**Oracle® Communications Report Manager**
Installation Guide
Release 7.5

October 2017

ORACLE®

# Contents

# About This Guide

This document and other product-related documents are described in the Related Documentation table.

**Related Documentation**

**Table 1: Oracle Communications Session Delivery Manager Documentation Library**

| Document Name | Document Description |
|---|---|
| Release Notes | Contains information about the administration and software configuration of the Oracle Communications Session Delivery Manager feature support new to this release. |
| Installation Guide | The Installation guide describes the process to install the Session Delivery Manager including both the typical installation process as well as the custom installation options. |
| Administration Guide | Contains information about security administration, which lets you create new users and new user groups, and set group-based authorization. |
| Security Guide | Provides the following security guidelines and topics:<br><br>• Guidelines for performing a secure installation of Oracle Communications Session Delivery Manager on your server, which includes methods for securing the server, firewall settings, system support for encryption and random number generators (RNG), using HTTPS, and password guidelines.<br>• An overview of the Security Manager features that are used to configure groups, users, operations, privileges, and manage access to the system.<br>• Security maintenance, which includes a checklist to securely deploy Oracle Communications Session Delivery Manager on your network, maintaining security updates, and security considerations for developers. |

**Table 2: Oracle Communications Session Element Manager Documentation Library**

| Document Name | Document Description |
|---|---|
| User Guide | Contains detailed information pertaining to the Session Element Manager application and describes the dashboard summary view, audit log, fault, and performance views. |

| Document Name | Document Description |
|---|---|
| Web Services SOAP XML Provisioning API Guide | Contains a full description of the individual interface definitions that make up the Application Programming Interface (API). |

**Table 3: Oracle Communications Report Manager Documentation Library**

| Document Name | Description |
|---|---|
| User Guide | Contains information about configuring Report Manager to interoperate with Oracle BI Publisher as well as creating reports on network devices. |
| Installation Guide | Contains instructions for installing Oracle Communications Report Manager as an Add-on to the Session Delivery Manager including the database and BI Publisher components. |

**Table 4: Oracle Communications Session Route Manager Documentation Library**

| Document Name | Description |
|---|---|
| User Guide | Contains documentation and about using the Session Route Manager with Oracle Communications Session Delivery Products. |

# Revision History

| Date | Description |
|---|---|
| August 2015 | • Initial release |
| January 2016 | • The organization of the content was improved, missing sections and information were added, incorrect information was fixed, and the content has been improved overall.<br>• The chapter, *Create a Report Manager Database Instance* was added for the creation of the Oracle database instance for Oracle Communications Report Manager (OCSDMDW), the Oracle database user (OCSREMDW), and the LISTENER2 instance. |
| April 2016 | • The Oracle Legal Notices section was updated.<br>• The title of this guide changed from the *Oracle Communications Session Delivery Manager Report Manager Installation Guide Release 7.5* to *Oracle Communications Report Manager Installation Guide Release 7.5*. |

| Date | Description |
|---|---|
| August 2016 | • The proper cross-reference was added to the *Restart the WebLogic Server to Run Reports* section in the *Register Oracle BI Publisher* chapter.<br>• An additional step was added to the *Start or Stop the Oracle Database* chapter to start or stop the database listeners.<br>• Added the *Prepare for a Report Manager Upgrade* section to the Pre-Installation Tasks chapter and added a note to this chapter's introduction that informs that the BI Publisher and Oracle database (Listener and Listener 2) need to be running and properly connected when the Oracle Communications Session Delivery Manager setup installation process is initiated during an upgrade of Oracle Communications Report Manager. |
| February 2017 | • The *Restart the WebLogic Server for Running Reports* section in the *Register Oracle BI Publisher* chapter was updated with the information in the *Restart the WebLogic Server* section in the *Report Manager Administrator Operations* chapter. The *Restart the WebLogic Server* section in the *Report Manager Administrator Operations* chapter was removed. |
| October 2017 | • The *Shutdown Report Manager* and *Start Report Manager* sections were added to the *Report Manager Administrator Operations* chapter.<br>• The *Start or Stop the Oracle Database* section was removed from the *Report Manager Administrator Operations* chapter. |

**1**

# Pre-Installation Tasks

Read and understand the summary of pre-installation steps that need to be done before installing Oracle Communications Report Manager on your Oracle Communications Session Delivery Manager system.

⚠️ **Warning:** In Oracle Communications Session Delivery Manager, Release 7.4 and later, the Oracle Communications Report Manager product uses Oracle BI Publisher to manage, customize, schedule, print, and render reports to multiple formats. The Postgres reporting database and reporting tool used in prior releases cannot be imported when upgrading Report Manager.

1. If you are installing the Oracle Communications Session Delivery Manager product software for the first time or upgrading from a previous version, complete the instructions in the Oracle Communications Session Delivery Manager Installation Guide before installing Oracle Communications Report Manager.
2. Check Linux server requirements before installing the Oracle Business Intelligence (BI) Publisher software.
3. Decide if you are going to implement Oracle Communications Report Manager in a local or remote configuration.
4. Create an Oracle group and user account on your Linux system(s).
5. Select either X11 forwarding using secure shell (SSH) or the virtual network computing (VNC) to install the Oracle database and BI Publisher software with a graphical user interface (GUI) installer on your Linux system.

## Check System Requirements

Overall, we recommend that your Linux server system have a minimum of 300 GB of disk space to install Oracle Communications Report Manager. The storage capacity of your server also depends on how much data and the number of devices that are being used.

👉 **Note:** For more information about Oracle Communications Session Delivery Manager system requirements, see the *Oracle Communications Session Delivery Manager Installation Guide* for more information.

Your Linux server system must meet the following minimum requirements to install the Oracle Business Intelligence (BI) Publisher:

- 64-bit operating system
- 64-bit JVK/JDK
- JDK version 1.6 (update 2) or higher

- 8 GB RAM for 64-bit JVM in large, high volume deployments
- 2 GB RAM for 32-bit JVM in small deployments
- 30 GB shared disk space for cluster deployments
- 20 GB non-shared, temporary disk space for document processing

# Decide How You Want to Implement Report Manager

The information in this section is used to determine which Report Manager implementation is appropriate for your organization before doing any installations.

Oracle Communications Report Manager is an optional application within Oracle Communications Session Delivery Manager that is used to centrally manage the following database functions, display functions, and applications:

- Use Oracle Business Intelligence Publisher (Oracle BI Publisher) application to render reports.
- Report Manager uses Oracle BI Publisher to render reports based on metrics collected from Historical Data Recording (HDR). HDR is a group of management features used to configure a managed device in order to collect statistics about system operation and function. The Report Manager collects raw data in CSV files from designated devices to aggregate it into time granularities (raw, hourly, daily, monthly, yearly), and make this data available for running reports.

> **Note:** With the introduction of Oracle Communications Session Delivery Manager, Release 7.5, both the Oracle Communications Session Delivery Manager and Oracle database software, must be installed together on the same server if you are using Report Manager. The Oracle Communications Session Delivery Manager Data Warehouse (OSCDMDW) database software that is used to store collected data from devices that are managed by Oracle Communications Session Delivery Manager.

You can do a simple or Oracle BI Publisher cluster installation for Report Manager:

- Simple installation—A local standalone installation, local cluster installation, or a remote standalone installation. See the *Simple Implementation of Report Manager* section for more information.
- Oracle BI Publisher Cluster Installation and scale-out installation—A remote cluster installation, in which multiple instances of Oracle BI Publisher and Oracle Communications Session Delivery Manager are installed on separate servers. See the *Oracle BI Publisher Cluster Implementation of Report Manager* section for more information.

> **Note:** You can select this installation option (Enterprise Install) later when you are installing Oracle BI Publisher and creating an Oracle BI Publisher cluster. See the *Create a BI Publisher Cluster* section in this document for more information.

> **Note:** In a remote cluster installation (Enterprise Install), the Oracle BI Publisher is not on the same server as the Oracle Communications Session Delivery Manager. Ensure that the Oracle database application is installed on one of the servers on which Oracle BI Publisher is installed and on both servers on which Oracle Communications Session Delivery Manager is installed.

## Simple Implementation of Report Manager

A simple implementation of Report Manager can include the following types of installations:

- **Local standalone installation**—A single local server that has Oracle Communications Session Delivery Manager, Oracle BI Publisher, and their respective databases that work together to generate reports.
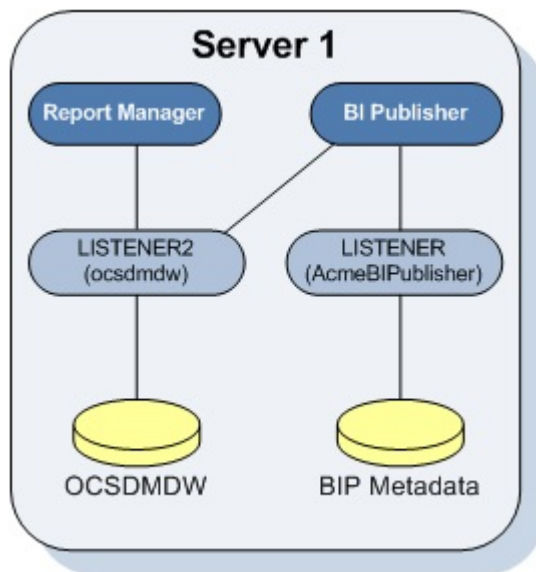
**Figure 1: Local standalone installation of Report Manager**

- **Local cluster installation**—A cluster of local servers that generate reports and provide high availability in case one system experiences a sudden failure. On each local server that is part of the same cluster, Oracle BI Publisher and Oracle Communications Session Delivery Manager are installed with their respective databases. Once installed, the Oracle BI Publisher application is local to the Oracle Communications Session Delivery Manager application.

> ☞ **Note:** In a local cluster, the databases synchronize every night. The database content of all non-master cluster nodes is synchronized with the master cluster node. All identifying information for one host, such as a username, password, and database prefix, should be identical to the identifying information of another host in the same cluster.
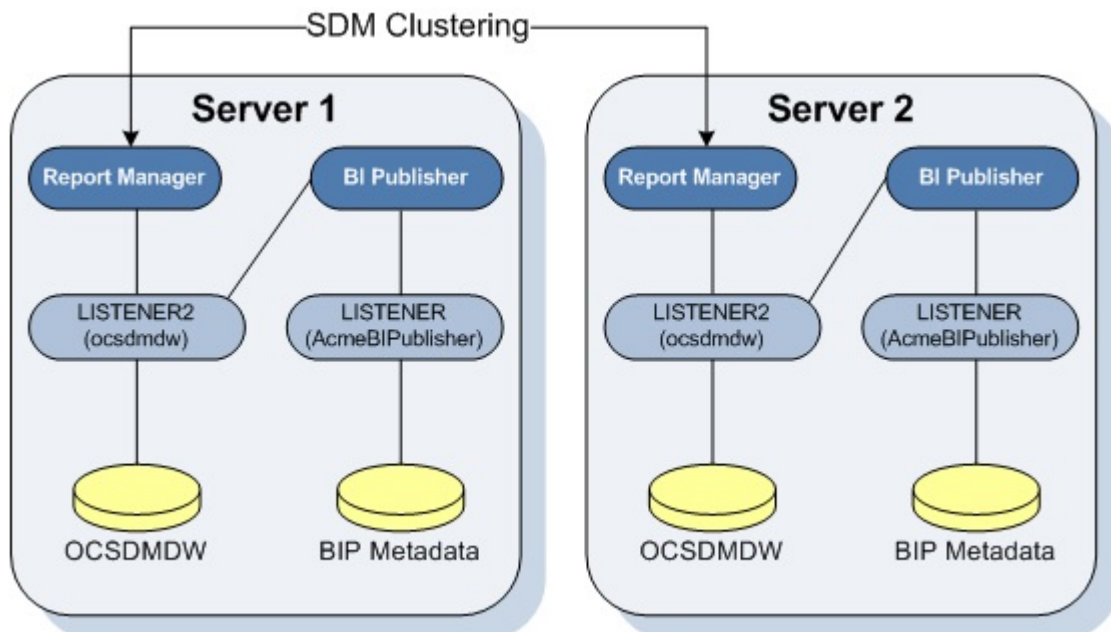


**Figure 2: Local cluster installation of Report Manager**

- **Remote standalone installation**—A single remote server that has Oracle Communications Session Delivery Manager, Oracle BI Publisher, and their respective databases.

👉 **Note:** If you select this type of installation, install Oracle Communications Session Delivery Manager on its server first on Server 1, and next install the Oracle BI Publisher software on Server 2.
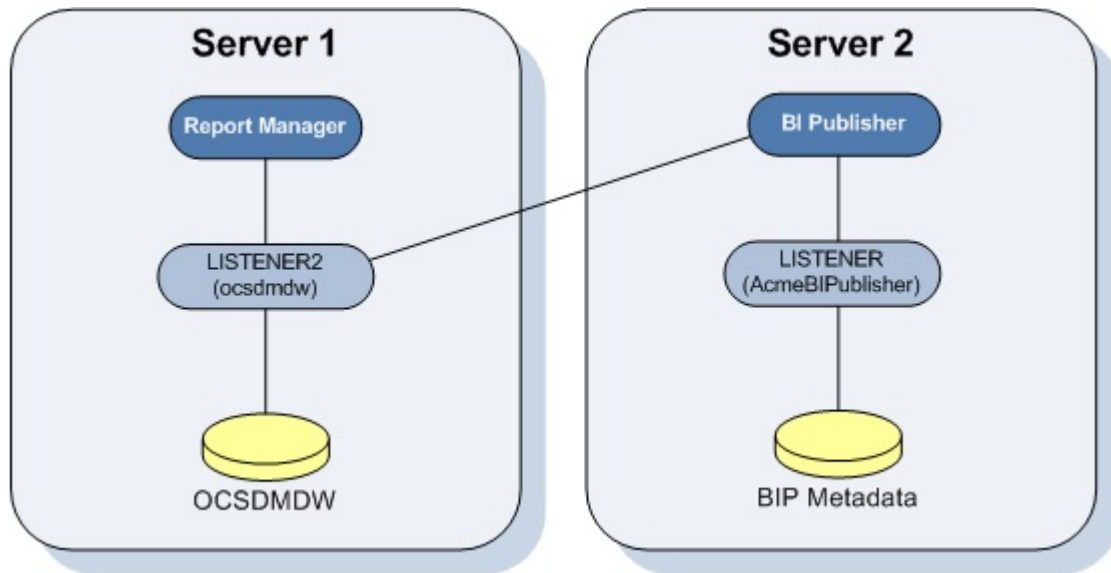


**Figure 3: Remote standalone installation of Report Manager**

The distinct databases in the illustration above function in the following ways for Oracle Communications Session Delivery Manager, Oracle BI Publisher, and Oracle Communications Report Manager:

- The Berkeley (SDM) XML database is embedded into the Oracle Communications Session Delivery Manager infrastructure, and provides database storage for Oracle Communications Session Delivery Manager user name and user group variables. It is initiated by the database service.
- The AcmeBIPublisher database is maintained and used by the Oracle database to hold the schemas and configuration required by the Oracle BI Publisher application.
- The Oracle Communications Session Delivery Manager Data Warehouse (ocsdmdw) database is maintained by Oracle Communications Session Delivery Manager and it is used to store data that is collected from devices for which collection is enabled is OCSDM.

