



Installing and Upgrading Reporting Module

This chapter describes how to install the Reporting module, and to use the various installer utilities developed by Cisco to install the Cognos software components and integrate them with the Cisco Prime Service Catalog application.

Cognos environment is comprised of an application server and a database server.

- An application server is the computer where you install the IBM Cognos software, and execute the configuration scripts to integrate Cognos with the Cisco Prime Service Catalog application.
- A database server is the computer where the Data Mart and Content Store databases reside.

The following sections describe the prerequisites for the Cognos application server and database server.

Prerequisites for Installing Reporting

Cognos Application Server Requirements

Operating Systems

- IBM Cognos software must be installed on a computer that runs Windows Server 2012 R2 (64-bit) operating system.
- It is recommended but not required that the Cognos application server is a separate computer from the Cisco Prime Service Catalog application. However, if the Cisco Prime Service Catalog application is running on a Linux computer, then the Cognos application server must be a separate machine with the Windows operating system.

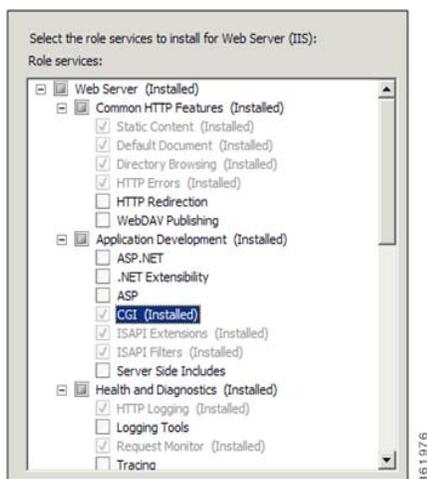
Memory and Disk Space

- The application server must have at least 8 GB RAM and 50 GB of free disk space.
- There must be at least 2 GB of free disk space on the drive that contains the %TEMP% directory, if this is different from the drive when you plan to install the Cognos software.

Internet Information Services (IIS)

- The “Web Server (IIS)” role must be installed on the Cognos application server.
- The “World Wide Web Publishing Service” is configured to start up automatically.
- IIS must have a site named “Default Web Site”.
- The following role services must be enabled for IIS:
 - CGI
 - ISAPI Extensions
 - ISAPI Filters

Figure 5-1 Select Role Services for Web Server



Internet Explorer

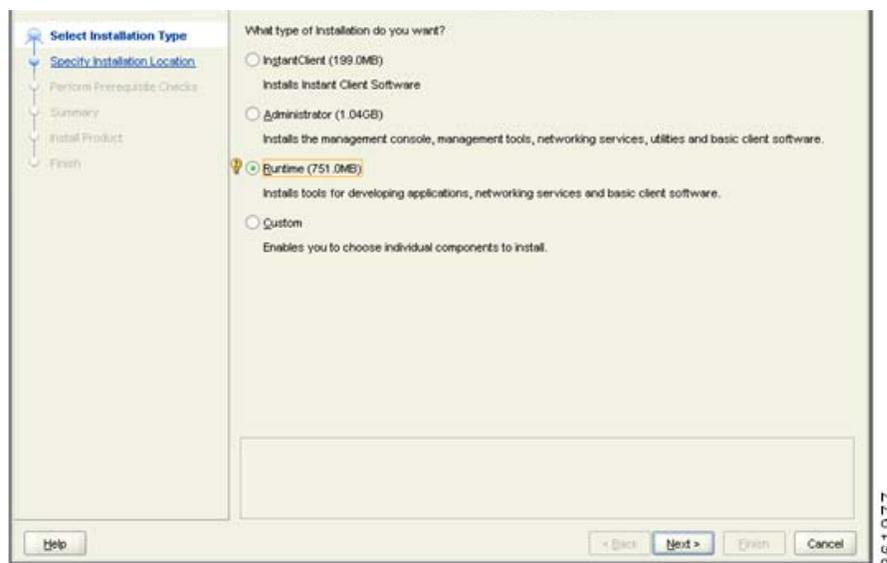
- Microsoft Internet Explorer (IE) version 11 and FireFox 49.0.2.xesr (or later) are supported. Use IE11, FireFox 49.0.x esr browser when accessing the Cognos UI or the “Advanced Reporting” module inside of the Cisco Prime Service Catalog.
- The following browser settings must be enabled:
 - Accept third-party cookies
 - JavaScript
 - Run ActiveX controls and plug-ins
 - Script ActiveX controls marked safe for scripting
 - Active scripting
 - Allow META REFRESH

Database Client Connectivity

The appropriate Database Client Connectivity software must be installed on the Cognos application server, and preconfigured to connect to all three databases: Request Center database, Data Mart database, and Content Store database.

- **For Oracle 12c:** The Oracle Client 12.1.0.2(32-bit) software is required (note that the 32-bit version of Oracle 12c Client software must be used, even though the Windows Server 2012 R2 operating system is a 64-bit version). The Cognos software installation is not bundled with the necessary JDBC driver to connect to an Oracle database. Thus, if the Content Store database is on Oracle, you must install the Oracle Client software on the Cognos application server. When installing Oracle Client 12.1.0.2, choose the “Runtime” option:

Figure 5-2 Select Installation Type



- **For Microsoft SQL Server 2016:** The SQL Server Client Connectivity software is not required. The Cognos installation is already bundled with the necessary JDBC driver to connect to the SQL Server database server.

Other Requirements

- You must log in as a user with administrative privileges on the application server to install the Cognos software. This user must also have read and write permission to the %TEMP% directory.
- The following machines must all be set to the same timezone:
 - The Cisco Prime Service Catalog application server
 - The Cognos application server
 - The database server where the following databases reside: Service Catalog, Data Mart, and Content Store

- A domain name system (DNS) should have been configured for the computer. The Primary DNS suffix of the hostname must be assigned to an appropriate value (for example, *mydomain.com*) and the hostname should resolve to the fully qualified domain name (for example, “ping *myserver*” should resolve to *myserver.mydomain.com*).
- The Service Catalog application server and the Cognos application server must belong in the same domain. For example, if the Service Catalog application server was installed on a computer in the domain called *mydomain.com*, then the Cognos application server must also belong in the same domain *mydomain.com*.
- Throughout this installation process, whenever you have to enter a host name or a server name, you must enter it as a fully qualified domain name. For example, do not enter “*localhost*,” or “*cognosserver*”; instead, enter “*cognosserver.mydomain.com*”. When you connect to Service Catalog, you must also enter the fully qualified domain name in the URL, for example, *http://servicecatalog.mydomain.com/RequestCenter*.
- Throughout this installation process, whenever you open a Command Prompt window to execute any script, make sure you increase the Command History Buffer Size (to something like 999) so that you can view the entire output on the Command Prompt window. Not all output is captured in the installation log file.

Cognos Database Server Requirements

The Reporting module requires access to three databases:

- The Service Catalog database
- The Data Mart database
- The Content Store database

In addition to the Service Catalog database, the Reporting module requires two more databases, Data Mart and Content Store. The next section describes how to create the Data Mart and Content Store database on either Oracle 12c or SQL Server 2016.

