Oracle® Fusion Middleware

Installing and Configuring Oracle Business Intelligence

12*c* (12.2.1.1)

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Documentation for installers and system administrators that describes how to install and configure Oracle Business Intelligence.

ORACLE

Oracle Fusion Middleware Installing and Configuring Oracle Business Intelligence, 12*c* (12.2.1.1)

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Preface

This document describes how to install and configure Oracle Business Intelligence.

Audience

Documentation Accessibility

Related Documents

Conventions

Audience

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

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

Refer to the Oracle Fusion Middleware Library for additional information.

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

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

Conventions

This document uses the following text conventions:

Convention	Meaning
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.

1

About the Oracle Business Intelligence Installation

The standard installation for Oracle Business Intelligence described in this guide creates the standard topology, which represents a sample starting topology for this product.

Introduction to Installing a Production Environment
: This guide describes how to use Oracle Business Intelligence (BI) distribution to install and configure a standard installation topology as a starting point for a production environment.

Using the Standard Installation Topology as a Starting Point
: The standard installation topology is a flexible topology that you can use as a starting point in production environments.

Using This Document to Extend an Existing Domain
: The procedures in this guide describe how to create a new domain. The assumption is that no other Oracle Fusion Middleware products are installed on your system.

Using This Document in an Upgrade Scenario
: If you are installing Oracle Business Intelligence as part of an upgrade procedure, follow the instructions in this document to install the software, but do not run the Configuration Wizard to create a WebLogic domain.

1.1 Introduction to Installing a Production Environment

This guide describes how to use Oracle Business Intelligence (BI) distribution to install and configure a standard installation topology as a starting point for a production environment.

To install BI in a production environment, Oracle recommends that you download, install, and configure the BI environment on a single host, by following the instructions given in this guide.

See Understanding the Business Intelligence Enterprise Deployment Topology in *Enterprise Deployment Guide for Oracle Business Intelligence*.

1.2 Using the Standard Installation Topology as a Starting Point

The standard installation topology is a flexible topology that you can use as a starting point in production environments.

The information in this guide helps you to create a standard installation topology for Oracle Business Intelligence. If appropriate and required, you can later extend the standard installation topology to create a secure and highly available production environment (see Next Steps After Configuring the Domain).

The standard installation topology represents a sample topology for this product. It is not the only topology that this product supports. See About the Standard Installation Topology in *Planning an Installation of Oracle Fusion Middleware*.

About the Business Intelligence Standard Installation Topology
This topology represents a standard WebLogic Server domain that contains an Administration Server and a cluster that contains two Managed Servers.

About Elements in the Standard Installation Topology Illustration
The standard installation topology typically includes common elements.

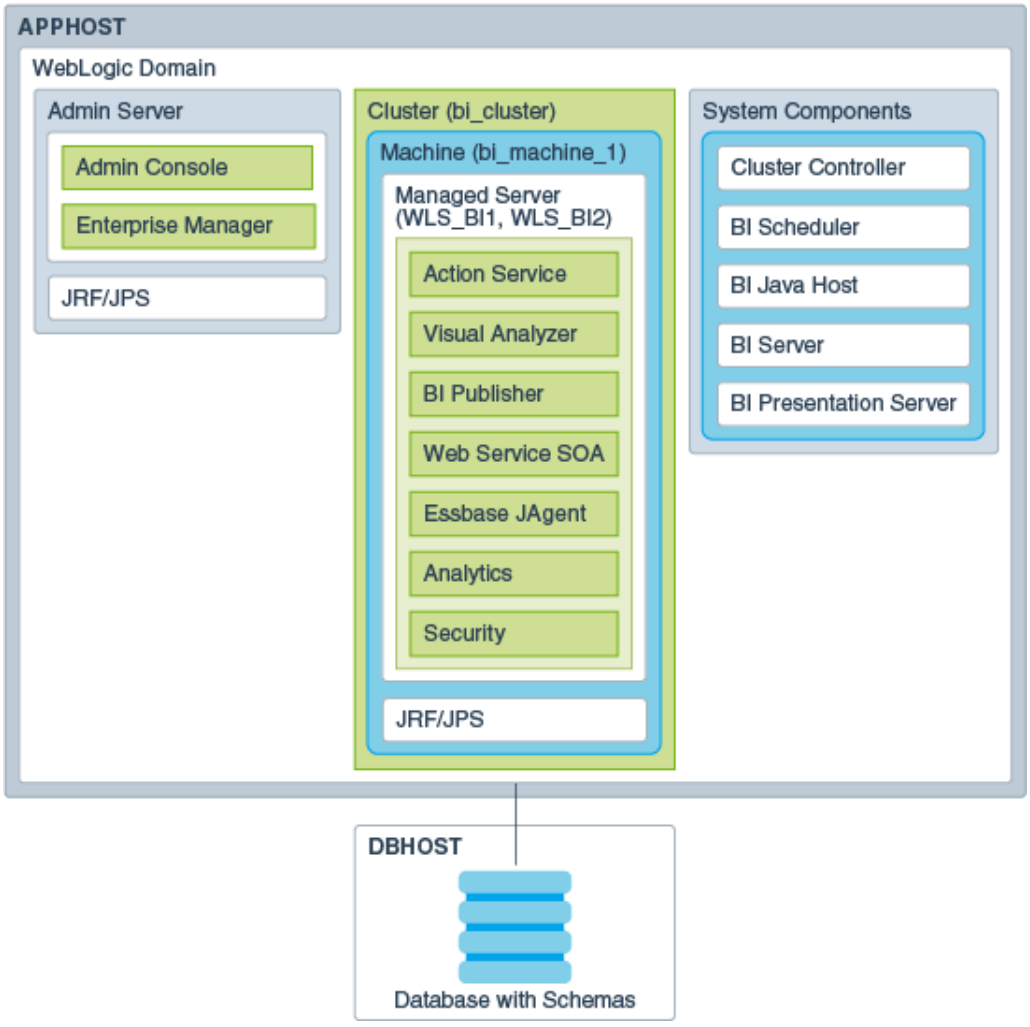
1.2.1 About the Business Intelligence Standard Installation Topology

This topology represents a standard WebLogic Server domain that contains an Administration Server and a cluster that contains two Managed Servers.

The following figure shows the standard installation topology for Business Intelligence.

See Table 1-1 for information on the elements for this topology.

Figure 1-1 Business Intelligence Standard Installation Topology



1.2.2 About Elements in the Standard Installation Topology Illustration

The standard installation topology typically includes common elements.

The following table describes all elements of the topology illustration:

Table 1-1 Description of Elements in Standard Installation Topologies

Element	Description and Links to Related Documentation
APPHOST	A standard term used in Oracle documentation to refer to the machine that hosts the application tier.
DBHOST	A standard term used in Oracle documentation to refer to the machine that hosts the database.
WebLogic Domain	A logically related group of Java components (in this case, the Administration Server, Managed Servers, and other related software components). See What Is an Oracle WebLogic Server Domain? in *Understanding Oracle Fusion Middleware*.
Administration Server	Central control entity of a WebLogic domain. It maintains configuration objects for that domain and distributes configuration changes to Managed Servers. See What Is the Administration Server? in *Understanding Oracle Fusion Middleware*.
Enterprise Manager	The Oracle Enterprise Manager Fusion Middleware Control is a primary tool used to manage a domain. See Oracle Enterprise Manager Fusion Middleware Control in *Understanding Oracle Fusion Middleware*.
Cluster	A collection of multiple WebLogic Server instances running simultaneously and working together. See Overview of Managed Servers and Managed Server Clusters in *Understanding Oracle Fusion Middleware*.
Machine	A logical representation of the computer that hosts one or more WebLogic Server instances (servers). Machines are also the logical glue between the Managed Servers and the Node Manager. In order to start or stop the Managed Servers using the Node Manager, associate the Managed Servers with a machine.
Managed Server	A host for your applications, application components, web services, and their associated resources. See Overview of Managed Servers and Managed Server Clusters in *Understanding Oracle Fusion Middleware*.
Infrastructure	A collection of services that include the following: • Metadata repository (MDS) contains the metadata for Oracle Fusion Middleware components, such as the Oracle Application Developer Framework. See What Is the Metadata Repository? in *Understanding Oracle Fusion Middleware*. • Oracle Application Developer Framework (Oracle ADF) • Oracle Web Services Manager (OWSM)

1.3 Using This Document to Extend an Existing Domain

The procedures in this guide describe how to create a new domain. The assumption is that no other Oracle Fusion Middleware products are installed on your system.

If you have installed and configured other Oracle Fusion Middleware products on your system (for example, Fusion Middleware Infrastructure, with a domain that is up and running) and wish to extend the same domain to includeOracle Business Intelligence, see Installing Multiple Products in the Same Domain for detailed information.

1.4 Using This Document in an Upgrade Scenario

If you are installing Oracle Business Intelligence as part of an upgrade procedure, follow the instructions in this document to install the software, but do not run the Configuration Wizard to create a WebLogic domain.

After you install the software, see *Oracle Fusion Middleware Oracle Business Intelligence Migration Guide* for migrating metadata and configuration from 11*g* to 12*c*; and for upgrading from a pervious 12*c* release, see *Oracle Fusion Middleware Upgrading Oracle Business Intelligence*.

2

Preparing to Install and Configure Oracle Business Intelligence

To prepare for your Oracle Business Intelligence installation, verify that your system meets the basic requirements, then obtain the correct installation software.

Roadmap for Installing and Configuring a Standard Installation Topology
: This roadmap provides the steps required to install and configure a standard Oracle Business Intelligence installation topology.

Roadmap for Verifying Your System Environment
: Before you begin the installation and configuration process, you must verify your system environment.

Obtaining the Product Distribution
: You can obtain the Oracle Fusion Middleware Infrastructure and Oracle Business Intelligence distribution on the Oracle Technology Network (OTN).

About Product Distributions
: You create the initial Oracle Business Intelligence domain using the Oracle Fusion Middleware Infrastructure distribution, which contains both Oracle WebLogic Server software and Oracle Java Required Files (JRF) software.

2.1 Roadmap for Installing and Configuring a Standard Installation Topology

This roadmap provides the steps required to install and configure a standard Oracle Business Intelligence installation topology.

Table 2-1 provides the high-level steps required for installing a standard installation topology.

Table 2-1 Standard Installation Roadmap

Task	Description	Documentation
Verify your system environment.	Before you begin the installation, verify that the minimum system and network requirements are met.	See Roadmap for Verifying Your System Environment.