# Oracle BI Publisher Installation for Report Manager

An Oracle BI Publisher installation for Report Manager remote cluster installation, in which multiple instances of Oracle BI Publisher and Oracle Communications Session Delivery Manager are installed on separate servers.
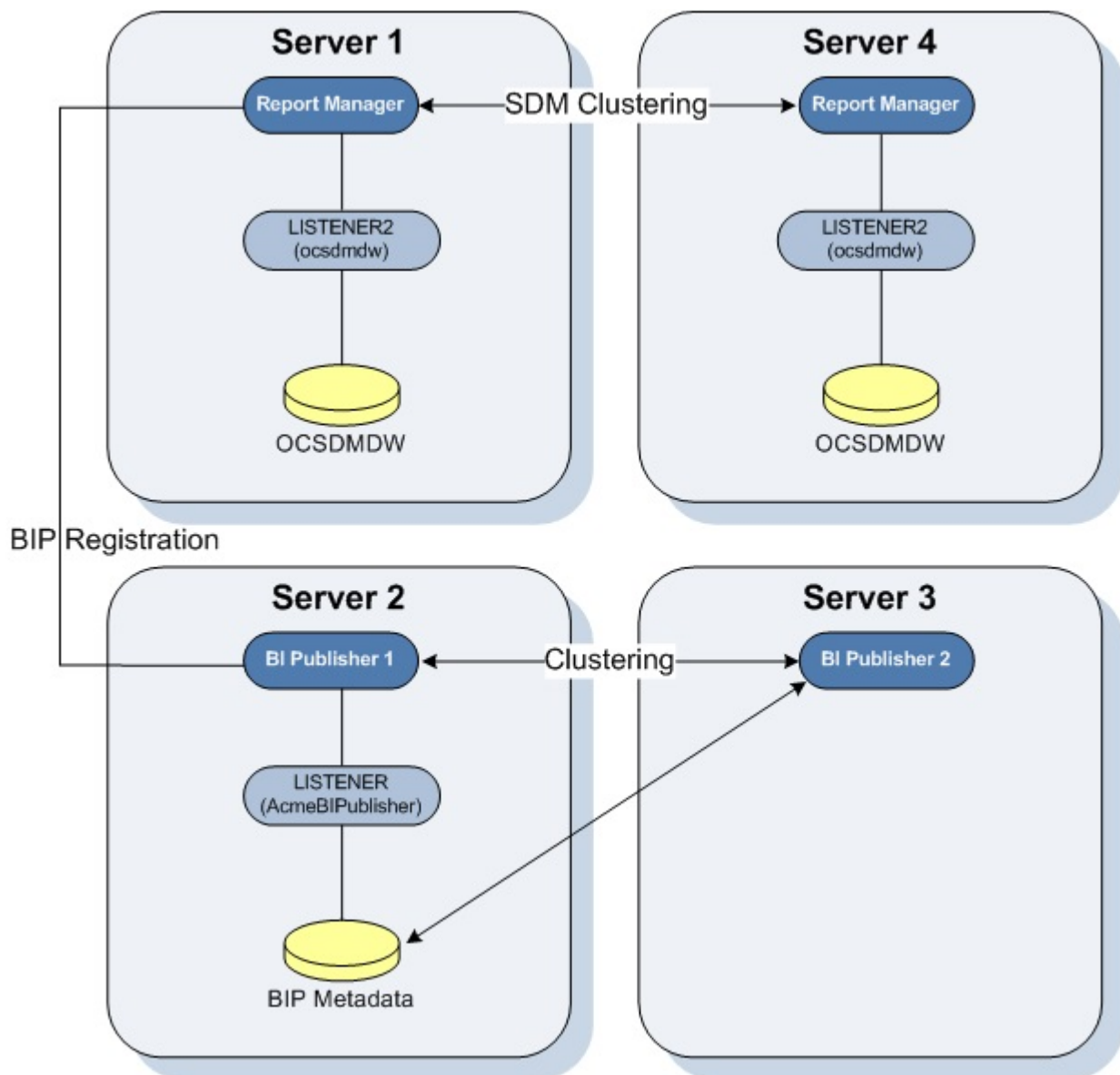
**Figure 4: Remote cluster installation of Report Manager**

The OCSDMDW database on the replica node is synchronized with the master node every night. When the user signs into Oracle BI Publisher from Oracle Communications Session Delivery Manager, the log in is attempted on the Oracle BI Publisher nodes (Server 2 and Server 3) in a round-robin fashion.

If this describes the architecture of your system, first install Oracle Communications Session Delivery Manager on Server 1 and Server 4. Then use this guide to install Oracle BI Publisher on all the Oracle BI Publisher server nodes (That is, Server 2 and Server 3 as shown in the example above).

☞ **Note:** You must set up the shared repository according to the security policies of your company.

# Create an Oracle User Account

Create an Oracle group and user account on your Linux system(s).

**1.** Create a new group called **oracle**.

```
groupadd oracle
```

2. Create a new user account called **oracle** that belongs to the **oracle** group.

```
useradd -m -g oracle -d /home/oracle -s /bin/bash oracle
```

3. Set the password for the oracle user account.

```
passwd oracle <my-oracle-password>
```

# Select the GUI Installer Method

Select either X11 forwarding using secure shell (SSH) or the virtual network computing (VNC) to do installations with a graphical user interface (GUI) installer on your Linux system.

## Configure SSH with X11 Forwarding

1. You can use either the -X or -Y flag to enable X11 forwarding through SSH when you log in as the root user. For example:

```
ssh -Y root@server-name
```

👉 **Note:** If you do not have DNS on your server or the server name does not work, enter the IP address of the server.

2. (Optional) Install the xorg-x11-xauth package (if it is not already installed). For example:

```
yum install xorg-x11-xauth
```

3. You can use either the -X or -Y flag to enable X11 forwarding through SSH when you disconnect and log in as the oracle user. For example:

```
ssh -Y oracle@vm
```

4. Find the values for the DISPLAY variable with the xauth list command.

```
$ xauth list
<domain name>/unix:11
<domain name>/unix:10
```

In the example above, either 11 and 10 are suitable values for the DISPLAY variable.

## Configure VNC

1. You can use either the -X or -Y flag to enable X11 forwarding through SSH when you log in as root. For example:

```
ssh -Y root@server-name
```

2. Install the Desktop package group, which includes X11 and gnome-desktop. For example:

```
yum install @desktop
```

3. Install a VNC server. For example:

```
yum install tigervnc-server
```

4. Reboot the server.
5. Log in as root.
6. Start the VNC server.

```
vncserver :1
```

# Prepare for a Report Manager Upgrade

Use this task if you are upgrading Oracle Communications Report Manager from a previous version. The BI Publisher database, and Oracle database and its listeners (LISTENER and LISTENER2) need to be running and properly connected when you use the Oracle Communications Session Delivery Manager setup installation application. Doing this verification ensures that the BI Publisher database and Oracle

Communications Session Delivery Manager Data Warehouse (ocsdmdw) databases are migrated to the upgraded version of Oracle Communications Report Manager.

1. From your Linux system, run the following commands to check if the BI Publisher database, Oracle database, and the listeners are running:

   - Verify that the BI Publisher database is running:

     ```
     ps -ef|grep <my-bi-publiser-db-name>
     ```

   - Verify that the ocsdmdw databases are running:

     ```
     ps -ef|grep ocsdmdw
     ```

   - Verify that the listeners (LISTENER and LISTENER2) are running:

     ```
     ps -ef | grep lsnr
     ```

2. Use the following options to start the BI Publisher database, Oracle database, or the listeners if one or more of these processes are not running:

   > ☞ **Note:** Ensure that the Oracle home path (ORACLE_HOME) is specified to the correct directory path for each option.

   - Start the BI Publisher database:

     ```
     export ORACLE_SID=AcmeBIPublis
     cd $ORACLE_HOME/bin
     ./sqlplus / as sysdba
     SQL> startup;
     ```

   - Start the ocsdmdw database:

     ```
     export ORACLE_SID=ocsdmdw
     cd $ORACLE_HOME/bin
     ./sqlplus / as sysdba
     SQL> startup;
     ```

   - Start the listeners (LISTENER and LISTENER2):

     ```
     cd $ORACLE_HOME/bin
     ./lsnrctl start
     ./lsnrctl start LISTENER2
     ```

     > ☞ **Note:** You must wait a minute for the listener process to start listening to their respective database services.

3. Use the following commands to check the status of the listeners (LISTENER and LISTENER2):

   ```
   ./lsnrctl status LISTENER
   ./lsnrctl status LISTENER2
   ```

   The following output displays:

   ```
   LSNRCTL for Linux: Version 11.2.0.1.0 - Production on 18-AUG-2016 16:32:38

   Copyright (c) 1991, 2009, Oracle.  All rights reserved.

   Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=nms-vm14)
   (PORT=1522)))
   STATUS of the LISTENER
   ------------------------
   Alias                     LISTENER2
   Version                   TNSLSNR for Linux: Version 11.2.0.1.0 - Production
   Start Date                16-AUG-2016 14:52:46
   Uptime                    2 days 1 hr. 39 min. 52 sec
   Trace Level               off
   Security                  ON: Local OS Authentication
   SNMP                      OFF
   Listener Parameter File   /app/oracle/product/11.2.0/dbhome_1/network/admin/
   listener.ora
   Listener Log File         /app/oracle/diag/tnslsnr/nms-vm14/listener2/alert/
   ```

```
log.xml
Listening Endpoints Summary...
   (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=nms-vm14)(PORT=1522)))
```
**Services Summary...**
**Service "ocsdmdw" has 1 instance(s).**
  **Instance "ocsdmdw", status READY, has 1 handler(s) for this service...**
**Service "ocsdmdwXDB" has 1 instance(s).**
  **Instance "ocsdmdw", status READY, has 1 handler(s) for this service...**
**The command completed successfully**

**2**

# Install the Oracle Database Software

Install the Oracle database software on your Linux server for Oracle Communications Report Manager by downloading and running the Oracle database installer, and editing and restarting the Oracle database listener (Listener 1).

## Install Dependencies for the Oracle Database Software

You must install software packages that the Oracle database software depends on for its proper operation.

> ☞ **Note:** For more information, see *Oracle Database 12c and 11g Installations on Oracle Linux 6*.

1. Log in to the server as the root user.
2. Navigate to the /etc/yum.repos.d/ directory and retrieve the file that configures repository locations.

```
cd /etc/yum.repos.d/
wget http://public-yum.oracle.com/public-yum-ol6.repo
```

3. Open public-yum-ol6.repo in a text editor and verify the enabled parameter is set to 1 in the [ol6_latest] section and the [ol6_UEK_latest] section.
4. Install the oracle-rdbms-server-11gR2-preinstall package.

```
yum -y install oracle-rdbms-server-11gR2-preinstall
```

> ☞ **Note:** If yum fails with a GPG key retrieval error, import Oracle's GPG key.
>
> ```
> rpm --import http://oss.oracle.com/ol6/RPM-GPG-KEY-oracle
> ```
>
> To verify the GPG key was successfully imported, type
>
> ```
> rpm -q gpg-pubkey-ec551f03-4c2d256a
> ```
>
> If the package name is returned, Oracle's GPG was successfully imported. If the command returns a message saying the package is not installed, re-enter the import command.

5. Install additional required packages:

```
yum -y install binutils compat-db compat-libstdc++-33 glibc glibc-devel gcc
cpp glibc-headers gcc-c++ libstdc++ make ksh elfutils-libelf elfutils-
libelf-devel sysstat libaio libaio-devel unixODBC unixODBC-devel
```

# Download the Oracle Database Software Installer

1. As root, create an /app/oracle directory that is owned by the oracle user.

```
[oracle@vm ~]$ su
Password:
[root@vm oracle]# mkdir /app
[root@vm oracle]# chown oracle:oracle /app
[root@vm oracle]# exit
exit
[oracle@vm ~]$ mkdir /app/oracle
```

2. Navigate your browser to the Oracle Database Software Downloads page:

   http://www.oracle.com/technetwork/database/enterprise-edition/downloads/index.html

3. Under the "Oracle Database Software Downloads" heading, select Accept License Agreement.

4. Download the Oracle Database 11g Release 2 for your particular system by clicking the File 1 and File 2 links.

5. Copy the files to the /app/oracle directory.

# Start the Oracle Database Software Installer

1. Log in as the oracle user with the -Y flag.

```
ssh -Y oracle@vm
```

2. Navigate to the /app/oracle directory.

```
cd /app/oracle
```

3. Unzip the Oracle database software installer.

   ☞ **Note:** If necessary, install `unzip` with the command yum install unzip.

```
unzip linux.x64_11gR2_database_1of2.zip
unzip linux.x64_11gR2_database_2of2.zip
```

4. Set the TMP, TMPDIR, and ORACLE_BASE variables and unset the ORACLE_HOME variable.

```
export TMP=/tmp
export TMPDIR=/tmp
export ORACLE_BASE=/app/oracle
unset ORACLE_HOME
```

5. Navigate to the /app/oracle/database directory.

```
cd /app/oracle/database/
```

6. Run the Oracle database software installer.

```
./runInstaller
```

   ☞ **Note:** If you experience errors, see the X11 Forwarding section of the Troubleshooting chapter.

# Install the Oracle Database Software

1. Leave the **My Oracle Support Password** field blank and provide an e-mail address in the **Email** field if you want to receive security updates from Oracle.

2. Click **Next**.

3. Click **Yes** to confirm.

4. Select **Create and configure a database** and click **Next**.

5. Select **Desktop Class** and click **Next**.

☞ **Note:** The Desktop Class is sufficient for Report Manager and BI Publisher's use of Oracle DB.

**6.** In the Database edition drop-down list, select **Standard Edition One**.

⚠ **Warning:** Selecting Enterprise Edition will result in extra charges from Oracle.
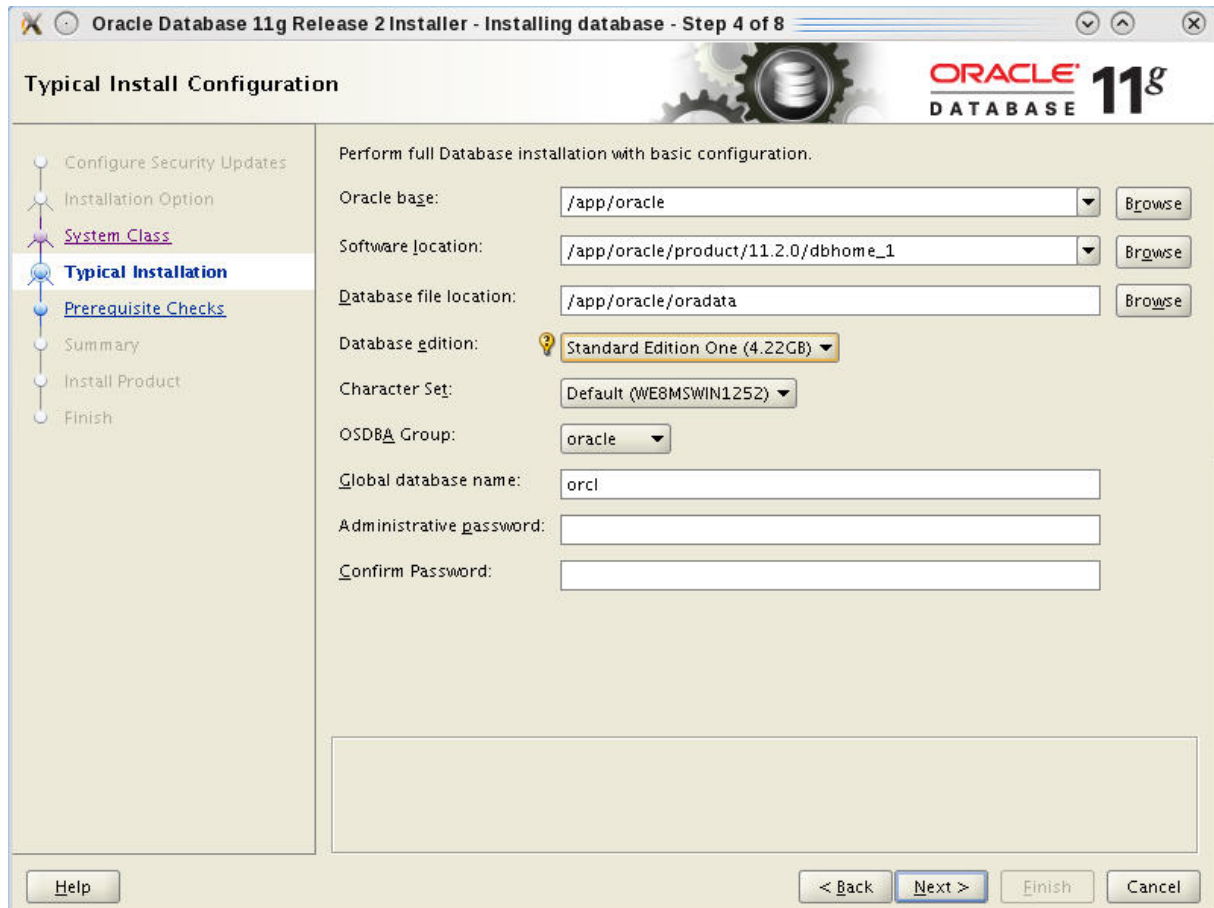


**Table 5: Typical Install Configuration values**

| Parameter | Value |
|---|---|
| Oracle base | /app/oracle |
| Software Location | /app/oracle/product/11.2.0/dbhome_1 |
| Database file location | /app/oracle/oradata |
| Database edition | Standard Edition One (4.22GB) |
| Character Set | Default |
| OSDBA Group | oracle<br><br>☞ **Note:** If the **OSDBA Group** is specified with another group by default, you must change it to **oracle**. |
| Global database name | orcl |
| Administrative password | |

**7.** Enter the administrative password and click **Next**.

8. If the Create Inventory window appears, accept the default values.
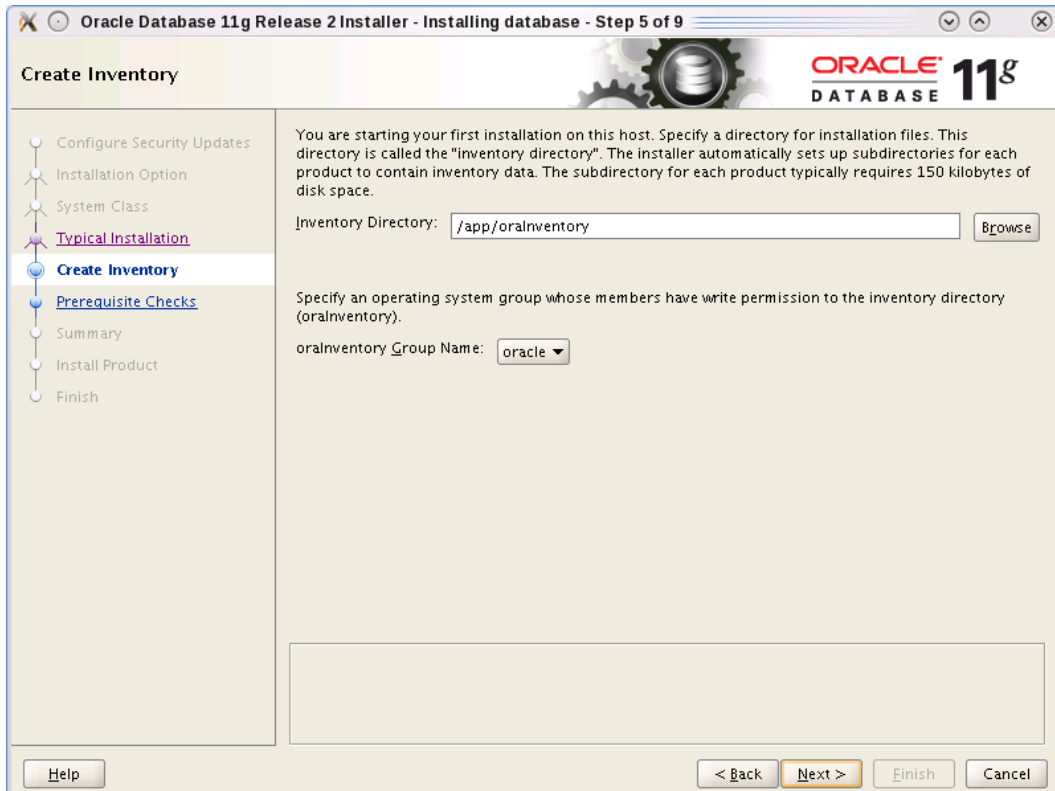


**Table 6: Default values**

| Parameter | Default value |
|---|---|
| Inventory Directory | /app/oraInventory |
| oraInventory Group Name | oracle |

9. Examine the error messages, take the appropriate actions, check Ignore All, and click **Next**.

   If necessary, install missing packages with the yum command and then click **Check Again**.