The Data Mart and Content Store database must be on the same type and version of RDBMS as the Service Catalog database. For example, if the Service Catalog database is on Oracle 12c, then the Data Mart and Content Store databases must also be created on Oracle 12c. If the Service Catalog database is on SQL Server 2016, then the Data Mart and Content Store databases must also be created on respective version of SQL Server.

The database server must be configured to support TCP/IP protocol for client connectivity, and must be accessible from the Cognos application server.

The database administrator must back up the Data Mart and Content Store database regularly because they contain all of the Cognos data, including custom reports and views as well as saved reports. To ensure the security and integrity of the databases, it is also important to protect the databases from unauthorized or inappropriate access.

Creating Data Mart and Content Store Databases for Oracle

For a new installation, you can prepare the tablespaces and users for the Data Mart and Content Store databases manually as described in this section before executing the Reporting installer, or you can let the Reporting installer create the database users on the default tablespaces for you by selecting the "Create Database" option presented by the installation wizard. The "Create Database" option of the Reporting installer is described in more detail in the "Installing Reporting" section.

To create tablespace and users for the Data Mart and Content Store database:

- Step 1** The Oracle database must be configured to use a Unicode character set (that is, either UTF-8 or UTF-16). To determine if the database character set is Unicode, execute the following sql command:

```
SELECT VALUE FROM NLS_DATABASE_PARAMETERS WHERE PARAMETER='NLS_CHARACTERSET';
```

If the returned value for the NLS_CHARACTERSET parameter is either AL32UTF8 or AL16UTF16, then your Oracle database supports Unicode. Otherwise, you need to create a new Oracle database, and specify the character set to be either AL32UTF8 or AL16UTF16 at creation time.

- Step 2** The ORACLE parameter CURSOR_SHARING must be set to EXACT and the parameter PROCESSES must be set to 500 (or higher). Execute the following commands to find out the current values of CURSOR_SHARING and PROCESSES:

```
SHOW PARAMETER CURSOR_SHARING;
```

```
SHOW PARAMETERS PROCESSES;
```

- Step 3** If CURSOR_SHARING is not set to EXACT, you can use the following command to change it:

```
ALTER SYSTEM SET CURSOR_SHARING=EXACT SCOPE=BOTH SID='*';
```

- Step 4** If the PROCESSES and SESSION parameters are smaller than 600, then work with your DBA to bump up these parameters for your Oracle database to 600 (or higher).

- Step 5** Create a new tablespace named DATAMART, with initial size of 500 MB and AUTOEXTEND ON.

- Step 6** Create a new temporary tablespace named DATAMART_TEMP, with initial size of 30 MB and AUTOEXTEND ON.

- Step 7** Create a database user named DMUser, with default tablespace set to DATAMART and temporary tablespace set to DATAMART_TEMP. DMUser should be granted QUOTA UNLIMITED on the DATAMART tablespace. DMUser will be the owner of the Data Mart schema.

- Step 8** Grant the following permissions to DMUser:

```
GRANT
  CREATE SESSION,
  CREATE TABLE,
  CREATE PROCEDURE,
  CREATE SEQUENCE,
  CREATE TRIGGER,
  CREATE VIEW,
  CREATE MATERIALIZED VIEW,
  CREATE SYNONYM,
  ALTER SESSION
  TO DMUser;
```

- Step 9** Create another database user named CSUser, with default tablespace set to DATAMART and temporary tablespace set to DATAMART_TEMP. CSUser should be granted QUOTA UNLIMITED on the DATAMART tablespace. CSUser will be the owner of the Content Store schema.

- Step 10** Grant the following permissions to CSUser:

```
GRANT
  CREATE SESSION,
  CREATE TABLE,
  CREATE PROCEDURE,
  CREATE SEQUENCE,
  CREATE TRIGGER,
```

```
CREATE VIEW
TO CSUser;
```

Creating Data Mart and Content Store Databases for MS SQL Server

For new installation, you can prepare the Data Mart and Content Store databases and login users as described in this section before executing the Reporting installer, or you can let the Reporting installer create the databases and login users for you by selecting the "Create Database" option presented by the installation wizard. The "Create Database" option of the Reporting installer is described in more detail in the "Installing Reporting" section.

To create the Data Mart and Content Store databases and login users:

-
- Step 1** SQL Server can be installed as Default Instance or a Named Instance.
 - Step 2** SQL Server must be configured with mixed-mode authentication (that is, allows both SQL Server authentication and Windows authentication).
 - Step 3** Create two separate databases called "Datamart" and "ContentStore", each with initial size of 500 MB and autogrowth by 10 percent. The collating sequence of each database must be case-insensitive.
 - Step 4** Create two separate database login accounts named "DMUser" and "CSUser".
-  **Note** DMUser and CSUser must be SQL Server login accounts that authenticate to the SQL Server using SQL Server authentication method, and not Windows authentication method.
-
- Step 5** Assign the database user account "DMUser" as the db_owner of the "Datamart" database. Verify your settings to ensure that a) the user "DMUser" in the Data Mart database is mapped to the login account "DMUser" in the SQL Server, b) the default schema is "dbo", and c) the user "DMUser" has the "db_owner" database role membership.
 - Step 6** Assign the database user account "CSUser" as the db_owner of the "ContentStore" database. Verify your settings to ensure that a) the user "CSUser" in the Content Store database is mapped to the login account "CSUser" in the SQL Server, b) the default schema is "dbo", and c) the user "CSUser" has the "db_owner" database role membership.
-

Sizing the Content Store Database

The size of the Content Store database depends on a number of factors:

- Number of concurrent users
- Number of saved reports (plus number of pages/rows/images per report)
- Number of saved report views (plus number of pages/rows per report)
- Format of the reports (PDF, HTML, and so on)

The following guidelines, adapted from an article published in the Cognos Knowledge Base, may help you estimate database sizing requirement, based on usage estimates from the above parameters.

Content Store sizing is a function of:

- System space: transaction logs; Cognos estimates 3,000,000 KB for a database with 250 active users.
- Temporary space: required to generate reports; estimate 100,000 KB per concurrent user.
- Data space: required to hold reports and views saved by users; user folders; and the Framework Manager models on which the reports are based.
- The total number of saved reports and views is a major factor in terms of Content Store sizing, and the most difficult to predict. This can be partially controlled by Cognos Administrators limiting the number of versions of a report that can be saved by each user.
- The size of each saved report is based on the number of report pages. Factors that may influence the average size of a report include number of pages; formatting and text selection; and the inclusion of images. Cognos estimates that following requirements for saved objects which users may create.
- Cognos also estimates the number of each of these saved objects that a “typical” user is likely to maintain. Multiplying these numbers by the storage requirements for each object yields an estimate for volume- (user-)dependent storage requirements for data space within the Content Store.

| Object | Storage Requirements (Estimate) | # Per User |
|--|---------------------------------|------------|
| Saved Report, PDF format, 1–10 pages | 340 KB | 2 |
| Saved Report, PDF format, 10–100 pages | 440 KB | 9 |
| Saved View, 1–100 rows | 250 KB | 3 |
| Saved View, 100–1000 rows | 350 KB | 8 |
| Schedule (daily or weekly) | 30 KB | 2 |

- You need only multiply these requirements by the number of Cognos users to estimate this most volatile aspect of disk usage.