Table 2-1 (Cont.) Standard Installation Roadmap

Task	Description	Documentation
Check for any mandatory patches that are required before or after the installation.	Review the Oracle Fusion Middleware Infrastructure release notes to see if there are any mandatory patches required for the software products that you are installing.	See Install and Configure in *Release Notes for Oracle Fusion Middleware Infrastructure*.
Obtain the appropriate distributions.	Oracle BI EE requires an existing Oracle Fusion Middleware Infrastructure installation and must be installed in the same Oracle home as Oracle Fusion Middleware Infrastructure. Therefore you must obtain the following distributions: fmw_12.2.1.2.0_infrastructure_generic.jar, (UNIX) fmw_12.2.1.2.0_bi_platform_linux64.bin, or (Windows) setup_fmw_12.2.1.2.0_bi_platform_win64.exe.	See About Product Distributions.
Determine your installation directories.	Verify that the installer can access or create the required installer directories. Also, verify that the directories exist on systems that meet the minimum requirements.	See What Are the Key Oracle Fusion Middleware Directories? in *Understanding Oracle Fusion Middleware*.
Install prerequisite software.	Install Oracle Fusion Middleware Infrastructure to create the Oracle home directory. Then install Oracle Business Intelligence in to the same Oracle home.	Installing the Infrastructure Software
Install the software.	Run the Oracle Universal Installer to install Oracle Business Intelligence. Installing the software transfers the software to your system and creates the Oracle home directory.	See Installing the Oracle Business Intelligence Software.
Select a database profile and review any required custom variables.	Before you install the required schemas in the database, review the information about any custom variables you need to set for the Oracle Business Intelligence schemas.	See Understanding Database Requirements for an Oracle Fusion Middleware Installation.
Create the schemas.	Run the Repository Creation Utility to create the schemas required for configuration.	See Creating the Database Schemas.
Create a WebLogic domain.	Use the Configuration Wizard/Assistant to create and configure the WebLogic domain.	See Configuring the BI Domain with the Configuration Assistant for creating the standard topology for Oracle Business Intelligence.

Table 2-1 (Cont.) Standard Installation Roadmap

Task	Description	Documentation
Administer and prepare your domain for high availability.	Discover additional tools and resources to administer your domain and configure your domain to be highly available.	See Next Steps After Configuring the Domain.

2.2 Roadmap for Verifying Your System Environment

Before you begin the installation and configuration process, you must verify your system environment.

Table 2-2 identifies important tasks and checks to perform to ensure that your environment is prepared to install and configure Oracle Business Intelligence.

Table 2-2 Roadmap for Verifying Your System Environment

Task	Description	Documentation
Verify certification and system requirements.	Verify that your operating system is certified and configured for installation and configuration.	See Verifying Certification, System, and Interoperability Requirements.
Identify a proper installation user.	Verify that the installation user has the required permissions to install and configure the software.	See Selecting an Installation User.
Select the installation and configuration directories on your system.	Verify that you can create the necessary directories to install and configure the software, according to the recommended directory structure.	See Understanding Directories for Installation and Configuration.
Install a certified JDK.	The installation program for the distribution requires a certified JDK present on your system.	See Understanding JDK Requirements for an Oracle Fusion Middleware Installation.
Install and configure a database for mid-tier schemas.	To configure your WebLogic domain, you must have access to a certified database that is configured for the schemas required by Oracle Business Intelligence.	See Understanding Database Requirements for an Oracle Fusion Middleware Installation.

Verifying Certification, System, and Interoperability Requirements

Oracle recommends that you use the certification matrix and system requirements documents with each other to verify that your environment meets the requirements for installation.

Selecting an Installation User

The user who installs and configures your system must have the required permissions and privileges.

Understanding Directories for Installation and Configuration

During the installation and domain configuration process, you must plan on providing the locations for these directories: Oracle home, Domain home, and the Application home.

Understanding JDK Requirements for an Oracle Fusion Middleware Installation
: Most Fusion Middleware products are in `.jar` file format. These distributions do *not* include a JDK. To run a `.jar` distribution installer, you must have a certified JDK already installed on your system.

Understanding Database Requirements for an Oracle Fusion Middleware Installation
: Many Fusion Middleware products require database schemas prior to configuration. If you do not already have a database where you can install these schemas, you must install and configure a certified database.

2.2.1 Verifying Certification, System, and Interoperability Requirements

Oracle recommends that you use the certification matrix and system requirements documents with each other to verify that your environment meets the requirements for installation.

1. **Verifying that your environment meets certification requirements**

   Make sure that you install your product on a supported hardware and software configuration. See the certification document for your release on the *Oracle Fusion Middleware Supported System Configurations* page.

   Oracle has tested and verified the performance of your product on all certified systems and environments. Whenever new certifications are released, they are added to the certification document right away. New certifications can be released at any time. Therefore, the certification documents are kept outside the documentation libraries and are available on Oracle Technology Network.

2. **Using the system requirements document to verify certification**

   Oracle recommends that you use the *Oracle Fusion Middleware System Requirements and Specifications* document to verify that the certification requirements are met. For example, if the certification document indicates that your product is certified for installation on 64-Bit Oracle Linux 6.5, use this document to verify that your system meets the required minimum specifications. These include disk space, available memory, specific platform packages and patches, and other operating system-specific requirements. System requirements can change in the future. Therefore, the system requirement documents are kept outside of the documentation libraries and are available on Oracle Technology Network.

3. **Verifying interoperability among multiple products**

   To learn how to install and run multiple Fusion Middleware products from the same release or mixed releases with each other, see Oracle Fusion Middleware 12c Interoperability and Compatibility in *Understanding Interoperability and Compatibility*.

2.2.2 Selecting an Installation User

The user who installs and configures your system must have the required permissions and privileges.

Understanding User Permissions
: The user who installs a Fusion Middleware product owns the files and has certain permissions on the files.

Understanding Non-Default User Permissions on UNIX Operating Systems
: Changing the default permissions setting reduces the security of the installation and possibly your system. Oracle does not recommend changing default permission settings.

Verifying that the Installation User has Administrator Privileges on Windows Operating Systems
: To update the Windows Registry, you must have administrator privileges.

2.2.2.1 Understanding User Permissions

The user who installs a Fusion Middleware product owns the files and has certain permissions on the files.

- Read and write permissions on all non-executable files (for example, `.jar`, `.properties`, or `.xml`). All other users in the same group as the file owner have read permissions only.
- Read, write, and execute permissions on all executable files (for example, `.exe`, `.sh`, or `.cmd`). All other users in the same group as the file owner have read and execute permissions only.

This means that someone other than the person who installs the software can use the installed binaries in the Oracle home to configure a domain or set of Fusion Middleware products.

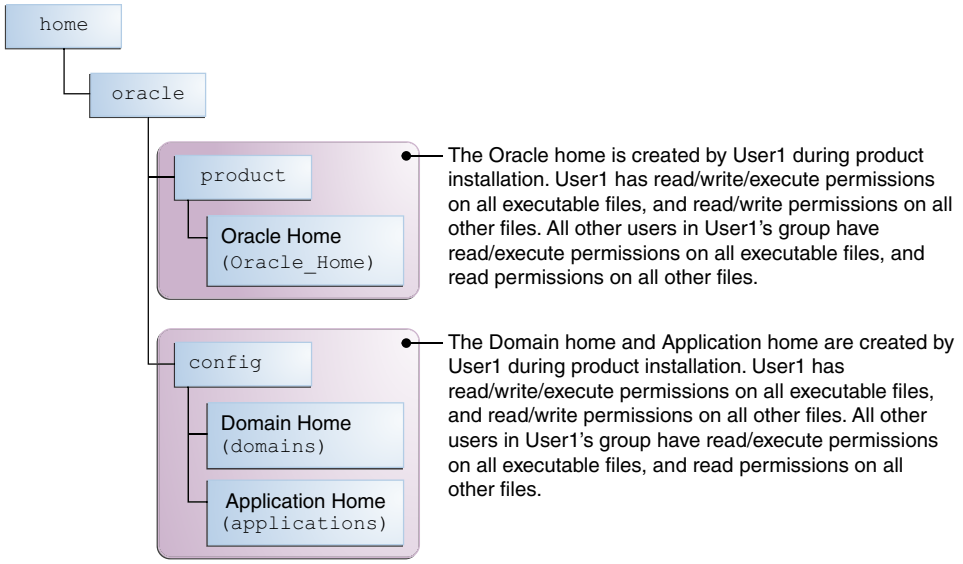
During configuration, the files generated by the configuration process are owned by the user who ran the Configuration Wizard, with the same permissions as described above for the installation user. However, security-sensitive files are not created with group permissions. Only the user that created the domain has read and write permissions and can administer the domain.

Consider the following examples:

- **Example 1: A Single User Installs the Software and Configures the Domain**

  This example shows the permissions if the same user installs the software and configures the domain.

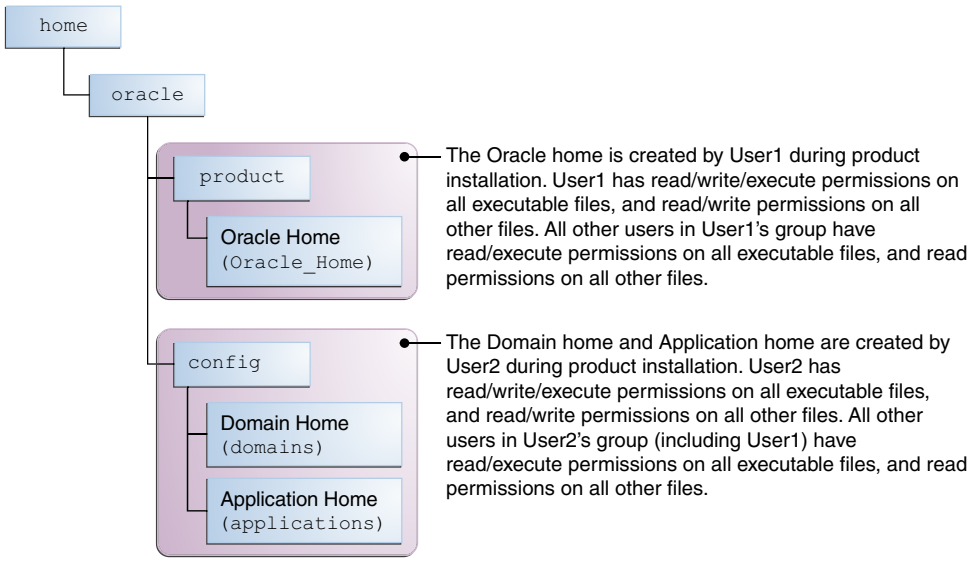
  To ensure the proper permissions and privileges for all files, Oracle recommends that the same owner perform both tasks: install the Oracle Fusion Middleware product and configure the WebLogic Server domain using the Configuration Wizard.



If the user who creates the domain is different than the user who installed the software, then both users must have the same privileges, as shown in the next example.

- **Example 2: The Oracle Home and Domain are Created by Different Users**

  This example shows the permissions where one user creates the Oracle home and another user configures the domain.



Note: Certain domain files do not have group permissions. For example, cwallet.sso.

