

## **Oracle® Fusion Middleware**

Migration Guide for Oracle Business Intelligence

12c (12.2.1.2)

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# Preface

This document describes how to migrate data from Oracle Business Intelligence the 11g environment to the 12c environment.

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## Audience

This guide is intended for system administrators or application developers who are installing and configuring Oracle Managed File Transfer. It is assumed that readers are familiar with web technologies and have a general understanding of Windows and UNIX platforms.

## Documentation Accessibility

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## Related Documents

Refer to the Oracle Fusion Middleware Library for additional information.

- For more information about Oracle Business Intelligence, see Oracle Business Intelligence Enterprise Edition Documentation.
- For installation information, see Fusion Middleware Installation Documentation.
- For upgrade information, see Fusion Middleware Upgrade Documentation.
- For administration-related information, see Fusion Middleware Administration Documentation.

- For release-related information, see Fusion Middleware Release Notes.

## Conventions

This document uses the following text conventions:

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

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# Overview: Migrating from Oracle Business Intelligence 11g to 12c

Migrating the metadata and configuration from Oracle Business Intelligence 11g to 12c is an out-of-place process performed by using the BI Migration Tool. This tool creates an Oracle BI 11g metadata archive which contains system security configuration information, the Oracle BI repository, and the Oracle BI Presentation Services Catalog of the 11g system.

This section explains the process to migrate Oracle BI metadata and configurations from an Oracle BI 11g (Release 11.1.1.7 or later) to Oracle BI 12c (12.2.1.2) instance.

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**Note:** The BI Migration Tool does not preserve any customized features of the 11g system. You must manually copy the customized features of 11g system to the 12c system post migration.

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## Understanding the 12c Migration Procedure

Oracle BI 12c (12.2.1.2) is the latest Business Intelligence release from Oracle. Migrating from Oracle BI 11g to 12c requires careful preparation, planning, and testing. Oracle provides tools and technology to automate much of the migration process. However, the precise strategy that you want to adopt depends on the configuration of the existing 11g system and the required configuration of the 12c system.

## 1.1 Understanding the 12c Migration Procedure

Oracle BI 12c (12.2.1.2) is the latest Business Intelligence release from Oracle. Migrating from Oracle BI 11g to 12c requires careful preparation, planning, and testing. Oracle provides tools and technology to automate much of the migration process. However, the precise strategy that you want to adopt depends on the configuration of the existing 11g system and the required configuration of the 12c system.

This document assumes that you have sufficient knowledge to debug and fix issues encountered in Oracle BI 12c. It also assumes that you have downloaded the Oracle BI 12c software and you have an existing Oracle BI 11g instance installed and running on your system.

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**Note:** The metadata and configuration migration is an out-of-place process. The migration process does not affect the existing 11g system in the production environment. You can continue to use the existing 11g system until you are ready to roll out the 12c system.

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To help you develop an effective migration strategy, Oracle recommends that you complete the following steps:

1. Analyze and optimize the existing 11g system in preparation for migration to 12c.
2. Understand what is migrated and how.
3. Define a test plan to validate the migration.
4. Test a sample migration on a representative subset of the existing 11g system.
5. Perform the migration.

The migration strategy that you ultimately implement can be unique to your particular situation and depends on specific topologies and organizational requirements.

#### Analyzing and Optimizing the Existing 11g System

Migrating metadata and configuration from an existing Oracle BI 11g system requires time and resources. A poorly optimized 11g deployment can disrupt the migration process and can affect the performance of the 12c system. Oracle recommends that you analyze and optimize the existing 11g system by removing redundant content and merging and consolidating similar content.

#### What is Migrated and How?

Oracle has introduced many enhancements to existing features in the 12c release for Business Intelligence. Sometimes, these enhancements replace the existing functionality or reimplement it in a different way. Wherever possible, the existing 11g functionality and configuration is migrated to the corresponding 12c system. Although the appearance and behavior of the 12c system can be different, the end result is expected to be functionally equivalent.

#### Defining a Test Plan to Validate the Migration

Oracle recommends that you define a test plan to verify whether the 12c system has all the migrated data as you expected. Oracle BI 12c provides a set of validation tools that can be used to validate certain parts of the 12c system. However, they are supplementary to the validation task.

#### Testing the Migration on a Representative Subset of the Existing 11g System

Oracle recommends that you migrate sample data from the 11g system to the 12c system before performing the actual migration to ensure a smooth transition.

#### Performing the Migration

After performing a sample migration and verifying that the data is migrated as expected in to the 12c system, you can proceed to migrate the entire Oracle BI 11g system.

### 1.1.1 Analyzing and Optimizing the Existing 11g System

Migrating metadata and configuration from an existing Oracle BI 11g system requires time and resources. A poorly optimized 11g deployment can disrupt the migration process and can affect the performance of the 12c system. Oracle recommends that you analyze and optimize the existing 11g system by removing redundant content and merging and consolidating similar content.

When you analyze the existing 11g system, note the current hardware and operating system environment on which it is running. Compare the current environment with the Oracle Fusion Middleware 12c system requirements and certification information. There is a set of new system requirements for deploying Oracle BI 12c. For example,

Oracle BI 12c requires a newer version of the operating system and a newer version of Java JDK. For more information, see:

- The system requirements document at Oracle® Fusion Middleware System Requirements and Specifications
- The certification document at Oracle Fusion Middleware Supported System Configurations

While analyzing the 11g system, note the following details:

- Name and size of the repository
- Name and size of the Oracle BI Presentation Catalog
- Existing security model details
- Data sources
- Number of scheduled jobs
- Any links to external systems

To optimize the existing 11g system in readiness for migration, perform the following tasks:

1. Run the Consistency Checker to check the validity of the 11g repository, and to identify and fix the syntax or semantic errors and warnings that can cause the queries to fail on the Oracle BI 12c Administration Tool. For more information, see *Checking the Consistency of a Repository or a Business Model in Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition*.
2. Disable the initialization blocks that are no longer being used.
3. Identify and remove users and groups that are no longer required, and therefore do not need to be migrated.
4. Identify and remove objects in the repository and the Oracle BI Presentation Catalog that are no longer required, and therefore do not need to be upgraded.
5. If you have been using the Oracle BI Server usage tracking functionality, then review the usage tracking data to identify unused objects.
6. If you have been using the Oracle BI Server summary advisor functionality, then review the summary advisor for aggregated data and aggregation script.

## 1.1.2 What is Migrated and How?

Oracle has introduced many enhancements to existing features in the 12c release for Business Intelligence. Sometimes, these enhancements replace the existing functionality or reimplement it in a different way. Wherever possible, the existing 11g functionality and configuration is migrated to the corresponding 12c system. Although the appearance and behavior of the 12c system can be different, the end result is expected to be functionally equivalent.

An efficient migration strategy allows you to migrate your metadata and configuration from Oracle BI 11g to the 12c environment. The goal of this process is to not exactly replicate the appearance and behavior of the original 11g system in the 12c environment. Replicating the 11g appearance and behavior is time-consuming and

sometimes difficult, if not impossible. For example, the dashboards and prompts are represented differently in 12c and would require significant manual intervention to recreate the 11g appearance. It also undermines the rationale behind moving on to Oracle BI 12c; namely, to take advantage of the enhancements introduced in 12c.

The following components are migrated:

- Oracle BI Server: This includes NQSCfg.INI, and opmn.xml environment.
- Oracle BI Presentation Services: This includes instanceconfig.xml.
- Oracle BI Publisher: This includes scanner.xml, xdo.cfg, xmlp-server-config.xml, datasources.xml, xdodelivery.cfg, cupsprinters.cfg, the Map directory, and the Plugins directory.

The following metadata is migrated:

- Content (WebCat), model (RPD), and the authorization policy securing it (Java AuthoriZatioN (JAZN)).

The following OPMN properties contained in the opmn.xml file are not migrated to 12c during configuration migration:

- obips
- obiccs
- obijh
- obisch

However, OBIS property is migrated.

### 1.1.3 Defining a Test Plan to Validate the Migration

Oracle recommends that you define a test plan to verify whether the 12c system has all the migrated data as you expected. Oracle BI 12c provides a set of validation tools that can be used to validate certain parts of the 12c system. However, they are supplementary to the validation task.

A typical test plan identifies the following:

- A representative subset of the existing 12c system to use as a test upgrade
- Several key indicators used to verify that a test upgrade has completed satisfactorily
- Additional key indicators used to verify that a full upgrade has completed satisfactorily

### 1.1.4 Testing the Migration on a Representative Subset of the Existing 11g System

Oracle recommends that you migrate sample data from the 11g system to the 12c system before performing the actual migration to ensure a smooth transition.

To migrate sample data, refer to the migration procedure described in this guide. Testing the migration by migrating a representative subset of the data can help you to:

- Verify more quickly that the migration of the data from the existing 11g system is likely to be successful

- Explore in detail the differences between the existing 11g system and the new 12c system

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**Note:** The 11g system is left unchanged during and after the migration process is complete.

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Use the test plan that you previously created to verify that the sample migration process is successful and that the resulting system has your data.

### 1.1.5 Performing the Migration

After performing a sample migration and verifying that the data is migrated as expected in to the 12c system, you can proceed to migrate the entire Oracle BI 11g system.

The following flowchart shows the flow of the migration process.

**Figure 1-1 Migration Process Flowchart for Oracle Business Intelligence from 11g to 12c**

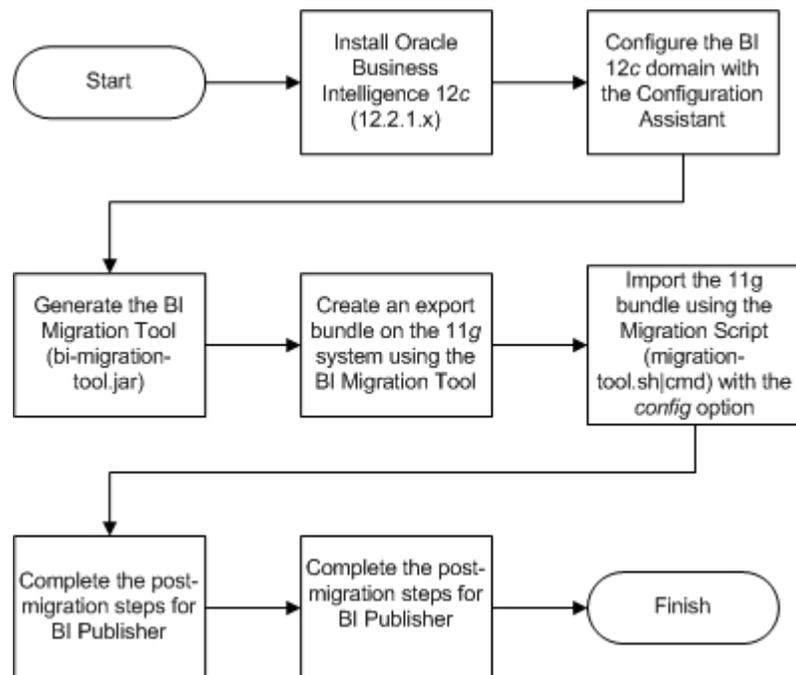


Table 1-1 provides a high-level summary of the steps you must perform to migrate from Oracle BI 11g to 12c.

