending on your payroll size and the type of problem you are troubleshooting, Oracle Support may recommend that you run one or more Oracle Fusion Global Payroll processes for all employees who are listed on the payroll, or that you place only a small number of employees in the payroll relationship group for which you will collect log entries. When practical, running the process for a small number of employees helps to optimize the troubleshooting process and manage the amount disk space used by the logged information.

- a. Sign in to the Oracle Fusion Global Payroll application using the account that was previously used for running the job in which the problem occurred.
 - b. From the **Payroll** section of the **Navigator** menu, choose **Payroll Calculations**.
 - c. In the **Payroll Flows** section of the **Tasks** panel, click **Submit a Process or Report**.
 - d. From the **Legislative Data Group** dropdown list in the **Submit a Process or Report: Select Flow Pattern** screen, select the appropriate value for the job you are about to run.
 - e. In the **Process or Report** table, select the **Flow Pattern** for the job, such as **Calculate Payroll**.
 - f. Click **Next** to display the **Submit a Process or Report: Enter Parameters** screen.
 - g. In the **Parameter Details** panel, click the **Search** icon to the right of the **Process Configuration Group** field to display the **Search and Select** dialog.
 - h. Click **Search** to display a list of available **Process Configuration Group** values.
 - i. Select the **Process Configuration Group** value that has the logging parameter values you want to use.
 - j. Enter any other appropriate parameters for the job, and complete the process of submitting the job as it would usually be done.
10. Make a note of the **ProcessId** value for each process you execute.

You may find the **ProcessId** value useful when you are ready to view the logged results. For information about how to view the results, see [Section 2.5.2](#).

2.3.11 Adjusting Oracle Fusion Incentive Compensation Batch Jobs Log Settings for Troubleshooting

The logging functionality for certain Oracle Fusion Incentive Compensation batch jobs is separate from the standard logging functionality for Oracle Fusion Applications. By default, the following kinds of Oracle Fusion Incentive Compensation batch jobs do not write log entries:

- Calculation
- Classification

- Collection
- Crediting
- Rollup

For optimum performance and log file sizes, it is recommended that you use the logging functionality for these areas only when troubleshooting an existing problem.

To configure Oracle Fusion Incentive Compensation batch jobs to write nonstandard log entries:

1. Navigate to the **Setup and Maintenance** work area.
2. In the **Implementations** section of the **Tasks** pane, click **Manage Implementation Projects**.
3. In the **Manage Implementation Projects** pane, use standard Oracle search techniques to locate the implementation project that includes Oracle Fusion Incentive Compensation, then click the project name in the search results.
4. In the **Tasks Lists and Tasks** table, expand the **Incentive Compensation** folder.
5. Expand the **Define Incentive Compensation** folder.
6. Expand the **Define Incentive Compensation Shared Configuration** folder.
7. Locate the **Manage Incentive Compensation Profile Values** row of the table and click the **Go to Task** icon.
8. In the **Search: Profile Option** pane of the **Manage Incentive Compensation Profile Values** screen, select **Incentive Compensation** from the **Application** dropdown list and click **Search**.
9. In the **Search Results** table, locate and select the row for the **CN_DEBUG** profile option.
10. Scroll down and inspect the **CN_DEBUG: Profile Values** table to determine whether it contains a record for the **Profile Level** and **Level Value** for which you want to collect log entries. If so, then select the record and click **Edit**; otherwise, click **New**, and then enter the appropriate values, as follows:
 - If you want to collect log entries for a specific user's Oracle Fusion Incentive Compensation batch jobs, then you edit or create a record in which **Profile Level** is set to **User**, **User Name** is set to the user name of the specific user, and **Profile Value** is set to **Yes**.
 - If you want to collect log entries for all of the Oracle Fusion Incentive Compensation batch jobs at the site, then you edit or create a record in which **Profile Level** is set to **Site**, and **Profile Value** is set to **Yes**.
11. Click **Save** or **Save and Close**.
12. Start a new user session of Oracle Fusion Incentive Compensation and try to replicate the problem.

For information about how to view the log entries, see [Section 2.5.3](#).

2.3.12 Adjusting Oracle Fusion General Ledger Log Settings for Troubleshooting

In the Oracle Fusion Financials product family, some logging functionality for the Oracle Fusion General Ledger application is separate from the standard logging functionality for Oracle Fusion Applications. By default, the following kinds of Oracle Fusion General Ledger batch jobs do not write log entries:

- OpenPeriod
- Posting
- Translation
- Close Process - Create Income Statement Closing Journals
- Close Process - Create Balance Sheet Closing Journals

For optimum performance and log file sizes, it is recommended that you use the logging functionality for these areas only when troubleshooting an existing problem.

To configure the Oracle Fusion General Ledger application to write nonstandard log entries:

1. Use the following substeps to navigate to the **Manage Administrator Profile Values** screen.
 - a. From the **Tools** section of the **Navigator** menu, choose **Setup and Maintenance**.
 - b. In the **Overview** screen that appears, click the **All Tasks** tab.
 - c. In the **Match** field of the **Search** panel, select **All**.
 - d. In the **Search** field, select **Task Lists and Tasks**.
 - e. In the **Name** field, enter `Manage Administrator Profile Values`.
 - f. Click **Search**.
 - g. In the **Search Results** panel, click the **Go to Task** icon for **Manage Administrator Profile Values**.
2. From the **Application** dropdown list in the **Search: Profile Option** pane, select **General Ledger**.
3. In the **Profile Display Name** field, enter `%Debug%` and click **Search**.
4. In the **Search Results** table, select `GL_DEBUG_MODE`.
5. If the `GL_DEBUG_MODE: Profile Values` table contains a record for the **Profile Level** and **Level Value** for which you want to collect log entries, then select the record and click **Edit**; otherwise, click **New**.
6. Fill in the appropriate values, as follows:
 - If you want to collect log entries for a specific user's Oracle Fusion General Ledger batch jobs, then edit or create a record in which **Profile Level** is set to `User`, and **Level Value** is set to the user name of the specific user. Set **Profile Value** to `Yes`.
 - If you want to collect log entries for all of the Oracle Fusion General Ledger batch jobs at the site, then edit or create a record in which **Profile Level** is set to `Site`, and **Level Value** is blank. Set **Profile Value** to `Yes`.
7. Click **Save**.
8. Ask an appropriate user to start a new user session of Oracle Fusion General Ledger and try to replicate the problem.
9. Inspect the relevant log file for new entries.

If the value of the `AFLOG_FILENAME` profile option is set, then the value of the `AFLOG_FILENAME` profile option indicates the location of the log file.

If the value of the `AFLOG_FILENAME` profile option is not set, then the information is logged to the location designated for Oracle Enterprise Scheduler log files. For information about viewing Oracle Fusion Middleware log files, including log files for Oracle Enterprise Scheduler, see the "Viewing and Searching Log Files" section in the *Oracle Fusion Middleware Administrator's Guide*.

10. To help manage the amount of disk space used by the logged information, set the value of `GL_DEBUG_MODE` to `No` or delete any row of the **GL_DEBUG_MODE: Profile Values** table that you no longer need.

For more information about managing the amount of disk space used by Oracle Fusion General Ledger log entries, see the "Managing Log File Space Usage for C Applications" section in the *Oracle Fusion Applications Administrator's Guide*.

2.3.13 Adjusting Oracle Fusion Receivables AutoInvoice Log Settings for Troubleshooting

In the Oracle Fusion Financials product family, logging functionality for the AutoInvoice portion of the Oracle Fusion Receivables application is separate from the standard logging functionality for Oracle Fusion Applications. The amount of information that is logged for AutoInvoice depends on the value of the Log File Message Level system option setting for each business unit. The information is placed in the standard log file for Oracle Enterprise Scheduler.

Note: For optimum performance and log file sizes, it is recommended that you keep the Log File Message Level system option set to the lowest value that meets your everyday needs, and increase the value of the setting only when troubleshooting an existing problem.

The available values for the Log File Message Level setting are the integers 0 through 5. The value of 0 is recommended for day-to-day business needs. The value of 5 provides the maximum amount of information for troubleshooting.

Specifically, if you set the Log File Message Level setting to a value of 0, the following kinds of information are logged:

- Product version
- Program name
- AutoInvoice start time
- AutoInvoice concurrent request arguments
- Error and warning Messages
- AutoInvoice End Time
- AutoInvoice logical steps

If you set the Log File Message Level setting to a value of 1, then the following additional information is gathered:

- Time-stamped function labels

If you set the Log File Message Level setting to a value of 2, then the following additional information is gathered:

- Sizes of allocated arrays

- Dynamic SQL statements
- Number of rows updated, inserted and deleted

If you set the Log File Message Level setting to a value of 3, then the following additional information is gathered:

- Method IV SQL array values

If you set the Log File Message Level setting to a value of 4, then the following additional information is gathered:

- Values of all variables that are used to call FND or tax routines

If you set the Log File Message Level setting to a value of 5, then the following additional information is gathered:

- Bad lines
- Rejected lines

To change the amount of information that the Oracle Fusion Receivables application logs for the AutoInvoice functionality area in the current business unit:

1. In the Oracle Fusion Receivables application, select **Setup and Maintenance** from the Navigator menu.
2. Complete the following substeps to navigate to the **Edit System Options** screen for the **Manage Receivables System Options** task.
 - a. On the **All Tasks** tab, expand the **Search** pane.
 - b. Enter `Manage Receivables System Options` in the **Name** field and click **Search**.
 - c. In the `Manage Receivables System Options` row of the **Search Results** table, click **Go to Task**.
 - d. In the **Search** area of the **Manage Receivables System Options** screen, select `Business Unit` from the dropdown list, enter the name of the business unit for which you are troubleshooting, and then click **Search**.
 Alternately, to display a list of the business units from which you can choose, click **Search** without specifying a business unit name.
 - e. In the **Search Results** table, click the name of the business unit for which you are troubleshooting.
3. In the **Edit System Options** screen, scroll down to display the **AutoInvoice** area of the screen, and then set **Log File Message Level** to the value that corresponds to the amount of information you want to gather.

For example, to gather the maximum amount of information for troubleshooting, set the value to 5. To gather the normal amount of information for day-to-day operations, set the value to 0.

4. Click **Save** or **Save and Close** to put the change into effect.

Log entries for the AutoInvoice portion of Oracle Fusion Receivables are placed in the standard log file for Oracle Enterprise Scheduler. For information about viewing Oracle Fusion Middleware log files, including log files for Oracle Enterprise Scheduler, see the "Viewing and Searching Log Files" section in the *Oracle Fusion Middleware Administrator's Guide*.

Note: After you gather the detailed information that you need, remember to repeat this procedure and return the **Log File Message Level** setting to the value that meets your day-to-day information needs.

2.3.14 Disabling Logging of a Particular Message

You may occasionally encounter a situation in which one of your Oracle Fusion applications repeatedly logs the same error message. In this situation, it is best to find and correct the cause of the error. However, on rare occasions, Oracle Support may recommend that you use the `FND_MESSAGES.LOGGABLE_ALERTABLE` attribute to prevent the repeating message from being logged while efforts are underway to resolve the issue.

Caution: Do not change the `FND_MESSAGES.LOGGABLE_ALERTABLE` attribute unless Oracle specifically advises you to do so, because this involves permanent loss of data.

Do not change the `FND_MESSAGES.LOGGABLE_ALERTABLE` attribute directly in the database. Instead, use the Manage Messages task flow.

To disable logging for a particular message:

1. Choose **Setup and Maintenance** from the Navigator menu.
2. Complete the following substeps to navigate to the **Manage Messages** screen.
 - a. On the **All Tasks** tab, make sure the **Search** pane is expanded.
 - b. In the Search pane, enter `Manage Messages` in the **Name** field.
 - c. Click **Search**.
 - d. In the `Manage Messages` row of the **Search Results** table, click **Go to Task**.
3. In the **Message Name** field in the **Search** pane, enter the name of the error message that you want to temporarily stop logging.
4. Select the relevant Oracle Fusion application from the **Application** dropdown list.
5. If you know it, then select the relevant code module name from the **Module** dropdown list.
6. Click **Search**.
7. Complete the following substeps to set the value of the `FND_MESSAGES.LOGGABLE_ALERTABLE` attribute to `N` for the error message that you want to temporarily stop logging:
 - a. In the search results table, select the error message that you want to temporarily stop logging.
 - b. Click the edit icon in the table header.
 - c. In the **Edit Message** screen, clear the **Logging Enabled** checkbox.
 - d. Click **Save, Save and Create Another**, or **Save and Close** to put the change into effect immediately.

2.3.15 Logging More Detailed Information for a Particular Code Module

If you contact Oracle Support for assistance in resolving a problem, the support representative may ask you to gather more detailed log information on the operations of one or more specific code modules in your Oracle Fusion applications. You can do this by setting the value of the `AFLOG_MODULE` profile option to one or more module names that Oracle Support specifies.

Caution: Unless Oracle Support specifically advises you to change the value of the `AFLOG_MODULE` profile option at the `Site` level, be sure to adjust the value only for a particular user who will attempt to reproduce the problem you are investigating. Specifying one or more particular modules at the `Site` level prevents logging on any modules that are not specified.

For more information about using administrative screens to set the value of this profile option either for a specific user or at the `Site` level, see the "Using Profile Options to Configure Standard Log Settings" section in the *Oracle Fusion Applications Administrator's Guide*. For more information about having a specific user set the user's own profile option using **Troubleshooting Options**, see [Section 2.3.1](#).

2.3.16 Configuring and Using Profile Options for Troubleshooting

You may find it useful to adjust one or more of the following profile options during troubleshooting:

- To log more detailed information about a particular user's operations, you can create or change the value of the `AFLOG_LEVEL` profile option for that user. For more information about setting this profile option, see the "Profile Options for Oracle Fusion Applications Logging" table in the *Oracle Fusion Applications Administrator's Guide*.
- To log more detailed information for an entire site, you can create or change the value of the `AFLOG_LEVEL` profile option for the site. For more information about setting this profile option, see the "Profile Options for Oracle Fusion Applications Logging" table in the *Oracle Fusion Applications Administrator's Guide*.
- To specify the Oracle Fusion Applications code modules for which standard log entries will be written at the level of detail specified by the `AFLOG_LEVEL` profile option for a particular user, you can set the `AFLOG_MODULE` profile option for the same user. (To minimize the number of unrelated log entries that will be placed in the log file during troubleshooting, it is recommended that you specify a particular module whenever feasible.) For more information about setting the `AFLOG_MODULE` profile option, see the "Profile Options for Oracle Fusion Applications Logging" table in the *Oracle Fusion Applications Administrator's Guide*.
- To turn on nonstandard logging for troubleshooting Oracle Fusion Incentive Compensation, you can set the value of the application-specific `CN_DEBUG` profile option to `Y`, either for a single user or for an entire site. For more information about setting this profile option, see [Section 2.3.11](#).

2.4 Configuring the Diagnostic Testing Framework for Troubleshooting

When you investigate an Oracle Fusion Applications problem, you may want to assign job roles to some users, temporarily, that will allow those users to run diagnostic tests.

For information about how to do this, see the "Controlling Access to Diagnostic Testing Functionality" section in the *Oracle Fusion Applications Administrator's Guide*.

In general, you can use the Oracle Fusion Applications Diagnostic Testing Framework (Diagnostic Testing Framework) for troubleshooting without needing to change other configuration settings. When Java or SOA error-handling code in an Oracle Fusion application creates an incident, the Diagnostic Testing Framework automatically runs any Oracle Fusion Applications diagnostic tests that are associated with the particular error message that is logged. There is no configuration setting in the Diagnostic Testing Framework for turning off this automatic execution of diagnostic tests.

Note: Oracle Fusion Applications developers use the APPS_MSG_ID diagnostic test tag to associate particular error messages with appropriate diagnostic tests. You cannot delete or modify the values of diagnostic test tags that are supplied by Oracle.

2.5 Troubleshooting Using Log Settings

You can use log settings to increase the amount of information that a particular Oracle Fusion application gathers about its own operations. This is particularly useful with problems that are easily reproducible—you can change log settings, reproduce the problem, then return log settings to their normal levels so that you do not use disk space for unnecessarily detailed information that is not relevant to the problem.

When you are troubleshooting a problem in an Oracle Fusion Applications environment, you may also find it helpful to use the logging capabilities of Oracle Fusion Middleware. At times, Oracle Support may ask you to use certain of these capabilities when attempting to reproduce a problem, particularly if you have a dedicated testing environment available.

2.5.1 Troubleshooting Using Standard Log Files

Most code modules in Oracle Fusion Applications use a standard diagnostic logging framework in which profile options determine how much information is logged for a particular site or a particular user. For information about adjusting site-level profile options or adjusting user-level profile options as an administrator, see the "Using Profile Options to Configure Standard Log Settings" section in the *Oracle Fusion Applications Administrator's Guide*. For information about allowing selected users to adjust the level of information that is logged for their own sessions, see [Section 2.3.1](#).

2.5.2 Viewing Special Log Output for Oracle Fusion Global Payroll

For information about configuring the special logging functionality for Oracle Fusion Global Payroll processes that are submitted using Oracle Enterprise Scheduler, see [Section 2.3.10](#). This functionality writes request log (.log) files that you may need to transmit to Oracle Support for technical evaluation.

To view special log files for the Oracle Fusion Global Payroll application, from within the application:

1. From the **Payroll** section of the **Navigator** menu, choose **Payroll Calculations**.
2. In the **Search** panel of the **Overview** tab, specify the appropriate information about the processes for which you want to view logs, and then click **Search**.
3. In the **Search Results** panel, click the **Payroll Process Flow Name** value of the process for which you want to view log entries.

4. Click the **Payroll Flow:** *FlowInstanceName* tab.
5. Click the **Processes and Reports** tab.
6. Make a note of the value that appears after the word **Process**.
For example, if the page shows **Process 10483**, record the value 10483.
This is the process number of the Oracle Enterprise Scheduler job.
7. Click the link for the process number to display the **ESS Output:** *ProcessNumber* tab.
8. If no details appear, click the **Refresh** icon.
9. Select the appropriate **Search Results** listing.
10. Scroll down to the **Log** section of the detailed information about the selected process.
11. Click the *LogFileName* link in the **Attachment** field to display the log file.
12. For optimum performance, after you finish troubleshooting, disable the logging functionality for Oracle Fusion Global Payroll processes that are submitted using Oracle Enterprise Scheduler by deleting the logging parameter override value from the payroll configuration group.
13. If you were troubleshooting using a production Oracle implementation, arrange for a regular Oracle Fusion Global Payroll user to roll back the processes that were run for troubleshooting purposes.

2.5.3 Viewing Special Log Output for Oracle Fusion Incentive Compensation

For information about configuring the special logging functionality for certain Oracle Fusion Incentive Compensation batch jobs, see [Section 2.3.11](#). After you enable this functionality and attempt to replicate the Oracle Fusion Incentive Compensation problem that you are troubleshooting, you must perform some database queries to view the resulting log entries. For these queries, you must specify the name of the Oracle Fusion Incentive Compensation process that you ran when attempting to replicate the reported problem. The process names that you can use in the query are as follows:

- CALCULATION MAIN PROCESS
- CLASSIFICATION
- COLLECT_STATISTICS
- Crediting
- GEN_RULE_ENGINE
- GET_WINNERS
- PopulateSrpBatches
- PopulateSrpTables
- REVERT_TRANSACTIONS
- ROLLUP
- Rollup within Crediting

Note: These process names are case-sensitive. For more information about how Oracle Fusion Incentive Compensation processes operate, see the product-specific documentation in Oracle Fusion Applications Help.

To view special log entries for Oracle Fusion Incentive Compensation batch jobs:

1. Use a SQL client to connect to Oracle Database and log in as a user that has permission to view the Fusion database schema.
2. Execute the following SQL command, replacing *process_name* with the name of the Oracle Fusion Incentive Compensation process that you ran when attempting to replicate the reported problem:

```
select process_audit_id from cn_process_audits_all
where process_type = process_name
order by creation_date desc;
```

3. Make a note of the process audit ID that is returned in the first row of the output.
4. Execute the following SQL command, replacing *selected_process_audit_ID* with the value that you noted in Step 3.

```
select message_type, message_text from cn_process_audit_lines_all
where process_audit_id = selected_process_audit_ID
order by process_audit_line_id asc;
```

5. If you have not already done so, place the output of Step 4 in a file that you can inspect with a text editor or send to Oracle Support if requested.
6. When you finish gathering log entries, reset the value of the `CN_DEBUG` profile option setting to `N`.

For information about setting the value of the `CN_DEBUG` profile option, see [Section 2.3.11](#).

2.5.4 Correlating Log Messages Across Log Files and Components

Sometimes, as part of the process of troubleshooting Oracle Fusion Applications, you may need to find all of the log entries that result from a particular action. If the action involves multiple Oracle Fusion applications or multiple Oracle Fusion Middleware components, then the log entries are placed in multiple log files. You can use certain values related to the particular action to locate the relevant log messages in those log files.

2.5.4.1 Values for Correlating Log Messages

You can use a particular action's Execution Context Identifier (ECID) and Relationship Identifier (RID) values to locate the log entries that result from that action.

A unique ECID value is assigned to each user request. However, depending on what is involved in the request, a log entry that is related to that request may have the original ECID of the request, or a different ECID of a child process spawned by the original request. For example, if you submit a job to Oracle Enterprise Scheduler, the request to schedule the job and the job, itself, always have different ECIDs.

For a particular ECID, if the request requires processing by multiple components, by multiple modules within a component, or by using multiple threads, then a unique RID value may be assigned when the work passes to a new thread or process.

In log entries, the ECID and RID values are typically separated by a comma. ECID values can include alphanumeric characters, colons, periods, and hyphens. RID values can include numerals and colons. The RID value indicates the relationship of the current thread or process to its creator. The first RID created for a request is RID = 0. Each shift in generation is represented by a colon. For example, the RID value for the seventh child process of the third child process of the root context for a request is represented as 0:3:7.

2.5.4.2 Correlating Log Messages for Oracle Enterprise Scheduler Jobs

When a job is submitted to Oracle Enterprise Scheduler, the request to schedule the job and the job, itself, always have different ECIDs.

The ECID for the job-scheduling request is displayed in the requesting user session at the time when the job is submitted. However, the ECID of the Oracle Enterprise Scheduler job, itself, is not assigned until the job starts, and it is not displayed in the requesting user session. To locate log entries related to the Oracle Enterprise Scheduler job, itself, you must use the job Request ID value.

To correlate log messages for Oracle Enterprise Scheduler jobs using Fusion Applications Control:

1. In the navigation pane, expand the **Farm** listing, then expand **Scheduling Services**, and then determine whether **Scheduling Services** contains Oracle Enterprise Scheduler clusters that contain individual Oracle Enterprise Scheduler servers or individual Oracle Enterprise Scheduler servers without clusters.
2. To open the ESSAPP deployment administration page, click the listing for an Oracle Enterprise Scheduler cluster such as **ESSAPP (ESSCluster)**, if one is available, or an individual Oracle Enterprise Scheduler server such as **ESSAPP (ess_server1)**.

Note: If you can select a cluster, then that will allow you to search all servers in the cluster simultaneously. This is an advantage because each job request is logged only on the Oracle Enterprise Scheduler server where that request is processed.

3. If the job request for the action that you are troubleshooting appears in the list of **Top 10 Running Job Requests**, then click its **Request ID** link to display the request details, then skip to Step 8.
4. In the context pane, from the dynamic **Scheduling Service Group** or **Scheduling Service** target menu, choose **Job Requests > Search Job Request**.
5. Use standard search techniques to locate the job request for the action that you are troubleshooting.

For information about searching Oracle Enterprise Scheduler job requests, see the "Searching for Oracle Enterprise Scheduler Job Requests" section in the *Oracle Fusion Applications Administrator's Guide*.
6. In the search results, make a note of the **Request ID** value for the job that interests you.
7. In the search results, click the **Request ID** link to display the request details.
8. In the **Request Details** pane, select **Request Log** from the Action dropdown list.

The **Log Messages** page displays all the log messages for the ECID associated with the selected job request.

9. Click any **Log File** link to display a list of the related log messages in the **View Log Messages** page.

At this point, you can inspect the log messages on your screen or download the log file and search it for all messages containing the relevant ECID.

Note: If the log level for a job request is set to `FINER` or `FINEST` when the job runs, then the diagnostic log entries for the job request are written to the log file specified by the `AFLOG_FILENAME` profile option and to the request log file that is available to the user who submitted the job request.

2.5.4.3 Correlating Log Messages for SOA Services and BPEL Processes

If you need to correlate log messages that are related to SOA services or BPEL processes, then you must obtain the ECID by first locating the relevant SOA composite instance.

To correlate log messages for SOA Services or BPEL processes using Fusion Applications Control:

1. In the navigation pane, expand the **Farm** listing, and then the **SOA** listing, and then the **soa_infra** listing, and then select **default**.
2. In either pane, click the SOA composite instance name for which you want to locate log entries.
3. Make sure that your browser is set to allow the display of pop-up windows.

For example, in Firefox, choose **Options > Content** from the **Tools** menu and either make sure that the **Block pop-up windows** checkbox is cleared or add any relevant hosts to **Exceptions**.

Similarly, in Internet Explorer, choose **Pop-up Blocker > Turn Off Pop-up Blocker** from the **Tools** menu.

4. In the **Recent Instances** table, click the relevant **Instance ID** link to display the Flow Trace pop-up window.

The **ECID** is displayed in the upper right corner of the window.

5. Make a note of the **ECID** value and close the Flow Trace pop-up window.
6. To view the relevant log entries using Fusion Applications Control, complete the following substeps. To view the log entries using the Oracle WebLogic Scripting Tool (WLST), skip to Step 7.
 - a. In the navigation pane, select an appropriate target.
 - b. From the dynamic target menu, choose **Logs > View Log Messages**.
 - c. On the Log Messages page, in the **Search** area, click **Add Field**.
 - d. In the pop-up list, select the **ECID** checkbox and click **Add**.
 - e. Enter the **ECID** value in the **ECID** field.
 - f. Adjust the other search field values appropriately and click **Search**.

Note: You can leave search fields blank; blank fields are not used as search criteria.

Skip Step 7.

7. In the Oracle WebLogic Scripting Tool (WLST), enter a command similar to the following example, but substitute the ECID value that you previously noted.

```
displayLogs (ecid='0000H19TwKUCs1T6uBi8UH181kWX000002')
```

2.5.4.4 Correlating Log Messages for Other Process Types

Many operations within Oracle Fusion applications do not use Oracle Enterprise Scheduler, SOA services, or BPEL processes. For these operations, you can correlate log entries using the ECID.

To locate log entries that result from one particular Oracle Fusion application action that does not use Oracle Enterprise Scheduler, SOA services, or BPEL processes:

1. Use Fusion Applications Control to search the log file that contains messages for the Oracle Fusion application in which the action was taken.

Use any search criteria that will allow you to locate a log entry that is associated with the particular action. The associated ECID and RID values are included in the detailed log entry information. For more information about searching for particular information in an Oracle Fusion Applications log file, see the "Searching for Specific Information in Log Files within a Single Domain" section or the "Searching for Specific Information in Log Files Across Multiple Domains" section in the *Oracle Fusion Applications Administrator's Guide*.

2. When you have the ECID and RID values for the action, use one of the following methods to view all of the log entries associated with the action:
 - In Fusion Applications Control, on the Log Messages page, in the **Search** area, click **Add Field** to make sure that the **ECID** search field is displayed, then enter the **ECID** value in that field and click **Search**.
 - In Fusion Applications Control, on the page of Log Messages search results, with a relevant log message selected, select **by ECID** from the **View Related Messages** list.
 - In the Oracle WebLogic Scripting Tool (WLST), enter a command similar to the following example, but substitute the ECID value that you previously noted.

```
displayLogs (ecid='0000H19TwKUCs1T6uBi8UH181kWX000002')
```

For more information about using ECIDs and RIDs to correlate log entries, see the "Correlating Messages Across Log Files and Components" section in the *Oracle Fusion Middleware Administrator's Guide*.

2.5.5 Downloading Log Files

As part of the process of troubleshooting Oracle Fusion Applications problems, an Oracle Support representative may request a copy of a particular log file. You can add downloaded log files to incidents to package those log files with incident information that you send to Oracle Support.

For more information about using Support Workbench to package incidents along with external files such as log files, see [Section 2.2.2.5.2](#). For more information about adding files to an incident and packaging the incident into a ZIP file using ADRCI, see

the "Packaging an Incident" section in the *Oracle Fusion Middleware Administrator's Guide*.

To download an Oracle Fusion Applications log file using Fusion Applications Control:

1. From the navigation pane, select the target for which you want to download a log file.
2. In the context pane, from the dynamic target menu, choose **Logs > View Log Messages** to display the log entries for the target you selected.
3. Use one of the following methods to locate the log file that you want to download:
 - Inspect the **Log File** column in the table of log entries that appears by default. If the column contains a link for the log file that you want to download, then click the link and go to Step 4.
 - Perform a standard log file search using criteria that you expect to list the desired log file in the search results. When the **Log File** column contains a link for the log file that you want to download, click the link and go to Step 4.
 - Expand the **Selected Targets** section of the **Search** area and click the **Target Log Files** icon for the target most likely to be associated with the log file you want to download. In the list of log files that appears, select the file that you want to download and go to Step 4.
4. Click **Download** and specify where you want the log file to be saved.

2.6 Troubleshooting Using the Diagnostic Testing Framework

Some Oracle Fusion Applications diagnostic tests are designed to help you to monitor the health of your system. Other diagnostic tests are designed to help you to troubleshoot problems or to gather data that Oracle Support may need when helping you to resolve a problem. For basic information about using Diagnostic Testing Framework features that are useful for both troubleshooting and monitoring system health, see the "Managing Oracle Fusion Applications Diagnostic Tests" chapter in the *Oracle Fusion Applications Administrator's Guide*. For information about the individual diagnostic tests that are provided with this release, see the *Oracle Fusion Applications Common User Guide* in Oracle Fusion Applications Help.

Note: The user name that you use to sign in to an Oracle Fusion application affects which diagnostic operations are available to you. Be sure that you sign in using an account that is assigned to the job roles for the diagnostic operations that you need. For more information, see the "Controlling Access to Diagnostic Testing Functionality" section in *Oracle Fusion Applications Administrator's Guide*.

2.6.1 Working with Automatically Started Diagnostic Tests

To make sure that certain diagnostic tests run automatically when certain error conditions occur, Oracle developers set the value of each test's APPS_MSG_ID tag to match the identifier of any error message that should trigger the automatic execution of that test. There is no configuration setting for disabling this automatic execution of diagnostic tests.

If the automatic creation of an incident results from an error, then the results of any automatically run diagnostic tests are automatically associated with the incident. The identity of the user who received the error message is also recorded.

2.6.2 Registering Diagnostic Tests

Oracle Fusion Applications seed data contains many diagnostic tests. Diagnostic tests that are supplied in seed data do not require you to register them.

However, if you report an Oracle Fusion application issue to Oracle Support, you may receive additional diagnostic tests to help resolve the issue. Depending on the exact circumstances, those diagnostic tests may or may not require registration. If registration is required for the additional diagnostic tests, Oracle will provide you with detailed registration instructions.

2.6.3 Sending Diagnostic Test Results to Oracle Support

From time to time, you may run a diagnostic test and then want to send the results of the test to Oracle Support. To accomplish this, you attach the results of the test to the relevant incident.

Note: You can also attach other types of files to incidents, such as log file excerpts or `Readme.txt` files containing information for Oracle Support. For more information about using Support Workbench to package incidents along with files such as log file excerpts or `readme.txt` files, see [Section 2.2.2.5.2](#). For more information about using ADRCI to add these files to incidents, see the "Packaging an Incident" section in the *Oracle Fusion Middleware Administrator's Guide*.

To attach diagnostic test results to an incident:

1. Sign in to the Oracle Fusion application that generated the incident using an account that has the `Diagnostic Advanced User` duty role or the `Diagnostic Administrator` duty role.
2. In the Oracle Fusion application, choose **Run Diagnostic Tests** from the Troubleshooting section of the **Settings and Actions** menu to display the Diagnostic Dashboard instance for that application. For more information, see the "Navigating to the Diagnostic Dashboard Application" section in the *Oracle Fusion Applications Administrator's Guide*.
3. If you are not already displaying the **Diagnostic Test Run Status** pane, expand the **Tasks** panel in the Regional area of your screen and click **Run Status**.
4. In the **Diagnostic Test Run Status** table, locate and select the test run that has the report that you want to add to an incident.
5. Click **Add to Incident** to display the Select Incident dialog.
6. Click the Select ADR Home icon to the right of the **ADR Home** field.
7. In the Search and Select: ADR Home dialog, locate and select the table row for the **ADR_HOME** and server that your Oracle Fusion application is currently using.

You can use any of the following techniques to locate the row that describes your `ADR_HOME` and server:

- In the **ADR Home** field, enter any part of your `ADR_HOME` name and then click **Search**.

- In the **Server** field, enter any part of the name of the server that is running your Oracle Fusion application and then click **Search**.
- In both the **ADR Home** field and the **Server** field, enter the values you want to search for, then select either **All** (to display rows that match both search strings) or **Any** (to display rows that match either search string) and click **Search**.

Note: In the Search and Select: ADR Home dialog, search operations are case-sensitive.

8. With the correct table row highlighted, click **OK** to return to the Select Incident dialog.
9. To display a list of known problems for your selected ADR home directory, click the Select Problem icon to the right of the **Problem** field.
10. In the Search and Select: Problem dialog, locate and select the problem that describes the incident to which you want to add test results.
11. With the correct problem highlighted, click **OK** to return to the Select Incident dialog.
12. From the **Incident** field, select the incident to which you want to add test results, and then click **OK**.

The test report results are added to the incident and a confirmation message is displayed.

2.6.4 Purging the Results of Selected Diagnostic Test Runs

From time to time, you may want to remove diagnostic test run results from your database, to keep the Run Status table from becoming too large. For information about deleting diagnostic test results, see the "Purging the Results of Selected Diagnostic Test Runs" section in the *Oracle Fusion Applications Administrator's Guide*.

Troubleshooting Oracle BI EE, Oracle BI Publisher, and Oracle BI Applications

This chapter describes common problems that you might encounter when using Oracle BI Enterprise Edition, Oracle Business Intelligence Publisher, and Oracle Business Intelligence Applications and explains how to solve them.

This chapter includes the following topics:

- [Section 3.1, "Introduction to Troubleshooting Oracle BI EE, Oracle BI Publisher, and Oracle BI Applications"](#)
- [Section 3.2, "Getting Started with Troubleshooting"](#)
- [Section 3.3, "Problems and Solutions for Oracle BI EE"](#)
- [Section 3.4, "Problems and Solutions for Oracle BI Publisher"](#)
- [Section 3.5, "Problems and Solutions for Oracle BI Applications"](#)

3.1 Introduction to Troubleshooting Oracle BI EE, Oracle BI Publisher, and Oracle BI Applications

This section provides guidelines and a process for using the information in this chapter. Using the following guidelines and process will focus and minimize the time you spend resolving problems.

This chapter addresses troubleshooting issues found in Oracle BI EE, Oracle BI Publisher, and Oracle BI Applications. For information about troubleshooting issues in other areas of Oracle Business Intelligence, see the following chapters:

- [Chapter 6, "Troubleshooting Oracle Enterprise Performance Management"](#)
- [Chapter 8, "Troubleshooting Oracle Fusion Transactional Business Intelligence"](#)

Guidelines

When using the information in this chapter, Oracle recommends:

- If the troubleshooting procedure requires you to modify a file (for example, `config.xml`), then be sure to back up the file before you modify it.
- After performing any of the solution procedures in this chapter, immediately retry the failed task that led you to this troubleshooting information. If the task still fails when you retry it, perform a different solution procedure in this chapter and then try the failed task again. Repeat this process until you resolve the problem.

- Making notes about the solution procedures you perform, symptoms you encounter, and data you collect while troubleshooting. Examples of information that you should collect include:
 - Screenshots of the error or behavior.
 - The user ID that you used when the error or issue occurred.
 - The steps that you used to perform the task.
 - From where you accessed an Oracle BI object or functionality. For example, embedded analytics, the reporting pane, reports and analytics work area, integrated search, BI Composer, or Oracle BI Presentation Services.

If you cannot resolve the problem using the information in this chapter and you must log a service request, the notes you make will expedite the process of solving the problem.

Process

Follow the process outlined in [Table 3–1](#) when using the information in this chapter. If the information in a particular section does not resolve your problem, proceed to the next step in this process.

Table 3–1 Process for Using the Information in this Chapter

Step	Section to Use	Purpose
1	Section 3.3 Section 3.4 Section 3.5	Perform problem-specific troubleshooting procedures for Oracle BI EE, Oracle BI Publisher, and Oracle BI Applications. These sections describe: <ul style="list-style-type: none"> ■ Possible causes of the problems ■ Solution procedures corresponding to each of the possible causes
2	Section 14.1	Use My Oracle Support to get additional troubleshooting information about Oracle Fusion Applications, Oracle BI EE, Oracle BI Publisher, or Oracle BI Applications. My Oracle Support provides access to several useful troubleshooting resources, including Knowledge Base articles and Community Forums and Discussions.
3	Section 14.1	Log a service request if the information in this chapter and My Oracle Support does not resolve your problem. You can log a service request using My Oracle Support at https://support.oracle.com .

3.2 Getting Started with Troubleshooting

Use the following information to determine where to begin troubleshooting your issue.

- [Section 3.2.1, "Oracle BI Technologies"](#)
- [Section 3.2.2, "Logging"](#)
- [Section 3.2.3, "Data Warehouse Enabled Profile Option"](#)

3.2.1 Oracle BI Technologies

To properly troubleshoot an Oracle BI issue, you must identify in the Oracle Fusion application user interface which underlying Oracle BI technologies are being used. When identifying these technologies, consider the following:

- Oracle Transactional Business Intelligence is also an Oracle Business Intelligence technology and can be referred to as real-time, current-state, or transactional

business intelligence. Oracle Transactional Business Intelligence objects analyze very recent data such as today's data or this week's data. This chapter does not address Oracle Fusion Online Transactional Business Intelligence troubleshooting issues. For information about troubleshooting these issues, see [Chapter 8, "Troubleshooting Oracle Fusion Transactional Business Intelligence"](#).

- Oracle Fusion Financials also uses Financial Reporting technology.
- Some analyses use Essbase, Real Time Decisions, or Oracle BI Publisher reports.

3.2.2 Logging

The Oracle BI Log files provide information to help you diagnose and fix issues. For example, the Oracle BI query log `nqquery.log` helps you identify problems with the datasource and connectivity set-up such as transactional database, warehouse database, Financial Reporting datasource, or Essbase datasource, and the datasource objects such as table names and column names.

To view the log files, go to Fusion Applications Control, expand the **Business Intelligence** domain, and click **coreapplication**. The Oracle BI log information displays in the **Diagnostics** tab.

Note: In some case you might want to generate a log file for a single Oracle Business Intelligence Application analysis' query. For more information, see [Section 3.5.2, "Need to Troubleshoot an Analysis' Query."](#)

3.2.3 Data Warehouse Enabled Profile Option

Note: The Data Warehouse Enabled Profile option only applies to users who have implemented Oracle Fusion Customer Relationship Management.

When troubleshooting, you should note whether the Data Warehouse Enabled profile was set to Yes, No, or NA. For information about how to check this profile's value, see the Oracle Fusion Applications documentation.

The Data Warehouse Enabled Profile option indicates whether the Oracle Fusion Customer Relationship Management implementation uses a Data Warehouse (Yes) or employs a "No Warehouse" solution (No) and therefore tries to retrieve data from the transactional (OTBI) database. For more information, see [Table 3–2](#).

Table 3–2 Warehouse Enablement Settings

Setting	Means that...
Yes	Real-Time Subject Area is serviced by OTBI source. Common Subject Area is serviced by data warehouse source.
No	Real-Time Subject Area is serviced by OTBI source. Common Subject Area is serviced by OTBI source. Some measures are not available. Some measures return zero.
NA	NA

3.3 Problems and Solutions for Oracle BI EE

This section describes common problems and solutions. It contains the following topics:

- [Section 3.3.1, "Oracle BI Presentation Services Fails to Start"](#)
- [Section 3.3.2, "The BI Server Is Not Running"](#)
- [Section 3.3.3, "Cannot Log In to Oracle Business Intelligence as a User With the BISystem Role"](#)
- [Section 3.3.5, "The "My Account" Link Does Not Display in Presentation Services"](#)
- [Section 3.3.4, "Report Object Icons In the Oracle BI Presentation Catalog Are Not Intuitive"](#)
- [Section 3.3.6, "Oracle Business Intelligence Requests Stop Responding"](#)

3.3.1 Oracle BI Presentation Services Fails to Start

In most cases, Presentation Services fails because the BI Server is not running. Note that if you are using a script to start services and the services fail to start, you should manually stop and then restart all services, making sure that one service has completed before you start the next service.

Problem

The BI Server may not be running.

Solution

To determine if the BI Server is running:

1. Log in to Fusion Applications Control.
2. Open the Business Intelligence node and select **coreapplication**.
3. Click the **Capacity Management** page, and then click the **Availability** tab.
4. Under **BI Server**, locate **coreapplication_obis1** and check its status.
5. If you discover that the BI Server is not running, use the Oracle BI log files to determine the cause of this issue. For more information about checking the Oracle BI log files, see [Section 3.3.2, "The BI Server Is Not Running."](#)

3.3.2 The BI Server Is Not Running

The BI Server has failed to start or has stopped running.

Problem

The Cluster Controller might not be communicating with the BI Server and the BI Server log might contain information describing why it cannot communicate.

Solution

To check the Cluster Controller log files in Fusion Applications Control:

1. Log in to Fusion Applications Control.
2. Open the **Business Intelligence** node and select **coreapplication**.
3. Click the **Diagnostics** tab, and then click the **Log Messages** subtab.

4. Go to the **View/Search Log Files** section and click **Cluster Controller Log**. The Log Messages page displays.
5. Search for an entry similar to the following entry:

```
[2011-02-28T12:54:51.000+00:00] [OracleBIServerComponent] [NOTIFICATION:1] []
[]
[ecid: 004bLSdkE549Xb9LJe_Aif0000Zg000000] [tid: b7f686c0] nqsserver:
Clustered Oracle BI Server started. Version: 11.1.1.4.0.110109.0239.000.
[2011-02-28T12:54:52.000+00:00] [OracleBIServerComponent] [NOTIFICATION:1]
[] [] [ecid: 004bLSdkE549Xb9LJe_Aif0000Zg000000] [tid: 66f6ba0] [43071]
A connection with Cluster Controller somemachine.example.com:7001 was
established.
```

Note that if this entry does not exist, then the Cluster Controller is *not* communicating correctly with the BI Server. If the Cluster Controller is not communicating with the BI Server, then go to the following "To check the BI Server log file in Fusion Applications Control" procedure.

To check the BI Server log file in Fusion Applications Control:

1. Log in to Fusion Applications Control.
2. Open the **Business Intelligence** node and select **coreapplication**.
3. Click the **Diagnostics** tab, and then click the **Log Messages** subtab.
4. Go to the **View/Search Log Files** section and click **BI Server Log**. The Log Messages page displays.
5. Search for an entry similar to the following entry:

```
[2011-01-31T20:47:38.000-08:00] [OBIPS] [ERROR:10] []
[saw.security.odbcuserpopulationimpl.initialize] [ecid: ] [tid: ]
Odbc driver returned an error (SQLDriverConnectW).
State: HY000. Code: 10058.
[NQODBC] [SQL_STATE: HY000] [nQSError: 10058]
A general error has occurred.
[nQSError: 73006] Cannot obtain Oracle BI Servers from either
the primary Cluster Controller (somemachine.example.com)
or the secondary Cluster Controller () specified for the
clustered DSN. (HY000)[[File:odbcuserpoploaderimpl.cpp Line:282
[2011-01-31T20:47:38.000-08:00] [OBIPS] [ERROR:16] []
[saw.security.odbcuserpopulationimpl.initialize] [ecid: ]
[tid: ] Unable to create a system user connection to BI Server during start up.
Trying again.
[[File:odbcuserpoploaderimpl.cpp
Line:283
```

3.3.3 Cannot Log In to Oracle Business Intelligence as a User With the BISystem Role

When logging in to Oracle Business Intelligence as a user with the BISystem role, a message displays stating that you have entered an invalid user name or password.

Problem 1

A user ID with the BISystem role may be locked. The system can lock this user ID if an administrator makes multiple attempts to log in with the incorrect password.

Solution 1

Ask the Oracle Internet Directory administrator to go to the Oracle Internet Directory and check the user ID. If this user ID is locked, the administrator must unlock it.

Problem 2

The password of the user ID with the `BISystem` role may not be synchronized with the credential store.

Solution 2

To confirm that the password is correct:

1. Log in to Oracle WebLogic Server Administration Console.
2. Go to **Domain Structure** and click **Security Realms**, and select **myrealm**. The Settings for myrealm page displays.
3. Click the **Users and Groups** tab, and then the **Users** subtab.
4. In the **Users** table, locate and select the user that has the `BISystem` role assigned to it. The settings page displays.
5. Click the **Passwords** tab and reset the user password. Click **Save**.
6. Log in to Fusion Applications Control.
7. Open the **WebLogic Domain** node and right-click **BIDomain**.
8. Select **Security**, and then select **Credentials**.
9. Select **oracle.bi.system** and the **select system.user**.
10. Edit the password to match the user password that you set in Oracle WebLogic Server.
11. Restart the Oracle BI Administration Server, Oracle Managed Server, and Oracle Process Manager and Notification Server.

Problem 3

The Oracle Internet Directory password may be incorrect.

Solution 3

To check and correct the Oracle Internet Directory password:

1. Log in to Fusion Applications Control.
2. Open the **Business Intelligence** node and select **coreapplication**.
3. Click the **Diagnostics** tab, and then click the **Log Messages** subtab.
4. Go to the **View/Search Log Files** section and click **Log Viewer** to search all log files. The Log Messages page displays.
5. Go to the **Search** section and expand the **Selected Targets** section.
6. In the **Selected Targets** table, locate **AdminServer** and click the corresponding **View** list of target files button.
7. Search for Oracle Internet Directory errors. If the error is due to the wrong password, you will find an error such as the following error:

```
<Feb 15, 2011 12:31:10 PM PST> <Error> <Console> <BEA-240003> <Console
  encountered the following error weblogic.security.providers.authentication.
  LDAPAtnDelegateException: [Security:090294]could not get connection
```

```

atweblogic.security.providers.authentication.
LDAPAtnDelegate.getConnection(LDAPAtnDelegate.java:3483)

at weblogic.security.providers.authentication.LDAPAtnDelegate.
getConnection(LDAPAtnDelegate.java:3470)

at weblogic.security.providers.authentication.LDAPAtnDelegate.
listUsers(LDAPAtnDelegate.java:2258)

at weblogic.security.providers.authentication.LDAPAuthenticatorImpl.
listUsers(LDAPAuthenticatorImpl.java:178)

at weblogic.security.providers.authentication.
OracleInternetDirectoryAuthenticatorMBeanImpl.listUsers

... 110 more

```

Caused by: netscape.ldap.LDAPException: error result (49); Invalid credentials

8. To correct this issue, log in to Oracle WebLogic Server Administration Console.
9. Go to **Domain Structure**, click **Security Realms**, and select **myrealm**.
10. Select the **Users and Groups** tab, and then select the **Users** subtab.
11. Select the user ID. The settings for the user ID display.
12. Click the **Passwords** subtab and reset the user's password to the correct password. If you are not sure of the password, see the Oracle Internet Directory administrator.

3.3.4 Report Object Icons In the Oracle BI Presentation Catalog Are Not Intuitive

The icons that the Oracle BI Presentation catalog uses to represent Oracle BI analyses, Oracle BI Publisher reports, and Oracle Hyperion financial reports do not clearly represent the object types.

Problem

Users may not know which icon represents which object type (that is Oracle BI analysis, Oracle BI Publisher report, and Oracle Hyperion financial report) and either do not know which object to open, or open the wrong object from the Oracle BI Presentation catalog.

Solution

Use the information in [Table 3-3](#) to understand the Oracle BI Presentation catalog's object icons.

Table 3-3 Object Icons for Analyses and Reports

Icon	Description
	This catalog icon represents an Oracle BI analysis.
	This catalog icon represents an Oracle BI Publisher report.

Table 3–3 (Cont.) Object Icons for Analyses and Reports

Icon	Description
	This catalog icon represents an Oracle Hyperion financial report.

3.3.5 The "My Account" Link Does Not Display in Presentation Services

In the Global Header of Presentation Services, the My Account option is missing. Normally the user can select the Signed In As list and the My Account option displays.

Problem

The problem may be a global user ID (GUID) refresh issue that requires you to recover the catalog.

Solution

To recover the catalog:

1. Start a command prompt.
2. Enter the following commands:

```
cd<Oracle_BI_Instance>/config/OracleBIPresentationServicesComponent/  
coreapplication_obips1/
```

3. Open the `instanceconfig.xml` file.

Note: Before you modify `instanceconfig.xml`, make a copy of the file for back up purposes. Before you modify the `instanceconfig.xml`, it is critical that you understand how to properly modify this file.

4. Locate the `<catalog>` element and add the following:

```
<UpdateAccountGUIDS>Recover</UpdateAccountGUIDS>
```
5. Save `instanceconfig.xml`.
6. Stop and restart Presentation Services.
7. Log in to Fusion Applications Control.
8. Open the **Business Intelligence** node and select **coreapplication**.
9. Select the **Capacity Management** tab, and then select the **Availability** subtab.
10. Under **BI Presentation Services**, select **coreapplication_obips1**.
11. Click the **Stop Selected** button and confirm that **coreapplicataion_obips1** stopped.
12. Re-select **coreapplication_obips1**.
13. Click the **Start Selected** button and confirm that **coreapplication_obips1** started.
14. Open `instanceconfig.xml`.
15. Remove the following:

```
<UpdateAccountGUIDS>Recover</UpdateAccountGUIDS>
```

Note: You must perform this step to ensure that your system is secure.

16. Save `instanceconfig.xml`.
17. Stop and restart the BI Server.

3.3.6 Oracle Business Intelligence Requests Stop Responding

Problem

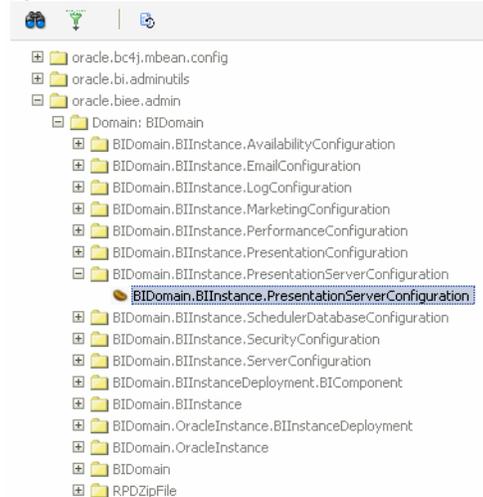
Oracle Fusion Applications pages that integrate Oracle Business Intelligence charts, reports, and dashboards must be authenticated by Oracle Business Intelligence Presentation Services. If the authentication is slow, these Oracle Fusion Applications pages may stop responding. The `SyncLogonTimeoutSecs` timeout parameter helps in timing out the Oracle Business Intelligence request so that the Oracle Fusion Applications page can return quickly.

Solution

To locate the Oracle Business Intelligence Presentation Services server properties to modify in Fusion Applications Control:

1. From the navigation pane, expand the `BIDomain` farm and select `WebLogic Domain`.
2. Click `BIDomain` to display the `WebLogic Domain` page.
3. From the `WebLogic Domain` menu, choose `System MBean Browser`.
4. In the `System MBean Browser` page, expand `Application Defined MBeans`.
5. Expand `Application Defined MBeans, oracle.biee.admin, Domain: BIDomain, BIDomain.BIInstance.PresentationServerConfiguration`.
6. Click `BIDomain.BIInstance.PresentationServerConfiguration`.

System MBean Browser



7. In the `Application Defined MBeans: BIDomain.....PresentationServerConfiguration` page, click the `SyncLogonTimeoutSecs` attribute.
8. Change the value from 900 to 60 in the `Value` field and click `Apply`.

3.4 Problems and Solutions for Oracle BI Publisher

This section describes common problems and solutions. It contains the following topics:

- [Section 3.4.1, "Oracle BI Publisher Reports Are Missing from the Presentation Services Shared Folders"](#)
- [Section 3.4.2, "Oracle BI Publisher Reports Are Missing from the Oracle BI Publisher Server Shared Folders"](#)

3.4.1 Oracle BI Publisher Reports Are Missing from the Presentation Services Shared Folders

When users log in to Presentation Services and access the Oracle BI Presentation Catalog to browse the shared folders for their reports, the shared folders do not contain any reports.

Problem

The reports may not exist on the file system.

Solution

To confirm that the items exist on the file system:

1. Log in to Fusion Applications Control.
2. Open the **Business Intelligence** node and select **coreapplication**.
3. Click the **Deployment** tab, and then click the **Repository** subtab.
4. Go to the **BI Presentation Catalog** section of the page and note the catalog path.
5. Use OS commands or a file explorer to navigate to the catalog path.
6. Browse the catalog for reports. Depending upon the outcome of this step, you may do one of the following:
 - If the reports do not exist in the catalog, it is probably because of a GUID refresh issue. See the following "[To refresh the GUIDs:](#)" procedure.
 - If the reports are not in the catalog, then it may be that you recently completed an unsuccessful catalog merge. Note that even if the last statement of the merge indicated success, the merge still might not have completed successfully. If you suspect that your catalog merge was not successful, then repeat the catalog merge.

To refresh the GUIDs:

1. Start a command prompt.
2. Enter the following command:

```
cd <Oracle_bi_Instance>/config/OracleBIServerComponent/coreapplication_obis1/
```
3. Open `NQsconfig.ini` and set the `FMW_UPDATE_ROLE_AND_USER_REF_GUIDS` parameter to `YES`, as follows:

```
FMW_UPDATE_ROLE_AND_USER_REF_GUIDS=YES
```

Note: Before you modify `NQSconfig.ini`, make a copy of the file for back up purposes.

4. Save and close `NQSconfig.ini`.
5. Repeat the previous two steps and set the `FMW_UPDATE_ROLE_AND_USER_REF_GUIDS` parameter in `NQSConfig.ini` back to `NO`.

Note: You must perform this step to ensure that your system is secure.

6. Restart the BI Server.

3.4.2 Oracle BI Publisher Reports Are Missing from the Oracle BI Publisher Server Shared Folders

When users log in to Oracle BI Publisher and access the shared folders containing their reports, they see no reports. This problem can occur even though users can locate their reports in the Presentation Services Catalog's shared folders.

Problem 1

The user may not have the proper privileges to view the report.

Solution 1

To access Presentation Services and check the privileges required to access reports:

1. Log in to Presentation Services as a user with administrator privileges.
2. Go to the **Global Header** and click the **Signed In As** list.
3. Click **My Account**. The My Account page displays.
4. Click the **Roles and Catalog Groups** tab and note the roles and groups in this page. Click **OK** to exit this page.
5. Go to the **Global Header** and click **Sign Out** to log out of Presentation Services.
6. Log back into Presentation Services using the log in credentials of the user who cannot view the reports in the Oracle BI Publisher Server shared folders.
7. Access the user's privileges using the previous steps.
8. If the user does not have the proper privileges, log in to Presentation Services as a user with administrator privileges and navigate to the Manage Privileges page to assign the proper privileges to the user.

Problem 2

An error may have occurred when Oracle BI Publisher connected to Presentation Services.

Solution 2

By default Oracle BI Publisher connects to Presentation Services using the `BISystemUser` account that is stored in the credential store. However, it is possible for users to override this account.

To override the `BISystemUser` account:

1. Open the `xmlp-server-config.xml` file in the following directory:
`BI_DOMAIN_HOME/config/bipublisher/repository/Admin/Configuration`
2. Confirm that the `SAW_USERNAME` and `SAW_PASSWORD` properties are not set. Note that if these properties have been set, it will cause an error. Before you change these properties, ask your administrator why they have been set.
3. To un-set these properties, set their values to "".

Note: Before you modify `xmlp-server-config.xml`, make a copy of the file for back up purposes.

4. Restart the WebLogic domain.

Problem 3

The catalog may be corrupted.

Solution 3

To check if the catalog is corrupted:

1. Log in to Presentation Services as a user with administrator privileges.
2. Go to the **Global Header** and click **Catalog**. The Catalog page displays.
3. In the **Search** pane, enter the following search criteria:
 - In the **Name** field, type `*`.
 - In the **Location** field, click the list and choose **All**.
 - In the **Type** field, click the list and choose **Data Model**.
4. Click **Search**. If the search results include the **Shared Folder**, then the catalog is corrupt. Note that if the Shared Folder is included in your search results, Oracle BI Enterprise Edition has classified it as a data model rather than a folder. Perform the following "To fix the corrupted catalog" procedure to fix the catalog.

To fix the corrupted catalog:

1. Open Catalog Manager and open the catalog in offline mode.
2. Navigate to **Shared Folders**.
3. Right-click the object in the Name column and select **Properties**.
4. Set the following properties to null:
 - `bip:DisplayName`
 - `Caption`
 - `compositeSignature`
 - `DESCRIPTION`
 - `objectName`
5. Save your changes.

3.5 Problems and Solutions for Oracle BI Applications

This section describes common problems and solutions for Oracle BI Applications. It contains the following topics:

- [Section 3.5.1, "Revenue Amount Columns Show No Data or Show Data with Currency Symbol Missing in CRM Reports"](#)
- [Section 3.5.2, "Need to Troubleshoot an Analysis' Query"](#)

3.5.1 Revenue Amount Columns Show No Data or Show Data with Currency Symbol Missing in CRM Reports

While creating or displaying an Oracle Fusion Customer Relationship Management (CRM) analysis with a currency amount column, the analysis either displays the entire column as blank or displays the amount with the currency symbol missing.

Problem

The user's currency setting, the column's data format, or the analysis' logical SQL is incorrect.

Solution 1

While this solution is performed in Presentation Services, the change is reflected in Presentation Services and BI Composer. To confirm that the column contains values and the currency symbol:

1. Log in to Presentation Services as an end user.
2. Go to the **Global Header** and click the **Signed In As** list.
3. Click **My Account**. The My Account page displays.
4. In the **Preferences** tab, from the **Currency** drop-down menu, select **CRM Currency**, and confirm the user's currency preference.
5. Click **OK** to save any changes and exit the My Account page.

Solution 2

This solution is applicable to Presentation Services only. To confirm that the **Amount** column's data format is correct:

1. Open an analysis and in the Analysis editor, click the Criteria tab, and locate the analysis' **Amount** column.
2. Click the column's **Options** button and select Column Properties. The Column Properties dialog displays.
3. Click the Data Format tab and select the **Override Default Data Format** box.
4. In the **Treat Number As** field, select Custom.
5. In the **Custom Numeric Format** field, enter the following:

```
[$:currencyTagColumn="Use the BI Currency column in the subject area"]
```

For example, to set this in an analysis created from the Sales - CRM Pipeline subject area, you would enter:

```
[$:currencyTagColumn="Sales - CRM Pipeline"."Currency"."Common Currency Code"]
```

6. Click **OK** to close the Column Properties dialog.

7. Save the analysis.

Solution 3

This solution is applicable to Presentation Services only. To confirm that the analysis' logical SQL is correct:

1. Open an analysis, and in the Analysis editor, click the Advanced tab, locate the Advanced SQL Clauses section, and then locate the **Prefix** field.
2. In the **Prefix** field, add the following preferred currency prefix:

```
set VARIABLE PREFERRED_CURRENCY='Global Currency 4';
```
3. Click **Apply SQL**.
4. Save the analysis.

Note: Any or all of the above solutions may be required to resolve the issue.

3.5.2 Need to Troubleshoot an Analysis' Query

The method of accessing `nqquery.log` as described in [Section 3.2.2, "Logging"](#) is not efficient when tracing a single Oracle Business Intelligence Applications analysis' query. To troubleshoot a single query, you can set the Oracle BI Server logging levels within Presentation Services to capture an analysis' SQL statement and then issue it to view the analysis' query.

Note: For more information about this issue, see Document 1469168.1 Fusion Applications: How to set up and access the `nqquery.log` to troubleshoot a single OTBI or OBIA query on My Oracle Support:

<https://support.oracle.com>

Problem

It is not efficient to use the `nqquery.log` when only a single analysis' query information is needed to troubleshoot an issue.

Solution 1

To setup and access the analysis' query:

1. Log in to Presentation Services and in the global header, click **Catalog**. The Catalog page displays.
2. Use the Catalog page to locate and click the **Edit** link corresponding to the analysis for which you want query information. After you open the analysis, the Analysis editor displays.

For more information about using the Catalog page, click the **Catalog Page Help** button.

3. In the Analysis editor, select the Advanced tab.
4. Locate the **SQL Issued** box, which contains the Logical SQL that was sent by the Oracle BI Presentation Server to the Oracle BI Server, and copy the SQL code.

5. Open a Fusion Application session as your BIAdministrator user and click the Administration link. The Administration page displays.

Note: If the Administration link does not display, then the BI Administrator authority was not set up correctly. For information about how to set up the BI Administrator authority, see Document 1395598.1 How To Assign BIAdministrator Role to a Fusion Application User on My Oracle Support:

<https://support.oracle.com>

6. Locate the Maintenance and Troubleshooting section and click **Issue SQL**. The Issue SQL page displays.
7. Paste the SQL code into the **Issue SQL** box and in the **Oracle BI Server Logging Level** field, select 2. Note that setting this field to 2 obtains the physical SQL (that is, the SQL sent by BI Server to the database or datasource). Click **Issue SQL**. The query results display in the Issue SQL page.
8. Scroll to the bottom of the page and click the **View Log** link. The log displays.
9. Confirm that the log contains a "sending query to database" entry, which contains information about how the physical SQL is being sent.

Troubleshooting Oracle Data Integrator

This chapter describes common problems that you might encounter when using Oracle Data Integrator (ODI) and explains how to solve them.

This chapter includes the following sections:

- [Section 4.1, "Introduction to Troubleshooting ODI"](#)
- [Section 4.2, "Getting Started with Logging Basics for Oracle Data Integrator"](#)
- [Section 4.3, "Resolving Common Problems"](#)

In addition to this chapter, review the *Oracle Fusion Middleware Error Messages Reference* for information about the error messages you may encounter.

4.1 Introduction to Troubleshooting ODI

This section provides guidelines and a process for using the information in this chapter. Using the following guidelines and process will focus and minimize the time you spend resolving problems.

Guidelines

When using the information in this chapter, Oracle recommends:

- After performing any of the solution procedures in this chapter, immediately retrying the failed task that led you to this troubleshooting information. If the task still fails when you retry it, perform a different solution procedure in this chapter and then try the failed task again. Repeat this process until you resolve the problem.
- Making notes about the solution procedures you perform, symptoms you see, and data you collect while troubleshooting. If you cannot resolve the problem using the information in this chapter and you must log a service request, the notes you make will expedite the process of solving the problem.

Process

Follow the process outlined in [Table 4–1](#) when using the information in this chapter. If the information in a particular section does not resolve your problem, proceed to the next step in this process.

Table 4–1 *Process for Using the Information in this Chapter*

Step	Section to Use	Purpose
1	Section 4.2	Get started troubleshooting ODI using log files.

Table 4–1 (Cont.) Process for Using the Information in this Chapter

Step	Section to Use	Purpose
2	Section 4.3	Perform problem-specific troubleshooting procedures for ODI. This section describes: <ul style="list-style-type: none"> ▪ Possible causes of the problems ▪ Solution procedures corresponding to each of the possible causes
3	Section 14.1	Use My Oracle Support to get additional troubleshooting information about Oracle Fusion Applications or ODI. My Oracle Support provides access to several useful troubleshooting resources, including Knowledge Base articles and Community Forums and Discussions.
4	Section 14.1	Log a service request if the information in this chapter and My Oracle Support does not resolve your problem. You can log a service request using My Oracle Support at https://support.oracle.com .

4.2 Getting Started with Logging Basics for Oracle Data Integrator

Use the following logging tools to troubleshoot ODI issues:

- [Section 4.2.1, "Viewing and Configuring ODI Agent Logs"](#)
- [Section 4.2.2, "Viewing Session Logs for ODI"](#)

4.2.1 Viewing and Configuring ODI Agent Logs

The ODI agents are deployed to a Managed Server. You can view the aggregate session events for the agent.

To view the logs for the ODI agent with Fusion Applications Control:

1. Log into Fusion Applications Control.
2. From the navigation pane, expand the farm, **Application Deployments, oraclediagent (ODICluster)**.
3. Select **oraclediagent (odi_server_name)**.

The Application Deployment page displays.

4. From the **Application Deployment** menu, choose **Logs > View Log Messages**.

The Log Messages page contains all of the latest ODI agent log messages. Click the messages to get more information and download the corresponding log file. For more information about viewing logs, see the "Viewing Log Files and Their Messages Using Fusion Middleware Control" chapter in the *Oracle Fusion Middleware Administrator's Guide*.

Note the session name and time or session ID from the log.

If the problem still cannot be solved, increase the log level of the system to debug the transactions. To simplify troubleshooting, it is recommended that you enable the following parent loggers at the **TRACE32 (FINEST)** level.

To change logger levels, perform the following steps in Fusion Applications Control:

1. From the navigation pane, expand the farm, **Application Deployments, oraclediagent (ODICluster)**.
2. Select **oraclediagent (odi_server_name)**.

The Application Deployment page displays.

3. Choose **Logs > Log Configuration**.

4. In the **Logger Name** column, expand the **oracle** and then **oracle.odi** to display the loggers.
5. In the **Oracle Diagnostic Logging Level (Java Level)** column, change the logging level to **TRACE:32** for selected ODI loggers.

The change should take effect within a few minutes. Note that in a production system, setting the trace at a fine-grained level can result in a large amount of output that must be diagnosed. You can alternately use selective tracing that provides a way to get a detailed, on-disk trace selectively (for example, by user name, thereby eliminating trace output for other users).

6. To activate selective tracing, right-click the domain under **WebLogic Domain** and choose **Logs > Selective Tracing**.

Note that **Selecting Tracing** does not display as an option when you right-click an Administration Server or Managed Server and choose **Logs**.

7. From the **Option Name** list, choose the type of selective trace (for example, based on user name), and start the trace.
8. When the problem has been reproduced, disable the trace and view the output to narrow down the issue.

For more information on selective tracing, see the "Configuring and Using Selective Tracing" section of the *Oracle Fusion Middleware Administrator's Guide*.

9. Review the error logs (from Fusion Applications Control) for more information on the error.

Cross layer, server, and family functionality can be correlated through the execution context ID (ECID) (for example, you can look up the composite instance for a given expense report by correlating all the log entries with the ECID associated with that expense report transaction). For more information, see the "Correlating Messages Across Log Files and Components" section of the *Oracle Fusion Middleware Administrator's Guide*.

4.2.2 Viewing Session Logs for ODI

To view a specific session log file:

1. Log into Fusion Applications Control.
2. From the navigation pane, expand the farm, and then **ODI**.
3. Click **MASTER REPOSITORY**.

The Master Repository page displays.

4. From the **Agents** section, from the **Running** column () , click the number for the agent with the session to search the sessions, for example, **FusionCrmOdiAgent**

The Search Sessions page displays.

5. On the Search Sessions page, in the **Sessions** section, locate the session number corresponding to the job. Notice that while the session has a value in the **Begin Date** column, it does not have a value in the **End Date** column.
6. Click the session number corresponding to the job.
You are prompted to log in to the ODI Console.
7. From the **Repository** list, choose **Work Repository**.

8. Enter the credentials, and then click **Sign In**.
9. On the Session page, in the **Execution Statistics** section, note the values for the **Session ID** and **Session Name** in the **Definition** section, and the time of session in the **Execution Statistics** section.
10. Expand the **Relationships** and view the steps in the **Session Steps** tab.
11. For a step that did not successfully complete, click the link in the **Step Name** column to perform a deeper analysis.
12. On the Step page, expand the **Relationships** and view the tasks for the step in the **Session Tasks** tab.

Status	Task Type	Object	Name	Start Date	End Date	Ins	Upd
Failed	Loading	SrcSet0	Drop work table	Monday, June 4, 201	Monday, June 4, 201 0		0
Success	Loading	SrcSet0	Create work table	Monday, June 4, 201	Monday, June 4, 201 0		0
Success	Loading	SrcSet0	Load data	Monday, June 4, 201	Monday, June 4, 201 0		0
Success	Loading	SrcSet0	Analyze work table	Monday, June 4, 201	Monday, June 4, 201 0		0
Success	Integration	Load Addresses data	Truncate target table	Monday, June 4, 201	Monday, June 4, 201 0		0
Success	Integration	Load Addresses data	Insert new rows	Monday, June 4, 201	Monday, June 4, 201 1865		0
Success	Integration	Load Addresses data	Commit transaction	Monday, June 4, 201	Monday, June 4, 201 0		0
Success	Loading	SrcSet0	Drop work table	Monday, June 4, 201	Monday, June 4, 201 0		0

13. For a step that did not successfully complete, click the link in the **Step Name** column to perform a deeper analysis.
14. On the Session Task Detail page, review the **Message** field in the **Execution Statistics** section and the **Target Command** command in the **Target Details** section for errors.

