

## **Oracle® Fusion Middleware**

Upgrading Oracle Business Intelligence

12c (12.2.1.1)

**E56277-01**

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# Preface

This preface contains the following sections:

[Audience](#)

[Documentation Accessibility](#)

[Related Documents](#)

For more information, see the following related documentation available in the Oracle Fusion Middleware 12c documentation library:

[Conventions](#)

## Audience

This manual is intended for Oracle Fusion Middleware system administrators who are responsible for upgrading Oracle Fusion Middleware. It is assumed that the readers of this manual have knowledge of the following:

- Oracle Fusion Middleware 11g or Oracle Fusion Middleware 12c system administration and configuration information for the existing deployment
- The configuration and expected behavior of the system or systems being upgraded

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## Documentation Accessibility

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### Access to Oracle Support

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## Related Documents

For more information, see the following related documentation available in the Oracle Fusion Middleware 12c documentation library:

- *Administering Oracle Fusion Middleware*
- *Understanding Oracle Fusion Middleware*
- *Upgrading to the Oracle Fusion Middleware Infrastructure*
- *Installing and Configuring Oracle Business Intelligence Installation Guide*

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## Conventions

The following text conventions are used in this document:

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

[Preface](#)

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# Introduction to Oracle Business Intelligence 12c Upgrade

When you are considering a new release of Oracle Business Intelligence, the tools and documentation required vary, depending on whether you are performing an upgrade or applying a patchset, a bundle patch, or a one-off patch. Upgrading an Oracle Business Intelligence system to 12c requires careful preparation, planning, and testing. Oracle provides tools and technology to automate much of the upgrade process.

Review the topics in this chapter to understand and prepare for the upgrade. This chapter contains the following topics:

## [Understanding an Upgrade of Oracle Business Intelligence to 12c](#)

Upgrading to Oracle Business Intelligence from 12.2.1.0 to 12.2.1.1 is an in-place upgrade performed by Upgrade Assistant. You install the 12.2.1.1 product distribution in a new Oracle home and then use the Upgrade Assistant to upgrade the 12.2.1.0 schemas and domain configuration. You also use the Reconfiguration Wizard to reconfigure the 12.2.1.0 domain.

## [Upgrade Starting Points for Oracle Business Intelligence](#)

The supported starting point for upgrading to Oracle Business Intelligence Release 12.2.1.1 is Oracle Business Intelligence Release 12.2.1.0.

## [Understanding the Standard Oracle Business Intelligence Upgrade Topology](#)

This upgrade documentation provides detailed instructions for upgrading BI and is referred to as the Oracle Fusion Middleware 12c standard upgrade topology. Specifically, for the purposes of this guide, a standard installation topology consists of a WebLogic Server domain that contains an Administration Server and a cluster containing two Managed Servers or a standalone domain.

## [Understanding the Oracle Business Intelligence Upgrade from a Previous 12c Release](#)

This topic helps you to understand the process flow of the Oracle Business Intelligence upgrade from a previous 12c release using a flowchart.

## [Understanding the Interoperability and Compatibility Restrictions before an Upgrade](#)

If you are using two or more Oracle Fusion Middleware products of the same or different versions in a single, supported, Oracle Fusion

Middleware configuration, you must consider the interoperability and compatibility factors before planning the upgrade.

## 1.1 Understanding an Upgrade of Oracle Business Intelligence to 12c

Upgrading to Oracle Business Intelligence from 12.2.1.0 to 12.2.1.1 is an in-place upgrade performed by Upgrade Assistant. You install the 12.2.1.1 product distribution in a new Oracle home and then use the Upgrade Assistant to upgrade the 12.2.1.0 schemas and domain configuration. You also use the Reconfiguration Wizard to reconfigure the 12.2.1.0 domain.

## 1.2 Upgrade Starting Points for Oracle Business Intelligence

The supported starting point for upgrading to Oracle Business Intelligence Release 12.2.1.1 is Oracle Business Intelligence Release 12.2.1.0.

If you are a 11g user (Release 11.1.1.7.0 and above), follow the procedure described in the Migration Guide for Oracle Business Intelligence to migrate your 11g metadata and configuration to the 12.2.1.1 system.

## 1.3 Understanding the Standard Oracle Business Intelligence Upgrade Topology

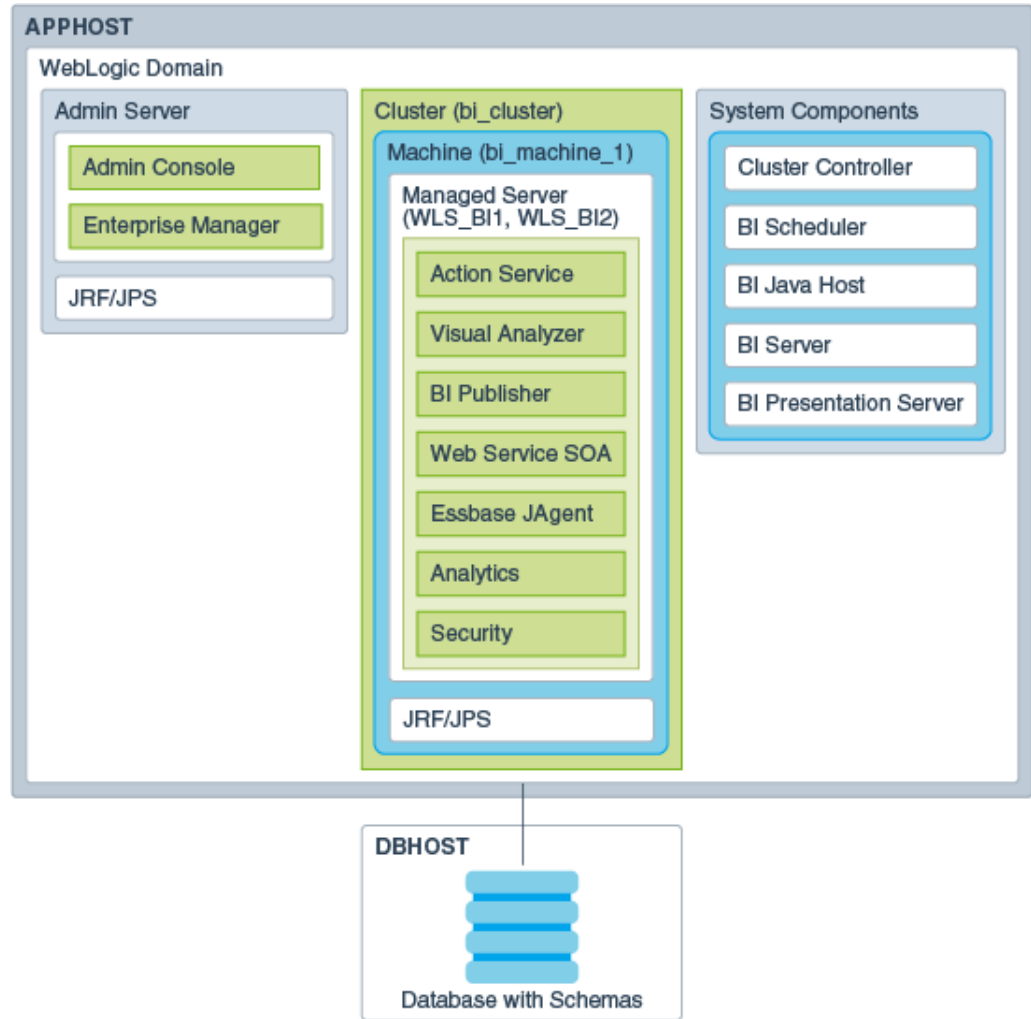
This upgrade documentation provides detailed instructions for upgrading BI and is referred to as the Oracle Fusion Middleware 12c standard upgrade topology. Specifically, for the purposes of this guide, a standard installation topology consists of a WebLogic Server domain that contains an Administration Server and a cluster containing two Managed Servers or a standalone domain.

Your actual topology may vary, but the topology described in this guide provide an example that can be used as a guide to upgrade BI.

[Figure 1-1](#) shows the standard upgrade topology for Oracle Business Intelligence.



**Figure 1-1 Oracle Business Intelligence Standard Upgrade Topology**



## 1.4 Understanding the Oracle Business Intelligence Upgrade from a Previous 12c Release

This topic helps you to understand the process flow of the Oracle Business Intelligence upgrade from a previous 12c release using a flowchart.

**Figure 1-2** Flowchart for Oracle Business Intelligence Upgrade Process from a Previous 12c Release

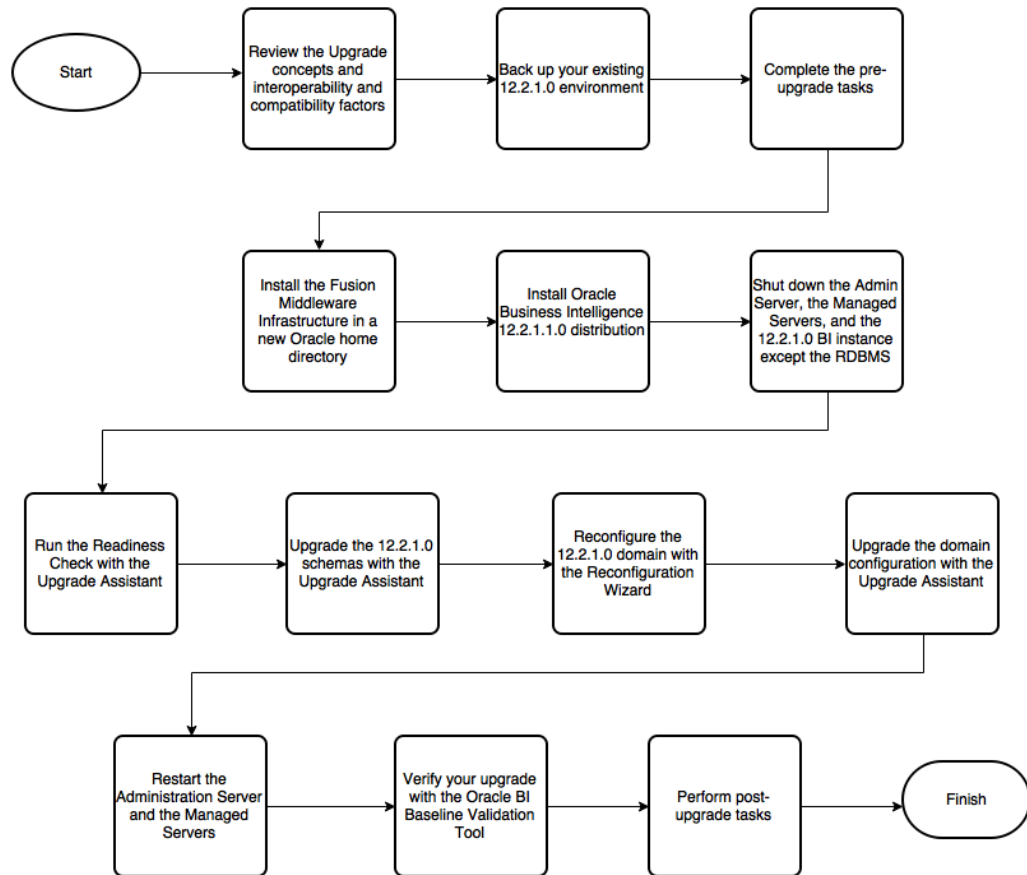


Table 1-1 lists the high-level steps that you need to perform to upgrade to Oracle BI Release 12.2.1.1:

**Table 1-1** Roadmap for Oracle Business Intelligence Upgrade Process from a Previous 12c Release

**Table 1-1 (Cont.) Roadmap for Oracle Business Intelligence Upgrade Process from a Previous 12c Release**

Step No.	Importance (Mandatory, Conditional, or Optional)	Task	Description
1	Optional.	Learn about the interoperability and compatibility factors that could affect how you upgrade to BI 12.2.1.1.	<p>It is important to understand how two or more Oracle Fusion Middleware products of the same version or different versions work together (interoperate) in a supported Oracle Fusion Middleware configuration.</p> <p>You can learn more about interoperability and compatibility in Oracle® Fusion Middleware Understanding Interoperability and Compatibility.</p>
2	Mandatory.	Back up your existing environment.	<p>It is important to back up your existing environment before the upgrade because the domain configurations are upgraded in-place. The back-up allows you to restore your pre-upgrade environment in case the upgrade fails or if the upgrade results are unsatisfactory.</p>
3	Mandatory.	Complete the pre-upgrade tasks.	<p>The pre-upgrade tasks include cloning your production environment, verifying system requirements and certifications, purging unused data, and creating non-SYSDBA user.</p> <p>For a complete list of pre-upgrade tasks, see <a href="#">Preparing to Upgrade Oracle Business Intelligence</a></p>

**Table 1-1 (Cont.) Roadmap for Oracle Business Intelligence Upgrade Process from a Previous 12c Release**

Step No.	Importance (Mandatory, Conditional, or Optional)	Task	Description
4	Mandatory.	Download and install the 12.2.1.1 Fusion Middleware Infrastructure distribution.	<p>The Infrastructure distribution packs the WebLogic Server and the Java Required Files (JRF) that are required to set up the foundation to install other Fusion Middleware products.</p> <p>As per the upgrade topology defined in this guide, you must install the Infrastructure in a new Oracle home. Therefore, follow the procedure described in <a href="#">Installing Fusion Middleware Infrastructure Release 12.2.1.1</a>.</p>
5	Mandatory.	Download and install the 12.2.1.1 Oracle Business Intelligence distribution.	<p>The Oracle Business Intelligence distribution packs BI EE, Publisher, and Essbase.</p> <p>You must install BI in the Oracle home that is created when you installed the 12.2.1.1 Infrastructure. To install Oracle BI, follow the procedure described in <a href="#">Installing Oracle Business Intelligence Release 12.2.1.1</a>.</p>
6	Mandatory.	Shut down the servers and BI instance.	<p>Before starting the upgrade process, shut down the Administration Server, the Managed Servers, and your 12.2.1.0 BI instance.</p> <p>However, keep the database (RDBMS) running.</p>

**Table 1-1 (Cont.) Roadmap for Oracle Business Intelligence Upgrade Process from a Previous 12c Release**

Step No.	Importance (Mandatory, Conditional, or Optional)	Task	Description
7	Recommended.	Run the Readiness Check.	Running the Readiness Check helps using the Upgrade Assistant helps you to determine whether your pre-upgrade environment is ready for upgrade. For the complete procedure, see <a href="#">Running the Readiness Check</a> .
8	Mandatory.	Upgrade the 12.2.1.0 schemas with the Upgrade Assistant.	The schemas you created during the 12.2.1.0 installation are supported in 12.2.1.1. Therefore, you don't need to create the schemas again. You must upgrade all the schemas within your domain using the Upgrade Assistant. For the complete procedure, see <a href="#">Upgrading the Schemas with the Upgrade Assistant</a> .
9	Mandatory.	Reconfigure the 12.2.1.0 domain with the Reconfiguration Wizard.	When you run the Reconfiguration Wizard on your existing domain, it prepares your domain for upgrade by selecting and applying the reconfiguration templates. It also tests the JDBC data sources and component schemas that are present within your domain. To reconfigure you domain, follow the procedure described in <a href="#">Reconfiguring the BI Domain with the Reconfiguration Wizard</a> .

**Table 1-1 (Cont.) Roadmap for Oracle Business Intelligence Upgrade Process from a Previous 12c Release**

Step No.	Importance (Mandatory, Conditional, or Optional)	Task	Description
10	Mandatory.	Upgrade the 12.2.1.0 domain configurations with the Upgrade Assistant.	<p>After you have reconfigured your 12.2.1.0 domain, you must run the Upgrade Assistant to upgrade all configurations used by your 12.2.1.0 domain.</p> <p>You can see all the components within your domain that will be upgraded on the Component List screen when you run the Upgrade Assistant. For the complete procedure, see <a href="#">Upgrading the Configuration with the Upgrade Assistant</a>.</p>
11	Mandatory.	Restart the servers and 12.2.1.1 BI instance.	The upgrade process is complete. You can now restart the Administration Server, the Managed Servers, and your 12.2.1.1 BI instance.
12	Mandatory.	Verify your upgrade.	<p>It is important to compare your 12.2.1.0 and 12.2.1.1 environments and verify that the data and configuration settings are consistent in the newly upgraded environment.</p> <p>Oracle provides the BI Baseline Validation Tool that you can use to compare and verify the upgrade.</p>
13	Mandatory.	Perform any post-upgrade tasks.	For a list of post-upgrade tasks, see <a href="#">Post-Upgrade Tasks</a>

## 1.5 Understanding the Interoperability and Compatibility Restrictions before an Upgrade

If you are using two or more Oracle Fusion Middleware products of the same or different versions in a single, supported, Oracle Fusion Middleware configuration,

you must consider the interoperability and compatibility factors before planning the upgrade.

### **Interoperability**

In the context of Oracle Fusion Middleware products, Interoperability is defined as the ability of two Oracle Fusion Middleware products or components of the same version (or release) to work together (interoperate) in a supported Oracle Fusion Middleware configuration. Specifically, interoperability applies when the first 4 digits of the release or version number are the same. For example, Oracle Fusion Middleware 12c (12.2.1.0) components are generally interoperable with other 12c (12.2.1.0) components.

### **Compatibility**

In the context of Oracle Fusion Middleware products, Compatibility is defined as the ability of two Oracle Fusion Middleware components of different versions (or releases) to interoperate.

For a list of products and features available in Oracle Fusion Middleware Release 12.2.1.1, see Products and Features Available in Oracle Fusion Middleware 12c (12.2.1.1) in *Understanding Interoperability and Compatibility*.





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# Preparing to Upgrade Oracle Business Intelligence

Upgrade is performed while the servers are down. The pre-upgrade tasks are often time-consuming. Oracle recommends that you plan and prepare your environment for upgrade by completing these pre-upgrade tasks, so that you have a successful upgrade and a limited downtime.

Use the following checklist to make sure you complete the pre-upgrade tasks:

## Oracle Fusion Middleware Pre-Upgrade Checklist

The Oracle Fusion Middleware Pre-Upgrade Checklist identifies tasks that can be performed before you begin any upgrade to ensure you have a successful upgrade and limited downtime.

## Creating a Complete Backup

Before you install the new 12c (12.2.1.1) distributions and begin upgrading your existing Oracle Fusion Middleware deployment, be sure you have backed up all system-critical files; including all of the databases that host your Oracle Fusion Middleware schemas.

## Cloning Your Production Environment for Testing

Oracle strongly recommends that you create a copy of your actual production environment, upgrade the cloned environment, verify that the upgraded components work as expected, and then (and only then) upgrade your production environment.

## Verifying Certification and System Requirements

The certification matrix and system requirements documents should be used in conjunction with each other to verify that your environment meets the necessary requirements for installation.