**Table 1-1 Tasks for Migrating Oracle Business Intelligence from 11g Release**

Task	Description
<p><b>Required</b> Install and configure Oracle BI 12c (12.2.1.2) software.</p>	<p>For a procedure to install BI 12c, see Installing Oracle Business Intelligence in <i>Oracle Fusion Middleware Installing and Configuring Oracle Business Intelligence Installation Guide</i>.</p> <p>For a procedure to configure the 12c domain, see Configuring Oracle Business Intelligence in <i>Oracle Fusion Middleware Installing and Configuring Oracle Business Intelligence Installation Guide</i>.</p>
<p><b>Required</b> Generate the BI Migration Tool (bi-migration-tool.jar) and copy it from the 12c Oracle Home to the 11g system.</p>	<p>See <a href="#">Generating the BI Migration Tool (bi-migration-tool.jar)</a>.</p>
<p><b>Required</b> Create an export bundle using the BI Migration Tool on the 11g system.</p>	<p>See <a href="#">Creating the Export Bundle</a>.</p>
<p><b>Required</b> Import the export bundle using the BI Migration Script (migration-tool.sh   cmd).</p>	<p>See <a href="#">Importing with the BI Migration Script (migration-tool.sh   cmd)</a>.</p>
<p><b>Required</b> Complete the post-installation steps.</p>	<p>For BI EE, see <a href="#">Post-Migration Steps for Oracle BI EE</a>.</p> <p>For BI Publisher, see <a href="#">Post Migration Steps for Oracle BI Publisher</a>.</p> <p>For Essbase, see <a href="#">Post Migration Steps for Essbase</a>.</p>

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## Migrating from Oracle BI 11g to 12c

The migration process migrates your 11g metadata and configuration for the BI components that you have installed on your system. Migration is a two-step process. The first step in the process is to create an export bundle from a read-only 11g certified Release (11.1.1.7 or later) using the BI Migration Tool (bi-migration-tool.jar). The second step is to import the export bundle in to the 12c system using the BI Migration Script (migration-tool.sh).

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**Note:** The export process is read-only. Data, configuration, or existing binaries are not modified or deleted on the source system. During export, the metadata and configuration (specifically the data model and connection pools), the catalog content, and the security store authorization policy are retained. You must reconfigure the following:

- The WebLogic authentication configuration

WebLogic does not support migration from 11g to 12c. Therefore, you must reconfigure the security realm in 12c and is not a part of the 11g to 12c migration. If your users and groups are in an external LDAP, you must configure your BI 12c to point to the external LDAP. If your BI 11g users were hosted in the WebLogic LDAP, you can use the WebLogic Server to export users from 11g in to 12c WebLogic LDAP. However, 12c does not support a BI System User. Therefore, you must delete the BI System User after importing it in to the 12c system.

- Mid-tier database content (such as BI Publisher schedules, the job history of agents, scorecard annotations, and usage tracking tables)

The Agents are migrated from 11g to 12c in a disabled state. You must re-enable them after the migration. Re-enabling the agents recreates the entries in the scheduler database. However, the Agent history is not migrated from 11g to 12c. You must also reconfigure Usage Tracking.

- Application-specific data such as TimesTen aggregates, the global cache, required database schemas, and Essbase applications, data, outlines, rules, and calculations

The import process is offline. During import, metadata content is deployed to customize the specified service instance and it overwrites the existing configuration settings.

---

### Prerequisites

Ensure that you configure the environment as per Oracle recommendations in readiness for the migration.

### Generating the BI Migration Tool (bi-migration-tool.jar)

The BI Migration Tool (bi-migration-tool.jar) is self-executing and self-contained. You must generate the BI Migration Tool jar file by using the BI Migration Script (migration-tool.sh | cmd). The BI Migration Script is made available after you configure the 12c domain. This step packages the components of the BI Migration Tool into a single, self-executing jar file, so that it can be easily transported on to an 11g system. To do this, you must have access to a 12c system with a configured domain. You must set up the 12c domain to provide sufficient infrastructure to run the BI Migration Tool and allow it to repackage itself. The 12c domain can be empty at this stage.

### Creating the Export Bundle

The export bundle is a ".jar" file and consists of the metadata information from the 11g Oracle home.

### Importing with the BI Migration Script (migration-tool.sh | cmd)

You must import the export bundle using the BI Migration Script (migration-tool.sh | cmd). The BI Migration Script automatically determines the Oracle home and the Domain home directories.

### Validating the Oracle BI Deployments

The Oracle BI Baseline Validation Tool enables you to identify differences during life cycle operations, such as migrating from the Oracle BI 11g release to the 12c release. After you complete the migration procedure, you can use this tool to compare the two deployments and verify whether the data from the 11g environment is correctly copied to the 12c environment.

## 2.1 Prerequisites

Ensure that you configure the environment as per Oracle recommendations in readiness for the migration.

Make sure that you have met the following requirements before proceeding to the migration procedure:

- You have an 11g certified release (11.1.1.7, 11.1.1.8, and 11.1.1.9) installed.
- You have installed and configured the 12c software as per the instructions in *Oracle Fusion Middleware Installing and Configuring Oracle Business Intelligence Installation Guide*.
- You have file system permission on both the 11g and 12c systems.
- You have configured the WebLogic authentication chain to enable the 11g users to sign in to the 12c domain. For more information, see *Configuring Authentication Providers in Oracle Fusion Middleware Administering Security for Oracle WebLogic Server*.
- You have stopped the 12c BI instance, in case it is running. The BI instance should not be running before migrating content into the new 12c instance.

For a procedure to start and stop Administration server and Managed servers, see *Starting and Stopping Administration and Managed Servers and Node Manager* and for a procedure to start and stop the BI instance, see *Starting and Stopping Components in Oracle Fusion Middleware Administering Oracle Fusion Middleware*.

- You have the JDK version 1.8.0\_101 installed on your system.

- You have stopped OBIS1 and OBIPS1.

## 2.2 Generating the BI Migration Tool (bi-migration-tool.jar)

The BI Migration Tool (bi-migration-tool.jar) is self-executing and self-contained. You must generate the BI Migration Tool jar file by using the BI Migration Script (migration-tool.sh | cmd). The BI Migration Script is made available after you configure the 12c domain. This step packages the components of the BI Migration Tool into a single, self-executing jar file, so that it can be easily transported on to an 11g system. To do this, you must have access to a 12c system with a configured domain. You must set up the 12c domain to provide sufficient infrastructure to run the BI Migration Tool and allow it to repackage itself. The 12c domain can be empty at this stage.

To generate the BI Migration Tool jar:

1. Locate the BI Migration Script available at the following location:

On UNIX operating system:

```
DOMAIN_HOME/bitools/bin/migration-tool.sh
```

On Windows operating system:

```
DOMAIN_HOME\bitools\bin\migration-tool.cmd
```

Replace the *DOMAIN\_HOME* with the actual path to the 12c Domain home you created when you configured the 12c BI instance.

2. Run the following command to generate the BI Migration Tool:

On UNIX operating system:

```
DOMAIN_HOME/bitools/bin/migration-tool.sh package bi-migration-tool.jar
```

On Windows operating system:

```
DOMAIN_HOME\bitools\bin\migration-tool.cmd package bi-migration-tool.jar
```

Where,

**Table 2-1 Command Description**

Option	Description
<i>DOMAIN_HOME</i> /bitools/bin	Specifies the location of the BI Migration Script.
package	Specifies the BI Migration Script to perform the packaging operation.
bi-migration-tool.jar	Specifies the file name of the migration tool jar file where the output is written. In this documentation, the bi-migration-tool.jar file is referred as the "BI Migration Tool" and the migration-tool.sh script is referred as the "BI Migration Script".

3. Copy the BI Migration Tool to the host system from where you want to export data.

## 2.3 Creating the Export Bundle

The export bundle is a ".jar" file and consists of the metadata information from the 11g Oracle home.

To create an export bundle:

1. Change to the directory where you created the bi-migration-tool.jar file.
2. Run the BI Migration Tool without passing parameters. Enter the following command:

On UNIX operating system:

```
JDK_HOME/bin/java -jar bi-migration-tool.jar
```

On Windows operating system:

```
JDK_HOME\bin\java -jar bi-migration-tool.jar
```

This command displays the list of parameters that you can include for the BI Migration Tool to locate various parts of the 11g system.

3. Run the BI Migration Tool with the following parameters this time to create an export bundle.

**Table 2-2 Parameter Description: Creating Export Bundle**

Parameter	Description
out	Indicates the BI Migration Tool to run in Export mode.
<oracle 11g home>	Specifies the Oracle home directory. This is typically the directory Oracle_BI inside Middleware home.
DOMAIN_HOME	Specify the Domain home directory. This is typically the directory user_projects/domains/bi/ inside the Middleware home.
<output export bundle path>	Specifies the file name of the export bundle where the output is written. The output is not a BAR file. The file name of the export bundle must include the ".jar" extension.

Following is a sample command for creating an export bundle:

On UNIX operating system:

```
JDK_HOME/bin/java -jar bi-migration-tool.jar out ORACLE_HOME/Oracle_BI1 DOMAIN_HOME/tmp/migration-tool-test/test_export.jar
```

On Windows operating system:

```
JDK_HOME\bin\java -jar bi-migration-tool.jar out ORACLE_HOME\Oracle_BI1 DOMAIN_HOME\tmp\migration-tool-test\test_export.jar
```

Where,

**Table 2-3 Parameter Values: Creating Export Bundle**

Parameter	Description
<code>ORACLE_HOME/Oracle_BI1</code>	The path where the Oracle home directory is located.
<code>DOMAIN_HOME</code>	The path where the Domain home directory is located.
<code>/tmp/migration-tool-test/test_export.jar</code>	The location where the export bundle is created.

---

**Note:** Make sure to replace these file paths with the respective paths on your system.

---

The following message indicates a successful export:

```
Export succeeded
```

Copy the export bundle in to the 12c system.

## 2.4 Importing with the BI Migration Script (migration-tool.shlcmd)

You must import the export bundle using the BI Migration Script (migration-tool.shlcmd). The BI Migration Script automatically determines the Oracle home and the Domain home directories.

You can include the following parameters while running the BI Migration Script to import the export bundle in to the 12c system:

**Table 2-4 Parameter Description: Importing the export bundle**

Parameter	Description
<code>in</code>	Indicates the BI Migration Script to import the bundle.
<code>config</code>	Indicates the BI Migration Script to overwrite the configuration files during the import process. This allows you to also migrate the configuration along with the data.
<code>&lt;export bundle&gt;</code>	The path where the export bundle is located.
<code>&lt;service instance name&gt;</code>	Specifies the name of the service instance, which is ssi.

---

**Note:** The default service instance name is "ssi". However, if you install Oracle BI in a silent mode using a response file, you can specify a service instance name during the product installation. In that case, you must specify the service instance name you have specified in the response file.

---

To import the metadata and configuration in to the 12c system:

1. Run the BI Migration Script with the following parameters:

On UNIX operating system:

```
DOMAIN_HOME/bitools/bin/migration-tool.sh in config <export bundle> <service instance name>
```

For example,

```
DOMAIN_HOME/bitools/bin/migration-tool.sh in config /tmp/
migration-tool-test/test_export.jar ssi
```

On Windows operating system:

```
DOMAIN_HOME\bitools\bin\migration-tool.cmd in config <export
bundle> <service instance name>
```

For example,

```
DOMAIN_HOME\bitools\bin\migration-tool.cmd in config /tmp/
migration-tool-test/test_export.jar ssi
```

Where,

**Table 2-5 Parameter Values: Importing the export bundle**

Parameter	Description
in	Indicates the BI Migration Script to import the bundle.
config	Indicates the BI Migration Script to overwrite the configuration files during the import process.
/tmp/migration-tool-test/test_export.jar	The path where the export bundle is located.
ssi	Specifies the name of the service instance.

