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Introduction

This document is intended for use with IBM Cognos 8. IBM Cognos 8 is a Web product with integrated reporting, analysis, scorecarding, and event management features.

This guide contains instructions for installing, upgrading, configuring, and testing IBM Cognos 8, changing application servers, and setting up samples.

Audience

To use this guide, you should be familiar with

- reporting concepts
- scorecarding concepts
- database and data warehouse concepts
- security issues
- basic Windows and/or UNIX administration skills
- the existing server environment and security infrastructure in your organization

Related Documentation

Our documentation includes user guides, getting started guides, new features guides, readmes, and other materials to meet the needs of our varied audience. The following documents contain related information and may be referred to in this document.

Note: For online users of this document, a Web page such as The page cannot be found may appear when clicking individual links in the following table. Documents are made available for your particular installation and translation configuration. If a link is unavailable, you can access the document on the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

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**Finding Information**

Product documentation is available in online help from the Help menu or button in IBM Cognos products.

To find the most current product documentation, including all localized documentation and knowledge base materials, access the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

You can also read PDF versions of the product readme files and installation guides directly from IBM Cognos product CDs.

**Using Quick Tours**

Quick tours are short online tutorials that illustrate key features in IBM Cognos product components.

To view a quick tour, start IBM Cognos Connection and click the Quick Tour link in the lower-right corner of the Welcome page.

**Getting Help**

For more information about using this product or for technical assistance, visit the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html). This site provides information on support, professional services, and education.

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format, solely for the purpose of operating, maintaining, and providing internal training on IBM Cognos software.
Introduction
Chapter 1: What’s New?

This section contains a list of new, changed, deprecated, and removed features for this release. It will help you plan your upgrade and application deployment strategies and the training requirements for your users.

For information about upgrading, see the Installation and Configuration Guide for your product. For information about other new features for this release, see the New Features Guide.

For changes to previous versions, see:
- New Features in Version 8.3
- Changed Features in Version 8.3
- Deprecated Features in Version 8.3
- Removed Features in Version 8.3

To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, visit the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

New Features in Version 8.4

Listed below are new features since the last release. Links to directly-related topics are included.

Additional Language Support

In addition to Japanese, German, and French, the installation documentation and the user interface for the installation program and IBM Cognos Configuration are available in the following languages:
- Chinese (simplified)
- Chinese (traditional)
- Korean
- Italian
- Spanish
- Portuguese (Brazilian)

During the installation you can select the language to use from the first page of the installation wizard. This determines the language of the user interfaces of the installation wizard and IBM Cognos Configuration. For more information, see "Install IBM Cognos 8 Server Components" (p. 120)
Support for DB2 Universal Driver for Content Store, Notification, and Logging Databases

DB2 introduced a universal JDBC driver that contains both type 2 and type 4 JDBC driver support. IBM Cognos 8 can connect to a DB2 content store, notification database, or logging database using either type of JDBC connectivity, but you must first copy two JAR files to the IBM Cognos 8 installation directory. If you are upgrading, you can continue to use type 2 JDBC connectivity without changing the connection properties for the DB2 content store.

For more information about connection properties for the content store, see "Set Database Connection Properties for the Content Store" (p. 131).

The two JAR files that you must copy to your IBM Cognos 8 installation directory are as follows:

- a license file, for example db2jcc_license_cisuz.jar or db2jcc_license_cu.jar
- a driver file, db2jcc.jar

For information about copying these files, see "Set Up Database Connectivity for the Content Store Database" (p. 127).

DB2 on z/OS as Content Store, Logging, or Notification Database

You can use DB2 on z/OS as your content store, logging, or notification database.

Connection settings to DB2 on z/OS are similar to those for DB2 on Linux, UNIX and Windows. However, additional advanced settings must be configured.

For information about the configuration settings, see "Suggested Settings for Creating the Content Store in DB2 on z/OS" (p. 60), "Suggested Settings for Creating a DB2 Notification Database on z/OS" (p. 316), and "Suggested Settings for Creating the DB2 Logging Database on z/OS" (p. 326).

You must run scripts to create tablespaces for storing Large Objects (LOBs). For more information, see "Create Tablespaces for DB2 Content Store on z/OS" (p. 63), "Create Tablespaces for the DB2 Notification Database on z/OS" (p. 317), and "Create Tablespaces for DB2 Logging Database on z/OS" (p. 327).

Support for IBM Cognos 8 BI for Linux on System z

IBM Cognos 8 BI version 8.4 is available for Linux on System z. After installing the required server components, you must install Framework Manager on a Windows computer to complete a basic installation. Optional server and Windows components are available to extend functionality. For more information, see the Installation and Configuration Guide for Linux on System z.

Support for IPv6 IP Addresses


For IBM Cognos Configuration to accept IPv6 addresses in the local URI properties, you must start IBM Cognos Configuration with the -ipv6 option. You can specify the option each time you open IBM Cognos Configuration from the command line.

On Windows, you can set the option permanently by adding the option to the Start menu shortcut.
For more information, see "Change the IP Address Version" (p. 348).

**IBM Cognos 8 BI 64-bit Installations**

Some IBM Cognos 8 server components are available for installation on 64-bit systems.

If your IBM Cognos 8 component is available as a 64-bit installation, the default paths that are used for installation and the Start menu are different from the default paths that are used in 32-bit installations.

The default installation directory, represented by the placeholder `c8_location` in this guide, is as follows:

- For 32-bit installations, `C:\Program Files\cognos\c8`
- For 64-bit installations, `C:\Program Files\cognos\c8_64`

The default shortcut in the Windows Start menu is as follows:

- For 32-bit installations, IBM Cognos 8
- For 64-bit installations, IBM Cognos 8 - 64

Before you install IBM Cognos 8 on a 64-bit system, check the Readme for late-breaking information about distributing the components.

**Support for 64-bit Application Servers**

IBM Cognos 8 Business Intelligence products are now available with support for 64-bit application servers.

For information about supported application servers, visit the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

For information about configuration, see "Configuring IBM Cognos 8 for an Application Server other than Tomcat" (p. 373).

**Hide the Namespace from Users During Login**

You can now hide namespaces from users during login. This lets you have trusted signon namespaces without showing them on the namespace selection list that is presented when users log in. For more information, see "Hide the Namespace from Users During Login" (p. 272).

**Changed Features in Version 8.4**

Listed below are changes to features since the last release. Links to directly-related topics are included.

**Change in Version of Report Specification Namespace Affects Upgrade**

In the current release, the version of the report specification namespace is changed. If you have SDK applications that create, modify, or save report specifications, do not upgrade your report specifications when you install the new version of IBM Cognos 8. You must first update your SDK.
applications to comply with the new IBM Cognos 8 report specifications schema. Otherwise, your SDK applications may not be able to access the upgraded report specifications. For information about upgrading report specifications, see the IBM Cognos 8 SDK Developer Guide.

In addition, we recommend that you limit user access to report specifications, so that users do not inadvertently upgrade report specifications before the SDK applications are updated. For more information about setting access permissions, see the IBM Cognos 8 Administration and Security Guide.

For more information about upgrade considerations for report specifications, see "SDK Applications" (p. 88).

Installing Supplementary Languages Documentation Required for Translated Product Documentation

You must install the Supplementary Languages Documentation to access product documentation in languages other than English. For more information, see "Install Translated Product Documentation" (p. 250).

By default, when you install the IBM Cognos 8 gateway component, the installation documentation, which includes the Installation and Configuration Guide, the Quick Start Installation and Configuration Guide and the Readme, is installed in all supported languages. The product documentation, such as the Administration and Security Guide, is installed in English.

Default Connection to an IBM DB2 Content Store Replaces Microsoft SQL Server

When you start Cognos Configuration for the first time, the connection to IBM DB2 replaces Microsoft SQL Server for the default content store.

If you did not install IBM Cognos Content Database, and want to use another database server for the content store, you must delete the default content store. After you uninstall, if you install into the same location as a previous release, your configuration is preserved and the existing content store is used.

For more information, see "Set Database Connection Properties for the Content Store" (p. 131).

Composite Information Server is Replaced By IBM Cognos 8 Virtual View Manager

Composite Information Server was available with earlier releases of IBM Cognos 8. In the current release, Composite Information Server is replaced by IBM Cognos 8 Virtual View Manager, which is an IBM proprietary product that is based on a new version of Composite Information Server. In this release, the default repository is changed, from Microsoft SQL Server to IBM Informix. If you have Composite data sources defined in IBM Cognos Connection, you must migrate the existing repository to the new default repository.

For more information about migrating the repository, see the IBM Cognos 8 Virtual View Manager User Guide. For more information about data source connections, see the Administration and Security Guide.
IBM Java Runtime Environment (JRE) Replaces Sun Java Runtime Environment

IBM Cognos 8 now contains the IBM version of the JRE as part of Windows installations. This replaces the Sun JRE for 32-bit Windows platforms.

The installation location remains the same. Any content encrypted with Sun JRE can be decrypted with the IBM JRE.

IBM Cognos 8 Go! Office Installation

In previous releases, the installation program automatically copied the IBM Cognos 8 Go! Office setup files to the c8_location\webcontent\coc folder when server components were installed. After installation, the administrator copied the IBM Cognos 8 Go! Office setup to a location accessible to end users for installation of the IBM Cognos 8 Go! Office software on their Windows clients.

In this release, IBM Cognos 8 Go! Office client installation files are no longer automatically copied to the server. The client can be installed using the IBM Cognos 8 Go! Office CD provided with IBM Cognos 8.

For more information about installing IBM Cognos 8 Go! Office, see the IBM Cognos 8 Go! Office Installation Guide.

IBM Cognos 8 Portal Services

Plumtree Portal is replaced by BEA AquaLogic User Interaction (ALUI) Portal. For more information, see "Configuring Portal Services" (p. 361).

Multilingual Support for Microsoft Analysis Services Data Sources

Users in different languages can now connect to an MSAS 2005 data source from a single instance of IBM Cognos 8. For more information, see the following topics:

- "Set Up the Data Source or Import Source Environment" (p. 138)
- "Set Up the Data Source Environment for Framework Manager" (p. 203)
- "Set Up the Data Source Environment for Transformer" (p. 224)

Deprecated Features in Version 8.4

A deprecated feature is one that is being replaced by a newer version or a better implementation. The intention is to discontinue the use of the feature and provide recommendations for adapting to this change over multiple releases.

Listed below are deprecated features, including links to related topics.

Support for DB2 JDBC Type 2 Driver for the Content Store, Notification, and Logging Databases on Linux, UNIX and Windows (db2java.zip)

DB2 introduced a universal JDBC driver that contains both type 2 and type 4 JDBC driver support. This new universal driver replaces the deprecated type 2 driver, db2java.zip.
You can continue to use type 2 connectivity with no configuration changes required. If you choose to use type 4 connectivity, a configuration change is required.

For more information, see "Set Database Connection Properties for the Content Store" (p. 131). This does not affect the metric store database, which continues to use the DB2 JDBC Type 2 Driver (db2java.zip).

**Removed Features in Version 8.4**

Listed below are features that are removed since the last release. Links to directly-related topics are included.

**Text-based User Interface for Installing and Uninstalling on UNIX and Linux**

In earlier versions of IBM Cognos 8 BI products, you could run a text-based, or console-mode, installation or uninstallation program on systems that did not have XWindows. In the current release, the text-based installation and uninstallation programs are not available. Users who install on UNIX and Linux without XWindows must run an unattended installation (p. 401) or uninstallation (p. 405).

**Language Support for IBM Cognos 8 User Interface Text and Messages Moved from Supplementary Languages to IBM Cognos 8 Server Installation**

IBM Cognos 8 comes with a set of user interface text and messages in several more languages than in the previous release. You are no longer required to install supplementary languages from a separate installation program to show the user interface in one of the supported languages. The required files are automatically installed when you install the IBM Cognos 8 server.

However, you must use Supplementary Languages Documentation to install the Andale WT fonts for Japan and Korea. These fonts map the U+005C value as a yen or won character. For more information, see "Install and Configure Additional Language Fonts" (p. 251).

**New Features in Version 8.3**

Listed below are new features since Version 8.2. Links to directly-related topics are included.

**IBM Cognos 8 Transformer**

IBM Cognos Series 7 Transformer is now fully integrated with IBM Cognos 8. You can install this optional component in your IBM Cognos 8 environment. It offers all the features of IBM Cognos Series 7 Transformer, and it supports user authentication and logon using supported IBM Cognos 8 security providers. Transformer runs on all supported IBM Cognos 8 platforms, including Linux, HP/UX Itanium, and Windows Vista. For more information, see "Installing and Configuring IBM Cognos 8 Transformer" (p. 217).

You can import metadata, which includes the associated filters and prompts, from IBM Cognos 8 packages and reports for use as a data source in Transformer 8. For more information, see the topic about creating a new model in the IBM Cognos 8 Transformer User Guide.
Secured cubes created in Transformer 8 are intended for the IBM Cognos 8 Business Intelligence Web studios and are not compatible with IBM Cognos Series 7.x PowerPlay products.

Unsecured and password-protected PowerCubes built in Transformer 8 can be accessed in IBM Cognos 8.3 Mobile Analysis for local (disconnected) use.

Transformer 8 supports UTF-8 encodings. Although you can use UTF-8 as a model setting when building PowerCubes, Transformer 8 does not support multilingual PowerCubes. Modelers must also be aware of differences between content locale in saved reports and the locale that Transformer uses when accessing reports to build PowerCubes. For more information about managing languages and locales in Transformer, see the Transformer User Guide.

Transformer 8 Installation Download
Transformer can now be made available more easily for business specialists who want to design models and build PowerCubes for their own use. For example, IT departments can provide business specialists or Transformer modelers with a Web-based, downloadable installation program from a corporate or secured portal, allowing for easy distribution of the installation files. For more information, see "Create a Network Installation Location for Transformer Modelers" (p. 357) and "Deploying IBM Cognos 8 Transformer for Modelers" (p. 359).

Series 7 IQD Bridge
IBM Cognos 8 Business Intelligence Transformer uses the IBM Cognos 8 query engine to support the features in IBM Cognos 8. The Series 7 IQD Bridge component enables Transformer 8 to continue to support IBM Cognos Series 7 .iqd files, whether the files were authored in IBM Cognos Series 7 Impromptu, or in IBM Cognos 8 Framework Manager as externalized queries. To use an .iqd data source with Transformer 8, install the Series 7 IQD Bridge on each Transformer computer that requires access to this data source type.

The Series 7 IQDBridge is an optional component and is not supported on new platforms such as Linux or HP-UX Itanium. For more information, see "Installing and Configuring IBM Cognos 8 Transformer" (p. 217).

Archive Location Property
In older versions of IBM Cognos 8, report output was saved by default in the content store. You can now configure two additional save locations, one inside IBM Cognos 8 and one outside IBM Cognos 8. For more information, see "Saved Report Output" (p. 314).

Portal Services for Microsoft SharePoint
IBM Cognos 8 now supports Cognos Portlets inside the Microsoft SharePoint portal. If you want to use this feature, you must configure security after deploying the portlets in the SharePoint portal. For more information, see "Configuring Portal Services" (p. 361).

Support for Windows Vista
IBM Cognos 8 is supported on Windows Vista for client components only. With Windows Vista, Microsoft introduced security enhancements to further protect the Program Files directory.
necessitated changes to environment variables and the directories where user profiles are stored. For more information, see "Operating Systems" (p. 89) and "Update File Location Properties on Windows Vista" (p. 352).

**Changed Features in Version 8.3**

Listed below are changes to features since Version 8.2. Links to directly-related topics are included.

**IBM Cognos 8 Go! Office**

In the previous release, the installation wizard showed the name IBM Cognos 8 Go! Office and used a default installation directory of Cognos Office. In the new release, the installation wizard shows the name IBM Cognos 8 for Microsoft Office and uses the default installation directory of IBM Cognos 8 for Microsoft Office. The wizard is used for a family of IBM Cognos products that work with Microsoft Office. For more information, see "Deploying IBM Cognos 8 Go! Office Client" (p. 256).

In the previous release, you could configure security for Microsoft .NET Framework using a Smart client or a COM add-in. IBM Cognos 8 Go! Office now uses the COM add-in only, and no action is required to configure it. In addition, the previous release required that you set custom properties in Microsoft Office templates. In the new release, the custom properties are no longer required. For more information, see "Configuring and Deploying IBM Cognos 8 Go! Office" (p. 253).

**Product Behavior After Upgrade**

When you upgrade from IBM Cognos 8 BI version 8.2 to version 8.3, some features in IBM Cognos 8 may behave differently after the upgrade. When you upgrade reports, for example, changes in behavior may cause validation errors. Documentation is available about the behavior changes. This documentation includes examples of the changed behavior and solutions for issues that may occur during the upgrade. For more information, search for Upgrading to IBM Cognos 8 BI 8.3: Changes in Product Behavior in the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

**Installing Transformer**

In previous releases, you could not install IBM Cognos Series 7 Transformer and IBM Cognos 8 Transformer 8.x on the same computer. With IBM Cognos 8 Transformer 8, you can install it on a computer that has IBM Cognos Series 7 Transformer, with no conflicts.

In previous releases of Transformer, the installation location was a cern directory, where n represented the Transformer 7.x rendition number. The Transformer 8 installation location is the same c8 directory used by all other IBM Cognos 8 products.

The Transformer 8 executable name (on Windows and UNIX) and .ini file names are now cogtr. **Note:** When Transformer 8 is installed on Windows Vista, if you do not have Administrator privileges on the computer and you make changes to the cogtr.xml file, the updated file is saved by default to a Virtual Store directory and not to the c8_location/configuration directory.
Model-, PowerCube- and Log files for Transformer 8 are maintained in the ..\My Documents\Transformer\ directory, in an appropriate subdirectory. Data Source and Temp file directories are stored in the default locations that are specified in IBM Cognos Configuration. To store them in a separate location, you can specify new locations in Transformer.

For more information, see "Install IBM Cognos 8 Transformer" (p. 218).

**Configuring Transformer**

Unlike previous versions of Transformer, which used IBM Cognos Series 7 Configuration Manager, Transformer 8 uses IBM Cognos Configuration for product configuration. This allows for complete integration with all IBM Cognos 8 Business Intelligence products.

For more information, see "Configure IBM Cognos 8 Transformer Computers" (p. 221).

**IBM Cognos 8 Samples**

In previous versions of IBM Cognos 8, the samples were installed automatically with the server components. Now the samples are on a separate CD in your IBM Cognos 8 product. If you want to use the samples, you must install them from the IBM Cognos 8 Business Intelligence Samples 8.3 CD. For more information, see "Install the IBM Cognos 8 Samples" (p. 234).

**IBM Cognos 8 Quick Tours**

Quick Tours are not installed automatically when you install IBM Cognos 8. You must install them from the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html). For instructions, see "Install Quick Tours" (p. 253).

**Deprecated Features in Version 8.3**

A deprecated feature is one that is being replaced by a newer version or a better implementation. The intention is to discontinue the use of the feature and provide recommendations for adapting to this change over multiple releases.

Listed below are deprecated features, including links to related topics.

**Configuring Content Manager**

The Create symmetric key store property could be enabled or disabled in older versions. It was typically set to true on the active Content Manager and false on standby Content Managers. These settings enabled standby Content Managers to retrieve the master common symmetric key from the active Content Manager.

The Create symmetric key store property is deprecated in Version 8.3 because Content Managers can now dynamically determine the active Content Manager and automatically retrieve the key. For more information, see "Installing and Configuring Content Manager" (p. 155).

**Configuring cogformat.xml: Notice of Intent to Change**

Currently, configuring the cogformat.xml file location and format specification properties is done at installation time. The information is saved to a configuration file on the local computer and the
configuration file is preserved when you upgrade. In the next release, configuring the cogformat.xml file location and format specification properties will be done in IBM Cognos Administration. The properties will be stored in the content store and available to all groups and roles. To prepare for this change, you must create a backup of any customizations you made to this file. For more information about backing up files that contain customization, see "Upgrade from an Earlier Version of IBM Cognos 8" (p. 90).

**Removed Features in Version 8.3**

Listed below are features that are removed since Version 8.2. Links to directly-related topics are included.

**Smart Client Deployment for IBM Cognos 8 Go! Office**

IBM Cognos 8 Go! Office deployment no longer supports the smart client. You must use the COM add-in client, which requires that an installation be run on user computers. If IBM Cognos Office Connection is upgraded with a later release, COM add-in users must install the newer version. For more information about deploying IBM Cognos Go! Office, see "Configuring and Deploying IBM Cognos 8 Go! Office" (p. 253).
Chapter 2: Components Used by IBM Cognos 8

IBM Cognos 8 is a Web-based business intelligence solution with integrated reporting, analysis, scorecarding, and event management features. IBM Cognos 8 includes IBM Cognos 8 Business Intelligence Server and IBM Cognos 8 Business Intelligence Modeling.

IBM Cognos 8 integrates easily into your existing infrastructure by using resources that are in your environment. Some of these existing resources are required, such as a Java Virtual Machine for UNIX installations. Other resources are optional, such as using another database for the content store or another security provider for authentication.

By default, IBM Cognos 8 uses Tomcat as an application server. You can configure IBM Cognos 8 products to run on supported application servers that you currently use in your environment.

Server Components

Server components provide the user interfaces for reporting, analysis, scorecarding, and event management, as well as the server functionality for routing and processing user requests. Server components include the following tools:

IBM Cognos Connection

IBM Cognos Connection is a Web portal provided with IBM Cognos 8, providing a single access point to the corporate data available for its products. It provides a single point of entry for querying, analyzing, and organizing data, and for creating reports, scorecards, and events. Users can run all their Web-based IBM Cognos 8 applications through IBM Cognos Connection. Other business intelligence applications, and URLs to other applications, can be integrated with IBM Cognos Connection.

IBM Cognos Administration

IBM Cognos Administration is a central management interface that contains the administrative tasks for IBM Cognos 8. It provides easy access to the overall management of the IBM Cognos environment and is accessible through IBM Cognos Connection.

Cognos Viewer

Cognos Viewer is a portlet in which you can view and interact with any type of published IBM Cognos content. It is accessible through IBM Cognos Connection and any existing enterprise portal.

Report Studio

Using Report Studio, report authors create, edit, and distribute a wide range of professional reports. They can also define corporate-standard report templates for use in Query Studio, and edit and modify reports created in Query Studio or Analysis Studio.
**Query Studio**
Using Query Studio, users with little or no training can quickly design, create and save reports to meet reporting needs not covered by the standard, professional reports created in Report Studio.

**Analysis Studio**
In Analysis Studio, users can explore, analyze, and compare dimensional data. Analysis Studio provides access to dimensional, OLAP (online analytical processing), and dimensionally modeled relational data sources. Analyses created in Analysis Studio can be opened in Report Studio and used to build professional reports.