   If you are installing the Oracle database on a 64-bit system:

   • Ignore the error message for other architectures (e.g., i386).
   • Ignore the error message about pdksh.

   If your display shows OS Kernel Parameter errors:

   • Follow the directions in the *Kernel Requirements* section of the Oracle Database documentation.

   ⚠ **Warning:** Two OS Kernel Parameter errors are exceptions and may be safely ignored:

   **Table 7: OS Kernel Parameters Safe to Ignore**

   | Parameter | Value |
   |---|---|
   | kernel.shmmax | 68719476736 |
   | kernel.shmall | 4294967296 |
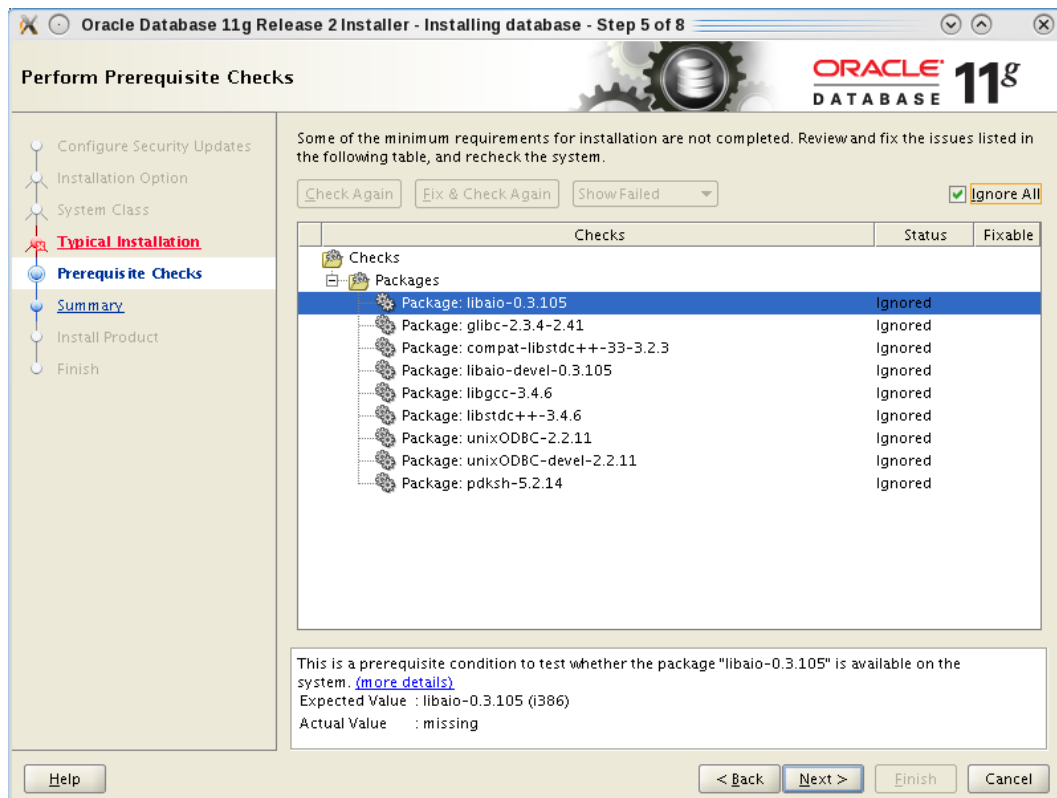
10. Click **Finish**.

    A default database will be created. The global database name is orcl and its SID is orcl.

11. When the installation is complete, click **OK**.

# Execute Configuration Scripts to Access the Oracle Database Software

In some circumstances, the **Execute Configuration scripts** dialog box opens to display the location of scripts that must be run by the root user before continuing.

1. Ensure that you are logged into the server as the root user.
2. In the **Execute Configuration scripts** dialog box, click **OK** to execute the listed scripts.
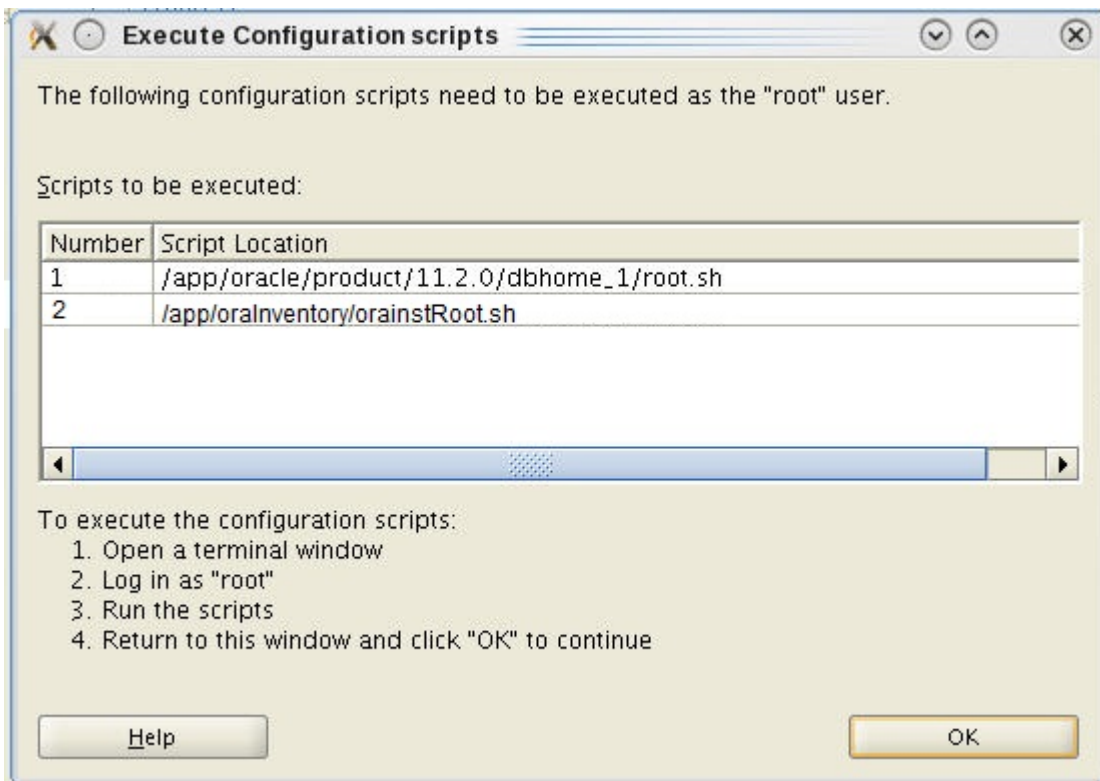
3. In the **Database Configuration Assistant** dialog box, click **OK**.
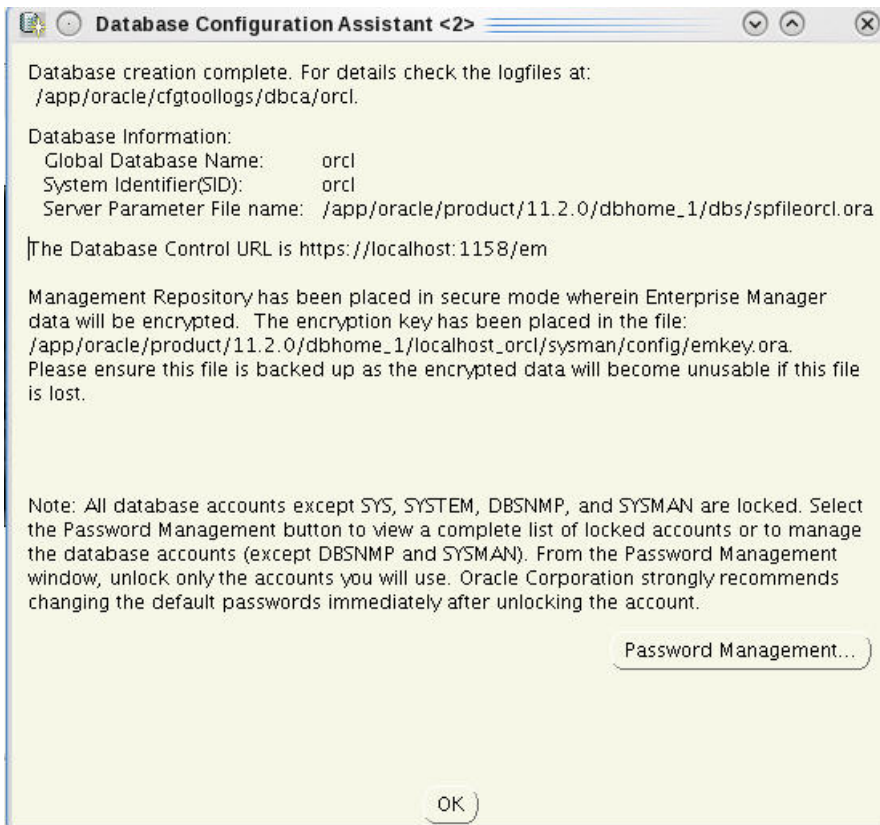


The Oracle database software can now be reached at https://<host name>:1158/em.

# Configure BI Publisher Access to the Oracle Database Software

Edit the Listener to ensure the Oracle database software is accessible remotely by BI Publisher, edit the listener.ora file.

1. Change directories to the admin directory.

```
[oracle@vm ~]$ cd /app/oracle/product/11.2.0/dbhome_1/network/admin/
```

2. Change the value of the HOST parameter from "localhost" to the hostname of your server.

```
[oracle@vm admin]$ sed -i s/localhost/`hostname`/ listener.ora
```

3. Use the export ORACLE_HOME variable to restart the listener. Ensure that this variable identifies (set to equal) the directory path on which you installed the Oracle database software. For example:

```
export ORACLE_HOME=/app/oracle/product/11.2.0/dbhome_1
```

4. To restart the listener and check its status, enter the following commands:

```
/app/oracle/product/11.2.0/dbhome_1/bin/lsnrctl stop
 /app/oracle/product/11.2.0/dbhome_1/bin/lsnrctl start
/app/oracle/product/11.2.0/dbhome_1/bin/lsnrctl status
```

**3**

# Create an Oracle Database Instance for BI Publisher

1. Log in as the oracle user.

2. Run the Database Creation Assistant.

```
[oracle@vm ~]$ cd /app/oracle/product/11.2.0/dbhome_1/bin
[oracle@vm bin]$ ./dbca
```

3. After the Welcome screen, select Create a Database and click **Next**.

4. Select General Purpose or Transaction Processing and click **Next**.

5. Enter "AcmeBIPublisher" in the Global Database Name field and click **Next**.

   The SID will be filled in automatically and truncated after 12 characters.
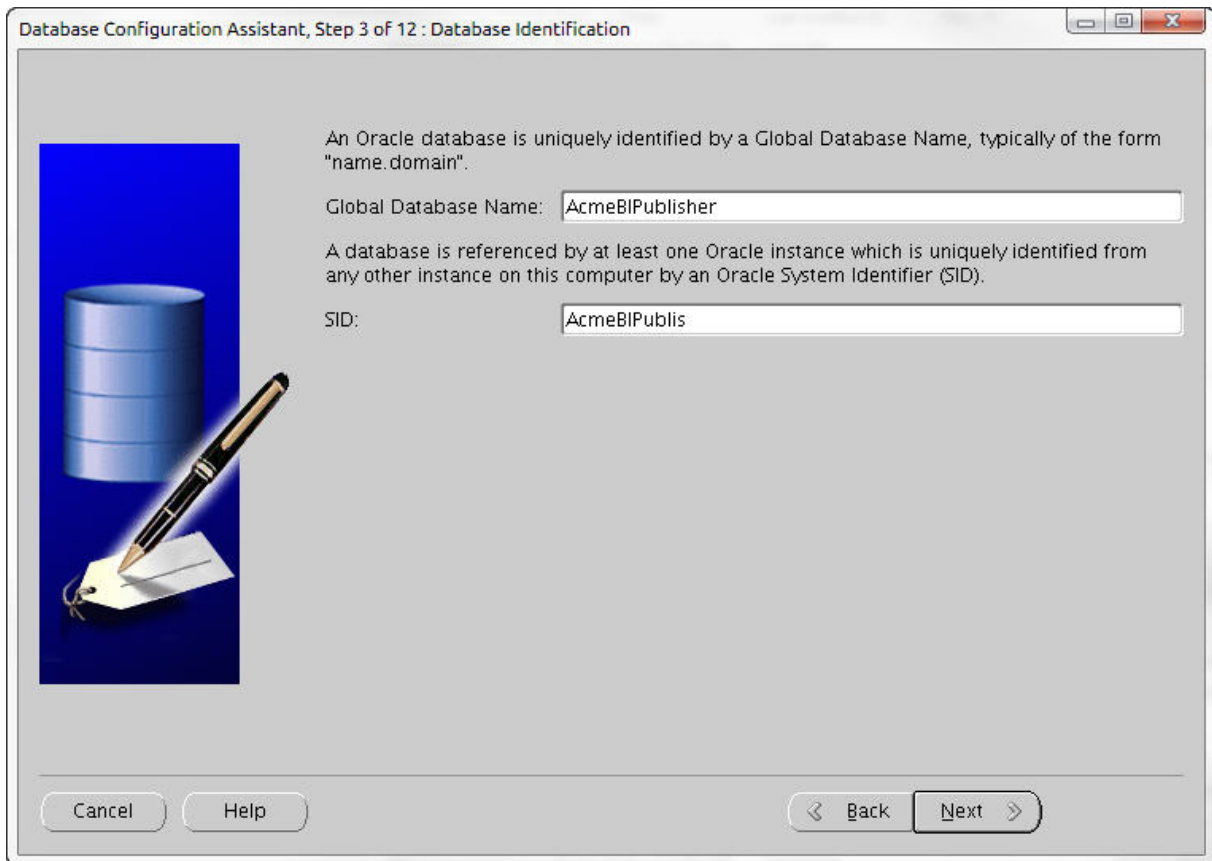


6. Click **Next** to select the defaults for the Management Options screen.

7. Select the database credentials option which suits your needs, enter the password or passwords, and click **Next**.

8.  Click **Next** to accept the default settings for the following screens:

    - Database File Locations
    - Recovery Configuration
    - Database Content
    - Initialization Parameters
    - Database Storage

9.  On the Creation Options screen, click **Finish**.

10. On the Confirmation screen, click **OK**.

> ☞ **Note:** Unless you want to create a separate listener for the newly created AcmeBIPublisher database, this error may be safely ignored.
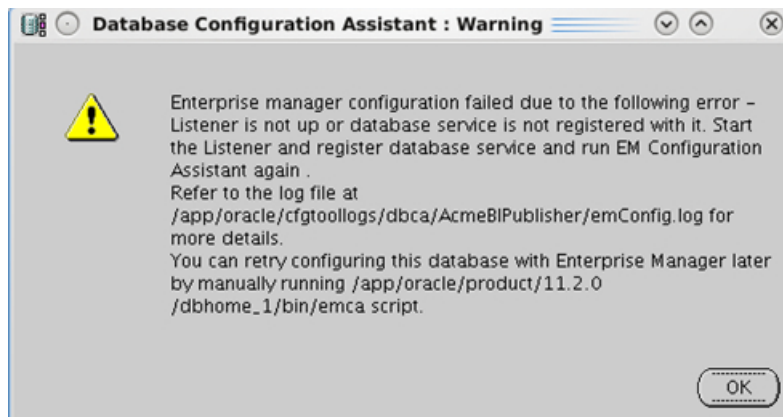
## Specify Oracle Database Software Variables

Use the following steps to specify the variable for the oracle database (ORACLE_HOME), and the system identifier (SID) variable that identifies the BI Publisher database.

1. Append the following lines to /home/oracle/.bash_profile.

```
export ORACLE_HOME=/app/oracle/product/11.2.0/dbhome_1
export ORACLE_SID=AcmeBIPublis
```

👉 **Note:** Make sure the ORACLE_HOME path has no trailing slash.

2. Switch to the nncentral user.

```
su nncentral
```

3. Append the following line to /home/nncentral/.bash_profile.

```
export ORACLE_HOME=/app/oracle/product/11.2.0/dbhome_1
```

👉 **Note:** The ORACLE_HOME variable must be set when restarting either the listener or Oracle Communications Session Delivery Manager.