- If the migration is successful, you see the output such as the following:

```
Import succeeded
About to close down logging to: DOMAIN_HOME/bilogs/migration/
migration-2016-05-05-06-13-05.log
This is so that the log file can be archived into the diagnostics zip
Any remaining log entries will go to '/tmp/migration.log', and will not appear in
the diagnostics zip
Migration action succeeded
```

You can now start the 12c system. For more information about starting the 12c system, see *About Managing Oracle Business Intelligence Processes in Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

---

**Note:** It takes about 10 more minutes for the Application roles and policies to migrate after the migration process is complete.

---

After completing the import process, you must start OBIS1 and OBIPS1 which you stopped before beginning the migration process.

## 2.5 Validating the Oracle BI Deployments

The Oracle BI Baseline Validation Tool enables you to identify differences during life cycle operations, such as migrating from the Oracle BI 11g release to the 12c release. After you complete the migration procedure, you can use this tool to compare the two deployments and verify whether the data from the 11g environment is correctly copied to the 12c environment.

For more information about using the Oracle BI Validation Tool, see [Comparing Oracle Business Intelligence Deployments Using the Oracle Business Intelligence Baseline Validation Tool](#).

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**Note:** You can download the Oracle BI Validation Tool along with the other Oracle Business Intelligence download on the Oracle Technology Network. See the Readme document that is included in the Oracle BI Validation Tool download for more information. For specific information on the distributions you want to download for each product, see [Oracle Fusion Middleware Download, Installation, and Configuration Readme Files](#) page.

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## Post-Migration Steps for Oracle BI EE

After migrating the Oracle BI EE metadata, manually migrate the configuration settings for catalog groups and other components such as security for WebLogic and Enterprise Manager, BI Server, and BI Presentation Services.

### Migrating Catalog Groups

Catalog groups are a feature of Oracle BI EE that allows administrators to organize users and application roles for security administration purposes.

### Migrating Configuration of Oracle BI EE

After migrating the data, manually migrate the configuration information from the 11g system to the 12c system, which includes WebLogic security, Enterprise Manager security, the managed BI configurations, BI logs, BI Server, and BI Presentation Server configuration settings.

### Configuring the Database to Use DataDirect Drivers

You must configure the database to use the appropriate DataDirect drivers. If you are using a database that is already configured to use the DataDirect drivers, modify the database configuration's `odbc.ini` file to use the correct DataDirect drivers.

### Configuring Usage Tracking

The Oracle BI Server supports the collection of usage tracking data. When usage tracking is enabled, the BI Server collects usage tracking data for each query. The statistics are then written to a usage tracking log file or are inserted directly in to a database table. After you complete migrating and configuring the 12c system, you must enable usage tracking in the `NQSConfig.INI` file.

### Configuring the SQL Server

After configuring the 12c system, you must configure the SQL Server settings in the `odbc.ini` file.

### Adding Roles and Permissions

After migrating the data, you must add roles and permissions for BI Administrator, BI Author, and BI Consumer groups.

### Configuring MySQL for Oracle BI

You must configure the MySQL database to use the DataDirect driver. If you are using a database that is already configured to use the DataDirect drivers, modify the database configuration's `odbc.ini` file to use the correct DataDirect drivers.

### Checking the BI JavaHost Configuration

Make sure that the XMLP and the BI JavaHost settings match with the settings specified for the configuration of the 11g system.

### Enabling Clusters

After migrating the data, you must manually enable the ClusterEnabled parameter in the ClusterConfig.xml file to turn on the cluster instances on the 12c system.

### Enabling Oracle Hardware Acceleration and Compatibility Mode

Hardware acceleration affects the autocompletion of features such as dashboard prompts, trellis charts and microcharts, Summary Advisor functionality, and aggregate persistence for the TimesTen In-Memory database. Therefore, you must manually enable the bi:hw-acceleration flag in the 12c bi-config.xml file post migration. You must also enable the bi:compat-mode-11g flag, so that the state of the 11g system is preserved at run time.

### Setting Compatibility Framework for Oracle BI Server

The compatibility framework allows the BI Server to add new features or bug fixes in Oracle BI 12c (12.2.1.1 and later) that are not compatible with the Oracle BI 11g releases while providing a flexible framework that enables the BI Server to operate in a compatibility mode with the earlier major release. Individual features and bug fixes can be enabled or disabled independently using compatibility flags. Alternatively, you can set all the compatibility flags to the default values using a single COMPATIBLE\_RELEASE flag for the Oracle BI system to be compatible with the earlier release, which is 11.1.1.9. Add the COMPATIBLE\_RELEASE parameter to the NQSCONFIG.INI file to ensure that the migrated 12c environment behaves as closely as possible to Oracle Business Intelligence 11g Release 1 (11.1.1.9) environment.

### Migrating the Fusion Middleware MapViewer Configuration

Oracle Fusion Middleware Mapviewer (MapViewer) is a programmable tool for rendering maps using spatial data managed by Oracle Spatial and Graph or Oracle Locator (also referred to as Locator). MapViewer provides tools that hide the complexity of spatial data queries and cartographic rendering, while providing customizable options for more advanced users. These tools can be deployed in a platform-independent manner and are designed to integrate with map-rendering applications. After migrating the data, you must manually modify the 12c MapViewer configuration file to contain the same contents as the 11g file except the Logging section.

### Unchecking "Required for Authentication" Option in DYNAMIC\_OLAP\_LOGIN Initialization Block

To avoid authentication issues post migration, you must uncheck the **Required for Authentication** option in the DYNAMIC\_OLAP\_LOGIN initialization block.

### Copying Configuration Files

You must manually copy the following configuration files after the migration: writebacktemplate.xml, userpref\_currencies.xml, and bicustom.ear.

## 3.1 Migrating Catalog Groups

Catalog groups are a feature of Oracle BI EE that allows administrators to organize users and application roles for security administration purposes.

In Oracle BI Release 12c (12.2.1.1 and higher), catalog groups are deprecated. The catalog groups are migrated by the upgrade process to Application roles.

## 3.2 Migrating Configuration of Oracle BI EE

After migrating the data, manually migrate the configuration information from the 11g system to the 12c system, which includes WebLogic security, Enterprise Manager security, the managed BI configurations, BI logs, BI Server, and BI Presentation Server configuration settings.

### Migrating Oracle BI WebLogic Security Configuration

Oracle Business Intelligence 12c is tightly integrated with the Oracle Fusion Middleware Security architecture and delegates core security functionality to components of that architecture. By default, an Oracle Business Intelligence installation is configured with an authentication provider that uses the Oracle WebLogic Server embedded LDAP server for user and group information. The Oracle Business Intelligence default policy store provider and credential store provider stores credentials, application roles, and application policies in files in the domain. You must manually migrate the Oracle BI WebLogic security configuration from the 11g system to the 12c system.

### Migrating Oracle Enterprise Manager Fusion Middleware Control Security Configuration

Most of the security configuration related to application roles, security grants, and application policies are migrated to the Oracle Enterprise Manager Fusion Middleware Control 12c during the migration process. You must examine and manually apply any special Security Provider configuration in the Fusion Middleware Control 12c.

### Migrating the Oracle Enterprise Manager Fusion Middleware Control Managed Business Intelligence Configurations

The Fusion Middleware Control is used to manage some of the important configurations for Oracle BI. You must manually examine the configuration of the General, Presentation, Performance, and Mail sections of the Fusion Middleware Control 11g and apply the same settings to the 12c system.

### Migrating the Enterprise Manager Fusion Middleware Control Managed Business Intelligence Log Configuration

The Enterprise Manager Fusion Middleware Control is used to manage the log configuration for the Oracle BI components. You must manually examine the log configuration settings in the 11g system and apply the same settings to your 12c system.

### Migrating Oracle BI Server Configuration

Various files for the BI Server contain configuration information: `odbc.ini` and `tnsnames.ora`. The `odbc.ini` file contains non-Oracle data source (DSN) connection information. The `tnsnames.ora` file contains network service names mapped to connect descriptors for the local naming method, or net service names mapped to listener protocol addresses. You must examine these 11g files and manually copy the configuration information to the respective 12c files.

### Migrating Oracle BI Presentation Server Configuration

The Oracle BI Presentation Services process hosts most of the business logic of the Web server and provides the framework and interface for the presentation of business intelligence data to web clients. The `userpref_currencies.xml` file defines the currency options that are

displayed in the **Currency** box of the **Preferences** tab of the **My Account** dialog. The `bridgeconfig.properties` file contains the Presentation Services Plug-in information. You must examine these 11g files and manually copy the configuration information to the respective 12c files.

### 3.2.1 Migrating Oracle BI WebLogic Security Configuration

Oracle Business Intelligence 12c is tightly integrated with the Oracle Fusion Middleware Security architecture and delegates core security functionality to components of that architecture. By default, an Oracle Business Intelligence installation is configured with an authentication provider that uses the Oracle WebLogic Server embedded LDAP server for user and group information. The Oracle Business Intelligence default policy store provider and credential store provider stores credentials, application roles, and application policies in files in the domain. You must manually migrate the Oracle BI WebLogic security configuration from the 11g system to the 12c system.

To migrate the Oracle BI WebLogic security configuration:

1. Examine your Oracle BI 11g WebLogic security configuration by accessing the Oracle BI 11g WebLogic Console to examine the current security configuration for security providers.
2. Manually configure the same security configuration in Oracle BI 12c WebLogic Console.

### 3.2.2 Migrating Oracle Enterprise Manager Fusion Middleware Control Security Configuration

Most of the security configuration related to application roles, security grants, and application policies are migrated to the Oracle Enterprise Manager Fusion Middleware Control 12c during the migration process. You must examine and manually apply any special Security Provider configuration in the Fusion Middleware Control 12c.

To migrate the Fusion Middleware Control 12c security configuration:

1. Examine the Security Provider configuration in the Fusion Middleware Control 11g.
2. Validate the Fusion Middleware Control 12c security setup by searching application policies and appropriate users.
3. Apply any special Security Provider configuration in the Fusion Middleware Control 12c.
4. Ensure that the user, group, and application roles appear correctly in the 12c system.

### 3.2.3 Migrating the Oracle Enterprise Manager Fusion Middleware Control Managed Business Intelligence Configurations

The Fusion Middleware Control is used to manage some of the important configurations for Oracle BI. You must manually examine the configuration of the General, Presentation, Performance, and Mail sections of the Fusion Middleware Control 11g and apply the same settings to the 12c system.

To migrate the Fusion Middleware Control managed BI configurations:

1. In the Fusion Middleware Control 11g, navigate to the **Business Intelligence Configuration** link and examine the Configuration tab.
2. Apply the same configuration settings in the **Business Intelligence Configuration** tab of the Fusion Middleware Control 12c.

Ensure that the configuration settings of the General, Presentation, Performance, and Mail sections are applied correctly to the Fusion Middleware Control 12c.

### 3.2.4 Migrating the Enterprise Manager Fusion Middleware Control Managed Business Intelligence Log Configuration

The Enterprise Manager Fusion Middleware Control is used to manage the log configuration for the Oracle BI components. You must manually examine the log configuration settings in the 11g system and apply the same settings to your 12c system.