**Event Studio**
In Event Studio, you set up agents to monitor your data and perform tasks when business events or exceptional conditions occur in your data that must be dealt with. When an event occurs, people are alerted to take action. Agents can publish details to the portal, deliver alerts by email, run and distribute reports based on events, and monitor the status of events. For example, a support call from a key customer or the cancellation of a large order may trigger an event, sending an email to the appropriate people.

**Metric Studio**
In Metric Studio, you can create and deliver a customized scorecarding environment for monitoring and analyzing metrics throughout your organization. Users can monitor, analyze, and report on time-critical information by using scorecards based on cross-functional metrics.

**IBM Cognos 8 Go! Office**
Using IBM Cognos 8 Go! Office, Microsoft Office users can access data from IBM Cognos reporting products within Microsoft Office applications.
IBM Cognos 8 Go! Office components are included with IBM Cognos 8 and must be installed separately.
IBM Cognos 8 Go! Office is not included with IBM Cognos 8 Metrics Manager.

**IBM Cognos Configuration**
IBM Cognos Configuration is a tool that you use to configure IBM Cognos 8, and to start and stop its services.

**Gateway**
Web communication in IBM Cognos 8 is typically through gateways, which reside on one or more Web servers. A gateway is an extension of a Web server program that transfers information from the Web server to another server.
Gateways are often CGI programs, but may follow other standards, such as Internet Server Application Program Interface (ISAPI) and Apache Modules (apache_mod).

**Content Manager**
Content Manager is the IBM Cognos 8 service that manages the storage of customer application data, including security, configuration data, models, metrics, report specifications, and report output.
Content Manager is needed to publish packages, retrieve or store report specifications, manage scheduling information, and manage the Cognos namespace.

Content Manager stores information in a content store database.

**Cognos Content Database**

Cognos Content Database is an instance of an Apache Derby database. It is a selectable component, and is not installed by default. If you install it on the same computer as Content Manager, Cognos Content Database is configured as the default content store for IBM Cognos 8.

Cognos Content Database can be used if you do not want to implement another database for the content store.

Apache Derby is open source software whose license terms can be found on the Apache Derby website (http://db.apache.org/derby/license.html). Modifying the Apache Derby database or using it with other products is not supported. Any modifications that you make to the Apache Derby database are at your own risk.

You can use Cognos Content Database as a content store or notification database, but not as a query database.

**IBM Cognos 8 Virtual View Manager**

IBM Cognos 8 Virtual View Manager provides access to additional data sources such as LDAP, JDBC, Open XML and WSDL, and improves performance when querying data from different data sources.

**IBM Cognos 8 Samples**

The IBM Cognos 8 samples illustrate product features and technical and business best practices using data from a fictitious company, Great Outdoors. You can also use them for experimenting with and sharing report design techniques, and for troubleshooting.

**Modeling Components**

Modeling components model data within data sources to structure and present data in a way that is meaningful to users. Modeling components include the following tools:

**Framework Manager**

Framework Manager is the IBM Cognos 8 modeling tool for creating and managing business-related metadata for use in IBM Cognos 8 analysis and reporting. Metadata is published for use by reporting tools as a package, providing a single, integrated business view of any number of heterogeneous data sources.

**Metric Designer**

Metric Designer is the IBM Cognos 8 modeling tool used to create extracts for use in IBM Cognos 8 scorecarding applications. Extracts are used to map and transfer information from existing metadata sources such as Framework Manager and Impromptu Query Definition (.iqd) files.
IBM Cognos 8 Transformer

IBM Cognos 8 Transformer is the IBM Cognos 8 modeling tool used to create PowerCubes for use in IBM Cognos 8. Secured IBM Cognos 8 PowerCubes are not compatible with IBM Cognos Series 7. For information about installing and configuring versions of Transformer that are earlier than 8.4, see the documentation provided with your edition of Transformer.

Series 7 IQD Bridge

The Series 7 IQD Bridge contains the connection information that IBM Cognos 8 requires to use IBM Cognos Series 7 Impromptu IQD data sources and IBM Cognos 8 Framework Manager externalized queries in IBM Cognos 8 Transformer. It also supports the multi-processing setting in Series 7 models that are imported into IBM Cognos 8 Transformer.

Map Manager

Administrators and modelers use a Windows utility named Map Manager to import maps and update labels for maps in Report Studio. For map features such as country and city names, administrators and modelers can define alternative names to provide multilingual versions of text that appears on the map.

For information about using Map Manager, see the Map Manager Installation and User Guide.

Other Components

In addition to the tools provided with IBM Cognos 8, it requires the following components that are created using other resources.

Content Store

The content store is a relational database that contains data that IBM Cognos 8 needs to operate, such as report specifications, published models, and the packages that contain them; connection information for data sources; information about the external namespace, and the Cognos namespace itself; and information about scheduling and bursting reports. The relational database can be Cognos Content Database or another supported database.

Design models and log files are not stored in the content store.

The IBM Cognos 8 service that uses the content store is named Content Manager.

Metric Store

A metric store is a relational database that contains content for metric packages. A metric store also contains Metric Studio settings, such as user preferences.

More than one metric store may be created. For example, one metric store may contain content for a sales application and another metric store may contain content for a finance application.

Data Sources

Data sources, also known as query databases, are relational databases, dimensional cubes, files, or other physical data stores that can be accessed through IBM Cognos 8. Application Tier Components use data source connections to access data sources.
Before implementing IBM Cognos 8, decide how you will install it in your environment. You can install all IBM Cognos 8 components on one computer, or distribute them across a network. The best distribution option depends on your reporting or scorecarding requirements, resources, and preferences. Configuration requirements differ depending on whether you install all components on one computer or more than one computer.

IBM Cognos 8 is compatible with other IBM Cognos products. If your environment includes other IBM Cognos products, you must consider how IBM Cognos 8 will fit into that environment.

### Distributing IBM Cognos 8 Server Components

When you install IBM Cognos 8 server components, you specify where to place the gateways, Application Tier Components, and Content Manager. You can install these components using any of these options:

- **Install all components on one computer.**
  
  This option is typically used for a demonstration or in a proof of concept environment.

- **Install the gateway on a separate computer.**
  
  In this option, the gateway and Web server are on one computer, and the remaining IBM Cognos components are on other computers. You may choose this option if you have existing Web servers available to handle IBM Cognos component requests.

- **Install Application Tier Components and Content Manager on separate computers.**
  
  Choose this option to maximize performance, availability, capacity, or security based on the processing characteristics of your organization.

  If you plan to install Cognos Content Database, you can install it on the same computer as Content Manager or on another computer. If you install it on the same computer and in the same location, Cognos Content Database is automatically configured for use as your content store. If you install it on another computer, ensure that you set the connection properties for Cognos Content Database on your Content Manager computer.

- **Install IBM Cognos 8 Application Tier Components in the same location as other IBM Cognos 8 products.**
  
  Different IBM Cognos 8 products share components, such as the Content Manager. If you plan to install the IBM Cognos 8 reporting and scorecarding components on the same computer, for example, we recommend that you install them in the same installation location. This conserves resources such as disk space and memory consumption by services.

After installing IBM Cognos 8 server components, you must configure them so they can communicate with each other.
In addition to installing the Content Manager, Application Tier Components, and gateway components, you must install Framework Manager, the metadata modeling application for business intelligence. You can also choose to install Transformer, the modeling and building tool for creating PowerCubes for use with IBM Cognos 8. No matter which IBM Cognos installation scenario you follow, you can install all components in separate locations.

All Components on One Computer

You can install all the IBM Cognos 8 reporting components on one computer. Choose this scenario for proof of concept or demonstration environments where the user load is small.

Because the gateway must be located with the Web server, the single computer must also be running a Web server.

A single-computer installation is not possible on UNIX or Linux, because you must install the Windows-based Framework Manager on a separate computer that runs on Windows.

In the following diagram, all server components for IBM Cognos 8 reporting, except Framework Manager, are installed on one computer. The content store, query databases, and Framework Manager are located on separate computers.

Configuration Requirements

If you install all server components for IBM Cognos 8 reporting on the same computer, you must then

- configure your Web server to host IBM Cognos Web content
- specify connection information to the content store
- set up an email account for notifications (if you intend to email reports)
Gateways on Separate Computers

The gateway passes queries from the Web server and clients to the dispatcher. It can reside on one or more Web servers.

You can install the gateway and a Web server on one computer, and install the remaining IBM Cognos 8 reporting components on other computers. If you have a Web farm, you may want to install a gateway on each Web server. Using multiple Web servers to manage incoming requests provides a better level of service.

If you install only the gateway component on the same computer as the Web server, your Web server manages the core Web services and does not process user requests. This separation of processing may be required if you have a firewall between the Web server and your Application Tier Components computers.

In the following diagram, two Web servers each have a gateway installed. Incoming requests are passed to either gateway and forwarded to the Application Tier Components computer.

Configuration Requirements

If you install one or more gateways on separate computers, you must ensure that you can view IBM Cognos content and that the gateways can communicate with other IBM Cognos components. On each computer where the gateway is installed you must

- configure your Web server to host IBM Cognos Web content
- configure the Dispatcher URIs

Application Tier Components and Content Managers on Separate Computers

Application Tier Components use the IBM Cognos Connection interface to balance loads, access data, perform queries, schedule jobs, and render reports. Content Manager stores all report specifications, results, packages, folders, and jobs in the content store.
You can install the Application Tier Components and Content Manager on the same computer, or on different computers. Installing on different computers can improve performance, availability, and capacity.

To improve scalability in an environment in which there is typically a large volume of report requests to process, you can install the Application Tier Components on multiple computers dedicated to processing incoming requests. By installing the Application Tier Components on multiple computers, you distribute and balance loads among the computers. You also have better accessibility and throughput than on a single computer, as well as failover support.

**Configuration Requirements**

If you install one or more Application Tier Components on a separate computer, to ensure that they can communicate with other IBM Cognos 8 reporting components you must

- specify all Content Manager URIs
- specify the Dispatcher URIs
- specify the Dispatcher URI for external applications

**More Than One Content Manager**

You can install any number of installations of Content Manager, although only one is active at any time. The other installations each act as a standby Content Manager. One becomes active only if a failure occurs that affects the active Content Manager computer. For failover support, it is advisable to install Content Manager on two or more computers.

Content Manager stores data that IBM Cognos 8 needs to operate, such as report specifications, published models, and the packages that use them; connection information for data sources; information about the external namespace and the Cognos namespace itself; and information about scheduling and bursting reports. The content store is a relational database management system (RDBMS). There is only one content store for each IBM Cognos installation.

You may choose to install Content Manager separately from the Application Tier Components. For example, you may want Content Manager in your data tier instead of in the applications tier.

When an active Content Manager fails, unsaved session data is lost. When the new active Content Manager takes over, users may be prompted to logon.

In the following diagram, the gateway passes the request to the dispatcher (not shown), which passes it to the default active Content Manager computer. Because the computer has failed, the request is redirected to the standby Content Manager computer, which became active when the default active Content Manager computer failed.
Configuration Requirements
On each computer where you install Content Manager, you must

- specify connection information to the content store
- specify the Dispatcher URIs
- specify all Content Manager URIs
- specify the Dispatcher URI for external applications
- set up a connection to an email account for notifications (if you want to email reports)

IBM Cognos 8 Products on the Same Computer

IBM Cognos 8 products are designed to share components, including the gateway, Content Manager, content store, IBM Cognos Connection, and IBM Cognos Configuration. If you install more than one IBM Cognos 8 product on the same computer, we strongly recommend that you install them in the same installation location. The installation program checks to determine whether other IBM Cognos 8 components exist in the installation location. If a component exists and can be shared, it is not reinstalled.

Accessing Product Documentation in an Integrated Environment

The documentation for IBM Cognos 8 components is installed with the gateway component. If you integrate different IBM Cognos 8 products, you can either use the same gateway or use separate gateways. If you want to use the same gateway, all gateway components must be of the same product version, and you should install the IBM Cognos 8 gateway component for each product into the same location on the same computer. This ensures that all the product documentation is available
to all users. If you want to use separate gateways for each product, you can install the IBM Cognos 8 gateway component for each product on separate computers, but the product documentation on each gateway will be specific for the IBM Cognos 8 product you installed.

If you want users to access each IBM Cognos 8 product through separate gateways, yet still be able to access documentation for all components, you can install each product's gateway component into the same location as your other IBM Cognos 8 gateway components.

**Distributing Framework Manager Components**

Framework Manager can be installed on a computer that contains other IBM Cognos 8 reporting components or on a computer that is separate from other IBM Cognos 8 reporting components.

To publish packages so that they are available to users, you must configure the modeling tools to use a dispatcher, either directly or through a gateway. If IBM Cognos Connection is secured, you must have privileges to create data sources and publish packages in IBM Cognos Connection. The modeling tools communicate with server components using one of two methods:

- connect to the Application Tier Components dispatcher using the internal dispatcher URI. This route is the recommended route.
- connect to an additional, dedicated gateway that is configured to connect to the dispatcher using the internal dispatcher URI. You must configure appropriate security for this gateway, such as SSL (p. 319). This method is useful when the modeling tool is outside a network firewall.

**Note:** Do not change your main gateway to use the internal dispatcher URI. Doing so reduces the security of the IBM Cognos 8 portal and studios.

Where you install Framework Manager, and how you configure it, can depend on how large your metadata models are and on which Web server you use.

**Web Servers Other Than Microsoft IIS**

For Web servers other than Microsoft Internet Information Services (IIS), no functional difference exists between the two communication routes between the modeling tool and the Application Tier Components dispatcher. For either route, the modeling tool uses the BI Bus SOAP API. If you use the Web server route, and you have medium- and large-sized packages (approaching 1 MB), the models are broken into smaller pieces (chunked) for transmission.

If you use a Web server other than Microsoft IIS, we recommend that you configure the modeling tool to communicate through your Web server gateway (using the first route). This eliminates the need to set up additional communications channels if you use firewalls to separate the modeling tool, Web server, and Application Tier Components.

For more information about configuring Framework Manager, see "Installing and Configuring Framework Manager" (p. 199).

**Firewall Considerations**

When the modeling tool is outside a network firewall that protects the Application Tier Components, communication issues with the dispatcher can occur. For security reasons, the default IBM Cognos 8
configuration prevents the dispatcher from accepting requests from the modeling tool when it is outside the network firewall.

By default, the modeling tool is configured to send requests directly to the dispatcher:

To avoid communication issues when communicating directly with the dispatcher, install the modeling tool in the same architectural tier as the Application Tier Components.

Alternatively, you can install an additional gateway that is dedicated for communication with the modeling tool. You then configure the modeling tool and its gateway such that the dispatcher will accept requests from the modeling tool.

**Configuration Requirements**

Framework Manager communicates with the Application Tier Components, which can be installed on one or more application servers. To publish packages, you must configure Framework Manager to communicate with the dispatcher, either directly or through a dedicated gateway.

You must ensure that Framework Manager can communicate with IBM Cognos 8 server components. On the computer where Framework Manager is installed, configure the following environment properties:

- Gateway URI
Dispatcher URI for external applications

If the modeling tool is using a dedicated gateway instead of communicating directly with the dispatcher, you must also configure the Dispatcher URIs for gateway property on the dedicated gateway computer.

Distributing Transformer Components

Transformer can be installed on a computer that contains other IBM Cognos 8 components or on a computer that is separate from other IBM Cognos 8 components. When installed separately, Transformer can be used as a standalone product or it can be configured to communicate with other IBM Cognos 8 components.

When you use Transformer as a standalone product, you can use data sources that are external to IBM Cognos 8 and you cannot create secured views with dimensional filtering. When you use Transformer with other IBM Cognos 8 components, you can use the following features provided by IBM Cognos 8:

- IBM Cognos 8 authentication providers
- IBM Cognos 8 data sources, such as published packages, Query Studio reports, and Report Studio reports
- IBM Cognos Connection for publishing the PowerCube data source and package
- building PowerCubes on Linux or HP-UX Itanium

You cannot use flat files as data sources.

Transformer consists of the following components. You may have one or both, depending on your environment.

- Transformer Windows
  This is the modeling tool for designing PowerCubes that are used in IBM Cognos 8. It can also be used to build and publish PowerCubes.
- Transformer UNIX/Linux
  This is a command line utility for building PowerCubes. You first design the models using Transformer Windows or MDL scripting, and then use the models to build the PowerCubes.

Either component can communicate with the server using one of two routes:

- connect to the Application Tier Components dispatcher using the internal dispatcher URI (the recommended route).
- connect to an additional, dedicated gateway that is configured to connect to the dispatcher using the internal dispatcher URI. You must configure appropriate security for this gateway, such as SSL (p. 319). This route is useful when the modeling tool is outside a network firewall.

Note: Do not change your main gateway to use the internal dispatcher URI. Doing so reduces the security of the IBM Cognos 8 portal and studios.
**Web Servers Other Than Microsoft IIS**

For Web servers other than Microsoft Internet Information Services (IIS), no functional difference exists between the two communication routes between the modeling tool and the Application Tier Components dispatcher. For either route, the modeling tool uses the BI Bus SOAP API. When publishing packages, only the package run time model is transferred and not the PowerCube. However, the PowerCube must be in a location that the dispatcher can access.

If you use a Web server other than Microsoft IIS, we recommend that you configure the modeling tool to communicate through your Web server gateway (using the first route). This eliminates the need to set up additional communications channels if you use firewalls to separate the modeling tool, Web server, and Application Tier Components.

**Firewall Considerations**

When the modeling tool is outside a network firewall that protects the Application Tier Components, communication issues with the dispatcher can occur. For security reasons, the default IBM Cognos 8 configuration prevents the dispatcher from accepting requests from the modeling tool when it is outside the network firewall.

By default, the modeling tool is configured to send requests directly to the dispatcher:

To avoid communication issues when communicating directly with the dispatcher, install the modeling tool in the same architectural tier as the Application Tier Components.

Alternatively, you can install an additional gateway that is dedicated to communication with the modeling tool. You then configure the modeling tool and its gateway such that the dispatcher accepts requests from the modeling tool.
Role-based Server Considerations

You may want to set up dedicated Transformer servers for optimal cube build performance and accessibility to the IBM Cognos 8 users. In this scenario, consider the following requirements:

- Database client software is installed on any computer where Transformer will be used to build PowerCubes or test data sources.
- Appropriate environment variables are set for UNIX and Linux servers.
- IBM Cognos 8 servers have access to the location where PowerCubes are stored so that the report server can access the PowerCubes.

Building and updating production PowerCubes can be scripted and run remotely when sufficient access and user privileges are set up. For more information about building and updating production PowerCubes, see the Transformer User Guide.

Business Analysts or Specialists

You may have specialized business or power users who want to build PowerCubes that are modeled on a combination of corporate and personal data sources. These users may want to do their own analysis of the data for their line of business or a small group of users. You can enable such users to be self-sufficient within the IT and security infrastructure of the organization by meeting the following requirements:

- Database client software is installed, or available for modelers to install, on the Transformer computers that are used to access IBM Cognos 8 data sources or IBM Cognos Series 7 IQD data sources.
- Modelers must have privileges to create a data source in IBM Cognos Administration. Modelers do not need direct access to IBM Cognos Administration. They can create and update data sources by using Transformer or command line tools. You can provide modelers with a secured folder in IBM Cognos Connection in which to publish PowerCube packages.
- Modelers must have access to a location in which to store the PowerCube after building it. This location must also be accessible to the IBM Cognos 8 service and can be a secured share on a LAN.
- Modelers may require special privileges to remotely run the IBM Cognos 8 PowerCube Connection utility, which is located on the IBM Cognos 8 server. For more information, see the topic about updating published PowerCubes and PowerCube connections in the Transformer User Guide.
- To build PowerCubes on a specific Transformer server, modelers should have FTP privileges to transfer models and execute privileges to build cubes on that server. Modelers can transfer models and execute cube builds using scripts. Modelers can also use automated methods to build PowerCubes. For more information, see the Administration and Security Guide.
Configuration Requirements
To publish PowerCube packages, you must configure Transformer to communicate with the dispatcher, either directly or through a dedicated gateway. If IBM Cognos Connection is secured, you must have privileges to create data sources and publish packages in IBM Cognos Connection.

On the computer where Transformer is installed, configure the following environment properties:

- Gateway URI
- Dispatcher URI for external applications

If the modeling tool is using a dedicated gateway instead of communicating directly with the dispatcher, you must also configure the Dispatcher URIs for gateway property on the dedicated gateway computer.

Distributing IBM Cognos 8 Scorecarding Components
When you install IBM Cognos 8 scorecarding components, you specify where to place the gateways, Application Tier Components, and Content Manager. You can install these components using any of these options:

- Install all components on one computer.
  This option is typically used for a demonstration or in a proof of concept environment.

- Install the gateway on a separate computer.
  In this option, the gateway and Web server are on one computer, and the remaining IBM Cognos components are on other computers. You may choose this option if you have existing Web servers available to handle IBM Cognos component requests.

- Install Application Tier Components and Content Manager on separate computers.
  Choose this option to maximize performance, availability, capacity, or security based on the processing characteristics of your organization.
  If you plan to install Cognos Content Database, you can install it on the same computer as Content Manager or on another computer. If you install it on the same computer and in the same location, Cognos Content Database is automatically configured for use as your content store. If you install it on another computer, ensure that you set the connection properties for Cognos Content Database on your Content Manager computer.

- Install IBM Cognos 8 scorecarding components on the same computer as other IBM Cognos 8 products.
  IBM Cognos 8 products share components, such as Content Manager. If you plan to install IBM Cognos 8 scorecarding components on the same computer as other IBM Cognos 8 products, we recommend that you install them in the same installation location.

After installing IBM Cognos 8 scorecarding components, you must configure them so they can communicate with each other.

In addition to installing the Content Manager, Application Tier Components, and gateway components, you may choose to install Metric Designer (p. 208), the metadata modeling application for
scorecarding. No matter which IBM Cognos installation scenario you follow, you can install Metric
Designer and the content store on a computer separate from the Application Tier Components.
The metric store is usually installed on the same computer as Content Manager. The metric store
can also be installed on a different computer.

All Components on One Computer

You can install all the IBM Cognos 8 scorecarding components on one computer. Choose this
scenario for proof of concept or demonstration environments where the user load is small.

Because the gateway must be located with the Web server, the single computer must also be running
a Web server.

A single-computer installation is not possible on UNIX or Linux, because you must install the
Windows-based Metric Designer on a separate computer that runs on Windows.

In the following diagram, all IBM Cognos 8 scorecarding components, except Metric Designer, are
installed on one computer. The content store and metric store are located on separate computers.

