Oracle® Fusion Middleware

Migration Guide for Oracle Business Intelligence

12*c* (12.2.1)
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Oracle Fusion Middleware Migration Guide for Oracle Business Intelligence, 12*c* (12.2.1)

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Preface

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

Topics:

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.

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Related Documents

For more information, see the following documents in the 12*c* (12.2.1) documentation set:

- *Planning an Installation of Oracle Fusion Middleware*
- *Installing and Configuring the Oracle Fusion Middleware Infrastructure*
- *System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*
- *User's Guide for Oracle Business Intelligence Publisher*
- *User's Guide for Oracle Business Intelligence Enterprise Edition*

- *High Availability Guide*

Conventions

Learn about the conventions used in this document.

This document uses the following text conventions:

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

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

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

This section explains the manual process to migrate Oracle BI metadata and configurations from an Oracle BI 11*g* (Release 11.1.1.7 or later) to Oracle BI 12*c* (Release 12.2.1) instance.

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

Topics:

1.1 Understanding the 12*c* Migration Procedure

Oracle BI 12*c* (12.2.1) is the latest Business Intelligence release from Oracle. Migrating from Oracle BI 11*g* to 12*c* 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 11*g* system and the required configuration of the 12*c* system.

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

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

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

1. Analyze and optimize the existing 11*g* system in preparation for migration to 12*c*.
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 11*g* 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 11*g* system requires time and resources. A poorly optimized 11*g* deployment can disrupt the migration process and can affect the performance of the 12*c* system. Oracle recommends that you analyze and optimize the existing 11*g* system by removing redundant content and merging and consolidating similar content.
- Understanding What is Migrated and How
  Oracle has introduced many enhancements to existing features in the 12*c* release for Business Intelligence. Sometimes, these enhancements replace the existing functionality or reimplement it in a different way. Wherever possible, the existing 11*g* functionality and configuration is migrated to the corresponding 12*c* system. Although the appearance and behavior of the 12*c* 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 12*c* system has all the migrated data as you expected. Oracle BI 12*c* provides a set of validation tools that can be used to validate certain parts of the 12*c* 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 11*g* system to the 12*c* 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 12*c* system, you can proceed to migrate the entire Oracle BI 11*g* system.

1.1.1 Analyzing and Optimizing the Existing 11*g* System

Migrating metadata and configuration from an existing Oracle BI 11*g* system requires time and resources. A poorly optimized 11*g* deployment can disrupt the migration process and can affect the performance of the 12*c* system. Oracle recommends that

you analyze and optimize the existing 11*g* system by removing redundant content and merging and consolidating similar content.

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

1. Run the Consistency Checker to check the validity of the 11*g* repository, and to identify and fix the syntax or semantic errors and warnings that can cause the queries to fail on the Oracle BI 12*c* Administration Tool. For more information, see Checking the Consistency of a Repository or a Business Model in *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 Understanding What is Migrated and How

Oracle has introduced many enhancements to existing features in the 12*c* release for Business Intelligence. Sometimes, these enhancements replace the existing functionality or reimplement it in a different way. Wherever possible, the existing 11*g* functionality and configuration is migrated to the corresponding 12*c* system. Although the appearance and behavior of the 12*c* 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 11*g* to the 12*c* environment. The goal of this process is to not exactly replicate the appearance and behavior of the original 11*g* system in the 12*c* environment. Replicating the 11*g* appearance and behavior is time-consuming and sometimes difficult, if not impossible. For example, the dashboards and prompts are represented differently in 12*c* and would require significant manual intervention to recreate the 11*g* appearance. It also undermines the rationale behind moving on to Oracle BI 12*c*; namely, to take advantage of the enhancements introduced in 12*c*.

1.1.3 Defining a Test Plan to Validate the Migration

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

A typical test plan identifies the following:

- A representative subset of the existing 12*c* 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 11*g* System

Oracle recommends that you migrate sample data from the 11*g* system to the 12*c* 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 11*g* system is likely to be successful
- Explore in detail the differences between the existing 11*g* system and the new 12*c* system

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

Use the test plan that you previously created to verify that the sample migration process is successfully 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 12*c* system, you can proceed to migrate the entire Oracle BI 11*g* system.

The following table provides a high-level summary of the steps you must perform to migrate from Oracle BI 11*g* to 12*c*:

Table 1-1 High-level Summary of the Migration Process

Step Number	Step Description	More Information
1	Install Oracle BI 12*c* software.	See Installing Oracle Business Intelligence in *Installing and Configuring Oracle Business Intelligence*.
2	Copy the BI Migration Tool (bi-migration-tool.jar) from the 12*c* Oracle Home to the 11*g* system.	None.
3	Create an export bundle using the BI Migration Tool on the 11*g* system.	See Creating the Export Bundle.
4	You can import the export bundle in either of the scenarios: • If you have not configured the 12*c* system, run the Oracle Business Intelligence 12*c* Configuration Assistant to configure the domain while importing the export bundle. • If you have already configured the 12*c* system, use the BI Migration Script (migration-tool.sh) to import the export bundle in a command-line mode.	For import using BI Configuration Assistant, see Importing the Export Bundle Using the BI 12*c* Configuration Assistant. For import using the BI Migration Script, see Performing an Import Using the BI Migration Script.
5	Complete the post-installation steps. The post-installation steps are important to migrate configuration from the 11*g* system to the 12*c* system.	For BI EE, see Post-Migration Tasks for Oracle BI EE. For BI Publisher, see Post-Migration Tasks for Oracle BI Publisher. For Essbase, see Post-Migration Tasks for Essbase.