Session Task Detail

Definition

- Session Id 12169001
- Session Step Load Addresses data - Full Load
- Order Number 100
- Number of Executions 1
- Task Name Integration
- Object Load Addresses data - Full Load
- Name Insert new rows

Execution Statistics

- Start Date Monday, June 4, 2012 4:05:36 PM GMT-05:00
- End Date Monday, June 4, 2012 4:05:36 PM GMT-05:00
- Duration (s) 0
- Status
- Return Code 0
- Message
- Log Indicator Error Tolerated

Record Statistics

- No. of Inserts 1865
- No. of Deletes 0
- No. of Updates 0
- No. of Errors 0
- No. of Rows 1865

Target Details

- Target Server Name TRG_ODISAMPLE
- Target Logical Schema ODISAMPLE_LogicalSchema
- Target Context GLOBAL
- Target Transaction Id 1
- Commit Target No Commit
- Target Isolation Level Default
- Target Command

```
insert into ODISAMPLE.SAMP_ADDRESSES_D ( ADDRESS1, ADDRESS2, POSTAL_CODE, CITY, STATE_PROVINCE,
CTRY_CD3_STATE_NAME, CTRY_CD3_STATE_ABBRV, CTRY_CD3_STATE_ABBRV_CITY, CTRY_CD3_STATE_NAME_CITY,
LONGITUDE, LATITUDE, ESTAB_NAME, REGION, ISO_COUNTRY_CODE3, COUNTRY_NAME, STATE_PROVINCE_ABBRV,
CTRY_CD3_CITY, ADDRESS_KEY, AREA ) select ADDRESS1, ADDRESS2, POSTAL_CODE, CITY, STATE_PROVINCE,
CTRY_CD3_STATE_NAME, CTRY_CD3_STATE_ABBRV, CTRY_CD3_STATE_ABBRV_CITY, CTRY_CD3_STATE_NAME_CITY,
LONGITUDE, LATITUDE, ESTAB_NAME, REGION, ISO_COUNTRY_CODE3, COUNTRY_NAME, STATE_PROVINCE_ABBRV,
CTRY_CD3_CITY, ADDRESS_KEY, AREA FROM ( select C10_ADDRESS1 ADDRESS1, C9_ADDRESS2 ADDRESS2, C14_POSTAL_CODE
POSTAL_CODE, C15_CITY CITY, C5_STATE_PROVINCE STATE_PROVINCE, C6_CTRY_CD3_STATE_NAME CTRY_CD3_STATE_NAME,
```

4.3 Resolving Common Problems

This section describes common problems and solutions. For each problem and solution, use the example that fits best. It contains the following topics:

- [Section 4.3.1, "ODI Process Is Taking a Long Time to Complete Job Request"](#)
- [Section 4.3.2, "A Coherence Node Connected to ODI Is Using UDP Multicasting for Cluster Discovery Instead of Well-Known Address"](#)
- [Section 4.3.3, "Troubleshooting ODI Repository Issues"](#)
- [Section 4.3.4, "Troubleshooting ODI and ESS Callback Issues"](#)

4.3.1 ODI Process Is Taking a Long Time to Complete Job Request

Problem

An ODI job request was started and is running far past the point at which it should have completed. You can determine by this viewing the session log to determine if there is end date. See the [Section 4.2.2, Steps 1 to 5](#) to determine if a session has an end date.

Cause

It is likely that the job is still running due to a job step stalling or failing to complete.

Solution

Check the ODI Agent log files and the ODI Console session log files for error messages. These messages provide information that could help you find the reason the job is not completing.

To resolve this issue:

1. View the ODI agent log file. See [Section 4.2.1](#).
2. View the ODI session log. See [Section 4.2.2](#).

If you find no error messages in the log files, the problem is likely due to environment issues outside of ODI.

4.3.2 A Coherence Node Connected to ODI Is Using UDP Multicasting for Cluster Discovery Instead of Well-Known Address

Problem

The Coherence node is operating in UDP Multicasting for cluster discovery instead of Well-Known Address (WKA), overriding the ODI server start settings indicated in the WebLogic Server Administration Console.

The Coherence log file contains diagnostic information that can confirm this issue. In some cases, there is a `tangosol.coherence.log` setting that is overriding the logging settings for `odi_server1` in the WebLogic Server Administration console. You must disable the override to view the Coherence log. You can do this by editing the `setDomainEnv.sh` script (UNIX) or the `setDomainEnv.cmd` script (Windows).

To disable the logging override and view the output of the Coherence logs:

1. Navigate to the `setDomainEnv` script, located at this path:

```
(UNIX) DOMAIN_HOME/bin  
(Windows) DOMAIN_HOME\bin
```

2. Open the script in a text editor. The `EXTRA_JAVA_PROPERTIES` section of the file will look similar to this:

```
EXTRA_JAVA_PROPERTIES="{EXTRA_JAVA_PROPERTIES}  
-Dsoa.archives.dir=${SOA_ORACLE_HOME}/soa -Dsoa.oracle.home=${SOA_ORACLE_HOME}  
-Dsoa.instance.home=${DOMAIN_HOME}  
-Dtangosol.coherence.log=jdk  
-Dtangosol.coherence.clusteraddress=10.0.0.0  
-Dtangosol.coherence.clusterport=9063  
-Djavax.xml.soap.MessageFactory=oracle.j2ee.ws.saaj.soap.MessageFactoryImpl  
-Dweblogic.transaction.blocking.commit=true  
-Dweblogic.transaction.blocking.rollback=true  
-Djavax.net.ssl.trustStore=${WL_HOME}/server/lib/fusion_trust.jks"
```

3. Remove `-Dtangosol.coherence.log=jdk` and save the script.
4. Delete the old `coherence.log` file.
5. Restart the domain. Coherence log messages will now properly be output to the `coherence.log` file.

For more information about restarting domains in Oracle Fusion Applications, see the "Starting and Stopping a Product Family Oracle WebLogic Server Domain" section in the *Oracle Fusion Applications Administrator's Guide*.

The Coherence log file displays the following output:

```

Oracle Coherence Version 3.6.0.4 Build 19111
Grid Edition: Development mode
Copyright (c) 2000, 2010, Oracle and/or its affiliates. All rights reserved.

2012-05-10 05:52:38.686/54.656 Oracle Coherence GE 3.6.0.4 <Info> (thread=[ACTIVE]
ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)',
member=n/a): Loaded cache configuration from
"jar:file:/user/APPLTOP/fusionapps/soa/soa/modules/oracle.soa.fabric_
11.1.1/fabric-runtime.jar!/soa-coherence-cache-config.xml"
2012-05-10 05:52:39.557/55.527 Oracle Coherence GE 3.6.0.4 <D4> (thread=[ACTIVE]
ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)',
member=n/a): TCPM bound to /10.0.0.0:9066 using SystemSocketProvider
2012-05-10 05:52:43.062/59.032 Oracle Coherence GE 3.6.0.4 <Info> (thread=Cluster,
member=n/a): Created a new cluster "cluster:0x000" with Member(Id=1,
Timestamp=2012-05-10 05:52:39.592, Address=10.0.0.0:9066, MachineId=53980,
Location=site:example.com,machine:machine_name,process:997, Role=WeblogicServer,
Edition=Grid Edition, Mode=Development, CpuCount=24, SocketCount=24)
UID=0x0AF129DC0000013736CEEC28D2DC236A
2012-05-10 05:52:43.107/59.077 Oracle Coherence GE 3.6.0.4 <Info> (thread=[ACTIVE]
ExecuteThread: '0' for queue: 'weblogic.kernel.Default (self-tuning)',
member=n/a): Started cluster Name=cluster:0x000

Group{Address=10.0.0.0, Port=9063, TTL=4}

```

The `Group{Address=10.0.0.0, Port=9063, TTL=4}` line indicates that UDP Multicasting is being used for cluster discovery instead of WKA. If WKA were being used, the log file would contain the following lines:

```

WellKnownAddressList(Size=1,
  WKA{Address=10.0.0.0, Port=9066}
)

```

Cause

The SOA Coherence override file, `tangosol-coherence-override.xml`, takes precedence over the ODI Coherence override file and the server start settings in the WebLogic Server Administration Console.

Solution 1

If the ODI Server was started with Node Manager, you must add the WKA properties to the Server Start settings for the ODI server in the WebLogic Server Administration Console and restart the ODI server to enable WKA cluster discovery.

To configure WKA settings for ODI in the WebLogic Administration Console:

1. Follow the procedure outlined in the "Configure Coherence for the Cluster" section in the *Oracle Fusion Middleware High Availability Guide*.
2. Restart the ODI server.

For more information about restarting servers using the WebLogic Server Administration Console, see "Start Managed Servers from the Administration Console" and "Shutdown servers in a cluster" in the *Oracle Fusion Middleware Oracle WebLogic Server Administration Console Online Help*.

Solution 2

If the ODI server was started with the command prompt, you must add the WKA properties to the `startManagedWebLogic.sh` script (UNIX) or the `startManagedWebLogic.cmd` script (Windows) and restart the ODI server to enable WKA cluster discovery.

To configure WKA settings for ODI in the `startManagedWebLogic` script:

1. From the command prompt, navigate to the location of the `startManagedWebLogic` script:

```
(UNIX) DOMAIN_HOME/bin/  
(Windows) DOMAIN_HOME\bin
```

2. Using a text editor, add the following lines to the script:

```
-Doracle.odi.coherence.wka1=machine1 -Doracle.odi.coherence.wka1.port=9088  
-Doracle.odi.coherence.wka2=machine2 -Doracle.odi.coherence.wka2.port=9088  
-Dtangosol.coherence.localport=9088
```

where *machine1* and *machine2* are the hostnames of the two machines in the cluster.

Note: Use 9088 as the Coherence port if it is unused on the machine. Otherwise, choose another port to configure as the Coherence port.

3. Restart the ODI server using the `faststartstop` utility.

For more information about restarting servers using the `faststartstop` utility, see the "Stopping the Administration Servers and Managed Servers" and the "Starting the Administration Servers and Managed Servers" sections in the *Oracle Fusion Applications Administrator's Guide*.

4.3.3 Troubleshooting ODI Repository Issues

Problem

ODI is unable to connect to the ODI repository.

Cause

Provisioning failed to populate the correct GUIDs.

Solution

Connect to the `FUSION_ODI` schema and use the following SQL commands:

```
select WUSER_NAME, PASS, GUID_EXTERNAL from SNP_USER;  
select AGENT_NAME, HOST_NAME, HOST_PORT from SNP_AGENT;
```

If the GUIDs are missing: either the provisioning failed or the ODI repository was overwritten after provisioning. If the GUIDs are present, check that the repository was not overwritten after provisioning. Check the provisioning logs and resolve any errors.

For more information about provisioning logs and troubleshooting the provisioning process, see the "Troubleshooting the Provisioning Process" section in the *Oracle Fusion Applications Installation Guide*.

Cause

The repository was overwritten during provisioning.

Solution

Run the following SQL commands:

```
select count( * ) from SNP_PROJECT;  
select count( * ) from SNP_MODEL;
```

If projects or models are missing, the ODI repository was not created correctly in the starter database or was overwritten after provisioning. Check the provisioning logs and correct any errors.

For more information about provisioning logs and troubleshooting the provisioning process, see the "Troubleshooting the Provisioning Process" section in the *Oracle Fusion Applications Installation Guide*.

4.3.4 Troubleshooting ODI and ESS Callback Issues

Problem

The ODI Agent is unable to call back to Oracle Enterprise Scheduler to update the status of a job.

Cause

The ODI Agent may be prevented from communicating with Oracle Enterprise Scheduler.

Solution

Check the ODI Agent logs for errors. See [Section 4.2.1](#) for more information about checking the ODI Agent logs. Resolve any errors listed in the logs.

If there are no errors in the ODI Agent logs, an error with Oracle Enterprise Scheduler might be causing the issue.

See [Chapter 7](#) for more information about troubleshooting Oracle Enterprise Scheduler.

Troubleshooting Oracle Enterprise Crawl and Search Framework

This chapter describes common problems that you might encounter when using Oracle Enterprise Crawl and Search Framework (ECSF) and explains how to solve them.

This chapter includes the following topics:

- [Section 5.1, "Problems and Solutions"](#)
- [Section 5.2, "Diagnosing Enterprise Crawl and Search Problems"](#)

Some procedures in this chapter reference content in the Oracle Fusion Middleware guides. These guides describe using Fusion Middleware Control. These procedures also apply to Fusion Applications Control.

In addition to this chapter, review the *Oracle Fusion Middleware Error Messages Reference* for information about the error messages you may encounter.

5.1 Problems and Solutions

This section describes common problems and solutions.

5.1.1 Missing Parameters for Search Engine Instance

You do not see any parameters for the search engine instance you created.

Problem

Seed data is not set up on your Oracle Fusion Applications database.

Solution

Execute the `ECSF_SEED_DATA.sql` script against your Oracle Fusion Applications database.

5.1.2 Cannot Create Search Engine Instance

You are unable to create a search engine instance record.

Problem

An existing search engine instance record is present.

Solution

1. Execute the following SQL statement:

```
select * from ECSF_ENGINE_INSTANCE
```

2. Delete the row that contains null values for all fields except the ID and Name fields, and commit the deletion.
3. Recreate the search engine instance. See the "Creating Search Engine Instances" section in the *Oracle Fusion Applications Administrator's Guide*.

5.1.3 Searchable Object Not Listed in Fusion Applications Control for ECSF

Your searchable object is not listed in the table of the Add a Searchable Object to Selected Engine Instance dialog.

Following are two possible causes and solutions for this issue:

Problem

The searchable object is not in the Oracle Fusion Applications database. You can check by executing the following SQL statement against your Oracle Fusion Applications database:

```
select * from ECSF_SEARCH_INDEX_OBJECT
```

Solution

Register the searchable object in the Oracle Fusion Applications database. For information, see "Task 2, Register the Searchable Objects" in the *Oracle Fusion Applications Administrator's Guide*.

Problem

The searchable object has already been associated with an engine instance. This is evident when a value exists in the `SEI_ID` column.

Solution

Disassociate the searchable object from the current engine instance. For information, see "Task 3, Disassociate the Searchable Objects from Search Engine Instances" in the *Oracle Fusion Applications Administrator's Guide*.

You can identify the engine instance with which the searchable object is associated by executing the following SQL statement:

```
select * from ECSF_ENGINE_INSTANCE where ID = sei_id_value_of_your_
searchable_object_record
```

Alternatively, you can browse through the engine instances in Fusion Applications Control for ECSF.

5.1.4 Searchable Object Deployment Fails

Your attempt to deploy a searchable object using Fusion Applications Control for ECSF fails.

Following are two possible causes and solutions for this issue:

Problem

The ECSF application, which is deployed to Oracle WebLogic Server, does not contain the search metadata file.

Solution

Make sure the ECSF application contains the search metadata file, and redeploy it to Oracle WebLogic Server. For information, see the "Deploying and Crawling Searchable Objects" chapter in *Oracle Fusion Applications Developer's Guide*.

Problem

The `ECSF_RUNTIME_URL` search engine instance parameter is not set, or is set incorrectly.

Solution

To resolve this issue, ensure the `ECSF_RUNTIME_URL` parameter is set correctly by checking the following:

- `SES_ADMIN_SERVICE URL`:
`http://search_engine_instance:7777/search/api/admin/AdminService`
- `SES_QUERY_SERVICE URL`:
`http://search_engine_instance:7777/search/query/OracleSearch`
- `ECSF_DATA_SERVICE URL`:
`http://example.oracle.com:7101/approot/searchfeedservlet/`
- `ECSF_SECURITY_SERVICE URL`:
`http://search_engine_instance:7101/approot/searchfeedservlet/`
- `ECSF_REDIRECT_SERVICE URL`:
`http://search_engine_instance:7101/approot/searchfeedservlet/`

5.1.5 Searchable Object Undeployment Fails

Your attempt to undeploy a searchable object from an engine instance fails.

Problem

The searchable object you are trying to undeploy does not exist in the Oracle SES data sources.

Solution

Make sure the searchable object you are trying to undeploy is deployed to an engine instance, as indicated when the `DEPLOYED` flag is set to `TRUE`, or the `Deployed` column is checked in Fusion Applications Control for ECSF.

5.1.6 Search Category Deployment Fails

Your attempt to deploy the search category to the engine instance fails.

Problem

There are no deployed searchable objects associated with the search category.

Solution

Make sure you associate searchable objects with the search category before you attempt to deploy the search category. For information, see "Task 3 Associate

Searchable Objects with the Search Categories" in the *Oracle Fusion Applications Administrator's Guide*.

5.1.7 Cannot Start, Undeploy, or Delete the Index Schedule

You cannot start, undeploy, or delete the index schedule.

Problem

The index schedule is in `ERROR_MANUAL_RECOVERY` state, which results from restarting the database.

Solution

You must recover the stuck ESS request.

5.1.8 Crawl Fails

You can view the data in feeds, but you receive an error when you attempt to crawl the data into the search engine.

Problem

You did not specify a search plug-in for your searchable object, so the default security plug-in is being used. The default security plug-in requires you to select a secure attribute.

Solution

Select a secure attribute when you define searchable attributes. For information, see the "Creating Searchable Objects" chapter in *Oracle Fusion Applications Developer's Guide*.

5.1.9 Invalid Channel Feed Type Error

You receive the following error during a scheduled crawl:

```
Error: Invalid Channel Feed type "error".
```

Problem

When the crawl was scheduled to start, the crawl state of the searchable object was `CRAWLING`. ECSF allows a searchable object to be crawled by only one process at a time. If you are certain that the searchable object is not being crawled, then the last crawl was abnormally terminated, and the ECSF metadata was not properly updated to indicate that the crawl had concluded.

Solution

Manually start the crawl to reset the state of the crawl and enable the searchable object to be crawled. For information, see "Task 5, Start the Index Schedules" in the *Oracle Fusion Applications Administrator's Guide*.

5.1.10 ECSF Query Error

You receive the following error when you click on a facet value:

```
unexpected ECSF Query Error: oracle.ecsf.SearchException: Field  
'facet_attribute' cannot be used for this query because it has not been  
indexed in on the search engine
```

Problem

You deployed the searchable object to the Oracle SES instance, so it became available for search and the facet tree was rendered with its facet values. However, the crawl had either failed or no documents were indexed, so Oracle SES does not contain the searchable attribute.

Solution

Determine why the crawl failed, undeploy the searchable object, and then redeploy it to the Oracle SES instance to generate a new index.

A crawl can fail for many reasons, such as running out of Oracle Database space, Oracle SES issues, Oracle Enterprise Scheduler issues, and so on.

5.1.11 FND-6603 Error

You receive the FND-6603 error that halts search functionality.

Problem

The search categories could not be fetched, or results could not be obtained from all the selected search categories. There may be other causes for the error.

Solution

You can change the server startup parameters to increase the web service timeout value to 5 minutes (500,000 milliseconds). For information, see the "How to Set the System Parameter for Web Service" section in *Oracle Fusion Applications Developer's Guide*.

You can also undeploy the categories that are failing to load. For information, see "Task 1 Undeploy the Search Categories" in the *Oracle Fusion Applications Administrator's Guide*.

5.2 Diagnosing Enterprise Crawl and Search Problems

This section describes general approaches for diagnosing ECSF problems.

5.2.1 Diagnosing ECSF Command Line Administration Utility Issues

To diagnose issues related to ECSF Command Line Administration Utility, you can check the log file (`ecsfcmdLineAdminLog.txt`) located in the log subdirectory where `runCmdLineAdmin.sh` or `runCmdLineAdmin.bat` file is executed.

5.2.2 Diagnosing Fusion Applications Control for ECSF Issues

To diagnose issues related to Fusion Applications Control for ECSF, you can also check for error messages in the log files located in `DOMAIN_HOME/sysman/log`.

If the parameters for the selected search engine instance are not configured correctly, a window with error messages appears. The error message contains three entries: a summary of the error, the specific error message from the runtime server, and the detailed stack trace information. The messages in the first and the second entries are internationalized (that is, they are translated to the language of the selected locale).

5.2.3 Diagnosing Failures During Deploy/Undeploy Operations for Search Categories

If you experience failures while deploying or undeploying search categories, check for the following:

- The database connection is successful.
- The searchable object is available in the Oracle Enterprise Manager repository.
- The associated searchable objects are deployed.
- The deployed object is available in Oracle SES.

Troubleshooting Oracle Enterprise Performance Management

This chapter describes common problems that you might encounter when using Oracle Enterprise Performance Management and explains how to solve them.

This chapter includes the following topics:

- [Section 6.1, "Problems and Solutions for Foundation Services"](#)
- [Section 6.2, "Problems and Solutions for Financial Reporting"](#)
- [Section 6.3, "Problems and Solutions for Hyperion Provider Services"](#)
- [Section 6.4, "Problems and Solutions for Essbase"](#)

6.1 Problems and Solutions for Foundation Services

This section describes some common problems and solutions for Foundation Services. It contains the following topics:

- [Section 6.1.1, "Getting Started with Logging Basics for Foundation Services"](#)
- [Section 6.1.2, "Web Traffic Snooping"](#)
- [Section 6.1.3, "EPM Registry"](#)
- [Section 6.1.4, "Hyperion Security Username/Password Authentication Fails during Enterprise Scheduler Services Essbase Cube Creation in the Domain"](#)
- [Section 6.1.5, "EPM Workspace"](#)
- [Section 6.1.6, "Allocation Manager"](#)
- [Section 6.1.7, "Smart View"](#)

6.1.1 Getting Started with Logging Basics for Foundation Services

Log files are the best tools for analyzing what might be wrong with the system configuration. The logging configuration file, the defaults it ships with, and instructions for changing change those defaults will help with the analysis.

- **Configuration:** The `logging.xml` file in the following directories contains the loggers and their default levels:

```
(UNIX) DOMAIN_HOME/servers/server_name/logs  
(Windows) DOMAIN_HOME\servers\server_name\logs
```

The `DOMAIN_HOME` is named BIDomain.

- Output: The default locations of the loggers are rooted in the following directories:

(UNIX) `DOMAIN_HOME/servers/server_name/logs`
(Windows) `DOMAIN_HOME\servers\server_name\logs`

These files include:

- `/registry/registry.log`
 - `/css/css.log`
 - `/workspace/Framework.log`
 - `/workspace/workspace.log`
 - `/financialreporting/fr.log`
 - `CalcManager.log`
- Loggers: Increase or decrease the levels of these loggers:
 - **oracle.EPMCSS**
 - **oracle.bi.bifndnepm.epmreg**
 - **oracle.bi.bifndnepm.bpmui**
 - **oracle.bi.bifndnepm.workspace**
 - **oracle.EPMFR**
 - **oracle.EPMAnnotations**
 - **oracle.EPMJCR**
 - **oracle.EPMADM**
 - **oracle.bi.bifndnepm.calcmgr**

To change logger levels, perform the following steps:

- Go to Fusion Applications Control.
- From the navigation pane, expand the farm and then **WebLogic Domain**.
- Right-click a Managed Server from within the domain (each server's log levels can be independently set).
- Choose **Logs > Log Configuration**.
- In the **Logger Name** column, expand the **oracle** runtime loggers to display loggers.
- Change the logging level as appropriate.

6.1.2 Web Traffic Snooping

Problem

Some components are not operating correctly, or appear to have some minor issues. This is a broad category, but snooping the web traffic can help development resolve some issues by looking for irregular status, content, and redirection, and just providing the flow of calls up to the problem area.

Solution

1. Connect to <http://www.fiddler2.com/fiddler2> and install version 2. Launch Fiddler through one of these methods:

- Start Menu: **Programs > Fiddler2**
 - Microsoft Internet Explorer: **Tools > Fiddler2**
 - Mozilla Firefox: **Tools > Monitor With Fiddler > Launch Fiddler Now**
Ensure **Do not use Fiddler** is not selected.
2. Connect to the starting URL and continue normally until the problem occurs.
 3. When the problem occurs, in Fiddler, choose **File > Save > All Sessions**.
 4. Enter a name for the session archive (.saz) file.

Note: Be aware that the file may contain sensitive information, such as user ID and password information. Therefore, manage the file carefully.

6.1.3 EPM Registry

This section describes common problems and solutions for EPM Registry. It contains the following topics:

- [EPM Registry Initialization Fails](#)
- [Connection to Essbase Server Fails](#)
- [Host and Ports Do Not Match](#)

6.1.3.1 EPM Registry Initialization Fails

Problem

The EPM Registry initialization fails in the `BI` domain. Oracle Fusion General Ledger and Oracle Fusion Customer Relationship Management (CRM) code running within the `FinancialsDomain` and `CRMDomain` domains, respectively, has direct integration with the EPM Registry API and consumes EPM Security Component, which also tightly integrates with the EPM Registry API. When EPM Registry initialization fails, it greatly impacts communication with downstream EPM products in the BI domain.

Solution

To resolve this problem:

1. Login to Oracle WebLogic Server Console as the Oracle WebLogic Server administrative user.
2. From **Domain Structure** portlet, navigate to **Services > Data Sources** and select **EPMSysRegistry Datasource** from the available list of datasources.
3. Click on the **Connection Pool** tab and confirm that the correct information is available for URL property.
4. Click on the **Targets** tab and confirm that the data source is targeted to all of the required Oracle WebLogic Servers and clusters running in the `Financials` domain.
5. Click on the **Monitoring** tab and confirm that the data source for all of the targeted Oracle WebLogic Servers and clusters is in **Running** state. Optionally, try clicking **Test Data Source** button to test the data source for a given server.
6. If, in Step 5, the data source was not in the **Running** state, click the **Control** tab and attempt to start the data source using the **Start** button.

7. If any errors were encountered during Step 5 or 6, consider restarting the Oracle WebLogic Server domain.

6.1.3.2 Connection to Essbase Server Fails

Problem

An error is returned when connecting to Essbase Server from the Fusion Applications domain, using the Essbase Cluster lookup URL that is built using the host and port information retrieved for `Essbase_FA_Cluster`, from EPM Registry using the Registry API.

Solution

To resolve this issue, perform the following validations with appropriate actions:

1. Verify that the host and port values for the `LOGICAL_WEB_APP` component in EPM System Registry, where `webAppType` is `PROVIDER_SERVICES_WEB_APP`, exactly matches the host and port that the APS Web application is running on in the BI domain. Follow these steps:
 - a. Run the EPM Registry Editor utility using the following command:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/config/foundation/11.1.2.0/epmsys_registry.sh view LOGICAL_WEB_APP | tee -a logical_webapp_report.txt
(Windows) APPLICATIONS_CONFIG\BIInstance\config\foundation\11.1.2.0\epmsys_registry.bat view LOGICAL_WEB_APP > logical_webapp_report.txt
```
 - b. In the `logical_webapp_report.txt` file that is generated as a result of Step 1, search for the following string:

```
*"webAppType = PROVIDER_SERVICES_WEB_APP"
```
 - c. For the `COMPONENT` containing the matching string, verify that `HOST/port/SSL_PORT` exactly match what the APS Web application is actually running on in the BI domain. If any of these values are different in the Essbase cluster lookup URL, they should be appropriately updated in EPM Registry for the given Logical Webapp Component. This solution is discussed in [Section 6.1.3.3](#).
 - d. Confirm that the APS Web application is in an Active state in the BI domain, by logging into the BI Administration Server console and reviewing the deployment profile of APS.
2. If verification of Step 1 successfully passes, verify the Oracle Access Manager protection policies and confirm that the Essbase cluster lookup URL is excluded from those policies

6.1.3.3 Host and Ports Do Not Match

Problem

If the host or port for Logical Web App components in the EPM Registry do not exactly match the actual host and port that EPM Web applications are running on in the `BIDomain` domain, there may be connection or launch issues for EPM Web applications from within the Fusion user interface. In this case, you must update the host and port for Logical Web App components in EPM Registry.

Solution

To resolve the issue:

1. Execute the following command so that respective component IDs are available in the file for later use.

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/config/foundation/11.1.2.0/epmsys_
registry.sh view LOGICAL_WEB_APP | tee -a logical_webapp_report.txt
(Windows) APPLICATIONS_CONFIG\BIInstance\config\foundation\11.1.2.0\epmsys_
registry.bat view LOGICAL_WEB_APP > logical_webapp_report.txt
```

The EPM Registry Dump (.html report) that is created by running `epmsys_registry.sh` and `epmsys_registry.bat` does not include the component IDs that are required to update the host and port properties for individual components.

After successfully executing this command, the `logical_webapp_report.txt` file now contains exported data for five Logical Web App components - something similar to:

```
COMPONENT - 1
NAME - Default
ID - a01b453873d1e7b5S7b70c01f12e34faed1bS7fdc
TYPE - LOGICAL_WEB_APP
HOST - hostname
HYPERION HOME - /scratch/aime1/work/mw8747/Oracle_BI1
PROPERTIES -
    webAppType = CALC_WEBAPP
    context = calcmgr
```

The ID highlighted above in bold will be available for COMPONENT - [1-5]; this is what you will be required to use in subsequent steps.

2. For the individual ID of COMPONENT - [1-5], execute the following EPM Registry update command:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/config/foundation/11.1.2.0/epmsys_
registry.sh updateproperty \#ID/@port port
(Windows) APPLICATIONS_CONFIG\BIInstance\config\foundation\11.1.2.0\epmsys_
registry.bat updateproperty #ID/@port port
```

For example:

```
./epmsys_registry.sh updateproperty
\#a01b453873d1e7b5S7b70c01f12e34faed1bS7fdc/@port 16050
```

3. Validate that you have successfully updated the host and port for Logical Web App components:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/config/foundation/11.1.2.0/epmsys_
registry.sh view LOGICAL_WEB_APP | tee -a logical_webapp_update_report.txt
(Windows) APPLICATIONS_CONFIG\BIInstance\config\foundation\11.1.2.0\epmsys_
registry.bat view LOGICAL_WEB_APP > logical_webapp_report.tx
```

4. After these updates, restart the BIDomain, CRMDomain and FinancialsDomain domains, so that new changes take effect. See "Starting and Stopping a Product Family Oracle WebLogic Server Domain" in the *Oracle Fusion Applications Administrator's Guide*.

6.1.4 Hyperion Security Username/Password Authentication Fails during Enterprise Scheduler Services Essbase Cube Creation in the Domain

Problem

The following error about Oracle Enterprise Scheduler Essbase Cube creation in the BIDomain domain is returned because of a Hyperion security username and password authentication failure:

```
EPMCSS-00301: Failed to authenticate user. Invalid credentials. Enter valid credentials.
```

Solution

To resolve this issue, verify that the password stored in credential store for Application Identity (App ID) used by the Oracle Enterprise Scheduler job to connect to Essbase exactly matches the password for the given Application Identity in the underlying LDAP Identity Store:

1. Identify which App ID is used by the Oracle Enterprise Scheduler job in the given domain, to connect to an Essbase single cluster.

The following application identities are used for the respective domains:

- Oracle Fusion Customer Relationship Management: FUSION_APPS_CRM_ADF_APPID
 - Oracle Fusion Projects: FUSION_APPS_PRJ_ESS_APPID
 - Oracle Fusion General Ledger: FUSION_APPS_GL_ESSBASE_APPID
2. Retrieve the credential with a given map and key, use scripting to invoke the MBean operation `JpsCredentialMXBean.getPortableCredential(map, key)`.

For example:

```
(map="oracle.wsm.security", key="FUSION_APPS_AMX_APPID-KEY")
```

3. The credential obtained in Step 2 can then be used to compare the existing password for the given App ID in the underlying LDAP ID Store, using the following command line `ldapcompare`:

```
ldapcompare -h hostname -p port -D "bind_user_dn" -w bind_user_password -a userpassword -v appid_password_from_credstore -b "appid_dn"
```

If Step 3 does not run with positive results, it implies that the credential store password and the LDAP store password failed the comparison test. In this case, passwords in credential store and LDAP ID Store should be synchronized.

6.1.5 EPM Workspace

This section describes common problems and solutions for EPM Workspace. It contains the following topics:

- [Debugging](#)
- [Startup](#)
- [Microsoft Internet Explorer Truncated Menus](#)

6.1.5.1 Debugging

Problem

Errors occur with certain functionality.

Solution

1. Check the status of Workspace by entering this URL:

```
http://server_name:19000/workspace/status
```

This URL displays a summary of any fatal errors that prevent Workspace from running, and a list of integrated products.

2. Enable the client debugging feature by selecting **Navigate > Administer > Workspace Server Settings** and selecting **Client Debug Enabled**.

All users who log on after selecting this option will be affected. The URLs that can be accessed include the following:

```
http://server_name:19000/workspace/debug/configInfo.jsp
http://server_name:19000/workspace/debug/userInfo.jsp
```

The first URL shows information about the system including metadata from integrated products (for example, menus, preferences panels, and so on); the second URL shows information about the current user, including groups, effective roles, and Workspace menu items as interpreted and filtered for the current user.

6.1.5.2 Startup

Problem

The `http://server_name:19000/workspace/` URL fails to respond or an error occurs.

Solution

Workspace initialization happens at the first request, not at server startup. If initialization fails, it is reattempted at every subsequent request. Any error during initialization is logged in the `workspace.log` file. The error message displays a page that replaces the normal Workspace Log on screen. Finally, the error is reported in the status report servlet, `/workspace/status`. Only the log files include Exception stack traces. The following tasks must successfully complete in order before Workspace allows log ons, and can be matched up in the `workspace.log` file:

1. Parse and validate the file `/conf/WSProducts.xml` in the Workspace Web application.
2. Initialize the Shared Services Registry:
 - a. Connect to the Shared Services Registry.
 - b. Find the unique `WORKSPACE` component in the Shared Services Registry.
 - c. Find the unique Workspace `LOGICAL_WEB_APP` component in the Shared Services Registry.
 - d. View the Workspace configuration properties from `LOGICAL_WEB_APP`.
 - e. Find at least one `WEB_SERVER` component that is a child of `WORKSPACE`.
3. Update `LOGICAL_WEB_APP` with host and port information from the Oracle WebLogic Server MBean.

4. Update LOGICAL_WEB_APP with any missing configuration properties.
5. Initialize Shared Services.
6. Scan the Shared Services Registry for integrated products, and match every discovered product with a configuration file from the following resources:
 - /conf/WSPProducts.xml (Workspace)
 - WorkspaceConfig file attribute of LOGICAL_WEB_APP (all other products)

6.1.5.3 Microsoft Internet Explorer Truncated Menus

Problem

Menu lists appear truncated in either height or width.

Solution

To resolve this issue:

1. From Microsoft Internet Explorer, choose **Tools > Internet Options > Security > CustomLevel > Miscellaneous**.
2. For **Allow script-initiated windows without size or position constraints**, select **Enable**.

6.1.6 Allocation Manager

This section describes common problems and solutions for Allocation Manager. It contains the following topics:

- [Essbase Applications Are Not Listed Under the Essbase Node](#)
- [Business Rules Cannot be Deployed to General Ledger](#)

6.1.6.1 Essbase Applications Are Not Listed Under the Essbase Node

Problem

No Essbase applications are listed under the Essbase node.

Solution

This could be due to any of the following:

- You are not provisioned to work with Allocation Manager. You must have at least one of the following access privileges to work with Allocation Manager:
 - Create General Ledger Allocation Rules
 - Administer Allocation Rules
 - Generate General Ledger Allocation Rules.
- The Essbase cluster name is not Essbase_FA_Cluster. If the Essbase server is not under this cluster, it is ignored by Allocation Manager.
- The stripe ID for General Ledger is different than the stripe ID for Workspace, so different security may be applied when Allocation Manager communicates with Essbase. Check the Allocation Manager log file to ensure that the stripe ID (or the application ID) for Allocation Manager is the same as the stripe ID for General Ledger.

- The Essbase application contains an empty Comment field. Each Essbase application must contain at least one character in the Comment field, or it is ignored by Allocation Manager.
- The application is not an Essbase aggregate storage application; only Essbase aggregate storage applications may be used with General Ledger.

6.1.6.2 Business Rules Cannot be Deployed to General Ledger

Problem

Business rules cannot be deployed from Allocation Manager to General Ledger. You receive the error message:

```
no WSDLLOCATION set
```

Solution

In the EPM registry, ensure that the `WSDLLOCATION` property is defined for Allocation Manager. The `WSDLLOCATION` property contains the General Ledger web services URL.

6.1.7 Smart View

This section describes common problems and solutions for Smart View. It contains the following topics:

- [Re-enabling Smart View in Microsoft Office Applications](#)
- [Enabling Advanced Logging](#)
- [Timeout Errors](#)
- [Shared Connections Panel Does Not Display Server Names](#)

6.1.7.1 Re-enabling Smart View in Microsoft Office Applications

Problem

Smart View may become disabled in Microsoft Office applications.

Solution

Smart View is a COM add-in, which Microsoft Office applications can disable. To re-enable Smart View, follow instructions in Excel Help for re-enabling COM add-ins.

6.1.7.2 Enabling Advanced Logging

Problem

Smart View collects and records events, errors, and other information in a log file, typically `SmartViewLogs.log`. When you experience performance or other issues, you can enable the logging in this file of additional information about profiling and requests and responses between Smart View and the server. This additional information can help Oracle Support to troubleshoot your issues.

Solution

To enable additional troubleshooting information:

1. Close all Microsoft Office applications.
2. Select **Start**, and then **Run**.

3. Enter `regedit` and click **OK** to open the registry.
4. Navigate to `HKEY_CURRENT_USER\Software\Hyperion Solutions\HyperionSmartView\Options`.
5. Right click **Options**, select **New**, and then **String Value**.
6. Name the new string value **Profile**.
7. Double-click **Profile** to open **Edit String**.
8. From **Edit String**, under **Value Data**, enter one of the following values:
 - **0**: Logging is not enabled. Initialized value `bEnableProfiling` is set to `false`.
 - **1**: Profile entries are logged when an event completes. This setting provides little information about abrupt terminations, but performance is better than with **2**.
 - **2**: Profile entries are logged immediately. Use this setting to determine the function in which a termination occurred. This setting provides the most detailed information but has the greatest negative impact on performance.
9. Close the registry.
10. Restart Excel.
11. From the Smart View ribbon, select **Options**.
12. Go to the **Advanced** page and ensure that **Route Messages to File** is selected. The log file, typically `SmartViewLogs.log`, will now begin recording profiling and request/response information between Smart View and the server in addition to the other information it records.

Note: To improve performance, when you no longer need to log profiling and request/response information, delete the **Profile** entry that you created in the registry.

6.1.7.3 Timeout Errors

Problem

If the server takes longer to process a Smart View operation than the timeout value set on the client computer, users may receive a connection timeout error, or zero values may be displayed for Smart View functions.

Solution

Increase the timeout limit for Smart View client computers. Smart View uses Win-Inet APIs to communicate with the provider. These are the same modules that Internet Explorer uses. To increase the timeout value for a Windows client computer:

1. In the Windows registry of the client computer, navigate to `HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\InternetSettings`.
2. Set the following values:

```
"ReceiveTimeout"=dword:00dbba00  
"KeepAliveTimeout"=dword:0002BF20  
"ServerInfoTimeout"=dword:0002BF20
```

6.1.7.4 Shared Connections Panel Does Not Display Server Names

Problem

The **Shared Connections** panel of the Smart View Panel displays no server names. This typically happens when your applications are not properly registered during installation and configuration.

Solution

Review the information in the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide* to ensure that applications and servers are properly configured.

6.2 Problems and Solutions for Financial Reporting

This section describes common problems and solutions for Financial Reporting. It contains the following topics:

- [Section 6.2.1, "Setting Up Data Sources and Debugging Setup and Connectivity Issues"](#)
- [Section 6.2.2, "Issues with Workspace \(Access Privileges, Preferences, Change And Manage Database Connections\)"](#)
- [Section 6.2.3, "Common Administrative Tasks and How to Debug Issues"](#)

6.2.1 Setting Up Data Sources and Debugging Setup and Connectivity Issues

This section describes common problems and solutions for setting up data sources and debugging setup and connectivity issues:

- [Section 6.2.1.1, "Unable to Connect to Essbase Cube"](#)
- [Section 6.2.1.2, "Error While Creating Database Connection"](#)
- [Section 6.2.1.3, "Cannot Set Up a Database Connection"](#)

6.2.1.1 Unable to Connect to Essbase Cube

Problem

You are unable to connect to an Essbase cube.

Solution

Verify that the Essbase Server name and port are correct. Verify the user credentials used to make the connection are correct and the User has at least read rights to the cube.

6.2.1.2 Error While Creating Database Connection

Problem

An error occurred while creating a database connection.

Solution

Check the Financial Reporting log file. If the log file has the following error, a Catalog GUID refresh is required.

```
"Caused by: javax.jcr.LoginException: access denied for user to path
```

`/users/userid"`

For more information, see "Refreshing User GUIDs" in *Oracle Fusion Middleware Security Guide for Oracle Business Intelligence Enterprise Edition*.

6.2.1.3 Cannot Set Up a Database Connection

Problem

You are unable to set up a database connection.

Solution

When you create a database connection, it is appended to the list in the Database Manager dialog box.

To add a database connection:

1. In Workspace, select **Tools**, then **Database Connection Manager**.
2. Click **New**.
3. In Database Connection Name, enter a name for the database connection.
4. Select a data source type of Essbase.
5. In **Server**, add the **Essbase Server Name** and **Port Number**.
6. Re-enter the **User ID** and **Password**.
7. To add application and database names, click the magnifying glass, and make your selections.

Note: The **Application Lookup** button displays a tree view of the applications and corresponding databases; the applications are listed as parents and the databases are listed as children. You can search on an application or database. For data sources that are not associated with a database, only applications are listed.

8. Click **OK**.

The database connection profile is appended to the list in Database Connection Manager dialog box.

6.2.2 Issues with Workspace (Access Privileges, Preferences, Change And Manage Database Connections)

This section describes common problems and solutions for setting up data sources and debugging setup and connectivity issues:

- [Section 6.2.2.1, "Error When Running a Report"](#)
- [Section 6.2.3.1, "Log File Output Management and Diagnosis of Log Issues"](#)
- [Section 6.2.3.2, "Setting Up Financial Reporting TCP Ports for Firewall Environments and Debugging Issues Around It"](#)

6.2.2.1 Error When Running a Report

Problem

When running a report, following error is displayed:

Error 1012:Report contains an invalid grid. The following dimensions could not be found: *<i>xxx</i>*

Solution

This error may occur if the database was recently changed on the report. To resolve the issue, open and save the report that has mismatched dimensions. This causes the dimensions that existed in the old database connection but not in the new database connection to be removed. The dimension and its members that existed in the rows and columns are removed from the grid. If, as a result of the removal, no dimension exists in the row or column, you need to add a valid dimension to the cleared row or column in order for the report to run. Dimensions that exist in the new database connection but not in the old one, are added to the POV.

6.2.3 Common Administrative Tasks and How to Debug Issues

This section describes common problems and solutions for setting up data sources and debugging setup and connectivity issues:

- [Section 6.2.3.1, "Log File Output Management and Diagnosis of Log Issues"](#)
- [Section 6.2.3.2, "Setting Up Financial Reporting TCP Ports for Firewall Environments and Debugging Issues Around It"](#)
- [Section 6.2.3.3, "Supporting PDF Print/Troubleshooting Financial Reporting Print Server Issues"](#)
- [Section 6.2.3.4, "Getting Error Application HReports Is not Defined"](#)
- [Section 6.2.3.5, "Permission Errors"](#)
- [Section 6.2.3.6, "All the Jobs Fail"](#)

6.2.3.1 Log File Output Management and Diagnosis of Log Issues

Problem

Financial Reporting cannot be accessed from Workspace.

Solution

1. Check if the Financial Reporting web application is running. In Internet browser, enter protocol://server:port/hr/status.jsp. If the web application is running, the following message is displayed:

The Oracle® Hyperion Financial Reporting, Fusion Edition Web application is available.

2. View the Financial Reporting log file `fr.log` from the following directories to see if there are any `com.sun.xml.ws.wsdl.parser` related errors:

(UNIX) `DOMAIN_HOME/servers/server_name/logs/financialreporting`
 (Windows) `DOMAIN_HOME\servers\server_name\logs\financialreporting`

In this case, it is possible that analytics web application is not running. If `fr.log` contains multiple instances of `Caused by: javax.jcr.LoginException: access`

denied for user to path `/users/userid`, then a Catalog GUID refresh is required.

For more information, see "Refreshing User GUIDs" in *Oracle Fusion Middleware Security Guide for Oracle Business Intelligence Enterprise Edition*.

6.2.3.2 Setting Up Financial Reporting TCP Ports for Firewall Environments and Debugging Issues Around It

Problem

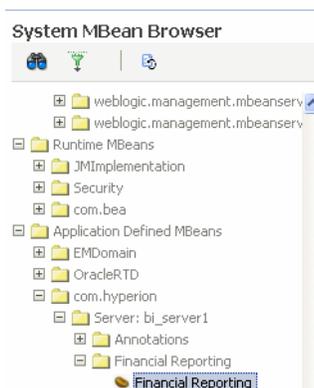
Unable to connect to Financial Reporting through a firewall from the Financial Reporting Studio.

Solution

By default, Financial Reporting components communicate with each other through Remote Method Invocation (RMI) on dynamically assigned Transmission Control Protocol (TCP) ports. To communicate through a firewall, you must specify the port for each Financial Reporting component separated by the firewall in the `JConsole.exe` file, and then open the necessary ports in your firewall. In addition, you may need to open ports for the Reports Server RDBMs, for data sources that you report against, and for LDAP/NTLM for external authentication. The Print Server defaults to 8297. This can be changed by modifying the `PrintServers` property in FR Mbeans and restarting. Once connected, all RMI Services can use anonymous ports by default for communication. Alternatively a range of ports can be configured for communication by setting `RMIPortRangeLower` and `RMIPortRangeUpper` within the Financial Reporting configuration. You can change the port assignments to use in a firewall environment for servers in the Financial Reporting Mbeans called `RMIPortRangeUpper` and `RMIPortRangeLower`.

To locate the Financial Reporting MBeans properties to modify in Fusion Applications Control:

1. From the navigation pane, expand the `BIDomain` farm, **Application Deployments**, and then **Internal Applications**.
2. Expand **FinancialReporting(11.1.1)(bi_cluster_name)**.
3. Right-click **FinancialReporting(11.1.1)(bi_server_name)** and choose **System MBean Browser**.
4. In the System MBean Browser page, expand **Application Defined MBeans**.
5. Expand **Application Defined MBeans, com.hyperion, Server:bi_server_name**.



6. Expand **Financial Reporting**.

7. Click **Financial Reporting**.
8. In the Application Defined MBeans: Financial Reporting page, scroll down to **PrintServers**, **RMIPortRangeUpper**, and **RMIPortRangeLower**.
9. Click on each attribute and add a value in the **Value** field and click **Apply**.

6.2.3.3 Supporting PDF Print/Troubleshooting Financial Reporting Print Server Issues

Problem

Financial Reporting Print server is not working.

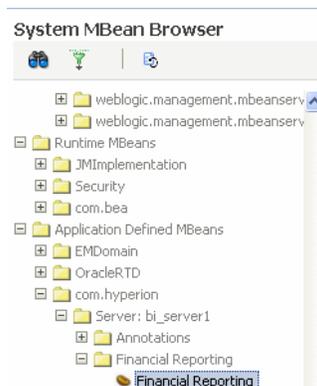
Solution

To resolve this issue:

1. Ensure that the Financial Reporting Print Server service has been created and started.
2. Verify 32-bit Ghostscript is installed by running. From the **Start** menu, choose **All Programs > Ghostscript**.
3. Examine the `FRPrintLogging.log` file in the `install_directory\Oracle\FinancialReportingStudio\diagnostics\logs\FinancialReporting` directory.
4. Verify that the `PrintServers` property in Financial Reporting MBeans now shows the Financial Reporting Print Server computer and port number. The default port is 8297. This may show multiple financial Reporting Print Servers if more than one have been configured.

To locate the `PrintServers` property to modify in Fusion Applications Control:

- a. From the navigation pane, expand the `BI` domain farm, **Application Deployments**, and then **Internal Applications**.
- b. Expand **FinancialReporting(11.1.1)(bi_cluster_name)**.
- c. Right-click **FinancialReporting(11.1.1)(bi_server_name)** and choose **System MBean Browser**.
- d. In the System MBean Browser page, expand **Application Defined MBeans**.
- e. Expand **Application Defined MBeans, com.hyperion, Server:bi_server_name**.



- f. Expand **Financial Reporting**.
- g. Click **Financial Reporting**.

Processes in Instance: BIInstance

ias-component	process-type	pid	status
essbaseserver1	Essbase	27879	Alive
coreapplication_obiccs1	OracleBIClusterCo~	10828	Alive
coreapplication_obisch1	OracleBIScheduler~	18308	Alive
coreapplication_obijh1	OracleBIJavaHostC~	18337	Alive
coreapplication_obips1	OracleBIPresentat~	26455	Alive
coreapplication_obis1	OracleBIServerCom~	21716	Alive

2. Restart the Essbase server:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/bin/opmnctl restartproc
ias-component=component_name
(Windows) APPLICATIONS_CONFIG\BIInstance\bin\opmnctl restartproc
ias-component=component_name
```

For example

```
APPLICATIONS_CONFIG/BIInstance/bin/opmnctl restartproc
ias-component=essbaseserver1
```

6.3 Problems and Solutions for Hyperion Provider Services

This section describes common problems and solutions for Oracle Hyperion Provider Services. It contains the following topics:

- [Section 6.3.1, "Provider Services Server Not Running"](#)
- [Section 6.3.2, "Provider Services Version Information"](#)
- [Section 6.3.3, "Maximum Numbers of Rows Exceeded in Smart View"](#)
- [Section 6.3.4, "Monitoring Provider Sessions"](#)
- [Section 6.3.5, "Monitoring Active-Active Essbase Clusters"](#)
- [Enabling and Disabling Active-Active Essbase Cluster Components](#)

6.3.1 Provider Services Server Not Running

Problem

Provider Services appears not to be functional. You may need to determine whether Provider Services is running.

Solution

To determine whether Provider Services is running:

1. Launch a web browser.
2. Enter the connection URL for the corresponding products:
 - Smart View Provider: `https://Provider_Services_server:Provider_Services_port/aps/SmartView`
 - Java API: `https://Provider_Services_server:Provider_Services_port/aps/JAPI`

If an HTTP error is returned, the Provider Services server is not running.

3. You may need to find out if you are connecting to the right port.

If you are running Provider Services with Oracle Access Manager, then the default Provider Services port number is 9704. If you are not running Provider Services with Oracle Access Manager, then the default Provider Services port number is 4443.

4. To start the Provider Services server, use the following script from the `fusionapps` Middleware directory:

```
(UNIX) FA_MW_HOME/user_projects/domains/bi_foundation_domain  
name/bin/startWebLogic.sh  
(Windows) FA_MW_HOME\user_projects\domains\bi_foundation_dmain_  
name\bin\startWebLogic.cmd
```

6.3.2 Provider Services Version Information

Problem

Provider Services version information is not provided in a user interface.

Solution

You can find the Provider Services version information in the following locations:

- Operating system console window that is displayed when the Provider Services server is running
- Provider Services log files

6.3.3 Maximum Numbers of Rows Exceeded in Smart View

Problem

In Excel, a Maximum numbers of rows [5000] Exceeded error is returned if there are more than 5,000 rows on the Smart View grid. By default, the maximum number of rows is set to 5000 and the maximum number of columns to 256. In Excel 2003, you cannot exceed these limits. However, in Excel 2007 and 2010, there are no limits on the number of rows or columns, and you can change the default settings.

Solution

To change maximum row and column settings in Excel 2007 or 2010:

1. Launch Excel.
2. From the Smart View ribbon, select **Open**, and then **Smart View Panel**.
3. In the Smart View Panel, click **Edit Provider Services** to open the **Provider Services** server preferences dialog box.
4. Change the settings for **Number of Rows** and **Number of Columns** as needed. Enter 0 to remove any limits to the number of rows or columns.

6.3.4 Monitoring Provider Sessions

Problem

You may need to monitor the number of sessions on a Provider Services server.

Solution

To monitor Provider Services server sessions, from Administration Services Console:

1. From **Enterprise View** or a custom view, under the **Provider Services** node, select a provider.
2. Under the provider node, select **Action**, and then **Sessions**.

6.3.5 Monitoring Active-Active Essbase Clusters

Problem

You may need to monitor active-active Essbase clusters.

Solution

To monitor Provider Services server sessions, from Administration Services Console:

1. From Enterprise View or a custom view, under the **Provider Services** node, select a provider.
2. Under the provider node, expand **Essbase Clusters** and select the active-active Essbase cluster node you want to monitor.
3. Choose **Action**, and then edit the active-active Essbase cluster.

6.3.6 Enabling and Disabling Active-Active Essbase Cluster Components

Problem

You may need to enable or disable individual active-active Essbase cluster components.

Solution

To enable or disable an active-active Essbase cluster component, follow the steps in the *Oracle Hyperion Enterprise Performance Management System High Availability and Disaster Recovery Guide*.

6.4 Problems and Solutions for Essbase

This section describes common problems and solutions. It contains the following topics:

- [Getting Started with Logging Basics for Essbase](#)
- [Essbase Agent Startup Fails with Error](#)
- [Essbase Agent Startup Fails Due to serviceinstanceref ref="audit" Entry in jps-config-jse.xml](#)
- [Essbase Agent Startup Fails with an Error While Loading Shared Libraries](#)
- [opmnctl Commands Fail to Execute](#)
- [An Application Stops Responding](#)
- [Section 6.4.7, "An Essbase Application Will Not Start"](#)
- [Section 6.4.8, "ASO Database Corruption Error"](#)
- [Section 6.4.9, "Essbase Login Credentials Are Unknown When Essbase Is Included in the Oracle Business Intelligence Installation"](#)
- [Section 6.4.10, "Cannot Stop an Application Process"](#)
- [Section 6.4.11, "Changing the Essbase Ports \(High-Availability Mode\)"](#)

- Section 6.4.12, "Changing the Essbase Ports (Non-High-Availability Mode)"
- Section 6.4.13, "Data Load Fails with the "Load Buffer Does Not Exist" Error"
- Section 6.4.14, "Data Load Fails with Resource Usage Error"
- Section 6.4.15, "Essbase Fails to Start in Cluster Mode"
- Section 6.4.16, "Essbase Login Failed Due to Invalid Credentials"
- Section 6.4.17, "Failed to Open a File on UNIX"
- Section 6.4.18, "GL Writeback Fails with "Accounting Date Conversion" Error"
- Section 6.4.19, "GL Writeback Fails with "Group ID Node" Error"
- Section 6.4.20, "GL Writeback Fails with "Not a Valid GL Application" Error"
- Section 6.4.21, "GL Writeback Fails with "SQL Database Connection" Error"
- Section 6.4.22, "Network Timeout"
- Section 6.4.23, "OPMN Fails to Start Essbase in High-Availability Mode"
- Section 6.4.24, "Restructure Failure"
- Section 6.4.25, "Security File Is Corrupt"
- Section 6.4.26, "Status of Essbase Agent Connection"
- Section 6.4.27, "Unable to Write File During Data Load or Building Aggregate Views"

6.4.1 Getting Started with Logging Basics for Essbase

Log files are the best tools for analyzing what might be wrong with the system configuration. The logging configuration file, the defaults it ships with, and instructions for changing change those defaults will help with the analysis.

- Essbase log files

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/Essbase/essbaseserver_  
name/essbase/Essbase.log  
(Windows) APPLICATIONS_  
CONFIG\BIInstance\diagnostics\logs\Essbase\essbaseserver_  
name\essbase\Essbase.log
```

- Oracle Diagnostic Logging (ODL) logs

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/Essbase/essbaseserver_  
name/essbase/ESSBASE_ODL.log  
(Windows) APPLICATIONS_  
CONFIG\BIInstance\diagnostics\logs\Essbase\essbaseserver_name\essbase\ESSBASE_  
ODL.log
```

- Lease Manager logs

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/Essbase/essbaseserver_  
name/essbase/leasemanager_essbase_machine_name.log  
(Windows) APPLICATIONS_  
CONFIG\BIInstance\diagnostics\logs\Essbase\essbaseserver_name\leasemanager_  
essbase_machine_name.log
```

- Shared Services logs

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/Essbase/essbaseserver_  
name/essbase/SharedServices_Security_Client.log
```

(Windows) `APPLICATIONS_CONFIG\BIInstance\diagnostics\logs\Essbase\essbaseserver_name\SharedServices_Security_Client.log`

- OPMN logs

(UNIX) `APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/OPMN/opmn/opmn.log`
 (Windows) `APPLICATIONS_CONFIG\BIInstance\diagnostics\logs\OPMN\opmn\opmn.log`

- Essbase ping log

(UNIX) `APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/OPMN/opmn/EssbasePing.log`
 (Windows) `APPLICATIONS_CONFIG\BIInstance\diagnostics\logs\OPMN\opmn\EssbasePing.log`

- OPMN debug log

(UNIX) `APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/OPMN/opmn/debug.log`
 (Windows) `APPLICATIONS_CONFIG\BIInstance\diagnostics\logs\OPMN\opmn\debug.log`

Note: The system will generate the OPMN debug log only if DEBUG mode is turned on in `opmn.xml`.

- OPMN console log

(UNIX) `APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/OPMN/opmn/console*.log`
 (Windows) `APPLICATIONS_CONFIG\BIInstance\diagnostics\logs\OPMN\opmn\console*.log`

Note: The system will generate the OPMN console log only if DEBUG mode is turned on in `opmn.xml`.

6.4.2 Essbase Agent Startup Fails with Error

Problem

The Essbase Agent startup fails with the following error:

```
Fatal Error: FUSIONAPPID not specified in the cfg file
```

Solution

To modify `essbase.cfg` and restart the Essbase server:

1. Locate the `essbase.cfg` file in the following directories:

(UNIX) `APPLICATIONS_CONFIG/BIInstance/Essbase/essbaseserver_name/bin`
 (Windows) `APPLICATIONS_CONFIG\BIInstance\Essbase\essbaseserver_name\bin`

2. Make sure that the following entry is present in `essbase.cfg`:

```
FUSIONAPPID appidname
```

3. Restart the Essbase server.

To restart the Essbase server using `opmnctl`:

- a. Determine the current status:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/bin/opmnctl status
(Windows) APPLICATIONS_CONFIG\BIInstance\bin\opmnctl status
```

OPMN generates a list of the running components and processes. The following message indicates that the Essbase Server (essbaseserver1) is already running:

Processes in Instance: BIInstance

ias-component	process-type	pid	status
essbaseserver1	Essbase	27879	Alive
coreapplication_obiccs1	OracleBIClusterCo~	10828	Alive
coreapplication_obisch1	OracleBIScheduler~	18308	Alive
coreapplication_obijh1	OracleBIJavaHostC~	18337	Alive
coreapplication_obips1	OracleBIPresentat~	26455	Alive
coreapplication_obis1	OracleBIServerCom~	21716	Alive

b. Restart the Essbase server:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/bin/opmnctl restartproc
ias-component=component_name
(Windows) APPLICATIONS_CONFIG\BIInstance\bin\opmnctl restartproc
ias-component=component_name
```

For example

```
APPLICATIONS_CONFIG/BIInstance/bin/opmnctl restartproc
ias-component=essbaseserver1
```

To start Essbase server using Fusion Applications Control:

- From the navigation pane, expand the farm and then **WebLogic Domain** for the BIDomain domain.
- Expand **Essbase Servers**, and then select the Essbase server.
- From the **Essbase Server** menu, choose **Administration**, then **Ports Configuration**.
- Select the **Listen** port, and then click **Edit**.
- Change the port number, and then click **OK**.
- From the **Essbase Server** menu, choose **Control**, then **Restart**.

6.4.3 Essbase Agent Startup Fails Due to serviceinstanceref ref="audit" Entry in jps-config-jse.xml

Problem

The Essbase Agent startup fails with the following error:

```
1051223 - Single Sign On function call [css_init] failed with error [CSS Error:
CSS method invocation error: getInstance: Failed to get CSSSystem instance,
please check SharedServices_Security_Client.log for more information
```

Solution

To modify essbase.cfg and restart the Essbase server:

- Locate the essbase.cfg file in the following directories:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/Essbase/essbaseserver_name/bin
```

(Windows) `APPLICATIONS_CONFIG\BIInstance\Essbase\essbaseserver_name\bin`

2. Make sure that the following entry is commented out using XML style comments in the `essbase.cfg` file. For example, `<!-- -->`:

```
serviceinstanceref ref="audit"
```

3. Restart the Essbase server.

To restart the Essbase server using `opmnctl`:

- a. Determine the current status:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/bin/opmnctl status
(Windows) APPLICATIONS_CONFIG\BIInstance\bin\opmnctl status
```

OPMN generates a list of the running components and processes. The following message indicates that the Essbase Server (`essbaseserver1`) is already running:

Processes in Instance: BIInstance

ias-component	process-type	pid	status
essbaseserver1	Essbase	27879	Alive
coreapplication_obiccs1	OracleBIClusterCo~	10828	Alive
coreapplication_obisch1	OracleBIScheduler~	18308	Alive
coreapplication_obijh1	OracleBIJavaHostC~	18337	Alive
coreapplication_obips1	OracleBIPresentat~	26455	Alive
coreapplication_obis1	OracleBIServerCom~	21716	Alive

- b. Restart the Essbase server:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/bin/opmnctl restartproc
ias-component=component_name
(Windows) APPLICATIONS_CONFIG\BIInstance\bin\opmnctl restartproc
ias-component=component_name
```

For example

```
APPLICATIONS_CONFIG/BIInstance/bin/opmnctl restartproc
ias-component=essbaseserver1
```

To start the Essbase server using Fusion Applications Control:

- a. From the navigation pane, expand the farm and then **WebLogic Domain** for the `BI` domain.
- b. Expand **Essbase Servers**, and then select the Essbase server.
- c. From the **Essbase Server** menu, choose **Administration**, then **Ports Configuration**.
- d. Select the **Listen** port, and then click **Edit**.
- e. Change the port number, and then click **OK**.
- f. From the **Essbase Server** menu, choose **Control**, then **Restart**.

6.4.4 Essbase Agent Startup Fails with an Error While Loading Shared Libraries

Problem

The Essbase Agent startup fails with the following error:

Error while loading shared libraries: libARicu24.so: cannot open shared object file: No such file or directory

Solution

To modify opmn.xml file and restart the Essbase server:

1. Locate the opmn.xml file in the following directories:

(UNIX) `APPLICATIONS_CONFIG/config/OPMN/opmn`
 (Windows) `APPLICATIONS_CONFIG\BIInstance\config\OPMN\opmn`

2. Update the following ODBC-related entries in opmn.xml:

```
<variable append="true" id="LD_LIBRARY_PATH" value="$ORACLE_
HOME/common/ODBC/Merant/6.0/lib$:ORACLE_
HOME/jdk/jre/lib/i386/server$:ESSBASEPATH/bin" />

<variable id="ODBCINI" value="$ORACLE_HOME/common/ODBC/Merant/6.0/odbc.ini" />

<variable id="ODBCINST" value="$ORACLE_
HOME/common/ODBC/Merant/6.0/odbcinst.ini" />
```

3. Restart the Essbase server:

- a. Determine the current status:

(UNIX) `APPLICATIONS_CONFIG/BIInstance/bin/opmnctl status`
 (Windows) `APPLICATIONS_CONFIG\BIInstance\bin\opmnctl status`

OPMN generates a list of the running components and processes. The following message indicates that the Essbase Server (essbaseserver1) is currently running:

Processes in Instance: BIInstance

ias-component	process-type	pid	status
essbaseserver1	Essbase	27879	Alive
coreapplication_obiccs1	OracleBIClusterCo~	10828	Alive
coreapplication_obisch1	OracleBIScheduler~	18308	Alive
coreapplication_obijh1	OracleBIJavaHostC~	18337	Alive
coreapplication_obips1	OracleBIPresentat~	26455	Alive
coreapplication_obis1	OracleBIServerCom~	21716	Alive

- b. Restart the Essbase server:

(UNIX) `APPLICATIONS_CONFIG/BIInstance/bin/opmnctl restartproc`
`ias-component=component_name`
 (Windows) `APPLICATIONS_CONFIG\BIInstance\bin\opmnctl restartproc`
`ias-component=component_name`

For example

```
APPLICATIONS_CONFIG/BIInstance/bin/opmnctl restartproc
ias-component=essbaseserver1
```

6.4.5 opmnctl Commands Fail to Execute

Problem

A communication error occurs when attempting to issue commands using the opmnctl command line for OPMN.

For example:

```
qtfhp3:/vol1/nnguyen/rc11/Oracle/Middleware/user_projects/epmsystem1/bin]$
opmnctl status RCV: No such file or directory Communication error with the
OPMN server local port. Check the OPMN log files opmnctl status: opmn is
not running.
```

Solution

To modify `opmn.xml`:

1. Edit `opmn.xml` to assign a different local and a remote port to OPMN, or just a remote port to OPMN. The currently assigned ports may already be used by another process. See the following example:

```
<notification-server interface="any"> <ipaddr remote="<hostname>" />
<port local="6711" remote="6712" />
```

2. Restart OPMN and try the `opmnctl` command again.

6.4.6 An Application Stops Responding

Problem

An Essbase application stops responding or shuts down abnormally.

Solution

To determine why the application is not responding:

1. Check the `Essbase.log` file for the following error message:

```
1002089 RECEIVED ABNORMAL SHUTDOWN COMMAND - APPLICATION TERMINATING
```

2. Check the `Essbase.log` file for the following message:

```
Exception error log [log00001.xcp] is being created...
```

3. If either of the above messages are found, contact Technical Support.

Note that if you find the `log00001.xcp` file, save it. Oracle Support will need this file to troubleshoot the issue.

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/Essbase/essbaseserver_
name/essbase/app/appname/log000001.xcp
```

```
(Windows) APPLICATIONS_
CONFIG\BIInstance\diagnostics\logs\Essbase\essbaseserver_
name\essbase\app\appname\log000001.xcp
```

6.4.7 An Essbase Application Will Not Start

Problem

An application does not respond after being started, or an error message like the following is displayed in the Essbase log file:

```
Network Error 10048 : Unable to Bind Host Server Socket On Port 4213
```

Solution

A port conflict may be occurring. Correct the port-related entries in `opmn.xml`.

Update the Essbase port range in `opmn.xml` to match the port specified in the configuration file:

```
<port id="essbase-port-range" range="32768-33768"/>
```

6.4.8 ASO Database Corruption Error

Problem

During an operation on an Essbase aggregate storage database, the following error is displayed:

```
Persistent data does not match the outline. There is no member in dimension [Abc] for member number [12345]. Data is corrupted.
```

Solution

To clear the database and reload it from the original sources or from a saved exported backup:

1. Save the list of current aggregate views.
2. Clear all data in the database.
3. Reload the data from original sources or from a backup.
4. Rebuild the aggregate views using the list specified.

6.4.9 Essbase Login Credentials Are Unknown When Essbase Is Included in the Oracle Business Intelligence Installation

Problem

You do not know the Essbase login credentials when Essbase is included in the Oracle Business Intelligence installation.

Solution

Use the Weblogic default user name and password to log in to Essbase. The default user name and password are `weblogic` and `welcome1`.

6.4.10 Cannot Stop an Application Process

Problem

An Essbase application process cannot be shut down.

Solution

To check the application log for active processing:

1. Access the application log. Note the following locations:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/Essbase/essbaseserver_  
name/essbase/app/appname/appname.log  
(Windows) APPLICATIONS_  
CONFIG\BIInstance\diagnostics\logs\Essbase\essbaseserver_  
name\essbase\app\appname\appname.log
```

2. Check the application log and look for the following message:

```
RECEIVED SHUTDOWN COMMAND - SERVER TERMINATING.
```

3. If you see the proceeding message, wait a few minutes to allow the application to self-terminate. The application may be doing cleanup tasks associated with the shutdown process.
4. If you see the following message, the application is still processing user requests. Wait for user requests or any other operation that is still in progress to terminate, and then try shutting down the application.

```
Cannot unload database dbname while user username is performing database
operation. Wait for the user to complete the operation, or ask the user to
abort it. Log out all users and then unload the database. Cannot unload
database dbname when it is still in use
```

5. If you need to terminate the application, perform the following steps:
 - a. If you need to terminate the application even when there are user requests in progress on the database, you can run the following sequence MaxL statements to forcefully terminate user requests:

```
#Display active sessions to see current requests display session on
application appname
#Disallow new connections to the application alter application appname
disable connects;
#Force logout of all, and terminate requests alter system logout session on
database appname.dbname force;
```

- b. After forcefully logging out all users, wait for a few minutes, and then use the following MaxL statement to check if any user requests are still running:

```
#Display active sessions display session on application <appname>;
```

- c. If there are no requests running, attempt to stop the application process.

6.4.11 Changing the Essbase Ports (High-Availability Mode)

Problem

The Essbase port numbers need to be changed when Essbase is installed in high-availability mode.