Configuration Requirements

If you install all IBM Cognos 8 scorecarding components on the same computer, you must

- configure your Web server to host IBM Cognos Web content
- specify connection information to the content store

Gateways on Separate Computers

The gateway passes queries from the Web server and clients to the dispatcher. It can reside on one
or more Web servers.

You can install the gateway and a Web server on one computer, and install the remaining IBM
Cognos 8 scorecarding components on other computers. If you have a Web farm, you may want
to install a gateway on each Web server. Using multiple Web servers to manage incoming requests
provides a better level of service.

By installing the gateway separately from the scorecarding components in the application tier, your
Web server manages the core Web services and does not process user requests. This separation of
processing may be required if you have a firewall between the Web server and your other IBM
Cognos 8 scorecarding components.
In the following diagram, two Web servers each have a gateway installed. Incoming requests are passed to either gateway and forwarded to the Application Tier Components computer for processing.

![Diagram of Web servers, gateways, and application components]

**Configuration Requirements**

If you install one or more gateways on separate computers, you must ensure that you can view IBM Cognos Web content and that the gateways can communicate with the other IBM Cognos dispatchers. On each computer where the gateway is installed, you must

- configure your Web server to host IBM Cognos Web content
- configure the Dispatcher URIs

**Application Tier Components and Content Managers on Separate Computers**

Application Tier Components process IBM Cognos requests, balance loads, execute tasks, and render scorecards. Content Manager stores and retrieves information, such as the data source connections in the content store.

You can install the Application Tier Components and Content Manager on the same computer, or on different computers. Installing on different computers can improve performance, availability, and capacity.

To improve scalability in an environment in which there is typically a large volume of report requests to process, you can install the Application Tier Components on multiple computers dedicated to processing incoming requests. By doing this, you distribute and balance loads among the computers. You also have better accessibility and throughput than on a single computer, as well as failover support.

**Configuration Requirements**

If you install one or more Application Tier Components on a separate computer, ensure that they can communicate with other IBM Cognos 8 components. You must

- specify all Content Manager URIs
- specify the Dispatcher URIs
More Than One Content Manager

You can install any number of installations of Content Manager, although only one is active at any time. The other installations each act as a standby Content Manager. One becomes active only if a failure occurs that affects the active Content Manager computer. For failover support, it is advisable to install Content Manager on two or more computers.

Content Manager stores data that IBM Cognos 8 needs to operate, such as report specifications, published models, and the packages that use them; connection information for data sources; information about the external namespace and the Cognos namespace itself; and information about scheduling and bursting reports. The content store is a relational database management system (RDBMS). There is only one content store for each IBM Cognos installation.

You may choose to install Content Manager separately from the Application Tier Components. For example, you may want Content Manager in your data tier instead of in the applications tier.

When an active Content Manager fails, unsaved session data is lost. When the new active Content Manager takes over, users may be prompted to logon.

In the following diagram, the gateway passes the request to the dispatcher (not shown), which passes it to the default active Content Manager computer. Because the computer has failed, the request is redirected to the standby Content Manager computer, which became active when the default active Content Manager computer failed.

Configuration Requirements
On each computer where you install Content Manager, you must

- specify connection information to the content store
- specify the Dispatcher URIs
IBM Cognos 8 Products on the Same Computer

IBM Cognos 8 products are designed to share components, including the gateway, Content Manager, content store, IBM Cognos Connection, and IBM Cognos Configuration. If you install more than one IBM Cognos 8 product on the same computer, we strongly recommend that you install them in the same installation location. The installation program checks to determine whether other IBM Cognos 8 components exist in the installation location. If a component exists and can be shared, it is not reinstalled.

Distributing Metric Designer Components

For Metric Studio, if you want to define and load metrics from relational and dimensional data sources, including cubes, Framework Manager packages, or Impromptu Query Definitions (.iqd files), install Metric Designer to extract the data.

Install Metric Designer after installing and configuring other IBM Cognos 8 components. You must install the Windows-based Metric Designer on a Windows computer.

Metric Designer communicates with other IBM Cognos 8 components using one of two routes:

- connect to the Application Tier Components dispatcher using the internal dispatcher URI. This route is the recommended route.
- connect to an additional, dedicated gateway that is configured to connect to the dispatcher using the internal dispatcher URI. You must configure appropriate security for this gateway, such as SSL (p. 319). This method is useful when the modeling tool is outside a network firewall.

Note: Do not change your main gateway to use the internal dispatcher URI. Doing so reduces the security of the IBM Cognos 8 portal and studios.

Where you install Metric Designer, and how you configure it, can depend on how large your metadata models are and which Web server you use.

Web Servers Other Than Microsoft IIS

For Web servers other than Microsoft Internet Information Services (IIS), no functional difference exists between the two communication routes between the modeling tool and the Application Tier Components dispatcher. For either route, the modeling tool uses the BI Bus SOAP API. If you use the Web server route, and you have medium- and large-sized packages (approaching 1 MB), the models are broken into smaller pieces (chunked) for transmission.

If you use a Web server other than Microsoft IIS, we recommend that you configure the modeling tool to communicate through your Web server gateway (using the first route). This eliminates the need to set up additional communications channels if you use firewalls to separate the modeling tool, Web server, and Application Tier Components.

For more information about configuring Metric Designer, see "Installing and Configuring Metric Designer" (p. 208).
Firewall Considerations

When the modeling tool is outside a network firewall that protects the Application Tier Components, communication issues with the dispatcher can occur. For security reasons, the default IBM Cognos 8 configuration prevents the dispatcher from accepting requests from the modeling tool when it is outside the network firewall.

By default, the modeling tool is configured to send requests directly to the dispatcher:

To avoid communication issues when communicating directly with the dispatcher, install the modeling tool in the same architectural tier as the Application Tier Components.

Alternatively, you can install an additional gateway that is dedicated for communication with the modeling tool. You then configure the modeling tool and its gateway such that the dispatcher will accept requests from the modeling tool.

Configuration Requirements

Metric Designer communicates with the Application Tier Components, which can be installed on one or more application servers. To publish extracts, you must configure Metric Designer to communicate with the dispatcher, either directly or through a dedicated gateway.
You must ensure that Metric Designer can communicate with other IBM Cognos 8 scorecarding components. On the computer where Metric Designer is installed, configure the following environment properties:

- Gateway URI
- Dispatcher URI for external applications

Additional configuration is required after you install Metric Designer so that it can access some types of data sources (p. 208).

If the modeling tool is using a dedicated gateway instead of communicating directly with the dispatcher, you must also configure the Dispatcher URLs for gateway property on the dedicated gateway computer.

**IBM Cognos 8 with Other IBM Cognos Products**

You can install IBM Cognos 8 in an environment that includes other IBM Cognos products. The installation wizard for IBM Cognos 8 can recognize compatible directories and shows a warning when conflicts occur. After IBM Cognos 8 is installed, you can access objects that are created in another IBM Cognos product in IBM Cognos 8. The requirements for access depend on how you choose to run the two products.

**IBM Cognos Products That Can Be Upgraded to IBM Cognos 8**

The following IBM Cognos products are earlier versions of components that are now within IBM Cognos 8: ReportNet, IBM Cognos Metrics Manager, DecisionStream, and PowerPlay Web. When you upgrade these products to IBM Cognos 8, you can continue to run the earlier versions concurrently in the same environment until you are satisfied with the transition to IBM Cognos 8.

**ReportNet®**

For ReportNet and IBM Cognos 8 to run concurrently, each version must have unique ports, content stores, aliases, and cookie settings. If you use the default settings, configuration is required only to select new ports and a new content store for IBM Cognos 8.

You cannot use data from ReportNet directly in IBM Cognos 8 until you upgrade ReportNet. When you upgrade to IBM Cognos 8, the content store is upgraded to use the IBM Cognos 8 schema. Therefore, you need to maintain both the old and new content stores to run both product versions.

You can maintain both content stores using one of the following approaches:

- copy the ReportNet content store database and use it with IBM Cognos 8
- export the ReportNet content store database and import it into IBM Cognos 8

You can upgrade reports at the same time or upgrade them later if compatibility is required with some existing SDK applications.

**IBM Cognos Metrics Manager**

To use data store content from IBM Cognos Metrics Manager in IBM Cognos 8, you upgrade by exporting the content from the data store, installing IBM Cognos 8, and then importing the content.
into the IBM Cognos 8 metric store. Note that the cube picker feature (the ability to map specific metrics to cube intersections) in IBM Cognos Metrics Manager is not available in IBM Cognos 8.

**IBM Cognos DecisionStream**

You can continue to run IBM Cognos DecisionStream Series 7 concurrently with IBM Cognos 8 products. Catalogs that are created using DecisionStream Series 7 must be upgraded before you can use them with Data Manager.

For instructions about running concurrently and upgrading DecisionStream catalogs to the IBM Cognos 8 Data Manager environment, see the chapter about upgrading a catalog in the Data Manager User Guide.

**IBM Cognos PowerPlay Web**

You can continue to use PowerPlay Web reports within the PowerPlay 7 user interfaces in the IBM Cognos 8 portal. You can also drill through between PowerPlay Web and IBM Cognos 8. You can publish from PowerPlay Enterprise Server to IBM Cognos 8, provided that you use the same host name or IP address to identify the Series 7 namespace in IBM Cognos Series 7 and in IBM Cognos 8.

You can also upgrade the following reports to IBM Cognos 8 reports by using migration tools:

- PowerPlay Windows reports
- PowerPlay Web Explorer reports
- PowerPlay for Excel reports
- PowerPlay for Windows reports published to PowerPlay Web

The tools are available at the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

For instructions about upgrading, see the Migration Tools User Guide.

**IBM Cognos Series 7 Products That Can Be Migrated to IBM Cognos 8**

You can migrate metadata and applications from IBM Cognos Series 7 to IBM Cognos 8. Content that can be migrated includes Architect models from Windows, Impromptu client reports and catalogs from Windows, Upfront content, and Web-based content from Windows and UNIX.

For more information, see the Migration Tools User Guide.

For a list of supported IBM Cognos Series 7 versions and to download the migration tools and documentation, see the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

**Architect**

You can migrate Architect models for use as a metadata source for Framework Manager.

**Impromptu**

You can migrate Impromptu catalogs and reports to IBM Cognos 8. You use migrated catalogs as a metadata source for Framework Manager. After completing the catalog migration process, you can migrate and deploy Impromptu reports.
**Upfront**
You can migrate Upfront content to IBM Cognos 8. The migration process maps the Upfront content structure to an IBM Cognos Connection folder structure. By preserving the existing Upfront organization, it is easier to complete administrative tasks, such as applying security to the migrated content.

**Impromptu Web Reports**
You can migrate Impromptu Web Reports content, such as schedules and events, to IBM Cognos 8. You migrate Impromptu Web Reports content using an IBM Cognos Series 7 Deployment Manager package as the migration source. Before you migrate Impromptu Web Reports you must migrate the Impromptu catalog metadata used by the reports.

You cannot migrate Impromptu query definition files (.iqd), but you can continue to use existing .iqd files to build cubes in IBM Cognos 8 BI Transformer 8.4. To do so, you must install the optional component, Series 7 IQD Bridge, which is available to install with IBM Cognos 8 BI on IBM Cognos Series 7 supported platforms.

PowerPrompts are not migrated, but you can implement similar functionality using either the built-in administrator functionality or the Software Development Kit.

**IBM Cognos Products That Interoperate with IBM Cognos 8**
Some IBM Cognos products provide functionality that is not available in IBM Cognos 8. You can use these products in the same environment as IBM Cognos 8. With some products, you can access the different types of cubes or reports in the IBM Cognos 8 portal. With other products, you can access unique features in the IBM Cognos 8 portal.

**IBM Cognos Planning - Analyst**
You can access published plan data in IBM Cognos 8 by using the Generate Framework Manager Model wizard, which requires IBM Cognos Planning - Analyst 7.3 MR1 or later.

For more information, see the Analyst User Guide.

**IBM Cognos Planning - Contributor**
You can access unpublished (real-time) Contributor cubes in IBM Cognos 8 by custom installing the IBM Cognos 8 - Contributor Data Server component that is included with IBM Cognos Planning - Contributor 7.3 MR1 release or later. You can access published plan data in IBM Cognos 8 by using the Generate Framework Manager Model administration extension in Contributor, which requires IBM Cognos Planning - Contributor 7.3 MR1 or later.

For more information, see the Contributor Administration Guide.

**IBM Cognos Finance**
You can access IBM Cognos Finance cubes that are secured against a Series 7 namespace by using the IBM Cognos Finance Network API Service. You can also export data and metadata from IBM Cognos Finance for use in Framework Manager.
**IBM Cognos Controller**

You can access IBM Cognos 8 to create IBM Cognos Controller Standard Reports by using a pre-defined Framework Manager model that is created when IBM Cognos Controller is installed. You can also access published Controller data and structures in Framework Manager for custom reporting and analysis. Both IBM Cognos Controller and IBM Cognos 8 BI must be at the same version.

**Transformer**

You can use IBM Cognos PowerCubes and Transformer models that were generated by Transformer 7.3 or later directly in IBM Cognos 8. The cubes and models are upwards compatible and require no migration or upgrade tools. You can run reports and analyses in IBM Cognos 8 against the IBM Cognos PowerCubes.

If you want to use the new integration features of Transformer with IBM Cognos 8, you can upgrade IBM Cognos Series 7.x Transformer models to IBM Cognos 8 BI Transformer 8.4. This allows you to use IBM Cognos 8 data sources (such as published packages), list reports authored in Query Studio or Report Studio, authenticate using IBM Cognos 8 security, and publish directly to IBM Cognos Connection.

Before you load the model, the IBM Cognos Series 7 namespace must be configured in IBM Cognos 8 (p. 267) and the name ID that is used to configure it in IBM Cognos 8 must match the name used in IBM Cognos Series 7.

For more information about upgrading IBM Cognos Series 7 secured PowerCubes, see the IBM Cognos 8 Transformer User Guide.

For IBM Cognos Series 7 PowerCubes to be used in IBM Cognos 8, we recommend that you optimize the cubes for use in IBM Cognos 8 by using the pcoptimizer utility, which is supplied with IBM Cognos 8. Otherwise, PowerCubes that were created with previous versions of Transformer may take too long to open in the IBM Cognos 8 Web studios. This optimization utility is suitable for older PowerCubes when the model no longer exists or the data used to build the PowerCube is no longer available. It is not necessary to run this command line utility for cubes created in Transformer 8.4. For more information about optimizing PowerCubes, see the Transformer User Guide.

You can publish PowerCubes using Transformer 8.4, Framework Manager, or directly in the IBM Cognos 8 portal. You can publish single PowerCube data sources and packages to IBM Cognos Connection interactively in Transformer or in the command line. You can also publish silently using batch scripts after building a PowerCube. A user who has privileges to create data sources and packages in IBM Cognos Connection can publish PowerCubes in IBM Cognos Connection as well. The MDC file must be in a secured location that the IBM Cognos 8 dispatcher can access. Packages that use multiple PowerCubes or PowerCubes mixed with other data sources should be published using Framework Manager.

If you use an IBM Cognos Series 7 PowerCube as a data source, IBM Cognos 8 converts the cube data from the encoding that was used on the system where the PowerCube was created. For a successful conversion, IBM Cognos Series 7 PowerCubes must be created with a system locale set to match the data in the PowerCube.
**Data Manager**

Data Manager is used to create data warehouses and data repositories for reporting, analysis, and performance management. When Data Manager is installed in your IBM Cognos 8 environment, you can use the Data Movement Service to run builds and JobStreams in IBM Cognos Connection. You must install the Data Manager engine in the same location as your IBM Cognos 8 Application Tier Components. Both Data Manager and IBM Cognos 8 BI must be the same version.

**IBM Cognos 8 Go! Mobile**

With IBM Cognos 8 Go! Mobile you can access reports authored with Analysis Studio, Report Studio, and Query Studio on a mobile device (such as a BlackBerry®). To download, view, and interact with reports, IBM Cognos 8 Go! Mobile requires the installation of a custom-built, rich client on the mobile device, in addition to the IBM Cognos 8 server components. Both IBM Cognos 8 Go! Mobile and IBM Cognos 8 BI must be at the same version.

**IBM Cognos 8 Go! Search**

The IBM Cognos 8 Go! Search add-on provides enhanced search and navigation options in IBM Cognos 8. In IBM Cognos Connection, you can use full-text search to locate content. In Analysis Studio, Query Studio, and Cognos Viewer, you can use full-text search and automatic navigation, which locates content related to the content in the current view. The IBM Cognos 8 content store must include content that can be indexed. Both IBM Cognos 8 Go! Search and IBM Cognos 8 BI must be at the same version.

**IBM Cognos 8 Go! Dashboard**

IBM Cognos 8 Go! Dashboard is a Web product for creating interactive dashboards using IBM Cognos content, as well as external data sources, according to specific information needs. Both IBM Cognos 8 Go! Dashboard and IBM Cognos 8 BI must be at the same version.

**Upgrade Manager**

Upgrade Manager is a Windows-based application for auditing upgrades from ReportNet 1.1 MR3 or MR4 to IBM Cognos 8.2 or later. It provides a verification feature that validates, executes, and compares report results from two different IBM Cognos BI releases. This helps to identify upgrade and compatibility issues between releases. User interface design and status reporting functionality provide both a proven practice process and support for upgrade project planning and status reporting. Upgrade Manager also automates much of the process of bundling the required files, such as reports and models, for the test case.

**IBM Cognos 8 Business Viewpoint Studio**

IBM Cognos 8 Business Viewpoint Studio helps to provide you with one version of the truth for dimensions used in an enterprise’s performance management processes. With Business Viewpoint Studio, you have a controlled, collaborative, workflow-oriented business process to manage both manual and automated changes to all data related to how enterprises analyze and manage their business. Both IBM Cognos 8 Business Viewpoint Studio and IBM Cognos 8 BI must be at the same version.
**IBM Cognos Series 7 Content That Can Be Recreated in IBM Cognos 8**

Some IBM Cognos products cannot be programmatically migrated or upgraded with the migration or upgrade tools for IBM Cognos 8. IBM Cognos 8 offers two options for duplicating content or functionality for the products described below: use the Upfront portal in the IBM Cognos 8 portal or duplicate queries, visualizations, or objects by using IBM Cognos 8 studios.

**IBM Cognos Query**
You can use the migration tools to identify IBM Cognos Query objects in the IBM Cognos Series 7 migration source. You can then duplicate most IBM Cognos Query functionality in IBM Cognos 8. Foundation queries are available in IBM Cognos 8 when you migrate an Architect model. You can also manually replicate saved queries using SQL components in Report Studio.

**IBM Cognos Visualizer**
You can duplicate functionality by using the charting, layout, and formatting options in Report Studio and Analysis Studio.

**IBM Cognos NoticeCast**
You can duplicate alert and notification functionality by using Event Studio and other IBM Cognos 8 components.

**IBM Cognos Web Services**
You can duplicate most IBM Cognos Web Services functionality using the IBM Cognos 8 Software Development Kit.

**IBM CognosScript**
You can duplicate automation functionality using the IBM Cognos 8 Software Development Kit.

**IBM Cognos Portal Services**
You can duplicate most IBM Cognos Portal Services functionality using IBM Cognos Connection.
Chapter 4: Preparing to Install

Before you install IBM Cognos 8, you must set up resources in your environment so that the components can operate. For example, you must create a database for the content store, configure Web browsers, and create a user account for IBM Cognos 8.

If you want to use Cognos Content Database as your content store, you do not have to create a database or set up a database client. A database is created during the installation and IBM Cognos 8 is configured to use it.

Use the following checklist to guide you through the setup process:

- Review the Readme.
- Review supported environments.
- Verify system requirements.
- Review the default port settings.
- Create the database for the content store.
- Configure a user or network server account for IBM Cognos 8.
- Set up environment variables on UNIX for the metric store, if using IBM Cognos 8 Metrics Manager.
- Configure Web browsers.

After you complete these tasks, continue with Installing IBM Cognos 8 Components on One Computer or Installing IBM Cognos 8 Server Components in a Distributed Installation.

Recommendation - Review the Readme Before You Install

Before you install your IBM Cognos product, it is important to be aware of all issues that may affect your installation strategy.

There may be late-breaking issues that were not known when this installation guide was created. We recommend that you review the Readme before you install your product. The Readme contains late-breaking information about known issues as well as documentation updates and deprecation notices. The Readme is available from the first page of the installation wizard or from the product CD.

Review Supported Environments

To ensure your product works properly, apply all minimum required operating system patches and use only the versions of other software that are supported for an IBM Cognos product.
To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, visit the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

It is important to note that the Linux operating system is available in a number of distributions and supports a number of hardware platforms. Ensure that the operating system and hardware combination you are using is a supported combination.

