

# Oracle® Communications

## Report Manager Installation Guide for Oracle Fusion Middleware 11g



SDM Release 8.1  
October 2018

The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

ORACLE®

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# About This Guide

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

## Oracle 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>.

## Related Documentation

**Table Oracle Communications Product Plug-in Documentation Library**

Document Name	Description
Session Element Manager User Guide	Provides information for managing and optimizing network infrastructure elements and their functions with comprehensive tools and applications used to provision fault, configuration, accounting, performance, and security (FCAPS) support for managed network functions and their associated devices in Oracle Communications Session Delivery Manager (SDM).
Report Manager User Guide	Provides information about configuring Report Manager to interoperate with Oracle BI Publisher as well as creating reports on Session Delivery product network devices.
Report Manager Installation Guide	Provides information for installing Oracle Communications Report Manager product as an addition to SDM including the Oracle database and BI Publisher components. The Oracle session delivery product plugin must be added to Oracle Communications Session Delivery Manager before performing the Report Manager installation.
Route Manager User Guide	Provides information for updating local route table (LRT) data on a single device or multiple devices.

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

<b>Document Name</b>	<b>Document Description</b>
Administration Guide	<p>Provides the following administration information:</p> <ul style="list-style-type: none"><li>• Implement SDM on your network as a standalone server or high availability (HA) server.</li><li>• Login to the SDM application, access GUI menus including help, customize the SDM application, and change your password.</li><li>• Access the product plugin service through the GUI to manage product plugin tasks, including how product plugins are uploaded and installed.</li><li>• Manage security, faults, and transport layer security certificates for east-west peer SDM server communication, and southbound communication with network function (NF) devices.</li><li>• Configure northbound interface (destination) fault trap receivers and configure the heartbeat trap for northbound systems.</li><li>• Monitor SDM server health to detect heartbeat messages and display the server status to prevent health problems, or view server disk utilization information and server directory statistics.</li><li>• Maintain SDM server operations, which includes database backup and database restoration and performing server cluster operations.</li><li>• Use available SDM server scripts, the contents of fault trap notifications, and a list of northbound notification traps generated by the SDM server.</li></ul>
Installation Guide	<p>Provides the following installation information:</p> <ul style="list-style-type: none"><li>• Do pre-installation tasks, which include reviewing system requirements, adjusting linux and firewall settings, completing SDM server settings and configuring your NNCentral account for security reasons.</li><li>• Do the typical installation to perform the minimal configuration required to run the SDM server.</li><li>• Do the custom installation to perform more advanced configurations including the mail server, cluster management, Route Manager, transport layer security (TLS), and Oracle database configuration.</li></ul>
Release Notes	<p>Contains information about the administration and software configuration of the SDM feature support new to this release.</p>
Security Guide	<p>Provides the following security guidelines:</p> <ul style="list-style-type: none"><li>• Use guidelines to perform a secure installation of SDM 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.</li><li>• Review Security Manager features that are used to configure groups, users, operations, privileges, and manage access to the system.</li><li>• Follow a checklist to securely deploy SDM on your network and maintain security updates.</li></ul>
REST API Guide	<p>Provides information for the supported REST APIs and how to use the REST API interface. The REST API interface allows a northbound client application, such as a network service orchestrator (NSO), to interact with SDM and its supported product plugins.</p>
SOAP API Guide	<p>The SOAP API guide provides information for the SOAP and XML provisioning Application Programming Interface (API) client and server programming model that enables users to write client applications that automate the provisioning of devices. The web service consists of operations that can be performed on devices managed by the SDM server and data structures that are used as input and output parameters for these operations.</p>

## Revision History

<b>Date</b>	<b>Description</b>
July 2018	Initial release
September 2018	The ORACLE_HOME path was updated.



# 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

Oracle has certified the following requirements for the Oracle® Communications Report Manager installation with Oracle Fusion Middleware 11g Standard Edition One:

- Report Manager is supported on Oracle Linux 6.5, 6.6, 6.7, 6.8 64-bit operating systems only.
- 300 GB hard drive minimum
- 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

- Plan to have 300 GB of disk space for storing HDR data, whether it is on the same system on which SDM is running or on a separate FTP or SFTP repository.

 **Note:**

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

## 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:**

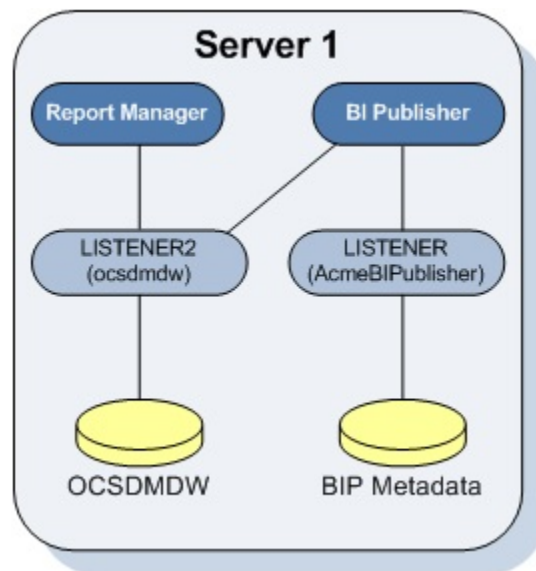
In a remote cluster installation (Enterprise Install), the Oracle BI Publisher is not on the same server as the Oracle Communications Session Delivery Manager. Ensure that the Oracle database application is installed on one of the servers on which Oracle BI Publisher is installed and on both servers 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 1-1 Local standalone installation of Report Manager**

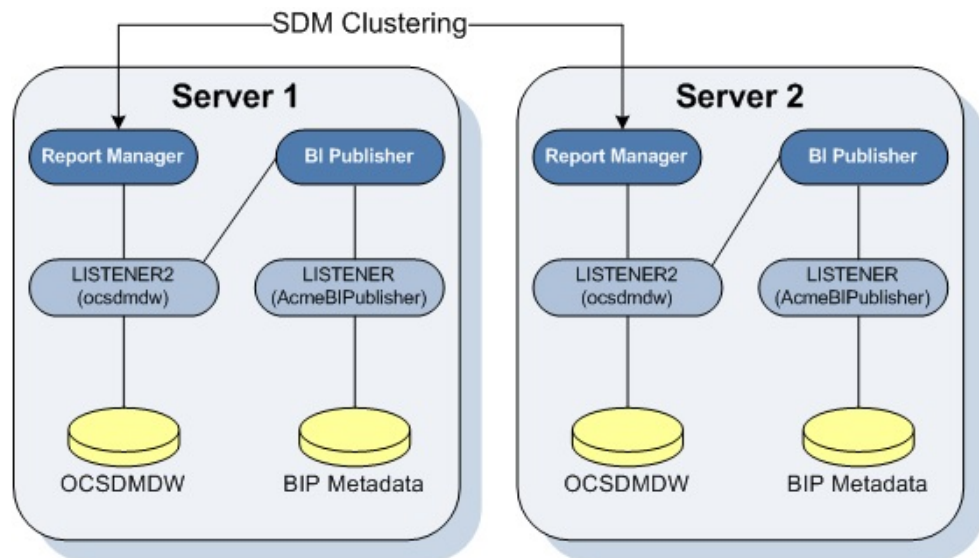


- **Local cluster installation**—A cluster of local servers that generate reports and provide high availability in case one system experiences a sudden failure. On each local server that is part of the same cluster, Oracle BI Publisher and Oracle Communications Session Delivery Manager are installed 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 1-2 Local cluster installation of Report Manager**

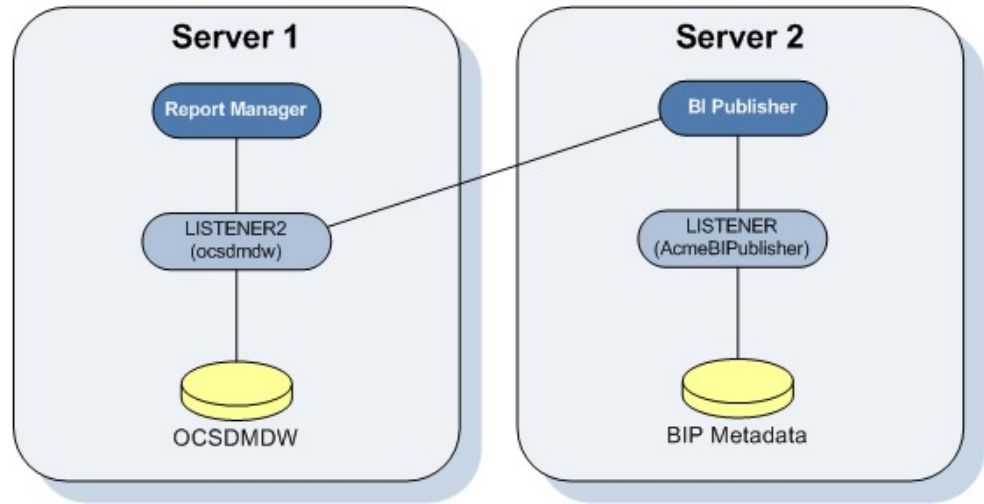


- **Remote standalone installation**—A single remote server that has Oracle Communications Session Delivery Manager, Oracle BI Publisher, and their respective databases.