Installing Cognos Software

This section describes how to install Cognos 10.2.1.



Note

You must log in as a user with administrative privileges to perform the installation tasks described in this section.

Downloading Cognos Software

Perform the following tasks to download Cognos software:

- Step 1** Access the Cisco product download web site and authenticate with the user name and password provided to you.
- Step 2** Search for the product name “Cisco Prime Service Catalog Reporting”, or navigate within the product selector to locate the Cognos Business Intelligence installer and fixed packs.

- Step 3** Choose **Business Intelligence Install** and download the following files under version 10.2.1 to your Cognos application server machine:

| File to download | Description |
|--|---|
| bi_svr_64b_10.2.1_win_ml.tar.gz | Cognos 10.2.1 Business Intelligence Server (64-bit) |
| bi_dmgr_64b_10.2.1_win_en.tar.gz | Cognos 10.2.1 Data Manager (64-bit) |
| up_bisrvr_winx64h_10.2.5002.78_ml.tar.gz | FixPack2 for Cognos 10.2.1 |

- Step 4** Extract the Cognos Business Intelligence Server zip file into a temporary directory such as C:\cognos_bi_software. Extract the Cognos Data Manager zip file into a temporary directory such as C:\cognos_dm_software. Extract the Cognos FixPack zip file into a temporary directory such as C:\cognos_fixpack.
- Step 5** Delete the JAVA_HOME environment variable, if it exists on the Cognos machine. This is because Cognos installation program will use its embedded Java, which may conflict with the version of Java defined for JAVA_HOME environment variable. After you install Cognos software, you will then set the JAVA_HOME environment variable to point to the Java directory under the Cognos installation directory.

Installing Cognos Business Intelligence Server

Perform the following tasks to install Cognos business intelligence server:

- Step 1** (Assuming that you extracted the Cognos BI software under the C:\cognos_bi_software directory) Open the folder C:\cognos_bi_software\winx64h.
- Step 2** Double-click **issetup.exe** to launch the Cognos Setup program.
- Step 3** Walk through the installation wizard by choosing all default values presented on the screen, until you get to the Component Selection screen.
- Step 4** Choose only the following components, and deselect all other components:
- Application Tier Components
 - Gateway
 - Content Manager
- Step 5** Click **Next** and proceed with the rest of the installation wizard, until you get to the Finish screen.
- Step 6** Uncheck the “Start IBM Cognos Configuration” option, and then click **Finish**.

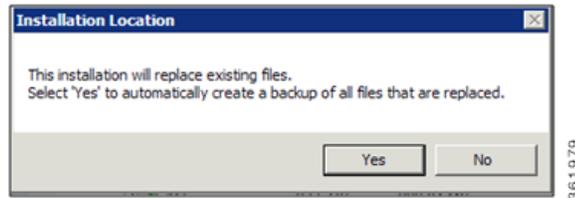
Installing Cognos Data Manager

Perform the following steps to install Cognos data manager:

- Step 1** Go to C:\cognos_dm_software\winx64h directory (assuming that the Cognos Data Manager software is extracted to this location).
- Step 2** Double-click **issetup.exe** to launch the Cognos Setup program.

- Step 3** Walk through the installation wizard by choosing all default values presented on the screen, until you get to the Installation Location screen.
- Step 4** Enter the same folder name where you have installed the Cognos Business Intelligence Server (for example, C:\Program Files\cognos\c10_64). Then click **Next**.
- Step 5** If you see the message “Warning: You are installing to the same location as a previous installation. Do you want to continue?”, click **Yes** to proceed.
- Step 6** If the following message appears, click **No** to proceed:

Figure 5-3 Installation Location Warning Message



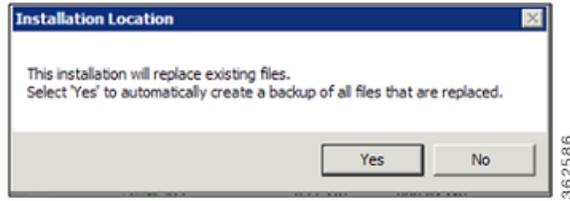
- Step 7** When the Component Selection screen appears, choose only the following component, and deselect all other components:
- Data Manager Engine
- Step 8** Click **Next** and proceed with the rest of the installation wizard, until you get to the Finish screen.
- Step 9** Uncheck the “Start IBM Cognos Configuration” option, and then click **Finish**.

Installing Cognos Fix Pack

Perform the following steps to install Cognos fix pack:

- Step 1** Assuming that you extracted the Cognos software under the C:\cognos_fixpack folder, go to the folder "C:\cognos_fixpack\winx64h".
- Step 2** Double-click **issetup.exe** to launch the Cognos Setup program.
- Step 3** Walk through the installation wizard by choosing all default values, until you get to the Installation Location screen.
- Step 4** Enter the same folder name where you have installed the Cognos Business Intelligence Server (for example, C:\Program Files \cognos\c10_64). Click **Next**.
- Step 5** If the following message appears, click No to proceed:

Figure 5-4 Installation Location Warning Message



- Step 6** Click **Next** and proceed with the rest of the installation wizard, until you get to the Finish screen.
- Step 7** Click **Finish**.

Installing Reporting

This section describes how to install and configure Cisco Prime Service Catalog Reporting. You must log in as a user with administrative privileges to perform the installation tasks described in this section.



Note

Reporting Installer uses the Cognos in-built JRE 7 and you must not have the Oracle JDK 1.8 or 1.7 installed on the same system.

Executing Reporting Setup

Reporting is installed by running a setup program which installs and launches an installation wizard.

To execute the setup program:

- Step 1** On the Cognos machine, set or modify the JAVA_HOME environment variable to "<COGNOS_HOME>\bin64\jre\7.0", where <COGNOS_HOME> is the installation directory for Cognos (i.e. C:\Program Files\cognos\c10_64). Then, add "%JAVA_HOME%\bin" to the beginning of the PATH environment variable. This will ensure that the Java executable under <COGNOS_HOME>\bin64\jre\7.0\bin will be used.
- Step 2** Copy the unlimited strength JCE policy files from <Build_No>\reporting\ibm_jre_7.0_policy to the %JAVA_HOME%\jre\lib\security directory, overwriting the existing files. The unlimited strength policy files are "local_policy.jar" and "US_export_policy.jar".
- Step 3** Extract the Cisco Prime Service Catalog software that you downloaded from the Cisco web site to your computer, if you have not already done so.
- Step 4** Double-click **reporting_setup.cmd** to launch the installation wizard.
- A progress bar appears, when complete, the first page of the installation wizard appears.

How to Use the Installation Wizard

The installation configuration options are case-sensitive, so ensure that you enter a value, such as a database name or a JMS queue name, with case sensitivity; otherwise, your installation may fail.

Running the Reporting Installation Wizard

This section provides instructions for running the Reporting installation wizard.

Prerequisite

Copy the `kek_new.txt` and `kek_old.txt` files from the `<ServiceCatalog_Install_Dir>\dist` directory to `C:\temp` or any other folder on the reporting machine. During the installation, you will be prompted for the master key file and you must navigate to this path in that window and select the `kek_new.txt` file.

