

Oracle® Fusion Middleware

Upgrading Oracle GoldenGate Studio

Release 12.2.1.1

E73559-01

June 2016

Provides an overview of the upgrade planning process, as well as upgrade concepts and common Fusion Middleware upgrade tasks.

Oracle Fusion Middleware Upgrading Oracle GoldenGate Studio, Release 12.2.1.1

E73559-01

Copyright © 2015, 2016, Oracle and/or its affiliates. All rights reserved.

Primary Author: Geetha Savithriamma

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

Preface	
Audience	5
Documentation Accessibility	5
Related Documents.....	5
Conventions.....	5
1 Introduction to Oracle GoldenGate Studio Upgrade	
1.1 Understanding the Oracle GoldenGate Studio Upgrade to 12c	1-1
1.2 Understanding the Oracle GoldenGate Studio Upgrade Process Flow	1-2
1.3 Understanding the Starting Points for the Oracle GoldenGate Studio Upgrade.....	1-5
1.4 Understanding the Interoperability and Compatibility Restrictions Before You Upgrade..	1-5
2 Preparing to Upgrade Oracle GoldenGate Studio	
2.1 Pre-Upgrade Checklist.....	2-2
2.2 Creating a Complete Backup	2-3
2.2.1 Backing Up the Schema Version Registry Table.....	2-4
2.3 Cloning Your Production Environment for Testing	2-4
2.4 Verifying Certification and System Requirements	2-5
2.4.1 Verify Your Environment Meets Certification Requirements	2-5
2.4.2 Verify System Requirements and Specifications	2-6
2.4.3 Verify that the Database Hosting Oracle Fusion Middleware Is Supported.....	2-6
2.4.4 Verify that the JDK Is Certified for This Release of Oracle Fusion Middleware	2-6
2.5 Purging Unused Data.....	2-7
2.6 Creating an Edition on the Server for Edition-Based Redefinition	2-7
2.7 Creating a Non-SYSDBA User to Run Upgrade Assistant	2-8
3 Performing the Oracle GoldenGate Studio Upgrade	
3.1 Installing Oracle GoldenGate Studio Release 12.2.1.1.....	3-1
3.2 Upgrading the Schemas with the Upgrade Assistant	3-3

Preface

Review the following sections to familiarize yourself with the intended audience and topographical conventions used.

[Audience](#)

[Documentation Accessibility](#)

[Related Documents](#)

[Conventions](#)

Audience

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

- Oracle Fusion Middleware 12c system administration knowledge
- The configuration and expected behavior of the upgraded 12c system or systems.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Related Documents

For more information, see the following related documentation available in the Oracle Fusion Middleware Release 12c (12.2.1.1) documentation library:

- *Understanding Oracle Fusion Middleware*
- *Upgrading with the Upgrade Assistant*

Conventions

The following text conventions are used in this document:

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

Introduction to Oracle GoldenGate Studio Upgrade

The guide explains the procedure to upgrade Oracle GoldenGate Studio from 12.2.1.0.0 to 12.2.1.1.0.

Note: For general information about Fusion Middleware upgrade planning and other upgrade concepts and resources, see the following sections in *Planning an Upgrade of Oracle Fusion Middleware*:

- [Planning an Upgrade to Oracle Fusion Middleware 12c](#)
 - [Understanding In-Place versus Out-of-Place Upgrades](#)
 - [Understanding the Basic 12c Upgrade Tasks](#)
-

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

[Understanding the Oracle GoldenGate Studio Upgrade to 12c](#)

[Understanding the Oracle GoldenGate Studio Upgrade Process Flow](#)

The process flow shows the high-level upgrade procedures and tools used to upgrade to Oracle GoldenGate Studio (OGS) 12.2.1.1.0.