 **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 1-3 Remote standalone installation of Report Manager



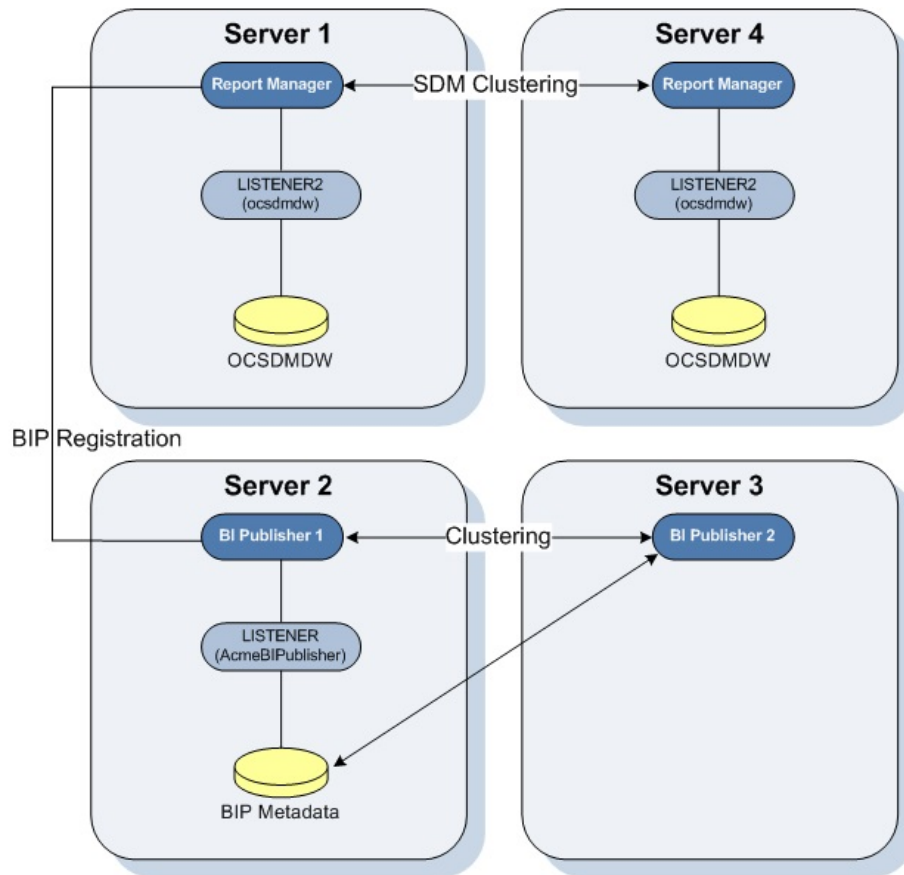
The distinct databases in the illustration above function in the following ways for Oracle Communications Session Delivery Manager, Oracle BI Publisher, and Oracle Communications Report Manager:

- 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 1-4 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
```



# 2

## 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 OCSDMDW 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.

1. If you have a software version of Oracle Communications Session Delivery Manager that is installed on your system that is older than SDM Release 7.5M3, you must upgrade to SDM Release 7.5M3 before you can install SDM Release 8.1.
2. 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-publisher-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
```
3. Use the following options to start the BI Publisher database, Oracle database, or the listeners if OCSDMDW and BI Publisher is down:

### Note:

Ensure that the Oracle home path (ORACLE\_HOME environment variable) 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.

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

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

For example, 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
```

# 3

## 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. In the **Configure Security Updates** window, provide an e-mail address in the **Email** field if you want to receive security updates from Oracle. If you want to receive security updates from **My Oracle Support**, check the checkbox, and enter your password in the **My Oracle Support Password** field.
2. Click **Next**.
3. Click **Yes** to confirm.
4. In the **Select Installation Option** window, select **Create and configure a database** and click **Next**.
5. In the **Select System Class** window, select **Desktop Class** and click **Next**.



**Note:**

The **Desktop Class** is sufficient for Report Manager and BI Publisher to use the Oracle database.

6. In the **Typical Installation Configuration** window, keep the fields identified with default values and change any of the fields as required below.

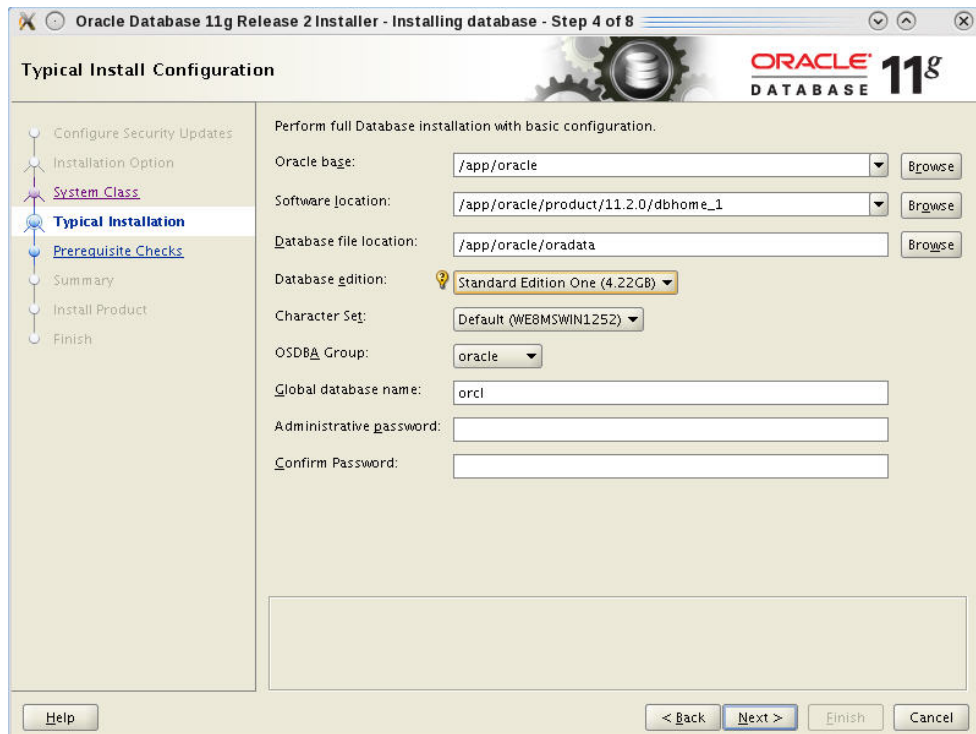
<b>Oracle base</b> field	(Default) /app/oracle
<b>Software Location</b> field	(Default) /app/oracle/product/11.2.0/dbhome_1
<b>Database file location</b> field	(Default) /app/oracle/oradata
<b>Database edition</b> drop-down list	Select <b>Standard Edition One (4.22GB)</b> .
<b>Character Set</b> drop-down list	(Default) WE8MSWIN1252
<b>OSDBA Group</b> drop-down list	(Default) oracle If the OSDBA Group is specified with another group by default, you must change it to <b>oracle</b> .
<b>Global database name</b> field	(Default) orcl
<b>Administrative password</b> field	Enter the administrative password.
<b>Confirm Password</b> field	Enter the administrative password again to confirm the password.



**WARNING:**

Selecting Enterprise Edition will result in extra charges from Oracle.

The following example shows the completed Typical Installation Configuration window.



7. Click **Next**.
8. In the **Create Inventory** window, keep the fields identified with default values and click **Next**:

<b>Inventory Directory</b> field	(Default) /app/oraInventory
<b>oraInventory Group Name</b> drop-down list	(Default) oracle

9. In the **Perform Prerequisite Checks** window, you may encounter error messages, take the appropriate actions. However if you do not want to correct them, 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:**

The kernel.shmmax and kernel.shmall OS Kernel Parameter errors are exceptions and may be safely ignored:

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

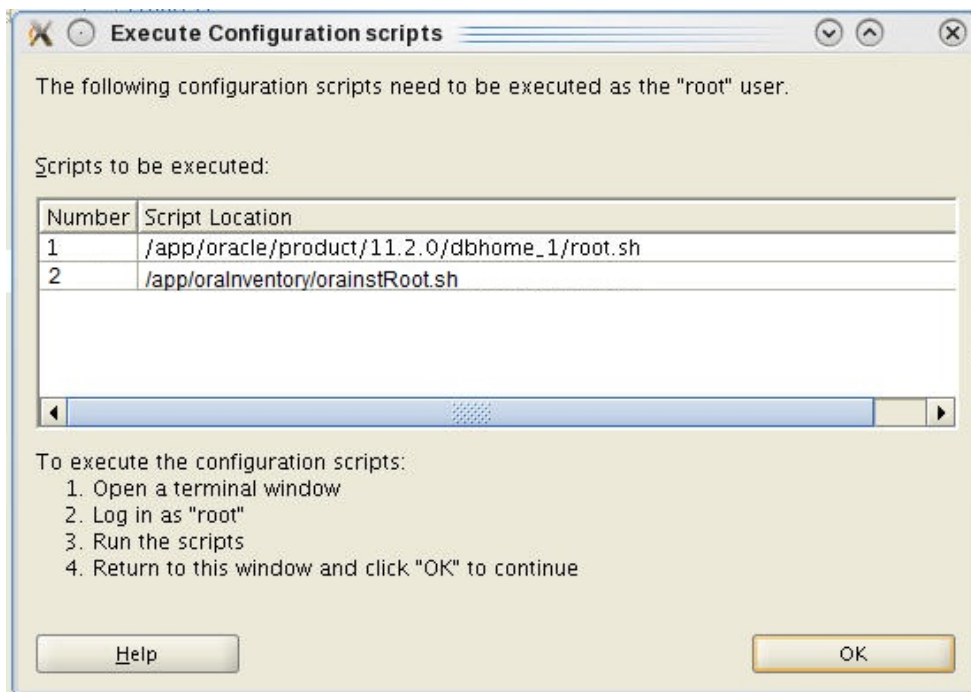
The **Execute Configuration scripts** dialog box opens to display the location of scripts that must be run by the root user before continuing.

1. Open a separate terminal window and login to the server as the root user.
2. Run the following scripts displayed in the following **Execute Configuration scripts** dialog box in the separate terminal window that you opened:

```
cd /app/oracle/product/11.2.0/dbhome_1/
./root.sh
```

```
cd /app/oraInventory/
./oraInstRoot.sh
```

The **Execute Configuration scripts** dialog box displays the scripts you need to execute to create the Oracle database:



When you execute the scripts, you are prompted with the following message:

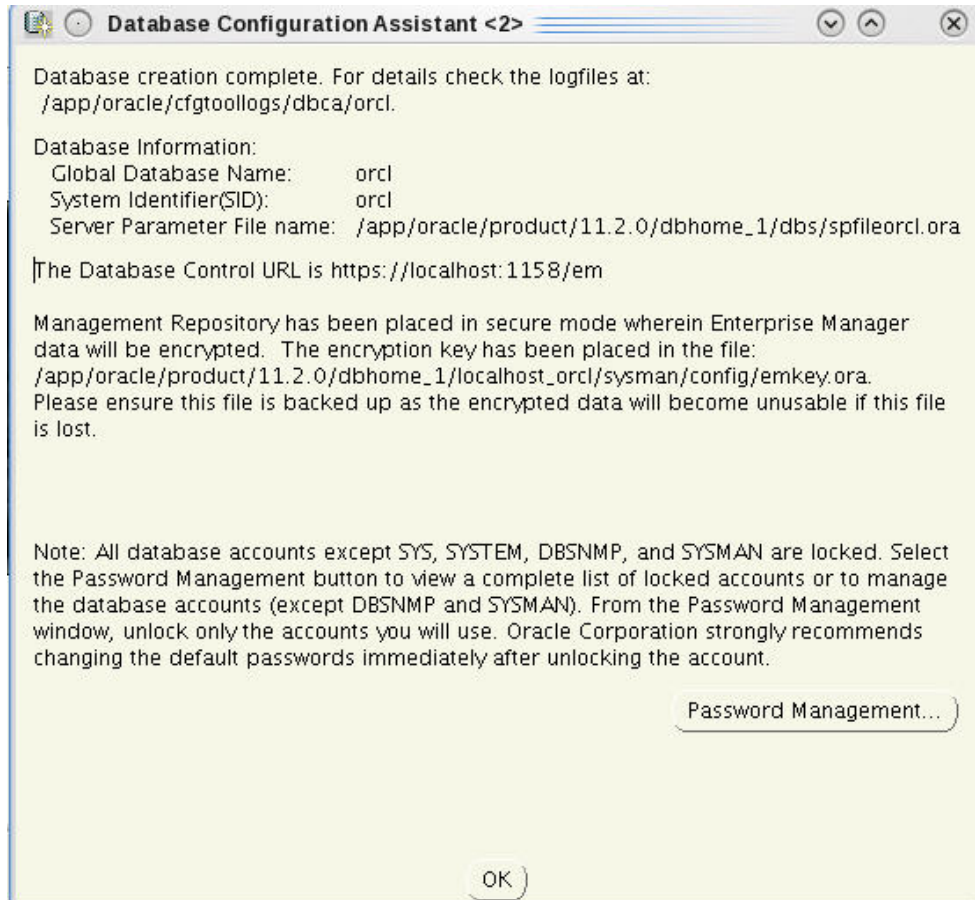
```
Do you want to setup Oracle Trace File Analyzer (TFA) now ? yes|[no] :
```

3. Press enter to select the default (**no**).

 **Note:**

If you need to setup the Oracle Trace File Analyzer for collecting diagnostic data and resolving issues, type **yes** and press Enter.

4. Go back to the **Execute Configuration scripts** dialog box, and click **OK**.
5. In the **Database Configuration Assistant** dialog box, click **OK**.



The Oracle database is created and can now be reached at <https://<localhost>:5500/em>.

## Change the Oracle Database Listener Configuration File

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
```

# 4

## Create an Oracle Database Instance for BI Publisher

1. Log in as the oracle user. For example:

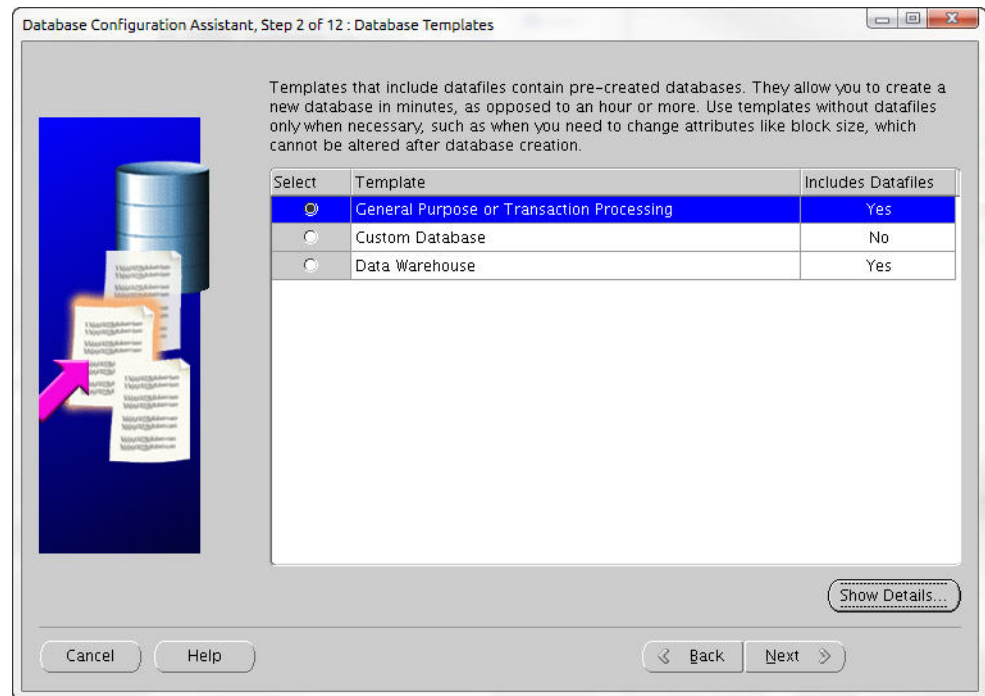
```
ssh -Y oracle@<my_oracle_server>
```

2. Run the Database Creation Assistant.

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

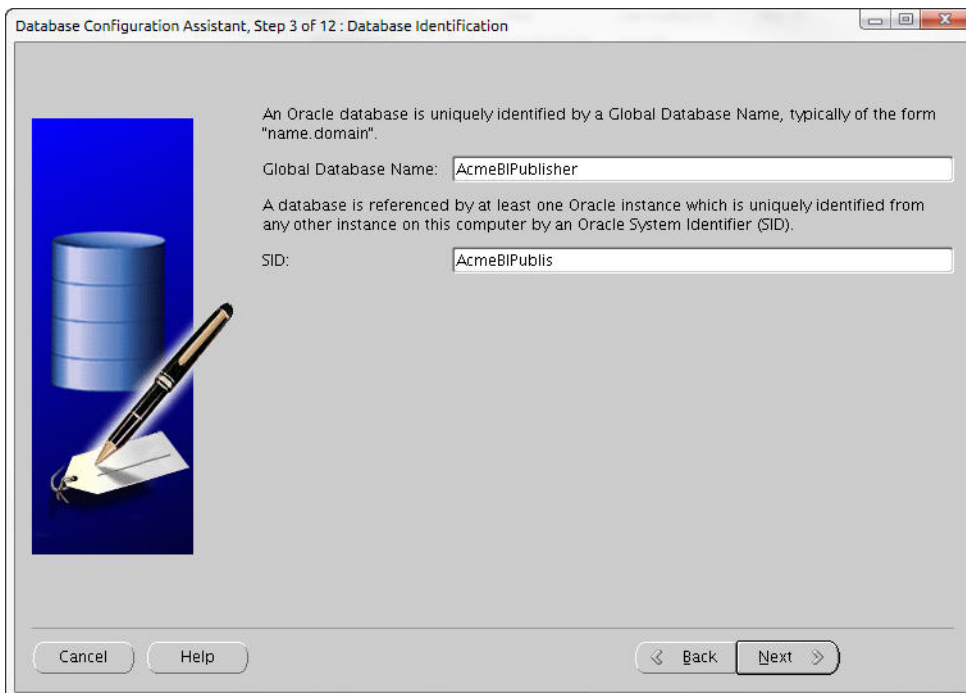
3. After the **Welcome** window, select **Create a Database** and click **Next**.

4. In the **Database Templates** window, select **General Purpose or Transaction Processing** and click **Next**.



5. In the **Database Identification** window, enter **AcmeBIPublisher** in the **Global Database Name** field and click **Next**.

The SID is filled in automatically and truncated after 12 characters.



Database Configuration Assistant, Step 3 of 12 : Database Identification

An Oracle database is uniquely identified by a Global Database Name, typically of the form "name.domain".