To migrate the Fusion Middleware Control managed BI log configuration:

1. In the Fusion Middleware Control 11g, navigate to the **Business Intelligence** link and examine the settings in the Diagnostics tab.
2. Note the configuration settings and apply the BI component log configuration and component log levels in the Fusion Middleware Control 12c.

### 3.2.5 Migrating Oracle BI Server Configuration

Various files for the BI Server contain configuration information: `odbc.ini` and `tnsnames.ora`. The `odbc.ini` file contains non-Oracle data source (DSN) connection information. The `tnsnames.ora` file contains network service names mapped to connect descriptors for the local naming method, or net service names mapped to listener protocol addresses. You must examine these 11g files and manually copy the configuration information to the respective 12c files.

To migrate the BI Server configuration details:

1. View the BI Server information in the 11g `odbc.ini` file present at the following location:

On UNIX operating system:

```
11g_DOMAIN_HOME/config/fmwconfig/bienv/core
```

On Windows operating system:

```
11g_DOMAIN_HOME\config\fmwconfig\bienv\core
```

2. Copy the BI Server configuration from the 11g `odbc.ini` file to the 12c file.
3. Copy the contents from the 11g `tnsnames.ora` file present at the following location to the 12c file and make the 12c-related changes:

On UNIX operating system:

```
11g_DOMAIN_HOME/config/fmwconfig/bienv/core
```

On Windows operating system:

```
11g_DOMAIN_HOME\config\fmwconfig\bienv\core
```

### 3.2.6 Migrating Oracle BI Presentation Server Configuration

The Oracle BI Presentation Services process hosts most of the business logic of the Web server and provides the framework and interface for the presentation of business intelligence data to web clients. The `userpref_currencies.xml` file defines the currency options that are displayed in the **Currency** box of the **Preferences** tab of the **My Account** dialog. The `bridgeconfig.properties` file contains the Presentation Services Plug-in information. You must examine these 11g files and manually copy the configuration information to the respective 12c files.

To migrate the Presentation Server configuration:

1. View the configuration information in the `userpref_currencies.xml` file present at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/fmwconfig/biconfig/OBIPS/
```

On Windows operating system:

```
DOMAIN_HOME\config\fmwconfig\biconfig\OBIPS\
```

2. Copy the appropriate configuration information from the 11g `userpref_currencies.xml` file to the 12c file.
3. View the configuration information in the `bridgeconfig.properties` file present at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/fmwconfig/biinstances/coreapplication
```

On Windows operating system:

```
DOMAIN_HOME\config\fmwconfig\biinstances\coreapplication\
```

4. Copy the appropriate configuration information from the 11g `bridgeconfig.properties` file to the 12c file.

### 3.3 Configuring the Database to Use DataDirect Drivers

You must configure the database to use the appropriate DataDirect drivers. If you are using a database that is already configured to use the DataDirect drivers, modify the database configuration's `odbc.ini` file to use the correct DataDirect drivers.

To configure the database to use the DataDirect drivers:

1. Open the `odbc.ini` file located at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/fmwconfig/bienv/core/odbc.ini
```

On Windows operating system:

```
DOMAIN_HOME\config\fmwconfig\bienv\core\odbc.ini
```

Replace the value of `DOMAIN_HOME` with the actual path to the 12c Domain home you created when you installed the 12c software.

2. Update the ODBC entry to use the DataDirect drivers, as shown in the following example:

```
[DSN name in RPD]
Driver=MW_HOME/bi/common/ODBC/Merant/7.1.4/lib/<7.1.4.so>
Description=DataDirect 7.1.4 Sybase Wire Protocol
LogonID=DB username
Password=DB password
NetworkAddress=DB hostname, DB port
Database=DB name
```

Where, RPD means rapidfile database. RPD is a binary file used by the BI Server to retrieve data from a source database.

3. Update all existing data source names (DSNs) that are configured with the 11g DataDirect version. For example, the data source name for SYBASE should point to DataDirect 7.1.4 as shown in the following example:

```
[ODBC Data Sources]
AnalyticsWeb = Oracle BI Server
Cluster = Oracle BI Server
SSL_Sample = Oracle BI Server
DSN name in RPD = DataDirect 7.1.4
```

4. Save and close the `odbc.ini` file.

## 3.4 Configuring Usage Tracking

The Oracle BI Server supports the collection of usage tracking data. When usage tracking is enabled, the BI Server collects usage tracking data for each query. The statistics are then written to a usage tracking log file or are inserted directly in to a database table. After you complete migrating and configuring the 12c system, you must enable usage tracking in the `NQSConfig.INI` file.

To configure usage tracking:

1. Open the repository in online mode.
2. Import the `S_NQ_ACCT` and the `S_NQ_DB_ACCT` table from the RCU schema.
3. In the `NQSConfig.INI` file, set `USAGE_TRACKING=YES` and update the `PHYSICAL_TABLE_NAME` and the `CONNECTION_POOL`.
4. Import the following tables to track query statistics related to the initialization block execution and the summary advisor feature:
  - `S_NQ_INITBLOCK`
  - `S_NQ_SUMMARY_ADVISOR`
5. To enable initialization block logging, update the `INIT_BLOCK_TABLE_NAME` and `INIT_BLOCK_CONNECTION_POOL` in the `NQSConfig.INI` file.
6. To enable summary advisor logging, set `SUMMARY_STATISTICS_LOGGING=YES` and update the `SUMMARY_ADVISOR_TABLE_NAME` in the `NQSConfig.INI` file.
7. Restart the BI Server.

For more information about usage tracking, see *Managing Usage Tracking in Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

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**Note:** Ensure that the queries of the BI Server are being tracked in the table by view data.

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## 3.5 Configuring the SQL Server

After configuring the 12c system, you must configure the SQL Server settings in the `odbc.ini` file.

To configure the SQL Server:

1. Open the `odbc.ini` file located at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/fmwconfig/bienv/core/odbc.ini
```

On Windows operating system:

```
DOMAIN_HOME\config\fmwconfig\bienv\core\odbc.ini
```

Replace the value of `DOMAIN_HOME` with the actual path to the 12c Domain home you created when you installed the 12c software.

2. Update the ODBC entry to use the DataDirect drivers, as shown in the following example:

```
[DSN name in RPD]
Driver=$ORACLE_HOME/bi/common/ODBC/Merant/7.1.4/lib/<7.1.4.so>
Description=DataDirect 7.1.4 SQL Server Wire Protocol
Address=DB HOST\SQLSERVER NAME
Port=PORT NUMBER
AlternateServers=
AnsiNPW=Yes
ConnectionRetryCount=0
ConnectionRetryDelay=3
Database=DB name
LoadBalancing=0
LogonID=DB username
Password=DB password
QuotedId=Yes
SnapshotSerializable=0
ReportCodePageConversionErrors=
```

3. Update all existing data source names (DSNs) that are configured with the 11g DataDirect version. For example, the data source name for SQL Server should point to DataDirect 7.1.4 as shown in the following example:

```
[ODBC Data Sources]
AnalyticsWeb = Oracle BI Server
Cluster = Oracle BI Server
SSL_Sample = Oracle BI Server
DSN name in RPD = DataDirect 7.1.4
```

4. Save and close the `odbc.ini` file.

### 3.6 Adding Roles and Permissions

After migrating the data, you must add roles and permissions for BI Administrator, BI Author, and BI Consumer groups.

To add roles and permissions:

1. Sign in to the WebLogic Console.
2. Go to **Myrealm** under **Security Realms** and click **Users and Groups**.
3. Create the following groups:
  - On the **Groups** tab, create the BIAdministrators group.
  - On the **Membership** tab, create the BIAuthors and the BIConsumers groups.
4. Assign the BIAdministrators group to the Administrator or the WebLogic user.

### 3.7 Configuring MySQL for Oracle BI

You must configure the MySQL database to use the DataDirect driver. If you are using a database that is already configured to use the DataDirect drivers, modify the database configuration's `odbc.ini` file to use the correct DataDirect drivers.

To configure MySQL for Oracle BI:

1. Open the `odbc.ini` file located at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/fmwconfig/bienv/core/odbc.ini
```

On Windows operating system:

```
DOMAIN_HOME\config\fmwconfig\bienv\core\odbc.ini
```

Replace the value of `DOMAIN_HOME` with the actual path to the 12c Domain home you created when you installed the 12c software.

2. Update the ODBC entry to use the DataDirect drivers, as shown in the following example:

```
[DSN name in RPD]
Driver=ORACLE_HOME/bi/common/ODBC/Merant/7.1.4/lib/<7.1.4.so>
Description=DataDirect 7.1.4 MySQL Wire Protocol
ApplicationUsingThreads=1
ConnectionRetryCount=0
ConnectionRetryDelay=3
Database=DB name
DefaultLongDataBuffLen=1024
EnableDescribeParam=0
InteractiveClient=0
LoadBalancing=0
LogonID=DB username
Password=DB password
PortNumber=DB PORT
ReportCodepageConversionErrors=0
TreatBinaryAsChar=0
```

3. Update all existing data source names (DSNs) that are configured with the 11g DataDirect version. For example, the data source name for MySQL should point to DataDirect 7.1.4 as shown in the following example:

```
[ODBC Data Sources]
AnalyticsWeb = Oracle BI Server
Cluster = Oracle BI Server
SSL_Sample = Oracle BI Server
DSN name in RPD = DataDirect 7.1.4
```

4. Save and close the `odbc.ini` file.

## 3.8 Checking the BI JavaHost Configuration

Make sure that the XMLP and the BI JavaHost settings match with the settings specified for the configuration of the 11g system.

To check the XMLP and the BI JavaHost configuration:

1. View the `config.xml` file on the 11g and the 12c systems.

The file is present at the following location on the 11g system:

On UNIX operating system:

```
DOMAIN_HOME/config/OracleBIJavaHostComponent/
coreapplication_obijh1/config .xml
```

On Windows operating system:

```
DOMAIN_HOME\config\OracleBIJavaHostComponent
\coreapplication_obijh1\config .xml
```

The file is present at the following location on the 12c system:

On UNIX operating system:

```
DOMAIN_HOME/config/fmwconfig/biconfig/OBIJH/config.xml
```

On Windows operating system:

```
DOMAIN_HOME\config\fmwconfig\biconfig\OBIJH\config.xml
```

2. Verify that the XMLP configuration on both the 11g and the 12c systems is as shown in the following code block:

```
<XMLP>
<InputStreamLimitInKB>8192</InputStreamLimitInKB>
<ReadRequestBeforeProcessing>true</ReadRequestBeforeProcessing>
</XMLP>
```

3. Verify that the `OBIJH_ARGS="-server -Xmx1024M -Xrs"` parameter in the 12c `setOBIJHEnv.sh` file matches with the `"start-args" value="-server -Xmx1024M -Xrs` parameter in the 11g `opmn.xml` file.

The `opmn.xml` file is located at the following location on the 11g system:

```
DOMAIN_HOME/config/OPMN/opmn/opmn.xml

<process-type id="OracleBIJavaHostComponent" module-id="CUSTOM">
<module-data>
<category id="start-parameters">
```

```
<data id="start-executable" value="$ORACLE_HOME/jdk/bin/java"/>
<data id="start-args" value="-server -Xmx1024M -Xrs
.
.
.
```

The setOBIJHEnv.sh file is located at the following location on the 12c system:

On UNIX operating system:

```
ORACLE_HOME/bi/modules/oracle.bi.cam.obijh/setOBIJHEnv.sh
```

On Windows operating system:

```
ORACLE_HOME\bi\modules\oracle.bi.cam.obijh\setOBIJHEnv.sh
```

### 3.9 Enabling Clusters

After migrating the data, you must manually enable the ClusterEnabled parameter in the ClusterConfig.xml file to turn on the cluster instances on the 12c system.

To enable the clusters:

1. Open the ClusterConfig.xml file for editing, located at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/fmwconfig/biconfig/core
```

On Windows operating system:

```
DOMAIN_HOME\config\fmwconfig\biconfig\core
```

2. Locate the following:

```
<ClusterEnabled>>false</ClusterEnabled>
```

Change it to the following:

```
<ClusterEnabled>>true</ClusterEnabled>
```

3. Save and close the file.

### 3.10 Enabling Oracle Hardware Acceleration and Compatibility Mode

Hardware acceleration affects the auto completion of features such as dashboard prompts, trellis charts and microcharts, Summary Advisor functionality, and aggregate persistence for the TimesTen In-Memory database. Therefore, you must manually enable the bi:hw-acceleration flag in the 12c bi-config.xml file post migration. You must also enable the bi:compat-mode-11g flag, so that the state of the 11g system is preserved at run time.