[Understanding the Starting Points for the Oracle GoldenGate Studio Upgrade](#)

[Understanding the Interoperability and Compatibility Restrictions Before You 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 the Oracle GoldenGate Studio Upgrade to 12c

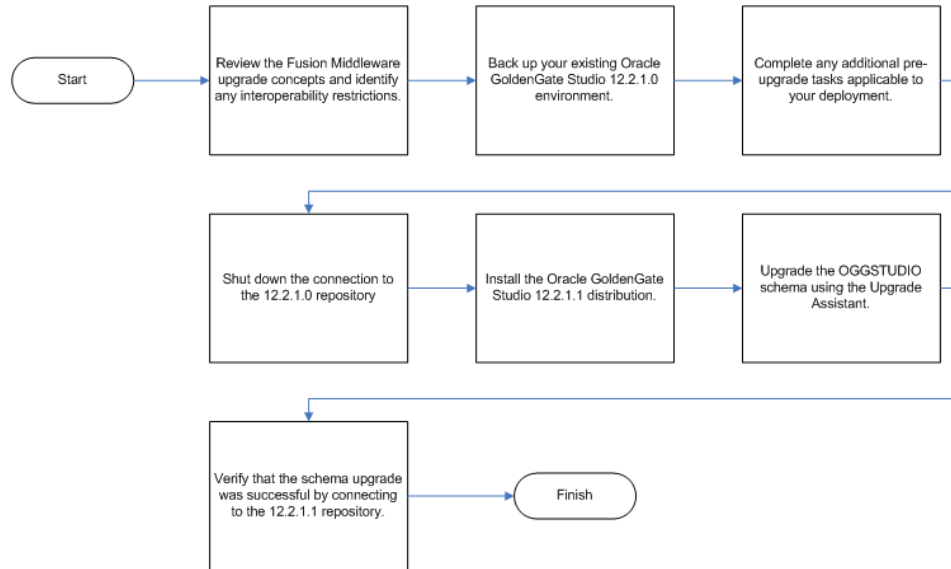
Oracle GoldenGate Studio is a standalone product. Upgrading to Oracle GoldenGate Studio from 12.2.1.0.0 to 12.2.1.1.0 is an in-place upgrade performed by Upgrade Assistant. You have to install the 12.2.1.1.0 product distribution in a new Oracle home, and then use the Upgrade Assistant to upgrade the 12.2.1.0.0 schemas and the security metadata. Oracle GoldenGate Studio 12.2.1.1.0 will require the upgraded repository; it cannot work using the 12.2.1.0.0 repository.

Note: The existing 12.2.1.0.0 production environment is not affected by the upgrade process. You can continue to use the 12.2.1.0.0 system until you are ready to roll-out the 12.2.1.1.0 system.

1.2 Understanding the Oracle GoldenGate Studio Upgrade Process Flow

The process flow shows the high-level upgrade procedures and tools used to upgrade to Oracle GoldenGate Studio (OGS) 12.2.1.1.0.

Figure 1-1 Oracle GoldenGate Studio Upgrade Process-Flow



The following table lists the high-level steps that you need to perform to upgrade to Oracle GoldenGate Studio Release 12.2.1.1.0:

Table 1-1 Oracle GoldenGate Studio High-level Upgrade Steps

Table 1-1 (Cont.) Oracle GoldenGate Studio High-level Upgrade Steps

Step No.	Importance (Mandatory, Conditional, or Optional)	Task	Description	Should be performed by (Role)
1	Optional	Learn about the interoperability and compatibility factors that could affect how you upgrade to OGGST 12.2.1.1.0.	<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 repository is 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>	

Table 1-1 (Cont.) Oracle GoldenGate Studio High-level Upgrade Steps

Step No.	Importance (Mandatory, Conditional, or Optional)	Task	Description	Should be performed by (Role)
3	Mandatory	Complete the pre-upgrade tasks.	The pre-upgrade tasks include cloning your production environment, verifying system requirements and certifications, purging unused data, and creating non-SYSDBA user. For a complete list of pre-upgrade tasks, see Preparing to Upgrade Oracle GoldenGate Studio	
4	Mandatory	Download and install the 12.2.1.1.0 Oracle GoldenGate Studio distribution.	To install OGGST, follow the procedure described in Installing Oracle GoldenGate Studio Release 12.2.1.1 .	Non-SYSDBA user.
6	Mandatory	Shut down the connection to the 12.2.1.0 repository.	Before starting the upgrade process, shut down the connection to the 12.2.1.0 repository. However, keep the database (RDBMS) running.	
7	Mandatory	Upgrade the 12.2.1.0.0 schemas with the Upgrade Assistant.	The schemas you created during the 12.2.1.0.0 installation are supported in 12.2.1.1.0. Therefore, you do not need to create the schemas again. You must upgrade all the repository schemas by using Upgrade Assistant. For the complete procedure, see Upgrading the Schemas with the Upgrade Assistant	Non-SYSDBA user.