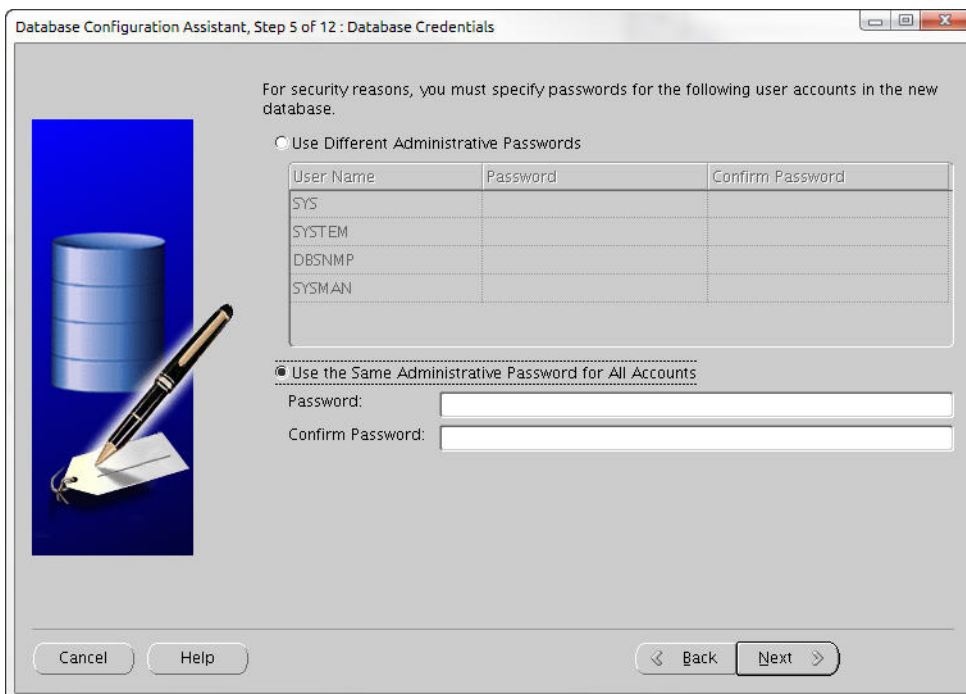
Global Database Name:

A database is referenced by at least one Oracle instance which is uniquely identified from any other instance on this computer by an Oracle System Identifier (SID).

SID:

Cancel Help < Back Next >

6. In the **Management Options** window, click **Next** to select the defaults that are provided.
7. In the Database Credentials window, select the database credentials option which suits your needs, enter the password or passwords, and click **Next**.



Database Configuration Assistant, Step 5 of 12 : Database Credentials

For security reasons, you must specify passwords for the following user accounts in the new database.

Use Different Administrative Passwords

User Name	Password	Confirm Password
SYS		
SYSTEM		
DBSNMP		
SYSMAN		

Use the Same Administrative Password for All Accounts

Password:

Confirm Password:

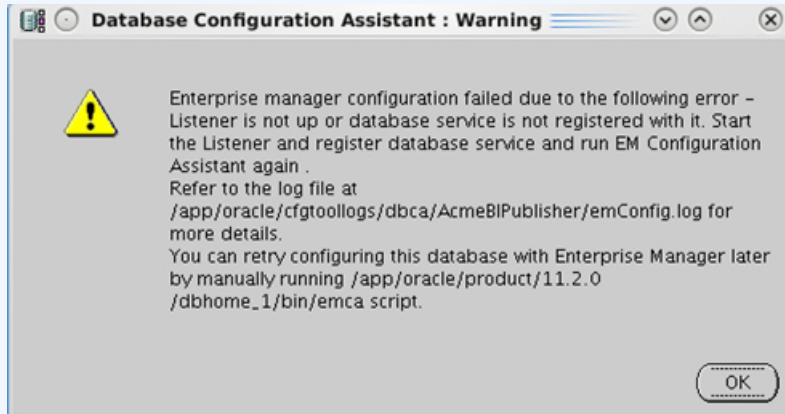
Cancel Help < Back Next >

8. Click **Next** to accept the default settings for each of the following screens:
  - Database File Locations
  - Recovery Configuration
  - Database Content

- Initialization Parameters
  - Database Storage
9. In the **Creation Options** window, click **Finish**.
  10. In the Confirmation dialog box, 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. Start a new bash shell as the "oracle" Linux user. For example:

```
ssh -Y oracle@<my_oracle_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 ~]$ echo $ORACLE_SID
AcmeBIPublis
[oracle@vm ~]$ 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
```

# 5

## 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.

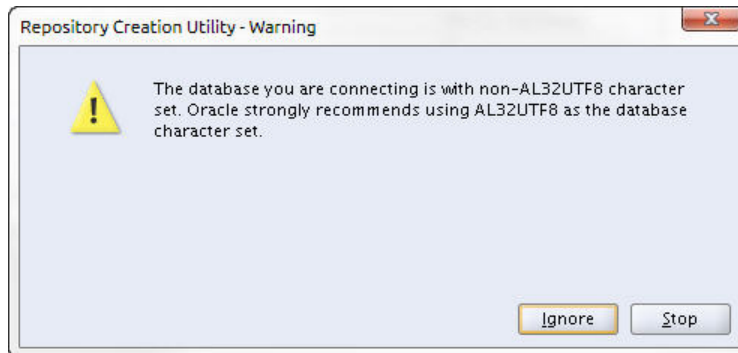
```
[oracle@vm ~]$ cd rcuHome/bin/  
[oracle@vm bin]$ ./rcu
```

3. In the **Welcome** window, click **Next**.
4. Select **Create** and click **Next**.
5. In the **Database Connection Details** window, complete the following fields and click **Next**.

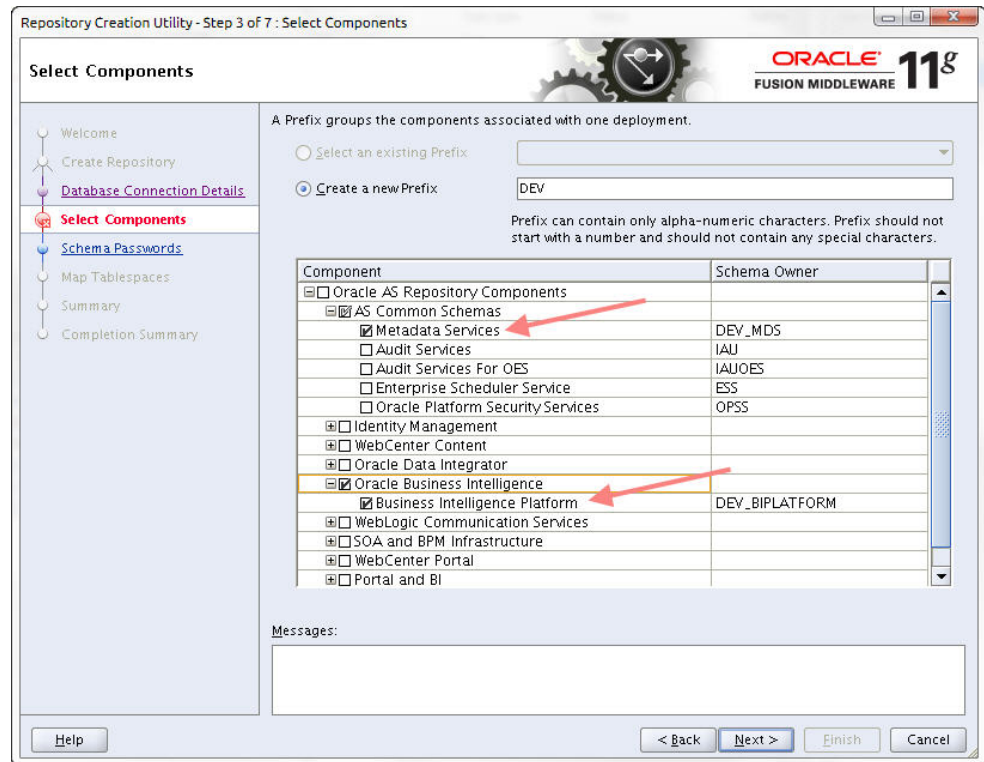
<b>Database Type</b> drop-down list	Select <b>Oracle Database</b> .
<b>Host name</b> field	Enter the hostname of your server.
<b>Port</b> field	Enter port 1521.
<b>Service Name</b> field	Enter <b>AcmeBIPublisher</b> .
<b>Username</b> field	Enter <b>sys</b> for the user who has system database administrator (SYDBA) privileges.
<b>Password</b> field	Enter the password for the SYDBA user.
<b>Role</b> drop-down list	Select <b>SYSDBA</b> .

 **Note:**

A warning dialog box displays about character sets. Click **Ignore**.



6. In the **Checking Prerequisites** window, click **OK**.
7. In the **Select Components** window, keep the default prefix **DEV** or create a new prefix.
8. Check the **Common Schemas**, **Metadata Services**, and **Oracle Business Intelligence** check boxes for the components that are to be installed and click **Next**.



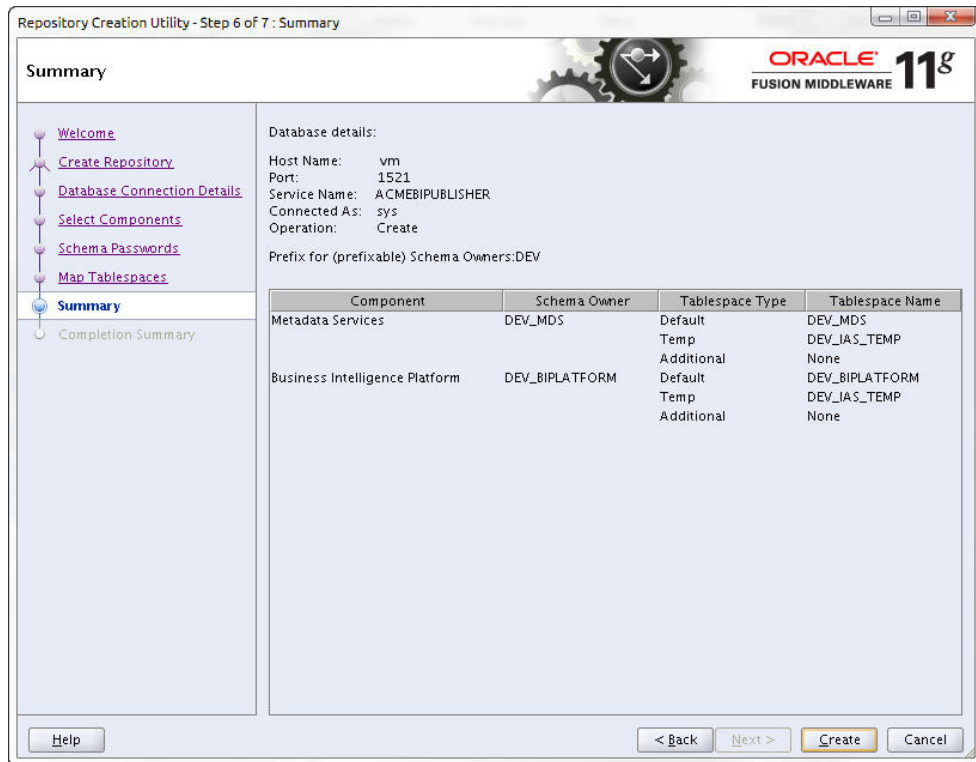
9. In the **Password Schema** window, enter the password and click **Next**.