### Verify System Requirements

Use the following table to check the minimum hardware and software requirements to install and run IBM Cognos 8 components on one computer. Additional resources may be required for distributed or production environments.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows, UNIX, Linux</td>
</tr>
<tr>
<td></td>
<td>Some IBM Cognos 8 components are not supported under Linux.</td>
</tr>
<tr>
<td>RAM</td>
<td>Minimum: 2 GB</td>
</tr>
<tr>
<td>Operating system specifications</td>
<td>File descriptor limit set to 2048 on UNIX and Linux (recommended)</td>
</tr>
<tr>
<td>Disk space</td>
<td>A minimum of 2.5 GB of free space is required to install the software and 4 GB of free space on the drive that contains the temporary directory used by IBM Cognos components. For all databases, the size will increase over time. Ensure that you have sufficient disk space for future requirements.</td>
</tr>
<tr>
<td>Web server</td>
<td>A Web server must be installed and started.</td>
</tr>
<tr>
<td>Java Runtime Environment (JRE)</td>
<td>An IBM JRE is installed automatically with IBM Cognos 8 on Windows.</td>
</tr>
<tr>
<td></td>
<td>If you are using an application server, use the JRE that is installed with it, if it is supported in IBM Cognos 8.</td>
</tr>
<tr>
<td>Requirement</td>
<td>Specification</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------</td>
</tr>
</tbody>
</table>
| Database    | Cognos Content Database can be installed and configured as the default content store database. If you want to use another database, you must have one of the following databases available to store IBM Cognos data:  
  - Oracle  
  - DB2  
  - Microsoft SQL Server  
  - Sybase  
For IBM Cognos 8 Metrics Manager, the following databases are supported for the metric store:  
  - Oracle  
  - DB2  
  - Microsoft SQL Server  
TCP/IP connectivity is required for all database types. |
| Web browser | For all Web browsers, the following are enabled:  
  - cookies  
  - JavaScript  
For Microsoft Internet Explorer only, the following are enabled:  
  - Run ActiveX controls and plug-ins  
  - Script ActiveX controls marked safe for scripting  
  - Active scripting  
  - Allow META REFRESH |
| Other       | On Windows, Microsoft Data Access Component (MDAC) for use with product samples  
If you want to email reports, the ability to use a mail server |
| SAP BW      | The following SAP Front-End components installed on each IBM Cognos 8 server computer:  
  - SAP GUI  
  - BW Add-ons |
Review the Default Port Settings for IBM Cognos 8

The following table lists the default ports and URI settings for IBM Cognos 8. After installation, you can use the configuration tool to change the settings (p. 301). You can also change them by editing the cogstartup.xml file in the `c8_location/configuration` directory.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Default Setting</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Manager URI</td>
<td><a href="http://localhost:9300/p2pd/servletContentManager">http://localhost:9300/p2pd/servletContentManager</a></td>
<td>The URI to Content Manager</td>
</tr>
<tr>
<td>Gateway URI</td>
<td><a href="http://localhost:80/cognos8/cgi-bin/cognos.cgi">http://localhost:80/cognos8/cgi-bin/cognos.cgi</a></td>
<td>The URI to the gateway</td>
</tr>
<tr>
<td>Dispatcher URI (Internal, External)</td>
<td><a href="http://localhost:9300/p2pd/servlet/dispatch">http://localhost:9300/p2pd/servlet/dispatch</a></td>
<td>The URI to the dispatcher</td>
</tr>
<tr>
<td>Dispatcher URI for external applications</td>
<td><a href="http://localhost:9300/p2pd/servlet/dispatch">http://localhost:9300/p2pd/servlet/dispatch</a></td>
<td>The URI to the dispatcher</td>
</tr>
<tr>
<td>Dispatcher URIs for Gateway</td>
<td><a href="http://localhost:9300/p2pd/servlet/dispatch/ext">http://localhost:9300/p2pd/servlet/dispatch/ext</a></td>
<td>The URI to the primary dispatcher used by the gateway</td>
</tr>
<tr>
<td>Log server port</td>
<td>9362</td>
<td>The port used by the local log server</td>
</tr>
<tr>
<td>Listening port number</td>
<td>1527</td>
<td>The port used by Cognos Content Database.</td>
</tr>
</tbody>
</table>

The following table lists the default settings used by IBM Cognos 8 for Tomcat. The non-SSL and SSL connectors are automatically updated in the server.xml file when you use IBM Cognos Configuration to change the dispatcher port (p. 301) or to enable the SSL protocol (p. 319). You can directly update the shutdown port using IBM Cognos Configuration.

<table>
<thead>
<tr>
<th>Setting</th>
<th>Port</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-SSL Coyote HTTP/1.1 Connector</td>
<td>9300</td>
<td>The port Tomcat uses to pass requests from the Web server to IBM Cognos 8</td>
</tr>
<tr>
<td>SSL Coyote HTTP/1.1 connector</td>
<td>9334</td>
<td>The port Tomcat uses to listen for secure connections</td>
</tr>
<tr>
<td>Shutdown port</td>
<td>9399</td>
<td>The port Tomcat uses to listen for a shutdown command</td>
</tr>
</tbody>
</table>
Guidelines for Creating the Content Store

The content store is a database that Content Manager uses to store global configuration data, global settings (such as the language and currency formats shown in the user interface), connections to data sources, and product-specific content.

Design models and log files are not stored in the content store.

You must create the content store before you can use IBM Cognos 8.

If you are upgrading from ReportNet or a previous version of IBM Cognos 8, you can use your existing content store with the new version of IBM Cognos 8. After the content store is upgraded, you cannot use it with the previous version. If you are upgrading and you want to keep running ReportNet or the older version of IBM Cognos 8, you must create a new content store database for use with IBM Cognos 8. You must follow the appropriate upgrade process (p. 93) when creating the new content store database.

Database Properties

You must create the database using one of the databases listed in the following table:

<table>
<thead>
<tr>
<th>Database</th>
<th>Character Encoding</th>
<th>Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2</td>
<td>UTF-8</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Oracle</td>
<td>AL32UTF8 or AL32UTF16</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>SQL Server</td>
<td>UTF-8 or UTF-16</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Sybase</td>
<td>UTF-8</td>
<td>TCP/IP</td>
</tr>
<tr>
<td>Cognos Content Database</td>
<td>pre configured</td>
<td>pre configured</td>
</tr>
</tbody>
</table>

If you plan to use the Cognos Content Database as your content store, a database is created and pre configured when the installation is complete.

You can create another instance of the Cognos Content Database. For more information see "Create a New Content Store Using Cognos Content Database" (p. 318).

Collation Sequence

Note that Cognos 8 uses a single sort order that specifies the rules used by the database to interpret, collect, compare, and present character data. For example, a sort order defines whether the letter A is less than, equal to, or greater than the letter B; whether the collation is case sensitive; and whether the collation is accent sensitive. For more information about collation and collation sequences, see the database documentation.

Suggested Settings for Creating the Content Store in DB2 on Linux, Windows and UNIX

The database you create for the content store must contain the recommended configuration settings.
To ensure a successful installation, use the following guidelines when creating the content store.

**32-bit Library Files for DB2**

IBM Cognos 8 requires 32-bit library files when running in a 32-bit application server. If you have installed DB2 version 9.5, the 64-bit library files may be set in your environment variables. You must change the library files used or change the order in which the library files are listed so that IBM Cognos 8 can find the 32-bit library files. The 32-bit library files must be listed first for IBM Cognos 8.

**Guidelines for Creating the Content Store in DB2 on Linux, UNIX, or Windows**

If you create your own content store, use the following checklist to help you set up the content store on DB2.

- If you use type 2 UDBC connectivity, set the appropriate environment variables for DB2, which are as follows.

<table>
<thead>
<tr>
<th>Environment variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2DIR</td>
<td>The top level directory that contains the database client software or the entire database installation.</td>
</tr>
<tr>
<td>LD_LIBRARY_PATH</td>
<td>The load library path. You must add the driver location.</td>
</tr>
<tr>
<td></td>
<td>For example, LD_LIBRARY_PATH= $DB2_location/sqlib/lib32: $LD_LIBRARY_PATH</td>
</tr>
<tr>
<td></td>
<td>Examples:</td>
</tr>
<tr>
<td></td>
<td>For Solaris and Linux:</td>
</tr>
<tr>
<td></td>
<td>LD_LIBRARY_PATH= $DB2DIR/lib: $LD_LIBRARY_PATH</td>
</tr>
<tr>
<td></td>
<td>For AIX:</td>
</tr>
<tr>
<td></td>
<td>LIBPATH=$DB2DIR/lib:$LIBPATH</td>
</tr>
<tr>
<td></td>
<td>For HP-UX:</td>
</tr>
<tr>
<td></td>
<td>SHLIB_PATH=$DB2DIR/lib:$SHLIB_PATH</td>
</tr>
<tr>
<td>DB2INSTANCE</td>
<td>The default database server connection.</td>
</tr>
<tr>
<td>DB2CODEPAGE</td>
<td>Setting this optional environment variable to a value of 1208 provides support for multilingual databases.</td>
</tr>
<tr>
<td></td>
<td>For information about whether to use this environment variable, see the DB2 documentation.</td>
</tr>
</tbody>
</table>

- Use UTF-8 as the code set value when you create the database.
To check if your database has the correct code set, using the command line interface, type the following at the command prompt:

```
    db2 get database configuration for database_name
```

The code set value should be UTF-8 and the code page value should be 1208.

- Ensure that you set the following configuration parameters.

<table>
<thead>
<tr>
<th>Property</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application heap size</td>
<td>1024 KB</td>
</tr>
<tr>
<td>(applheapsz)</td>
<td></td>
</tr>
<tr>
<td>Lock timeout (locktimeout)</td>
<td>240 seconds</td>
</tr>
<tr>
<td></td>
<td>Do not set this to an infinite timeout value.</td>
</tr>
</tbody>
</table>

If the application heap size value is too small, out of memory errors may occur when there are many users.

- Create a buffer pool with a page size of 32 KB, and a second one with a page size of 4 KB.

- Create a system temporary tablespace using the 32 KB buffer pool you created in the previous step.

- Create a user temporary tablespace using the 4 KB buffer pool you created.
  Global temporary tables will be created in the user temporary tablespace.

- Create a regular user tablespace using the 4 KB buffer pool you created.
  If you are also creating a logging database, create an additional regular user tablespace with a page size of 8 KB.

- Grant the following database privileges for the user account IBM Cognos 8 will use to access the database:
  - connect to database
  - create tables
  - create schemas implicitly

  **Tip:** If you want to host more than one content store on your DB2 instance and you will use both at the same time, use a different user account for each content store to ensure that each IBM Cognos 8 instance is fully isolated from the other.

- Ensure that the user account has use privileges for the user temporary tablespace and other appropriate tablespaces associated with the database.

- Create a schema for the user account IBM Cognos 8 will use to access the database, and ensure the user has create, drop, and alter permissions for the schema.
We recommend that you create a profile that sources the sqllib/db2profile from the DB2 user’s home directory. For example, the content of your .profile will be similar to the following:

```bash
if [ -f /home/db2user/sqllib/db2profile ]; then
  ./home/db2user/sqllib/db2profile
fi
```

Your database administrator must back up IBM Cognos 8 databases regularly because they contain the IBM Cognos data. To ensure the security and integrity of databases, protect them from unauthorized or inappropriate access.

### Suggested Settings for Creating the Content Store in DB2 on z/OS

The database you create for the content store must contain some recommended configuration settings. To ensure a successful installation, use the following guidelines when creating the content store.

#### Guidelines for Creating the Content Store in DB2 on z/OS

Use the following checklist to help you set up the content store in DB2 on z/OS.

- Create a database instance, storage group, and a user account for the content store.
  
  A user must have permissions to create and delete tables in the database.
  
  IBM Cognos 8 uses the credentials of the user account to communicate with the database server.

- Ensure you reserve a buffer pool with a page size of 32 KB, and a second one with a page size of 4 KB for the database instance.

- Administrators must run a script to create tablespaces to hold Large Objects and other data for the content store and grant user rights to the tablespaces. For information about running the script, see "Create Tablespaces for DB2 Content Store on z/OS" (p. 63).

- Your database administrator must back up IBM Cognos 8 databases regularly because they contain the IBM Cognos data. To ensure the security and integrity of databases, protect them from unauthorized or inappropriate access.

### Suggested Settings for Creating the Content Store in Oracle

The database you create for the content store must contain some recommended configuration settings. To ensure a successful installation, use the following guidelines when creating the content store.

#### Guidelines for Creating the Content Store in Oracle

Use the following checklist to help you set up the content store on Oracle.

- Ensure that the parameter for the database instance compatibility level of the content store database is set to 9.0.1 or higher.

  For example, you can check the COMPATIBLE initialization parameter setting by issuing the following SQL statement:

  ```sql
  SELECT name, value, description FROM v$parameter WHERE name='compatible';
  ```
For information about changing an instance configuration parameter, see the Oracle documentation.

❑ Determine if the database is Unicode.

   Tip: One method is to type the following select statement:
   
   ```sql
   select * from NLS_DATABASE_PARAMETERS
   ```

   If the result set returns an NLS_CHARACTERSET that is not Unicode, create a new database and specify AL32UTF8 for the database character set parameters.

❑ Determine which user account will be used to access the database.

   Tip: If you want to host more than one content store on your Oracle instance and you will use both at the same time, use a different user account for each content store to ensure that each IBM Cognos 8 instance is fully isolated from the others.

❑ Ensure that the user account that accesses the database has permission to do the following:
   - connect to the database
   - create, alter, and drop tables, triggers, views, procedures, and sequences
   - insert, update, and delete data in the database tables

❑ Your database administrator must back up IBM Cognos 8 databases regularly because they contain the Cognos data. To ensure the security and integrity of databases, protect them from unauthorized or inappropriate access.

**Suggested Settings for Creating the Content Store in Microsoft SQL Server**

The database you create for the content store must contain some recommended configuration settings. To ensure a successful installation, use the following guidelines when creating the content store.

**Suggested settings for Microsoft SQL Server**

Use the following checklist to help you set up the content store on Microsoft SQL Server.

❑ Ensure that the collation sequence is case-insensitive.

   In a Custom installation, you choose a collation, which includes character sets and sort order, during the SQL Server setup. In a Typical installation, the installation uses the locale identified by the installation program for the collation. This setting cannot be changed later.

❑ When connecting to Microsoft SQL Server Management Studio to create the database, use SQL server authentication.

   If you connect using Windows authentication, the database that you create will also use Windows authentication. In this situation, you must configure the database connection using a database type of **SQL Server database (Windows Authentication)** in IBM Cognos Configuration.

❑ For the user account that will be used to access the database, create a new login under **Security** and use the following settings:
   - Select **SQL Server authentication**.
• Clear the **Enforce password policy** check box.

**Tip:** If you want to host more than one content store on your Microsoft SQL Server instance and you will use both at the same time, use a different user account for each content store to ensure that each IBM Cognos 8 instance is fully isolated from the others.

❑ For Microsoft SQL Server 2008, grant EXECUTE permission to the user account that accesses the database.

❑ For the content store database, create a new database under **Databases**.

❑ Under **Security** for the new database, create a new schema and assign a name to it.

❑ Under **Security** for the new database, create a new user with the following settings:
  • For **Login name**, specify the new login that you created for the user account.
  • For **Default schema**, specify the new schema.
  • For **Owned Schemas**, select the new schema.
  • For **Role Members**, select **db_datarader, db_datawriter, and db_ddladmin**.

---

**Suggested Settings for Creating the Content Store in Sybase**

The database you create for the content store must contain some recommended configuration settings. To ensure a successful installation, use the following guidelines when creating the content store.

**Suggested settings for Sybase**

Use the following checklist to help you set up the content store on Sybase.

❑ On the Sybase server, create a server instance with an 8 KB server page size.
  
  For instructions, see the Sybase documentation.

❑ If required, install jConnect 5.5.
  
  This tool sets up the communication between the JDBC driver and the Sybase Adaptive Server instance.
  
  For instructions, see the Sybase documentation.
  
  If your version of Sybase does not include JConnect 5.5, you must download the installer from Sybase’s Web site.

❑ Add the UTF-8 character set to the server instance.

❑ If required, make UTF-8 the default character set on the server.

❑ Create a database device.
  
  **Tip:** Set **log_segment** to a minimum of 10 MB.

❑ Set the new database device as the default.
Information about the new database will be stored in the new database device. Keep a backup of the database device for recovery purposes.

- Create the database.
- Determine which user account will be used to access the database.
  
  **Tip:** If you want to host more than one content store on your Sybase instance and you will use them at the same time, use a different user account for each content store to ensure that each IBM Cognos 8 instance is fully isolated from the others.
- Ensure that the user account has the following privileges for the database: create default, create procedure, create rule, create table, and create view.
- Ensure that the database has the following settings and is restarted:
  - create and drop table privileges for the user account
  - `Select into` property is set to True

### Create Tablespaces for DB2 Content Store on z/OS

A database administrator must run a script to create a set of tablespaces required for the content store database. The script must be modified to replace the placeholder parameters with ones that are appropriate for your environment.

Ensure that you use the naming conventions for DB2 on z/OS. For example, all names of parameters must start with a letter and the length must not exceed eight characters. For more information, see the IBM DB2 Information Center.

**Steps**

1. Connect to the database as a user with privileges to create and drop tablespaces and to allow execution of SQL statements.

2. Open the `tablespace_db2zOS.sql` script file and use the following table to help you to replace the generic parameters with ones appropriate for your environment.

   Not all of the parameters listed are in the script, but may be added in the future.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMSCRIPT_CREATE_IN</td>
<td>Specifies the base tables location</td>
</tr>
<tr>
<td></td>
<td>For example, <code>databaseName.baseTablespaceName</code></td>
</tr>
<tr>
<td>CMSCRIPT_STOGROUP</td>
<td>Specifies the name of the storage group.</td>
</tr>
<tr>
<td>CMSCRIPT_DATABASE</td>
<td>Specifies the name of the content store database.</td>
</tr>
<tr>
<td>Parameter Name</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CMSCRIPT_CS_ID</td>
<td>Specifies the instance identification for the content store database. The ID must not be longer than two characters.</td>
</tr>
<tr>
<td>CMSCRIPT_TABLESPACE</td>
<td>Specifies the name of the tablespace that will contain all of the base tables in the content store. Auxiliary tables are not included.</td>
</tr>
<tr>
<td></td>
<td>The name cannot be longer than six characters.</td>
</tr>
<tr>
<td>CMSCRIPT_LARGE_BP</td>
<td>Specifies the name of the large buffer pool allocated for especially large objects.</td>
</tr>
<tr>
<td>CMSCRIPT_REGULAR_BP</td>
<td>Specifies the name of the regular size buffer pool allocated for regular and large objects.</td>
</tr>
<tr>
<td>CMSCRIPT_USERNAME</td>
<td>Specifies the user account that accesses the content store database.</td>
</tr>
</tbody>
</table>

3. Save and run the script.

4. Grant the IBM Cognos user rights to the tablespaces that were created when you ran the tablespace_db2zOS.sql file script:
   - In the remote access tool, open the rightsGrant_db2zOS.sql script file and replace the placeholder parameters with values that are appropriate for your environment.
     Tip: Ensure that you use the same values that you used when you allocated resources to the buffer pools and user account.
   - Save and run the file.

The content store database is created. You can now configure a database connection.

**Configure a User Account or Network Service Account for IBM Cognos 8**

You can configure either a user account or a network service account for IBM Cognos 8.

The user or network service account under which IBM Cognos 8 runs must:
- have access to all required resources, such as printers and Web servers
- have the rights to log on as a service and act as part of the operating system

In addition, the user account must be a member of the local administrator group.
For example, to print reports using a network printer, the account must have access to the network printer, or you must assign a logon account to the IBM Cognos 8 service.

**Configure a User Account**

For Windows, we recommend that you assign a logon account to the IBM Cognos 8 service. You can configure the IBM Cognos 8 service to use a special user account by selecting the IBM Cognos 8 service from the list of services shown in the Services window in Windows. You can then define the user account properties.

For UNIX or Linux, we recommend that you create a new UNIX or Linux group named cognos8. This group must contain the user that owns the IBM Cognos files. Change the group ownership of the IBM Cognos files to the cognos8 group and change the file permissions for all IBM Cognos files to GROUP READABLE/WRITABLE/EXECUTABLE.

You must configure the Web Server to use aliases. For more information, see "Configure the Web Server" (p. 135).

**Configure a Network Service Account**

The network service account is the built in account NT AUTHORITY\NetworkService in the operating system. Administrators do not need to manage a password or maintain the account.

Use an account with administrator privileges if you are installing on Windows Server 2008

You must configure the Web server to use the application pool. For more information, see "Configure the Web Server" (p. 135). You also need the appropriate write permissions to install to the directory.

---

**Setting Up Environment Variables on UNIX for the Metric Store**

For IBM Cognos 8, you must specify environment variables before you can use a DB2 or Oracle database as the metric store.

The proper syntax for creating environment variables is shell dependent.

**DB2**

For IBM DB2 databases, you must set the database variables by running the environment setup scripts included with the IBM DB2 installation. For Bourne or Korn shells, run the following command or add it to the .profile script:

```
DB2_installation_path/db2profile
```

Contact your database or network administrator for the correct values for your system.

**Oracle**

For Oracle databases, you must set and export the database environment variables for the user of the metric store before you start the IBM Cognos processes. IBM Cognos 8 uses these database variables to connect to your database. One way to set these environment variables is to include these commands in the .profile or .login script of the user who starts the IBM Cognos services.
When you set the load library paths, ensure that the 32-bit Oracle libraries are in the library search path, which is usually the $ORACLE_HOME/lib directory or the $ORACLE_HOME/lib32 directory if you installed a 64-bit Oracle client.

The following table describes environment variables for Oracle databases. Contact your database or network administrator for the correct values for your system.

<table>
<thead>
<tr>
<th>Environment variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORACLE_HOME</td>
<td>The top level directory that contains the database client software or the entire database installation. Example: /usr/oracle You may be able to use an Oracle script to create the environment variables. For more information, see the Oracle documentation. Example: /usr/local/bin/coraenv</td>
</tr>
<tr>
<td>TNS_ADMIN</td>
<td>The directory that contains the tnsnames.ora file, which allows calls to the Oracle database to determine the required server connections. Example: $ORACLE_HOME/network/admin</td>
</tr>
<tr>
<td>PATH</td>
<td>The variable to locate executable files. Example: $PATH:$ORACLE_HOME/bin</td>
</tr>
</tbody>
</table>
**Environment variable** | **Description**
--- | ---
NLS_LANG | The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.

**Configure Web Browsers**

IBM Cognos 8 uses the default browser configurations provided by Microsoft, Netscape, and Firefox. For all browsers, you must ensure that settings are enabled for cookies and Java scripts. Additional required settings are specific to the browser.

The following table shows the settings that must be enabled in the supported Web browsers.

<table>
<thead>
<tr>
<th>Browser</th>
<th>Setting</th>
<th>IBM Cognos component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet Explorer (settings for studios and portals)</td>
<td>Allow Cookies&lt;br&gt;Active Scripting&lt;br&gt;Allow META REFRESH</td>
<td>IBM Cognos Connection&lt;br&gt;IBM Cognos Administration&lt;br&gt;Cognos Viewer&lt;br&gt;Report Studio&lt;br&gt;Query Studio&lt;br&gt;Analysis Studio&lt;br&gt;Event Studio&lt;br&gt;Metric Studio</td>
</tr>
<tr>
<td>Internet Explorer (settings for some studios)</td>
<td>Run ActiveX controls and plugins&lt;br&gt;Script ActiveX controls marked safe for scripting</td>
<td>Report Studio&lt;br&gt;Query Studio&lt;br&gt;Analysis Studio</td>
</tr>
<tr>
<td>Internet Explorer (settings for a single studio)</td>
<td>Binary and script behaviors&lt;br&gt;Allow programmatic clipboard access</td>
<td>Report Studio</td>
</tr>
<tr>
<td>Netscape</td>
<td>Allow Cookies&lt;br&gt;JavaScript</td>
<td>IBM Cognos Connection&lt;br&gt;IBM Cognos Administration&lt;br&gt;Query Studio&lt;br&gt;Event Studio&lt;br&gt;Metric Studio</td>
</tr>
</tbody>
</table>
Note: Report Studio and Query Studio use the native Microsoft Internet Explorer XML support, which is a component of the browser. ActiveX support must be enabled because Microsoft implements XML using ActiveX. IBM Cognos 8 does not provide or download ActiveX controls. Only the ActiveX controls that are installed as part of Internet Explorer are enabled through this configuration.

Important: If Adblock Plus is installed with Firefox, disable it using the per-page option. Adblock Plus prevents some IBM Cognos Connection resources from working properly.