## Updating Policy Files when Using Enhanced Encryption (AES 256)

Optional step to perform if you plan to use enhanced encryption, such as Advanced Encryption Standard (AES) 256, in your upgraded

environment. Oracle recommends that you apply the latest required policy files to the JDK before you upgrade.

#### Purging Unused Data

Purging unused data and maintaining a purging methodology before an upgrade can optimize the upgrade process.

#### Creating a Non-SYSDBA User to Run Upgrade Assistant

Oracle recommends that you create a non-SYSDBA user called FMW to run the Upgrade Assistant. The FMW user has the privileges required to modify schemas, but does not have full administrator privileges.

#### Disabling Internal SSL

You must disable SSL on the internal communication links before you start the upgrade process.

#### Creating a Baseline Report with the Oracle BI Baseline Validation Tool

The Oracle BI Baseline Validation Tool lets you compare two system installations. Run this tool on your pre-upgrade environment to extract result sets from your existing BI deployment and generate comparison files in order to determine whether any changes are needed before making a modified system available to your user community.

## 2.1 Oracle Fusion Middleware Pre-Upgrade Checklist

The Oracle Fusion Middleware Pre-Upgrade Checklist identifies tasks that can be performed before you begin any upgrade to ensure you have a successful upgrade and limited downtime.

Upgrades are performed while the servers are down. This checklist is meant to identify important — and often time-consuming — pre-upgrade tasks that you can perform before the upgrade to limit your downtime. The more preparation you can do before you begin the upgrade process, the less time you will spend offline.

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**Note:** The pre-upgrade procedures you perform will depend on the configuration of your existing system, the components you are upgrading, and the environment you want to create at the end of the upgrade and configuration process. Complete only those tasks that apply to your configurations or use cases.

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**Table 2-1** Tasks to Perform Before You Upgrade to Oracle Fusion Middleware 12c

Task	Description	Documentation
Create a complete backup of your existing environment.	<p><b>Required</b></p> <p>Back up all system-critical files and database(s) that contain any schemas that are to be upgraded before you begin your upgrade.</p> <p>If the upgrade fails, you can restore your pre-upgrade environment and begin the upgrade again.</p>	<p><a href="#">Creating a Complete Backup.</a></p> <p>If you modified any of the startup scripts in your existing domain, you will need to copy them to temporary directory location (outside of the existing domain) during the upgrade and redeploy them after the upgrade.</p> <p><a href="#">Maintaining Custom Domain Environment Settings</a></p>

**Table 2-1 (Cont.) Tasks to Perform Before You Upgrade to Oracle Fusion Middleware 12c**

Task	Description	Documentation
Clone your production environment to use as an upgrade testing platform.	<p><b>Optional</b></p> <p>In addition to creating a complete backup of your system files, Oracle strongly recommends that you clone your production environment. This environment can be used to test the upgrade.</p>	<a href="#">Cloning Your Production Environment for Testing</a> .
<p>Verify that you are installing and upgrading your product on a supported hardware and software configuration.</p> <p>Do not attempt an upgrade if you are unable to use the latest supported operating system. As with all supported configurations, failure to comply with these requirements may cause your upgrade to fail.</p>	<p><b>Required</b></p> <p>Verify that your hardware and software configurations (including operating systems) are supported by the latest certifications and requirements documents.</p> <p>Oracle recommends that you verify this information right before you start the upgrade as the certification requirements are frequently updated.</p> <p><b>Make sure that you have applied the latest patches to your components before you upgrade.</b></p> <p>You must also make sure to use a supported JDK version before you install the 12c product distributions.</p>	<p><a href="#">Verifying Certification and System Requirements</a>.</p> <p>If you are currently running a 32-bit operating system, you will have to migrate to a 64-bit operating system before you can upgrade.</p> <p><a href="#">Migrating from a 32-Bit to a 64-Bit Operating System (Required only if you have a 32-Bit OS)</a></p>
<p>Update security policy files if you are using enhanced encryption (AES 256).</p> <p>Some of the security algorithms used in Fusion Middleware 12c require additional policy files for the JDK.</p>	<p><b>Optional</b></p> <p>If you plan to use enhanced encryption, such as AES 256, Oracle recommends that you apply the latest required policy files to the JDK before you upgrade.</p>	<a href="#">Updating Policy Files when Using Enhanced Encryption (AES 256)</a>
Purge any outdated or unused data before you upgrade.	<p><b>Optional</b></p> <p>To optimize performance, consider purging data and objects that will not be used in the upgraded environment.</p> <p>Use the purge scripts before you start the instance upgrade to purge the closed 11g instances that you do not need in the upgraded 12c environment.</p>	<a href="#">Purging Unused Data</a>
Create a Non-SYSDBA user to run the Upgrade Assistant.	<p><b>Optional</b></p> <p>Oracle recommends that you create the FMW user to run Upgrade Assistant. User FMW can run the Upgrade Assistant without system administration privileges.</p>	<a href="#">Creating a Non-SYSDBA User to Run Upgrade Assistant</a>

## 2.2 Creating a Complete Backup

Before you install the new 12c (12.2.1.1) distributions and begin upgrading your existing Oracle Fusion Middleware deployment, be sure you have backed up all system-critical files; including all of the databases that host your Oracle Fusion Middleware schemas.

Performing a complete database backup prior to performing a schema upgrade is a prerequisite for running Upgrade Assistant. In the Upgrade Assistant prerequisites GUI screen, you will be required to acknowledge that backups have been performed, before proceeding with the actual upgrade.

For more information, see *Backing Up Your Oracle Fusion Middleware Environment and Upgrading and Preparing Your Oracle Databases for 12c*.

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**Note:** Your system backup must include the `SYSTEM.SCHEMA_VERSION_REGISTRY$` table.

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### Backing Up the Schema Version Registry Table

Your system backup must include the `SYSTEM.SCHEMA_VERSION_REGISTRY$` table.

### Maintaining Custom Domain Environment Settings

Every domain includes dynamically generated domain and server startup scripts, such as `setDomainEnv`. Oracle recommends that you do not modify these startup scripts, as any changes made to them are overwritten during subsequent domain upgrade and reconfiguration operations.

## 2.2.1 Backing Up the Schema Version Registry Table

Your system backup must include the `SYSTEM.SCHEMA_VERSION_REGISTRY$` table.

Each Fusion Middleware schema has a row in the `SYSTEM.SCHEMA_VERSION_REGISTRY$` table. If you run the Upgrade Assistant to update an existing schema and it does not succeed, you must restore the original schema before you can try again. Make sure you back up your existing database schemas before you run the Upgrade Assistant.

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**Note:** Performing these backups prior to performing a schema upgrade is a prerequisite for running Upgrade Assistant. In the Upgrade Assistant prerequisites GUI screen, you will be required to acknowledge that backups have been performed, before proceeding with the actual upgrade.

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## 2.2.2 Maintaining Custom Domain Environment Settings

Every domain includes dynamically generated domain and server startup scripts, such as `setDomainEnv`. Oracle recommends that you do not modify these startup scripts, as any changes made to them are overwritten during subsequent domain upgrade and reconfiguration operations.

To maintain your custom domain-level environment settings, creating a separate file to store the custom domain information before you upgrade.

For example, if you want to customize server startup parameters that apply to all servers in a domain, you can create a file called `setUserOverrides.cmd` (Windows) or `setUserOverrides.sh` (UNIX) and configure it to add custom libraries to the WebLogic Server classpath, specify additional java command line options for running the servers, or specify additional environment variables, for instance. Any custom settings you add to this file are preserved during domain upgrade operation and are carried over to the remote servers when using the `pack` and `unpack` commands.

Following is an example of startup customizations in a `setUserOverrides` file:

```
# add custom libraries to the WebLogic Server system claspath
if [ "${POST_CLASSPATH}" != "" ] ; then
    POST_CLASSPATH="${POST_CLASSPATH}${CLASSPATHSEP}${HOME}/foo/fooBar.jar"
    export POST_CLASSPATH
else
    POST_CLASSPATH="${HOME}/foo/fooBar.jar"
    export POST_CLASSPATH
fi
```

```
# specify additional java command line options for servers
JAVA_OPTIONS="${JAVA_OPTIONS} -Dcustom.property.key=custom.value"
```

If the `setUserOverrides` file exists during a server startup, the file is included in the startup sequence and any overrides contained within this file take effect. You must store the `setUserOverrides` file in the `domain_home/bin` directory.

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**Note:**

If you are unable to create the `setUserOverrides` script before an upgrade, you need to reapply your settings as described in [Re-apply Customizations to Startup Scripts](#).

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## 2.3 Cloning Your Production Environment for Testing

Oracle strongly recommends that you create a copy of your actual production environment, upgrade the cloned environment, verify that the upgraded components work as expected, and then (and only then) upgrade your production environment.

Upgrades cannot be reversed. In most cases, if an error occurs, you must stop the upgrade and restore the entire environment from backup and begin the upgrade process from the beginning. Identifying potential upgrade issues in a development environment can eliminate unnecessary downtime.

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**Note:** It is beyond the scope of this document to describe the cloning procedures for all components and operating systems. Cloning procedures are component and operating system-specific. At a high level, you install the pre-upgrade version of your component domain on a test machine, create the required schemas using the Repository Creation Utility (RCU), and perform the upgrade.

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Additional benefits of running an upgrade in a cloned production environment include the following:

- Uncover and correct any upgrade issues.
- Practice completing an end-to-end upgrade.

- Understand the upgrade performance and how purge scripts can help.
- Understand the time required to complete the upgrade.
- Understand the database resource usage (such as temporary tablespace; PGA, etc).

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**Note:** You can run the pre-upgrade Readiness Check on the cloned production environment to help identify potential upgrade issues with your data, but you must perform a complete test upgrade on a cloned environment to ensure a successful upgrade.

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## 2.4 Verifying Certification and System Requirements

The certification matrix and system requirements documents should be used in conjunction with each other to verify that your environment meets the necessary requirements for installation.

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**Note:** When checking the certification, system requirements, and interoperability information, be sure to check specifically for any 32-bit or 64-bit system requirements. It is important for you to download software specifically designed for the 32-bit or 64-bit environment, explicitly.

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**Warning:** Make sure that your current environment has been patched to the latest patch set BEFORE you begin the upgrade. Certifications are based on fully patched environments unless stated otherwise.

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### Verify Your Environment Meets Certification Requirements

Oracle has tested and verified the performance of your product on all certified systems and environments. Make sure that you are installing your product on a supported hardware or software configuration

### Verify System Requirements and Specifications

It is important to verify that the system requirements such as disk space, available memory, specific platform packages and patches, and other operating system-specific items are met.

### Verify that the Database Hosting Oracle Fusion Middleware Is Supported

You must have a supported Oracle database configured with the required schemas before you run Oracle Fusion Middleware 12c.

### Verify that the JDK is Certified for This Release of Oracle Fusion Middleware

Before you can install any Oracle Fusion Middleware product using a generic installer, you must download and install a supported JDK on your system.

## 2.4.1 Verify Your Environment Meets Certification Requirements

Oracle has tested and verified the performance of your product on all certified systems and environments. Make sure that you are installing your product on a supported hardware or software configuration

Whenever new certifications occur, they are added to the proper certification document right away. New certifications can occur at any time, and for this reason the

certification documents are kept outside of the documentation libraries and are available on Oracle Technology Network. For more information, see Certification Matrix for 12c (12.2.1.1).

## 2.4.2 Verify System Requirements and Specifications

It is important to verify that the system requirements such as disk space, available memory, specific platform packages and patches, and other operating system-specific items are met.

The Oracle Fusion Middleware System Requirements and Specifications document should be used to verify that the requirements of the certification are met. For example, if the certification document indicates that your product is certified for installation on 64-Bit Oracle Linux 7, this document should be used to verify that your Oracle Linux 7 system has met the required minimum specifications, like disk space, available memory, specific platform packages and patches, and other operating system-specific items. This document is updated as needed and resides outside of the documentation libraries. The latest version is available on Oracle Technology Network.

For a complete description of the system requirements for installing and upgrading to Oracle Fusion Middleware 12c, see Review System Requirements and Specifications.

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---

**Note:** When you install the Oracle Fusion Middleware Release 12c software in preparation for upgrade, you should use the same user account that you used to install and configure the existing, pre-upgrade Oracle Fusion Middleware software. On UNIX operating systems, this will ensure that the proper owner and group is applied to new Oracle Fusion Middleware 12c files and directories

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### [Migrating from a 32-Bit to a 64-Bit Operating System \(Required only if you have a 32-Bit OS\)](#)

This step is only required If you are running a 32-bit environment. If you have a 32-bit OS, then you must migrate your 32-bit environment to a 64-bit software environment before you upgrade.

#### 2.4.2.1 Migrating from a 32-Bit to a 64-Bit Operating System (Required only if you have a 32-Bit OS)

This step is only required If you are running a 32-bit environment. If you have a 32-bit OS, then you must migrate your 32-bit environment to a 64-bit software environment before you upgrade.

Make sure to validate the migration to ensure all your Oracle Fusion Middleware 11g software is working properly on the 64-bit machine, and only then perform the upgrade to Oracle Fusion Middleware 12c.

In these tasks, **host** refers to the 32-bit source machine and **target** refers to the new 64-bit target machine.

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**Note:** These steps assume that your database is located on a separate host and will not be moved.

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Upgrading an operating system typically involves the following:

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**Caution:** These steps are provided as an example of the operating system upgrade process and may or may not include all of the procedures you must perform to update your specific operating system. Consult your operating system's upgrade documentation for more information.

---

#### [Procure the Hardware That Supports the Upgrade's 64-bit Software Requirement](#)

Make sure that you have supported target hardware in place before you begin the upgrade process.

#### [Stop All Processes](#)

Before upgrading, you must stop all processes, including the Administration Server, Managed Servers, and Node Manager, if they are started on the host.

#### [Back Up All Files from the 32-bit Host Machine](#)

Make sure that you have created a complete backup of your entire 11g deployment before you begin the upgrade process. These files can be used if there is an issue during the migration and you have to restart the process.

#### [Set Up the Target 64-bit Machine with the 11g Host Name and IP Address](#)

The host name and IP address of the target machine must be made identical to the host. This requires you to change the IP address and name of the source machine or decommission the source machine to avoid conflicts in the network.

#### [Restore the 11g Backup from 32-bit Host to 64-bit Host](#)

Restore the files you backed from the 32-bit host using the same directory structure that was used in 11g. The directory structure on the target machine must be identical to the structure of the host machine.

#### [Install the 12c Product Distribution\(s\) on the Target Machine](#)

Oracle recommends an Out-of-Place approach for upgrade. Therefore, you must install the 12c product distributions in a new Oracle home on the target machine.

#### [Upgrade the Target 64-bit Environment Using the Standard Upgrade Procedure](#)

After installing the product on the target machine, you must upgrade each product component individually using an upgrade utility specified in the component-specific upgrade guide and complete any post-upgrade tasks.

##### **2.4.2.1.1 Procure the Hardware That Supports the Upgrade's 64-bit Software Requirement**

Make sure that you have supported target hardware in place before you begin the upgrade process.

##### **2.4.2.1.2 Stop All Processes**

Before upgrading, you must stop all processes, including the Administration Server, Managed Servers, and Node Manager, if they are started on the host.

For example, to stop the Administration Server, enter the following command:

```
DOMAIN_HOME/bin/stopWebLogic.sh username password [admin_url]
```



### 2.4.2.1.3 Back Up All Files from the 32-bit Host Machine

Make sure that you have created a complete backup of your entire 11g deployment before you begin the upgrade process. These files can be used if there is an issue during the migration and you have to restart the process.

---

**Note:** If the upgrade from 32-bit to 64-bit takes place on the same machine, there is a risk of corrupting the source environment if the upgrade fails.

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For more information on backing up your 11g files, see [Backing Up Your Environment](#) in *Oracle® Fusion Middleware Administrator's Guide*.

During the upgrade you must have access to the contents of the following:

- 11g Domain Home
- 11g /nodemanager directory located in `$ORACLE_HOME/wlserver/common/`

Some of the backup and recovery procedures described in [Backing Up Your Environment](#) in *Oracle® Fusion Middleware Administrator's Guide* are product-specific. Do not proceed with the upgrade until you have a complete backup.

### 2.4.2.1.4 Set Up the Target 64-bit Machine with the 11g Host Name and IP Address

The host name and IP address of the target machine must be made identical to the host. This requires you to change the IP address and name of the source machine or decommission the source machine to avoid conflicts in the network.

The process of changing an IP address and host name varies by operating system. Consult your operating system's administration documentation for more information.

### 2.4.2.1.5 Restore the 11g Backup from 32-bit Host to 64-bit Host

Restore the files you backed from the 32-bit host using the same directory structure that was used in 11g. The directory structure on the target machine must be identical to the structure of the host machine.

For detailed information about restoring your 11g files to the 64-bit target machine, see [Recovering Your Environment](#) in *Oracle® Fusion Middleware Administrator's Guide*.

### 2.4.2.1.6 Install the 12c Product Distribution(s) on the Target Machine

Oracle recommends an Out-of-Place approach for upgrade. Therefore, you must install the 12c product distributions in a new Oracle home on the target machine.

For detailed instructions on how to obtain 12c distributions, see [Understanding and Obtaining Product Distributions](#). To identify an installation user see [Selecting an Installation User](#). To understand the directory structure for installation and configuration, see [Understanding Directories for Installation and Configuration](#). Refer to the component-specific installation guides for the component(s) you are installing.

### 2.4.2.1.7 Upgrade the Target 64-bit Environment Using the Standard Upgrade Procedure

After installing the product on the target machine, you must upgrade each product component individually using an upgrade utility specified in the component-specific upgrade guide and complete any post-upgrade tasks.

For a complete upgrade procedure, see the component-specific upgrade guide for the component(s) you are upgrading.

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**Note:** The Node Manager upgrade procedure requires access to the original Node Manager files. Use the 11g Node Manger files that you backed up from the 32-bit source machine as part of [Back Up All Files from the 32-bit Host Machine](#).

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### 2.4.3 Verify that the Database Hosting Oracle Fusion Middleware Is Supported

You must have a supported Oracle database configured with the required schemas before you run Oracle Fusion Middleware 12c.

It is assumed that you understand the Oracle Database requirements when upgrading and ensure that the database hosting Oracle Fusion Middleware is supported and has sufficient space to perform an upgrade. For more information, see Certification Matrix for 12c (12.2.1.1).

### 2.4.4 Verify that the JDK is Certified for This Release of Oracle Fusion Middleware

Before you can install any Oracle Fusion Middleware product using a generic installer, you must download and install a supported JDK on your system.

At the time this document was published, the certified JDK was 1.8.0\_77.