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

# 6

## 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 [Create a Standalone BI Publisher](#) section.
3. If you are setting up a local cluster, follow the directions in the [Create a BI Publisher Cluster](#) section.
4. If you are setting up a remote cluster, follow the directions in the [Create 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.

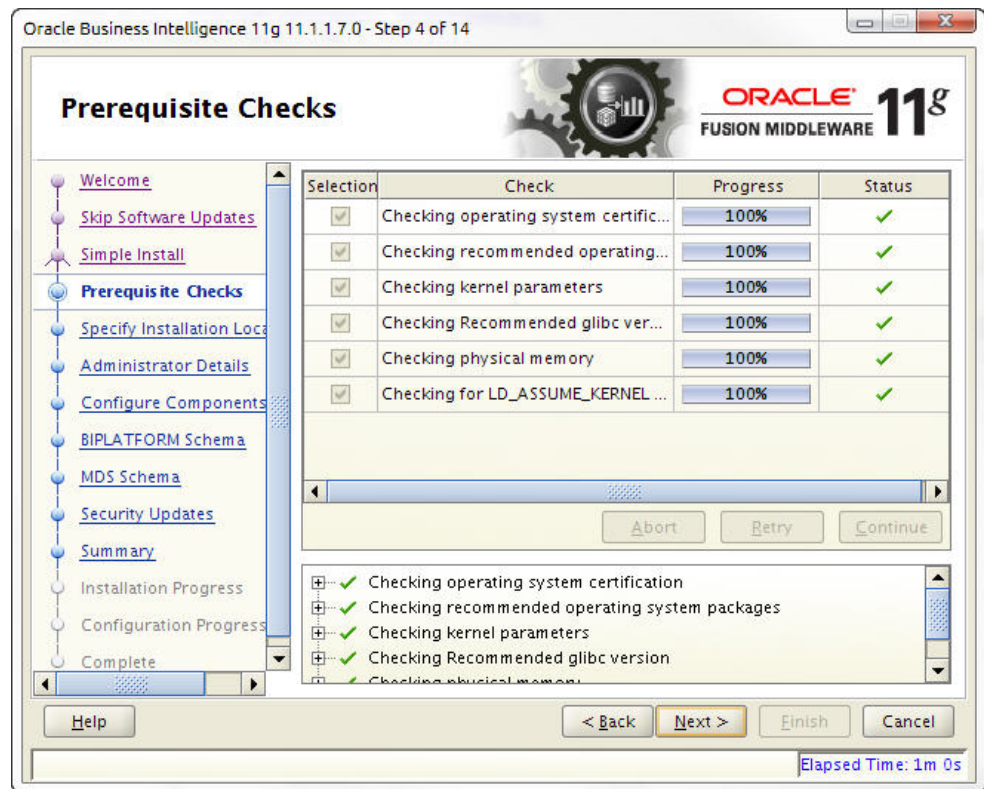
```
cd ~/bishiphome/Disk1/  
./runInstaller
```

## Create a Standalone BI Publisher

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

<b>Inventory Directory</b> field	/home/oracle/oraInventory
<b>Operating System Group name</b> field	dba

2. In the **Welcome** window, click **Next**.
3. In the **Install Software Updates** window, select **Skip Software Updates** and click **Next**.
4. In the **Select Installation Type** window, select **Simple Install** and click **Next**.
5. In the **Prerequisite Checks** window, verify that your system has the necessary prerequisites and click **Next**. For example:

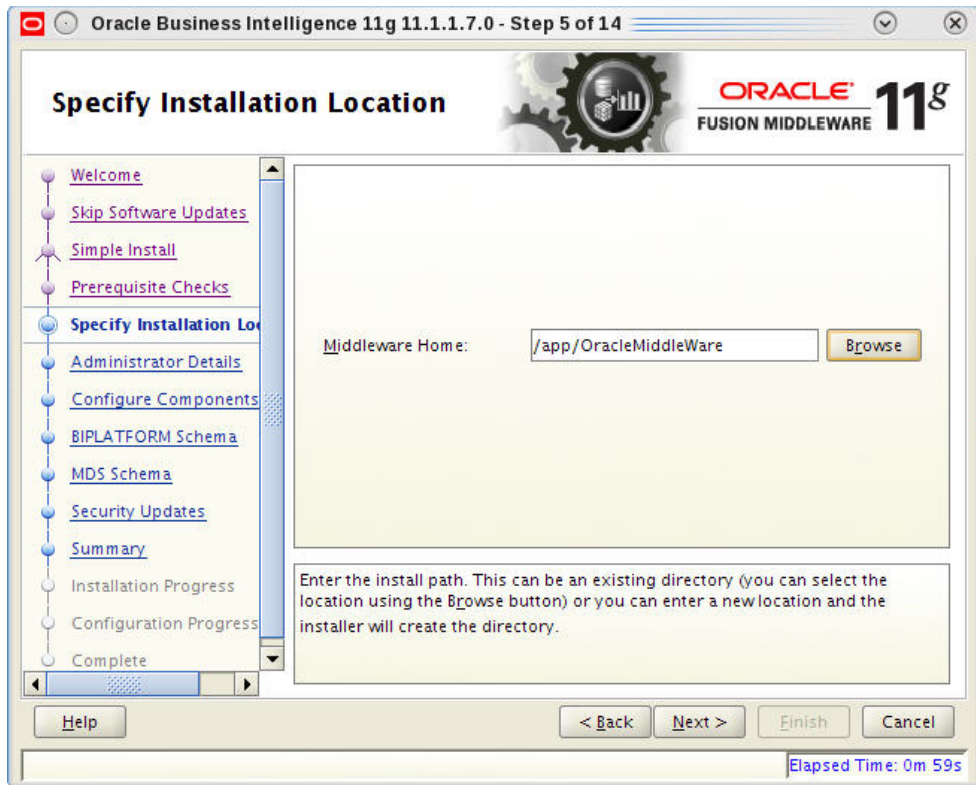


**Note:**

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.

Selection	Check	Progress	Status
<input checked="" type="checkbox"/>	Checking operating system certific...	100%	⚠
<input checked="" type="checkbox"/>	Checking recommended operating...	100%	✗
<input checked="" type="checkbox"/>	Checking kernel parameters	100%	✗
<input checked="" type="checkbox"/>	Checking Recommended glibc ver...	100%	✗
<input checked="" type="checkbox"/>	Checking physical memory	100%	✓
<input checked="" type="checkbox"/>	Checking for LD_ASSUME_KERNEL ...	100%	✓

- In the **Specify Installation Location** window, click **Browse** to populate the **Middleware Home** field with the OracleMiddleWare directory you created. For example:



7. In the Administrator Details window, complete the following fields for the WebLogic account and click **Next**:

<b>Username</b> field	Enter <b>weblogic</b> .
<b>Password</b> field	Enter the WebLogic account password.
<b>Confirm Password</b> field	Reenter the WebLogic account password to confirm it.

 **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. In the **Configure Components** window, check the **Business Intelligence Publisher** check box only and click **Next**.



9. In the **BIPLATFORM Schema** window, complete the following fields and click **Next**:

<b>Database Type</b> field	The name of the database. For example: Oracle Database
<b>Connect String</b> field	<server_name>:<port>:<service_name> For example: vm:1521:AcmeBIPublisher
<b>BIPLATFORM Schema Username</b> field	<prefix>_BIPLATFORM For example: DEV_BIPLATFORM
<b>Schema Password</b> field	Enter the schema 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 **MDS Schema** window, complete the following fields and click **Next**:

<b>Database Type</b> field	The name of the database. For example: Oracle Database
<b>Connect String</b> field	<server_name>:<port>:<service_name> For example: vm:1521:AcmeBIPublisher
<b>MDS Schema Username</b> field	<prefix>_MDS For example: DEV_MDS

---

<b>Schema Password</b> field	Enter the schema password.
------------------------------	----------------------------

---

 **Note:**

The <prefix> value is set when running the Repository Creation Utility (RCU). The default schema prefix is set to DEV unless this value was changed in the **Create a New Prefix** field in the RCU **Select Components** window.

11. In the **Specify Security Updates** window, enter your email address and click **Next**.
12. On the **Summary** window, 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.

13. After the processes in the **Configuration Progress** window complete, click **Next**.
14. 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** window.
2. In the **Install Software Updates** window, select **Skip Software Updates** and click **Next**.
3. In the **Select Installation Type** window, select **Enterprise Install** and click **Next**.



4. In the **Prerequisite Checks** window, several system prerequisite checks are made, click **Next** when they are completed.
5. In the **Create or Scale Out BI System** window, select the **Create New BI System** option if you are creating this system for the first time and complete the following fields to create the administration server. Click **Next** when you are finished.

