Oracle® Fusion Middleware

Upgrading with the Upgrade Assistant

12*c* (12.1.2)

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This tool-specific reference guide provides command-line instructions and screen references for the Oracle Fusion Middleware Upgrade Assistant.

ORACLE

Oracle Fusion Middleware Upgrading with the Upgrade Assistant, 12*c* (12.1.2)

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Contents

Preface v

What's New in This Guide vii

1 Using the Upgrade Assistant

1.1 About the Upgrade Assistant 1-1
1.2 Using the Upgrade Assistant in the Overall 12c Upgrade Process 1-2
1.3 Verifying Your Database is Supported for Upgrade 1-2
1.4 Identifying Schemas that Can be Upgraded with the Upgrade Assistant 1-2
1.5 Identifying Component Configurations to be Upgraded with the Upgrade Assistant 1-4
1.6 Before You Begin Using the Upgrade Assistant 1-4
1.6.1 Verifying Pre-Upgrade Requirements Have Been Met 1-4
1.6.2 Installing Oracle Fusion Middleware 12c (12.1.2) 1-5
1.6.3 Creating New 12.1.2 Schemas Before You Upgrade 1-5
1.6.4 Stopping Servers and Processes Before Schema Upgrades 1-5
1.6.5 Starting the Administration Servers Before Component Configuration Upgrades 1-5
1.7 Starting the Upgrade Assistant 1-6
1.8 Upgrading Schemas with the Upgrade Assistant 1-6
1.9 Upgrading Oracle WebLogic Component Configurations 1-8
1.10 Upgrading Standalone System Component Configurations 1-9
1.11 Post-Upgrading Procedures 1-11
1.11.1 Performing Basic Post-Upgrade Administrative Tasks 1-11
1.11.2 Verifying a Successful Schema Upgrade 1-12
1.11.3 Checking for Invalid Database Objects 1-13

2 Using the Upgrade Assistant Command-Line Interface

2.1 Launching the Upgrade Assistant with Optional Arguments 2-1
2.2 Performing Silent Upgrades with Response Files 2-2
2.2.1 Creating an Upgrade Response File 2-2
2.2.2 Using the Response File to Upgrade Fusion Middleware 2-2
2.2.3 Troubleshooting a Silent Upgrade 2-4

3 Troubleshooting Your Upgrade

3.1 General Troubleshooting Guidelines 3-1
3.2 Reviewing Log Files 3-2

3.3 Investigating Examination Failures 3-2
3.4 Investigating Upgrade Failures 3-3
3.5 Resolving Common Upgrade Assistant Errors 3-3
3.5.1 Ensuring there is sufficient disk space 3-3
3.5.2 Resolving Database Connection Problems When Upgrading Schemas 3-4
3.5.3 Setting the DISPLAY Environment Variable 3-4
3.6 Restarting the Upgrade Assistant After a Failure 3-4
A.1 Welcome A-2
A.2 Schemas A-3
A.3 WebLogic Component Configurations A-4
A.4 Standalone Components A-5
A.5 Available Components A-6
A.6 Component List A-7
A.7 Prerequisites A-8
A.8 Domain Directory A-9
A.9 11g Domain Directory A-10
A.10 Select Schemas A-11
A.11 Instance Directories A-13
A.12 Node Manager A-14
A.13 OWSM Policy Manager A-15
A.14 ODI Options A-16
A.15 ODI Supervisor A-18
A.16 ODI Upgrade Key A-19
A.17 Examine A-20
A.18 Examine Failure A-21
A.19 Upgrade Summary A-22
A.20 Upgrade Progress A-23
A.21 Upgrade Success A-24
A.22 Upgrade Failure A-25
A.23 Cancel Upgrade A-26

Preface

This preface contains the following sections:

- Audience
- Documentation Accessibility
- Related Documents
- 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 11*g* system administration and configuration information for the existing deployment
- The configuration and expected behavior of the system or systems being upgraded

Documentation Accessibility

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

Access to Oracle Support

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

Related Documents

For more information, see the following related documentation available in the Oracle Fusion Middleware 12c (12.1.2) documentation library:

- *Planning an Upgrade of Oracle Fusion Middleware*
- *Planning an Installation of Oracle Fusion Middleware*
- *Understanding Oracle Fusion Middleware*

- *Understanding Interoperability and Compatibility*
- *Installing Software with the Oracle Universal Installer*
- *Creating Schemas with the Repository Creation Utility*
- *Upgrading to the Oracle Fusion Middleware Infrastructure*
- *Upgrading Oracle WebLogic Server*
- *Upgrading Oracle Data Integrator*

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.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

What's New in This Guide

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

- New and Changed Features for 12c (12.1.2)
- Other Significant Changes in this Document for 12c (12.1.2)

> **Note:** This guide, *Upgrading with the Upgrade Assistant*, is new to the Oracle Fusion Middleware library. Individual upgrade guides will no longer include the basic instructions for using the Upgrade Assistant. Component-specific upgrade guides will document any specific upgrade information related to the component or suite.

New and Changed Features for 12c (12.1.2)

Upgrade Assistant 12c (12.1.2) includes the following new and changed administrative features:

- Upgrade Assistant is now used for upgrading schemas, component configurations, and standalone system component configurations. The separate Patch Set Assistant utility is no longer used for upgrading schemas.
- The new Reconfiguration Wizard is used in conjunction with the Upgrade Assistant to upgrade Oracle WebLogic component configurations. For more information on using the Reconfiguration Wizard, see "*Reconfiguring an Oracle WebLogic Domain with the Reconfiguration Wizard*".
- When upgrading standalone system components, such as Oracle HTTP Server, the Upgrade Assistant creates a new standalone domain for your system components. For more information about this new standalone domain, see "What Is a Standalone Domain?" in *Understanding Oracle Fusion Middleware*.
- Upgrade Assistant now supports upgrading all schemas within a domain in a single session. Any cross-component dependencies will be identified and upgraded.
- Upgrade Assistant supports Edition Based Redefinition (EBR) for Fusion Middleware database schemas to provide high availability upgrade of Fusion Middleware components.
- Upgrade Assistant can generate a response file that enables you to execute a complete upgrade from the command line in silent mode.

- Upgrade Assistant is now available as part of *ORACLE_HOME*/oracle_common directory rather than the individual component or suite Oracle homes.

Other Significant Changes in this Document for 12c (12.1.2)

This guide was created in the 12*c* (12.1.2) release as a reference guide for using the Upgrade Assistant. See the following documents for detailed procedural information:

- For component-specific upgrade procedures, see the component or suite upgrade guide in the Oracle Fusion Middleware 12c (12.1.2) documentation library.

1 Using the Upgrade Assistant

The Oracle Fusion Middleware Upgrade Assistant automates many upgrade tasks. This chapter describes how to use the Upgrade Assistant.

This chapter describes the following:

- Section 1.1, "About the Upgrade Assistant"
- Section 1.2, "Using the Upgrade Assistant in the Overall 12c Upgrade Process"
- Section 1.3, "Verifying Your Database is Supported for Upgrade"
- Section 1.4, "Identifying Schemas that Can be Upgraded with the Upgrade Assistant"
- Section 1.5, "Identifying Component Configurations to be Upgraded with the Upgrade Assistant"
- Section 1.6, "Before You Begin Using the Upgrade Assistant"
- Section 1.7, "Starting the Upgrade Assistant"
- Section 1.8, "Upgrading Schemas with the Upgrade Assistant"
- Section 1.9, "Upgrading Oracle WebLogic Component Configurations"
- Section 1.10, "Upgrading Standalone System Component Configurations"
- Section 1.11, "Post-Upgrading Procedures"

> **Note:** Before starting the Upgrade Assistant, refer to *Planning an Upgrade of Oracle Fusion Middleware* and your component-specific upgrade documentation for detailed information about the supported upgrade starting points, as well as the prerequisites and upgrade paths for specific installation types.

1.1 About the Upgrade Assistant

The Oracle Fusion Middleware Upgrade Assistant is used to upgrade component schemas, component configurations, and standalone system component configurations from Fusion Middleware 11*g* Release 1 (11.1.1.6.0 or 11.1.1.7.0) to Fusion Middleware 12*c* (12.1.2).

When you run the Upgrade Assistant from the `oracle_common/upgrade/bin` directory of your Fusion Middleware 12*c* (12.1.2) installation, it performs the following tasks:

- For schema upgrades, the Upgrade Assistant examines the current install directory and identifies the list of component schemas to be upgraded. It also determines the order of schema upgrade based on certain dependency information present.

- For component configuration upgrades, the Upgrade Assistant connects to the WebLogic Administration Server to determine the list of components that are configured and supported for upgrade.

1.2 Using the Upgrade Assistant in the Overall 12c Upgrade Process

The Upgrade Assistant is used in conjunction with other Fusion Middleware tools and processes to complete an 11*g* to 12*c* (12.1.2) upgrade. The 11*g* to 12*c* upgrade process is very different from previous releases. To understand how the Upgrade Assistant and the other upgrade tools are used in the upgrade process, see "Understanding the 12c Upgrade Process" in *Planning an Upgrade of Oracle Fusion Middleware*.

1.3 Verifying Your Database is Supported for Upgrade

The 12*c* domain requires a database to store the new schemas. The database that hosts the schemas used in Fusion Middleware must be supported. For more information, see "Verifying Your Database and Schemas are Ready for Upgrade" in *Planning an Upgrade of Oracle Fusion Middleware*.

1.4 Identifying Schemas that Can be Upgraded with the Upgrade Assistant

The Upgrade Assistant identifies schemas for which an upgrade is available. You can upgrade multiple schemas in a single session of running the Upgrade Assistant.

When the schemas are created in your database, RCU creates and maintains a table called `schema_version_registry`. This table contains schema information such as version number, component name and ID, date of creation and modification, and custom prefix.

Note: The Upgrade Assistant identifies all of the schemas that are available for an upgrade, but it allows you to select which schemas should be upgraded. If you determine that an upgrade is not needed for a schema, the `schema_version_registry` table will show the schemas at their pre-upgrade version after the 12.1.2.0.0 upgrade. Table 1–1 shows what the pre- and post-upgrade version numbers will be when the schemas are selected for an upgrade.

To determine which of your 11*g* schemas can be upgraded to 12.1.2.0.0, execute the following:

If you are using an Oracle database, connect to the database as *SYS* and run the following from SQL*Plus to get the current version numbers:

```
SELECT OWNER, VERSION, STATUS, UPGRADED FROM SCHEMA_VERSION_REGISTRY;
```

If the number in the "VERSION" column is 11.1.1.6.0 or 11.1.1.7.0, the STATUS column is 'VALID', and schema is listed in Table 1–1, then the schema is supported for upgrade.

The component schemas listed in Table 1–1 (default names shown) can be upgraded to 12*c* (12.1.2.0.0) using this version of the Upgrade Assistant.

Note: The Schema(s) column in Table 1–1 shows the default schema name format of prefix and schema name separated by an underscore (_) character. The default prefix is `DEV`, but you may have created new prefixes for your schemas while using the RCU.

Notes About the Schemas That Need to Be Upgraded:

- The only schema versions that are valid for updating are 11*g* Release 1 (11.1.1.6.0 or 11.1.1.7.0). If your schemas are not at version 11.1.1.6.0 or 11.1.1.7.0, you must upgrade them before using the 12*c* (12.1.2) upgrade procedures.
- Refer to your component-specific installation and upgrade documentation for additional information about the schemas that are required for your upgrade.
- Your 11*g* schemas must be associated with a domain before you begin the upgrade process.
- If you used a file-based security store in 11g, then you must reassociate the file-based security store with a database-based security store before running the Upgrade Assistant. For more information see "Reassociating a File-Based Security Store Before Upgrade" in *Upgrading to the Oracle Fusion Middleware Infrastructure*.
- When using the Upgrade Assistant to upgrade the database schemas of Oracle Fusion Middleware components, the schemas must meet one of the following criteria:
  - The schema was created in an 11*g* release using the Repository Creation Utility (RCU).

    Or:
  - The schema was previously upgraded using an 11*g* release of Upgrade Assistant or Patch Set Assistant.

    NOTE: These requirements do not apply to the Oracle WebLogic Diagnostic Framework (`_WLDF`) schema.
- Table 1–1 lists only the schemas for products that are available for upgrade in the Oracle Fusion Middleware 12*c* (12.1.2) release.

Table 1–1 Schemas That Require an Upgrade

Component Name	Schema(s)	Schema Version Before Upgrade	Schema Version After Upgrade	Dependencies
Audit Services[1]	*prefix*`_IAU`	11.1.1.6.0 11.1.1.7.0	12.1.2.0.0	None.
Metadata Services	*prefix*`_MDS`	11.1.1.6.0 11.1.1.7.0	12.1.2.0.0	None.
Oracle Platform Security Services[2]	*prefix*`_OPSS`	11.1.1.6.0 11.1.1.7.0	12.1.2.0.0	The *prefix*`_IAU` schema must be upgraded first.
WebLogic Diagnostic Framework	*prefix*`_WLDF`	Not applicable.[3]	12.1.2.0.0	
Oracle Data Integrator (Master and Work Repository)	*prefix*`_ODI_REPO`	11.1.1.6.0 11.1.1.7.0	12.1.2.0.0	None.

[1] When upgrading _IAU the Upgrade Assistant will update two auxilary schemas, IAU_APPEND and IAU_VIEWER and add them to the schema_version_registry for 12.1.2.0.0. These schemas were not part of the 11.1.1.6.0 or 11.1.1.7.0 schema_version_registry table.

[2] As of release 11.1.1.7.0, OPSS audit data is stored in IAU common tables instead of the JPS table. When upgrading _OPSS schemas to 12.1.2.0.0 from 11.1.1.6.0, any existing data in the JPS table can remain unchanged for reporting or auditing purposes, and there is no need to upgrade JPS table with extra columns.

[3] In 11*g* the _WLDF schema was not listed in the schema_version_registry table. After the upgrade to 12.1.2.0.0, however, the _WLDF schema will be listed in the schema_version_registry table.

1.5 Identifying Component Configurations to be Upgraded with the Upgrade Assistant

When you use the Upgrade Assistant to upgrade your component configurations, it automatically determines the list of components that are configured and can be upgraded to the latest version. After you run the Upgrade Assistant for schema upgrades, you will use the Reconfiguration Wizard to reconfigure your domain. The Upgrade Assistant is used again, after the reconfiguration, to upgrade any remaining configuration properties.