Solution

To run the Essbase failover automation script to change the Essbase port:

1. Go to the following location:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/bin/essbase_ha
(Windows) APPLICATIONS_CONFIG\BIInstance\bin\essbase_ha
```

2. Look for the `%SHARED_FOLDER%` location specified in the file `essfoenv.properties`.
3. Edit the `%SHARED_FOLDER%\EssFoConfig.properties` file or `%SHARED_FOLDER%\EssFoConfig.properties` file.
4. Look for `SYSTEM_AGENT_PORTNUMBER(1|2)`, and change the port number. There are two Essbase instances, so make sure to change the one that you need.
5. Execute `essfoconfig.sh` (UNIX) or `essfoconfig.bat` (Windows) without any parameter. The Help prints so you can see a list of options for parameters.
6. Execute the following command:

```
essfoconfig.sh update prpName
```

where *prpName* is the port number property in Step 4.

For example, the following command updates the agent port of the first Essbase instance:

```
essfoconfig.sh update SYSTEM_AGENT_PORTNUMBER1
```

6.4.12 Changing the Essbase Ports (Non-High-Availability Mode)

Problem

The Essbase port numbers need to be changed when Essbase is installed in non-high-availability mode.

Solution

Go to Fusion Applications Control and change the Essbase port.

1. From the navigation pane, expand the farm and then **WebLogic Domain** for the **BIDomain** domain.
2. Expand **Essbase Servers**, and then select the Essbase server.
3. From the **Essbase Server** menu, choose **Administration**, then **Ports Configuration**.
4. Select the **Listen** port, and then click **Edit**.
5. Change the port number, and then click **OK**.
6. Restart Essbase server. From the **Essbase Server** menu, choose **Control**, then **Restart**.

6.4.13 Data Load Fails with the "Load Buffer Does Not Exist" Error

Problem

Following a data load failure to a specified load buffer, the following error displays for subsequent loads to the same load buffer:

```
Data load buffer [123] does not exist.
```

Solution

This error may occur when data loads initialize a load buffer and load multiple data files to it before committing it to the cube. If an error occurs that causes one of the steps to fail, then the load buffer is automatically destroyed, causing all subsequent steps to fail with the previous error.

Use one of the following methods to correct this error:

- Determine the cause of the original data load error and try to resolve it.
- Set the Essbase data load options to indicate that the data load should not be aborted on error; instead, have data load errors written or appended to the log file

6.4.14 Data Load Fails with Resource Usage Error

Problem

Upon attempting to load data into an Essbase aggregate storage database, the following error displays:

Specified load buffer resource usage [100] is above currently available value [0].

Solution

Other ongoing data load operations have reserved part of the cache for their load buffers. Use one of the following methods to correct this error:

- Reduce the resource usage for this data load, and try again. If you are using MaxL, you must explicitly create the load buffer, using the optional `resource_usage` argument. For example:

```
alter database AsoSamp.Sample initialize load_buffer with buffer_id 1
resource_usage .5;
```

- Wait for other operations to finish.
- To see what reservations have been made to the cache resources, run the following MaxL statement:

```
query database "app"."db" list load_buffers;
```

For more information about the `query database`, `alter database`, and other MaxL statements, see the *Oracle Essbase Technical Reference*.

6.4.15 Essbase Fails to Start in Cluster Mode

Problem

Essbase does not start when it is in cluster mode and Oracle Business Intelligence domain is installed with a non-domain-qualified host name.

Solution

The error occurs when the Essbase host specified in the cluster configuration properties file, `EssFOConfig.properties`, is domain-qualified, but is not in the EPM Registry, leading to a mismatch.

For more information about viewing the EPM Registry, see the "Viewing the Components in the Shared Services Registry," section in the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

To check if there is an Essbase host name qualification mismatch:

1. Use the following command to return all the Essbase clusters that were configured in the registry:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/config/foundation/11.1.2/epmsys_
registry.sh view CLUSTER
(Windows) APPLICATIONS_CONFIG\BIInstance\config\foundation\11.1.2\epmsys_
registry.bat view CLUSTER
```

2. Drill into the specific Essbase Server instance underneath this cluster, and view that node to see the host name:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/config/foundation/11.1.2/epmsys_
registry.sh view #Essbase_Server_GUID
(Windows) APPLICATIONS_CONFIG\BIInstance\config\foundation\11.1.2\epmsys_
registry.bat view #Essbase_Server_GUID
```

Note that GUID is the global unique ID of an Essbase Server instance as returned from the full viewing of the EPM Registry.

3. Access the EPM registry and confirm that the host in the cluster configuration properties file displays exactly how Essbase is configured in the EPM Registry.
4. Restart Essbase.

6.4.16 Essbase Login Failed Due to Invalid Credentials

Problem

When the user attempts to log in to Essbase, the login attempt fails. The problem may be an authentication failure. When the Essbase login fails due to an authentication problem, it reports the following errors:

```
ERROR - 103 - Unexpected Essbase error 1051440.  
ERROR - 1051440 - Essbase user [bi-001] Authentication Fails against the Shared  
Services Server with Error [EPMCSS-1009004: Failed to read data from the policy  
store.]
```

Solution

To determine login failure problems by gathering detailed error messages:

1. Locate the `essbase.cfg` file in the following directories:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/Essbase/essbaseserver_name/bin  
(Windows) APPLICATIONS_CONFIG\BIInstance\Essbase\essbaseserver_name\bin
```

2. Using a text editor, add the following text on its own line:

```
LOGINFAILUREMESSAGEDETAILED
```

For more information about this and other `essbase.cfg` configuration settings, see the *Oracle Essbase Technical Reference*.

3. Stop and restart the Essbase server. For detailed procedures, see "Starting and Stopping Essbase Server" in the *Oracle Essbase Database Administrator's Guide*.
4. Use the following paths to access the `Essbase.log` file, which contains any error messages:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/Essbase/essbaseserver_  
name/essbase/Essbase.log  
(Windows) APPLICATIONS_  
CONFIG\BIInstance\diagnostics\logs\Essbase\essbaseserver_  
name\essbase\Essbase.log
```

5. In the same path where `Essbase.log` is found, see the `SharedServices_Security_Client.log` to locate security-related error messages.

To gather debug-level error messages:

Note: Keep the debug statistics available for diagnostic purposes, in case you need to contact Technical Support.

1. Locate the `essbase.cfg` file in the following directories:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/Essbase/essbaseserver_name/bin  
(Windows) APPLICATIONS_CONFIG\BIInstance\Essbase\essbaseserver_name\bin
```

2. Using a text editor, add the following text on its own line:

```
AGENTLOGMESSAGELEVEL DEBUG
```

For more information about this and other `essbase.cfg` configuration settings, see *Oracle Essbase Technical Reference*.

3. Stop and restart the Essbase server. For detailed procedures, see the "Starting and Stopping Essbase Server" section in *Oracle Essbase Database Administrator's Guide*.
4. Use the following paths to access the `Essbase.log` file, which contains any error messages:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/Essbase/essbaseserver_
name/essbase/Essbase.log
(Windows) APPLICATIONS_
CONFIG\BIInstance\diagnostics\logs\Essbase\essbaseserver_
name\essbase\Essbase.log
```

To check for and correct BI domain login errors:

See [Table 6–1](#) to identify if you have a debug login failure problem. Go to each file listed in the table and search for the corresponding error message. If one or both of your files contain errors, use the following procedure to correct them.

Table 6–1 File Names and Error Messages

File Name	Error Message
AdminServer.out	<pre><oracle.epm.oem.essbase.mbeans.EssbaseServerRegistratio nMBeanImpl> <BEA-000000> <Child MBean registration failed due to some reason Not able to get Credential Store Factory from EM java.lang.Exception: Not able to get Credential Store Factory from EM</pre>
BIDomain.log	<pre>Exception while retrieving data from Essbase Cannot connect to olap service. Cannot connect to Essbase Server. Error:EssbaseError(1051293): Login fails due to invalid login credentials com.essbase.api.base.EssException: Cannot connect to olap service. Cannot connect to Essbase Server. Error:Essbase</pre>

To add a valid Essbase user name to the credential store from Fusion Applications Control, perform the following:

1. From the navigation pane, expand the farm and then **WebLogic Domain** for the `BIDomain` domain.
2. Right-click **BIDomain** and click **Security**.
3. Click **Credentials**. The Credentials page displays.
4. In the Credential table, expand **essbaseserver**.
5. Select the Essbase server and click the **Edit** the selected credential key button. The Edit Key page displays.
6. Verify that the user name and password are correct.

6.4.17 Failed to Open a File on UNIX

Problem

The following error occurs on a UNIX platform:

Failed to open file [filename]: a system file error occurred. Please see application log for details.

Solution

To open a file on UNIX:

1. Confirm that the specified file exists.
2. If the file exists, increase the maximum number of open file descriptors. To do this, consult the UNIX operating system's documentation for the `ulimit` command.

6.4.18 GL Writeback Fails with "Accounting Date Conversion" Error

Problem

GL writeback fails with the following error:

```
The accounting date conversion failed for %s to %s in the ACCOUNTING_DATE
column. Unable to proceed with GL export.
```

Problem

This error may occur when GL writeback cannot format the date string in the way that GL tables expect.

To fix this issue, make sure that the `<DATE_FORMAT>` tag in the `cubeMap.xml` file has date format represented in one of the following acceptable formats, and that it matches with the date value stored in the accounting date alias table of the outline. The following are the acceptable date formats:

```
mon dd yyyy
Month dd yyyy
mm/dd/yy
mm/dd/yyyy
yy.mm.dd
dd/mm/yy
dd.mm.yy
dd-mm-yy
dd Month yy
dd mon yy
Month dd, yy
mon dd, yy
mm-dd-yy
yy/mm/dd
yymmdd
dd Month yyyy
dd mon yyyy
dd/mon/yy
yyyy-mm-dd
yyyy/mm/dd
Day, Month dd, yyyy
```

6.4.19 GL Writeback Fails with "Group ID Node" Error

Problem

GL writeback fails with the following error:

```
The group id node has active GL operations in state [<state_name>]. Use the
appropriate API call in sequence. Unable to proceed with [api name] call.
```

Solution

This error may occur if more than one user tries to use the GL writeback-related API calls with the same group ID. To fix this issue, ensure that all users using GL writeback operations are using different group IDs.

6.4.20 GL Writeback Fails with "Not a Valid GL Application" Error**Problem**

GL writeback fails with the following error:

```
This application is not a valid GL application for Essbase.
```

Solution

The error may occur if the `cubeMap.xml` file is either not present in the `app/db` directory, or is not parsed properly. For the GL writeback to work properly, the `cubeMap.xml` file must be present and contain the required information to be parsed successfully.

To confirm that `cubeMap.xml` was parsed correctly:

1. Ensure that `cubeMap.xml` file exists in the `app/db` directory and contains the correct information.
2. To ensure that `cubeMap.xml` was found and parsed successfully, check the Essbase application log for the following entry:

```
Parsing of cubeMap.xml file succeeded
```

If the parsing of `cubeMap.xml` fails, verify that the file exists in the `app/db` directory and that it contains the appropriate information.

6.4.21 GL Writeback Fails with "SQL Database Connection" Error**Problem**

GL writeback fails with the following error:

```
Failed to Establish Connection With SQL Database Server. See log for more information.
```

Solution

The error may occur if the SQL drivers are not set up correctly.

To confirm that the SQL drivers are set up correctly:

1. Ensure that the ODBC Merant drivers path in `odbcinst.ini` is correct.
2. Ensure that the **ODBCINST** variable in `opmn.xml` is pointing to the correct `odbcinst.ini` file.
3. Ensure that an Oracle GL target database is running. For the GL writeback to work, a GL system is required, with `cubeMap.xml` correctly set up with the GL system information as follows:

```
<HOST>someMachine.company.com</HOST> <PORT>port</PORT> <SID>SID</SID>
```

4. Ensure that `Essbase.cfg` contains driver descriptors information in the following format, so that Essbase can connect to drivers in the `odbcinst.ini`:

```
BPM_Oracle_DriverDescriptor "DataDirect 6.0 Oracle Wire Protocol"
```

6.4.22 Network Timeout

Problem

When performing an operation against an Essbase cube, one of the following errors occurs:

- Network error [12345]: Cannot Send Data
- Network error [12345]: Cannot Receive Data

Solution

- The error may indicate that Essbase has terminated abnormally. If an xcp file is found in the following location, save it and contact Oracle Support:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/diagnostics/logs/Essbase/essbaseserver_  
name/essbase/app/appname/log000001.xcp  
(Windows) APPLICATIONS_  
CONFIG\BIInstance\diagnostics\logs\Essbase\essbaseserver_  
name\essbase\app\appname\log000001.xcp
```

- In `essbase.cfg`, increase the network timeout parameters using the settings `NETDELAY` and `NETRETRYCOUNT`. For more information, see "Essbase.cfg Configuration Settings" in *Oracle Essbase Technical Reference*.

6.4.23 OPMN Fails to Start Essbase in High-Availability Mode

Problem

OPMN fails to start Essbase in high-availability mode.

Solution

For Essbase clustering to work, all Essbase failover cluster data must be on shared storage with the `ARBORPATH` variables set correctly.

To confirm that Essbase can start in high-availability mode:

1. Ensure that OPMN is started by a network or domain user.
2. Ensure that `ARBORPATHS` are specified as mapped drives, and not as UNC paths.

6.4.24 Restructure Failure

Problem 1

During a dimension build or outline restructure, error code 1130203 occurs.

Solution 1

The error indicates that not enough memory was available to perform the operation. Use one of the following methods to correct this error:

- Increase the amount of virtual memory available to the operating system.
- If Essbase is running on a 32-bit platform, keep in mind that the maximum memory available to Essbase is between 2 GB and 4 GB, regardless of how much RAM is installed on the machine. Because Essbase loads both the old and new outlines in memory during the restructure, there is a restriction on the largest outline that can be modified on such a machine. For example, if the platform only allows 2 GB of memory to be used by a process, and an Essbase application

process is already using 200 MB memory, then the maximum-size outline that can be modified is 900 MB. Switching to a 64-bit installation of Essbase will lift this limitation.

Problem 2

During dimension build or outline restructure, outline validation fails with one of the following errors:

- There were errors validating the outline. Please check the error file.
- Outline has errors

Solution 2

Review the application log or the error file (if available) to see what specific errors are causing the validation error.

Problem 3

During dimension build or outline restructure, one of the following errors occurs:

- Cannot write the new outline file during the restructuring of [%s]
- Error writing outline change log file for database [%s]

Solution 3

Check the application log for other errors. If none are found, check to see if the file system is full. Remember that making a change to an Essbase outline requires at least as much free space as the existing outline.

6.4.25 Security File Is Corrupt

Problem

The `Console.log` displays the following error:

```
Fatal Error: Invalid item index in security file
```

Solution

The Essbase security file, `essbase.sec`, is invalid. Use one of the following methods to correct this error:

- Restart Essbase using the latest backup security file by copying `essbase_timestamp.bak` to `essbase.sec`. Both files are located in the following directories

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/Essbase/essbaseserver_name/bin
```

```
(Windows) APPLICATIONS_CONFIG\BIInstance\Essbase\essbaseserver_name\bin
```

For more information, see "Managing the Essbase Security File" in *Oracle Essbase Database Administrator's Guide*.

- Open the `essbase.cfg` file and set the `ENABLESWITCHTOBACKUPFILE` setting to `TRUE`. This setting allows Essbase to automatically use a backup security file. The `essbase.cfg` file is located in the following directories:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/Essbase/essbaseserver_name/bin
```

```
(Windows) APPLICATIONS_CONFIG\BIInstance\Essbase\essbaseserver_name\bin
```

If you edit `Essbase.cfg`, restart Essbase to enable the change.

For more information, see "Essbase.cfg Configuration Settings" in *Oracle Essbase Technical Reference*.

6.4.26 Status of Essbase Agent Connection

Problem

The Administrator does not know if Essbase is running.

Solution

Use the following OPMN command to determine if the Essbase agent is running:

```
(UNIX) APPLICATIONS_CONFIG/BIInstance/bin/opmnctl status  
(Windows) APPLICATIONS_CONFIG\BIInstance\bin\opmnctl status
```

To start Essbase server using Fusion Applications Control:

1. From the navigation pane, expand the farm and then **WebLogic Domain** for the BIDomain domain.
2. Expand **Essbase Servers**, and then select the Essbase server to see if it is running.
3. If it is not running, From the **Essbase Server** menu, choose **Control**, then **Restart**.

6.4.27 Unable to Write File During Data Load or Building Aggregate Views

Problem

When attempting to load data into an Essbase aggregate storage database or while building aggregate views, the following error is displayed:

```
Failed to extend file [<path>/ess0001.dat]: a system file error occurred.  
Please see application log for details.
```

Solution

This error indicates that the file system is out of space. Essbase can require significant temporary disk storage while performing a data load or aggregate view build. The "default" tablespace is the location where cube data is stored. The "temp" tablespace is where Essbase writes temporary data while building the cube. By default, both tablespaces are on the disk drive where Essbase is installed.

During the operation, the space required by the temp tablespace is at least as big as the resulting change in the database size, so the total free space required is at least twice as big as the resulting change to the database size. For example, loading a database that is 1GB will require at least 2GB of free space. Building 10GB worth of aggregate views will require at least 20GB of free space. Note that after the operation is complete, the files created in the temp tablespace are deleted.

Use one of the following methods to correct this error:

- To correct this error, use MaxL statements to view or change the tablespace settings.
- If the tablespace locations do not have enough free space, consider moving one or both tablespaces to different disk drives, or limit the size of the existing file locations and add new locations on other disk drives. Note that you cannot remove a tablespace location that already contains data.

Troubleshooting Oracle Enterprise Scheduler

This chapter describes common problems that you might encounter when using Oracle Enterprise Scheduler and explains how to solve them.

This chapter contains the following topics:

- [Section 7.1, "Introduction to Troubleshooting Oracle Enterprise Scheduler"](#)
- [Section 7.2, "Getting Started with Troubleshooting Oracle Enterprise Scheduler Jobs"](#)
- [Section 7.3, "Problems and Solutions"](#)

To gain insight into the log details generated by Oracle Fusion applications, see the "Managing Oracle Fusion Applications Log Files" chapter in the *Oracle Fusion Applications Administrator's Guide*. Also, review the *Oracle Fusion Middleware Error Messages Reference* for information about the error messages you may encounter.

7.1 Introduction to Troubleshooting Oracle Enterprise Scheduler

This section provides guidelines and a process for using the information in this chapter. Using the following guidelines and process will focus and minimize the time you spend resolving problems.

Guidelines

When using the information in this chapter, Oracle recommends:

- After performing any of the solution procedures in this chapter, immediately retrying the failed task that led you to this troubleshooting information. If the task still fails when you retry it, perform a different solution procedure in this chapter and then try the failed task again. Repeat this process until you resolve the problem.
- Making notes about the solution procedures you perform, symptoms you see, and data you collect while troubleshooting. If you cannot resolve the problem using the information in this chapter and you must log a service request, the notes you make will expedite the process of solving the problem.

Process

Follow the process outlined in [Table 7-1](#) when using the information in this chapter. If the information in a particular section does not resolve your problem, proceed to the next step in this process.

Table 7–1 Process for Using the Information in this Chapter

Step	Section to Use	Purpose
1	Section 7.2	Get started troubleshooting Oracle Enterprise Scheduler jobs.
2	Section 7.3	Perform problem-specific troubleshooting procedures. This section describes: <ul style="list-style-type: none"> ■ Possible causes of the problems ■ Solution procedures corresponding to each of the possible causes
3	Section 14.1	Use My Oracle Support to get additional troubleshooting information about Oracle Fusion Applications or Oracle Enterprise Scheduler. My Oracle Support provides access to several useful troubleshooting resources, including Knowledge Base articles and Community Forums and Discussions.
4	Section 14.1	Log a service request if the information in this chapter and My Oracle Support does not resolve your problem. You can log a service request using My Oracle Support at https://support.oracle.com .

7.2 Getting Started with Troubleshooting Oracle Enterprise Scheduler Jobs

You may want to troubleshoot the following typical issues that can arise when running Oracle Enterprise Scheduler jobs.

- Asynchronous jobs remain in running state indefinitely.
- An asynchronous job hangs or crashes.
- Oracle Enterprise Scheduler is down when the remote scheduled job completes or there are network problems such that Oracle Enterprise Scheduler does not receive the completion status from the remote job.
- A scheduled job is ready to execute, but does not execute.
- A scheduled job is placed in manual error recovery state where troubleshooting is needed.
- Oracle Enterprise Scheduler is throwing errors.
- A scheduled job ends in error.

For troubleshooting Oracle Enterprise Scheduler, use the standard Oracle WebLogic Server system log. For information about viewing job request logs, see "Managing Logging for Oracle Enterprise Scheduler" in the *Oracle Fusion Applications Administrator's Guide*. For more information about troubleshooting Oracle Enterprise Scheduler, see the "Troubleshooting Oracle Enterprise Scheduler" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle Enterprise Scheduler*.

Troubleshooting Asynchronous Oracle Business Intelligence Publisher Jobs

When viewed in Fusion Applications Control, a given Oracle Business Intelligence Publisher job includes a direct URL pointing to the Oracle Business Intelligence Publisher server on the Job Details page. After the Oracle Business Intelligence Publisher job starts running on the Oracle Business Intelligence Publisher server, the scheduled job request attains the property value `bip.status_url`. This property value holds the URL of the Oracle Business Intelligence Publisher server which is used to diagnose Oracle Business Intelligence Publisher report execution. For more information about viewing job request details, see "Viewing Job Request Details"

section in the *Oracle Fusion Middleware Administrator's Guide for Oracle Enterprise Scheduler*.

Oracle Business Intelligence Publisher jobs are supported only in Oracle Fusion Applications.

7.3 Problems and Solutions

This section describes common problems and solutions for Oracle Enterprise Scheduler. It contains the following topics:

- [Section 7.3.1, "Oracle BI Publisher Job Remains In RUNNING State"](#)
- [Section 7.3.2, "Oracle BI Publisher Job States Mismatch with Oracle Enterprise Scheduler States"](#)
- [Section 7.3.3, "Job Never Executes and Goes into ERROR State Immediately"](#)
- [Section 7.3.4, "Job Completes, but Goes into a WARNING state"](#)
- [Section 7.3.5, "Metadata Access Denied Error When Accessing Job Metadata"](#)
- [Section 7.3.6, "Insufficient Privilege Error on Request Error"](#)
- [Section 7.3.7, "Empty Process List in Schedule New Process Dialog"](#)
- [Section 7.3.8, "Slow Display of Job Definition List of Values in Schedule New Process Dialog"](#)

In addition to the recommended solutions, consider reviewing the section "Tuning Oracle Enterprise Scheduling System Performance" in *Oracle Fusion Middleware Administrator's Guide for Oracle Enterprise Scheduler* for tuning tips.

7.3.1 Oracle BI Publisher Job Remains In RUNNING State

Problem

Oracle Business Intelligence Publisher jobs run on separate computers. In these cases, Oracle Enterprise Scheduler depends on the remote job sending a completion status at end of processing that defines the job outcome. However this message may never get generated due to various reasons. It is required to troubleshoot the native job implementation to resolve.

Solution

To resolve this issue, you must troubleshoot the native job. See [Section 7.3.2](#) for more information.

7.3.2 Oracle BI Publisher Job States Mismatch with Oracle Enterprise Scheduler States

Problem

Under normal circumstances, the Oracle BI Publisher server state should match the Oracle Enterprise Scheduler job state. However, in case of any BI Publisher job errors, server issues or other network issues, the Oracle BI Publisher server state may not match the Oracle Enterprise Scheduler job state.

Solution

It is important to understand that the Oracle Enterprise Scheduler runtime invokes the Oracle BI Publisher web service asynchronously and then needs to wait for it to

successfully complete to update the Oracle Enterprise Scheduler job status. Therefore, between the initial web service invocation, there could be various things that could go wrong. The table below lists the typical job life cycle, the potential failure points, and the Oracle Enterprise Scheduler and Oracle BI Publisher state values seen at each of those states. Use the table below to debug any state mismatch between the Oracle Enterprise Scheduler job and the Oracle BI Publisher server:

Processing Step/Error	Server	Expected ESS Request State	Expected Oracle BI Publisher State	Description
1. Oracle Enterprise Scheduler request is in the <code>RUNNING</code> state, calls Oracle BI Publisher job	Oracle Enterprise Scheduler	<code>RUNNING</code>	None	
2. Oracle BI Publisher Oracle Enterprise Scheduler job begins to execute.	Oracle Enterprise Scheduler	<code>RUNNING</code>	None	
3. Oracle BI Publisher Oracle Enterprise Scheduler job invokes Oracle BI Publisher web service.		<code>RUNNING</code>	None	
3a. Error calling the web service, for example, the Oracle BI Publisherserver is down or crashes while processing the web service.	Oracle Enterprise Scheduler	<code>ERROR_MANUAL_RECOVERY</code>	Could be None or <code>RUNNING</code> , depending on where the crash occurs	An error message is seen in the Oracle Enterprise Scheduler server log and with Oracle Enterprise Scheduler request in Fusion Applications Control. Oracle BI Publisher job state depends on why the web service failed. This requires manual recovery.
4. Oracle BI Publisher web service creates "BIP Job ID" with <code>RUNNING</code> status, enqueues to JMS, and commits.	Oracle BI Publisher	<code>RUNNING</code>	<code>RUNNING</code>	
5. Oracle BI Publisher Oracle Enterprise Scheduler job finishes after web service processing.	Oracle Enterprise Scheduler	<code>RUNNING</code>	<code>RUNNING</code>	
5a. Error in the Oracle BI Publisher Oracle Enterprise Scheduler job before returning.		<code>ERROR_MANUAL_RECOVERY</code>	<code>RUNNING</code>	Error message seen in the Oracle Enterprise Scheduler server log and with Oracle Enterprise Scheduler request in Fusion Applications Control. Oracle BI Publisher job is running, but Oracle Enterprise Scheduler job that invoked it has failed. This needs manual recovery because the Oracle Enterprise Scheduler job cannot be in a terminal <code>SUCCESS</code> or <code>ERROR</code> state while the Oracle BI Publisher job is <code>RUNNING</code> .
5b. Oracle Enterprise Scheduler server crash anywhere during Oracle BI Publisher Oracle Enterprise Scheduler job execution (crash during Oracle BI Publisher Oracle Enterprise Scheduler job executable call between Steps 2-5).		<code>ERROR_MANUAL_RECOVERY</code>	Could be None or <code>RUNNING</code> , depending on where the crash occurs	Error message seen in the Oracle Enterprise Scheduler server log and with Oracle Enterprise Scheduler request in Fusion Applications Control. It is not known if the web service has been invoked or not, so manual intervention is required.
6. Oracle BI Publisher server begins processing the Oracle BI Publisher job	Oracle BI Publisher	<code>RUNNING</code>	<code>RUNNING</code>	
6a. Oracle BI Publisher server crashes during processing and restarts		<code>RUNNING</code> to <code>ERROR</code> (See steps 11 through 13)	<code>RUNNING</code> (before restart) to <code>ERROR</code> (after restart)	

Processing Step/Error	Server	Expected ESS Request State	Expected Oracle BI Publisher State	Description
6b. Job is taking a long time to run		RUNNING	RUNNING	Oracle BI Publisher "request job history" UI should show which stage of processing the job is in. When Oracle BI Publisher server restarts, it will mark the Oracle BI Publisher state as ERROR and then notify Oracle Enterprise Scheduler that the job had an error.
Oracle BI Publisher report is successful				
7. Oracle BI Publisher job completes successfully, Oracle BI Publisher sets the Oracle BI Publisher job to SUCCESS and commits	Oracle BI Publisher	RUNNING	SUCCESS	
8. Oracle BI Publisher invokes Oracle Enterprise Scheduler web service to notify Oracle Enterprise Scheduler of job completion.	Oracle BI Publisher	RUNNING	SUCCESS	
8a. Oracle Enterprise Scheduler server is down while Oracle BI Publisher makes web service call to notify Oracle Enterprise Scheduler of job completion, other Oracle Enterprise Scheduler servers in the cluster are running.	Oracle BI Publisher	See Steps 9 through 10.	SUCCESS	Fusion Applications Control should show that the Oracle Enterprise Scheduler server is down. Service invocation should be routed successfully to another Oracle Enterprise Scheduler server in the cluster.
8b. All Oracle Enterprise Scheduler servers are down while Oracle BI Publisher makes web service call to notify Oracle Enterprise Scheduler of job completion.	Oracle BI Publisher	RUNNING	SUCCESS	Can detect this case after the Oracle Enterprise Scheduler servers are restarted and the Oracle BI Publisher request is SUCCESS while the Oracle Enterprise Scheduler request is RUNNING (or timed out). Job will remain RUNNING and administrator has to cancel and recover request in Fusion Applications Control.
9. Oracle Enterprise Scheduler calls job post-processor.	Oracle Enterprise Scheduler	COMPLETED	SUCCESS	
9a. Oracle Enterprise Scheduler job post-processor has an error.	Oracle Enterprise Scheduler	WARNING	SUCCESS	Error message seen in the Oracle Enterprise Scheduler server log and with ESS request in Fusion Applications Control.
10. Oracle Enterprise Scheduler completes the request after post-processing finishes successfully	Oracle Enterprise Scheduler	SUCCESS	SUCCESS	
Oracle BI Publisher report has error.				Error message seen in the Oracle Enterprise Scheduler server log and with Oracle Enterprise Scheduler request in Fusion Applications Control as well as in Oracle BI Publisher console for the job.
11. Oracle BI Publisher job completes with error, Oracle BI Publisher sets the Oracle BI Publisher job to ERROR and commits	Oracle BI Publisher	RUNNING	ERROR	
12. Oracle BI Publisher invokes Oracle Enterprise Scheduler web service to notify Oracle Enterprise Scheduler of job completion	Oracle BI Publisher	RUNNING	ERROR	

Processing Step/Error	Server	Expected ESS Request State	Expected Oracle BI Publisher State	Description
12a. Oracle Enterprise Scheduler server is down while Oracle BI Publisher makes web service call to notify Oracle Enterprise Scheduler of job completion, other Oracle Enterprise Scheduler servers in the cluster are running.	Oracle BI Publisher	RUNNING	ERROR	See Steps 8a and 8b. Oracle BI Publisher retries delivery of the status update in all cases if Oracle Enterprise Scheduler web service invocation fails
13. Oracle Enterprise Scheduler updates request status in the Oracle Database to ERROR	Oracle Enterprise Scheduler	ERROR	ERROR	
Request is cancelled.				Note: The timing refers to when the <code>AsyncCancellable</code> method is invoked, not when <code>cancel</code> is initiated. The states in this section assume that if the Oracle BI Publisher runs, it runs successfully unless canceled. For more details on Oracle Enterprise Scheduler cancellation, see the "Cancelling Oracle Enterprise Scheduler Job Requests" section in the <i>Oracle Fusion Middleware Administrator's Guide for Oracle Enterprise Scheduler</i> .
14. Request in <code>RUNNING</code> state canceled prior to Oracle BI Publisher Oracle Enterprise Scheduler job execution.		CANCELLING to CANCELLED	None	Process phase prior to <code>ExecuteInitiate</code> . Should automatically transition from CANCELLING to CANCELLED.
15. Request canceled during Oracle BI Publisher Oracle Enterprise Scheduler job execution before Oracle BI Publisher job begins.		CANCELLING to CANCELLED	None	Oracle BI Publisher Oracle Enterprise Scheduler job should prevent Oracle BI Publisher job from being initiated by having checkpoints in the <code>execute</code> method. On return, request should transition to CANCELLED.
16. Request canceled during Oracle BI Publisher Oracle Enterprise Scheduler job execution after Oracle BI Publisher job initiated.		CANCELLING to CANCELLED	RUNNING to CANCELLED	Oracle BI Publisher Oracle Enterprise Scheduler job <code>execute</code> method can ignore <code>cancel</code> . <code>Cancel()</code> method should attempt to cancel Oracle BI Publisher job. Oracle BI Publisher job returns status (CANCELLED or other). Request ends up in CANCELLED state.
17. Request canceled while Oracle BI Publisher job is running.		CANCELLING to CANCELLED	RUNNING to CANCELLED	<code>Cancel()</code> method should attempt to cancel Oracle BI Publisher job. Oracle BI Publisher job returns status (CANCELLED or other). Request ends up in CANCELLED state.
18. Request canceled after Oracle BI Publisher job, before callback received (when is Oracle BI Publisher state set to <code>SUCCESS</code> .)		CANCELLING to CANCELLED	SUCCESS	<code>Cancel()</code> method should attempt to cancel Oracle BI Publisher job. Oracle BI Publisher job returns status (CANCELLED or other). Request ends up in CANCELLED state.
19. Request canceled after callback received, before post-processor		CANCELLING to CANCELLED	SUCCESS	
20. Request canceled while post-processor is running		SUCCESS	SUCCESS	After post-processing has begun, the <code>cancel</code> operation has no effect.
21. Request canceled after post-processing		SUCCESS	SUCCESS	

7.3.3 Job Never Executes and Goes into ERROR State Immediately

Problem

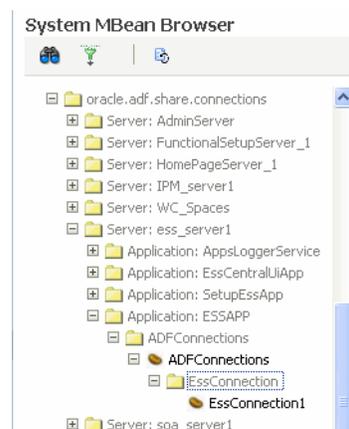
When the user submits a spawn job, it goes into `ERROR` state immediately.

Solution

To resolve this problem, verify that the `RequestFileDirectory` directory is created and set up on the server. This directory can be located anywhere. The Oracle WebLogic Server writes and reads from it, so the Oracle Fusion Middleware administration account server can access this directory. If this directory does not exist, all jobs will move to `ERROR` state. The directory is a shared file system shared across the Oracle Enterprise Scheduler cluster.

To find the `RequestFileDirectory` value in the Fusion Applications Control:

1. Search the logs to diagnose any specific issues found. See the section "Viewing and Searching Log Files" in the *Oracle Fusion Middleware Administrator's Guide*.
2. Verify that `RequestFileDirectory` directory is created:
 - a. From the navigation pane, expand the farm, **WebLogic Domain**, and select the Oracle Enterprise Scheduler server.
 - b. From the **WebLogic Server** menu, choose **System MBean Browser**.
 - c. In the System MBean Browser page, expand **Application Defined MBeans**.
 - d. Expand **oracle.adf.share.connections**, **Server: ess_server_name**, **Application: ESSAPP**, **ADFConnections**, **ADFConnections**, **EssConnection**.



- e. Click **EssConnection1**.
- f. In the Application Defined MBeans: `EssConnection:EssConnection1` page, view the attribute value for **RequestFileDirectory**.

7.3.4 Job Completes, but Goes into a WARNING state

Problem

Oracle Enterprise Scheduler tries to upload log/output files to Oracle WebCenter Content. If upload fails, the request will be marked to `WARNING` state.

Solution

To resolve this problem, use Fusion Applications Control:

1. Check that the Oracle WebCenter Content Content Server is up and running.
Oracle WebCenter Content is located in the `CommonDomain` domain in the Oracle Fusion Setup product family.
 - a. From the navigation pane, expand the farm, **Content Management**, and then **Content Server**.
 - b. Select the **Oracle Universal Content Management - Content Server** application for the appropriate Managed Server.
 - c. In the home page, in the **Scheduler Components** section, ensure the Request Processor has a status of **Started**.

If it is not running, start it. See "Starting and Stopping a Request Processor or Dispatcher" in the *Oracle Fusion Middleware Administrator's Guide for Oracle Enterprise Scheduler*.
 - d. In the Scheduling Service home page, in the **General** section, ensure the Content Server has a state of Active.
 - e. If the state is not **Active**, from the **UCM** menu, choose **Control > Start**.
2. Search and view log records for issues related to Oracle WebCenter Content or attachments. See the "Viewing and Searching Log Files" section in the *Oracle Fusion Middleware Administrator's Guide*.
3. Check the attachments configuration for the job hosting application is correct:
 - a. From the navigation pane, expand the farm, **Application Deployments**.
 - b. Expand `domain_nameEssApp`, and then select `domain_nameEssApp`.
The Application Deployment page displays.
 - c. From the **Application Deployment** menu, choose **WebCenter > Service Configuration**.
The WebCenter Service Configuration page displays.
 - d. Click **Content Repository**.
 - e. In the Manage Content Repository Connection sections, click **Edit** to view and modify the entry for the `FusionAppsContentRepository` connection.

7.3.5 Metadata Access Denied Error When Accessing Job Metadata

Problem

When accessing job metadata, users receive a metadata access denied error in the Standard Report Submission, when there is an attempt to submit a job.

Solution

To resolve this problem,

1. Determine the application role that is supposed to have metadata permissions for the job. See the "Mapping External Roles to an Application Role" section in the chapter "Securing Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*.
2. From Fusion Applications Control, perform the following steps to verify the permissions:
 - a. In the navigation pane, expand the farm and then **WebLogic Server Domain**.

- b. Select the domain.
 - c. From the **WebLogic Domain** menu, choose **Security > Application Policies**.
The Application Policies page displays.
 - d. In the **Search** section, choose the application or application stripe to search, enter the data to match (a principal name or a permission name or both), and click the blue **Search application security grants** icon. In the results table at the bottom of the page, search the grants for the application role and see if the permissions are granted. If
 - e. Add the permissions, as described in the "Managing Application Policies" section of the *Oracle Fusion Middleware Application Security Guide*.
 - f. Determine the enterprise role that is supposed to map to the application role. See the "Mapping External Roles to an Application Role" section in the *Oracle Fusion Applications Common Implementation Guide*.
3. From the Oracle WebLogic Server Administration Console, perform the following to steps to determine the enterprise role of the user.
 - a. From the left pane, from **Domain Structure**, select **Security Realms**.
 - b. On the Summary of Security Realms page select the name of the realm.
 - c. On the Settings for Real Name page, click the **Users and Groups** tab to check the user's group.
If you do not find the user, add the user to the group, as described in Step 4.
 4. Add the user to the group:
 - a. In the **Users** table, select the user you want to add to a group.
 - b. On the Settings for User Name page select **Groups**.
 - c. Select a group or groups from the Available list box:
 - To locate a group in a large list, type the first few characters of the name.
 - To select multiple groups, Ctrl-click each group.
 - To add a user to a group, click the right arrow to move the selection to the **Chosen** list box.
 - To remove a user from a group, select the group in the **Chosen** list box and click the left arrow.
 - d. Click **Save**.

7.3.6 Insufficient Privilege Error on Request Error

Problem

The following error is reported:

```
User name does not have sufficient privilege to do name operation on request number
```

Solution

To resolve this problem,

1. Check who submitted the request. A user should be able to operate on the requests submitted. If the login user is not the request submitter, go to Step 2.

2. Use Oracle Authorization Policy Manager to check if the submitter is assigned privileges on the request. See the "Locating Policies Associated with a Database Resource" section in the chapter "Securing Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*. When using Oracle Authorization Policy Manager, in the **Search** area of the **Manage Database Resources and Policies** tab, search for the `ESS_REQUEST_HISTORY` database resource.
3. Search the policies for the application role that is expected to receive the grants. See the "Searching Database Resources" section in the chapter "Securing Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*.
4. If the policy or condition is missing, use Oracle Authorization Policy Manager to add them. See the "Managing Database Resource Conditions" section in the chapter "Securing Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*.
5. Use Oracle Authorization Policy Manager to check if the submitter is assigned privileges on the request. See the "Searching Database Resources" section in the chapter "Securing Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*.

7.3.7 Empty Process List in Schedule New Process Dialog

Problem

When an application user logs into an Oracle Fusion application to schedule a new Oracle Enterprise Scheduler job by using the following procedure and finding no value for the process:

1. Click the **Navigator** link.
2. Choose **Tools > Scheduled Processes**.
3. In the Scheduled Processes page, in the **Search Results** section, click **Schedule New Process**.
4. In the Schedule New Process dialog, click the arrow button next to the **Process Name** list and find no values.

This issue is usually the result of a permissions problem.

Solution

To resolve this problem,

1. Check who submitted the request. A user should be able to operate on the requests submitted. If the login user is not the request submitter, go to Step 2.
2. Use Oracle Authorization Policy Manager to check if the submitter is assigned privileges on the request. See the "Locating Policies Associated with a Database Resource" section in the chapter "Securing Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*. When using Oracle Authorization Policy Manager, in the **Search** area of the **Manage Database Resources and Policies** tab, search for the `ESS_REQUEST_HISTORY` database resource.
3. Search the policies for the application role that is expected to receive the grants. See the "Searching Database Resources" section in the chapter "Securing Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*.
4. If the policy or condition is missing, use Oracle Authorization Policy Manager to add them. See the "Managing Database Resource Conditions" section in the

chapter "Securing Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*.

5. Use Oracle Authorization Policy Manager to check if the submitter is assigned privileges on the request. See the "Searching Database Resources" section in the chapter "Securing Oracle Fusion Applications" in the *Oracle Fusion Applications Administrator's Guide*.

7.3.8 Slow Display of Job Definition List of Values in Schedule New Process Dialog

Problem

When an application user logs into an Oracle Fusion application to schedule a new Oracle Enterprise Scheduler job by using the following procedure and finding slow performance in the list of values.

1. Click the **Navigator** link.
2. Choose **Tools > Scheduled Processes**.
3. In the Scheduled Processes page, in the **Search Results** section, click **Schedule New Process**.
4. In the Schedule New Process dialog, click the arrow button next to the **Process Name** list and discover the performance is unacceptably slow.

Solution

To resolve this issue, update the MDS table statistics for the query optimizer to use optimal query plans:

1. Generate Oracle Enterprise Scheduler MDS schema statistics:

```
BEGIN
  dbms_stats.gather_schema_stats(
    ownname => 'FUSION_MDS',
    METHOD_OPT => 'FOR ALL COLUMNS SIZE AUTO',
    CASCADE => TRUE,
    ESTIMATE_PERCENT => NULL);
END;
```

2. Flush the shared pool:

```
SQL> ALTER SYSTEM FLUSH SHARED_POOL;
```

7.3.9 Job Status Notifications Are Not Sent

Problem

The Oracle ADF user interface for submitting job requests provides the ability to notify users of the status of submitted jobs (via the Notification tab of the user interface). For example, users can request a notification to be sent to the originator of the job request.

A problem occurs if the notifications are not received.

Solution

1. Configure Oracle User Messaging Service. For more information, see the section "Configuring Oracle User Messaging Service" in the chapter "Configuring Oracle Business Activity Monitoring" in *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

-
2. Deploy the drivers required for Oracle User Messaging Service. You can do so using Oracle WebLogic Server Scripting Tool. For more information, see the chapter "Managing Oracle User Messaging Service" in *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

Troubleshooting Oracle Fusion Transactional Business Intelligence

This chapter describes common problems that you might encounter when using Oracle Transactional Business Intelligence and explains how to solve them.

This chapter includes the following topic:

- [Section 8.1, "Diagnosing Oracle Fusion Transactional Business Intelligence Query Problems"](#)

8.1 Diagnosing Oracle Fusion Transactional Business Intelligence Query Problems

This section describes how you to use the `NQQuery.log` file and the `AdminServer-diagnostic.log` file to diagnose Oracle Transactional Business Intelligence query issues such as ODBC errors, ORA-errors, other database errors, and query performance issues.

The `NQQuery.log` file is useful for any analysis that uses the BI Server to query the datasource. The `NQQuery.log` records the logical SQL sent by the Oracle BI Presentation layer to the BI Server layer and the physical or ANSI SQL sent by the BI Server to the datasource.

This section contains the following topics:

- [Section 8.1.1, "Enabling the NQQuery.log File"](#)
- [Section 8.1.2, "Presentation Services Request Query"](#)
- [Section 8.1.3, "Query Trace"](#)
- [Section 8.1.4, "Physical Query"](#)
- [Section 8.1.5, "Using AdminServer-diagnostic.log File to Troubleshoot Oracle WebLogic Server"](#)
- [Section 8.1.6, "Using View Data to Check the Datasource Connectivity"](#)

8.1.1 Enabling the NQQuery.log File

You can enable the `NQQuery.log` file to diagnose issues that you encounter in Oracle Transactional Business Intelligence queries. Use one of the following methods to enable the `NQQuery.log` file.

- You can enable query logging from the Oracle BI Administration Tool. For information and procedures about enabling the query log file, see "Managing the

Query Log" in the *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

- You can enable the `LogLevel` system session variable for the repository by accessing the repository and setting the `LogLevel` system variable to 7. For information and procedures about setting this variable, see "About System Session Variables" section in the *Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition (Oracle Fusion Applications Edition)*.
- If you have administrator permissions, you can log into Presentation Services, access the analysis that you want to troubleshoot, and temporarily change its logging level to 2. This will turn on logging for the analysis even when logging is turned off for all analyses. For more information, see [Section 3.5.2, "Need to Troubleshoot an Analysis' Query"](#) and "Setting the Query Logging Level" in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

If you use this method to enable the `NQQuery.log` file, look for the following:

- An error like "no log found." An error like this indicates that there is a known error. Look in the `NQQuery.log` file, which contains additional logging.
- The timestamp to help you locate the log entry.
- The logical SQL as shown in the error message. This is the SQL sent by Presentation Services to the BI Server layer.
- The physical SQL related to the above mentioned logical SQL. Search for `physical`. The physical SQL is the SQL sent by BI Server through ODBC to the database.
- For any more detailed errors.

Note that the `NQQuery.log` file is visible (but *not* searchable) in the Fusion Applications Control Log Viewer.

After enabling query logging, if the BI Server caching is enabled, you must clear the cache before re-executing the analysis so that the `NQQuery.log` file will contain the correct information. Use the following procedure to perform this task.

To clear the BI Server cache:

1. Log into Presentation Services as an administrator.
2. In the **Global Header**, click **Administration**. The Administration page displays.
3. Click **Manage Sessions**. The Manage Sessions page displays.
4. Scroll to the Cursor Cache section of the page and click the **Close All Cursors** button.

8.1.2 Presentation Services Request Query

The request query executed from Presentation Services will be shown in the `NQQuery.log` file as follows:

```
RqList      0 as c1 GB,      Dim - Procurement Item.Category Name as c2 GB,      Dim
- Procurement Item.Item Description as c3 GB,      # of PO Lines:[DAggr(Fact -
Purchasing - Order.# of PO Lines by [ Dim - Procurement Item.Category Name, Dim
- Procurement Item.Item Description] )] as c4 GBOrderBy: c1 asc, c2 asc, c3 asc
```

This query trace explains how a measure is calculated. It also shows the logical table source used to render the data. The query should use the logical table sources having

priority 5 for the requests executed from the Oracle Transactional Business Intelligence Real Time Subject Areas.

8.1.3 Query Trace

The query trace shows the view object, its view criteria, and its view links that are used to execute the request. See the following:

```
<ADFQuery mode="SQLBypass" queryid="14604-3902"
locale="en"><Parameters></Parameters>
<Projection>
<Attribute><Name><![CDATA[CategoryName]]></Name>
  <ViewObject><![CDATA[FscmTopModelAM.PrcPoPublicViewAM.
PurchasingItemP]]></ViewObject>
</Attribute>
<Attribute><Name><![CDATA[ItemDescription]]></Name>
  <ViewObject><![CDATA[FscmTopModelAM.PrcPoPublicViewAM.
PurchasingItemP]]></ViewObject>
</Attribute>
<Attribute><Name><![CDATA[PurchasingDocumentHeaderTypeLookupCode]]></Name>
  <ViewObject><![CDATA[FscmTopModelAM.PrcPoPublicViewAM.StandardLinePVO]]>
  </ViewObject>
</Attribute>
<Attribute><Name><![CDATA[PoLineId]]></Name>
  <ViewObject><![CDATA[FscmTopModelAM.PrcPoPublicViewAM.StandardLinePVO]]>
  </ViewObject>
</Attribute>
<Attribute><Name><![CDATA[ItemNumber]]></Name>
  <ViewObject><![CDATA[FscmTopModelAM.PrcPoPublicViewAM.PurchasingItemP]]>
  </ViewObject>
</Attribute>
</Projection>
JoinSpec>
  <ViewObject>
    <Name><![CDATA[FscmTopModelAM.PrcPoPublicViewAM.PurchasingItemP]]></Name>
    <ViewLink><Name><![CDATA[oracle.apps.prc.po.publicView.analytics.link.
PurchasingDocumentLinePVOToPurchasingItemPVO]]></Name></ViewLink>
  </ViewObject>
  <ViewObject>
    <Name><![CDATA[FscmTopModelAM.PrcPoPublicViewAM.StandardLinePVO]]></Name>
    <ViewLink><Name><![CDATA[oracle.apps.prc.po.publicView.analytics.link.
PurchasingDocumentLinePVOToPurchasingItemPVO]]></Name></ViewLink>
  </ViewObject>
</JoinSpec>
<DetailFilter>
<ViewCriteria>
  <ViewCriteriaRow conjunction="VC_CONJ_AND">
    <Attribute><Name><![CDATA[PurchasingDocumentVersionCoSequence]]></Name>
    <ViewObject><![CDATA[FscmTopModelAM.PrcPoPublicViewAM.StandardLinePVO]]>
    </ViewObject>
  </Attribute>
  <Value><![CDATA[0]]></Value>
  <Predicate operator="OPER_EQ"/>
</ViewCriteriaRow>
<ViewCriteriaRow conjunction="VC_CONJ_AND" negated="true">
<Attribute><Name><![CDATA[PurchasingDocumentVersionCoCanceledFlag]]></Name>
  <ViewObject><![CDATA[FscmTopModelAM.PrcPoPublicViewAM.StandardLinePVO]]>
  </ViewObject>
</Attribute>
<Value><![CDATA[Y]]></Value>
```

```

    <Predicate operator="OPER_EQ"/>
  </ViewCriteriaRow>
</ViewCriteria>
</DetailFilter>
</ADFQuery>

```

You or the administrator can review the query trace to check that the desired View Objects (VOs) and View Links are executed. The execution of the view objects and view must be based on the Logical model code to render the measure or attributes executed in the request.

8.1.4 Physical Query

The SQL Bypass database should be set up in the repository to send the physical query to the database directly, rather than through the Application Development Framework (ADF) Server. The `NQQuery.log` file shows the physical query sent to the database if the SQL Bypass database is enabled. See the following excerpt from the log file:

```

WITH
SAWITH0 AS (select T744257.C501728333 as c1,
    T744257.C281594243 as c2,
    T744257.C469784899 as c3,
    T744257.C168071223 as c4
from
    (SELECT V110617254.CATEGORY_NAME AS C501728333,          V110617254.
ITEM_DESCRIPTION
    AS C281594243,          V278099157.TYPE_LOOKUP_CODE263 AS C469784899,
V278099157.PO_LINE_ID AS C168071223,          V110617254.ITEM_NUMBER AS
C348883104,          V278099157.CO_SEQUENCE AS C78750419,          V278099157.CO_
CANCELED_FLAG AS C443371219,          V278099157.PO_HEADER_ID1 AS PKA_
PurchasingDocumentHeaderP0,          V278099157.VERSION_ID AS PKA_
PurchasingDocumentVersion0 FROM (SELECT PurchasingDocumentLine.PO_LINE_ID,
PurchasingDocumentHeader.PO_HEADER_ID AS PO_HEADER_ID1,
PurchasingDocumentHeader.TYPE_LOOKUP_CODE AS TYPE_LOOKUP_CODE263,
PurchasingDocumentVersion.CO_CANCELED_FLAG,
PurchasingDocumentVersion.CO_SEQUENCE,
PurchasingDocumentVersion.VERSION_ID,
(DECODE(PurchasingDocumentLine.ITEM_ID, NULL,
DECODE(PurchasingDocumentLine.VENDOR_PRODUCT_NUM, NULL,
(PurchasingDocumentLine.ITEM_DESCRIPTION || '[' || CategoryTranslation.
CATEGORY_NAME || ']'),(PurchasingDocumentLine.VENDOR_PRODUCT_NUM || '[' ||
PurchasingDocumentHeader.VENDOR_ID || ']')),TO_CHAR(PurchasingDocumentLine.
ITEM_ID))) AS ITEM_NAME FROM PO_LINES_ALL PurchasingDocumentLine,
PO_HEADERS_ALL PurchasingDocumentHeader, PO_VERSIONS PurchasingDocumentVersion
WHERE (PurchasingDocumentLine.PO_HEADER_ID = PurchasingDocumentHeader.
PO_HEADER_ID AND PurchasingDocumentHeader.PO_HEADER_ID =
PurchasingDocumentVersion.PO_HEADER_ID) AND ( (
UPPER(PurchasingDocumentHeader.TYPE_LOOKUP_CODE) = UPPER('STANDARD') ) ) )
V278099157, (SELECT DISTINCT ( DECODE(PL.ITEM_ID,NULL,DECODE(PL.
VENDOR_PRODUCT_NUM, NULL,(PL.ITEM_DESCRIPTION || '[' || TL1.CATEGORY
_NAME||']'),(PL.VENDOR_PRODUCT_NUM || '[' || PH.VENDOR_ID ||']')), TO
_CHAR(I.ITEM_NUMBER))) AS ITEM_NUMBER, PL.ITEM_DESCRIPTION,
PL.CATEGORY_ID,TL1.CATEGORY_NAME, DECODE(PL.ITEM_ID, NULL,DECODE
(PL.VENDOR_PRODUCT_NUM, NULL, 'DESCRIPTION BASED ITEMS','SUPPLIER
ITEMS'),'INVENTORY_ITEMS') AS ITEMTYPE FROM PO_LINES_ALL PL,
EGP_CATEGORIES_TL TL1, PO_HEADERS_ALL PH, PO_SYSTEM_PARAMETERS_ALL SP,
EGP_SYSTEM_ITEMS_B I WHERE PL.CATEGORY_ID=TL1.CATEGORY_ID AND PL.CATEGORY_ID IS
NOT NULL AND PL.PO_HEADER_ID=PH.PO_HEADER_ID AND PL.PRC_BU_ID=SP.PRC_BU_ID AND
I.INVENTORY_ITEM_ID=PL.ITEM_ID) V110617254 WHERE V278099157.ITEM_NAME =
V110617254.ITEM_NUMBER( + ) AND ( ( (V278099157.CO_SEQUENCE = 0 ) ) AND

```

```
( NOT ( (V278099157.CO_CANCELED_FLAG = 'Y' ) ) ) ) T744257),
SAWITH1 AS (select D1.c1 as c2,      D1.c2 as c3,
      case when D1.c3 = 'STANDARD' then D1.c4 end as c4
from
      SAWITH0 D1), SAWITH2 AS (select D1.c2 as c2,      D1.c3 as c3,
      D1.c4 as c4,
      ROW_NUMBER() OVER (PARTITION BY D1.c2, D1.c3, D1.c4 ORDER BY D1.c2 DESC,
      D1.c3 DESC, D1.c4 DESC) as c5from      SAWITH1 D1),SAWITH3 AS (select
      count(distinct case D1.c5 when 1 then D1.c4 else NULL end )
      as c1,      D1.c2 as c2,      D1.c3 as c3from SAWITH2 D1
group by D1.c2, D1.c3)
select distinct 0 as c1,      D1.c2 as c2,      D1.c3 as c3,      D1.c1 as c4 from
      SAWITH3 D1
order by c2, c3
```

Use this physical SQL to diagnose which tables, columns joins, and filters are being used by the BI Server to gather data. Table names are aliased (for example, T744257). Search for the table alias in the RPD to find the actual table name. Run the SQL to check whether it works in SQL*Plus.

For performance issues, look for filter columns that are not indexed, and known database performance causes such as NOT IN clauses. Also use Oracle Database Control for performance advice.

The `NQQuery.log` file also indicates the user who executed the analysis, the timestamp, and the OBI Connection Object used for the analysis. From the Connection Object name, you can refer back to the Oracle BI repository to find the set up properties of the connection, such as whether it uses a native connection or ODBC.

The Oracle BI `NQQuery.log` file contains detailed BI Server errors, so it is recommended to check this log file. You can access this log file with the Fusion Application Control. The `NQQuery.log` file shows queries executed at the time of starting the BI Server service. Be sure to check this log for any query failures.

8.1.5 Using AdminServer-diagnostic.log File to Troubleshoot Oracle WebLogic Server

Oracle BI EE gets the view object physical query from the Oracle ADF Server. This query involves the view object query and the security predicate associated to it. You or the administrator need to research the WebLogic Server log file if you suspect an issue in the view object query. You will find this information in the `AdminServer-diagnostic.log` file. This file is located in the WebLogic Server domain associated to Oracle JDeveloper 11g.

The `AdminServer-diagnostic.log` file shows the user name, view object, attributes, the view link source and destination entities, and the view criteria for view objects (including security view criteria). In this file you will find the roles associated to the user and the security predicate associated to the roles and users in the roles. This file also shows the composite view object API called for the view object, along with view links and view criteria.

8.1.6 Using View Data to Check the Datasource Connectivity

The BI Server uses the properties in the connection pool object, which is located in the Oracle BI repository. Use the following procedure to confirm that your connectivity is set up correctly.

To confirm that your connectivity is set up correctly:

Note: This procedure uses the ADF BC Datasource as an example.

1. In the Physical layer of the Administration Tool, expand the database object for the ADF Business Component data source.
2. Right-click a physical table and click **View Data**.
3. Check that the appropriate data displays. Note that if you have just imported, you may need to check in the new objects before you perform this test.

Troubleshooting Oracle Identity Management

Use this chapter to troubleshoot runtime Oracle Fusion Applications problems that may have originated in the Oracle Identity Management and security integration layer. That is: Your Oracle Fusion Applications deployment was operating properly, but stopped doing so, and the cause appears to be related to identity or security integration.

This chapter contains the following topics:

- [Section 9.1, "Introduction to Troubleshooting Oracle Identity Management"](#)
- [Section 9.2, "Getting Started with Troubleshooting Oracle Identity Management"](#)
- [Section 9.3, "Problems and Solutions"](#)
- [Section 9.4, "Additional Information for Troubleshooting Oracle Identity Management"](#)

Some procedures in this chapter reference content in the Oracle Fusion Middleware guides. These guides describe using Fusion Middleware Control. These procedures also apply to Fusion Applications Control.

In addition to this chapter, review the *Oracle Fusion Middleware Error Messages Reference* for information about the error messages you may encounter.

9.1 Introduction to Troubleshooting Oracle Identity Management

This section provides guidelines and a process for using the information in this chapter. Using the following guidelines and process will focus and minimize the time you spend resolving problems.

Guidelines

When using the information in this chapter, Oracle recommends:

- Reviewing the various terms and implementations of roles within Oracle Fusion Applications and Oracle Identity Management. For example, a duty role in the context of Oracle Fusion Applications equates to an application role in the context of Oracle Identity Management. See *Oracle Fusion Applications Common Implementation Guide*.
- After performing any of the solution procedures in this chapter, immediately retrying the failed task that led you to this troubleshooting information. If the task still fails when you retry it, perform a different solution procedure in this chapter and then try the failed task again. Repeat this process until you resolve the problem.

- Making notes about the solution procedures you perform, symptoms you see, and data you collect while troubleshooting. If you cannot resolve the problem using the information in this chapter and you must log a service request, the notes you make will expedite the process of solving the problem.

Process

Follow the process outlined in [Table 9–1](#) when using the information in this chapter. If the information in a particular section does not resolve your problem, proceed to the next step in this process.

Table 9–1 Process for Using the Information in this Chapter

Step	Section to Use	Purpose
1	Section 9.2	Get started troubleshooting Oracle Identity Management. The procedures in this section quickly address a wide variety of problems.
2	Section 9.3	Perform problem-specific troubleshooting procedures. This section describes: <ul style="list-style-type: none"> ■ Symptoms of specific Oracle Fusion Applications runtime problems that may have originated in the Oracle Identity Management and security integration layer ■ Possible causes of the problems ■ Solution procedures corresponding to each of the possible causes
3	Section 9.4	Get Oracle Identity Management component-specific troubleshooting information. Use this section if you have isolated your problem to a specific Oracle Identity Management component or want to learn more about a component.
4	Section 14.1	Use My Oracle Support to get additional troubleshooting information about Oracle Fusion Applications or Oracle Identity Management. My Oracle Support provides access to several useful troubleshooting resources, including Knowledge Base articles and Community Forums and Discussions.
5	Section 14.1	Log a service request if the information in this chapter and My Oracle Support does not resolve your problem. You can log a service request using My Oracle Support at https://support.oracle.com .

9.2 Getting Started with Troubleshooting Oracle Identity Management

Start troubleshooting by performing the procedures in this section, as they quickly address a wide variety of problems. If the procedures in this section do not resolve your problem, proceed to [Section 9.3](#).

This section contains the following topics:

- [Section 9.2.1, "Verifying Oracle Internet Directory Identity Stores Can Perform Look Ups"](#)
- [Section 9.2.2, "Verifying the Security Providers in the Oracle WebLogic Server Domain"](#)
- [Section 9.2.3, "Using Selective Tracing to Troubleshoot Inaccessible Functionality"](#)

9.2.1 Verifying Oracle Internet Directory Identity Stores Can Perform Look Ups

When using Oracle Internet Directory as the identity store, it must be configured to index the `displayName` attribute. If Oracle Internet Directory is not configured to index the `displayName` attribute, operations that require looking up users and roles in the identity store will fail.

To verify an Oracle Internet Directory identity store is configured to index the `displayName` attribute:

1. Invoke Oracle Directory Services Manager and connect to the Oracle Internet Directory identity store instance. Refer to the "Invoking Oracle Directory Services Manager" and "Connecting to the Server from Oracle Directory Services Manager" sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* for more information.
2. Click **Schema** on the Oracle Directory Services Manager task selection bar.
3. Expand the **Attributes** area of the navigation panel, enter `displayName` in the search field, and click the **Go (>)** button to search for the `displayName` attribute.
4. Click the **displayName** attribute in the search results. The configuration details for the `displayName` attribute appear in the main screen.
5. Verify the **Indexed** option is selected (checked) in the configuration details.

If the **Indexed** option is not selected, click **the attribute will be cataloged/decataloged** button below the search field in the navigation tree.

Refer to the "Adding an Index to an Existing Attribute by Using Oracle Directory Services Manager" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* for more information.

9.2.2 Verifying the Security Providers in the Oracle WebLogic Server Domain

Small configuration errors in the security providers for the Oracle WebLogic Server domain, such as in the Identity Asserters and Authenticators, frequently are the cause of runtime problems. Use the information in this section to quickly verify a few key security provider settings, including:

- The order of providers, which determines the authentication sequence.
- JAAS Control Flags, which determine how the authentication sequence uses the providers.
- Connection, cache, and user and group lookup settings for the identity store's LDAP Authenticator.

To verify configuration settings for the security providers in the Oracle WebLogic Server domain:

1. Log in to the Oracle WebLogic Server Administration Console by referring to the "Starting the Administration Console" section in the *Oracle Fusion Middleware Introduction to Oracle WebLogic Server* document.
2. Click **Security Realms** in the **Domain Structure** area on the left side of the Administration Console Home Page. The Summary of Security Realms screen appears.
3. Click the name of the appropriate security realm in the **Realms** table. The Settings for `REALM_NAME` screen appears.
4. Click the **Providers > Authentication** tabs. The configured providers appear in the **Authentication Providers** table.

Verifying the Order of Providers

The security providers must be configured in the following order, where number 1 in the following list is at the top of the **Authentication Providers** table:

1. Oracle Access Manager Identity Asserter

2. LDAP Authenticator for the identity store: Either the Oracle Internet Directory Authenticator or Oracle Virtual Directory Authenticator, depending on the LDAP server used as the identity store.

If needed, you can reorder the security providers by performing the following steps from the Settings for *REALM_NAME* screen:

1. Click **Reorder**.
2. Select a provider and use the arrow buttons to move it up or down in the order.
3. Click **OK**.

Verifying JAAS Control Flags

The JAAS Control Flags for the security providers must be set as shown in [Table 9-2](#). Perform the following steps to view, and if needed, edit the JAAS Control Flags.

From the Settings for *REALM_NAME* screen:

1. Click the provider name in the **Authentication Providers** table.
2. Click the **Configuration > Common** tabs.
3. Examine the **Control Flag** setting and adjust it as needed.
4. Click **Save**.

Table 9-2 Required JAAS Control Flags for Security Providers

Security Provider	Required JAAS Control Flag
Oracle Access Manager Identity Asserter	Required
LDAP Authenticator for the identity store:	Sufficient
<ul style="list-style-type: none"> ■ Oracle Internet Directory Authenticator <li style="padding-left: 20px;">or ■ Oracle Virtual Directory Authenticator 	

Verifying Settings for the Identity Store's LDAP Authenticator

[Table 9-3](#) lists settings for the identity store's LDAP Authenticator that you should verify. Perform the following steps on either the Oracle Internet Directory Authenticator or the Oracle Virtual Directory Authenticator, depending on the LDAP server you are using for the identity store.

From the Settings for *REALM_NAME* screen:

1. Click the appropriate authenticator in the **Authentication Providers** table.
2. Click the **Configuration > Provider Specific** tabs.
3. Examine the settings and adjust as needed.
4. Click **Save**.

Note: You can get more information about each of the settings listed in [Table 9-3](#) by clicking **More Info...** next to each setting in the Oracle WebLogic Server Administration Console.

Table 9–3 Settings to Verify in the Identity Store's LDAP Authenticator

Setting	Verification to Perform
Connection settings	Double-check all to ensure accuracy. Pay particular attention to the Host value, which can contain misspelled strings.
User Name Attribute	Regardless of which attribute is set, the same attribute must be used to specify the user name in the All Users Filter and User From Name Filter settings.
All Users Filter and User From Name Filter	The user name attribute used in both of these settings must be the attribute configured for the User Name Attribute setting.
Use Retrieved User Name as Principal	Must be enabled (checked).
Static Group Name Attribute	Regardless of which attribute is set, the same attribute must be used to specify the group name in the All Groups Filter and Group From Name Filter settings.
All Groups Filter and Group From Name Filter	The attribute used to specify the group name in these two settings must be the same attribute configured for the Static Group Name Attribute setting.
Cache Enabled	If enabled, examine the value of the Cache TTL setting.
Cache TTL	Examine to ensure an appropriate value is set. If you perform an operation that fails, wait for the amount of time specified by the Cache TTL to elapse and then retry the failed operation. This will ensure the authenticator's cache has been refreshed and any recent configuration changes have been activated.

9.2.3 Using Selective Tracing to Troubleshoot Inaccessible Functionality

When Oracle Fusion Applications users cannot access a particular functionality, for example, they attempt to log in to an application and are denied access or see an unexpected view of the application, often it is because they are not authorized to access that functionality. In these situations, you can use the Selective Tracing feature in Fusion Applications Control to collect data specific to the user and request, then collaborate with the security administrator to compare it against the configured authorizations.

To use Selective Tracing to troubleshoot inaccessible functionality:

1. Update the domain's environment setup script by performing one of the following steps that is appropriate to your environment:

On UNIX systems, add the text shown in the following example to the bottom of the `DOMAIN_HOME/bin/setDomainEnv.sh` file:

```
JAVA_
OPTIONS="-Djava.util.logging.manager=oracle.core.ojdl.logging.ODLLogManager
${JAVA_OPTIONS}"
export JAVA_OPTIONS
FMWCONFIG_CLASSPATH=${FMWCONFIG_CLASSPATH}${CLASSPATHSEP}${ORACLE_COMMON_
HOME}/modules/oracle.odl_11.1.1/ojdl.jar
export FMWCONFIG_CLASSPATH
```

On Windows systems, add the text shown in the following example to the bottom of the `DOMAIN_HOME\bin\setDomainEnv.cmd` file:

```
set JAVA_
```

```

OPTIONS=-Djava.util.logging.manager=oracle.core.ojdl.logging.ODLLogManager
%JAVA_OPTIONS%
set FMWCONFIG_CLASSPATH=%FMWCONFIG_CLASSPATH%;%ORACLE_COMMON_
HOME%\modules\oracle.odl_11.1.1\ojdl.jar

```

2. Log in to Fusion Applications Control by referring to the "Starting Fusion Applications Control" section in the *Oracle Fusion Applications Administrator's Guide* for more information.
3. Navigate to the appropriate domain, then select **Logs > Selective Tracing** from the domain menu. The Selective Tracing page appears.
4. Click the **Tracing Options** tab, configure the following settings, and click **Start Tracing** to generate the selective trace:
 - Option Name: Select **User Name** from the list and enter the name of the user that cannot access functionality.

Note: While this procedure describes troubleshooting inaccessible functionality by selective tracing on a user name, you can also use the other options in the Option Names list for troubleshooting purposes.

- Level: Select **TRACE:32 (FINEST)**.
- Description: Enter a description that will help you identify the trace results, such as: *USER_NAME* cannot access functionality.
- Duration: Enter the number of minutes the selective trace will run.
- Trace ID: Select **Generate a New Unique Trace ID**. Optionally, you can select **Use a Custom Trace ID** and enter an ID, but note that Fusion Middleware Control does not verify the uniqueness of Custom Trace ID strings.
- Loggers: Oracle recommends enabling the following loggers for troubleshooting inaccessible functionality:

Note: To quickly locate a specific logger, enter the logger name or a string in the logger name in the field above the list of loggers and press return.

- oracle.jps.authorization
- oracle.jps.common
- oracle.security.jps.az.internal.runtime.policy.AbstractPolicyImpl
- oracle.security.jps.internal.policystore.JavaPolicyProvider
- oracle.security.jps.internal.policystore.Idap.BulkAuthorizer
- oracle.security.jps.trace.logger
- oracle.security.jps.util.JpsAuth

Note: Refer to the "Debugging the Authorization Process" section in the *Oracle Fusion Middleware Application Security Guide* for information about system properties you can enable for extremely fine grained authorization debugging.

5. Instruct the user that cannot access functionality to try and access it again. Now that you have enabled Selective Tracing for that user, you will collect data specific to that user and the request.
6. Access the results from the selective trace by clicking the **Active Traces And Tracing History** tab and selecting the trace from either the **Active Traces** or **Tracing History** table. If the number of minutes that you specified in the Duration option has elapsed, the trace will be in the **Tracing History** table. If you provided a description for the selective trace, look for it in the **Description** column.
7. Provide the trace results to the Security Administrator.