<b>User Name</b> field	Enter the new user name for the system administrator.
<b>User Password</b> field	Enter the password.
<b>Confirm Password</b> field	Reenter the password to confirm it.
<b>Domain Name</b> field	Enter the domain name of the administrator server. For example: bifoundation_domain.

If you have already created this server and are building out a cluster, select **Scale Out BI System** and complete the following fields for the administration server. Click **Next** when you are finished.

 **Note:**

When building out local clusters, make sure SDM has previously been installed on each system.

<b>Host Name</b> field	Enter the host name of the administrative server.
<b>Port</b> field	Enter the port of the administrative server. For example: 7001



<b>User Name</b> field	Enter the user name of the administrative server. For example: weblogic
<b>Domain Name</b> field	Enter the user password of the administrator server.

Managed servers are created that mirror the configuration details of the administration server and point to the administration server.

- In the **Specify Installation Location** window, browse to the OracleMiddleWare directory you created (**/app/OracleMiddleWare**) and click **Next**. Other fields are not used or populated by default. For example:



- In the **Configure Components** window, check the **Business Intelligence Publisher** checkbox.
- In the **BIPLATFORM Schema** window, complete the following fields and click **Next**.

<b>Database Type</b> drop-down list	(Default) Oracle Database
<b>Connect String</b> field	host:port:instance For example: vm:1521:AcmeBIPublisher
<b>BIPLATFORM Schema Username</b> field	<prefix>_BIPLATFORM The Oracle Communications BI Publisher Platform Schema Username. The default schema prefix is DEV. For example: DEV_BIPLATFORM
<b>BIPLATFORM schema password</b> field	The Oracle Communications BI Publisher platform schema password.

- In the **MDS Schema** window, complete the following fields and click **Next**.

<b>Database Type</b> drop-down list	(Default) Oracle Database
<b>Connect String</b> field	hostname:port:instance For example: vm:1521:AcmeBIPublisher
<b>BIPLATFORM Schema Username</b> field	<prefix>_MDS The Oracle Communications BI Publisher MDS Schema Username. The default schema prefix is DEV. For example: DEV_MDS
<b>MDS schema password</b> field	The Oracle Communications BI Publisher MDS schema password.

10. In the **Configure Ports** window, select **Auto Port Configuration** and click **Next**.
11. In the **Specify Security Updates** window, enter your email address and click **Next**.
12. In the **Summary** window, click **Install**.
13. In the **Configuration Progress** window, when the processes are complete, click **Next**.
14. In the **Complete** window, 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 oracle user where the Oracle DB is installed. You may grant the necessary privileges as the oracle user with the following command:

```
chmod -Rf g+rwX <ORACLE_DB_INSTALL_PATH>
```

For example:

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

8. The nncentral user must have read, write, and execute privileges for the oracle user where Oracle MiddleWare is installed. You may grant the necessary privileges as the oracle user with the following command:

```
chmod -Rf g+rwX <ORACLE_MIDDLEWARE_PATH>
```

For example:

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

9. Switch to the nncentral user to restart Oracle Communications Session Delivery Manager (SDM) if it is currently running.

## 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 the BI Publisher Security Model

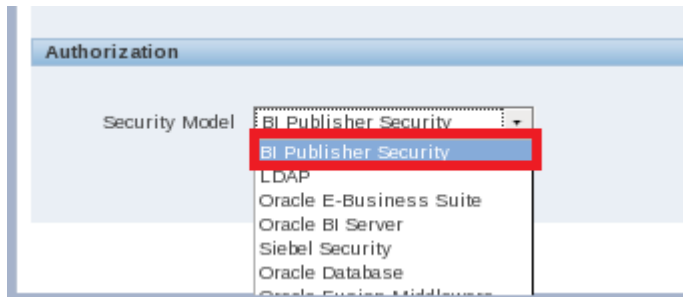
1. Log into BI Publisher.
2. Click **Administration** in the top right corner of the page.



3. Click on **Security Configuration** under the **Security Center** heading on the page.

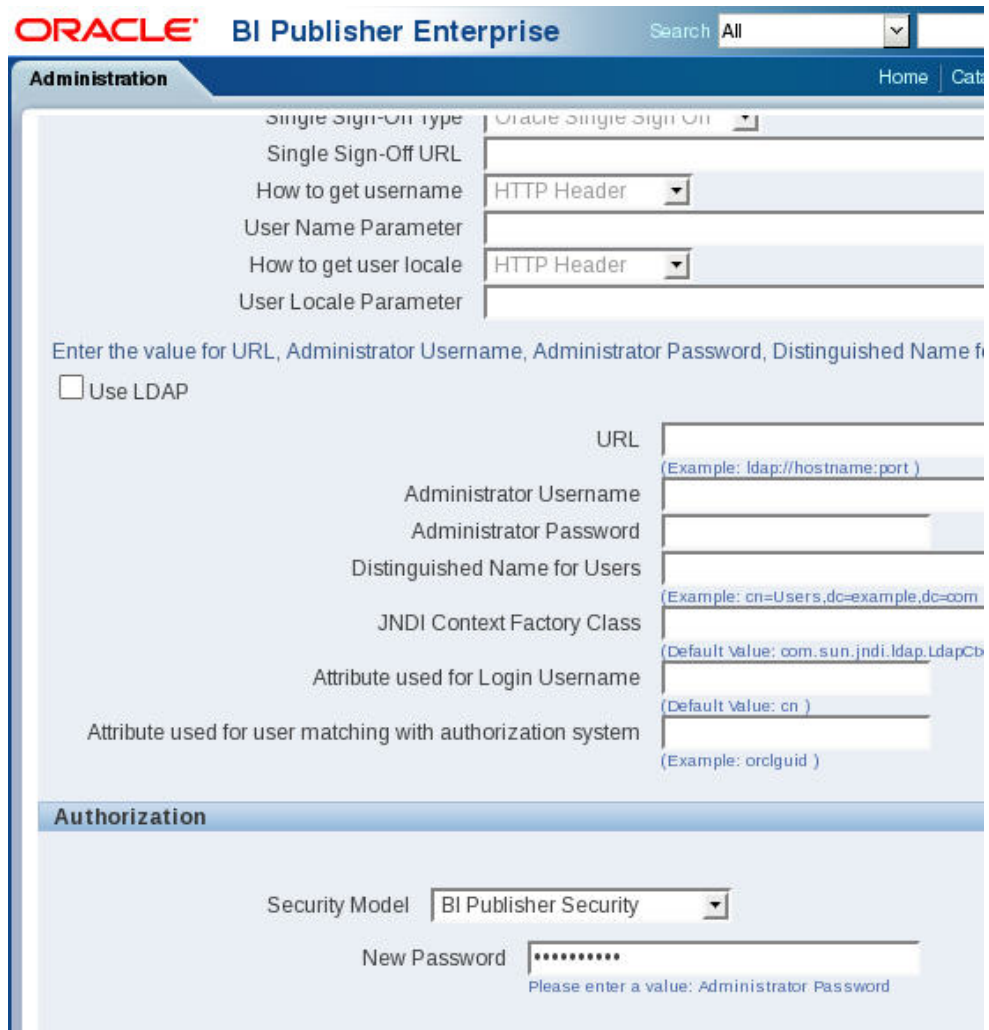


4. Under **Authorization** section, select **BI Publisher Security** from the **Security Model** drop-down list.



5. Enter the administrator user name and password that you configured earlier for the BI Publisher login in the text fields that appear above the **Authorization** section of the page.

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

The post-installation process involves the creation of a boot.properties file.

1. Change directories to the BI Publisher domain. For example:

```
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`. For example:

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

3. Create a file called boot.properties.

```
vi boot.properties
```

4. Add the following two lines:

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

Use the password which you created for the weblogic user.

# 7

## 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 setup application, specify the Oracle home path (ORACLE\_HOME) and the credentials of the Oracle database user instance (OCSREMDW).

**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/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 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 confirm the password.

 **Note:**

The password must be eight characters or more, contain at least one uppercase character, one lowercase character and a number (1-9). You cannot use the `$`, `#`, and `&` special character(s) in the password. Use only the supported `%`, period (`.`), and `!` special characters in your password at this time.

For example:

```
Password for user OCSREMDW
Enter password for user OCSREMDW [ ] <MyPassword4U!>
```

 **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/<Oracle-Database-
Version>/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/<ocsremdw 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/NNC<version>/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:

```
cd $ORACLE_HOME/bin
```

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

```
./lsnrctl 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/NNC<version>/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.

# 8

## Register Oracle BI Publisher

### Register BI Publisher in HTTPS Mode

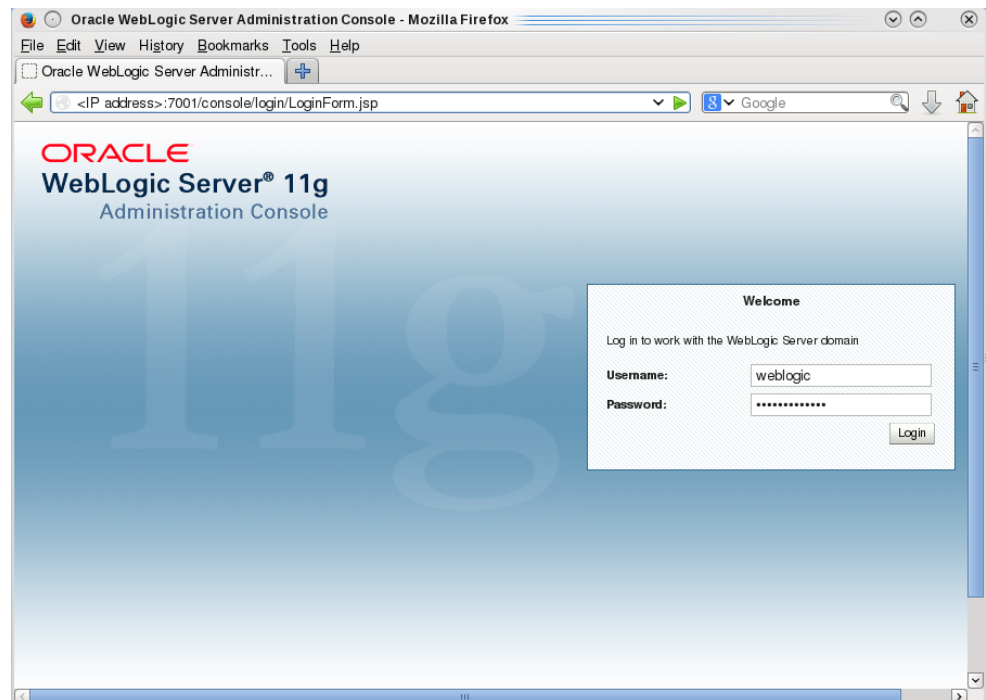
Oracle recommends you register BI Publisher in HTTPS mode to encrypt any communication between Oracle Communications Session Delivery Manager and BI Publisher. BI Publisher can be run in both HTTP and HTTPS modes. If you decide to run BI Publisher in HTTP mode, then you can skip this section and go to the Register BI Publisher in Session Delivery Manager section.