2
Migrating from Oracle BI 11*g* to 12*c*

Migrating the metadata from Oracle BI 11*g* to 12*c* is a two-step process, and is carried out by using the BI Migration Script (migration-tool.sh). The first step in the process is to create an export bundle from a read-only 11*g* certified Release (11.1.1.7 or later) using the BI Migration Tool (bi-migration-tool.jar). The second step is to import the previously-generated export bundle in to the 12*c* system. The BI Migration Script is used to generate the BI Migration Tool jar file.

This procedure is applicable only for Oracle BI EE and BI Publisher.

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

Topics:

- Prerequisites
  Ensure that you configure the environment as per Oracle recommendations in readiness for the migration.
- Generating the BI Migration Tool jar File
  The BI Migration Tool is self-executing and self-contained. You must generate the BI Migration Tool jar file by using the BI Migration Script (migration-tool.sh). The BI Migration Script is made available after you install the 12*c* software. 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 11*g* system. To do this, you must have access to a 12*c* system with a configured domain. You must set up the 12*c* domain to provide sufficient infrastructure to run the BI Migration Tool and allow it to repackage itself. The 12*c* 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 11*g* Oracle home.
- Importing the Export Bundle Using the BI 12c Configuration Assistant
  You can use the Oracle BI 12*c* Configuration Assistant to reference the export bundle while configuring the 12*c* system if you have installed but have not configured the 12*c* system. Follow the procedure in this topic only if you are configuring the 12*c* system for the first time. However, if you have already configured the 12*c* system, you have the BI domain and BI Service instance created. Perform the procedure to import the export bundle using the BI Migration Script.
- Performing an Import Using the BI Migration Script
  Use the BI Migration Script (migration-tool.sh) to import the 11*g* data in to the 12*c* system, if you have already configured the 12*c* system. 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 11*g* release to the 12*c* release. After you complete the migration procedure, you can use this tool to compare the two deployments and verify whether the results from the 11*g* environment are the same as the results from the 12*c* 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 11*g* certified GA release 11.1.1.7 or later installed.
- You have the 12*c* software installed as per the instructions in Installing Oracle Business Intelligence in *Installing and Configuring Oracle Business Intelligence*.
- You have file system permission on both the 11*g* and 12*c* systems.
- You have configured the WebLogic authentication chain to enable the 11*g* users to sign in to the 12*c* domain. For more information, see Configuring Authentication Providers in *Administering Security for Oracle WebLogic Server 12c (12.2.1)*.
- You have stopped the 12*c* BI instance, in case it is running. The BI instance should not be running before migrating content into the new 12*c* instance.

2.2 Generating the BI Migration Tool jar File

The BI Migration Tool is self-executing and self-contained. You must generate the BI Migration Tool jar file by using the BI Migration Script (migration-tool.sh). The BI Migration Script is made available after you install the 12*c* software. 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 11*g* system. To do this, you must have access to a 12*c* system with a configured domain. You must set up the 12*c* domain to provide sufficient infrastructure to run the BI Migration Tool and allow it to repackage itself. The 12*c* 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:

   ORACLE_HOME`/user_projects/domains/bi/bitools/bin/migration-tool.sh`

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

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

   ```
   ORACLE_HOME/user_projects/domains/bi/bitools/bin/migration-tool.sh package bi-migration-tool.jar
   ```

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

   Where,

Option	Description
ORACLE_HOME`/user_projects/domains/bi/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 11*g* Oracle home.

To create an export bundle:

1. 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 11*g* system.