-
- Step 1** Stop the IIS web server.
 - Step 2** Launch the installation wizard (see [Executing Reporting Setup](#)).
 - Step 3** On the first page of the installation wizard, click **Next** to begin.
 - Step 4** On the Choose Install Folder panel, enter a destination folder for the installation and click **Next**.
The default destination folder is “`C:\CiscoPrimeServiceCatalog`”. If desired, enter a different destination folder, or click Choose to locate and select another folder (or create a new one). The path name for the destination folder must not contain any spaces. Throughout this document, this destination folder is referred to as `<Reporting_Install_Dir >`.
 - Step 5** Enter the Cognos root directory. This is where you installed the Cognos 10.2.1 software. The default Cognos root directory is “`C:\Program Files\ibm\cognos\c10_64`”. If needed, enter a different root directory, or click Browse to locate and choose the directory. Click **Next**.
 - Step 6** In the Database Selection panel, choose the database platform (Microsoft SQL Server or Oracle) and click **Next**.
Refer to your [Database Information Worksheet](#) that you filled out earlier to determine your database platform.

- Step 7** In the Service Catalog Database panel, enter your Service Catalog database configuration values. For more information on updating the values on the Service Catalog Database panel, see [Table 5-1](#). Use your [Database Information Worksheet](#) that you filled out earlier to help you determine what configuration values to enter.

Table 5-1 Request Center Database Table for Reporting

| Field | SQL Server | Oracle Server |
|---------------------------------------|--|---|
| Host IP Address | Enter the IP address of the server where the Service Catalog database resides. | Enter the IP address of the server where the Service Catalog schema resides. When using Oracle RAC use Scan IP Address only. |
| Port | Enter the TCP/IP Port Number used by your Database Server. Valid port numbers are from 1 to 65535. The default value is 1433. | Enter the TCP/IP Port Number used by the Database Server. The default value is 1521. |
| Database Name | Enter the name of the RequestCenter database. By default, the value is "Service Catalog". Enter only alphanumeric characters. Do not use any space characters. | Not Applicable |
| Database SID or Database Service Name | Not Applicable | If you use SID to connect to your Oracle database, then select the SID radio button, and enter the Oracle SID value. If you use Service Name to connect to your Oracle database, then select the Service Name radio button, and enter the Service Name value. When using Oracle RAC use the Service Name only. |
| Username | Enter the database username. Enter only alphanumeric characters. Do not include any space characters. This username is the login ID and the db_owner of the "Service Catalog" database. The default value is "CPSCUser". | Enter the database username. Enter only alphanumeric characters. Do not include any space characters. This username is the login ID and schema name for the database schema. The default value is "CPSCUser". |
| Password | Enter the password for the Database Username. | Enter the password for the Database Username. |

- Step 8** Click **Next** to proceed to the next page of the wizard.

The installer performs a connection test to your Service Catalog database using the configuration values you entered and checks that the prerequisites for your database platform have been fulfilled.

If the database connection test fails, a "Database Test Connection Failed" dialog box message appears. If you get this message, click **OK** to close the dialog box, and make any necessary modifications to the information on the Service Catalog Database panel. If you want to abort the installation wizard at this point, click **Cancel**.

If the database connection test passes, the Master Key File panel appears.

Step 9 In the Master Key File panel, enter (or browse to) the full path to the kek_new.txt file that you copied to C:\Temp earlier.

Step 10 Click Next.

The Prime Service Catalog installer will verify that the master key in the specified kek_new.txt file matches with the Service Catalog database that you entered in the last panel. If the master key file does not match, the installer will raise an error and will not let you proceed to the next step.

Step 11 In the DataMart Database Creation panel:

- If you have already created your database, then select **No** here and click **Next** to continue. You will be prompted for the information of your existing database. Refer to the [Data Mart Database Table for Reporting](#) to enter the database information.
- If you have not created the database in advance, select **Yes** to let the installer create the database for you and click **Next**. You will be prompted for the connection information to your database server so that the installer can create the database on the fly. Enter the database information on the Data Mart Database panel and click **Create Datamart**.

If the database creation is successful, the Data Mart database successful message dialog appears. Click **OK** to close the message dialog box. Refer to the [Data Mart Database Table for Reporting](#) below to enter the database information.



Note This "Create Datamart" feature will create a very basic Data Mart database that meets the minimum requirements for the Service Catalog Reporting module to operate. This feature is recommended for a Demo or Test system, but for a Production system, it is advisable that you work with your DBA to create the Data Mart database in advance which meets all of the product requirements as described in the Configuring Databases section, as well as any performance, reliability and security requirements that adhere to your corporate policy.



Note The fields in the Data Mart Database panel varies depending on whether you clicked **Yes** or **No** in the Data Mart Database Creation panel. Use the [Table 5-2](#) accordingly.

Table 5-2 Data Mart Database Table for Reporting

| Field | SQL Server | Oracle Server |
|-----------------|--|---|
| Host IP Address | Enter the IP address of the Database Server. | Enter the IP address of the Database Server. When using Oracle RAC use Scan IP Address only. |
| Port | Enter the TCP/IP Port Number used by the Database Server. The default value is 1433. | Enter the TCP/IP Port Number used by the Database Server. The default value is 1521. |

Table 5-2 Data Mart Database Table for Reporting

| Field | SQL Server | Oracle Server |
|---------------------------------------|---|---|
| Database name | Enter the name of the database for the Data Mart. Enter only alphanumeric characters. Do not include any space characters. The default value is "Datamart" | Not Applicable |
| sa password | To create the database in SQL Server, the installer must connect to SQL Server as the "sa" user. Enter the password for the "sa" user here. | Not Applicable |
| sys password | Not Applicable | Enter the password for the "sys" user. |
| Database SID or Database Service Name | Not Applicable | If you use SID to connect to your Oracle database, then select the SID radio button, and enter the Oracle SID value. If you use Service Name to connect to your Oracle database, then select the Service Name radio button, and enter the Service Name value. When using Oracle RAC use the Service Name only. |
| Username | Enter the database username. Enter only alphanumeric characters. Do not include any space characters. This username will be the login ID and the db_owner of the "Datamart" database. The default value is "DMUser". | Enter the database username. Enter only alphanumeric characters. Do not include any space characters. This username will be the login ID and schema name for the database schema. The default value is "DMUSER". |
| Password | Enter the password for the Database Username. | Enter the password for the Database Username. |
| Confirm Password | Re enter the password for the Database Username. | Re enter the password for the Database Username. |
| User tablespace | Not Applicable | (Optional value) If you have a specific Oracle tablespace name, enter it here. The default tablespace for the shema will be set to this value. If you leave this value blank, then the installer will use whatever the default USER tablespace that the Oracle server provides. |
| Temp tablespace | Not Applicable | (Optional value) If you have a specific Oracle temp tablespace name, enter it here. The temp tablespace for the shema will be set to this value. If you leave this value blank, then the installer will use whatever the default TEMP tablespace that the Oracle server provides. |

- Step 12** In the Data Mart Database panel, click the **Next** button to continue. The installer will connect to the database to validate the required settings for the database. If the installer created the database for you, then it would meet all of the required settings, and the validation test would pass. If you provided the information for an existing database, then the installer may report a validation error if it detects that a certain required database setting is missing. If a database validation error occurs, the installer will not allow you to move on. You can do one of the following:
- Close the error dialog and click **Cancel** to exit the installation wizard, or
 - Fix the missing database setting on a separate database connection session. Then come back to this screen, close the error dialog, and click **Next** again. At this point, the installer will repeat the validation test, and if the test passes, it will let you move to the next page.