Consider the following items before running the installer:

- On UNIX operating systems, Oracle recommends that you set `umask` to `027` on your system before you install the software. This ensures that file permissions are set properly during installation. Use the following command:

```
umask 027
```

You must enter this command in the same terminal window from which you plan to run the product installer.

- On UNIX operating systems, do not run the installation program as the `root` user. If you run the installer as a root user, the startup validation may fail and you cannot continue the installation.
- When you manage a product installation (for example, applying patches or starting managed Servers), use the same user ID that you used to install the product.
- On Windows operating systems, you must have Administrative privileges to install the product. See Verifying the Installation User has Administrator Privileges on Windows Operating Systems for more information.

2.2.2.2 Understanding Non-Default User Permissions on UNIX Operating Systems

Changing the default permissions setting reduces the security of the installation and possibly your system. Oracle does not recommend changing default permission settings.

If other users require access to particular files or executable, consider using the UNIX `sudo` command (or other similar command) in lieu of changing file permissions.

Refer to your UNIX operating system Administrator's Guide or contact your operating system vendor if you need further assistance.

2.2.2.3 Verifying that the Installation User has Administrator Privileges on Windows Operating Systems

To update the Windows Registry, you must have administrator privileges.

By default, users with the administrator privilege sign in to the system with regular privileges, but can request elevated permissions to perform administrative tasks.

To perform a task with elevated privileges:

1. Find the Command Prompt icon, either from the Start menu or the Windows icon in the lower-left corner.
2. Right-click Command Prompt and select **Run as administrator**.

   This opens a new command prompt window, and all actions performed in this window are done with administrator privileges.

   Note: If you have User Access Control enabled on your system, you may see an additional window asking you to confirm this action. Confirm and continue with this procedure.

3. Perform the desired task.

   For example, to start the product installer:

   For a jar file, enter:

   ```
   java –jar distribution_name.jar
   ```

   For an executable (`.exe`, `.bin`, or `.sh` file), enter:

   ```
   distribution_name.exe
   ```

2.2.3 Understanding Directories for Installation and Configuration

During the installation and domain configuration process, you must plan on providing the locations for these directories: Oracle home, Domain home, and the Application home.

Understanding the Recommended Directory Structure
: Oracle recommends specific locations for the Oracle Home, Domain Home, and Application Home.

About the Oracle Home Directory
: When you install any Oracle Fusion Middleware product, you must use an Oracle home directory.

About the Domain Home Directory
: The Domain home is the directory where domains that you configure are created.

About the Application Home Directory
: The Application home is the directory where applications for domains you configure are created.

Installing Multiple Products in the Same Domain
: There are two methods to install and configure multiple products in one domain. This is also known as *extending* a domain.

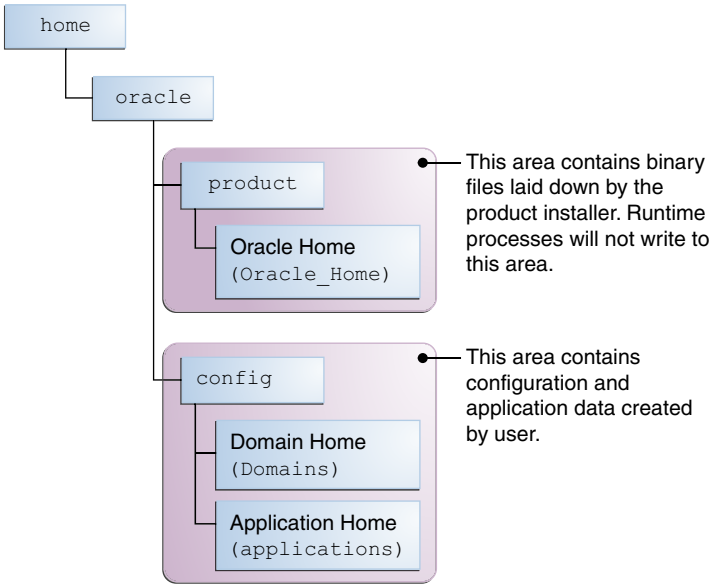
Preparing for Shared Storage
: Oracle Fusion Middleware enables you to configure multiple Oracle WebLogic Server domains from a single Oracle home. This allows you to install the Oracle home in a single location on a shared volume and reuse the Oracle home for multiple host installations.

2.2.3.1 Understanding the Recommended Directory Structure

Oracle recommends specific locations for the Oracle Home, Domain Home, and Application Home.

Oracle recommends a directory structure similar to the one shown in Figure 2-1.

Figure 2-1 Recommended Oracle Fusion Middleware Directory Structure



A base location (Oracle base) should be established on your system (for example, `/home/oracle`) and from there, two separate branches should be created. The `product` directory should contain the product binary files and all of the Oracle home directories. The `config` directory should contain your domain and application data.

Oracle recommends that you do not keep your configuration data anywhere underneath the Oracle home; if you upgrade your product to another major release, you will be required to create a new Oracle home for binaries. You must also make sure that your configuration data exist in a location to which the binaries in the Oracle home have access.

The `/home/oracle/product` (for the Oracle home) and `/home/oracle/config` (for the application and configuration data) directories are used in examples throughout the documentation; be sure to replace these directories with the actual directories on your system.

2.2.3.2 About the Oracle Home Directory

When you install any Oracle Fusion Middleware product, you must use an Oracle home directory.

This directory is a repository for common files that are used by multiple Fusion Middleware products installed on the same machine. These files are essential to ensuring that Fusion Middleware operates correctly on your system. They facilitate checking of cross-product dependencies during installation. For this reason, you can consider the Oracle home directory a *central support directory* for all Oracle Fusion Middleware products installed on your system.

Fusion Middleware documentation refers to the Oracle home directory as *ORACLE_HOME*.

Oracle Home Considerations

Keep the following in mind when you create the Oracle home directory and install Fusion Middleware products:

- Do not include spaces in the name of your Oracle home directory; the installer gives you an error message if your Oracle home directory path contains spaces.

- You can install only one instance of each Oracle Fusion Middleware product in a single Oracle home directory. If you need to maintain separate versions of a product on the same machine, each version must be in its own Oracle home directory.

  Although you can have several different products in a single Oracle home, only one version of each product can be in the Oracle home.

Multiple Home Directories

Although in most situations, a single Oracle home directory is sufficient, it is possible to create more than one Oracle home directory. For example, you need to maintain multiple Oracle home directories in the following situations:

- You prefer to maintain separate development and production environments, with a separate product stack for each. With two directories, you can update your development environment without modifying the production environment until you are ready to do so.
- You want to maintain two different versions of a Fusion Middleware product at the same time. For example, you may want to install a new version of a product while keeping your existing version intact. In this case, you must install each product version in its own Oracle home directory.
- You need to install multiple products that are not compatible with each other. See Oracle Fusion Middleware 12*c* (12.2.1.1) Interoperability and Compatibility in *Understanding Interoperability and Compatibility* .

Note: If you create more than one Oracle home directory, you must provide non-overlapping port ranges during the configuration phase for each product.

2.2.3.3 About the Domain Home Directory

The Domain home is the directory where domains that you configure are created.

The default Domain home location is *`ORACLE_HOME`*`/user_projects/domains/`*`domain_name`*. However, Oracle strongly recommends that you do not use this default location. Put your Domain home *outside* of the Oracle home directory, for example, in `/home/oracle/config/domains`. The `config` directory should contain domain and application data. Oracle recommends a separate domain directory so that new installs, patches, and other operations update the *ORACLE_HOME* only, *not* the domain configuration.

See Understanding the Recommended Directory Structure for more on the recommended directory structure and locating your Domain home.

Fusion Middleware documentation refers to the Domain home directory as *DOMAIN_HOME* and includes all folders up to and including the domain name. For example, if you name your domain `exampledomain` and locate your domain data in the `/home/oracle/config/domains` directory, the documentation would use *DOMAIN_HOME* to refer to `/home/oracle/config/domains/exampledomain`.

2.2.3.4 About the Application Home Directory

The Application home is the directory where applications for domains you configure are created.

The default Application home location is *`ORACLE_HOME`*`/user_projects/applications/`*`domain_name`*. However, Oracle strongly recommends that you

locate your Application home *outside* of the Oracle home directory; if you upgrade your product to another major release, you must create a new Oracle home for binaries.

See Understanding the Recommended Directory Structure for more on the recommended directory structure and locating your Application home..

Fusion Middleware documentation refers to the Application home directory as *APPLICATION_HOME* and includes all folders up to and including the domain name. For example, if you name your domain `exampledomain` and you locate your application data in the `/home/oracle/config/applications` directory, the documentation uses *APPLICATION_HOME* to refer to `/home/oracle/config/applications/exampledomain`.

2.2.3.5 Installing Multiple Products in the Same Domain

There are two methods to install and configure multiple products in one domain. This is also known as *extending* a domain.

- **Method 1.**

  Install and configure Product A, including creating the schemas and starting all servers in the domain to verify a successful domain configuration.

  This is the method used in all installation guides in the Fusion Middleware library. You can repeat this process for as many products as necessary. It allows you to validate one product at a time and add more products incrementally.

  To install Product B in the same domain as Product A:

  1. Stop all servers to prevent any updates to the domain while you add the new product.

     See Starting and Stopping Oracle Fusion Middleware in *Administering Oracle Fusion Middleware*.

  2. Follow the instructions in the installation guide for Product B, including creating the necessary schemas.

  3. Run the Configuration Wizard to configure the domain.

     During configuration, the Configuration Wizard automatically detects the components that have been installed and offers you the option to extend the existing Product A domain to include Product B.

- **Method 2.**

  Install all of the required products, then create the schemas for all of the products. After you create the schemas, configure the domain by using the necessary product templates, then start all the servers.

  This method of creating a multi-product domain may be slightly faster than Method 1; however, the installation guides in the Fusion Middleware library do not provide specific instructions for this method of domain creation.

See Also:

- To update WebLogic domains, see Updating WebLogic Domains in *Creating WebLogic Domains Using the Configuration Wizard*.
- For important information regarding the ability of Oracle Fusion Middleware products to function with previous versions of other Oracle Fusion Middleware, Oracle, or third-party products, see Oracle Fusion Middleware 12*c* (12.2.1.1) Interoperability and Compatibility in *Understanding Interoperability and Compatibility*.

2.2.3.6 Preparing for Shared Storage

Oracle Fusion Middleware enables you to configure multiple Oracle WebLogic Server domains from a single Oracle home. This allows you to install the Oracle home in a single location on a shared volume and reuse the Oracle home for multiple host installations.

If you plan to use shared storage in your environment, see Using Shared Storage in *High Availability Guide* for more information.

2.2.4 Understanding JDK Requirements for an Oracle Fusion Middleware Installation

Most Fusion Middleware products are in `.jar` file format. These distributions do *not* include a JDK. To run a `.jar` distribution installer, you must have a certified JDK already installed on your system.