4. Press Ctrl + D to exit the nncentral user and return to the oracle user.

5. Start a new bash shell as the "oracle" Linux user. For example:

```
ssh oracle@<my_server>
```

## Add an Oracle Database User that Connects to BI Publisher for Backup and Restore Functions

Add an Oracle database user called nncentral to connect BI Publisher database for backup and restore functions work properly. This task needs to be done for local installations only.

1. Log into the Oracle database.

```
[oracle@vm ~]$ cd $ORACLE_HOME/bin/
[oracle@vm bin]$ ./sqlplus '/as sysdba'
```

2. Create a user called nncentral and the user password.

👉 **Note:** The password that you configure expires after 180 days. Seven days before the password expires, a password expiry trap warns you through SDM that your password needs to be reset. If you need to reset this user password later, see the *Reset the Password for the Oracle Database User* section in the *Oracle Communications Report Manager User Guide* for more information.

```
SQL> CREATE USER nncentral IDENTIFIED BY <password>;
```

3. Grant the appropriate privileges.

```
SQL> GRANT CONNECT, DBA, SYSDBA, CREATE SESSION TO nncentral;
```

4. Exit the Oracle database prompt.

```
SQL> exit
```

# 4

# Run the Repository Creation Utility

The repository creation utility (RCU) creates a set of table spaces and schemas required for BI Publisher.

## Download the Repository Creation Utility

1. Navigate to the **Oracle Software Delivery Cloud** and sign in:

   https://edelivery.oracle.com/

2. Read the **Terms and Restrictions**, check the two check boxes, and click **Continue**.

3. In the **Select a Product Pack** drop-down list, select **Oracle Business Intelligence Suite Enterprise Edition Plus**.

4. Click **Select Platform**, and check the **Linux x86-64** check box.

5. Click **Continue**.

6. Click **Continue** again.

7. In the license agreement pop-up dialog box, scroll to read the full license agreement, and check the checkbox that confirms that you have read the license.

8. Uncheck the checkbox next to the **Oracle Business Intelligence** application (all software packages are selected by default).

9. Click the arrow icon to the left of the **Oracle Business Intelligence** application to expand all the software packages in the suite.

10. Check the **Oracle Fusion Middleware Repository Creation Utility** checkbox.

    👉 **Note:** This should be the only checkbox that is selected.

11. Click **Continue**.

12. In the license agreement pop-up dialog box, scroll to read the full license agreement, and check the checkbox that confirms that you have read the license.

13. Click **Continue**.

14. Click **Download All** to copy all the Oracle Fusion Middleware Repository Creation Utility files to your server.

15. Log into your server and unzip the RCU files.

    ```
    unzip <filename>.zip
    ```

# Run the Repository Creation Utility

1. Log in to your server with the -Y flag.

```
ssh -Y oracle@vm
```

2. Start the installation.

```
[oracle@vm ~]$ cd rcuHome/bin/
[oracle@vm bin]$ ./rcu
```

3. On the Welcome screen, click **Next**.

4. Select **Create** and click Next.

5. In the Database Type drop-down list, select Oracle Database. Enter the host name, port, service name, user name, password, and role. Then click **Next**.

| Parameter | Value |
| --- | --- |
| Host name | The hostname of your server |
| Port | 1521 |
| Service Name | AcmeBIPublisher |
| Username | sys |
| Password | Your password |
| Role | SYSDBA |



Oracle® Communications Report Manager

☞ **Note:** You may safely ignore the following warning about character sets.
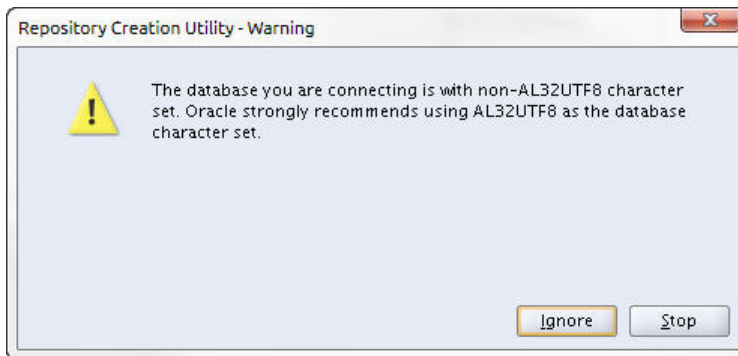


6. Click **OK** to close the Checking Prerequisites window.

7. In the Create a new Prefix field, enter a prefix.

☞ **Note:** The default prefix is DEV.

8. Select two components to install: **Common Schemas** > **Metadata Services** and **Oracle Business Intelligence**. Click **Next**.
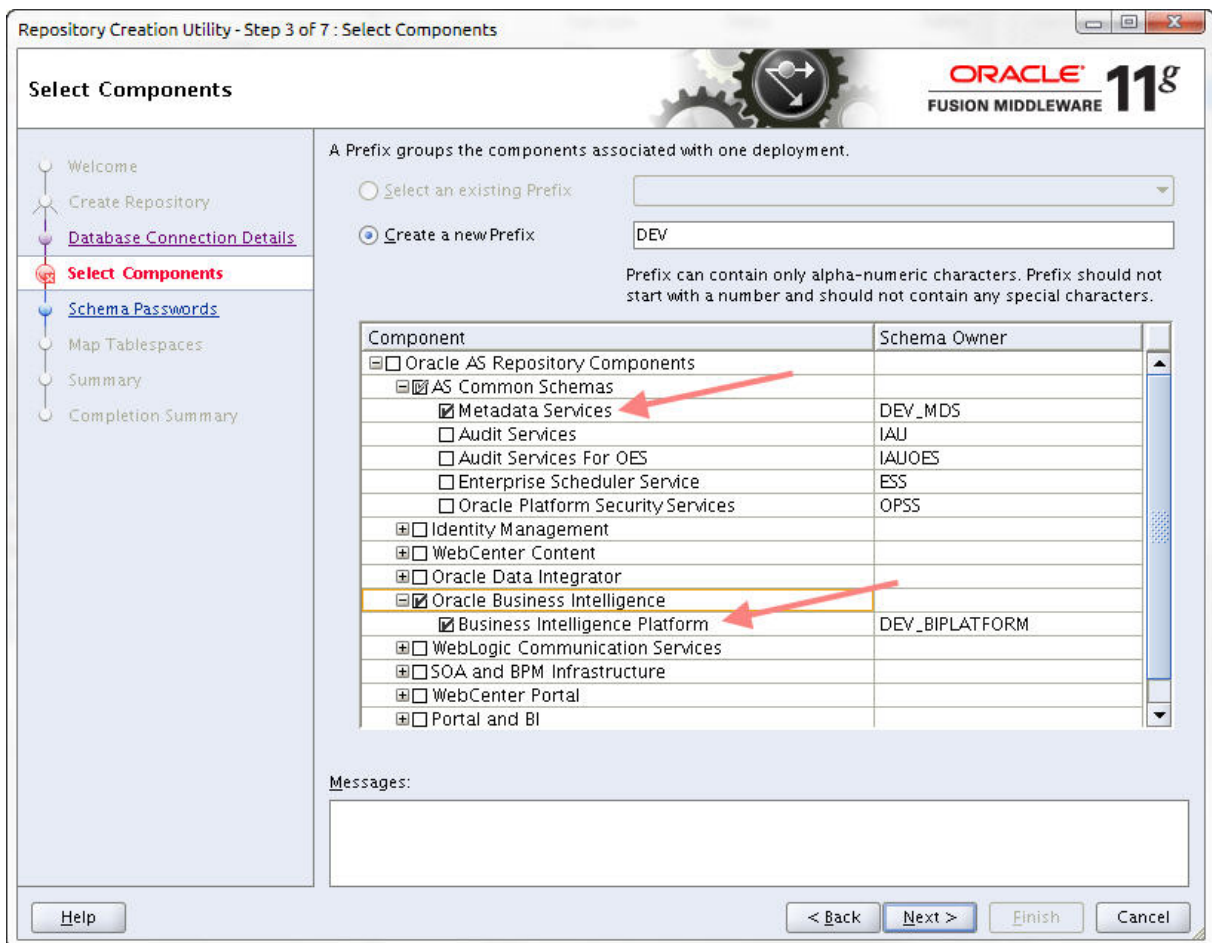


9. On the Password Schema screen, enter the password and click **Next**.

☞ **Note:** The password that you configure expires after 180 days. Seven days before the password expires, a password expiry trap warns you through SDM that your password needs to be reset. If you need to reset this user password later, see the *Reset the Password for BI Publisher Users* section in the *Oracle Communications Report Manager User Guide* for more information.

10. On the Map Tablespaces screen, click **Next**.
11. On the Confirmation window, click **OK**.
12. On the Creating Tablespaces window, click **OK** after the operation has completed.
13. On the Summary screen, click **Create**.
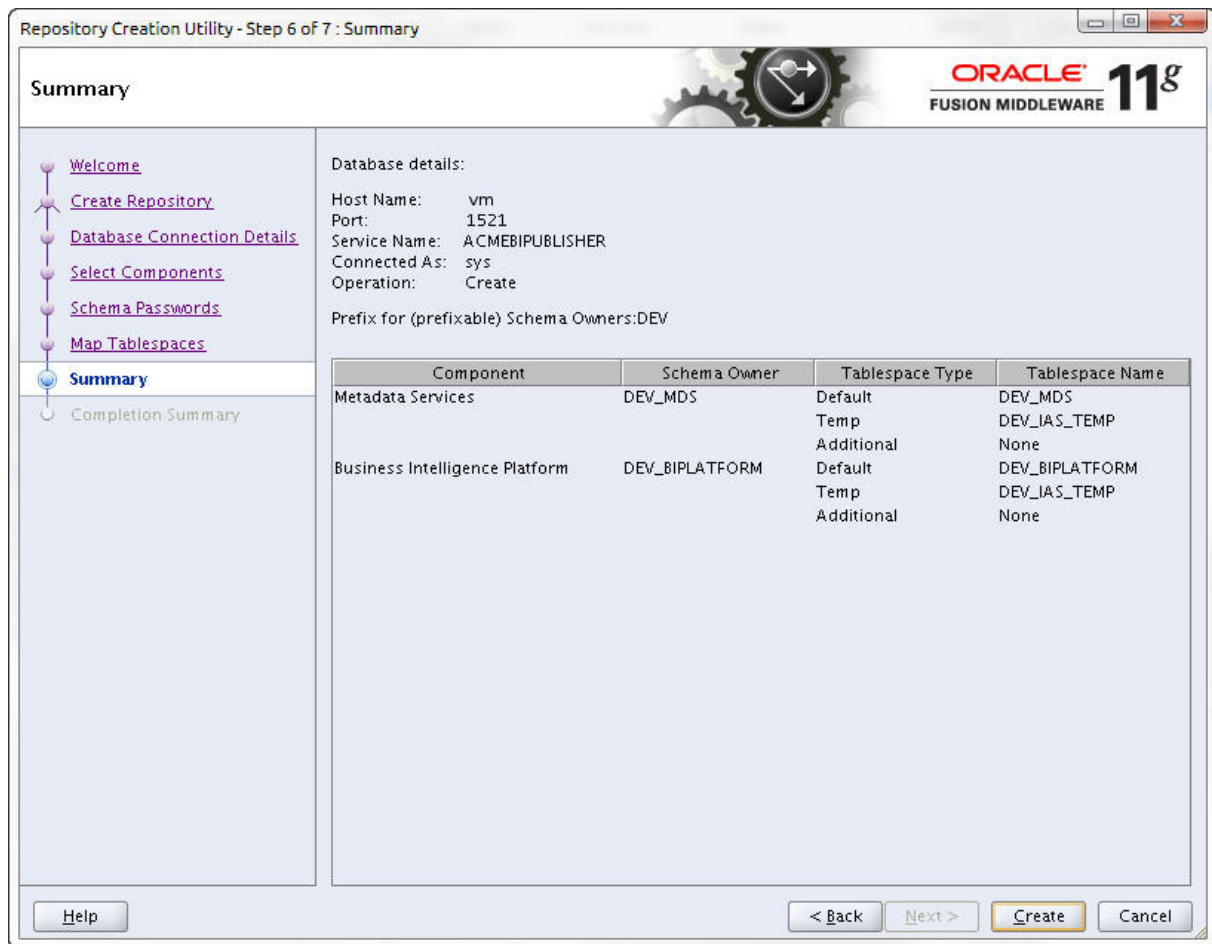


14. After the repository is created, click **Close**.

# Troubleshooting the RCU

If the RCU fails to connect to the Oracle database, follow the steps below.

1. Stop the listener.

   ```
   /app/oracle/product/11.2.0/db_home1/bin/lsnrctl stop LISTENER
   ```

2. As root, edit the /etc/hosts file and remove your <server name> in the 127.0.0.1 and ::1 line.

   ```
   127.0.0.1    localhost.localdomain   localhost.localdomain   localhost4
   localhost4.localdomain4   localhost   centosTemplate   <server_name>
   ::1          localhost.localdomain   localhost.localdomain   localhost6
   localhost6.localdomain6   localhost   centosTemplate   <server_name>
   ```

3. Restart the listener.

   ```
   /app/oracle/product/11.2.0/db_home1/bin/lsnrctl start LISTENER
   ```

4. Double check the status.

   ```
   /app/oracle/product/11.2.0/db_home1/bin/lsnrctl status LISTENER
   ```

   Look for the server name after the HOST parameter.

```
Listening Endpoints Summary...
    (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(KEY=EXTPROC1521)))
    (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=<server_name>)(PORT=1521)))
```

**5.** Try to connect to the Oracle database again.

# 5

# Install Oracle BI Publisher

1. Start the Oracle BI Publisher installer.
2. If setting up a local or remote standalone, follow the directions in the *Creating a Standalone BI Publisher* section.
3. If you are setting up a local cluster, follow the directions in the *Creating a Standalone BI Publisher Cluster* section.
4. If you are setting up a remote cluster, follow the directions in the *Creating a BI Publisher Cluster* section.
5. Verify your access to BI Publisher.
6. Configure privileges for the nncentral user and oracle user.
7. If you installed a local standalone or local cluster, set up a data pump directory.

   ☞ **Note:** If you encounter errors during the installation process, see the *Administrator's Troubleshooting Guide* for BI Publisher.

## Download and Start the BI Publisher Installer

1. Download the appropriate files for BI Publisher 11.1.1.7.0 from the *Oracle Business Intelligence Downloads* page.

   ☞ **Note:** Report Manager only supports BI Publisher version 11.1.1.7.0.

2. Copy the files to your server.
3. Log in to your server as the oracle user with the -Y flag.

   ```
   ssh -Y oracle@vm
   ```

4. To ensure the files were not corrupted during transfer, match the checksum of the file to checksum that Oracle publishes for each file. Checksums display next to the download link on the right.

   The checksum output follows this format: <checksum> <byte count> <filename>

   The following example shows checksum output:

   ```
   [oracle@vm ~]$ cksum bi_linux_x86_111170_64_disk*
   413369417 1828186782 bi_linux_x86_111170_64_disk1_1of2.zip
   2568284489 1562917161 bi_linux_x86_111170_64_disk1_2of2.zip
   579025974 1855356149 bi_linux_x86_111170_64_disk2_1of2.zip
   107813693 755328883 bi_linux_x86_111170_64_disk2_2of2.zip
   3702413188 1702929424 bi_linux_x86_111170_64_disk3.zip
   [oracle@vm ~]$
   ```

**5.** Unzip the files.

```
ls bi_linux_x86_111170_* | while read file; do unzip "$file"; done
```

Unzipping these files creates the bishiphome directory.