IBM Cognos 8 uses the following cookies to store user information.

<table>
<thead>
<tr>
<th>Cookie</th>
<th>Type</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS_TICKET</td>
<td>Session temporary</td>
<td>Created if IBM Cognos 8 is configured to use an IBM Cognos Series 7 namespace</td>
</tr>
<tr>
<td>caf</td>
<td>Session temporary</td>
<td>Contains security state information</td>
</tr>
<tr>
<td>Cam_passport</td>
<td>Session temporary</td>
<td>Stores a reference to a user session stored on the Content Manager server</td>
</tr>
<tr>
<td>cc_session</td>
<td>Session temporary</td>
<td>Holds session information that is specific to IBM Cognos Connection</td>
</tr>
<tr>
<td>cc_state</td>
<td>Session temporary</td>
<td>Holds information during edit operations, such as cut, copy, and paste</td>
</tr>
<tr>
<td>CRN</td>
<td>Session temporary</td>
<td>Contains the content and product locale information, and is set for all IBM Cognos users</td>
</tr>
<tr>
<td>CRN_RS</td>
<td>Persistent</td>
<td>Stores the choice that the user makes for the &quot;view members folder&quot; in Report Studio</td>
</tr>
<tr>
<td>Cookie</td>
<td>Type</td>
<td>Purpose</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PAT_CURRENT_FOLDER</td>
<td>Persistent</td>
<td>Stores the current folder path if local file access is used, and is updated after the Open or Save dialog box is used</td>
</tr>
<tr>
<td>qs</td>
<td>Persistent</td>
<td>Stores the settings that the user makes for user interface elements such as menus and toolbars</td>
</tr>
<tr>
<td>userCapabilities</td>
<td>Session temporary</td>
<td>Contains all capabilities and the signature for the current user</td>
</tr>
<tr>
<td>usersessionid</td>
<td>Session temporary</td>
<td>Contains a unique user session identifier, valid for the duration of the browser session.</td>
</tr>
</tbody>
</table>

After upgrading or installing new software, restart the Web browser and advise users to clear their browser cache.
New versions of IBM Cognos 8 BI provide enhancements that may affect many components, such as product features and functionality, performance and scalability, and usability. Because of these improvements, upgrading may not be simple, and should be considered a process that you perform in stages.

You should treat upgrading as an IT project that requires careful planning, adequate time, and resources.

When you upgrade, you perform two distinct activities:

1. Install the new version of the product.
2. Move applications to the new version of the product.

**Install the New Version of the Product**

You can install the new version of the product in the same location as the existing version after you uninstall, or you can install into a new location.

We recommend that you first install into a new location, such as a test environment. This allows you to test your applications in both the old and new environment to ensure that they work as expected when you upgrade. You can compare the appearance and functionality of the reports in both environments to ensure equivalency.

**Move Content to the New Environment**

As part of the upgrade process, ensure that your applications work as expected in the new version. Sometimes, changes may introduce unexpected results. It is important to test your applications before you move them.

In IBM Cognos 8, when you move content from one environment to another, you do a deployment. Different groups are commonly involved in each of these activities. As part of the project, you should assess both your current IT environment and your existing applications separately, to ensure that the infrastructure can support your business objectives.

If you have IBM Cognos Series 7 content, you can move some of that content to IBM Cognos 8 using migration tools that are available in a separate installation.

If you are using previous versions of ReportNet, Metrics Manager, IBM Cognos 8 Go! Office, or Transformer, you can upgrade your content to IBM Cognos 8. You can also upgrade from previous versions of IBM Cognos 8, including full and maintenance (MR) releases.

**Upgrade Process**

The following diagram shows the approach that we recommend when you upgrade. The diagram shows the stages in the upgrade process. Before you start, you plan the upgrade, assess the applications that you want to upgrade and create a test environment. You should iteratively deploy and
test content in both the source and target environments before you to move successfully upgraded applications to a production environment.

In some upgrade situations, other tasks may be required. For example, if you use SDK applications that depend on the report specifications, you must upgrade your SDK applications before upgrading the report specifications. If you are upgrading from ReportNet 1.1 MR3 or MR4, you can use Upgrade Manager to automate some tasks in the trial upgrade stage.

See the following topics for information about upgrading:
- Planning the Upgrade
- Upgrading from IBM Cognos Series 7
- Upgrading from ReportNet, Metrics Manager, or Earlier Versions of IBM Cognos 8
- Upgrading IBM Cognos 8 Go! Office
- Upgrading Transformer Models and PowerCubes

**Planning the Upgrade**

We recommend that you plan your upgrade so that you know what to expect at each stage of the process. In the planning stage, you can review the upgrade documentation for information about expected behavior, new features, deprecated features, compatibility between versions, and requirements for preparing your production environment. When you finish the review, you can then conduct a site survey to identify the BI infrastructure, applications, reports, and custom configuration settings. Finally, you can test the upgrade on a subset of your data so that you can fine tune your reports and data before committing to the full upgrade.
The following diagram shows a high level view of the phases in an upgrade project.

When planning your upgrade, ensure that you

- gather the necessary information, such as the required inputs and expected outputs for each phase
- assess the applications in your reporting environment and group similar reports together
- install the new software in a test environment and deploy the content to the test environment
- test the upgraded applications to ensure reports run as expected

Deployment and testing is usually an iterative process. Assess any differences between the source and target environments to determine actionable activities. Move to your production environment when you are satisfied that the deployed applications meet your business requirements.

We recommend that you do not change security providers, such as changing from an IBM Cognos Series 7 namespace to Active Directory as part of the upgrade process. You should treat that as a separate project.

Ensure that you have the skills available, either internal or using external resources. Also consider the hardware that you will need before you begin.

Use the following checklist to guide you through the planning process:

- Review the documentation.
- Assess applications in the source environment.
- Perform a trial upgrade, which includes the following tasks:
  - Create the test environment.
  - Plan the deployment of content from the source environment to the test environment.
  - Create an export deployment specification.
  - Copy the deployment specification to the test environment.
  - Include configuration objects for import, if required.
  - Import the deployment specification to Cognos 8 in the test environment.
  - Test the upgraded content.
- Move to the production environment.
Review the Documentation

Documentation is provided from a variety of sources to help you achieve a successful upgrade. All the documentation is available online at the IBM Cognos Customer Service Center (http://www.ibm.com/software/data/support/cognos_crc.html).

Steps

1. Read the "What’s New" section in this guide (p. 17).
   It contains a list of new, changed, deprecated, and removed features for this release.

2. Read the rest of the Upgrade information in this document.

3. Read the topic about IBM Cognos 8 with other IBM Cognos products (p. 47).
   It contains information about other IBM Cognos products that you may have in your environment and that must be considered in the upgrade.

4. From the Documentation link on the IBM Cognos Customer Service Center (http://www.ibm.com/software/data/support/cognos_crc.html), download and review the latest versions of the following documentation:

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Cognos 8 Readme</td>
<td>Recent issues that may affect an upgrade</td>
</tr>
<tr>
<td>IBM Cognos 8 New Features</td>
<td>New features that may affect the behavior of existing content</td>
</tr>
<tr>
<td>Framework Manager User Guide</td>
<td>Upgrading models</td>
</tr>
<tr>
<td>Report Studio Professional Authoring User Guide</td>
<td>Upgrading reports</td>
</tr>
<tr>
<td>IBM Cognos 8 Transformer User Guide</td>
<td>Upgrading user views and upgrading IBM Cognos Series 7 models</td>
</tr>
<tr>
<td>IBM Cognos 8 Migration and Upgrade Tools User Guide</td>
<td>Moving metadata, Impromptu catalogs and reports, PowerPlay reports, and Upfront content from IBM Cognos Series 7 to IBM Cognos 8</td>
</tr>
<tr>
<td>Upgrade Manager User Guide</td>
<td>Using Upgrade Manager to audit trial upgrades from ReportNet 1.1 MR3 or MR4 to IBM Cognos 8.2 or later</td>
</tr>
<tr>
<td>IBM Cognos 8 SDK Developer Guide</td>
<td>Upgrading SDK applications</td>
</tr>
</tbody>
</table>
Recommendation - Assess Applications in the Source Environment

Preparing to upgrade provides an opportunity to review your current BI investment, and clean up your source environment. Inventory your BI applications to understand the strengths, weaknesses, and areas for improvement in your environment.

For example, you may have a hundreds of reports, packages, public folders and applications in your environment. However, it is not uncommon to find that a number of applications are not used, or no longer meet the company’s requirements, or do not work in the source environments.

We recommend that you conduct an audit of your applications to determine which applications should be upgraded. Assessing and reducing the number of reports is a useful exercise. Do not rely only on user feedback to determine which content is used.

An audit of your existing applications may include the following:

- Do a site survey.

  A survey will help you to assess the current production environment and identify areas that require attention during an upgrade. The site survey should include information about the infrastructure, applications, users, and configuration settings for your IBM Cognos 8 products.

- Assess the software that you use in your reporting application.

  List software, such as operating systems, Web servers, security, databases, and so on. Compare the list to the supported versions for your target upgrade version, available from the Production Information, Software Environments links at the IBM Cognos Customer Service Center (http://www.ibm.com/software/data/support/cognos_crc.html). Determine whether any components require updating.

- List your BI applications, including the following:
  - Framework Manager models
  - published packages
  - reports
  - Transformer models
  - SDK applications and their dependencies

- Complete a detailed assessment of your applications.

  The usage, age, size, and complexity of your applications are important factors to consider when planning the upgrade. The total size of the applications may have an impact on the time required to complete the upgrade.

- List all the reports contained in your application and do the following:

  - Interview the team members to see which cubes, views, or reports are needed and used, which ones can be consolidated, and which ones can be eliminated. Use audit report data to determine report usage.

    Upgrade only the reports that work and that users need and use. This reduces the number of applications that you must upgrade.
For more information about audit reports, see the *Administration and Security Guide*.

- Look at the purpose of each report and assign a priority.
  This identifies business-critical applications and the functionality that is required in the new environment.

- Flag reports that fail to run or validate in the current environment.
  They are unlikely to upgrade successfully. Repair these reports so that they upgrade.

- Consider retiring unused or little-used reports.

- Group the reports into categories, such as upgrade, eliminate, no longer used, and do not upgrade,

  - List the following information about your configuration:
    - configuration settings that you enabled using IBM Cognos Configuration
      These settings are preserved through the upgrade. They are stored in two files. For ReportNet v1.1, the files are crnstartup.xml and crnlocale.xml. For IBM Cognos 8, the files are cogstartup.xml and coglocale.xml.
    - changes to other configuration files
      Changes to other files must be made manually during the upgrade. If you changed other configuration files, you must assess the changes that you want to preserve in the upgraded environment. This may include .xml, .txt, and .css files in the configuration, templates, webapps, and webcontent directories of the installation location.
      **Important**: Changes to .ini files are not supported. If you changed .ini files, please contact Customer Support.

  - Back up all reports, models, and configuration data and files.

  - Create an upgrade plan.

**Recommendation - Perform a Trial Upgrade**

Pilot upgrade projects are valuable and practical exercises because they ensure that the upgrade produce the expected and required outcome. In addition, an evaluation of the pilot project ensures that the upgrade is successful. If unexpected results occur, you can determine whether the differences are enhancements for your situation or whether you should take action to mitigate the differences.

When you upgrade, applications usually work in the new environment, with little or no intervention. By running an pilot upgrade you can validate selected reports to see if the expected results are produced.

We recommend that you perform a trial upgrade several weeks before upgrading your production system. The trial upgrade identifies components that will upgrade with minimal effort, and components that may require additional actions before or after the upgrade.

Commonly, you upgrade a sample set of reports in an isolated environment, and you compare the appearance and behavior of the reports before and after the upgrade.
Ensure skilled resources are available to perform migration work, especially for mission-critical applications. Also, test and debug all applications prior to deployment.

If you are upgrading from ReportNet 1.1 MR3 or MR4, you can use Upgrade Manager to automate some tasks in the trial upgrade stage.

Create the Test Environment

Create a test environment for the new software in preparation for your trial upgrades.

Initially, the new environment does not need to be large, or be the same as your production environment. For example, if it is acceptable, you may use hardware from existing environments, such as development servers.

The environment can be scaled up and out in a phased way after the basic new environment is up and running.

Alternatively, existing environments can remain untouched. If you want the test environment to become the new production environment, configure the test system to match your production environment.

Steps

1. Ensure the infrastructure is in place.
2. Review the supported environments.
3. Install the new software in the test environment.

   Having the new version of software in a different location than the earlier version ensures that you run both versions at the same time and confirm that your applications work properly in both environments.

   For more information about installing a basic installation, see "Installing and Configuring IBM Cognos 8 Components on One Computer" (p. 119).

After you have installed the software, use the deployment process to upgrade the content. For more information, see the online help in the IBM Cognos Administration console.

Plan Your Deployment

Deployment involves moving applications from one installation to another. In IBM Cognos 8, you deploy packages, top-level folders, or the entire content store from a source environment to a target environment.

When you deploy, you must consider how to handle security and whether to deploy the entire content store or to deploy selected packages, folders, and directory content. Other considerations relate to the database you use for the content store, bursting reports, and ownership of entries.

For more information about planning the deployment of content to a new environment, see the online help for the Administration console.

The following diagram summarizes the deployment process.
Security
Before you deploy, you must consider access permissions and security of deployment archives. To deploy IBM Cognos Connection entries, you must have the following permissions:

- Execute permissions for the **Administration tasks** secured feature.
- Traverse permissions for the **Administration** secured function.

We also recommend that you belong to the System Administrators group, and have read and write access to the Cognos namespace, so that you can deploy the System Administrators group.

For information about deploying IBM Cognos groups and roles, see the online help in the IBM Cognos Administration console.

References to Namespaces
Some entries, such as groups, roles, distribution lists, contacts, data source signons, and some report properties, such as email recipients and report contacts, can refer to entities in namespaces, or authentication providers. When you deploy public folders and directory content, you can deploy these entries with or without the third-party references.

Deploying the Entire Content Store
Deploying the entire content store ensures that all packages, folders, and directory content are copied to a new location. For example, if you are changing the computer where IBM Cognos 8 is installed, you can move the entire content store from the old environment to the new environment and keep all the reports and other entries created by administrators and users.

When you import an entire content store, configuration data is included in the export, but excluded from the import by default. We recommend that you do not change this setting. However, if you must import configuration settings (p. 81), you can change the default in the Advanced Settings.

Deploying Selected Public Folders and Directory Content
You can choose to do a partial deployment, deploying only selected public folders and directory content.

You can choose the packages and folders that you want to deploy by browsing the Public Folders hierarchy and select a package or folder. Once you select a package or folder, its contents are deployed. You cannot select specific entries in the packages or folders. During export, the parent packages and folders are not exported and Content Manager does not create placeholder locations for them in the target environment. During both export and import, you can specify a new target location in the Content Manager hierarchy for each deployed package and folder.
When you do a partial export of public folders and directory content, you must have the following permissions:

- Read and traverse permissions for the entries that you export.
- Write permissions because you create a deployment specification and deployment history when you export.
- Write and set policy permissions for the entries that you import.

Deploying Packages

A package is an entry that contains published reports and metadata. Packages are stored in the content store and appear as entries in IBM Cognos Connection.

During a partial deployment, you can deploy one or more packages at a time. A package can reference objects that are outside the package, such as security objects, data sources, and distribution lists. However, referenced objects are not deployed with the package.

Create an Export Deployment Specification

After planning your deployment, the first step in moving content from the one installation to another is to export the content store or the entries that you want to keep in your new environment. To do this, you create an export deployment specification in your source environment.

The entries are exported to an export deployment archive in the source environment. Later, you import the archive entries into the target environment. You can update the entries in the target environment using the entries from the deployment archive.

We recommend that you stop the IBM Cognos 8 service in IBM Cognos Administration before you export and import. For more information, see the Administration and Security Guide.

Steps to Create a New Export Deployment Specification for the Content Store

1. In IBM Cognos Administration, on the Configuration tab, click Content Administration.

2. On the toolbar, click the new export button and follow the instructions in the New Export wizard.

3. To export the entire content store, click Select the entire content store and select whether to include user account information.

4. Click Next.

5. If you want to secure the archive, under Encryption, click Set the encryption password, type a password, and then click OK, and then click Next.

   The summary information appears.

6. Review the summary information and click Next.

   Tip: If you want to change information, click Back and follow the instructions.

7. Determine how you want to run the export by selecting the action you want.
After you run the export, you can move the deployment archive. You can also see the export run history.

**Steps to Create a New Export Deployment Specification for Partial Deployments**

1. In IBM Cognos Administration, on the Configuration tab, click Content Administration.

2. On the toolbar, click the new export button and follow the instructions in the New Export wizard.

3. To export specific folders and directory content, click Select public folders and directory content, and then click Next.

4. In the Select the Public folders content page, click Add.

5. In the Select entries page, in the Available Entries box, select the packages or folders that you want to export.

   You can browse the Public Folders hierarchy and choose the packages and folders you want. Click the right arrow button to move the selected items to the Selected entries box, and click OK.

6. For each package and folder that you export, do one of the following:
   - If you want to make any changes to the package or folder in the target environment, click the edit icon make your changes, and click OK.
   - To restrict access to the package or folder and its entries, select the check box in the Disable after import column. This is useful when you want to test the reports before you make them available in the target environment.

7. Under Options, select whether you want to include the report output versions, run history, and schedules and what to do with entries in case of a conflict, and then click Next.

8. In the Select the directory content page, select whether you want to export IBM Cognos groups and roles, distribution lists and contacts, and data sources and connections and what to do with the entries in case of a conflict, and then click Next.

9. In the Specify the general options page, select whether to include access permissions and who should own the entries after they are imported in the target environment.

10. Specify the Recording Level for the deployment history, and then click Next.

11. In the Specify a deployment archive page, under Deployment archive, select an existing deployment archive from the list, or type a new name to create one.

    If you are typing a new name for the deployment archive, we recommend that you do not use spaces in the name. If the name of the new deployment specification matches the name of an existing deployment archive, the existing deployment archive is overwritten.

12. If you want to secure the archive, under Encryption, click Set the encryption password, type a password, and then click OK.
13. Click **Next**.
   The summary information appears.

14. Review the summary information and click **Next**.
   **Tip:** If you want to change information, click **Back** and follow the instructions.

15. Determine how you want to run the export by selecting the action you want.

After you run the export, you can **move the deployment archive**. You can also see the export run history.

**Steps to Run an Export**

1. In the **Actions** column, click the run with options button.
2. Click **Now** to run the export immediately, or click **Later**, and enter the time that you want the export to run.
   You can also schedule a task to run on a recurring basis, and view a list of scheduled tasks using the Schedule Management tool.

You can now **move the deployment archive**.

**Copy the Deployment Specification to the Test Environment**

Move the deployment archive that you created in the source environment to the test environment. Later, you use the deployment archive to import entries into the target environment.

If the source and test environments use the same content store, you can import without moving the deployment archive.

The default location is `c8_location\deployment`.

If you plan to move the deployment archive to a location on a LAN, ensure that there is enough disk space. If you did not encrypt the deployment archive, we recommend that you copy it to a secure location.

**Steps to Copy the Deployment Specification**

1. Copy the deployment specification from the source environment to a LAN location or to a CD.
2. Copy the deployment specification from the LAN or CD to the test environment location specified in the configuration tool.

You can now **include configuration objects** if you’re importing an entire content store or **import to the target environment**.

**Include Configuration Objects in Import of Entire Content Store**

You can include configuration objects when importing an entire content store. For example, you may want to import the configuration because you have a series of advanced settings for your services that you want from the source environment.
By default, configuration objects are excluded when you import an entire content store, even though they are included in the export. Configuration objects include dispatchers and configuration folders used to group dispatchers.

**Steps**

1. In **IBM Cognos Administration**, on the **Configuration** tab, click **Dispatchers and Services**.
2. Click the dispatcher you want.
3. Next to **ContentManagerService**, click the set properties button.
4. Click the **Settings** tab.
5. In the **Value** column, click **Edit**.
6. Select the **Override the settings acquired from the parent entry** check box.
7. In the **Parameter** column that appears, type the following in uppercase:
   
   CM.DEPLOYMENTINCLUDECONFIGURATION

8. In the **Value** column, type **true**
9. Click **OK** to finish.

**Import to the Test Environment**

You import entries from the deployment archive into the target environment. To import the entries, you create an import deployment specification.

When you import, you select from entries that were exported. You can either accept the default options set during the export, or change them. You can only select options that were included in the deployment archive during the export.

If you do a partial deployment of specific public folders and directory content, the import wizard shows whether packages and folders already exist in the target environment and the date and time they were last modified. You can use this information to help you decide how to resolve conflicts. When you redeploy, the wizard also shows whether the packages and folders were in the original deployment.

**Steps to Import Deployment Specification**

1. In the target environment, in **IBM Cognos Administration**, on the **Configuration** tab, click **Content Administration**.
2. On the toolbar, click the new import button.
   
   The **New Import** wizard appears.
3. In the **Deployment archive** box, click the deployment archive that you want to import.
4. If the deployment archive is encrypted, type the password, and then click **OK**.
5. Click **Next**.
6. Type a unique name and an optional description and screen tip for the deployment specification, select the folder where you want to save it, and then click Next.

7. Select the content that you want to include in the import.
   Tip: To ensure that the required target package or folder exists in the target content store, click the edit button next to the package, and check the location. If you want, you can change the target location now.

8. Select the options you want, along with your conflict resolution choice for the options that you select.

9. In the Specify the general options page, select whether to include access permissions and who should own the entries after they are imported in the target environment.

10. Specify the Recording Level for the deployment history.

11. Click Next.
   The summary information appears.

12. Review the summary information, and click Next.

13. Determine how you want to run the import by selecting the action you want.

After you run the import, you can test the deployment.

**Steps to Run an Import**

1. In the Actions column, click the run with options button.

2. Click Now to run the import immediately, or click Later, and enter the time that you want the import to run.

3. If you want to upgrade the report specifications, click Upgrade all report specifications to the latest version.
   You can also use the Schedule Management tool to schedule a task to run on a recurring basis, and view a list of scheduled tasks.

You can now test the deployment.

**Test the Deployed Content**

After you import the packages from the deployment archive, you can check that all the entries were deployed successfully in the target environment.

You can test your deployment by doing the following:

- Review the run history for a deployment.
- Ensure that the correct packages and folders were imported, along with their contents.
- Run imported reports and report views.

For more information, see the online help in the IBM Cognos Administration console.
Recommendation - Test the Upgraded Content

After you import the packages from the deployment archive, you can check that all the entries were deployed successfully in the target environment.