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

Table 2-1 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 ORACLE_HOME/bi/migration-tool/jlib/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 ORACLE_HOME\bi\migration-tool\jlib\bi-
migration-tool.jar out ORACLE_HOME\Oracle_BI1 DOMAIN_HOME\tmp
\migration-tool-test\test_export.jar
```

Where,

Table 2-2 Parameter Values: Creating Export Bundle

Parameter	Description
ORACLE_HOME/bi/migration-tool/jlib/bi-migration-tool.jar	The location where the BI Migration Tool is copied.
ORACLE_HOME/Oracle_BI1	The path where the Oracle home directory is located.
DOMAIN_HOME	The path where the Domain home directory is located.
/tmp/migration-tool-test/test_export.jar	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 12*c* system.

2.4 Importing the Export Bundle Using the BI 12*c* Configuration Assistant

You can use the Oracle BI 12*c* Configuration Assistant to reference the export bundle while configuring the 12*c* system if you have installed but have not configured the 12*c* system. Follow the procedure in this topic only if you are configuring the 12*c* system for the first time. However, if you have already configured the 12*c* system, you have the BI domain and BI Service instance created. Perform the procedure to import the export bundle using the BI Migration Script.

> **Note:**
>
> Oracle recommends that you use the Oracle BI 12*c* Configuration Assistant to configure your 12*c* system.

To import the export bundle using the Configuration Assistant:

1. Go to the `bin` directory using the following commands based on your operating system:

   Unix command:

   ```
   cd Oracle_home/bi/bin
   ```

   Windows command:

   ```
   cd Oracle_home\bi\bin
   ```

2. Start the Configuration Assistant using the following commands based on your operating system:

   Unix command:

   ```
   ./config.sh
   ```

   Windows command:

   ```
   config.cmd
   ```

   The Configuration Assistant starts and the Welcome screen is displayed.

3. Select the components to install and click **Next**.

> **Note:**
>
> The Configuration Assistant automatically adjusts your selection to ensure that consistent set of suites are deployed.

- Essbase: Includes components such as Essbase Server, Cube Deployment Server, and Analytic Provider Services.
- Business Intelligence Enterprise Edition: Includes components such as Presentation Services, Visual Analyzer, BI Composer, web services, proactive

intelligence (Delivers and Actions), Web Services for SOA (WS4SOA), and Mobile Application Designer.

- Business Intelligence Publisher: Includes Oracle BI Publisher.

The Prerequisite Checks screen is displayed.

4. On the Prerequisite Checks screen, after the prerequisite checks conclude with no errors, click **Next**.

   If any of the prerequisite checks fail, then a short error message appears at the bottom of the screen. Fix the error and click **Rerun** to try again. To ignore the error or warning messages and continue with the installation, click **Skip**, although this approach is not recommended.

> **Note:**
>
> The configuration might not function normally if you continue without resolving the issue that caused an error or warning message during the prerequisite checks.

The Define New Domain screen is displayed.

5. On the Define New Domain screen, specify the following, and click **Next**:

Field	Description
Domains Directory	Specify the path where you want to set up the domain directory.
Domain Name	Specify domain.
Domain Home	It is self-derived from the Domains Directory and cannot be edited.
Username	Specify a username for the System Administrator.
	Note: This user is created in the embedded LDAP and is granted WebLogic Administrator permissions.
Password	Specify a password for the System Administrator.
Confirm Password	Confirm the password by reentering it.

The Database Schema screen is displayed.

6. On the Database Schema screen, either create a new schema or use an existing schema by clicking the appropriate option.

   If you select to create a new schema, the Configuration Assistant creates a schema for you. Specify the following and click **Next**:

Field	Description
Schema prefix	Specify a unique schema prefix.
Schema password	Specify a password for your schema.

Field	Description
Confirm password	Confirm the password by reentering it.
Database type	Select the database you are using from the list of values.
Username	Enter the privileged username to create the schema.
Password	Enter the password for the above username.
Simple connect string	Specify the connect string in the form of hostname:port:servicename for the database. For example: host1.example.com:1521:pdborcl.example.com

If you select to use an existing schema, you must create STB, BIPLATFORM, MDS, OPSS, and WLS schemas using the RCU. Specify the following and click **Next**:

Field	Description
Database type	Select the database you are using from the list of values.
Simple connect string	Specify the connect string in the form of hostname:port:servicename for the database. For example: host1.example.com:1521:pdborcl.example.com
Prefix	Specify the prefix for the STB schema you created using the RCU.
Password	Enter the password you specified while creating the STB schema using the RCU.

The Port Range screen is displayed.

7. On the Port Range screen, specify the port range and click **Next**.

> **Note:**
>
> The default, allocated port range is from 9500 to 9999, both inclusive. You can keep the default values or specify different values within this range.

The Initial Application screen is displayed.

8. On the Initial Application screen, select the following option:

   `Your own existing BI Application from export bundle (.jar).`

   When you select this option, you are prompted with a dialog box to select the export bundle that you created previously from the 11*g* environment.

9. Browse and select the export bundle and click **Next**

   The Summary screen is displayed.

10. On the Summary screen, verify the values you specified on each screen.

    Click **Save** to generate a response file used for silent installation (optional).

Click **Configure**.

The configuration process starts and the Configuration Progress screen is displayed.

11. After the configuration concludes without any errors, click **Next** to go to the Configuration Complete screen.
12. On the Configuration Complete screen, review the configuration summary.

    Click **Save** to save the information displayed on this screen in a file.

    Click **Finish** to close the Configuration Assistant.

    The BI Application opens in the browser. Use the login credentials you specified while configuring to sign in to the BI application home.

> **Note:**
>
> Note down the various management URLs for the newly created Oracle BI 12*c* system to complete the post migration steps.

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

2.5 Performing an Import Using the BI Migration Script

Use the BI Migration Script (migration-tool.sh) to import the 11*g* data in to the 12*c* system, if you have already configured the 12*c* system. 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 12*c* system:

Parameter	Description
in	Indicates the BI Migration Script to import the bundle.
<export bundle>	The path where the export bundle is located.
<service instance name>	Specifies the name of the service instance, which is service1.

To import the metadata in to the 12*c* system:

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

   ```
   user_projects/domains/bi/bitools/bin/migration-tool.sh in
   <export bundle> <service instance name>
   ```

   For example,

   ```
   user_projects/domains/bi/bitools/bin/migration-tool.sh
   in /tmp/migration-tool-test/test_export.jar service1
   ```

   Where,

Parameter	Description
in	Indicates the BI Migration Script to import the bundle.

/tmp/migration-tool-test/test_export.jar	The path where the export bundle is located.
service1	Specifies the name of the service instance.

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

```
Import succeeded
About to close down logging to: /scratch/mwport/work/mw/user_projects/domains/
bidomain/bilogs/migration/migration-2015-10-05-06-13-05.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 12*c* system. For more information about starting the 12*c* system, see About Managing Oracle Business Intelligence Processes in *System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

2.6 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 11*g* release to the 12*c* release. After you complete the migration procedure, you can use this tool to compare the two deployments and verify whether the results from the 11*g* environment are the same as the results from the 12*c* environment.