Table 1-1 (Cont.) Oracle GoldenGate Studio High-level Upgrade Steps

Step No.	Importance (Mandatory, Conditional, or Optional)	Task	Description	Should be performed by (Role)
10	Mandatory	Connect to the 12.2.1.1.0 repository.	The upgrade process is complete. You can now connect to the 12.2.1.1.0 OGGST repository.	Non-SYSDBA user.
11	Mandatory	Verify your upgrade.	It is important to compare your 12.2.1.0.0 and 12.2.1.1.0 environments and verify that the data and configuration settings are consistent in the newly upgraded environment.	

1.3 Understanding the Starting Points for the Oracle GoldenGate Studio Upgrade

Oracle GoldenGate Studio 12.2.1.0.0 is the first release. You can upgrade to Oracle GoldenGate Studio 12c (12.2.1.1) from Oracle GoldenGate Studio 12c (12.2.1.0.0).

The upgrade procedures in this guide explain how to upgrade the repository schemas of an existing Oracle GoldenGate Studio 12.2.1.0.0 to Oracle GoldenGate Studio 12.2.1.1.

1.4 Understanding the Interoperability and Compatibility Restrictions Before You 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 \(12.2.1.1\)](#). You can learn more about interoperability and compatibility considerations in [Understanding Interoperability and Compatibility](#).

Preparing to Upgrade Oracle GoldenGate Studio

Upgrade is performed while the servers are down. The pre-upgrade 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:

Pre-Upgrade Checklist

The Pre-Upgrade Checklist identifies tasks that can be performed before you begin your 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.

Purging Unused Data

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

Creating an Edition on the Server for Edition-Based Redefinition

Before upgrading an Edition-Based Redefinition (EBR) enabled schema, you must connect to the database server and create an edition on the database server for 12c.

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.

2.1 Pre-Upgrade Checklist

The Pre-Upgrade Checklist identifies tasks that can be performed before you begin your 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.

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.

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

Task	Description	Documentation
Create a complete backup of your pre-upgrade environment.	<p>Required</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 need to restore your pre-upgrade environment and begin the upgrade again.</p>	Creating a Complete Backup

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.	Optional 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.	Cloning Your Production Environment for Testing
Verify that you are installing and upgrading your product on a supported hardware and software configuration. NOTE: 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.	Required Verify that your hardware and software configurations (including operating systems) are supported by the latest certifications and requirements documents. Oracle recommends that you verify this information right before you start the upgrade as the certification requirements are frequently updated. Make sure that you have applied the latest patches to your components before you upgrade.	Verifying Certification and System Requirements
Purge any outdated or unused data before you upgrade.	Optional To optimize performance, consider purging data and objects that will not be used in the upgraded environment.	Purging Unused Data
Oracle Database Users Only: Before upgrading an Edition-Based Redefinition (EBR) enabled schema, you must connect to the database server and create an edition on the database server for 12c (12.2.1.1).	Required If you are using an Edition-Based Redefinition (EBR) database, you must create the edition before starting the upgrade.	Creating an Edition on the Server for Edition-Based Redefinition
Create the non-SYSDBA user 'FMW' to avoid running the Upgrade Assistant as SYSDBA.	Optional Oracle recommends that you create the non-SYSDBA user 'FMW' to run Upgrade Assistant with only those privileges required by the Upgrade Assistant.	Creating a Non-SYSDBA User to Run Upgrade Assistant

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*.

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

Backing Up the Schema Version Registry Table

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

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.

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.

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.

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.

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).

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.

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.

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.

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.

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.

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

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_51.

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 `/home/oracle/products/jdk` directory.

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 Purging Unused Data

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

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*.

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.