To enable the bi:hw-acceleration flag:

1. Locate the bi-config.xml, available at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/fmwconfig/biconfig/core/bi-config.xml
```

On Windows operating system:

`DOMAIN_HOME\config\fmwconfig\biconfig\core\bi-config.xml`

Replace the value of `DOMAIN_HOME` with the path of the BI domain on the 12c system.

2. Locate the following:

```
<bi:hw-acceleration>>false</bi:hw-acceleration>
```

Replace it with the following:

```
<bi:hw-acceleration>>true</bi:hw-acceleration>
```

3. Locate the following:

```
<bi:compat-mode-11g>>false</bi:compat-mode-11g>
```

Replace it with the following:

```
<bi:compat-mode-11g>>true</bi:compat-mode-11g>
```

4. Save and close the file.

## 3.11 Setting Compatibility Framework for Oracle BI Server

The compatibility framework allows the BI Server to add new features or bug fixes in Oracle BI 12c (12.2.1.1 and later) that are not compatible with the Oracle BI 11g releases while providing a flexible framework that enables the BI Server to operate in a compatibility mode with the earlier major release. Individual features and bug fixes can be enabled or disabled independently using compatibility flags. Alternatively, you can set all the compatibility flags to the default values using a single `COMPATIBLE_RELEASE` flag for the Oracle BI system to be compatible with the earlier release, which is 11.1.1.9. Add the `COMPATIBLE_RELEASE` parameter to the `NQConfig.INI` file to ensure that the migrated 12c environment behaves as closely as possible to Oracle Business Intelligence 11g Release 1 (11.1.1.9) environment.

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**Note:** If the `COMPATIBLE_RELEASE` parameter is not set, then the system defaults to the behavior of the current release, such as 12.2.1.2.

---

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The framework does not distinguish individual bundle patches (only the first four digits of the version number are significant for determining compatibility).

When applying new features, enhancements, or bug fixes that are not inherently backward-compatible, ensure that you specify a compatibility flag using the guidelines described in this topic.

---

**Note:** The NQSSConfig.INI file does not contain the COMPATIBLE\_RELEASE parameter by default. The global bi:compat-mode-11g is the default flag and it applies to all Oracle BI EE components. When the bi:compat-mode-11g element in the bi-config.xml file is set to true, the BI Server compatibility framework behaves as if the COMPATIBLE\_RELEASE were set to 11.1.1.9 and it disables any features or bug fixes that would cause major compatibility issues during migration from 11g to 12c. However, if you explicitly edit the NQSSConfig.INI file to set the COMPATIBLE\_RELEASE parameter or any other compatibility flag, then the setting in the NQSSConfig.INI file takes precedence over the global bi:compat-mode-11g flag specified in the bi-config.xml file.

---

In addition to setting the general COMPATIBLE\_RELEASE parameter, you can set compatibility flags for specific features or bug fixes, which begin with the prefix "OBIS\_". Instructions to set these specific compatibility flags are provided by the support team to solve certain issues on a need basis. For example,

```
[ COMPATIBILITY ]
COMPATIBLE_RELEASE=11.1.1.9;
OBIS_ENABLE_DIMENSIONALITY=0;
```

Setting the COMPATIBLE\_RELEASE parameter or specific compatibility flags in the NQSSConfig.INI file applies the changes to the entire system. You can also set the COMPATIBLE\_RELEASE parameter or the specific feature flag as a session variable or an environment variable so that the compatibility mode is set to specific reports or dashboards. You can do this by adding a query prefix to an analysis request. The following is an example of a variable setting:

```
set variable COMPATIBLE_RELEASE='11.1.1.9':
```

## 3.12 Migrating the Fusion Middleware MapViewer Configuration

Oracle Fusion Middleware Mapviewer (MapViewer) is a programmable tool for rendering maps using spatial data managed by Oracle Spatial and Graph or Oracle Locator (also referred to as Locator). MapViewer provides tools that hide the complexity of spatial data queries and cartographic rendering, while providing customizable options for more advanced users. These tools can be deployed in a platform-independent manner and are designed to integrate with map-rendering applications. After migrating the data, you must manually modify the 12c MapViewer configuration file to contain the same contents as the 11g file except the Logging section.

To migrate the MapViewer configuration:

1. Go to the 12c Fusion Middleware MapViewer Administration Console.
2. Create a copy of the default 12c MapViewer configuration file.
3. Overwrite the contents in the copy of the 12c MapViewer configuration file with the content from the mapViewerConfig.xml file from the 11g MapViewer install.
4. Replace the logging section of the MapViewer configuration file copy with the settings from the default 12c MapViewer configuration file.
5. Update the logging settings log levels of the MapViewer configuration file as needed for the 12c.

6. Click **Save** on the 12c MapViewer Administration Console and then click **Restart**.

### 3.13 Unchecking "Required for Authentication" Option in DYNAMIC\_OLAP\_LOGIN Initialization Block

To avoid authentication issues post migration, you must uncheck the **Required for Authentication** option in the DYNAMIC\_OLAP\_LOGIN initialization block.

---

**Note:** Follow this procedure only if you are migrating from Oracle BI Release 11.1.1.7 to 12c.

---

To uncheck the **Required for authentication** option:

1. Open the repository in offline mode.
  - a. Change to the following directory on the 12c system:

On UNIX operating system:

```
DOMAIN_HOME/bitools/bin/
```

On Windows operating system:

```
DOMAIN_HOME\bitools\bin\
```

Replace the value of *DOMAIN\_HOME* with the actual Domain home on your 12c system.
  - b. Run the following command:

```
sh data-model-cmd.sh downloadrpd -u uname -p pwd -o downloaded.rpd -w rpd_password
```

Where,

    - o is the output RPD
    - w *rpd\_password* is the RPD password, say Admin123
  - c. Open the downloaded repository offline in the BI Administration Tool, which you installed with the client installer.
2. Complete the following steps:
  - a. From the **Manage** menu in the BI Administration Tool, select **Variables**.
  - b. In the Variable Manager dialog, from the **Action** menu, select **Session**, then **Initialization Blocks**.
  - c. In the Variable Initialization Block dialog, locate DYNAMIC\_OLAP\_LOGIN.
  - d. Open the DYNAMIC\_OLAP\_LOGIN properties, and uncheck the **Required for Authentication** checkbox.
  - e. Click **Apply** and save the repository.
3. Open the repository in online mode using the uploadrpd command.

```
DOMAIN_HOME/bitools/bin/data-model-cmd.sh uploadrpd -u uname -p pwd -i downloaded.rpd -w rpd_password
```

## 3.14 Copying Configuration Files

You must manually copy the following configuration files after the migration: writebacktemplate.xml, userpref\_currencies.xml, and bicustom.ear.

Copy the following configuration files to the new BI instance:

1. Change to the following directory:

(UNIX) *DOMAIN\_HOME*/bi/bifoundation/web/msgdb/messages

(Windows) *DOMAIN\_HOME*\bi\bifoundation\web\msgdb\messages

2. Copy the writebacktemplate.xml file to the 12c instance.

3. Change to the following directory:

(UNIX) *APPLICATION\_HOME*/bi/bidata/components/OBIPS/

(Windows) *APPLICATION\_HOME*\bi\bidata\components\OBIPS\

4. Copy the bicustom.ear file to the 12c instance.

5. Change to the following directory:

(UNIX) *DOMAIN\_HOME*/config/fmwconfig/biconfig/OBIPS

(Windows) *DOMAIN\_HOME*\config\fmwconfig\biconfig\OBIPS

6. Copy the userpref\_currencies.xml file to the 12c instance.

7. Open the userpref\_currencies.xml file for editing and add the following lines:

```
<Config>
<UserCurrencyPreferences currencyTagMappingType="static">
  <UserCurrencyPreference sessionVarValue="gc1" displayText="Global Currency 1"
currencyTag="int:USD" />
  <UserCurrencyPreference sessionVarValue="gc2" displayText="Global Currency 2"
currencyTag="int:euro-1" />
  <UserCurrencyPreference sessionVarValue="gc3" displayText="Global Currency 3"
currencyTag="loc:ja-JP" />
  <UserCurrencyPreference sessionVarValue="orgc" displayText="Org Currency"
currencyTag="loc:en-BZ" />
  <UserCurrencyPreference sessionVarValue="lc1" displayTag="int:DEM"
currencyTag="int:DEM" />
</UserCurrencyPreferences>
</Config>
```

Save and close the file.

8. Change to the following directory:

(UNIX) *DOMAIN\_HOME*/config/fmwconfig/biconfig/OBIPS

(Windows) *DOMAIN\_HOME*\config\fmwconfig\biconfig\OBIPS

9. Open the instanceconfig.xml file for editing and add the following line:

```
<UserprefCurrenciesConfigFile>DOMAIN_HOME/config/fmwconfig/biconfig/OBIPS/
userpref_currencies.xml</UserprefCurrenciesConfigFile>
```

Save and close the file.

**10.** Restart the services.

---

## Post Migration Steps for Oracle BI Publisher

After completing the data migration, you must migrate the BI Publisher configuration, scheduler jobs, and job history. You must also remove the BISystemUser policy from the JMSResource security configuration.

### Migrating Scheduler Jobs and Job History

After migrating the 11g configuration to a new 12c environment, you must migrate the scheduler jobs and the job history data from the 11g BIPLATFORM schema to a 12c BIPLATFORM schema. You can connect to 12c BIPLATFORM schema through SQL\*PLUS or any other tool and execute the script.

### Removing the BISystemUser Policy from the JMSResource Security Configuration

BISystemUser is not supported in the 12c environment. When the users and policies are migrated from an 11g instance, the JMSResource policy blocks the scheduled jobs. Therefore, you must remove this policy from the JMSResource security configuration. You can manually remove the BISystemUser policy from WebLogic console. Alternatively, you can execute a WLST (Python) script to accomplish this task.

## 4.1 Migrating Scheduler Jobs and Job History

After migrating the 11g configuration to a new 12c environment, you must migrate the scheduler jobs and the job history data from the 11g BIPLATFORM schema to a 12c BIPLATFORM schema. You can connect to 12c BIPLATFORM schema through SQL\*PLUS or any other tool and execute the script.

The `bip_12c_scheduler_migration.sql` script requires the user ID, the password, and the connection string for 11g BIPLATFORM schema. The script creates a database link called `BIP11g_DBLINK` and imports all schedule objects using that link. You must have Database Administrator privileges to run the script.

---

**Note:** Oracle does not support the migration of scheduler data from DB2 and SQL Server databases at this point. Migration of scheduler data is only supported by Oracle database.

---

1. The `bip_12c_scheduler_migration.sql` script is available in a zip file format called `BIP12CUupgrade.zip` which is located in the following directory:

On UNIX operating system:

```
ORACLE_HOME/bi/modules/oracle.bi.publisher
```

On Windows operating system:

```
ORACLE_HOME\bi\modules\oracle.bi.publisher
```

Replace *ORACLE\_HOME* with the actual path to the 12c Oracle home you created when you installed the 12c software.

2. To use the `bip_12c_scheduler_migration.sql` script, decompress the `BIP12CUpgrade.zip` file by entering the following command:

```
unzip BIP12CUpgrade.zip
```

3. Change directory to `ORACLE_HOME/bi/modules/oracle.bi.publisher/BIP12CUpgrade`.

4. Run the `bip_12c_scheduler_migration.sql` script by entering the following command:

```
mysql -u <username> -p bip_12c_scheduler_migration.sql
```

When prompted, enter your password.

5. Enter the command-line parameters `11g_RCU_SCHEMA`, `11G_PASSWORD`, `11G_CONNECTION_STRING`, and `12C_BIPLATFORM_SCHEMA`.

Usage:

```
SQL > @bip_12c_scheduler_migrationg.sql 11g_userid  
11g_password 11g_connection_string
```

```
SQL> @bip_12c_scheduler_migration.sql 11g_RCU_USERNAME  
11g_PASSSSWORD 11G_hostname.us.oracle.com:1521/  
orcl.us.oracle.com 12C_BIPLATFROM_SCHEMA_NAME  
System output:  
old 1: &&1  
new 1: adc00ccq_biplatform  
old 2: &&2  
new 2: welcome1  
old 3: '&&3'  
new 3: 'bipdev4.us.oracle.com:1521/orallg.us.oracle.com'  
old 4: '&&4'  
new 4: 12C_BIPLATFROM_SCHEMA_NAME  
Database link created.  
9979 rows created.  
9769 rows created.  
9739 rows created.  
4159 rows created.  
6 rows created.  
6 rows created.  
6 rows created.  
Commit complete.  
Database link dropped.  
SQL>
```

After the import operation completes, the database link is deleted.

## 4.2 Removing the BISystemUser Policy from the JMSResource Security Configuration

BISystemUser is not supported in the 12c environment. When the users and policies are migrated from an 11g instance, the JMSResource policy blocks the scheduled jobs. Therefore, you must remove this policy from the JMSResource security configuration. You can manually remove the BISystemUser policy from WebLogic console. Alternatively, you can execute a WLST (Python) script to accomplish this task.

### Manually Removing the BISystemUser Policy

This topic describes the procedure to remove the BISystemUser policy from the WebLogic Console.

### Removing the BISystemUser Policy using a WLST Script

This topic describes the procedure to remove the BISystemUser policy using a WLST script.

### 4.2.1 Manually Removing the BISystemUser Policy

This topic describes the procedure to remove the BISystemUser policy from the WebLogic Console.

To manually remove the BISystemUser policy:

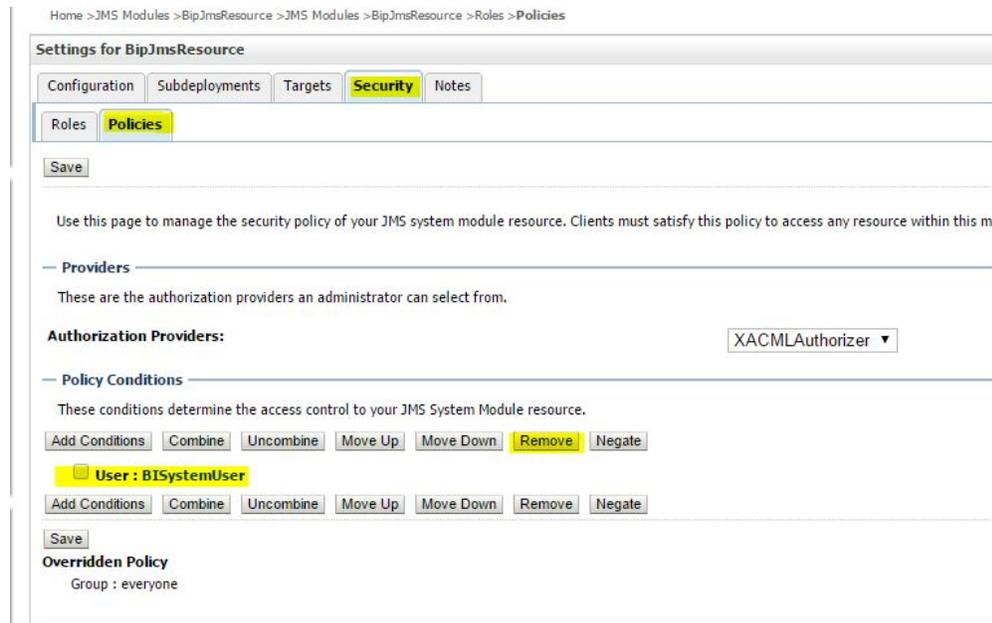
1. Sign in to the WebLogic Console.
2. Under **Services**, click **Messaging** and then **JMSModules**, and select **BipJmsResource**.

**Figure 4-1 JMS Modules**



3. Under the Security tab, click **Policies**.
4. Under Policy Conditions, select the **User: BISystemUser** checkbox and click **Remove**.

**Figure 4-2 Settings for BipJmsResource**



5. Restart the BI Publisher and check the scheduled jobs.

## 4.2.2 Removing the BISystemUser Policy using a WLST Script

This topic describes the procedure to remove the BISystemUser policy using a WLST script.

To remove the BISystemUser policy:

1. Copy the BIPRemoveJMSResourcePolicy.py script from the following location:

On UNIX operating system:

```
ORACLE_HOME/bi/modules/oracle.bi.publisher
```

On Windows operating system:

```
ORACLE_HOME\bi\modules\oracle.bi.publisher
```

Replace the *ORACLE\_HOME* with the actual path to the 12c Oracle home you created when you installed the 12c software.

2. Go to *ORACLE\_HOME*/server/bin directory.

3. Set the WLS environment. Enter

```
source ./setWLSEnv.sh
```

4. Run the script to remove JMS Resource policy. Enter

```
java weblogic.WLST BIPRemoveJMSResourcePolicy.py <WL Admin
Username> <WL Admin Password> <Admin Server URL: t3://
localhost:port>
```

5. Sign in to the WebLogic Console and verify whether the policy is removed.

---

## Post Migration Steps for Essbase

After completing data migration, manually migrate the configuration settings from the 11g system in to the 12c system and complete the post migration tasks.

See Understanding Essbase Deployed in BI 12.2.1 in [Oracle® Essbase Database Administrator's Guide](#) for the procedure to migrate the following configuration settings from the 11g system in to the 12c system and to complete the post migration tasks:

- Thread Pool Configuration for Essbase
- ESSLANG Configuration Setting for Essbase Server
- Configuring Modes, Ports, and Cipher Suites
- Configuring wallets for root, Essbase Server, and Essbase clients
- Importing certificates in to the key store



---

## Known Differences: Oracle Business Intelligence 12c

This appendix lists the differences in appearance and functionality of the Oracle BI 12c system after migration.

Oracle Business Intelligence Release 12c includes many new and enhanced features. To learn about the features and enhancements, see the "What's New" sections described in those guides.

### [SCM: DSO and AR Balance Trend Are Displayed Differently in 12c](#)

The DSO and AR Balance Trend graph in the Supply Chain and Order Management module can appear different in 12c even if the underlying data used to generate this graph is the same. The display difference occurs due to the manner in which the BI Server handles the order of the time period data that is fetched from the database.

### [View Display Error: Invalid Column Encountered in Orders Outstanding Report](#)

You might see a View Display Error message that states that an invalid column was encountered when loading the Orders Outstanding Report in 12c. This error is displayed because the ID of the column that causes the error exists in the XML definition of the report, but not in the subject area table. You must manually edit the XML definition and remove the invalid column.

### [Visual Cues in BI Composer Appear Same in Regular and Accessibility Mode](#)

Visual cues, such as icons or check boxes, displayed on a BI Composer wizard page in accessibility mode are the same as displayed in regular mode in Oracle BI EE 12c. Even though the list of text-based wizard page links are not displayed on a wizard page in accessibility mode, screen reader applications such as JAWS can read them.

### [Enabling Embedded Content in Dashboards](#)

For security reasons, you can no longer embed content from external domains in dashboards. To embed external content in dashboards, you must edit the instanceconfig.xml file.

### [Trellis Views Display Without Grid Lines in 12c](#)

A trellis is a view type that presents multidimensional data laid out in a set of cells in a grid, with each cell displaying a subset of data shown as numbers or as graphs. The trellis view allows users to display multiple views all at once for quick comparison, and to display data that reveals trends. In Oracle BI 11g, the trellis view contained grid lines, by default. With Oracle BI 12c, you can select horizontal or vertical lines, or you can select the default option.

### [Domain Home and bipublisher Folder Path Different in 12c](#)

The Domain Home and bipublisher file paths are different in 12c as compared to the 11g system.

### [Oracle BI EE Content Changes for 12c](#)

This topic describes the difference in appearance for analyses and views after you migrate to 12c.

### [Changes to Catalog Structure](#)

In releases prior to Release 11.1.1.9.0, when you first sign in to Oracle Business Intelligence, folders are automatically created for you to hold content that you eventually create. Examples of these folders are the `_portal` folder to hold personal dashboards and the `_delivers` folder to hold alerts. Starting with Release 11.1.1.9.0, these folders are not automatically created when you sign in for the first time. Instead, the folders are created when they are needed.

## **A.1 SCM: DSO and AR Balance Trend Are Displayed Differently in 12c**

The DSO and AR Balance Trend graph in the Supply Chain and Order Management module can appear different in 12c even if the underlying data used to generate this graph is the same. The display difference occurs due to the manner in which the BI Server handles the order of the time period data that is fetched from the database.

## **A.2 View Display Error: Invalid Column Encountered in Orders Outstanding Report**

You might see a View Display Error message that states that an invalid column was encountered when loading the Orders Outstanding Report in 12c. This error is displayed because the ID of the column that causes the error exists in the XML definition of the report, but not in the subject area table. You must manually edit the XML definition and remove the invalid column.

## **A.3 Visual Cues in BI Composer Appear Same in Regular and Accessibility Mode**

Visual cues, such as icons or check boxes, displayed on a BI Composer wizard page in accessibility mode are the same as displayed in regular mode in Oracle BI EE 12c. Even though the list of text-based wizard page links are not displayed on a wizard page in accessibility mode, screen reader applications such as JAWS can read them.

## **A.4 Enabling Embedded Content in Dashboards**

For security reasons, you can no longer embed content from external domains in dashboards. To embed external content in dashboards, you must edit the `instanceconfig.xml` file.

For a complete procedure, see *Embedding External Content in Dashboards* in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

## **A.5 Trellis Views Display Without Grid Lines in 12c**

A trellis is a view type that presents multidimensional data laid out in a set of cells in a grid, with each cell displaying a subset of data shown as numbers or as graphs. The trellis view allows users to display multiple views all at once for quick comparison, and to display data that reveals trends. In Oracle BI 11g, the trellis view contained grid

lines, by default. With Oracle BI 12c, you can select horizontal or vertical lines, or you can select the default option.

To specify the grid options:

1. Open the trellis view for editing.
2. Click the properties dialog.
3. Based on your choice, select:
  - Horizontal
  - Vertical
  - Default option

## A.6 Domain Home and bipublisher Folder Path Different in 12c

The Domain Home and bipublisher file paths are different in 12c as compared to the 11g system.

For Domain Home:

In 11g: *mwhome*/user\_projects/domains/bifoundation\_domain/

In 12c: *Oracle\_home*/user\_projects/domains/bi/

For bipublisher folder:

In 11g: *DOMAIN\_HOME*/config/bipublisher/

In 12c: *DOMAIN\_HOME*/bidata/components/bipublisher/

## A.7 Oracle BI EE Content Changes for 12c

This topic describes the difference in appearance for analyses and views after you migrate to 12c.

The following describes changes to analyses and views between 11g and 12c:

Change	Description
The Gauge view shows a data column	In 11g, the gauge view did not display unit data. In 12c, the gauge view displays the value of the gauge chart in the form of a data column below the chart.
Prompts are left-aligned in PDF files	In 11g, when you export an analysis to PDF, prompts are center-aligned. In 12c, when you export the same analysis to PDF, prompts are left-aligned.
The bottom border of the title view does not span the page width	In 11g, when you export an analysis to a PDF file, the bottom border of the title view spans the width of the page. In 12c, when you export the same analysis to PDF, the bottom border spans only the width of the title view.

## A.8 Changes to Catalog Structure

In releases prior to Release 11.1.1.9.0, when you first sign in to Oracle Business Intelligence, folders are automatically created for you to hold content that you eventually create. Examples of these folders are the *\_portal* folder to hold personal dashboards and the *\_delivers* folder to hold alerts. Starting with Release 11.1.1.9.0,

these folders are not automatically created when you sign in for the first time. Instead, the folders are created when they are needed.

The following list shows the structure of the Oracle BI Presentation Catalog for a user before Release 11.1.1.9.0:

```
/users/<user>
/users/<user>/_delivers
  /users/<user>/_delivers/_deliveries
/users/<user>/_filters
/users/<user>/_portal
/users/<user>/_selections
/users/<user>/_savedcolumns
/users/<user>/_subscriptions
/users/<user>/_thumbnails
/users/<user>/_prefs
  /users/<user>/_prefs/deliveryprofiles
/users/<user>/_prefs/devices
```

The following list shows the structure of the Oracle BI Presentation Catalog for a user in Release 11.1.1.9.0 and later. Objects previously stored in the "\_prefs" and "\_subscriptions" folders are moved to the "\_internals" folder. The "\_deliveries" folder is merged with its parent folder "\_delivers".

```
/users/<user>/_delivers
/users/<user>/_portal
/users/<user>/_filters
/users/<user>/_selections
/users/<user>/_savedcolumns
/users/<user>/_thumbnails
/users/<user>/_internals
  /users/<user>/_internals/subscriptions
    /users/<user>/_internals/subscriptions.atr
  /users/<user>/_internals/deliveryprofile_profile1
    /users/<user>/_internals/deliveryprofile_profile1.atr
  /users/<user>/_internals/device_device1
    /users/<user>/_internals/device_device1.atr
  /users/<user>/_internals/_favorites
    /users/<user>/_internals/_favorites.atr
  /users/<user>/_internals/cacheduserinfo
    /users/<user>/_internals/cacheduserinfo.atr
  /users/<user>/_internals/volatileuserdata
    /users/<user>/_internals/volatileuserdata.atr
  /users/<user>/_internals/defaultdevices
    /users/<user>/_internals/defaultdevices.atr
  /users/<user>/_internals/defaultdeliveryprofile
    /users/<user>/_internals/defaultdeliveryprofile.atr
  /users/<user>/_internals/userprefsxmlstore
    /users/<user>/_internals/userprefsxmlstore.atr
```

During upgrade, you can optionally remove empty folders within each existing user's home directory or relocate existing folders to their new locations. This change has no effect on folders for existing users.

To remove empty folders within each existing user's home directory or relocate existing folders to their new locations, specify the following elements within the <Catalog></Catalog> nodes in the instanceconfig.xml file:

- To remove all empty folders: <CleanEmptyFolderInHome>true</CleanEmptyFolderInHome>

- To relocate existing folders to their new locations: `<CoalesceHomeDirectoryFolders>true</CoalesceHomeDirectoryFolders>`

---

---

**Note:** Revert the changes after completing the task.

---

---



---

## Exception Handling

This appendix provides procedures to handle exceptions during or after migrating from Oracle BI 11g to 12c.

### Configuration Failure with TRANSFORMBAREXCEPTION

The 12c configuration might fail with a TRANSFORMBAREXCEPTION error, if any objects in the catalog are older than Release 11.1.1.7. You can confirm the need to update the catalog items by viewing the metrics in Fusion Middleware Control. In the Catalog folder, find a metric called Reads Needing Upgrade with the description "The number of objects read that required upgrading." If the number is large, then you can resolve this issue by updating objects in the catalog using the Administration page in Presentation Services.

### Multiple Y-Axis Highcharts Graph is not Displayed After Migration

You may not be able to render the Multiple Y-axis Highcharts graph in 12c after migration because the required JavaScript (.js) files are not present in the 12c instance.

### Setting the Evaluate Parameter in the NQSCONFIG.INI File

The EVALUATE function in your analyses is not enabled by default in Logical SQL queries because it exposes the database to SQL injection attacks. If you encounter any error while generating any views after migrating to Oracle BI 12c, then you must set the value of the EVALUATE\_SUPPORT\_LEVEL parameter appropriately in the NQSCONFIG.INI file.

### Error: java.lang.NoClassDefFoundError: Could not initialize class sun.awt.X11GraphicsEnvironment

You can encounter the "java.lang.NoClassDefFoundError: Could not initialize class sun.awt.X11GraphicsEnvironment" error if you have set the value of the DISPLAY variable manually or the system has manipulated it automatically. In case you change the value of the DISPLAY variable to a Windows-client system IP, to run the 64-bit Linux installer through a Windows client, reset it to its original value after the installation is complete. If you generate an analysis that contains graphs without resetting the value of the DISPLAY variable, you can get this error.

### Verifying File Data Sources in Oracle BI Publisher

While generating reports, if you encounter an error stating oracle.xdo.XDOException: File does not exist or is not readable: . . ., you might not have copied the supporting XML files to the 12c system. To solve this issue, manually validate that the path for each data source points to the appropriate directory on the 12c system.

### [\[nQSError: 46168\] Operation RawFile::checkSoftLimit failed](#)

You can get the [nQSError: 43119] Query Failed: [nQSError: 46168] Operation RawFile::checkSoftLimit failed, it'll exceed the current limitation. 1073758528 error if the BI query requires more temporary space to complete the request than the BI Administrator has allocated.

### [Act As Configuration Failing in 12c](#)

The Act As functionality allows you to act for another user in Oracle BI EE. This functionality is useful, for example, when you need to work on another user's dashboard or content, or when IT support staff wants to troubleshoot another user's account. If you have migrated from BI 11g to 12c, and are unable to configure Act As functionality in 12c, follow the procedure in this topic to fix the issue.

### [Custom Link and SampleApp Oracle Technology Network Page Not Visible Post Migration](#)

Custom Link and SampleApp Oracle Technology Network page may not be visible in the 12c system directly after the migration. This happens because the Custom Links xml settings is not copied from BI 11g to 12c during the migration. You must manually copy the Custom Links xml settings from BI 11g to 12c.

### [Migrating 11g WebLogic Users to 12c](#)

After migrating from 11g to 12c, you must manually migrate the WebLogic users in to your 12c domain. You can do this by exporting the security data from a security realm and importing it in to another security realm. Security data includes authentication, authorization, credential map, and role data.

## **B.1 Configuration Failure with TRANSFORMBAREXCEPTION**

The 12c configuration might fail with a TRANSFORMBAREXCEPTION error, if any objects in the catalog are older than Release 11.1.1.7. You can confirm the need to update the catalog items by viewing the metrics in Fusion Middleware Control. In the Catalog folder, find a metric called `Reads Needing Upgrade` with the description "The number of objects read that required upgrading." If the number is large, then you can resolve this issue by updating objects in the catalog using the Administration page in Presentation Services.

To update the catalog:

1. Sign in to Oracle BI EE with administration credentials.
2. In the global header, click **Administration**.
3. Click the **Scan and Update Catalog Objects That Require Updates** link.
4. Click **Update Catalog Objects** to begin the update process.

Click the other links on the page to see which objects were updated and which were not. You can view the log files for details on objects that were not updated.

Restart Oracle BI Presentation Services using Enterprise Manager Fusion Middleware Control.

### Regenerating User GUIDs

This task requires that you manually edit the configuration files to instruct Oracle BI Server and Oracle BI Presentation Server to regenerate the GUIDs on restart. Once completed, you edit these files again to remove the modification.

### Updating Oracle Business Intelligence Catalogs

When migrating from 11g, you must manually update your Oracle BI Presentation Services Catalog.

## B.1.1 Regenerating User GUIDs

This task requires that you manually edit the configuration files to instruct Oracle BI Server and Oracle BI Presentation Server to regenerate the GUIDs on restart. Once completed, you edit these files again to remove the modification.

For information about where to locate Oracle Business Intelligence configuration files, see Configuration Files in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

To regenerate user GUIDs:

1. Update the FMW\_UPDATE\_ROLE\_AND\_USER\_REF\_GUIDS parameter in the 11g NQSConfig.INI file.

- a. Open the 11g NQSConfig.INI file for editing. The NQSConfig.INI file is located at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/OracleBIServerComponent/  
coreapplication_obisn
```

On Windows operating system:

```
DOMAIN_HOME\config\OracleBIServerComponent  
\coreapplication_obisn
```

- b. Locate the FMW\_UPDATE\_ROLE\_AND\_USER\_REF\_GUIDS parameter and set it to YES, as follows

```
FMW_UPDATE_ROLE_AND_USER_REF_GUIDS = YES;
```

- c. Save and close the file.