You can use the Upgrade Assistant to upgrade the following component configurations to 12*c* (12.1.2.0.0):

- Oracle HTTP Server
- Oracle Web Services Manager

Caution: If you have existing Fusion Middleware 11*g* components that are not available in the 12.1.2.0.0 upgrade, and you want to continue to use them with your upgraded components, review *Understanding Interoperability and Compatibility* before you upgrade. You will need to determine if an upgrade will cause any incompatibility issues with your Fusion Middleware 11*g* components.

1.6 Before You Begin Using the Upgrade Assistant

This section describes the procedures you must perform before you run the Upgrade Assistant:

- Verifying Pre-Upgrade Requirements Have Been Met
- Installing Oracle Fusion Middleware 12c (12.1.2)
- Creating New 12.1.2 Schemas Before You Upgrade
- Stopping Servers and Processes Before Schema Upgrades
- Starting the Administration Servers Before Component Configuration Upgrades

1.6.1 Verifying Pre-Upgrade Requirements Have Been Met

The *Planning an Upgrade of Oracle Fusion Middleware* guide provides detailed information on the tasks that you will need to perform before you begin the upgrade process.

Review "Developing an Upgrade Strategy" to make sure that all pre-upgrade requirements have been met.

1.6.2 Installing Oracle Fusion Middleware 12c (12.1.2)

The Upgrade Assistant is included in the 12*c* (12.1.2) Fusion Middleware software Infrastructure distribution. The 12.1.2.0.0 product distributions must be installed before executing your upgrade. For more information on 12*c* (12.1.2) installations, including the standard 12*c* (12.1.2) installation topologies, see *Planning an Installation of Oracle Fusion Middleware*. This guide also discusses additional prerequisites and links to component-specific Installation Guides.

You can also see a complete list of Installation Guides in the Oracle Fusion Middleware 12*c* (12.1.2) documentation library.

1.6.3 Creating New 12.1.2 Schemas Before You Upgrade

After installing your 12.1.2.0.0 components, you will need to create the new 12.1.2.0.0 schemas, such as the new Service Table schema (*prefix*_STB) in a supported database certified for use with this release of Oracle Fusion Middleware.

For more information on determining which schemas should be created for your upgrade, see "Creating Schemas Before You Upgrade" in *Planning an Upgrade of Oracle Fusion Middleware*.

Note: Before upgrading an EBR-enabled schema from Fusion Middleware 11g Release 1 (11.1.1.6.0 or 11.1.1.7.0), you must first connect to the database server and create an edition on the database server for 12c (12.1.2). The new edition for 12.1.2 must be a child of your 11.1.1.6.0 or 11.1.1.7.0 edition.

For more information on creating an edition on the server for edition-based redefinition, see "Creating an Edition on the Server for Edition-Based Redefinition" in *Planning an Upgrade of Oracle Fusion Middleware*.

1.6.4 Stopping Servers and Processes Before Schema Upgrades

Before running Upgrade Assistant to upgrade your schemas, shut down all Oracle Fusion Middleware Managed Servers, Administration Servers, and system components (such as OHS) that may be using the schemas you want to upgrade. Failure to do so may result in an incomplete or failed upgrade.

If you are running Node Manager, you should also stop Node Manager. You can do this by closing the console window in which Node Manager is running, or by using the `stopNodeManager` WLST command.

Instructions for stopping an Oracle Fusion Middleware environment are provided in "Stopping an Oracle Fusion Middleware Environment" in *Administering Oracle Fusion Middleware*.

1.6.5 Starting the Administration Servers Before Component Configuration Upgrades

Before running Upgrade Assistant to upgrade your component configurations, start the Administration Server where the component is deployed. For example, before upgrading Oracle Web Services Manager (OWSM) component configuration, you must start the Administration Server where Oracle Web Services Manager (OWSM) Policy Manager is deployed.

Refer to your component-specific upgrade documentation for more information on starting servers before component configuration upgrades.

1.7 Starting the Upgrade Assistant

Upgrade Assistant will be installed by the 12*c* (12.1.2) version of the Oracle Universal Installer (OUI) into the `oracle_common` area of the Fusion Middleware home in the `oracle_common/upgrade/bin` directory.

To start the Upgrade Assistant using the graphical user interface, navigate to the `oracle_common` directory of your the Oracle home where your Middleware products are installed. For information on launching the Upgrade Assistant from the command line with arguments, see Using the Upgrade Assistant Command-Line Interface.

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

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
   ```

   On Windows operating systems:

   ```
   ua.bat
   ```

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

1.8 Upgrading Schemas with the Upgrade Assistant

If you are running the Upgrade Assistant from an Oracle home that contains components with any schemas listed in Table 1–1, then the **Schemas** upgrade option is shown. The Upgrade Assistant will only list components that are candidates for schema upgrade. You can select which schemas to upgrade from the component list.

The Upgrade Assistant will display the following screens when upgrading schemas:

Table 1–2 Upgrade Assistant Screens: Upgrading Schemas

Screen	When Screen Appears	Description
Welcome	Always.	This screen provides an overview of the Upgrade Assistant and some information about important pre-upgrade tasks.
Schemas	When Schemas is selected as the upgrade type, the screen name is Schemas.	Use this screen to select the option to upgrade schemas for your installed components.
Available Components	Always.	This screen provides a list of installed Oracle Fusion Middleware components that have schemas that can be upgraded. When you select a component, the schemas and any dependencies are automatically selected.

Table 1–2 (Cont.) Upgrade Assistant Screens: Upgrading Schemas

Screen	When Screen Appears	Description
Prerequisites	Always.	This screen requires you to acknowledge that all prerequisites have been met before you continue with the upgrade. You must check the boxes before you can continue.
Select Schemas	Only when Schemas is selected as the upgrade type.	Use this screen to enter information required to connect to the selected schema and the database that hosts the schema. Note that the screen name changes based on the type of schema selected ("MDS Schema", for example).
11g Domain Directory	Only when upgrading OPSS or Audit schemas.	Use this screen to specify the existing Oracle WebLogic 11g domain directory for `_OPSS` and `_IAU` schema upgrades. The Upgrade Assistant requires the 11*g* domain location to access the `jps-config.xml` file.
ODI Options	Only when upgrading Oracle Data Integrator schemas.	Use this screen to specify which upgrade operations the Upgrade Assistant will perform. For more information on upgrading Oracle Data Integrator, see *Upgrading Oracle Data Integrator*.
ODI Supervisor	Only when upgrading Oracle Data Integrator schemas.	Use this screen to provide the ODI Supervisor username (`SUPERVISOR`) and password. For more information on upgrading Oracle Data Integrator, see *Upgrading Oracle Data Integrator*.
ODI Upgrade Key	Only when upgrading Oracle Data Integrator schemas.	Use this screen to generate an upgrade key that will convert 11g object IDs into unique GUIDs. Use this key when importing other 11g objects post-upgrade. The auto-generated upgrade key can be changed as needed. For more information on upgrading Oracle Data Integrator, see *Upgrading Oracle Data Integrator*.
Examine	Always.	This screen displays the status of the Upgrade Assistant as it examines each component, verifying that the component is ready for upgrade.
Upgrade Summary	Always.	Use this screen to review a summary of the options you have selected and to start the upgrade process.
Upgrade Progress	Always.	This screen shows the status of the upgrade process.
Upgrade Success Or Upgrade Failure	Always.	The upgrade was successful. The Post-Upgrade Actions window describes the manual tasks you must perform to make the component function in the new installation. Or: The upgrade failed for the specified component(s) and Upgrade Assistant will have to be restarted.

1.9 Upgrading Oracle WebLogic Component Configurations

If you are running the Upgrade Assistant from an Oracle home that contains managed WebLogic domain components, then the **WebLogic Component Configuration** upgrade option is available.

> **Note:** After upgrading the component schemas, you must run the Reconfiguration Wizard to reconfigure the domain. For more information, see "*Reconfiguring an Oracle WebLogic Domain with the Reconfiguration Wizard*". After the domain reconfiguration, use the Upgrade Assistant again to upgrade the component configurations as described in Upgrading Oracle WebLogic Component Configurations.

The Upgrade Assistant will display the following screens when upgrading a WebLogic component configurations, such as Oracle Web Services Manager (OWSM).

Table 1–3 Upgrade Assistant Screens: Upgrading Oracle WebLogic Component Configurations

Screen	When Screen Appears	Description
Welcome	Always.	This screen provides an overview of the Upgrade Assistant and some information about important pre-upgrade tasks.
WebLogic Component Configurations	When WebLogic Component Configurations is selected as the upgrade type, the screen name is WebLogic Components.	Select the WebLogic Component Configurations option to upgrade component configurations for a managed WebLogic Server domain. You will be prompted to supply the connection details required to connect to the WebLogic Administration Server that is managing the domain.
OWSM Policy Manager	Only when upgrading Oracle Web Services Manager (OWSM) configuration in a cross-domain topology.	If your enviroment has multiple WebLogic Server domains, but the OWSM Policy Manager is only in one WLS domain and the OWSM agents are on other domains, you will use this screen to enter the credentials for the WebLogic Administration Server domain where the Oracle Web Services Manager (OWSM) Policy Manager is deployed.
Component List	Always.	This screen provides a list of components that will be included in the WebLogic domain's component configuration upgrade. The name of the domain is provided along with the list of components located within the domain.
Prerequisites	Always.	This screen requires you to acknowledge that all prerequisites have been met before you continue with the upgrade. You must check the boxes before you can continue.
Examine	Always.	This screen displays the status of the Upgrade Assistant as it examines each component, verifying that the component is ready for upgrade.

Table 1–3 (Cont.) Upgrade Assistant Screens: Upgrading Oracle WebLogic Component Configurations

Screen	When Screen Appears	Description
Upgrade Summary	Always.	Use this screen to review a summary of the options you have selected and to start the upgrade process.
Upgrade Progress	Always.	This screen shows the status of the upgrade process.
Upgrade Success Or Upgrade Failure	Always.	The upgrade was successful. The Post-Upgrade Actions window describes the manual tasks you must perform to make the component function in the new installation. Or: The upgrade failed for the specified component(s) and Upgrade Assistant will have to be restarted.

1.10 Upgrading Standalone System Component Configurations

If you are running the Upgrade Assistant from an Oracle home that contains only standalone system components, such as Oracle HTTP Server (OHS), then the Standalone Components upgrade option is shown. Standalone components are not associated with a managed WebLogic domain.

> **Note:** In 12*c* (12.1.2), the Upgrade Assistant will create a seperate **standalone domain** for your system components. This domain can be managed by Node Manager, but has no Administration Servers. For more information on using the new system component domain, see *Understanding Oracle Fusion Middleware*.

The Upgrade Assistant will display the following screens when upgrading a standalone system component, such as Oracle HTTP Server (OHS), for example. The screens that you use will vary depending on the system components you are upgrading and the options you select. See your component-specific upgrade documenation for information on the screens related to your specific component upgrade.

Table 1–4 Upgrade Assistant Screens: Upgrading Standalone System Component Configurations

Screen	When Screen Appears	Description
Welcome	Always.	This screen provides an overview of the Upgrade Assistant and some information about important pre-upgrade tasks.
Standalone Components	Only when you have a standalone system component to upgrade and no schemas available to upgrade.	Beginning with 12c (12.1.2), standalone system components will have their own standalone domain. Use this screen to specify the domain option you want to apply to the standalone system component you are upgrading. You will have two options: ■ Create a New Domain When you are upgrading your 11*g* standalone system components (which had no previous domain associations), you must first create a new standalone domain for your system components. ■ Update an Existing Domain After you have created a new 12.1.2 standalone domain for your upgraded 11g system components, you can extend the standalone domain with additional standalone system components using this option. This option would also be used if a domain was created with the "Create a New Domain" option and you re-run the upgrade.
Component List	Always.	Lists the standalone system components that are available to upgrade.
Prerequisites	Always.	This screen requires you to acknowledge that all prerequisites have been met before you continue with the upgrade. You must check the boxes before you can continue.
Instance Directories	Always.	When upgrading system components, such as OHS, you must provide the directory locations of the 11g instances that will be used as a starting point for creating new 12c component instances.
Node Manager	Only when Create a New Domain is selected.	Use this screen to specify the credentials of the Node Manager that will be used to create a domain during the upgrade of standalone system components.
Examine	Always.	This screen displays the status of the Upgrade Assistant as it examines each component, verifying that the component is ready for upgrade.

Table 1–4 (Cont.) Upgrade Assistant Screens: Upgrading Standalone System Component Configurations

Screen	When Screen Appears	Description
Upgrade Summary	Always.	Use this screen to review a summary of the options you have selected and to start the upgrade process.
Upgrade Progress	Always.	This screen shows the status of the upgrade process.
Upgrade Success Or Upgrade Failure	Always.	The upgrade was successful. The Post-Upgrade Actions window describes the manual tasks you must perform to make the component function in the new installation. Or: The upgrade failed for the specified component(s) and Upgrade Assistant will have to be restarted.

1.11 Post-Upgrading Procedures

This section contains information about basic tasks performed after the 12.1.2.0.0 upgrade is complete. Some of the tasks may not apply to your environment, as you may not be upgrading the products listed.

Always refer to your component-specific upgrade documentation for more information on post-upgrade procedures.

- Performing Basic Post-Upgrade Administrative Tasks
- Verifying a Successful Schema Upgrade
- Checking for Invalid Database Objects

Note: You should be able to successfully complete the tasks described in this section after an upgrade. If you are unable to complete one or more of these tasks in your newly upgraded environment, see Troubleshooting Your Upgrade.

1.11.1 Performing Basic Post-Upgrade Administrative Tasks

Table 1–5 lists some common administration tasks you will likely want to perform on your newly upgraded domain. Successful completion of these tasks after your upgrade signifies that your upgrade was successful.

Note: Only perform those tasks that apply to your upgraded environment.

Table 1–5 Basic Post-Upgrade Administration Tasks

Task	Description	More Information
Starting and stopping products and servers	Learn how to start and stop Oracle Fusion Middleware, including the Administration Server, Managed Servers, and components. Performing these tasks will validate that the upgrade was successful.	"Starting and Stopping Oracle Fusion Middleware" in *Administering Oracle Fusion Middleware*.
Starting and stopping upgraded applications.	Learn how to start your upgraded applications in the new 12.1.2 environment to verify they are working as expected.	"Starting and Stopping Applications" in *Administering Oracle Fusion Middleware*.
Configuring Secure Sockets Layer (SSL)	Learn how to set up secure communications among between Oracle Fusion Middleware components using SSL.	"Configuring SSL in Oracle Fusion Middleware" in *Administering Oracle Fusion Middleware*.
Deploying Applications	Learn how to deploy your applications to Oracle Fusion Middleware.	"Deploying Applications" part in *Administering Oracle Fusion Middleware*.
Monitoring Oracle Fusion Middleware	Learn how to keep track of the status of Oracle Fusion Middleware components.	"Monitoring Oracle Fusion Middleware" in *Administering Oracle Fusion Middleware*.
Adding a Web Tier front-end to your WebLogic domain	Oracle Web Tier hosts Web pages (static and dynamic), provides security and high performance along with built-in clustering, load balancing, and failover features. In particular, the Web Tier contains Oracle HTTP Server.	*Installing and Configuring Oracle HTTP Server*.
Tuning and configuring Coherence for your topology.	The standard installation topology includes a Coherence cluster that contains storage-enabled Managed Coherence Servers. This configuration is a good starting point for using Coherence, but depending upon your specific requirements, consider tuning and reconfiguring Coherence to improve performance in a production environment.	For information about Coherence clusters, see "Configuring and Managing Coherence Clusters" in *Administering Clusters for Oracle WebLogic Server*. For information about tuning Coherence, see *Administering Oracle Coherence*. For information about storing HTTP session data in Coherence, see "Using Coherence*Web with WebLogic Server" in *Administering HTTP Session Management with Oracle Coherence*Web*. For more information about creating and deploying Coherence applications, see *Developing Oracle Coherence Applications for Oracle WebLogic Server*.

1.11.2 Verifying a Successful Schema Upgrade

You can use the SQL command below to verify that the schema version in `schema_version_registry` has been properly upgraded:

```
SELECT OWNER, VERSION, STATUS, UPGRADED FROM SCHEMA_VERSION_REGISTRY;
```

Check that the number in the "VERSION" column matches the latest version number for that schema. See Table 1–1 to verify that the upgraded version number is correct for your schema(s).

In the query results, the STATUS field will be either "UPGRADING" or "UPGRADED" during the schema patching operation, and will become "VALID" when the operation is finished.

If the status appears as "INVALID" then the schema upgrade failed. You should examine the logs files to determine the reason for the failure.

1.11.3 Checking for Invalid Database Objects

If you are using an Oracle database, you should recompile database objects after running the Upgrade Assistant by connecting to the database as SYS and running the following from SQL*Plus:

```
SQL>@?/rdbms/admin/utlrp.sql
```

This will compile the database objects that were upgraded by Upgrade Assistant.

Then issue the following query to ensure there are no longer any invalid database objects:

```
SELECT owner, object_name FROM all_objects WHERE status='INVALID';
```

None of the database objects for the upgraded schema should be invalid at this point. If there are any, run the `utlrp.sql` command again and check again. If the problem persists, you should file a service request.

2

Using the Upgrade Assistant Command-Line Interface

This chapter describes how to run the Oracle Fusion Middleware Upgrade Assistant from the command-line interface (CLI).

You can use the optional command-line interface arguments, documented in this chapter, to upgrade your Oracle Fusion Middleware 11*g* components to Oracle Fusion Middleware 12*c* (12.1.2). In addition, a response file can be generated to automate some of the upgrade tasks.

This chapter contains the following sections:

- Launching the Upgrade Assistant with Optional Arguments
- Performing Silent Upgrades with Response Files

2.1 Launching the Upgrade Assistant with Optional Arguments

The following examples show the optional arguments that can be used when you launch the Upgrade Assistant graphical user interface:

On Unix operating systems:

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

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

On Windows operating systems:

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

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

Refer to Table 2–1 for a description of the command line arguments available when you are invoking the Upgrade Assistant graphical user interface from your operating system's command line.

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 2–1 Optional Upgrade Assistant GUI Command Line Parameters

Parameter	Required or Optional Parameter?	Description
`-logLevel`	Optional.	Logging level. Select one of the following: ■ TRACE ■ NOTIFICATION ■ WARNING ■ ERROR ■ INCIDENT_ERROR The default logging level is NOTIFICATION. **NOTE**: Consider setting the `-logLevel` to `TRACE` so that more information will be logged. This will be useful when troubleshooting a failed upgrade.
`-logDir`	Optional.	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. On UNIX operating systems, the default locations are: *ORACLE_HOME*`/oracle_common/upgrade/logs` *ORACLE_HOME*`/oracle_common/upgrade/temp` On Windows operating systems, the default locations are: *ORACLE_HOME*`\oracle_common\upgrade\logs` *ORACLE_HOME*`\oracle_common\upgrade\temp`
`-help`	Optional.	View all of the command line options.

2.2 Performing Silent Upgrades with Response Files

This section describes how you can upgrade supported Oracle Fusion Middleware components in a silent mode 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.

2.2.1 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.

2.2.2 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

```
./ua -response <response_file> [-examine] [-logLevel <log_level>] [-logDir <log_
directory>]
```

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>]
```

Refer to Table 2–2 for a description of the command line arguments available when you are using a response file to upgrade.

Table 2–2 Upgrade Assistant Silent Mode Command Line Parameters

Parameter	Required or Optional Parameter?	Description
-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 will perform the examine phase but WILL NOT perform any actual upgrades.
-logLevel	Optional.	Logging level. Select one of the following: ■ TRACE ■ NOTIFICATION ■ WARNING ■ ERROR ■ INCIDENT_ERROR The default logging level is NOTIFICATION. **NOTE**: Consider setting the -logLevel to TRACE so that more information will be logged. This will be useful when troubleshooting a failed upgrade.
-logDir	Optional.	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. On UNIX operating systems, the default locations are: *ORACLE_HOME*/oracle_common/upgrade/logs *ORACLE_HOME*/oracle_common/upgrade/temp On Windows operating systems, the default locations are: *ORACLE_HOME*\oracle_common\upgrade\logs *ORACLE_HOME*\oracle_common\upgrade\temp
-help	Optional.	View all of the command line options.

2.2.3 Troubleshooting a Silent Upgrade

For more information on troubleshooting a failed upgrade, see Chapter 3, "Troubleshooting Your Upgrade".

3 Troubleshooting Your Upgrade

This chapter describe how to resolve common problems and issues that may occur while you are using the Upgrade Assistant to upgrade to Oracle Fusion Middleware to 12c (12.1.2):

This chapter contains the following topics:

- General Troubleshooting Guidelines
- Reviewing Log Files
- Investigating Examination Failures
- Investigating Upgrade Failures
- Resolving Common Upgrade Assistant Errors
- Restarting the Upgrade Assistant After a Failure

3.1 General Troubleshooting Guidelines

If errors occur while you are running the Upgrade Assistant, use the following steps to troubleshoot the problem:

1. Locate and open the Upgrade Assistant log file with a text editor.

   For the location of the log file, see Section 3.2, "Reviewing Log Files".

2. Locate any error messages that are identified by number; for example, `UPGAST-00091`.

3. Look up the error in the *Error Messages*.

   The description of the error in the *Error Messages* should include a description of the cause of the error, as well as the action you should take to resolve the error.

4. Based on whether or not you can locate an error message and the error message description, do the following:

   - If, by reviewing the log files and the *Error Messages*, you are able to identify a solution to the upgrade failure, you can implement your solution and then re-start the Upgrade Assistant and perform the upgrade again.

     When you re-run the Upgrade Assistant, any components that were upgraded successfully during the previous run will not be affected. However, the Upgrade Assistant will attempt to upgrade any components that were not upgraded successfully during a previous run of the utility.

   - Contact Oracle Support for any errors that are not documented or that cannot be resolved by following documented actions. Note that some errors that

occur will require the repository to be restored from backup, the problem to be resolved, and another upgrade to be run.

3.2 Reviewing Log Files

Should any failures occur when running Upgrade Assistant, log files will be needed to help diagnose and correct the problem; do not delete them. When running the Upgrade Assistant, you can alter the contents of your log files by specifying a different `-logLevel` from the command line. You can alter the location of your log files using the `-logDir` parameter.

Tip: To expedite the review process, search for the word "ERROR".

For more information on understanding error messages in your log files, see Resolving Common Upgrade Assistant Errors.

Log files are stored in the following default directory:

On UNIX operating systems:

ORACLE_HOME`/oracle_common/upgrade/logs/ua<`*timestamp*`>.log`

On Windows operating systems:

ORACLE_HOME`\oracle_common\upgrade\logs\ua<`*timestamp*`>.log`

Some components will create a second log file called `ua<`*timestamp*`>.out`, also in the same location.

The *timestamp* will reflect the actual date and time that Upgrade Assistant was run.

For database schema upgrades of certain components, there can also be an output (`.out`) file that will contain the screen output of commands that were run in a shell process or as PL/SQL scripts. You can locate these output files in the same default directory.

Note: In the event that there are questions or issues about an upgrade failure that cannot be resolved with the information in this guide, it will be important to retain the log files. If a service request is needed, the entire Upgrade Assistant .log file should be uploaded to the service request.

3.3 Investigating Examination Failures

To determine the cause of an examination failure:

1. Note the name of the failed component in the Upgrade Assistant dialog or command-line output.
2. Open the latest Upgrade Assistant log file.

   For the location of the log file, see Section 3.2, "Reviewing Log Files".
3. In the log file, search for the message `Starting to examine` *component_name*.

3.4 Investigating Upgrade Failures

To determine the cause of an upgrade failure:

1. Note the name of the failed component in the Upgrade Assistant dialog or command-line output.
2. Open the latest Upgrade Assistant log file.

   For the location of the log file, see Section 3.2, "Reviewing Log Files".
3. Search for the message `Starting to upgrade` *`component_name`*.

3.5 Resolving Common Upgrade Assistant Errors

If errors occur while you are running the Upgrade Assistant, you must correct the conditions that caused them before you try the upgrade again. The following sections provide some common errors that can occor.

> **Note:** This section provides descriptions of the most common upgrade errors. For a complete list of Fusion Middleware errors, see the *Error Messages*.

3.5.1 Ensuring there is sufficient disk space

If an upgrade fails due to the database server running out of disk space, you must restore the database server environment from backups, add sufficient disk space or remove unwanted files (such as temp or trace files) from the database server, and then retry the upgrade.

> **Note:** Once a database schema upgrade has failed due to this class of error, you cannot simply add more disk space and retry the upgrade. The schemas have been left in an inconsistent state and may have been marked "INVALID". You cannot recover from this error without restoring the original database state from backups.

The following examples show some insufficient disk space errors you may encounter:

ORA-01114: IO error writing block to file <*block number*>

Cause: The device on which the file resides is probably offline. If the file is a temporary file, then it is also possible that the device has run out of space. This could happen because disk space of temporary files is not necessarily allocated at file creation time.

Action: Restore access to the device or remove unnecessary files to free up space.

ORA-09945: Unable to initialize the audit trail file

Cause: The system is unable to write header information to the file being used as the audit trail. The audit_trail_dest or audit trail destination is full for generation of audit file.

Action: Free up space and retry the operation.

Linux-x86_64 Error: 28: No space left on device

3.5.2 Resolving Database Connection Problems When Upgrading Schemas

If you have trouble connecting to a database when using the Upgrade Assistant to upgrade a component schema, try connecting to the database using another tool, such as SQL*Plus. This will help you troubleshoot the problem by verifying that the database is up and running and available on the network.