To download the required JDK, use your browser to navigate to the following URL and download the Java SE JDK:

<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

Make sure that the JDK is installed outside of the Oracle home. The Oracle Universal Installer validates that the designated Oracle home directory is empty, and the install does not progress until an empty directory is specified. If you install JDK under Oracle home, you may experience issues in future operations. Therefore, Oracle recommends that you use install the JDK in the following directory: `/home/oracle/products/jdk`.

For more information on the difference between generic and platform-specific installers, see “Understanding the Difference Between Generic and Platform-Specific Distributions” in the *Oracle Fusion Middleware Download, Installation, and Configuration Readme Files*.

## 2.5 Updating Policy Files when Using Enhanced Encryption (AES 256)

Optional step to perform if you plan to use enhanced encryption, such as Advanced Encryption Standard (AES) 256, in your upgraded environment. Oracle recommends that you apply the latest required policy files to the JDK before you upgrade.

The Java platform defines a set of APIs spanning major security areas, including cryptography, public key infrastructure, authentication, secure communication, and access control. These APIs allow developers to easily integrate security mechanisms into their application code.

Some of the security algorithms used in Fusion Middleware 12c require additional policy files for the JDK. For more information, see [Java Cryptography Architecture Oracle Providers Documentation](#).

If you attempt to use enhanced encryption without applying these policy files to the JDK before you begin the upgrade, the upgrade can fail and you must restore the entire pre-upgrade environment and start the upgrade from the beginning.

## 2.6 Purging Unused Data

Purging unused data and maintaining a purging methodology before an upgrade can optimize the upgrade process.

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**Note:** If a large amount of data needs to be purged, consider partitioning tables or employing other data optimization strategies. Using scripts to remove large amounts of data may impact performance. See *Developing a Purging and Partitioning Methodology* and *Developing a Database Growth Management Strategy*.

---



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Some components have automated purge scripts. If you are using purge scripts, wait until the purge is complete before starting the upgrade process. The upgrade may fail if the purge scripts are running while using the Upgrade Assistant to upgrade your schemas.

### For Oracle Data Integrator (ODI) Components:

Purge the execution logs to avoid exporting and importing excessive data as part of work repository export/import in the next step. See *Purging the Logs*.

### For SOA Suite Components:

If you are migrating closed 11g instance data, run the instance purge scripts before running the upgrade. See [Using Instance Data Purge Scripts](#).

## 2.7 Creating a Non-SYSDBA User to Run Upgrade Assistant

Oracle recommends that you create a non-SYSDBA user called FMW to run the Upgrade Assistant. The FMW user has the privileges required to modify schemas, but does not have full administrator privileges.

SYSDBA is an administrative privilege, required to perform high-level administrative operations such as creating, starting up, shutting down, backing up, or recovering the database. The SYSDBA system privilege is for a fully empowered database administrator. When you connect with the SYSDBA privilege, you connect with a default schema and not with the schema that is generally associated with your user name. For SYSDBA, this schema is SYS. Access to a default schema can be a very powerful privilege. For example, when you connect as user SYS, you have unlimited privileges on data dictionary tables. Therefore, Oracle recommends that you create a Non-SYSDBA user to upgrade the schemas. The privileges listed in this topic must be granted before starting the Upgrade Assistant.

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**Note:** The `v$Xatrans$` table does not exist by default. You must run the `XAVIEW.SQL` script to create this table before creating the user. Moreover, grant on `v$Xatrans$` table is required only for Oracle Identity Manager. If you do not require Oracle Identity Manager for configuration or if you do not have the `v$Xatrans$` table, then remove the following line from the script:

```
grant select on v$Xatrans$ to FMW with grant option;
```

---



---

In the example below, `welcome1` is the password. Make sure that you specify your actual password when granting privileges.

```
create user FMW identified by welcome1;
grant dba to FMW;
grant execute on DBMS_LOB to FMW with grant option;
grant execute on DBMS_OUTPUT to FMW with grant option;
grant execute on DBMS_STATS to FMW with grant option;
grant execute on sys.dbms_aqadm to FMW with grant option;
grant execute on sys.dbms_aqin to FMW with grant option;
grant execute on sys.dbms_aqjms to FMW with grant option;
grant execute on sys.dbms_aq to FMW with grant option;
grant execute on utl_file to FMW with grant option;
grant execute on dbms_lock to FMW with grant option;
grant select on sys.V_$INSTANCE to FMW with grant option;
grant select on sys.GV_$INSTANCE to FMW with grant option;
grant select on sys.V_$SESSION to FMW with grant option;
grant select on sys.GV_$SESSION to FMW with grant option;
grant select on dba_scheduler_jobs to FMW with grant option;
grant select on dba_scheduler_job_run_details to FMW with grant option;
grant select on dba_scheduler_running_jobs to FMW with grant option;
grant select on dba_aq_agents to FMW with grant option;
grant execute on sys.DBMS_SHARED_POOL to FMW with grant option;
grant select on dba_2pc_pending to FMW with grant option;
grant select on dba_pending_transactions to FMW with grant option;
grant execute on DBMS_FLASHBACK to FMW with grant option;
grant execute on dbms_crypto to FMW with grant option;
grant execute on DBMS_REPUTIL to FMW with grant option;
grant execute on dbms_job to FMW with grant option;
grant select on pending_trans$ to FMW with grant option;
grant select on dba_scheduler_job_classes to fmw with grant option;
grant select on SYS.DBA_DATA_FILES to FMW with grant option;
grant select on SYS.V_$ASM_DISKGROUP to FMW with grant option;
grant select on v$xsatrans$ to FMW with grant option;
grant execute on sys.dbms_system to FMW with grant option;
grant execute on DBMS_SCHEDULER to FMW with grant option;
grant select on dba_data_files to FMW with grant option;
grant execute on UTL_RAW to FMW with grant option;
grant execute on DBMS_XMLDOM to FMW with grant option;
grant execute on DBMS_APPLICATION_INFO to FMW with grant option;
grant execute on DBMS_UTILITY to FMW with grant option;
grant execute on DBMS_SESSION to FMW with grant option;
grant execute on DBMS_METADATA to FMW with grant option;
grant execute on DBMS_XMLGEN to FMW with grant option;
grant execute on DBMS_DATAPUMP to FMW with grant option;
grant execute on DBMS_MVIEW to FMW with grant option;
grant select on ALL_ENCRYPTED_COLUMNS to FMW with grant option;
grant select on dba_queue_subscribers to FMW with grant option;
grant execute on SYS.DBMS_ASSERT to FMW with grant option;
```

---

---

**Note:**

**Oracle Database 11.2.0.3 Database Users ONLY:** You must apply **Oracle Patch 13036331** before you begin the upgrade. Go to My Oracle Support to download the patch.

If you do not apply this patch, then you will have to grant additional privileges for some schemas.

---

---

## 2.8 Disabling Internal SSL

You must disable SSL on the internal communication links before you start the upgrade process.

To disable internal SSL:

1. Stop the system by entering the following command:

On UNIX operating system:

```
$DOMAIN_HOME/bitools/bin/stop.sh
```

On Windows operating system:

```
%DOMAIN_HOME%\bitools\bin\stop.cmd
```

2. Enter the following command to disable SSL on WebLogic internal channels and internal components:

On UNIX operating system:

```
$DOMAIN_HOME/bitools/bin/ssl.sh internalssl false
```

On Windows operating system:

```
%DOMAIN_HOME%\bitools\bin\ssl.cmd internalssl false
```

3. Restart the system by entering the following command:

On UNIX operating system:

```
$DOMAIN_HOME/bitools/bin/start.sh
```

On Windows operating system:

```
%DOMAIN_HOME%\bitools\bin\start.cmd
```

## 2.9 Creating a Baseline Report with the Oracle BI Baseline Validation Tool

The Oracle BI Baseline Validation Tool lets you compare two system installations. Run this tool on your pre-upgrade environment to extract result sets from your existing BI deployment and generate comparison files in order to determine whether any changes are needed before making a modified system available to your user community.

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

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To know more about using the Oracle BI Baseline Validation Tool, see *Comparing Oracle Business Intelligence Deployments Using the Oracle Business Intelligence Baseline Validation Tool*. This documentation is available with the Oracle BI Baseline Validation Tool.



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# Performing the Oracle Business Intelligence Upgrade

This chapter contains the procedure to upgrade Oracle Business Intelligence from Release 12.2.1 to Release 12.2.1.1. The upgrade is performed in-place, that is, the upgrade operations are performed on the existing 12.2.1 domain.

If you are upgrading from a 11g release, such as 11.1.1.7.x, follow the procedure described in the BI Migration Guide.

High-level upgrade steps:

## [Installing Fusion Middleware Infrastructure Release 12.2.1.1](#)

Download and install the Fusion Middleware Infrastructure Release 12.2.1.1 on the target system using the procedure in this section.

## [Installing Oracle Business Intelligence Release 12.2.1.1](#)

Download and install the Oracle Business Intelligence distribution on the target system using the procedure in this section.

## [Running the Readiness Check](#)

Oracle recommends that you run the Readiness Check before starting the upgrade process in order to ensure that your pre-upgrade environment is ready for upgrade.

## [Upgrading Schemas with the Upgrade Assistant](#)

After you install the 12.2.1.1 product distributions, you must first upgrade the 12.2.1.0 schemas using the Upgrade Assistant. The Upgrade Assistant provides two options for upgrading schemas: `Individually Selected Schemas` and `All Schemas Used By a Domain`. However, for the topology defined in this document, you must select `All Schemas Used By a Domain`.

## [Backing up the mapViewerConfig.xml File](#)

The `mapViewerConfig.xml` file is overwritten by the reconfiguration templates when you run the Reconfiguration Wizard. Therefore, you must back up the `mapViewerConfig.xml` file before reconfiguring your 12.2.1.0 domain.

## [Reconfiguring the BI Domain with the Reconfiguration Wizard](#)

After upgrading the schemas, run the Reconfiguration Wizard on your existing domain to reconfigure it before upgrading the domain configuration.

## [Restoring the mapViewerConfig.xml File](#)

The `mapViewerConfig.xml` file is overwritten when you run the Reconfiguration Wizard on your domain. You can know that the `mapViewerConfig.xml` file is overwritten by checking its file size. You

must restore the original file that you backed up before upgrading your domain with the Upgrade Assistant.

#### Upgrading the Configuration with the Upgrade Assistant

You must upgrade the 12.1.1.0 domain configuration using the Upgrade Assistant.

## 3.1 Installing Fusion Middleware Infrastructure Release 12.2.1.1

Download and install the Fusion Middleware Infrastructure Release 12.2.1.1 on the target system using the procedure in this section.

To install Fusion Middleware Infrastructure Release 12.2.1.1:

1. Sign in to the target system where you want to install the 12.2.1.1 product distribution.
2. Download the Oracle Fusion Middleware Infrastructure distribution (fmw\_12.2.1.1.0\_infrastructure\_generic.jar) from [Oracle Technology Network](#) or [Oracle Software Delivery Cloud](#) on your target system.
3. Start the installation program by entering the following command:

On UNIX operating system:

```
$JDK_HOME/bin/java [-d64] -jar <distribution_file_name>.jar
```

---

---

**Note:** Use the "-d64" flag only if you are using the HP-UX Itanium system.

---

---

On Windows operating system:

```
%JDK_HOME%\bin\java -jar <distribution_file_name>.jar
```

4. On UNIX operating system, the Installation Inventory Setup screen appears if this is the first time you are installing an Oracle product on this host.

Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location and click **Next**.

---

---

**Note:** Installation Inventory Setup screen does not appear on Windows operating system.

---

---

5. On the Welcome screen, review the information to make sure that you have met all the prerequisites and click **Next**.
6. On the Auto Updates screen, select **Skip Auto Updates** and click **Next**.
  - Skip Auto Updates: If you do not want your system to check for software updates at this time.
  - Select patches from directory: To navigate to a local directory if you downloaded patch files.
  - Search My Oracle Support for Updates: To automatically download software updates if you have a My Oracle Support account. You must enter Oracle Support credentials then click **Search**. To configure a proxy server for the



installer to access My Oracle Support, click **Proxy Settings**. Click **Test Connection** to test the connection.

7. On the Installation Location screen, specify the location for the Oracle home directory and click **Next**.

For more information about Oracle Fusion Middleware directory structure, see *Selecting Directories for Installation and Configuration in Planning an Installation of Oracle Fusion Middleware*.

8. On the Installation Type screen, select **Fusion Middleware Infrastructure** and click **Next**.

---

**Note:** The topology in this document does not include server examples. Oracle strongly recommends that you do not install examples into a production environment.

---

9. On the Security Updates screen, enter your My Oracle Support account information so you can receive the latest product information and security updates via your My Oracle Support account.

This screen appears the first time you install an Oracle product on a host.

If you do not have an Oracle Support account and you are sure that you want to skip this step, clear the check box and verify your selection in the follow-up dialog box.

10. On the Installation Summary screen, verify the installation options you selected.

To save these options to a response file, click **Save Response File** and enter the location and the name of the response file. You can use response files for silent installation. Click **Install**.

11. On the Installation Progress screen, click **Next** when the progress bar displays 100%.

12. The Installation Complete screen displays the Installation Location and the Feature Sets that are installed. Review this information on this screen and click **Finish** to close the installer.

You have installed Fusion Middleware Infrastructure Release 12.2.1.1.

## 3.2 Installing Oracle Business Intelligence Release 12.2.1.1

Download and install the Oracle Business Intelligence distribution on the target system using the procedure in this section.

To install Oracle Business Intelligence Release 12.2.1.1:

1. Sign in to the target system where you want to install the 12.2.1.1 product distribution.
2. Download the Oracle Business Intelligence distribution (fmw\_12.2.1.1.0\_bi\_platform\_linux64.bin for UNIX and fmw\_12.2.1.1.0\_bi\_platform\_linux64.exe for Windows) from [Oracle Technology Network](#) or [Oracle Software Delivery Cloud](#) on your target system.

3. Start the installation program by entering the following command:

On UNIX operating system:

```
./<distribution_file_name>.bin
```

On Windows operating system:

```
<distribution_file_name>.exe
```

4. On UNIX operating system, the Installation Inventory Setup screen appears if this is the first time you are installing an Oracle product on this host.

Specify the location where you want to create your central inventory. Make sure that the operating system group name selected on this screen has write permissions to the central inventory location and click **Next**.

---

---

**Note:** Installation Inventory Setup screen does not appear on Windows operating system.

---

---

5. On the Welcome screen, review the information to make sure that you have met all the prerequisites and click **Next**.

6. On the Auto Updates screen, select **Skip Auto Updates** and click **Next**.

- Skip Auto Updates: If you do not want your system to check for software updates at this time.
- Select patches from directory: To navigate to a local directory if you downloaded patch files.
- Search My Oracle Support for Updates: To automatically download software updates if you have a My Oracle Support account. You must enter Oracle Support credentials then click **Search**. To configure a proxy server for the installer to access My Oracle Support, click **Proxy Settings**. Click **Test Connection** to test the connection.

7. On the Installation Location screen, specify the location for the Oracle home directory and click **Next**.

For more information about Oracle Fusion Middleware directory structure, see *Selecting Directories for Installation and Configuration* in *Planning an Installation of Oracle Fusion Middleware*.

8. On the Installation Type screen, select **BI Platform Distribution** and click **Next**.

9. The Prerequisite Checks screen analyzes the host computer to ensure that the specific operating system prerequisites have been met.

If any prerequisite check fails, then an error message appears at the bottom of the screen. Fix the error and click **Rerun** to try again.

To ignore the error or the warning message and continue with the installation, click **Skip**, however this approach is not recommended.

10. On the Installation Summary screen, verify the installation options you selected.

---

To save these options to a response file, click **Save Response File** and enter the location and the name of the response file. You can use response files for silent installation. Click **Install**.

11. On the Installation Progress screen, click **Next** when the progress bar displays 100%.
12. The Installation Complete screen displays the Installation Location and the Feature Sets that are installed. Review this information on this screen and click **Finish** to close the installer.

You have installed Oracle Business Intelligence Release 12.2.1.1.

### 3.3 Running the Readiness Check

Oracle recommends that you run the Readiness Check before starting the upgrade process in order to ensure that your pre-upgrade environment is ready for upgrade.

[About Running a Pre-Upgrade Readiness Check with the Upgrade Assistant](#)

[Readiness Check Screens](#)

This section describes the screens that are presented when running the Upgrade Assistant in -readiness mode.

#### 3.3.1 About Running a Pre-Upgrade Readiness Check with the Upgrade Assistant

You can run the Upgrade Assistant in -readiness mode to detect issues before you perform the actual upgrade. This can be done using the GUI or with silent upgrades using the response files.

The Upgrade Assistant readiness check performs a **read-only**, pre-upgrade review of your existing Oracle Fusion Middleware schemas and Oracle WebLogic configurations.

The readiness check generates a formatted, time-stamped readiness report so you can address potential issues before you attempt the actual upgrade. If no issues are detected, you can begin the upgrade process. Oracle recommends that you read this report thoroughly before performing an upgrade.

For more information, see the [Sample Readiness Report](#).

---

**Note:** Alternatively, you can run the readiness check in -response mode to perform a silent readiness check using a response file. For more information on using a response file with the Upgrade Assistant, see [Starting the Upgrade Assistant in Response File Mode](#).

---

You can run the readiness check while your existing Oracle Fusion Middleware domain is online (while other users are actively using it), or offline.

Readiness checks can be run any number of times before any actual upgrades are attempted. However, do not run the readiness check after an upgrade has been performed, as the report will not provide valid results.

**Note:**

Oracle recommends that you run the readiness checks during off-peak hours to prevent possible performance degradation.

[Starting the Upgrade Assistant in Readiness Mode](#)

[Performing the Readiness Check](#)

[Understanding the Readiness Report](#)

### 3.3.1.1 Starting the Upgrade Assistant in Readiness Mode

To perform a readiness check on your pre-upgrade environment, you will launch the Upgrade Assistant in `-readiness` mode as shown below:

1. Change directory to `$ORACLE_HOME/oracle_common/upgrade/bin` on UNIX operating systems or `%ORACLE_HOME%/oracle_common/upgrade/bin` on Windows operating systems.
2. Enter the following command to start the Upgrade Assistant.

On UNIX operating systems:

```
./ua -readiness
```

On Windows operating systems:

```
ua.bat -readiness
```

Provide the required information in each of the Upgrade Assistant screens. The screens you see will vary depending on the upgrade options you select. The sections below describe the upgrade options and the information you will need to provide.

### 3.3.1.2 Performing the Readiness Check

When the Upgrade Assistant is started in `-readiness` mode, the following screens appear.

Alternatively, you can run the readiness check using a response file. For more information on using a response file with the Upgrade Assistant, see [Starting the Upgrade Assistant in Response File Mode](#).

Note that these screens are a subset of the screens you will see.

**Table 3-1 Upgrade Assistant Screens: Readiness Check**

Screen	When Screen Appears	Description
<a href="#">Welcome</a>	Always.	This screen provides an overview of the readiness check.