You can download the Oracle BI Validation Tool from Oracle BI Baseline Validation Tool Downloads.

For more information about using the Oracle BI Validation Tool, see *Comparing Oracle Business Intelligence Deployments Using the Oracle Business Intelligence Baseline Validation Tool*.

> **Note:**
>
> You can download the Oracle BI Validation Tool along with the other Oracle Business Intelligence download on the Oracle Technology Network. See the 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.

3
Post-Migration Tasks 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.

Topics:

aggregate persistence for the TimesTen In-Memory database. Therefore, you must manually enable the bi:hw-acceleration flag in the 12*c* bi-config.xml file post-migration. You must also enable the bi:compat-mode-11g flag, so that the state of the 11*g* 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 12*c* (12.2.1 and later) that are not compatible with the Oracle BI 11*g* 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 12*c* environment behaves as closely as possible to Oracle Business Intelligence 11*g* 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 12*c* MapViewer configuration file to contain the same contents as the 11*g* file except the Logging section.
- Resolving Authentication Issues After Migration
  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.
- Removing the Display of HTML Codes in a Customized "No Results" Message
  In an analysis, content developers can control the text that is displayed when the results of the analysis return no data. Content developers can accept the default message, or they can customize the text of the message, including by inserting HTML formatting codes in the message.

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 11*g* releases, catalog groups primarily allowed for backward compatibility with earlier releases. In 11*g* releases, you were encouraged to migrate to and use the more powerful application roles feature for organizing and managing users.

In Oracle BI Release 12*c*, catalog groups are deprecated. Migrate all catalog groups to application roles, by entering commands such as the following ones:

```
./runcat.sh -cmd report -offline DOMAIN_HOME/bidata/
service_instances/ssi/metadata/content/catalog -
```

```
forceoutputFile /tmp/catalog_groups_privilege_references.txt -
type "Security ACL" -fields "Path:Privilege"

./runcat.sh -cmd report -offline DOMAIN_HOME/bidata/
service_instances/ssi/metadata/content/catalog -
forceoutputFile /tmp/catalog_groups_names.txt -type "Accounts" -
accounts "group;;*" -fields "Account Name"
```

> **Note:**
>
> Replace the sample names in the previous examples with names appropriate to your system.

3.2 Migrating Configuration of Oracle BI EE

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

- Migrating the Security Configuration for Oracle BI with Oracle WebLogic Server
  Oracle BI 12*c* is tightly integrated with the Oracle Fusion Middleware Security architecture and delegates core security functionality to components of that architecture. By default, an Oracle BI installation is configured with an authentication provider that uses the Oracle WebLogic Server embedded LDAP server for user and group information. The Oracle BI 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 security configuration for Oracle BI from the 11*g* system to the 12*c* system with Oracle WebLogic Server.
- Migrating the 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 12*c* during the migration process. You must examine and manually apply any special Security Provider configuration in the Fusion Middleware Control 12*c*.
- 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 11*g* and apply the same settings to the 12*c* system.
- Migrating the Oracle Enterprise Manager Fusion Middleware Control Managed Business Intelligence Log Configuration
  The Oracle 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 11*g* system and apply the same settings to your 12*c* system.

- Migrating Oracle BI Server Configuration
  Various files for the BI Server contain configuration information: NQSConfig.INI, odbc.ini, and tnsnames.ora. The NQSConfig.INI file sets parameters on startup, which customize the action of an individual installation. The file contains configuration details that aren't managed by the Fusion Middleware Control. 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 11*g* files and manually copy the configuration information to the respective 12*c* 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 instanceconfig.xml stores the configuration settings that affect Oracle BI Presentation Services. 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 11*g* files and manually copy the configuration information to the respective 12*c* files.

3.2.1 Migrating the Security Configuration for Oracle BI with Oracle WebLogic Server

Oracle BI 12*c* is tightly integrated with the Oracle Fusion Middleware Security architecture and delegates core security functionality to components of that architecture. By default, an Oracle BI installation is configured with an authentication provider that uses the Oracle WebLogic Server embedded LDAP server for user and group information. The Oracle BI 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 security configuration for Oracle BI from the 11*g* system to the 12*c* system with Oracle WebLogic Server.

To migrate the security configuration for Oracle BI:

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

3.2.2 Migrating the 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 12*c* during the migration process. You must examine and manually apply any special Security Provider configuration in the Fusion Middleware Control 12*c*.

To migrate the Oracle Enterprise Manager Fusion Middleware Control security configuration:

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

To migrate the Fusion Middleware Control managed BI configurations:

1. In the Fusion Middleware Control 11*g*, 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 12*c*.

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

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

The Oracle 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 11*g* system and apply the same settings to your 12*c* system.