Make sure that the JDK is installed *outside* of the Oracle home. If you install the JDK under the Oracle home, you will encounter problems when you try to perform tasks in the future. Oracle Universal Installer validates that the Oracle home directory is empty; the install will not progress until you specify an empty directory. Oracle recommends that you locate your JDK installation in the `/home/oracle/products/jdk` directory.

Some products (such as Oracle HTTP Server and Oracle JDeveloper) are available as **platform-specific distributions**. Platform-specific distributions have a `.bin` (for UNIX operating systems) or `.exe` (for Windows operating systems) installer; in these cases, a platform-specific JDK is in the distribution and you do not need to install a JDK separately. However, you may need to upgrade this JDK to a more recent version, depending on the JDK versions that are certified.

Always verify the required JDK version by reviewing the certification information on the *Oracle Fusion Middleware Supported System Configurations* page. For 12*c* (12.2.1.1), the certified JDK is 1.8.0_77 and later.

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

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

2.2.5 Understanding Database Requirements for an Oracle Fusion Middleware Installation

Many Fusion Middleware products require database schemas prior to configuration. If you do not already have a database where you can install these schemas, you must install and configure a certified database.

To find a certified database for your operating system, see the certification document for your release on the *Oracle Fusion Middleware Supported System Configurations* page.

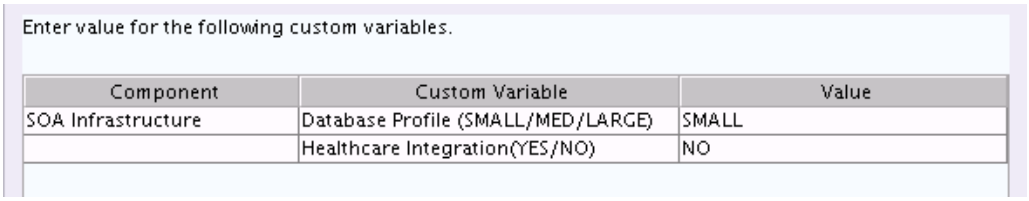
To make sure your database is properly configured for schema creation, see Repository Creation Utility Requirements in the *Oracle Fusion Middleware System Requirements and Specifications* document.

After your database is properly configured, you use the Repository Creation Utility (RCU) to create product schemas in your database. This tool is available in the Oracle home for your Oracle Fusion Middleware product. See Understanding Repository Creation Utility in *Creating Schemas with the Repository Creation Utility*.

About the Custom Variables Required for the SOA Suite Schemas
When you install the Oracle SOA Suite schemas, you are prompted to set two custom variables, which affect the way in which these schemas are created in the database.

2.2.5.1 About the Custom Variables Required for the SOA Suite Schemas

When you install the Oracle SOA Suite schemas, you are prompted to set two custom variables, which affect the way in which these schemas are created in the database.


Enter value for the following custom variables.

Component	Custom Variable	Value
SOA Infrastructure	Database Profile (SMALL/MED/LARGE)	SMALL
	Healthcare Integration(YES/NO)	NO

These variables are explained further in the following sections:

About the Database Profile Custom Variable
The Database Profile custom variable on the Repository Creation Utility (RCU) Custom Variables screen allows you to identify the predicted size or "profile" of the database on which you are installing the SOA Infrastructure schema.

About the Healthcare Integration Custom Variable
The Healthcare Integration custom variable helps to activate the Product2 user interface. The interface is not supported for Oracle Business Process Management.

2.2.5.1.1 About the Database Profile Custom Variable

The Database Profile custom variable on the Repository Creation Utility (RCU) Custom Variables screen allows you to identify the predicted size or "profile" of the database on which you are installing the SOA Infrastructure schema.

To estimate the size of the database required for your Oracle SOA Suite configuration, consider the information in Developing a Database Growth Management Strategy in *Administering Oracle SOA Suite and Oracle Business Process Management Suite*.

If you enter **SMALL** or **MEDIUM** as the database profile, the RCU performs no special actions when the schema is created. The **SMALL** and **MEDIUM** options should be entered for informational purposes only.

If you enter **LARGE** as the database profile, the RCU creates the SOA Infrastructure schema using an Oracle database feature called Interval Partitioning. Interval partitioning improves the efficiency of the database when large numbers of composite applications must be processed. When you select the **LARGE** database profile, the

RCU creates the interval partitioned tables in a manner supported by the Oracle SOA Suite purging scripts and guidelines.

For more information about database partitioning, see the following sections of the *Oracle Database VLDB and Partitioning Guide*:

- Partitioning Concepts
- Interval Partitioning

2.2.5.1.2 About the Healthcare Integration Custom Variable

The Healthcare Integration custom variable helps to activate the Product2 user interface. The interface is not supported for Oracle Business Process Management.

If you are *not* planning to use the Product2 user interface, then set the value of the Healthcare Integration custom variable to **NO**. If you *are* planning to use the Product2 user interface, set it to **YES**. Otherwise, the Product2 user interface will not function properly after it is installed and configured.

When set to **YES**, the RCU creates additional materialized views in the database, which are required by the Product2 user interface. When set to **NO**, you can perform these additional schema configuration tasks later by running the following SQL script on the database. This script is installed in the Oracle Fusion Middleware Oracle home when you select the Healthcare with B2B installation type:

`ORACLE_HOME/common/sql/soainfra/sql/oracle/b2b_mv.sql`

See Using the Oracle SOA Suite for Healthcare Integration User Interface in *Healthcare Integration User's Guide for Oracle SOA Suite*.

2.3 Obtaining the Product Distribution

You can obtain the Oracle Fusion Middleware Infrastructure and Oracle Business Intelligence distribution on the Oracle Technology Network (OTN).

To prepare to install Oracle Fusion Middleware Infrastructure and Oracle Business Intelligence:

1. Enter `java -version` on the command line to verify that a certified JDK is installed on your system. For 12*c* (12.2.1.1), the certified JDK is 1.8.0_77 and later.

   See Understanding JDK Requirements for an Oracle Fusion Middleware Installation.

2. Locate and download the Oracle Fusion Middleware Infrastructure and Oracle Business Intelligence software.

   See Obtaining Product Distributions in *Planning an Installation of Oracle Fusion Middleware*.

2.4 About Product Distributions

You create the initial Oracle Business Intelligence domain using the Oracle Fusion Middleware Infrastructure distribution, which contains both Oracle WebLogic Server software and Oracle Java Required Files (JRF) software.

Oracle JRF software consists of:

- Oracle Web Services Manager
- Oracle Application Development Framework (Oracle ADF)

- Oracle Enterprise Manager Fusion Middleware Control
- Repository Creation Utility (RCU)
- Other libraries and technologies required to support Oracle Fusion Middleware products

Installing Oracle Fusion Middleware Infrastructure is a prerequisite to installing Oracle Business Intelligence.

3

Installing the Oracle Business Intelligence Software

Follow the steps in this section to install the Oracle Business Intelligence software.

Before beginning the installation, ensure that you have verified the prerequisites and completed all steps covered in Preparing to Install and Configure Oracle Business Intelligence.

Verifying the Installation Checklist
: The installation process requires specific information.

Starting the Installation Program
: You can start the installation program on UNIX or Windows.

Navigating the Installation Screens
: The installer shows a series of screens where you verify or enter information.

Verifying the Installation
: After you complete the installation, verify it was successful by completing a series of tasks.

Checking the Directory Structure
: After you install Oracle Business Intelligence, you should see the directory structure as shown in this topic. The contents of your installation vary based on the options you selected during the installation.

3.1 Verifying the Installation Checklist

The installation process requires specific information.

Table 3-1 lists important items that you must know before, or decide during, Oracle Business Intelligence installation.

Table 3-1 Installation Checklist

Information	Example Value	Description
`JAVA_HOME`	`/home/Oracle/Java/jdk1.8.0_77`	Environment variable that points to the Java JDK home directory.
Database host	`examplehost.exampledomain`	Name and domain of the host where the database is running.

Table 3-1 (Cont.) Installation Checklist

Information	Example Value	Description
Database port	`1521`	Port number that the database listens on. The default Oracle database listen port is `1521`.
Database service name	`orcl.oracle.com`	Oracle databases require a unique service name. The default service name is `orcl`.
DBA username	`SYS`	Name of user with database administration privileges. The default DBA user on Oracle databases is `SYS`.
DBA password	`myDBApw957`	Password of the user with database administration privileges.
`ORACLE_HOME`	`/home/Oracle/`*`product`*`/ORACLE_HOME`	Directory in which you will install your software. This directory will include Oracle Fusion Middleware Infrastructure and Oracle Business Intelligence, as needed.
WebLogic Server hostname	`examplehost.exampledomain.com`	Host name for Oracle WebLogic Server and Oracle Business Intelligence consoles.
Console port	`7001`	Port for Oracle WebLogic Server and Oracle Business Intelligence consoles.
`DOMAIN_HOME`	`/home/Oracle/config/domains/bi_domain`	Location in which your domain data is stored.
`APPLICATION_HOME`	`/home/Oracle/config/applications/bi_domain`	Location in which your application data is stored.
Administrator user name for your WebLogic domain	`weblogic`	Name of the user with Oracle WebLogic Server administration privileges. The default administrator user is `weblogic`.
Administrator user password	`myADMpw902`	Password of the user with Oracle WebLogic Server administration privileges.

Table 3-1 (Cont.) Installation Checklist

Information	Example Value	Description
RCU	*ORACLE_HOME*/oracle_common/bin	Path to the Repository Creation Utility (RCU).
RCU schema prefix	BI	Prefix for names of database schemas used by Oracle Business Intelligence.
RCU schema password	myRCUpw674	Password for the database schemas used by Oracle Business Intelligence.
Configuration utility	*ORACLE_HOME*/oracle_common/common/bin	Path to the Configuration Wizard for domain creation and configuration.
Configuration Assistant	*ORACLE_HOME*/bi/bin	Path to the Configuration Assistant for domain creation and configuration. Oracle recommends that you use the Configuration Assistant to configure your BI domain.

3.2 Starting the Installation Program

You can start the installation program on UNIX or Windows.

To start the installation program:

1. Sign in to the host system.
2. Go to the directory where you downloaded the installation program.
3. Enter the following command:
   - (UNIX) `./fmw_12.2.1.2.0_bi_platform_linux64.bin`
   - (Windows) `setup_fmw_12.2.1.2.0_bi_platform_win64.exe`

   Note:

   You will not be able to execute `./fmw_12.2.1.2.0_bi_platform_linux64.bin` if it does not have execute permission. Make sure to check and grant execute permission before running this command.

When the installation program appears, you are ready to begin the installation.

3.3 Navigating the Installation Screens

The installer shows a series of screens where you verify or enter information.

The following table lists the order in which installer screens appear. If you need additional help with an installation screen, click **Help**.