We recommend that you test your upgraded content by doing the following:

- Test your reports, as follows:
  - In Report Studio, validate each report and note whether the validation was successful.
  - In Report Studio, Query Studio, and Analysis Studio, run the applicable reports and note whether each report ran successfully.

You can download Upgrade Manager from the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html) to help you test. Upgrade Manager is a verification tool that checks that your reports run and produce the same results in the new environment.

- Test models and PowerCubes in IBM Cognos 8 Transformer, if required:
  - Open models with the appropriate security options and save them.
  - Test PowerCubes.

- Test models in Framework Manager.
  
  You can use the same models and projects in Framework Manager for IBM Cognos 8 that you used with the earlier version. When upgrading models, the validation process produces errors for every model. To upgrade a project, open and save it in the new version of Framework Manager. For more information, see the Framework Manager User Guide.

- Repair or exclude reports and models that do not operate correctly.

- Test the repaired reports and models by running them again on the test system.
  
  Troubleshoot any issues, and contact Cognos Software Services about unresolved upgrade issues.

- Revise the upgrade plan to include adaptations that you made during the trial upgrade.

For more information, see the online help in the IBM Cognos Administration console.

Moving to the Production Environment

When all issues that you discovered during the trial upgrade are resolved, you are ready to begin the full upgrade in your production environment. Your upgrade plan will provide the details for each step of the full upgrade.

The following diagram shows the high level steps in the process of moving upgraded applications to a production environment. After preparing the production environment and backing up data and configuration files, you can uninstall the older version of the software, and install the new version in the same location. Then, you can deploy the content from your test environment.
If you want to leverage your existing resources and upgrade in the same directory, you must first back up your configuration data, ensure that Framework Manager models are backed up and checked into a source control system (if applicable), and uninstall the older version of IBM Cognos 8.

Use the following checklist to guide you through the process of moving to a production environment:

- Prepare the production environment.
  - Back up files and data.
    
    You may have modified files other than those in the configuration folder. We strongly recommend that you back up the entire installation directory.
    
    When you back up the configuration data, store it in a secure directory. You must protect the directory from unauthorized or inappropriate access.
  
  - Install your new release system in the production environment.
    
    If you install the new software from the test environment to the same location as the existing software, you must first uninstall the existing software.
  
  - Configure the system.

- Manually configure customization.
  - If you manually edited any configuration files, the changes will be overwritten during the upgrade. You must reapply the changes. You should keep a record of any customizations to ensure that they can be reapplied after upgrading. You should also back up these files so that you can restore the original version if necessary.
  
  - The IBM Cognos 8 presentation service supports automatic upgrade of some system.xml files. If you made many customization changes to system.xml files, you can use this automatic upgrade feature instead of reapplying the changes manually after upgrading. The system.xml files are overwritten during the installation of IBM Cognos 8. Therefore, you must back up the customized versions of these files and then copy them to the directory after upgrading IBM Cognos 8. The automatic upgrade will be applied when you start the IBM Cognos 8 service.
  
  - The system.xml files for which automatic upgrade is supported are in the following directories:
    
    `c8_location/templates/ps`
    
    `c8_location/templates/ps/portal`
    
    `c8_location/templates/ps/qs`
  
  - Note: The recommended method to upgrade customized files is to manually reapply changes after the new software is installed. Use automatic upgrade of system.xml files only when you have made a large number of customizations to these files.
Deploy the application on the production system.

When upgrading, you can export the entire content store to a deployment archive and then import the deployment archive into IBM Cognos 8 after upgrading the software.

Deploy the reports and models from the test system to the production system.

## Upgrading from IBM Cognos Series 7

You can move content from IBM Cognos Series 7 to IBM Cognos 8. For a list of supported versions, see the IBM Cognos Customer Service Center (http://www.ibm.com/software/data/support/cognos_crc.html). If you are using a version of IBM Cognos Series 7 that is not supported for migrating to IBM Cognos 8, you must first upgrade the software and data to a supported version of IBM Cognos Series 7. Moving other IBM Cognos Series 7 content to IBM Cognos 8 is considered a migration.

You can move the following types of content to IBM Cognos 8:

- IBM Cognos Series 7 Web-based content, such as the following:
  - PowerPlay Web Explorer reports
  - Upfront content, such as NewsBoxes and NewsIndexes
  - Impromptu Web Reports content, such as events, schedules, and Impromptu reports and catalogs that are published in Impromptu Web Reports as reports
  - PowerPlay Windows reports
  - Impromptu reports and catalogs from Windows
  - Architect models from Windows
  - Transformer PowerCubes, including user class views and user classes from models with secured cubes

If you have published PowerPlay Web reports to IBM Cognos Connection, either the ReportNet version or the IBM Cognos 8 version, you can continue to open the PowerPlay Web reports in PowerPlay Web Explorer or you can upgrade the PowerPlay Web reports to IBM Cognos 8 Analysis. Transformer allows you to place security objects from different namespaces within a single custom view. IBM Cognos 8 supports multiple namespaces for securing PowerCubes, but only to verify content when migrating from IBM Cognos Series 7 security to an alternate security provider. You cannot deploy PowerCubes that are secured against multiple namespaces in IBM Cognos 8. After verifying the content in the model, you must associate a single namespace with each PowerCube. For more information about deploying PowerCubes, see the Transformer User Guide. For information about upgrading IBM Cognos Series 7 content to IBM Cognos 8 Transformer, see "Upgrading Transformer Models and PowerCubes" (p. 114).

If you are moving content from IBM Cognos Series 7, you must install the IBM Cognos migration tools to upgrade your IBM Cognos Series 7 content to IBM Cognos 8.
You can download the migration tools or you can request a CD. For more information, go to the IBM Cognos Customer Service Center (http://www.ibm.com/software/data/support/cognos_crc.html). The documentation for installing and using the tools is included with the tools.

To upgrade PowerPlay reports that are published to IBM Cognos Connection, after you install the migration tools, you must enable the options to allow users to open the IBM Cognos Series 7 reports in Report Studio or Analysis Studio. You use IBM Cognos Connection to enable the options. For more information, see the Administration and Security Guide.

**Upgrading from ReportNet, Metrics Manager, or Earlier Versions of IBM Cognos 8**

You must upgrade the software to move from an earlier version of IBM Cognos 8, ReportNet, or Metrics Manager to a new version of IBM Cognos 8. You must upgrade all components. Components from different versions are not compatible. If you are using IBM Cognos Series 7 PowerCubes as a data source, it is not necessary to upgrade Transformer unless you want to use the features of the new version of Transformer. For more information, see "Upgrading Transformer Models and PowerCubes" (p. 114). PowerCubes that are built using IBM Cognos Series 7.3 Transformer (or later) and IBM Cognos 8.3 Transformer (or later) are both supported with IBM Cognos 8 reporting and metrics.

If you are using previous versions of ReportNet, Metrics Manager, IBM Cognos 8 Go! Office, or Transformer, you can upgrade your content to IBM Cognos 8. You can also upgrade from previous versions of IBM Cognos 8, including full and maintenance (MR) releases.

You can upgrade directly to IBM Cognos 8 from the following product versions:

- IBM Cognos 8 Version 8.1 or later, including MR releases
- ReportNet 1.1 MR1 through MR4
  - If you are upgrading from ReportNet 1.1 MR3 or MR4, you can use Upgrade Manager to automate some tasks in the trial upgrade stage.
  - If you have an earlier version of ReportNet, you must first upgrade to one of the ReportNet 1.1 MR releases (1 through 4) and then upgrade to IBM Cognos 8.

- Metrics Manager 2.0 or later

You can run different versions of the software on your computer at the same time, provided that you install them in different directories and configure each to use a different content store and a different set of ports and URLs for each version.

Before you begin upgrading, you must plan your upgrade strategy (p. 72). The strategy depends on the data that you want to use and any customizing that you have done with your existing configuration.

When upgrading from ReportNet, if you want to use an existing configuration directory, you must ensure that the configuration data from ReportNet is copied to the IBM Cognos 8 installation location. This includes backing up existing data, configuring IBM Cognos 8 to use the existing content store or a copy of it, copying the configuration data files to the IBM Cognos 8 installation directory, and reapplying any manual edits or customizations that you applied in the earlier version.
If both ReportNet and Metrics Manager are on the same computer and you plan to upgrade to IBM Cognos 8, upgrade ReportNet first, and then Metrics Manager.

After upgrading to IBM Cognos 8 using existing data, additional configuration may be required if you want to use new features. For information about new features in IBM Cognos 8, see IBM Cognos 8 New Features.

IBM Cognos 8 can read deployment archives produced by ReportNet.

**SDK Applications**

You must use compatible versions of IBM Cognos 8 SDK applications and IBM Cognos 8 Business Intelligence.

If you upgrade from ReportNet, you must make some changes to your SDK program for it to function with the IBM Cognos 8 version of the WSDL file. Some methods, classes, and properties have been deprecated in IBM Cognos 8. Deprecated features continue to function as before, but will be removed in future releases. Some other methods, classes, and properties are obsolete, and have been removed from the IBM Cognos 8 SDK.

For information about changes to methods, classes, properties, and enumeration sets, see the Release Notes appendixes in the IBM Cognos 8 SDK Developer Guide.

New report specifications have been added in IBM Cognos 8. If you run a report that was created in ReportNet or in a previous version of IBM Cognos 8, it is automatically upgraded to the new IBM Cognos 8 format. After a report is upgraded to the new format, it cannot be returned to the ReportNet or older IBM Cognos 8 format. Because of the potential for users to upgrade report specifications that SDK applications may depend on, we recommend that you set access permissions on those reports to limit user access. For more information about setting access permissions, see the IBM Cognos 8 Administration and Security Guide.

If you have SDK applications that create, modify, or save report specifications, do not upgrade your report specifications when you install the new version of IBM Cognos 8. You must first update your SDK applications to comply with the IBM Cognos 8 report specifications schema. Otherwise, your SDK applications may not be able to access the upgraded report specifications. For information about upgrading report specifications, see the IBM Cognos 8 SDK Developer Guide.

We recommend that you do not upgrade your report specifications if you are unsure about whether you have SDK applications that create, modify, or save report specifications. Contact your SDK administrator for more information about your SDK applications.

**Content Manager**

When you start the service after upgrading, Content Manager automatically upgrades the schema and contents in the content store if you use the same content store database as the previous version. Upgraded content store databases are not backward compatible and thus cannot be used by previous versions of IBM Cognos 8. To protect your original content store data, you must configure IBM Cognos 8 to use a copy of the content store. You create a copy by backing up the original content store and restoring the data into a new content store.
Content Store
If you saved reports from IBM Cognos Series 7 PowerPlay or scorecards from IBM Cognos Metrics Manager 2.x in ReportNet, the content store upgrade carries the saved reports and scorecards forward into IBM Cognos 8.

Framework Manager
You can use the same models and projects in Framework Manager for IBM Cognos 8 that you used with the earlier version. When upgrading models, the validation process produces errors for every model. To upgrade a project, you open and save it in the new version of Framework Manager. For more information, see the Framework Manager User Guide.

If you have SDK applications that rely on an earlier version of the report specifications, you cannot use Framework Manager to publish your model without losing backward compatibility.

Report Studio
The upgrade does not account for such items as undocumented and unsupported features, changes in report behavior, and changes in formatting and style sheets. For more information, see the Report Studio Professional Authoring User Guide.

Published IBM Cognos Series 7 PowerCubes in ReportNet
If you published cubes from IBM Cognos Series 7 PowerPlay Enterprise Server in ReportNet, you may not be able to publish those same cubes in IBM Cognos 8. The default cookie path that was used in ReportNet is changed in IBM Cognos 8. To enable publishing of your IBM Cognos Series 7 PowerCubes in IBM Cognos 8, see "Set Up to Publish IBM Cognos Series 7 PowerCubes After Upgrade from ReportNet" (p. 112).

Metrics Manager Data Stores
In earlier versions, Metrics Manager used a data store database to store, organize, and retrieve information. In IBM Cognos 8, this database is referred to as the metric store. If you want to use data store content from an earlier version, you can export the content from the data store, install IBM Cognos 8, and import the content into the metric store.

You cannot use the metric store with versions of Metrics Manager other than 8.x because it is not compatible. Before exporting the data store content, ensure that you back it up.

Security
When you upgrade from ReportNet or an earlier version of IBM Cognos 8, security may be affected. For example, new roles may exist that were not in earlier releases and some roles may have new capabilities. As a result, the security of your upgraded system may not be at the desired level. To confirm the security level after upgrading, see the Administration and Security Guide.

Operating Systems
As you upgrade your IBM Cognos 8 products, you may choose to install some components on new operating systems. You must consider how these operating systems might affect the installation and configuration of IBM Cognos 8.
If your upgrade includes installing IBM Cognos 8 client components on Windows Vista, you must consider the following:

- **roaming profiles**
  Profiles of users are stored in a different location than in earlier Windows operating systems. The Documents and Settings directory is replaced by the Users directory. The All Users directory is replaced by the Public directory.

- **environment variables**
  The default paths that are associated with environment variables are changed. If you use scripts or applications that reference the paths in the environment variables, you may need to update the scripts and applications.

In addition, you may want to reconfigure the default file locations in IBM Cognos Configuration so that a single file location can be used across operating systems in your IBM Cognos 8 environment. For more information, see the topic about updating file location properties in the configuration chapter (p. 352).

### Installations That Include Earlier Versions of Other IBM Cognos 8 Products

If you are upgrading IBM Cognos 8 BI in an environment that includes earlier versions of other IBM Cognos 8 products, such as IBM Cognos 8 Controller 8.3, IBM Cognos 8 Planning 8.3, or IBM Cognos 8 BI Analysis for Excel 8.3, install the new version of IBM Cognos 8 BI in a separate location from the other IBM Cognos 8 product and configure IBM Cognos 8 BI to operate independently of that product. After you upgrade the other product to a compatible version with IBM Cognos 8 BI, you can then configure the two products to operate together.

### Upgrade from an Earlier Version of IBM Cognos 8

You can upgrade IBM Cognos 8 in the same directory as an earlier version or in a different directory, depending on where you are in the process. For example, if you are setting up your test environment, you install in a new directory. If you have finished testing your applications and want to upgrade the software in your production environment, you can install in the same directory after uninstalling the earlier version.

If you want to upgrade IBM Cognos 8 in the same directory, you must first back up your configuration data, ensure that Framework Manager models are backed up and checked into a source control system (if applicable), and uninstall the older version of IBM Cognos 8. For complete instructions, see the steps to install in the same directory.

If you are installing on a new computer, see the steps to install in a new directory.

When you back up the configuration data, you store it in a secure directory. The directory must be protected from unauthorized or inappropriate access.

An alternative method of upgrading includes exporting the entire content store to a deployment archive and then importing the deployment archive into IBM Cognos 8 after the upgrade. For more information about deployment, see the *Administration and Security Guide*. A deployment upgrade is required if you want to change the type of database that you use for the content store. If you use the deployment upgrade method, only the steps for exporting and restoring the configuration data are different. All other steps are the same as documented in this section.
IBM Cognos 8 installs and uses Tomcat as its application server by default. If you do not want to use Tomcat, you must follow a different set of steps to upgrade. For more information, see "Upgrade to IBM Cognos 8 in an Application Server Environment" (p. 391).

After the IBM Cognos 8 content is upgraded, the report administrator will no longer have access to the Content Administration tool and will not be able to create deployment definitions.

**Customized IBM Cognos 8 Files**

If you manually edited any configuration files, the changes will be overwritten during the upgrade. You must reapply the changes. You should keep a record of any customizations to ensure that they can be reapplied after upgrading. You should also back up these files so that the original version can be restored if necessary.

You may have modified files other than those in the configuration folder. We strongly recommend that you back up the entire installation directory.

The IBM Cognos 8 presentation service supports automatic upgrade of some system.xml files. If you made many customization changes to system.xml files, you can use this automatic upgrade feature instead of reapplying the changes manually after upgrading. The system.xml files are overwritten during the installation of IBM Cognos 8. Therefore, you must back up the customized versions of these files and then copy them to the directory after upgrading IBM Cognos 8. The automatic upgrade will be applied when you start the IBM Cognos 8 service.

The system.xml files for which automatic upgrade is supported are in the following directories:

- `c8_location/templates/ps`
- `c8_location/templates/ps/portal`
- `c8_location/templates/ps/qs`

**Note:** The recommended method to upgrade customized files is to manually reapply changes after the new software is installed. Automatic upgrade of system.xml files is to be used only when you have made a large number of customizations to these files.

**Steps to Install in the Same Directory**

1. Using your database tools, back up your existing content store database. For information on how to do this, see the documentation for your database.

2. Back up the following files to a secure location:
   - `cogstartup.xml` and `coglocale.xml` in the `c8_location/configuration` directory
   - `server.xml` in the `c8_location/tomcat4.1.27/conf` directory
   - `system.xml` in the appropriate directory, if required

   Ensure that you note the original directory path for each backed up file. For example, `c8_location/templates/ps`

3. In IBM Cognos Configuration, export the configuration data to the same secure location. To make the configuration data usable for upgrading, name the file `cogstartup.xml`.

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Important: Because the exported crnstartup.xml file (ReportNet) or cogstartup.xml file (IBM Cognos 8) contains unencrypted passwords, ensure that the location is secure.

4. Back up any manually edited files in the c8_location/configuration and other directories to a secure location.

5. If you use a source control system such as CVS, ensure that all Framework Manager models are backed up and checked in before upgrading.

6. Stop all IBM Cognos services and any Web servers hosting IBM Cognos 8 content.

7. Prepare Transformer models, if required (p. 114).

8. Upgrade or install other products (p. 109).

9. Uninstall IBM Cognos 8 from every IBM Cognos 8 computer (p. 149).

10. Install the newer version of IBM Cognos 8 in the same directory that you used for IBM Cognos 8 on every computer (p. 120).

11. For files that were manually edited in earlier versions of IBM Cognos 8, edit the same files in the c8_location directory and reapply the changes that were made to the original customized files.

   Do not copy the customized files from the backup location to the c8_location directories. The earlier versions of these files may not be compatible.

12. If you use Oracle for a notification database, logging database, or the content store database, delete the classes12.jar file from the c8_location\webapps\p2pd\WEB-INF\lib directory.

   Older versions of ReportNet and IBM Cognos 8 used this file, which conflicts with the ojdbc14.jar (or, for Oracle 11g, the ojdbc5.jar) file that is used in newer versions.

13. In IBM Cognos Configuration, review the configuration, and then save it.

    When you save the configuration, an upgrade dialog box appears and asks if you want to upgrade your report specifications. The default setting is to not upgrade report specifications.

    Important: Do not upgrade your report specifications if you have SDK applications that create, modify, or save report specifications. You must first update your SDK applications to comply with the IBM Cognos 8 report specifications schema. Otherwise, your SDK applications may not be able to access the upgraded report specifications. In addition, do not save your reports until the SDK applications have been updated. For information about upgrading report specifications, see the IBM Cognos 8 SDK Developer Guide.


    IBM Cognos 8 automatically upgrades the content store. System.xml files are upgraded, if required, to an IBM Cognos 8 compatible version.

15. Install and configure (p. 199) Framework Manager.

16. Upgrade your Framework Manager projects and reports as required. For instructions, see the Framework Manager User Guide.

    Report Studio users must clear their Web browser cache to get the latest images.
17. If you use pages created in earlier versions of IBM Cognos 8, you may need to reconfigure the following properties:
   - Title
   - Open action links going outside a portal

   For more information, see the Administration and Security Guide.

18. Install (p. 218) and configure (p. 221) Transformer, if required.

19. Upgrade Transformer models and PowerCubes (p. 114), if required.

20. If you use SAP Enterprise Portal, upgrade your master iView.

   Old SAP iViews will not work with the new Portal Services producer component. For information, see the topic about deploying Cognos Portlets to SAP Enterprise Portal in the Administration and Security Guide.

**Steps to Install in a New Directory**

1. Using your database tools, copy your existing content store database into a new content store database.

   For information on how to do this, see the documentation for your database.

2. Back up the following files to a secure location:
   - coglocale.xml in the $c8_location$/configuration directory
   - server.xml in the $c8_location$/tomcat4.1.27/conf directory
   - system.xml in the appropriate directory, if required

   Ensure that you note the original directory path of the backed up files. For example, $c8_location$/templates/ps

   - any manually edited files in the $c8_location$/configuration and other directories

3. In IBM Cognos Configuration, export the configuration data to the same secure location.

   To make the configuration data usable for upgrading, name the file cogstartup.xml.

   **Important:** Because the exported cogstartup.xml file contains unencrypted passwords, ensure that the location is secure.

4. Prepare Transformer models, if required (p. 114).

5. Upgrade or install other products (p. 109).


7. Copy the .xml files from the secure backup location to the following directory:
   - Copy cogstartup.xml and coglocale.xml to $c8_location$/configuration.
   - Copy server.xml to $c8_location$/tomcat4.1.27/conf.
Copy system.xml to the same directory in the new location as it was in the earlier version, if required.

For example,

c8_location/templates/ps

If you are prompted to overwrite existing files, click Yes.

8. For files that were manually edited, edit the same files in the c8_location directory and reapply the changes that were made to the original customized files.

Do not copy the customized files from the backup location to the c8_location directories. The earlier versions of these files may not be compatible with the new version of IBM Cognos 8.


10. In IBM Cognos Configuration, configure IBM Cognos 8 to point to the new content store, configure new ports and URLs, use a different cookie path, and then save the configuration (p. 109).

Ensure that the port numbers and service name for this installation are different from those used for earlier versions so that there are no conflicts.

Ensure that security authentication settings are not changed. For example, the namespaces must be the same for policies, users, roles, and groups to work correctly.

When you save the configuration, an upgrade dialog box appears and asks if you want to upgrade your report specifications. The default setting is to not upgrade report specifications.

**Important:** Do not upgrade your report specifications if you have SDK applications that create, modify, or save report specifications. You must first update your SDK applications to comply with the IBM Cognos 8 report specifications schema. Otherwise, your SDK applications may not be able to access the upgraded report specifications. In addition, do not save your reports until the SDK applications have been updated. For information about upgrading report specifications, see the IBM Cognos 8 SDK Developer Guide.


IBM Cognos 8 automatically upgrades the new content store. System.xml files are upgraded, if required, to an IBM Cognos 8 compatible version.

12. Install and configure (p. 199) Framework Manager.

13. Upgrade your Framework Manager projects and reports as required. For instructions, see the Framework Manager User Guide.

Report Studio users must clear their Web browser cache to get the latest images.

14. Open the Administration portal, and unregister the dispatchers that are used with earlier versions of IBM Cognos 8.

When you open the Administration portal in IBM Cognos 8, you may see the dispatchers that are registered for both versions.