To migrate the Fusion Middleware Control managed Oracle BI log configuration:

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

3.2.5 Migrating Oracle BI Server Configuration

Various files for the BI Server contain configuration information: NQSConfig.INI, odbc.ini, and tnsnames.ora. The NQSConfig.INI file sets parameters on startup, which customize the action of an individual installation. The file contains configuration details that aren't managed by the Fusion Middleware Control. 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 11*g* files and manually copy the configuration information to the respective 12*c* files.

To migrate the BI Server configuration details:

1. View the configuration information in the server section of the 11*g* NQSConfig.INI file present at the following location using the `cat` command:

   `$11g_DOMAIN_HOME/config/fmwconfig/biconfig/OBIS`

2. Copy the appropriate configuration information from the 11*g* NQSConfig.INI file to the 12*c* file.
3. View the BI Server information in the 11*g* odbc.ini file present at the following location:

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

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

   `$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 instanceconfig.xml stores the configuration settings that affect Oracle BI Presentation Services. 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 11*g* files and manually copy the configuration information to the respective 12*c* files.

To migrate the Presentation Server configuration:

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

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

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

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

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

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

6. Copy the appropriate configuration information from the 11*g* bridgeconfig.properties file to the 12*c* 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:

   (UNIX) *12c_DOMAIN_HOME*`/config/fmwconfig/bienv/core/odbc.ini`

   (Windows) *12c_DOMAIN_HOME*`\config\fmwconfig\bienv\core\odbc.ini`

   Replace the value of *DOMAIN_HOME* with the actual path to the 12*c* Domain home you created when you installed the 12*c* 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 indicates 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 11*g* 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 12*c* 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 *System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

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

3.5 Configuring the SQL Server

After configuring the 12*c* 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:

   (UNIX) *12c_DOMAIN_HOME*`/config/fmwconfig/bienv/core/odbc.ini`

   (Windows) *12c_DOMAIN_HOME*`\config\fmwconfig\bienv\core\odbc.ini`

   Replace the value of *DOMAIN_HOME* with the actual path to the 12*c* Domain home you created when you installed the 12*c* 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 11*g* 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:

   (UNIX) *12c_DOMAIN_HOME*`/config/fmwconfig/bienv/core/odbc.ini`

   (Windows) *12c_DOMAIN_HOME*`\config\fmwconfig\bienv\core\odbc.ini`

   Replace the value of *DOMAIN_HOME* with the actual path to the 12*c* Domain home you created when you installed the 12*c* software.
2. Update the ODBC entry to use the DataDirect drivers, as shown in the following example:

```
[DSN name in RPD]
Driver=NEW_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 11*g* 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 Oracle BI JavaHost Configuration

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

To check the XMLP and the BI JavaHost configuration:

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

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

   (UNIX) *EXISTING_DOMAIN_HOME*`/config/OracleBIJavaHostComponent/coreapplication_obijh1/config .xml`

   (Windows) *EXISTING_DOMAIN_HOME*`\config\OracleBIJavaHostComponent\coreapplication_obijh1\config .xml`

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

   (UNIX) *NEW_DOMAIN_HOME*`/config/fmwconfig/biconfig/OBIJH/config.xml`

   (Windows) *NEW_DOMAIN_HOME*`\config\fmwconfig\biconfig\OBIJH\config.xml`

2. Verify that the XMLP configuration on both the 11*g* and the 12*c* 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 12*c* setOBIJHEnv.sh file matches with the `"start-args" value="-server -Xmx1024M -Xrs` parameter in the 11*g* opmn.xml file.

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

   MW_HOME`/instances/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 12*c* system:

(UNIX) *NEW_ORACLE_HOME*`/bi/modules/oracle.bi.cam.obijh/setOBIJHEnv.sh`

(Windows) *NEW_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 12*c* 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 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 12*c* bi-config.xml file post-migration. You must also enable the bi:compat-mode-11g flag, so that the state of the 11*g* system is preserved at run time.

To enable the bi:hw-acceleration flag:

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

   (UNIX) *12c_DOMAIN_HOME*`/config/fmwconfig/biconfig/core/bi-config.xml`

   (Windows) *12c_DOMAIN_HOME*`\config\fmwconfig\biconfig\core\bi-config.xml`

Replace the value of *DOMAIN_HOME* with the path of the Oracle BI domain on the 12*c* 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 12*c* (12.2.1 and later) that are not compatible with the Oracle BI 11*g* 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 12*c* environment behaves as closely as possible to Oracle Business Intelligence 11*g* Release 1 (11.1.1.9) environment.

> **Note:**
>
> If the COMPATIBLE_RELEASE parameter is not set, then the system defaults to the behavior of the current release, such as 12.2.1.0.

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 NQSConfig.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 11*g* to 12*c*. However, if you explicitly edit the NQSConfig.INI file to set the COMPATIBLE_RELEASE parameter or any other compatibility flag, then the setting in the NQSConfig.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 NQSConfig.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 12*c* MapViewer configuration file to contain the same contents as the 11*g* file except the Logging section.

To migrate the MapViewer configuration:

1. Go to the 12*c* Fusion Middleware MapViewer Administration Console.
2. Create a copy of the default 12*c* MapViewer configuration file.
3. Overwrite the contents in the copy of the 12*c* MapViewer configuration file with the content from the mapViewerConfig.xml file from the 11*g* MapViewer install.

4. Replace the logging section of the MapViewer configuration file copy with the settings from the default 12*c* MapViewer configuration file.
5. Update the logging settings log levels of the MapViewer configuration file as needed for the 12*c*.
6. Click **Save** on the 12*c* MapViewer Administration Console and then click **Restart**.

3.13 Resolving Authentication Issues After Migration

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 12*c*.

To resolve the authentication issues after migration:

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

      (UNIX) *12c_DOMAIN_HOME*`/bitools/bin/`

      (Windows) *12c_DOMAIN_HOME*`\bitools\bin\`

      Replace the value of *DOMAIN_HOME* with the actual Domain home on your 12*c* 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.

   ```
   12c_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 12*c* 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 12*c* 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 12*c* 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-l" />
  <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.