3.5.3 Setting the DISPLAY Environment Variable

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

```
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.

3.6 Restarting the Upgrade Assistant After a Failure

If the Upgrade Assistant fails or only partially upgrades your components, try to resolve the and then follow these steps:

1. Recover your backed-up 11*g* environment.
2. Start the Upgrade Assistant in GUI or command-line mode.

Note: If you continue to experience upgrade failures, consider setting the `-logLevel` to `TRACE` so that more information will be logged. This will be useful when troubleshooting a failed upgrade, but be sure to reset the `-logLevel` to `NOTIFICATION` after the issue has been resolved to avoid performance issues.

A

Upgrade Assistant Screens

The screens for the Oracle Fusion Middleware Upgrade Assistant vary depending upon the type of Oracle Fusion Middleware software you are upgrading.

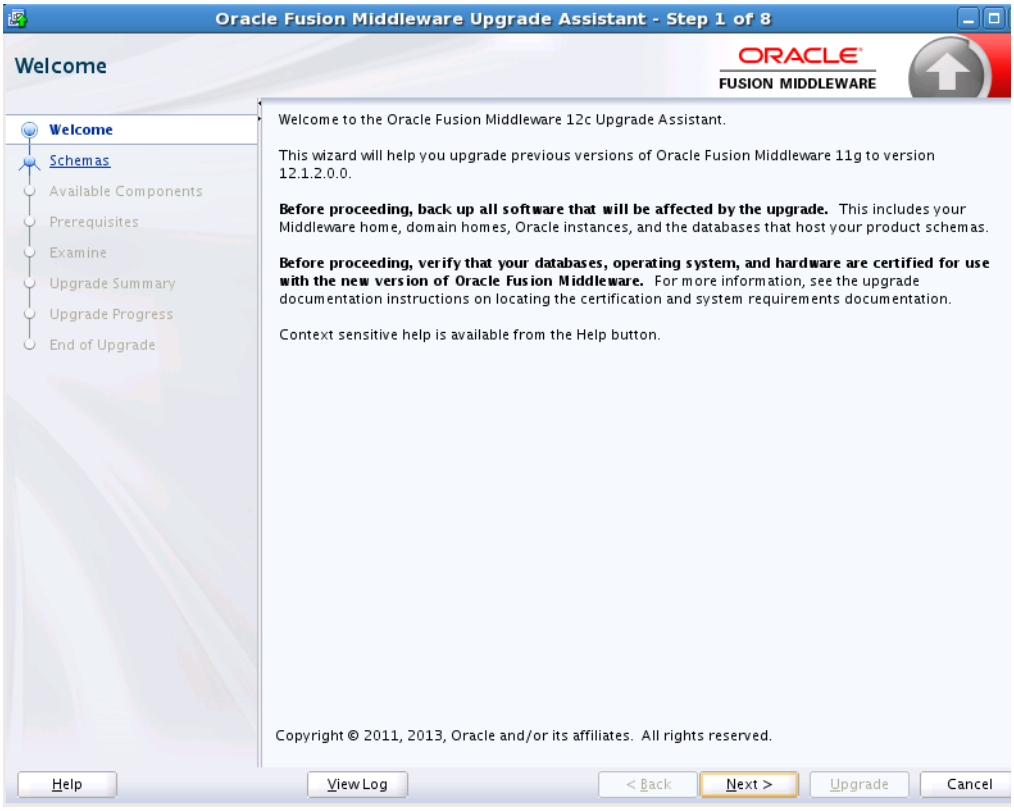
Refer to the following sections for more information:

- Section A.1, "Welcome"
- Section A.2, "Schemas"
- Section A.3, "WebLogic Component Configurations"
- Section A.4, "Standalone Components"
- Section A.5, "Available Components"
- Section A.6, "Component List"
- Section A.7, "Prerequisites"
- Section A.8, "Domain Directory"
- Section A.9, "11g Domain Directory"
- Section A.10, "Select Schemas"
- Section A.11, "Instance Directories"
- Section A.12, "Node Manager"
- Section A.13, "OWSM Policy Manager"
- Section A.14, "ODI Options"
- Section A.15, "ODI Supervisor"
- Section A.16, "ODI Upgrade Key"
- Section A.17, "Examine"
- Section A.18, "Examine Failure"
- Section A.19, "Upgrade Summary"
- Section A.20, "Upgrade Progress"
- Section A.21, "Upgrade Success"
- Section A.22, "Upgrade Failure"
- Section A.23, "Cancel Upgrade"

Note: The screens documented in this appendix are not necessarily in sequels order. Depending on the options you select, you may not see all of the screens. See Chapter 1, "Using the Upgrade Assistant" for general information on the screens that are used for each upgrade type.

A.1 Welcome

Figure A–1 Welcome



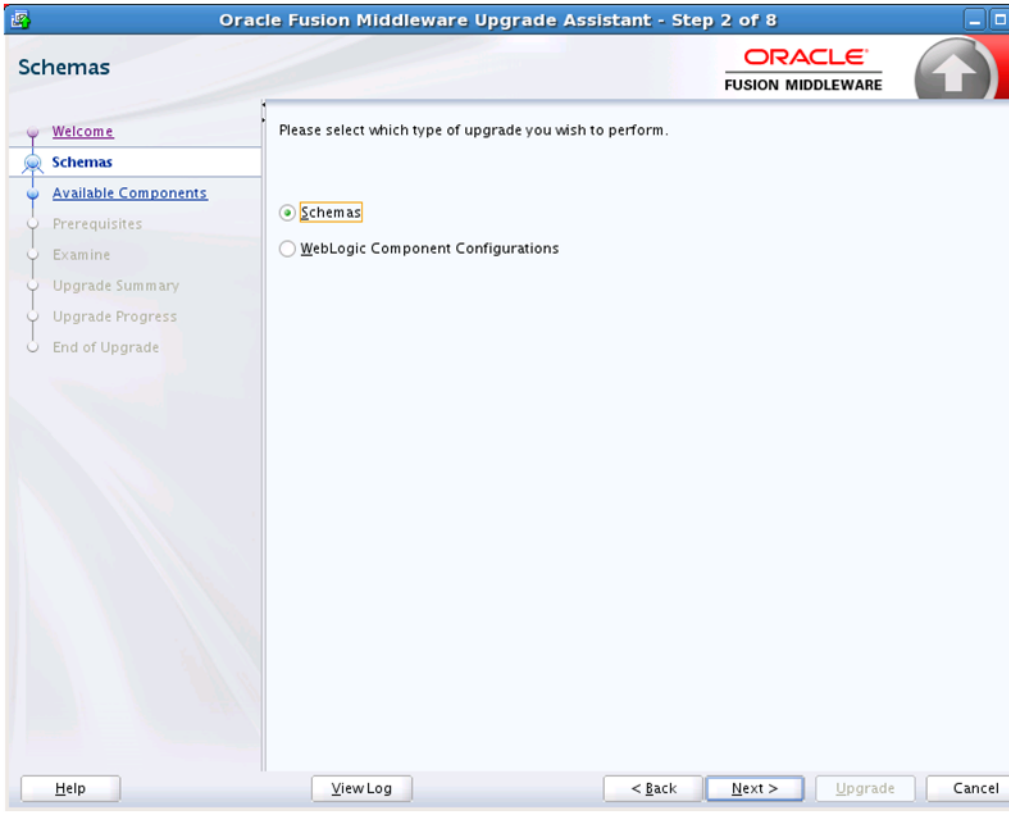
Welcome Page of the Upgrade Assistant. Graphic described in surrounding text.

****

The Oracle Fusion Middleware Upgrade Assistant is used to upgrade component schemas, component configurations, and standalone system component configurations from Fusion Middleware 11*g* Release 1 (11.1.1.6.0 or 11.1.1.7.0) to Fusion Middleware 12*c* (12.1.2).

A.2 Schemas

Figure A–2 Schemas

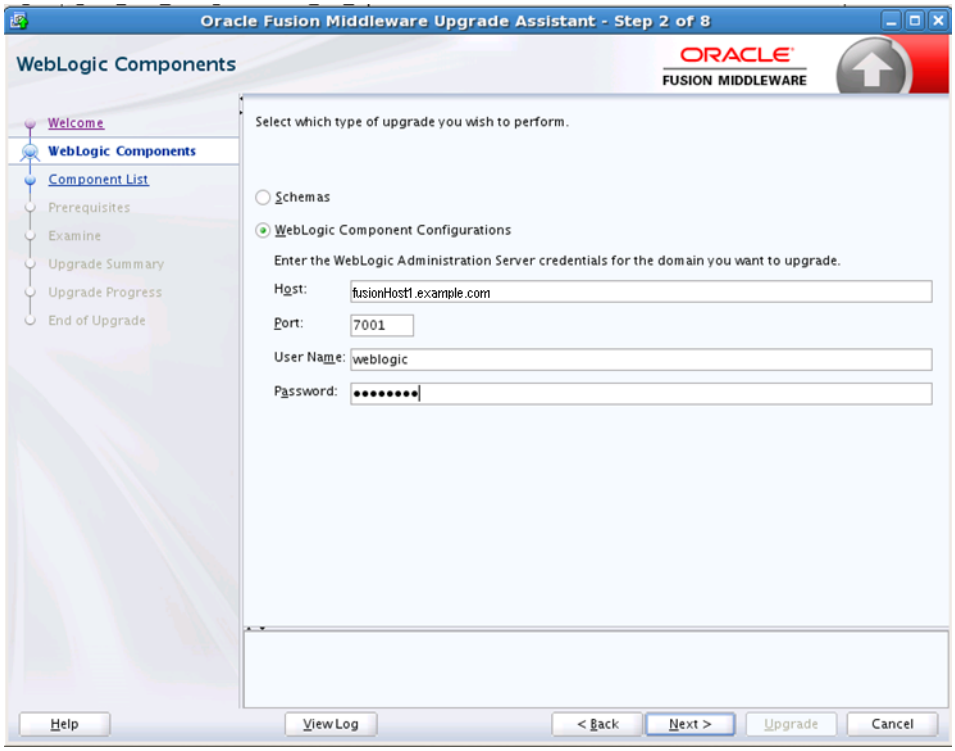


Select **Schemas** to upgrade schemas for your installed components. The Upgrade Assistant will list components that are candidates for schema upgrade. It is possible that your environment does not use one of the listed components and, therefore, does not need a schema upgrade for the component. When using the Upgrade Assistant to upgrade schemas, upgrade schemas one domain at a time. After the schemas are upgraded, and the domain has been reconfigured and upgraded, launch the Upgrade Assistant again for each additional domain that requires an upgrade.

CAUTION: Upgrade only those schemas that will be used to support your 12.1.2.0.0 components. Do not upgrade schemas that are currently being used to support 11g components that are not included in the Oracle Fusion Middleware 12.1.2.0.0 release.

A.3 WebLogic Component Configurations

Figure A–3 WebLogic Component Configurations



WebLogic Component Configuration screen is described in the surrounding text.

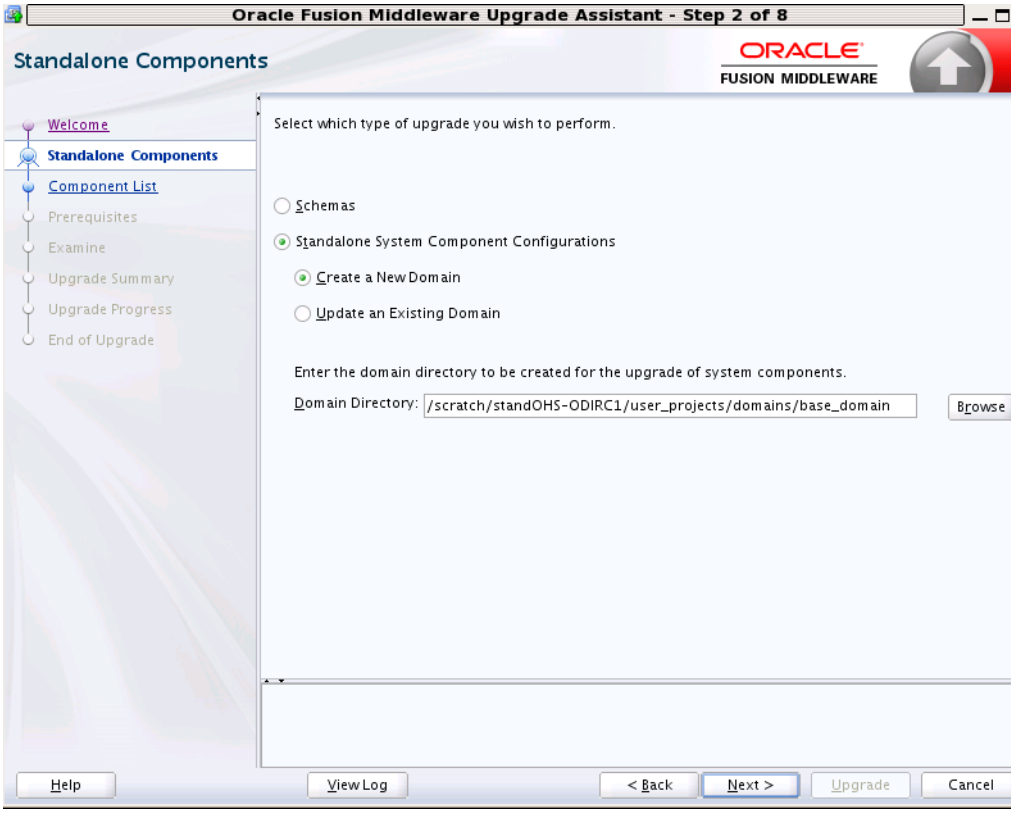
****

Select the **WebLogic Component Configurations** option to upgrade component configurations for a managed WebLogic Server domain. You will be prompted to supply the connection details required to connect to the WebLogic Administration Server that is managing the domain.

Element	Description
Host	The host of the administration sever. Be sure to include the full host name; for example: `fusionHost1.example.com`
Port	The listening port of the administration server. Typically, the administration server listens on port 7001.
Username	The username that is used to log in to the administration server. This is the same username you use to log in to the Administration Console for the domain.
Password	The password for the administrator account that is used to log in to the administration server. This is the same password you use to log in to the Administration Console for the domain.

A.4 Standalone Components

Figure A–4 Standalone Components

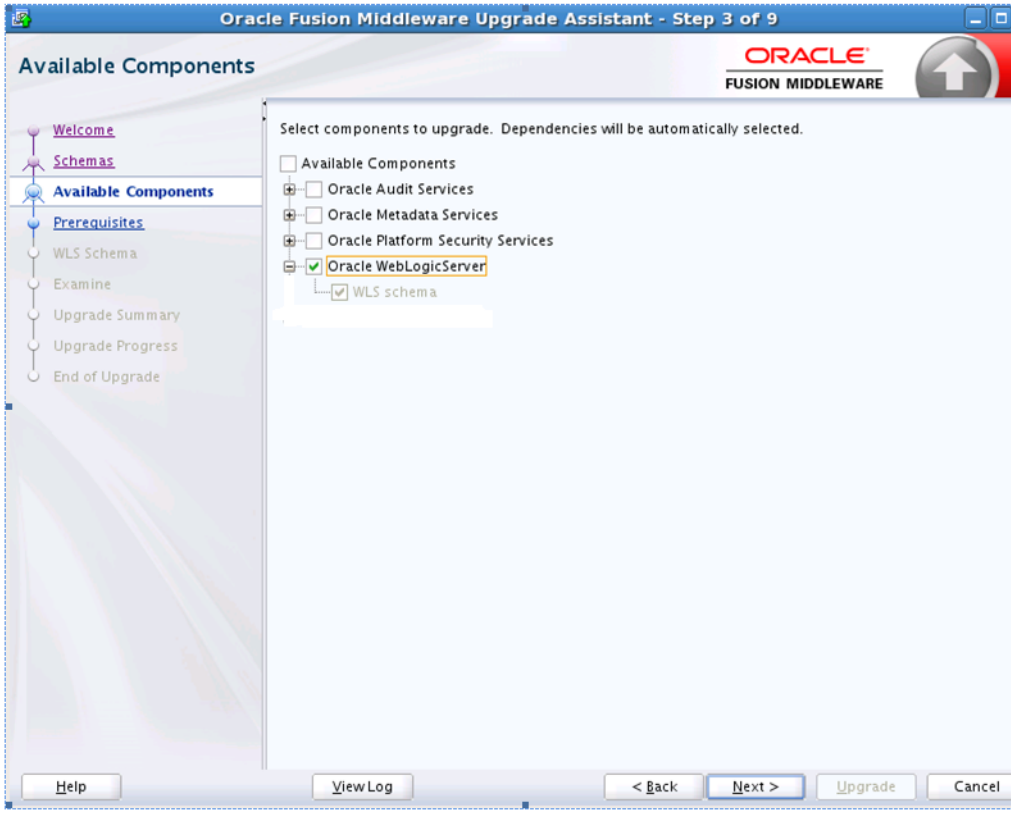


Select the **Standalone System Component Configurations** option when you will be upgrading a standalone system component, such as Oracle HTTP Server (OHS). You will be prompted to select one of the following:

Option	Description
Create a New Domain	Standalone system components will have a separate standalone domain in 12*c*. A standalone domain is a container for system components, such as Oracle HTTP Server. It has a directory structure similar to an Oracle WebLogic domain, but it does not contain an Administration Server or Managed Servers. It can contain one or more instances of system components of the same type, such as Oracle HTTP Server, or a mix of types. Management tools, such as the Configuration Wizard, pack and unpack, WLST, and Node Manager can operate on standalone domains.
Update an Existing Domain	Once a standalone domain has been created for a system component in 12.1.2.0.0, you can select this option to extend that domain for another standalone system component.

A.5 Available Components

Figure A–5 Available Components



Graphic described in surrounding text.

****

The Upgrade Assistant provides a list of installed Oracle Fusion Middleware components that have schemas that can be upgraded. When you select a component, the schemas and any dependencies are automatically selected.