Table 3-2 Oracle Business Intelligence Install Screens

Screen	Description
Installation Inventory Setup	On UNIX operating systems, this screen opens if this is the first time you are installing any 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. For more about the central inventory, see About the Oracle Central Inventory in *Installing Software with the Oracle Universal Installer*. This screen does not appear on Windows operating systems.
Welcome	Review the information to make sure that you have met all the prerequisites, then click **Next**.
Auto Updates	Select to skip automatic updates, select patches, or search for the latest software updates, including important security updates, through your My Oracle Support account.
Installation Location	Specify your Oracle home directory location. You can click **View** to verify and ensure that you are installing Oracle Business Intelligence in the correct Oracle home.
Installation Type	Use this screen to select the type of installation and consequently, the products and feature sets you want to install. For this topology, select **BI Platform Distribution with Samples**.
Prerequisite Checks	This screen verifies that your system meets the minimum necessary requirements. To view the list of tasks that gets verified, select **View Successful Tasks**. To view log details, select **View Log**. 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** (not recommended).
Installation Summary	Use this screen to verify installation options you selected. If you want to save these options to a response file, click **Save Response File** and enter the response file location and name. The response file collects and stores all the information that you have entered, and enables you to perform a silent installation (from the command line) at a later time. Click **Install** to begin the installation.
Installation Progress	This screen shows the installation progress. When the progress bar reaches 100% complete, click **Finish** to dismiss the installer, or click **Next** to see a summary.
Installation Complete	This screen displays the Installation Location and the Feature Sets that are installed. Review this information and click **Finish** to close the installer.

3.4 Verifying the Installation

After you complete the installation, verify it was successful by completing a series of tasks.

Reviewing the Installation Log Files
: Review the contents of the installation log files to make sure that the installer did not encounter any problems.

Checking the Directory Structure
: The contents of your installation vary based on the options that you selected during the installation.

Viewing the Contents of the Oracle Home
: You can view the contents of the Oracle home directory by using the `viewInventory` script.

3.4.1 Reviewing the Installation Log Files

Review the contents of the installation log files to make sure that the installer did not encounter any problems.

By default, the installer writes logs files to the *`Oracle_Inventory_Location`*`/logs` (on UNIX operating systems) or *`Oracle_Inventory_Location`*`\logs` (on Windows operating systems) directory.

For a description of the log files and where to find them, see Installation Log Files in *Installing Software with the Oracle Universal Installer*.

3.4.2 Checking the Directory Structure

The contents of your installation vary based on the options that you selected during the installation.

See What Are the Key Oracle Fusion Middleware Directories? in *Understanding Oracle Fusion Middleware*.

3.4.3 Viewing the Contents of the Oracle Home

You can view the contents of the Oracle home directory by using the `viewInventory` script.

See Viewing the Contents of an Oracle Home in *Installing Software with the Oracle Universal Installer*.

3.5 Checking the Directory Structure

After you install Oracle Business Intelligence, you should see the directory structure as shown in this topic. The contents of your installation vary based on the options you selected during the installation.

To see the directory structure:

1. Change to the *ORACLE_HOME* directory where you installed BI.
2. Enter the following command:

```
ls --format=single-column
```

The directory structure on your system should match the structure shown in the following example:

```
/u01/oracle/products/fmw/bi

bi-epm-registry
bifoundation
bin
clients
common
endpointmanager
file_templates
jlib
lib
modules
nls
oracore
plugins
products
schema
upgrade
vcredist_x64.exe
vcredist_x86.exe
xsd
```

See What are the Key Oracle Fusion Middleware Directories? in *Understanding Oracle Fusion Middleware*.

4

Configuring Oracle Business Intelligence

This chapter walks you through a step-by-step process to configure Oracle BI standard topology using the Oracle Business Intelligence 12*c* Configuration Assistant.

About the Oracle Business Intelligence Configuration Assistant
The Oracle Business Intelligence 12*c* Configuration Assistant is a multi-functional utility that helps you to create database schemas, specify a port range, create system components, and start the application servers in addition to configuring the BI standard topology. Oracle strongly recommends that you to use the Configuration Assistant to configure the BI domain.

Configuration Assistant Prerequisites
It is important to make sure that you meet the criteria listed in this topic for a smooth, error-free domain configuration by using the Configuration Assistant.

Creating the Database Schemas
Before you can configure an Oracle Business Intelligence domain, you must install required schemas on a certified database for use with this release of Oracle Fusion Middleware.

Configuring the BI Domain with the Configuration Assistant
The Oracle BI 12*c* Configuration Assistant is a `.sh` (UNIX) or `.cmd` (Windows) file. Start the Configuration Assistant by starting the config executable from the `bi/bin` directory inside the Oracle home. Follow the procedure in this topic to complete the configuration step-by-step.

Starting the BI Instance
Verifying the configuration involves starting the servers (Admin Servers, and the Managed Servers) and the newly configured BI instance.

4.1 About the Oracle Business Intelligence Configuration Assistant

The Oracle Business Intelligence 12*c* Configuration Assistant is a multi-functional utility that helps you to create database schemas, specify a port range, create system components, and start the application servers in addition to configuring the BI standard topology. Oracle strongly recommends that you to use the Configuration Assistant to configure the BI domain.

4.2 Configuration Assistant Prerequisites

It is important to make sure that you meet the criteria listed in this topic for a smooth, error-free domain configuration by using the Configuration Assistant.

To verify whether the required conditions are met, see that:

- You have correctly installed the BI product binary files.

- You have the latest supported JDK installed on your system.
- You have access to any one of the Oracle certified databases: Oracle, DB2, SQLServer, or RAC.
- (Optional) You have connection details of existing RCU schema prefix (STB) and you have already created BIPLATFORM, IAU, OPSS, MDS, STB, and WLS schemas in a single session.

Note: You can, alternatively, generate a schema prefix (STB) and create the BIPLATFORM, IAU, OPSS, MDS, STB, and WLS schemas while you run the BI Configuration Assistant, provided you have the DBA credentials.

Note: The database schemas are required to store internal housekeeping information. These schemas are different from any data sources which you plan to analyze by using Oracle BI.

4.3 Creating the Database Schemas

Before you can configure an Oracle Business Intelligence domain, you must install required schemas on a certified database for use with this release of Oracle Fusion Middleware.

Installing and Configuring a Certified Database
: Before you create the database schemas, you must install and configure a certified database, and verify that the database is up and running.

Starting the Repository Creation Utility
: Start the Repository Creation Utility (RCU) after you verify that a certified JDK is installed on your system.

Navigating the Repository Creation Utility Screens to Create Schemas
: Enter required information in the RCU screens to create the database schemas.

4.3.1 Installing and Configuring a Certified Database

Before you create the database schemas, you must install and configure a certified database, and verify that the database is up and running.

See Understanding Database Requirements for an Oracle Fusion Middleware Installation.

4.3.2 Starting the Repository Creation Utility

Start the Repository Creation Utility (RCU) after you verify that a certified JDK is installed on your system.

To start the RCU:

1. Verify that a certified JDK already exists on your system by running `java -version` from the command line. For 12*c* (12.2.1.1), the certified JDK is 1.8.0_77 and later.

   See Understanding JDK Requirements for an Oracle Fusion Middleware Installation.

2. Ensure that the `JAVA_HOME` environment variable is set to the location of the certified JDK. For example:
   - (UNIX) `setenv JAVA_HOME/home/Oracle/Java/jdk1.8.0_77`
   - (Windows) `set JAVA_HOME=C:\home\Oracle\Java\jdk1.8.0_77`
3. Go to the `/oracle_common/bin` directory:
   - (UNIX) *`ORACLE_HOME`*`/oracle_common/bin`
   - (Windows) *`ORACLE_HOME`*`\oracle_common\bin`
4. Enter the following command:
   - (UNIX) `./rcu`
   - (Windows) `rcu.bat`

4.3.3 Navigating the Repository Creation Utility Screens to Create Schemas

Enter required information in the RCU screens to create the database schemas.

Introducing the RCU
: The Welcome screen is the first screen that appears when you start the RCU.

Selecting a Method of Schema Creation
: Use the Create Repository screen to select a method to create and load component schemas into the database.

Providing Database Connection Details
: On the Database Connection Details screen, provide the database connection details for the RCU to connect to your database.

Specifying a Custom Prefix and Selecting Schemas for Oracle B2B and Healthcare
: Specify a custom prefix and database schema to automatically select Common Infrastructure Services and dependent schemas.

Specifying Schema Passwords
: On the Schema Passwords screen, specify how you want to set the schema passwords on your database, then enter and confirm your passwords.

Specifying Custom Variables
: Specify the custom variables for the SOA Infrastructure schema.

Completing Schema Creation
: Navigate through the remaining RCU screens to complete schema creation.

4.3.3.1 Introducing the RCU

The Welcome screen is the first screen that appears when you start the RCU.

Click **Next**.

4.3.3.2 Selecting a Method of Schema Creation

Use the Create Repository screen to select a method to create and load component schemas into the database.

On the Create Repository screen:

- If you have the necessary permissions and privileges to perform DBA activities on your database, select **System Load and Product Load**. This procedure assumes that you have SYSDBA privileges.
- If you do *not* have the necessary permissions or privileges to perform DBA activities in the database, you must select **Prepare Scripts for System Load** on this screen. This option generates a SQL script that you can give to your database administrator. See About System Load and Product Load in *Creating Schemas with the Repository Creation Utility*.
- If the DBA has already run the SQL script for System Load, select **Perform Product Load**.

4.3.3.3 Providing Database Connection Details

On the Database Connection Details screen, provide the database connection details for the RCU to connect to your database.

Note:

If you are unsure of the service name for your database, you can obtain it from the `SERVICE_NAMES` parameter in the initialization parameter file of the database. If the initialization parameter file does not contain the `SERVICE_NAMES` parameter, then the service name is the same as the global database name, which is specified in the `DB_NAME` and `DB_DOMAIN` parameters.

For example:

Database Type: `Oracle Database`
Name: `examplehost.exampledomain.com`
Port: `1521`
Service Name: `Orcl.exampledomain.com`
User Name: `sys`
Password: `******`
Role: `SYSDBA`

Click **Next** to proceed, then click **OK** in the dialog window that confirms a successful database connection.

4.3.3.4 Specifying a Custom Prefix and Selecting Schemas for Oracle B2B and Healthcare

Specify a custom prefix and database schema to automatically select Common Infrastructure Services and dependent schemas.