3.15 Removing the Display of HTML Codes in a Customized "No Results" Message

In an analysis, content developers can control the text that is displayed when the results of the analysis return no data. Content developers can accept the default message, or they can customize the text of the message, including by inserting HTML formatting codes in the message.

If content developers customized the message and included HTML codes in Release 11*g*, then the message is displayed with the codes showing as readable text in Release 12*c*, rather than performing their functions to format the message. To work around this issue, open the Analysis Properties dialog for each analysis whose custom message includes HTML codes and select the **Contains HTML Markup** option.

For information on the use of the **Contains HTML Markup** option, see EnableSavingContentWithHTML in *Security Guide for Oracle Business Intelligence Enterprise Edition*.

4

Post-Migration Tasks 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.

Topics:

- Migrating the BI Publisher Configuration
  Migrate the customized 11*g* BI Publisher configuration settings to the 12*c* environment using the BI Publisher Migration Tool (BIP12CUpgrade.sh).
- Migrating Scheduler Jobs and Job History
  After migrating the 11*g* configuration to a new 12*c* environment, you must migrate the scheduler jobs and the job history data from the 11*g* BIPLATFORM schema to a 12*c* BIPLATFORM schema. You can connect to 12*c* BIPLATFROM 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 12*c* environment. When the users and policies are migrated from an 11*g* 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.
- Configuring Passwords for Oracle BI Publisher Data Sources
  The passwords for all data sources in the datasources.xml file are not migrated during the migration. You must manually enter and save the password for each data source using the Administration page in BI Publisher.

4.1 Migrating the BI Publisher Configuration

Migrate the customized 11*g* BI Publisher configuration settings to the 12*c* environment using the BI Publisher Migration Tool (BIP12CUpgrade.sh).

To migrate the configuration:

1. Copy BI Publisher Migration Tool from the following path to your scratch directory:

   ORACLE_HOME`\bi\modules\oracle.bi.publisher\BIP12CUpgrade.zip`

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

2. Decompress the BIP12CUpgrade.zip file. Enter the following command:

   ```
   unzip BIP12CUpgrade.zip
   ```

3. Export the configuration from 11*g* instance to a target directory using the `export_configuration` option with the following syntax:

```
sh BIP12CUpgrade.sh PATH_TO_ORACLE_HOME -export_configuration
<Source_BIPDomain_Path> <Export_BIP_Directory_Path>
```

Sample command:

```
sh BIP12CUpgrade.sh /scratch/bipublisher/mw_home -
export_configuration /scratch/bipublisher/mw_home/
user_projects/domains/bifoundation_domain /scratch/user1/
Downloads/migrationData
```

4. Import the configuration from the target directory in to the 12*c* instance using `import_configuration` option with the following syntax:

```
sh BIP12CUpgrade.sh PATH_TO_ORACLE_HOME -import_configuration
<Export_BIP_Directory_Path>/export_bip
<Target_BIPData_Repository_Path>
```

Sample command:

```
sh BIP12CUpgrade.sh /scratch/bip/work/Oracle_Home -
import_configuration /scratch/user1/Downloads/migrationData/
export_bip /scratch/bip/work/Oracle_Home/user_projects/
domains/bi/bidata/components/bipublisher/repository
```

Next, migrate the scheduler jobs and job history from the 11*g* BIPLATFORM to the 12*c* BIPLATFORM.

4.2 Migrating Scheduler Jobs and Job History

After migrating the 11*g* configuration to a new 12*c* environment, you must migrate the scheduler jobs and the job history data from the 11*g* BIPLATFORM schema to a 12*c* BIPLATFORM schema. You can connect to 12*c* BIPLATFROM 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 11*g* BIPLATFROM 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:**
>
> You cannot migrate scheduler data from DB2 and SQL Server databases. You can migrate scheduler data only from Oracle databases.

To migrate scheduler jobs and job history:

1. The bip_12c_scheduler_migration.sql script is available in a zip file format called `BIP12CUpgrade.zip` which is located in the following directory:

   (UNIX) *`NEW_ORACLE_HOME`*`/bi/modules/oracle.bi.publisher`

   (Windows) *`NEW_ORACLE_HOME`*`\bi\modules\oracle.bi.publisher`

   Replace *NEW_ORACLE_HOME* with the actual path to the 12*c* Oracle home you created when you installed the 12*c* 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 *NEW_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_PASSSWORD 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/ora11g.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.