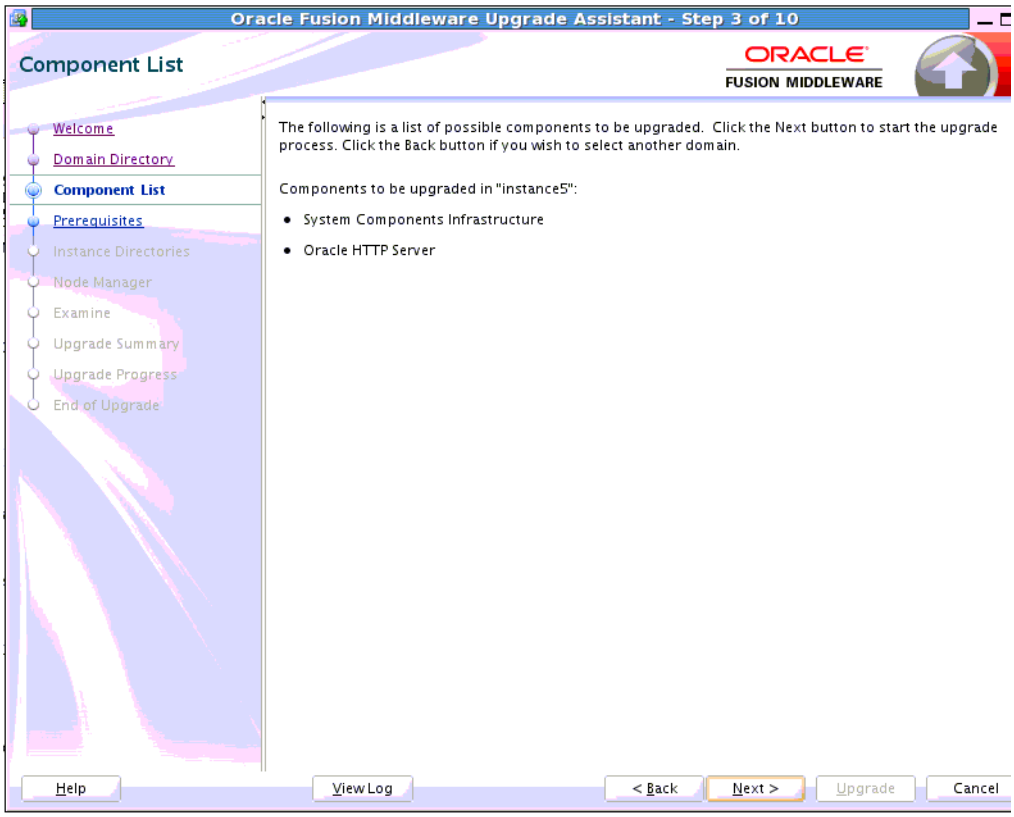
To select a schema, click the box next to the component name.

To select all available schemas, click the box next to Available Components. This will select all components and their available schemas.

CAUTION: Upgrade only those schemas that will be used to support your 12.1.2.0.0 components. Do not upgrade schemas that are currently being used to support 11g components that are not included in the Oracle Fusion Middleware 12.1.2.0.0 release.

A.6 Component List

Figure A–6 Component List



Graphic described in surrounding text.

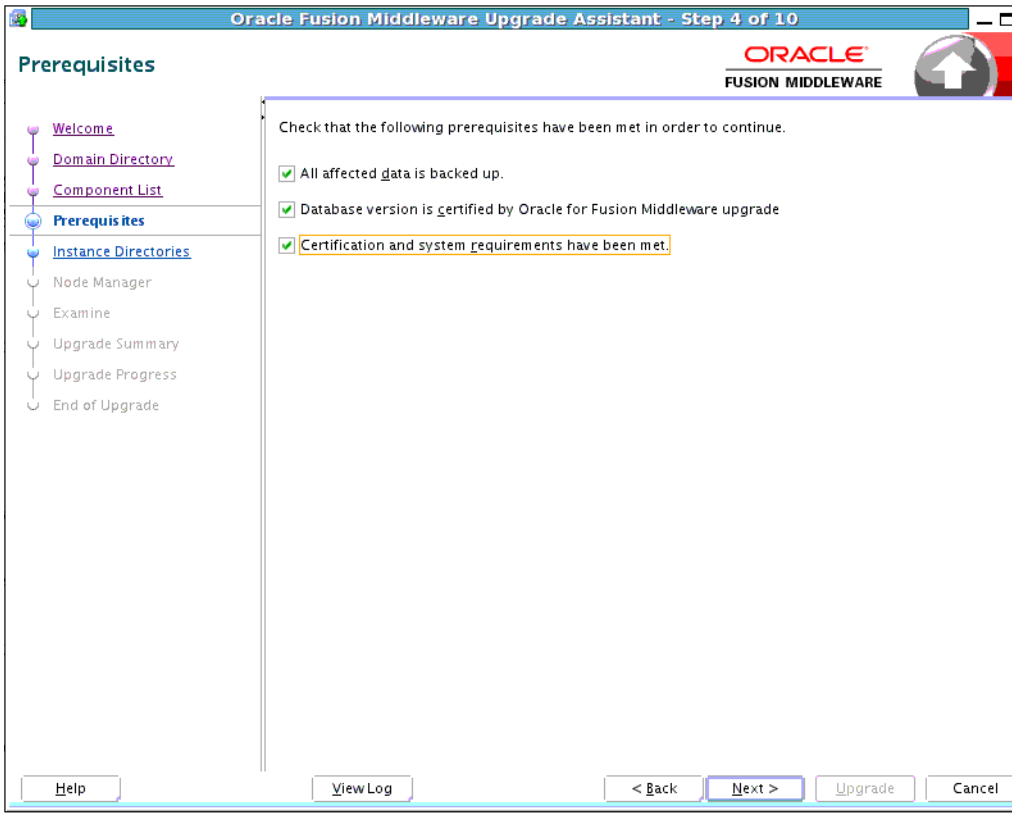
****

This screen provides a list of components that will be included in the WebLogic domain's component configuration upgrade. The name of the domain is provided along with the list of components located within the domain.

Review the list to verify that the correct components will be upgraded. If you do not see the components you want to upgrade, you may have selected the wrong domain. Use the **Back** button to specify a different domain.

A.7 Prerequisites

Figure A–7 Prerequisites



Graphic described in surrounding text.

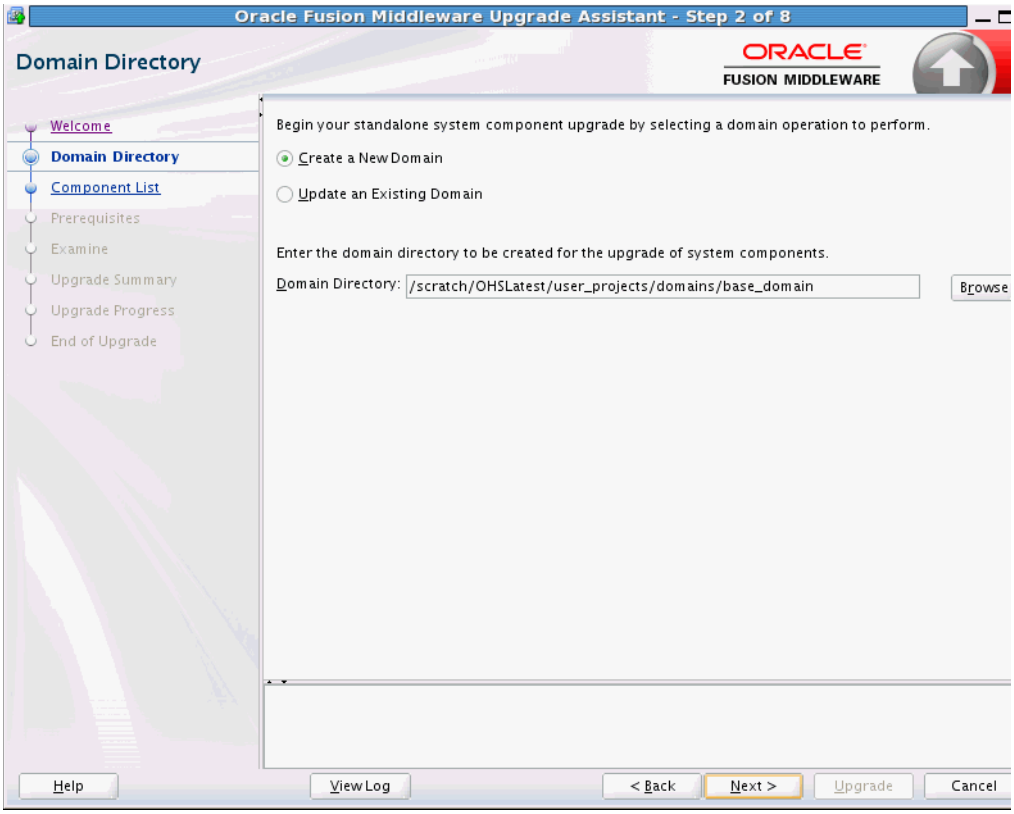
****

This screen requires you to acknowledge that all prerequisites have been met before you continue with the upgrade. You must check the boxes before you can continue.

The Upgrade Assistant will not verify that the prerequisites have been met.

A.8 Domain Directory

Figure A–8 Domain Directory



Graphic described in surrounding text.

****

When upgrading a standalone system component, such as Oracle HTTP Server (OHS), you have two choices for configuring the component's upgrade domain directory:

Create a New Domain

Beginning with 12c (12.1.2), standalone system components will have their own standalone domain. Use this screen to specify the domain option you want to apply to the standalone system component you are upgrading.

When you are upgrading your 11*g* standalone system components (which had no previous domain associations), you must first create a new standalone domain for your system components.

Specify the location and name of a new (unique) directory to be created for the upgrade of your system components.

Update an Existing Domain

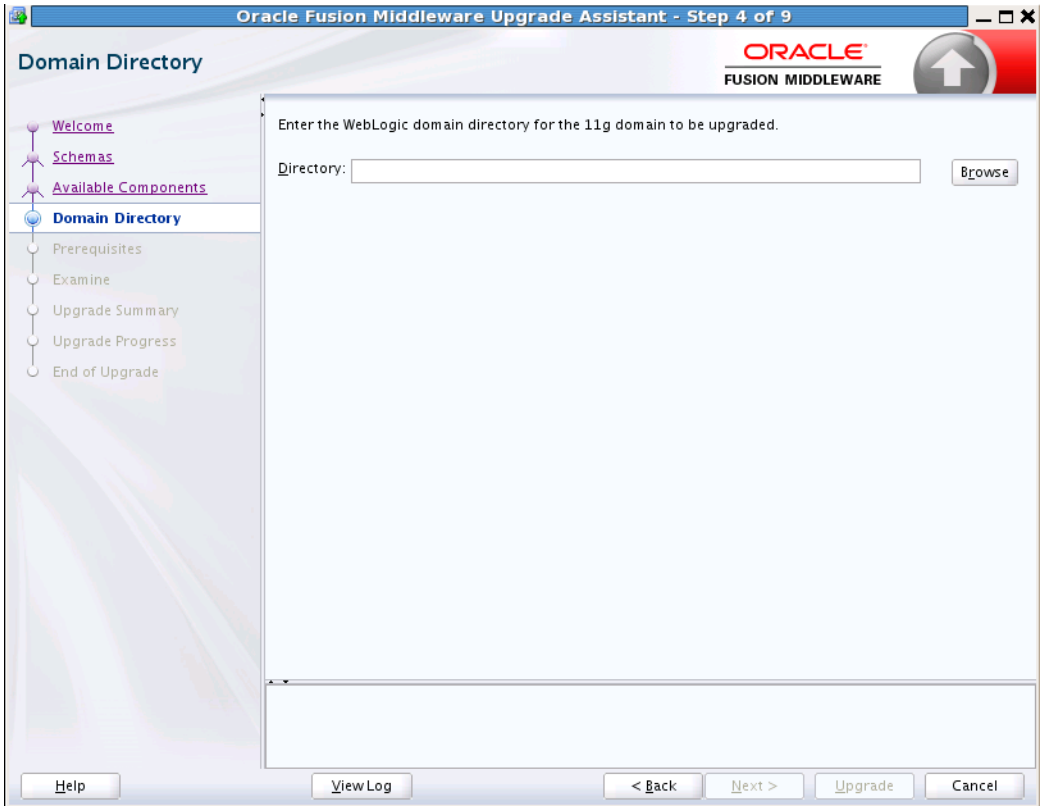
After you have created a new 12.1.2 standalone domain for your upgraded 11g system components, you can extend the standalone domain with additional standalone system components using this option.

This option would also be used if a domain was created with the "Create a New Domain" option and you re-run the upgrade.

Click **Browse** and use the navigation tree to select a valid domain directory (a directory that contains a `config.xml` file in the `config` directory of a 12.1.2.0.0 domain), and click **Next.**

A.9 11g Domain Directory

Figure A–9 11g Domain Directory



Graphic described in surrounding text.

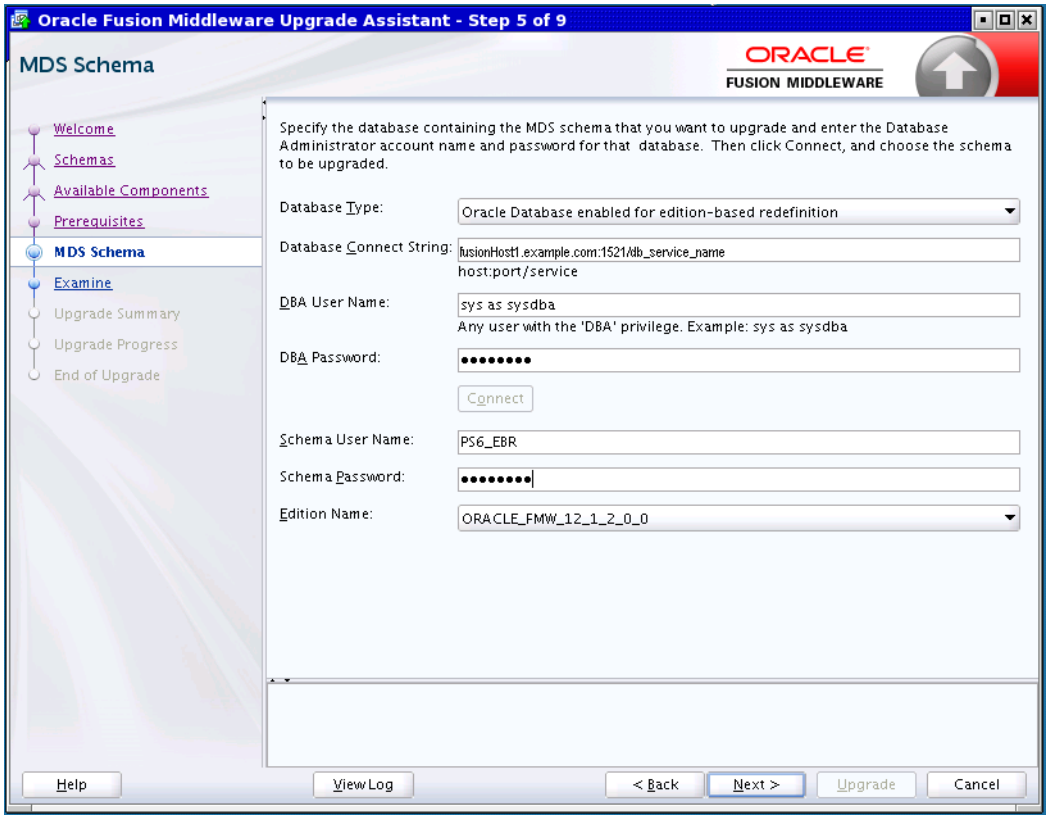
****

When upgrading schemas for OPSS or Audit, you must specify the existing Oracle WebLogic 11*g* domain directory. The Upgrade Assistant requires the 11*g* domain location to access the `jps-config.xml` file.

Click **Browse** and use the navigation tree to select a WebLogic domain directory of the 11*g* domain to be upgraded.

A.10 Select Schemas

Figure A–10 Select Schemas



Graphic described in surrounding text.

****

Use this screen to enter information required to connect to the selected schema and the database that hosts the schema. Click **Connect** to connect to the database then select the schema to be upgraded.

NOTE: For WebLogic Server domain schemas you will manually enter the 11*g* schema user name and password.

The following table describes the elements that appear on this screen.

Element	Description
Database Type	Select the database type from the drop-down menu. The types of databases available in the menu varies, depending on the schema you are about to upgrade. **NOTE**: The database type shown in the example above is for Oracle Edition-Based Redefinition (EBR) schemas. Be sure to select the correct database type for your upgrade.

Element	Description
Database Connect String	Enter the location of the database. For example, if you are selecting an Oracle database, the following URL format could be used: `host:port/db_service_name` If you are using a Microsoft SQL Server or IBM DB2 database, then select the database type from the drop-down menu, and review the text below the field, which provides the syntax required for each database type.
DBA User Name	Enter the database user name used to connect to the database. For Oracle database users, the user of Upgrade Assistant must be granted the Oracle "DBA" role.
DBA Password	Enter the password associated with the specified DBA database user.
Schema User Name	Enter the user name of the schema, for example, **DEV_MDS**.
Schema Password	Enter the password associated with the specified schema user name.
Edition Name	When Oracle Database enabled for edition-based redefinition is selected as the database type, you must specify the existing edition name. **NOTE**: Before upgrading an EBR-enabled schema from Fusion Middleware 11g Release 1 (11.1.1.6.0 or 11.1.1.7.0), you must first connect to the database server and create an edition on the database server for 12c (12.1.2). The new edition for 12.1.2 must be a child of your 11.1.1.6.0 or 11.1.1.7.0 edition. For more information on creating an edition on the server for edition-based redefinition, see "Creating an Edition on the Server for Edition-Based Redefinition" in *Planning an Upgrade of Oracle Fusion Middleware*.

A.11 Instance Directories

Figure A–11 Instance Directories

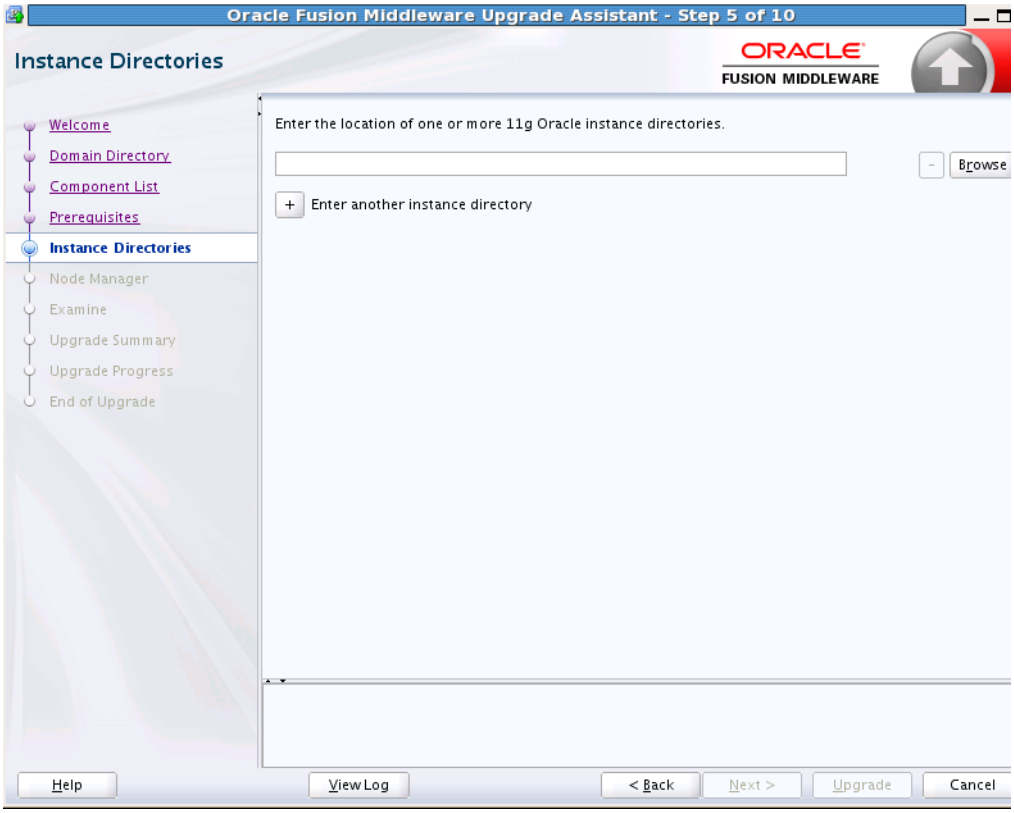


Image described in text below.

****

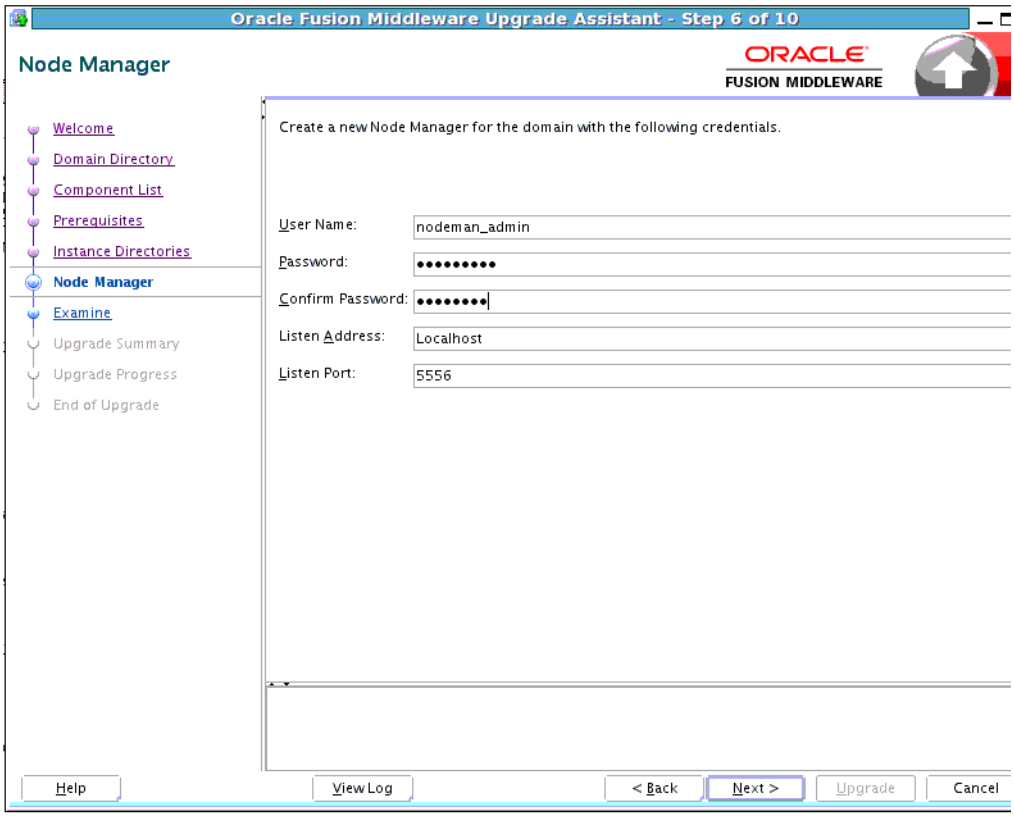
When upgrading system components, such as OHS, you must provide the directory locations of the 11g instances that will be used as a starting point for creating new 12c component instances.