**Table 3-1 (Cont.) Upgrade Assistant Screens: Readiness Check**

Screen	When Screen Appears	Description
Readiness Check Type: <ul style="list-style-type: none"> <li>Individually Selected Schemas</li> <li>Domain Based</li> </ul>	Always.	Readiness checks are only performed on schemas or component configurations that are at a supported upgrade starting point. There are two options to choose from. These options are described below: <ul style="list-style-type: none"> <li><a href="#">Readiness Check Type: Individually Selected Schemas</a> Use the <b>Individually Selected Schemas</b> option to be able to select the schemas you want to review prior to upgrade.</li> <li><a href="#">Readiness Check Type: Domain Based</a> Use the <b>Domain Based</b> option to let the Upgrade Assistant perform a readiness check per domain.</li> </ul>
<a href="#">Available Components</a>	When <b>Individually Selected Schemas</b> option is selected.	This screen lists the available components for which the schemas will be selected. If you select something here, readiness check will be performed on that component's schema.
<a href="#">Schema Credentials</a>	Always.	Use this screen to enter information required to connect to the selected schema and the database that hosts the schema. If the schema that is to be upgraded was created by RCU in a prior Fusion Middleware release then you will see a drop-down menu listing the possible schema names.
<a href="#">Readiness Summary</a>	Always.	This screen provides a high-level overview of the readiness checks to be performed based on your selections.  Click <b>Save Response File</b> if you plan to run the Upgrade Assistant again in —response (or silent) mode.

**Table 3-1 (Cont.) Upgrade Assistant Screens: Readiness Check**

Screen	When Screen Appears	Description
<a href="#">Readiness Check</a>	Always.	<p>This screen displays the current status of the readiness check. Depending on what you have selected to check, the process can take several minutes.</p> <p>For a detailed report, click <b>View Readiness Report</b>. This button appears only after all the readiness checks are complete.</p>
		<hr style="border-top: 3px double #000;"/> <p><b>Caution</b> : To prevent performance degradation, consider running the readiness check during off-peak hours.</p> <hr style="border-top: 3px double #000;"/>
<a href="#">Readiness Success</a>	If the readiness check completes successfully.	<p>You can now review the complete report.</p> <p>If the readiness check encounters an issue or error, review the log file to identify the issues, correct the issues, and then restart the readiness check.</p>

### 3.3.1.3 Understanding the Readiness Report

Now that you have completed the readiness checks for your domain, review the report to determine what actions - if any - need to be taken before the completion of a successful upgrade.

Each Readiness Report contains the following information:

Report Information	Description	Required Action
Overall Readiness Status: SUCCESS or FAILURE	The top of the report indicates whether the Upgrade readiness check passed or completed with one or more errors.	If the report completed with one or more errors, search for FAIL and correct the failing issues before attempting to upgrade. You can re-run the readiness check as many times as necessary before an upgrade.

Report Information	Description	Required Action
Timestamp	This is the date and time that the report was generated.	No action required.
Log file location	This is the directory location of the generated log file.	No action required.
Readiness Report location	This is the directory location of the generated readiness report.	No action required.
Names of components that were checked	The names and versions of the components included in the check and status.	If your domain includes components that cannot be upgraded to this release, such as SOA Core Extension, then do not attempt an upgrade.
Names of schemas that were checked	The names and current versions of the schemas included in the check and status.	Review the version numbers of your schemas. If your domain includes schemas that cannot be upgraded to this release, then do not attempt an upgrade.
Status: FAIL	The individual readiness check test detected an issue.	Do not upgrade until all FAILED issues have been resolved.
Status: PASS	The readiness check test detected no issues.	If your readiness check report shows only the PASS status, then you can upgrade your environment. Note, however, that the Readiness Check cannot detect issues with externals such as hardware or connectivity during an upgrade. You should always monitor the progress of your upgrade.

Here is a sample Readiness Report file. Your report may or may not include all of these checks.

```
Upgrade readiness check completed with one or more errors.
```

```
This readiness check report was created on Tue May 30 11:15:52 EDT 2016
Log file is located at: /scratch/yourname/oracle/work/middleware_latest/
oracle_common/upgrade/logs/ua2016-05-30-11-14-06AM.log
Readiness Check Report File: /scratch/yourname/oracle/work/middleware_latest/
oracle_common/upgrade/logs/readiness2016-05-30-11-15-52AM.txt
```

```
Starting readiness check of components.
```

```
Oracle Metadata Services
```

```
Starting readiness check of Oracle Metadata Services.
```

```
Schema User Name: DEV11_MDS
```

```
Database Type: Oracle Database
```

```
Database Connect String: machinename@yourcompany.com
```

```
VERSION Schema DEV11_MDS is currently at version 12.1.1.1.0. Readiness checks
will now be performed.
```

```
Starting schema test: TEST_REQUIRED_TABLES Test that the schema contains all
the required tables
```

```
Completed schema test: TEST_REQUIRED_TABLES --> Test that the schema contains all
the required tables +++ PASS
```

```

Starting schema test: TEST_REQUIRED_PROCEDURES Test that the schema contains
all the required stored procedures
    EXCEPTION Schema is missing a required procedure: GETREPOSITORYFEATURES
Completed schema test: TEST_REQUIRED_PROCEDURES --> Test that the schema contains
all the required stored procedures +++ FAIL
Starting schema test: TEST_REQUIRED_VIEWS Test that the schema contains all the
required database views
Completed schema test: TEST_REQUIRED_VIEWS --> Test that the schema contains all
the required database views +++ PASS
Starting index test for table MDS_ATTRIBUTES: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_ATTRIBUTES: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS
Starting index test for table MDS_COMPONENTS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_COMPONENTS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS
Starting index test for table MDS_DEPENDENCIES: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_DEPENDENCIES: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS
Starting index test for table MDS_DEPL_LINEAGES: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_DEPL_LINEAGES: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS
Starting index test for table MDS_LABELS: TEST_REQUIRED_INDEXES --> Test that
the table contains all the required indexes
Completed index test for table MDS_LABELS: TEST_REQUIRED_INDEXES --> Test that
the table contains all the required indexes +++ PASS
Starting index test for table MDS_LARGE_ATTRIBUTES: TEST_REQUIRED_INDEXES -->
Test that the table contains all the required indexes
Completed index test for table MDS_LARGE_ATTRIBUTES: TEST_REQUIRED_INDEXES -->
Test that the table contains all the required indexes +++ PASS
Starting index test for table MDS_METADATA_DOCS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_METADATA_DOCS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS
Starting index test for table MDS_NAMESPACES: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_NAMESPACES: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS
Starting index test for table MDS_PARTITIONS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_PARTITIONS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS
Starting index test for table MDS_PATHS: TEST_REQUIRED_INDEXES --> Test that the
table contains all the required indexes
Completed index test for table MDS_PATHS: TEST_REQUIRED_INDEXES --> Test that the
table contains all the required indexes +++ PASS
Starting index test for table MDS_PURGE_PATHS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_PURGE_PATHS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS
Starting index test for table MDS_SANDBOXES: TEST_REQUIRED_INDEXES --> Test that
the table contains all the required indexes
Completed index test for table MDS_SANDBOXES: TEST_REQUIRED_INDEXES --> Test that
the table contains all the required indexes +++ PASS
Starting index test for table MDS_STREAMED_DOCS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_STREAMED_DOCS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS

```



```
Starting index test for table MDS_TRANSACTIONS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes
Completed index test for table MDS_TRANSACTIONS: TEST_REQUIRED_INDEXES --> Test
that the table contains all the required indexes +++ PASS
Starting index test for table MDS_TXN_LOCKS: TEST_REQUIRED_INDEXES --> Test that
the table contains all the required indexes
Completed index test for table MDS_TXN_LOCKS: TEST_REQUIRED_INDEXES --> Test that
the table contains all the required indexes +++ PASS
Starting schema test: TEST_REQUIRED_TRIGGERS Test that the schema has all the
required triggers
Completed schema test: TEST_REQUIRED_TRIGGERS --> Test that the schema has all
the required triggers +++ PASS
Starting schema test: TEST_MISSING_COLUMNS Test that tables and views are not
missing any required columns
Completed schema test: TEST_MISSING_COLUMNS --> Test that tables and views are
not missing any required columns +++ PASS
Starting schema test: TEST_UNEXPECTED_TABLES Test that the schema does not
contain any unexpected tables
Completed schema test: TEST_UNEXPECTED_TABLES --> Test that the schema does not
contain any unexpected tables +++ PASS
Starting schema test: TEST_UNEXPECTED_PROCEDURES Test that the schema does not
contain any unexpected stored procedures
Completed schema test: TEST_UNEXPECTED_PROCEDURES --> Test that the schema does
not contain any unexpected stored procedures +++ PASS
Starting schema test: TEST_UNEXPECTED_VIEWS Test that the schema does not
contain any unexpected views
Completed schema test: TEST_UNEXPECTED_VIEWS --> Test that the schema does not
contain any unexpected views +++ PASS
Starting index test for table MDS_ATTRIBUTES: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes
Completed index test for table MDS_ATTRIBUTES: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
Starting index test for table MDS_COMPONENTS: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes
Completed index test for table MDS_COMPONENTS: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
Starting index test for table MDS_DEPENDENCIES: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes
Completed index test for table MDS_DEPENDENCIES: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
Starting index test for table MDS_DEPL_LINEAGES: TEST_UNEXPECTED_INDEXES -->
Test that the table does not contain any unexpected indexes
Completed index test for table MDS_DEPL_LINEAGES: TEST_UNEXPECTED_INDEXES -->
Test that the table does not contain any unexpected indexes +++ PASS
Starting index test for table MDS_LABELS: TEST_UNEXPECTED_INDEXES --> Test that
the table does not contain any unexpected indexes
Completed index test for table MDS_LABELS: TEST_UNEXPECTED_INDEXES --> Test that
the table does not contain any unexpected indexes +++ PASS
Starting index test for table MDS_LARGE_ATTRIBUTES: TEST_UNEXPECTED_INDEXES -->
Test that the table does not contain any unexpected indexes
Completed index test for table MDS_LARGE_ATTRIBUTES: TEST_UNEXPECTED_INDEXES -->
Test that the table does not contain any unexpected indexes +++ PASS
Starting index test for table MDS_METADATA_DOCS: TEST_UNEXPECTED_INDEXES -->
Test that the table does not contain any unexpected indexes
Completed index test for table MDS_METADATA_DOCS: TEST_UNEXPECTED_INDEXES -->
Test that the table does not contain any unexpected indexes +++ PASS
Starting index test for table MDS_NAMESPACES: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes
Completed index test for table MDS_NAMESPACES: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
Starting index test for table MDS_PARTITIONS: TEST_UNEXPECTED_INDEXES --> Test
```

```
that the table does not contain any unexpected indexes
  Completed index test for table MDS_PARTITIONS: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
  Starting index test for table MDS_PATHS: TEST_UNEXPECTED_INDEXES --> Test that
the table does not contain any unexpected indexes
  Completed index test for table MDS_PATHS: TEST_UNEXPECTED_INDEXES --> Test that
the table does not contain any unexpected indexes +++ PASS
  Starting index test for table MDS_PURGE_PATHS: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes
  Completed index test for table MDS_PURGE_PATHS: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
  Starting index test for table MDS_SANDBOXES: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes
  Completed index test for table MDS_SANDBOXES: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
  Starting index test for table MDS_STREAMED_DOCS: TEST_UNEXPECTED_INDEXES -->
Test that the table does not contain any unexpected indexes
  Completed index test for table MDS_STREAMED_DOCS: TEST_UNEXPECTED_INDEXES -->
Test that the table does not contain any unexpected indexes +++ PASS
  Starting index test for table MDS_TRANSACTIONS: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes
  Completed index test for table MDS_TRANSACTIONS: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
  Starting index test for table MDS_TXN_LOCKS: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes
  Completed index test for table MDS_TXN_LOCKS: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
  Starting schema test: TEST_UNEXPECTED_TRIGGERS Test that the schema does not
contain any unexpected triggers
  Completed schema test: TEST_UNEXPECTED_TRIGGERS --> Test that the schema does not
contain any unexpected triggers +++ PASS
  Starting schema test: TEST_UNEXPECTED_COLUMNS Test that tables and views do not
contain any unexpected columns
  Completed schema test: TEST_UNEXPECTED_COLUMNS --> Test that tables and views do
not contain any unexpected columns +++ PASS
  Starting datatype test for table MDS_ATTRIBUTES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
  Completed datatype test for table MDS_ATTRIBUTES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
  Starting datatype test for table MDS_COMPONENTS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
  Completed datatype test for table MDS_COMPONENTS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
  Starting datatype test for table MDS_DEPENDENCIES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
  Completed datatype test for table MDS_DEPENDENCIES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
  Starting datatype test for table MDS_DEPL_LINEAGES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
  Completed datatype test for table MDS_DEPL_LINEAGES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
  Starting datatype test for table MDS_LABELS: TEST_COLUMN_DATATYPES_V2 --> Test
that all table columns have the proper datatypes
  Completed datatype test for table MDS_LABELS: TEST_COLUMN_DATATYPES_V2 --> Test
that all table columns have the proper datatypes +++ PASS
  Starting datatype test for table MDS_LARGE_ATTRIBUTES: TEST_COLUMN_DATATYPES_V2
--> Test that all table columns have the proper datatypes
  Completed datatype test for table MDS_LARGE_ATTRIBUTES: TEST_COLUMN_DATATYPES_V2
--> Test that all table columns have the proper datatypes +++ PASS
  Starting datatype test for table MDS_METADATA_DOCS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
```

```
Completed datatype test for table MDS_METADATA_DOCS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
Starting datatype test for table MDS_NAMESPACES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
Completed datatype test for table MDS_NAMESPACES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
Starting datatype test for table MDS_PARTITIONS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
Completed datatype test for table MDS_PARTITIONS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
Starting datatype test for table MDS_PATHS: TEST_COLUMN_DATATYPES_V2 --> Test
that all table columns have the proper datatypes
Completed datatype test for table MDS_PATHS: TEST_COLUMN_DATATYPES_V2 --> Test
that all table columns have the proper datatypes +++ PASS
Starting datatype test for table MDS_PURGE_PATHS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
Completed datatype test for table MDS_PURGE_PATHS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
Starting datatype test for table MDS_SANDBOXES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
Completed datatype test for table MDS_SANDBOXES: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
Starting datatype test for table MDS_STREAMED_DOCS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
Completed datatype test for table MDS_STREAMED_DOCS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
Starting datatype test for table MDS_TRANSACTIONS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
Completed datatype test for table MDS_TRANSACTIONS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
Starting datatype test for table MDS_TXN_LOCKS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes
Completed datatype test for table MDS_TXN_LOCKS: TEST_COLUMN_DATATYPES_V2 -->
Test that all table columns have the proper datatypes +++ PASS
Starting permissions test for table MDS_ATTRIBUTES: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
Completed permissions test for table MDS_ATTRIBUTES: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions +++ PASS
Starting permissions test for table MDS_COMPONENTS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
Completed permissions test for table MDS_COMPONENTS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions +++ PASS
Starting permissions test for table MDS_DEPENDENCIES: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
Completed permissions test for table MDS_DEPENDENCIES: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions +++ PASS
Starting permissions test for table MDS_DEPL_LINEAGES: TEST_TABLE_GRANTS -->
Test that tables have the proper GRANT permissions
Completed permissions test for table MDS_DEPL_LINEAGES: TEST_TABLE_GRANTS -->
Test that tables have the proper GRANT permissions +++ PASS
Starting permissions test for table MDS_LABELS: TEST_TABLE_GRANTS --> Test that
tables have the proper GRANT permissions
Completed permissions test for table MDS_LABELS: TEST_TABLE_GRANTS --> Test that
tables have the proper GRANT permissions +++ PASS
Starting permissions test for table MDS_LARGE_ATTRIBUTES: TEST_TABLE_GRANTS -->
Test that tables have the proper GRANT permissions
Completed permissions test for table MDS_LARGE_ATTRIBUTES: TEST_TABLE_GRANTS -->
Test that tables have the proper GRANT permissions +++ PASS
Starting permissions test for table MDS_METADATA_DOCS: TEST_TABLE_GRANTS -->
Test that tables have the proper GRANT permissions
Completed permissions test for table MDS_METADATA_DOCS: TEST_TABLE_GRANTS -->
```

```

Test that tables have the proper GRANT permissions +++ PASS
  Starting permissions test for table MDS_NAMESPACES: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
  Completed permissions test for table MDS_NAMESPACES: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions +++ PASS
  Starting permissions test for table MDS_PARTITIONS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
  Completed permissions test for table MDS_PARTITIONS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions +++ PASS
  Starting permissions test for table MDS_PATHS: TEST_TABLE_GRANTS --> Test that
tables have the proper GRANT permissions
  Completed permissions test for table MDS_PATHS: TEST_TABLE_GRANTS --> Test that
tables have the proper GRANT permissions +++ PASS
  Starting permissions test for table MDS_PURGE_PATHS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
  Completed permissions test for table MDS_PURGE_PATHS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions +++ PASS
  Starting permissions test for table MDS_SANDBOXES: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
  Completed permissions test for table MDS_SANDBOXES: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions +++ PASS
  Starting permissions test for table MDS_STREAMED_DOCS: TEST_TABLE_GRANTS -->
Test that tables have the proper GRANT permissions
  Completed permissions test for table MDS_STREAMED_DOCS: TEST_TABLE_GRANTS -->
Test that tables have the proper GRANT permissions +++ PASS
  Starting permissions test for table MDS_TRANSACTIONS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
  Completed permissions test for table MDS_TRANSACTIONS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions +++ PASS
  Starting permissions test for table MDS_TXN_LOCKS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
  Completed permissions test for table MDS_TXN_LOCKS: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions +++ PASS
  Starting permissions test: TEST_DBA_TABLE_GRANTS Test that DBA user has
privilege to view all user tables
  Completed permissions test: TEST_DBA_TABLE_GRANTS --> Test that DBA user has
privilege to view all user tables +++ PASS
  Starting schema test: TEST_ENOUGH_TABLESPACE Test that the schema tablespaces
automatically extend if full
  Completed schema test: TEST_ENOUGH_TABLESPACE --> Test that the schema
tablespaces automatically extend if full +++ PASS
  Starting schema test: TEST_USER_TABLESPACE_QUOTA Test that tablespace quota for
this user is sufficient to perform the upgrade
  Completed schema test: TEST_USER_TABLESPACE_QUOTA --> Test that tablespace quota
for this user is sufficient to perform the upgrade +++ PASS
  Starting schema test: TEST_ONLINE_TABLESPACE Test that schema tablespaces are
online
  Completed schema test: TEST_ONLINE_TABLESPACE --> Test that schema tablespaces
are online +++ PASS
  Starting schema test: TEST_DATABASE_VERSION Test that the database server
version number is supported for upgrade
  INFO Database product version: Oracle Database 11g Enterprise Edition Release
11.2.0.3.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
  Completed schema test: TEST_DATABASE_VERSION --> Test that the database server
version number is supported for upgrade +++ PASS
  Finished readiness check of Oracle Metadata Services with status: FAILURE.

Common Infrastructure Services
  Starting readiness check of Common Infrastructure Services.
  Schema User Name: DEV1212_STB