Select **Create new prefix**, specify a custom prefix, then select the **SOA Suite** schema. This action automatically selects the following schemas as dependencies:

- User Messaging Service

- Metadata Services
- Oracle Platform Security Services
- Audit Services
- Audit Services Append
- Audit Services Viewer
- WebLogic Services

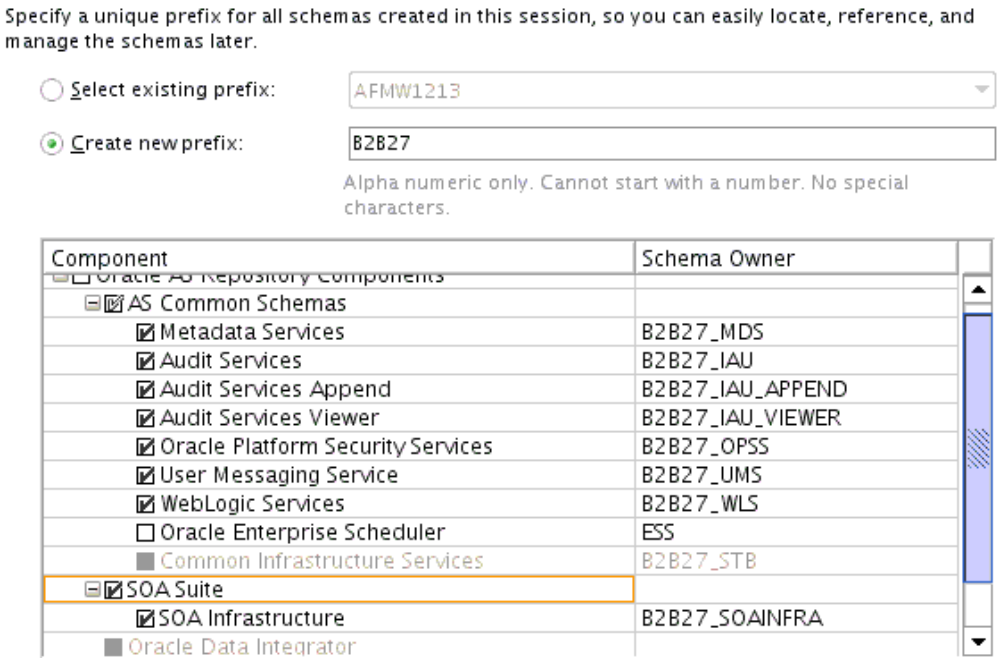
The schema Common Infrastructure Services is also automatically created; this schema is grayed out; you cannot select or deselect it. This schema enables you to retrieve information from RCU during domain configuration. See Understanding the Service Table Schema in *Creating Schemas with the Repository Creation Utility*.

The custom prefix is used to logically group these schemas together for use in this domain only; you must create a unique set of schemas for each domain as schema sharing across domains is not supported.

Tip:

For more information about custom prefixes, see Understanding Custom Prefixes in *Creating Schemas with the Repository Creation Utility*.

For more information about how to organize your schemas in a multi-domain environment, see Planning Your Schema Creation in *Creating Schemas with the Repository Creation Utility*.



Tip:

You must make a note of the custom prefix you choose to enter here; you will need this later on during the domain creation process.

Click **Next** to proceed, then click **OK** on the dialog window confirming that prerequisite checking for schema creation was successful.

4.3.3.5 Specifying Schema Passwords

On the Schema Passwords screen, specify how you want to set the schema passwords on your database, then enter and confirm your passwords.

Tip:

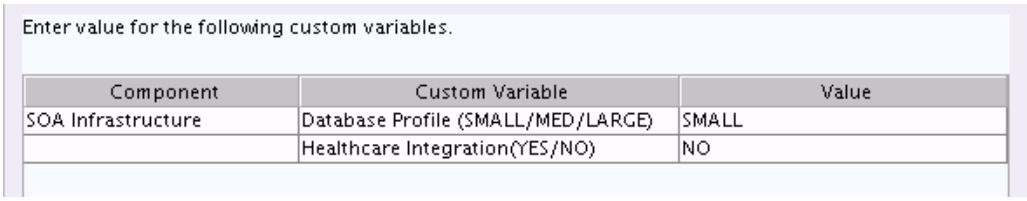
You must make a note of the passwords you set on this screen; you will need them later on during the domain creation process.

4.3.3.6 Specifying Custom Variables

Specify the custom variables for the SOA Infrastructure schema.

For the Oracle SOA Suite standard installation topology, set values for the **Database Profile** (**SMALL**) and **Healthcare Integration** (**NO** for B2B installation, **YES** for Healthcare Integration for Oracle SOA Suite).

See About the Custom Variables Required for the SOA Suite Schemas


Enter value for the following custom variables.

Component	Custom Variable	Value
SOA Infrastructure	Database Profile (SMALL/MED/LARGE)	SMALL
	Healthcare Integration(YES/NO)	NO

Tip:

For more information about the options on this screen, see Custom Variables in *Creating Schemas with the Repository Creation Utility*.

:

4.3.3.7 Completing Schema Creation

Navigate through the remaining RCU screens to complete schema creation.

On the Map Tablespaces screen, the Encrypt Tablespace check box appears *only* if you enabled Transparent Data Encryption (TDE) in the database (Oracle or Oracle EBR) when you start the RCU. Select the **Encrypt Tablespace** check box if you want to encrypt all new tablespaces that the RCU creates.

When you reach the Completion Summary screen, click **Close** to dismiss the RCU.

4.4 Configuring the BI Domain with the Configuration Assistant

The Oracle BI 12*c* Configuration Assistant is a `.sh` (UNIX) or `.cmd` (Windows) file. Start the Configuration Assistant by starting the config executable from the `bi/bin` directory inside the Oracle home. Follow the procedure in this topic to complete the configuration step-by-step.

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

To configure the BI standard topology:

Important: If you are extending the WebLogic domain with Oracle Business Intelligence by using the Configuration Assistant, make sure that the Administration Server for the domain is named *AdminServer*. Other names for the Administration Server are not supported.

Note: Context-sensitive help is available on each screen as you navigate through the Configuration Assistant. Click **Help** to seek more information about the elements on that screen.

1. Change to the following directory:

   (UNIX) *ORACLE_HOME*`/bi/bin`

   (Windows) *ORACLE_HOME*`\bi\bin`

2. Start the Configuration Assistant by entering the following command:

   (UNIX) `./config.sh`

   (Windows) `config.cmd`

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

   Note: To ensure that a consistent set of suites are deployed, the Configuration Assistant automatically adjusts your selection.

   - Essbase: Includes components such as Essbase Server, Cube Deployment Server, and Analytic Provider Services.
   - Business Intelligence Enterprise Edition: Includes components such as Presentation Services, Visual Analyzer, BI Composer, web services, proactive intelligence (Delivers and Actions), Web Services for SOA (WS4SOA), and Mobile Application Designer.
   - Business Intelligence Publisher: Includes Oracle BI Publisher.

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

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

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

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

Table 4-1 Field-name descriptions for the Define New Domain screen

Field	Description
Domains Directory	Specify the path where you want to set up the domain directory.
Domain Name	Specify domain.
Username	Specify a username for the System Administrator. **Note:** This user is created in the embedded LDAP and is granted WebLogic Administrator permissions.
Password	Specify a password for the System Administrator.
Confirm Password	Confirm the password by reentering it.

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

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

Table 4-2 Field-name descriptions for the Database Schema screen

Field	Description
Schema prefix	Specify a unique schema prefix.
Schema password	Specify a password for your schema.
Confirm password	Confirm the password by reentering it.
Database type	Select the database that you are using from the list of values. Supported databases are: • Oracle Database • Microsoft SQL Server • IBM DB2
Username	Enter the privileged username to create the schema.
Password	Enter the password for the above username.
Simple connect string	The connect string that you specify varies depending on the type of database you are using. • (Oracle Database) `host:port/service` or `host:port:SID` or `TNS` connect string • (Microsoft SQL Server) `//host:port;DatabaseName=dbname` • (IBM DB2) `//host:port;DatabaseName=dbname`

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

> **Note:** If you are using Oracle Database version 12.2.0.1 or higher, you must create a pluggable database within a container database to create repository schemas. You cannot create schemas within a container database without using a pluggable database.

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

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

8. On the Initial Application screen, select one of the following options as per your requirement, and click **Next**:

   - Oracle sample application (SampleAppLite).
   - Your own existing BI Application from export bundle (`.jar`).

> **Note:** This option is applicable if you are migrating from Oracle BI 11*g* to 12*c*. See Migrating from Oracle BI 11*g* to 12*c* in *Oracle Business Intelligence Migration Guide*.

   - Clean Slate (no predefined application).

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

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

   Click **Configure**.

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

10. After the configuration concludes without any errors, click **Next** to go to the Configuration Complete screen.

11. On the Configuration Complete screen, review the configuration summary.

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

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

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

You have configured the standard BI topology. The Configuration Assistant automatically starts the newly configured BI instance after successful completion. However, if you want to restart a domain that has been shut down manually, see Starting the BI Instance.

4.5 Starting the BI Instance

Verifying the configuration involves starting the servers (Admin Servers, and the Managed Servers) and the newly configured BI instance.

To start the BI instance including the components such as the Node Manager, Admin Servers, and the Managed Servers:

1. Change directory to the following:

   On UNIX operating system:

   DOMAIN_HOME/bitools/bin

   On Windows operating system:

   DOMAIN_HOME\bitools\bin

2. To start the servers, enter the following command:

   On UNIX operating system:

   ```
   start.sh
   ```

   On Windows operating system:

   ```
   start.cmd
   ```

   Note: When prompted to enter the password, specify the Node Manager password that you entered while configuring the BI domain.

5

Next Steps After Configuring the Domain

After you configure a product domain, there are additional tasks that you may want to perform.

Performing Basic Administrative Tasks
: Review the administrative tasks you will likely want to perform on a new domain.

Performing Additional Domain Configuration Tasks
: You can add a Web Tier component to your BI domain, such as Oracle HTTP Server.

Preparing Your Environment for High Availability
: Scaling out for high availability requires additional steps.

5.1 Performing Basic Administrative Tasks

Review the administrative tasks you will likely want to perform on a new domain.

Table 5-1 Basic Administration Tasks for a New Domain

Task	Description	More Information
Getting familiar with Fusion Middleware administration tools	Get familiar with various tools that you can use to manage your environment.	See Overview of Oracle Fusion Middleware Administration Tools in *Administering Oracle Fusion Middleware*.
Starting and stopping products and servers	Learn how to start and stop Oracle Fusion Middleware, including the Administration Server, Managed Servers, and components.	See Starting and Stopping Oracle Fusion Middleware in *Administering Oracle Fusion Middleware*.
Configuring Secure Sockets Layer (SSL)	Learn how to set up secure communications between Oracle Fusion Middleware components using SSL.	See Configuring SSL in Oracle Fusion Middleware in *Administering Oracle Fusion Middleware*.
Monitoring Oracle Fusion Middleware	Learn how to keep track of the status of Oracle Fusion Middleware components.	See Monitoring Oracle Fusion Middleware in *Administering Oracle Fusion Middleware*.
Understanding Backup and Recovery Procedures	Learn the recommended backup and recovery procedures for Oracle Fusion Middleware.	See Introduction to Backup and Recovery in *Administering Oracle Fusion Middleware*.
Configuring a system for deployment after installation	Configuring metadata and content, general preferences, and default system settings.	NA

Table 5-1 (Cont.) Basic Administration Tasks for a New Domain

Task	Description	More Information
Configuring security	Securing access to the Oracle Business Intelligence system, metadata, and data, configuring Secure Sockets Layer (SSL) and Single Sign-On (SSO), and integration with identity management systems.	NA
Scaling out and configuring for high availability	Configuring the Oracle Business Intelligence system for linear scale-out (increasing capacity with more components on a machine) and identifying and removing single points of failure (adding more machines).	NA
Managing performance and availability	Monitoring service levels and tuning performance.	NA
Managing and resolving issues	Diagnosing errors and establishing resolutions.	NA
Moving a system from test to production	Managing the steps for moving from a test to a production environment.	NA

5.2 Performing Additional Domain Configuration Tasks

You can add a Web Tier component to your BI domain, such as Oracle HTTP Server.