**6.** Unset the ORACLE_HOME variable.

```
unset ORACLE_HOME
```

**7.** Create an OracleMiddleWare directory.

```
mkdir /app/OracleMiddleWare
```

**8.** Run the BI Publisher installer.

```
cd ~/bishiphome/Disk1/
./runInstaller
```

# Create a Standalone BI Publisher

**1.** If the Specify Inventory Directory window appears, accept the default values.

| Parameter | Default value |
| --- | --- |
| Inventory Directory | /home/oracle/oraInventory |
| Operating System Group name | dba |

**2.** Click **Next** on the Welcome screen.

**3.** On the Install Software Updates screen, select Skip Software Updates and click **Next**.

**4.** Select Simple Install and click **Next**.
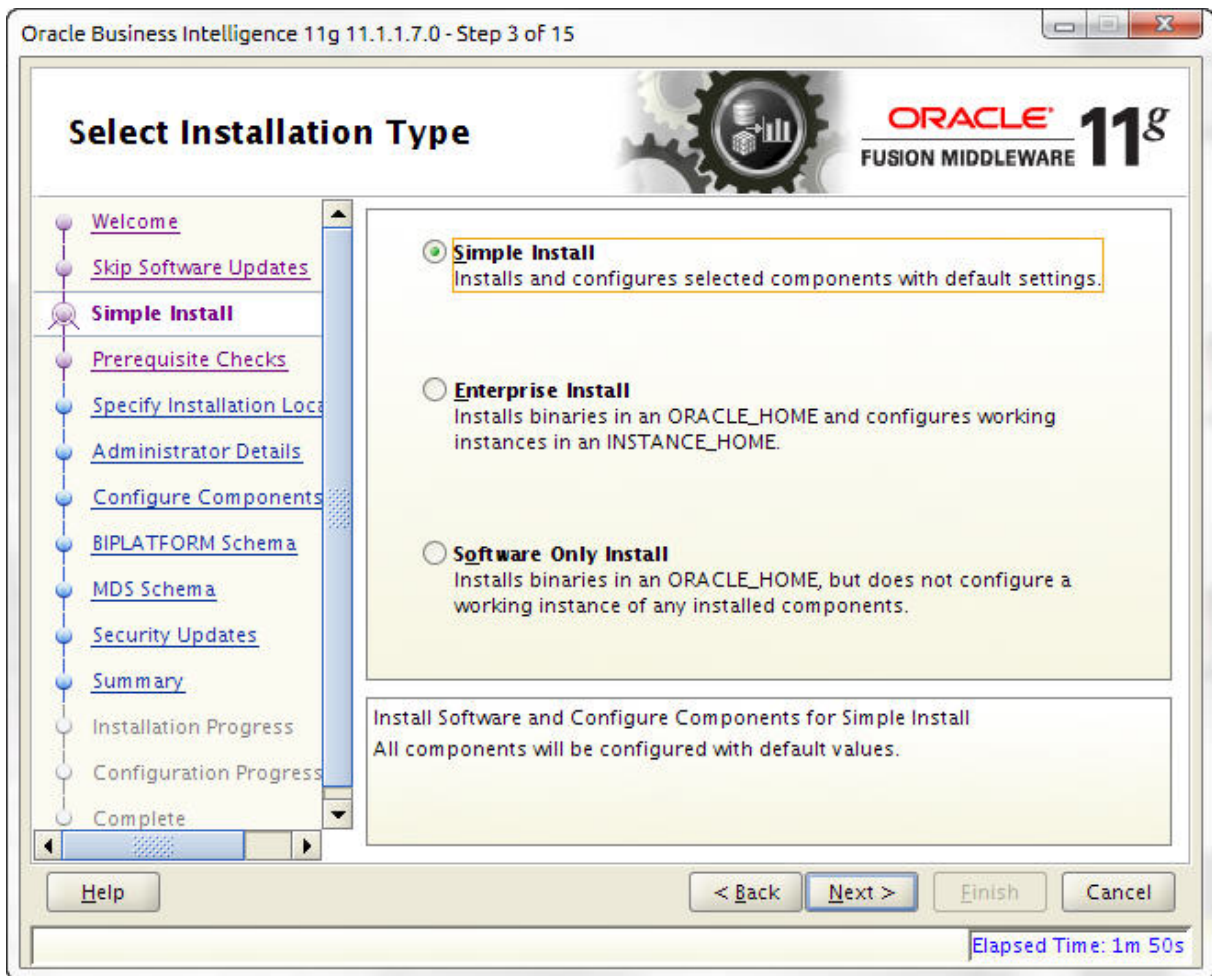
5. If your system has the prerequisites, click **Next**.
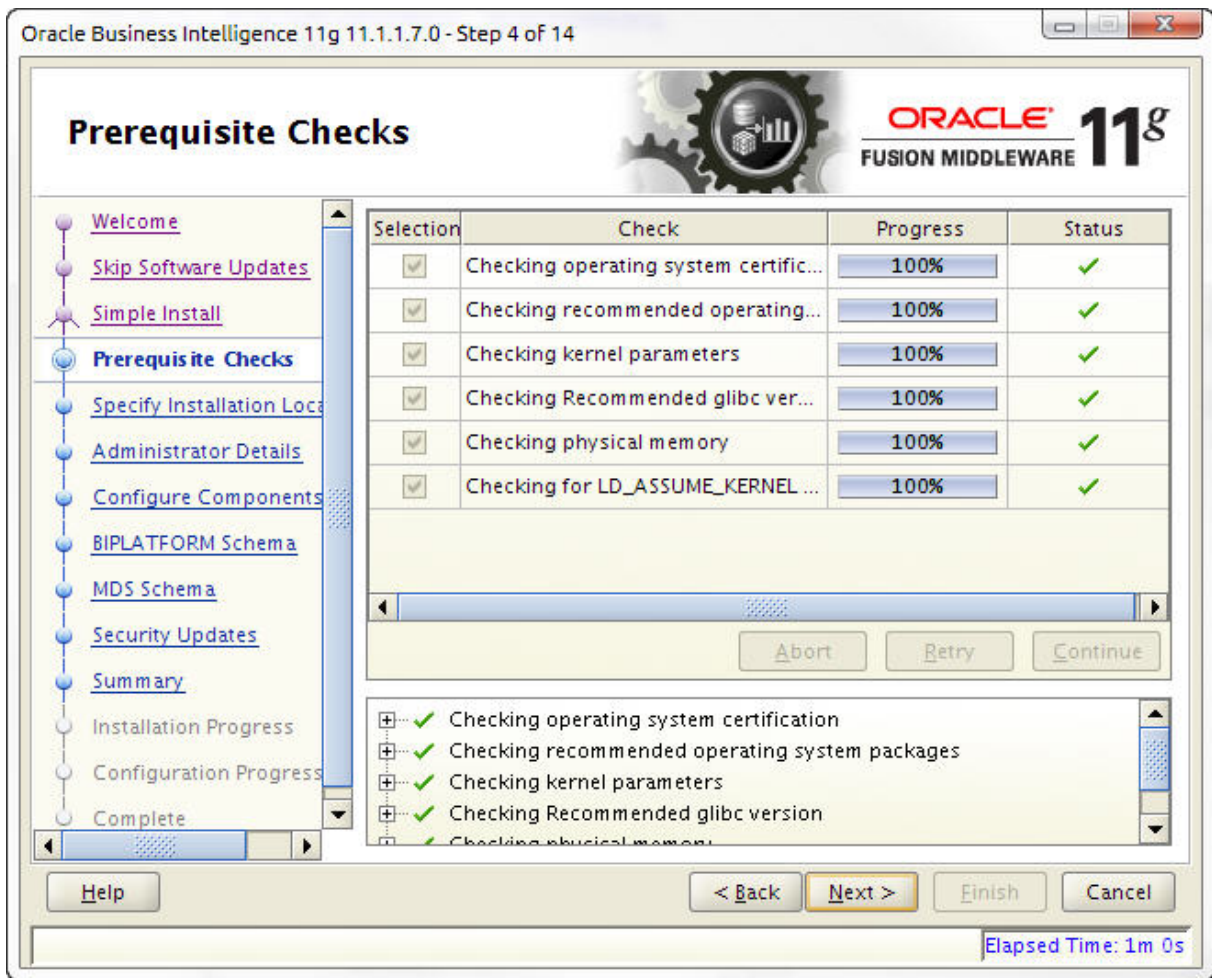
☞ **Note:** If the operating system certification test fails, the test skips the next three checks even though it marks them with an X. This can happen even on systems with the latest glibc version. If necessary, run yum update glibc to update your version of glibc.



6. Browse to the OracleMiddleWare directory you created.

7. Create a password for the WebLogic account and click **Next**.

> **☞ Note:** The user name and password provided is used after installation to register and to sign in to BI Publisher at the URL: <server_name_or_ip>:7001/xmlpserver.

8. Select only Business Intelligence Publisher.

9.  Fill in the BIPLATFORM Schema and MDS Schema screens with the following values.

| Parameter | Value |
|---|---|
| Database Type | Oracle Database |
| Connect String | <server_name>:<port>:<service_name> (e.g. vm:1521:AcmeBIPublisher) |
| BIPLATFORM Schema Username MDS Schema Username | <prefix>_BIPLATFORM <prefix>_MDS |
| Schema Password | Enter the password. |

☞      **Note:** The <prefix> value is set when running the Repository Creation Utility (RCU). The default schema prefix will be set to DEV unless this value was changed in the "Create a new Prefix" text field of RCU's Select Components screen.

10. In the Specify Security Updates screen, enter your email address and click **Next**.

11. On the Summary screen, click **Install**.

☞ **Note:** You may see error pop-up messages appear during the installation because software updates were skipped in a previous step. Click **OK** in these messages to continue the installation.

12. After the Configuration Progress screen is complete, click **Next**.

13. Click **Finish**.

# Create a BI Publisher Cluster

A local cluster consists of two or more identical standalone installations on separate servers. All identifying information, such as the user name, password, and database prefix, must be identical between the two servers.

1. After running the installer, click **Next** on the Welcome screen.

2. On the Install Software Updates screen, select Skip Software Updates and click **Next**.

3. Select Enterprise Install and click **Next**.

**Oracle Business Intelligence 11g 11.1.1.7.0 - Step 3 of 12**

**Select Installation Type**

- Welcome
- Skip Software Updates
- **Enterprise Install**
- Prerequisite Checks
- Scale Out BI System
- Scale Out BI System Details
- Configure Ports
- Security Updates
- Summary
- Installation Progress
- Configuration Progress
- Complete

○ **Simple Install**
Installs and configures selected components with default settings.

◉ **Enterprise Install**
Installs binaries in an ORACLE_HOME and configures working instances in an INSTANCE_HOME.

○ **Software Only Install**
Installs binaries in an ORACLE_HOME, but does not configure a working instance of any installed components.

Choose this option to install and configure selected components (you will choose the components you want to install on the next screen). You will also be able to create a new domain or join an existing domain on an existing WebLogic server.

Help     < Back     Next >     Finish     Cancel

Elapsed Time: 13m 5s

**4.** If your system has the prerequisites, click **Next**.

**5.** If you are creating this system for the first time, select Create New BI System and enter a new user name and password. This creates your administration server. If you have already created this server and are building out a cluster, select Scale Out BI System and enter the host name, port (7001), user name, and password for the administration server. This creates the managed servers.

> **Note:** When building out local clusters, make sure SDM has previously been installed on each machine.

> **Note:** The managed server should mirror the configuration details of the administration server.
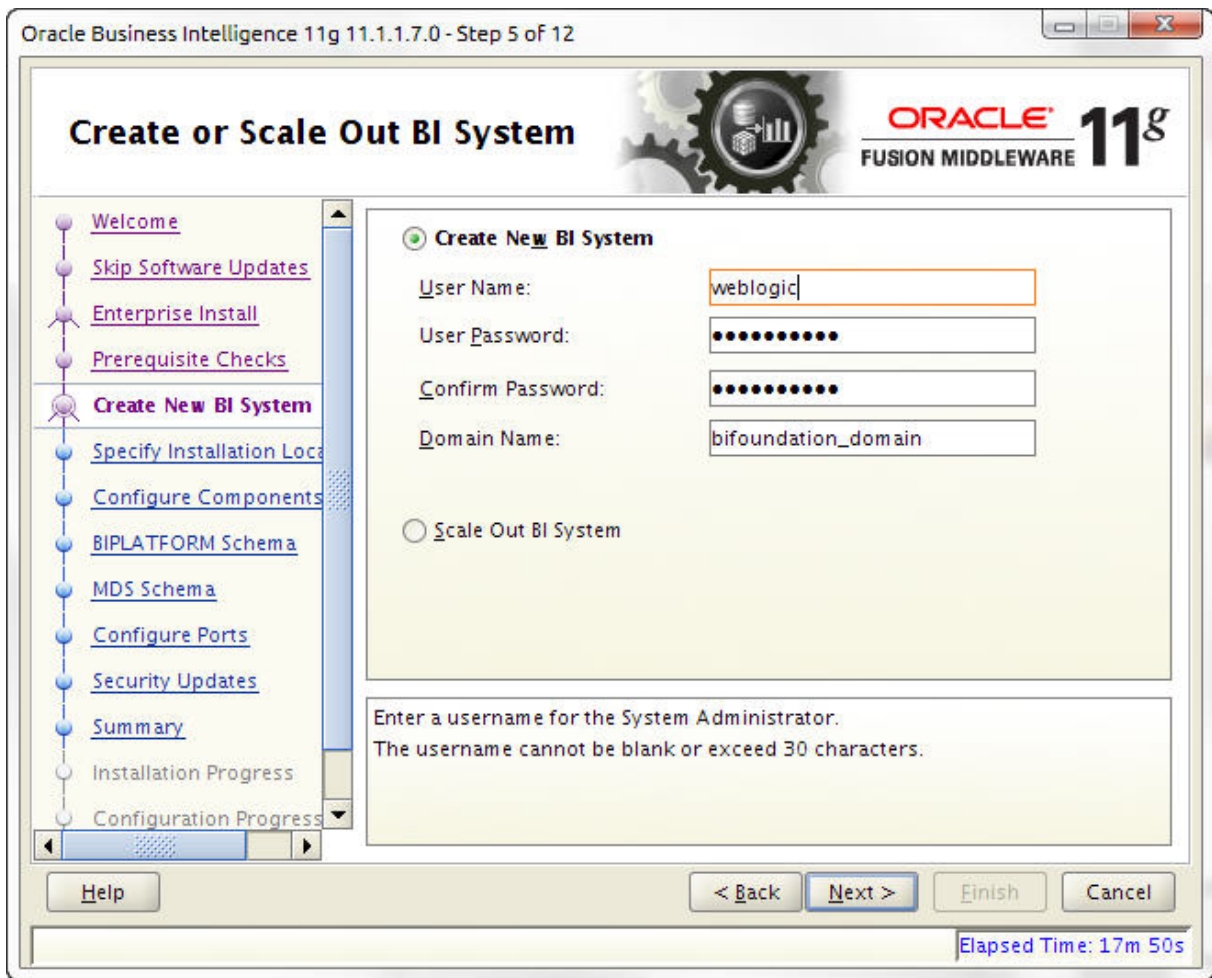
👉 **Note:** The managed servers must point to the administration server.

**6.** Browse to the OracleMiddleWare directory you created.

Oracle® Communications Report Manager
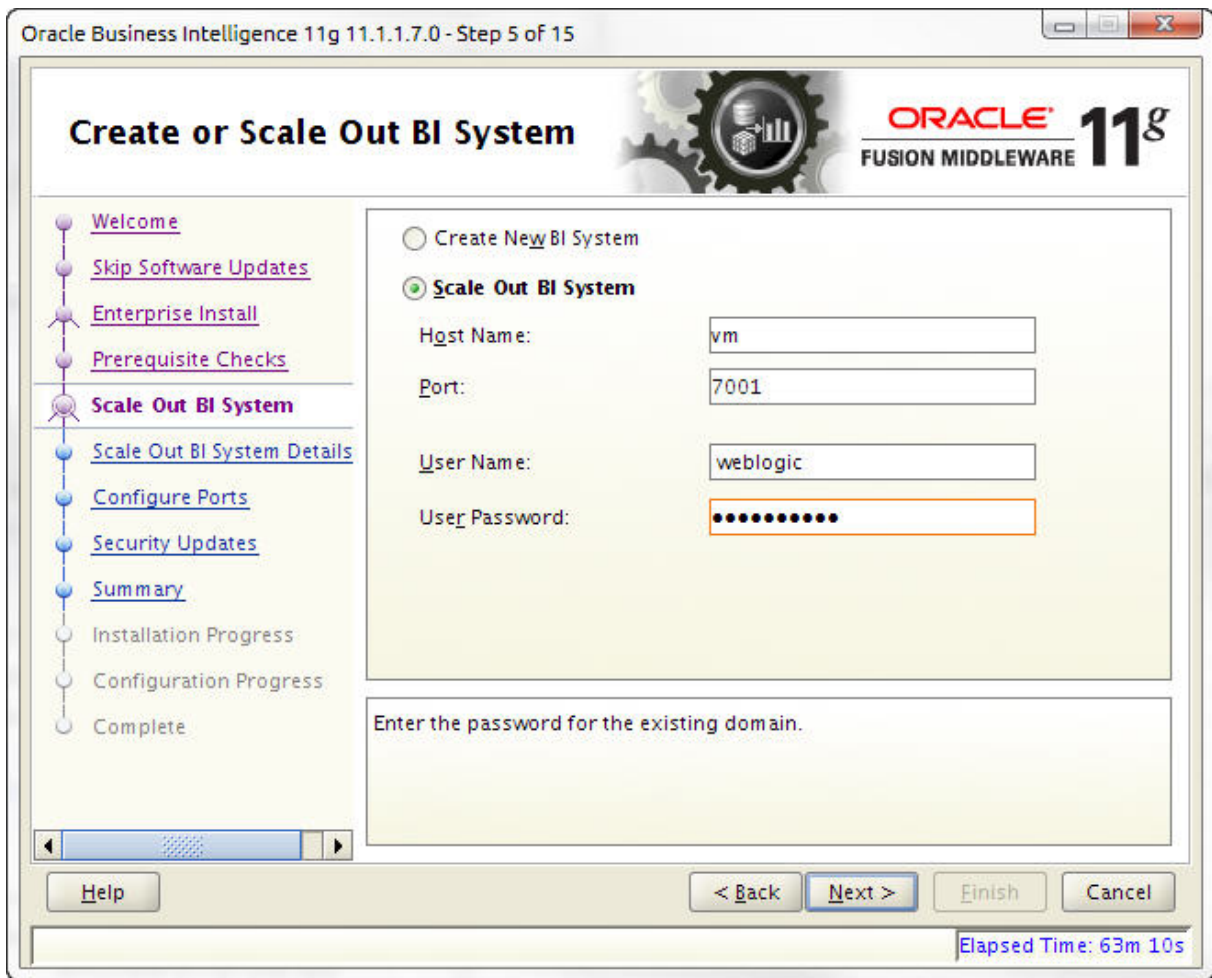
7. Select only Business Intelligence Publisher.