```

```
Database Type: Oracle Database
Database Connect String: machinename@yourcompany.com
VERSION Schema STB is currently at version 12.1.2.0.0. Readiness checks will
now be performed.
Starting schema test: TEST_REQUIRED_TABLES Test that the schema contains all
the required tables
Completed schema test: TEST_REQUIRED_TABLES --> Test that the schema contains all
the required tables +++ PASS
Completed schema test: TEST_REQUIRED_TABLES --> Test that the schema contains all
the required tables +++ PASS
Starting schema test: TEST_UNEXPECTED_TABLES Test that the schema does not
contain any unexpected tables
Completed schema test: TEST_UNEXPECTED_TABLES --> Test that the schema does not
contain any unexpected tables +++ PASS
Starting schema test: TEST_REQUIRED_VIEWS Test that the schema contains all the
required database views
Completed schema test: TEST_REQUIRED_VIEWS --> Test that the schema contains all
the required database views +++ PASS
Starting schema test: TEST_MISSING_COLUMNS Test that tables and views are not
missing any required columns
Completed schema test: TEST_MISSING_COLUMNS --> Test that tables and views are
not missing any required columns +++ PASS
Starting schema test: TEST_UNEXPECTED_COLUMNS Test that tables and views do not
contain any unexpected columns
Completed schema test: TEST_UNEXPECTED_COLUMNS --> Test that tables and views do
not contain any unexpected columns +++ PASS
Starting schema test: TEST_UNEXPECTED_PROCEDURES Test that the schema does not
contain any unexpected stored procedures
Completed schema test: TEST_UNEXPECTED_PROCEDURES --> Test that the schema does
not contain any unexpected stored procedures +++ PASS
Starting permissions test: TEST_DBA_TABLE_GRANTS Test that DBA user has
privilege to view all user tables
Starting permissions test: TEST_DBA_TABLE_GRANTS Test that DBA user has
privilege to view all user tables
Completed permissions test: TEST_DBA_TABLE_GRANTS --> Test that DBA user has
privilege to view all user tables +++ PASS
Completed permissions test: TEST_DBA_TABLE_GRANTS --> Test that DBA user has
privilege to view all user tables +++ PASS
Starting permissions test for table COMPONENT_SCHEMA_INFO: TEST_TABLE_GRANTS -->
Test that tables have the proper GRANT permissions
Completed permissions test for table TEST_TABLE_GRANTS: Test that tables have the
proper GRANT permissions --> PASS +++ {3}
Starting permissions test for table SERVICETABLE: TEST_TABLE_GRANTS --> Test
that tables have the proper GRANT permissions
Completed permissions test for table TEST_TABLE_GRANTS: Test that tables have the
proper GRANT permissions --> PASS +++ {3}
Starting datatype test for table COMPONENT_SCHEMA_INFO: TEST_COLUMN_DATATYPES_V2
--> Test that all table columns have the proper datatypes
Completed datatype test for table COMPONENT_SCHEMA_INFO: TEST_COLUMN_DATATYPES_V2
--> Test that all table columns have the proper datatypes +++ PASS
Starting datatype test for table SERVICETABLE: TEST_COLUMN_DATATYPES_V2 --> Test
that all table columns have the proper datatypes
Completed datatype test for table SERVICETABLE: TEST_COLUMN_DATATYPES_V2 --> Test
that all table columns have the proper datatypes +++ PASS
Starting index test for table COMPONENT_SCHEMA_INFO: TEST_REQUIRED_INDEXES -->
Test that the table contains all the required indexes
Completed index test for table COMPONENT_SCHEMA_INFO: TEST_REQUIRED_INDEXES -->
Test that the table contains all the required indexes +++ PASS
Starting index test for table COMPONENT_SCHEMA_INFO: TEST_UNEXPECTED_INDEXES -->
Test that the table does not contain any unexpected indexes
Completed index test for table COMPONENT_SCHEMA_INFO: TEST_UNEXPECTED_INDEXES -->
```

```

Test that the table does not contain any unexpected indexes +++ PASS
  Starting index test for table SERVICETABLE: TEST_REQUIRED_INDEXES --> Test that
the table contains all the required indexes
  Completed index test for table SERVICETABLE: TEST_REQUIRED_INDEXES --> Test that
the table contains all the required indexes +++ PASS
  Starting index test for table SERVICETABLE: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes
  Completed index test for table SERVICETABLE: TEST_UNEXPECTED_INDEXES --> Test
that the table does not contain any unexpected indexes +++ PASS
  Starting schema test: TEST_UNEXPECTED_TRIGGERS Test that the schema does not
contain any unexpected triggers
  Completed schema test: TEST_UNEXPECTED_TRIGGERS --> Test that the schema does not
contain any unexpected triggers +++ PASS
  Starting schema test: TEST_ENOUGH_TABLESPACE Test that the schema tablespaces
automatically extend if full
  Starting schema test: TEST_ENOUGH_TABLESPACE Test that the schema tablespaces
automatically extend if full
  Completed schema test: TEST_ENOUGH_TABLESPACE --> Test that the schema
tablespaces automatically extend if full +++ PASS
  Completed schema test: TEST_ENOUGH_TABLESPACE --> Test that the schema
tablespaces automatically extend if full +++ PASS
  Starting schema test: TEST_ONLINE_TABLESPACE Test that schema tablespaces are
online
  Starting schema test: TEST_ONLINE_TABLESPACE Test that schema tablespaces are
online
  Completed schema test: TEST_ONLINE_TABLESPACE --> Test that schema tablespaces
are online +++ PASS
  Completed schema test: TEST_ONLINE_TABLESPACE --> Test that schema tablespaces
are online +++ PASS
  Starting schema test: TEST_USER_TABLESPACE_QUOTA Test that tablespace quota for
this user is sufficient to perform the upgrade
  Starting schema test: TEST_USER_TABLESPACE_QUOTA Test that tablespace quota for
this user is sufficient to perform the upgrade
  Completed schema test: TEST_USER_TABLESPACE_QUOTA --> Test that tablespace quota
for this user is sufficient to perform the upgrade +++ PASS
  Completed schema test: TEST_USER_TABLESPACE_QUOTA --> Test that tablespace quota
for this user is sufficient to perform the upgrade +++ PASS
  Starting schema test: TEST_DATABASE_VERSION Test that the database server
version number is supported for upgrade
  Starting schema test: TEST_DATABASE_VERSION Test that the database server
version number is supported for upgrade
  INFO Database product version: Oracle Database 11g Enterprise Edition Release
11.2.0.3.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
  Completed schema test: TEST_DATABASE_VERSION --> Test that the database server
version number is supported for upgrade +++ PASS
  Completed schema test: TEST_DATABASE_VERSION --> Test that the database server
version number is supported for upgrade +++ PASS
  Finished readiness check of Common Infrastructure Services with status: SUCCESS.

Finished readiness check of components.

```

### 3.3.2 Readiness Check Screens

This section describes the screens that are presented when running the Upgrade Assistant in -readiness mode.

The Upgrade Assistant can be run in -readiness mode before you perform the actual upgrade to detect any potential problems with the pre-upgrade environment.

## Welcome

### Readiness Check Type: Individually Selected Schemas

### Readiness Check Type: Domain Based

The **Domain Based** option is used to check all of the upgrade-eligible schemas and/or component configurations used by the domain. The Upgrade Assistant detects all of the schemas for you. You can check schemas and component configurations at the same time. Or, if you prefer, you can select one or the other. In either case, you must specify the **Domain Directory** that is to be reviewed.

### Available Components

This screen appears if you select **Individually Selected Schemas** in the Schemas screen.

### Schema Credentials

### Readiness Summary

### Readiness Check

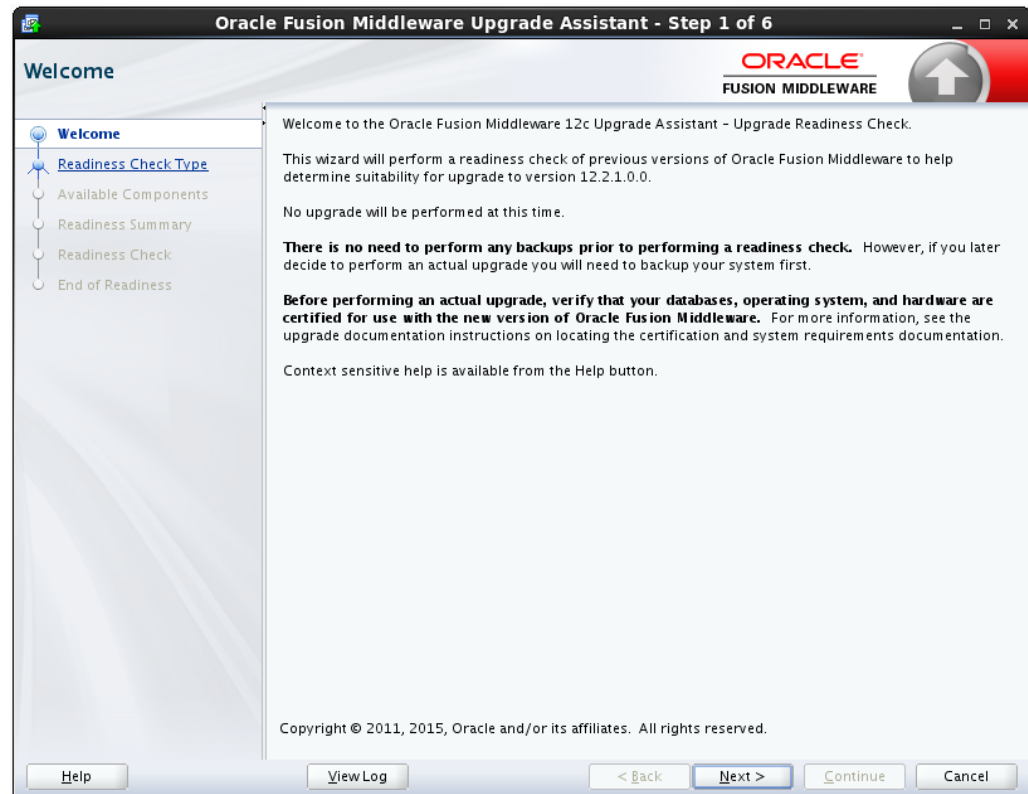
### Log Viewer

### Readiness Success

### Sample Readiness Report

## 3.3.2.1 Welcome

Figure 3-1 Readiness Welcome



The Upgrade Assistant Readiness Check performs a read-only, pre-upgrade review of your existing Oracle Fusion Middleware schemas and Oracle WebLogic component configurations.

The Readiness Check provides a formatted, time-stamped Readiness Report so you can address any issues before you attempt the actual upgrade. If no issues are detected, you can begin the upgrade process.

The Upgrade Assistant Readiness Check can be run with your existing 11g or 12c domain online or offline.

---

---

**Note:** While readiness check ships with 12.2.1, it only checks supported pre-upgrade environments.

---

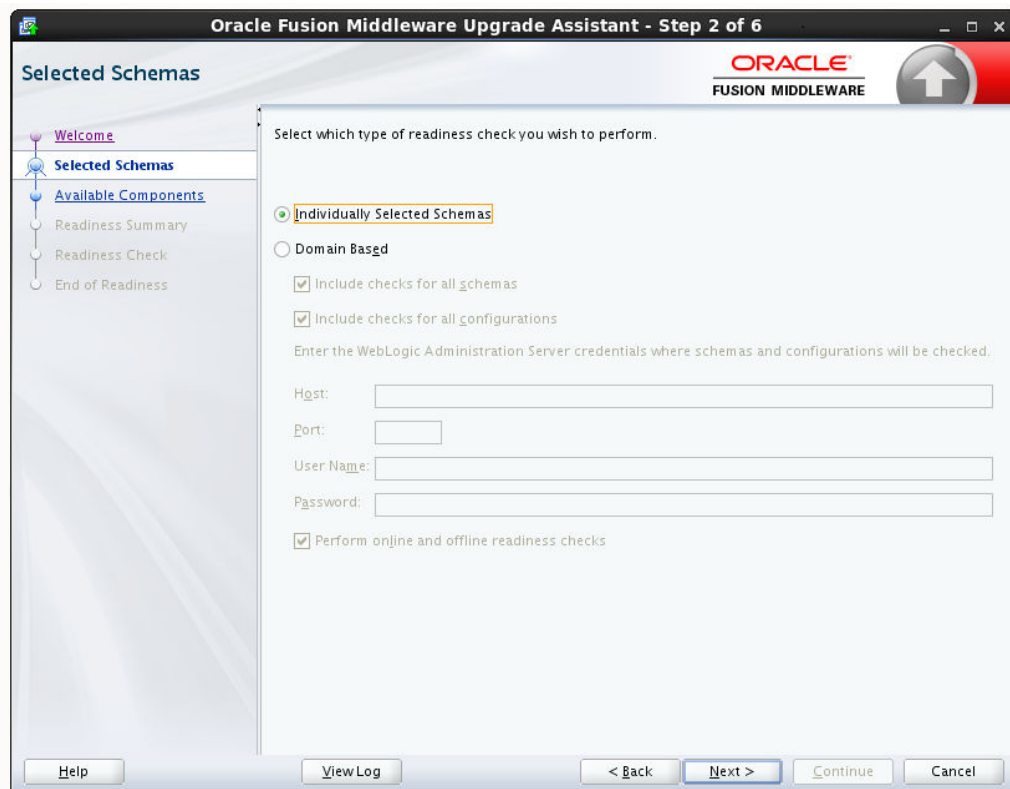
---

The Readiness Check can be run any number of times before the actual upgrade is performed. However, do not run after the Readiness Check after an upgrade has been performed, as the report will not provide valid results.

Oracle recommends that you read this report thoroughly before performing an upgrade.

### 3.3.2.2 Readiness Check Type: Individually Selected Schemas

**Figure 3-2** *Individually Selected Schemas*



You have two options when running the readiness check:

- **Individually Selected Schemas**
- **Domain Based**



Select the **Individually Selected Schemas** option to limit the check to specific schemas. Click **Next** and you will be required to supply the schema credentials.

Readiness checks are performed on the schemas that you connect to. The readiness check report tells you whether a schema is supported for an upgrade, or where an upgrade is needed.

### 3.3.2.3 Readiness Check Type: Domain Based

The **Domain Based** option is used to check all of the upgrade-eligible schemas and/or component configurations used by the domain. The Upgrade Assistant detects all of the schemas for you. You can check schemas and component configurations at the same time. Or, if you prefer, you can select one or the other. In either case, you must specify the **Domain Directory** that is to be reviewed.

You have several options when checking the WebLogic Server domain.

You can select one - or more - of the following options each time you run the Domain Based Readiness Check:

- **Include checks for all schemas**

Select this option to enable the Upgrade Assistant to discover and review all components that have a schema available to upgrade.

- **Include checks for all configurations**

Select this option to review component configurations for a managed WebLogic Server domain.

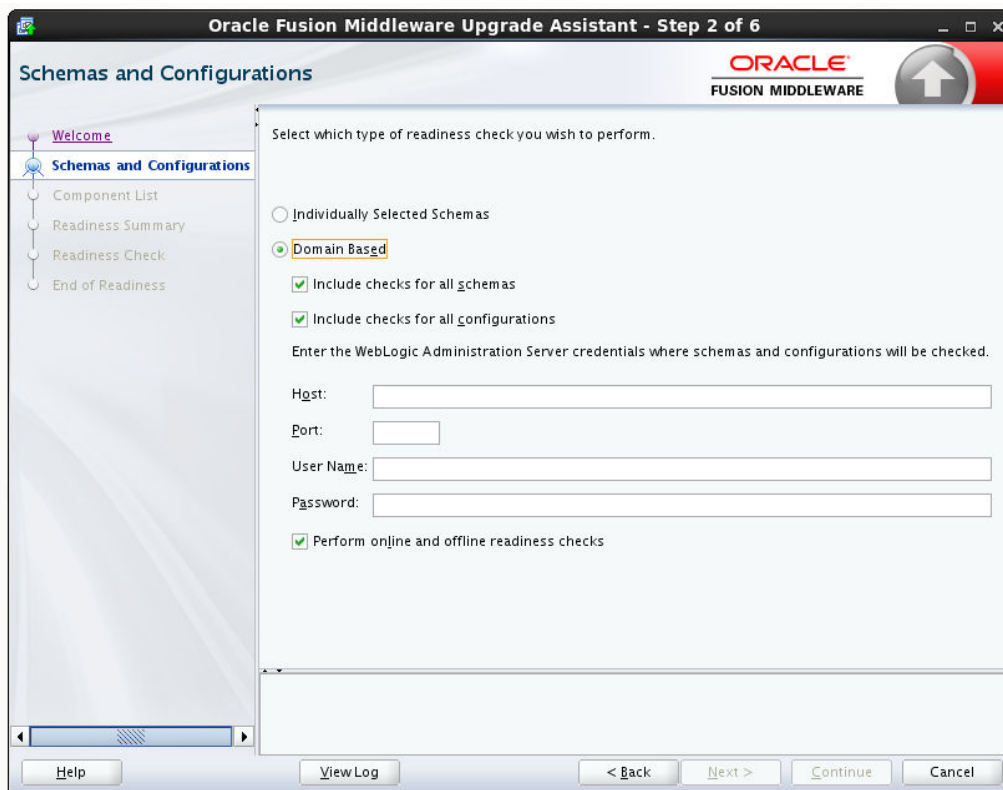
You can perform domain configuration check even when the domain is online or offline.

- **Perform online and offline readiness checks.**

Select this option to perform additional online readiness checks. This option will require your domain to be online. You must provide the domain's host name, port, user name, and password that you plan to check.

If you do not select this option your domain can be offline. You must provide the domain location that you plan to check.