If the database validation passes, the Content Store Database Creation panel appears.

- Step 13** For a new installation, you can prepare the database in advance as described in the [Cognos Database Server Requirements](#) section.
- If you have already created your database, then select **No** and click **Next** to continue. You will be prompted for the information of your existing database.
Refer to the Content Store Database Table for Reporting below to enter the database information. Click **Next**.
 - If you have not created the database in advance, select **Yes** to let the installer create the database for you and click **Next**. You will be prompted for the connection information to your database server so that the installer can create the database on the fly. Enter the database information on the Content Store Database Creation panel and click **Create Content Store**. If the database creation is successful, the Content Store Database successful message dialog will appear.



Note

The Create Database feature will create a very basic Content Store database that meets the minimum requirements for the Service Catalog Reporting module to proceed. This feature is recommended for a Demo or Test system, but for a Production system, it is advisable that you work with your DBA to create the Content Store database in advance which meets all of the product requirements as described in the Cognos Database Server Requirements section, as well as any performance, reliability and security requirements that adhere to your corporate policy.

Refer to the [Table 5-3](#) below to enter the database information. Click **Next**.



Note

The fields in the Content Store Database panel varies depending on whether you clicked Yes or No in the Content Store Database Creation panel. Use the Content Store Database Table for Reporting accordingly.

Table 5-3 *Content Store Database Table for Reporting*

| Field | SQL Server | Oracle Server |
|-----------------|--|---|
| Host IP Address | Enter the IP address of the Database Server. | Enter the IP address of the Database Server. When using Oracle RAC use Scan IP Address only. |
| Port | Enter the TCP/IP Port Number used by the Database Server. The default value is 1433. | Enter the TCP/IP Port Number used by the Database Server. The default value is 1521. |

Table 5-3 Content Store Database Table for Reporting

| Field | SQL Server | Oracle Server |
|---------------------------------------|---|---|
| Database name | Enter the name of the database for the Content Store. Enter only alphanumeric characters. Do not include any space characters. The default value is "ContentStore" | Not Applicable |
| sa password | To create the database in SQL Server, the installer must connect to SQL Server as the "sa" user. Enter the password for the "sa" user here. | Not Applicable |
| Database SID or Database Service Name | Not Applicable | If you use SID to connect to your Oracle database, then select the SID radio button, and enter the Oracle SID value. If you use Service Name to connect to your Oracle database, then select the Service Name radio button, and enter the Service Name value. When using Oracle RAC use the Service Name only. |
| Username | Enter the database username. Enter only alphanumeric characters. Do not include any space characters. This username will be the login ID and the db_owner of the "ContentStore" database. The default value is "CSUser". | Enter the database username. Enter only alphanumeric characters. Do not include any space characters. This username will be the login ID and schema name for the database schema. The default value is "CSUSER". |
| Password | Enter the password for the Database Username. | Enter the password for the Database Username. |
| Confirm Password | Re enter the password for the Database Username. | Re enter the password for the Database Username. |
| User tablespace | Not Applicable | (Optional value) If you have a specific Oracle tablespace name, enter it here. The default tablespace for the shema will be set to this value. If you leave this value blank, then the installer will use whatever the default USER tablespace that the Oracle server provides. |
| Temp tablespace | Not Applicable | (Optional value) If you have a specific Oracle temp tablespace name, enter it here. The temp tablespace for the shema will be set to this value. If you leave this value blank, then the installer will use whatever the default TEMP tablespace that the Oracle server provides. |

- Step 14** Click the **Next** button on the Content Store Database panel to continue. The installer will connect to the database to validate the required settings for the database. If the installer created the database for you, then it would meet all of the required settings, and the validation test would pass. If you provided the information for an existing database, then the installer may report a validation error if it detects that certain required database setting is missing. If a database validation error occurs, the installer will not allow you to move on. You can do one of the following:
- Close the error dialog and click **Cancel** to exit the installation wizard, or
 - Fix the missing database setting on a separate database connection session. Then come back to this screen, close the error dialog, and click **Next** again. At this point, the installer will repeat the validation test, and if the test passes, it will let you move to the next page.

If the database validation passes, the Content Store Root Directory page appears.

- Step 15** Click **Next** to proceed. The Cognos Settings page appears.

- Step 16** Enter the following information for Cognos server.

- Cognos Server Name:** Enter the fully qualified domain hostname (not IP address) of the computer where the Cognos software is installed.
- Configure IIS?:** Do not deselect this option. The installer will automatically configure the Cognos application on the IIS web server on this computer.
- IIS Web Site:** Do not change the default value of "Default Web Site".

- Step 17** Click the **Advanced Options** button. The Advanced Options dialog box appears.

Specify if you want to execute the database scripts as part of the installation by selecting the **Execute SQL Scripts** checkbox. This checkbox is selected by default.

You should deselect this setting only in exceptional circumstances such as:

- If a separate review of the scripts by internal personnel is required before they execute. In this case, you will need to step through this wizard again, this time selecting the checkbox, in order to execute the scripts and complete the installation.
- A previous installation attempt successfully executed these scripts but failed later during the installation process. In this case, you can save time during the installation process the second time through by deselecting the checkbox, since execution of the scripts takes some time and if they have already executed, there is no need to do so again.

- Step 18** Click **Next** to proceed.

The Form Data Reporting panel appears.

- Step 19** Enter your Form Data Reporting Tables settings as described in [Form Data Reporting Tables](#). Should you decide that you need to modify some of these settings after the installation, there is a utility for you to do so. See the Modifying Form Data Reporting Configuration section of *Cisco Prime Service Catalog Reporting Guide* for more information.

Table 5-4 Form Data Reporting Tables

| Field | Definition |
|-------------------------|--|
| Dictionary table prefix | The prefix for the names of the Dictionary Tables. Default value is "DM_FDR_DICTIONARY_." It is recommended to go with this prefix. If you must change the prefix, use only alphabetic characters and the underscore character. Do not use any numeric or special characters. |
| Service table prefix | The prefix for the names of the Service Tables. Default value is "DM_FDR_SERVICE_." It is recommended to go with this prefix. If you must change the prefix, use only alphabetic characters and the underscore character. Do not use any numeric or special characters. |
| Table columns prefix | The prefix for the field names in each table. Default value is "FIELD." It is recommended to use the default value unless there is absolute necessity to change it. This name is used to create tables with field name like FIELD1, FIELD2, ..., FIELDn. |
| Text column max length | This parameter indicates the maximum size of dictionary and service table object varchar field size. The default value is 200. |

Step 20 Click **Next** to proceed. The Form Data Reporting Dictionary Settings panel appears.

Step 21 Enter Form Data Reporting Dictionary Settings as described in [Form Data Reporting Dictionary Settings Table](#).