8. Fill in the BIPLATFORM Schema and MDS Schema screens with the following values:

| Parameter | Value |
|---|---|
| **Database Type** drop-down list | Oracle Database |
| **Connect String** field | host:port:instance<br><br>For example: vm:1521:AcmeBIPublisher |
| **BIPLATFORM Schema Username** field | \<prefix>_BIPLATFORM<br><br>\<prefix>_MDS<br><br>The Oracle Communications BI Publisher MDS Schema Username |
| **BIPLATFORM schema password** field | The Oracle Communications BI Publisher platform schema password. |

☞ **Note:** The default schema prefix is DEV.

9.  In the **Configure Ports** screen, select Auto Port Configuration and click **Next**.

10. In the **Specify Security Updates** screen, enter your email address and click **Next**.

11. On the **Summary** screen, click **Install**.

12. After the **Configuration Progress** screen is complete, click **Next**.

13. Click **Finish**.

See the Troubleshooting section for running scheduled reports when the active server is down.

# Access the BI Publisher and WebLogic Admin Console

1.  To access BI Publisher, navigate to http://<hostname>:7001/xmlpserver.

2.  To access the WebLogic admin console, navigate to http://<hostname>:7001/console.

# Configuring User Privileges for Local Configurations

For local standalone and local cluster setups only, add the nncentral user to the oracle group and oinstall group, add the oracle user to the nncentral group and oinstall group, and add both the oracle and nncentral users to the dba group.

The following procedure is necessary only when Oracle BI Publisher and Oracle Session Delivery Manager are installed on the same server.

1.  SSH to your BI Publisher server.

2.  As root, open the /etc/group file.

3.  Add **oracle** to the end of the line that begins with nncentral and oinstall. Add **nncentral** to the end of the line that begins with oracle and oinstall. Add the **oracle** and **nncentral** to the end of the line that begins with dba.

For example:

```
nncentral:x:<###>:oracle
oracle:x:<###>:nncentral
oinstall:x:<###>:oracle,nncentral
dba:x:<###>:oracle,nncentral
```

☞ **Note:** The <###> represents a series of numbers.

4. Save and close the file.

5. Change from the root user to the oracle user.

6. Grant the nncentral user permission to act as a sysdba.

```
cd $ORACLE_HOME/bin
chmod 6751 oracle
```

7. The nncentral user must have read, write, and execute privileges for the BIP home folder and repository location. You may grant the necessary privileges as the oracle user with the following command:

```
chmod -Rf g+rwX /app
```

8. Switch to the nncentral user and use the `shutdownnnc` and `startnnc` scripts to restart Oracle Communications Session Delivery Manager.

☞ **Note:** If Oracle Communications Session Delivery Manager is not currently running use the `startnnc` script only.

The following example assumes Oracle Communications Session Delivery Manager is running:

```
[oracle@vm ~]$ su nncentral
Password:
[nncentral@vm oracle]$ cd ~/AcmePacket/NNCMainB34/bin
[nncentral@vm bin]$ ./shutdownnnc.sh
Shutdown back-end server
Shutting down server.....
[nncentral@vm bin]$ ./startnnc.sh
Starting Back-End server now              23 Starting Apache servers...
Servers and services started successfully. Web client access ready.

[nncentral@vm bin]$ exit
exit
[oracle@vm ~]$
```

# Configure a Data Pump Directory for Local Installations

If your system is set up as a local standalone or local cluster, you need to manually specify the data pump directory. The data pump directory is used in the backup and restore process for the Oracle database.

1. Connect to the Oracle database as the sysdba.

```
cd $ORACLE_HOME/bin
./sqlplus '/ as sysdba'
```

2. Change the directory location of the data pump files to your desired directory.

Below is an example of the command.

```
CREATE OR REPLACE DIRECTORY "DATA_PUMP_DIR" as '/app/oracle/product/11.2.0/
dbhome_1/rdbms/log/';
```

3. Verify the change took place.

```
SELECT owner, directory_name, directory_path FROM dba_directories WHERE
directory_name='DATA_PUMP_DIR';
```

# Configure BI Publisher Security

If you set the Single Sign On option to enable, you must change the security configuration of BI Publisher.

1. Log into BI Publisher.
2. Click on **Administration** in the top right corner.



3. Click on **Security Configuration**.



4. Under Authorization, select **BI Publisher Security** from the Security Model drop-down list.

---

5. Enter the administrator user name and password that you configured earlier for the BI Publisher login in the text field that appears.

   This can be, but does not have to be, the same password you used when setting up BI Publisher. The password provided here is used when registering BI Publisher.
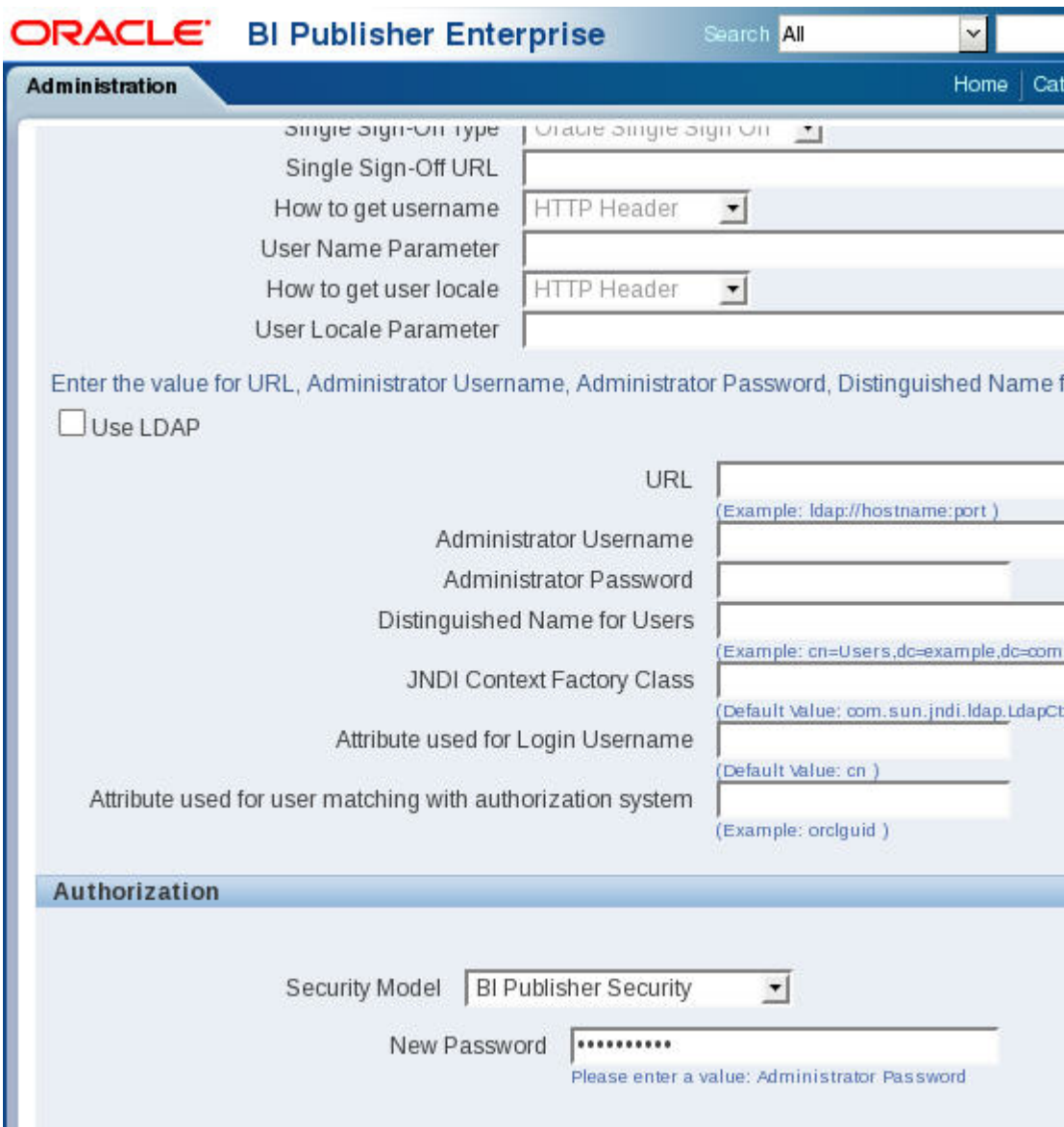


6. Click **Apply** in the top right corner.

7. Restart the WebLogic server.

   ☞  **Note:** See the Troubleshooting section for information about restarting the WebLogic server.

> 👉 **Note:** After restarting the WebLogic server, the WebLogic account is disabled. Administrative actions must be performed with the administrator account.

# Create the Boot Properties File for Local Clusters

The post-installation process involves the creation of a boot.properties file for local cluster installations.

1. Change directories to the BI Publisher domain.

   In the examples in this guide, the BI Publisher domain is `/app/OracleMiddleWare/user_projects/domains/bifoundation_domain/`.

   ```
   cd /app/OracleMiddleWare/user_projects/domains/bifoundation_domain/
   ```

2. If the following path does not exist on your system, create it with the mkdir command. Otherwise, change directories from the BI Publisher domain to `servers/AdminServer/security`.

   ```
   cd servers/AdminServer/security
   ```

3. Create a file called boot.properties.

4. Add the following two lines:

   ```
   username=<username>
   password=<password>
   ```

   Use the user name and password which you created when installing BI Publisher.

**6**

# Create a Report Manager Database Instance

If you are using Oracle Communications Report Manager with Oracle Communications Session Delivery Manager, you must create a Report Manager database instance on the external Oracle database.

When you complete the Report Manager database instance (OCSDMDW) configuration on Oracle Communications Session Delivery Manager, the following items are created on the external Oracle database:

- Oracle database instance for Oracle Communications Report Manager (OCSDMDW).
- Oracle database user (OCSREMDW)
- LISTENER2 instance, which listens on its designated port 1522 (for the Report Manager application) on the Oracle database.

## Create a Report Manager Database Instance on the External Oracle Database

From Oracle Communications Session Delivery Manager application, specify the Oracle home path (ORACLE_HOME) and the credentials of the Oracle database user instance (OCSREMDW) in the setup program.

**Pre-requisites:** You must complete the following tasks:

- Install or upgrade Oracle Communications Session Delivery Manager. See the *Oracle Communications Session Delivery Manager Installation Guide* for more information.
- Install the Oracle database software. See the *Install the Oracle Database Software* chapter in this guide for more information.
- Install the Oracle database for BI Publisher. See the *Create an Oracle Database for BI Publisher* chapter in this guide for more information.
- Run the repository creation utility (RCU). See the *Run the Repository Creation Utility* chapter in this guide for more information.
- Install Oracle BI Publisher. See the *Install Oracle BI Publisher* chapter in this guide for more information.

1. Log in as the nncental user.
2. Navigate to the bin directory.

   For example:

   ```
   cd /opt/AcmePacket/NNC80/bin
   ```

3.  Execute the shutdownnnc.sh script. By default, the shutdownnnc.sh script detects whether the existing installation is a standalone or clustered system and prompts you with the option to shut down the entire cluster if no flag options are provided.

    👉 **Note:** However, You can script an option ahead of time by adding -local for single nodes and -cluster to shutdown an entire cluster.

    ```
    Shutdown back-end server
    Do you wish to shut down the entire cluster (Yes/No)? Yes
    Shutting down cluster.....
    ```

4.  Enter Yes to continue and shut down the cluster.

5.  Switch to the root user.

6.  Run setup.sh.

    ```
    ./setup.sh
    ```

7.  Select option 2, **Custom**. Press Enter to continue.

    ```
    [ ]  1 - Typical
    [X]  2 - Custom
    [ ]  3 - Quit
    ```

8.  Select option 10, **Oracle DB OCSREMDW configuration**. Press Enter to continue.

9.  Enter the password for the Report Manager user (OCSREMDW), and then confirm the password. For example:

    ```
    Password for user OCSREMDW
    Enter password for user OCSREMDW [] <mypassword>
    ```

    👉 **Note:** The password that you configure expires after 180 days. Seven days before the password expires, a password expiry trap warns you through SDM that your password needs to be reset. If you need to reset this user password later, see the *Reset the Password for the Oracle Database User* section in the *Oracle Communications Report Manager User Guide* for more information.

10. Enter the path of the ORACLE_HOME variable. For example:

    ```
    Oracle home path (ORACLE_HOME)
    Enter Oracle home path (ORACLE_HOME) [] /app/oracle/product/11.2.0/dbhome_1
    ```

# Verify the Report Manager Database Instance

You must verify that the Report Manager database instance (OCSDMDW) is created.

1.  From your Linux system, query the Oracle database to verify if the OCSDMDW database is active:

    ```
    ssh -Y oracle @vm
    export ORACLE_SID=ocsdmdw
    cd $ORACLE_HOME/bin
    ```

2.  Enter the path to the OCSDMDW database:

    ```
    ./sqlplus ocsremdw/<OCSDMDW password>@ocsdmdw
    ```

    If a success message appears, it indicates that the OCSDMDW database is active and installed correctly. If a failure message appears, either the database is not installed or not configured. Continue to step three if you get a failure message.

3.  Check the logs directory to discover why a failure happened (if a failure has happened).

    ```
    /home/nncentral/AcmePacket/NNC75/logs/SetupApplication.log
    ```

4.  Look for any error messages in the setup application log. We suggest filtering your search with the words LISTENER2 and OCSDMDW. If you are unable to determine what is wrong, contact your Oracle Communications support representative.

# Verify LISTENER2 is Created on the Oracle Database

You must verify that LISTENER2 on port 1522 is created on the Oracle database.

1. From your Linux system, query the NNC report LISTENER2 status to see if it is active:

   ```
   Get$ORACLE_HOME/bin
   ./lsnrctl status LISTENER2
   ```

2. If there is a failure message, manually try activating LISTENER2:

   ```
   ./snrctl start LISTENER2
   ```

3. Check the status of LISTENER2 again:

   ```
   ./lsnrctl status LISTENER2
   ```

   If a success message appears, it indicates that LISTENER2 is active and the Oracle database is installed correctly. If a failure message appears again, either the database is not installed or the listener is not configured. Continue to step four if you get a failure message.

4. Check the logs directory to discover why a failure happened (if a failure has happened).

   ```
   /home/nncentral/AcmePacket/NNC75/logs/SetupApplication.log
   ```

5. Look for any error messages in the setup application log. We suggest filtering your search with the words LISTENER2 and OCSDMDW. If you are unable to determine what is wrong, contact your Oracle Communications support representative.

**7**

# Register Oracle BI Publisher

## Register BI Publisher in HTTPS Mode

Oracle recommends you register BI Publisher in HTTPS mode to encrypt any communication between Oracle Communications Session Delivery Manager and BI Publisher.
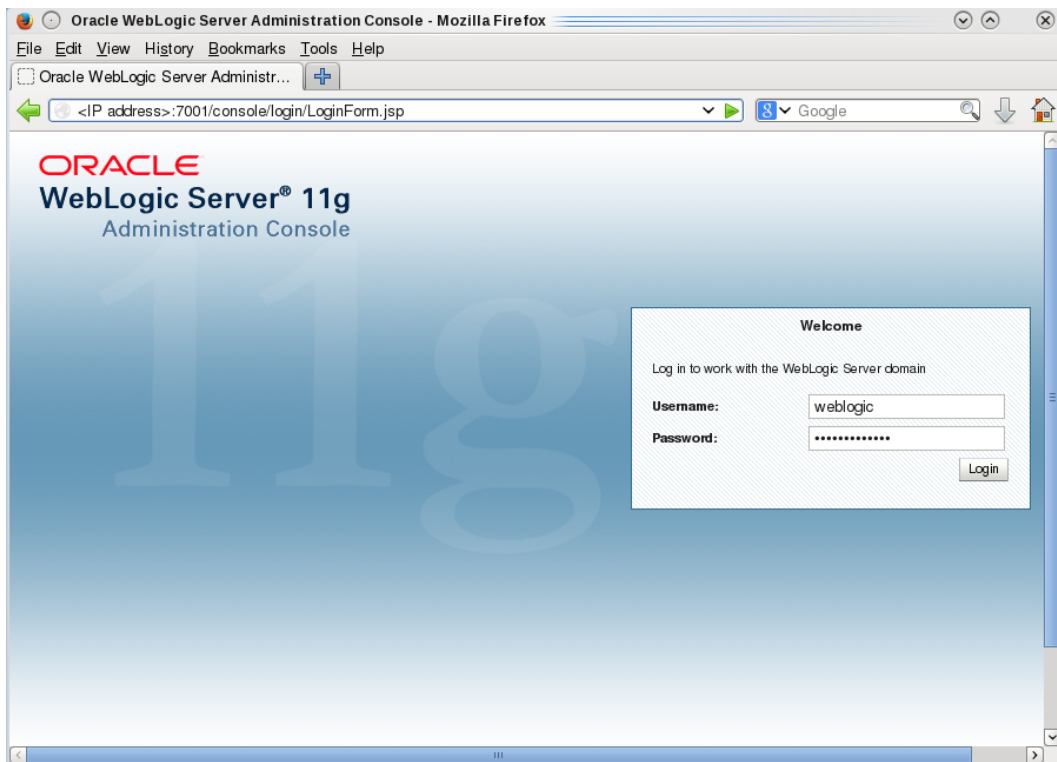
### Enable HTTPS on the WebLogic Server

To encrypt the communication between BIP and SDM, first enable HTTPS on the WebLogic server.
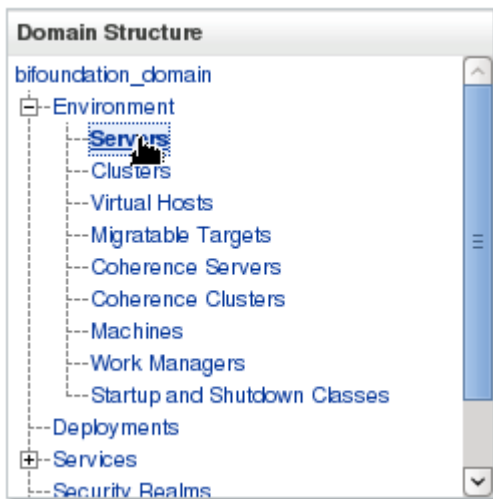
1. Login to the administrative console of your WebLogic server. Use the username and password you created when installing BI Publisher.