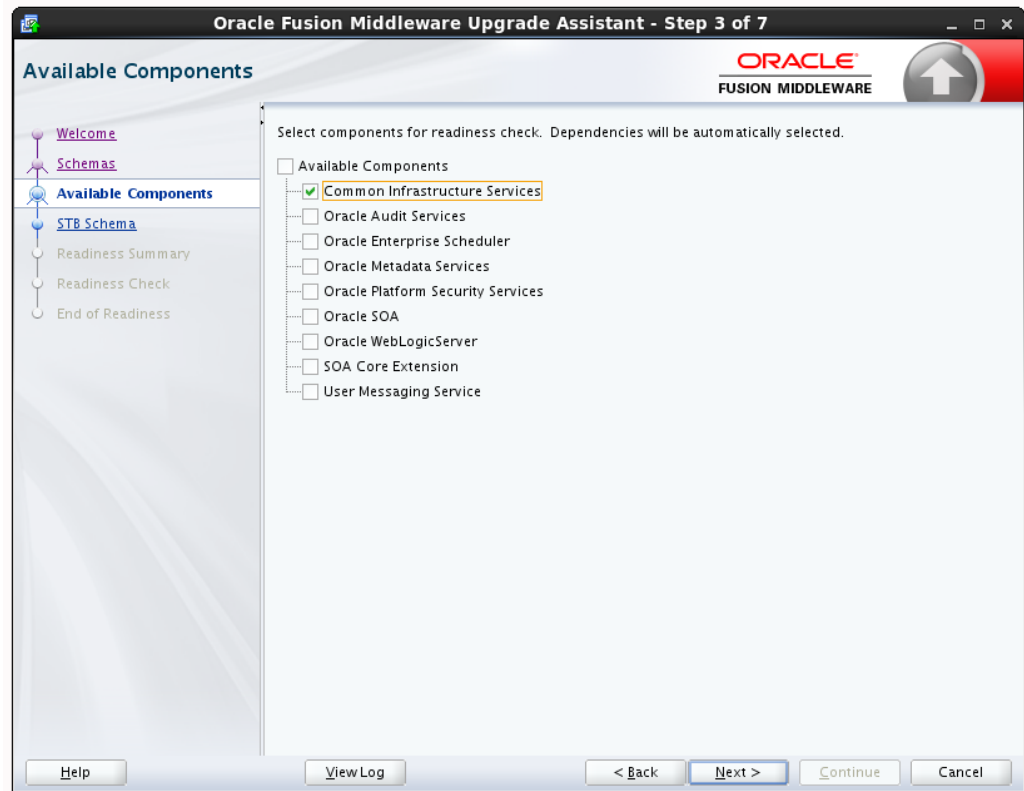
Figure 3-3 WebLogic Server Readiness Check Options



### 3.3.2.4 Available Components

This screen appears if you select **Individually Selected Schemas** in the Schemas screen.

**Figure 3-4 Available Components**



If you chose **Individually Selected Schemas** this screen lists the available components for which the schemas will be selected. If you select something here, readiness check will be performed on that component's schema. You must select one or more components from the list to perform readiness check on them.

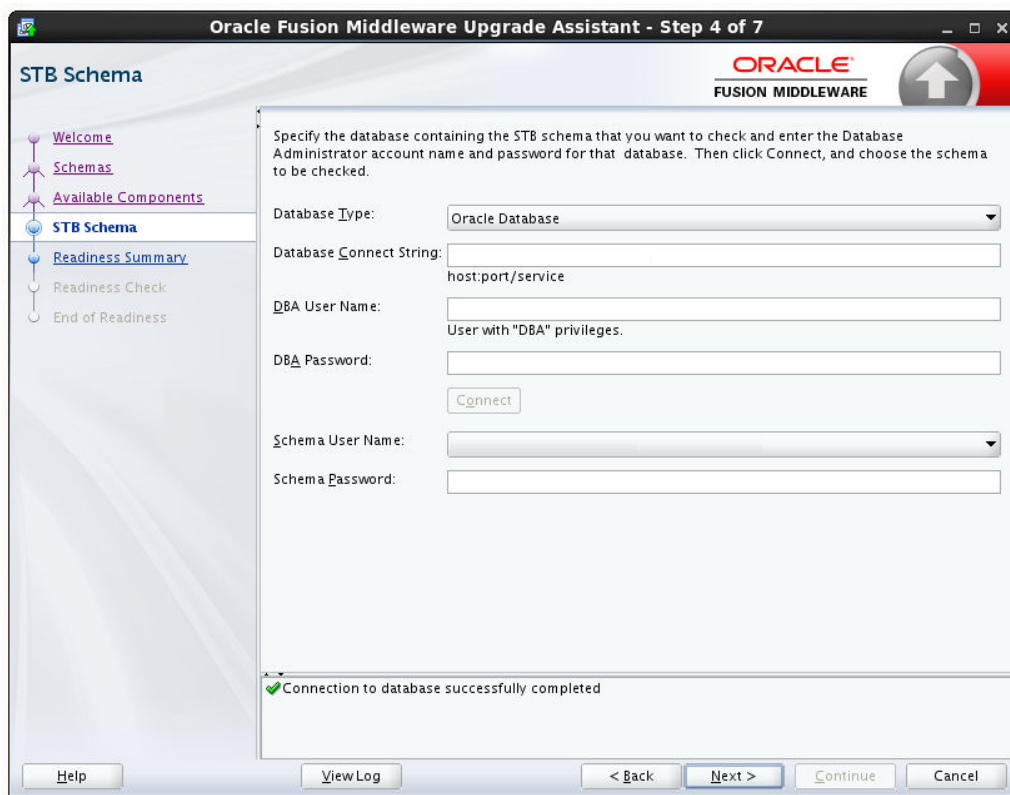
### 3.3.2.5 Schema Credentials

Use this screen to enter information required to connect to the selected schema and the database that hosts the schema. If the schema that is to be reviewed was created by RCU in a prior Fusion Middleware release then you will see a drop-down menu listing the possible schema names as shown below.

Click **Connect** to connect to the database then select the schema to be reviewed. NOTE: Most schemas will have this information pre-populated. If, however, the Upgrade Assistant is unable to detect the connection details, then they must be entered manually as shown below.

If multiple components are selected, then the Schema Credential screens appear in dependency order.

**Figure 3-5 Schema Credentials**

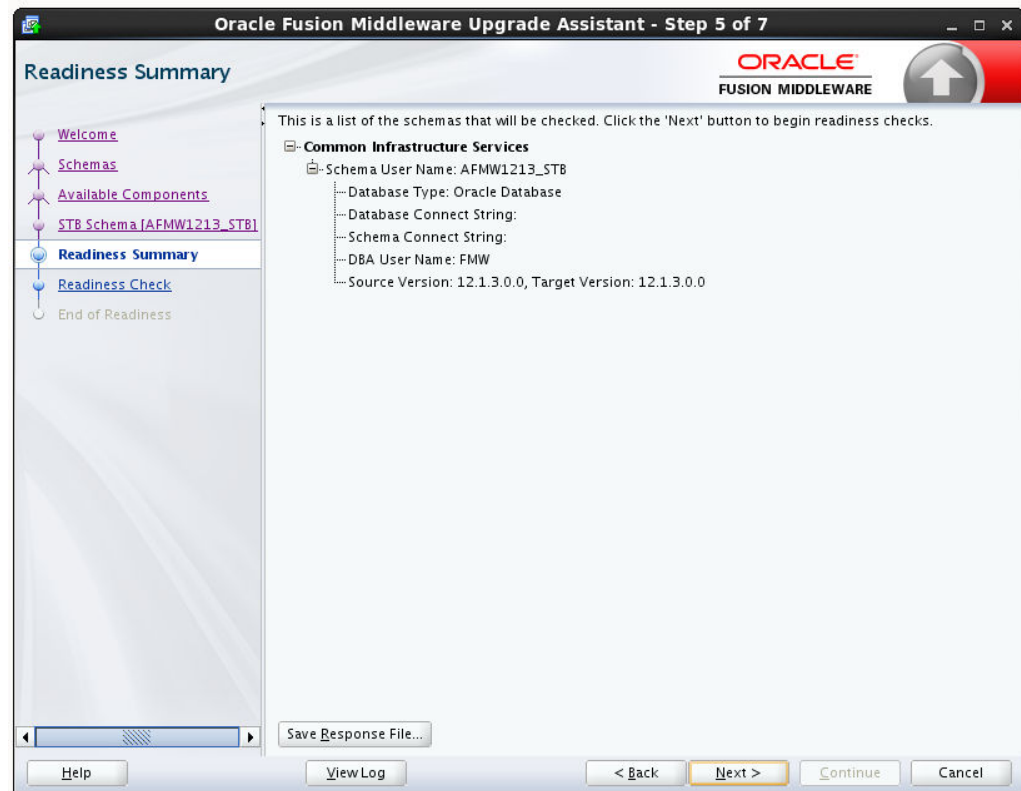


### 3.3.2.6 Readiness Summary

This screen provides a high-level overview of the readiness checks performed based on your selections.

For a detailed report, click **View Log**.

Figure 3-6 Readiness Summary

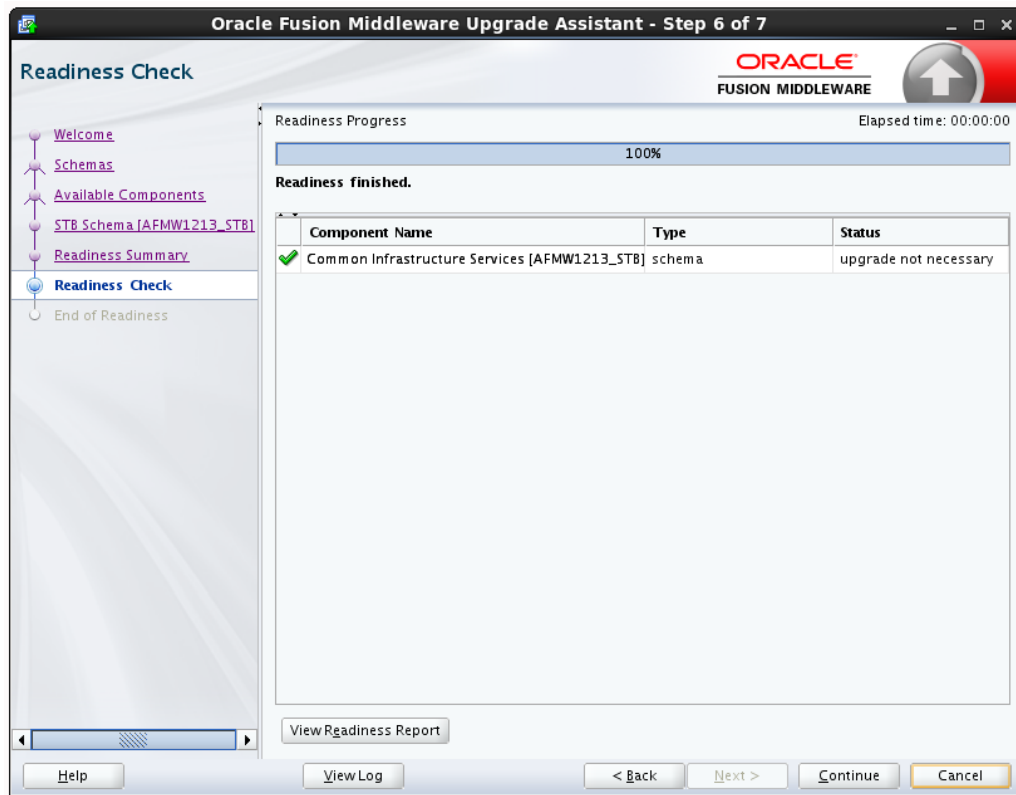


### 3.3.2.7 Readiness Check

This screen shows the overall progress and completion details of the running readiness check. If you are checking multiple components, then each gets component will have its own progress bar and will be checked in parallel. Once completed, click **View Readiness Report** to see the full text report.

**CAUTION:** If you are running the readiness check on your online production environment, Oracle recommends that you perform the check during off-peak hours to prevent performance degradation.

**Figure 3-7 Readiness Check Complete**

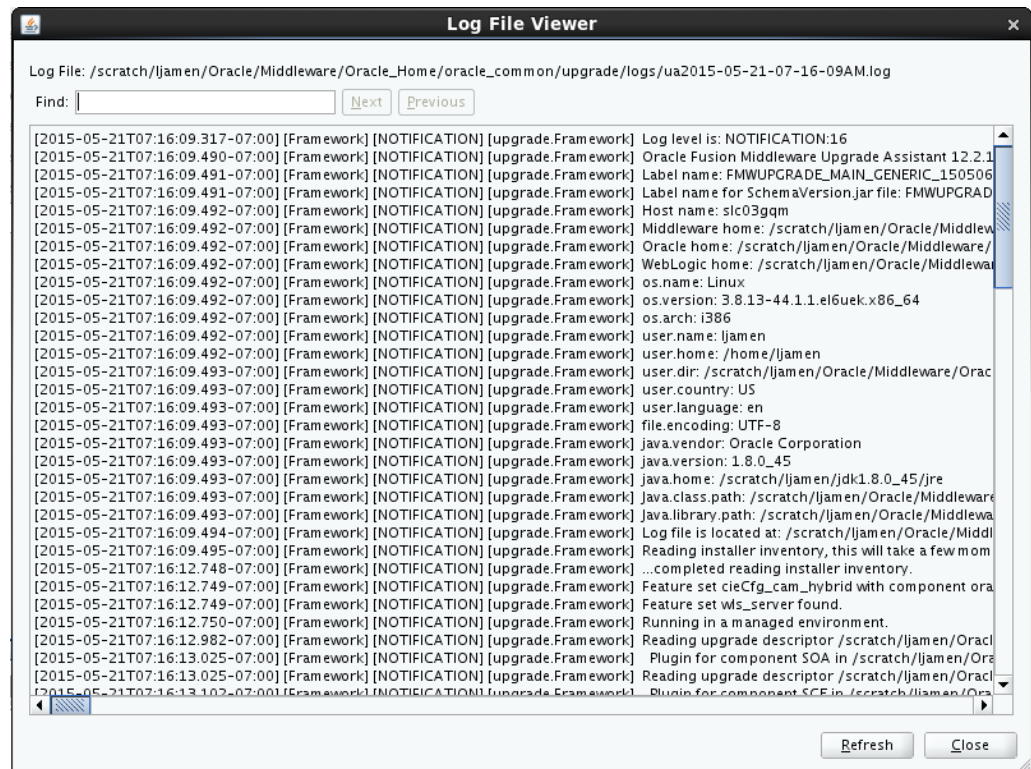


### 3.3.2.8 Log Viewer

Click **View Log** from any of the screens to see the latest logged information.

The log file is managed by the command line options you set. See [Starting the Upgrade Assistant with Additional Parameters \(Optional\)](#) for more information.

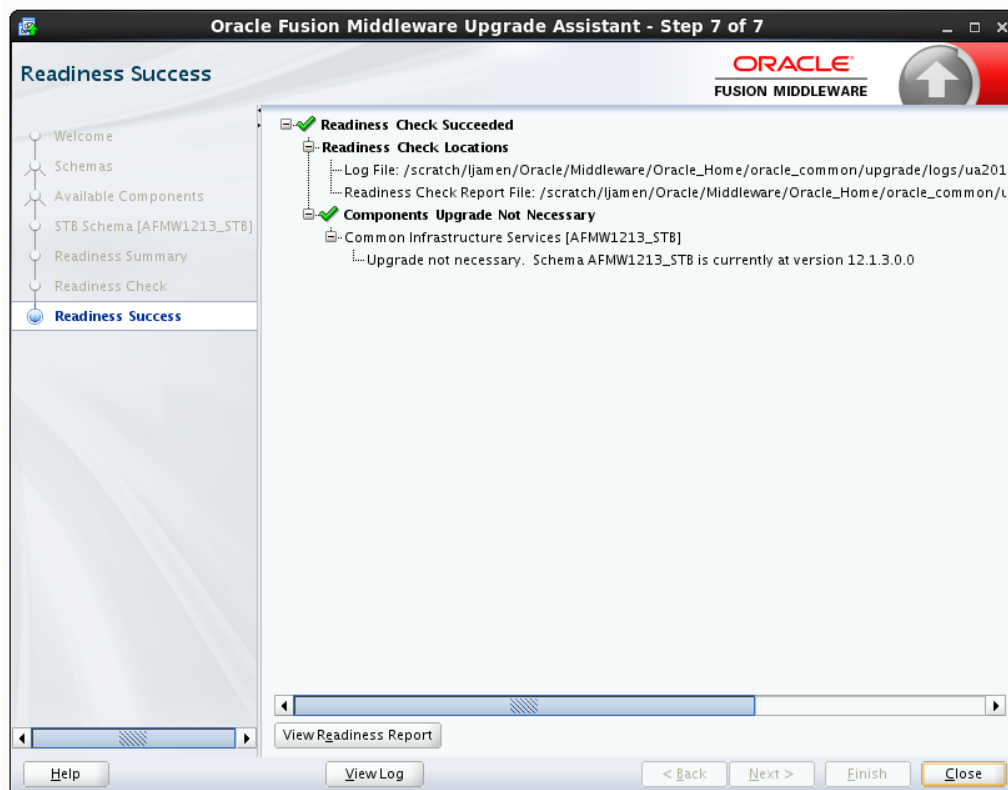
Figure 3-8 Sample Log File



### 3.3.2.9 Readiness Success

Readiness success indicates that the readiness review was successfully completed.

Even with a successful completion of the review, you should still click **View Readiness Report** and review the Readiness Report before you perform the actual upgrade.

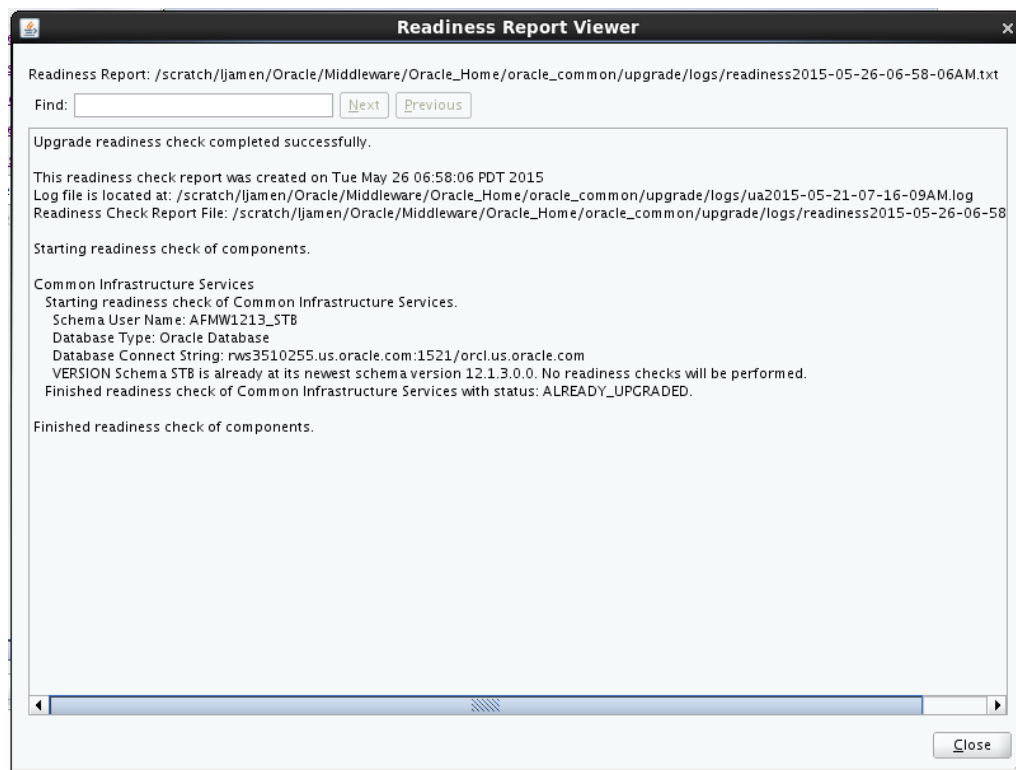
**Figure 3-9 End of Readiness: Readiness Success**

### 3.3.2.10 Sample Readiness Report

A formatted Readiness Report is prepared for you after running the check. Make sure that you review the report and correct any issues before you start the actual upgrade. Use the Find option to search for a particular word within the report (such as a schema name or command, for example.)