### 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.

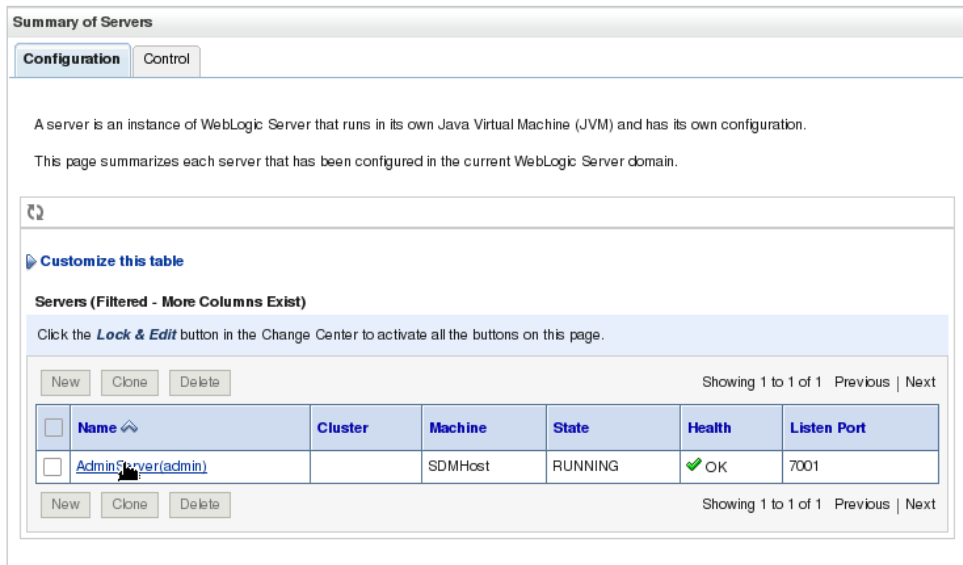
In the default installation, the administrative console can be reached at `http://<IP address>:7001/console`.



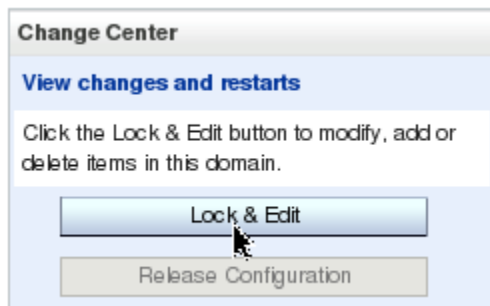
2. Under **Domain Structure** section of the pane in the left panel, click to expand the **Environment** menu and click **Servers**.



3. In the main tab of the **Summary of Servers** section of the pane, check the **AdminServer(admin)** check box.



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



5. In the **Configuration** tab, General sub-tab, click the **SSL Listen Port Enabled** check box and enter the port number in the **SSL Listen Port** field.

Settings for AdminServer

Configuration Protocols Logging Debug Monitoring Control Deployments Services Security Notes

General Cluster Services Keystores SSL Federation Services Deployment Migration Tuning Overload

Health Monitoring Server Start Web Services

Save

Use this page to configure general features of this server such as default network communications.

[View JNDI Tree](#)

<b>Name:</b>	AdminServer	An alphanumeric name for this server instance. <a href="#">More Info...</a>
<b>Machine:</b>	SDMHost	The WebLogic Server host computer (machine) on which this server is meant to run. <a href="#">More Info...</a>
<b>Cluster:</b>	(Standalone)	The cluster, or group of WebLogic Server instances, to which this server belongs. <a href="#">More Info...</a>
<b>Listen Address:</b>	<input type="text"/>	The IP address or DNS name this server uses to listen for incoming connections. <a href="#">More Info...</a>
<input checked="" type="checkbox"/> <b>Listen Port Enabled</b>		Specifies whether this server can be reached through the default plain-text (non-SSL) listen port. <a href="#">More Info...</a>
<b>Listen Port:</b>	<input type="text" value="7001"/>	The default TCP port that this server uses to listen for regular (non-SSL) incoming connections. <a href="#">More Info...</a>
<input checked="" type="checkbox"/> <b>SSL Listen Port Enabled</b>		Indicates whether the server can be reached through the default SSL listen port. <a href="#">More Info...</a>
<b>SSL Listen Port:</b>	<input type="text" value="7002"/>	The TCP/IP port at which this server listens for SSL connection requests. <a href="#">More Info...</a>

- Click **Save**.
- In the **Change Center** of the pane, 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

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

### Note:

You must use secure HTTPS.

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

- Confirm that you understand the risks.
- View and add the server certificate.
- Select the server certificate you that you added and click **Export**.
- Save the file with the .cer extension in one of the following formats:
  - X.509 PEM (Linux)
  - Base-64 (Windows)

- 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.

You can either add the BI Publisher certificate through the SDM setup program (setup.sh) or upload it through the SDM GUI:

### Note:

If you are using the SDM setup program to upload a BI Publisher certificate, you must run the setup program on each SDM server cluster node to upload the BI Publisher certificate on each node. If you perform this task through the SDM GUI, the BI Publisher certificate is replicated to all SDM cluster nodes.

- See the *Configure Southbound Interface Transport Layer Security* section in the *Custom Installation* chapter of the *Oracle Communications Session Delivery Manager Installation Guide* for more information about loading the BI Publisher certificate through the SDM setup program.
- See the *Manage Certificates for Southbound Authentication* chapter in the *Oracle Communications Session Delivery Manager Administration Guide* for more information about loading the BI Publisher certificate through the SDM GUI.

## Register BI Publisher in Session Delivery Manager


After the Oracle Communications Session Delivery Manager installation, Oracle BI Publisher must be registered from within the SDM GUI application.

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

```
cd /opt/AcmePacket/NNC<version>/bin/  
./startnnc.sh
```

- Navigate to your SDM server IP address on port 8080.
- Click **Report Manager > Register BI Publisher**.
- In the **Registered BI Publisher** pane click **Configure Registration**.
- In the Register BI Publisher Step 1 of 2 pane, complete the following installation details fields to register a BI Publisher server:

<b>Installation Location</b> radio buttons	<p>Select the following location type:</p> <ul style="list-style-type: none"> <li><b>local</b>—The Report Manager and BI Publisher software is installed on the same server.</li> <li><b>remote</b>—The Report Manager and BI Publisher software is installed on separate servers.</li> </ul>
--	---

	 <b>Note:</b> If you are registering BI Publisher with SSL on a local server, a domain name server (DNS) is required.
<b>Installation Type</b> radio buttons	Select the following installation type: <ul style="list-style-type: none"> <li>• <b>standalone</b>—A single or remote installation of Oracle Communications Session Delivery Manager, Oracle BI Publisher, and their respective databases that work together to generate reports.</li> <li>• <b>cluster</b>—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.</li> </ul>
<b>Weblogic Admin User Name</b> field	Enter the Weblogic administrator user name that you created when you installed Oracle BI Publisher.
<b>Weblogic Admin Password</b> field	Enter the Weblogic administrator password that you created when you installed Oracle BI Publisher.
<b>Admin User Name</b> field	This is the user name that you entered when you configured BI Publisher security.
<b>Admin Password</b> field	Enter the Oracle BI Publisher administrator password that you created when you installed Oracle BI Publisher.

6. Click Next.



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:

<b>Server Protocol</b> drop-down list	Select <b>http</b> or <b>https</b> for the secure hypertext transfer protocol.
<b>Server Location</b> field	The host name.

	<p> <b>Note:</b></p> <p>This value should be the same host name used when creating the certificate (For example, server1.oracle.com).</p>
<b>Server Port</b> field	The Oracle BI Publisher server port number. For example, 7002.
<b>BI Publisher Home Folder</b> field	The BI Publisher Home Folder. For the installation previously documented, the path is <code>/app/OracleMiddleWare/user_projects/domains/bifoundation_domain</code> . The path for your installation may differ if you selected a different location for the OracleMiddleWare directory.
<b>Repository Location</b> field	<p>The repository location that can be found by logging into BI Publisher and navigating to <b>Administration &gt; Server Configuration &gt; Catalog &gt; Path</b>. For the installation previously documented, the repository location is <code>/app/OracleMiddleWare/user_projects/domains/bifoundation_domain/config/bipublisher/repository</code>.</p> <p> <b>Note:</b></p> <p>The 'nncentral' user must have write privileges for the BIP home folder and repository location.</p>
<b>BI Publisher Schema Prefix</b> field	The prefix schema for BI Publisher. The default prefix is DEV.
<b>Oracle Database User Name</b> field	The nncentral user name for your Oracle database. See the <i>Add an Oracle Database User that Connects to BI Publisher for Backup and Restore Functions</i> section for more information.
<b>Oracle Database User Password</b>	The password for the nncentral database user.
<b>Oracle Database Service Name</b>	The Oracle database service name. Unless you previously selected a different name, enter <b>AcmeBIPublisher</b> .
<b>Oracle Database Home Path</b>	Enter the Oracle database home path. For the installation previously documented, the Oracle database home path is <code>/app/oracle/product/11.2.0/dbhome_1</code> .
<b>Oracle Database SID</b>	Enter the Oracle database SID. The SID is the first 12 characters of the Oracle Database Service Name. If <i>AcmeBIPublisher</i> is the Oracle Database Service Name, enter <b>AcmeBIPublis</b> .