Note: Typically, the Security Administrator performs the remaining steps in this procedure.

8. Locate the Failed ProtectionDomain string and its corresponding resourceName=, resourceType=, and Principal= strings in the trace results. These strings will provide information about the user and the inaccessible resource. As shown in the following example, the user named user1 was denied access to the resource named ResourceNameX:

```
PolicyContext: [JeeScenarioApp]
Resource/Target: [resourceType=TaskFlowResourceType, resourceName=ResourceNameX]
Action: [read]
Permission Class: [oracle.security.jps.ResourcePermission]
                Result:          [FAILED]
                Evaluator:       [ACC]

FailedProtectionDomain:ClassLoader=weblogic.utils.classloaders.ChangeAwareClassLoader
@c7cee9finder:weblogic.utils.classloaders.CodeGenClassFinder@a05da2 annotation:
JeeScenarioApp@jeescenario

CodeSource=file:/somepath/wls-jrfServer/servers/jrfServer_admin/tmp/
_WL_user/JeeScenarioApp/gw8m4w/war/WEB-INF/lib/_wl_cls_gen.jar
                Principals=total 5 of principals(
                1. weblogic.security.principal.WLSUserImpl

"user1"
                2. JpsPrincipal:
oracle.security.jps.internal.core.principals.JpsAuthenticatedRoleImpl
"authenticated-role"
GUID=null DN=null
                3. JpsPrincipal:
oracle.security.jps.service.policystore.ApplicationRole "basic_role1"
GUID=734342D04A2811E0AF671B4A95E1598C DN=cn=basic_
role1, cn=Roles, cn=JeeScenarioApp, cn=testfarm_
wilu_mlr6, cn=JPSText, cn=jpsroot
                4. JpsPrincipal:
oracle.security.jps.service.policystore.ApplicationRole "myrole2"
GUID=738C80D04A2811E0AF671B4A95E1598C
DN=cn=myrole2, cn=Roles, cn=JeeScenarioApp, cn=testfarm_wilu_
mlr6, cn=JPSText, cn=jpsroot
                5. JpsPrincipal:
oracle.security.jps.internal.core.principals.JpsAnonymousRoleImpl
"anonymous-role" GUID=null
DN=null)

Permissions=(
(oracle.security.jps.service.credstore.CredentialAccessPermission
```

```

context=SYSTEM,mapName=default,keyName=* read,write)

(oracle.security.jps.service.policystore.PolicyStoreAccessPermission
Context:SYSTEM Context Name:null Actions:getConfiguredApplications)

(oracle.security.jps.service.policystore.PolicyStoreAccessPermission
Context:APPLICATION Context Name:* Actions:getApplicationPolicy)

(oracle.security.jps.service.policystore.PolicyStoreAccessPermission
Context:SYSTEM Context Name:null Actions:*)

(oracle.security.jps.service.policystore.PolicyStoreAccessPermission
Context:APPLICATION Context Name:* Actions:*)
    (java.io.FilePermission file2.txt read)
    (java.io.FilePermission file2.txt write)
    (java.io.FilePermission file1.txt read)
    (java.util.PropertyPermission line.separator
read)
    (java.util.PropertyPermission
java.vm.specification.version read)
    (java.util.PropertyPermission java.vm.version
read)
    (java.util.PropertyPermission java.vendor.url
read)
    (java.util.PropertyPermission
java.vm.specification.vendor read)
    (java.util.PropertyPermission java.vm.name read)
    (java.util.PropertyPermission os.name read)
    (java.util.PropertyPermission java.vm.vendor
read)
    (java.util.PropertyPermission path.separator
read)
    (java.util.PropertyPermission os.version read)
    (java.util.PropertyPermission
java.specification.name read)
    (java.util.PropertyPermission os.arch read)
    (java.util.PropertyPermission java.version read)
    (java.util.PropertyPermission java.class.version
read)
    (java.util.PropertyPermission java.vendor read)

```

9. Use Oracle Authorization Policy Manager to search for configured security policies that contain the resource and resource type listed in the trace results (look for `resourceName=` and `resourceType=`). In the example shown in Step 8, you would search for configured security policies that contain the resource named `ResourceNameX` that is of the type `TaskFlowResourceType`.

Refer to "Searching within Authorization Policy Manager" in the *Oracle Fusion Applications Administrator's Guide* for more information on how to use Oracle Authorization Policy Manager to search for policies based on resources.

Note: After identifying the relevant security policies using the "Finding Application Policies that Match Entitlements or Resources" procedure, you will be able to identify the principals and actions granted in each of those configured security policies.

10. Compare the security policies identified by the search in Step 9 against the relevant `Failed ProtectionDomain` strings in the trace results. Specifically, *for each of the security policies*, compare the granted actions and principals as follows:

- a. Ensure the action granted in the security policies is the same action listed for the `Failed ProtectionDomain` string in the trace results. In [Example](#), you would ensure the security policy is granting the read action (identified by `Action:[read]` in the trace).

If the action for the `Failed ProtectionDomain` string is granted in the configured security policy, proceed to Step b.

If the action for the `Failed ProtectionDomain` string *is not granted* in the security policy, compare the action against all security policies identified by the search in Step 9.

- b. Ensure the principals granted in the security policies are the same principals listed for the `Failed ProtectionDomain` string (identified by `Principals=`).

If the principals configured in the security policy are application roles or external roles and they are not listed in the `Failed ProtectionDomain` string, use Oracle Authorization Policy Manager to determine if the roles are mapped to the relevant user.

Note: Be sure to consult your organization's security policies and the Oracle Fusion Applications security reference manuals before altering any aspect of the configured security policies, as it is possible the user is intentionally unauthorized to access the particular functionality.

You can access the Oracle Fusion Applications security reference manuals in the Oracle Fusion Applications Technology Documentation Library.

If both the actions and principals granted in the security policies are consistent with the authorization request (as identified in the trace), examine Oracle Platform Security Services' cache refresh setting by referring to the problem and solution described in [Section 9.3.2.1](#) of this chapter.

9.3 Problems and Solutions

Use the information in this section if the solution procedures in [Section 9.2](#) did not resolve your problem. This section describes symptoms of specific Oracle Fusion Applications runtime problems that may have originated in the Oracle Identity Management and security integration layer, possible causes of the problems, and solution procedures corresponding to each of the possible causes.

For problems that contain multiple possible causes, the most probable cause and its corresponding solution are listed first. If multiple possible causes are listed, perform the first solution procedure and then retry the failed task. If the problem persists after retrying the failed task, perform the second solution procedure in the topic and then try the failed task again. Repeat this process while proceeding down the list of solution procedures until the problem is resolved.

This section contains the following topics:

- [Section 9.3.1, "Problems and Solutions for Missing or Incorrect Data"](#)
- [Section 9.3.2, "Problems and Solutions for Accessing Functionality"](#)

- [Section 9.3.3, "Problems and Solutions for Managing Users"](#)
- [Section 9.3.4, "Problems and Solutions for Managing Roles"](#)
- [Section 9.3.5, "Problems and Solutions for Managing Keystores and Certificates"](#)
- [Section 9.3.6, "Problems and Solutions for Identity Propagation Using SAML"](#)
- [Section 9.3.7, "Problems and Solutions for Logging in to Secured Resources"](#)

Notes: When looking in this section for the problem you encountered, be sure to examine all topics, as many problems fit into multiple topics. For example, while the problem of not being able to see application role hierarchies resides in the topic about managing roles, it could also reside in the topic about missing or incorrect data.

9.3.1 Problems and Solutions for Missing or Incorrect Data

This section describes problems and solutions related to missing or incorrect data. This section contains the following topics:

- [LDAP Changes Not Reconciled in Oracle Identity Manager](#)
- [Data is Missing After Migrating or Patching the Policy Store](#)
- [Administrator Search for Database Resources Returns No Results](#)
- [Data is Missing or Incorrect in a Portlet](#)

9.3.1.1 LDAP Changes Not Reconciled in Oracle Identity Manager

LDAP changes to an Oracle Internet Directory identity store are not getting reconciled into Oracle Identity Manager.

Problem

The problem may be the Oracle Internet Directory identity store is not configured to generate change logs.

Solution

To verify change log generation is enabled for an Oracle Internet Directory identity store:

Note: If you have multiple Oracle Internet Directory identity store instances, perform this procedure on all of them.

1. Log in to Fusion Applications Control by referring to the "Starting Fusion Applications Control" section in the *Oracle Fusion Applications Administrator's Guide* for more information.
2. Navigate to the appropriate Oracle Internet Directory instance. In the Target Navigation Pane, expand the **Domain > Identity and Access** entries. Alternatively, from the domain home page, expand the **Fusion Middleware > Identity and Access** entries. Oracle Internet Directory instances are listed in both locations. To view the full name of a instance, move the mouse over the instance name.
3. Verify change log generation is enabled. If change log generation is disabled, you must enable it. Refer to the "Enabling or Disabling Change Log Generation by

Using Fusion Middleware Control" section of the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory*.

9.3.1.2 Data is Missing After Migrating or Patching the Policy Store

After migrating or patching the Oracle Platform Security Services policy store, data that was once available is now missing. This issue may be encountered after the policy store is:

- Migrated from the baseline ("out-of-the-box") jazn-data.xml file policy store to an Oracle Internet Directory instance.
- Migrated from one environment to another, such as moving from a test environment to a production environment.
- Patched using Oracle Authorization Policy Manager.

Problem

The problem may be the application role GUIDs in the Oracle Fusion Data Security repository are not identical to their corresponding application role GUIDs in the Oracle Platform Security Services policy store.

Solution

Run the `oracle.apps.fnd.applcore.dataSecurity.util.DSDataMigrator` java program to reconcile the application role GUIDs from the Oracle Platform Security Services policy store (which is the "source of truth" repository) to the Oracle Fusion Data Security repository.

Backing Up the `fnd_grants` Table in the Oracle Fusion Data Security Repository

The `DSDataMigrator` program modifies only the `fnd_grants` table, which is Virtual Private Database (VPD) enabled. Before running the program, as `sys` user, back up the existing `fnd_grants` table in the Oracle Fusion Data Security repository. For example:

```
$sqlplus sys as sysdba
  create table FUSION.FND_GRANTS_OLD as select * from FUSION.FND_GRANTS;
```

Running the `DSDataMigrator` Program

To run the `oracle.apps.fnd.applcore.dataSecurity.util.DSDataMigrator` java program, the following JAR files must be added to the classpath:

```
MW_HOME/ATGPF_HOME/atgpf/modules/oracle.applcore.model_11.1.1/Common-Model.jar
MW_HOME/ATGPF_HOME/atgpf/modules/oracle.applcore.model_11.1.1/DataSecurity-Model.jar
MW_HOME/oracle_common/modules/oracle.adf.model_11.1.1/adfm.jar
MW_HOME/oracle_common/modules/oracle.adf.share.ca_11.1.1/adf-share-ca.jar
MW_HOME/oracle_common/modules/oracle.adf.share.ca_11.1.1/adf-share-base.jar
MW_HOME/oracle_common/modules/oracle.adf.share_11.1.1/jsp-el-api.jar
MW_HOME/oracle_common/modules/oracle.adf.businesseditor_11.1.1/adf-businesseditor.jar
MW_HOME/oracle_common/modules/oracle.adf.share_11.1.1/adflogginghandler.jar
MW_HOME/oracle_common/modules/oracle.jps_11.1.1/jps-manifest.jar
MW_HOME/modules/javax.jsp_1.2.0.0_2-1.jar
MW_HOME/oracle_common/modules/oracle.mds_11.1.1/mdsrt.jar
MW_HOME/oracle_common/modules/oracle.javatools_11.1.1/resourcebundle.jar
MW_HOME/oracle_common/modules/oracle.javatools_11.1.1/javatools-nodeps.jar
MW_HOME/wlsserver_10.3/server/ext/jdbc/oracle/11g/ojdbc5.jar
```

Note: If the classpath is set in the shell, you can run the program from the command line using only the necessary arguments.

The syntax to run the `DSDataMigrator` java program is:

```
java -classpath $CLASSPATH \  
-Doracle.security.jps.config=Path_to_jps-config-jse.xml_file \  
oracle.apps.fnd.applcore.dataSecurity.util.DSDataMigrator \  
-dsdburl URL_to_Oracle_Fusion_Data_Security_repository \  
-dsdbuser user_name_for_Oracle_Fusion_Data_Security_repository \  
-silentMode [true | false] -forceProcessAllRows [true | false] \  
-policyStripe [crm | fscm | hcm]
```

Note: To see usage instructions, execute the following command:

```
java oracle.apps.fnd.applcore.dataSecurity.util.DSDataMigrator
```

Parameters

The `DSDataMigrator` program supports the following parameters:

- `oracle.security.jps.config`: Identifies the path to the `jps-config-jse.xml` file that the `DSDataMigrator` program will use. For example:

```
COMMON_DOMAIN/config/fmwconfig/jps-config-jse.xml
```

Note: The `jps-config-jse.xml` file must have credentials for *both* the identity store and policy store—not just the policy store.

- `FND_DS_GUID_RECON_LOG_DIR`: Identifies the output directory for the program's log. For example: `-DFND_DS_GUID_RECON_LOG_DIR=/tmp`

Arguments

The `DSDataMigrator` program supports the following arguments:

- `silentMode`: Set to `true` if you do not want exceptions to be raised when an entry is not found in the Oracle Platform Security Services policy store.
- `forceProcessAllRows`: Set to `true` if you want to process all the rows in the policies table. By default, only rows where `compile_flag=Y` are processed.
- `policyStripe`: Identifies the policy stripe to process. Valid values are: `crm`, `fscm`, and `hcm`. If the `policyStripe` argument is not specified, all policy stripes and identity store data security role policies are processed.
- `idStoreOnly`: Set to `true` if you want to process only data security policies made to enterprise roles. If `idStoreOnly` is set to `true`, the `policyStripe` argument is ignored.

9.3.1.3 Administrator Search for Database Resources Returns No Results

A user with administrator privileges uses Oracle Authorization Policy Manager to search for database resources, but the search does not find any.

Problem

The problem may be data security policies that govern data security administration do not exist in the Oracle Fusion Data Security repository.

Solution

To troubleshoot this issue:

1. Use Oracle Authorization Policy Manager to verify the following application roles are mapped to the external roles of the user performing the search. Refer to the Oracle Fusion Applications security guides for more information.
 - APM_CRM_APPLICATION_OBJECTS_DATA_ADMINISTRATION_DUTY
 - APM_HCM_APPLICATION_OBJECTS_DATA_ADMINISTRATION_DUTY
 - APM_FSCM_APPLICATION_OBJECTS_DATA_ADMINISTRATION_DUTY
 - APM_FND_APPLICATION_OBJECTS_DATA_ADMINISTRATION_DUTY

Note:

- If the application roles are mapped to the external roles of the user performing the search, go to Step 2.
- If the application roles are not mapped to the external roles of the user performing the search, use Oracle Authorization Policy Manager to map them to the user's external roles and then go to Step 2.

2. Determine whether data security policies that govern data security administration exist in the Oracle Fusion Data Security repository. Log in to Oracle Authorization Policy Manager as a user with the Application Developer external role and search for the following roles. Ensure that data security policies for the roles exist on the FND_OBJECTS object and that the policies have not expired.

- APM_CRM_APPLICATION_OBJECTS_DATA_ADMINISTRATION_DUTY
- APM_HCM_APPLICATION_OBJECTS_DATA_ADMINISTRATION_DUTY
- APM_FSCM_APPLICATION_OBJECTS_DATA_ADMINISTRATION_DUTY
- APM_FND_APPLICATION_OBJECTS_DATA_ADMINISTRATION_DUTY

If the policies do not exist in the Oracle Fusion Data Security repository, use Oracle Fusion Functional Setup Manager to upload the Applications Core data security seed data to the Oracle Fusion Data Security repository. See the "Using Oracle Fusion Functional Setup Manager" section in the *Oracle Fusion Applications Administrator's Guide* for more information about using Oracle Fusion Functional Setup Manager.

9.3.1.4 Data is Missing or Incorrect in a Portlet

After logging in to an Oracle Fusion Applications portlet, the data the user expects to see is missing or incorrect.

Problem

The problem may be:

- The application user session was not propagated to the portlet.

- The application user session was not created using the portlet's application stripe and Applications Core did not compute the application roles for the portlet's application stripe.

Solution

To troubleshoot this situation:

1. Log out of the portlet, and then log in again.
2. Execute the following diagnostic tests. See the "Searching for Diagnostic Tests by Name, Categorization Tag, or Module" section in the *Oracle Fusion Applications Administrator's Guide* for more information about running diagnostic tests.
 - Data Security Configuration
 - Data Security Configuration with Application User Session Prerequisite
 - Data Security Run Time
 - Data Security Run Time with Application User Session Prerequisite

9.3.2 Problems and Solutions for Accessing Functionality

This section describes problems and solutions related to accessing functionality. This section contains the following topics:

- [Section 9.3.2.1, "Inappropriate User Access After Enterprise Role Membership Removal"](#)
- [Section 9.3.2.2, "Newly Created User Does Not Have Correct Access to Oracle Fusion Applications"](#)
- [Section 9.3.2.3, "After Logging Out, Access to a Secured Resource is Granted Without Logging in"](#)
- [Section 9.3.2.4, "Authenticated User Gets Unexpected Page when Accessing a Different Secured Resource"](#)
- [Section 9.3.2.5, "Support Representative Cannot Impersonate an Oracle Fusion Applications User"](#)
- [Section 9.3.2.6, "Unauthenticated User Gets Error Page when Accessing a Secured Resource"](#)

9.3.2.1 Inappropriate User Access After Enterprise Role Membership Removal

After removing an enterprise role's membership to an application role using Oracle Authorization Policy Manager, access to the application is still being granted.

Problem

Oracle Platform Security Services optimizes the authorization process by caching security artifacts. When an application policy (or some other security artifact) is modified, the change becomes effective depending on where the application and the tool used to modified the artifact (Oracle Authorization Policy Manager in this case) are running.

If the application and the tool (Oracle Authorization Policy Manager) are running on different hosts or in different domains, the change becomes effective after the policy store cache is refreshed. The frequency of the cache refresh is determined by the value of the **Refresh Polling Time (secs)** parameter in Fusion Middleware Control.

Depending on the configuration, access to the application may have been granted (despite the removal of the enterprise role membership to the application role) because the Oracle Platform Security Services cache was not refreshed before the application was accessed.

Refer to the "Caching and Refreshing the Cache" and "An Example" sections in the *Oracle Fusion Middleware Application Security Guide* for more information about authorization behavior relating to the Oracle Platform Security Services cache.

Solution

To examine the refresh interval for Oracle Platform Security Services' cache:

1. Log in to Fusion Applications Control by referring to the "Starting Fusion Applications Control" section in the *Oracle Fusion Applications Administrator's Guide* for more information.
2. Click the name of the appropriate domain in the target navigation pane on the left side of the screen.
3. Select **Security > Security Provider Configuration** from the domain menu at the top of the screen. The Security Provider Configuration screen appears.
4. Select the **Policy Store Credential Store Keystore** entry in the **Security Stores** table and click **Edit**. The Edit Security Provider Configuration screen appears.
5. Examine the value set for the **Refresh Polling Time (secs)** parameter.
6. Wait for the amount of time specified by the **Refresh Polling Time (secs)** parameter to elapse, then retry the use case. This will ensure that the policy store cache has been refreshed and any recent changes to policies are effective.

9.3.2.2 Newly Created User Does Not Have Correct Access to Oracle Fusion Applications

After creating a new user and external role using Oracle Fusion Human Capital Management, then granting duty roles to that user using Oracle Authorization Policy Manager, the user cannot log in and perform its granted duties.

Problem

The problem may be:

- The user does not exist in the identity store.
- The user to external role membership does not exist in the identity store.
- The Oracle Internet Directory Authenticator's cache or Oracle Platform Security Services' cache has not yet been refreshed.
- Oracle Identity Manager and Oracle Authorization Policy Manager are not configured to use the same identity store or their connection settings to identity store are incorrect.

Solution 1

To verify the user exists in the identity store, use Oracle Directory Services Manager to examine the container in the identity store where users are stored, such as `cn=users,dc=us,dc=oracle,dc=com`.

Refer to the following for more information about examining identity store containers.

If Oracle Internet Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* using this sequence:

1. "Invoking Oracle Directory Services Manager"
2. "Connecting to the Server from Oracle Directory Services Manager"
3. "Displaying Entries by Using Oracle Directory Services Manager"

If Oracle Virtual Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Virtual Directory* using this sequence:

1. "Invoking Oracle Directory Services Manager"
2. "Connecting to the Server from Oracle Directory Services Manager"
3. "Viewing Oracle Virtual Directory Entries"

Solution 2

To verify the user to external role membership exists in the identity store:

1. Verify the user exists in the identity store. Use Oracle Directory Services Manager to examine the container in the identity store where users are stored, such as `cn=users,dc=us,dc=oracle,dc=com`.
2. Verify the external role exists in the identity store. Use Oracle Directory Services Manager to examine the container where enterprise roles are stored, such as `cn=groups`.
3. Verify the user is a member of the external role. Use Oracle Directory Services Manager to confirm `uniqueMember` is an attribute of the external role.
4. Use Oracle Authorization Policy Manager to verify the external role is mapped to the appropriate application role. Perform a simple search on the application role, open it, and click the **External Role Mapping** tab. Refer to the Oracle Fusion Applications security guides for more information.

Solution 3

To troubleshoot the Oracle Internet Directory Authenticator's cache and Oracle Platform Security Services' cache:

1. Examine the Oracle Internet Directory Authenticator's cache settings by referring to [Section 9.2.2](#).
2. Examine Oracle Platform Security Services' cache refresh setting by referring to the problem and solution described in [Section 9.3.2.1](#) of this chapter.

Note: Wait for the caches to be refreshed before retrying any failed task or operation.

Solution 4

To verify Oracle Identity Manager and Oracle Authorization Policy Manager are configured to use the same identity store and their connection settings to identity store are correct:

1. Identify the identity store that Oracle Identity Manager is using by performing the following steps:

- a. Log in to the Advanced view of the Oracle Identity Manager Administrative and User Console. You can access the Advanced view by entering a URL similar to the following into a web browser:

```
http://HOST:PORT/oim/admin/
```
 - b. Click **Manage IT Resource**. The Manage IT Resource screen appears.
 - c. Enter `Directory Server` in the IT Resource Name field or select **Directory Server** from the IT Resource Type list and click **Search**. The search results appear at the bottom of the screen.
 - d. Click the **Directory Server** link in the search results. The configuration details for the identity store appear. Examine and make a note of the connection settings to the identity store.
2. Identify the identity store that Oracle Authorization Policy Manager is using by examining the connection settings configured for the LDAP Authenticators in the Oracle WebLogic Server domain. To examine the LDAP Authenticators' configuration, refer to [Section 9.2.2](#).

9.3.2.3 After Logging Out, Access to a Secured Resource is Granted Without Logging in

After logging out of a resource secured by Oracle Access Manager and then attempting to access a different secured resource, access is granted without a login page appearing.

Note: Oracle Platform Security Services manages logouts for Oracle Fusion Applications by providing the configured logout URL (typically the Oracle Access Manager logout URL) to Oracle Application Development Framework for redirection. Oracle Access Manager then sets the session status to logged out.

Problem

The problem may be:

- Oracle Access Manager's user session was not removed during logout.
- Oracle Platform Security Services is not configured with the correct Oracle Access Manager logout URL.

Solution 1

Perform either of the following steps to determine whether Oracle Access Manager's user session was removed during logout:

- Examine the cookies in the user's browser. Oracle Access Manager's `OAM_ID` session cookie should *not* be present, as it gets deleted from the browser upon logout.
- Use the Oracle Access Manager Administration Console's Session Management functionality to examine the active sessions. Search on the user to see if any of its sessions are active.

Refer to the "Logging In to the Oracle Access Manager Console" and "Managing Active User Sessions" sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager with Oracle Security Token Service*.

Solution 2

To verify Oracle Platform Security Services is configured with the correct Oracle Access Manager logout URL:

1. Log in to Fusion Applications Control by referring to the "Starting Fusion Applications Control" section in the *Oracle Fusion Applications Administrator's Guide* for more information.
2. Select the appropriate domain from the target navigation pane or the content pane.
3. Select **Security > Security Provider Configuration** from the domain menu. The Security Provider Configuration page appears.
4. Expand the **Single Sign-On Provider** area if it is not already expanded and click the **Configure** button. The Single Sign-On Provider page appears.
5. Select the **Configure Single Sign-on** option. All settings on the Single Sign-On Provider page are invisible until you select the **Configure Single Sign-on** option.
6. Examine the value set in the Logout URL field.

9.3.2.4 Authenticated User Gets Unexpected Page when Accessing a Different Secured Resource

After successfully logging in to and working on a resource secured by Oracle Access Manager and then attempting to access a different secured resource, an unexpected page, such as `Not Authorized`, blank (empty), corrupted, or `500 error`, appears.

Problem

The problem may be Oracle Access Manager's `ObSSOCookie` and `OAM_ID` cookies are not in the user's browser. The `ObSSOCookie` and `OAM_ID` cookies are encrypted, single sign-on, session-based cookies generated by the Oracle Access Manager Access Server when a user authenticates successfully.

Solution

To verify Oracle Access Manager's `ObSSOCookie` and `OAM_ID` cookies are in the user's browser:

1. Display the cookies in the user's browser.
2. Locate Oracle Access Manager's `ObSSOCookie` and `OAM_ID` session cookies.

If the `ObSSOCookie` and `OAM_ID` cookies are *not* in the user's browser:

- Examine the browser's security settings, as they may be too high and preventing cookies from being accepted
- Add the Oracle Fusion application's domain to the browser's exception list

9.3.2.5 Support Representative Cannot Impersonate an Oracle Fusion Applications User

A Support (Help Desk) representative attempts to log in to a resource secured by Oracle Access Manager and impersonate an Oracle Fusion Applications user, but cannot do so.

Problem

The problem may be the user that the Support representative is attempting to impersonate has not granted the privilege to be impersonated or the privilege has expired.

Solution

To verify that the user has granted the privilege to be impersonated and that the privilege is active:

1. Use Oracle Directory Services Manager to locate the account of the user to be impersonated in the identity store. Look in the container where users are stored, such as `cn=users,dc=us,dc=oracle,dc=com`.

Refer to the following for more information about examining identity store containers.

If Oracle Internet Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* using this sequence:

- a. "Invoking Oracle Directory Services Manager"
- b. "Connecting to the Server from Oracle Directory Services Manager"
- c. "Displaying Entries by Using Oracle Directory Services Manager"

If Oracle Virtual Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Virtual Directory* using this sequence:

- a. "Invoking Oracle Directory Services Manager"
- b. "Connecting to the Server from Oracle Directory Services Manager"
- c. "Viewing Oracle Virtual Directory Entries"

2. Verify the user has granted the privilege to be impersonated by examining the user's account for the `orclImpersonationGrantee` attribute.
 - If the user's account does not have the `orclImpersonationGrantee` attribute, the user has not granted the privilege to be impersonated.
 - If the user's account has the `orclImpersonationGrantee` attribute, ensure the privilege has not expired. The `orclImpersonationGrantee` attribute will be in a format such as:

```
EEA958988E344BF49740CF00DF9B0421|20110124170000Z|20110124180000Z
```

- EEA958988E344BF49740CF00DF9B0421 is the GUID of the impersonator.
- 20110124170000Z is the date on which impersonation can begin
- 20110124180000Z is the expiration date for the impersonation privilege

Note: The date strings in the `orclImpersonationGrantee` attribute use the Coordinated Universal Time (UTC) standard and are of the form: `yyyyMMdHHmmss'Z'`

9.3.2.6 Unauthenticated User Gets Error Page when Accessing a Secured Resource

While attempting to access a resource secured by Oracle Access Manager, an unauthenticated user gets an error page instead of the login page.

Problem

The problem may be:

- The Oracle HTTP Server Web servers front-ending the Oracle Fusion application are not running.
- The Managed Servers where Oracle Access Manager is deployed or the requisite Oracle Access Manager services are not running.

Solution 1

To verify the Oracle HTTP Server Web servers front-ending the Oracle Fusion application are running:

1. Connect to a page provided by Oracle Identity Manager. If Oracle Identity Manager is front-ended by Oracle HTTP Server or a load balancer, use the following URL:

```
http(s)://FRONTEND_HOST:FRONTEND_PORT/admin/faces/pages/accountlocked.jspx
```

If Oracle Identity Manager is not front-ended by Oracle HTTP Server or a load balancer, use the following URL:

```
http(s)://OIM_MANAGED_SERVER_HOST:PORT/admin/faces/pages/accountlocked.jspx
```

2. Connect to any public page provided by an Oracle Fusion application through Oracle HTTP Server. For example:

```
http(s)://ORACLE_HTTP_SERVER_FRONTEND_HOST:PORT/fa/app/index.jsp
```

If you cannot access a page in an Oracle HTTP Server front-ending configuration, use Fusion Applications Control to examine the WebLogic Host and WebLogic Port settings for the Oracle HTTP Server's `mod_wl_ohs` module. Refer to the "Configuring the `mod_wl_ohs` Module" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle HTTP Server* for more information.

Solution 2

To verify the Managed Servers where Oracle Access Manager is deployed and the requisite Oracle Access Manager services are running:

1. Verify the Managed Servers where Oracle Access Manager is deployed are running by performing the following steps:
 - a. Log in to the Oracle WebLogic Server Administration Console by referring to the "Starting the Administration Console" section in the *Oracle Fusion Middleware Introduction to Oracle WebLogic Server* document.
 - b. Click **Servers** in the Environment section on the Home page. The Summary of Servers page appears.
 - c. Click the **Configuration** tab. A table containing a summary of each server in the domain appears.
 - d. Examine the **State and Health** columns for the Managed Servers where Oracle Access Manager is deployed.
2. Verify the HTTP port is open by attempting to connect to it. If Oracle Access Manager is front-ended by Oracle HTTP Server or a load balancer, enter the following URL into a web browser:

```
http://ORACLE_HTTP_SERVER-or-LOAD_BALANCER_HOST:PORT/oam/pages/logout.jsp
```

If Oracle Access Manager is not front-ended, enter the following URL into a web browser:

```
http://MANAGED_SERVER_HOST:PORT/oam/pages/logout.jsp
```

3. Verify Oracle Access Manager authentication is functioning properly by accessing any resource secured by Oracle Access Manager. For example, log in to the Oracle Access Manager Administration Console by referring to the "Logging In to the Oracle Access Manager Console" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager with Oracle Security Token Service*.

9.3.3 Problems and Solutions for Managing Users

This section describes problems and solutions related to managing users. This section contains the following topics:

- [Section 9.3.3.1, "Oracle Fusion Human Capital Management Requests to Assign Roles to Users Fail"](#)
- [Section 9.3.3.2, "SPML Calls Initiated from an Oracle Fusion Application Are Not Processed"](#)
- [Section 9.3.3.3, "Troubleshooting Oracle Fusion Human Capital Management-Oracle Identity Manager SPML Requests"](#)

9.3.3.1 Oracle Fusion Human Capital Management Requests to Assign Roles to Users Fail

Oracle Fusion Human Capital Management makes a request to assign a role to a user, but the role assignment fails.

Problem

The problem may be the user exists in Oracle Identity Manager, but does not exist in the Oracle Internet Directory identity store.

Solution

To troubleshoot this situation:

1. Verify the user does not exist in Oracle Internet Directory by using Oracle Directory Services Manager to examine the container where users are stored, such as `cn=users,dc=us,dc=oracle,dc=com`.

Refer to the "Displaying Entries by Using Oracle Directory Services Manager" or "Searching for Entries by Using Oracle Directory Services Manager" sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* for more information.

Note:

- If the user does not exist in Oracle Internet Directory, continue this procedure.
 - If the user exists in Oracle Internet Directory, perform the steps in [Section 9.3.3.3](#) to get information about why the role assignment failed.
-
-

2. Execute the LDAP User Create and Update Reconciliation scheduled job in Oracle Identity Manager. After the job executes, the user account will be removed from Oracle Identity Manager and requests from Oracle HCM for the user will not be created.

Refer to the "Managing Scheduled Tasks" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle Identity Manager* for information about the LDAP User Create and Update Reconciliation scheduled job and how to execute it.

9.3.3.2 SPML Calls Initiated from an Oracle Fusion Application Are Not Processed

An Oracle Fusion application invokes an event that initiates an SPML call, for example, Oracle Fusion Human Capital Management sends an SPML request to add a user, but the call fails.

Problem

The problem may be the Oracle Fusion application's composite that invokes the SPML service is using incompatible Oracle Web Services Manager (Oracle WSM) client and server security policies. The client and server security policies must be compatible for calls to succeed.

Solution

To verify Oracle Identity Manager is using the correct Oracle WSM server and client security policies:

1. Verify Oracle Identity Manager is using the correct Oracle WSM server security policy by performing the following steps:
 - a. Log in to Fusion Applications Control on the Oracle WebLogic Server where Oracle Identity Manager is installed. Refer to the "Starting Fusion Applications Control" section in the *Oracle Fusion Middleware Administrator's Guide* for more information.
 - b. Expand the **Application Deployments** entry in the navigation tree and click **spml-xsd**. The spml-xsd details page appears.
 - c. Select **Web Services** from the Application Deployment list. The Web Services tab appears.
 - d. Click **SPMLServiceProviderSoap**. The details for the web service appear.
 - e. Click the **OWSM Policies** tab.
 - f. Verify the following policy is listed as a Directly Attached Policy:
oracle/wss_saml_or_username_token_service_policy
2. Verify the Oracle Fusion application is using the correct Oracle WSM client security policy by performing the following steps:
 - a. Log in to Fusion Applications Control on the Oracle WebLogic Server where the Oracle Fusion application is running.
 - b. Expand the **SOA** entry in the navigation tree and all of its child entries until the list of configured composites appear and then click the name of the appropriate composite. The details of the composite appear.
 - c. Click the **Policies** tab.
 - d. Verify the following policy is attached to the composite's end points:
oracle/wss_username_token_client_policy

9.3.3.3 Troubleshooting Oracle Fusion Human Capital Management-Oracle Identity Manager SPML Requests

To collect information about SPML requests between Oracle Fusion Human Capital Management and Oracle Identity Manager:

1. Identify the ID number of the request you want to investigate. After an Oracle Fusion Human Capital Management application performs an operation that sends an SPML request to Oracle Identity Manager, Oracle Identity Manager creates a unique ID for that specific request and returns it to the application. From the application, identify the request ID.
2. Use the Advanced view of the Oracle Identity Manager Administrative and User Console to see general information about the request, such as its status.

- a. Log in to the Advanced view of the Oracle Identity Manager Administrative and User Console by entering a URL similar to the following into a web browser:

`http://HOST:PORT/oim/admin/`

- b. Click the **Administration** tab, then click **Requests**.
- c. Search for the request by entering the request ID in the search field and clicking **Search**.
- d. Click the request ID in the search results. Information about the request appears.
- e. Examine the status of the request. If the status is Request Failed, a hyperlink to additional information about the failed request is provided. Click the **Request Failed** link to see more information.

Refer to the "Searching and Tracking Requests" section in the *Oracle Fusion Middleware User's Guide for Oracle Identity Manager* for more information.

Note: To see more detailed information about the request, proceed to the next step in this procedure.

3. Use the Oracle Identity Manager Diagnostic Dashboard's Orchestration Status test to see information such as which Oracle Identity Manager event handlers handled the request and its status at each event handler.

- a. Log in to the Oracle Identity Manager Diagnostic Dashboard.

Refer to the "Working with the Diagnostic Dashboard" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle Identity Manager* for more information.

- b. Run the **Request Diagnostic Information** test on the request ID. The test will return an Orchestration ID.
- c. Run the **Orchestration Status** test on the Orchestration ID. Detailed information about the request appears.

Note: To see the most information available about the request, proceed to the next step in this procedure.

4. Use Fusion Middleware Control to view the Oracle Identity Manager diagnostic logs. Examine the log files to see the most detailed information about the SPML request. Refer to the "Managing Log Files and Diagnostic Data" chapter in the *Oracle Fusion Middleware Administrator's Guide* for more information.

9.3.4 Problems and Solutions for Managing Roles

This section describes problems and solutions related to managing roles. This section contains the following topics:

- [Section 9.3.4.1, "Cannot See the Function Security Policies for an External Role"](#)
- [Section 9.3.4.2, "Cannot See the Data Security Policies for a Data Role"](#)
- [Section 9.3.4.3, "Problems Mapping an Application Role to an External Role"](#)
- [Section 9.3.4.4, "Cannot See Application Role Hierarchies"](#)
- [Section 9.3.4.5, "Attempts to Add an Application Role to a Hierarchy Appear to Have No Effect"](#)
- [Section 9.3.4.6, "Cannot Create Valid Data Roles Using Data Role Template"](#)

9.3.4.1 Cannot See the Function Security Policies for an External Role

The function security policies for a particular external role cannot be seen using Oracle Authorization Policy Manager.

Problem

The problem may be:

- If Oracle Internet Directory is being used as the identity store, it is not configured to index the `displayName` attribute. If Oracle Internet Directory is not indexing the `displayName` attribute, Oracle Authorization Policy Manager cannot retrieve the role during a search.
- The Oracle Internet Directory Authenticator in the Oracle WebLogic Server domain is not configured with the correct connection settings to the Oracle Internet Directory instance.
- The external role has not been provisioned into the identity store.
- If the administrator attempting to identify the function security policies is configured as a Delegated Administrator, the Delegated Administrator role does not have access to the appropriate application stripe.
- The policy store does not have the correct application stripes.
- The external role is not mapped to the correct application roles.
- The external role is mapped to an application role that does not have policy attached to it.

Solution 1

To verify an Oracle Internet Directory identity store is configured to index the `displayName` attribute, refer to [Section 9.2.1](#).

Solution 2

To verify the Oracle Internet Directory Authenticator in the Oracle WebLogic Server domain is configured with the correct connection settings to the Oracle Internet Directory instance, refer to [Section 9.2.2](#).

Solution 3

To verify the external role was provisioned into the identity store, use Oracle Directory Services Manager to examine the container in the identity store where external roles are stored, such as: `cn=groups,dc=mycompany,dc=com`.

Note:

- If the external role does not exist in the identity store, use Oracle Fusion Human Capital Management to add it to the identity store.
 - If the external role exists in the identity store, verify the security providers in the Oracle WebLogic Server domain are configured in the correct order and with the correct JAAS Control Flags by referring to [Section 9.2.2](#).
-
-

Refer to the following for more information about examining identity store containers.

If Oracle Internet Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* using this sequence:

1. "Invoking Oracle Directory Services Manager"
2. "Connecting to the Server from Oracle Directory Services Manager"
3. "Displaying Entries by Using Oracle Directory Services Manager"

If Oracle Virtual Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Virtual Directory* using this sequence:

1. "Invoking Oracle Directory Services Manager"
2. "Connecting to the Server from Oracle Directory Services Manager"
3. "Viewing Oracle Virtual Directory Entries"

Solution 4

If the administrator attempting to identify the function security polices is configured as a Delegated Administrator, verify the Delegated Administrator role has access to the appropriate application stripe by referring to *Oracle Fusion Applications Common Implementation Guide*.

Solution 5

To verify the policy store has the correct application stripes:

1. Identify the application stripes that were loaded into the policy store after the Oracle Fusion Applications environment was provisioned by referring to the Oracle Fusion Applications security reference manuals. You can access the Oracle Fusion Applications security reference manuals in the Oracle Fusion Applications Technology Documentation Library.
2. Verify the application stripes identified in Step 1 exist in the policy store by performing the following steps:
 - a. Log in to Oracle Authorization Policy Manager as a security administrator with the `APMAdmin` application role, which will allow you to see all application stripes in the policy store.

9.3.4.2 Cannot See the Data Security Policies for a Data Role

Data security policies for a particular data role cannot be seen in Oracle Authorization Policy Manager.

Problem

The problem may be:

- The Oracle Internet Directory Authenticator in the Oracle WebLogic Server domain is not configured with the correct connection settings to the Oracle Internet Directory instance.
- If Oracle Internet Directory is being used as the identity store, it is not configured to index the `displayName` attribute. If Oracle Internet Directory is not indexing the `displayName` attribute, Oracle Authorization Policy Manager cannot retrieve the role during a search.
- The user searching for the data security policies does not have the privileges to do so.
- The data role does not exist in the identity store.
- Data role templates did not create data security policies for the data role.
- The data security role GUIDs in the Oracle Fusion Data Security repository and the Oracle Platform Security Services policy store are not synchronized.

Solution 1

To verify the Oracle Internet Directory Authenticator in the Oracle WebLogic Server domain is configured with the correct connection settings to the Oracle Internet Directory instance, refer to [Section 9.2.2](#).

Solution 2

To verify an Oracle Internet Directory identity store is configured to index the `displayName` attribute, refer to [Section 9.2.1](#).

Solution 3

To verify the user searching for the data security policies has the privileges to do so, perform the solution described in [Section 9.3.1.3](#).

Solution 4

To verify the data role exists in the identity store, use Oracle Directory Services Manager to examine the container in the identity store where data roles are stored, such as `cn=groups,dc=mycompany,dc=com`. If the role does not exist in the identity store, an administrator should add it.

Refer to the following for more information about examining identity store containers.

If Oracle Internet Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* using this sequence:

1. "Invoking Oracle Directory Services Manager"
2. "Connecting to the Server from Oracle Directory Services Manager"
3. "Displaying Entries by Using Oracle Directory Services Manager"

If Oracle Virtual Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Virtual Directory* using this sequence:

1. "Invoking Oracle Directory Services Manager"
2. "Connecting to the Server from Oracle Directory Services Manager"
3. "Viewing Oracle Virtual Directory Entries"

Solution 5

To verify data role templates created data security policies for the data role:

1. Use Oracle Authorization Policy Manager to perform a simple search for the data role using **External Role** as the object type. Refer to the "Searching within Authorization Policy Manager" section in the *Oracle Fusion Applications Administrator's Guide* for more information.
2. Select the data role in the search results and click the **View** button. Details about the data role appear.
3. Click the **Find Global Policies** button. The **Data Security Policies** table appears and lists the data security policies attached to the data role. Examine the entries in the table to ensure the data role template created the appropriate data security policies.

Solution 6

To reconcile the data security role GUIDs in the Oracle Fusion Data Security repository and the Oracle Platform Security Services policy store, run the `oracle.apps.fnd.applcore.dataSecurity.util.DSDataMigrator` java program to reconcile the GUIDs. Refer to the solution in [Section 9.3.1.2](#) for information about using this program.

9.3.4.3 Problems Mapping an Application Role to an External Role

While attempting to map an application role to an external role using Oracle Authorization Policy Manager, issues such as the following are encountered:

- Either the external role or application role cannot be seen in Oracle Authorization Policy Manager.
- The mapping succeeds in Oracle Authorization Policy Manager, but is activated after a delay.

Problem

The problem may be:

- If Oracle Internet Directory is being used as the identity store, it is not configured to index the `displayName` attribute. If Oracle Internet Directory is not indexing the `displayName` attribute, Oracle Authorization Policy Manager cannot retrieve the roles during a search.
- The security providers for the Oracle WebLogic Server domain are configured incorrectly. Specifically, the order of providers, JAAS Control Flags, or connection settings to the Oracle Internet Directory instance may be incorrect.
- If the mapping succeeds in Oracle Authorization Policy Manager, but is activated after a delay, the cache refresh settings for the Oracle Internet Directory Authenticator or for Oracle Platform Security Services may need to be adjusted.

Solution 1

To verify an Oracle Internet Directory identity store is configured to index the `displayName` attribute, refer to [Section 9.2.1](#).

Solution 2

To troubleshoot the configuration of the security providers for the Oracle WebLogic Server domain, perform the steps in [Section 9.2.2](#) and examine the:

- Order of providers
- JAAS Control Flags
- Connection settings to the Oracle Internet Directory instance

Solution 3

If the mapping is activated after a delay, to troubleshoot the cache refresh settings for the Oracle Internet Directory Authenticator and for Oracle Platform Security Services:

1. Examine the Oracle Internet Directory Authenticator's cache settings by referring to [Section 9.2.2](#).
2. Examine Oracle Platform Security Services' cache refresh setting by referring to the problem and solution described in [Section 9.3.2.1](#) of this chapter.

Note: Wait for the caches to be refreshed before reattempting a failed task or operation.

9.3.4.4 Cannot See Application Role Hierarchies

Attempts to view application role hierarchies using Oracle Authorization Policy Manager fail.

Problem

The problem may be:

- The identity store's LDAP Authenticator in the Oracle WebLogic Server domain is configured to use the wrong identity store.
- The administrator is attempting to view the application role hierarchy from the incorrect application role in the Oracle Authorization Policy Manager interface.
- Role hierarchies are not defined.

Solution 1

To verify the identity store's LDAP Authenticator in the Oracle WebLogic Server domain is configured to use the correct identity store, refer to [Section 9.2.2](#) and examine the connection settings configured for the identity store's LDAP Authenticator.

Solution 2

To verify the correct application role is being used to display the application role hierarchy, in the Oracle Authorization Policy Manager interface, ensure attempts to display the role hierarchy are based on the correct application role. Application roles frequently have similar names, such as roles that are qualified by region. Double-check that the intended application role is being used to display the role hierarchy.

Solution 3

To verify role hierarchies are defined, refer to the Oracle Fusion Applications security guides.

9.3.4.5 Attempts to Add an Application Role to a Hierarchy Appear to Have No Effect

After using Oracle Authorization Policy Manager to add an application role to a hierarchy, no changes can be seen in the hierarchy.

Problem

The problem may be:

- The application role already exists as a member of the hierarchy.
- The incorrect application role was added to the hierarchy, or the correct application role was added to the incorrect hierarchy.

Solution

To verify the application role hierarchy:

1. Display the application role hierarchy the role was intended for. Refer to the Oracle Fusion Applications security guides for information about viewing the application role hierarchy.
2. Ensure that the application role does not already exist in the hierarchy.
3. Ensure that when the application role was added to the hierarchy, the intended application role and the intended hierarchy were used. It is possible the intended application role was added to the incorrect hierarchy, or the incorrect application role was added to the intended hierarchy.

Refer to the "Permission Inheritance and the Role Hierarchy" section in the *Oracle Fusion Middleware Application Security Guide* for information about rules for application role hierarchies.

9.3.4.6 Cannot Create Valid Data Roles Using Data Role Template

While attempting to create a data role using a data role template in Oracle Authorization Policy Manager, issues such as the following are encountered:

- The data role is not created
- The data role is created with a null displayName and description

Problem

The problem may be:

- The SQL query used in the Dimension tab of the template is invalid or returns no records.
- The Oracle Authorization Policy Manager application ID used by the data role template does not have sufficient privileges to create the data role in the intended identity store container.
- A general issue in the identity store, such as the instance is not running.

Solution 1

To troubleshoot the SQL query used in the Dimension tab of the template:

1. Review the SQL query and ensure the intended string was entered correctly.
2. Review the SQL query and ensure it does not contain special characters such as ", " (comma) that are unsupported by the identity store. Role names must be comprised of only alphanumeric characters.
3. Verify the database table referenced in the SQL query contains data (is not empty).

Solution 2

To troubleshoot the privileges of the Oracle Authorization Policy Manager application ID used by the data role template, perform the following steps on the identity store:

1. Verify the `cn=fusion_apps_apm_rgx_appid` user exists in the `cn=appidusers` container.

Refer to the following for more information about examining identity store containers.

If Oracle Internet Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory* using this sequence:

- a. "Invoking Oracle Directory Services Manager"
- b. "Connecting to the Server from Oracle Directory Services Manager"
- c. "Displaying Entries by Using Oracle Directory Services Manager"

If Oracle Virtual Directory is the identity store, refer to the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Virtual Directory* using this sequence:

- a. "Invoking Oracle Directory Services Manager"
- b. "Connecting to the Server from Oracle Directory Services Manager"
- c. "Viewing Oracle Virtual Directory Entries"

2. Verify the `cn=fusion_apps_apm_rgx_appid` group exists in the `cn=appidgroups` container.
3. Identify all groups that the `fusion_apps_apm_rgx_appid` group is a member of, and then verify those groups have write permission to the container where enterprise roles are stored, such as `cn=groups`.

Note: If using Oracle Virtual Directory as the identity store, you must verify the groups' permissions *in both* Oracle Virtual Directory and the back-end (source) repositories.

4. If using Oracle Virtual Directory as the identity store, verify that the ACLs for Oracle Virtual Directory and its back-end (source) data repositories are configured correctly.

To focus the ACL verification, perform the following steps:

- a. Temporarily disable access control checking in Oracle Virtual Directory using Fusion Middleware Control. To disable access control checking, deselect (disable) the **Enable Access Control Check** option on Oracle Virtual Directory's Server Properties page.

Refer to the "Configuring Oracle Virtual Directory Server Properties Using Fusion Middleware Control" section in *Oracle Fusion Middleware Administrator's Guide for Oracle Virtual Directory* for more information.

- b. Perform the steps to create the data role using a data role template.
 - If you can create the data role when Oracle Virtual Directory access control checking is disabled, the Oracle Virtual Directory ACLs are configured incorrectly.

To isolate the error in the Oracle Virtual Directory ACLs, re-enable access control checking in Oracle Virtual Directory, set its logging to TRACE message type at level 32, try creating the data role using a data role template, and then examine Oracle Virtual Directory's log, which will now contain the result of each ACL test.

Refer to the "Setting the Level of Information Written to Log Files" section and the "Managing Log Files and Diagnostic Data" chapter in the *Oracle Fusion Middleware Administrator's Guide* for more information about Oracle Virtual Directory logging.
 - If you cannot create the data role when Oracle Virtual Directory access control checking is disabled, the error is not in the Oracle Virtual Directory ACLs and you should examine the ACLs in the back-end (source) data repositories by referring to their documentation.

Solution 3

To troubleshoot the identity store:

- If using Oracle Internet Directory as the identity store:
 1. Verify Oracle Internet Directory is running.

You can view the status of Oracle Internet Directory using Fusion Applications Control. After logging in to Fusion Applications Control, navigate to the Farm home page and examine the Identity and Access components within the Fusion Middleware section of the content pane.

Refer to the "Navigating within Fusion Applications Control" section in the *Oracle Fusion Applications Administrator's Guide* for more information.
 2. Verify Oracle Internet Directory is configured to index the `displayName` attribute by referring to [Section 9.2.1](#).
- If using Oracle Virtual Directory as the identity store:
 1. Verify Oracle Virtual Directory is running.

You can view the status of Oracle Virtual Directory using Fusion Applications Control. After logging in to Fusion Applications Control, navigate to the Farm home page and view the Identity and Access components within the Fusion Middleware section of the content pane.

Refer to the "Navigating within Fusion Applications Control" section in the *Oracle Fusion Applications Administrator's Guide* for more information.
 2. Verify the connectivity between Oracle Virtual Directory and its back-end (source) data repositories. Use Oracle Directory Services Manager's Client View Data Browser to view the directory tree. If Oracle Virtual Directory is not connected to a back-end repository, a message will appear when the Data Browser attempts to connect it.

Refer to the following sections (in the listed sequence) in the *Oracle Fusion Middleware Administrator's Guide for Oracle Virtual Directory* for more information about using Oracle Directory Services Manager's Client View Data Browser:

- a. "Invoking Oracle Directory Services Manager"
- b. "Connecting to the Server from Oracle Directory Services Manager"
- c. "Viewing Oracle Virtual Directory Entries"

9.3.5 Problems and Solutions for Managing Keystores and Certificates

This section describes problems and solutions for managing keystores and certificates. This section contains the following topics:

- [Section 9.3.5.1, "Key or Credential Store Error After an Application Invokes Web Service"](#)
- [Section 9.3.5.2, "Trust Certificate Error After Application Invokes Web Service"](#)

9.3.5.1 Key or Credential Store Error After an Application Invokes Web Service

After an Oracle Fusion application invokes a web service, a key store or credential store error such as the following appears:

- WSM-00056: The key orakey is not retrieved
- WSM-00256: The property "Keystore Sign Alias" is not set

Problem

The problem may be:

- The alias for the signature key or encryption key in the Oracle WSM keystore configuration does not exist in the Oracle WSM keystore file.
- The signature key, encryption key, or Oracle WSM keystore file password is not synchronized in the keystore file and the keystore configuration for Oracle WSM. That is, at least one of the passwords does not have identical values in both locations.

Solution 1

To verify the alias for the signature key and encryption key in the Oracle WSM keystore configuration exist in the Oracle WSM keystore file:

1. Use Fusion Middleware Control to identify the alias for the signature key and encryption key in the Oracle WSM keystore configuration. Perform the procedure in the "Configuring Keystores for Message Protection" section in the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*.
2. Verify the aliases identified in Step 1 exist in the Oracle WSM keystore file. Use the `keytool -list` command on the Oracle WSM keystore file to view its aliases. Refer to the *keytool - Key and Certificate Management Tool* document on the Java SE Technical Documentation Web site for more information about using `keytool`. You can access this document by searching for it on the Search Java SE Technical Documentation Web page at:

<http://download.oracle.com/javase/search.html>

- Ensure each alias is synchronized in both locations. If they are not, you can edit the alias in the Oracle WSM keystore configuration by performing the procedure in the "Configuring Keystores for Message Protection" section in the

Oracle Fusion Middleware Security and Administrator's Guide for Web Services. You can edit the alias in the Oracle WSM keystore file using the `keytool -changealias` command.

Note: Before you edit an alias, be sure that doing so will not affect any other web service.

- If the alias for the signature key or encryption key does not exist in the Oracle WSM keystore file, add it by referring to the "Generating Private Keys and Creating the Java Keystore" section in the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*.

Solution 2

To ensure that the signature key, encryption key, and Oracle WSM keystore file passwords are each synchronized in the keystore file and the keystore configuration for Oracle WSM:

1. Use `keytool` to reset the passwords in the Oracle WSM keystore file. Because the passwords are not visible, resetting them is the only method to ensure that they have identical respective values in both locations.
 - Use the `keytool -storepasswd` command to reset the Oracle WSM keystore file password.
 - Use the `keytool -keypasswd` command to reset the signature key password and encryption key password.
2. Use Fusion Middleware Control to reset the passwords in the Oracle WSM keystore configuration to the same respective values you set in Step 1. Refer to the "Configuring Keystores for Message Protection" section in the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services* for more information.

9.3.5.2 Trust Certificate Error After Application Invokes Web Service

After an Oracle Fusion application invokes a web service, a trust certificate error such as the following appears:

```
WSM-00138: The path to the certificate is invalid due to exception
```

Problem

The problem may be, if the web service is advertising its certificate in the Web Services Description Language (WSDL), the client is not configured correctly to trust that certificate or its issuer.

Solution

To verify the client is configured to trust the web service's certificate advertised in the WSDL or its issuer:

1. Verify the client keystore has either the public certificate of the web service or the public certificate of its issuer. Use the `keytool -list` command to identify the certificates in the client keystore. If either of the public certificates are missing from the client keystore, use the `keytool -importcert` command to add them.

Refer to the *keytool - Key and Certificate Management Tool* document on the Java SE Technical Documentation Web site for more information about using `keytool`. You can access this document by searching for it on the Search Java SE Technical Documentation Web page at:

<http://download.oracle.com/javase/search.html>

2. Verify the value for the `keystore.recipient.alias` override property of the client Oracle WSM policy is identical to the alias of the trusted public certificate in the Oracle WSM keystore file. Refer to the "Attaching Web Service Policies Permitting Overrides" section of the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services* for more information.

9.3.6 Problems and Solutions for Identity Propagation Using SAML

After an Oracle Fusion application attempts to propagate a user's identity by calling a different Oracle Fusion application using Oracle SOA, `InvalidSecurityToken-`, `FailedAuthentication-`, or SAML assertion issuer-related errors appear.

Problem

The problem may be:

- The SAML issuer name for the SAML token is not configured or is configured incorrectly.
- The `subject.precedence` configuration override is set incorrectly.

Solution 1

To troubleshoot the SAML issuer name configuration, verify the SAML Issuer Name the client is using is among the issuers configured on the Oracle WebLogic Server domain by performing the steps in the "Adding an Additional SAML Assertion Issuer Name" section of the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*.

If the SAML Issuer Name that the client is using is not configured as an issuer in the Oracle WebLogic Server domain, Oracle recommends changing the issuer name on the client by updating its `saml.issuer.name` override to one of the issuers configured on the Oracle WebLogic Server domain.

If you cannot change the issuer name on the client, you can add its issuer name to the Oracle WebLogic Server domain by performing the steps in the "Adding an Additional SAML Assertion Issuer Name" section of the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*.

Solution 2

To troubleshoot the `subject.precedence` configuration override:

1. Set the `subject.precedence` override value in your current client policy to false to change the identity to a different user. By default, the `subject.precedence` override is set to true.
2. Set the appropriate Credential Store Framework key override on the client policy that contains the user name and password of the user you want to send to the service. If an entry for this user does not exist in the Credential Store Framework, you must add it. Refer to the "Adding Keys and User Credentials to the Credential Store" section in the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services* for more information.
3. Ensure the appropriate Web Services Identity Permission is set for the client application by performing the steps in the "Configuring SAML Web Service Clients for Identity Switching" section of the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*.

9.3.7 Problems and Solutions for Logging in to Secured Resources

This section describes problems and solutions for logging in to secured resources. This section contains the following topics:

- [Section 9.3.7.1, "Incorrect Language Appears After Logging in to a Secured Resource"](#)
- [Section 9.3.7.2, "Login Page Unexpectedly Reappears \(No Single Sign-On\)"](#)
- [Section 9.3.7.3, "Cannot Access Forgotten Password Functionality from Login Page"](#)

9.3.7.1 Incorrect Language Appears After Logging in to a Secured Resource

While attempting to access a resource secured by Oracle Access Manager, a user changes the language preference on the login page. After logging in successfully, the secured resource appears in a language different from what the user selected on the login page.

Problem

The problem may be Oracle Access Manager's `ORA_FUSION_PREFS` cookie is not in the user's browser. The `ORA_FUSION_PREFS` cookie determines which language the secured resource appears in. After the user chooses a language preference on the login page and gets authenticated, Oracle Access Manager sends the `ORA_FUSION_PREFS` cookie to the user's browser.

Solution

Examine the cookies in the user's browser and try to locate the `ORA_FUSION_PREFS` cookie. If the `ORA_FUSION_PREFS` cookie is not in the user's browser:

- Examine the browser's security settings, as they may be too high and preventing cookies from being accepted.
- Add the Oracle Fusion application's domain to the browser's exception list.

9.3.7.2 Login Page Unexpectedly Reappears (No Single Sign-On)

After successfully logging in to a resource secured by Oracle Access Manager, a login page unexpectedly reappears. Regardless if the reappearing login page is for Oracle Access Manager or Oracle Fusion Applications, a user may not expect to see it in a single sign-on environment.

Problem

The problem may be:

- If the login page reappeared after attempting to access a different secured resource, the authentication level of the authentication scheme securing the subsequently accessed resource is greater (higher) than the authentication level of the authentication scheme securing the resource that was accessed first. In this situation, the reappearing login page is expected behavior.
- The Oracle Access Manager server's Idle Timeout or Session Lifetime configuration parameters are set to a value that is too small. The Idle Timeout parameter specifies the amount of time, in minutes, that a user's authentication session remains valid without accessing a resource secured by Oracle Access Manager. The Session Lifetime parameter specifies the amount of time, in minutes, that a user's authentication session remains valid. For both parameters, the smaller the value, the more frequently users must re-authenticate.

- Oracle Access Manager's `ObSSOCookie` and `OAM_ID` cookies are not in the user's browser. The `ObSSOCookie` and `OAM_ID` cookies are encrypted, single sign-on, session-based cookies generated by the Oracle Access Manager Access Server when a user authenticates successfully.

Solution 1

To examine the authentication levels of the authentication schemes securing the resources:

1. Log in to the Oracle Access Manager Administration Console by referring to the "Logging In to the Oracle Access Manager Console" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager with Oracle Security Token Service*.
2. Identify the authentication policies securing the resources and the authentication schemes configured for those policies. You can reduce the number of policies to examine by first looking at the policies for the Host Identifier that the Webgate is using.

Refer to the "Searching for an Authentication Policy" and "Viewing or Editing an Authentication Policy" sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager with Oracle Security Token Service* for more information.

3. Identify the authentication levels for each authentication scheme. Refer to the "Viewing or Editing a Authentication Scheme" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager with Oracle Security Token Service*.

Note: If the authentication level for the subsequently accessed resource is greater than that of the first accessed resource, the reappearing login page is the expected behavior.

Solution 2

To verify the settings for the Idle Timeout and Session Lifetime configuration parameters:

1. Log in to the Oracle Access Manager Administration Console by referring to the "Logging In to the Oracle Access Manager Console" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager with Oracle Security Token Service*.
2. Verify the values configured for the **Idle Timeout** and **Session Lifetime** configuration parameters by referring to the "Configuring User Session Lifecycle Settings" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager with Oracle Security Token Service*.

Solution 3

To verify Oracle Access Manager's `ObSSOCookie` and `OAM_ID` cookies are in the user's browser:

1. Display the cookies in the user's browser.
2. Locate Oracle Access Manager's `ObSSOCookie` and `OAM_ID` session cookies.

If the `ObSSOCookie` and `OAM_ID` cookies are not in the user's browser:

- Examine the browser's security settings, as they may be too high and preventing cookies from being accepted.
- Add the Oracle Fusion application's domain to the browser's exception list.

9.3.7.3 Cannot Access Forgotten Password Functionality from Login Page

While attempting to access a resource secured by Oracle Access Manager, the Forgotten Password feature is inaccessible from the login page.

Problem

The problem may be:

- Network issues are preventing a connection to Oracle Identity Manager.
- Oracle Access Manager's configuration to Oracle Identity Manager's lost password functionality is incorrect.

Solution 1

To test connectivity to Oracle Identity Manager, from the system hosting the Administration Server where Oracle Access Manager is deployed, ping the system hosting the Managed Server where Oracle Identity Manager is deployed.

Solution 2

To verify Oracle Access Manager's configuration to Oracle Identity Manager's lost password functionality:

1. Use a text editor to open the following file on the Administration Server for the domain where Oracle Access Manager is deployed:

```
DOMAIN_HOME/config/fmwconfig/oam-config.xml
```

2. Locate the `<Setting Name="IdentityManagement" Type="htf:map">` entry.
3. Examine the `ServerConfiguration` settings similar to those shown in [Example 9-1](#) and verify the following values:

Example 9-1 ServerConfiguration Settings Within IdentityManagement Entry

```
<Setting Name="ServerConfiguration" Type="htf:map">  
  <Setting Name="OIM-SERVER-1" Type="htf:map">  
    <Setting Name="Host" Type="xsd:string">OIM_HOST</Setting>  
    <Setting Name="Port" Type="xsd:integer">OIM_PORT</Setting>  
    <Setting Name="SecureMode" Type="xsd:boolean">true|false</Setting>  
  </Setting>  
</Setting>
```

- **OIM-SERVER-1:** Must be identical value of the same setting in the `IdentityServiceProviderConfiguration` entry described in Step 4.
- If Oracle Identity Manager is front-ended by Oracle HTTP Server or a load balancer:
 - **OIM_HOST:** Fully-qualified host name of Oracle HTTP Server or load balancer.
 - **OIM_PORT:** The port for the Oracle HTTP Server or load balancer.
 - **SecureMode:** Set to true for connecting to Oracle Identity Manager over HTTPS, set to false for connecting over HTTP.

- If Oracle Identity Manager is not front-ended:
 - **OIM_HOST**: Fully-qualified host name of the Managed Server where Oracle Identity Manager is deployed.
 - **OIM_PORT**: The port for the Managed Server where Oracle Identity Manager is deployed.
 - **SecureMode**: Set to true for connecting to Oracle Identity Manager over HTTPS, set to false for connecting over HTTP.
- 4. Examine the IdentityServiceProviderConfiguration settings similar to those shown in [Example 9–2](#) and verify the following values:

Example 9–2 IdentityServiceProviderConfiguration Settings Within IdentityManagement Entry

```
<Setting Name="IdentityServiceProviderConfiguration" Type="htf:map">
  <Setting Name="IdentityManagementServer" Type="xsd:string">OIM-SERVER-1</Setting>
  <Setting Name="DateFormatPattern" Type="xsd:string">yyyy-MM-dd'T'HH:mm:ss'Z'</Setting>
  <Setting Name="PasswordExpiredURL" Type="xsd:string">/admin/faces/pages/pwdmgmt.jsp</Setting>
  <Setting Name="ChallengeSetupNotDoneURL" Type="xsd:string">/admin/faces/pages/pwdmgmt.jsp</Setting>
  <Setting Name="ForcedPasswordChangeURL" Type="xsd:string">/admin/faces/pages/pwdmgmt.jsp</Setting>
  <Setting Name="AccountLockedURL" Type="xsd:string">/admin/faces/pages/accountlocked.jsp</Setting>
</Setting>
```

- **OIM-SERVER-1**: Must be identical value of the same setting in the ServerConfiguration entry described in Step 3.
- Confirm the following URL Settings are configured with the values shown in [Example 9–2](#):
 - PasswordExpiredURL
 - ChallengeSetupNotDoneURL
 - ForcedPasswordChangeURL
 - AccountLockedURL

9.4 Additional Information for Troubleshooting Oracle Identity Management

The following is a list of Oracle Identity Management documents that provide additional information and will help you troubleshoot. Use these documents if you have isolated your problem to a specific Oracle Identity Management component or to learn more about a specific component.

Note: A few of the documents in the following list do not contain explicit troubleshooting information, but are a source of information that will help you during troubleshooting.

- "Troubleshooting Oracle Fusion Middleware" appendix of the *Oracle Fusion Middleware Administrator's Guide*
- "Troubleshooting Security in Oracle Fusion Middleware" appendix in the *Oracle Fusion Middleware Application Security Guide*
- "Troubleshooting Oracle Internet Directory" appendix of the *Oracle Fusion Middleware Administrator's Guide for Oracle Internet Directory*
- "Troubleshooting Oracle Virtual Directory" appendix of the *Oracle Fusion Middleware Administrator's Guide for Oracle Virtual Directory*

- *"Troubleshooting" appendix in the Oracle Fusion Middleware Administrator's Guide for Oracle Access Manager with Oracle Security Token Service*
- *Oracle Fusion Middleware Administrator's Guide for Oracle Identity Manager*
- *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*

Troubleshooting Oracle Metadata Repository

This chapter describes common problems that you might encounter when using Oracle Metadata Repository (MDS Repository) and explains how to solve them. This chapter contains the following topics:

- [Section 10.1, "Introduction to Troubleshooting MDS Repository"](#)
- [Section 10.2, "Getting Started with Troubleshooting and Logging Basics for Oracle Metadata Repository"](#)
- [Section 10.3, "Applications Performing Slowly Due to MDS Repository"](#)
- [Section 10.4, "Diagnosing Exceptions with Oracle Metadata Repository"](#)

Some procedures in this chapter refer to content in the Oracle Fusion Middleware guides. These guides describe using Fusion Middleware Control. These procedures also apply to Fusion Applications Control.

10.1 Introduction to Troubleshooting MDS Repository

This section provides guidelines and a process for using the information in this chapter. Using the following guidelines and process will focus and minimize the time you spend resolving problems.

Guidelines

When using the information in this chapter, Oracle recommends:

- After performing any of the solution procedures in this chapter, immediately retry the failed task that led you to this troubleshooting information. If the task still fails when you retry it, perform a different solution procedure in this chapter and then try the failed task again. Repeat this process until you resolve the problem.
- Making notes about the solution procedures you perform, symptoms you see, and data you collect while troubleshooting. If you cannot resolve the problem using the information in this chapter and you must log a service request, the notes you make will expedite the process of solving the problem.

Process

Follow the process outlined in [Table 10-1](#) when using the information in this chapter. If the information in a particular section does not resolve your problem, proceed to the next step in this process.

Table 10–1 Process for Using the Information in this Chapter

Step	Section to Use	Purpose
1	Section 10.2	Get started troubleshooting the MDS Repository. The procedure in this section quickly addresses a wide variety of problems.
2	Section 10.3 through Section 10.4	Perform problem-specific troubleshooting procedures. These sections describe: <ul style="list-style-type: none"> ▪ Possible causes of the problems ▪ Solution procedures corresponding to each of the possible causes
3	Section 14.1	Use My Oracle Support to get additional troubleshooting information about Oracle Fusion Applications or Oracle SOA Suite. My Oracle Support provides access to several useful troubleshooting resources, including Knowledge Base articles and Community Forums and Discussions.
4	Section 14.1	Log a service request if the information in this chapter and My Oracle Support does not resolve your problem. You can log a service request using My Oracle Support at https://support.oracle.com .

10.2 Getting Started with Troubleshooting and Logging Basics for Oracle Metadata Repository

For general instructions on managing the metadata for Oracle Fusion Middleware components in the Oracle Metadata Repository, see the "Managing the Metadata Repository" chapter in the *Oracle Fusion Middleware Administrator's Guide*.