The report also indicates where the completed Readiness Check Report file is located.



**Figure 3-10 Readiness Report Viewer**

## 3.4 Upgrading Schemas with the Upgrade Assistant

After you install the 12.2.1.1 product distributions, you must first upgrade the 12.2.1.0 schemas using the Upgrade Assistant. The Upgrade Assistant provides two options for upgrading schemas: *Individually Selected Schemas* and *All Schemas Used By a Domain*. However, for the topology defined in this document, you must select *All Schemas Used By a Domain*.

### Individually Selected Schemas

This option enables you to select the component schemas you want to upgrade. Select this option when you have other component schemas within the domain that you do not want to upgrade.

### All Schemas Used By a Domain

This option allows the Upgrade Assistant to detect all the available schemas within the specified domain and include them in the upgrade.

#### [Identifying Schemas that Can be Upgraded with the Upgrade Assistant](#)

Review the list of available schemas before you begin the upgrade by querying the schema version registry.

#### [Upgrading the Schemas with the Upgrade Assistant](#)

Run the Upgrade Assistant to upgrade all the schemas in the 12.2.1.0 domain to 12.2.1.1.

### 3.4.1 Identifying Schemas that Can be Upgraded with the Upgrade Assistant

Review the list of available schemas before you begin the upgrade by querying the schema version registry.

This optional step can be used if you want to manually query the `schema_version_registry` table before you start the upgrade process. It is important to note that the Upgrade Assistant identifies all schemas that are available for an upgrade and allows you to select the individual schemas you want to upgrade or allow Upgrade Assistant to upgrade all of the schemas in the domain. In addition, when you run the Upgrade Assistant in `-readiness` mode, you will receive a report with all of the schemas and their current pre-upgrade versions.

If you are using an Oracle database, connect to the database as a user having Oracle DBA privileges, and run the following from SQL\*Plus to get the current version numbers:

```
SET LINE 120
COLUMN MRC_NAME FORMAT A14
COLUMN COMP_ID FORMAT A20
COLUMN VERSION FORMAT A12
COLUMN STATUS FORMAT A9
COLUMN UPGRADED FORMAT A8
SELECT MRC_NAME, COMP_ID, OWNER, VERSION, STATUS, UPGRADED FROM
SCHEMA_VERSION_REGISTRY ORDER BY MRC_NAME, COMP_ID ;
```

The following report is generated when saved to a SQL script, for example `version.sql`.

If the number in the "VERSION" is at 11.1.1.7.0 or higher, and the STATUS column is 'VALID', then the schema is supported for upgrade.

If an upgrade is not needed for a schema, the `schema_version_registry` table retains the schemas at their pre-upgrade version after the upgrade.

**Tip:**

Compare the information you collect from the schema version registry and the corresponding schemas to determine whether there are schemas in your domain that are not available for an upgrade yet.

### Notes about the schemas that need to be upgraded

- For **most** components, the only schema version starting points that are valid for upgrading are 11g Release 1 (1.1.1.7.0, 11.1.1.8.0, or 11.1.1.9.0) or 12c (12.1.2, 12.1.3, or 12.2.1.0). If your schemas are not at a supported version, then you must upgrade them before using the 12c (12.2.1.1) upgrade procedures.

Some components, such as Oracle Enterprise Data Quality and Oracle Golden Gate Veridata, support an upgrade from versions other than the standard Oracle Fusion Middleware supported versions.

Refer to your component-specific installation and upgrade documentation for additional information about the schemas that are required for your upgrade.

- If you used an OID-based policy store in 11g, make sure that you create a new 12c (12.2.1.1) OPSS schema before you perform the upgrade. After the upgrade, the OPSS schema will still remain LDAP-based store.
- You can only upgrade schemas for products that are available for upgrade in the Oracle Fusion Middleware 12c (12.2.1.1) release. **Do not attempt to upgrade a domain that includes components that are not yet available for upgrade to 12c (12.2.1.1).**

### 3.4.2 Upgrading the Schemas with the Upgrade Assistant

Run the Upgrade Assistant to upgrade all the schemas in the 12.2.1.0 domain to 12.2.1.1.

If you are using DB2 in your 12.2.1.0 BI instance, then perform the following before starting the upgrade process:

1. Sign in to the WebLodic Console.
2. Go to **Datasources** under **Services** and select **wlsservices\_datasource**.
3. Change the user for data source 'wlsservices\_datasource' from `<PREFIX>_WLS_RUNTIME` to `<PREFIX>_WLS`.

For example: Change the user from `L1_WLS_RUNTIME` to `L1_WLS`.

You can now proceed with the upgrade process.

To upgrade the 12.2.1.0 schemas:

1. Run the Upgrade Assistant from the 12.2.1.1 Oracle home by entering the following command:

On UNIX operating system:

```
$Oracle_Home/oracle_common/upgrade/bin/ua
```

On Windows operating system:

```
%Oracle_Home%\oracle_common\upgrade\bin\ua.bat
```

2. The Welcome screen provides an overview of the Upgrade Assistant and some information about important pre-upgrade tasks. Click **Next**.

For more information about using the Upgrade Assistant, click **Help** on the Upgrade Assistant screen.

3. On the All Schemas screen, select **All Schemas Used by a Domain** and click **Next**.

When you select **All Schemas Used by a Domain**, the Upgrade Assistant discovers and selects all components that have a schema available to upgrade. Additionally, the Upgrade Assistant pre-populates connection information on the schema input screens.

4. On the Component List screen, verify that all the components and schemas you want to upgrade within a domain are listed and click **Next**.

If you do not see the components or schemas you want to upgrade, click **Back** to go to the previous screen and specify a different domain.

If you want to exclude some components or schemas from the list, navigate back to the All Schemas screen and select **Individually Selected Schemas**. This option allows you to select only those schemas you want included in the upgrade.

5. On the Prerequisites screen, acknowledge that the prerequisites have been met by checking all the check boxes. Click **Next**.

---

---

**Note:** The Upgrade Assistant does not verify whether the prerequisites have been met.

---

---

6. On the BIPLATFORM Schema [BIEE\_PLATFORM] screen, the system automatically populates data in the other fields from the 12.2.1.0 schema.  
  
Enter the database administrator account: DBA username and password for the database containing the BIEE\_PLATFORM schema and click **Connect**.  
  
When you see the message “Connection to database successfully completed”, click **Next**.
7. On the IAU Schema [BIEE\_IAU] screen, the system automatically populates data in the other fields from the 12.2.1.0 schema.  
  
Enter the database administrator account: DBA username and password for the database containing the BIEE\_IAU schema and click **Connect**.  
  
When you see the message “Connection to database successfully completed”, click **Next**.
8. On the OPSS Schema [BIEE\_OPSS] screen, the system automatically populates data in the other fields from the 12.2.1.0 schema.  
  
Enter the database administrator account: DBA username and password for the database containing the BIEE\_OPSS schema and click **Connect**.  
  
When you see the message “Connection to database successfully completed”, click **Next**.
9. On the MDS Schema [BIEE\_MDS] screen, the system automatically populates data in the other fields from the 12.2.1.0 schema.  
  
Enter the database administrator account: DBA username and password for the database containing the BIEE\_MDS schema and click **Connect**.  
  
When you see the message “Connection to database successfully completed”, click **Next**.
10. On the STB Schema [BIEE\_STB] screen, the system automatically populates data in the other fields from the 12.2.1.0 schema.  
  
Enter the database administrator account: DBA username and password for the database containing the BIEE\_STB schema and click **Connect**.  
  
When you see the message “Connection to database successfully completed”, click **Next**.
11. On the WLS Schema [BIEE\_WLS\_RUNTIME] screen, the system automatically populates data in the other fields from the 12.2.1.0 schema.  
  
Enter the database administrator account: DBA username and password for the database containing the BIEE\_WLS\_RUNTIME schema and click **Connect**.  
  
When you see the message “Connection to database successfully completed”, click **Next**.

12. The Examine screen displays the status of the Upgrade Assistant as it examines each component, verifying that the component is ready for upgrade. If the status is "Examine finished.", click **Upgrade**.

If the examine phase fails, Oracle recommends that you cancel the upgrade by clicking **No** on the Examination Failure dialog box. Click **View Log** to see what caused the error and refer to *Troubleshooting Your Upgrade* for information on resolving common upgrade errors.

---

**Note:**

- If you resolve any issues detected during the examine phase without proceeding with the upgrade, you can start the Upgrade Assistant again without restoring from backup. However, if you proceed by clicking **Yes** on the Examination Failure dialog box, you need to restore your pre-upgrade environment from backup before starting the Upgrade Assistant again.
- Canceling the examination process has no effect on the schemas or configuration data; the only consequence is that the information the Upgrade Assistant has collected must be collected again in a future upgrade session.

- 
13. On the Upgrade Summary screen, review the summary of the options you have selected by expanding the tree.

Review the Source Version and the Target Version to make sure that both the versions are correct before proceeding with the upgrade.

The response file collects and stores all the information that you have entered through the Upgrade Assistant's graphical user interface, and enables you to perform a silent upgrade at a later time. The silent upgrade performs exactly the same function that the Upgrade Assistant wizard performs, but you do not have to manually enter the data again. If you want to save these options to a response file, click **Save** and provide the location and name of the response file.

Click **Upgrade** to start the upgrade process.

14. The Upgrade Progress screen shows the status of the upgrade process and the projected Target Version of the component after a successful upgrade. Click **Next**.

---

**Caution:** Allow the Upgrade Assistant enough time to perform the upgrade. Do not cancel the upgrade operation unless absolutely necessary. Doing so may result in an unstable environment.

---

If any components are not upgraded successfully, refer to the Upgrade Assistant log files for more information.

15. If the upgrade is successful, you see the Upgrade Success screen. Click **Close** to complete the upgrade and close the wizard.

The Post-Upgrade Actions window describes the manual tasks you must perform to make the component functional in the new installation. This is an optional window that only appears if a component has post-upgrade steps.

16. If the upgrade has failed, you see the Upgrade Failure screen. This indicates that the upgrade of one or more components has failed. The components cannot be upgraded this time.

Click **View Log** to view and troubleshoot the errors.

Fix the issues in the pre-upgrade environment before starting the Upgrade Assistant again. Restore your pre-upgrade environment from backup (making sure to keep the original backup files in a separate location), fix the issues, and restart the Upgrade Assistant.

### 3.5 Backing up the mapViewerConfig.xml File

The mapViewerConfig.xml file is overwritten by the reconfiguration templates when you run the Reconfiguration Wizard. Therefore, you must back up the mapViewerConfig.xml file before reconfiguring your 12.2.1.0 domain.

#### Backing up the mapViewerConfig.xml File on UNIX Operating System

To back up the mapViewerConfig.xml file:

1. The mapViewerConfig.xml file is present in the following location on your system. Use the list command: `ls -ltr` to check its file size.

```
$DOMAIN_HOME/config/fmwconfig/mapviewer/conf/
mapViewerConfig.xml

-rw-r----- 1 mwport svrtech 2xxx7 May  5 18:45 $DOMAIN_HOME/config/fmwconfig/
mapviewer/conf/mapViewerConfig.xml
```

2. Copy the mapViewerConfig.xml file as shown in the following example:

```
cp $DOMAIN_HOME/config/fmwconfig/mapviewer/conf/
mapViewerConfig.xml $DOMAIN_HOME/config/fmwconfig/mapviewer/
conf/mapViewerConfig_orig.xml
```

A copy of the mapViewerConfig.xml file is created with the filename 'mapViewerConfig\_orig.xml'.

#### Backing up the mapViewerConfig.xml File on Windows Operating System

To back up the mapViewerConfig.xml file:

1. Open a command prompt window and change to the following directory:

```
%DOMAIN_HOME%\config\fmwconfig\mapviewer\conf
\mapViewerConfig.xml
```

2. Enter the following command to check the file size of the mapViewerConfig.xml file:

```
dir
```

3. Copy the mapViewerConfig.xml file as shown in the following example:

```
copy "mapViewerConfig.xml" "mapViewerConfig_original"
```

A copy of the mapViewerConfig.xml file is created with the filename 'mapViewerConfig\_original.xml'.

### 3.6 Reconfiguring the BI Domain with the Reconfiguration Wizard

After upgrading the schemas, run the Reconfiguration Wizard on your existing domain to reconfigure it before upgrading the domain configuration.

To reconfigure the domain:

1. Run the Reconfiguration Wizard by entering the following command:

On UNIX operating system:

```
`${ORACLE_HOME}/oracle_common/common/bin/reconfig.sh
```

On Windows operating system:

```
%ORACLE_HOME%\oracle_common\common\bin\reconfig.cmd
```

---

**Note:** When you run the `reconfig.cmd` or `reconfig.sh` command, you can get the following error message to indicate that the default cache directory is not valid:

```
*sys-package-mgr*: can't create package cache dir
```

You can change the cache directory by including the `-Dpython.cachedir=valid_directory` parameter in the command.

---

Oracle recommends that you specify the “log” option while starting the Reconfiguration Wizard as shown in the following example:

```
./reconfig.sh -log=/${ORACLE_HOME}/logs/reconfig.log -log_priority=ALL
```

You can set the `log_priority` as per your requirements.

2. On the Select Domain screen, specify the location of the domain you want to upgrade or click **Browse** to navigate and select the domain directory. Click **Next**.
3. The Reconfiguration Setup Progress screen shows the progress of the setup process. When complete, click **Next**.

During this process:

- The reconfiguration templates for your installed products, including Fusion Middleware products, are automatically applied. This updates various domain configuration files such as `config.xml`, `config-groups.xml`, and `security.xml` (among others).
  - Schemas, scripts, and other such files that support your Fusion Middleware products are updated.
  - The domain upgrade is validated.
4. On the Domain Mode and JDK screen, select the JDK to use in the domain or click **Browse** to navigate to the JDK you want to use. Click **Next**.

---

**Note:** You cannot change the **Domain Mode** at this stage.

---

For a list of JDKs that are supported for a specific platform, see Oracle Fusion Middleware Supported System Configurations.

5. A JDBC data source contains a pool of database connections that are created when the data source instance is created, deployed or targeted, or at server startup.

Applications look up a data source on the JNDI tree, and then request a connection. When the applications no longer need the connections, they return the connections to the connection pool in the data source.

You can configure the JDBC data sources defined in your domain source on the JDBC Data Sources screen. The JDBC data sources associated with the products for which you are creating the domain are listed in the lower half of the screen.

Select the data source(s) from the **Data Source Name** drop-down list for which you want to specify the settings. The values that you specify are displayed in the appropriate columns in the data source list, for the selected data source.

For Oracle RAC Configuration for data sources, you can select one of the three options:

- Convert to GridLink
- Convert to RAC multi data source
- Don't convert

For more information about each option, click **Help**.

After specifying the details, click **Next**.

If you do not select any data sources on the JDBC Data Sources screen, you get a pop-up with the following warning:

Missing Driver

Click **Ok** to proceed without verification, click **Cancel** to return to the JDBC Data Sources page.

In this case, if you click **Ok**, the data sources are not verified.

6. On the JDBC Data Sources Test screen, select the check box for the data source connection you configured on the JDBC Data Sources screen and click **Test Selected Connections** to test the data source connection.

---

**Note:** In order to test the database connections, the database to which you are connecting must be running. If you do not want to test the connections at this time, do not select any data sources. Click **Next** to continue.

---

7. On the Database Configuration Type screen, select **RCU Data**.

Enter the database connection details using the RCU service table (STB) schema credentials and click **Get RCU Configuration**.

The Reconfiguration Wizard uses this connection to automatically configure the data sources required for components in your domain.

If the check is successful, click **Next**. If the check fails, reenter the connection details correctly and try again.



8. On the JDBC Component Schema Test screen, select all the component schemas and click **Test Selected Connections** to test the connection for each schema.

When the check is complete, click **Next**.

9. On the Advanced Configuration screen, you can select all categories for which you want to perform advanced configuration. For each category you select, the appropriate configuration screen is displayed to allow you to perform advanced configuration.

---

---

**Note:** The categories that are listed on the Advanced Configuration screen depend on the resources defined in the templates you selected for the domain.

---

---

For this upgrade, select none of the options and click **Next**.

10. On the Configuration Summary screen, review the detailed configuration settings of the domain before continuing.

You can limit the items that are displayed in the right-most panel by selecting a filter option from the **View** drop-down list.

To change the configuration, click **Back** to return to the appropriate screen. To reconfigure the domain, click **Reconfig**.

---

---

**Note:** The location of the domain does not change when you reconfigure it.

---

---

11. The Reconfiguration Progress screen displays the progress of the reconfiguration process.

During this process:

- Domain information is extracted, saved, and updated.
- Schemas, scripts, and other such files that support your Fusion Middleware products are updated.

When the progress bar shows 100%, click **Next**.

12. The End of Configuration screen indicates whether the reconfiguration process completed successfully or failed. It also displays the location of the domain that was reconfigured as well as the Administration Server URL (including the listen port). If the reconfiguration is successful, it displays "Oracle WebLogic Server Reconfiguration Succeeded".

If the reconfiguration process did not complete successfully, an error message is displayed to indicate the reason. Take appropriate action to resolve the issue. If you cannot resolve the issue, contact My Oracle Support.

Note the Domain Location and the Admin Server URL for further operations.

### 3.7 Restoring the mapViewerConfig.xml File

The mapViewerConfig.xml file is overwritten when you run the Reconfiguration Wizard on your domain. You can know that the mapViewerConfig.xml file is

overwritten by checking its file size. You must restore the original file that you backed up before upgrading your domain with the Upgrade Assistant.