Table 5-2 lists additional tasks you could perform on your new domain.

Table 5-2 Additional Domain Configuration Tasks

Task	Description	More Information
Adding a Web Tier front end to your 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.	To install and configure Oracle HTTP Server in the WebLogic Server domain, see Installing the Oracle HTTP Server Software in *Oracle Fusion Middleware Installing and Configuring Oracle HTTP Server*. Also, see Installing Multiple Products in the Same Domain in *Planning an Installation of Oracle Fusion Middleware* for important information.

5.3 Preparing Your Environment for High Availability

Scaling out for high availability requires additional steps.

Table 5-3 provides a list of tasks to perform if you want to scale out your standard installation environment for high availability.

Table 5-3 Tasks Required to Prepare Your Environment for High Availability

Task	Description	More Information
Scaling out to multiple host computers	To enable high availability, it is important to provide failover capabilities to another host computer. That way, if one computer goes down, your environment can continue to serve the consumers of your deployed applications.	See Scaling Out a Topology (Machine Scale Out) in the *High Availability Guide*.
Configuring high availability for your Web Tier components.	If you have added a Web tier front-end, then you must configure the Web Tier for high availability, as well as the WebLogic Server software.	See Configuring High Availability for Web Tier Components in *High Availability Guide*.
Setting up a front-end load balancer	A load balancer can be used to distribute requests across servers more evenly.	See Server Load Balancing in a High Availability Environment and Configuring Load Balancer Virtual Server Names and Ports in *High Availability Guide*.
Configuring Node Manager	Node Manager enables you to start, shut down, and restart the Administration Server and Managed Server instances from a remote location. This document assumes you have configured a per-domain Node Manager. Review the Node Manager documentation, for information on advanced Node Manager configuration options and features.	See Advanced Node Manager Configuration in *Administering Node Manager for Oracle WebLogic Server*.
Configuring high availability for Oracle BI components	To configure Oracle BI for high availability, ensure that the system has no single points of failure by scaling out the Oracle BI Server, Presentation Services, and the JavaHost so that you have at least two of each component types, distributed across at least two computers.	See Deploying Oracle Business Intelligence for High Availability in *System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.
Managing performance tuning and query caching	For Oracle BI Server database queries to return quickly, the underlying databases must be configured, tuned, and indexed correctly. The BI Server can store query results for reuse by subsequent queries. Query caching can dramatically improve the performance of the system for users, particularly for commonly used dashboards. However, it does not improve performance for most ad-hoc analysis.	See Managing Performance Tuning and Query Caching in *System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

6

Deinstalling or Reinstalling Oracle Business Intelligence

Follow the instructions in this section to deinstall or reinstall Oracle Business Intelligence.

Oracle recommends that you always use the instructions in this section to remove the software. If you try to remove the software manually, you may encounter problems when you try to reinstall the software again at a later time. Following the procedures in this section ensures that the software is properly removed.

Removing Your Database Schemas
: Before you remove the Oracle home, Oracle recommends that you run the Repository Creation Utility (RCU) to remove database schemas associated with this domain.

Deinstalling the Software
: Follow the instructions in this section to start the product deinstaller and remove the software.

Removing the Oracle Home Directory Manually
: After you deinstall the software, you must manually remove your Oracle home directory and any existing subdirectories that the deinstaller did not remove.

Removing the Program Shortcuts on Windows Operating Systems
: On Windows operating systems, you must also manually remove the program shortcuts; the deinstaller does not remove them for you.

Removing the Domain and Application Data
: After you deinstall the software, you must remove the domain and application data.

Reinstalling the Software
: You can reinstall your software into the same Oracle home as a previous installation only if you deinstalled the software by following the instructions in this section, including manually removing the Oracle home directory.

6.1 Removing Your Database Schemas

Before you remove the Oracle home, Oracle recommends that you run the Repository Creation Utility (RCU) to remove database schemas associated with this domain.

Each domain has its own set of schemas, uniquely identified by a custom prefix. For more information about custom prefixes, see About Custom Prefixes in *Creating Schemas with the Repository Creation Utility*. This set of schemas cannot be shared with any other domain. For more information about creating schemas with the RCU, see Planning Your Schema Creation in *Creating Schemas with the Repository Creation Utility*.

If there are multiple sets of schemas on your database, be sure to identify the schema prefix associated with the domain that you are removing.

For schema removal steps, see Dropping Schemas in *Creating Schemas with the Repository Creation Utility*.

6.2 Deinstalling the Software

Follow the instructions in this section to start the product deinstaller and remove the software.

If you want to perform a silent (command-line) deinstallation, see Running the Oracle Universal Installer for Silent Deinstallation in *Installing Software with the Oracle Universal Installer*.

Starting the Deinstallation Program

Selecting the Product to Deinstall

Navigating the Deinstallation Screens

6.2.1 Starting the Deinstallation Program

To start the deinstaller:

- **On UNIX**

  On the command line, enter the following commands:

  ```
  cd ORACLE_HOME/oui/bin
  ./deinstall.sh
  ```

- **On Windows**

  Do one of the following:

  – Use a file manager window to navigate to the *ORACLE_HOME*`\oui\bin` directory, and double-click on `deinstall.cmd`.

  – Open a command prompt and enter the following commands:

  ```
  cd %ORACLE_HOME%\oui\bin
  deinstall.cmd
  ```

  – From the **Start** menu, select **All Programs**, then **Oracle**, then **OracleHome**, and then **Uninstall Oracle Software**.

6.2.2 Selecting the Product to Deinstall

Because multiple products exist in the Oracle home, ensure that you are deinstalling the correct product.

After you run the deinstaller, the Distribution to Uninstall screen opens. From the drop-down list, select **Select What Variable for Deinstallation?** and click **Uninstall**. The deinstallation program shows the screens listed in Navigating the Deinstallation Screens.

Note:

You can deinstall Oracle Fusion Middleware Infrastructure after you deinstall Oracle Business Intelligence software by running the deinstallation wizard again. Before doing so, make sure that there are no other products using the Infrastructure; those products will no longer function once the Infrastructure is removed. You will not encounter the Distribution to Uninstall screen if no other software depends on Oracle Fusion Middleware Infrastructure. See Deinstalling Oracle Fusion Middleware Infrastructure in *Installing and Configuring the Oracle Fusion Middleware Infrastructure*.

6.2.3 Navigating the Deinstallation Screens

The deinstaller shows a series of screens to confirm the deinstallation of the software.

If you need help on screen listed in Table 6-1, click **Help** on the screen.

Table 6-1 Deinstallation Screens and Descriptions

Screen	Description
Welcome	Introduces you to the product deinstaller.
Deinstallation Summary	Shows the Oracle home directory and its contents that are deinstalled. Verify that this is the correct directory. If you want to save these options to a response file, click **Save Response File** and enter the response file location and name. You can use the response file later during a silent deinstallation. See Running the Oracle Universal Installer for Silent Deinstallation in *Installing Software with the Oracle Universal Installer*. Click **Deinstall**, to begin removing the software.
Deinstallation Progress	Shows the deinstallation progress.
Deinstallation Complete	Appears when the deinstallation is complete. Review the information on this screen, then click **Finish** to close the deinstaller.

6.3 Removing the Oracle Home Directory Manually

After you deinstall the software, you must manually remove your Oracle home directory and any existing subdirectories that the deinstaller did not remove.

For example, if your Oracle home directory is `/home/Oracle/product/ORACLE_HOME` on a UNIX operating system, enter the following commands:

```
cd /home/Oracle/product
rm -rf ORACLE_HOME
```

On a Windows operating system, if your Oracle home directory is `C:\Oracle\Product\ORACLE_HOME`, use a file manager window and navigate to the `C:\Oracle\Product` directory. Right-click on the *ORACLE_HOME* folder and select **Delete**.

6.4 Removing the Program Shortcuts on Windows Operating Systems

On Windows operating systems, you must also manually remove the program shortcuts; the deinstaller does not remove them for you.

To remove the program shortcuts on Windows:

1. Go to the `C:\ProgramData\Microsoft\Windows\Start Menu\Programs\Oracle\`*`ORACLE_HOME`*`\`*`Product`* directory.
2. If you only have one product installed in your Oracle home, delete the *ORACLE_HOME* directory. If you have multiple products installed in your Oracle home, delete all products before you delete the *ORACLE_HOME* directory.

6.5 Removing the Domain and Application Data

After you deinstall the software, you must remove the domain and application data.

To remove the domain and application data:

1. Manually remove your Domain home directory. For example:

   On a UNIX operating system, if your Domain home directory is `/home/Oracle/config/domains/bi_domain`, enter the following command:

   ```
   cd /home/Oracle/config/domains
   rm -rf bi_domain
   ```

   On a Windows operating system, if your Domain home directory is `C:\Oracle\Config\domains\bi_domain`, use a file manager window and navigate to the `C:\Oracle\Config\domains` directory. Right-click on the `bi_domain` folder and select **Delete**.

2. Manually remove your Application home directory. For example:

   On a UNIX operating system, if your Application home directory is `/home/Oracle/config/applications/bi_domain`, enter the following commands:

   ```
   cd /home/Oracle/config/applications
   rm -rf bi_domain
   ```

   On a Windows operating system, if your Application home directory is `C:\Oracle\Config\applications\bi_domain`, use a file manager window and navigate to the `C:\Oracle\Config\applications` directory. Right-click on the `bi_domain` folder and select **Delete**.

3. Back up the `domain_registry.xml` file in your Oracle home, then edit the file and remove the line associated with the domain that you are removing. For example, to remove the `bi_domain`, find the following line and remove it:

   ```
   <domain location="/home/Oracle/config/domains/bi_domain"/>
   ```

   Save and exit the file when you are finished.

6.6 Reinstalling the Software

You can reinstall your software into the same Oracle home as a previous installation only if you deinstalled the software by following the instructions in this section, including manually removing the Oracle home directory.

When you reinstall, you can then specify the same Oracle home as your previous installation.

Consider the following cases where the Oracle home is not empty:

- Installing in an existing Oracle home that contains the same feature sets.