Use the following tools to troubleshoot Oracle Metadata Repository issues:

- [Section 10.2.1, "WLST Commands"](#)
- [Section 10.2.2, "MBean Properties in Fusion Applications Control"](#)
- [Section 10.2.3, "Logging"](#)

10.2.1 WLST Commands

Use the MDS Repository commands described in the "Metadata Services (MDS) Custom WLST Commands" section of the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

Use the following script from the Oracle WebLogic Server domain home directory, which is based on WLST commands:

1. From the fusionapps Middleware subdirectory, start WLST:

```
(UNIX) FA_MW_HOME/oracle_common/common/bin/wlst.sh
(Windows) FA_MW_HOME\oracle_common\common\bin\wlst.cmd
```

where *DOMAIN_HOME* is located in the following locations:

```
(UNIX) APPLICATIONS_CONFIG/instance/domains/host/domain_name
(Windows) APPLICATIONS_CONFIG\instance\domains\host\domain_name
```

2. Connect to Oracle WebLogic Server.
3. Use WLST commands for the MDS Repository. For example:
 - `deleteMetadata`, `exportMetadata`, `importMetadata`, and `purgeMetadata` to manage application metadata.
 - `importMAR` to import an application MAR.

Use the `force=true` argument to force the import of all document. If you do not use the `with force` argument, only documents that have changed will be imported.

- `listMetadataLabels` to inspect which labels exist. For example, you can use this command to see if there are too many labels pinning down versions, causing the database repository to grow.
- `purgeMetadataLabels` to delete labels based on name pattern. For example, you can use this command to allow versions pinned by those labels to become eligible for purge.
- `deleteMetadataLabel`, `promoteMetadataLabel` to manage labels.

10.2.2 MBean Properties in Fusion Applications Control

Modify configuration and runtime MBean properties:

- Modify the `AutoPurgeTimeToLive` and `MaximumCacheSize` configuration MBean property in Fusion Applications Control. Note that use of this has a short-term performance impact until the cache is re-populated. See the "Changing MDS Configuration Attributes for Deployed Applications" section in the *Oracle Fusion Middleware Administrator's Guide*.
- Modify the `clearCache` runtime MBean operation in Fusion Applications Control. If you think that metadata updates are not being picked up, you can invoke this operation to see if it is related to caching. Note that use of this has performance impact.:

- a. From the navigation pane, expand the farm and then **Application Deployments**.
- b. Click the application that uses MDS Repository.
- c. In the Java EE Application home page, from the **Application Deployment** menu, choose **MDS Configuration**.

The MDS Configuration page displays the page.

- d. In the Advanced Configuration section, click **Runtime MBean Browser**.
- e. In the System MBean Browser page, expand **Application Defined MBeans**.

Expand `oracle.mds.lcm`, then **Server: Managed Server**, then **Application: Application Name**, then **MDSAppRuntime**, then **MDSAppRuntime**. The System MBean Browser displays the Application Defined MBeans: `MDSAppRuntime:MDSAppRuntime` page.

- f. Click the **Operations** tab.

The screenshot shows the System MBean Browser interface. On the left is a navigation tree with 'oracle.mds.lcm' expanded to 'MDSAppRuntime'. The main pane shows 'Application Defined MBeans: MDSAppRuntime:MDSAppRuntime' with the 'Operations' tab active. Below the tabs is a table of operations:

Name	Description	Para
1 clearCache	Clears the metadata cache of application runtime instance.	
2 createMetadataLabel	Creates a label on the Application's repository partition.	
3 deleteMetadata	Deletes documents from Application's repository.	
4 deleteMetadataLabel	Deletes a label on the Application's repository partition.	
5 doExport	Exports documents from Application's repository to a archive for downloading (internally used by MetadataTransferManager).	
6 doExport	Exports documents from Application's repository to a archive for downloading (internally used by MetadataTransferManager).	
7 doImport	Imports documents uploaded from a local archive to Application's repository (internally used by MetadataTransferManager).	
8 doSandboxExport	Exports sandbox contents from Application's DB repository to a archive for downloading (internally used by MetadataTransferManager).	
9 doSandboxImport	Imports sandbox contents uploaded from a local archive to Application's DB repository (internally used by MetadataTransferManager).	
10 doSandboxImport	Imports sandbox contents uploaded from a local archive to Application's DB repository (internally used by MetadataTransferManager).	

g. Click the **clearCache**.

h. Click **Invoke**.

10.2.3 Logging

View the logs. Right-click the domain under **WebLogic Domain** and choose **View Log Messages**.

1. From the navigation pane, expand the farm, **WebLogic Domain, Managed_Server**.
2. Choose **Logs**, then **View Log Messages**.

If the problem still cannot be solved, increase the log level of the system to debug the transactions. To simplify troubleshooting, it is recommended that you enable the loggers listed in the following steps at the **TRACE32 (FINEST)** level.

To change logger levels, perform the following steps:

1. From the navigation pane, expand the farm, then **WebLogic Domain**, then **Managed_Server**.
2. Choose **Logs**, then **Log Configuration**.
3. In the **Logger Name** column, expand the **oracle** and then **oracle.mds** to display the loggers.
4. In the **Oracle Diagnostic Logging Level (Java Level)** column, you can enable tracing for the following loggers, depending on the functional area you want to investigate. For example, you can change the logging level to **TRACE:32** for the following loggers:
 - **oracle.mds.query** for detailed diagnostics for SQL statements, bind variables, and timing information about MDS database queries.
 - **oracle.mds.jsp** for trace JSP integration with MDS.

- **oracle.mds.dbstore** for detailed logging about all operations done at the persistence level for the database-based MDS repository.
- **oracle.mds.sandbox** for debug level information for all the sandbox operations. Use this logger when troubleshooting creation of a sandbox, managing the sandbox metadata, applying a sandbox or any other sandbox lifecycle-related operations. Use this logger in conjunction with the **oracle.mds.dbstore** logger.
- **oracle.mds.coretxn** for detailed logging for `MDSTransaction` methods. `MDSTransaction` is an internal class which is associated with an `MDSSession` that is being used to make changes to metadata. Enabling this logger includes diagnostics to help verification that the same `MDSSession` is not being used by multiple threads which while not illegal is unusual and can cause problems if done incorrectly.
- **oracle.mds.pdcache** for trace-document cache access and invalidation. Shows labels being used for lookups and versions being returned from the cache.
- **oracle.mds.remotechange** for detailed tracing on polling thread, synchronous polling on `flushChanges()` and optional distributed notifications feature (not enabled for Fusion Applications).
- **oracle.mds.corecache** to trace core cache access and invalidation.
- **oracle.mds.rename** for detailed diagnostics for listing dependency references during rename operation.
- **oracle.mds.custupdate** for detailed diagnostics for change events handling and optimization, and creation of MDS customization instructions during update of MDS customizations.
- **oracle.mds.custmerge** for detailed diagnostics when applying MDS customization instructions
- **oracle.mds.mnfe** for tracing of `MetadataNotFoundException` and `isStale()` evaluation.

The change should take effect within a few minutes. Note that in a production system, setting the trace at a fine-grained level can result in a large amount of output that must be diagnosed. You can alternately use selective tracing that provides a way to get a detailed, on-disk trace selectively (for example, by user name, thereby eliminating trace output for other users).

5. To activate selective tracing, right-click the domain under **WebLogic Domain** and choose **Logs**, then **Selective Tracing**.

Note that **Selecting Tracing** does not display as an option when you right-click an Administration Server or Managed Server and choose **Logs**.

6. From the **Option Name** list, choose the type of selective trace (for example, based on user name), and start the trace.
7. When the problem has been reproduced, disable the trace and view the output to narrow down the issue.

For more information on selective tracing, see the "Configuring and Using Selective Tracing" section of *Oracle Fusion Middleware Administrator's Guide*.

8. Review the error logs (from Fusion Applications Control) for more information on the error.

Cross layer, server, and family functionality can be correlated through the execution context ID (ECID) (for example, you can look up the composite instance

for a given expense report by correlating all the log entries with the ECID associated with that expense report transaction). For more information, see the "Correlating Messages Across Log Files and Components" section of *Oracle Fusion Middleware Administrator's Guide*.

10.3 Applications Performing Slowly Due to MDS Repository

Problem

If the application is performing slowly, there could be an issue with the MDS Repository.

Solution 1

To check the MDS Repository performance and adjust the cache size:

1. Check performance metrics for cache performance.
 - a. Navigate to the application's home page by expanding the farm, then **Application Deployments**. Then, select an application.
The application's home page is displayed.
 - b. From the **Application Deployment** menu, choose **Performance Summary**.
The Performance Summary page displays.
 - c. Click **Show Metric Palette**.
 - d. Expand **MDS Metrics** and select **IOs Per Metadata Object Get** and **IOs Per MO Content Get**.
 - e. Monitor the performance of these metrics. Typically, values close to 1 indicate poor cache performance.
2. Modify the `MaximumCacheSize` configuration MBean property, incrementally increasing it in size to see if that improves performance. See the "Changing MDS Configuration Attributes for Deployed Applications" section in the *Oracle Fusion Middleware Administrator's Guide*.

Solution 2

To resolve this problem from the MDS Repository database:

1. Capture an Automatic Workload Repository (AWR) report. See the "Gathering Database Statistics Using the Automatic Workload Repository" section in the *Oracle Database 2 Day + Performance Tuning Guide*.
2. Check if any specific MDS SQL is taking too long. Analyze the log (if needed with `oracle.mds` logger set to `FINER`) or DMS data from `DMSSpy`.
3. Regather the Oracle Database statistics for each MDS schema by executing the `GATHER_SCHEMA_STATS` procedure in the `DBMS_STATS` PL/SQL package from SQL, as a privileged database user, such as `SYS`.

```
execute dbms_stats.gather_schema_stats(  
  ownname => 'schemaOwner',  
  estimate_percent => dbms_stats.auto_sample_size,  
  method_opt => 'for all columns size auto',  
  cascade => true);
```

Note: Replace <schemaOwner> with the name of the schema, for example FUSION_MDS. Also, place the entire command in a single line at the time of execution.

4. If performance does not improve after collecting statistics, then flush the shared pool to clear the execution plan for the database and generate a new query plan with the following SQL command:

```
ALTER SYSTEM FLUSH SHARED_POOL;
ALTER SYSTEM FLUSH BUFFER_CACHE;
```

5. If you notice continuous growth in metadata in Oracle Database tables, it could be that the purge was not executed or labels are preventing metadata from being purged.

- a. Use these queries to identify which of the above is the cause.

Determine how many versions can be purged in partitions. In the following examples, :B1 is a bind variable. Define the variable as the appropriate partition name. For example, Oracle ADF metadata is stored in the FAGlobal partition and Oracle SOA Suite metadata is stored in the soa_infra partition.

```
SELECT count( * ) FROM mds_paths path, mds_txn_locks, mds_partitions WHERE
path_low_cn <= lock_txn_cn AND path_low_cn > 0
AND NOT EXISTS (SELECT label_cn from mds_labels
                WHERE path.path_low_cn <= label_cn
                AND (path.path_high_cn > label_cn OR path.path_high_cn IS
NULL)
                AND label_partition_id = path.path_partition_id)
                AND path_high_cn IS NOT NULL
                AND path_partition_id = lock_partition_id
                and path_partition_id = partition_id
                AND partition_name =:B1
```

To determine how many document versions in the repository are held by labels:

```
select label_name, label_cn, (SELECT count( * )
FROM mds_paths path, mds_partitions
WHERE path_high_cn IS NOT NULL
and path_low_cn <= label_cn
AND path_low_cn > 0
and path_high_cn > label_cn
AND path_partition_id = partition_id
and partition_name=:B1) versHeld, txn_time from mds_labels, mds_
transactions, mds_partitions
where label_partition_id=txn_partition_id
and
label_cn=txn_cn
and label_partition_id=partition_id
and partition_name=:B1 order by versHeld desc
```

To determine partition-wise statistics of tip and non-tip, purgeable versions:

```
select docs.*, labels.count_labels, can_be_purged,
       round(100*(can_be_purged/docs.total)) pct_can_be_purged from
(select partition_name, count(*) total, sum(decode(PATH_HIGH_CN, null, 1,
0)) tip,
       sum(decode(PATH_HIGH_CN, null, 0, 1)) non_tip,
       round(100*(sum(decode(PATH_HIGH_CN, null, 0, 1))/count(*))) percent_non_
```

```

tip
  from MDS_PATHS x, MDS_PARTITIONS y
  where x.PATH_PARTITION_ID = y.PARTITION_ID
  and path_type = 'DOCUMENT'
  group by partition_name)
docs,
  (select PARTITION_name, count(label_name) count_labels
  from MDS_LABELS l, MDS_PARTITIONS p
  where p.partition_id = l.label_partition_id(+)
  group by PARTITION_name, partition_id)
labels,
  (SELECT partition_name, count (*) can_be_purged
  FROM MDS_PATHS path, MDS_TXN_LOCKS, MDS_PARTITIONS p
  WHERE partition_id = path_partition_id
  and path_low_cn <= lock_txn_cn AND path_low_cn > 0
  AND NOT EXISTS (SELECT label_cn from MDS_LABELS
  WHERE path.path_low_cn <= label_cn
  AND (path.path_high_cn > label_cn OR path.path_high_cn IS
  NULL)
  AND label_partition_id = path.path_partition_id)
  AND path_high_cn IS NOT NULL
  AND path_partition_id = lock_partition_id
  and path_type = 'DOCUMENT'
  GROUP BY partition_name )
can_purge
WHERE docs.partition_name = labels.partition_name
AND docs.partition_name = can_purge.partition_name(+)
order by total

```

- b. Execute the `purgeMetadata WLST` command to clean up the content. You may need to reclaim the space manually in some cases. See the "Tuning the Database Repository" section of the *Oracle Fusion Middleware Performance and Tuning Guide*.
- c. If a large portion of non-tip versions are held by labels, consider removing those (older) labels using Fusion Middleware Control.

Note that if you delete a label on which a sandbox is based, the sandbox becomes unusable, so using the `purgeMetadataLabels WLST` command can be risky. However, the Manage Labels page in Fusion Middleware Control automatically hides sandbox labels so you will not accidentally delete sandbox labels. To delete a label that contains no sandboxes:

- a. Expand the farm, then expand **Metadata Repositories**.
- b. Select the repository.
- c. On the repository home page, select a partition and click **Manage Labels**.
- d. On the Manage Labels page, search for a label.
- e. By default, labels associated with sandboxes and deployed applications are not shown. To display those labels, select **Sandboxes** or **Deployment** or both. Fusion Middleware Control will not let you delete a label associated with a sandbox.
- f. Select the label and click **Delete Selected**.
- g. In the confirmation box, click **OK**.

10.4 Diagnosing Exceptions with Oracle Metadata Repository

Problem 1

The following error code is seen in the `diagnostic.log` file:

```
MDS-01273: The operation on the resource {0} failed because source metadata store mapped to the namespace {1} is read only.
```

For example:

```
ReadOnlyStoreException: MDS-01273:
@ The operation on the resource
/oracle/apps/cdm/foundation/parties/flex/orgContactNew/test.xsd failed because
source
@ metadata store mapped to the namespace / BASE DEFAULT is read only
Ensure that adf-config.xml contains a mapping that covers the resource and is
mapped to DBMetadataStore
```

The `diagnostic.log` file is stored in the following directories:

```
(UNIX) DOMAIN_HOME/servers/server_name/logs/server-name-diagnostic.log
(Windows) DOMAIN_HOME\servers\server_name\logs\server-name-diagnostic.log
```

This error occurs because the resource is not mapped in `adf-config.xml`. When it is not mapped, it defaults to `ClasspathStore`, which is read-only.

Solution 1

To resolve this problem:

1. Check the persistence configuration in `adf-config.xml`. Specifically, the repository pointing to the namespace should have its `metadata-store` element with the class name attribute set to `oracle.mds.persistence.stores.db.DBMetadataStore`. For example:

```
<mdsC:adf-mds-config>
<mds-config>
...
  <persistence-config>
    <metadata-namespaces>
      <namespace path="/oracle/apps/cdm/foundation/parties/flex/orgContact"
metadata-store-usage="globalStore-by-adfconfigfilter"/>
    </metadata-namespaces>
    <metadata-store-usages>
      <metadata-store-usage id="globalStore-by-adfconfigfilter"
default-cust-store="true" deploy-target="true">
        <metadata-store
class-name="oracle.mds.persistence.stores.db.DBMetadataStore">
          <property name="repository-name" value="mds-ApplicationMDSDB"/>
          <property name="partition-name" value="FAGlobal"/>
          <property name="jndi-datasource"
value="jdbc/mds/mds-ApplicationMDSDBDS"/>
        </metadata-store>
      </metadata-store-usage>
    </persistence-config>
  </mds-config>
</mdsC:adf-mds-config>
```

2. Check if a namespace that includes the document is mapped to `DBMetadataStore`. For example, if MDS-01273 is reported for

/oracle/apps/cdm/foundation/parties/flex/orgContactNew/test.xsd, check that its package /oracle/apps/cdm/foundation/parties/flex/ or any parent package is mapped to DBMetadataStore in adf-config.xml.

3. In the adf-config.xml file or the customization document, ensure the read-only-mode element is not set to true. You can do this in the System MBean Browser of Fusion Middleware Control:
 - a. In Fusion Middleware Control, from the navigation pane, navigate to the domain and select it. From the WebLogic Domain menu, choose **System MBean Browser**.
 - b. Expand **Application Defined MBeans**, then **oracle.adf.share.config**, then **Server: name**, then **Application: name**, then **ADFConfig**, then **ADFConfig**, and **ADFConfig**.
 - c. Check that the ReadOnly attribute is not set to true.

Problem 2

The following error code is seen in the diagnostic.log file:

```
MDS-00013: no metadata found for metadata object "{0}"
```

For example:

```
oracle.mds.core.MetadataNotFoundException: MDS-00013: no metadata found for
metadata object "/AtkHomePageWelcome"/AtkHomePageWelcome"
MDS-00201: PDocument not found in MetadataStore : [store-type=DefaultMetadataStore
app-name=HomePageApp (V2.0) lookup-order=ServletContext,Classpath]
```

The diagnostic.log file is stored in the following directories:

```
(UNIX) DOMAIN_HOME/servers/server_name/logs/server-name-diagnostic.log
(Windows) DOMAIN_HOME\servers\server_name\logs\server-name-diagnostic.log
```

Solution 2

To resolve this problem:

1. Check that the store mentioned in the message is consistent with what is listed in adf-config.xml. If not, it may be that you are looking at the wrong adf-config.xml file or the MDSSession was not correctly initialized for the current ADFContext. For example:

```
<mdsC:adf-mds-config>
  <mds-config>
  ...
    <persistence-config>
      <metadata-namespaces>
        <namespace path="/oracle/apps/cdm/foundation/parties/flex/orgContact"
metadata-store-usage="globalStore-by-adfconfigfilter"/>
      </metadata-namespaces>
      <metadata-store-usages>
        <metadata-store-usage id="globalStore-by-adfconfigfilter"
default-cust-store="true" deploy-target="true">
          <metadata-store
class-name="oracle.mds.persistence.stores.db.DBMetadataStore">
            <property name="repository-name" value="mds-ApplicationMDSDB"/>
            <property name="partition-name" value="FAGlobal"/>
            <property name="jndi-datasource"
value="jdbc/mds/mds-ApplicationMDSDBDS"/>
          </metadata-store>
        </metadata-store-usage>
      </metadata-store-usages>
    </persistence-config>
  </mds-config>
</mdsC:adf-mds-config>
```

```

        </metadata-store-usage>
    ....
        </persistence-config>
    </mds-config>
</mdsC:adf-mds-config>

```

2. Based on the mapping, perform the appropriate action
 - If it is mapped to a database store, use the `exportMetadata` command to check if the metadata document is present in the MDS Repository partition. For more information about this command, see the "exportMetadata" section of the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.
 - If it is not mapped, then the document must be in classpath. You may need to bounce the server.
3. Set the log level to `TRACE:32` for logger `oracle.mds.mnfe`. See [Section 10.2.3](#).

Problem 3

The following error code is seen in the `diagnostic.log` file:

```
MDS-01330: unable to load MDS configuration document
```

Typically, there will be nested exceptions that describe the actual reason for failure. For example:

```
MDSConfigurationException : parseADFConfigurationMDS-0133
```

Typically, this error occurs when the data source cannot connect to the database. There could be DB issues for which they can check the DB alert logs. For example, the database is overloaded so Oracle WebLogic Server thinks it is inaccessible.

This error can also occur when the repository is configured incorrectly or if the Oracle Database is down. For example:

```

MDSConfigurationException encountered in parseADFConfigurationMDS-01330: unable to
load MDS configuration document
MDS-01329: unable to load element "persistence-config"
MDS-01370: MetadataStore configuration for metadata-store-usage "OWSM_TargetRepos"
is invalid.
MDS-01377: Unable to get database connection from data source configured with JNDI
name "jdbc/mds/owsm".
weblogic.common.resourcepool.ResourceDeadException:
0:weblogic.common.ResourceException: Could not create pool connection

```

The `diagnostic.log` file is stored in the following directories:

```

(UNIX) DOMAIN_HOME/servers/server_name/logs/server-name-diagnostic.log
(Windows) DOMAIN_HOME\servers\server_name\logs\server-name-diagnostic.log

```

Solution 3

To resolve this problem, try one or both of the following:

- Test the data source to see if the database is currently accessible.
- Capture an Automatic Workload Repository (AWR) report. Check if any specific SQL is taking too long. Analyze the log (if needed with `oracle.mds` logger set to `FINER`) or DMS data from `DMSSpy`

See the "Gathering Database Statistics Using the Automatic Workload Repository" section in the *Oracle Database 2 Day + Performance Tuning Guide*.

Problem 4

During runtime, an exception stack displays with a concurrent modification exception:

```
java.util.ConcurrentModificationException
```

This error occurs during runtime, when working with objects using JEDI or customizing using Page Composer. Essentially, the same document at the same layer is being customized by multiple users. You encounter the conflicts when changes are published.

Solution 4

Resolve the concurrency. See the CMR Extensibility Guide for information on resolving this issue.

Troubleshooting Oracle SOA Suite

This chapter describes common problems that you might encounter when using Oracle SOA Suite and explains how to solve them.

This chapter contains the following topics:

- [Section 11.1, "Introduction to Troubleshooting Oracle SOA Suite"](#)
- [Section 11.2, "Getting Started with Troubleshooting and Logging Basics for Oracle SOA Suite"](#)
- [Section 11.3, "Runtime Diagnostics"](#)
- [Section 11.4, "Security and Oracle WSM Policy Manager Configuration"](#)
- [Section 11.5, "Human Workflow"](#)
- [Section 11.6, "Patching and Deployment"](#)
- [Section 11.7, "Performance"](#)
- [Section 11.8, "Maintenance"](#)
- [Section 11.9, "Custom Development \(Extensibility\)"](#)

Some procedures in this chapter reference content in the Oracle Fusion Middleware guides. These guides describe using Fusion Middleware Control. These procedures also apply to Fusion Applications Control.

To gain insight into the log details generated by Oracle Fusion applications, see [Chapter 2, "Troubleshooting Oracle Fusion Applications Using Incidents, Logs, QuickTrace, and Diagnostic Tests."](#) Also, review the *Oracle Fusion Middleware Error Messages Reference* for information about the error messages you may encounter.

Note: Some sections of this chapter describe how to set properties in the System MBean Browser of Fusion Applications Control. Some MBean properties are applicable to Oracle WebLogic Server and others are applicable to the SOA Infrastructure. Oracle WebLogic Server Mbeans are properties that impact the Java Virtual Machine (JVM) server level process that runs on the operating system. Example properties include the port on which the server is listening, and so on. These properties are agnostic to the type of application running on that server. SOA Infrastructure level Mbeans are properties that impact the SOA Infrastructure application running on the same Oracle WebLogic Server. Example properties include audit levels, transaction retries, and so on.

11.1 Introduction to Troubleshooting Oracle SOA Suite

This section provides guidelines and a process for using the information in this chapter. Using the following guidelines and process will focus and minimize the time you spend resolving problems.

Guidelines

When using the information in this chapter, Oracle recommends:

- After performing any of the solution procedures in this chapter, immediately retrying the failed task that led you to this troubleshooting information. If the task still fails when you retry it, perform a different solution procedure in this chapter and then try the failed task again. Repeat this process until you resolve the problem.
- Making notes about the solution procedures you perform, symptoms you see, and data you collect while troubleshooting. If you cannot resolve the problem using the information in this chapter and you must log a service request, the notes you make will expedite the process of solving the problem.

Process

Follow the process outlined in [Table 11–1](#) when using the information in this chapter. If the information in a particular section does not resolve your problem, proceed to the next step in this process.

Table 11–1 Process for Using the Information in this Chapter

Step	Section to Use	Purpose
1	Section 11.2	Get started troubleshooting Oracle SOA Suite. The procedure in this section quickly addresses a wide variety of problems.
2	Section 11.3 through Section 11.9	Perform problem-specific troubleshooting procedures. These sections describe: <ul style="list-style-type: none"> ■ Possible causes of the problems ■ Solution procedures corresponding to each of the possible causes
3	Section 14.1	Use My Oracle Support to get additional troubleshooting information about Oracle Fusion Applications or Oracle SOA Suite. My Oracle Support provides access to several useful troubleshooting resources, including Knowledge Base articles and Community Forums and Discussions.
4	Section 14.1	Log a service request if the information in this chapter and My Oracle Support does not resolve your problem. You can log a service request using My Oracle Support at https://support.oracle.com .

11.2 Getting Started with Troubleshooting and Logging Basics for Oracle SOA Suite

Note: In the majority of cases in which an Oracle SOA Suite error occurs with Distributed Order Orchestration (DOO), a message is logged that is displayed in the DOO user interface.

SOA troubleshooting must be performed in the following scenarios:

1. The Oracle Fusion application transaction flow has an error and it has been identified as an error in SOA (or you want to check if it is a SOA-related error).

2. The Oracle Fusion application transaction flow has not completed and is taking longer than it should and it has been identified as stuck in SOA (or you want to check if it is stuck in SOA).
3. The Oracle Fusion application transaction flow is not working as expected, and the wrong data is passed.

The recommended approach to troubleshooting SOA issues is as follows:

1. Check the server and composite status log in Oracle WebLogic Server Administration Console and check if the SOA server is up and running successfully (that is, not in a failed state).
 - a. Log in to Oracle WebLogic Server Administration Console.
 - b. In the **Domain Structure**, click **Deployments**.
 - c. In the **Name** column of the **Deployments** section, find **soa-infra**.
 - d. Check that the **State** column is set to **Active** and the **Health** column is set to **OK**.
 - e. Click **soa-infra > Monitoring** tab.
 - f. Expand to ensure that all components have **Health** set to **OK**.
 - g. Note the server name on which SOA is deployed.
 - h. Go to the **Domain Structure** and click **Environment > Servers** to verify that the **State** column is set to **RUNNING** and the **Health** column is set to **OK**.
 - i. Note the **Listen Port** column value, as this is the SOA runtime port.
2. Check if any Oracle Fusion application incident was created for the problem encountered.
3. Check whether the event was delivered to the SOA cluster by checking the log messages in Fusion Applications Control.

This requires the **oracle.integration.platform.blocks.event** logger to be set to **TRACE:32 (FINEST)**. There are potentially many types of exceptions that can appear in the log messages on the client side that raised the event. For example:

- If a Java class is not in the class path, then a `ClassNotFoundException` may appear.
- If the Java Naming and Directory Interface (JNDI) for the context or connection factory is not configured properly, then a `NamingException` or `FabricException` may appear.
- If the event payload XML that you create is invalid or contains invalid characters, you may receive a `FabricException` indicating that enqueueing of the event fails at the PL/SQL API with invalid characters, and so on.

For information about enabling this log and troubleshooting business events, see [Section 11.3.2](#).

4. Check the composite instance flow. If the event was fired, then find your composite instance based on the application data.
See [Section 11.3.1](#) for primary key mapping to the composite instance ID.
5. Review the composite instance flow and fault details. If the instance is in error and it is recoverable, attempt recovery using the **Recovery** tab of the BPEL process service engine in Fusion Applications Control.
6. View the logs.

If the problem still cannot be solved, increase the log level of the system to debug the transactions. To simplify troubleshooting, it is recommended that you enable the following parent loggers at the **TRACE32 (FINEST)** level in Fusion Applications Control:

- **oracle.soa**
- **oracle.fabric**
- **oracle.integration**

The **oracle.wsm** logger can remain set to the **ERROR** level where it logs the required error messages. The **oracle.apps** logger should be set to **ALL**. To change logger levels, perform the following steps:

- a. Go to Fusion Applications Control.
- b. In the navigation pane, select **WebLogic Domain**.
- c. Right-click a Managed Server from within the domain (each server's log levels can be independently set).
- d. Choose **Logs > Log Configuration**.
- e. In the **Logger Name** column, expand the **oracle** runtime loggers to display loggers such as **oracle.soa**.
- f. Change the logging level to **TRACE:32**. The change should take effect within a few minutes.

The screenshot displays the 'Log Configuration' page in Fusion Applications Control. The page title is 'Log Configuration' and it includes a sub-header 'Log Levels'. Below this, there is a table of loggers. The table has four columns: 'Logger Name', 'Oracle Diagnostic Logging Level (Java Level)', 'Log File', and 'Persistent Log Level State'. The 'oracle' logger is expanded, showing several sub-loggers. The logging level for 'oracle' is set to 'NOTIFICATION:1 (INFO)'. The 'oracle.ac' logger is also visible with a logging level of 'NOTIFICATION:1 (INFO)'. The page includes a search bar, a 'View' dropdown set to 'Runtime Loggers', and an 'Apply' button.

Logger Name	Oracle Diagnostic Logging Level (Java Level)	Log File	Persistent Log Level State
Root Logger	WARNING:1 (WARNING)	odi-handler	WARNING:1
FacesJspTagMapper	WARNING:1 (WARNING) [Inherit]	odi-handler	
HTTPClient	WARNING:1 (WARNING) [Inherit]	odi-handler	
RepositoryPartitionsModel	WARNING:1 (WARNING) [Inherit]	odi-handler	
TargetRepositoryModel	WARNING:1 (WARNING) [Inherit]	odi-handler	
TargetRepositoryView	WARNING:1 (WARNING) [Inherit]	odi-handler	
com	WARNING:1 (WARNING) [Inherit]	odi-handler	
oracle	NOTIFICATION:1 (INFO)	odi-handler	NOTIFICATION:1
oracle.adf	NOTIFICATION:1 (INFO) [Inherit]	odi-handler	
oracle.adfdt	NOTIFICATION:1 (INFO) [Inherit]	odi-handler	
oracle.adfdinternal	NOTIFICATION:1 (INFO) [Inherit]	odi-handler	
oracle.adfinternal	NOTIFICATION:1 (INFO) [Inherit]	odi-handler	
oracle.ac	NOTIFICATION:1 (INFO) [Inherit]	odi-handler	

Note that in a production system, setting the trace at a fine-grained level can result in a large amount of output that must be diagnosed. You can alternately use selective tracing that provides a way to get a detailed, on-disk trace selectively (for example, by user name, thereby eliminating trace output for other users).

- g. To activate selective tracing, right-click the domain under **WebLogic Domain** and choose **Logs > Selective Tracing**.

Note that **Selecting Tracing** does not display as an option when you right-click an Administration Server or Managed Server and choose **Logs**.

- h. From the **Option Name** list, choose the type of selective trace (for example, based on user name), and start the trace.
 - i. When the problem has been reproduced, disable the trace and view the output to narrow down the issue.
 - j. Review the error logs (from Fusion Applications Control) for more information on the error.
- Cross layer, server, and family functionality can be correlated through the execution context ID (ECID) (for example, you can look up the composite instance for a given expense report by correlating all the log entries with the ECID associated with that expense report transaction).
7. Check for incorrect configurations and any networking issues, especially around potentially incorrect settings of the following:
 - External load balancers
 - Oracle HTTP Server
 - Virtual host/IP address
 - Oracle WebLogic Server front-end URL
 - SSL host name verification settings
 8. Verify that custom applications have been deployed on the correct servers using the correct configuration plan during deployment.
 9. Contact Oracle Support Services.

If the error still cannot be resolved, file a ticket with Oracle Support Services and provide the logs and information shown in [Table 11-2](#).

Table 11-2 SOA Log Information for Oracle Support Services

Log	Description
Application diagnostic log	View the following log: <code>DOMAIN_HOME/servers/domain_name/logs/apps/server_name-diagnostic.log</code>
Server diagnostic log	View the following log: <code>DOMAIN_HOME/servers/server_name/logs/server_name-diagnostic.log</code> For example, <code>soa_server1-diagnostic.log</code> , if <code>server_name</code> is <code>soa_server1</code> . This is where the log output is available. By default, only the last 100 MB of the diagnostic logs are retained.
Server log	View the following log: <code>server_name.log</code> For example, <code>soa_server1.log</code> , if <code>server_name</code> is <code>soa_server1</code> .
Server console output	<stdout> is also helpful, especially for deployment or patching issues.

Table 11–2 (Cont.) SOA Log Information for Oracle Support Services

Log	Description
Server thread dump	<p>Enter the following at the operating system command prompt:</p> <pre>kill -3 managed_server_process_ID</pre> <p>You can also use Oracle WebLogic Server Administration Console.</p> <ol style="list-style-type: none"> 1. In the navigation tree of Oracle WebLogic Server Administration Console, select Environment > Servers. 2. In the table, select the server. 3. Select the Monitoring tab. 4. Select the Threads tab. 5. Click Dump Thread Stacks. <p>The output is in the console logs.</p>
OPatch thread dump	<pre>kill -3 opatch_client_process_ID</pre>
OWSM message log	<p>The following log captures all SOAP messages on the wire.</p> <pre>\$DOMAIN_HOME/servers/server_name/logs/owsm/msglogging/diagnostic.log</pre> <p>This log is not enabled by default. To enable this log:</p> <ol style="list-style-type: none"> 1. Go to Fusion Applications Control > Weblogic Domain > Web Services > Policies. 2. Choose the security level for which to enable logging. 3. Edit the policy to enable the log assertion.

10. Send Oracle Support Services information about the error packaged with Automatic Diagnostic Repository-based incident processing.

The following documentation provides additional information about the topics discussed in this section:

- For information about how to investigate, report, and, in some cases, resolve a problem, see the "Investigating, Reporting, and Solving a Problem" section of *Oracle Fusion Middleware Administrator's Guide*.
- For information about correlating all log entries with the ECID, see the "Correlating Messages Across Log Files and Components" section of *Oracle Fusion Middleware Administrator's Guide*.
- For information about configuration plans, see the "How to Use Configuration Plans to Customize SOA Composite Applications for the Target Environment" section of *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.
- For information about setting logging levels for SOA components, see the "Setting Logging Levels for Troubleshooting" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.
- For information about incorrect configurations and any networking issues see the *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle SOA Suite*.
- For information about selective tracing, see the "Configuring and Using Selective Tracing" section of *Oracle Fusion Middleware Administrator's Guide*.
- For information about Oracle Fusion application incident processing, see [Section 2.2, "Investigating, Reporting, and Solving a Problem."](#)

- For information about the list of loggers and log levels, see "Troubleshooting Oracle SOA Suite and Oracle BPM Suite" appendix of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.3 Runtime Diagnostics

This section contains the following topics that describe common problems and solutions for Oracle SOA Suite runtime:

- [Section 11.3.1, "Correlating Application Issues to the SOA Composite IDs"](#)
- [Section 11.3.2, "Business Event Subscriptions Are Not Firing"](#)
- [Section 11.3.3, "Long Delays After an Event is Published and Before a Subscriber is Triggered"](#)
- [Section 11.3.4, "Events Are Consumed by Multiple Revisions of the Same Composites"](#)
- [Section 11.3.5, "Rolled Back OAOO Event Delivery Messages Are Displayed in the Log Files"](#)
- [Section 11.3.6, "Application Transaction Does Not Complete and the Underlying Composite Is Stuck in a Running State"](#)
- [Section 11.3.7, "BPEL Process Received No Response from an ADF Asynchronous Service"](#)
- [Section 11.3.8, "Business Event Is Picked Up Twice \(Or More\) By SOA Server"](#)
- [Section 11.3.9, "Long Running, Synchronous Calls To Remote Web Services Error Out or Asynchronous Transactions Return with an Error after a Long Time"](#)
- [Section 11.3.10, "Some Messages Are Lost Between EDN and Composites or Composites Across Clusters"](#)
- [Section 11.3.11, "Some Composites Are Being Retried Multiple Times on Failure"](#)
- [Section 11.3.12, "Some Fusion Applications Control Features Are Missing the No Recover Button or Export Composite Capability"](#)
- [Section 11.3.13, "Automatic Recovery of BPEL Instances is Not Recovering A Specific Instance"](#)
- [Section 11.3.14, "SOA Runtime Fails with a "Cannot read WSDL" Error"](#)
- [Section 11.3.15, "Uploading a Composite for Oracle Support Services"](#)
- [Section 11.3.16, "Confirming SOA Component Configuration Properties for Oracle Support Services"](#)

11.3.1 Correlating Application Issues to the SOA Composite IDs

Problem

How does an administrator translate an issue faced in the application to a composite instance in Fusion Applications Control for debugging purposes? For example, a purchase order transaction is stuck in processing for days and the administrator wants to see what the composite instance is doing. How does the administrator map the purchase order ID to the composite instance ID?

Solution

Oracle Fusion Applications modules write context-specific and business user-identifiable keys to the log files. This includes primary keys for any of the logical entities processed by the composite. After the primary key and other context information is included in the log messages, the administrator can search for that context (for example, purchase order ID) in the log file and derive the composite instance ID and ECID. From there, they can diagnose the issue in Fusion Applications Control. Usually, the primary key information is written to the logs in case of any error/incident/message level.

Cross layer, server, and family functionality are all designed to be correlated through the ECID. For example, you can look up the composite instance for a given expense report by correlating all the log entries with the ECID associated with that expense report transaction.

During a specific time interval, you may create several hundred instances., This is a fairly common use case. If there is no error, or if the application has not implemented a BPEL process with sensor logging (should not be common), then instead of searching for the primary key, perform one of the following tasks:

- Try using the approximate timestamp of the transaction.
- Inspect the input payload of the audit trail flow (until you find the right one) to identify the right composite.

Any extensions/customizations are also expected to log the same context-specific keys. You can set `AF_LOG` and `AF_LOG_MODULE` properly (such as setting log channel levels) to specify finer-grained logging from a particular family/logical business area (LBA)/composite.

11.3.2 Business Event Subscriptions Are Not Firing

Problem

When a business event is published, the business event subscription defined in the composite does not fire and a composite instance is not created.

This can occur, for example, with an ADF application invoking a SOA composite.

Solution

To resolve this problem.

1. Enable EDN logging in Fusion Applications Control. The following server loggers specific to EDN are available for selection:
 - `oracle.integration.platform.blocks.event`
 - `oracle.integration.platform.blocks.event.saq`
 - `oracle.integration.platform.blocks.event.jms`

Note that `oracle.integration.platform.blocks.event.jms` only appears if EDN is running in EDN-JMS mode instead of the default EDN-DB mode.

You can set the server loggers to one of the following levels:

- `TRACE:1 (FINE)`
- `TRACE:16 (FINER)`
- `TRACE:32 (FINEST)`

You can alternately use selective tracing to get detailed, on-disk trace selectively (for example, by user name, thereby eliminating trace output for other users). See [Section 11.2](#) for details.

Detailed logging goes into SOA server's `diagnostic.log` file configured in Fusion Applications Control. To set the log level for the loggers:

- a. Go to the navigation pane.
- b. Right-click **soa-infra**.
- c. Choose **Logs > Log Configuration**.
- d. Expand **oracle.integration > oracle.integration.platform > oracle.integration.platform.blocks > oracle.integration.platform.blocks.event**.
- e. Set the loggers described in step 1 to an appropriate logging level.

The following sample shows a portion of a server log file:

```
[2011-03-22T11:52:37.038-07:00] [soa_server1] [TRACE] [SOA-31010]
[oracle.integration.platform.blocks.event.saq] [tid:
weblogic.work.j2ee.J2EEWorkManager$WorkWithListener@96bab0] [userId:
<anonymous>] [ecid:
5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83,0:1:100000140]
[SRC_CLASS:
oracle.integration.platform.blocks.event.saq.SAQBusinessEventBusMessages]
[APP: soa-infra] [composite_name: MediatorPubSub] [component_name:
PublishEvent] [component_instance_id: 8E0411C054B511E0AF455DABE1395E7B] [SRC_
METHOD: fineDequeuedEvent] [composite_instance_id: 90087] Dequeued event,
Subject: null [source type "J"]:[[
  <business-event
xmlns:ns="http://schemas.oracle.com/events/edl/MyEventDefn"
xmlns="http://oracle.com/fabric/businessEvent">
  <name>ns:MyEvent</name>
  <id>a7ae9d28-9530-4049-8385-e0ebfb0eea50</id>

<source>default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/PublishEvent</source>
  <tracking>
    <ecid>5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83</ecid>
    <compositeInstanceId>90087</compositeInstanceId>
  <parentComponentInstanceId>mediator:8E0411C054B511E0AF455DABE1395E7B</parentCom
ponentInstanceId>
  </tracking>
  <content>
    <inpl:singleString
xmlns:inpl="http://xmlns.oracle.com/singleString">P0123</inpl:singleString>
    </content>
  </business-event>

]]
[2011-03-22T11:52:37.042-07:00] [soa_server1] [TRACE] [SOA-31011]
[oracle.integration.platform.blocks.event.saq] [tid:
weblogic.work.j2ee.J2EEWorkManager$WorkWithListener@96bab0] [userId:
<anonymous>] [ecid:
5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83,0:1:100000140]
[SRC_CLASS:
oracle.integration.platform.blocks.event.saq.SAQBusinessEventBusMessages]
[APP: soa-infra] [composite_name: MediatorPubSub] [component_name:
PublishEvent] [component_instance_id: 8E0411C054B511E0AF455DABE1395E7B] [SRC_
```

```

METHOD: fineFilterResults] [composite_instance_id: 90087] Filter [XPath Filter:
/be:business-event/be:content/ns1:singleString = 'P0123'] for subscriber
"default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/SubsEvent" returned true
. . .
. . .

```

2. Check whether bad composites exist in the SOA domain that slow down the overall EDN event delivery.

EDN internally uses two advanced queuing (AQ) queues in a serial processing fashion for all business events. One or more bad SOA composite applications that fail to consume certain types of events can slow down EDN delivery of all other event types and cause an event backlog in the AQ queues.

- a. Check if there are repeated errors from bad SOA composite applications in the SOA server log with EDN logging enabled. Even if the errors are in completely separate SOA composite applications that are unrelated to the event types of interest, it can delay the overall delivery of events of interest to the target SOA composite applications.
- b. Check the event backlog count as detailed in Step d (events are stuck in advanced queue). Obtain the counts by running the following SQL queries (substitute *SOAINFRA-SCHEMA-USER* with the schema owner (for example, HCM_FUSION_SOAINFRA)).

```

SELECT COUNT(*) FROM SOAINFRA-SCHEMA-USER.EDN_OA00_DELIVERY_TABLE;
SELECT COUNT(*) FROM SOAINFRA-SCHEMA-USER.EDN_EVENT_QUEUE_TABLE;

```

If bad composites are found in Step a and large numbers of backlogged events occur in Step b, then proceed to c.

- c. Stop bad composites identified in Step a. This can be achieved from Oracle Enterprise Manager Fusion Middleware Control or the WLST command line utility.
- d. Temporarily increase the number of EDN threads to a larger number, (for example, from 3 to 5 or 7) to clear up the backlogged events faster.

To change the number of EDN threads through the configuration of the **EDNConfig** MBean in Oracle Enterprise Manager Fusion Middleware Control:

- a. Go to the navigation pane.
- b. Right-click **soa-infra**.
- c. Select **SOA Infrastructure > Administration > System MBean Browser**.
- d. Expand **Application Defined MBeans > oracle.as.soainfra.config > Server: soa_server-x > EDNConfig > edn**.
- e. Change the value for the **NumberOfThreads** attribute, and click **Apply**.

If you do not care about backlog event processing, you can purge the backed up events directly in AQ. The purge script is as follows:

```

DECLARE
    purge_options dbms_aqadm.aq$_purge_options_t;
BEGIN
    purge_options.block := FALSE;
    DBMS_AQADM.PURGE_QUEUE_TABLE(
        queue_table => '&edn_user..edn_event_queue_table',
        purge_condition => NULL,

```

```

        purge_options => purge_options);
DBMS_AQADM.PURGE_QUEUE_TABLE(
    queue_table => '&edn_user..edn_oaoo_delivery_table',
    purge_condition => NULL,
    purge_options => purge_options);
END;
/
commit;

```

- e. Periodically monitor the EDN backlog count (see Step b) to confirm that it is being reduced. If the clear-up rate is very slow, you can further increase the EDN thread number (see Step d).
 - f. Continue to monitor the EDN backlog count over a period of time. Also monitor the recent instances and faults in Oracle Enterprise Manager Fusion Middleware Control to see if composite instances are being created or new faults are showing up both across the board (that is, at SOA Infrastructure level) and for the composite of interest.
 - g. Once the backlog is cleared up, revert the number of EDN threads to the previous setting or an appropriate number.
 - h. Publish a business event of interest and verify that the target composite is triggered with expected instance creations.
3. Check whether the event publication is being delivered to the SOA cluster.

One way to do this is to use the log messages in Fusion Applications Control. The log messages include information about the incoming events and the event subject and payload. Before you can view the event information in the log messages, you must first set the **oracle.integration.platform.blocks.event** logger to **TRACE:32 (FINEST)**, as described in step 1, and then raise the event again. To search for the event-related messages:

- a. Right-click **soa-infra**, and choose **Logs > View Log Messages**.
- b. Specify the date range.
- c. In the **Message Types** section, select the **Notification** and **Trace** checkboxes.
- d. To search for all events delivered to the SOA cluster, specify **Message contains Dequeued** event as the search criteria, and click **Search**.

The subject associated with the event is displayed in the **Message** field and the business event namespace and local name, payload, ECID, and message details are displayed in the **Supplemental Detail** field.

- e. To search for a particular event by event name, click **Add Fields**.
- f. Select **Supplemental Detail**, and click **Add**.
- g. Specify that **Supplemental Detail contains** either the event namespace or event local name as the search criteria.
- h. Click **Search**.
- i. Use additional information such as the time interval or data in the payload to identify the specific event message of interest.

The log message is generally a good way to identify whether the issue is with the publisher or subscriber. For example, if the subject is missing or the `fmw-context` is missing, it typically means there is an issue with the publisher. If the information reported in the log message is correct, then it typically means there is a problem with the subscriber.

If you see the Dequeued event log message for your business event, then go to step 10.

If you do not see the Dequeued event log message, there may be issues with the following:

For This Issue...	See...
EDN is in paused mode and temporarily stopped delivering events to its subscribers.	Step 4
Events are stuck in the advanced queue.	Step 5
More than one SOA cluster is pointing to the same advanced queue.	Step 6
There are internal SOA issues in the database layer.	Step 7
The data source is configured to point to the wrong SOAINFRA schema.	Step 8
There are issues with the Java, SOA, or PL/SQL code raising the event.	Step 9

4. When patches are applied to the SOA cluster, EDN is automatically placed in paused mode to prevent delivery of events during patching. After patching is complete, EDN exits paused mode and resumes event processing. When a patch fails, EDN may remain in paused mode to prevent event subscriptions from firing after the failure. Follow these steps to identify if EDN is in paused mode, and restart it:
 - a. From the navigation pane, expand **SOA** and right-click **soa-infra**.
 - b. Choose **Administration > System MBean Browser**.
 - c. Go to **Application Defined MBeans > oracle.as.soainfra.config > Server: SOA_cluster_name > EDNConfig > edn**.
 - d. In the **Attributes** column, locate the **Paused** property.
 - e. If **Paused** is set to **true**, the listener threads are decreased to zero, which temporarily stops event delivery.
 - f. To restart event delivery, select **false**.
 - g. Click **Apply**.
5. At times, the message may be stuck in the advanced queue in different stages of delivery. Check the count of (potentially stuck) events currently in the following queue tables:
 - **EDN_EVENT_QUEUE_TABLE**: Every event published is temporarily enqueued into this table (for `edn_event_queue`).
 - **EDN_OA00_DELIVERY_TABLE**: Only events with a one-and-only-one (OA00) delivery target(s) are temporarily enqueued into this table (for `edn_oa00_queue`).

You can also check the count in the `edn-db-log`. The total number of messages in the `EDN_EVENT_QUEUE_TABLE` and `EDN_OA00_DELIVERY_TABLE` are displayed at the top of the page.

- a. Navigate to the following URL to see the total number of messages at the top of the page:

`http://host_name:port/soa-infra/events/edn-db-log`

You do not need to enable the `edn-db-log` to view these messages.

6. There may be more than one SOA cluster pointing to the same `SOAINFRA` schema. This is highly unlikely in a provisioned environment, but for environments that are created by developers, it may be an issue. In this case, the expected SOA runtime environment may not be receiving the events properly. It is expected that only one SOA runtime environment listens for business events on a `SOAINFRA` schema. Use the following query to identify the list of SOA runtime environments subscribing to business events from a `SOAINFRA` schema. Have only the required SOA runtime environment up, which points to the `SOAINFRA` schema, and shut down the others.

- a. Navigate to the `edn-db-log` to see log messages that display each SOA cluster that is connecting to the EDN advanced queue:

```
http://host_name:port/soa-infra/events/edn-db-log
```

You do not need to enable the `edn-db-log` to view these messages. The messages continue to be displayed in the `edn-db-log` until the next time you click the **Clear** link. Here is a sample message that you see in the `edn-db-log`:

```
Starting EDN bus. Timestamp=Wed Feb 23 10:11:26 PST 2011.
Parameters: platform="weblogic", cluster="", server="soa_server1",
domain="fusion_domain", admin server="AdminServer", host="adc2180440".
```

- b. Alternatively, you can run the following `select` statement against the `SOAINFRA` schema. For example, use `FIN_FUSION_SOAINFRA` for the SOA cluster in the Financials domain.

```
select * from V$SESSION where username like 'family_FUSION_SOAINFRA';
```

7. Verify that the event is properly being enqueued and dequeued by the underlying EDN PL/SQL procedures. You can do this using the `edn-db-log` that displays all events, including their namespace, names, payload, and subject, which are enqueued and dequeued by the PL/SQL EDN procedures.

- a. Navigate to the following URL:

```
http://host_name:port/soa-infra/events/edn-db-log
```

- b. Click the **Enable** link.
c. Raise the business event again.
d. Click the **Refresh** link.

Note:

- You must have the administrator privilege to enable/disable the `edn-db-log`.
 - You must always disable the `edn-db-log` after debugging to disable logging. This prevents excessive database growth in the EDN database log table. If the `edn-db-log` remains enabled, then debugging messages related to events that are published/enqueued into the database and subscribed to/dequeued from the database continue to be persisted into certain EDN database log tables. This causes the table to grow indefinitely.
-
-

8. The `EDNSource` and `EDNLocalTxSource` data sources may be pointing to a different database than the `EDNDataSource` and `EDNLocalTxDataSource` data source

connections of the SOA server. Ensure that these four data source connections on ADF and the SOA server are pointing to the same database schema.

Check or set the data sources in the Oracle WebLogic Server Administration Console:

- a. In the **Domain Structure**, select **Services > Data Sources**.
 - b. In the **Name** column of the table, select *data_source_name*.
The connection pool and driver name are only available for generic data sources, and not for multidata sources.
 - c. Select the **Connection Pool** tab.
 - d. In the **Driver Class Name** field, set the data source.
9. Check the log files in Fusion Applications Control for the code that raises the event to see if there were failures in raising the event or failures in the code that prevented the event from being raised.

For ADF, check the log files. Look for the ECID corresponding to the business key (for example, purchase order).

To enable event-related log messages in the server running the ADF application that raises the event, set the log level for the **oracle.integration.platform.blocks.event** logger to **TRACE (32)** on that server.

10. By the time you reach this step, you have confirmed that the business event is properly delivered to the SOA cluster. To identify whether any composite instances were created, perform the following steps:
- a. Because the ECID is different for a subscription with a guaranteed consistency level and a subscription with an OAOO level defined for the same event, you must first identify the consistency level for the event subscription. To do this, right click **soa-infra**, choose **Business Events**, and click the **Subscriptions** tab. Find the composite that subscribes to the business event in the **Components Subscriptions** table and get the value from the **Consistency Level** column.
 - b. If the value is set to **Guaranteed**, then get the ECID from the Dequeued event log message.
 - c. If the value is set to **One And Only One**, then search for the log message with **Message contains Dequeued OAOO event** as criteria and use the ECID from that message.
 - d. Locate the composite instance by right-clicking **soa-infra**, selecting the **Instances** tab, entering the ECID in the search criteria, and clicking **Search**.

If you see composite instances, then continue to step 13.

If you do not see any composite instances, this may be due to the following issues:

- There are issues with the subscription logic in the composite, possibly a mismatch in the event namespace or event name or error in the filter logic. See step 11.
 - There may be a SOA issue. See Step 12.
11. If a filter is being used, there may be an issue with the filter logic. Use Fusion Applications Control to review the event subscriptions and filters defined for the composite and the payload content.
- a. Log in to Fusion Applications Control in the domain where the composite with the subscription is deployed.

- b. Navigate to *domain_name* > SOA.
- c. Right-click *soa-infra* (*SOA_cluster_name*), and choose **Business Events**.
- d. Click the **Subscriptions** tab.
- e. Review the information in the **Event Name**, **Namespace**, and **XPath Filter** columns of the **Component Subscriptions** table.

Alternatively, you can also check the SOA server `diagnostic.log` file for filter-related logging. You must set the log level to at least **TRACE:1 (FINE)** for the **oracle.integration.platform.blocks.event.saq** logger. The following is an example log message that has the following statement pattern: `Filter [XPath Filter: ...]` for subscriber `"..."` returned `true/false`.

```
[2011-03-22T11:52:36.976-07:00] [soa_server1] [TRACE] [SOA-31011]
[oracle.integration.platform.blocks.event.saq] [tid:
[ACTIVE].ExecuteThread: '2' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: <anonymous>] [ecid:
5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-00000000000c2b83,0:1] [SRC_
CLASS:
oracle.integration.platform.blocks.event.saq.SAQBusinessEventBusMessages]
[WEBSERVICE_PORT.name: execute_pt] [APP: soa-infra] [composite_name:
MediatorPubSub] [component_name: PublishEvent] [component_instance_id:
8E0411C054B511E0AF455DABE1395E7B] [J2EE_MODULE.name: fabric] [SRC_METHOD:
fineFilterResults] [WEBSERVICE.name: PublishEvent_ep] [J2EE_APP.name:
soa-infra] [composite_instance_id: 90087] Filter [XPath Filter:
/be:business-event/be:content/ns1:singleString = 'P0123'] for subscriber
"default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/SubsEvent" returned true
```

12. Check the SOA diagnostic log for stack traces related to the issue. For example, the SOA instance may have been rolled back due to an error.
13. By the time you reach this step, you have confirmed that the business event has been delivered to the SOA cluster and a composite instance has been created. However, you may be encountering issues with the composite components:
 - If you see a composite instance, but not a BPEL instance, check if the BPEL process can be executed independently by a client, as opposed to the event subscription.
 - If you see a composite instance, but not a BPEL instance, this symptom may indicate a stuck thread on a service call. In this scenario, the BPEL process service engine is hung on a service call and has not created the audit trail. To verify the behavior, take three thread dumps approximately 30 seconds apart on all servers in the cluster. See [Table 11-2](#) for more information on taking thread dumps. If the same thread shows it is stuck after the three thread dumps (that is, after 1.5 minutes), the thread is stuck. In this case, wait for the call to time out, which then enables you to recover the instance.
 - If the audit trail shows the following message:

```
Invoked 1-way operation "initiate" on target service service_name
```

There may be an issue with an incorrect driver type for the data sources. Note that the driver XA configuration should already be created by the SOA/provisioning template. If the driver type is changed or is not set properly, routing from Oracle Mediator does not occur. Instead, it tries to route and fails several times. This can be confirmed by instances in Fusion Applications Control. As per Oracle Fusion Applications standards, the

SOADataSource and EDNDataSource data sources should use the XA driver type; that is:

- EDNDataSource: oracle.jdbc.xa.client.OracleXADataSource
- SOADataSource: oracle.jdbc.xa.client.OracleXADataSource

The following documentation provides additional information about the topics discussed in this section:

- For more information about setting logging levels for Oracle SOA Suite, see the "Setting Logging Levels for Troubleshooting" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.
- For more information about data sources, see the "Configuring the SOA Infrastructure" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.3.3 Long Delays After an Event is Published and Before a Subscriber is Triggered

Problem

After a business event is published, there is a long delay (minutes, hours, or even days) before the event subscriber is triggered and its composite instance is created.

This can occur, for example, with an ADF application invoking a SOA composite.

Solution

To resolve this problem, perform the following steps.

1. Enable EDN logging in Fusion Applications Control. The following server loggers specific to EDN are available for selection:
 - **oracle.integration.platform.blocks.event**
 - **oracle.integration.platform.blocks.event.saq**
 - **oracle.integration.platform.blocks.event.jms**

Note that **oracle.integration.platform.blocks.event.jms** only appears if EDN is running in EDN-JMS mode, instead of the default EDN-DB mode.

2. Set the server loggers to one of the following levels:
 - **TRACE:1 (FINE)**
 - **TRACE:16 (FINER)**
 - **TRACE:32 (FINEST)**

You can alternately use selective tracing to selectively get a detailed, on-disk trace (for example, by user name, thereby eliminating trace output for other users). See [Section 11.2](#) for details.

Detailed logging goes into the server's `diagnostic.log` file configured in Fusion Applications Control.

3. Set the log level for the loggers.
 - a. Go to the navigation pane.
 - b. Right-click **soa-infra**.
 - c. Select **Logs > Log Configuration**.

- d. Expand `oracle.integration > oracle.integration.platform > oracle.integration.platform.blocks > oracle.integration.platform.blocks.event`.
- e. Set the loggers described in step 1 to an appropriate logging level.

The following sample shows a portion of a server log file:

```
[2011-03-22T11:52:37.038-07:00] [soa_server1] [TRACE] [SOA-31010]
[oracle.integration.platform.blocks.event.saq] [tid:
weblogic.work.j2ee.J2EEWorkManager$WorkWithListener@96bab0] [userId:
<anonymous>] [ecid:
5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83,0:1:10000140]
[Src_CLASS:
oracle.integration.platform.blocks.event.saq.SAQBusinessEventBusMessages]
[APP: soa-infra] [composite_name: MediatorPubSub] [component_name:
PublishEvent] [component_instance_id: 8E0411C054B511E0AF455DABE1395E7B]
[Src_
METHOD: fineDequeuedEvent] [composite_instance_id: 90087] Dequeued event,
Subject: null [source type "J"]:[[
  <business-event
xmlns:ns="http://schemas.oracle.com/events/edl/MyEventDefn"
xmlns="http://oracle.com/fabric/businessEvent">
  <name>ns:MyEvent</name>
  <id>a7ae9d28-9530-4049-8385-e0ebfb0eea50</id>
  <source>default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/PublishEvent</source>
  <tracking>
  <ecid>5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83</ecid>
  <compositeInstanceId>90087</compositeInstanceId>
  <parentComponentInstanceId>mediator:8E0411C054B511E0AF455DABE1395E7B</paren
tCom
ponentInstanceId>
  </tracking>
  <content>
  <inpl:singleString
xmlns:inpl="http://xmlns.oracle.com/singleString">P0123</inpl:singleString>
  </content>
</business-event>
  ]]
[2011-03-22T11:52:37.042-07:00] [soa_server1] [TRACE] [SOA-31011]
[oracle.integration.platform.blocks.event.saq] [tid:
weblogic.work.j2ee.J2EEWorkManager$WorkWithListener@96bab0] [userId:
<anonymous>] [ecid:
5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83,0:1:10000140]
[Src_CLASS:
oracle.integration.platform.blocks.event.saq.SAQBusinessEventBusMessages]
[APP: soa-infra] [composite_name: MediatorPubSub] [component_name:
PublishEvent] [component_instance_id: 8E0411C054B511E0AF455DABE1395E7B]
[Src_
METHOD: fineFilterResults] [composite_instance_id: 90087] Filter [XPath
Filter:
/be:business-event/be:content/ns1:singleString = 'P0123'] for subscriber
"default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/SubsEvent" returned true
. . .
. . .
```

4. Find out when the event is published, dequeued, and sent to the subscriber by EDN.

Use the Java logging in step 1 to identify the timestamps of event publishing, dequeuing, and sending to the subscriber. From these timestamps, you can identify if the delay is on the publishing side or the EDN delivery side.

To search for the event-related messages in the log messages.

- a. Right-click **soa-infra**.
- b. Select **Logs > View Log Messages**.
- c. Specify the date range.
- d. To search for all events delivered to the SOA cluster, specify **Message contains** Dequeued event as the search criteria, and click **Search**.

The subject associated with the event is displayed in the **Message** field and the business event namespace and local name, payload, ECID, and message details are displayed in the **Supplemental Detail** field.

- e. To search for a particular event by event name, click **Add Fields**.
- f. Select **Supplemental Detail**, and click **Add**.
- g. Specify that **Supplemental Detail** contains either the event namespace or the event local name as the search criteria.
- h. Click **Search**.
- i. Use additional information such as the time interval or data in the payload to identify the specific event message of interest.

The following sample shows a portion of a server log file containing information about event publishing with a timestamp of 2011-03-22T11:52:36.968-07:00.

```
[2011-03-22T11:52:36.968-07:00] [soa_server1] [TRACE] [SOA-31000]
[oracle.integration.platform.blocks.event.saq] [tid:
[ACTIVE].ExecuteThread: '2' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: <anonymous>] [ecid:
5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83,0:1] [SRC_
CLASS:
oracle.integration.platform.blocks.event.saq.SAQBusinessEventBusMessages]
[WEBSERVICE_PORT.name: execute_pt] [APP: soa-infra] [composite_name:
MediatorPubSub] [component_name: PublishEvent] [component_instance_id:
8E0411C054B511E0AF455DABE1395E7B] [J2EE_MODULE.name: fabric] [SRC_METHOD:
fineEventPublished] [WEBSERVICE.name: PublishEvent_ep] [J2EE_APP.name:
soa-infra] [composite_instance_id: 90087] Received event: Subject: null
Sender: default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/PublishEvent
Event: [[
<business-event xmlns:ns="http://schemas.oracle.com/events/edl/MyEventDefn"
xmlns="http://oracle.com/fabric/businessEvent">
  <name>ns:MyEvent</name>
  <id>a7ae9d28-9530-4049-8385-e0ebfb0eea50</id>
  <tracking>
  <ecid>5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83</ecid>
    <compositeInstanceId>90087</compositeInstanceId>

  <parentComponentInstanceId>mediator:8E0411C054B511E0AF455DABE1395E7B</paren
tComponentInstanceId>
  </tracking>
  <content>
    <inpl:singleString
```

```

xmlns:inp1="http://xmlns.oracle.com/singleString">P0123</inp1:singleString>
</content>
</business-event>

]]

```

The following sample shows a portion of a server log file containing information about an event dequeued by EDN with a timestamp of 2011-03-22T11:52:37.038-07:00.

```

[2011-03-22T11:52:37.038-07:00] [soa_server1] [TRACE] [SOA-31010]
[oracle.integration.platform.blocks.event.saq] [tid:
weblogic.work.j2ee.J2EEWorkManager$WorkWithListener@96bab0] [userId:
<anonymous>] [ecid:
5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83,0:1:10000140]
[Src_CLASS:
oracle.integration.platform.blocks.event.saq.SAQBusinessEventBusMessages]
[APP: soa-infra] [composite_name: MediatorPubSub] [component_name:
PublishEvent] [component_instance_id: 8E0411C054B511E0AF455DABE1395E7B]
[Src_METHOD: fineDequeuedEvent] [composite_instance_id: 90087] Dequeued
event, Subject: null [source type "J"]:[[
<business-event xmlns:ns="http://schemas.oracle.com/events/edl/MyEventDefn"
xmlns="http://oracle.com/fabric/businessEvent">
  <name>ns:MyEvent</name>
  <id>a7ae9d28-9530-4049-8385-e0ebfb0eea50</id>

  <source>default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/PublishEvent</source>
  <tracking>
    <ecid>5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83</ecid>
    <compositeInstanceId>90087</compositeInstanceId>
    <parentComponentInstanceId>mediator:8E0411C054B511E0AF455DABE1395E7B
  </parentComponentInstanceId>
  </tracking>
  <content>
    <inp1:singleString
xmlns:inp1="http://xmlns.oracle.com/singleString">P0123</inp1:singleString>
    </content>
  </business-event>

]]

```

The following sample shows a portion of a server log file containing information of an event sent to a subscriber by EDN with a timestamp of 2011-03-22T11:52:37.150-07:00.

```

[2011-03-22T11:52:37.150-07:00] [soa_server1] [TRACE] [SOA-31033]
[oracle.integration.platform.blocks.event.saq] [tid:
weblogic.work.j2ee.J2EEWorkManager$WorkWithListener@b402db] [userId:
<anonymous>] [ecid:
5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-0000000000c2b83,0:1:10000141]
[Src_CLASS:
oracle.integration.platform.blocks.event.saq.SAQBusinessEventBusMessages]
[APP: soa-infra] [Src_METHOD: fineSentOAOOEvent] Sent OAOO event [QName:
"{http://schemas.oracle.com/events/edl/MyEventDefn}MyEvent" to target:
"default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/SubsEvent"]:[[
<business-event xmlns:ns="http://schemas.oracle.com/events/edl/MyEventDefn"
xmlns="http://oracle.com/fabric/businessEvent">
  <name>ns:MyEvent</name>

```

```

    <id>a7ae9d28-9530-4049-8385-e0ebfb0eea50</id>
<source>default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/default/MediatorPubSub!2.0*soa_
58454bff-3b36-4e29-a883-949085d85719/PublishEvent</source>
<tracking>
<ecid>5fc0ca821d51e919:3d214296:12ebaa2c996:-8000-00000000000c2b83</ecid>
    <compositeInstanceId>90087</compositeInstanceId>

<parentComponentInstanceId>mediator:8E0411C054B511E0AF455DABE1395E7B</paren
tComponentInstanceId>
</tracking>
<content>
    <inpl:singleString
xmlns:inpl="http://xmlns.oracle.com/singleString">P0123</inpl:singleString>
    </content>
</business-event>
]]

```

5. If the delay comes from the event publishing side, then check the following:
 - a. If you use the remote EDN API to publish events from, for example, an ADF component to the SOA server, and you use the following event connection factory lookup code:

```

BusinessEventConnectionFactory BusinessEventConnectionFactorySupport.
findRelevantBusinessEventConnectionFactory(boolean forceRetry)

```

You may need to set the `forceRetry` parameter to `true` to cache the `BusinessEventConnectionFactory` object after it is found, and avoid forced retries of JNDI lookups that can cause a significant delay.
 - b. If you publish multiple events with a loop statement in a batch fashion, you may need to move the above event connection factory lookup outside the loop to avoid a lookup per event.
6. If the delay comes from event dequeuing after the event is published, then check the following:

Ensure That...	Description
The SOA server is up running, and EDN has been configured with the correct amount of dequeuer threads through an <code>EDNConfig</code> MBean.	<p>To examine the configuration of the <code>EDNConfig</code> MBean in Fusion Applications Control:</p> <ol style="list-style-type: none"> 1. Go to the navigation pane. 2. Right-click soa-infra. 3. Select SOA Infrastructure > Administration > System MBean Browser. 4. Expand Application Defined MBeans > oracle.as.soainfra.config > Server: soa_server-x > EDNConfig > edn. 5. Ensure that the NumberOfThreads attribute (for EDN dequeuer threads) is set to an appropriate number (the default is 3). <p>Set the number of EDN dequeuer threads (the default is 3) to a value that matches the number of events published. If there are a large number of events published, then you may need to increase this number to avoid a bottleneck of events dequeuing. Note that the EDN dequeuer threads come from a thread pool that is provided by the SOA server and shared with other SOA processes. Therefore, when you increase the number of EDN dequeuer threads, you may potentially impact server performance for other SOA functionality.</p>
The backing store of EDN is functioning properly.	For example, if the backing store of EDN is Oracle AQ, and there are a significant amount of dead events stuck in the AQ that are not cleared, then event dequeuing by EDN may slow down significantly.

7. If the delay comes from event consumption by its subscriber after the event is dequeued, then check the following:
 - a. Ensure that all the event subscribing components such as Oracle Mediator or a BPEL process can consume and process the event within the expected time frame. If not, investigate why there is a delay.
 - b. If the event delivery is configured with an OAOO delivery guarantee, then EDN delivers the event to its subscriber in a global transaction context with built-in retry logics, should the transaction fail to commit. Retries may delay overall event processing. If the transaction fails to commit, ensure that you research the root cause of transaction failure.

For more information about setting logging levels for Oracle SOA Suite, see the "Setting Logging Levels for Troubleshooting" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.3.4 Events Are Consumed by Multiple Revisions of the Same Composites

Problem

Events are consumed by multiple revisions of the same composites.

Solution

By design, different composites can subscribe to the same event. However, it is an error if multiple revisions of the same composite subscribe to the same event. This

occurs when you have multiple active versions of the composite that may be a result of a patch failure.

Perform the following steps to identify whether there are multiple, active revisions of the same composite and to retire the composite revision that should not be active:

1. Go to Fusion Applications Control.
2. Click **SOA > soa-infra**.
In the **Deployed Composites** section of the **Dashboard** tab, you see a list of deployed composite names, revisions, and modes (for example, active).
3. Identify composites with the same name and with an active mode, but with different revisions.
4. Click the composite revision that should not be active.
5. Click the **Retire** button.