For more information, see the Administration and Security Guide.
15. If you use pages created in ReportNet, you may need to reconfigure the following properties:
   ● Title
   ● Open action links going outside a portal

   For more information, see the Administration and Security Guide.

16. Install (p. 218) and configure (p. 221) Transformer, if required.

17. Upgrade Transformer models and PowerCubes (p. 114), if required.

18. If you use SAP Enterprise Portal, upgrade your master iView.
   
   Old SAP iViews will not work with the new Portal Services producer component. For information, see the topic about deploying Cognos Portlets to SAP Enterprise Portal in the Administration and Security Guide.

19. When you are ready to uninstall the previous version of IBM Cognos 8, do the following:
   ● Stop the IBM Cognos 8 service and any Web servers hosting IBM Cognos 8 content.
   ● Uninstall IBM Cognos 8 from all computers.

   For instructions, see "Uninstalling IBM Cognos 8" (p. 149).

When you complete the upgrade tasks, IBM Cognos 8 is fully configured except for new properties and features.

If you use Chinese, Japanese, or Korean characters, you may notice differences in some characters after upgrading. For more information, see the Troubleshooting section of the Administration and Security Guide.

If you use a DB2 database for the content store, you can tune the database to take advantage of DB2 features. For more information, see the Architecture and Deployment Guide.

To ensure the security and integrity of IBM Cognos 8, it is important to protect the installation directory from unauthorized or inappropriate access.

**Migrate Apache Derby Databases to Cognos Content Database**

If you use your own installation of Apache Derby for the content store or notification databases in IBM Cognos 8 Version 8.1, you must migrate the databases to Cognos Content Database before starting IBM Cognos 8. To do this, remove the CognosCMDerby.jar file from the Apache Derby database and copy the database directories to the content store directory of the IBM Cognos 8 installation.

**Steps**
1. Ensure that your Apache Derby Network Server is running.
2. Start the ij utility using the ij.bat or ij.ksh script file.
3. Connect to the Apache Derby database by typing the following ij utility command:

   `connect 'jdbc:derby://host:port/db_name;user=username;password=password';`
Here is an example:

```java
connect 'jdbc:derby://localhost:1527/cm;user=cognos; password=cognos';
```

If you changed the port number from the default 1527, use the correct port number for your Apache Derby database. Use the correct name of your Apache Derby database.

4. Clear the derby.database.classpath property of the database by typing the following ij utility command:

```sql
CALL SYSCS_UTIL.SYSCS_SET_DATABASE_PROPERTY('derby.database.classpath','');
```

5. Remove the existing jar file by typing the following ij utility command:

```sql
CALL sqlj.remove_jar('schema_name.CMFunctionsjar', 0);
```

For example, if your schema is cognos, type

```sql
CALL sqlj.remove_jar('cognos.CMFunctionsjar', 0);
```

6. Enable row level locking on the database by typing the following ij utility command:

```sql
CALL SYSCS_UTIL.SYSCS_SET_DATABASE_PROPERTY('derby.storage.rowLocking','true');
```

7. Close the ij utility by typing the following command:

```sql
disconnect;
```

8. Stop the Apache Derby Network Server.

9. Copy the content store and notification database directories to the $c8_location\contentstore directory.

For example:

```cmd
xcopy "c:\derby\data\cm" "c:\Program Files\c8\contentstore\cm" /s /i
xcopy "c:\derby\data\notify_db" "c:\Program Files\c8\contentstore\notify_db" /s /i
```

In this example, the content store database is named cm and the notification database is named notify_db. They are located in the c:\derby\data directory.

**New Product, File, and Directory Names After Upgrade from ReportNet**

After you upgrade from ReportNet, the product name will be changed to IBM Cognos 8. In addition, some file, directory, and command names will be different. If you install IBM Cognos 8 in a different directory from ReportNet, default directory names change when you install IBM Cognos 8. If you install IBM Cognos 8 in the same directory as ReportNet, the existing directory names do not change. Some file name changes occur when you install IBM Cognos 8 and other changes occur after you save the IBM Cognos 8 configuration. You must change the alias for the virtual directory manually, if required.

The following names are affected.
<table>
<thead>
<tr>
<th>ReportNet name</th>
<th>IBM Cognos 8 name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>crn</td>
<td>c8</td>
<td>Default installation directory (32-bit)</td>
</tr>
<tr>
<td></td>
<td>c8_64</td>
<td>Default installation directory (64-bit)</td>
</tr>
<tr>
<td>crn</td>
<td>cognos8</td>
<td>Default Web browser alias or virtual directory</td>
</tr>
<tr>
<td>crnstartup.xml</td>
<td>cogstartup.xml</td>
<td>Configuration data file used when starting IBM Cognos Configuration</td>
</tr>
<tr>
<td>crnstartup_ yyyyymmddhhmm.xml</td>
<td>cogstartup_ yyyyymmddhhmm.xml</td>
<td>Configuration data file that stores choices made each time the configuration is saved</td>
</tr>
<tr>
<td>crnlocale.xml</td>
<td>coglocale.xml</td>
<td>Configuration data file that stores codes for global configuration settings</td>
</tr>
<tr>
<td>crnlocale_ yyyyymmddhhmm.xml</td>
<td>coglocale_ yyyyymmddhhmm.xml</td>
<td>Configuration data file that stores choices made each time global configuration settings are saved</td>
</tr>
<tr>
<td>crnformat.xml</td>
<td>cogformat.xml</td>
<td>Configuration data file that stores formats for numeric data, dates, and times</td>
</tr>
<tr>
<td>crnserver.log</td>
<td>cogserver.log</td>
<td>Default logging file</td>
</tr>
<tr>
<td>crconfigw.exe</td>
<td>cogconfigw.exe</td>
<td>File to start IBM Cognos Configuration on Windows</td>
</tr>
<tr>
<td>crconfig.bat</td>
<td>cogconfig.bat</td>
<td>File to start IBM Cognos Configuration in silent mode on Windows</td>
</tr>
<tr>
<td>crconfig.sh</td>
<td>cogconfig.sh</td>
<td>File to start IBM Cognos Configuration on UNIX and Linux</td>
</tr>
<tr>
<td>crconfig.prefs</td>
<td>cogconfig.prefs</td>
<td>Configuration data file that stores user preferences for IBM Cognos Configuration</td>
</tr>
<tr>
<td>crconfig_response.csv</td>
<td>cogconfig_response.csv</td>
<td>Silent mode log file that stores activities performed while IBM Cognos Configuration runs in silent mode</td>
</tr>
</tbody>
</table>
Upgrade ReportNet to IBM Cognos 8

You can upgrade IBM Cognos 8 in the same directory as an earlier version or in a different directory, depending on where you are in the process. For example, if you are setting up your test environment, you install in a new directory. If you have finished testing your applications and want to upgrade the software in your production environment, you can install in the same directory.

If you want to upgrade to IBM Cognos 8 in the same directory, you must first back up your data, ensure that Framework Manager models are backed up and checked into a source control system (if applicable), and uninstall ReportNet. For complete instructions, see the steps to install in the same directory.

If you want to install IBM Cognos 8 in a new directory, you can keep ReportNet active until you are satisfied with the operation of the new version. If you are installing on a new computer, see the steps to install in a new directory.

When you back up the configuration data, you store it in a secure directory. The directory must be protected from unauthorized or inappropriate access.

An alternative method of upgrading includes exporting the entire content store to a deployment archive in ReportNet and then importing the deployment archive into IBM Cognos 8. For more information about deployment, see the Administration and Security Guide. A deployment upgrade is required if you want to change the type of database that you use for the content store. If you use the deployment upgrade method, only the steps for exporting and restoring the configuration data are different. All other steps are the same as documented in this section.

IBM Cognos 8 installs and uses Tomcat as its application server by default. If you upgrade from ReportNet and you do not want to use Tomcat, you must follow a different set of steps to upgrade. For more information, see "Upgrade to IBM Cognos 8 in an Application Server Environment" (p. 391).

After the ReportNet 1.1 content is upgraded, the report administrator will no longer have access to the Content Administration tool and will not be able to create deployment definitions.

If you are upgrading from ReportNet 1.1 MR3 or MR4, you can use Upgrade Manager to automate some tasks in the trial upgrade stage.
Customized ReportNet Files

If you manually edited any configuration files, the changes will be overwritten during the upgrade. You must reapply the changes in the IBM Cognos 8 environment. You should keep a record of any customizations to ensure that they can be reapplied after upgrading. You should also back up these files so that the original version can be restored if necessary.

You may have modified files other than those in the configuration folder. We strongly recommend that you back up the entire installation directory.

The IBM Cognos 8 presentation service supports automatic upgrade of some ReportNet system.xml files. If you made many customization changes to system.xml files in ReportNet, you can use this automatic upgrade feature instead of reapplying the changes manually after upgrading. The system.xml files are overwritten during the installation of IBM Cognos 8. Therefore, you must back up the ReportNet versions of these files and then copy them to the directory after installing IBM Cognos 8. The automatic upgrade will be applied when you start the IBM Cognos 8 service.

The system.xml files for which automatic upgrade is supported are in the following directories:

- `crn_location/templates/ps`
- `crn_location/templates/ps/portal`
- `crn_location/templates/ps/qs`

Note: The recommended method to upgrade customized files is to manually reapply changes after the new software is installed. Automatic upgrade of system.xml files is to be used only when you have made a large number of customizations to these files.

Steps to Install in the Same Directory

1. Using your database tools, back up your existing content store database.
   For information on how to do this, see the documentation for your database.

2. Back up the following files to a secure location:
   - `crnstartup.xml` and `crnlocale.xml` in the `crn_location/configuration` directory
   - `server.xml` in the `crn_location/tomcat4.1.27/conf` directory
   - `system.xml` in the appropriate directory, if required

   Ensure that you note the original directory path for each backed up file. For example, `crn_location/templates/ps`

3. In IBM Cognos Configuration, export the configuration data to the same secure location.
   To make the configuration data usable for upgrading, name the file `crnstartup.xml`.
   Important: Because the exported `crnstartup.xml` file contains unencrypted passwords, ensure that the location is secure.

4. Back up any manually edited files in the `crn_location/configuration` and other directories to a secure location.
5. If you use a source control system such as CVS, ensure that all Framework Manager models are backed up and checked in before upgrading.

6. Stop all IBM Cognos services and any Web servers hosting ReportNet content.

7. Prepare Transformer models, if required (p. 114).

8. Upgrade or install other products (p. 109).

   For instructions, see the documentation for the older version of ReportNet.

10. Install IBM Cognos 8 in the same directory that you used for ReportNet on every computer (p. 120).

11. For files that were manually edited in ReportNet, edit the same files in the \crn_location\ directory and reapply the changes that were made to the original customized files.
    Do not copy the customized files from the backup location to the \crn_location\ directories. The earlier versions of these files may not be compatible with IBM Cognos 8.

12. If you use Oracle for a notification database, logging database, or the content store database, delete the classes12.jar file from the \c8_location\webapps\p2pd\WEB-INF\lib directory.
   Older versions of ReportNet and IBM Cognos 8 used this file, which conflicts with the ojdbc14.jar (or, for Oracle 11g, the ojdbc5.jar) file that is used in newer versions.

13. In IBM Cognos Configuration, review the configuration, and then save it.
    When you save the configuration, an upgrade dialog box appears and asks if you want to upgrade your report specifications. The default setting is to not upgrade report specifications.
    **Important:** Do not upgrade your report specifications if you have SDK applications that create, modify, or save report specifications. You must first update your SDK applications to comply with the IBM Cognos 8 report specifications schema. Otherwise, your SDK applications may not be able to access the upgraded report specifications. In addition, do not save your reports until the SDK applications have been updated. For information about upgrading report specifications, see the IBM Cognos 8 SDK Developer Guide.

    IBM Cognos 8 automatically upgrades the content store. System.xml files are upgraded, if required, to an IBM Cognos 8 compatible version.
    If the ReportNet service continues to run, manually uninstall the ReportNet service (p. 111).

15. Install and configure (p. 199) Framework Manager.

16. Upgrade your Framework Manager projects and reports as required. For instructions, see the Framework Manager User Guide.
    Report Studio users must clear their Web browser cache to get the latest images.

17. If you use pages created in ReportNet, you may need to reconfigure the following properties:
    - Title
• Open action links going outside a portal

For more information, see the Administration and Security Guide.

18. If you published IBM Cognos Series 7 PowerCubes in ReportNet, restructure your virtual directories or change your cookie path (p. 112).

19. Install (p. 218) and configure (p. 221) Transformer, if required.

20. Upgrade Transformer models and PowerCubes (p. 114), if required.

21. If you use SAP Enterprise Portal, upgrade your master iView.

Old SAP iViews will not work with the new Portal Services producer component. For information, see the topic about deploying Cognos Portlets to SAP Enterprise Portal in the Administration and Security Guide.

Steps to Install in a New Directory

1. Using your database tools, copy your existing content store database into a new content store database.

For information on how to do this, see the documentation for your database.

2. Back up the following files to a secure location:
   • crnlocale.xml in the $crn_location/configuration directory
   • server.xml in the $crn_location/tomcat4.1.27/conf directory
   • system.xml in the appropriate directory, if required

   Ensure that you note the original directory path for each backed up file. For example, $crn_location/templates/ps
   • any manually edited files in the $crn_location/configuration and other directories.

3. In IBM Cognos Configuration, export the configuration data to the same secure location.

To make the configuration data usable for upgrading, name the file crnstartup.xml.

Important: Because the exported crnstartup.xml file contains unencrypted passwords, ensure that the location is secure.

4. Prepare Transformer models, if required (p. 114).

5. Upgrade or install other products (p. 109).


7. Copy the .xml files from the secure backup location to the following directory:
   • Copy crnstartup.xml and crnlocale.xml to $c8_location/configuration.
   • Copy server.xml to $c8_location/tomcat4.1.27/conf.
   • Copy system.xml to the same directory in the new location as it was in the ReportNet location, if required.
For example,

c8_location/templates/ps

If you are prompted to overwrite existing files, click Yes.

8. For files that were manually edited in ReportNet, edit the same files in the c8_location directory and reapply the changes that were made to the original customized files.

Do not copy the customized files from the backup location to the c8_location directories. The earlier versions of these files may not be compatible with IBM Cognos 8.


10. In IBM Cognos Configuration, do the following:

   • For the new IBM Cognos 8 instance, configure IBM Cognos 8 to point to the new content store, configure new ports and URLs, and then save the configuration (p. 109).

   • For ReportNet, configure ReportNet to use a new default cookie path (p. 111).

   Ensure that the port numbers and service name for this installation are different from those used for earlier versions so that there are no conflicts.

   Ensure that security authentication settings are not changed. For example, the namespaces must be the same for policies, users, roles, and groups to work correctly.

   When you save the configuration, an upgrade dialog box appears and asks if you want to upgrade your report specifications. The default setting is to not upgrade report specifications.

   **Important:** Do not upgrade your report specifications if you have SDK applications that create, modify, or save report specifications. You must first update your SDK applications to comply with the IBM Cognos 8 report specifications schema. Otherwise, your SDK applications may not be able to access the upgraded report specifications. In addition, do not save your reports until the SDK applications have been updated. For information about upgrading report specifications, see the IBM Cognos 8 SDK Developer Guide.


   IBM Cognos 8 automatically upgrades the new content store. System.xml files are upgraded, if required, to an IBM Cognos 8 compatible version.

12. Install and configure (p. 199) Framework Manager.

13. Upgrade your Framework Manager projects and reports as required. For instructions, see the Framework Manager User Guide.

   Report Studio users must clear their Web browser cache to get the latest images.

14. Open the Administration portal in IBM Cognos 8, and unregister the dispatchers that are used with ReportNet.

   When you open the Administration portal in IBM Cognos 8, the portal shows the dispatchers that are registered for both versions.

   For more information, see the Administration and Security Guide.
15. If you use pages created in ReportNet, you may need to reconfigure the following properties:
   - Title
   - Open action links going outside a portal

   For more information, see the *Administration and Security Guide*.

16. If you published IBM Cognos Series 7 PowerCubes in ReportNet, restructure your virtual directories or change your cookie path (p. 112).

17. Install (p. 218) and configure (p. 221) Transformer, if required.

18. Upgrade Transformer models and PowerCubes (p. 114), if required.

19. If you use SAP Enterprise Portal, upgrade your master iView.

   Older versions of SAP iViews may not work with the new Portal Services producer component. For information, see the topic about deploying Cognos Portlets to SAP Enterprise Portal in the *Administration and Security Guide*.

20. When you are ready to uninstall ReportNet, do the following:

   For instructions, see the documentation for the older version of ReportNet.

When you complete the upgrade tasks, IBM Cognos 8 is fully configured except for new properties and features.

If you use Chinese, Japanese, or Korean characters, you may notice differences in some characters after upgrading to IBM Cognos 8. For more information, see the Troubleshooting section of the *Administration and Security Guide*.

If you use a DB2 database for the content store, you can tune the database to take advantage of DB2 features. For more information, see the *Architecture and Deployment Guide*.

To ensure the security and integrity of IBM Cognos 8, it is important to protect the installation directory from unauthorized or inappropriate access.

**Upgrading Using the Silent Configuration Option**

You can run a silent configuration to upgrade the configuration from ReportNet to IBM Cognos 8. Before you run the silent configuration, you must ensure that the option to upgrade the report specifications is set correctly. If you installed IBM Cognos 8 in a new directory, you must also change the settings for ports and the Web server alias.

If you want to upgrade the configuration in silent mode, follow the steps in the preceding section and stop at the step to configure IBM Cognos 8:

- In the *steps to install in the same directory*, stop after step 12.
- In the *steps to install in a new directory*, stop after step 9.
When you reach that step, do not start IBM Cognos Configuration. Instead, perform the following steps and then return to the steps in the preceding section.

- Edit the crnstartup.xml file in `crn_location/configuration` (same directory) or `c8_location/configuration` (new directory) and look for the following lines:

  `<crn:parameter name="doReportSpecUpgrade">`
  `<crn:value xsi:type="xsd:boolean">false</crn:value>`
  `</crn:parameter>`

- Set the value for the report specification upgrade:
  - To skip the upgrade of the report specifications, leave the value as false.
  - To upgrade the report specifications, change the value to true.

- Modify other settings as required.

  If you installed IBM Cognos 8 in a new directory, see "Run ReportNet and IBM Cognos 8 at the Same Time" (p. 109) for the settings to modify.

- Type the configuration command:
  - On UNIX or Linux, type
    `/cogconfig.sh -s`
  - On Windows, type
    `cogconfig.bat -s`

---

**Upgrade Metrics Manager to IBM Cognos 8**

You must install and upgrade to IBM Cognos 8 in a different directory from the earlier version of Metrics Manager. You can keep Metrics Manager active until you are satisfied with the operation of IBM Cognos 8.

If both ReportNet and Metrics Manager are on the same computer and you plan to upgrade to IBM Cognos 8, upgrade ReportNet first, and then Metrics Manager.

IBM Cognos 8 and earlier versions of Metrics Manager use different security models. If you want to upgrade the security information for the earlier version of Metrics Manager, you must follow a different set of steps to upgrade. For more information, see "Upgrade Metrics Manager and Security Information" (p. 105).

IBM Cognos 8 installs and uses Tomcat as its application server by default. If you upgrade from Metrics Manager and you do not want to use Tomcat, you must follow a different procedure to upgrade. For more information, see "Upgrade from Metrics Manager to IBM Cognos 8 in an Application Server Environment" (p. 392).

**Steps**

1. Export the contents of any data store that you want to use with IBM Cognos 8 from the earlier version of Metrics Manager.
For more information, see the documentation provided with your earlier version of Metrics Manager.

2. Install IBM Cognos 8:
   - If you are upgrading only Metrics Manager, install IBM Cognos 8 in a different directory from the earlier version of Metrics Manager (p. 153).
   - If ReportNet is on the same computer as Metrics Manager, follow the steps to upgrade ReportNet to IBM Cognos 8 (p. 98).

3. Set up the environment (p. 53).
   If you exported the contents of one or more data stores in step 1, create one metric store database (p. 177) for the contents of each data store. For each metric store, set up the database client (p. 181) and environment variables on UNIX (p. 65).

4. Create a metric package (p. 182).

5. If you exported content from data stores in step 1, import the contents of each data store into a different metric store.
   For information about importing data, see the Metric Studio User Guide for Authors.

6. Install and configure (p. 208) Metric Designer on Windows.

7. Upgrade Metric Designer projects and extracts as required.

8. When you are ready, stop the earlier version of Metrics Manager and uninstall it as described in the documentation provided with it.

To ensure the security and integrity of IBM Cognos 8, protect the installation directory from unauthorized or inappropriate access.

**Upgrade Metrics Manager and Security Information**

IBM Cognos 8 and earlier versions of Metrics Manager use different security models. Before upgrading to IBM Cognos 8, review the information about IBM Cognos 8 security to determine if it meets your requirements. For information, see the Administration and Security Guide.

If the IBM Cognos 8 security model does not meet your requirements and you must upgrade your existing security information, an upgrade utility is available. You use this utility during the upgrade process to map the security permissions for scorecards and metrics in the earlier version to corresponding permissions in IBM Cognos 8.

The upgrade utility does not map the Deny permission if it was used in the earlier version of Metrics Manager. For example, assume a user belongs to two user classes. For the same scorecard, one user class has Read permission and the other user class has Deny permission. After the upgrade utility is run, the user will have only Read permission for the scorecard.