Use the **Add** button to include more than one instance, if needed.

NOTE: You cannot use the Upgrade Assistant to upgrade Oracle 10g instances to Oracle 12c. You must first upgrade Oracle 10g instances to 11g. For more information on migrating 10g to 11g, see the 11g upgrade documentation for your components.

A.12 Node Manager

Figure A–12 Node Manager



Graphic described in surrounding text.

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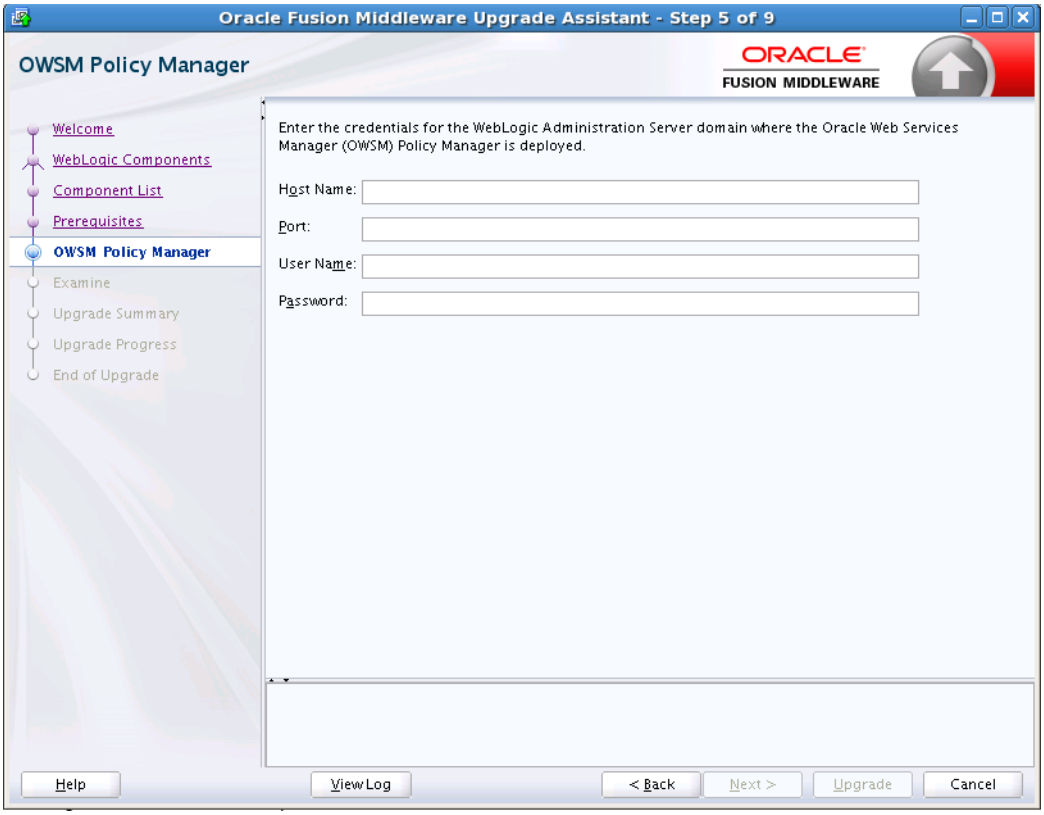
Use this screen to specify the credentials of the Node Manager that will be used to create a domain during the upgrade of standalone system components.

> **Note:** The username and password are only used to authenticate connections between Node Manager and clients. They are independent from the server Administrator ID and password.

Element	Description
Username	The username used to access Node Manager.
Password	The password used to access Node Manager. You will need to re-enter the password for confirmation.
Listen Address	Enter the DNS name or IP address upon which Node Manager listens in the Listen Address field.
Listen Port	The listening port number of Node Manager.

A.13 OWSM Policy Manager

Figure A–13 OWSM Policy Manager



Graphic described in surrounding text.

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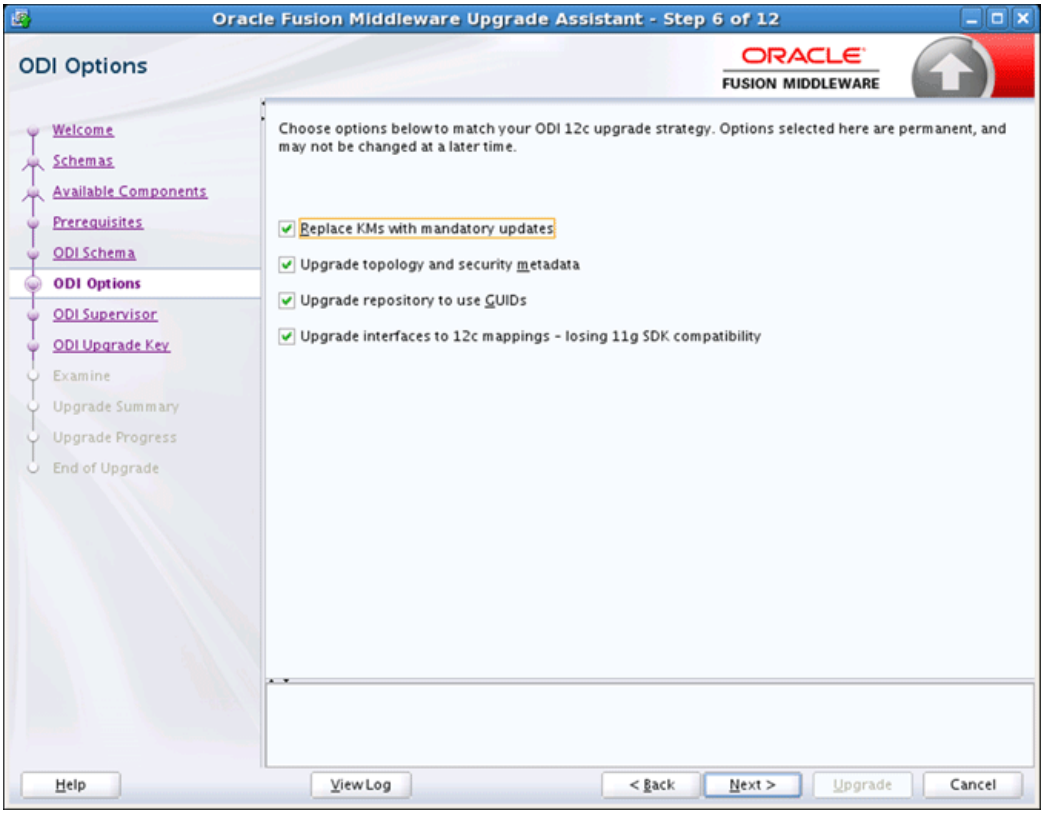
Use this screen to enter the credentials for the WebLogic Administration Server domain where the Oracle Web Services Manager (OWSM) Policy Manager is deployed.

Element	Description
Host	The host where an Administration Server for the domain is running. Be sure to include the full host name; for example: `fusionHost1.example.com`
Port	The listening port of the administration server. Typically, the administration server listens on port 7001.
Username	The username that is used to log in to the administration server. This is the same username you use to log in to the Administration Console for the domain.
Password	The password for the administrator account that is used to log in to the administration server. This is the same password you use to log in to the Administration Console for the domain.

A.14 ODI Options

Figure A–14 Oracle Data Integrator (ODI) Options



This screen is used to specify the upgrade operations you want the Upgrade Assistant to perform. The options are described in detail below.

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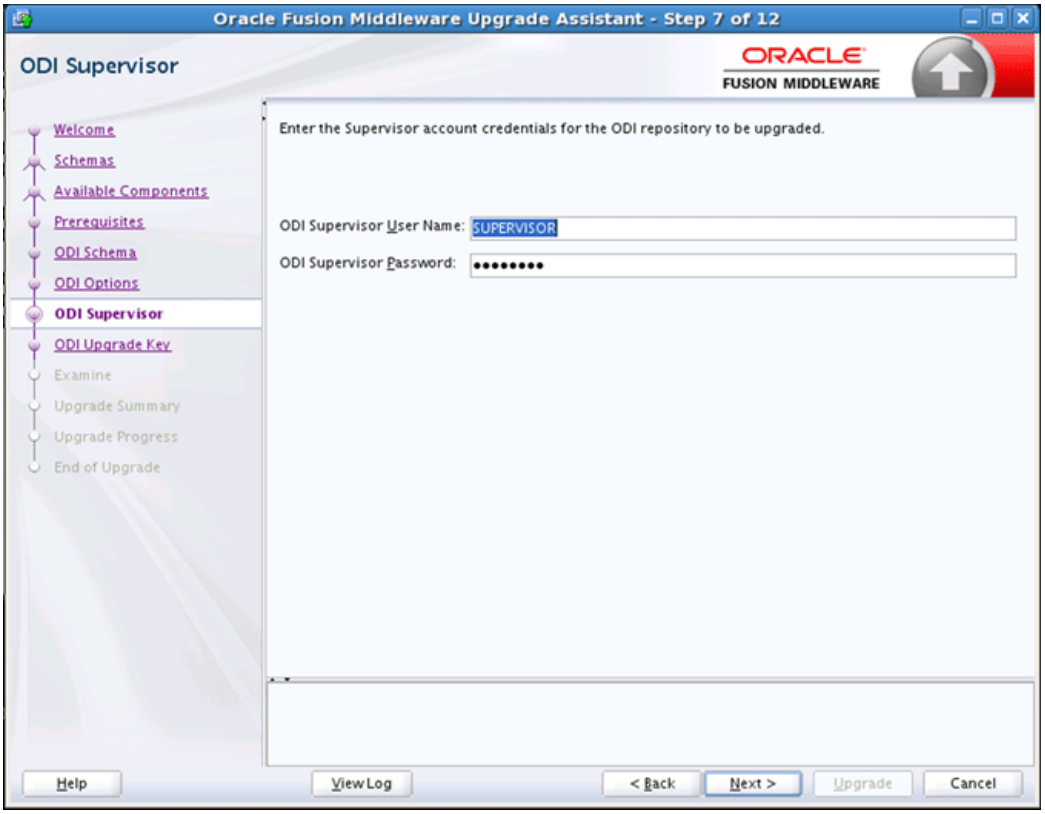
Select from the following options the operations you want the Upgrade Assistant to perform. Click **Next** to continue.

Option	Description
Replace KMs with mandatory updates	This selection replaces standard KMs with the newest version. Any customizations to standard KMs will be lost.
Upgrade topology and security metadata	This selection replaces topology and security artifacts such as Technologies, Datatypes, Security Profiles and others with the newest version. Any customizations will be lost.
Upgrade repository to use GUIDs	This selection sets the repository to 12*c* full mode. All objects will be referenced using 12*c* GUID rather than the internal ID. If you uncheck this, then the repository is left in "11*g* compatibility mode," which allows the user to execute already generated 11*g* interface objects. The repository can be switched to 12*c* full mode using the graphical user interface or an SDK call. **CAUTION**: Once the repository is switched, you cannot revert to the previous 11g compatibility mode.

Option	Description
Upgrade interfaces to use 12c mappings - losing 11g SDK compatibility	This selection converts all 11*g* interfaces to 12*c* mappings. Once converted to 12*c* mappings, all of the existing scenarios must be regenerated before use. You cannot use the existing 11*g* SDK applications; they must be upgraded to use the 12*c* SDK. If this option is not selected, the conversion to 12*c* mappings is not performed. The interfaces remain and can be only modified by the 11*g* SDK (in the graphical interface they are read-only). These can be modified and regenerated/executed using the 11*g* SDK. Once the user has modified there custom application, the interfaces can then be converted to 12*c* mappings using the graphical interface or the 12*c* SDK. **NOTE**: In order for this migration to work properly, all interfaces in the 11*g* repository must be valid (they should not return any errors when validating from 11*g* Studio, for example). If an 11*g* interface is not valid, the Upgrade Assistant will not stop - even if some 11*g* interfaces fail during migration. The Upgrade Assistant will try to migrate any invalid interfaces into a 12*c* mapping, but the migration of that interface may fail, or exceptions may be printed to the log file. If this occurs, the resulting mapping will be invalid. To ensure a successful upgrade, all interfaces in the 11*g* repository must be valid.

A.15 ODI Supervisor

Figure A–15 Oracle Data Integrator (ODI) Supervisor



When you created the Master and Work repositories for ODI, the Repository Creation Utility prompted you to supply a password for the default SUPERVISOR account. On the ODI Supervisor screen, enter the following:

Element	Description
ODI Supervisor User Name	Supervisor account name for the ODI repository to be upgraded. The Supervisor user should be `SUPERVISOR` (all CAPS).
ODI Supervisor Password	Password that you created for the ODI Supervisor account.

A.16 ODI Upgrade Key

Figure A–16 Oracle Data Integrator (ODI) Upgrade Key

This screen generates a unique identifier or *upgrade key* to convert 11g IDs for repository objects into unique GUIDs. You can use the auto-generated upgrade key or you can specify your own key in the Upgrade Key field.

Consider the following two scenarios when selecting an upgrade key:

- You know that an ID used in the 11g repository is the same as a project ID located in an XML file exported from the same repository. Use the Upgrade Key field to enter the project ID that was used in the 11g repository.

  In this scenario, the upgrade key used to upgrade the repository should be the same as the upgrade key used to import the XML file into the upgraded 12c repository. This ensures that the project object in the import file will be properly matched with the project object in the repository (when using one of SYNONYM import modes).

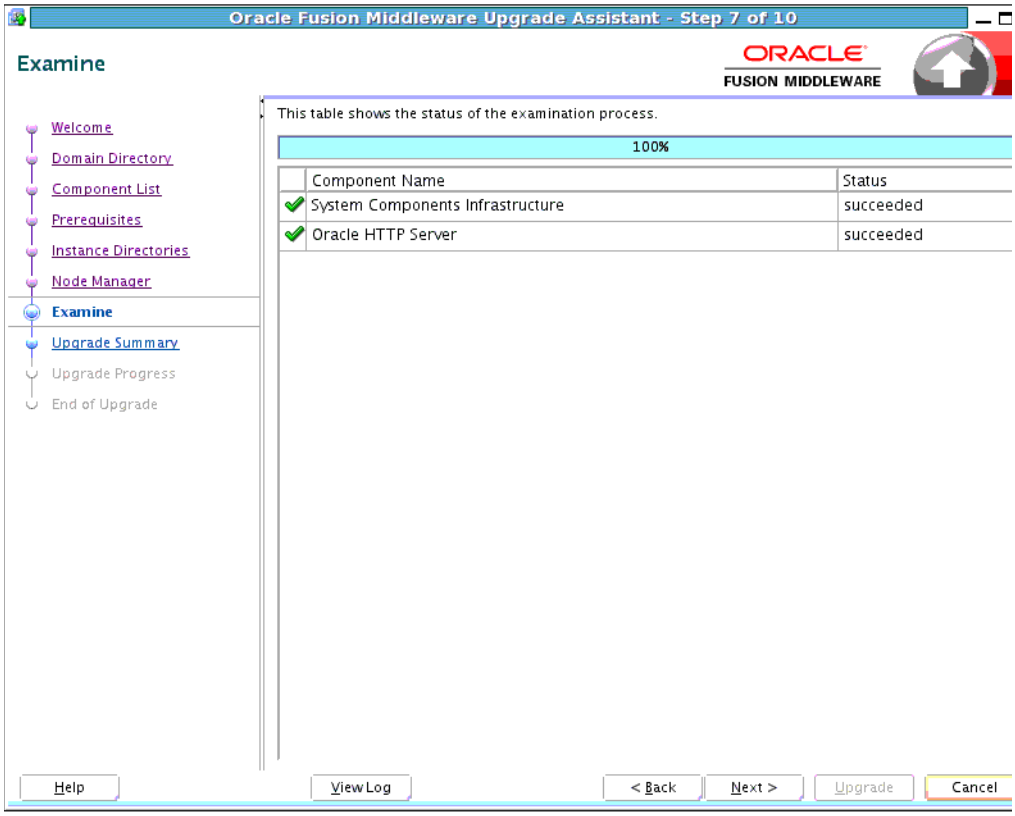
- You have 11g XML export file provided from a source containing objects created in another repository and you do not know which IDs were used. Use the auto-generated upgrade key or specific your own unique ID to avoid duplicate IDs.

  In this scenario, there is a chance that the file may contain a project that has the same internal ID. To prevent erroneous object matching, which may corrupt the metadata, a different, custom upgrade key should be used when importing that file into the repository.

NOTE: When multiple copies of the same object exist (in a repository or exported in XML files), the same GUID should be produced for all copies of the object. For this reason, the same upgrade key must be used for all upgrade operations involving the copies of that particular object.

A.17 Examine

Figure A–17 Examine



The Upgrade Assistant examines each component to be sure it meets a minimum set of criteria before you begin the upgrade process.

****

This screen displays the status of the Upgrade Assistant as it examines each component, verifying that the component is ready for upgrade.

The Upgrade Assistant examines each component to be sure it meets a minimum set of criteria before you begin the upgrade process.

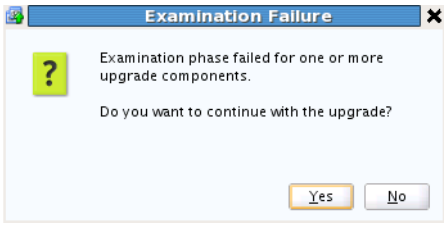
The description of the status indicators for the components is listed in the following table:

Status	Description
upgrade not necessary	The component has already been upgraded in a previous Upgrade Assistant session or the schema was recently created by Repository Creation Utility 12.1.2.0.0 for the current release and does not require an upgrade. No action will be performed on this component.
in progress...	The Upgrade Assistant is examining the upgrade items for the component.
pending...	The component will be examined when the Upgrade Assistant finishes the preceding component.
failed	Upgrade items were missing or did not meet upgrade criteria. The Upgrade Assistant cannot upgrade the component. Click **View Log** to troubleshoot the errors.
succeeded	Upgrade items were found and are valid for upgrade.

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.

A.18 Examine Failure

Figure A–18 Examine Failure



Graphic described in surrounding text.

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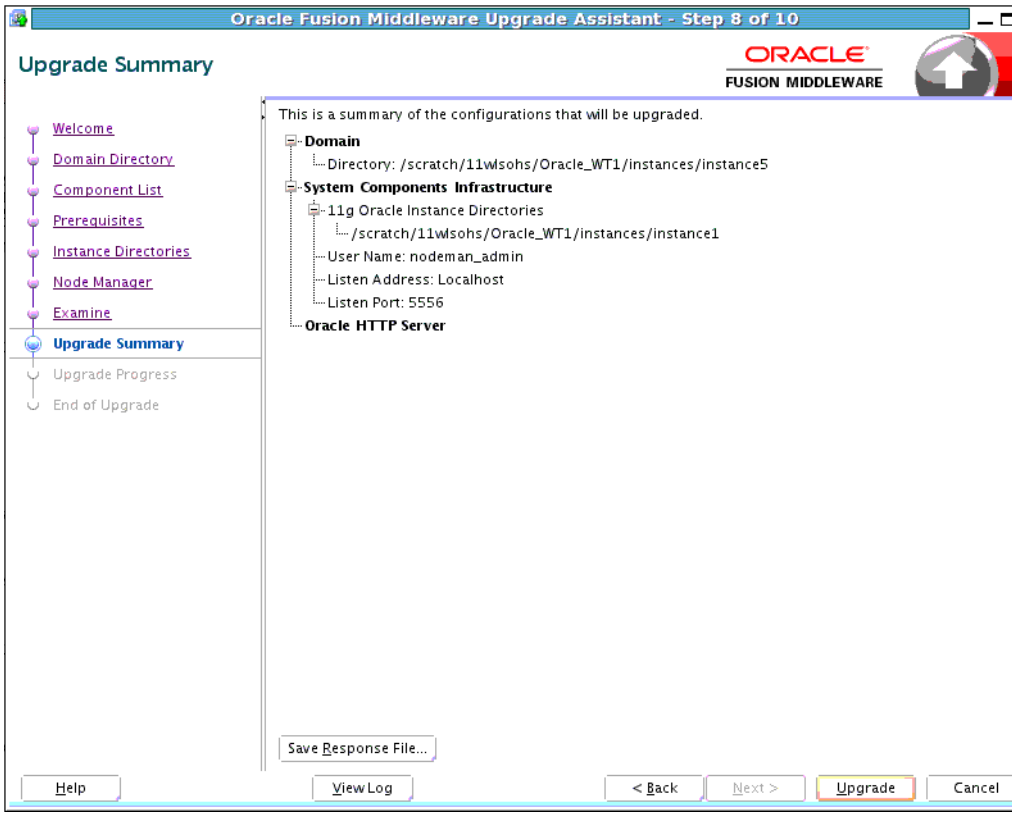
This dialog box appears when one of more of your components failed the examination phase and you selected to continue with the upgrade. If there was an examination failure, you should consider canceling the upgrade (click **No**) and review the log files. See Troubleshooting Your Upgrade for more information.

Click **Yes** to continue the upgrade.

A.19 Upgrade Summary

Figure A–19 Upgrade Summary



Graphic described in surrounding text.

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Use this screen to review a summary of the options you have selected and to start the upgrade process.

Reviewing the Upgrade Summary

Expand and collapse the tree to show or hide details about the data provided in the wizard screens, such as schema details, Oracle WebLogic Server connection details, and Oracle WebLogic domain directory information.

Starting the Upgrade Process

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

If you are upgrading a schema, verify that you have a backup of the database that hosts the schema.

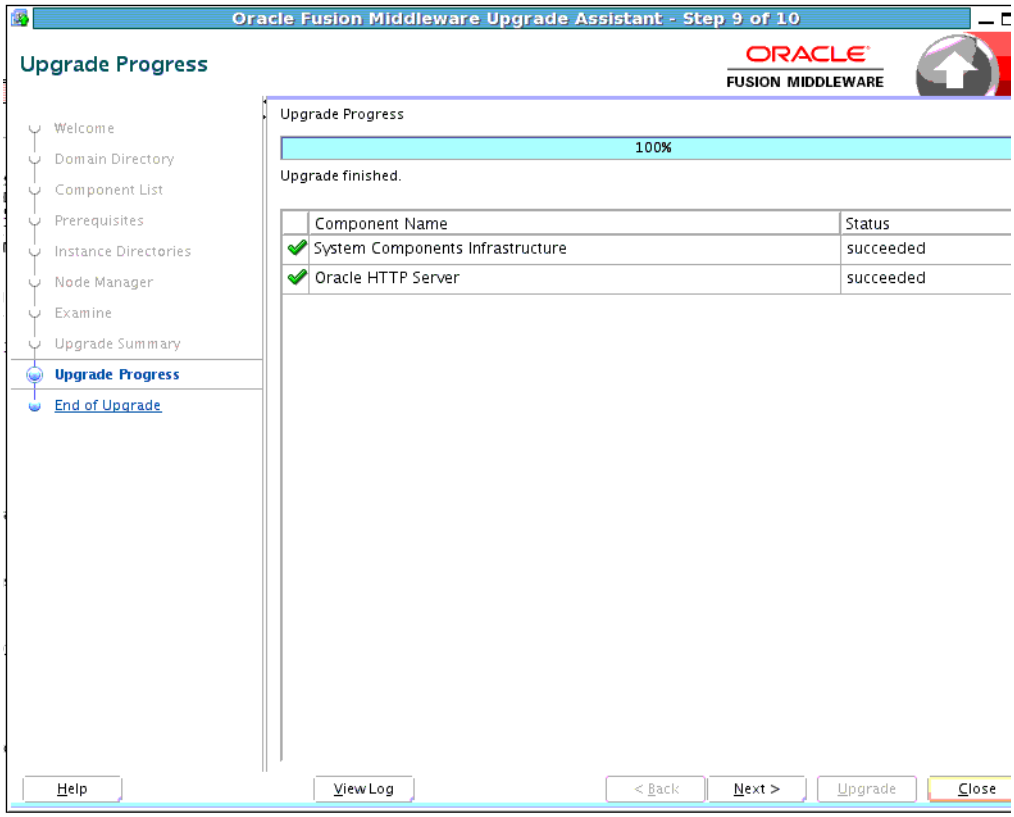
Save Response File

The **Save Response File** option creates a file that can be used as input to the Upgrade Assistant. The response file collects all the information that you have entered through the Upgrade Assistant's graphical user interface screens, 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.

A.20 Upgrade Progress

Figure A–20 Upgrade Progress



Graphic described in surrounding text.

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This screen shows the status of the upgrade process.

The status of each component upgrade is indicated by one of the following messages that can appear next to the component name. The following table describes each status message.

Status	Description
in progress...	The Upgrade Assistant is upgrading the component's upgrade items.
pending...	The component will be upgraded when the Upgrade Assistant finishes the preceding component.
upgrade not necessary	The component was upgraded previously by the Upgrade Assistant or the component was just installed and is already at the latest version. No action will be taken on this component.
skipped	The component is dependent on another component which has a status of "failed". When the status is "skipped" no upgrade is attempted for that component.

Status	Description
failed	Upgrade items were missing or did not meet upgrade criteria. The component cannot be upgraded. Click View Log to troubleshoot the errors.
succeeded	Upgrade items were upgraded successfully.

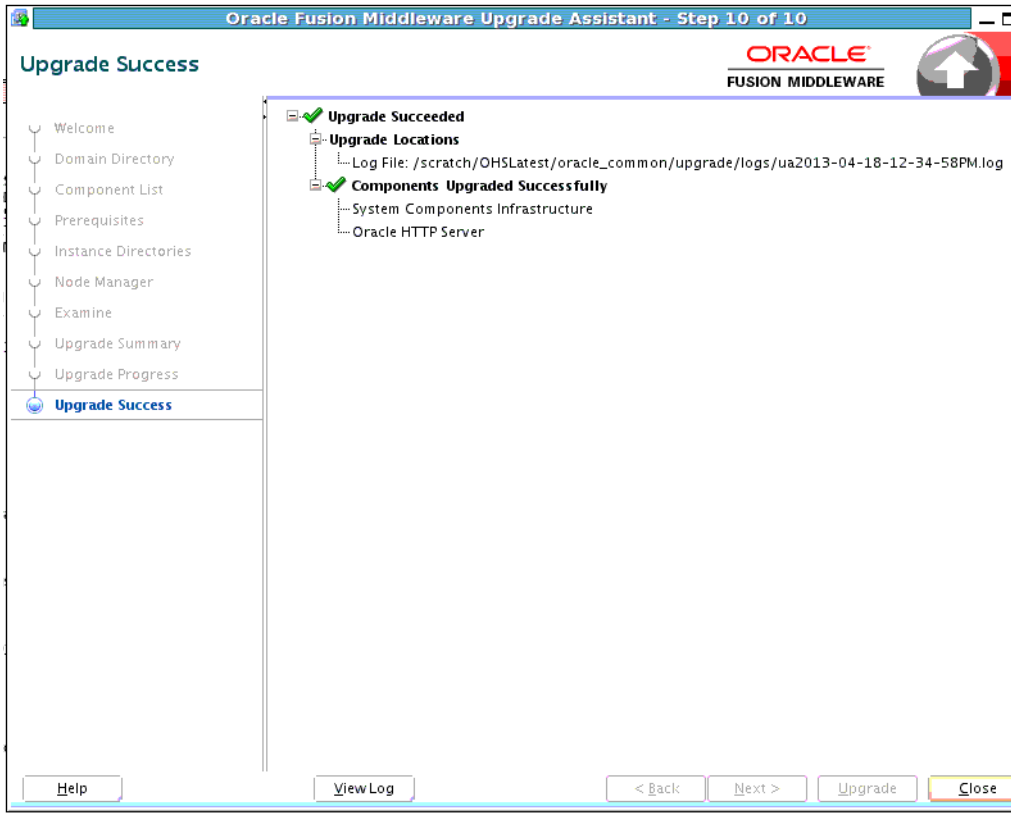
If any components are not upgraded successfully, refer to the Upgrade Assistant log files for more information.

Related Topics

Upgrading with the Upgrade Assistant

A.21 Upgrade Success

Figure A–21 Upgrade Success



Graphic described in surrounding text.

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

In addition, be sure to do the following:

- View the `postupgrade.txt` file in the Oracle home:

On Unix systems:

```
ORACLE_HOME/oracle_common/upgrade/logs
```

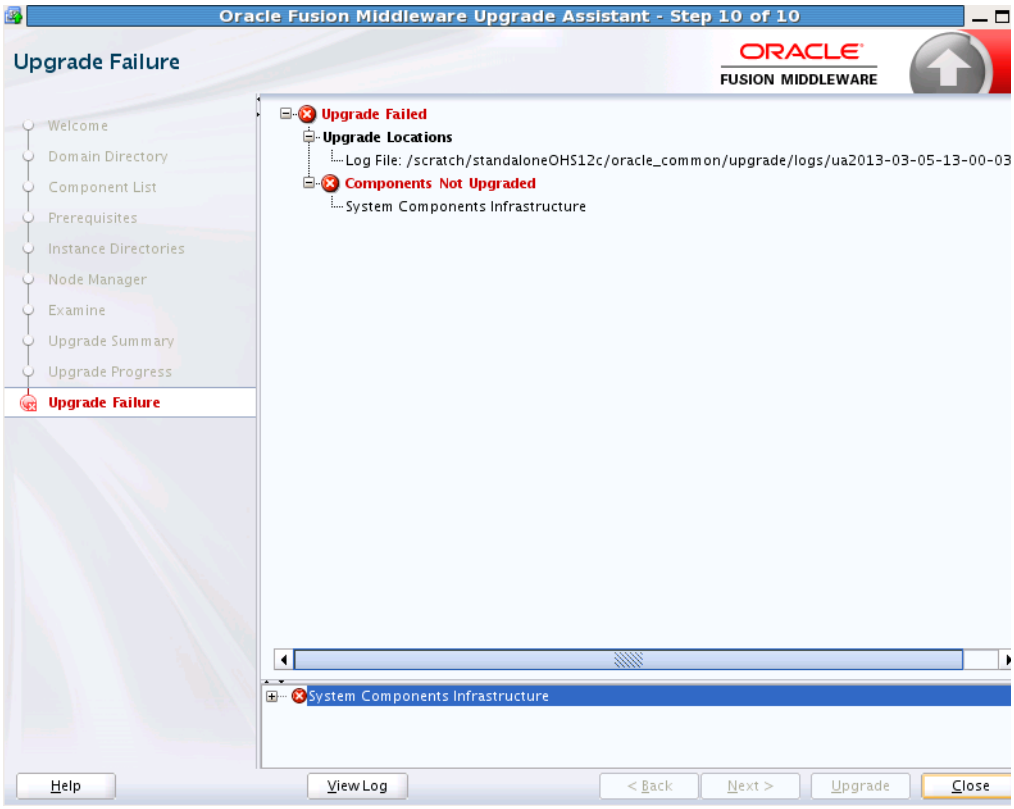
On Windows systems:

```
ORACLE_HOME\oracle_common\upgrade\logs
```

- Review the Upgrade Guide specific to your Oracle Fusion Middleware environment for more information about any additional post-upgrade tasks.

A.22 Upgrade Failure

Figure A–22 Upgrade Failure



Graphic described in surrounding text.

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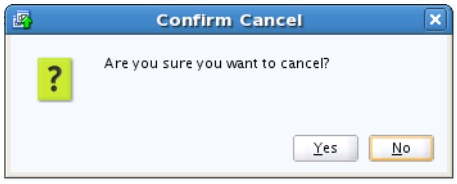
The upgrade of one or more components has failed. The component cannot be upgraded at this time. Click **View Log** to troubleshoot the errors.

For more information, see Troubleshooting Your Upgrade.

A.23 Cancel Upgrade

Figure A–23 Cancel Upgrade



screen described in surrounding text.

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This screen prompts you to confirm your decision to cancel the upgrade.

Important Note: If you cancel a schema upgrade, you must restore a backup of the database that hosts the schema and its environment (the pre-upgrade directory structure).