11.3.5 Rolled Back OAOO Event Delivery Messages Are Displayed in the Log Files

Problem

If the Java debug level is set to **TRACE:16 (FINER)** or a lower value, you may see log messages such as the following:

```
Began XA for OAOO  
Rolled back XA for OAOO
```

Solution

These are normal messages of OAOO event delivery when there are no events waiting to be delivered. These are *not* error conditions. You can turn off these messages by setting the Java logging level to **TRACE:1 (FINE)** or a higher value.

11.3.6 Application Transaction Does Not Complete and the Underlying Composite Is Stuck in a Running State

Problem

An application transaction is not completing. For example, a purchase order status may remain processing. Checking the composite instance shows that the composite is stuck in the running state. In this case, the component is probably not running. Instead, it has likely faulted and may need recovery.

Faults may occur for various reasons:

- A BPEL activity faulted with an error (for example, a business error, security authorization error, or some other error).
- A BPEL activity invoked an external web service that was unavailable.
- A BPEL activity has already been terminated by the administrator using Fusion Applications Control.
- A BPEL activity invoked an asynchronous ADF service and the message is stuck in the AQ/JMS queue.
- A BPEL activity invoked an asynchronous ADF service, but because SOA was unavailable, the callback message did not arrive.

- A BPEL activity invoked a synchronous ADF service, which is taking a long time (or is hanging).
- A network error occurred.

Solution

1. Log in to Fusion Applications Control.
2. In the navigator pane, go to *domain_name* > **SOA**.
3. Click **soa-infra (SOA_cluster_name)**.
4. Click the **Instances** tab.
5. Search for the composite instance, and click the instance ID.

The Flow Trace page appears.

If the instance is not visible (and the **Audit Level** is not set to **Off** in the SOA Infrastructure Common Properties page), this implies that the message is stuck outside of SOA. Check the ADF log (if invoked through an ADF service) to find out if it is stuck in the AQ/JMS queue.

If the message has reached Oracle Mediator, but not instantiated the BPEL flow, the BPEL instance may have been rolled back from the start due to an error.

If the BPEL flow exists, the **Faults** section of the Flow Trace page typically shows the faulted service that can trace the root cause.

6. In the **Trace** section, click the BPEL process.
7. Expand the BPEL audit trail to see the exact point at which the service faulted.

This information is also available in the **Faults** tab of the BPEL flow trace. It also indicates whether the fault can be recovered.

8. Click the **View Raw XML** link.

The same information is also available through this link, where you can see the error. For example:

```
...
<message>Faulted while invoking operation "modifyUserRoles" on provider
  "UserService". </message><details>
...
<tns:message>JBO-27023: Failed to validate all rows in a
  transaction.</tns:message>
<tns:severity>SEVERITY_ERROR</tns:severity>
...
<message>The transaction was rolled back. The work performed for bpel instance
  "451042" was rolled back to the previous dehydration point, but the audit
  trail has been saved.
You can recover the instance from the recovery console by resubmitting the
  callback message or activity for execution.</message>
```

Since the instance was rolled back to its previous dehydration point, the status remains as **Running**.

9. In the **Audit Trail** and **Faults** tabs, make a note of the following:
 - Composite name (for example, **HcmUsersSpmlComposite**)
 - Component (for example, **UpdateGuid** BPEL process)
 - BPEL instance ID (for example, **bpel:451042**)

This is all used in the recovery of the instance, if it is recoverable. Note that the audit trail window may mark the error as a nonrecoverable business fault, but the recoverability of the message can be found in the **Recovery** tab of the BPEL process service engine.

10. To attempt to recover the instance, right-click **soa-infra** (*SOA_cluster_name*), and choose **Service Engines > BPEL**.
11. Click the **Recovery** tab.
12. From the **Type** list, select **Activity**.
13. Specify the composite and component names captured in step 9, and click **Search**.
14. Find the specific BPEL instance ID. You can recover faults marked as **Recoverable**.
15. Check the other recovery options in the **Type** list (for example, **Invoke** and **Callback**), if they exist.

Note: You can also search for recoverable messages from the **Faults and Rejected Messages** tab of the SOA Infrastructure by clicking the message and selecting the appropriate action from the **Recovery Actions** list.

16. If the instance is not marked as recoverable, then reinvoking the service is not allowed (most probably because it is not idempotent). In some cases, you may need to provide diagnostic information to Oracle Support Services to resolve issues with nonrecoverable, nonidempotent transactions.
17. If the BPEL activity has invoked an asynchronous ADF service and the message is stuck in the AQ JMS queue, you can view the *server.log* and *server-diagnostic.log* files to see the logging of the message metadata logged by the JRF web services infrastructure.

In addition, the ADF diagnostic logs are also available to debug, if needed.

- a. Use the ECID field to correlate and track ADF service logging corresponding with the SOA composite that invoked it.
- b. When viewing the log in Fusion Applications Control, click the **Broaden Target Scope** dropdown list and select the *farm_name/domain_name* (Oracle WebLogic Domain) to view messages across the domain.
- c. In the Log Messages page for the Oracle WebLogic Server domain, in the **Selected Targets** section, ensure that the search includes the **ECID** field with the value noted in step a and the **Component Name** field is set to **adf-bc**.
- d. Search and view log records for the Oracle Application Development Framework (Oracle ADF) Business Component (BC) and the ECID and note any issues.

For a specific ECID, you find several root instances (top level clients). You must drill down to the appropriate instance to find a specific fault.

- e. Observe if the Oracle ADF Business Components completed successfully or completed with an error. See the "Viewing and Searching Log Files" section in the *Oracle Fusion Middleware Administrator's Guide*.

For more details on diagnosing Oracle ADF-BC asynchronous web service calls, see [Section 11.3.7](#).

See the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite* for the various ways to recover transactions and messages:

- "Managing SOA Composite Application Instances" chapter to recover from the SOA composite application page in Fusion Applications Control.
- "Managing BPEL Process Service Components and Engines" chapter to recover from the BPEL process service component and BPEL process service engine message recovery pages.

11.3.7 BPEL Process Received No Response from an ADF Asynchronous Service

Problem

A BPEL activity has invoked an asynchronous ADF service and not received a response. The message may be stuck in the request or response queues.

Solution

1. Check if the reply address is valid, the server is running, and the name of the server and port match with the server on which the BPEL process is running.
2. Verify that the policy on the callback receive activity matches with the policy advertised in the WSDL for the response port type/binding.
3. Look at the `server-name_diagnostic.log` file and check for all status messages of the request.
 - a. Go to Fusion Applications Control.
 - b. Right-click **soa-infra**.
 - c. Choose **Logs > View Log Messages**.
 - d. Click **Target Log Files**.
 - e. Select the server diagnostic file to view, and click **View Log File**.

Note that every log contains the message ID and other details, such as ECID, that can help isolate it from other messages. After you find the message ID (that is, MessageID: urn:uuid:ac1a4a81-39df-45b1-a741-e16e752d5d33), search for the same ID in the log file. You should see messages such as the following for each successful asynchronous operation.

If the following log is not available, this means the asynchronous operation was never called on this server:

```
[2010-12-17T12:27:13.537-08:00] [AdminServer] [NOTIFICATION] []
[oracle.j2ee.ws.common.jaxws.JAXWSMessages]
[tid: [ACTIVE].ExecuteThread: '2' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: <anonymous>]
[ecid: 0000Inq0wfa76EwLHyo2yf1D2wUW000000,0:1]
[WEBSERVICE_PORT.name: AsyncEjbPort] [APP: AsyncEjb] [J2EE_MODULE.name:
AsyncEjb-ejb] [WEBSERVICE.name: AsyncEjbService] [J2EE_APP.name: AsyncEjb]
*[MessageID: urn:uuid:ac1a4a81-39df-45b1-a741-e16e752d5d33] Sending message
to JMS queue*
"oracle.j2ee.ws.server.async.NonDefaultRequestQueue" for async processing
of service "1d7551aa-73d9-4624-ad52-c15e35b5b25dRequest"
```

If the following log is not available, this means the asynchronous operation was never called on this server:

```

[2010-12-17T12:27:13.783-08:00] [AdminServer] [NOTIFICATION] []
  [oracle.j2ee.ws.common.jaxws.JAXWSMessages]
[tid: [ACTIVE].ExecuteThread: '2' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: <anonymous>]
[ecid: 0000Inq0wfa76EwLHyo2yf1D2wUW000000,0:1]
[WEBSERVICE_PORT.name: AsyncEjbPort] [APP: AsyncEjb] [J2EE_MODULE.name:
AsyncEjb-ejb] [WEBSERVICE.name: AsyncEjbService] [J2EE_APP.name: AsyncEjb]
*[MessageID: urn:uuid:ac1a4a81-39df-45b1-a741-e16e752d5d33] An asynchronous
request message is received*
and successfully recorded for service "AsyncEjbService" with a replyTo
address as
"http://adc2180314:7001/AsyncEjbCallback/AsyncEjbResponseImplService"

[2010-12-17T12:27:13.986-08:00] [AdminServer] [NOTIFICATION] []
  [oracle.j2ee.ws.common.jaxws.JAXWSMessages]
[tid: [ACTIVE].ExecuteThread: '0' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: weblogic]
[ecid: 0000Inq0wfa76EwLHyo2yf1D2wUW000000,0] [APP: AsyncEjb]
*[MessageID: urn:uuid:ac1a4a81-39df-45b1-a741-e16e752d5d33]
Startedasynchronous request processing for the service*
"AsyncEjbService" with the message selector
"1d7551aa-73d9-4624-ad52-c15e35b5b25dRequest". Transaction enabled: "true"

[2010-12-17T12:27:14.296-08:00] [AdminServer] [NOTIFICATION] []
  [oracle.j2ee.ws.common.jaxws.JAXWSMessages]
[tid: [ACTIVE].ExecuteThread: '0' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: weblogic]
[ecid: 0000Inq0wfa76EwLHyo2yf1D2wUW000000,0] [APP: AsyncEjb]
*[MessageID: urn:uuid:ac1a4a81-39df-45b1-a741-e16e752d5d33] Completed
asynchronous request processing. A response will be sent to the client.*

[2010-12-17T12:27:14.312-08:00] [AdminServer] [NOTIFICATION] []
  [oracle.j2ee.ws.common.jaxws.JAXWSMessages]
[tid: [ACTIVE].ExecuteThread: '2' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: weblogic]
[ecid: 0000Inq0wfa76EwLHyo2yf1D2wUW000000,0] [APP: AsyncEjb]
*[MessageID: urn:uuid:ac1a4a81-39df-45b1-a741-e16e752d5d33]
Startedasynchronous response processing for the service*
"AsyncEjbService" with the message selector
"1d7551aa-73d9-4624-ad52-c15e35b5b25dResponse".

[2010-12-17T12:27:15.018-08:00] [AdminServer] [NOTIFICATION] []
  [oracle.j2ee.ws.common.jaxws.JAXWSMessages]
[tid: [ACTIVE].ExecuteThread: '2' for queue: 'weblogic.kernel.Default
(self-tuning)'] [userId: weblogic]
[ecid: 77e271e3-afd5-48e8-a83d-9b326860f3f2-0000000000000018,0] [APP:
AsyncEjb] *[MessageID: urn:uuid:ac1a4a81-39df-45b1-a741-e16e752d5d33]
Completed asynchronous response processing successfully. Client must have
received the response by now.*

```

To monitor the traffic to the asynchronous ADF web services, monitor the Oracle AQ queues that are used for each family. The queue names for each family are shown in the following table:

Family AQ	Name
Oracle Fusion Customer Relationship Management Product	CRM_AsyncWS_Request and CRM_AsyncWS_Response

Family AQ	Name
Oracle Fusion Human Capital Management Product	HCM_AsyncWS_Request and HCM_AsyncWS_Response
Oracle Fusion Financials Product	FIN_AsyncWS_Request and Fin_AsyncWS_Response
Oracle Fusion Procurement Product	PRC_AsyncWS_Request and PRC_AsyncWS_Response
Oracle Fusion Project Product	PRJ_AsyncWS_Request and PRJ_AsyncWS_Response
Oracle Fusion Supply Chain Management Product	SCM_AsyncWS_Request and SCM_AsyncWS_Response
Oracle Fusion Setup Product	COMMON_AsyncWS_Request and COMMON_AsyncWS_Response
IC	IC_AsyncWS_Request and IC_AsyncWS_Response

For more information about the different types of loggers to set, see the "Setting Logging Levels for Troubleshooting" section of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.3.8 Business Event Is Picked Up Twice (Or More) By SOA Server

Problem

Business events are raised from Fusion J2EE applications and are picked up more than once. Expected behavior is that they should be picked up only once.

Solution

If a patch fails, it may be possible for two versions of a given composite to be active (that is, the older version has not been retired). When multiple versions of a composite are active, they all become subscribers and the event is picked up more than once. This should not happen under normal scenarios. Reapply the patch and ensure that the deployed composite only has one active version.

11.3.9 Long Running, Synchronous Calls To Remote Web Services Error Out or Asynchronous Transactions Return with an Error after a Long Time

Problem

Long running synchronous calls to remote web services end with JTA transaction rolled-back errors. When executing a transaction making an asynchronous call (for example, to the SOA server), the application returns with an error. Server logs show JTA transaction timeouts, which can cause this behavior.

Solution

Check the JTA transaction timeout in Oracle WebLogic Administration Console.

1. Log in to Oracle WebLogic Server Administration Console.
2. In the **Domain Structure**, select **Services > JTA** to check the timeout value.

If the transaction is always timing out beyond 30 seconds and is a custom composite synchronous client invocation, then you may need to revisit the design approach. It may be best for the external web service to be invoked as an asynchronous transaction.

Increasing the JTA for supporting long running synchronous transactions is simply an interim mechanism.

3. If synchronous client invocations to Oracle Fusion Applications code take a long time, check for any performance issues with the system and try to resolve them.
4. Check for appropriate values for the **syncMaxWaitTime** property and BPEL's EJB transaction timeout settings in relation to the JTA timeout settings and only then increase the value of the JTA timeout, if needed.
5. To view and change the BPEL EJB transaction timeout settings, perform the following steps:
 - a. Log in to Oracle WebLogic Server Administration Console.
 - b. In the **Domain Structure**, click **Deployments**.
 - c. Expand **soa-infra > EJBs**.
 - d. Update the following EJBs:
 - **BPELActivityManagerBean**
 - **BPELDeliveryBean**
 - **BPELDispatcherBean**
 - **BPELEngineBean**
 - **BPELFinderBean**
 - **BPELInstanceManagerBean**
 - **BPELProcessManagerBean**
 - **BPELSensorValuesBean**
 - **BPELServerManagerBean**
 - e. Click **Save**.
 - f. Restart Oracle WebLogic Server.
6. For asynchronous transactions, check the values for both the BPEL EJB transaction timeout and the JTA transaction timeout and adjust as needed.

The following documentation provides additional information about the topics discussed in this section:

- For information about changing the JTA transaction timeout setting, see the "Resolving Connection Timeouts" section of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.
- For information about viewing and changing the **syncMaxWaitTime** property, see the "Configuring BPEL Process Service Engine Properties" section of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.3.10 Some Messages Are Lost Between EDN and Composites or Composites Across Clusters

Problem

Messages primarily get lost for the following reasons:

1. The EDN message was not delivered.
2. The target asynchronous service did not respond.
3. The message was roll backed (though it was not lost; you still see it in Fusion Applications Control).

Solution

This issue typically requires you to identify where the messages are supposed to be and to diagnose the path.

- If the calling component is an ADF web service invoking a SOA composite, then check for any client errors in the ADF logs.
- Because ADF invokes SOA composites using EDN, check the JMS/AQ and XA data source configurations to ensure that events are being fired. For more information about EDN issues, see [Section 11.3.2](#).
- Check if the Oracle WSM Policy Manager security configurations allow the client to invoke the SOA composite.
- Verify that the transaction is not transient (nonpersistent).

Oracle BPEL Process Manager uses the dehydration store database to maintain long-running, asynchronous processes and their current state information in a database while they wait for asynchronous callbacks. Storing the process in a database preserves the process and prevents any loss of state or reliability if a system shuts down or a network problem occurs. There are two types of processes in Oracle BPEL Process Manager. These processes impact the dehydration store database in different ways.

- Transient processes: This process type does not incur any intermediate dehydration points during process execution. If there are unhandled faults or there is system downtime during process execution, the instances of a transient process do not leave a trace in the system. Instances of transient processes cannot be saved in-flight (whether they complete normally or abnormally). Transient processes are typically short-lived, request-response style processes. The synchronous process you design in JDeveloper is an example of a transient process.
- Durable processes: This process type incurs one or more dehydration points in the database during execution because of the following activities:
 - * Receive activity
 - * OnMessage branch of a pick activity
 - * OnAlarm branch of a pick activity
 - * Wait activity

Instances of durable processes can be saved in-flight (whether they complete normally or abnormally). These processes are typically long-living and initiated through a one-way invocation. Because of out-of-memory and system downtime issues, durable processes cannot be memory-optimized.

- If a composite instance is not visible in Fusion Applications Control and the SOA Infrastructure is running, check that the **Audit Level** is not set to **Off** in the SOA Infrastructure Common Properties page. This can be checked in Fusion Applications Control:
 1. Right-click **soa-infra** (*SOA_cluster_name*).

2. Choose **SOA Administration > Common Properties**.

- Check the ADF logs to see if there was a bad/malformed message or incorrect SOAP headers (if invoking from an external web service). The transaction may have rolled back before being dehydrated due to an internal error. Again, the SOA logs can identify the cause of this issue.
- If the composite instance is available, check the **bpel.config.oneWayDeliveryPolicy** BPEL property value. You can check the value in Fusion Applications Control:
 1. In the navigation pane, expand **soa-infra (SOA_cluster_name)**.
 2. Expand the partition, and select the composite.
The Dashboard page for the composite is displayed.
 3. In the upper right corner, click the **Show XML Definition** icon.
The contents of `composite.xml` for that composite are displayed.

If this is set to **async.cache**, you may lose messages. Set it to **async.persist** for reliable messages. This is typically specified in the BPEL process service component section of the `composite.xml` file, so this can be set for custom composites. If the value is not set in `composite.xml`, the value for **oneWayDeliveryPolicy** in the System MBean Browser in Fusion Applications Control is used. The following values are possible:

- **async.persist**: Messages are persisted in the database hash map.
- **async.cache**: Messages are stored in memory.
- **sync**: Direct invocation occurs on the same thread.

It is also possible that the transaction has invoked a target asynchronous service that has not responded back. In this case, the composite instance flow shows the call to the target asynchronous service.

- Check if the instance has rolled back and the message is in recovery.
 1. Log in to Fusion Applications Control.
 2. Right-click **soa-infra (SOA_cluster_name)**, and choose **Service Engines > BPEL**.
 3. Click the **Recovery** tab.

This may occur if any external references receiving the message are not reachable (for example, an external web service, enterprise applications such as Siebel, and so on).

The following documentation provides additional information about the topics discussed in this section:

- For information about **oneWayDeliveryPolicy** property settings, see the "Deployment Descriptor Properties" appendix and the "Transaction and Fault Propagation Semantics in BPEL Processes" chapter in the *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.
- For information about setting the **oneWayDeliveryPolicy** property in the System MBean Browser, see the "Configuring BPEL Process Service Engine Properties" section of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.3.11 Some Composites Are Being Retried Multiple Times on Failure

Problem

When a BPEL process flow errors out, it is retried with all its invocations. This is undesirable in some cases.

Solution

The property **GlobalTxMaxRetry** (default value is 3) specifies how many retries are performed if an error is identified as a retrievable one. For example, after several web service invocations, if dehydration fails due to a data source error, then this is identified as a retrievable error and all activities from the prior dehydration state are retried. If the activities being retried are not idempotent (that is, their state can change with each retry and is not guaranteed to give the same behavior), then multiple retries can be problematic.

To rectify this, customize the composite by specifically marking the nonidempotent activities with `idempotentset` set to `false` in the partner link settings section of the `composite.xml` file to prevent retries.

```
<property name="bpel.partnerLink.partner_link_name.idempotent">false</property>
```

You cannot set the `idempotentset` property in Fusion Applications Control.

You can also set **GlobalTxMaxRetry** to 0 in the Systems MBean Browser.

1. Right-click **soa-infra (SOA_cluster_name)**.
2. Choose **SOA Administration > Common Properties**.
3. Click **More SOA Infra Advanced Configuration Properties**.
4. Click **GlobalTxMaxRetry**.
5. In the **Value** field, enter an appropriate value.
6. Click **Apply**.

The following documentation provides additional information about the topics discussed in this section:

- For information about the `idempotent` property, see the "Tuning BPEL Properties Set Inside a Composite" section of *Oracle Fusion Middleware Performance and Tuning Guide*.
- For information about Oracle SOA Suite customizations in JDeveloper, see the "Customizing and Extending SOA Components" chapter in the *Oracle Fusion Applications Extensibility Guide*.

11.3.12 Some Fusion Applications Control Features Are Missing the No Recover Button or Export Composite Capability

Problem

Fusion Applications Control is missing features needed for diagnostics and recovery. For example, the **Recovery** tab for the BPEL process service engine shows a BPEL instance as recoverable along with instructions to click the **Recover** button. However, there is no **Recover** button available. In addition, the ability to export a composite is not available.

Solution

Check that you are logged in as a user with administrator privileges and are not logged in as a read-only user. Read-only users do not see administrative features such as the **Recover** button or the ability to export composites.

See the "Roles and Privileges for Oracle SOA Suite Users in Oracle Enterprise Manager" appendix of *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.3.13 Automatic Recovery of BPEL Instances is Not Recovering A Specific Instance

Problem

BPEL processes have an automatic recovery feature that attempts to automatically recover activities that are recoverable such as unresolved invoke/callback messages, activities not completed over a provided threshold time, and so on. However, the automatic recovery feature only tries to recover a few instances and only retries a fixed number of times. If some instances are not being automatically recovered, they are likely not being picked up because of the configuration of the automatic recovery parameters.

Solution

- Set the maximum number of messages to automatically recover.

By default, the automatic recovery feature of Oracle BPEL Process Manager processes fifty messages to submit for each recovery attempt. This is controlled by the **maxMessageRaiseSize** property.

1. In the navigation pane, right-click **soa-infra (SOA_cluster_name)**.
2. Choose **SOA Administration > BPEL Properties > More BPEL Configuration Properties > RecoveryConfig**.
3. Expand both **RecurringScheduleConfig > maxMessageRaiseSize** and **StartupScheduleConfig > maxMessageRaiseSize**.

The default value is 50 for each. A negative value causes all messages selected from the database to be submitted for recovery. A value of 0 causes no messages to be selected from the database (effectively disabling recovery). To recover more than fifty messages, set the property value to that value. Use this property to limit the impact of recovery on the server.

- Set the maximum number of automatic recovery attempts on a given message.

You can also configure the number of automatic recovery attempts to submit in the same recoverable instance. The value you provide specifies the maximum number of times that invoke and callback messages are recovered. If the value is 0 (the default value), it recovers all messages. After the number of recovery attempts on a message exceeds the specified value, a message is marked as nonrecoverable.

Follow these steps to configure automatic recovery attempts for invoke and callback messages in Fusion Applications Control.

1. In the navigation pane, right-click **soa-infra (SOA_cluster_name)**.
2. Choose **SOA Administration > BPEL Properties > More BPEL Configuration Properties**.
3. Select **MaxRecoverAttempt**, and enter a value in the **Value** field.
4. Click **Apply**.

It may not be desirable in all cases to use automatic recovery. If services are not idempotent, then corruption can occur. Moreover, the automatic recovery restores the composite to the last save point that can be immediately after an asynchronous invoke, wait, and so on. Therefore, it is important to understand the process behavior and what it does next before performing mass recoveries. Attempt mass automatic recovery only after the root cause of the composite failures has been fixed (for example, a service that was unavailable is now available, a database running out of space was fixed, and so on). Automatic recovery can also trigger an unexpected load during failure scenarios. This causes more threads to block on a remote server that can induce hangs in the SOA server in a cascading fashion.

For more information, see [Section 11.3.11](#) and the "Configuring Automatic Recovery for Oracle BPEL Process Manager" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.3.14 SOA Runtime Fails with a "Cannot read WSDL" Error

Problem

The following error is displayed if either the endpoint is not available for a reference or a composite is deployed with an incorrect deployment plan file.

```
oracle.fabric.common.FabricException: Cannot read WSDL
```

Solution

1. Ensure that the endpoint for the reference is up and running.

The WSDL or endpoint is stated in the error. The service can then be looked up from Fusion Applications Control to check if it is active. After the service is active and the endpoint is reachable, search for the SOA instance and retry through the **Recovery** tab for the BPEL process service engine in Fusion Applications Control.

2. For extensions/customizations, ensure that the correct URL is updated in the deployment configuration plan.

For information about deployment plans, including examples of using `sca_extractPlan` to extract plans, see the "Customizing Your Application for the Target Environment Before Deployment" section of *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite* and the "Customizing SOA Composite Applications with JDeveloper" section of *Oracle Fusion Applications Extensibility Guide*.

11.3.15 Uploading a Composite for Oracle Support Services

Problem

Oracle Support Services has requested you to upload your composite to review the flow and associated configuration files.

Solution

1. Log in to Fusion Applications Control as a user with administrator privileges, and not as a read-only user.
2. In the navigation pane, expand **soa-infra** (*SOA_cluster_name*).
3. Expand the partition in which the composite is located (for example, **default**).
4. Right-click the composite and choose **Export**.

5. Accept the default selections, and save the resulting JAR file.
6. Provide the JAR file to Oracle Support Services so that it can be imported for review in JDeveloper by selecting **File > Import**.

11.3.16 Confirming SOA Component Configuration Properties for Oracle Support Services

Problem

Oracle Support Services has requested you to confirm configuration properties of various SOA components.

Solution

1. In the navigation pane, right-click **soa-infra (SOA_cluster_name)**.
2. Choose **Administration > MDS Configuration > Export**.
3. Upload the resulting file to Oracle Support Services for review.

11.4 Security and Oracle WSM Policy Manager Configuration

For information about troubleshooting Oracle WSM Policy Manager, see the "Diagnosing Problems" chapter in the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*.

11.5 Human Workflow

This section contains the following topics that describe common problems and solutions for human workflow:

- [Section 11.5.1, "Recovering Human Task Instances Stuck in the Alerted State"](#)
- [Section 11.5.2, "Worklist: Notifications and Approvals Region Contains No Data"](#)
- [Section 11.5.3, "Task Detail Page is Not Available"](#)
- [Section 11.5.4, "Task Chooses an Incorrect User If Several Rules Are Defined or Errors with "Ruleset returned lists with different list builder""](#)
- [Section 11.5.5, "Document Is Stuck in Pending Approval and Logs Show Error "Unable to walk hierarchy for user user_name""](#)
- [Section 11.5.6, "Task History: Cannot Remove or Move a Participant After Yourself"](#)
- [Section 11.5.7, "Hierarchy List Builders Display an Error Due to Security Configuration Issues and Log Report Errors in Authentication or Authorization with HCM Services"](#)
- [Section 11.5.8, "HCM Services are Timing Out or Getting Stuck"](#)
- [Section 11.5.9, "Error/Warning Reported in Retrieving the Position for a User"](#)
- [Section 11.5.10, "Users See No Approvals in the Inbox when Using Position Hierarchy"](#)
- [Section 11.5.11, "Task Escalation Does Not Follow Job Level, Supervisory, or Position Hierarchies"](#)

- Section 11.5.12, "User Is Not Allowed to Perform an Action on a Human Workflow Task"
- Section 11.5.13, "Email Notification Is Not Being Sent Out"
- Section 11.5.14, "Notifications Sent Are Not Actionable"
- Section 11.5.15, "Actionable Notifications Are Sent But No Action is Taken After Responding"
- Section 11.5.16, "After LDAP Configuration with Oracle WebLogic Server, Users Appear in the Console, But a "No Role found matching the criteria" Error Appears"
- Section 11.5.17, "Only a Subset of Users in LDAP Can Log In to Oracle BPM Worklist"
- Section 11.5.18, ""Unknown Macro" Exception Appears when Myrealm Is Passed as a Parameter to the Identity Context To Identity Service APIs"
- Section 11.5.19, "Add Participant Button in Oracle BPM Worklist Is Disabled"
- Section 11.5.20, "Task Modifications Made in a Runtime Tool Are Not Appearing for the Task"
- Section 11.5.21, "How Can I Set Commonly Used Human Workflow Configuration Parameters?"
- Section 11.5.22, "How Do I Set Human Workflow Configuration Parameters Not Available in the Fusion Applications Control Properties Pages?"
- Section 11.5.23, "System MBean Browser Does Not Reflect My Changes After Editing the Human Workflow Config MBeans"
- Section 11.5.24, "Human Workflow Services Are Not Locating Resource Bundles or Classes Located at the Workflow Customizations Class Path URL"
- Section 11.5.25, "How Do I Manually Set the URL for Displaying Task Details for a Particular Human Workflow Task Component?"
- Section 11.5.26, "How to Test the Health of the Installed Server"
- Section 11.5.27, "User Authentication Error (in this example, the user is FMW_USERID and identityContext is jazn.com)"
- Section 11.5.28, "Error During Import of Task Payload Mapped Attribute Mappings"
- Section 11.5.29, "Error During Rule Migration"
- Section 11.5.30, "When Defining a Rule Based on the Approval Group List Builder During Runtime, a Message Says the Group Does Not Exist"

11.5.1 Recovering Human Task Instances Stuck in the Alerted State

Problem

If a human task instance fails due to a business error, the task status stays in the alerted state.

Solution

This can happen if, for example, the following occurs:

- The assigned user does not exist.

- The manager is not defined.
- A rule does not return assignees.

In these cases, the task is set to alerted and is assigned to the process owner or the error assignee (if defined in the task metadata).

The administrator or process owner must go to Oracle BPM Worklist and reassign these tasks to the correct users for the workflow to continue forward.

11.5.2 Worklist: Notifications and Approvals Region Contains No Data

Problem

If the **Worklist: Notifications and Approvals** region in the Welcome dashboard on the Oracle Fusion Applications home page does not contain data, it is likely the connection from Oracle BPM Worklist to the SOA Managed Server is timing out.

Solution

1. Ensure the SOA Managed Servers are running in the `CommonDomain` domain with Fusion Applications Control:
 - a. From the navigation pane, expand the farm, **WebLogic Domain, CommonDomain, FS_SOACluster**.
 - b. Click **FS_SOACluster** to display the Oracle WebLogic Server Cluster Home page.
 - c. In the **Servers** section, view the Status column of the SOA Managed Server, for example, **soa_server1**.

If the Managed Server is not running, restart it.

2. Locate the `HomePageServer_n-Diagnostic.log` diagnostic log files on the `CommonDomain` domain. This log file is typically stored in the following locations:

```
(UNIX) DOMAIN_HOME/servers/server_name/logs/HomePageServer_n-Diagnostic.log
(Windows) DOMAIN_HOME\servers\server_name\logs\HomePageServer_n-Diagnostic.log
```

These log files may be stored in a different location if you reconfigured the log file.

3. Review the `HomePageServer_n-Diagnostic.log` diagnostic log for the following exception:

```
[HomePageServer_1] [ERROR] []
[oracle.soa.services.workflow.worklist] [tid: [ACTIVE].ExecuteThread: '24'
for queue: 'weblogic.kernel.Default (self-tuning)'] [userId: username]
[ecid: ecidvalue] [APP: HomePageApp#V2.0] [URI:
/homePage/faces/AtkHomePageWelcome] TimeoutException occurred for
server='null'.[[
oracle.bpel.services.common.concurrent.TimeoutException: Execution timeout
service : FederetedWorklistService
```

4. Modify default timeout interval in the profile:
 - a. Log in to the Setup UI application.
 - b. From the **Administration** menu in the work area, choose **Setup and Maintenance**.

The Overview page displays.

- c. Click the **All Tasks** tab.

- d. In the **Name** field, enter Profiles and click **Search**.
- e. In the **Search Results** table, in the **Manage Administrator Profile Values** table, click the **Go to Task**.

Name	Business Objects	Help	Go to Task	Permitted
Configure My Oracle Support Service R		?		?
▷ Define Clause and Template Manag				
▷ Define Eligibility Profiles				
▷ Define First Party Tax Profiles		?		
▷ Define Profiles		?		
Manage Profile Options	Application Profile Value	?		✓
Manage Administrator Profile Values	Application Profile Value	?		✓
Manage Profile Categories	Application Profile Category			✓
▷ Define Talent Profiles				

From the Manage Administrator Profile Values page, in the **Profile Display Name** field, enter Welcome Dashboard Worklist Timeout Interval, and then click **Search**.

- f. In the **Search Results** table, select **ATK_HOME_PAGE_WORKLIST_TIMEOUT**.
- g. In the **ATK_HOME_PAGE_WORKLIST_TIMEOUT: Profile Values** table, modify the **Profile Value** field.

Increase the default timeout of 5 seconds to a larger value such as 10 seconds. A larger timeout value increases the amount of time that home page server waits for response from background SOA web services for all users and it might adversely impact home page performance when there are many concurrent users. Increasing this value should be a temporary change until you can find the root cause for the delay in SOA federated worklist response time.

- h. Click **Save**.
- i. Run a session, and check that the **Worklist: Notifications and Approvals** region in the Welcome dashboard on the Oracle Fusion Applications home page contain data.

For information about starting managed servers, see the "Starting the Administration Servers and Managed Servers" section in the *Oracle Fusion Applications Administrator's Guide*.

11.5.3 Task Detail Page is Not Available

Problem

When you click the human task in Oracle BPM Worklist, the following message is displayed:

Task detail is not available

Solution

This problem typically occurs during the deployment of the ADF J2EE application containing the task details page definition. Therefore, the URI for the details page is not registered with the SOA cluster.

To confirm whether the task details page was registered in Fusion Applications Control:

1. Log in to the domain where the composite with the subscription is deployed.
2. In the navigation pane, right-click **SOA > soa-infra (SOA_cluster_name)**.
3. Choose **Service Engines > Human Workflow**.
4. In the **Components** section, click the appropriate task.
5. Click the **Administration** tab to see a URI for the task details page.

If there is no URI displayed, then check the log files for any errors during deployment.

A possible problem may be incorrect entries in the `wf_client_config.xml` file. The `wf_client_config.xml` file resides in the exploded EAR file's `APP-INF/classes` directory. For example:

```
APPLICATIONS_BASE/fusionapps/applications/fin/deploy/EarFinPayables.ear/
APP-INF/classes/wf_client_config.xml
```

The file contains the cluster URL information for the local SOA runtime of that particular Oracle WebLogic Server domain. If the cluster name is wrong or that cluster does not exist in the domain, then a problem exists with the deployment and configuration of the environment.

As a workaround, you can directly enter the task details page URI in Fusion Applications Control. For the values, enter the following:

Field	Value
Application Name	<code>worklist</code>
Host Name	Your server host name for SOA
HTTP Port	Your HTTP server port used for SOA if SSL is disabled.
HTTPS Port	Your HTTPS server port used for SOA if SSL is enabled.
URI	For example, for financials: <code>/payables/faces/adf.task-flow?_id=FinApInvoiceApprovalTaskFlow&_document=WEB-INF/oracle/apps/financials/payables/invoices/transactions/ui/invoiceApprovalTask/flow/FinApInvoiceApprovalTaskFlow.xml</code>

For information about the task details page URI in Fusion Applications Control, see the "Managing the URI of the Human Task Service Component Task Details Application" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.4 Task Chooses an Incorrect User If Several Rules Are Defined or Errors with "Ruleset returned lists with different list builder"

Problem

At runtime, when a human workflow task tries to fetch the list of users, it errors with the following message:

```
Ruleset returned lists with different list builder
```

This can be seen in the **Task Detail Comments** field. Alternately, it may select a user or approver, which may not seem to be the correct or expected one. This is primarily caused by having overlapping rules with different list builders. When participants of a task are specified using business rules, it is expected that business rules return list builders of the same type.

Moreover, only one rule from a ruleset should be applicable for a transaction. In case a number of rules are true, the actions associated with the applicable rule with the highest priority get executed. If multiple applicable rules have the same priority, then the first rule in the list is picked and its actions are executed.

Solution

To resolve this issue, avoid writing overlapping rules. Constraints from different list builders are different and cannot be mixed. If more than one rule gets triggered with a different list builder, this error occurs. Moreover, only one set of constraints is honored.

Check that all rules in the ruleset have priorities defined so that multiple rules with the same priority are not applicable for the same transaction. For more details, see the "Using Approval Management" chapter in the *Oracle Fusion Middleware Modeling and Implementation Guide for Oracle Business Process Management*.

11.5.5 Document Is Stuck in Pending Approval and Logs Show Error "Unable to walk hierarchy for user *user_name*"

Problem

The document is stuck pending approval and the logs show the following error:

```
"Unable to walk hierarchy for user username"
```

This occurs when the hierarchy for the given user has not been set up correctly. For example, assume you have approval rules set up so that the rule getting fired uses the supervisory hierarchy and you expect it to route to USER01 > USER02 > USER03 > . . . > USER10 (ten level hierarchy). If the supervisory/management hierarchy of USER01 has not been set up, then the approval task throws an error stating the inability to go through the hierarchy for USER01.

Solution

Since the user level hierarchy does not exist for the *user_name*, verify the Human Capital Management (HCM) setup by manually running the HCM service to which `workflow-identity-config.xml` is pointing. If it does not return any result, then configure the correct hierarchy for the user in HCM.

Run the HCM service, select the `fetchManager(s)` API (for supervisory), and provide the following payload, where

```
<ns2:Id>DD7A1614BBFAA0F0A4511ACD96D2C88D</ns2:Id>
```

is the GUID of the user

whose manager you are trying to find. The supervisory hierarchy and position hierarchy services can be found under `HcmCore`. The name is `HierarchyProviderService`. The corresponding WSDLs are as follows:

- **Supervisory hierarchy:**

```
http://host:port/hcmEmploymentCoreApprovalHierarchy/HierarchyProviderService?wsdl
```

- **Position hierarchy:**

```
http://host:port/hcmTreesModel/HierarchyProviderService?wsdl
```

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
<soap:Header>
<wsse:Security soap:mustUnderstand="1"
xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-sec
ext-1.0.xsd">
<wsse:UsernameToken>
<wsse:Username>FUSION_APPS_AMX_APPID</wsse:Username>
<wsse:Password
Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-username-token-profi
le-1.0#PasswordText">Welcome1</wsse:Password>
</wsse:UsernameToken>
</wsse:Security>
</soap:Header>
<soap:Body
xmlns:ns1="http://xmlns.oracle.com/apps/hcm/employment/core/approvalHierarchyServi
ce/types/">
<ns1:fetchManagers>
<ns1:principal
xmlns:ns2="http://xmlns.oracle.com/apps/hcm/employment/core/approvalHierarchyServi
ce/">
<ns2:Id>DD7A1614BBFAA0F0A4511ACD96D2C88D</ns2:Id>
</ns1:principal>
<ns1:level>2</ns1:level>
</ns1:fetchManagers>
</soap:Body>
</soap:Envelope>
```

The following example shows the `workflow-identity-config.xml` file used in a development environment:

```
<?xml version='1.0' encoding='UTF-8'?>
<ISConfiguration xmlns="http://www.oracle.com/pcbpel/identityservice/isconfig">
<configurations>
<configuration realmName="myrealm">
<provider name="JpsProvider" providerType="JPS" service="Identity">
<property name="jpsContextName" value="default"/>
<property name="IdentityServiceExtension" value="HCMIdentityServiceExtension"/>
</provider>
</configuration>
</configurations>
<property name="caseSensitive" value="false"/>
<property name="caseSensitiveGroups" value="true"/>
<serviceExtensions>
<serviceExtension name="HCMIdentityServiceExtension">
<serviceProvider
classname="oracle.bpel.services.identity.hierarchy.providers.hcm.HCMHierarchyProvi
der" type="supervisoryHierarchyProvider">
<initializationParameter name="wsdlUrl"
```

```

value="http://example.com:20619/hcmEmploymentCoreApprovalHierarchy/HierarchyProviderService?WSDL"/>
<initializationParameter name="csf-key-name" value="FUSION_APPS_AMX_APPID-KEY"/>
<initializationParameter name="http-read-timeout" value="30000"/>
<initializationParameter name="securityPolicyName" value="oracle/wss_username_token_client_policy"/>
</serviceProvider>
<serviceProvider
classname="oracle.bpel.services.identity.hierarchy.providers.hcm.HCMHierarchyProvider" type="jobLevelHierarchyProvider">
<initializationParameter name="wsdlUrl"
value="http://example.com:20619/hcmEmploymentCoreApprovalHierarchy/HierarchyProviderService?WSDL"/>
<initializationParameter name="csf-key-name" value="FUSION_APPS_AMX_APPID-KEY"/>
<initializationParameter name="http-read-timeout" value="30000"/>
<initializationParameter name="securityPolicyName" value="oracle/wss_username_token_client_policy"/>
</serviceProvider>
<serviceProvider
classname="oracle.bpel.services.identity.hierarchy.providers.hcm.HCMPositionHierarchyProvider" type="positionHierarchyProvider">
<initializationParameter name="wsdlUrl"
value="http://example.com:20619/hcmTreesModel/HierarchyProviderService?WSDL"/>
<initializationParameter name="csf-key-name" value="FUSION_APPS_AMX_APPID-KEY"/>
<initializationParameter name="http-read-timeout" value="30000"/>
<initializationParameter name="securityPolicyName" value="oracle/wss_username_token_client_policy"/>
</serviceProvider>
<serviceProvider
classname="oracle.bpel.services.identity.position.provider.hcm.PositionLookupServiceProvider" type="positionLookupProvider">
<initializationParameter name="wsdlUrl"
value="http://example.com:20619/hcmEmploymentCore/positionLookupService?WSDL"/>
<initializationParameter name="csf-key-name" value="FUSION_APPS_AMX_APPID-KEY"/>
<initializationParameter name="http-read-timeout" value="30000"/>
<initializationParameter name="securityPolicyName" value="oracle/wss_username_token_client_policy"/>
</serviceProvider>
<serviceProvider
classname="oracle.bpel.services.identity.position.provider.hcm.PositionDisplayNameProvider" type="positionDisplayNameProvider">
<initializationParameter name="wsdlUrl"
value="http://example.com:20619/hcmTreesModel/HierarchyProviderService?WSDL"/>
<initializationParameter name="csf-key-name" value="FUSION_APPS_AMX_APPID-KEY"/>
<initializationParameter name="http-read-timeout" value="30000"/>
<initializationParameter name="securityPolicyName" value="oracle/wss_username_token_client_policy"/>
</serviceProvider>
</serviceExtension>
</serviceExtensions>
</ISConfiguration>

```

The workflow-identity-config.xml file is in the MDS repository. For information about how to export the workflow-identity-config.xml file from MDS, see [Section 11.5.7](#).

11.5.6 Task History: Cannot Remove or Move a Participant After Yourself

Problem

You cannot remove or move a participant that was added through future participant editing. This is because the participant was anchored to you and you are the current assignee.

Solution

This feature is not supported.

11.5.7 Hierarchy List Builders Display an Error Due to Security Configuration Issues and Log Report Errors in Authentication or Authorization with HCM Services

Problem

Hierarchy list builders (for example, supervisory, job-level, and position) used in rules are not working as expected and are throwing security configuration-related errors. For example:

```
SOAPFaultException: FailedAuthorization
```

Hierarchy services are protected services using Oracle Web Services Manager policies (for example, supervisory, job-level, and position services). Elevated privileges are used for authentication. These privileges must be configured in Fusion Applications Control and in configuration files.

Solution

To resolve this problem:

1. Check the MDS store to see if `workflow-identity-config.xml` and `workflow-config.xml` are set up with the correct information (pointing to HCM services and the JAZN name).

1. Run the following script to connect to the WLST shell on Linux operating systems. There is no equivalent script on Windows operating systems.

```
$MW_HOME/oracle_common/common/bin/wlst.sh
```

2. Run `connect()`. This takes you to the prompt as shown in the following example:

```
wls:/offline> connect()
Please enter your username [weblogic] :weblogic
Please enter your password [weblogic] :
Please enter your server URL [t3://localhost:7001]
:t3://example.com:9401
```

3. Run the following command after connecting:

```
exportMetadata(application='soa-infra',server='soa_server1',toLocation='any
Location on
server',docs='/soa/configuration/default/workflow-identity-config.xml')
```

The file is stored in the `soa/configuration/default` directory in the location given in the `toLocation` attribute. After verifying, you can upload the file with the following command.

```
importMetadata(application='soa-infra',server='soa_
```

```
server1',fromLocation='any Location on
server',docs='/soa/configuration/default/workflow-identity-config.xml')
```

2. Verify that the `csf-keys` are specified as initialization parameters.
 - a. Ensure that the `csf-key-name` value is `FUSION_APPS_AMX_APPID-KEY` in `workflow-identity-config.xml`, as described in [Section 11.5.5](#).
3. Check in Fusion Applications Control that the keys defined for the services have the correct values for authentication.
 - a. Retrieve a credential with a given map and key by using scripting to invoke the MBean operation `JpsCredentialMBean.getPortableCredential(map, key)`.

```
(map="oracle.wsm.security", key="FUSION_APPS_AMX_APPID-KEY")
```

For more information about this MBean, see the "Managing Credentials with OPSS Scripts" section of *Oracle Fusion Middleware Application Security Guide*.

11.5.8 HCM Services are Timing Out or Getting Stuck

Problem

Hierarchy services sometimes get overloaded and do not respond (for example, supervisory, job-level, and position services).

Solution

Check that the `workflow-identity-config.xml` file for the problematic service has correct timeout settings defined as initialization parameters. The timeout parameter is `http-read-timeout`. For an example of the configuration file, see [Section 11.5.5](#). Note that increasing the timeout may cause errors, such as other timeouts and only puts more load on an already overloaded server.

11.5.9 Error/Warning Reported in Retrieving the Position for a User

Problem

Not all LDAP users are defined as people within Oracle Fusion HCM. For example, users may be defined in LDAP for Oracle Fusion Supply Chain Management that are not defined as people with positions in Oracle Fusion HCM. Therefore, the position lookup can generate a message that the user does not have positions.

Solution

This is a tolerated condition and the warning can be ignored if the user name specified in the warning is not an HCM user. If this is an HCM user, the problem is on the HCM side. Add a position to these users in the HCM application.

11.5.10 Users See No Approvals in the Inbox when Using Position Hierarchy

Problem

This issue may be noticed by organizations using position hierarchy such as governments and universities. After users log in, they do not see any approvals in their inbox. This is caused by a failure to look up the position. This can be caused by network issues when accessing the HCM services. Sometimes due to load balancing or

network setup, HCM services may not be accessible and Oracle BPM Worklist has errors such as the following:

WSDL port is not accessible

or

Could not find the host

Solution

1. Check the network setup and ensure that the HCM services are accessible and WSDL ports can be accessed in the browser. Tools like ping and traceroute can also diagnose the problem.
2. If the services are not available, bring up the services and retry.
3. Restart the HCM server and SOA server. For information, see the "Starting and Stopping Managed Servers Using Fusion Middleware Control" section in *Oracle Fusion Middleware Administrator's Guide*.

11.5.11 Task Escalation Does Not Follow Job Level, Supervisory, or Position Hierarchies

Problem

This feature is not supported. Escalation does not follow the job level, supervisory, or position hierarchies.

Solution

Build your own custom plug-in. For more details, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

11.5.12 User Is Not Allowed to Perform an Action on a Human Workflow Task

For troubleshooting information about this issue, see the "Task Action Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.13 Email Notification Is Not Being Sent Out

For troubleshooting information about this issue, see the "Notification Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.14 Notifications Sent Are Not Actionable

For troubleshooting information about this issue, see the "Notification Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*. This section describes how to make the task actionable in the Human Task Editor during design time.

In addition, if notifications are sent, but are not actionable, the administrator may have configured the notification to be nonactionable through Oracle BPM Worklist. To make notifications actionable, select the **Make notification actionable** checkbox under the **Event Driven** subtab of the **Task Configuration** tab.

11.5.15 Actionable Notifications Are Sent But No Action is Taken After Responding

For troubleshooting information about this issue, see the "Notification Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.16 After LDAP Configuration with Oracle WebLogic Server, Users Appear in the Console, But a "No Role found matching the criteria" Error Appears

For troubleshooting information about this issue, see the "Identity Service Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.17 Only a Subset of Users in LDAP Can Log In to Oracle BPM Worklist

For troubleshooting information about this issue, see the "Identity Service Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.18 "Unknown Macro" Exception Appears when Myrealm Is Passed as a Parameter to the Identity Context To Identity Service APIs

For troubleshooting information about this issue, see the "Identity Service Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.19 Add Participant Button in Oracle BPM Worklist Is Disabled

For troubleshooting information about this issue, see the "Task History Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.20 Task Modifications Made in a Runtime Tool Are Not Appearing for the Task

For troubleshooting information about this issue, see the "Design Time at Runtime Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.21 How Can I Set Commonly Used Human Workflow Configuration Parameters?

For troubleshooting information about this issue, see the "Human Workflow Service/System MBean Browser Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.22 How Do I Set Human Workflow Configuration Parameters Not Available in the Fusion Applications Control Properties Pages?

For troubleshooting information about this issue, see the "Human Workflow Service/System MBean Browser Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.23 System MBean Browser Does Not Reflect My Changes After Editing the Human Workflow Config MBeans

For troubleshooting information about this issue, see the "Human Workflow Service/System MBean Browser Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.24 Human Workflow Services Are Not Locating Resource Bundles or Classes Located at the Workflow Customizations Class Path URL

For troubleshooting information about this issue, see the "Human Workflow Service/System MBean Browser Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.25 How Do I Manually Set the URL for Displaying Task Details for a Particular Human Workflow Task Component?

For troubleshooting information about this issue, see the "Human Workflow Service/System MBean Browser Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.26 How to Test the Health of the Installed Server

For troubleshooting information about this issue, see the "Test-to-Production Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.27 User Authentication Error (in this example, the user is FMW_USERID and identityContext is jazn.com)

For troubleshooting information about this issue, see the "Test-to-Production Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.28 Error During Import of Task Payload Mapped Attribute Mappings

For troubleshooting information about this issue, see the "Test-to-Production Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.29 Error During Rule Migration

For troubleshooting information about this issue, see the "Test-to-Production Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.5.30 When Defining a Rule Based on the Approval Group List Builder During Runtime, a Message Says the Group Does Not Exist

For troubleshooting information about this issue, see the "AMX Extension Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.6 Patching and Deployment

For troubleshooting information about patching and deployment issues, see the "Troubleshooting Patching Sessions for SOA Composites" section in the *Oracle Fusion Applications Patching Guide*.

11.7 Performance

This section contains the following topics that describe common problems and solutions for Oracle SOA Suite performance:

- [Section 11.7.1, "SOA Transactions are Failing and Logs Indicate the SOA Database is Running Out of Space"](#)
- [Section 11.7.2, "Slow Application Performance Such as Longer Time to Serve Pages or Finish Transactions"](#)
- [Section 11.7.3, "Slow Fusion Applications Control Performance"](#)

11.7.1 SOA Transactions are Failing and Logs Indicate the SOA Database is Running Out of Space

Problem

SOA transactions are failing and logs indicate that the database is running out of space. The problem may occur with the SOA dehydration store or MDS store running out of space due to a high volume of transactions. In the latter example, you see errors such as the following:

```
java.sql.SQLException: ORA-01653: unable to extend table SH_MDS.CUBE_INSTANCE by
16 in tablespace FUSION_TS_TOOLS
```

This indicates that the tablespace is full and the database cannot extend it.

Solution

1. Purge the SOA dehydration store tables periodically, taking into account the appropriate record retention policies and ensuring that the applications have no dependencies on runtime data.

The purge should be followed by commands to coalesce the space. For the purging strategy to work, it is important to understand how long to retain the data in the database. Factors that drive the retention policy include the following:

- Legal requirements
- Line of business requirements
- Overall company policy on retention of data

The longer the retention policy, the greater the volume of data that must be stored and, correspondingly, the higher the disk capacity requirements.

2. Ensure that the database hardware has sufficient resources to handle the demands of Oracle Database partitioning before configuring your tables for partitioning.

For the SOA dehydration store, database partitioning using range partitioning and hash partitioning is an optimal solution. Partitioning by definition means storing data in multiple tables to reduce bigger data sets into smaller, more manageable data sets. Partitioning strategies play a large role in easing maintenance overheads (dropping and pruning the partition) and improving performance. Partitioning

should at least be done for tables having high activity. This plays a large role in balancing disk I/O and preventing hot disks. One important requirement that you must meet before configuring your tables for partitioning is to ensure that the database hardware has sufficient resources to handle the demands of Oracle Database partitioning. If preproduction testing has indicated that the installation is large, Oracle expects that you have sized your environment (CPU, memory, and disk space) correctly to take advantage of the partitioning features.

3. Tune database parameters for memory, tablespace, and partitions to get maximum performance.
4. For other tablespaces running out of space, use the following query to check for free tablespace:

```
SELECT Total.tablespace_name "Tablespace Name", Free_space, (total_space-Free_
space) Used_space, total_space, round((Free_space*100/total_space),2) "Free %"
FROM (select tablespace_name, sum(bytes/1024/1024) Free_Space from sys.dba_
free_space group by tablespace_name) Free,
(select tablespace_name, sum(bytes/1024/1024) TOTAL_SPACE from sys.dba_data_
files group by tablespace_name) Total
WHERE Free.Tablespace_name = Total.tablespace_name AND Total.tablespace_name =
 '<tablespacename>'
ORDER BY 5;
```

5. To increase tablespace settings, use the administrator account. For example:

```
alter tablespace tablespace_name add datafile 'datafile_name' size 500m
autoextend on;
```

The following documentation provides additional information about the topics discussed in this section:

- For information tablespace settings, see the "Resolving Message Failure Caused by Too Many Open Files" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.
- For information about creating a purging strategy, see the "Managing Database Growth" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.
- For information about tuning parameters, see the "Tuning Database Parameters" section in the *Oracle Fusion Middleware Performance and Tuning Guide*.

11.7.2 Slow Application Performance Such as Longer Time to Serve Pages or Finish Transactions

Problem

You observe slow application performance and/or memory trashing. For example, it may take longer to load and serve pages or to complete composite transactions. Response time may seem slower compared to normal behavior.

There are various reasons for slow performance. It may be due to a large number of servers running on the same host, or there may be a large number of records/sessions/locking at the database. Thread contention can also be a reason for poor performance.

Note: All configuration changes in Fusion Applications Control may be unavailable due to this problem.

Solution

1. Check the CPU utilization to see if it is saturated due to a heavy load or an excessive number of processes in relation to CPU capacity.

If CPU utilization is at 100% during normal load hours (the target should be 70-80%), you have no capacity to handle a peak load and the hardware resources are insufficient. Add scale-out servers to handle the additional load.

2. Check applications using Fusion Applications Control to report on performance. Check the performance of ADF services and the invoke/response times in the BPEL process audit trail to identify if the issue is in Oracle Fusion Applications.
3. To maximize performance, it is recommended that you not set the logging level higher than the default **INFO** level.

For debugging purposes, you must set the logging level to the **FINEST** level. However, after issues are resolved, reset the logging level to the default level for best performance. It is also recommended that you set **Audit Level** to **Production** in the SOA Infrastructure Common Properties page. This can be set in Fusion Applications Control as follows:

- a. Right-click **soa-infra** (*SOA_cluster_name*).
 - b. Choose **SOA Administration > Common Properties**.
 - c. Set **Audit Level** to **Production**.
4. Purge periodically based on retention requirements to maintain the service level agreements (SLAs).
 5. Check the memory/IO/paging/swapping/CPU usage load statistics using Top or Glance or another monitoring tool.
 6. Optimize the JVM to avoid full garbage collection or out-of-memory errors.
Frequent garbage collection can be either due to higher memory usage or memory leaks.
 - a. Ensure that the sum of the maximum heap size of all the JVMs running on your system does not exceed the amount of available physical RAM to avoid operating system level paging activity.
 - b. Use the JRockit mission control memory profiling tools to get thread dumps and memory snapshots, which helps Oracle Support Services debug any code issues.
 7. Optimize threads to avoid contention. Get a thread dump to investigate and submit it to Oracle Support Services.
 8. Check the JVM and thread dumps for methods invoking the database to identify if database performance is a bottleneck.
 9. Run database Automatic Workload Repository (AWR) snapshots to identify causes of database performance issues.
 10. Ensure that database statistics are updated at regular intervals and other tunable parameters for memory, tablespace, and partitions are used effectively to obtain maximum performance.

Here are some common tuning recommendations:

- Put indexes and tables in as physically separate disk areas if possible.
- Never put rollback segments with data or index segments.
- Separate highly active tables and indexes into their own tablespaces.

- Partition high activity tables and indexes to help balance disk I/O and prevent hot disks.
 - Have processes in place to generate database table statistics at regular intervals.
11. Tune database tables to control the high watermark (HWM) contention of large objects. Tune database advanced queues (AQ) to control high watermark (HWM) contention and ensure consistent performance of producing and consuming messages from AQ.

Specifically, the AQs to be aware of are as follows:

Family AQ	Queue Name
EDN	EDN_EVENT_QUEUE_TABLE and EDN_OAEO_DELIVERY_TABLE
CRM	CRM_AsyncWS_Request and CRM_AsyncWS_Response
HCM	HCM_AsyncWS_Request and HCM_AsyncWS_Response
FIN	FIN_AsyncWS_Request and Fin_AsyncWS_Response
PRC	PRC_AsyncWS_Request and PRC_AsyncWS_Response
PRJ	PRJ_AsyncWS_Request and PRJ_AsyncWS_Response
SCM	SCM_AsyncWS_Request and SCM_AsyncWS_Response
COMMON	COMMON_AsyncWS_Request and COMMON_AsyncWS_Response
IC	IC_AsyncWS_Request and IC_AsyncWS_Response
Cross Family Business Event Subscriptions	ACR_XFAMILY_EVENT_Q and ACR_XFAMILY_EVENT_QT

12. Tune the BPEL and EDN thread counts to ensure optimal settings (for example, the **Dispatcher Invoke Threads** and **Dispatcher Engine Threads** properties on the BPEL Service Engine Properties page in Fusion Applications Control). If the thread configuration is too high, the servers run out of memory. If they are too low, the messages start backing up.
13. Tune the BPEL properties to reduce overhead (for example, disable the **ValidateXML** and **StatsLastN** (statistics gathering batch size) properties on the BPEL Service Engine Properties page in Fusion Applications Control) if they are not needed.
14. In case of integration with packaged applications (for example, Siebel), check if the issue lies with the legacy applications.

The following documentation provides additional information about the topics discussed in this section:

- For information about performance tuning the various components, see the "Top Performance Areas" chapter and the "SOA Suite Components" part in the *Oracle Fusion Middleware Performance and Tuning Guide*.
- For information about setting properties on the BPEL Service Engine Properties page, see the "Configuring BPEL Process Service Engine Properties" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.
- For information about identifying the tables where data growth may lead to performance issues, see the "Identifying Tables Impacted By Instance Data Growth" section in the *Oracle Fusion Middleware Performance and Tuning Guide*.

- For information about tuning, see the "Tuning Database Parameters" section in the *Oracle Fusion Middleware Performance and Tuning Guide*.
- For information about the use of the purge scripts, see the "Managing Database Growth" chapter in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.7.3 Slow Fusion Applications Control Performance

Problem

Fusion Applications Control pages are loading very slowly.

Solution

To improve Fusion Applications Control page load times on pages with instance and fault metrics, set the SOA Infrastructure **Display Data Counts** properties.

1. Right-click **soa-infra** (*SOA_cluster_name*).
2. Choose **SOA Administration > Common Properties**.
3. In the **Display Data Counts** section, deselect the **Disable fetching of instance and fault count metrics** checkbox.
4. Reduce the **Duration Details** value.
5. Click **Apply**.

In addition to setting this property, it is also useful to scope queries by time where available (for example, only show items occurring in the last hour).

For more information, see the "Optimizing the Loading of Pages with Instance and Fault Metrics" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.8 Maintenance

This section contains the following topics that describe common problems and solutions for Oracle SOA Suite maintenance:

- [Section 11.8.1, "JVM is Suspended If Any In-use Log Directories are Deleted"](#)
- [Section 11.8.2, "Server Start Script Does Not Work for Scale-Out \(Postprovisioning\) Servers"](#)
- [Section 11.8.3, "SOA Server Does Not Start"](#)
- [Section 11.8.4, "SOA Server Is Not Responding To Administrative Commands"](#)
- [Section 11.8.5, "Undeploying a Composite Left in an Inconsistent State Due to a Failed Patch"](#)
- [Section 11.8.6, "Increased Load Observed on RAC Instances when Using Multiple Oracle RAC Servers"](#)
- [Section 11.8.7, "List of SOA Composite State Values"](#)
- [Section 11.8.8, "Log Files Have Been Deleted or Are Missing"](#)

11.8.1 JVM is Suspended If Any In-use Log Directories are Deleted

Problem

JRockit writes log information (called flight recorder files) under `/tmp` when using JRockit Mission Control. When it rotates to a new flight recorder file, the JVM is suspended until it completes. If the old directories in use under `/tmp` are deleted (for example, a cleanup or custom maintenance script to run to clear `/tmp` when it is close to full to avoid server downtime), the domain may go into a suspended state because the JVM may wait for a directory that no longer exists.

Solution

1. Change any cleanup scripts/procedures to first shut down the domain cleanly.
2. Perform a cleanup of `/tmp`.
3. Restart the domain.

To recover existing, suspended JVMs without restarting them, you must recreate the directories that the JVM was trying to use.

11.8.2 Server Start Script Does Not Work for Scale-Out (Postprovisioning) Servers

Problem

Scale-out servers, created after provisioning, cannot be started using back-end commands. The script `start_fusion_Allservers.sh` only starts servers that are created during provisioning time.

Solution

To start scale-out servers, use Fusion Applications Control. See the "Starting and Stopping an Oracle WebLogic Server Cluster Using Fusion Applications Control" section in the *Oracle Fusion Applications Administrator's Guide*.

11.8.3 SOA Server Does Not Start

Problem

The SOA server (`soa_infra`) does not start.

Solution

There can be various reasons for server startup issues. A discovery-based approach to find the root cause is required. Check the server and diagnostic logs as a first attempt to diagnose the issue. In addition, check the following:

1. Check if the database is not available or there are not enough connections available. Some failures with SOA runtime can result from database outage/connectivity issues. Perform the following steps:
 - a. Log in to Oracle WebLogic Server Administration Console.
 - b. In the **Domain Structure**, view the status by selecting **Services > Data Sources > SOADatasource > Monitoring > Testing** to test the data source. You can also check this from a SQL prompt.
2. Check the list of ports used for port conflicts.

3. Check if the MDS repository is unable to load shared documents (incorrect MDS configuration or the database that holds the MDS schema is not reachable).
4. Check the Coherence configuration if using a SOA cluster (use of unicast versus multicast).

This issue only applies after provisioning is complete. Clustering of SOA servers may fail if there are port conflicts (used by Coherence). For example, one SOA server may be picking up the deployment, but the other server is not. In some cases, this may only present the following error:

```
[soa_server1] [ERROR] [] [Coherence] [tid: Logger@352821903 3.6.0.4]
[ecid: 46f620208907e045:63f295ec:12dd091ec2e:-8000-0000000000000003,1:27187]
[APP: soa-infra] 2011-01-28 23:06:19.463/414.816 Oracle Coherence GE 3.6.0.4
<Error> (thread=[ACTIVE] ExecuteThread: '0' for queue: 'weblogic.kernel.Default
(self-tuning)', member=n/a):
Error while starting cluster: com.tangosol.net.RequestTimeoutException: Timeout
during service start: ServiceInfo(Id=0, Name=Cluster, Type=Cluster[...
```

In this example, Coherence timeouts are prominently available. However, sometimes it presents itself with an unrelated error, such as the following:

```
Error creating bean with name 'SensorManager' defined in ServletContext
resource
```

The root cause of this is still primarily related to Coherence configuration.

5. Check if both the Administration Server and Managed Server ports are open and accessible.
6. Check if Managed Server startup failed because the Administration Server is not reachable.
7. Check network issues (for example, IP routing filtering/rules that may be causing issues).
8. Check Oracle WebLogic Server LDAP security corruption.

The Managed Server may report that policies for the application System MBeans Browser already exist or do not exist.

For more information, see the "Setting the Frontend URL for the Administration Console and Setting Redirection Preferences" section and the "Setting the Frontend HTTP Host and Port" section in the *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle SOA Suite*.

11.8.4 SOA Server Is Not Responding To Administrative Commands

Problem

The SOA server (*soa_infra*) is not responding to administrative commands. This problem can be due to your environment using a load balancer, and the default listener address or channel is local-only. Therefore, the connection cannot be made from the external client or server.

Solution

To resolve this problem, perform the following steps from the Oracle WebLogic Server Administration Console:

1. Ensure that the listener address is correctly defined and accessible.
 - a. From the **Domain Structure**, expand **Environment** and select **Servers**.

- b. From the **Servers** table, click **AdminServer(admin)**.
 - c. From the Settings for AdminServer page, click the **Protocols** tab.
 - d. Click the **HTTP** subtab.
 - e. Set the **Frontend Host** property to the load balancer address.
 2. Similarly, set the **Frontend HTTP Host** and **Frontend HTTP Port** properties for the SOA cluster:
 - a. From the **Domain Structure**, expand **Environment** and select **Clusters**.
 - b. From the **Clusters** table, click *domain_SOACluster*
 - c. From the Settings for the *domain_SOACluster* page, click the **HTTP** subtab.
 - d. Set the **Frontend Host** property to the load balancer address.
 - e. Change the **Frontend HTTP Host** and **Frontend HTTP Port** properties.

For more information, see the "Setting the Frontend URL for the Administration Console and Setting Redirection Preferences" section and the "Setting the Frontend HTTP Host and Port" section in the *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle SOA Suite*.

11.8.5 Undeploying a Composite Left in an Inconsistent State Due to a Failed Patch

For troubleshooting information about this issue, see the "Troubleshooting SOA Composite Deployment Failures" section in the *Oracle Fusion Applications Patching Guide*.

11.8.6 Increased Load Observed on RAC Instances when Using Multiple Oracle RAC Servers

Problem

An increased load is seen on Oracle Real Application Clusters (Oracle RAC) instances when using multiple Oracle RAC servers.

Solution

Use a multidata source against Oracle RAC instances using load balancing rather than failover. This ensures that the load is evenly distributed rather than all load staying on one node until it fails over, at which point all the connections are failed over to the other node.

Ensure that you set the **Connection Test Frequency Seconds** property at the multidata source level to a nonzero value. A value that is too low means more load on the listeners/RAC instances when multiple servers attempt to reconnect at the same time.

Note: The Oracle Fusion Applications default configuration for the these settings has been tuned for best performance. Only change these settings when the configuration has *not* been set out-of-the-box by Oracle Fusion Applications.

For more information about configuring JDBC multidata sources, see *Oracle Fusion Middleware Configuring and Managing JDBC Data Sources for Oracle WebLogic Server*.

11.8.7 List of SOA Composite State Values

Problem

Get a list of all composite state values from the *_SOAINFRA.COMPOSITE_INSTANCE state table (for diagnosis).

Solution

Table 11-3 shows the composite state values.

Table 11-3 Composite State Values

State	Description
0	Running
1	Completed
2	Running with faults
3	Completed with faults
4	Running with recovery required
5	Completed with recovery required
6	Running with faults and recovery required
7	Completed with faults and recovery required
8	Running with suspended
9	Completed with suspended
10	Running with faults and suspended
11	Completed with faults and suspended
12	Running with recovery required and suspended
13	Completed with recovery required and suspended
14	Running with faults, recovery required, and suspended
15	Completed with faults, recovery required, and suspended
16	Running with terminated
17	Completed with terminated
18	Running with faults and terminated
19	Completed with faults and terminated
20	Running with recovery required and terminated
21	Completed with recovery required and terminated
22	Running with faults, recovery required, and terminated
23	Completed with faults, recovery required, and terminated
24	Running with suspended and terminated
25	Completed with suspended and terminated
26	Running with faulted, suspended, and terminated
27	Completed with faulted, suspended, and terminated
28	Running with recovery required, suspended, and terminated
29	Completed with recovery required, suspended, and terminated

Table 11-3 (Cont.) Composite State Values

State	Description
30	Running with faulted, recovery required, suspended, and terminated
31	Completed with faulted, recovery required, suspended, and terminated
32	Unknown
64	State

11.8.8 Log Files Have Been Deleted or Are Missing

Problem

The SOA log files are getting deleted. This is typically due to the retention policy set in Fusion Applications Control.

Solution

Change the retention policy for the `odl-handler` to the appropriate value in Fusion Applications Control:

1. Right-click **soa-infra**.
2. Choose **Logs > Log Configuration**.

11.9 Custom Development (Extensibility)

This section contains the following topics that describe common problems and solutions for Oracle SOA Suite runtime:

- [Section 11.9.1, "Unable to Use Layered Customization on Specific Artifacts"](#)
- [Section 11.9.2, "New or Deleted Artifacts Do Not Appear as a Layered Customization"](#)
- [Section 11.9.3, "Warnings Regarding xml:id when Building or Deploying a Customized Composite"](#)
- [Section 11.9.4, "Distributed Queue Topic Messages Are Retrieved Multiple Times by Subscribers"](#)
- [Section 11.9.5, "Internal Key is Displayed Instead of a Translated String"](#)
- [Section 11.9.6, "BPEL Activity Errors and the Log Shows Error "com.oracle.bpel.entity.dataprovider.EntityVarMgrException:zero Item""](#)
- [Section 11.9.7, "BPEL Activity Errors and Log Shows Error "XPath variable or expression <expression> is empty""](#)
- [Section 11.9.8, "Unavailable Composite Errors Occurring Even Though the Target Service Is Up and Running"](#)
- [Section 11.9.9, "High-Volume Cross Reference \(XREF_DATA\) Table Impacts Performance and Maintenance"](#)
- [Section 11.9.10, "Access Denied Error While Invoking an Oracle ADF BC Service from BPEL"](#)
- [Section 11.9.11, "Clicking Manage Approvals Page Gives a "SOA server may be down" or "No data to display" Error"](#)

- Section 11.9.12, "Synchronous Service Invocation Errors Due to WS-Addressing"
- Section 11.9.13, "Deploying Human Workflow Application Throws "Unable to resolve "TaskQueryService" Error"
- Section 11.9.14, ""Invalid Subject" Error Thrown with Human Workflow API or Notification"
- Section 11.9.15, "Task is Assigned to the Group/Role When It Is Expected to Go to Every User in the Group/Role Individually"
- Section 11.9.16, "Task Completes Without Any Assignment Occurring"
- Section 11.9.17, "Parallel Assignees Must Approve or Reject the Task Even Though the Parallel Completion Criteria is Met"
- Section 11.9.18, "All Added Adhoc Participants Disappear After a Page Refresh"
- Section 11.9.19, "Future Approvers Are Not Visible in the History Table"
- Section 11.9.20, "Message Appears in the History Table About a Correlation ID Not Being Passed or Any Exception Related to the Correlation ID"
- Section 11.9.21, "Edit Toolbar Is Disabled or Not Shown"
- Section 11.9.22, "oracle.jrf.UnknownPlatformException Error When Customizing an Oracle Mediator"
- Section 11.9.23, "java.lang.NullPointerException When Customizing an Oracle Mediator"
- Section 11.9.24, "JDeveloper Compilation Error in a SOA Project with SOA MDS Service Location"

11.9.1 Unable to Use Layered Customization on Specific Artifacts

Problem

Only certain artifacts allow layered customization in Oracle JDeveloper because it requires editors that use XMLEF to make delta changes to the underlying Document Object Model (DOM). XMLEF is the XML Editing Framework. XMLEF is an Oracle JDeveloper framework that supports flexible editing of XML documents and is used extensively in layered customizations.

Solution

The following SOA artifact types are customizable:

- Composite (`composite.xml`)
- BPEL process (`.bpel`)
- Oracle Mediator (`.mplan`)

The following SOA artifact types are not customizable:

- XSL map (`.xsl`)
- Human task (`.task`)
- Decision service (`.decs`)
- Rules (`.rules`)
- Event definition (`.edl`)
- Domain value map (`.dvm`)

The following common artifact types are not customizable because Oracle XDK/WSDL APIs do not support customization (although their editors do use XMLEF to make delta changes to the underlying DOM):

- XSD schema (.xsd)
- WSDL document (.wsdl)

Noncustomizable artifacts are not sensitive to a customization context. Any changes to those artifacts from any customization context are visible to other customization contexts.

For more information about customizations in Oracle JDeveloper and runtime tools (such as Oracle SOA Composer and Oracle BPM Worklist), see the "Customizing and Extending SOA Components" chapter in the *Oracle Fusion Applications Extensibility Guide*.

11.9.2 New or Deleted Artifacts Do Not Appear as a Layered Customization

Problem

Because MDS customization does not capture artifact creations or deletions as deltas in the customization role, artifact creations and deletions in one customization context are visible to other customization contexts.

Solution

Artifact creations and deletions are not customization context sensitive. Therefore, only existing artifact customizations are supported in layers. Because new artifacts cannot be added as part of a layer, the artifacts are added to the project like any other base artifact. Any component artifacts that are added to the project are not incorporated into the runtime composite model unless the `composite.xml` file has explicitly referred to it. Therefore, if a customization did not alter `composite.xml` to include the newly added component, the new artifacts have no impact. Of course, the new artifacts are saved along with the base artifacts.

Additions of any new artifact introduced in the composite definition as a customization (for example, XSLT artifacts) must be named appropriately to prevent collisions with base XSLT artifacts. References to the new XSLT files must be made within the Oracle BPEL Process Manager/Oracle Mediator artifacts (through a layer).

11.9.3 Warnings Regarding `xml:id` when Building or Deploying a Customized Composite

Problem

When building or deploying the customized composite, you may get warnings similar to this because the `xml:id` element is not supported:

```
[scac] [WARNING] Line [13] Column [29] Schema validation failed for
C:\customizationdemo\project1\composite.xml
<Line 13, Column 29>: XML-24535: (Error) Attribute
'http://www.w3.org/XML/1998/namespace:id' not expected.
```

Solution

This warning can be ignored and should not prevent you from deploying the composite successfully.

11.9.4 Distributed Queue Topic Messages Are Retrieved Multiple Times by Subscribers

Problem

In a clustered environment, a queue topic is being retrieved multiple times by the subscribers. SOA clusters are typically homogenous (that is, each node has the same services running). Therefore, if a queue topic has multiple subscribers (for example, an error queue is subscribed to by a fallout notification service and a trouble ticketing service), then in a clustered environment, each service is running on every node. If it is a four-node cluster, then there are four instances of the fallout notification service and four instances of the trouble ticketing service, each of which retrieve the topic message. This is not desirable.

Solution

Set the consuming service singleton property to ensure that in a multi-node environment, only one of the subscriber instances can consume the topic message. In the example in the "Problem" section, the fallout notification service and the trouble ticketing service each should set their singleton property so that each of them consumes the message only once by any one of the four instances.