2. Click **Apply**.

## Register a Remote Standalone BI Publisher

Use this task if you entered remote standalone in the previous step:

1. In the **Register BI Publisher Step 2 of 2** pane, complete the following fields:

<b>Server Protocol</b> drop-down list	Select <b>https</b> or <b>http</b> for the web server protocol.
<b>Server Location</b> field	The host name of the server on which BI Publisher is installed.
<b>Server Port</b> field	The BI Publisher xmlpserver port . For example: 7002.
<b>FTP User Name</b> field	The FTP user name.
<b>FTP Password</b> field	The FTP password.
<b>FTP Path for BI Publisher Home Folder</b> field	The FTP path for the BI Publisher Home Folder. For example: /app/OracleMiddleWare/user_projects/domains/bifoundation_domain. The path for your installation may differ if you selected a different location for the OracleMiddleWare directory.
<b>FTP Path for Repository Location</b> field	The FTP path for the repository location. For example: /home/oracle/Oracle/Middleware/Oracle_Home/user_projects/domains/bi/bidata/components/bipublisher/repository

2. Click **Apply**.

## Register a Local BI Publisher Cluster

If you entered the **local** and **cluster** options in the **Register BI Publisher Step 1 of 2** pane, complete the following task:

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 the remote and cluster options in the **Register BI Publisher Step 1 of 2** pane, complete the following task:



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 WebLogic bin directory.

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

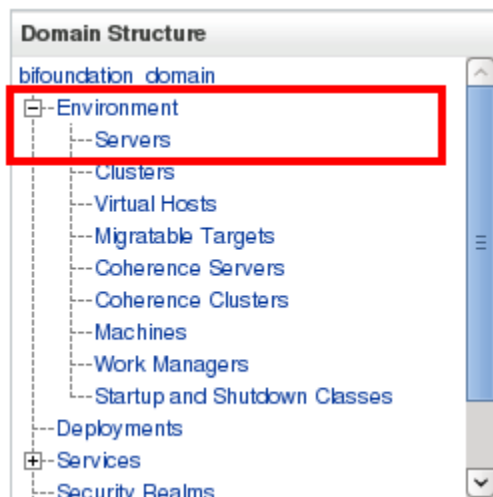
3. Run the startNodeManager script with an appended ampersand.

```
./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 **Domain Structure** section of the pane, click to expand the **Environment** menu and click **Servers**. For example:



6. In the **Summary of Servers** section of the pane, click the **Control** tab, and click the available server nodes and click **Start** to start the managed WebLogic server.

Home > Summary of Servers

Summary of Servers

Configuration Control

Use this page to change the state of the servers in this WebLogic Server domain. Control operations on Managed Servers require starting the Node Manager. Starting Managed Servers in Standby mode requires the domain-wide administration port.

Customize this table

Servers (Filtered - More Columns Exist)

Start Resume Suspend Shutdown Restart SSL Showing 1 to 1 of 1 Previous | Next

Server	Machine	State	Status of Last Action
AdminServer(admin)	SDMHost	RUNNING	None

Start Resume Suspend Shutdown Restart SSL Showing 1 to 1 of 1 Previous | Next

## 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 &
```

# 9

## 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 server where the Oracle database software and BI Publisher are installed, 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 (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 server where the Oracle database software and BI Publisher are installed, 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 (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]$ nohup ./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/NNC75/bin
./shutdownnnc.sh
```

2. Run `setup.sh` as root.

3. Select **Custom** and **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 ocsremdw accounts.

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

10. Change passwords for the nncentral user and the ocsremdw user. The new ocsremdw 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>@ocsremdw  
./sqlplus ocsremdw/<new_password>@ocsremdw
```

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/
```



# 10

## Troubleshoot Installation Problems

### X11 Forwarding

If the `xorg-x11-xauth` program is not installed, the following error appears if X11 forwarding over SSH is used:

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

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

```
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 BI Publisher login window by first searching for your default browser. You receive an error if the default browser is not set on your operating system.

If this error occurs, open a web 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 receive an error that says the Oracle Net Configuration Assistant failed or there is an invalid specification for system parameter `LOCAL_LISTENER` ORA-00130, ensure your `/etc/hosts` file contains a valid hostname besides "localhost."

## 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

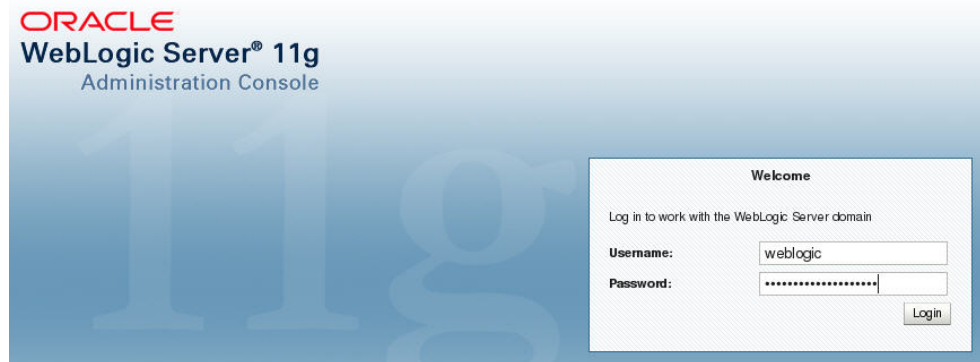
In a BIP cluster, scheduled reports will fail if the active server is down. If the server running the JMS service fails, migrate the JMS service to restore BIP scheduling.

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.

1. Go to the WebLogic server administration console at the following URL: `http://<host>:7001/console/`
2. In the **WebLogic Server Administration Console** enter your **Username** (for example: `weblogic`) and **Password** in their respective fields.



In the following BIP Cluster example, there are two host machines and by default one system has both an AdminServer and a Managed Server called `bi_server1`, and another system has a scaled out Managed Server called `bi_server2`. The JMS server is hosted on the Managed Server `bi_server1`, which is running on the same system as the AdminServer.

Summary of Servers

**Configuration** Control

A server is an instance of WebLogic Server that runs in its own Java Virtual Machine (JVM) and has its own configuration.  
This page summarizes each server that has been configured in the current WebLogic Server domain.

Customize this table

Servers (Filtered - More Columns Exist)

Click the **Lock & Edit** button in the Change Center to activate all the buttons on this page.

New Clone Delete Showing 1 to 3 of 3 Previous Next

| Name               | Cluster    | Machine | State   | Health | Listen Port |
|--------------------|------------|---------|---------|--------|-------------|
| AdminServer(admin) |            |         | RUNNING | OK     | 7001        |
| bi_server1         | bi_cluster |         | RUNNING | OK     | 9704        |
| bi_server2         | bi_cluster |         | RUNNING | OK     | 9704        |

New Clone Del Showing 1 to 3 of 3 Previous Next

## 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. In the **Change Center** section of the pane, click **Lock & Edit**.
2. In the **Domain Structure** section, click to expand the **Environment** menu and click **Migratable Targets**.
3. In the **Summary of Migratable Targets** pane appears.
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. Check the the candidate server check boxes in the **Available** box and move them by clicking on the right arrow to the **Chosen** box.
6. Click **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 the migratable solution, a file-based custom store is created, which points to the JMS Server to the same Migratable Target as the custom store.

1. Log into 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 **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

Use the following steps to migrate the JMS Services running on the BIP Cluster to the same migratable target as the previously created custom persistent store.

### WARNING:

Ensure that JMS services on **bi\_server1** and the server itself are shut down so that the migration task is successful. The BIP Scheduler becomes inoperable when the server is shut down.

1. In the **Oracle WebLogic Server Administration Console**, under the **Domain Structure** section menu, click **Services, Messaging, and JMS Servers** from the tree.
2. In the **Summary of JMS Servers** pane, **JMS Servers** section, check the check box for the **BipJmsServer** (Default) if no other JMS servers were created.
3. In the **Change Center** section of the pane, click **Lock & Edit**.
4. Select the new custom persistent store that was created in the previous step from the **Persistent Store** drop-down list.
5. Click **Save**.

### Note:

Ignore any error messages about the JMS server or SAF agent that display.

6. Click the **Targets** tab and select **bi\_server1 (migratable)** from the **Target** drop-down list to change the target for the JMS server.
7. Click **Save**.
8. Click **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 WebLogic documentation for their migration process.

## Manually Migrate the JMS Server

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

1. In the **Change Center** section of the Administration Console, click **Lock & Edit**.
2. In the **Domain Structure** tree, click **Environment, Migratable Targets**.
3. In the **Summary of Migratable Targets** page, click the **Control** tab.
4. In the **Migratable Target** section, check the check box for each target server to migrate.

5. Click **Migrate**.
6. Select a new managed server from the **New hosting server** drop-down list that is healthy (in this example, `bi_server2`).
7. Click **OK**.
8. Click **Activate Changes**.