Table 5-5 Form Data Reporting Dictionary Settings Table

| Field | Definition |
|-------------------|---|
| Dictionary tables | Number of tables required in the Data Mart database to store the data for reportable dictionaries. One table is needed per reportable dictionary. The default value is 50, which is also the minimum value allowed. |
| Text Fields | Number of Text type fields that are used in dictionaries based on the customer form reporting analysis. The default value is 40. |
| Numeric fields | Number of Numeric fields that are used in dictionaries based on the customer form reporting analysis. The default value is 10. |
| Date fields | Number of Date fields that are used in dictionaries based on the customer form reporting analysis. The default value is 10 |

Step 22 Click **Next** to proceed. The Form Data Reporting Service Settings page appears.

Step 23 Enter your Form Data Reporting Service Settings as described in [Form Data Reporting Service Settings Table](#).

Table 5-6 Form Data Reporting Service Settings Table

| Field | Definition |
|----------------|---|
| Service tables | Number of tables required in the Data Mart database to store the data for reportable dictionaries. One table is needed per reportable dictionary. The default value is 50, which is also the minimum value allowed. |
| Text Fields | Number of Text type fields that are used in dictionaries based on the customer form reporting analysis. The default value is 80. |
| Numeric fields | Number of Numeric fields that are used in dictionaries based on the customer form reporting analysis. The default value is 20. |
| Date fields | Number of Date fields that are used in dictionaries based on the customer form reporting analysis. The default value is 20. |

Step 24 Click **Next**. The SMTP Settings panel appears.

Step 25 Enter your SMTP settings as described in [SMTP Settings Table](#).

Table 5-7 SMTP Settings Table

| Field | Definition |
|---------------|--|
| SMTP hostname | The Hostname or IP address of the SMTP server. |
| SMTP port | The SMTP Port Number used by the SMTP server. Valid port numbers are from 1 to 65535. The default value is 25. |
| SMTP username | (Optional) The authenticated user for the SMTP server. |
| SMTP password | (Optional) The password for the SMTP username. |
| Sender email | The sender email address to be used for system generated notifications. |

Step 26 (Optional) Click the "**Test SMTP**" button to verify the connection to the SMTP server. If the test connection fails, the installer will still let you move on to the next page.

Step 27 Click **Next** to proceed. The Pre-Installation Summary panel appears.

The installation wizard has enough information to start the installation process. Review the settings that appear on this panel. If you need to make any changes, click Previous to go back to a particular panel and make the necessary changes. If they are correct, click Install to begin the installation of Reporting.

The installation process may take up to 20 minutes to complete. Do not interrupt the installation wizard during this process. If the installation process completes successfully, the Install Complete panel of the installation wizard appears.

Step 28 Click **Done** to exit the installation wizard.

Executing create_datasource.cmd

Perform the following steps to execute create_datasource.cmd:

- Step 1** Open a Command Prompt window, and navigate to the `<Reporting_Install_Dir>\cognos\bin` directory.
- Step 2** Execute `create_datasource.cmd`.
- Step 3** After `create_datasource.cmd` completes successfully, open a browser on the Cognos machine, and connect to the URL `http://localhost/cognos10`.
- Step 4** Enter the User ID and Password of the Service Catalog Site Administrator user, then click **OK** to log in.
- Step 5** In the UI, click the **My home** link.
- Step 6** In the top right corner of the UI, click the **Launch** link, and click the **IBM Cognos Administration** drop-down menu.
- Step 7** Click the **Configuration** tab.
- Step 8** In the left pane, click the **Data Source Connections** link.
- Step 9** In the right pane, click on "RequestCenter".
- Step 10** Skip this step if your database is SQL Server. If your database is Oracle, you must perform the steps a to f described below to modify the JDBC connection parameters.
- a. Click the "Set properties - RequestCenter" icon under the Actions column as shown below:

Figure 5-5 Set Properties - Request Center



- b. Click the Connection tab, and click the "Edit connection string" icon, which appears next to Connection string text box.
- c. Under the OCI tab, copy the value in the "SQL*Net connect string" text box.
- d. Open the JDBC tab, then select the Thin radio button for Driver type, paste the connection string copied in the above step to the "Oracle Net Descriptor" text box as shown below:

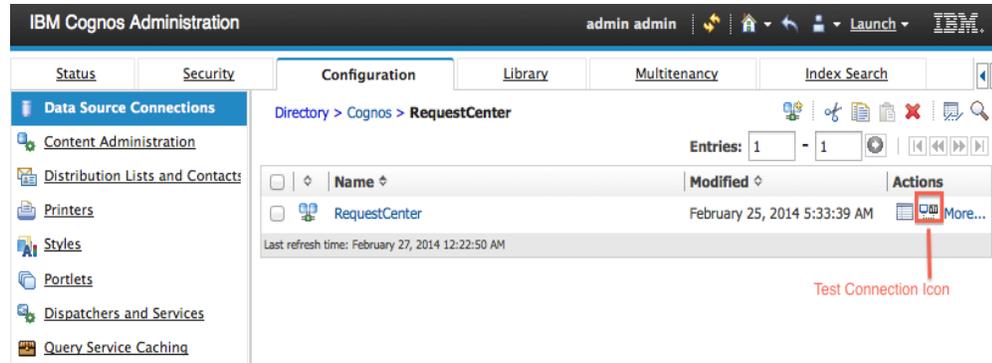
Figure 5-6 Driver Type Selection Window



- e. Click the OK button to save the changes.
- f. Click OK button again to close the "Set properties - RequestCenter" page.

- Step 11** Perform this step for both SQL Server and Oracle. Click the "Test the connection" icon under the Actions column for RequestCenter.

Figure 5-7 Test the Connection Window



- Step 12** On the next page, click the **Test** button.
- Step 13** Verify that the status show “Succeeded” for both JDBC entries on the screen. You can now proceed to the next section.

Importing Service Catalog Reports

Perform the following tasks to configure and import the Service Catalog Standard Reports Archive to the Cognos environment.

- Step 1** Open a Command Prompt window and navigate to the `<Reporting_Install_Dir>\cognos\bin` directory.
- Step 2** Execute `import_reports.cmd`.
- Step 3** Execute `update_datamart_std.cmd`.



Note This script may take several minutes to complete.

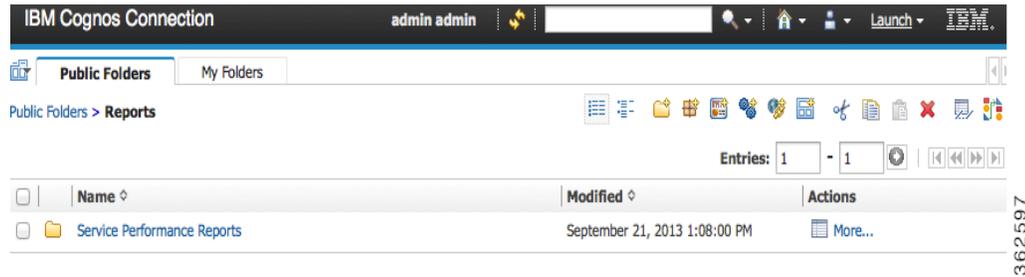
Restart the Service Catalog Application

Perform the following steps to restart the service catalog application:

- Step 1** **Restart the Service Catalog application.** This will allow the Service Catalog application server to pick up the new configuration which enables it to integrate with the Cognos application server. Restart the entire application server where the Request Center application is running.
- Step 2** Once the application server is started, connect to the URL using the IP address (for example, `http://IP Address/RequestCenter`). Log in as the Site Administrator user.
- Step 3** Choose the **Reporting** module.