## Restoring the mapViewerConfig.xml File on UNIX Operating System

To restore the original mapViewerConfig.xml file:

1. Change to the following directory:

```
$DOMAIN_HOME/config/fmwconfig/mapviewer/conf
```

2. Enter the following command to list the files within this directory and check the file size of the mapViewerConfig.xml file:

```
ls -ltr
```

Following is a sample output:

```
-rw-r----- 1 mwport svrtech 2xxx2 May 5 19:07 $DOMAIN_HOME/config/fmwconfig/  
mapviewer/conf/mapViewerConfig.xml
```

---

---

**Note:** The change in the file size implies that the mapViewerConfig.xml file is overwritten by the reconfiguration template.

---

---

3. Restore the original file by renaming the mapViewerConfig\_original.xml to mapViewerConfig.xml.
4. Enter the following command to list the files again and check the file size of the mapViewerConfig.xml file:

```
ls -ltr
```

The file size of the mapViewerConfig.xml file should now match with the file size you obtained while backing up the mapViewerConfig.xml file.

In this example, 2xxx7.

## Restoring the mapViewerConfig.xml File on Windows Operating System

To restore the original mapViewerConfig.xml file:

1. Change to the following directory:

```
%DOMAIN_HOME%\config\fmwconfig\mapviewer\conf
```

2. Enter the following command to list the files within this directory and check the file size of the mapViewerConfig.xml file:

```
dir
```

---

---

**Note:** The change in the file size implies that the mapViewerConfig.xml file is overwritten by the reconfiguration template.

---

---

3. Restore the original file by renaming the mapViewerConfig\_original.xml to mapViewerConfig.xml.
4. Enter the following command to list the files again and check the file size of the mapViewerConfig.xml file:

```
dir
```

The file size of the `mapViewerConfig.xml` file should now match with the file size you obtained while backing up the `mapViewerConfig.xml` file.

### 3.8 Upgrading the Configuration with the Upgrade Assistant

You must upgrade the 12.1.1.0 domain configuration using the Upgrade Assistant.

To upgrade the 12.2.1.1 domain:

1. Run the Upgrade Assistant from the 12.2.1.1 Oracle home by entering the following command:

On UNIX operating system:

```
$Oracle_Home/oracle_common/upgrade/bin/ua
```

On Windows operating system:

```
%Oracle_Home%\oracle_common\upgrade\bin\ua.bat
```

2. The Welcome screen provides an overview of the Upgrade Assistant and some information about important pre-upgrade tasks. Click **Next**.

For more information about using the Upgrade Assistant, click **Help** on the Upgrade Assistant screen.

3. On the All Configurations screen, select **All Configurations Used by a Domain** and specify the 12.2.1.0 domain location in the **Domain Directory** field by entering it directly or by clicking **Browse** to use a navigation tree to select a valid domain directory. Click **Next**.
4. On the Component List screen, verify that all the components you want to upgrade within a domain are listed and click **Next**.

If you do not see the components you want to upgrade, click **Back** to go to the previous screen and specify a different domain.

5. On the Prerequisites screen, acknowledge that the prerequisites have been met by checking all the check boxes. Click **Next**.

---

**Note:** The Upgrade Assistant does not verify whether the prerequisites have been met.

---

6. On the MapViewer Configuration screen, select **12c** and click **Next**.
7. The Examine screen displays the status of the Upgrade Assistant as it examines each component, verifying that the component is ready for upgrade. If the status is "Examine finished.", click **Upgrade**.

If the examine phase fails, Oracle recommends that you cancel the upgrade by clicking **No** on the Examination Failure dialog box. Click **View Log** to see what caused the error and refer to *Troubleshooting Your Upgrade* for information on resolving common upgrade errors.

---

---

**Note:**

- If you resolve any issues detected during the examine phase without proceeding with the upgrade, you can start the Upgrade Assistant again without restoring from backup. However, if you proceed by clicking **Yes** on the Examination Failure dialog box, you need to restore your pre-upgrade environment from backup before starting the Upgrade Assistant again.
  - Canceling the examination process has no effect on the schemas or configuration data; the only consequence is that the information the Upgrade Assistant has collected must be collected again in a future upgrade session.
- 
- 

8. On the Upgrade Summary screen, review the summary of the options you have selected by expanding the tree.

Review the Source Version and the Target Version to make sure that both the versions are correct before proceeding with the upgrade.

The response file collects and stores all the information that you have entered through the Upgrade Assistant's graphical user interface, and enables you to perform a silent upgrade at a later time. The silent upgrade performs exactly the same function that the Upgrade Assistant wizard performs, but you do not have to manually enter the data again. If you want to save these options to a response file, click **Save** and provide the location and name of the response file.

Click **Upgrade** to start the upgrade process.

9. The Upgrade Progress screen shows the status of the upgrade process and the projected Target Version of the component after a successful upgrade. Click **Next**.

---

---

**Caution:** Allow the Upgrade Assistant enough time to perform the upgrade. Do not cancel the upgrade operation unless absolutely necessary. Doing so may result in an unstable environment.

---

---

If any components are not upgraded successfully, refer to the Upgrade Assistant log files for more information.

10. If the upgrade is successful, you see the Upgrade Success screen. Click **Close** to complete the upgrade and close the wizard.

The Post-Upgrade Actions window describes the manual tasks you must perform to make the component functional in the new installation. This is an optional window that only appears if a component has post-upgrade steps.

11. If the upgrade has failed, you see the Upgrade Failure screen. This indicates that the upgrade of one or more components has failed. The components cannot be upgraded this time.

Click **View Log** to view and troubleshoot the errors.

Fix the issues in the pre-upgrade environment before starting the Upgrade Assistant again. Restore your pre-upgrade environment from backup (making sure

to keep the original backup files in a separate location), fix the issues, and restart the Upgrade Assistant.



---

## Post-Upgrade Tasks

After completing the upgrade process, perform the tasks listed in this chapter to start the BI instance and validate the upgrade.

This chapter contains the following topics:

### Enabling Internal SSL

Enable SSL on internal communication links after you complete the

### 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.

## 4.1 Enabling Internal SSL

Enable SSL on internal communication links after you complete the

To enable internal SSL:

1. Stop the system by entering the following command:

On UNIX operating system:

```
$DOMAIN_HOME/bitools/bin/stop.sh
```

On Windows operating system:

```
%DOMAIN_HOME%\bitools\bin\stop.cmd
```

2. Enter the following command to enable SSL on WebLogic internal channels and internal components:

On UNIX operating system:

```
$DOMAIN_HOME/bitools/bin/ssl.sh internalssl true
```

On Windows operating system:

```
%DOMAIN_HOME%\bitools\bin\ssl.cmd internalssl true
```

3. Restart the system by entering the following command:

On UNIX operating system:

```
$DOMAIN_HOME/bitools/bin/start.sh
```

On Windows operating system:

```
%DOMAIN_HOME%\bitools\bin\start.cmd
```

## 4.2 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 11g releases, catalog groups primarily allowed for backward compatibility with earlier releases. In 11g releases, you were encouraged to migrate to and use the more powerful application roles feature for organizing and managing users.

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



---

# Starting the Upgrade Assistant

This topic describes how to run the Oracle Fusion Middleware Upgrade Assistant. You can run the Upgrade Assistant either in the Graphical User Interface (GUI) mode or in the response file mode.

You can use the optional command-line interface arguments, documented in this topic, to upgrade your Oracle Fusion Middleware components to the latest version. In addition, a response file can be generated to automate some of the upgrade tasks.

This topic contains the following sections:

## [Starting the Upgrade Assistant in Graphical User Interface \(GUI\) Mode](#)

The Upgrade Assistant is used to upgrade schemas, component configurations and standalone system components.

## [Starting the Upgrade Assistant in Response File Mode](#)

Silent or “hands free” upgrades can be performed using a response file. The response file can only be created after you have provided the information in the Upgrade Assistant screens.

## [Setting the DISPLAY Environment Variable](#)

## [View Display Error while Generating Oracle R-based Advanced Analytic Reports](#)

If you get the following error while generating Oracle R-based Advanced Analytic reports after you have upgraded to Oracle BI 12.2.1.1, see the procedure in this topic to fix the issue. View Display Error: Odbc driver returned an error (SQLExecDirectW). Error codes: OPR4ONWY, U9IM8TAC, U9IM8TAC, U9IM8TAC, OI2DL65P.

## A.1 Starting the Upgrade Assistant in Graphical User Interface (GUI) Mode

The Upgrade Assistant is used to upgrade schemas, component configurations and standalone system components.

Oracle recommends that you successfully complete the upgrade of schemas and component configurations for a single domain before beginning the upgrade of another domain.

---

**Note:** The Upgrade Assistant should be run by a non-SYSDBA user whenever possible. The steps to create a user who has the privileges required to upgrade the schemas are described in [Creating a Non-SYSDBA User](#).

---

To start the Upgrade Assistant:

1. On UNIX operating systems:: change directory to `ORACLE_HOME/oracle_common/upgrade/bin`.

On Windows operating systems: change directory to *ORACLE\_HOME* \oracle\_common\upgrade\bin.

2. Enter the following command to start the Upgrade Assistant:

On UNIX operating systems:

```
./ua
```

On Windows operating systems:

```
ua.bat
```

You can also launch the Upgrade Assistant with logging parameters as shown in the UNIX example below:

```
./ua [-logLevel <log_level>] [-logDir <log_directory>]
```

Logging level. Select one of the following:

- TRACE
- NOTIFICATION
- WARNING
- ERROR
- INCIDENT\_ERROR

The default logging level is NOTIFICATION.

---

---

**Note:** When troubleshooting, consider setting the `-logLevel` to `TRACE` so that more information will be logged. If additional information is not needed, change the `logLevel` as the Upgrade Assistant's log files can become very large when `-logLevel TRACE` is used.

---

---

### Starting the Upgrade Assistant with Additional Parameters (Optional)

#### A.1.1 Starting the Upgrade Assistant with Additional Parameters (Optional)

Table A-1 lists the command-line parameters you can use while running the Upgrade Assistant in the GUI mode. The following example shows the usage of these parameters on your respective operating system:

**On UNIX operating systems:**

Change directory to *ORACLE\_HOME*/oracle\_common/upgrade/bin

Enter the command: `./ua -help`

**On Windows operating systems:**

Change directory to *ORACLE\_HOME*\oracle\_common\upgrade\bin

Enter the command: `ua.bat -help`

---

**Note:** If you get an Xlib error when starting the Oracle Upgrade Assistant such as "Failed to connect to server", "Connection refused by server", or "Can't open display", then you must set the DISPLAY environment variable and restart the Upgrade Assistant as described in [Setting the DISPLAY Environment Variable](#).

---

**Table A-1** *Upgrade Assistant GUI Command Line Parameters*

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**Table A-1 (Cont.) Upgrade Assistant GUI Command Line Parameters**

Parameter	Required or Optional Parameter?	Description
-logLevel	Optional.	<p>Logging level. Select one of the following:</p> <ul style="list-style-type: none"> <li>• TRACE</li> <li>• NOTIFICATION</li> <li>• WARNING</li> <li>• ERROR</li> <li>• INCIDENT_ERROR</li> </ul> <p>The default logging level is NOTIFICATION.</p>

---



---

**Note:**

When troubles hooting, consider setting the -logLevel to TRACE so that more information will be logged. If additional information is not needed, change the logLevel as the Upgrade Assistant's log files can become very large when -logLevel TRACE is used.

---



---

**Table A-1 (Cont.) Upgrade Assistant GUI Command Line Parameters**

Parameter	Required or Optional Parameter?	Description
-logDir	Optional.	<p>Change the default location of upgrade log files and temporary files. You must specify an existing, writable directory where Upgrade Assistant will create log files and temporary files.</p> <p>On UNIX operating systems, the default locations are:</p> <p><i>ORACLE_HOME</i>/oracle_common/upgrade/logs  <i>ORACLE_HOME</i>/oracle_common/upgrade/temp</p> <p>On Windows operating systems, the default locations are:</p> <p><i>ORACLE_HOME</i>\oracle_common\upgrade\logs  <i>ORACLE_HOME</i>\oracle_common\upgrade\temp</p> <p><b>Note:</b> If you have installed the Upgrade Assistant in a read-only directory, you must specify this parameter to ensure the log directory is writable. If the log directory is read-only, the Upgrade Assistant will fail.</p>
-threads	Optional	<p>Identify the number of threads available for concurrent schema upgrades or readiness checks of the schemas.</p> <p>The value must be a positive integer in the range 1 to 8. Default is 4 threads.</p>

**Table A-1 (Cont.) Upgrade Assistant GUI Command Line Parameters**

Parameter	Required or Optional Parameter?	Description
-readiness	Required for Readiness Check	Performs the upgrade readiness check without performing any actual examines or upgrades. Schemas and configuration are checked.
		<hr/> <b>Note:</b> -readiness option may not appear on the command line with -examine option. <hr/>
		For more information, see <a href="#">Performing the Readiness Check</a>
-help	Optional.	Prints all the command-line options to the console.

## A.2 Starting the Upgrade Assistant in Response File Mode

Silent or “hands free” upgrades can be performed using a response file. The response file can only be created after you have provided the information in the Upgrade Assistant screens.

The following topics describe how you can upgrade the supported Oracle Fusion Middleware components using a response file. The response file collects all the information that you have entered through the Upgrade Assistant's graphical user interface screens, and performs exactly the same function that the Upgrade Assistant wizard performs.

---

**Note:** You must run the Upgrade Assistant in GUI mode first to generate the response file that will be used to complete your silent upgrade.

---

[Creating an Upgrade Response File](#)

[Using the Response File to Upgrade Fusion Middleware](#)

### A.2.1 Creating an Upgrade Response File

The **Save Response File** option on the Upgrade Summary screen creates a file that uses the information you have already provided in the Upgrade Assistant screens. The

response file enables you to use the saved information instead of manually entering data through the Upgrade Assistant wizard screens.

Once you select the **Save Response File** option, you will be prompted for a name and location where you want to create this response file. After it is created, you can use it exactly as-is to replicate the upgrade options on other systems, or modify it as needed.

For more information, see [Using the Response File to Upgrade Fusion Middleware](#).

## A.2.2 Using the Response File to Upgrade Fusion Middleware

To perform upgrades using a response file from the command-line interface (CLI), use the following command:

### On Unix operating systems:

Change directory to `ORACLE_HOME/oracle_common/upgrade/bin`

Execute the following:

```
./ua -response <response_file> [-examine] [-logLevel
<log_level>] [-logDir <log_directory>] [-threads <number>]
```

### On Windows operating systems:

Change directory to `ORACLE_HOME\oracle_common\upgrade\bin`

Execute the following:

```
ua.bat -response <response_file> [-examine] [-logLevel
<log_level>] [-logDir <log_directory>] [-threads <number>]
```

**Table A-2 Upgrade Assistant Response File Mode Command Line Parameters**

Parameter	Required or Optional Parameter?	Description
-readiness	Required for Readiness Check	Performs the upgrade readiness check without performing any actual examines or upgrades. Schemas and configuration are checked.

---

**Note:**

Do not specify this parameter if you have specified the -examine parameter.

---

For more information, see [Performing the Readiness Check](#)

**Table A-2 (Cont.) Upgrade Assistant Response File Mode Command Line Parameters**

Parameter	Required or Optional Parameter?	Description
-threads	Optional	Identify the number of threads available for concurrent schema upgrades or readiness checks of the schemas.  The value must be a positive integer in the range 1 to 8. Default is 4 threads.
-response	Required.	File containing inputs required to perform an upgrade. This file can be generated from inputs entered when the Upgrade Assistant is run in graphical mode.
-examine	Optional.	If this option is present, Upgrade Assistant performs the examine phase but DOES NOT perform any actual upgrades.

**Note:**

Do not specify this parameter if you have specified the -readiness parameter.



**Table A-2 (Cont.) Upgrade Assistant Response File Mode Command Line Parameters**

Parameter	Required or Optional Parameter?	Description
-logLevel	Optional.	<p>Logging level. Select one of the following:</p> <ul style="list-style-type: none"> <li>• TRACE</li> <li>• NOTIFICATION</li> <li>• WARNING</li> <li>• ERROR</li> <li>• INCIDENT_ERROR</li> </ul> <p>The default logging level is NOTIFICATION.</p>

**Note:**  
Consider setting the -logLevel to TRACE so that more information will be logged. This will be useful when troubleshooting a failed upgrade. The Upgrade Assistant's log files can become very large if -logLevel is TRACE is used.

**Table A-2 (Cont.) Upgrade Assistant Response File Mode Command Line Parameters**

Parameter	Required or Optional Parameter?	Description
-logDir	Optional.	<p>Change the default location of upgrade log files and temporary files. You must specify an existing, writable directory where Upgrade Assistant will create log files and temporary files.</p> <p>On UNIX operating systems, the default locations are:</p> <pre>ORACLE_HOME/ oracle_common/upgrade/ logs ORACLE_HOME/ oracle_common/upgrade/ temp</pre> <p>On Windows operating systems, the default locations are:</p> <pre>ORACLE_HOME \oracle_common\upgrade \logs ORACLE_HOME \oracle_common\upgrade \temp</pre>
-help	Optional.	View all of the command line options.

### A.3 Setting the DISPLAY Environment Variable

When running Upgrade Assistant in GUI mode, you must set the DISPLAY variable properly or you may receive errors such as:

**Xlib: connection to ":1.0" refused by server**

**Xlib: No protocol specified**

**Cause:** These errors indicate that the DISPLAY variable is not set up properly to allow a GUI to be displayed to the screen.

**Action:** Set the DISPLAY environment variable to the system name or IP address of your local workstation, and re-run Upgrade Assistant.

If you continue to receive these errors after setting the DISPLAY variable, try launching another GUI tool, such as vncconfig. If you see the same errors, your DISPLAY environment variable may not be set correctly.

## A.4 View Display Error while Generating Oracle R-based Advanced Analytic Reports

If you get the following error while generating Oracle R-based Advanced Analytic reports after you have upgraded to Oracle BI 12.2.1.1, see the procedure in this topic to fix the issue. View Display Error: Odbc driver returned an error (SQLExecDirectW). Error codes: OPR4ONWY, U9IM8TAC, U9IM8TAC, U9IM8TAC, OI2DL65P.

To resolve the view display error:

1. Verify that you are able to successfully generate R-based Advanced Analytic reports in 12.2.1.0 environment.
2. Back up the 12.2.1.0 R script that you have customized.
3. After you have upgraded to 12.2.1.1, rerun the R installation packages (r-installer.zip). The R installation packages are bundled with the BI distribution and are available at the following location:

On UNIX operating system:

```
$ORACLE_HOME/bi/bifoundation/advanced_analytics/
```

On Windows operating system:

```
%ORACLE_HOME%\bi\bifoundation\advanced_analytics\
```

For detailed information about installing Oracle Enterprise R, see *Installing R and Oracle R Enterprise for External Logical SQL Functions in Installing and Configuring Oracle Business Intelligence Installation Guide*.

4. After installing the 12.2.1.1 R script, copy the custom settings from the 12.2.1.0 R script to the 12.2.1.1 R script.