4.3 Removing the BISystemUser Policy from the JMSResource Security Configuration

BISystemUser is not supported in the 12*c* environment. When the users and policies are migrated from an 11*g* 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.

4.3.1 Manually Removing the BISystemUser Policy

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

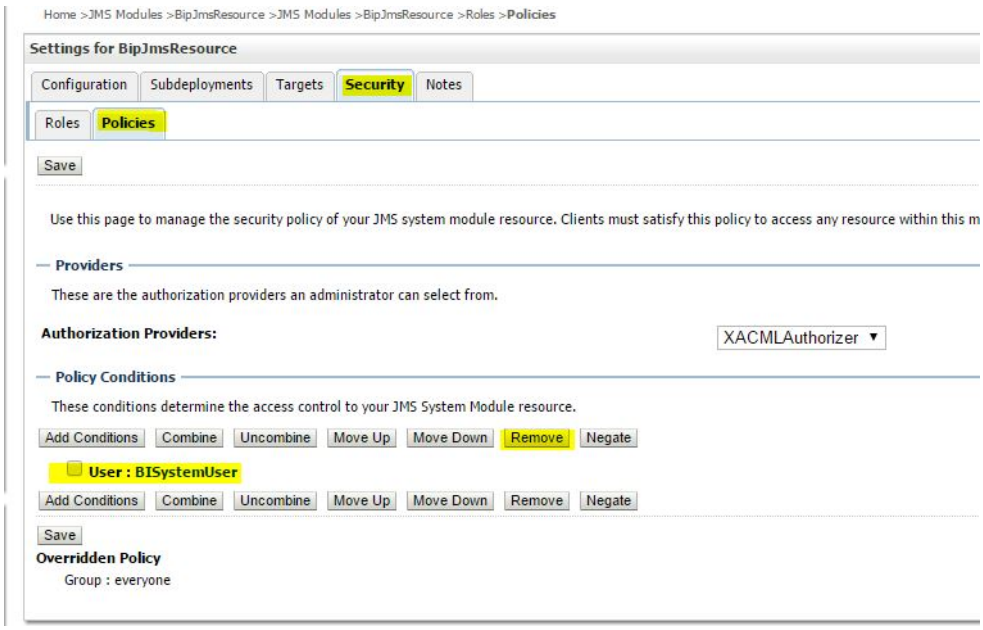
To manually remove the BISystemUser policy:

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.

4.3.2 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:

   (UNIX) *NEW_ORACLE_HOME*`/bi/modules/oracle.bi.publisher`

   (Windows) *NEW_ORACLE_HOME*`\bi\modules\oracle.bi.publisher`

2. Go to *NEW_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.

4.4 Configuring Passwords for Oracle BI Publisher Data Sources

The passwords for all data sources in the datasources.xml file are not migrated during the migration. You must manually enter and save the password for each data source using the Administration page in BI Publisher.

To set the passwords:

1. Sign in to the BI Publisher Enterprise.
2. Configure each data source, such as JDBC, JNDI, File, LDAP, OLAP, Web Service, and HTTP connections under **Administration**.
3. Enter the details in the **Database Driver Class**, **Connection String**, **Username**, and the **Password** fields while configuring each data source and click **Apply**.
4. Update the **Database Driver Class** and the **Connection String** details for the following data source entries:
   - SQLSERVER2012
   - SQLSERVER2008
   - SQLSERVER2005
   - IBMDB2UDB

5

Post-Migration Tasks for Essbase

After completing data migration, manually migrate the configuration settings from the 11*g* system in to the 12*c* 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 11*g* system to the 12*c* 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

A

Known Differences: Oracle Business Intelligence 12*c*

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

Oracle Business Intelligence Release 12*c* 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 be displayed differently in Oracle BI 12*c* 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 12*c*. 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 are Displayed the Same Accessibility Mode
  Visuals cues, such as icons and check boxes, which are displayed on pages in BI Composer, are displayed the same whether you have accessibility mode turned on or not. 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 11*g*, the trellis view contained grid lines, by default. With Oracle BI 12*c*, 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 12*c* as compared to the 11*g* system.
- Oracle BI EE Content Changes for 12c
  This topic describes the difference in appearance for analyses and views after you migrate to 12*c*.

- 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 12*c*

The DSO and AR Balance Trend graph in the Supply Chain and Order Management module can be displayed differently in Oracle BI 12*c* 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 12*c*. 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 are Displayed the Same Accessibility Mode

Visuals cues, such as icons and check boxes, which are displayed on pages in BI Composer, are displayed the same whether you have accessibility mode turned on or not. 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 *System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

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

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 11*g*, the trellis view contained grid lines, by default. With Oracle BI 12*c*, 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 12*c*

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

For Domain Home:

In 11*g*: *mwhome*/user_projects/domains/bifoundation_domain/

In 12*c*: *ORACLE_HOME*/user_projects/domains/bi/

For bipublisher folder:

In 11*g*: *DOMAIN_HOME*/config/bipublisher/

In 12*c*: *DOMAIN_HOME*/bidata/components/bipublisher/

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

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

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

Change	Description
The Gauge view shows a data column	In 11*g*, the gauge view did not display unit data. In 12*c*, 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 11*g*, when you export an analysis to PDF, prompts are center-aligned. In 12*c*, 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 11*g*, when you export an analysis to a PDF file, the bottom border of the title view spans the width of the page. In 12*c*, when you export the same analysis to PDF, the bottom border spans only the width of the title view.