- Step 4** Click the **Reports** tab.
- Step 5** Verify that the Public Folders tab appears with a folder named “Service Performance Reports”. This is a good indication that the Reporting module of Service Catalog is integrated successfully with the Cognos application server.

Figure 5-8 The Report Tab



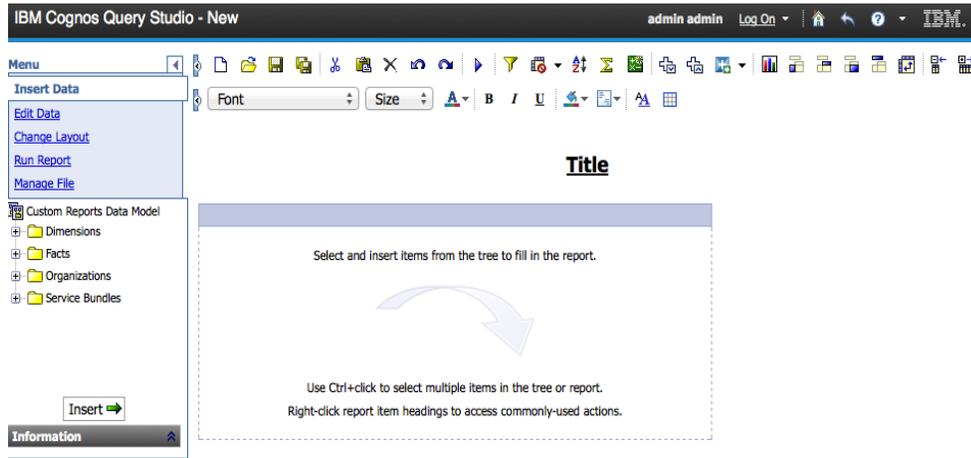
- Step 6** Proceed to “[Configuring Advanced Reporting](#)”.

Configuring Advanced Reporting

Execute the following scripts to set up the Advanced Reporting components. If you do not want Advanced Reporting, skip to the [Postinstallation Tasks](#).

- Step 1** On the Cognos machine, open a Command Prompt window, and navigate to the `<Reporting_Install_Dir>\cognos\bin` directory.
- Step 2** Execute `update_datamart.cmd`. This script may take several minutes to complete.
- Step 3** Execute `create_model.cmd`.
- Step 4** Execute `publish_fdr_pkg.cmd`. This script may take several minutes to complete.
- Step 5** Log out of the Service Catalog UI, then log back in as Site Administrator user. Remember that you must enter the IP address on the URL, for example, `http://IP Address/RequestCenter`.
- Step 6** Choose the **Advanced Reporting** module.
- Step 7** Click the **Ad-Hoc Reports** tab.
- Step 8** Click the **Custom Report Data Models** link.
- Step 9** If you see the Query Studio window, then it is a good indication that the Advanced Reporting module of Service Catalog is integrated successfully with the Cognos application server.

Figure 5-9 Query Studio Window



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Postinstallation Tasks

The postinstallation tasks consist of scheduling the ETL processes to be run. The amount of time each process takes to complete is proportional to the amount of data in the Request Center database which must be extracted and transmitted to the Data Mart database.

Postinstallation Tasks for Reporting

Set up the following script as scheduled tasks on the Cognos machine. All scripts reside in the `<Reporting_Install_Dir>\cognos\bin` directory.

| Standard Report Script | Description |
|-------------------------|--|
| update_datamart_std.cmd | This script extracts the data from the Service Catalog database and transmits it to the Data Mart database. This data is used to refresh the Service Catalog Standard Reports. This script can be scheduled to run however often you want Standard Reports to be refreshed. Normally, this script can be scheduled to run once a day, at off-peak hours. |

Postinstallation Tasks for Advanced Reporting

If you have Advanced Reporting, then you must also perform the tasks described in this section.

- Step 1** On the Cognos machine, set up the following scripts as scheduled tasks. All scripts reside in the `<Reporting_Install_Dir>\cognos\bin` directory.

| Advanced Report Scripts | Description |
|-------------------------|--|
| update_datamart.cmd | This script updates fact tables and dimensions in the Data Mart database. |
| create_model.cmd | This script creates the framework model used by the Cognos reporting tools (Query Studio and Report Studio). |
| publish_fdr_pkg.cmd | This script publishes the Cognos framework for Service Catalog. |

**Note**

We recommend scheduling the advanced report scripts in the table above to run once daily during off-peak hours. The data in the Data Mart database are available during this time, however performance may be adversely affected.

Allow 40 minutes per 10,000 new or changed requisitions between update_datamart.cmd and create_model.cmd. Allow 30 minutes per 10,000 new or changed requisitions between create_model.cmd and publish_fdr_pkg.cmd.

The scripts must be run without overlapping. If the scripts overlap, you may encounter data inconsistency.

Using Reporting Module with Oracle RAC Database

When installing the Reporting module with Oracle RAC database, enter the Oracle Service Name and the IP address of the Scan Host on the installation wizard to connect to the database. After the installation, follow the steps described below to replace the Scan Host's IP address with the Scan Name. Perform these steps before you start executing the reporting configuration scripts.

-
- Step 1** Add the Scan Name and its set of mapped IP addresses to the machine's hosts file.
 - Step 2** Stop the IBM Cognos service.
 - Step 3** Replace the Scan Host's IP address with the Scan Name in all files, located in the *<Reporting Install folder>* directory and the *<Cognos Install Folder>\c10_64* directory. The best way to do this is to use a third party software like grepWin to search which files in those directories containing the Scan Host's IP address, then use a text editor to modify those files.
 - Step 4** Overwrite file ojdbc6.jar with ojdbc7.jar (which is the Oracle 12c JDBC driver) in the following directories:
 - <Reporting Install folder>\cognos\lib*
 - <Cognos Install Folder>\c10_64\webapps\p2pd\WEB-INF\lib*
 - Step 5** Replace the string "%JAVA_HOME%\bin\java" with "%JAVA_HOME%\bin\java -Doracle.jdbc.autoCommitSpecCompliant=false" in all scripts located in the *<Reporting Install folder>\cognos\bin* directory. The best way to do this is to use a third party software such as grepWin to search which files in that directory containing the string JAVA_HOME, then use a text editor to modify those files.

**Note**

Do not replace any string that looks like "%JAVA_HOME%\bin\java.exe".

- Step 6** Use a text editor to remove the string "%DEBUG_OPTS%" in the script "update_datamart_std.cmd".
- Step 7** Start the IBM Cognos service.

Upgrading Reporting

Performing Preupgrade Tasks for Reporting

Backing Up Data Mart and Content Store Artifacts

To back up the Data Mart and Content Store artifacts:

- Step 1** Back up the Data Mart database (If there are any custom Data Mart tables, they can be referred from this backup) and the Content Store database.
- Step 2** Back up all custom-defined views that are used by Advanced Reporting from the Service Catalog database.
- Step 3** Export all the backed up custom-defined views that are used by Advanced Reporting from the Service Catalog database.