2.6 Creating an Edition on the Server for Edition-Based Redefinition

Before upgrading an Edition-Based Redefinition (EBR) enabled schema, you must connect to the database server and create an edition on the database server for 12c.

Edition-based redefinition enables you to upgrade an application's database objects while the application is in use, thus minimizing or eliminating downtime. This is accomplished by changing (redefining) database objects in a private environment known as an edition. Only when all changes have been made and tested do you make the new version of the application available to users.

Note: This task must be completed by an Oracle Database user with DBA privileges.

Before upgrading an Edition-Based Redefinition (EBR) enabled schema, you must connect to the database server and create an edition on the database server for 12c. The new edition for 12c must be a child of your existing 11g or 12c edition.

To create an edition on the database server, log in as an SYS user (or another Oracle user that has DBA privileges) and enter the following command:

```
create edition Oracle_FMW_12_2_1 as child of
Oracle_FMW_11_1_1_7_0;
```

Where, `Oracle_FMW_11_1_1_7_0` is an example of the edition name you specified in RCU 11.1.1.7 when the 11.1.1.7 schemas were created. Be sure to provide the actual name used when creating the edition.

If the edition is created successfully, you get the following message:

```
Edition created.
```

During the upgrade, you are prompted to launch the Reconfiguration Wizard to reconfigure your existing domain. Before running the Reconfiguration Wizard, you must specify the database default edition. Use the following SQL to manually setup the default edition name for the database, for example:

```
ALTER DATABASE DEFAULT EDITION = Oracle_FMW_12_2_1;
```

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.

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.

Performing the Oracle GoldenGate Studio Upgrade

This chapter contains the procedure to upgrade Oracle Business Intelligence from Release 12.2.1.0.0 to Release 12.2.1.1.0. The upgrade is performed in-place, that is, the upgrade operations are performed on the existing 12.2.1 domain.

High-level upgrade steps:

[Installing Oracle GoldenGate Studio Release 12.2.1.1](#)

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

Run the Upgrade Assistant to upgrade all the schemas in the 12.2.1.0.0 domain to 12.2.1.1.0.

3.1 Installing Oracle GoldenGate Studio Release 12.2.1.1

To install Oracle GoldenGate Studio:

1. Sign in to the target system where you want to install the 12.2.1.1 product distribution.
2. Download all the installation files of Oracle GoldenGate Studio from [Oracle Technology Network](#) or [Oracle Software Delivery Cloud](#) on your target system. The name of the distribution file is `fmw_12.2.1.1.0_oggstudio_generic.jar`.
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**.

Note:

Ensure that the Oracle Home directory, where you are installing Oracle GoldenGate Studio, is empty.

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 **Complete Install**.
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.

3.2 Upgrading the Schemas with the Upgrade Assistant

Run the Upgrade Assistant to upgrade all the schemas in the 12.2.1.0.0 domain to 12.2.1.1.0.

To upgrade the 12.2.1.0.0 repository 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 Selected Schemas screen, select **Individually Selected Schemas**. This option allows you to select only those schemas that you want to include in the upgrade. Click **Next**.
4. On the Available Components screen, select **Oracle GoldenGate Studio** and click **Next**.
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 OGGSTUDIO Schema screen, specify the connection credentials in which you will be creating or dropping schemas.

Specify the service name and the database administrator account: DBA username and password for the database containing the OGGSTUDIO schema and click **Connect**.

Note:

Do not use SYSDBA as the database user name.

7. Specify the schema user name and the password for the selected schema.

When you see the message “Connection to database successfully completed”, click **Next**.

8. On the Studio Options screen, select **Upgrade topology and security metadata** and **Use AES-128 encryption algorithm**. Click **Next**.

Note:

If you do not select **Use AES-128 encryption algorithm**, AES-256 will be used as the encryption algorithm will be used for the upgrade.

9. On the OGG Studio Supervisor screen, specify the supervisor credentials for the OGG repository you want to upgrade and click **Next**.
10. 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 "ready for upgrade.", click **Upgrade**.

If the repository version is same as that of the current repository, the status will be 'upgrade not required'.

11. 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.

12. 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.

13. 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.

14. 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.