  The installer warns you that the Oracle home that you specified during installation already contains the same software you are trying to install.

- Installing in an existing, non-empty Oracle home.

  For example, suppose you chose to create your Domain home or Application home somewhere inside your existing Oracle home. This data is not removed during the deinstallation process, so if you try to reinstall into the same Oracle home, the installer does not allow it. Your options are:

  1. Deinstall your software from the Oracle home (as this section describes) and then remove the Oracle home directory. After you deinstall the software and remove the Oracle home directory, you can reinstall and reuse the same Oracle home location. Any domain or application data that was in the Oracle home must be re-created.

  2. Select a different Oracle home directory.

7

Installing R and Oracle R Enterprise for External Logical SQL Functions

The external Logical SQL functions such as EVALUATE_SCRIPT, FORECAST, and CLUSTER feed input data to the standalone R-process or to Oracle R Enterprise. Therefore, to create analyses that include these functions, you must install either the R or Oracle R Enterprise external engine in your environment.

R is a widely used environment for statistical computing and graphics and can be used with many different data sources including external files or databases. Oracle R Enterprise is installed specifically for use with the Oracle Database, and makes the open source R statistical programming language and environment ready for use by Oracle BI EE.

See Advanced Analytics External Logical SQL Functions in *User's Guide for Oracle Business Intelligence Enterprise Edition* for more information about using these functions in analyses.

Installing R and R Packages
: To create analyses using the advanced analytics external Logical SQL functions, you must install R and the required R packages.

Installing Oracle R Enterprise and Required R Packages on the Oracle Database
: Oracle BI EE use the R engine included in Oracle R Enterprise instead of R. Oracle BI EE can use the Oracle R Enterprise colocation option, where the data can reside in the Oracle R Enterprise database. (In the non-colocation option, the data does not reside in the Oracle R Enterprise database.)

7.1 Installing R and R Packages

To create analyses using the advanced analytics external Logical SQL functions, you must install R and the required R packages.

If you are using Oracle Database, then see Installing Oracle R Enterprise and Required R Packages on the Oracle Database for more information.

Before You Begin the Installation
: You need to install the 3.1.1 R version distributed with Oracle BI.

Installing R and R Packages on UNIX Platforms
: Use the procedures in this section to install R and the R packages on UNIX platforms.

Installing R and R Packages on Windows
: Use the procedures in this section to install R and the R packages on Windows.

7.1.1 Before You Begin the Installation

You need to install the 3.1.1 R version distributed with Oracle BI.

You can find the R installer in the following Oracle BI environment location:

ORACLE_HOME/bi/bifoundation/advanced_analytics/r-installer.zip

The distributed R installation supports Linux (OLE 6 and OLE 7) and Windows (7 and 8).

7.1.2 Installing R and R Packages on UNIX Platforms

Use the procedures in this section to install R and the R packages on UNIX platforms.

See Before You Begin the Installation for general prerequisite information.

Before you perform the installation, note the following important information and required tasks:

- Run RInstaller.sh as root or using the sudo command. See the README.txt that is included in r-installer.zip for more information.
- Locate proxy.txt in the RInstaller folder and edit it to include the proxy server details.
- For OLE 7, before you install the Oracle R distribution, you need to install the TexLive and TexInfo RPMs.
  - The required RPM versions are: texlive-epsf-svn21461.2.7.4-32.el7.noarch.rpm and texinfo-tex-5.1-4.el7.x86_64.rpm.
  - Download the RPMs and install them using `rpm -ivh <rpm_name>`.
  - You must install the RPMs in this specific order: texlive and then texinfo.

To Install R on UNIX Platforms:

Note: You must run the RInstaller in the following operation as a **Root** user.

Open a command line, navigate to the installer's location, and enter the following to decompress and run the distributed R installer:

```
bash-4.1$ unzip r-installer.zip
bash-4.1$ cd RInstaller
bash-4.1$ ./RInstaller.sh
Usage ./RInstaller { install | installpackages | uninstall }
bash-4.1$ sudo ./RInstaller.sh install
```

To Install R Packages on UNIX Platforms

For UNIX platforms, after you have installed R, then from the same command line run the following command to download and install the required R packages (forecast, mvoutlier, randomForest, RJSONIO, and matrixcalc). Running this command also installs the OBIEEAdvancedAnalytics R package. The installer uses the proxy information from proxy.txt to download the packages from CRAN.

```
bash-4.1$ sudo ./RInstaller.sh installpackages
```

7.1.3 Installing R and R Packages on Windows

Use the procedures in this section to install R and the R packages on Windows.

See Before You Begin the Installation for general prerequisite information.

Before you perform the installation, note the following important information and required tasks:

- Locate proxy.txt in the RInstaller folder and edit it to include the proxy server details.
- Before you can install R on Windows, you must confirm that your Windows environment contains the wget and the unzip utilities. You can download these utilities from the following locations:
  - `http://gnuwin32.sourceforge.net/packages/wget.htm`
  - `http://gnuwin32.sourceforge.net/packages/unzip.htm`

To Install R on Windows:

1. Locate and open NQSConfig.INI. In the ADVANCE_ANALYTICS_SCRIPT section, update the R_EXECUTABLE_PATH property to point to the R executable path. For example:

   ```
   R_EXECUTABLE_PATH = "C:/Program Files/R/R-3.1.1/bin/x64/R";
   ```

2. Using a zip utility, unzip r-installer.zip.
3. If you have not already done so, then go to the RInstaller folder, locate proxy.txt, and edit it to include the proxy server details.
4. To run the installer, go to the RInstaller folder where you unzipped r-installer.zip, locate and then execute './Rinstaller.bat install' in a command line session.

To Install R Packages on Windows:

After you have installed R, then from the same command line run the following command to download and install the required R packages (forecast, mvoutlier, randomForest, RJSONIO, and matrixcalc). Running this command also installs the OBIEEAdvancedAnalytics R package.

```
.\RInstaller.bat installpackages
```

7.2 Installing Oracle R Enterprise and Required R Packages on the Oracle Database

Oracle BI EE use the R engine included in Oracle R Enterprise instead of R. Oracle BI EE can use the Oracle R Enterprise colocation option, where the data can reside in the Oracle R Enterprise database. (In the non-colocation option, the data does not reside in the Oracle R Enterprise database.)

See Before You Begin the Installation for more information. If you are using databases other than the Oracle Database, then see Installing R and R Packages for more information.

Before You Begin the Installation
Oracle BI EE requires that you install Oracle R Enterprise version 1.4 or 1.4.1.

Installing Oracle R Enterprise and R Packages
Use the procedures in this section to install Oracle R Enterprise 1.4.1 on the Oracle database and to install all of the required R packages on Oracle R Enterprise.

Configuring Oracle R Enterprise to Work with Oracle BI EE
After you have installed Oracle R Enterprise and the R Packages, the next step is to configure Oracle R Enterprise.

7.2.1 Before You Begin the Installation

Oracle BI EE requires that you install Oracle R Enterprise version 1.4 or 1.4.1.

Table 7-1 ORE Configuration and Support Matrix

Oracle R Enterprise Version	Oracle R Enterprise Distributed R Version	Oracle Database Version
1.4	3.0.1	11.2.0.3
	3.1.1	11.2.0.4
		12.1.0.1
1.4.1	3.0.1	11.2.0.3
	3.1.1	11.2.0.4
		12.1.0.1

7.2.2 Installing Oracle R Enterprise and R Packages

Use the procedures in this section to install Oracle R Enterprise 1.4.1 on the Oracle database and to install all of the required R packages on Oracle R Enterprise.

To Install Oracle R Enterprise on the Database

A sample user such as ruser or rqueser is used for R Execution on the database.

To install Oracle R Enterprise 1.4.1 on the database follow the installation instructions in *Oracle R Enterprise Installation and Administration Guide*, Release 1.4.1.

For information about the steps in a typical installation of Oracle R Enterprise on a Linux server and a Windows client, see the "A Sample Installation of Oracle R Enterprise" in *Oracle R Enterprise Installation and Administration Guide*.

To Install R Packages on Oracle R Enterprise

1. After you have installed Oracle R Enterprise, then locate and copy r-installer.zip onto the Oracle R Enterprise host.
2. Decompress the r-installer.zip.
3. If you have not already done so, then go to the RInstaller folder, locate proxy.txt, and edit it to include the proxy server details.

4. Open a command line and as an Oracle user, run the following command to install the required R packages (forecast, mvoutlier, randomForest, RJSONIO, and matrixcalc).

   ```
   ORACLE_HOME/bin/ORE -f r-package-install.R
   ```

7.2.3 Configuring Oracle R Enterprise to Work with Oracle BI EE

After you have installed Oracle R Enterprise and the R Packages, the next step is to configure Oracle R Enterprise.

To Configure Oracle R Enterprise

1. Open your instance of Oracle BI Presentation Services and click Administration. In the Administration page, click Issue SQL. The Issue SQL dialog displays.

2. In the Issue SQL dialog, enter and issue the following stored procedures:

   ```
   call NQSRegisterScript("filerepo://obiee.Clustering.xml")
   call NQSRegisterScript("filerepo://obiee.RegressionCreateModel.xml")
   call NQSRegisterScript("filerepo://obiee.RegressionScoreModel.xml")
   call NQSRegisterScript("filerepo://obiee.Outliers.xml")
   call NQSRegisterScript("filerepo://obiee.Regression.xml")
   call NQSRegisterScript("filerepo://obiee.RegressionCorrelation.xml")
   call NQSRegisterScript("filerepo://obiee.TimeSeriesForecast.xml")
   ```

3. Locate and open NQSConfig.INI and in the ADVANCED_ANALYTICS_SCRIPT section make the following updates:

   - In the CONNECTION_POOL property, specify the name of the connection pool to be defined in the repository.

     For example, suppose the database name is ORE and the connection pool name is ORECP. Then in the CONNECTION_POOL property, you would enter:

     ```
     ORE.ORECP
     ```

     Note:

     The schema user defined in the connection pool ORECP should have RQADMIN privileges which can be granted via GRANT RQADMIN TO <SCHEMA_USER>.

   - If the ORE database and the source data are located in the same database, then you can improve the speed of the R execution by setting the CONNECTION_POOL property to the source database connection pool.

   - In the TARGET property, set the value to `"ORE"`. For example, `TARGET="ORE"`.

4. Test the configuration by running an Oracle BI Server query. For example:

   ```
   SELECT
   "A - Sample Sales"."Time"."T02 Per Name Month" Month1,
   "A - Sample Sales"."Base Facts"."1- Revenue" target,
   FORECAST("A - Sample Sales"."Base Facts"."1- Revenue", ("A - Sample
   Sales"."Time"."T02 Per Name Month" timeMonth),
   ```

```
'forecast','numPeriods=7;predictionInterval=90;)
FROM "A - Sample Sales" order by 1;
```