2. Update the Catalog element in the 11g instanceconfig.xml file. The instanceconfig.xml file is located at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/OracleBIPresentationServicesComponent/  
coreapplication_obipsn
```

On Windows operating system:

```
DOMAIN_HOME\config\OracleBIPresentationServicesComponent  
\coreapplication_obipsn
```

- a. Open instanceconfig.xml for editing:

- b. Locate the Catalog element and update it as follows:

```
<Catalog>
<UpgradeAndExit>>false</UpgradeAndExit>
<UpdateAccountGUIDs>UpdateAndExit</UpdateAccountGUIDs>
</Catalog>
```

- c. Save and close the file.

3. Restart the Oracle BI system components using opmnctl:

```
cd ORACLE_HOME/admin/instancen/bin
./opmnctl stopall
./opmnctl startall
```

4. Set the FMW\_UPDATE\_ROLE\_AND\_USER\_REF\_GUIDS parameter in the NQSConfig.INI file back to NO.

---



---

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

---



---

5. Update the Catalog element in the 11g instanceconfig.xml file to remove the UpdateAccount GUIDs entry.

6. Restart the Oracle BI system components using opmnctl:

```
cd ORACLE_HOME/admin/instancen/bin
./opmnctl stopall
./opmnctl startall
```

## B.1.2 Updating Oracle Business Intelligence Catalogs

When migrating from 11g, you must manually update your Oracle BI Presentation Services Catalog.

To update the Oracle BI catalog:

1. Shut down Oracle BI Presentation Services using the Fusion Middleware Control.

For more information, see *Using Fusion Middleware Control to Start and Stop BI System Component Processes* in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

2. Back up your Release 10g catalogs by using the 7-Zip utility to create a compressed file.

3. Create a backup copy of the instanceconfig.xml file. The instanceconfig.xml file is located at the following location:

On UNIX operating system:

```
DOMAIN_HOME/config/OracleBIPresentationServicesComponent/
coreapplication_obipsn
```

On Windows operating system:

```
DOMAIN_HOME\config\OracleBIPresentationServicesComponent
\coreapplication_obipsn
```

4. Change the UpgradeAndExit option to true in the instanceconfig.xml file.

Find the following code:

```
<ps:Catalog xmlns:ps="oracle.bi.presentation.services/config/v1.1">
  <ps:UpgradeAndExit>false</ps:UpgradeAndExit>
</ps:Catalog>
```

Change it to the following:

```
<ps:Catalog xmlns:ps="oracle.bi.presentation.services/config/v1.1">
  <ps:UpgradeAndExit>true</ps:UpgradeAndExit>
</ps:Catalog>
```

5. Start Oracle BI Presentation Services using the following OPMN command to update the catalogs:

```
opmnctl startproc ias-component=coreapplication_obipsn
```

Where, *n* is the instance.

For example:

On UNIX operating system:

```
cd ORACLE_INSTANCE/bin
./opmnctl startproc ias-component=coreapplication_obips1
```

On Windows operating system:

```
cd ORACLE_INSTANCE\bin
opmnctl startproc ias-component=coreapplication_obips1
```

6. After the catalogs are updated, edit the instanceconfig.xml file again and change the UpgradeAndExit option back to false.
7. Restart Oracle BI Presentation Services using the Fusion Middleware Control.

## B.2 Multiple Y-Axis Highcharts Graph is not Displayed After Migration

You may not be able to render the Multiple Y-axis Highcharts graph in 12c after migration because the required JavaScript (.js) files are not present in the 12c instance.

To copy the files to the 12c system:

1. Go to the \AnalyticsRes directory on the 11g system.
2. Copy the following files from the 11g \AnalyticsRes directory to the 12c \AnalyticsRes directory:
  - highcharts.js
  - exporting.js
  - jquery-1.8.2.min.js

## B.3 Setting the Evaluate Parameter in the NQSConfig.INI File

The EVALUATE function in your analyses is not enabled by default in Logical SQL queries because it exposes the database to SQL injection attacks. If you encounter any error while generating any views after migrating to Oracle BI 12c, then you must set

the value of the `EVALUATE_SUPPORT_LEVEL` parameter appropriately in the `NQSCONFIG.INI` file.

The default value of the `EVALUATE_SUPPORT_LEVEL` parameter is "0", which means that evaluate is not supported.

```
# EVALUATE_SUPPORT_LEVEL:
# 1: evaluate is supported for users with manageRepositories permission
# 2: evaluate is supported for any user.
# other: evaluate is not supported if the value is anything else.
EVALUATE_SUPPORT_LEVEL = 0;
```

Manually set the value of the `EVALUATE_SUPPORT_LEVEL` parameter same as it is in the `11g NQSCONFIG.INI` file or as required by your organization.

The `NQSCONFIG.INI` file is located at the following location:

On UNIX operating system:

`DOMAIN_HOME/config/fmwconfig/biconfig/OBISn`

On Windows operating system:

`DOMAIN_HOME\config\fmwconfig\biconfig\OBISn`

## B.4 Error: `ava.lang.NoClassDefFoundError: Could not initialize class sun.awt.X11GraphicsEnvironment`

You can encounter the "`ava.lang.NoClassDefFoundError: Could not initialize class sun.awt.X11GraphicsEnvironment`" error if you have set the value of the `DISPLAY` variable manually or the system has manipulated it automatically. In case you change the value of the `DISPLAY` variable to a Windows-client system IP, to run the 64-bit Linux installer through a Windows client, reset it to its original value after the installation is complete. If you generate an analysis that contains graphs without resetting the value of the `DISPLAY` variable, you can get this error.

To fix this error:

1. Reset the value of the `DISPLAY` variable.
2. Restart the `JavaHost` process.

## B.5 Verifying File Data Sources in Oracle BI Publisher

While generating reports, if you encounter an error stating `oracle.xdo.XDOException: File does not exist or is not readable: . . .`, you might not have copied the supporting XML files to the `12c` system. To solve this issue, manually validate that the path for each data source points to the appropriate directory on the `12c` system.

To validate paths for the data source names:

1. Sign in to Oracle BI Publisher.
2. Go to **File** under **Data Source** on the Administration page.  
On the File page, you can see the directory path for each DSN.
3. Check whether the file is pointing to the correct `12c` directory.
4. To change the directory path, click the **DSN**.

You are navigated to the Update Data Source page.

5. Enter the correct and the complete path of top-level directory and click **Apply**.

## B.6 [nQSError: 46168] Operation RawFile::checkSoftLimit failed

You can get the [nQSError: 43119] Query Failed: [nQSError: 46168] Operation RawFile::checkSoftLimit failed, it'll exceed the current limitation. 1073758528 error if the BI query requires more temporary space to complete the request than the BI Administrator has allocated.

To resolve this issue:

1. Modify the query to reduce the volume of data that is processed by the BI Server by:
  - a. Adding additional filters to the query.
  - b. Replacing the most detailed attribute columns with less detailed columns to reduce the overall level of detail of the query.
  - c. Removing attribute columns containing long text values.
  - d. Avoiding the use of SQL functions that are not supported by the backend data source.
  - e. Removing certain attribute or measure columns that cause more complex internal processing in the BI Server.
2. If you cannot resolve the issue by modifying or restructuring the query and if the system is capable of handling more load, request the BI Administrator to increase the maximum size allowed for temporary files by modifying the following parameters in the NQSCONFIG.INI file:
  - WORK\_DIRECTORY\_SIZE\_GLOBAL\_LIMIT or
  - MAX\_WORK\_FILE\_SIZE\_PERCENT

For example:

```
[General]
WORK_DIRECTORY_SIZE_GLOBAL_LIMIT = 100 GB;
# No temporary file will be allowed to exceed this percentage of the global work
# directory limit.
MAX_WORK_FILE_SIZE_PERCENT = 5;
```

**Note:**

- The maximum size allowed for any single temporary file is determined by multiplying the total size limit of the temporary directory set in the `WORK_DIRECTORY_SIZE_GLOBAL_LIMIT` parameter by the percentage specified in `MAX_WORK_FILE_SIZE_PERCENT`. By default the temporary file size limit is  $100\text{ GB} * 5\% = 5\text{ GB}$ . This per-file limit applies to each temporary file individually, while the total `WORK_DIRECTORY_SIZE_GLOBAL_LIMIT` applies collectively to all the temporary files created by the BI Server.
  - You must increase the `MAX_WORK_FILE_SIZE_PERCENT` parameter cautiously. Setting a large percentage can allow a single request to consume a large portion of the total temporary space, possibly causing the system and other BI requests to run out of temporary space and fail. Increasing the `WORK_DIRECTORY_SIZE_GLOBAL_LIMIT` is safer as long as there is sufficient disk space. However, you must observe caution while increasing the value of the `WORK_DIRECTORY_SIZE_GLOBAL_LIMIT` parameter. Setting a large value can cause the system to run out of disk space or allow BI requests to consume too many system resources.
- 

## B.7 Act As Configuration Failing in 12c

The Act As functionality allows you to act for another user in Oracle BI EE. This functionality is useful, for example, when you need to work on another user's dashboard or content, or when IT support staff wants to troubleshoot another user's account. If you have migrated from BI 11g to 12c, and are unable to configure Act As functionality in 12c, follow the procedure in this topic to fix the issue.

Before configuring Act As functionality in 12c:

1. Create the "customMessages" folder under the following directory:

On UNIX operating system:

```
ORACLE_HOME/bi/bifoundation/web/msgdb/l_en
```

On Windows operating system:

```
ORACLE_HOME\bi\bifoundation\web\msgdb\l_en
```

2. Copy the 11g LogonParamSQLTemplate.xml file to the "customMessages" folder created in step 1.

For more information about creating a custom message template, see [Creating a Custom Message Template for Proxy Functionality](#).

## B.8 Custom Link and SampleApp Oracle Technology Network Page Not Visible Post Migration

Custom Link and SampleApp Oracle Technology Network page may not be visible in the 12c system directly after the migration. This happens because the Custom Links xml settings is not copied from BI 11g to 12c during the migration. You must manually copy the Custom Links xml settings from BI 11g to 12c.

To copy the Custom Links xml settings:

1. Copy the Custom Links xml to the following folder on your 12c system:

On UNIX operating system:

```
DOMAIN_HOME/bidata/components/OBIPS(customMessages)
```

On Windows operating system:

```
DOMAIN_HOME\bidata\components\OBIPS(customMessages)
```

2. Open the Oracle BI EE instanceconfig.xml for editing and find the <CustomLinks> directive.
3. Enable the custom links as shown in the following example:

```
<CustomLinks>
<Enabled>true</Enabled>
</CustomLinks>
```

## B.9 Migrating 11g WebLogic Users to 12c

After migrating from 11g to 12c, you must manually migrate the WebLogic users in to your 12c domain. You can do this by exporting the security data from a security realm and importing it in to another security realm. Security data includes authentication, authorization, credential map, and role data.

Understand when you would want to migrate security data. See [Overview of Security Data Migration](#).

Understand the concepts associated with importing and exporting security data. See [Migration Concepts](#).

Understand which formats and constraints are supported by the WebLogic Security providers. See [Formats and Constraints Supported by WebLogic Security Providers](#).

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**Note:** You can only export and import security data between security realms in the same WebLogic Server release.

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### Exporting the security data from a security provider

To export security data from a security provider to a file:

1. In the left pane, select **Security Realms** and then select the name of the realm you are configuring (for example, myrealm).
2. Select the type of provider from which you want to export security data (for example, Authentication).
3. Select the security provider from which you want to export security data.
4. Select **Export** under **Migration**.
5. Specify the directory and filename in which to export the security data in the **Export File on Server** field. The directory must exist.

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**Note:** The directory and file into which you export the security data should be carefully protected with operating system security as they contain secure information about your deployment.

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6. (Optional) Define a specific set of security data to be exported in the **Export Constraints** box.
7. Click **Save**.

After you export the data from the security provider, you can import it any time.

## Importing the security data into a security provider

To import security data into a security provider:

1. In the left pane of the Administration Console, select **Security Realms**.
2. Select the name of the security realm into which the security data is to be imported (for example, myrealm).
3. Select **Providers** and then the type of provider into which security data is to be imported (for example, **Authentication** under **Providers**).
4. Select the security provider in which the security data is to be imported and select **Import** under **Migration**.
5. Specify the directory and file name of the file that contains the exported security data in the **Import File on Server** field.
6. Click **Save**.