   In the default installation, the administrative console can be reached at `http://<IP address>:7001/console`.

**2.** Under Domain Structure in the left panel, click **Environment** > **Servers**.



**3.** In the main tab under Summary of Servers, select **AdminServer(admin)**.

4.  In the Change Center, click **Lock & Edit**.



5.  In the **Configurations** > **General** tab, click **SSL Listen Port Enabled** and set the port number.

6. Click **Save**.

7. In the Change Center, click **Activate Changes**.

In a cluster setup, repeat this task for each BIP server.

## Save and Transfer the BI Publisher Certificate to Session Delivery Manager

1. Open your web browser and connect to BI Publisher. For example:

    👉 **Note:** You must use secure HTTPS.

    ```
    https://<myhostname>:7002/xmlpserver
    ```

2. Confirm that you understand the risks.

3. View and add the server certificate.

4. Select the server certificate you that you added and click **Export**.

5. Save the file with the .cer extension in one of the following formats:

    • X.509 PEM (Linux)
    • Base-64 (Windows)

6. Use the secure file transport protocol (SFTP) to send the saved BI Publisher certificate to a directory on your Oracle Communications Session Delivery Manager server.

## Add the BI Publisher Certificate to the Session Delivery Manager Keystore

After transferring BI Publisher Certificate to your Oracle Communications Session Delivery manager server, you must add your BI Publisher certificate to the Oracle Communications Session Delivery Manager keystore.

**Pre-requisite:**

If your Oracle Communications Session Delivery manager server is running, run the `shutdownnnc.sh` script in `<install dir>/AcmePacket/<release>/bin` before continuing with this task.

1. From the `<install dir>/AcmePacket/<release>/bin` directory, run `setup.sh` as root.
2. Select option **2 - Custom** and press Enter to continue.

```
Please select an option [1] 2


[ ]  1 - Typical   : Runs through most common set up options.
(Recommended)   [Default]
[X]  2 - Custom    : Allows manual customization.          (Advanced
users)
[ ]  3 - Quit      : Finish and quit setup.


Do you want to continue Yes/No?
```

3. Select the **SBI TLS configuration** option and press Enter to continue.
4. Select option **1 - Keystore Selection** and press Enter to continue.

```
Please select an option [1]


[X]  1 - Keystore Selection - Choose a Keystore to explore   [Default]


Do you want to continue Yes/No?
```

5. Select option **3 - Reporting Manager Keystore** and press Enter to continue.

```
Please select an option [4] 3


[ ]  1 - ACP TLS Keystore
[ ]  2 - Elasticity Manager Keystore
[X]  3 - Reporting Manager Keystore
[ ]  4 - Finished   [Default]


Do you want to continue Yes/No?
```

6. Select option **2 - Trusted Certificate** and press Enter to continue.

```
Please select an option [3] 2


[ ]  1 - Entity Certificate
[X]  2 - Trusted Certificate
[ ]  3 - Finished   [Default]


Do you want to continue Yes/No?
```

7. Select the default option **1 - Import Trusted Certificate** and press Enter to continue.

```
Please select an option [1]
```

```
[X]  1 - Import Trusted Certificate     [Default]
[ ]  2 - Quit and back to Main Menu


Do you want to continue Yes/No?
```

8. Enter an alias for this certificate.

```
Create unique alias name for the certificate to be imported:  [] bip-cert
```

9. Enter the absolute path of the certificate.

```
Enter full path of the certificate to be imported: [ ] /opt/AcmePacket/
Transport/tls/biptest.acmepacket.cer


Operation successful!

Certificate was added to keystore
[Storing /opt/AcmePacket/Transport/tls/bipKeyAndCertStore]
```

10. To exit the script, follow the path **Quit and back to Main Menu** > **Finished** > **Finished** > **Quit setup**.

In a cluster setup, repeat this task for each BIP server.

## Listing Contents of the SDM Keystore

After adding a certificate to SDM's keystore, verify the certificate is in the keystore.

1. At the command line prompt, `cd` to the `<install dir>/AcmePacket/<version>/jre/bin` directory.

```
user@host:~$ cd /opt/AcmePacket/NNCMainN151/jre/bin/
user@host:/opt/AcmePacket/NNCMainN151/jre/bin$
```

2. Run the `keytool` command with the list and keystore options.

The keystore option takes a filepath to a keystore object as its argument.

```
keytool -list -keystore /opt/AcmePacket/Transport/tls/bipKeyAndCertStore
```

👉 **Note:** Because we are only verifying the certificate is in the keystore, and not editing the keystore, this command does not require a password. You may leave the password field blank and ignore the error message.

3. Verify the keystore contains the certificate

```
Keystore type: JKS
Keystore provider: SUN

Your keystore contains 1 entry

bip-cert, Jan 30, 2015, trustedCertEntry,
Certificate fingerprint (MD5): 1A:24:2B:06:84:AA:D4:FA:FE:B7:31:79:FF:
50:33:51
```

You are now ready to register BIP in HTTPS mode.

# Register BI Publisher in Session Delivery Manager

After installation, Oracle BI Publisher must be registered from within Oracle Communications Session Delivery Manager to allow communication between Oracle Communications

1. Start the Oracle Communications Session Delivery Manager server as the nncentral user:

```
cd /opt/AcmePacket/NNC75/bin/
./startnnc.sh
```

2. Navigate to your Oracle Communications Session Delivery Manager server IP address on port 8080.

3. Click **Report Manager** > **Register BI Publisher**.

4. In the **Registered BI Publisher** pane click **Configure Registration**.

5. In the Register BI Publisher Step 1 of 2 pane, complete the following installation details fields to register a BI Publisher server:

| Name | Description |
|---|---|
| **Installation Location** radio buttons | Select the following location type: <br><br>• **local**—The Report Manager and BI Publisher software is installed on the same server.<br>• **remote**—The Report Manager and BI Publisher software is installed on separate servers.<br><br>☞ Note: If you are registering BI Publisher with SSL on a local server, a domain name server (DNS) is required. |
| **Installation Type** radio buttons | Select the following installation type: <br><br>• **standalone**—A single or remote installation of Oracle Communications Session Delivery Manager, Oracle BI Publisher, and their respective databases that work together to generate reports.<br>• **cluster**—A cluster of servers (local or remote) that generate reports and provide high availability in case one system experiences a sudden failure. On each server that is part of the same cluster, Oracle BI Publisher and Oracle Communications Session Delivery Manager are installed with their respective databases. |
| **Support Single Sign On** check box | Check the **enable** check box if you want to enable single sign-on (SSO). SSO is a session and user authentication process that permits a user to enter one name and password in order to access multiple applications. When SSO is enabled, Oracle Communications Session Delivery Manager manages the users and roles for BI Publisher. When users click on **Operational Reports**, they are logged in automatically. If disabled, customers must manage users and roles through BI Publisher manually and the user must log in twice when accessing reports.<br><br>☞ Note: SSO is enabled by default (**true**) to ensure Oracle BI Publisher security. |
| **Weblogic Admin User Name** field | Enter the Weblogic administrator user name that you created when you installed Oracle BI Publisher. |
| **Weblogic Admin Password** field | Enter the Weblogic administrator password that you created when you installed Oracle BI Publisher. |

| Name | Description |
|------|-------------|
| **Admin User Name** field | Enter the Oracle BI Publisher administrator user name that you created when you installed Oracle BI Publisher. |
| **Admin Password** field | Enter the Oracle BI Publisher administrator password that you created when you installed Oracle BI Publisher. |

6. Click **Next**.

   The Oracle Communications Session Delivery Manager and Oracle BI Publisher systems connect.

   The available configuration parameters for Step 2 of 2 depend on your selections in Step 1 of 2.

# Register a Local Standalone Installation of BI Publisher for Report Manager

If you entered local standalone in the previous section, use this additional task to register a local standalone installation of Oracle BI Publisher for Report Manager:

1. In the Register BI Publisher Step 2 of 2 pane, complete the following installation details fields to register a local standalone installation of Oracle BI Publisher for Report Manager:

| Name | Description |
|------|-------------|
| **Server Protocol** drop-down list | Select **https** for the secure hypertext transfer protocol. |
| **Server Location** field | The host name.<br><br>☞ **Note:** This value should be the same host name used when creating the certificate (For example, server1.oracle.com). |
| **Server Port** field | The Oracle BI Publisher server port number. For example, 7002. |
| **BI Publisher Home Folder** field | The BI Publisher Home Folder. For the installation previously documented, the path is `/app/OracleMiddleWare/user_projects/domains/bifoundation_domain`. The path for your installation may differ if you selected a different location for the OracleMiddleWare directory. |
| **Repository Location** field | The repository location that can be found by logging into BI Publisher and navigating to **Administration** > **Server Configuration** > **Catalog** > **Path**. For the installation previously documented, the repository location is `/app/OracleMiddleWare/user_projects/domains/bifoundation_domain/config/bipublisher/repository`.<br><br>☞ **Note:** The 'nncentral' user must have write privileges for the BIP home folder and repository location. |

| Name | Description |
|------|-------------|
| **BI Publisher Schema Prefix** field | The prefix schema for BI Publisher. The default prefix is DEV. |
| **Oracle Database User Name** field | The nncentral user name for your Oracle database. See the *Add an Oracle Database User that Connects to BI Publisher for Backup and Restore Functions* section for more information. |
| **Oracle Database User Password** | The password for your Oracle database. |
| **Oracle Database Service Name** | The Oracle database service name. Unless you previously selected a different name, enter **AcmeBIPublisher**. |
| **Oracle Database Home Path** | Enter the Oracle database home path. For the installation previously documented, the Oracle database home path is `/app/oracle/product/11.2.0/dbhome_1`. |
| **Oracle Database SID** | Enter the Oracle database SID. The SID is the first 12 characters of the global database name. If AcmeBIPublisher is the global database name, enter **AcmeBIPublis**. |

2. Click **Apply**.

## Registering a Remote Standalone BI Publisher

If you entered remote standalone in the previous step:

1. Next to Server Protocol, select https.
2. In the Server Location field, enter the host name of the server on which BI Publisher is installed.
3. Enter 7002 in the Server Port field.
4. Enter your FTP user name and password.
5. Enter the FTP path for the BI Publisher home folder.

   For the installation previously documented, the path is `/app/OracleMiddleWare/user_projects/domains/bifoundation_domain`. The path for your installation may differ if you selected a different location for the OracleMiddleWare directory.
6. Enter the FTP path for the repository location.

This can be found by navigating to **Administration** > **Server Configuration** > **Configuration Folder settings** in BI Publisher.



## Register a Local BI Publisher Cluster

If you entered a local cluster in step 1:

1. Select the local cluster node and click **Edit**.

2. In the BI Publisher Cluster Member window, enter the protocol, IP address, port, FTP user name, FTP password, BI Publisher home folder, repository location, and Oracle database information for each node in the cluster.

   ☞ **Note:** If setting up a local cluster, the BI Publisher server information is pre-populated.

3. Click **Apply** to save and close the BI Publisher Cluster Member window.

4. Click **Apply**.

## Register a Remote BI Publisher Cluster

If you entered remote cluster in step 1:

1. Select the remote cluster node and click **Edit**.

2. In the BI Publisher Cluster Member window, enter the protocol, IP address, port, FTP user name, FTP password, the BI Publisher home folder, and the repository location for each node in the cluster.

3. Click **Apply** to save and close the BI Publisher Cluster Member window.

4. Click **Apply**.

# Remote Cluster Configuration

To configure BI Publisher in a remote cluster, run the Node Manager and then start the Managed Servers.

Repeat steps 1 through 3 for each node in the cluster before moving on to step 4.

1. SSH to your BI Publisher server.

2. Navigate to the `/app/OracleMiddleWare/wlserver_10.3/server/bin` directory.

```
cd /app/OracleMiddleWare/wlserver_10.3/server/bin
```
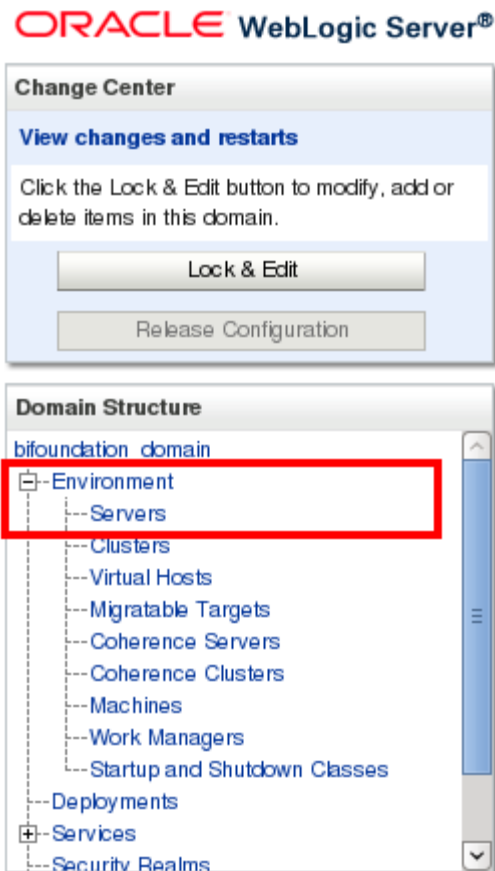
3. Run the startNodeManager script with an appended ampersand.

```
./startNodeManager.sh &
```

⚠️ **Warning:** Repeat steps 1 through 3 for each node in the cluster before continuing.

4. Navigate your browser to BI Publisher's Admin Console at http://<IP address>:7001/console.

5. In the left column, click **Environment** > **Servers**.



6. On the Control tab, start the managed WebLogic server by selecting the nodes and clicking **Start**.

## Restart the WebLogic Server to Run Reports

After registering with SDM, enabling SSL or changing the BIP security model, the WebLogic server must be restarted for reports to run properly.

**Pre-requisite:**You must have an SSH connection to your BI Publisher server. When you are prompted for a password, use the password you set up when installing BI Publisher.

☞ **Note:** If you set up a standalone, restart the WebLogic server. If you set up a cluster, restart all WebLogic servers in the cluster.

1. Stop the WebLogic server by running the stopWeblogic.sh script.

```
cd /app/OracleMiddleWare/user_projects/domains/bifoundation_domain/bin/
./stopWebLogic.sh
```

The default user name is weblogic.

2. To start the WebLogic server not in background mode, run the startWeblogic.sh script:

```
cd /app/OracleMiddleWare/user_projects/domains/bifoundation_domain/bin/
./startWebLogic.sh
```

⚠ **Warning:** If you start the Administration Server from a Windows or UNIX command-line window, then do not close the window later on, or the server terminates (unless the server is started as a background process from the command line).

⚠ **Warning:** If your BI Publisher server went down, make sure you start the Oracle database and restart the listener before restarting the WebLogic server.

☞ **Note:** For more information, see this article about *Starting and Stopping Oracle Business Intelligence Components*.

3. To start the WebLogic server in background mode, run the following command:

```
nohup ./startWebLogic.sh -Dweblogic.management.username=weblogic -
Dweblogic.management.password=<password>
```

> **Note:** Press Enter to the shell.

4. If you want to configure the Oracle user .bash_profile, enter the following parameters:

```
export WLS_USER=weblogic
export WLS_PW=<my-secure_password>
```

5. Login again as the Oracle user and start BI Publisher.

```
nohup ./startWeblogic.sh &
```

# 8

## Troubleshoot Installation Problems

## X11 Forwarding

If the xorg-x11-xauth program is not installed, you will see this error when trying to use X11 forwarding over SSH:

```
X11 forwarding request failed on channel 0
```

If you see this error, install the package xorg-x11-xauth.

```
yum install xorg-x11-xauth
```

## xdpyinfo Errors

The following error messages indicate that xdpyinfo is not installed:

- Checking monitor: must be configured to display at least 256 colors
- Could not execute auto check for display colors using command /usr/bin/xdpyinfo. Check if the DISPLAY variable is set. Failed.

The xdpyinfo program must be installed.

1. Type the following command.

   ```
   yum install xorg-x11-utils-<version-number>
   ```

2. If the program is already installed, check whether the oracle user has execute privileges.

   ```
   [oracle@ouzo ~]$ cd /usr/bin
   [oracle@ouzo bin]$ ls -al | grep xdpyinfo
   -rwxr-xr-x   1 root root      38112 Feb 23  2015 xdpyinfo
   ```

   ☞  **Note:** In this example, the oracle user has execute privileges.