```
<service name="ConsumeFaultMessage" ui:wSDLLocation="ConsumeFaultMessage.wsdl">
<interface.wSDL
interface="http://xmlns.oracle.com/pcbpel/adapter/jms/EH/AIAReadJMSNotificationProcess/ConsumeFaultMessage/#wsdl.interface(Consume_Message_ptt)"/>
<binding.jca config="ConsumeFaultMessage_jms.jca">
  <property name="singleton">true</property>
</binding.jca>
</service>
```

11.9.5 Internal Key is Displayed Instead of a Translated String

Problem

An internal key is displayed instead of a translated string in the human task title, human task outcome, email subject and body, and human task mapped attributes displayed in Oracle BPM Worklist.

Solution

To resolve this problem:

1. Check the SOA `server-diagnostic.log` for errors for each server in the cluster. If a resource bundle or the key is not found, you see a similar error stack that contains the composite name and resource bundle name.

```
2010-09-29T23:45:46.702-07:00 soa_server1 ERROR \[\]
oracle.soa.services.workflow.soa tid: orabpel.invoke.pool-4.thread-7 userId:
weblogic
eid:59ab739a26595dc1:-38d33932:12b614ddb44,0:1:100000026
APP: soa-infra composite_name: RC3HumanTaskComposite component_name: Humantask1
component_instance_id: composite_instance_id: 310003
<WorkflowServiceEngine.request> Operation 'initiateTask' failed with exception
'EJB Exception: : java.util.MissingResourceException:
Can't find bundleforbase name
oracle.apps.hcm.people.soa.resource.HcmPeopleTopSoaBundleDummy, locale
en\[\]
at
java.util.ResourceBundle.throwMissingResourceException(ResourceBundle.java:1427
)
```

```
at java.util.ResourceBundle.getBundleImpl(ResourceBundle.java:1250)
at java.util.ResourceBundle.getBundle(ResourceBundle.java:952)
```

2. Confirm that the resource bundle has been deployed to the correct location in SOA MDS by first exporting the contents of SOA MDS and confirming that the resource bundle class is defined under `/apps/resource`. Follow these steps to export the metadata contents from Fusion Applications Control:
 - a. From the navigation pane, expand **SOA** and select **soa-infra**.
 - b. From the **SOA Infrastructure** menu, choose **Administration > MDS Configuration**.
 - c. Select **Export metadata documents to an archive on the machine where the web browser is running**.
 - d. Click **Export**.
3. If the resource bundle is not defined in SOA MDS or is in the wrong location in SOA MDS, then you may have encountered an error during patching or there is a problem with the resource bundle definition.

If the resource bundle is properly defined in SOA MDS and the string that is not translated is a mapped attribute that appears in the column heading of the worklist, then perform the followings steps to:

- Set the System MBean Browser **WorkflowCustomClasspathURL** property to a value of `""`.
 - Apply the changes.
 - Set **WorkflowCustomClasspathURL** to `"oramds:///apps/resource/"`.
 - Apply the changes in Fusion Applications Control.
- a. Log in to Fusion Applications Control in the domain where the JAR file was deployed.
 - b. From the navigation pane, expand **SOA** and select **soa-infra**.
 - c. From the **SOA Infrastructure** menu, choose **SOA Administration > System MBean Browser**.
 - d. Go to **Application Defined MBeans > oracle.as.soainfra.config > Server: SOA_cluster_name > WorkflowConfig > human-workflow**.
 - e. Remove the value in the **Value** column for the **WorkflowCustomClasspathURL** attribute.
 - f. Click **Apply**.
 - g. Enter `oramds:///apps/resource/` in the **Value** column of the **WorkflowCustomClasspathURL** attribute.
 - h. Click **Apply**.

If the resource bundle is properly defined in SOA MDS and the string that is not translated is not a mapped attribute that appears in the column heading of the worklist, then stop and restart the composite that references the resource bundle by following these steps:

- a. Log in to Fusion Applications Control in the domain where the JAR file was deployed.
- b. From the navigation pane, expand **SOA** and select **soa-infra**.

- c. Click **Shut Down**.
 - d. Click **Yes** in the confirmation window.
 - e. Click **Start Up**.
 - f. Click **Yes** in the confirmation window.
4. Retest your transaction flow.

11.9.6 BPEL Activity Errors and the Log Shows Error "com.oracle.bpel.entity.dataprovider.EntityVarMgrException:zero Item"

Problem

If entity variables are used in Oracle BPEL Process Manager, this error may be thrown at runtime:

```
com.oracle.bpel.entity.dataprovider.EntityVarMgrException:zero item
```

Solution

When the entity variable tries to bind the key provided to it at runtime in Oracle BPEL Process Manager and if it cannot find the key in the database, it throws this error. This may be due to human error. Either the developer has passed an incorrect primary key value to bind to the entity variable or the composite has been deployed to the wrong business component (BC) URL in the deployment plan. To resolve, ensure that the primary key value that gets bound to the entity variable at runtime exists in the database used by the BC service.

11.9.7 BPEL Activity Errors and Log Shows Error "XPath variable or expression <expression> is empty"

Problem

If the payload node used in an activity such as an assign activity in BPEL is empty/null, then it throws this error.

```
The XPath variable or expression
/ns4:findDtsPurchasingDeliverable1FindByDelStatusResponse/ns4:resultns2:Deliverabl
eId=$DeliverableIdVar/ns2:BatchId is empty at line 344. selectionFailure:
com.oracle.bpel.client.BPELFault: faultName:
{{http://schemas.xmlsoap.org/ws/2003/03/business-process/}selectionFailure}
```

Solution

This error is thrown when a selection operation performed either in a function or in an assignment encounters an error. If there is a possibility of getting a null/empty value for a payload element at runtime, then you can get around this error by enclosing this element in a switch case with a condition check of `(string-length(payload_element) > 0)` or a `bpelx:assert` element to test for null conditions in their code. If these errors are encountered at runtime, there is information in the log and the BPEL audit trail flow.

11.9.8 Unavailable Composite Errors Occurring Even Though the Target Service Is Up and Running

Problem

When a BPEL process has partner links targeted to external servers, during start up of the SOA server or activation of the BPEL composite, the BPEL service engine recognizes that the target server is down and marks the BPEL composite as unavailable. Even after the target server becomes available, there is no way to make the BPEL process available without restarting the complete SOA server or redeploying the BPEL process. Until then, the BPEL composite is not listed in the navigation pane of Fusion Applications Control and is only visible through the **Deployed Composites** tab. Even though the composite is displayed here (sometimes as active), if you click the process, you receive this error:

```
The composite <Process Name>[ <Version> ] is not available. This could happen because either the composite has been undeployed or EM has not yet discovered this composite.
```

Solution

The issue is caused by using a concrete WSDL file in the BPEL definition. Using an abstract WSDL prevents the BPEL composite/process from becoming inactive or its state from becoming retired when the target server or service is down.

Oracle Fusion Applications develop composites with `oramds://` references to WSDL files at design time for both the binding and the WSDL location. At deployment, the binding's concrete location (which is only used at runtime) is fixed.

Follow these steps to use an abstract WSDL by making a local copy of the target WSDL file in your BPEL project.

1. When you create a web service partner link in a composite in the Create Web Service dialog, select the **copy WSDL and its dependent artifacts into the project** checkbox.
2. After you are done with web service creation and the partner link is wired (connected) with the BPEL process service component, you see two WSDL files in the Application Navigator of Oracle JDeveloper:
 - *Webservice.WSDL* (the local copy of your target WSDL)
 - *WebserviceRef.WSDL*
3. Redeploy the SOA composite.
4. Retest the scenario.

11.9.9 High-Volume Cross Reference (XREF_DATA) Table Impacts Performance and Maintenance

Problem

When the volume of data in the XREF Oracle SOA schemas grows very large, maintaining the database can become difficult. It may have an impact on performance and may be identified in AWR snapshots.

Solution

To address this maintenance challenge, Oracle SOA 11g has been instrumented with partition keys that enable database administrators (DBAs) to take advantage of the

Oracle RDBMS partitioning features and capabilities. Even though multiple types of partitioning are possible, the list partitioning strategy is the preferred one for partitioning the cross reference data table.

List partitioning allows greater flexibility in the mapping of rows to partitions than range or hash partitioning. Because the cross reference data (XREF_DATA) is distributed based on discrete column values, unordered and unrelated sets of data can be grouped with no relationship between the partitions. For this table, the list partitioning is based on the column XREF_TABLE_NAME. Because you know the list of entities that have cross reference data, this strategy is ideal. The only caveat is that you must repeat this activity if a new entity gets added to the system.

Better understanding of data distribution can lead to further refinement and space management by employment of composite partitioning strategies such as list - list and list - range schemes. For information about partitioning, see the *Oracle Database Performance Tuning Guide*.

In addition to this partitioning strategy, you can also use Oracle Mediator's feature by which custom database tables can be created to store cross reference data for certain high volume entities. For more information, see *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

11.9.10 Access Denied Error While Invoking an Oracle ADF BC Service from BPEL

Problem

A common case in Oracle Fusion Applications is Oracle ADF BC service invocations from various SOA components. If the user context attached with the SOA composite instance or identity switching used in a SOA reference does not have proper permission to access the Oracle ADF BC service, then an access denied error is displayed.

Solution

Common causes for this error are as follows. These must be resolved.

- The Oracle ADF BC service does not have required permissions in `jazn-data.xml`.
- The permissions provided in `jazn-data.xml` are not properly reflected in `system-jazn-data.xml`.
- The `ejb-jar.xml` file does not have the `<interceptors>` tag added or it has an incorrect application name. An example of `ejb-jar.xml` with the correct tags is as follows:

```
<ejb-jar xsi:schemaLocation="http://java.sun.com/xml/ns/javaee
  [http://java.sun.com/xml/ns/j2ee/ ejb-jar_3_0.xsd] "version="3.0">
<enterprise-beans>
<session>
<ejb-name>oracle.apps.financials.payables.invoices.transactions.invoiceApproval
Service.InvoiceApprovalBCServiceBean</ejb-name>
<resource-ref><res-ref-name>jdbc/ApplicationDBDS</res-ref-name><res-type>javax.
sql.DataSource</res-type><res-auth>Container</res-auth></resource-ref>
<resource-ref><res-ref-name>jdbc/ApplicationServiceDBDS</res-ref-name><res-type
>javax.sql.DataSource</res-type><res-auth>Container</res-auth></resource-ref>
</session>
</enterprise-beans>
&nbsp;
<interceptors> <interceptor>
<interceptor-class>oracle.security.jps.ee.ejb.JpsInterceptor</interceptor-class
>
```

```
<env-entry> <env-entry-name>application.name</env-entry-name>
  <env-entry-type>java.lang.String</env-entry-type>
  <env-entry-value>fscm</env-entry-value>
<injection-target>
<injection-target-class>oracle.security.jps.ee.ejb.JpsInterceptor</injection-target-class>
<injection-target-name>application_name</injection-target-name>
</injection-target>
</env-entry>
</interceptor> </interceptors>
 
<assembly-descriptor>
<interceptor-binding>
<ejb-name>*</ejb-name><interceptor-class>oracle.security.jps.ee.ejb.JpsInterceptor</interceptor-class> </interceptor-binding>
</assembly-descriptor>
 
</ejb-jar>
```

11.9.11 Clicking Manage Approvals Page Gives a "SOA server may be down" or "No data to display" Error

Problem

At runtime, when you click the Manage Approvals page (for both a requisition and purchase order), you may get a SOA server may be down error among other errors. The page may also show a No data to display error.

Solution

Verify if you have `wf_client_config.xml` pointing to the correct SOA server. Oracle Fusion Applications environments are all multidomain and applications that must query their local SOA runtime must do so through the `wf_client_config.xml` file configuration.

For more information about the `wf_client_config.xml` file, see [Section 11.5.3](#).

11.9.12 Synchronous Service Invocation Errors Due to WS-Addressing

Problem

When integrating with external web services, you may have issues related to the WS-Addressing headers in the request and response XML documents used in synchronous request-response scenarios. This may even occur if there is a dynamic endpoint that resolves to an external web service that does not support WS-Addressing.

- A SOA composite acting as a client fails to invoke a service provider that does not support WS-Addressing headers in the request message for synchronous interactions.
- An external service consumer that does not support WS-Addressing headers in the response message fails to invoke a synchronous operation of a SOA composite.
- A service provider throws a `wsa:InvalidAddressingHeader` error when `SOAPAction` is defined in the WSDL `<binding>` element of the service provider interface.

Solution

The WS binding component of Oracle Fusion Middleware 11g generates WS-Addressing headers by default, which is as per the specification, but may be incompatible with some web services. This behavior can be overwritten using properties that allow you to control the generation of WS-Addressing header information for interoperability purposes.

- A SOA composite acting as a client fails to invoke a service provider that does not support WS-Addressing headers in the request message for synchronous interactions.

When your Oracle SOA Suite components act as service clients (consumers) and invoke synchronous operations of external web services, the invocation fails. The invocation failure is due to the WS-Addressing headers included in the request message when invoking the service provider.

The stack trace displays the following information:

```
NSGetCustomer (faulted)
Nov 10, 2009 4:26:40 PM Faulted while invoking operation "get" on provider
"NetSuite2009_PL".
<payload>
Nov 10, 2009 4:26:40 PM
"{urn:platform_2009_1.webservices.netsuite.com}UnexpectedErrorFault" has been
thrown.
<payload>
Nov 10, 2009 4:26:40 PM There is a system exception while performing the BPEL
instance, the reason is "Invalid SOAP Header: '<ns1:To
xmlns:ns1="http://www.w3.org/2005/08/addressing">https://webservices.netsuite.c
om/services/NetSuitePort_2009_1</ns1:To>'. Value is
'https://webservices.netsuite.com/services/NetSuitePort_2009_1'."
<payload>
```

In Oracle SOA Suite 11g, the WS-Binding component includes the following WS-Addressing headers:

- wsa:to
- wsa:replyTo
- wsa:action

These headers are included by default regardless of interacting with synchronous or asynchronous web service operations. Although the SOAP message generated by 11g is fully specification compliant, there are service provider implementations that do not understand these WS-Addressing headers when included in the request message for synchronous operations. This is why the invocation fails.

Oracle Fusion Middleware 11g uses new standards, WS-Addressing (*wsa*) and WS-I Basic profile, which demand that WS-Addressing headers be added by default to the request message.

To increase interoperability, the property `oracle.soa.ws.outbound.omitWSA` has been introduced for the `<binding.ws>` element in the `composite.xml` file. This property enables you to optionally suppress generation of WS-Addressing headers in the request message when set to `true`. The default value is `false`.

1. Manually add the following property to the `<binding.ws>` element in the `composite.xml` file.

```
[snippet]
<binding.ws
.....
```

```

        <property name="oracle.soa.ws.outbound.omitWSA" type="xs:boolean"
many="false" override="may">true</property>
</binding.ws>
[/snippet]

```

2. Redeploy the composite.

- An external service consumer that does not support WS-Addressing headers in the response message fails to invoke a synchronous operation of a SOA composite.

When external services invoke the endpoints of Oracle SOA Suite composites, which expose synchronous operation(s) acting as a server (service provider), the external web service fails with invocation errors. This is commonly due to the WS-Addressing headers included in the response message, which are not supported by some web service implementations.

In SOA Suite 11g, the WS-Binding component includes the WS-Addressing headers by default in the response messages. Although the SOAP message generated by 11g is fully specification compliant, there are service consumer implementations that do not understand the WS-Addressing headers when included in the response message in synchronous request-response scenarios. This is why the invocation fails.

To increase interoperability with clients (consumers) that do not support WS-Addressing headers, a property named `oracle.soa.addressing.response.enabled` has been introduced. This property can be used within the `<binding.ws>` element in the `composite.xml` file. This property enables you to optionally suppress generation of WS-Addressing headers in the response message when set to `true`. The default value is `false`.

This means that in a synchronous request-response scenario, in which the Oracle SOA Suite composite acts as a service provider, WS-Addressing headers are included in the response message by default. If the property is set to `false`, no WS-Addressing-related headers are returned in the response message.

1. Set the property in the `composite.xml` file as follows:

```

[snippet]
<binding.ws>
.....
<property name="oracle.soa.addressing.response.enabled" type="xs:boolean"
many="false" override="may">>false</property>
</binding.ws>
[/snippet]

```

- A service provider throws a `wsa:InvalidAddressingHeader` error when `SOAPAction` is defined in the WSDL `<binding>` element of the service provider interface.

When invoking a web service provider with a synchronous interface from a composite deployed on 11.1.1.1, a `wsa:InvalidAddressingHeader` message is returned. This happens when both of the following conditions are met:

- The service interface (WSDL) of the service provider does not include the `wsa:Action` element in the WSDL input message for the port operations
- and
- The `soapAction` attribute in the WSDL binding section of the service provider interface is specified.

The difference with the first scenario is that the service provider interface may accept WS-Addressing headers for synchronous endpoint operations by using the WS-Addressing extensibility attribute `wsa:UsingAddressing` in the WSDL binding section. A WSDL binding section sample is shown as follows:

```
<wsdl:binding name="mySoapBinding"
type="impl:myService">
  <wsaw:UsingAddressing wsdl:required="false"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdlsoap:binding style="document"
transport="http://schemas.xmlsoap.org/soap/http"/>
  <wsdl:operation name="myOperation">
    <wsdlsoap:operation soapAction="myAction"/>
    <wsdl:input name="myRequestMsg">
      <wsdlsoap:body use="literal"/>
    </wsdl:input>
    <wsdl:output name="myResponseMsg">
      <wsdlsoap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
</wsdl:binding>
```

As the following code sample shows, neither the input message nor the output message (as defined in the service provider WSDL) contain a `<wsa:Action>` element:

```
....
<wsdl:message name="myRequestMsg">
  <wsdl:part name="parameters"
element="impl:myRequestElement"/>
</wsdl:message>
.....
<wsdl:message name="myresponseMsg">
  <wsdl:part name="parameters"
element="impl:myResponseElement"/>
</wsdl:message>
```

The problem has been observed when integrating with synchronous web services deployed on the IBM WebSphere 6.1 Application Server.

The stack trace looks similar to the following code example:

```
.....
oracle.fabric.common.FabricInvocationException:
javax.xml.ws.soap.SOAPFaultException: A header representing a Message
Addressing Property is not valid and the message cannot be processed
at
oracle.integration.platform.blocks.soap.WebServiceExternalBindingComponent.thro
wFabricInvocationException(WebServiceExternalBindingComponent.java:415)
at
oracle.integration.platform.blocks.soap.WebServiceExternalBindingComponent.thro
wFabricInvocationExceptionForSoapFault(WebServiceExternalBindingComponent.java:
411)
at
oracle.integration.platform.blocks.soap.WebServiceExternalBindingComponent.proc
essSOAPFault(WebServiceExternalBindingComponent.java:394)
at
oracle.integration.platform.blocks.soap.WebServiceExternalBindingComponent.proc
essOutboundMessage(WebServiceExternalBindingComponent.java:253)
at
oracle.integration.platform.blocks.soap.WebServiceExternalBindingComponent.send
```

```

SOAPMessage (WebServiceExternalBindingComponent.java:644)
at
oracle.integration.platform.blocks.soap.WebServiceExternalBindingComponent.request (WebServiceExternalBindingComponent.java:526)
at
oracle.integration.platform.blocks.mesh.SynchronousMessageHandler.doRequest (SynchronousMessageHandler.java:139)
at
oracle.integration.platform.blocks.mesh.MessageRouter.request (MessageRouter.java:179)
at
oracle.integration.platform.blocks.mesh.MeshImpl.request (MeshImpl.java:144)
at sun.reflect.NativeMethodAccessorImpl.invoke0 (Native Method)
at
.....

```

If you use HTTP Analyzer or Apache TCP Monitor to trace the message exchange, you observe that the issue is related to the `<wsa:action>` element in the request SOAP header, which is not the same as `SOAPAction` in the HTTP header. The response message looks like the following code sample:

```

<soapenv:Envelope>
.....
  <soapenv:Header>
    <wsa:FaultDetail xmlns:wsa="http://www.w3.org/2005/08/addressing">
      <wsa:ProblemHeaderQName>wsa:Action</wsa:ProblemHeaderQName>
    </wsa:FaultDetail>
  </soapenv:Header>
  <soapenv:Body>
    <soapenv:Fault>
      <faultcode>wsa:InvalidAddressingHeader</faultcode>
      <faultstring>
        <![CDATA[A header representing a Message Addressing Property is not
          valid and the message cannot be processed]]></faultstring>
      </soapenv:Fault>
    </soapenv:Body>
  </soapenv:Envelope>

```

As mentioned in the previous sections, the WS Binding component of Oracle Fusion Middleware 11g generates WS-Addressing headers by default. According to the W3C specification (Web Services Addressing 1.0 - WSDL Binding W3C Candidate Recommendation 29 May 2006), Section 4.4.1 Explicit Association:

"In the absence of a `wsa:Action` attribute on a WSDL input element where a `SOAPAction` value is specified, the value of the `[action]` property for the input message is the value of the `SOAPAction` specified."

The generated value for the `<wsa:Action>` element of the input message matches the value of the `SOAPAction` element, if that is specified in the WSDL binding section. Otherwise, it generates a default value for the `<wsa:Action>` element.

A sample of the generated request is as follows (provided WSDL `<binding>` and `<messages>` section, as shown previously).

```

POST /currencyratesapi/services/myAction HTTP/1.1
Host: <host>:<port>
Connection: TE
TE: trailers, deflate, gzip, compress
User-Agent: Oracle HTTPClient Version 10h
SOAPAction: "myAction"
Accept-Encoding: gzip, x-gzip, compress, x-compress

```

```

ECID-Context: 1.0000IUhXOGw3R9BpNWK6ye1BPi6A0002Wk;kYhgp8TL00hgv0
Content-type: text/xml; charset=UTF-8
Content-Length: 1473

<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:wsa="http://www.w3.org/2005/08/addressing">
<env:Header>

<wsa:To>http://<host>:<port>/currencyratesapi/services/myAction</wsa:To>
<wsa:Action>myAction</wsa:Action>
<wsa:MessageID>...</wsa:MessageID>
<wsa:RelatesTo>...</wsa:RelatesTo>
<wsa:ReplyTo>
<wsa:Address>http://www.w3.org/2005/08/addressing/anonymous</wsa:Address>
<wsa:ReferenceParameters>
.....
</wsa:ReferenceParameters>
</wsa:ReplyTo>
</env:Header>
<env:Body>
.....
</env:Body>
</env:Envelope>

```

11.9.13 Deploying Human Workflow Application Throws "Unable to resolve 'TaskQueryService'" Error

Problem

Almost all Oracle Fusion Applications have the `hwtaskflow.xml` file with the `IntegrateTaskFlowWithTask` entry in the `web.xml` file to register the notification projects. When deploying the J2EE EAR file, it throws the following error if you did not configure the foreign JNDI connection or `wf_client_config.xml` with a valid SOA environment.

```

javax.naming.NameNotFoundException:Unable to resolve 'TaskQueryService'. Resolved
''; remaining name 'TaskQueryService'

```

Solution

If the SOA server is not up and running, then start the SOA server using Fusion Applications Control. If it is up and the problem exists, then check that the `wf_client_config.xml` file has a valid SOA environment. If possible, avoid foreign JNDI references because the JNDI resources get bound into all servers in the domain that causes `BindException` errors for servers in which the actual service exists when source and target JNDI names are the same. Oracle Fusion Applications do not use foreign JNDI references, instead bundling a correctly configured `wf_client_config.xml` file in the EAR file or using APIs at runtime to generate the Java Architecture for XML Binding (JAXB) for the human workflow APIs.

Use `wf_client_config.xml` (bundled at the application level) for all ADF worklist client applications communicating with Oracle SOA Suite. Ensure that you specify the correct URL in the file configuration.

```

<?xml version="1.0" encoding="UTF-8" ?>

<workflowServicesClientConfiguration
xmlns="http://xmlns.oracle.com/bpel/services/client">
<server name="default" default="true" clientType="REMOTE">
<localClient>

```

```
<participateInClientTransaction>>false</participateInClientTransaction>
</localClient>
<remoteClient>
  <serverURL>t3:cluster://CRMSoACluster</serverURL>
<initialContextFactory>weblogic.jndi.WLInitialContextFactory</initialContextFa
ctory>
  <participateInClientTransaction>>false</participateInClientTransaction>
  </remoteClient>
  <soapClient>
<rootEndPointURL>http://adc60048fems.us.example.com:6361/soa-infra</rootEndPointUR
L
>
  </soapClient>
</server>
</workflowServicesClientConfiguration>
```

11.9.14 "Invalid Subject" Error Thrown with Human Workflow API or Notification

Problem

When Oracle SOA Suite is installed on Domain1 and ADF on Domain2 and if any remote calls are performed between them for any human workflow API use or for notifications, errors similar to the following are thrown if the domain trust is not set.

```
javax.servlet.ServletException:
javax.servlet.ServletException:java.lang.SecurityException: Security:090398Invalid
Subject:principals=CVBUYER01, AR_MANAGER_VISION_OPERATIONS_DATA, AR_ACCOUNTS_
RECEIVABLE_MANAGER_JOB, FBI_TRANSACTIONAL_BI_WORKER
```

Solution

Set the domain trust password on both domains (global trust).

1. Log in to Oracle WebLogic Server Administration Console.
2. In the **Domain Structure**, click the domain name.
3. Click the **Security** tab, and then click **Advanced**.
4. Set the password in the **Credential** and **Confirm Credential** fields.

Note: Oracle Fusion Applications do not support RMI across domains. That is, all remote calls between ADF and SOA are always within the same domain. When cross domain communication is required, SOAP is used.

You may encounter the scenario described in this section in your development environment. For example, you may be running the ADF task flow for human tasks in the JDeveloper-integrated Oracle WebLogic Server and running the composite in an independent standalone SOA server. Both are in different domains.

11.9.15 Task is Assigned to the Group/Role When It Is Expected to Go to Every User in the Group/Role Individually

For troubleshooting information about this issue, see the "Task Assignment/ Routing/ Escalation Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.9.16 Task Completes Without Any Assignment Occurring

For troubleshooting information about this issue, see the "Task Assignment/ Routing/ Escalation Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.9.17 Parallel Assignees Must Approve or Reject the Task Even Though the Parallel Completion Criteria is Met

For troubleshooting information about this issue, see the "Task Assignment/ Routing/ Escalation Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.9.18 All Added Adhoc Participants Disappear After a Page Refresh

For troubleshooting information about this issue, see the "Task History Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.9.19 Future Approvers Are Not Visible in the History Table

For troubleshooting information about this issue, see the "Task History Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.9.20 Message Appears in the History Table About a Correlation ID Not Being Passed or Any Exception Related to the Correlation ID

For troubleshooting information about this issue, see the "Task History Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.9.21 Edit Toolbar Is Disabled or Not Shown

For troubleshooting information about this issue, see the "Task History Issues" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle SOA Suite and Oracle Business Process Management Suite*.

11.9.22 oracle.jrf.UnknownPlatformException Error When Customizing an Oracle Mediator

Problem

You can receive the following error when making customization modifications to an Oracle Mediator service component in a SOA application.

For example, assume you perform the following steps:

1. Log in to JDeveloper with the **Fusion Application Developer** role.
2. Create a SOA application and project with the **Customizable** option selected.
3. Add appropriate JAR files under the **Libraries and Classpath** section of the Project Properties dialog for the project.
4. Under **Application Resources > Descriptors > ADF META-INF > adf-config.xml**, add appropriate customization classes.

5. Add an Oracle Mediator service component to the application.
6. Save the application and restart JDeveloper.
7. Add appropriate routing rule and XSL transformations to the Oracle Mediator service component.

The following error is displayed in the command prompt window:

```
oracle.jrf.UnknownPlatformException: JRF is unable to determine the current application server platform.
```

Solution

This error can be ignored. After this error occurs, everything still works correctly.

11.9.23 java.lang.NullPointerException When Customizing an Oracle Mediator

Problem

You can receive the following error when making a customization modification to an Oracle Mediator service component in a SOA application.

For example, assume you perform the following steps:

1. Log in to JDeveloper with the **Fusion Application Developer** role.
2. Create a SOA application and project with the **Customizable** option selected.
3. Add appropriate JAR files under the **Libraries and Classpath** section of the Project Properties dialog for the project.
4. Under **Application Resources > Descriptors > ADF META-INF > adf-config.xml**, add customization classes.
5. Add an Oracle Mediator service component to the application.
6. Add a routing rule to the Oracle Mediator service component.

The following error is displayed in the command prompt window:

```
java.lang.NullPointerException
```

Solution

If you do not see any alerts indicating that a WSDL file cannot be found or parsed, then this exception in the log/console can be ignored.

11.9.24 JDeveloper Compilation Error in a SOA Project with SOA MDS Service Location

Problem

1. Start JDeveloper with the **Fusion Application Developer** role.
2. Create a SOA application.
3. Create and deploy a SOA bundle to the server.
4. Create another SOA application.
5. Create an Oracle Mediator service component.
6. Create a reference web service and access the SOA MDS connection and browser for the service of the SOA application that you created in Step 2.
7. Wire the components.

8. Update the empty port and location values in the `composite.xml` file. For the location value, enter the `oramds` path. For example:

```
<reference name="Service1"

ui:wSDLLocation="oramds:/apps/CalleeProject/CalleeBPELProcess.wsdl">
  <interface.wsdl
interface="http://xmlns.oracle.com/Comp2Comp_
EDGApp/CalleeProject/CalleeBPELProcess#wsdl.interface(CalleeBPELProcess)"/>
  <binding.ws
port="http://xmlns.oracle.com/Comp2Comp_
EDGApp/CalleeProject/CalleeBPELProcess#wsdl.endpoint(calleebpelprocess_client_
ep/CalleeBPELProcess_pt)"
  location="oramds:/apps/CalleeProject/CalleeBPELProcess.WSDL"/>
</reference>
```

9. Compile the application.

You receive the following error message.

```
Warning(26,76): Failed to Find Binding
```

Solution

This is only a warning message thrown by the compiler. Runtime works fine. Having a reference from SOA MDS in a composite makes the port and location values empty in the bindings. To resolve this warning message:

- Explicitly enter the corresponding details. For example, replace the `binding.ws` location value with the concrete WSDL file.
- Deploy the composite using the configuration plan, which replaces the port and `oramds` location with the concrete WSDL file.

Troubleshooting Oracle WebCenter Content

This chapter describes common problems that you might encounter when using Oracle WebCenter Content and explains how to solve them. This chapter contains the following topics:

- [Section 12.1, "Introduction to Troubleshooting Oracle WebCenter Content"](#)
- [Section 12.2, "Attachments"](#)
- [Section 12.3, "Integration"](#)

Some procedures in this chapter reference content in the Oracle Fusion Middleware guides. These guides describe using Fusion Middleware Control. These procedures also apply to Fusion Applications Control.

12.1 Introduction to Troubleshooting Oracle WebCenter Content

This section provides guidelines and a process for using the information in this chapter that will minimize the time you spend resolving problems.

Guidelines

When using the information in this chapter, Oracle recommends:

- After performing any of the solution procedures in this chapter, immediately retrying the failed task that led you to this troubleshooting information. If the task still fails when you retry it, perform a different solution procedure in this chapter and then try the failed task again. Repeat this process until you resolve the problem.
- Making notes about the solution procedures you perform, symptoms you see, and data you collect while troubleshooting. If you cannot resolve the problem using the information in this chapter and you must log a service request, the notes you make will expedite the process of solving the problem.

Process

Follow the process outlined in [Table 12-1](#) when using the information in this chapter. If the information in a particular section does not resolve your problem, proceed to the next step in this process.

Table 12–1 Process for Using the Information in this Chapter

Step	Section to Use	Purpose
1	Section 12.2 through Section 12.3	Perform problem-specific troubleshooting procedures. These sections describe: <ul style="list-style-type: none"> ■ Possible causes of the problems ■ Solution procedures corresponding to each of the possible causes
2	Section 14.1	Use My Oracle Support to get additional troubleshooting information about Oracle Fusion Applications or Oracle SOA Suite. My Oracle Support provides access to several useful troubleshooting resources, including Knowledge Base articles and Community Forums and Discussions.
3	Section 14.1	Log a service request if the information in this chapter and My Oracle Support does not resolve your problem. You can log a service request using My Oracle Support at https://support.oracle.com .

12.2 Attachments

Oracle WebCenter Content can store attachments associated with a content item. Within the Oracle Fusion Applications environment, attachments are secured by their corresponding content items. If you can access a content item, then you can access its attachments.

12.2.1 Attachment File Is Too Large

Problem

When the user attempts to add an attachment, the file selection field clears and they receive the following message:

```
Warning: The file upload failed.
The file could not be uploaded because it is too large.
```

Solution

The maximum size of a file that can be uploaded is managed by the Apache MyFaces Trinidad settings. The `UPLOAD_MAX_MEMORY` context parameter in the `web.xml` file can be added or modified to change this size from the default of 2 MB.

For more information, see the "Changing the Maximum File Upload Size" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.

12.3 Integration

This section covers the following topics:

- [Section 12.3.1, "Content Server Web Service Is Unavailable"](#)
- [Section 12.3.2, "Content Server Connection Failure"](#)
- [Section 12.3.3, "Clicking Attachments Link Results in a 404 Error"](#)
- [Section 12.3.4, "Authorization Failure"](#)
- [Section 12.3.5, "Application Access Denied"](#)
- [Section 12.3.6, "CredentialAccessPermission Denied"](#)
- [Section 12.3.7, "Appcore Attachment Checkin Failure"](#)

12.3.1 Content Server Web Service Is Unavailable

Problem

When the Content Server is down, it is not possible for any user to create, update or retrieve Content Server content. For example, the following error:

```
Error: Fails to access WSDL at
<protocol://host:port/idcnativews/IdcWebRequestPort?WSDL>
```

Fails with the following response:

```
'503: Service Unavailable' for url
'protocol://host:port/idcnativews/IdcWebRequestPort?WSDL'
```

Solution

To resolve this issue:

1. Check that the connection end point is correct. If it is incorrect, update the CIS Web URL of the FusionAppsContentRepository Java Content Repository (JCR) connection to the correct value.
2. Restart Content Server if it is not available. See "Managing System Processes" in *Oracle Fusion Middleware Administering Oracle WebCenter Content*.

12.3.2 Content Server Connection Failure

Problem

When a connection failure occurs, it is not possible for any user to create, update or retrieve Content Server content. This occurs at the point where the application is attempting to connect and authorize the connection, such as when adding or accessing an attachment. The following are indications of a connection problem:

- Clicking on the link to an attachment displays a warning message instead of the attachment. For example:

```
Warning: The attachment information cannot be retrieved. (FND-2403)
```

The same text is shown for errors FND-2403 through to FND-2405. These errors are all indicative of problems connecting to Content Server when trying to retrieve content.

- Attempting to save an attachment results in an error message. For example:

```
Error: Your attachments changes cannot be saved. (FND-2408)
```

The same text is shown for errors FND-2407 through FND-2410. These errors are all indicative of problems connecting to Content Server when trying to save content.

- No connection, folder or document is available to the document picker.
- Message popup beginning with the following:

```
oracle.stellent.ridc.protocol.ProtocolException
```

Solution

To resolve this issue:

1. Look for the error message number in the application log, for example, FND-2403. If there is no FND message then it is likely that the message is being bubbled up from Content Server or Oracle WebCenter Portal. Search for the text of the

message in the application log. The exception message provides additional context to help determine the root cause of the problem.

2. Check that the Content Server is running. Restart Content Server if it is not available. See "Managing System Processes" in *Oracle Fusion Middleware Administering Oracle WebCenter Content*.
3. Determine if the JCR Connection is set correctly in this environment:
 - Check that the Content Server Connection has been defined. The connection name must be `FusionAppsContentRepository`, and must be defined as the primary Content Server connection.
 - The connection must be of socket type `jaxws`, with the Web URL configured to point to the Content Server native web services endpoint (the `idcnatives` endpoint). The Client Security Policy must be null, indicating that GPA (Global Policy Attachments) should be leveraged. A valid administrative user must also be specified as part of the definition. This connection definition is persisted in Oracle Metadata Repository, which happens automatically as a part of the setup. Hence, MDS Repository issues may result in issues for Attachments. For example, the connection specified in a `connections.xml` is overridden by the MDS Repository configuration.

You can use Oracle Enterprise Manager Fusion Applications Control (Fusion Applications Control) or the Oracle WebLogic Scripting Tool (WLST) to view connection details. Verbose listing also shows that this is the primary connection.

Use the System MBean Browser to view the connection details:

- a. Choose **Fusion Applications** from the **Targets** menu.
- b. In the table on the Fusion Applications target home page, click the appropriate **Product Family** target.
- c. From the navigation pane, expand the product family, then expand **Fusion Applications**.
- d. Expand the cluster application you want to monitor to show each instance of the application.
- e. Click one of the application deployment instances, for example, **PayablesApp (PayablesSever_1)**.

The Fusion J2EE Application page displays.

- f. From the **Fusion J2EE Application** menu, choose **System MBean Browser**.
- g. In the System MBean Browser page, expand **Application Defined MBeans**.
- h. Expand **oracle.adf.share.connections**, *server name*, *application name*, **ADFConnections**, **JCR**.
- i. Click **FusionAppsContentRepository**.
- j. In the Application Defined MBeans: JCR:FusionAppsContentRepository page, verify the connection properties.

To use the Oracle WebLogic Scripting Tool (WLST):

- a. From the `fusionapps` Middleware subdirectory, start the scripting tool:

```
(UNIX) FA_MW_HOME/oracle_common/common/bin/wlst.sh
(Windows) FA_MW_HOME\oracle_common\common\bin\wlst.cmd
```

Where `DOMAIN_HOME` is located in the following locations:

```
(UNIX) APPLICATIONS_CONFIG/instance/domains/host/domain_name
(Windows) APPLICATIONS_CONFIG\instance\domains\host\domain_name
```

- b. Connect to Oracle WebLogic Server.
- c. Use Oracle WebLogic Scripting Tool (WLST) commands. For example:

```
listJCRContentServerConnections(appName='LedgerApp',verbose=1)
FusionAppsContentRepository
Connection Name: FusionAppsContentRepository
Connection Type: JCR
External Application ID:
Timeout: (not set)
CIS Socket Type: jaxws
CIS Server Hostname:
CIS Server Port:
CIS Keystore Location:
CIS Private Key Alias:
CIS Web URL:
${adfDomainConfig.oraclefusionapps.ucmAppInternalProtocol}://${adfDomainCon
fig.oraclefusionapps.ucmAppInternalHost}:${adfDomainConfig.oraclefusionapps
.ucmAppInternalPort}/idcnativews
Web Server Context Root:
Client Security Policy:
Admin User Name: FUSION_APPS_FIN_ADF_APPID
Cache Invalidation Interval: (not set)
Binary Cache Maximum Entry Size: (not set)
The Documents primary connection is "FusionAppsContentRepository"
```

Note that the URL in the output is tokenized using Expression Language expressions. These expressions are resolved from the `adf-domain-config.xml` document from MDS. Make the following selections to resolve the expressions and return the actual destination:

```
System MBean Browser > Application Defined MBeans >
oracle.adf.share.connections > Server: YYY > Application: ZZZApp >
ADFConnections > ADFConnections > Operations Tab >
exportWithResolvedExpressions > Invoke
```

The document picker used to select folders or documents from Content Server is provided by WebCenter.

12.3.3 Clicking Attachments Link Results in a 404 Error

Problem

Clicking on the link of an attachment results in a 404 (page not found) error. This occurs for all users of an application.

Solution

If the attachment type is a file or text, then it is likely to be a problem with the `GetHandler` servlet.

The condition occurs when the `GetHandler` servlet is not running or the application has not been defined correctly.

1. One way to confirm that the servlet is available is to go to the console:
Deployments > Application > Application Root > Monitoring > Servlets
2. Restart the `GetHandler` servlet if it is not running.

3. If the servlet is running then the issue is likely to be with the configuration of the application. Contact the Oracle Fusion Applications product team to resolve the issue with the configuration of the application.

If the attachment type is a URL, then the value must be corrected. This can be done by verifying and re-entering the correct URL attachment.

12.3.4 Authorization Failure

Problem

When the user attempts to create a new attachment or view an existing attachment, they receive an insufficient privileges message. Here are some sample error messages that either originate from the Content Server or are found in the logs:

```
Content item '(null)' was not successfully checked in. User 'USERNAME' does not have sufficient privileges.
```

```
Unable to download 'DOCUMENTID'. User 'USERNAME' does not have sufficient privileges.
```

```
Content item '(null)' was not successfully checked in. Unable to execute service method 'checkSecurity'. The error was caused by an internally generated issue. The error has been logged.
```

```
'USERNAME' does not have sufficient privileges
```

```
Invalid Security: error in processing the WS-Security header
```

```
MustUnderstand  
headers:{http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd\}Security are not understood
```

```
internal.messaging.saa.j.SOAPEXceptionImpl: No NamespaceURI, SOAP requires  
faultcode content to be a QName  
com.sun.xml.internal.messaging.saa.j.SOAPEXceptionImpl: No NamespaceURI, SOAP  
requires faultcode content to be a QName
```

```
com.sun.xml.internal.messaging.saa.j.SOAPEXceptionImpl: No NamespaceURI, SOAP  
requires faultcode content to be a QName
```

Solution

The insufficient privileges message originates from Content Server. It means that the user for the Content Server connection does not have sufficient privileges to complete the requested steps. There are many possible configuration errors that produce this message, but it indicates a problem with the configuration of the underlying technology stack.

To resolve this issue, follow the procedures in the following tasks:

- [Task 1: Check Oracle Fusion Applications Client](#)
- [Task 2: Check Oracle Content Server Setup](#)

12.3.4.1 Task 1: Check Oracle Fusion Applications Client

Check the application log for errors and then follow the steps that match the reported error:

- [Section 12.3.4.1.1, "Misunderstood Headers or No Namespace URL Error"](#)

- [Section 12.3.4.1.2, "Invalid Security Error"](#)
- [Section 12.3.4.1.3, "Unable to Generate Digital Signature Error"](#)

12.3.4.1.1 Misunderstood Headers or No Namespace URL Error

The following errors indicate the web service end point on Content Server may be missing the web service policy; this can be verified in several ways.

```
MustUnderstand
headers:{http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd\}Security are not understood
```

```
com.sun.xml.internal.messaging.saaj.SOAPExceptionImpl: No NamespaceURI, SOAP
requires faultcode content to be a QName
```

From the Fusion Applications Control:

1. From the navigation pane, expand the domain and **Application Deployments**, then click **Oracle UCM Native Web Services (UCM_server1)**.
2. From the **Application Deployment** menu, choose **Web Services**.
3. In the Web Services home page, click the **Web Service** tab.
4. Click the **IdcWebLoginPort** endpoint to view the configuration in the IdcWebLoginPort (Web Service Endpoint) page.
5. On the IdcWebLoginPort (Web Service Endpoint) page, click the **OWSM Policy** tab and verify the Globally Attached Policy. For example:

```
oracle/wss_saml_or_username_token_service_policy
```

From the Web Services Description Language (WSDL) URL:

1. Point your browser to the following URL:

```
http://contentserver_host:contentserver_port/idcnativews/IdcWebLoginPort?WSDL
```

2. Check that the WSDL contains a binding reference to the appropriate service policy. For example:

```
<wsp:PolicyReference URI="#wss_saml_or_username_token_service_policy" ...
```

12.3.4.1.2 Invalid Security Error

The following exception occurs if the client GPA (Global Policy Attachments) is not set up correctly.

```
Invalid Security: error in processing the WS-Security header
```

Both the Web Service Client (Fusion Application) and Service (Content Server native web services login endpoint) leverage Globally Attached Policies (GPA) in most cases. With GPA, the domain administrator configures default policies for Web Service Client and Service resources for each domain. Clients and services which do not directly attach policies (Locally Attached Policies) use the corresponding policies configured for GPA. Issues arise when client and service policies are not compatible. For example, a message protection policy is set on the client, but not on the service. Always check that the client and service leverage GPA and that the policies are compatible. For example:

- If the service policy on Content Server login service is set to:

```
oracle/wss_saml_or_username_token_service_policy
```

Then the client policy should be set to:

```
oracle/wss10_saml_token_client_policy
```

- If the service policy on Content Server login service is set to:

```
oracle/wss11_saml_or_username_token_with_message_protection_service_policy
```

Then the client policy should be set to:

```
oracle/wss11_saml_token_with_message_protection_client_policy.
```

Note that the GPA is set at the global domain level and impacts all domains. This is done as part of provisioning, and there is no explicit action to be done for Content Server Attachments in provisioned environments.

From the Oracle WebLogic Scripting Tool (WLST):

1. From the fusionapps Middleware subdirectory, start the scripting tool:

```
(UNIX) FA_MW_HOME/oracle_common/common/bin/wlst.sh
(Windows) FA_MW_HOME\oracle_common\common\bin\wlst.cmd
```

2. Connect to Oracle WebLogic Server.

3. Run a `listPolicySets()` command and then an appropriate `displayPolicySet('xxxx')` command from the client domain to obtain details on the GPA defined for the web service client (ws-client).

```
...> listPolicySets()
Location changed to domainRuntime tree. This is a read-only tree with
DomainMBean as the root.
For more help, use help(domainRuntime)
Global Policy Sets in Repository:
...
ws-client
...
...> displayPolicySet('ws-client')

Policy Set Details:
-----
Name: ws-client
Type of Resources: Web Service Client
Scope of Resources: Domain("**")
Description: Global policy attachments for Web Service Client resources.
Enabled: true
Policy Reference: security : oracle/wss10_saml_token_client_policy,
enabled=true
```

Similarly, from the CommonDomain where UCM is deployed, run WLST with appropriate `listPolicySets()` and `displayPolicySet('xxxx')` commands to obtain details on the GPA defined for the service (ws-service).

12.3.4.1.3 Unable to Generate Digital Signature Error

The following message indicates that there is a problem on the Oracle Fusion Applications side when attempting to generate a digital signature.

```
Unable to generate digital signature
```

If there is no such error, then skip to the [Section 12.3.4.2](#).

Keystore or Password Error

In some cases, the application log may contain the following message:

```
Keystore has been tampered with, or password is wrong
```

To resolve this issue:

1. Determine the keystore location from Fusion Applications Control:
 - a. From the navigation pane, expand the farm and then **WebLogic Domain**.
 - b. Select the domain, for example, FinancialDomain.
 - c. In the Oracle WebLogic Server Domain home page, from the WebLogic Domain menu, choose **Security > Security Provider Configuration**.
 - d. In the Security Provider Configuration page, under **Web Services Manager Authentication Providers**, expand **Keystore** to see the location. The location is typically

```
(UNIX) DOMAIN_HOME/config/fmwconfig/default-keystore.jks
```

```
(Windows) DOMAIN_HOME\config\fmwconfig\default-keystore.jks
```

2. Validate the keystore password using the `keytool` tool, located in `ORACLE_HOME/jdk/bin` on UNIX and `ORACLE_HOME\jdk\bin` on Windows. For example:

```
keytool -list -v -keystore default-keystore.jks -storepass admin123
```

Where `admin123` is the keystore password.

The following error occurs if the password is incorrect:

```
java.security.UnrecoverableKeyException
```

3. Validate the private key alias and password using `keytool`. For example:

```
keytool -keypasswd -alias orakey -keypass welcome1 -new welcome1 -keystore default-keystore.jks -storepass admin123
```

Where `admin123` is the verified keystore password from Step 2, and `welcome1` is the alias entry password.

The following error occurs if the password is incorrect.

```
java.security.UnrecoverableKeyException
```

The following error occurs if there is no key pair under the alias `orakey`.

```
java.lang.Exception
```

4. Validate that the correct passwords and entries exist in the credential store.

The credential store must contain valid password credentials for the `oracle.wsm.security` map providing the keystore access password, signing key alias and password, and encryption key alias and password.

You can view and edit credential store contents from EM (passwords are not rendered):

- a. From the navigation pane, expand the farm and then **WebLogic Domain**.
- b. Select the domain, for example, FinancialDomain.
- c. In the Oracle WebLogic Server Domain home page, from the WebLogic Domain menu, choose **Security > Credentials**.

Alternatively, run the WLST `listCred` script with the appropriate map and key to retrieve passwords associated with credentials:

```
listCred(map="oracle.wsm.security", key="keystore-csf-key")
listCred(map="oracle.wsm.security", key="sign-csf-key")
listCred(map="oracle.wsm.security", key="enc-csf-key")
```

For more information, see the section "listCred" in the *Oracle Fusion Middleware Application Security Guide*.

Access Denied Error

The following error indicates a problem with configuration or provisioning of the application.

```
Access Denied
```

Contact the Oracle Fusion Applications product team to resolve the issue.

12.3.4.2 Task 2: Check Oracle Content Server Setup

To resolve this issue:

1. Switch on logging for the `FusionAppsAttachments` component:
 - a. Log in to UCM as an administrator.
 - b. Choose **Administration > System Audit Information**.
 - c. In the **Tracing sections Information** area, add **fusionappsattachments** to **Active Sections**.
 - d. Enable **Save and Full Verbose Tracing**.
 - e. Click **Update**.
2. View the logs:
 - a. Log in to UCM as an administrator.
 - b. Choose **Administration > System Audit Information**.
 - c. Select **View Server Output**.
3. After re-running an attempt to retrieve or create an attachment, search for the string `Signature Verification Failed`. Determine the keystore location from Fusion Applications Control:
 - a. From the navigation pane, expand the farm and then **WebLogic Domain**.
 - b. Select the domain.
 - c. In the Oracle WebLogic Server Domain home page, from the WebLogic Domain menu, choose **Security > Security Provider Configuration**.
 - d. In the Security Provider Configuration page, under **Web Services Manager Authentication Providers**, expand **Keystore** to see the location. The location is typically

```
(UNIX) DOMAIN_HOME/config/fmwconfig/default-keystore.jks
(Windows) DOMAIN_HOME\config\fmwconfig\default-keystore.jks
```

4. Validate the keystore password using the `keytool` tool, located in `ORACLE_HOME/jdk/bin` on UNIX and `ORACLE_HOME\jdk\bin` on Windows. For example:

```
keytool -list -v -keystore default-keystore.jks -storepass admin123
```

Where `admin123` is the supposed keystore password.

The following error occurs if the password is incorrect:

```
java.security.UnrecoverableKeyException
```

5. Validate the private key alias and password using `keytool`. For example:

```
keytool -keypasswd -alias orakey -keypass welcome1 -new welcome1 -keystore
default-keystore.jks -storepass admin123
```

Where `admin123` is the verified keystore password from Step 2, and `welcome1` is the alias entry password.

The following error occurs if the password is incorrect.

```
java.security.UnrecoverableKeyException
```

The following error occurs if there is no key pair under the alias `orakey`.

```
java.lang.Exception
```

6. Validate that the correct passwords and entries exist in the credential store.

The credential store must contain valid password credentials for the `oracle.wsm.security` map providing the keystore access password, signing key alias and password, and encryption key alias and password.

Run the WLST `listCred` script with the appropriate map and key. See the section "listCred" in the *Oracle Fusion Middleware Application Security Guide*.

7. Correct the keystore or credential store if required. See the following sections:
 - [Section 12.3.4.2.1, "Public Certificate Map Error"](#)
 - [Section 12.3.4.2.2, "Legacy Signing Request Error"](#)
 - [Section 12.3.4.2.3, "Request Expiry Time Reached Error"](#)
 - [Section 12.3.4.2.4, "Unable to Base64 Decode Received Signature Error"](#)
 - [Section 12.3.4.2.5, "Unable to Verify Signature Error"](#)

12.3.4.2.1 Public Certificate Map Error

Problem

This following error indicates that the public certificate associated with the private key used by the Attachments client was not found in the Content Server domain's keystore.

```
Public Certificate Map did not contain fingerprint: XXXX Public Certificate is
null; Unable to verify signature
```

In security-hardened environments where each domain could use unique key pairs, the client's public certificate must be loaded into the Content Server domain's keystore. In non-security-hardened environments, each domain uses identical key pairs (and possibly cloned keystores), and hence the public certificate should already be present in the Content Server domain's keystore.

Solution

Check that the keystore on the Oracle Fusion Applications client and the Content Server contain the correct keystore. In a non-security hardened environment, the keystore can be copied from one domain to another and Oracle WebLogic Server

restarted. You must restart the Content Server when the keystore changes, as this public certificate is cached at startup. The Attachments caches the value upon the first access so the Oracle Fusion application may also require bouncing, although this is unlikely.

Use the `keytool` to check the certificate. For example:

```
keytool -list -v -keystore default-keystore.jks
```

See the Oracle Fusion Applications security guides for the correct configuration of the keystore.

12.3.4.2.2 Legacy Signing Request Error

Problem

The following message indicates that the Attachment client provided a null or empty public certificate fingerprint value (`XFND_CERT_FP`), which is likely due to some keystore access issue on the client.

```
Legacy signing request; Certificate FingerPrint missing
```

If this value is missing from the databinder, the signature value itself is also likely missing. If this is the case, you would also likely see the following message:

```
Signature Scheme Properties missing from DataBinder
```

This message indicates that one of the following values is null or empty in the databinder supplied by the Attachments client:

- `XFND_SIGNATURE`
- `XFND_RANDOM`
- `XFND_EXPIRES`

This problem is reported when the Oracle Fusion application making the request is incorrectly configured.

Solution

To resolve this issue, refer to [Section 12.3.4.1](#). There are likely to be many clients. Therefore, you may have to check each one. The `FusionAppsAttachments` logging may provide enough information to determine which client is causing the error.

12.3.4.2.3 Request Expiry Time Reached Error

Problem

The following error indicates that the `XFND_EXPIRES` (milliseconds since epoch) date value provided in the request databinder has already passed according to the Content Server's clock.

```
Request expiry time reached
```

Solution

Check to make sure that there are no time and time zone differences between the client and Content Server. The request timeout should typically be 10 minutes.

12.3.4.2.4 Unable to Base64 Decode Received Signature Error

Problem

The following message indicates that the client-supplied, URL-safe, base64 signature could not be successfully decoded back to binary data.

```
Unable to base64 decode received signature
```

Solution

Check the application logs for any errors when encoding the signature.

12.3.4.2.5 Unable to Verify Signature Error**Solution**

The following errors in the application log files indicate an issue obtaining the keystore and/or the public certificate.