Change	Description
Measures hidden in views	In previous releases, if you marked a measure as hidden in the Column Properties dialog, then the measure was still displayed in views if the measure was part of the view's measure list (that is, not added to an edge of the view but used as intended as a metric). In 12*c*, a measure that you mark as hidden isn't displayed in views.

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.

B

Troubleshooting a Migrated Oracle BI Instance

This appendix provides procedures to troubleshoot a migrated BI instance from 11*g* to 12*c*.

- Configuration Failure with TRANSFORMBAREXCEPTION
  The 12*c* configuration might fail with a TRANSFORMBAREEXCEPTION 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 Oracle Enterprise Manager 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 Graphs Not Displayed
  Multiple Y-axis highchart graphs likely don't render after migration, because the Oracle BI 12*c* instance does not include the required JavaScript (.js) files. You must copy the files to the instance manually.
- 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 12*c*, 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
  If you have set the value of the DISPLAY variable manually or the system has manipulated it automatically, you can encounter the *java.lang.NoClassDefFoundError: Could not initialize class sun.awt.X11GraphicsEnvironment* error . 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 12*c* system. To solve this issue, manually validate that the path for each data source points to the appropriate directory on the 12*c* system.

B.1 Configuration Failure with TRANSFORMBAREXCEPTION

The 12*c* configuration might fail with a TRANSFORMBAREEXCEPTION 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 Oracle Enterprise Manager 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 Oracle 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 BI Presentation Services Catalog
  When migrating from 11*g*, 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 locating the Oracle Business Intelligence configuration files, see Configuration Files in *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 11*g* NQSConfig.INI file.
   a. Open the 11*g* NQSConfig.INI file for editing present at these locations:

      (UNIX) *`11g_DOMAIN_HOME`*`/config/OracleBIServerComponent/coreapplication_obis`*n*

      (Windows) *`11g_DOMAIN_HOME`*`\config\OracleBIServerComponent\coreapplication_obis`*n*

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 11*g* instanceconfig.xml file present at these locations:

(UNIX) *11g_DOMAIN_HOME*/config/OracleBIPresentationServicesComponent/coreapplication_obips*n*

(Windows) *11g_DOMAIN_HOME*\config\OracleBIPresentationServicesComponent\coreapplication_obips*n*

a. Open the instanceconfig.xml file 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 11*g* 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 BI Presentation Services Catalog

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

To update the Oracle BI Presentation Services Catalog:

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

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

2. Back up your existing Oracle BI Presentation Services Catalog by using the 7-Zip utility to create a compressed file.
3. Create a backup copy of the instanceconfig.xml file present at these locations:

   (UNIX) *11g_DOMAIN_HOME*/config/OracleBIPresentationServicesComponent/coreapplication_obips*n*

   (Windows) *11g_DOMAIN_HOME*\config\OracleBIPresentationServicesComponent\coreapplication_obips*n*
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 Oracle BI Presentation Services Catalog:

   `opmnctl startproc ias-component=coreapplication_obipsn`

   Where, *n* is the instance.

   For example:

   (UNIX) `cd ORACLE_INSTANCE/bin`

   (UNIX) `./opmnctl startproc ias-component=coreapplication_obips1`

   (Windows) `cd ORACLE_INSTANCE\bin`

   (Windows) `opmnctl startproc ias-component=coreapplication_obips1`
6. After catalog is updated, edit the instanceconfig.xml file again and change the `UpgradeAndExit` option back to `false`.
7. Restart Oracle BI Presentation Services using Oracle Enterprise Manager Fusion Middleware Control.

B.2 Multiple Y-Axis Highcharts Graphs Not Displayed

Multiple Y-axis highchart graphs likely don't render after migration, because the Oracle BI 12*c* instance does not include the required JavaScript (.js) files. You must copy the files to the instance manually.

To copy the JavaScript files to the 12*c* instance:

1. Change to the `\AnalyticsRes` directory on the 11*g* system.
2. Copy the following files from the 11*g* `\AnalyticsRes` directory to the 12*c* `\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 12*c*, 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 11*g* NQSConfig.INI file or as required by your organization.

The NQSConfig.INI file is located at the following location:

(UNIX) *12c_DOMAIN_HOME*`/config/fmwconfig/biconfig/OBIS`*n*

(Windows) *12c_DOMAIN_HOME*`\config\fmwconfig\biconfig\OBIS`*n*

B.4 Error: java.lang.NoClassDefFoundError: Could not initialize class sun.awt.X11GraphicsEnvironment

If you have set the value of the DISPLAY variable manually or the system has manipulated it automatically, you can encounter the *java.lang.NoClassDefFoundError: Could not initialize class sun.awt.X11GraphicsEnvironment* error . 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 12*c*

system. To solve this issue, manually validate that the path for each data source points to the appropriate directory on the 12*c* 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 12*c* directory.
4. To change the directory path, click the **DSN**.

   You see the Update Data Source page.
5. Enter the correct and the complete path of the top-level directory and click **Apply**.