3. If the oracle user does not have executable privileges, log in as root and execute this command:

   ```
   xhost +SI:localuser:oracle
   ```

4. Log in as the oracle user and run the installer.

   ```
   ./runInstaller
   ```

# Browser Path error

After the installation, the Oracle installer attempts to reach the BIP log in screen by first searching for your default browser. If the default browser is not set on your operating system, the following image will be displayed.
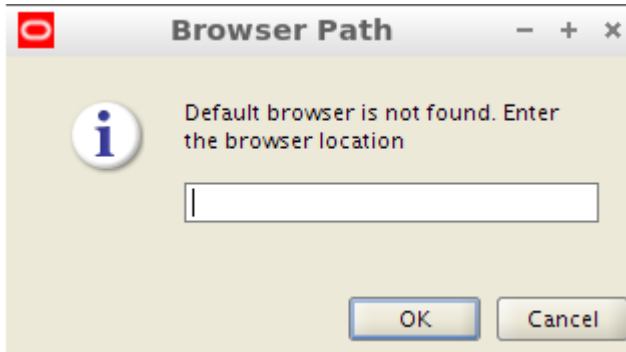


If this occurs, click **Cancel**, open a browser, and navigate to <hostname>:7001/xmlpserver.

# Data Pump Directory

Follow these steps if the expdp command in the backup script fails.

☞    **Note:** You must shut down the SDM server before you complete the steps in this section.

1. Connect to your Oracle database as sysdba.

   ```
   cd $ORACLE_HOME/bin
   ./sqlplus / as sysdba
   ```

2. Change the streams pool size to generate data pump files.

   ```
   ALTER SYSTEM SET streams_pool_size=128M;
   ```

3. Shutdown the Oracle database.

   ```
   SHUTDOWN IMMEDIATE;
   ```

4. Restart the Oracle database.

   ```
   STARTUP;
   ```

5. Verify the change took place with the following command:

   ```
   SHOW PARAMETER streams_pool_size;
   ```
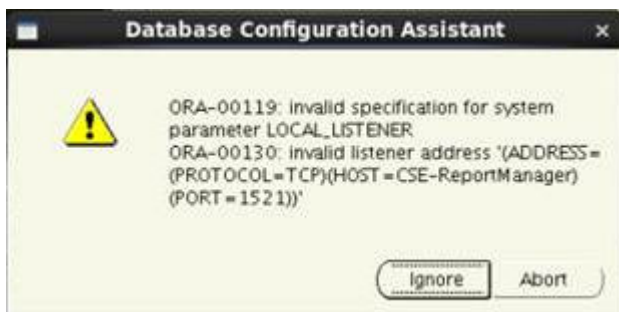
# Oracle Database Installer Errors

If you see either of these two errors, make sure your `/etc/hosts` file contains a valid hostname besides "localhost."

- Oracle Net Configuration Assistant failed.

- Invalid specification for system parameter LOCAL_LISTENER ORA-00130.



## FTP Errors

Connection errors may occur when registering BI Publisher.

1. If you get a "Unknown service vsftpd" error message, install the FTP server on each BI Publisher node.

   ```
   yum install vsftpd
   ```

2. If you get an "Unable to connect to hosts via ftp protocol" error message, make sure the FTP server has been started on each BI Publisher node.

   ```
   service vsftpd start
   ```

## Migrate JMS Service on BIP Cluster

In a BIP cluster, scheduled reports will fail if the active server is down. If the server running the JMS service fails, migrate the JMS service to restore BIP scheduling.

The following examples assume BI Publisher has been installed as a cluster using the Enterprise Install option on the first node and the Scale Out option on subsequent nodes.

⚠ **Warning:** The JMS must not be running during this migration.

Log into the WebLogic Server Administration Console at the URL http://<host>:7001/console/.
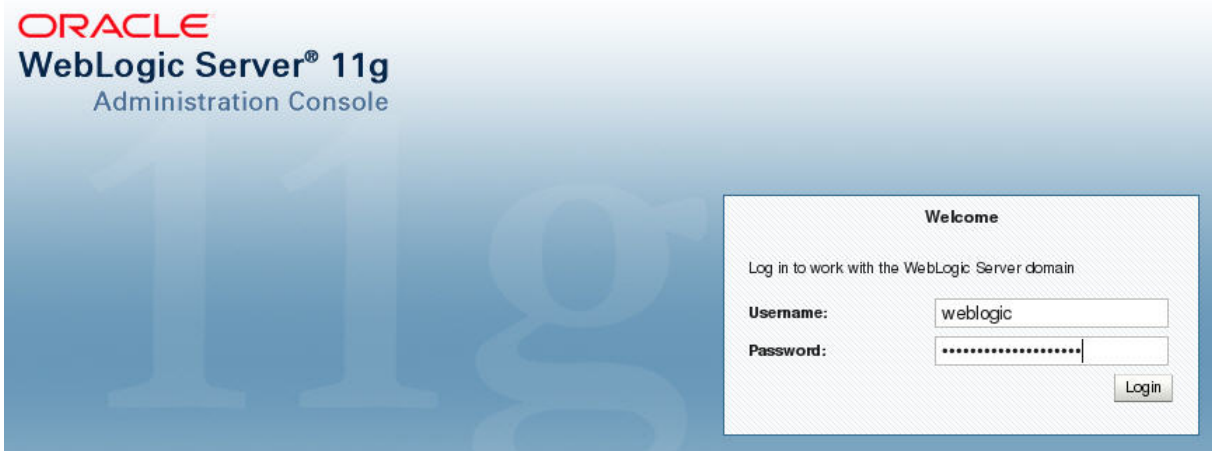
In this basic BIP Cluster example, we have two host machines and by default one machine has both an AdminServer and a Managed Server called bi_server1, and another machine has a scaled out Managed Server called bi_server2.



For this example, assume the JMS server is hosted on the Managed Server bi_server1, which is running on the same machine as the AdminServer.

## Configure a Migratable Target

When installing a BIP cluster, the system automatically generates migratable targets of "<servername> (migratable)" for each running server in the cluster.

1. If you have not already done so, in the Change Center of the Administration Console, click **Lock & Edit**.
2. In the Domain Structure tree, click **Environment** > **Migratable Targets**.
3. Click on the corresponding Migratable Target (e.g. bi_server1 (migratable)).

4. Select the Migration tab.

5. Under Constrained Candidate Servers, select the servers you want to use as a JMS Server backup and move them to the Chosen list. Move the Candidate Servers from the Available box to the Chosen box by checking the boxes and clicking on the right arrow.



6. Click on Save.

7. To activate these changes, in the Change Center of the Administration Console, click **Activate Changes**.

> **Note:** If a message says that some items must be restarted, then please restart the required Servers.

## Create New Persistent Stores

JMS-related services require you to configure a custom persistent store that is also targeted to the same migratable targets as the JMS services. For our migratable solution, we will create a file-based custom store and point the JMS Server to the same Migratable Target as the custom store.

1. Log in to the Administration Console.

2. In the Domain Structure tree, expand Services, and then select **Persistent Stores**.

3. Under Change Center, click on **Lock & Edit**.

4. In the Summary of Persistent Stores table click on **New** > **Create FileStore**.

5. Name the new file store and for the Target drop-down select bi_server1 (migratable).

6. The Directory field must be a pathname that is accessible from every node that was declared a Candidate Server when modifying the bi_server1 (migratable) target. Whether you decide to use NFS, a storage area network (SAN), or a dual-ported SCSI disk, make sure this pathname set for the Directory exists and can be accessed from every Candidate Server node.

7. Click **Activate Changes** under the Change Center.

## Migrate JMS Services

The following steps are for the actual migration of the JMS Services running on the BIP Cluster. Target the JMS Services to the same Migratable Target as the custom persistent store created earlier.

⚠️ **Warning:** In order for this migration step to work, the JMS Services that are being migrated cannot be running. This example assumes that the JMS Services hosted on bi_server1 are not running because this Managed Server is down, which causes the BIP Scheduler to start failing.

1. In the Administration Console, under the Domain Structure tree, click **Services** > **Messaging** > **JMS Servers**.

2. Click on the default BipJmsServer if no other JMS Servers were created.



3. Click on **Lock & Edit**.

4. Under the Persistent Store drop-down, select the new custom persistent that was created on the previous step.

5. Click on **Save**.

👉 **Note:** You will see some error message about JMS Server or SAF agent: "BipJmsServer is not targeted to the same target as its persistent store." This can be ignored because we still need to change the Target for the JMS Server.

6. Click on the **Targets** tab and under the Target drop-down select bi_server1 (migratable).

7. Click on **Save**.

8. Click on **Activate Changes**.

> **Note:** If there are other JMS Services besides the JMS Server that need to be migrated, such as SAF Agents and Path Services, refer to the Oracle documentation for their migration process.

## Manually Migrate the JMS Server

The JMS Server needs to be manually migrated using the Administration Console.

1. If you have not already done so, in the Change Center of the Administration Console, click **Lock & Edit**.

2. In the Domain Structure tree, click **Environment** > **Migratable Targets**.

3. Click on the Control tab within the Summary of Migratable Targets page.

4. Use the check boxes to select the Migratable Target to migrate.

5. Click **Migrate**.

6. Use the New hosting server drop-down to select a new Managed Server that is healthy (in this example, bi_server2).

7. Click **OK**.

8. Click **Activate Changes**.

# Report Manager Administrator Operations

## Shutdown Report Manager

1. Log in as the nncentral user.

2. Change the directory to the bin directory.

   For example:

   ```
   cd /home/nncentral/AcmePacket/NNC<version>/bin
   ```

3. Execute the **shutdownnnc.sh** script. By default, the shutdownnnc.sh script detects whether the existing installation is a standalone or clustered system and prompts you with the option to shutdown the entire cluster if no flag options are provided.

   > **Note:** However, you can script an option ahead of time by adding -local for single nodes and -cluster to shutdown an entire cluster.

   ```
   ./shutdownnnc.sh
   Shutdown back-end server
   Do you wish to shut down the entire cluster (Yes/No)? Yes
   ```

4. On the SDM server, login as the **Oracle** user.

5. Change to the WebLogic server directory:

   ```
   [oracle@vm ~]$ cd app/OracleMiddleWare/user_projects/domains/
   bifoundation_domain/bin/
   ```

6. Stop the WebLogic server by running the stopWebLogic.sh script.

   ```
    [oracle@vm bin]$ ./stopWebLogic.sh
   ```

7. Stop the BI Publisher database instance listener.

   ```
   ./lsnrctl stop
   ```

8. Stop the OCSDMDW database instance listener (LISTENER2):

   ```
   ./lsnrctl stop LISTENER2
   ```

9. If undefined, set the ORACLE_HOME variable in the .bash_profile of both the oracle user and the nncentral user.

   ```
   export ORACLE_HOME=/app/oracle/product/11.2.0/dbhome_1
   ```

10. Specify the ORACLE_SID variable for the AcmeBIPublisher database.

    ```
    export ORACLE_SID=AcmeBIPublis
    ```

11. Execute the ORACLE_HOME/bin/sqlplus script.

```
[oracle@vm bin]$ ./sqlplus '/ as sysdba'
```

12. Use the following option to shutdown the Oracle database instance and exit:

```
SQL> shutdown immediate;
SQL> exit
```

13. Specify the ORACLE_SID variable for the Report Manager database instance (OCSDMDW).

```
export ORACLE_SID=ocsdmdw
```

14. Execute the ORACLE_HOME/bin/sqlplus script.

```
[oracle@vm bin]$ ./sqlplus '/ as sysdba'
```

15. Use the following option to shutdown the Oracle database instance and exit:

```
SQL> shutdown immediate;
SQL> exit
```

# Start Report Manager

1. On the SDM server, login as the **Oracle** user.
2. If undefined, set the ORACLE_HOME variable in the .bash_profile of both the oracle user and the nncentral user.

```
export ORACLE_HOME=/app/oracle/product/11.2.0/dbhome_1
```

3. Specify the ORACLE_SID variable for the AcmeBIPublisher database.

```
export ORACLE_SID=AcmeBIPublis
```

4. Execute the ORACLE_HOME/bin/sqlplus script.

```
[oracle@vm bin]$ ./sqlplus '/ as sysdba'
```

5. Use the following option to start the Oracle database instance and exit:

```
SQL> startup
SQL> exit
```

6. Specify the ORACLE_SID variable for the Report Manager database instance (OCSDMDW).

```
export ORACLE_SID=ocsdmdw
```

7. Execute the ORACLE_HOME/bin/sqlplus script.

```
[oracle@vm bin]$ ./sqlplus '/ as sysdba'
```

8. Use the following option to start the Oracle database instance and exit:

```
SQL> startup
SQL> exit
```

9. Start the BI Publisher database instance listener.

```
./lsnrctl start
```

10. Start the OCSDMDW database instance listener (LISTENER2).

```
./lsnrctl start LISTENER2
```

11. Change to the WebLogic server directory:

```
[oracle@vm ~]$ cd app/OracleMiddleWare/user_projects/domains/
bifoundation_domain/bin/
```

12. Enter the following parameters to configure the Oracle user .bash_profile:

```
export WLS_USER=weblogic
export WLS_PW=<my-secure_password>
```

13. Start the WebLogic server by running the startWebLogic.sh & script.

```
 [oracle@vm bin]$ ./startWebLogic.sh &
```

---

**14.** Log in as the nncentral user.

**15.** Change the directory to the bin directory.

For example:

```
cd /home/nncentral/AcmePacket/NNC<version>/bin
```

**16.** Execute the startnnc.sh script.

```
./startnnc.sh
```

> ☞ **Note:** The console displays the number of services started. After all services have started, the system is ready for use. Do not attempt to log in until the console has indicated that the web servers are up.

# Reset the OCSREMDW User Password

The password for the Oracle Communications OCSREMDW User who connects to the Oracle Communications Session Delivery Manager Data Warehouse (ocsdmdw) database expires every 180 days. Use this task to reset the expired password with a new password.

**1.** Shutdown SDM as the nncentral user.

```
cd /opt/AcmePacket/NNC80/bin
./shutdownnnc.sh
```

**2.** Run setup.sh as root.

**3.** Select **Custom** > **Oracle DB OCSDMDW Configuration**

**4.** Enter and then confirm the OCSDMDW password.

**5.** Enter the ORACLE_HOME path.
The error message should say "OCSDMDW Oracle DB already exists. Please drop this DB and try again."

**6.** Exit setup.sh.

**7.** Set the ORACLE_HOME and ORACLE_SID variables as the nncentral user.

```
su nncentral
export ORACLE_HOME=/app/oracle/product/11.2.0/dbhome_1
export ORACLE_SID=ocsdmdw
```

**8.** Log in to the Oracle database.

```
cd $ORACLE_HOME/bin
./sqlplus / as sysdba
```

**9.** If the database user accounts are locked because of multiple failed logins with the wrong password, unlock the nncentral and oscremdw accounts.

```
alter user nncentral account unlock;
alter user ocsremdw account unlock;
```

**10.** Change passwords for the nncentral user and the ocsremdw user. The new ocsdmdw password must be the same as the one specified in step 4.

```
alter user nncentral identified by <new_password>;
alter user ocsremdw identified by <new_password>;
```

**11.** Exit

```
exit;
```

**12.** Confirm the password changes by looking for a successful log in to the following commands:

```
./sqlplus nncentral/<new_password>@ocsdmdw
./sqlplus ocsremdw/<new_password>@ocsdmdw
```

**13.** Start SDM as the nncentral user.

```
cd /opt/AcmePacket/NNC75/bin/
./startnnc.sh
```

# Free Up Disk Space

In local clusters, dump files may be deleted if the server runs low on disk space.

☞ **Note:** Do not run this command if a backup or restore is in progress.

1. Log in as the oracle user.
2. Find and remove the dump files.

```
find . -name OCSDMDW_Dump*.dmp | xargs rm -rf
```

# Uninstall Oracle Database

To uninstall Oracle database:

1. Run the deinstall script in the $ORACLE_HOME/deinstall folder.

```
[oracle@vm ~]$ cd $ORACLE_HOME/deinstall/
[oracle@vm deinstall]$ ./deinstall
```

2. Select the default options unless you need to drop or delete schemas and listeners.
3. Type y to continue.
4. After the script finishes, remove the oracle folder.

```
rm -rf /app/oracle
```

# Uninstall BI Publisher

1. Log in to the server over VNC or SSH.

```
ssh -Y oracle@vm
```

2. If you installed a Simple Install, stop the WebLogic server by running the stopWebLogic.sh script.

```
[oracle@vm ~]$ cd app/OracleMiddleWare/user_projects/domains/
bifoundation_domain/bin/
[oracle@vm bin]$ ./stopWebLogic.sh
```

3. If you installed the Enterprise Install, stop the managed server's WebLogic server and the running Node Manager process.

This script uses the syntax:

```
stopManagedWebLogic.sh {SERVER_NAME} {ADMIN_URL} {USER_NAME} {PASSWORD}
```

For example:

```
[oracle@vm ~]$ cd app/OracleMiddleWare/user_projects/domains/
bifoundation_domain/bin/
[oracle@vm ~]$ ./stopManagedWebLogic.sh bi_server1 t3://vm.acmepacket.com:
9704 weblogic testPassword5
```

4. If it's still running, kill the Node Manager's process ID.

```
ps -ef | grep weblogic
kill <node manager process id>
```

5. Run the uninstallation scripts for BI Publisher .

```
[oracle@vm bin]$ cd ~/app/OracleMiddleWare/utils/uninstall/
[oracle@vm uninstall]$ ./uninstall.sh
```

Click **Next**, **Next**, and **Done** to uninstall all the components.

6. Run RCU and drop the MDS and BIPLATFORM schemas from Oracle database.

```
[oracle@vm ~]$ cd ~/rcuHome/bin
[oracle@vm bin]$ ./rcu
```

7. Delete the OracleMiddleWare directory.

```
rm -rf ~/app/OracleMiddleWare/
```