```
java.lang.NullPointerException at SigningUtils.verify !syNullPointerException
java.lang.NullPointerException. at AttachmentsConfig.getPublicCertificate
```

Solution

Check what exceptions are present at the Content Server start time that are associated with keystore and credential store access.

12.3.5 Application Access Denied**Problem**

When the end-user attempts to create a new attachment, or view an existing attachment they receive an access denied message. For example:

```
oracle.fabric.common.PolicyEnforcementException: access denied
(oracle.wsm.security.WSIIdentityPermission resource=appName assert)
```

Solution

This indicates a problem with configuration or provisioning of the application. Contact the Oracle Fusion Applications product team to get them to resolve the issue.

12.3.6 CredentialAccessPermission Denied**Problem**

The following exception is reported:

```
access denied (oracle.security.jps.service.credstore.CredentialAccessPermission
context=SYSTEM,mapName=oracle.wsm.security,keyName=enc-csf-key read)
```

This issue indicates a problem with configuration or provisioning of the application.

Solution

Contact the Oracle Fusion Applications product team to get them to resolve the issue.

12.3.7 Applcore Attachment Checkin Failure

If applcore attachments fail during checkin, the likely causes can vary if the failure occurs across all domains or in a single domain.

- [Section 12.3.7.1, "Checkin Failure Causes"](#)

- [Section 12.3.7.2, "Checkin Failure Solutions"](#)

12.3.7.1 Checkin Failure Causes

First, determine if attachment uploads to the central UCM instance are successful for any other domain in the installation.

Failure Across Domains

If attachments fail on all domains, possible causes are (in order of likelihood):

1. There is a mismatch between the "ws-service" policy of the Common Domain Web Services Manager (WSM) Global Policy Attachment (GPA) and the associated domain's corresponding "ws-client" policy.
2. The UCM login webservice is not using a Global Policy Attachment (GPA), but rather an incorrect Local Policy Attachment (LPA).
3. The WSM Policy Manager application has failed in the Common Domain.
4. Credential store entries are incorrect for Common Domain preventing the keystore from opening.
5. If using message protection policy, the keystores for the domains are not synchronized.
6. Clients are unable to generate digital signatures due to policy permission security issues or invalid oracle.wsm.security credential store values for the underlying keystore.
7. The public certificate fingerprint of the client is not in UCM server keystore.
8. The JCR connections are not using GPA, but rather an incorrect LPA.
9. The tokenized Web URL JCR connection value is incorrect.

Failure in a Single Domain

If attachments fail on a single domain and other domains function properly, possible causes are (in order of likelihood):

1. There is a mismatch between the "ws-service" policy of the Common Domain Web Services Manager (WSM) Global Policy Attachment (GPA) and the associated domain's corresponding "ws-client" policy
2. The client keystore is not synchronized with the UCM common domain server keystore.
3. Clients are unable to generate digital signatures due to policy permission security issues or invalid oracle.wsm.security credential store values for the underlying keystore.
4. The public certificate fingerprint of the client is not in the UCM server keystore.
5. The JCR connection for FusionAppsAttachments is not using GPA client policy and may be somehow leveraging an LPA.
6. The tokenized Web URL JCR connection value is incorrect.

12.3.7.2 Checkin Failure Solutions

Investigate the following to find possible solutions.

Policy Manager Active

1. From the UCM domain, check if the Web Services Manager policy manager is active:

```
http://ucmhost:adminport/wsm-pm/validator
```

It should prompt for credentials, and then return a status such as Policy Manager Status: Operational, along with a table of policies.

2. If the application does not appear to be responding, open the UCM Domain Weblogic Server Administration Console the following to see if it is active:

Deployments > Summary of Deployments > wsm-pm deployment

Correct Service Policy

1. From the UCM domain, check the wsp:PolicyReference in the IdcWebLoginPort WSDL:

```
http://ucmhost:ucmport/idcnativevws/IdcWebLoginPort?WSDL
```

2. Look for something similar to the following:

```
<wsp:PolicyReference URI="#wss_saml_or_username_token_service_policy"
wsdl:required="false"/>
```

3. If the service policy is either empty or not what you expected, check to make sure that the GPA policy for ws-service has been correctly set:
 - a. From the navigation pane, expand the domain and **Application Deployments**, then click **Oracle UCM Native Web Services (UCM_server1)**.
 - b. From the **Application Deployment** menu, choose **Web Services**.
 - c. In the Web Services home page, click the **Web Service** tab.
 - d. Click the **IdcWebLoginPort** endpoint to view the configuration in the IdcWebLoginPort (Web Service Endpoint) page.
 - e. On the IdcWebLoginPort (Web Service Endpoint) page, click the **OWSM Policy** tab and verify the correct policy is listed under Globally Attached Policy and that no policy is listed under Directly Attached Policies.
4. Make sure that the policy associated with GPA Web Service Endpoint resource is correct:
 - a. From the Enterprise Manager, click **Weblogic Domain**.
 - b. Click the domain name, for example, **CommonDomain**.
 - c. From the Weblogic Domain menu, choose **Web Services** and then **Policy Sets**.
 - d. Specify or change the policy as necessary.

Correct Client Policy

From the client domain, check the GPA policy set for Web Service Client resources.

1. From the Enterprise Manager, click **Weblogic Domain**.
2. Click the domain name, for example, **CRMDomain**.
3. From the Weblogic Domain menu, choose **Web Services** and then **Policy Sets**.
4. Make sure that the policy set associated with GPA Web Service Client resources is correct.

Correct JCR Connection

Check the "FusionAppsContentRepository" JCR connection to make sure that the client policy is empty, meaning GPA should get used, and that the web URL is correct.

1. The System MBean browser within EM can show the details of the connection.
System MBean Browser > oracle.adf.share.connections > Server: YYY >
Application: ZZZApp > ADFConnections > ADFConnections > JCR >
FusionAppsContentRepository
2. Make sure the Client Security Policy is empty.
3. The Web URL will likely point to properties such as:

```
${adfDomainConfig.oraclefusionapps.ucmAppInternalProtocol}://  
${adfDomainConfig.oraclefusionapps.ucmAppInternalHost}:  
${adfDomainConfig.oraclefusionapps.ucmAppInternalPort}/idcnativews
```

The following mBean operation provides the resolved output for the web service URL:

```
System MBeans > Application Defined MBeans > oracle.adf.share.connections >  
Server: [your server name] > Application: [your application name] > ADFConnections  
> ADFConnections > Operations Tab > exportWithResolvedExpressions > Invoke
```

Troubleshooting Oracle WebCenter Portal

This chapter describes common problems that you might encounter when using Oracle WebCenter Portal and explains how to solve them.

This chapter contains the following topics:

- [Section 13.1, "Problems and Solutions for WebCenter Portal Portlets"](#)
- [Section 13.2, "Problems and Solutions for WebCenter Portal's Composer"](#)
- [Section 13.3, "Problems and Solutions for Oracle WebCenter Portal: Spaces"](#)
- [Section 13.4, "Problems and Solutions for Activity Stream"](#)
- [Section 13.5, "Problems and Solutions for Search in WebCenter Portal"](#)
- [Section 13.6, "Problems and Solutions for the Tags Service"](#)
- [Section 13.7, "Problems and Solutions for the Instant Messaging and Presence Service"](#)
- [Section 13.8, "Problems and Solutions for the Discussions Service"](#)
- [Section 13.9, "Problems and Solutions for the Documents Service"](#)

Some procedures in this chapter reference content in the Oracle Fusion Middleware guides. These guides describe using Fusion Middleware Control. These procedures also apply to Fusion Applications Control.

13.1 Problems and Solutions for WebCenter Portal Portlets

Oracle Fusion Applications utilizes portlet technology in various places, typically to remotely invoke a business view that is implemented as an Oracle Application Development Framework (ADF) task flow. This enables functionality that is implemented on one Oracle Fusion application, for example, HCM, to be incorporated into another Oracle Fusion application, for example, CRM, as if it was embedded in the same application. The CRM application is in fact embedding a portlet that obtains its markup from the remote HCM application, which is running on another server. The task flow that is implemented on the HCM server is made available as a portlet through a component called the Oracle JSF Portlet Bridge. This wrapper makes the task flow available as a portlet producer that can be consumed by another application.

13.1.1 Introduction to Troubleshooting WebCenter Portal Portlets

When running Oracle Fusion Applications, it may not be readily apparent which portions of the user interface are implemented as portlets. The only time this may actually be evident is when there is a problem.

Useful Terminology

The following list defines some common terms for WebCenter Portal portlets:

- Portlet

A portlet is a region of the screen that is displayed from a remote source. In Oracle Fusion Applications, portlets conform to the Web Services for Remote Portlets (WSRP) standard, and implement the JSR 286 portlet specification.
- Oracle JSF Portlet Bridge

The Oracle JSF Portlet Bridge is a component that enables an ADF application to be exposed as a WSRP portlet producer application. Oracle Fusion applications are all implemented as ADF applications.
- Producer application

A producer application is an ADF application with pages or task flows that have been enabled to run as portlets. This type of application can run in dual modes: as a servlet (like a regular web application), or as a portlet (when consumed by a consumer application through the Oracle JSF Portlet Bridge).
- Consumer application

A consumer application is an application that consumes the portlets exposed by a producer application. Before consuming a portlet (by dropping it onto a page), application developers must first register the portlet producer application with the consumer application.

Useful Resources

The following list provides some useful resources to use when diagnosing problems with WebCenter Portal portlets:

- Portlet Consumer Test Page

A page that provides diagnostic information about the consumer application. You can access the Portlet Consumer Test Page using the following URL:

```
http://host:port/context-root/faces/oracle/portlet/client/adf/ diagnostic/pages/ConsumerTestPage.jspx
```

where:

 - *host* is the server to which the consumer application is deployed
 - *port* is the port to which the server is listening for HTTP requests
 - *context-root* is the consumer web application's context root

For example:

```
http://mymanagedserver.example.com:8888/myapp/faces/oracle/portlet/client/adf/diagnostic/pages/ConsumerTestPage.jspx
```

For more information, see [Section 13.1.6.1.2](#).
- Producer Test Page

A page that provides diagnostic information about the portlet producer application. You can access the Producer Test Page using the following URL:

```
http://host:port/context-root/info
```

where:

- *host* is the server to which the portlet producer is deployed
- *port* is the port to which the server is listening for HTTP requests
- *context-root* is the producer web application's context root

For example:

```
http://portlets.example.com:9999/sample/info
```

The Producer Test Page includes a link to the Web Service Definition Language (WSDL) document to use for registration, for example:

```
http://portlets.example.com:9999/sample/portlets/wsrp2?WSDL
```

For more information, see [Section 13.1.6.1.3](#).

- Running a producer as a servlet application through Faces

This is also known as running the application as a servlet. Before an application can act as a portlet provider, it must be able to run correctly through standard HTTP requests.

To run an application as a servlet, use the following URL:

```
http://host:port/context-root/faces/path-to-page/page.jspx
```

where:

- *host* is the server to which the portlet producer is deployed
- *port* is the port to which the server is listening for HTTP requests
- *context-root* is the producer web application's context root
- *path-to-page* is the path to the page you want to run
- *page* is the name of the page you want to run

For example:

```
http://portlets.example:9999/sample/faces/index.jspx
```

The Producer Test Page provides links to run such pages or task flows as servlets. For more information, see [Task 2, "Run the JSF Portlet as a Servlet"](#).

- Logging configuration file

The logging configuration file, `logging.xml`, is located in:

```
DOMAIN_HOME/config/fmwconfig/servers/server/logging.xml
```

- Diagnostic log file

The default location of the diagnostic log file is:

```
DOMAIN_HOME/servers/server/logs/server-diagnostic.log
```

Process

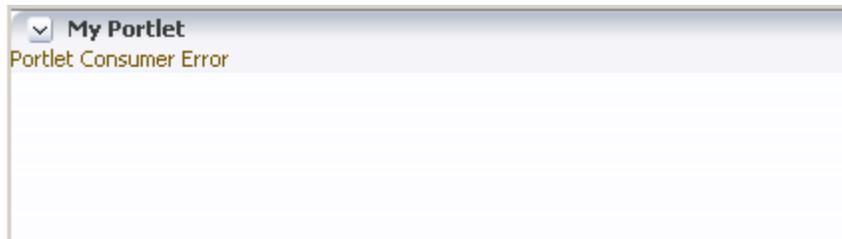
Follow the process outlined in the following table when using the information in this section. If the information in a particular section does not resolve your problem, proceed to the next step in this process.

Table 13–1 Process for Using the Information in this Section

Step	Section to Use	Purpose
1	Section 13.1.2 to Section 13.1.5	Perform problem-specific troubleshooting procedures. These sections describe: <ul style="list-style-type: none"> ■ Possible causes of the problems ■ Solution procedures corresponding to each of the possible causes
1	Section 13.1.6	Perform general diagnostics steps when you encounter problems with WebCenter Portal portlets.
2	Section 14.1	Use My Oracle Support to get additional troubleshooting information about Oracle Fusion Applications or WebCenter Portal portlets. My Oracle Support provides access to several useful troubleshooting resources, including Knowledge Base articles and Community Forums and Discussions. When you encounter problems with WebCenter Portal portlets, there are some general diagnostics steps that you can follow.
3	Section 14.1	Log a service request if the information in this chapter and My Oracle Support does not resolve your problem. You can log a service request using My Oracle Support at https://support.oracle.com .

13.1.2 Portlet Displays a Portlet Consumer Error

The message `Portlet Consumer Error` (shown in the following figure) typically indicates that an error occurred within the operation of the portlet parts of the portlet consumer application.

Figure 13–1 Portlet Displaying a Portlet Consumer Error

Problem

An error has occurred within the operation of the portlet parts of the portlet consumer application. In other words, the error is unrelated to the remote portlet producer application.

Solution

Consult the diagnostic log file to determine the cause of the exception. For information about portlet logging, see [Section 13.1.6.2](#).

The exception that caused the error message to be displayed is logged. Wherever possible, a message is included in the log at the start of the exception stack to indicate for which portlet binding the exception occurred. The following example shows a message logged for a portlet error.

Example 13–1 Example Message Logged for a Portlet Error

```
<PortletRenderer> <setErrorState> An error has occurred for Portlet Binding portlet1.
```

```
oracle.portlet.client.container.PortletContentTypeException: Unexpected content
type "null" in WSRPGetMarkup response.
...
```

Pay particular attention to the cause exceptions in the stack as this is likely to indicate what the real underlying problem is.

The cause is likely to be an internal error and the appropriate course of action is to contact Oracle Support with the log files of the consumer application.

13.1.3 Portlet Displays a Portlet Timeout

If a `Portlet Timeout` message is displayed in the area of the page that you would expect to contain a portlet (as shown in the following figure), this means that the consumer waited for a configured period of time for the producer to respond and did not get a response during that time, or the response did not complete during that time. There are a number of possible causes.

Figure 13–2 *Portlet Displaying a Portlet Timeout Error*



Problem 1

The producer machine is overloaded.

Solution 1

Check the load on the producer Managed Server (the tools used to do this vary depending on the operating system that is running on the producer). If the load is high, check whether a particular process is causing this high load, and whether such a process could be run on another machine, or at a less busy time. If no single process is causing the high load, or if the Oracle WebLogic Server is causing the high load, and if the load is consistently high, consider whether the producer hardware is adequate, or whether it is necessary to upgrade it (or add further nodes to the cluster). Also consider adjusting the Oracle WebLogic Server configuration to increase the size of the request thread pool.

Problem 2

The network is overloaded, or there are problems with the network affecting communication between the consumer and producer.

Solution 2

Check that you can ping the producer machine from the consumer machine. Check that you can access the producer's WSRP Producer Test Page in your local browser (for information, see [Useful Resources](#)). If this works, check that you can access this same page from a browser running on the consumer machine. If any of these steps cause problems, and the machine is not overloaded, this could be a network problem, which should be investigated by a system administrator.

Problem 3

The log or trace files indicate that there is a deadlock (or a stuck thread) on the producer machine causing the request thread to hang.

Solution 3

This should not happen during normal operation. If it does occur, there will generally be an error in the producer's log files indicating the point at which the deadlock occurred. This may help diagnose the problem. In some cases, it may be possible to alleviate this by modifying the configuration of Oracle WebLogic Server.

Problem 4

The producer application is running slowly (for example, due to processing large quantities of data).

Solution 4

In this case, the producer application may be processing large quantities of data, causing it to spend too long building the response. If the application will regularly deal with large quantities of information, it may be necessary to either add or improve producer hardware. If this is not possible you can increase the portlet timeout duration.

For information about how to configure the portlet timeout, see [Solution 5](#).

Problem 5

The portlet timeout values have been misconfigured such that the timeout period is too short.

Solution 5

Typically, the timeout for a portlet is set on the registration of the portlet. This may have been set to a value that does not give time for the portlet to respond. You can configure the portlet timeout on the producer connection in the consumer application using:

- Fusion Applications Control.

Note: The procedures referenced in this guide describe using Fusion Middleware Control. These procedures also apply to Fusion Applications Control.

- the `setWSRPProducer WLST` command.

Also, the portlet section of the `adf-config.xml` file allows minimum, maximum, and default values for portlet timeouts to be configured across the whole application. The maximum timeout imposes an upper limit on timeouts specified by portlet producers, so if the maximum timeout is too short, this could cause unwanted portlet timeout errors even if the timeout specified on the producer connection is longer.

After editing the `adf-config.xml` file, you must redeploy the application.

Related Links

The following documents provide additional information related to subjects discussed in this section:

- For information about tuning WebLogic Server, see *Oracle Fusion Middleware Performance and Tuning for Oracle WebLogic Server*, in the Oracle Fusion Middleware Online Documentation Library.
- For information about configuring the portlet timeout on the producer connection, see the "Editing Producer Registration Details Using Fusion Middleware Control" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*, in the Oracle Fusion Middleware Online Documentation Library.
- For information about WLST commands, see the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.
- For information about the `adf-config.xml` file, see "`adf-config.xml`" in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter Portal*.

13.1.4 Portlet Displays a Remote Portlet Communication Error

When a section of the screen shows the Remote Portlet Communication Error message (as shown in the following figure), and there is an otherwise blank region surrounding it, this area is expected to be filled with a portlet, which the application is not able to contact.

Figure 13–3 Portlet Displaying a Remote Portlet Communication Error



Problem 1

The producer is down.

Solution 1

It could be that the producer application is not running, or the Managed Server on which it is deployed is not started. In this case, it will need to be started. Identify the application that needs to be started based on the task being attempted at the time of the portlet failure. For more information, see [Section 13.1.6.1.1](#).

Problem 2

The producer log files indicate that the web services security is incorrectly configured.

Solution 2

In Oracle Fusion Applications deployments, web services security (WS-Security) is managed with global web services security policies.

Troubleshooting steps for web services security depend on the type of security profile being used, for example AuthN, SSL, or Message Security.

For more information about troubleshooting web service security, see:

- The "Diagnosing Problems" chapter in the *Oracle Fusion Middleware Security and Administrator's Guide for Web Services*

- [Section 9.3.5](#)
- [Section 9.3.6](#)

The security policies set on the portlet producer's `WSRP_v2_Service` web service ports are as follows:

- `WSRP_v2_ServiceDescription_Service` port: `oracle/no_authentication_service_policy`
- `WSRP_v2_PortletManagement_Service` port: `oracle/no_authentication_service_policy`
- `WSRP_v2_Markup_Service` port: no policy specified, so that it picks up the globally attached policy
- `WSRP_v2_Registration_Service` port: `oracle/no_authentication_service_policy`

If the producer ports are configured in any other way, then it may be the cause of the problem. In particular, if a local policy is applied to the `WSRP_v2_Markup_Service` port, and the policy does not match the corresponding policy on the producer connection, then the port or the connection will need to be updated to specify matching policies, or be removed, so that the globally attached policies can take effect.

Problem 3

The producer Managed Server cannot be reached.

Solution 3

The producer may be in a location that cannot be reached by the consumer application, due to intervening firewalls or incorrect routing rules. In an environment that is installed by Oracle's provisioning software, this should not be the case, but it is worth checking that you are able to access the WSDL endpoint for the producer from the machine hosting the consumer, by going to:

```
http://host:port/context-root/portlets/wsrp2?WSDL
```

Where:

- `host` is the server to which the portlet producer is deployed
- `port` is the port to which the server is listening for HTTP requests
- `context-root` is the producer web application's context root

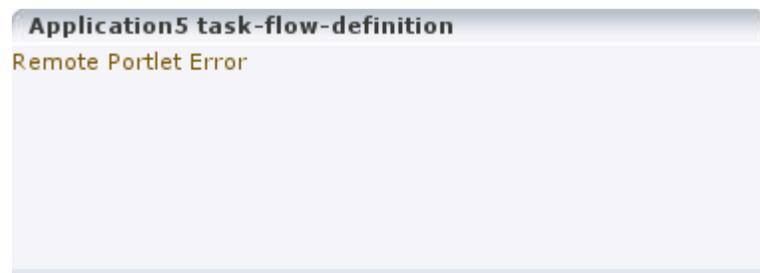
For example:

```
http://portlets.example.com:9999/sample/portlets/wsrp2?WSDL
```

If you cannot reach the WSDL endpoint, contact your network administrator.

13.1.5 Portlet Displays a Remote Portlet Error

If the portlet displays a `Remote Portlet Error` message (as shown in the following figure), this indicates that the producer responded with an error message. The error message is returned in the form of a SOAP fault message inside the response document. There are a number of reasons the producer might return an error. The best strategy to diagnose these errors is to first find the corresponding exception stack trace in the consumer diagnostic logs (see [Section 13.1.6.2](#)). This stack trace shows what kind of fault was returned by the producer, plus any further information required in the response. Some faults you may encounter are listed in the following sections.

Figure 13–4 Portlet Displaying a Remote Portlet Error**Problem 1**

`OperationFailedException`. This is the most common type of Remote Portlet Error and it is a catch-all for most unhandled exceptions raised in the producer application.

Solution 1

To resolve an `OperationFailedException`, examine the exception in the consumer diagnostic logs. This generally shows any exception that was raised in the producer application to trigger the fault response as the final `Caused by` exception.

If required, you can then examine the diagnostic logs on the producer application for more detail, or for any related exceptions that occurred prior to the fault being triggered. In some cases, the exception in the producer log indicates a problem that can be simply resolved, such as a database connection failure or configuration problem. In other cases, the exception might indicate a product bug.

Problem 2

`InvalidRegistrationException`. This error indicates that the producer has not been properly registered with the consumer before the consumer attempted to communicate with it. This could also occur if the producer's persistence store has been moved or deleted since the consumer registered it.

Solution 2

If this error is observed, the most likely cause is a problem during provisioning. It is also worth checking that the producer application is using a consumer persistence store. The following example shows how this is indicated in the producer application's `web.xml` file.

Example 13–2 Persistence Store Setting in web.xml

```
<env-entry>
  <env-entry-name>oracle/portal/wsrp/server/persistentStore</env-entry-name>
  <env-entry-type>java.lang.String</env-entry-type>
  <env-entry-value>Consumer</env-entry-value>
</env-entry>
```

If the persistence store setting is not the problem, contact Oracle Support with the consumer log file.

Problem 3

`InvalidHandleException`. This indicates that the consumer has asked the producer to render, or otherwise interact with, a portlet instance that the producer does not know about. This could occur if the producer's persistence store has been corrupted in some way since the portlet was added to the page.

Solution 3

If this error is observed, the most likely cause is a problem during provisioning, or a missing `persistentStore` setting in the `web.xml` file, as described in [Solution 2](#).

Problem 4

`AccessDeniedException`. This indicates that the producer application decided that the current user did not have access to the portlet or task flow in question.

Solution 4

If this error is observed, it could either be a legitimate error message or an indication of a configuration problem. In most cases, Oracle Fusion Applications should deal with authorization errors gracefully, without a `Portlet Remote Error` being displayed. If this error is caused by a configuration error, contact Oracle Support with the consumer log file.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about persistence stores, see the "Setting Up a Persistence Store for a WSRP Producer" section in *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter Portal*.

13.1.6 Diagnosing WebCenter Portal Portlet Problems

When you encounter problems with WebCenter Portal portlets, there are some general diagnostics steps that you can follow.

13.1.6.1 Using Diagnostic Tools

There is a set of tools available for both the consumer and producer to help identify and resolve issues when running Oracle JSF Portlet Bridge portlets.

If you encounter a portlet error message when a portlet is rendered, or if the portlet displays but you cannot interact correctly with it, there are some general steps using these tools that you should follow to diagnose the issue.

13.1.6.1.1 Identify the Portlet Instance The first step when you encounter a portlet error, is to identify which portlet producer and portlet instance is being invoked. Execute the `portletDebugShow()` JavaScript from your browser to display this information over the top of the main portlet content.

To identify the portlet instance:

1. Enter the following command in the Location field of your browser:

```
javascript:portletDebugShow()
```

Tip: In Internet Explorer and Google Chrome, you must type this command in the Location field. If you paste the command into the field, the `javascript` piece is removed.

In Firefox 6 and above, you cannot enter JavaScript in the Location field, you must enter the command in the JavaScript Console.

2. After running the script, every portlet now displays the following information:

- Producer name
- Portlet name
- Portlet instance ID
- Execution Context IDs (ECIDs)

The ECIDs are unique IDs used to identify a portlet request. Use the ECIDs to correlate the messages across different consumer and producer log files using Fusion Applications Control. The same ECID is propagated from the consumer to the producer.

Note: Broken portlets show two ECIDs: one for the request in which the error occurred and one for request in which the error was reported.

For IFRAME portlets, for example Oracle JSF Portlet Bridge portlets, the ECIDs are different. This is because the error is reported in a later request than the one in which the original exception occurred. When checking the logs, you should look for both ECIDs, as either may contain relevant information.

Tip: If you cannot see all of the information due to the size of the portlet, you can click anywhere within the diagnostic information to display it in a separate panel that is not confined to the portlet dimensions.

You can use this information in the subsequent diagnostic steps to help locate the issue.

Note: The ECIDs shown in the portlet diagnostic information do not reflect partial page rendering requests that have been made to the portlet producer (using the portlet consumer resource proxy). These requests may update the portlet, but the ECIDs are not recorded in the portlet diagnostic information. Errors that occur during these requests are logged on the producer and by the portlet resource proxy on the consumer but you cannot use the ECID information reported in the portlet diagnostic information to help you determine the ECIDs for the relevant log entries.

- When you have finished debugging the portlets, enter the following command to hide the portlet debugging information:

```
javascript:portletDebugHide()
```

Tip: In Internet Explorer and Google Chrome, you must type this command in the Location field. If you paste the command into the field, the `javascript` piece is removed.

In Firefox 6 and above, you cannot enter JavaScript in the Location field, you must enter the command in the JavaScript Console.

- 13.1.6.1.2 Examine the Portlet Consumer Test Page** The next step in diagnosing a portlet error is to access the Portlet Consumer Test Page (shown in the following figure) to locate the portlet producer and, if necessary, test the portlet in isolation.

Figure 13–5 The Portlet Consumer Test Page



The Portlet Consumer Test Page contains three tabs:

- Producers:** This tab lists all the producers registered with the consumer application. Selecting a producer provides specific information about that producer.
- Sanity Checks:** This tab may contain a predefined set of portlet instances and required parameters that can be run in the consumer application, as configured by the consumer application developer. Any failures within these portlets indicate a problem with the corresponding producer and/or portlet.

- **Configuration:** This tab enables you to identify the consumer configuration entries for portlet consumption. You cannot change these values as they are stored within the application; they are displayed for reference information only.

After accessing the Portlet Consumer Test Page, you can perform further diagnostic steps.

Task 1 Access the Portlet Consumer Test Page

The Portlet Consumer Test Page provides diagnostic information about the portlet consumer.

To access the Portlet Consumer Test Page:

1. In your browser, enter the URL for the Portlet Consumer Test Page:

```
http://host:port/context-root/faces/oracle/portlet/client/adf/ diagnostic/pages/
ConsumerTestPage.jspx
```

Note: If the consumer application is secured, the Portlet Consumer Test Page can be accessed only by users granted permission to view those pages.

2. In the Portlet Consumer Test Page, you can perform further diagnostic steps as described in the following sections.

Task 2 Locate the Portlet Producer

The Producers tab of the Portlet Consumer Test Page lists all the producers that have been registered with the consumer application. If a portlet instance in your application displays an error message, you can view information about the producer that owns the portlet by selecting it on this tab.

To locate the portlet producer:

1. In the Portlet Consumer Test Page, select the portlet producer that owns the portlet instance that is reporting the error.

You noted this information in [Section 13.1.6.1.1](#).

2. The following information is provided for the selected producer:

- **Producer Test Page:** A link to the Producer Test Page.
- **Configuration:** Details of potential issues surrounding skins, security, and timeouts associated with the using producer.
- **Offered Portlets:** A list of all portlets offered by the producer. If there are no offered portlets listed, this indicates that there is a problem with the registration metadata for the producer.
- **Portlet Instances:** A list of all portlet instances for the selected producer in the consumer application. This list may be empty.

You can use this information to identify potential issues with the producer.

Task 3 Locate and Run the Portlet Instance

If you have still not been able to identify the cause of the portlet error, the issue may lie with the portlet instance itself.

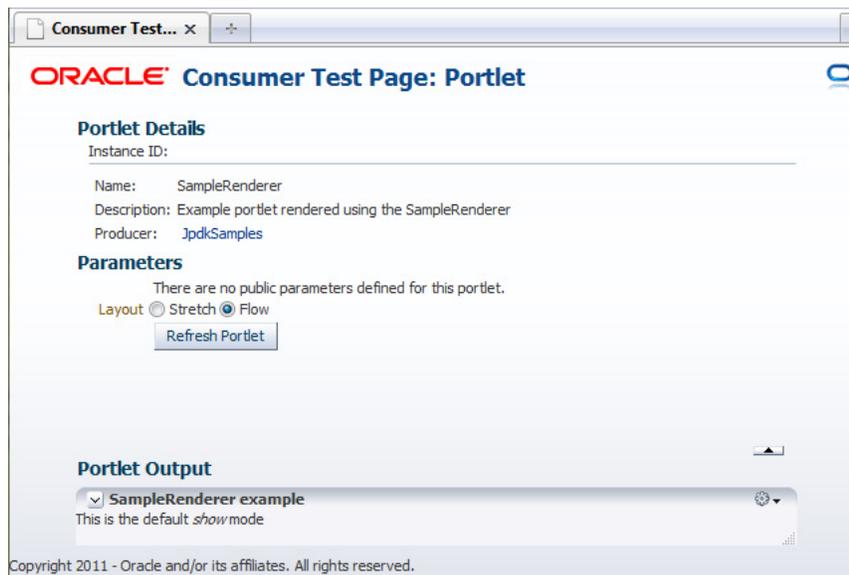
To locate and run the portlet instance:

1. In the Portlet Consumer Test Page, select the portlet producer that owns the portlet instance that is reporting the error.

You noted this information in [Section 13.1.6.1.1](#).

2. Under Portlet Instances, select the portlet instance to display the Consumer Test Page: Portlet page.

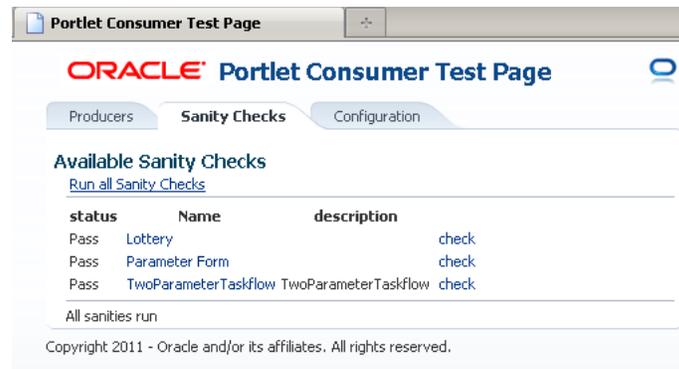
You noted this information in [Section 13.1.6.1.1](#).



3. The Portlet Consumer Test Page: Portlet page renders the portlet in a standalone page. If the portlet runs correctly on this page, the problem is most likely caused by other components on the page containing the broken portlet.
4. The Parameters section enables you to experiment with how the portlet looks using a stretch or flow layout.
5. If the portlet accepts parameters, the Parameters section also lists all the public parameters for the portlet. Enter values for any parameters to test that the portlet is receiving parameters correctly.
6. To navigate back to the Portlet Consumer Test Page, click the producer name link at the top of the page.

Task 4 Perform Sanity Checks

The Sanity Checks tab of the Portlet Consumer Test Page (shown in the following figure) provides a quick overview of the state of portlet communication in your application across all producers.

Figure 13–6 The Sanity Checks Tab

The **Sanity Checks** tab references portlet instances used within the consumer application. This list is configured by the application developer who chose the portlets to include and the parameters to pass to these portlets.

The checks on this page do not render the output in the UI, but simply create a runnable instance of the portlet under the covers and report any failures if any exception is returned by the portlet.

To perform sanity checks:

1. In the Portlet Consumer Test Page, click the **Sanity Checks** tab.
2. Click the **check** link next to the portlet that you want to test.

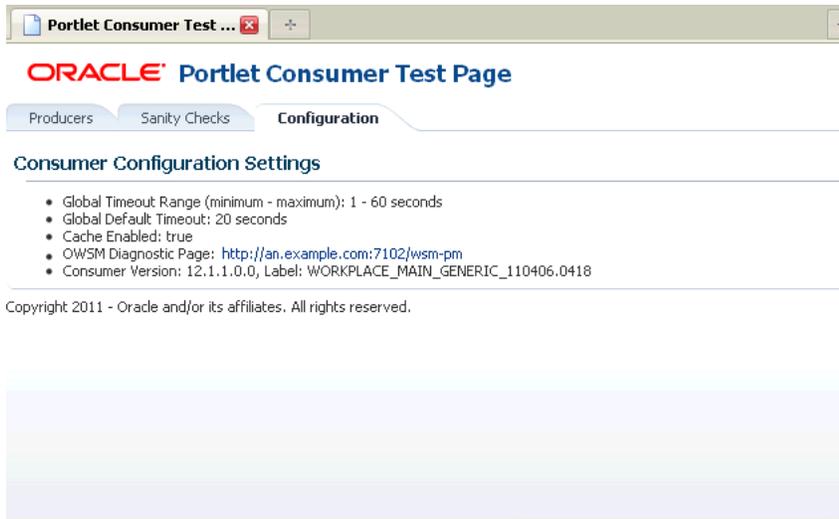
The results of the sanity tests are displayed in the **Status** column. If any sanity tests have failed, run the corresponding portlet to troubleshoot the issue.

3. To run sanity checks on all listed portlets, click the **Run all Sanity Checks** link.

Task 5 Check Consumer Configuration Entries

The **Configuration** tab of the Portlet Consumer Test Page (shown in the following figure) enables you to identify the consumer configuration entries for portlet consumption. This tab displays settings defined in the `adf-config.xml` file, for example, the minimum and maximum timeout values and the consumer version number. You cannot change these values as they are stored within the application; they are displayed for reference information only.

Figure 13–7 The Configuration Tab



13.1.6.1.3 Examine the Producer Test Page If you cannot identify the cause of the error in the consumer application, the next step is to use the Producer Test Page (shown in the following figure) to identify potential issues with the portlet producer application.

Figure 13–8 The Producer Test Page



Access to the main Producer Test Page is public, but links to the test pages for each portlet are accessible only to users granted permission on the underlying pages and task flows.

The Producer Test Page contains five sections:

- **Portlets**

A list of all the portlets within the producer. For Oracle JSF Portlet Bridge portlets, each portlet also provides a separate link to run the portlet as a servlet (this is a prerequisite to running them as portlets: if a portlet does not run as a servlet, it cannot run as a portlet).

- **Container Configuration**

Information on where the consumer preference information is stored.

- **Container Version**

The version number of the Portlet Producer Container.

- **WSDL URLs**

Links to the Web Service Definition Language (WSDL) documents to use for registration.

- **SOAP Monitor**

A link to the WSRP SOAP monitor where users with the `Monitors` or `Administrators` role can track the SOAP messages between the consumer and producer.

After accessing the Producer Test Page, you can perform further diagnostic steps.

Task 1 Access the Producer Test Page

The Producer Test Page provides diagnostic information about the portlet producer.

To access the Producer Test Page:

1. In your browser, enter the URL for the Producer Test Page:

```
http://host:port/context-root/info
```

2. In the Producer Test Page, you can perform further diagnostic steps as described in the following sections.

Task 2 Run the JSF Portlet as a Servlet

To verify that an Oracle JSF Portlet Bridge portlet producer is running correctly, you must first verify that the producer application runs correctly through standard HTTP requests. If the artifacts the producer exposes as portlets do not run as servlets, they will not run as portlets.

To run a JSF portlet as a servlet:

1. In the Producer Test Page, click the **run as servlet** link next to the portlet.
2. The portlet is called using standard HTTP to request the underlying page or task flow. The results of the request are displayed in a new browser window.

If the resulting page or task flow does not render correctly, then there is a problem with the producer application that must be resolved before you can run the page or task flow as a portlet.

3. If the portlet accepts parameters, click **show parameters** to list them and provide values. When you click **run as servlet**, the portlet call includes the parameter values.

Task 3 Check the Persistent Store Type

Oracle Fusion Applications has adopted a standard to use a consumer persistence store as the persistent store. Therefore, for Oracle Fusion applications producers, the

Persistent Store Type displayed on the Producer Test Page should always be set to **Consumer**.

Although other configurations are acceptable for applications that are built to assume such a configuration, having a non-consumer setting in Oracle Fusion applications indicates an issue in the producer. For Oracle Fusion applications to work correctly, they require a consumer persistence store.

Task 4 Examine the SOAP Monitor

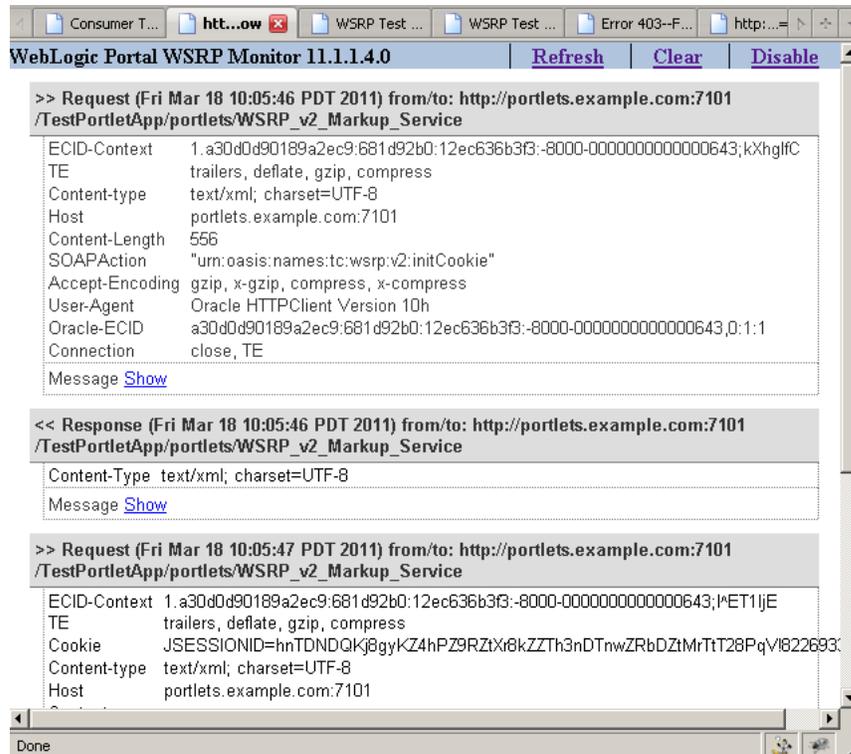
The SOAP monitor provides access to the SOAP requests between the consumer and producer when rendering a portlet. This is very useful in diagnosing problems at the communication level.

To examine the SOAP monitor:

1. In the Producer Test Page, click the **SOAP Monitor** link at the bottom of the page.
2. When prompted, enter your user name and password.

Note: To access the SOAP monitor you must be a member of the **Monitors** or **Administrators** role in the Identity Management System.

3. By default, the SOAP monitor is disabled, so the page is empty. You must first enable the monitor by clicking the **Enable** link at the top of the page.
4. The page does not automatically refresh, so to display SOAP messages, you must click the **Refresh** link.
5. To force a request to the failing portlet, go to the Portlet Consumer Test Page: Portlet page for the portlet and select **Refresh Portlet**.
6. When the portlet has rendered, or failed, click the Refresh link in the SOAP monitor to display the captured request.



- Now, you can investigate the SOAP messages that were sent and the responses to try to narrow down the cause of the problem.

Note: If, after rerunning the portlet and refreshing the SOAP monitor, you see no messages displayed, this indicates that there may be a security issue between the producer and the consumer. You must verify that the correct WS-Security settings are set up for the producer and consumer to communicate.

13.1.6.2 Configuring the Portlet Logging File

To troubleshoot portlet issues, it is useful to add portlet log-handlers and loggers to the logging configuration file, `logging.xml`.

The following example shows how to add the portlet log-handlers and loggers. The example assumes that you are running the consumer and producer applications on the same WebLogic Server instance. If you are running the consumer and producer applications on different instances, you must split them up appropriately, with the Portlet Servers and Portlet Bridge log handlers and loggers on the instance running the producer application and the Portlet Consumer log handler and logger on the instance running the consumer application.

Note: Add the log entries at the end of the file to ensure that they override any seeded settings.

Example 13–3 Configuring Log Files for Troubleshooting Portlet Issues

```
<!-- NOTE: You need to change the path where the logfile is located -->
<log_handlers>
...

```

```
<!-- Portlet Consumer -->
<log_handler name="portlet-consumer-handler" class="oracle.core.ojdl.logging.ODLHandlerFactory">
  <property name="format" value="ODL-Text"/>
  <property name="path" value="/scratch/logs/portlet-consumer.log"/>
</log_handler>

<!-- Portlet Producer -->
<log_handler name="portlet-producer-handler" class="oracle.core.ojdl.logging.ODLHandlerFactory">
  <property name="format" value="ODL-Text"/>
  <property name="path" value="/scratch/logs/portlet-producer.log"/>
</log_handler>

<!-- Portlet Bridge -->
<log_handler name="portlet-bridge-handler" class="oracle.core.ojdl.logging.ODLHandlerFactory">
  <property name="format" value="ODL-Text"/>
  <property name="path" value="/scratch/logs/portlet-bridge.log"/>
</log_handler>
...
</log_handlers>

<loggers>
...
  <!-- Portlet Consumer -->
  <logger name="oracle.portlet.client" level="FINEST" useParentHandlers="false">
    <handler name="portlet-consumer-handler"/>
  </logger>

  <!-- Portlet Servers -->
  <logger name="com.bea.portlets" level="FINEST" useParentHandlers="false">
    <handler name="portlet-producer-handler"/>
  </logger>
  <logger name="com.bea.netuix" level="FINEST" useParentHandlers="false">
    <handler name="portlet-producer-handler"/>
  </logger>
  <logger name="com.bea.wsrp" level="FINEST" useParentHandlers="false">
    <handler name="portlet-producer-handler"/>
  </logger>
  <logger name="oracle.portlet.producer" level="FINEST" useParentHandlers="false">
    <handler name="portlet-producer-handler"/>
  </logger>

  <!-- Portlet Bridge -->
  <logger name="oracle.portlet.bridge" level="FINEST" useParentHandlers="false">
    <handler name="portlet-bridge-handler"/>
  </logger>
  <logger name="oracle.portlet.server.bridge" level="FINEST" useParentHandlers="false">
    <handler name="portlet-bridge-handler"/>
  </logger>
...
</loggers>
```

The logging configuration file is located in:

DOMAIN_HOME/config/fmwconfig/servers/server/logging.xml

The log file name is also defined in logging.xml. By default the log file name is:

DOMAIN_HOME/servers/server/logs/server-diagnostic.log

13.2 Problems and Solutions for WebCenter Portal's Composer

This section describes problems and solutions related to WebCenter Portal's Composer.

13.2.1 Unable to Edit a Component in Composer's Edit Mode

While in Composer's Edit mode, the user is unable to edit the properties of components on the page. It is also not possible to add content or delete some components. The icons that allow these operations on Composer's toolbar are grayed out.

Problem 1

The user may not have adequate page or task flow privileges.

Solution 1

Ensure that the user is allowed to edit the page. Typically, only administrators are allowed to edit the page and end users are allowed to personalize the page. If the user is allowed to edit the page, edit or customize privileges must be provisioned for the page or the task flow if the component is inside a task flow (region).

Problem 2

An MDS customization restriction may be in place to prevent edits to the page.

Solution 2

MDS customization restrictions can be specified to restrict editing of a page, or in the case of a task flow, a page fragment. This is typically specified using an RDF file.

Ensure that `customizationAllowed` is set to `true` in the cases where the user should be allowed to edit the artifact.

Problem 3

The `id` is not specified on the component that is required to be edited. Only components that have `id` specified can be edited.

Solution 3

It is highly recommended that all components on a page have an `id` specified.

Ensure that the component in question has `id` specified.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about MDS customization restrictions, see the "Applying Component-Level Restrictions by Defining Customization Policies" section in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter Portal*.

13.2.2 Unable to Personalize Some Components

Some components do not show icons to collapse, expand, delete, edit properties, or add content while in Composer's Edit mode.

For possible problems and solutions, see [Section 13.2.1](#).

13.2.3 Able to Edit a Component in Composer's Edit Mode

The end user can customize components on the page or task flow that are not intended to be edited.

Problem 1

The **Edit Current Page** link appears in the **Personalization** menu for users who should not be able to edit the page.

Solution 1

In the appropriate `.jspx` page, set the `isPersonalizableInComposer` attribute to `false`:

```
<f:attribute name="isPersonalizableInComposer" value="false">
```

Setting this option to `false` prevents the **Edit Current Page** link displaying for non-administrator users.

Problem 2

The user does not have the appropriate permissions on the page or task flow.

Solution 2

Ensure that the user is not allowed to edit the page.

Problem 3

An MDS customization restriction may be required to prevent edits to the page.

Solution 3

MDS customization restrictions can be specified to restrict editing of a page, or in the case of a task flow, a page fragment. This is typically specified using an RDF file.

Ensure that `customizationAllowed` is set to `false` in the cases where the user should not be allowed to edit the artifact.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about MDS customization restrictions, see the "Applying Component-Level Restrictions by Defining Customization Policies" section in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter Portal*.

13.2.4 Implicit Personalizations Do Not Stick

When the end user collapses (or expands) a task flow, the personalization does not persist and the task flow continues to show as expanded (or collapsed) on revisiting the page even after logging out and back in.

Problem 1

An MDS customization restriction is in effect for the task flow container component. This prevents the implicit personalization from being persisted into the underlying MDS store.

Solution 1

Ensure that the MDS customization restriction is removed or relaxed for the required component. In the Customization section of the Property Inspector for the component, set `customizationAllowed` to true.

Problem 2

Settings under the `adf-faces-config` section in `adf-config.xml` prevent personalizations from being persisted.

Solution 2

Edit `adf-config.xml` to change the settings in the `adf-faces-config` section.

Related Links

The following documents provide additional information related to subjects discussed in this section:

- For more information about MDS customization restrictions, see the "Applying Component-Level Restrictions by Defining Customization Policies" section in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter Portal*.
- For more information about personalization persistence settings in `adf-config.xml`, see the "Allowing User Customization on JSF Pages" section in the *Oracle Fusion Middleware Web User Interface Developer's Guide for Oracle Application Development Framework*

13.2.5 Cannot Rearrange Components on Child Components Pane

Problem

When editing a page and bringing up the Property Inspector of a container component (such as `PanelFormLayout`, `PanelGroupLayout`, `PanelCustomizable`, and so on), the **Child Components** tab does not allow the listed child component to be rearranged. The **Up** and **Down** buttons are disabled.

This problem indicates that the `id` is not specified on the child component that is required to be edited. Only components that have `id` specified can be edited.

Solution

It is highly recommended that all components on a page have an `id` specified. Ensure that all the child components have `id` specified.

13.3 Problems and Solutions for Oracle WebCenter Portal: Spaces

This section describes problems and solutions related to WebCenter Portal: Spaces.

13.3.1 Documents Service Is Not Available When Content Server Is Not Running

Problem

The Document service in WebCenter Portal: Spaces relies on Oracle WebCenter Content Server. If Content Server is not running when WebCenter Portal: Spaces is started up Spaces will consider the Document service as unavailable. In such cases you may see the following message on Document pages:

Documents service is not available.

Solution

Start the Content Server, and restart WebCenter Portal: Space, so it can recheck if the Document service is configured.

To resolve this problem:

1. Shut down WebCenter Portal: Spaces.
2. Start the Content Server.
3. Start WebCenter Portal: Spaces.

Related Links

The following documents provide additional information related to subjects discussed in this section:

- For information about stopping and starting WebCenter Portal: Spaces, see the "Starting and Stopping the Spaces Application" section in *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*, in the Oracle Fusion Middleware Online Documentation Library.
- For information about starting the Content Server, see the "Managing System Processes" chapter in *Oracle Fusion Middleware Administering Oracle WebCenter Content*, in the Oracle Fusion Middleware Online Documentation Library.

13.3.2 Workflows Do Not Work

Problem

The accept invitation functionality does not work.

Solution

For workflows to work, WS Security and Global Policy Attachment (GPA) should be configured on the client and server side. Local Policy Attachment (LPA) should be removed on the client side.

To resolve this problem:

1. Ensure that JVM is started with the following parameter in the `setDomainEnv.sh` file:

```
-Dwebcenter.owsm.gpa.enabled=true
```
2. Remove LPA on the client side.
3. GPA should be configured on the client and server side. If GPA is configured correctly, the following policies are expected:
 - Policy on server side: `oracle/wss_saml_or_username_token_service_policy`
 - Policy on client side: `oracle/wss10_saml_token_client_policy`

13.3.3 List of Spaces Does Not Show Any Spaces

Problem 1

The WebCenter Portal: Spaces instance may be down.

Solution 1

To check whether the WebCenter Portal: Spaces instance is up and running, go to:

`protocol://webcenter-host:webcenter-port/webcenter`

Also, check that the instance allows users to login.

Problem 2

The list of spaces displays only those spaces that the currently logged in user has created or to which the user has membership. If the user has not created any spaces and is not a member of any spaces the list is empty.

Solution 2

If the user creates a space or is assigned membership to a space, the list of spaces will no longer be empty.

Problem 3

If the WebCenter Portal: Spaces instance is up and running and the user is a member of one or more spaces, the problem could be that GPA is not enabled or LPA has not been removed on the client side.

Solution 3

See the solution for [Section 13.3.2](#).

13.3.4 Creating a Space Throws an Error or Warning

Problem 1

The WebCenter Portal: Spaces instance may be down.

Solution 1

To check whether the WebCenter Portal: Spaces instance is up and running, go to:

`protocol://webcenter-host:webcenter-port/webcenter`

Also, check that the instance allows users to login.

Problem 2

The user does not have the appropriate permission to create a space.

Solution 2

Login to WebCenter Portal: Spaces as an administrator and verify that user has the appropriate permission (`Spaces-Create`) to create spaces.

Problem 3

One or more services are not provisioned. This can happen because the service's back-end server, such as Oracle WebCenter Content or WebCenter Portal's Discussion Server, are slow. If this is the case you will find an `InterruptedException` in the logs or a timeout from the concurrency service.

Solution 3

The `adf-config.xml` file in `webcenter.ear` has a timeout duration for each service in WebCenter Portal. This can be increased.

For example, out of the box the timeout is set as follows:

```
<resource service="oracle.webcenter.collab.forum"
```

```
resource="oracle.webcenter.collab.forum" timeoutMinPeriod="2s"
timeoutMaxPeriod="10s" timeoutDefaultPeriod="5s"/>
```

You can change this to:

```
<resource service="oracle.webcenter.collab.forum"
resource="oracle.webcenter.collab.forum" timeoutMinPeriod="25s"
timeoutMaxPeriod="30s" timeoutDefaultPeriod="30s"/>
```

After making changes to the `adf-config.xml` file, you must redeploy the `webcenter.ear` file.

Note: There is no WLST command to set this value, you must update it manually.

Problem 4

If you are using a socket connection to Oracle WebCenter Content, the IP address for the `WC_Spaces` server must be authorized to connect to Oracle WebCenter Content. If this is not the case, the logs contain a `ConnectionRefused` exception.

Solution 4

Authorize the IP address for the `WC_Spaces` server to connect to Oracle WebCenter Content.

Problem 5

The feature versions in Oracle WebCenter Content are not those expected by WebCenter Portal: Spaces.

Solution 5

Check for the following feature versions in Oracle WebCenter Content:

- ExtendedUserAttributes: 1.1.1.30
- JpsUserProvider: 1.0.0.7
- WebCenterWorkflows: 11.1.1.4.0

You can check these versions in Oracle WebCenter Content by going to **Administration > Configuration for *instanceName* > Feature Details**.

If the versions are not correct, there may have been a problem during installation or configuration. Refer to the installation and administration guides.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For information about configuring the IP address for the `WC_Spaces` server, see the "Configuring System Properties" chapter in *Oracle Fusion Middleware Administering Oracle WebCenter Content*, in the Oracle Fusion Middleware Online Documentation Library.

13.4 Problems and Solutions for Activity Stream

This section describes problems and solutions related to Activity Stream.

13.4.1 Business Object Activities Do Not Appear for Some Users

Problem

User cannot see the business activities in the activity stream view.

Solution

To see business activities, the user must have permission to access the business object and must be following the business object.

To resolve this problem:

1. Verify the access permission and ensure that the user can access the business object.
2. Verify that the user is following the business object.

13.4.2 Business Object Activities Cannot Be Published

Problem

Business object activities such as creating or updating the object are not displayed for users who are following a business object that they have permission to access.

Solution

To resolve this problem, enable the publish capability for the service category of the business object:

1. Go to the FNDSetup page.
2. Navigate to the Activity Stream administration page.
3. Find the service category for the appropriate business objects and enable publish capability.

13.4.3 New Activities Do Not Appear for Some Users

Problem

Users can see only activities posted before a particular time. Activities posted after this time cannot be accessed regardless of whether those activities are posted by the user or other users.

Solution

Typically, this happens when the user GUID is changed and the WC_AS_ACTOR_DETAIL table cached the old GUID. For example, if the application points to one LDAP server and is then switched to another.

To resolve this problem:

1. Use SQL Developer to access the WebCenter Portal schema to which the Oracle Fusion application points.
2. Open the table WC_AS_ACTOR_DETAIL.
3. Find the row that matches the user and remove it.

13.4.4 Rendering of the Activity Stream View Is Very Slow

Problem

The rendering of the Activity Stream task flow is slow with users experiencing significant delays.

The Activity Stream captures large amount of data over time. Displaying all this data may cause the rendering of the task flow to take some time.

Solution

Displaying activities from several months ago may not be necessary. If the rendering of the Activity Stream flow is slow and it is displaying data that is old, you can archive activity stream data to reduce the amount of data displayed and therefore reduce the amount of time taken to render the task flow.

You can use WLST commands to archive activity stream data.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For information about WLST commands, see the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

13.4.5 Cannot See Activities from Some Spaces

Problem

Users cannot see activities from some spaces. This could be because the activities from those spaces are hidden.

Solution

To resolve this problem, you must show the spaces:

1. Go to the activity stream view.
2. Click the **Options** link.
3. Click the **Spaces** tab to show the spaces with hidden activities.
4. Next to the space whose activities you want to show, click **Show**.

13.5 Problems and Solutions for Search in WebCenter Portal

This section describes problems and solutions related to search in WebCenter Portal.

13.5.1 No Search Results Found

Problem

The Oracle Secure Enterprise Search (SES) connection is not created correctly. The search query is not submitted to Oracle SES.

Solution

Confirm the Oracle SES connection by entering the URL for Oracle SES Web Services operations in a browser:

```
http://host:port/search/query/
```

If the URL address does not render in the browser, then either the host or port for the Oracle SES server is incorrect, or Oracle SES has not been started.

If the Oracle SES connection is correct, review the remaining topics in this section for other possible causes.

13.5.2 Search Results Do Not Include Secured Resources

Problem 1

One possible cause is that the proxy login of WebCenter Portal users failed in Oracle SES.

An Oracle SES proxy login error in the WebCenter Portal diagnostic log looks similar to the following:

```
Received status "failed" during proxy login with application entity "weblogic" to
Oracle SES at http://host:port/search/query/OracleSearch, as search user
"vicki". Defaulting to public.
```

Solution 1

Confirm that Oracle SES is configured with an identity management system to validate and authenticate users.

Also confirm that WebCenter Portal and Oracle SES use the same identity management system, such as Oracle Internet Directory. All repositories (such as WebCenter Portal: Spaces, WebCenter Portal Content: Content Server, and Oracle WebCenter Portal Discussions Server) must share the same user base as Oracle SES.

Additionally, each Oracle SES instance must have a trusted entity for allowing WebCenter Portal end users to be securely propagated at search time.

Problem 2

Another possible cause is that authorization endpoints are not configured correctly.

Locate the search log file on the Oracle SES instance. Look for phrases including the URL value. For example:

```
EQP-80309: Exception while opening a stream to the URI:
http://host:port/sesUserAuth?userId=end-user-name
```

```
QueryFilterPlugin returned null or empty array value for security attribute
"WCECATTR". Values required for all security attributes.
```

Solution 2

To resolve this problem:

1. In the Oracle SES administration tool, go to the **Home - Sources** tab.
2. Click the **Edit** icon for the source to see source configuration tabs.
3. Click the **Authorization** tab to confirm the authorization connection string, user name, password, and authorization user ID format.

Problem 3

A third possible cause is that authorization endpoints are not returning authorization data.

Locate the search log file on the Oracle SES instance. Look for phrases including the URL value. For example:

```
A security filter authorization timeout for dsid = # occurred after 10000 milliseconds.
```

Solution 3

Each WebCenter Portal instance has up to four crawl sources. If an Oracle SES instance is used for more than one WebCenter Portal instance, then the number of crawl sources could potentially get quite high and cause timeout issues. This problem can also occur if the Oracle SES instance has other crawl sources for other uses.

The solution is to reduce the number of crawl sources.

Related Links

The following documents provide additional information related to subjects discussed in this section:

- For information about configuring Oracle SES with an identity management system, see:
 - The "Configuring the Identity Store" chapter of the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*, in the Oracle Fusion Middleware Online Documentation Library.
 - The "Oracle SES - Configuration" section of the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*.
- For information about configuring authorization endpoints, see the following sections in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*, in the Oracle Fusion Middleware Online Documentation Library:
 - "Configuring Oracle SES to Search Framework Applications"
 - "Configuring Oracle SES to Search Spaces Applications"

13.5.3 Search Results Do Not Include Documents

Problem

Crawling of WebCenter Portal Content Server documents fails.

Solution

To resolve this problem:

1. In the Oracle SES administration tool, go to the **Home - Schedules** tab.
2. Click the **Log File** icon to display the log file for the source. To obtain the location of the full log, click the **Status** link.
3. The Crawler Progress Summary and Log Files by Source section displays the full path to the log file. If Oracle SES fails to log in to the Content Server crawl endpoint due to an authentication error, then the following errors are logged:

```
EQP-60303: Exiting saxthread due to errors
```

```
EQP-80330: Unrecognized QName  
<http://schemas.xmlsoap.org/soap/envelope/>:Envelope  
oracle.search.sdk.crawler.PluginException
```

4. Update the configuration parameters of the Content Server crawl source with the correct credentials.

13.5.4 Search Results Do Not Include Discussions and Announcements

Problem 1

In the crawl source, the **Single Record Query** parameter is set to true on the **Authorization** tab.

Solution 1

Set the **Single Record Query** parameter to false.

Problem 2

The identity management system uses a mixed case user name, but the Oracle WebCenter Portal Discussions Server database uses an all lowercase user name.

Solution 2

The authorization query for the crawl source must apply the `LOWER()` function to user name parameters.

Using the Oracle SES administration tool, confirm that the **Authorization Query** for the crawl source definition looks like the following:

```
SELECT forumID as WCSECATTR FROM AUTHCRAWLER_FORUM_VW WHERE LOWER(username) =
LOWER(?) UNION SELECT DISTINCT -1 as WCSECATTR FROM AUTHCRAWLER_FORUM_VW
```

13.5.5 Search Results Do Not Include Recently Added Resources

Problem

A new resource was created recently, but search results do not include the new resource.

Solution

New resources must be crawled and indexed before they can be returned in search results. Crawl schedules are run periodically to index new content. If new resources are created often, then increase the frequency of the crawl schedule. If new resources need to be crawled immediately, then start the crawl schedule manually.

13.5.6 Search Results Do Not Reflect Authorization Changes

Problem

Some resources are accessible to more users due to authorization changes in WebCenter Portal. For example, resources in a space are now accessible to all authenticated users. The affected users cannot search for those resources.

Solution

Authorization data is cached in Oracle SES. The cache is invalidated according to the **Security Filter Lifespan** global setting in Oracle SES. The default value is 1 day or 1440 minutes. Adjust the value according to the general frequency of changes to authorization data.

13.5.7 Search Results Do Not Include Resources Available to Wide Audience

Problem

A space is publicly accessible, but unauthenticated users cannot see space resources in search results.

Solution

By default, view access of resources is granted to space members only, even if the space is accessible to the public. View access of resources must be granted to non-members explicitly.

In WebCenter Portal: Spaces, go to Spaces Administration, click the **Security** then **Roles** tabs, and for the affected role, check the view access to the different resources.

13.6 Problems and Solutions for the Tags Service

This section describes problems and solutions related to the Tags service.

13.6.1 Tag Center Results Do Not Appear When Tag Is Clicked

Problem

A resource to which a user has view permission has been tagged, but the user cannot see the resource in the Tag Center.

Solution

To resolve this problem:

1. In `service-definition.xml`, verify that the resource type has the Resource Authorizer configured properly.
2. Enable logging for the Resource Authorizer to ensure that it is giving you permission to see the required objects.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about the Resource Authorizer, see the "Creating a Resource Authorizer Class" section in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter Portal*.

13.6.2 Tagging Button Does Not Display on Page

Problem

The **Tagging Button** component is dropped on a page, but it does not show up.

Solution

To resolve this problem:

1. The **Tagging Button** component requires that the **Tagging Dialog** task flow be present on the page. Drop this task flow on the page or page template.

2. The Tags service requires a database connection to the WebCenter Portal repository (a database with the WebCenter Portal schema (WEBCENTER) installed). Ensure that there is a database connection present.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about creating a database connection to the WebCenter Portal repository, see the "Setting Up Database Connections" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*, in the Oracle Fusion Middleware Online Documentation Library.

13.6.3 Clicking a Tagged Resource Does Not Go to the Correct Page

Problem

When clicking a tagged resource in the Tag Center, the user is not redirected to the correct page.

Solution

All tagging links are generated through the Resource Action Handling (RAH) framework. Ensure that RAH is configured properly.

1. Check `service-definition.xml` for the resource type to see if a resource viewer is configured properly.
2. Check the source code for the **Tagging Button** that created the tagged resource to ensure that the **Tagging Button** definition uses the correct `resourceID` and `serviceID`.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about the Resource Authorizer, see the "Creating a Resource Authorizer Class" section in the *Oracle Fusion Middleware Developer's Guide for Oracle WebCenter Portal*.

13.7 Problems and Solutions for the Instant Messaging and Presence Service

This section describes problems and solutions related to the Instant Messaging and Presence service.

13.7.1 Presence Icon Not Seen In WebCenter Portal Applications

Problem

User does not see the Presence icon in front of a user name.

Solution

Ensure that an Instant Messaging and Presence connection exists and has been set as active.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about creating an active connection to the Instant Messaging and Presence server, see the "Registering Instant Messaging and Presence Servers" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*, in the Oracle Fusion Middleware Online Documentation Library.

13.7.2 Presence Icon Always Shows User as Offline

Problem

Presence icon always shows user as offline.

Solution

To resolve this problem:

1. Ensure that you have configured the Instant Messaging and Presence connections properly and have provided the correct values.
2. Ensure that the back-end presence server is up and running. A quick way to verify this is to check that you can connect to the presence server using a supported thick client (for example, Microsoft Communicators for LCS/OCS).
3. If you are able to connect to the presence server using the thick client, then ensure that the `web-services` for the presence servers are installed properly and are up and running.
4. Ensure that you are logged in as a valid user and that the user exists on the presence server. For more information, refer to the documentation for the back-end presence server.
5. Ensure that the user whose presence you cannot see exists on the back-end presence server. For more information, refer to the documentation for the back-end presence server.
6. Ensure that the user whose presence you cannot see is online on the presence server. If the user is your buddy, you can do that by logging in to the supported thick client with your account.
7. Ensure that the user's IM address, specified in the External Application Connection (**Account** field) or User Preferences, is valid.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about creating an active connection to the Instant Messaging and Presence server, see the "Registering Instant Messaging and Presence Servers" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*, in the Oracle Fusion Middleware Online Documentation Library.
- For more information about checking the status of the Instant Messaging and Presence server, see the "Instant Messaging and Presence Server Prerequisites" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*, in the Oracle Fusion Middleware Online Documentation Library.

13.7.3 Presence Icon in Framework Applications Always Shows User as Offline

Problem

Presence icon in Framework applications always shows user as offline.

Solution

To resolve this problem, see the solution for [Section 13.7.2](#).

If this does not resolve the problem, ensure that the page you have created has the `presenceData` component on it. Also the `presenceData` component should be after all the presence tags on the page. The recommendation is that the `presenceData` tag should be the last tag on the page before the closing `</af:document>` tag.

13.7.4 Presence Updates Not Seen

Problem

Presence updates are not seen in WebCenter Portal applications.

Solution

The Instant Messaging and Presence service holds a presence cache for each logged in user's session. This means that after the service makes a back-end trip to the presence server to fetch the latest presence information, the presence information is stored in the cache. For the following requests for presence, the data is returned from the cache until the cache expires. The default cache expiry time is 60 seconds. In the case where users are not seeing the presence update, it is recommended that you wait for the cache to expire and then refresh. You can change the cache expiry time by using the `setIMPServiceProperty WLST` command to set the `rtc.cache.time` configuration property to the desired value (in seconds).

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about WLST commands, see the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

13.7.5 Issues with Context Menu Options

Problem 1

The **Send Instant Message** option is not available in the context menu.

Solution 1

Some contextual actions do not apply to self presence. If you are invoking contextual actions from self presence, then the **Send Instant Message** action is hidden. Select a different user.

If you are accessing the context menu from another user's presence tag, ensure that the Instant Messaging and Presence service is configured correctly in the application.

Problem 2

The **Send Mail** option is not available in the context menu.

Solution 2

Ensure that the Mail service is configured correctly in the application.

Problem 3

The **View Profile** option is not available in the context menu.

Solution 3

Ensure that the application is secure as the **View Profile** contextual action is enabled only for authenticated users.

Problem 4

The **Change Ext App Credential** option is not available in the context menu.

Solution 4

To resolve this problem, consider the following:

- The **Change Ext App Credential** option is available only when an external application is configured with the active Instant Messaging and Presence connection.
- The **Change Ext App Credential** option is available only for the self presence tag.
- The **Change Ext App Credential** option is not available when shared or public credentials are configured in the external application.

13.8 Problems and Solutions for the Discussions Service

This section describes problems and solutions related to the Discussions service.

13.8.1 User Is Not Authorized / Service Not Configured

Problem

Navigating to a page containing the forums or announcements regions shows `User xxxx is not authorized` or `Service not configured`.

Solution

Ensure that the environment is configured properly:

- Check whether the discussions server is up and running by accessing the following URL:
`protocol://host:port/owc_discussions`
- Verify that the user is able to log in to the discussions server directly. If the user is unable to log in, then execute the WLST commands shown in the following table (adding server and node information as per your environment) to ensure that the environment is properly configured by comparing them with the expected values.

Table 13–2 WLST Commands for Discussions Server Configuration

WLST Command	Expected Value
<code>getDiscussionsServerProperty(appName='owc_discussions', key='AuthFactory.className')</code>	<code>oracle.jive.security.JpsAuthFactory</code>
<code>getDiscussionsServerProperty(appName='owc_discussions', key='UserManager.className')</code>	<code>oracle.jive.security.JpsUserManager</code>
<code>getDiscussionsServerProperty(appName='owc_discussions', key='GroupManager.className')</code>	<code>oracle.jive.security.JpsGroupManager</code>
<code>getDiscussionsServerProperty(appName='owc_discussions', key='owc_discussions.setup.complete_11.1.1.2.0')</code>	<code>true</code>
<code>getDiscussionsServerProperty(appName='owc_discussions', key='owc_discussions.sso.mode')</code>	<code>true</code>

- Verify that the discussions connection has been configured to use GPA. Execute the following WLST command to find out details about the connection and look for the highlighted entries.

```
wlst:/> listDiscussionForumConnections(appName='webcenter', verbose=1)
...
Policy URI For Authenticated Access: GPA
Policy URI For Public Access: GPA
```

13.8.2 User Is Not Authorized Message for Member of a Group that Has Access

Problem

User has been added to a group which has access to a particular forum, yet in WebCenter Portal: Spaces the user is unable to view the content.

Solution

This normally happens because of a mismatch of the user groups on the discussions server. The user-group cache on the discussions server is refreshed once every 6 hours.

To resolve this issue consider the following options:

- Clear the cache.
 - Log in to the discussions server administration console.
 - Navigate to **Cache Settings**.
 - Click **Clear Cache**.
- Change the cache size. When the cache reaches the cache size limit, the least recently used objects are pushed out of it.
 - Log in to the discussions server administration console.
 - Navigate to **Cache Settings**.
 - Click **Edit Caches**.
 - Change the Group Membership cache size to the desired value, in MB, for example, 0.01. If you set this value too low, then the server may end up accessing the back-end identity management system on every request, which may result in performance issues.

5. Save the new setting.
- Change the frequency of the cache refresh. This requires a restart of the application server.
 1. Edit the `jive_startup.xml` file to change the `maxLifeTime` value for `GroupMembership` to the desired value (in milliseconds).
 2. Save the changes and restart the server.

13.8.3 Unable to Log In to the Discussions Administration Console

Problem

A previously working user ID is no longer able to log in to the discussions server administration console.

Solution

This can happen if the administrator accidentally deletes the group that has administration access. To resolve this problem, execute the WLST command, `addDiscussionsServerAdmin`, to regain access.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about WLST commands, see the *Oracle Fusion Middleware WebLogic Scripting Tool Command Reference*.

13.8.4 SOAP Fault Exceptions Seen in Announcements Region

Problem

The announcement region displays a SOAP fault exception instead of the announcements.

Solution

- Verify that the discussions connection has been configured to use GPA. Execute the following WLST command to find out details about the connection and look for the highlighted entries:

```
wlst:> listDiscussionForumConnections(appName='webcenter', verbose=1)
...
Policy URI For Authenticated Access: GPA
Policy URI For Public Access: GPA
```

- Check that your `wsm-pm` application's configuration is correct and that there are no errors being reported in your log files. To validate the `wsm-pm` application, log in to the `wsm-pm` application's validation page as a user with administrative rights. Use the following format for validation:

```
http://host:port/wsm-pm/validator
```

If there are no issues with this application, then accessible policies display. If policies do not display, then investigate the related logged information on the server whose `wsm-pm` application is failing.

13.8.5 Discussions Server Displays a Form-Based Login Instead of SSO Login Screen

Problem

Clicking login or accessing the discussions server administration console displays a form-based login instead of the configured SSO login screen.

Solution

Verify that your discussion server settings are as described in [Table 13–2](#), specifically that the `owc_discussions.sso.mode` property is set to `true`.

13.8.6 Service Not Provisioned During Space Creation

Problem

Creating a space returns the following warning:

```
Announcement, Discussions not provisioned
```

Solution

To resolve this problem:

1. Verify that the discussions server is configured properly as described in [Section 13.8.1](#).
2. Verify that your discussions server connection is correctly configured. You can check on the connection information using Fusion Applications Control.
3. Check the `WC_Spaces-diagnostic.log` files to see if there are any timeouts during space creation. Timeouts indicate that there is a bottleneck in the network. It could be that the server is unreachable or overloaded and taking more time to respond. Ensure that you are not routing the calls unnecessarily over the network when a direct access would be better.

You can also go to Space administration settings, and provision the services manually.

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about how to manually provision services, see the "Enabling and Disabling Services Available to a Space" section in the *Oracle Fusion Middleware User's Guide for Oracle WebCenter Portal: Spaces*, in the Oracle Fusion Middleware Online Documentation Library.

13.9 Problems and Solutions for the Documents Service

This section describes problems and solutions related to Documents service.

13.9.1 Documents Service Unavailable

Problem

After configuring WebCenter Portal: Spaces to have a active connection to a Content Repository connection (Oracle WebCenter Content: Content Server) and bouncing WebCenter Portal: Spaces, the Documents service does not appear to be available in Spaces. For example, in the Home space or a space there are no documents available.

Solution

The cause of the issue is likely to be in the Content Repository connection settings or that the WebCenter Portal data was not successfully seeded into the Content Server.

To resolve this problem:

1. Check that the Content Server is up and running. Ensure the server has the **Server Port** (intradoc) configured and the **Server IP Filter** allows connection from WebCenter Portal: Spaces:
 - a. Log in to the Content Server.
 - b. Click **Administration**.
 - c. Click **Configuration for *instance name***.
 - d. Click the **Server Configurations** link under System Configuration.
 - e. Ensure that **Server Port** is listed and that **Server IP Filter** allows access from WebCenter Portal: Spaces.
2. Check the Content Repository Connection settings are correct for the Content Server being used for the Document store:
 - a. Using either WLST or Fusion Applications Control display the Content Repository Connection settings.
 - b. Ensure that the connection for the Content Server is marked as the Active Connection or Primary Connection.
 - c. Ensure that the settings for the Content Server are correct.
 - d. Ensure that the **Content Administrator**, **Root Folder** and **Application Name** have been specified:
 - The **Content Administrator** must have administration rights in the Content Server. This user will be used to create and maintain folders for spaces content, security groups and roles, and manage content access rights.
 - The **Root Folder** and **Application Name** must be unique and not used by any other WebCenter Portal: Spaces application using the same Content Server. If you change these values, ensure that both values are changed and not just one of them.
 - It is recommended the **Application Name** is less than 14 characters as it is used as a prefix for items created in Content Server, such as workflows, which have a limit on the length of the item name.
3. Check the log at the time of the WebCenter Portal: Spaces start-up for any errors connecting to the Content Server or seeding the data in the Content Server:
 - a. When WebCenter Portal: Spaces has an active or primary Content Repository connection and the **Content Administrator**, **Root Folder** and **Application Name** have been specified, then when the WebCenter Portal: Spaces server starts up, data is seeded in the Content Server for that application (if it does not already exist).
 - b. If both 1 and 2 are correct, check the WebCenter Portal: Spaces log for any errors when WebCenter Portal: Spaces starts up. There may be errors when seeding the data in the Content Server.
 - c. If the log does not show any useful log information, turn up the logging for the Documents server and bounce WebCenter Portal: Spaces to see the log messages regarding seeding the WebCenter Portal: Spaces seed data:

- a. Either use Fusion Applications Control or edit the `logging.xml` file to increase the logging for `oracle.webcenter.doclib.internal.model` and `oracle.webcenter.doclib.internal.spaces`.
- b. Restart WebCenter Portal: Spaces.
- c. View the log for any messages regarding the seeding of the WebCenter Portal: Spaces data.
- d. If the data is seeded correctly there should be a message logged at TRACE level similar to the following:

```
Content Server already contains the Space container, therefore no need
to seed any data
```

- e. If the seed data does not already exist, there should be a message logged at TRACE level similar to the following:

```
Creating WebCenter Seeded Data
```

13.9.2 Granting Permissions Errors in Documents When Creating a Space

Problem

On creating a space based on a template with the Documents service, the space creation fails with an error such as the following:

```
Granting permissions for Documents failed
```

Solution

View the WebCenter Portal: Spaces log to see if there are any log messages indicating the source of the error.

If it is not clear what the cause of the error is, try resetting all the Document permissions for all the roles to see if the role mapping completes successfully. Any failures should be logged in the WebCenter Portal: Spaces log.

For information about how to reset the permissions, see [Section 13.9.3](#).

13.9.3 User Appears to Not Have the Correct Capabilities in the Documents Page for His Role

Problem

When a user does not have the expected capabilities in the Documents page for his or her role, (for example the user is a Participant who has Write and Delete yet he or she cannot create content) it is possible that the permissions displayed in WebCenter Portal: Spaces do not match those permissions actually stored in the Content Server.

Solution 1

If the problem affects a single user, reset the user's role by performing the following steps:

1. Log in to WebCenter Portal: Spaces.
2. Navigate to the space.
3. Navigate to the Space administration settings.
4. Click the **Members** tab.

5. Select the affected user.
6. Click **Change Role**.
7. Select a different role and click **OK**.
8. Click **Change Role** again.
9. Select the original role and click **OK**.

Solution 2

If the problem affects multiple users, resynchronize the permissions from WebCenter Portal: Spaces to WebCenter Portal Content by performing the following steps:

1. Log in to WebCenter Portal: Spaces.
2. Navigate to the Space administration settings.
3. Click the **Roles** tab.
4. For each role:
 - a. Select the role and click **Edit Permissions**.
 - b. Deselect all the permissions and click **Save**.
 - c. Click **Edit Permissions** again and select the desired permissions.
 - d. Click **Save**.
5. For the seeded roles the recommended permissions are:
 - Moderator: Read, Write, Delete, Admin
 - Participant: Read, Write, Delete
 - Viewer: Read

13.9.4 Documents Connection Not Working after Switching to Global Policy Attachment

Problem

A Documents connection that was used with Local Policies fails to behave correctly when repurposed for GPA use.

Solution

To resolve this problem:

1. Examine the Documents connection properties using Fusion Applications Control or WLST.
2. Verify that the client security policy is not set.
3. If it is set, clear the value. For example, using WLST:

```
setJCRContentServerConnection(  
    [application name],  
    [connection name],  
    clientSecurityPolicy=null);
```

Related Links

The following document provides additional information related to subjects discussed in this section:

- For more information about examining the Documents connection properties, see the "Modifying Content Repository Connection Details" section in the *Oracle Fusion Middleware Administrator's Guide for Oracle WebCenter Portal*, in the Oracle Fusion Middleware Online Documentation Library.

Additional Troubleshooting Information

This chapter describes additional troubleshooting resources.

This chapter contains the following topic:

- [Section 14.1, "Using My Oracle Support for Additional Troubleshooting Information"](#)

14.1 Using My Oracle Support for Additional Troubleshooting Information

You can use My Oracle Support (formerly MetaLink) to help resolve Oracle Fusion Applications problems. My Oracle Support contains several useful troubleshooting resources, such as:

- Knowledge base articles
- Community forums and discussions
- Patches and upgrades
- Certification information

You can access My Oracle Support at <https://support.oracle.com>.