Uninstalling Cognos 8.4.x Components

This release of Service Catalog uses Cognos version 10.2.1. You can install Cognos 10.2.1 software on a brand new machine. But if you plan to install the Cognos 10.2.1 software on the same machine where you already have Cognos 8.4.x software, then you must first uninstall the Cognos 8.4.x software, by performing the following steps:

- Step 1** From your system Start button, choose **Programs > IBM Cognos 8 > Uninstall IBM Cognos 8**.
- Step 2** Choose the display language and click **Next**.
- Step 3** Choose all the components from the package list, and proceed with the rest of the installation wizard until you get to the Finish screen.
- Step 4** Reboot the system once all the components have been uninstalled successfully.

Installing Cognos 10.2.1 Software

See [Installing Cognos Software](#) for more details on how to install Cognos 10.2.1

Running the Reporting Installer for Upgrade

Perform the following steps to run the reporting installer for upgrade:

-
- Step 1** Run the Reporting installation wizard as described in the [Installing Reporting](#).
 - Step 2** After entering values for your Data Mart Database, click **Next** to proceed to the next page of the wizard. The Existing Installation Detected dialog box appears,
 - Step 3** Click **Upgrade Existing Database**.
 - Step 4** Continue with the Reporting installation wizard as described in the [Running the Reporting Installation Wizard](#). You cannot edit the settings in the Form Data Reporting Tables, Form Data Reporting Dictionary Settings, and Form Data Reporting Service Settings pages. On these pages, just click **Next** to continue. Should you decide that you need to modify some of these settings after the upgrade, there is a utility for you to do so. See the Modifying Form Data Reporting Configuration section of *Cisco Prime Service Catalog Reporting Guide* for more information.
-

Performing Post-upgrade Tasks for Advanced Reporting

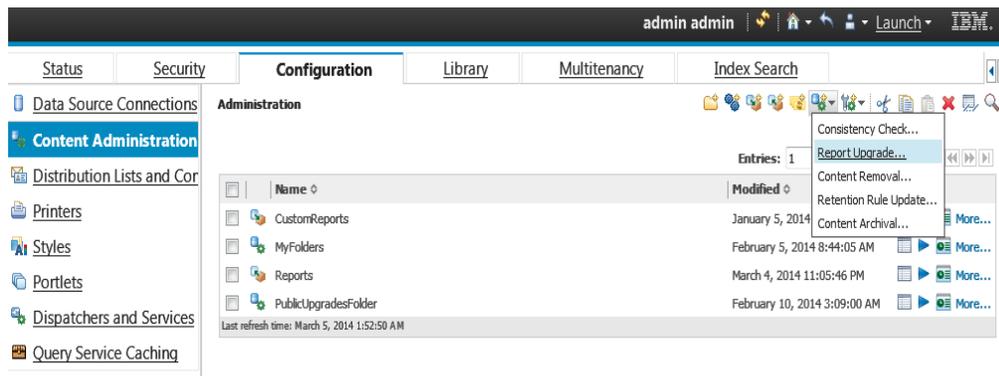
Perform the tasks described in [Postinstallation Tasks](#).

Migrating Custom Reports

Custom reports are automatically upgraded during the Cognos upgrade to 10.1. If you wish, you could manually upgrade the reports from the Prime Service Catalog.

-
- Step 1** Log into Service Catalog as a user with the Report Administrator role.
 - Step 2** Choose **Advanced Reporting** module from the drop-down.
 - Step 3** Go to **Launch** on the right hand side top corner and click **IBM Cognos Administration**.
 - Step 4** Click the **Configuration** tab.
 - Step 5** Go to **Content Administration** from the left pane, click on the **New Content Maintenance** icon and select **Report Upgrade**, as shown below.

Figure 5-10 Content Administration Window



- Step 6** Enter the Name, Description (optional) and Screen Tips (optional) for the New Content Maintenance task. And click **Next**.
- Step 7** In the Report upgrade screen, click **Add**. Select folders that need to be upgraded, click **Add**, and then at the bottom, click **OK**.
- Step 8** Click **Next**.
- Step 9** Select any of the below actions:
- Save and run once.
 - Save and schedule
 - Save only
- Step 10** Click **Finish**.
- Step 11** Select the time to run the report upgrade and click **OK**.
- Step 12** To view the result of the job select the check box “View the details of this content maintenance task after closing the dialog”.
- Step 13** Click **OK**.
- Step 14** Click **Refresh** to view the status. Click **Close**.

Reporting Upgrade Issue and its Workaround

While upgrading from any earlier release to 10.1, except for 10.0 and 10.0-R2, certain roles under the Permission tab of the Reports, show up as Unavailable. This happens if the role is either deprecated or renamed in 10.1. This change does not impact the reporting functionality but might create confusion for the user. To avoid this, you could delete the affected roles and add them back if the role is renamed.

To delete and then add a role:

- Step 1** Log in to Service Catalog UI, and navigate to the **Advanced Reporting** module.
- Step 2** Navigate to your custom report under your folder name.
- Step 3** Click **More** under the **Actions** column for your custom report.
- Step 4** Click **Set properties** under **Available** actions.

- Step 5** Click on the **Permissions** tab. If any roles are displayed as Unavailable, it is because those roles were deprecated or renamed. You can either remove these roles if you no longer need them, or rename it to an appropriate role name based on the list of new roles that are available in this release.
- Step 6** To remove a role: Select the check box in front of the role that is displayed as Unavailable, then click the **Remove** link at the bottom of the table.
- Step 7** To add a new role: Click the **Add** link at the bottom of the table, click **newScale**, select one or more roles from the Available entries table, click the add arrow to move these roles to the Selected entries table, then click the **OK** button. Next, you have to set the appropriate permissions for the new roles that you just added. After you are done, click the **OK** button to close the Set properties page.
-

These instructions for modifying roles are only applicable for a custom report. You cannot modify a standard report that came along with Prime Service Catalog.

Uninstalling Reporting

To uninstall the reporting module you need to first uninstall the IBM Cognos software and then the Cisco Prime Service Catalog Reporting module.

To uninstall IBM Cognos:

- Step 1** From the **Start** menu select **IBM Cognos 10-64 > Uninstall IBM Cognos**.
- Step 2** In the Uninstall Wizard window, click **Select All** to select both the modules.
- Step 3** Click **Next**.
- Step 4** In the Uninstall Wizard window, it is recommended that you select the second option to uninstall all the folders.
- Step 5** After the uninstallation is complete, in File Explorer, go to the folder where IBM Cognos is installed and manually delete the folder to clean up all Cognos files from the machine.
-

To uninstall Cisco Prime Service Catalog Reporting module

- Step 1** In File Explorer, navigate to the Cisco Prime Service Catalog Reporting folder and right click and select **Uninstall/Change**.
- Step 2** In the Uninstall Options window, select **Complete Uninstall**.
- Step 3** After the uninstallation is complete, if you still see Cisco Prime Service Catalog Reporting folder, delete it manually.
-