The upgrade utility maps security information for one data store using the information in a control file that you create. This file is a text file. If you plan to upgrade the content of more than one data store, you must create a control file for each data store and run the upgrade utility for each control file.
The following table describes the properties that must be defined in the control file. An example of a control file is provided below the table.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>scorecard_file</td>
<td>A comma delimited list of object_stage (.cmo) files that contain the scorecards from the earlier version of Metrics Manager. The list must include all the scorecards that you want to import into the IBM Cognos 8 metric store. Only scorecards are imported; other objects in these files are ignored.</td>
</tr>
<tr>
<td>policy_file</td>
<td>A comma delimited list of source object_link_stage (.cml) files from the earlier version of Metrics Manager that contain the policies to be upgraded. The list of files must contain all the policy links that you want to import into the IBM Cognos 8 metric store. Only policy links are imported; other objects in these files are ignored.</td>
</tr>
<tr>
<td>input_file_encoding</td>
<td>The character set of the input files. This property is optional. By default, the default character set of the platform is used.</td>
</tr>
<tr>
<td>flat_file_version</td>
<td>The version of the flat file from the earlier version of Metrics Manager. The value may be 2.0 or 2.2. This property is optional. The default value is 2.2.</td>
</tr>
<tr>
<td>output_file</td>
<td>The name of the file where the generated IBM Cognos 8 policies will be written. This property is optional. The default output file name is policies.cms.</td>
</tr>
<tr>
<td>output_file_encoding</td>
<td>The desired character set of the output file. This property is optional. By default, the default character set of the platform is used.</td>
</tr>
<tr>
<td>read_mapping</td>
<td>A comma delimited list of IBM Cognos 8 permissions to grant for the read permission level set in the earlier version of Metrics Manager. One of the following suffixes may be added to specify the permissions for a specific object type: .metric or .scorecard.</td>
</tr>
</tbody>
</table>
## Property Description

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>write_mapping</td>
<td>A comma delimited list of IBM Cognos 8 permissions to grant for the write permission level set in the earlier version of Metrics Manager.</td>
</tr>
<tr>
<td></td>
<td>One of the following suffixes may be added to specify the permissions for a specific object type: .metric or .scorecard.</td>
</tr>
<tr>
<td>administrator_mapping</td>
<td>A comma delimited list of IBM Cognos 8 permissions to grant for the administer permission level set in the earlier version of Metrics Manager.</td>
</tr>
<tr>
<td></td>
<td>The permissions include:</td>
</tr>
<tr>
<td></td>
<td>• Read</td>
</tr>
<tr>
<td></td>
<td>• Write</td>
</tr>
<tr>
<td></td>
<td>• Setpolicy</td>
</tr>
<tr>
<td></td>
<td>• Readannotations</td>
</tr>
<tr>
<td></td>
<td>• Annotate</td>
</tr>
<tr>
<td></td>
<td>• Writeproject</td>
</tr>
<tr>
<td></td>
<td>• Writeactual</td>
</tr>
<tr>
<td></td>
<td>• Writetarget</td>
</tr>
<tr>
<td></td>
<td>• Writetolerance</td>
</tr>
<tr>
<td></td>
<td>• Writeudc</td>
</tr>
<tr>
<td></td>
<td>One of the following suffixes may be added to specify the permissions for a specific object type: .metric or .scorecard.</td>
</tr>
</tbody>
</table>

### Example

The following shows an example control file:

```plaintext
scorecard_file=c:\cmm_exports\export_scorecards.cmo
policy_file=c:\cmm_exports\export_permissions.cml
flat_file_version=2.2
output_file=new_policies.cms
read_mapping=read,readannotations
write_mapping=read,readannotations,annotate,writeproject
```
Steps

1. Export the contents of the data store from the earlier version of Metrics Manager with the exception of users.
   
   For more information, see the documentation provided with the earlier version of Metrics Manager.

2. Install IBM Cognos 8:
   
   - If you are upgrading only Metrics Manager, install IBM Cognos 8 in a different directory from the earlier version of Metrics Manager (p. 153).
   
   - If ReportNet is on the same computer as Metrics Manager, follow the steps to upgrade ReportNet to IBM Cognos 8 (p. 98).

3. Set up the environment (p. 53).
   
   Ensure that you create a metric store database (p. 177) and set up the metric store database client (p. 181) and environment variables on UNIX (p. 65).

   Also, ensure that the IBM Cognos Series 7 namespace is configured and available in the IBM Cognos 8 environment.

4. Create a control file that references the object stage (.cmo) files, containing the scorecard definitions, and the object link stage (.cml) files, containing the permission definitions generated in step 1.
   
   The control file is a text file. See the table and example above to help you create your control file.

5. In the c8_location\bin directory, type the following command from a command prompt:

   cmm_migrate_policies control_file_name

6. Create a metric package (p. 146).

7. Import the data store export you created in step 1 into the metric store.
   
   You do not have to import the object link stage (.cml) files containing the permission definitions. In the example above, the file containing the permission definition is export_permission.cml.
   
   For more information about importing, see the Metric Studio User Guide for Authors.

8. Import the contents of the output file generated using the cmm_migrate_policy command.
   
   The output file is named new_policies.cms in the example above.

   Ensure that you specify the import source file format to be 8.1.2MR2.


10. Upgrade Metric Designer projects and extracts as required.

11. When you are ready, stop the earlier version of Metrics Manager and uninstall it as described in the documentation provided with it.
To ensure the security and integrity of IBM Cognos 8, protect the installation directory from unauthorized or inappropriate access.

**Upgrading Metrics Manager Custom Calendars**

If you want to upgrade a Metrics Manager 2.2 calendar that uses a customized period start date and end date, you must create a standard calendar in IBM Cognos 8 that reflects your custom calendar as closely as possible. You must then export the standard calendar and modify the import time periods file (.cal), import time levels file (.lvl), and time language text file (.tlt) so that the calendar equals your Metrics Manager 2.2 calendar.

**Install or Upgrade Other Products**

When you upgrade IBM Cognos 8, you may need to upgrade to new versions of other products, update some components of other products, or install additional other products to support new features in IBM Cognos 8.

To view a list of other products that are used by IBM Cognos 8, see "Verify System Requirements" (p. 54).

To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, visit the IBM Cognos Customer Service Center (http://www.ibm.com/software/data/support/cognos_crc.html).

**Step**

- If you do not have the supported version of a required product, install or upgrade the product.

Instructions are provided in this guide for these required other products:

- setting up a database client (p. 161)
- updating the Java environment (p. 125)
- configuring a Web server (p. 135)
- configuring a Web browser (p. 67)
- changing the version of Java Runtime Environment used in IBM Cognos 8 (p. 393)

For instructions to install or upgrade other products, see the instructions provided with each product.

**Run ReportNet and IBM Cognos 8 at the Same Time**

You must change the ports and the Web server alias in IBM Cognos 8 if you want to run IBM Cognos 8 and ReportNet, or two versions of IBM Cognos 8, on the same computer and at the same time.

In ReportNet, there is no default cookie path, which means the cookie is sent to all URLs on the Web server. If IBM Cognos 8 uses the same Web server, IBM Cognos 8 will then receive two cam_passport cookies. To prevent this conflict, you must set a cookie path in ReportNet.
Other configuration changes may be required depending on your environment. If you use Portal Services, you must specify the location of the applications.xml file. If you use an ISAPI gateway on an IIS Web server, you must isolate the IBM Cognos 8 gateway to prevent a conflict with the ReportNet gateway. For IIS 5, you isolate the gateway by setting the application protection for the Web site and virtual directories to High. For IIS 6 and 7, you must create an application pool for each version of the IBM Cognos 8 product and associate the aliases to it.

**Steps for IBM Cognos 8**

1. In IBM Cognos 8, start IBM Cognos Configuration.
2. In the Explorer window, click Environment.
3. In the Properties window, under Dispatcher Settings, click the value for Internal dispatcher URI.
4. Select the port number and then type the new port number.
5. If required, change the port number for the following URIs to match the new port number that you entered for Internal dispatcher URI.
   - Under Dispatcher Settings, change the port for External dispatcher URI.
   - Under Other URI Settings, change the port for Dispatcher URI for external applications and Content Manager URIs.
   
   Content Manager URIs does not appear on a gateway computer.
6. Under Gateway Settings, click the value for Gateway URI and ensure that the URI contains the correct Web server alias for IBM Cognos 8.
   
   For example, replace crn with cognos8.
7. If you are using Portal Services, update the applications.xml file:
   - In the Explorer window, click Environment, Portal Services.
   - In the Properties window, ensure that the port number for Location of Applications.xml matches the port for the other URI properties.
8. In the Explorer window, click Data Access, Content Manager, Content Store.
9. In the Properties window, configure IBM Cognos 8 to use the new content store:
   - For Database name, specify the name of the new content store.
   - For User ID and password, click the edit button and specify the userid and password to access the new content store.
10. If you are running two instances of IBM Cognos 8, change the cookie path for the new version of IBM Cognos 8:
    - From the Actions menu, click Edit Global Configuration.
    - In the Global Configuration window, click Cookie Settings.
• Go to a different path from the one that is used by the older version of IBM Cognos 8.

• Click OK.

11. Save the configuration and start IBM Cognos 8.

Steps for ReportNet
1. In ReportNet, start IBM Cognos Configuration.

2. Change the cookie path:
   • From the Actions menu, click Edit Global Configuration.
   • In the Global Configuration window, click Cookie Settings.
   • Set the path to the installation directory (for example, /crn).
   • Click OK.

3. Save the configuration.

You can now run ReportNet and IBM Cognos 8, or two instances of IBM Cognos 8, at the same time.

Note: When you change from the default ports on Windows, the port number is automatically appended to the service name. The service name in IBM Cognos Configuration does not show the port number. You can view the service name and port number under Services in your Windows administrative tools.

Manually Uninstall the ReportNet Service on Windows

If the ReportNet service continues to run after you uninstalled ReportNet and then installed IBM Cognos 8, you must manually uninstall the ReportNet service.

You can install more than one version of IBM Cognos 8 in different locations on the same computer. If the versions use the same ports, the installation may not upgrade the service correctly. IBM Cognos Configuration upgrades to the most recently configured service for IBM Cognos 8.

Tip: To see if the correct IBM Cognos 8 service is running, check the version number in the About window in IBM Cognos Configuration.

Steps
1. Start IBM Cognos Configuration.

2. Right-click the service node IBM Cognos 8 (or other name that has been given to the service) in the Explorer panel and select Stop.

3. Open a Command Prompt window.

4. Go to the c8_location/bin directory.

5. Uninstall the service:
   • If you used the default name for the service, type cogbootstrapservice -u
If you specified another name, type `cogbootstrapservice -u -name="c8_service_name"`

6. Close the Command Prompt window.
7. Restart IBM Cognos Configuration.
IBM Cognos 8 upgrades to the correct service.

Set Up to Publish IBM Cognos Series 7 PowerCubes After Upgrade from ReportNet

After you upgrade from IBM Cognos ReportNet to IBM Cognos 8, you may not be able to publish cubes from PowerPlay Enterprise Server to IBM Cognos Connection. Similarly, if a user opens a cube from IBM Cognos Connection that was published from PowerPlay Enterprise Server, they may receive the following error when they save the report to IBM Cognos Connection:

*Your session ticket is invalid. It may have expired.*

To enable publishing of IBM Cognos Series 7 PowerCubes after upgrading, you can either restructure your virtual directories so that the IBM Cognos Series 7 and IBM Cognos 8 gateways are within the same structure or change the default cookie path in IBM Cognos 8 to the value specified below. If you use the specified cookie path value, you cannot run ReportNet and IBM Cognos 8 on the same computer.

**Steps to Restructure Virtual Directories**
1. Create an alias called `cognos8` that points to the `c8_location\webcontent` directory.
2. Create an alias called `cognos8\cgi-bin` that points to the `c8_location\cgi-bin` directory.
3. Create an alias called `cognos8\series7` that points to the `series7_location\webcontent` directory.
4. Create an alias called `cognos8\series7\cgi-bin` that points to the `series7_location\cgi-bin` directory.
5. Create an alias called `cognos8\series7\help` that points to the `series7_location\Documentation` directory.

**Steps to Change the Default Cookie Path**
1. Start IBM Cognos Configuration.
2. Click Actions, Edit Global Configuration, and click the General tab.
3. In the Path box under Cookie Setting, type `/`
4. Click OK.
5. Save the configuration.

**Note:** If you change the cookie path to the specified value, you cannot run ReportNet and IBM Cognos 8 on the same computer. If you intend to run ReportNet and IBM Cognos 8 on the same computer, correct this problem by changing your virtual directories as described above.
Upgrading IBM Cognos 8 Go! Office

To upgrade IBM Cognos 8 Go! Office, users of the client components must first uninstall the older version and then run a setup file that installs a new version of Microsoft .NET Framework, updates the .NET components, and installs the new version of IBM Cognos 8 Go! Office. To upgrade reports, users must open them in the new version and then save them.

There is no action required to update the server components for IBM Cognos 8 Go! Office. They are included in the upgrade to the new version of IBM Cognos 8.

To support the addition of other IBM Cognos products that work with Microsoft Office, the name used to install the new product is now IBM Cognos 8 for Microsoft Office. This name is used in the installation wizard and in the name of the action pane that appears in your Microsoft Office product after upgrading. In addition, the name of the default installation directory is changed to IBM Cognos 8 for Microsoft Office.

If you deployed IBM Cognos 8 Go! Office enabled files or templates, you do not have to revise the custom properties in the new version. The custom properties and templates are no longer required.

Uninstall the Previous Version

Before you can upgrade to the new version of IBM Cognos 8 Go! Office, you must uninstall the old version.

Steps
1. From the Start menu, click Settings, Control Panel.
2. Start Add or Remove Programs.
3. In the list of currently installed programs, click IBM Cognos 8 Go! Office.
4. Click Remove and follow the instructions.

Install IBM Cognos 8 Go! Office

To install IBM Cognos 8 Go! Office, you run a setup.exe file from the appropriate directory on the product CD or central LAN location. The file installs a security update for Microsoft .NET Framework and then installs the IBM Cognos 8 Go! Office components.

Before you update and install components, ensure that you also
- have administrative privileges on the computer
- installed Microsoft .NET Framework 2.0
- uninstalled any previous version of IBM Cognos 8 Go! Office
- have the appropriate license to use your IBM Cognos 8 for Microsoft Office product

Steps
1. Insert the IBM Cognos 8 Go! Office disk or go to the location where the installation files were downloaded.
The IBM Cognos 8 Go! Office setup Wizard should open.

2. If the no setup wizard appears, in the go_office directory on the CD, double-click setup.exe.

3. At the prompt to install the shared add-in support update for Microsoft .NET Framework, click Install.
   
   A progress dialog appears while the update is installed.

4. In the Welcome to the IBM Cognos 8 Go! Office Setup Wizard page, click Next.

5. In the License Agreement page, select I Agree and then click Next.

6. In the Select Installation Folder page, select the installation directory, such as C:\Program Files\Cognos\Cognos 8 for Microsoft Office\ and then click Next.
   
   If you have already installed one of the IBM Cognos 8 for Microsoft Office components, such as IBM Cognos 8 BI Analysis for Microsoft Excel the folder setting cannot be changed. IBM Cognos 8 Go! Office must be installed in the same location as other IBM Cognos 8 for Microsoft Office products.
   
   We recommend that you use the same user setting for all IBM Cognos 8 for Microsoft Office products. The default setting, Everyone, means that all users who log on to the computer will see IBM Cognos 8 in the toolbar of the Microsoft Office products. If you select Just Me, only the user who installed IBM Cognos 8 for Microsoft Office will see IBM Cognos 8 in the toolbar.
   
   If a dialog box appears, advising you to uninstall a previous version of IBM Cognos 8 product, follow the prompts and uninstall the previous version, and then resume the installation.

7. In theConfirm Installation page, click Next.
   
   The wizard installs the IBM Cognos 8 Go! Office components.

8. In the Installation Complete page, click Close.

## Upgrading Transformer Models and PowerCubes

You can open IBM Cognos Series 7 models with secured cubes in Transformer and upgrade the IBM Cognos Series 7 user class views and user classes for use in IBM Cognos 8.

Before you load the model, the IBM Cognos Series 7 namespace must be configured in IBM Cognos 8 (p. 267).

To upgrade Transformer models and PowerCubes, do the following:

- Prepare the IBM Cognos Series 7 models
- Import unsecured models in IBM Cognos 8 Transformer
- Upgrade IBM Cognos Series 7 secured PowerCubes in IBM Cognos 8 Transformer

## Prepare Models in IBM Cognos Series 7 Transformer

To upgrade models created in earlier versions of Transformer, you must save them in Model Definition Language (MDL) format before you can import them into Transformer 8.4. This ensures...
that equivalent definitions are created for all model objects. You can upgrade models from IBM Cognos Series 7 Transformer, versions 7.x.

**Steps**

1. Open the model in the earlier version of Transformer and, from the File menu, click **Save As**.

2. In the **Save as Type** box, click **Exported Model Files (*.mdl)**.
   
   **Tip:** By default, Transformer saves models in the ../My Documents/Transformer/Models directory. You can set the location to which Transformer saves models by changing the Models directory setting on the **Directories** tab of the **Preferences** property sheet.

3. Back up the .mdl files in a secure location.

**Import Unsecured Models in IBM Cognos 8 Transformer**

After you install IBM Cognos 8 Transformer, you can import the .mdl files from IBM Cognos Series 7 into IBM Cognos 8 Transformer. If you are importing secured models from IBM Cognos Series 7, see the topic about upgrading an IBM Cognos Series 7 secured model in Transformer 8.4.

You can open an IBM Cognos Series 7 model with secured cubes in IBM Cognos 8 Transformer, and convert the IBM Cognos Series 7 user class views to IBM Cognos 8 custom views. You can then choose the authentication provider you want to use with the custom views. For more information about adding security, see the Transformer **User Guide**.

During the transition from an IBM Cognos Series 7 namespace to an alternate security provider, you can use the PowerCube property **All applicable namespaces (including unsecured PowerCubes)** to associate all applicable namespaces during migration testing. When you associate all the applicable namespaces to the cube, you can ensure that the group, role, or user dimensional filtering is consistent with that which had been applied for the IBM Cognos Series 7 user class. This option is supported only for migration testing, and cannot be used to deploy cubes in production environments.

You can change the association for an IQD data source to that of an IBM Cognos 8 data source, thereby taking advantage of the enhancements available when using an IBM Cognos 8 package or report data source. You can change the association for IBM Cognos Series 7 .iqd files and for Framework Manager .iqd (externalized query) files, after the updated model has been saved in Transformer 8.4. For more information about changing a data source type, see the Transformer **User Guide**.

Transformer 8.4 supports upgrading models from IBM Cognos Series 7.x. When importing .mdl files from earlier versions, some features may not convert correctly, such as legacy data that contains special characters, spaces, and quotation marks. For more information, see the migration documentation delivered with your version of the product.

**Step**

- Open the .mdl file in IBM Cognos 8 Transformer, make any required changes to the model design, and save it, again selecting the .mdl format.

When you are ready to use the model in your production environment, you may want to save it as a .pyj-format file.
IBM Cognos 8 Transformer models are not backward compatible (.mdl and .pyj). As a result, we strongly recommend that you maintain the .mdl file for the Transformer 7.x model for a period of time following upgrade.

Upgrade an IBM Cognos Series 7 Secured PowerCube

You can open IBM Cognos Series 7 models with secured cubes in IBM Cognos 8 Transformer, and upgrade the IBM Cognos Series 7 user class views and user classes for use in IBM Cognos 8.

If you want to move to an IBM Cognos 8 supported authentication provider other than Access Manager, you can do this over time.

When you open the IBM Cognos Series 7 secured model in IBM Cognos 8 Transformer, you can choose to:

- import the IBM Cognos Series 7 user class views associated with the model, but not the user classes

  Choose this option when you want to maintain the view operations applied in the IBM Cognos Series 7 user class views but not use an IBM Cognos Series 7 namespace with the custom views, or if you do not intend to expose IBM Cognos Series 7 as an available namespace configured in IBM Cognos 8.

  Note: Prior to building and using the IBM Cognos 8 Transformer cube in any of the IBM Cognos 8 Web studios, you will need to associate new security objects to the upgraded custom views.

- import the IBM Cognos Series 7 user class views and user classes associated with the model

  Choose this option when you want to maintain the view operations applied in the user class views and use the IBM Cognos Series 7 user classes, or if you want to transition to an alternate security provider but need to maintain the IBM Cognos Series 7 user class objects to ensure the transition is carried out correctly.

  This option requires you to configure the IBM Cognos Series 7 security on which the upgraded model was designed as an available namespace in IBM Cognos 8. The unique identifier that locates the user class in Access Manager is converted to an IBM Cognos 8 identifier, and this process will not be successful if you use this option with a different IBM Cognos Series 7 namespace.

- discard all existing custom views and security objects

  Choose this option when you plan to create new custom views and use only the security objects currently configured in the IBM Cognos 8 namespace.

For PowerCubes that are in development and transitioning from an IBM Cognos Series 7 namespace to an alternate security provider, you can associate all the applicable namespaces on the PowerCube property sheet (Data Source tab). This option is intended only for the testing of migration, and requires that the modeler or administrator log on to all the applicable namespaces prior to accessing the PowerCube package in IBM Cognos 8. Failing to log on to all applicable namespaces will result in an inaccurate view of the data. This feature is not supported for the deployment of cubes for end users.
For more information about publishing a PowerCube, see the Transformer User Guide.

**Steps**

1. From the **File** menu, click **Open**, browse to the location of the IBM Cognos Series 7 secured model, select the model, and then click **Open**.

2. In the **Import model with IBM Cognos Series 7 user class view** dialog box, select the appropriate security import option, and then click **Next**.

3. If you selected **Import user class views and user classes from the model**, in the **Logon** dialog box, select the appropriate namespace and then log on with your user ID and password.

4. In the **Available namespace(s)** box, select the namespace used to secure the IBM Cognos Series 7 cube.
   
   **Tip:** If the namespace does not appear in the list, click **Logon As** to select and log on to the namespace.

5. Click **Finish**.
You can install all IBM Cognos 8 components on one computer. This is useful when you are setting up a test or evaluation environment, or for small production environments. To use IBM Cognos 8, you must install all components that are selected by default in the installation wizard.

We recommend that you do an interactive installation (p. 120)

You can also distribute the installation of IBM Cognos 8 on different computers. For more information, see "Installing IBM Cognos 8 Server Components on Different Computers" (p. 153).

Use the following checklist to guide you through installing IBM Cognos 8 on one computer:

- Install IBM Cognos 8 server components
- Install the IBM Cognos 8 Metric Manager, if required
- Update the Java environment
- Set up database connectivity for the content store database
- Set up database connectivity for the reporting databases.
- Start IBM Cognos Configuration
- Configure environment properties
- Enable security
- Set the database connection properties for the content store
- Specify a mail server account
- Start the IBM Cognos 8 services
- Configure the Web server
- Set up the data source or import source environment
- Create the metric store database
- Set up the database client for the metric store, if required
- Create a metric package
- Test the installation and configuration

When you have finished, you may want to install IBM Cognos 8 Metrics Manager. Install the Metrics Manager component in the same location as the IBM Cognos 8 Business Intelligence component. For example, install the IBM Cognos 8 Metrics Manager Content Manager component to the same location as you installed the IBM Cognos 8 Business Intelligence Content Manager component.
Next, you must install Framework Manager (p. 199). If you are using PowerCubes, you must install Transformer (p. 217). For uninstalling instructions, see "Uninstalling IBM Cognos 8" (p. 149).

**Recommendation - Install Server Components in Interactive Mode**

For a complete installation, you must install components on your server and then configure them to work in your environment. Typically, you run the IBM Cognos installation and configuration programs in interactive mode. This means that in a graphical user interface (GUI) the installer prompts you to provide information, and the configuration tool enables you to change default settings. You can choose to install server components in silent mode.

**Silent Mode**

You can automate the installation of components using response files and running the installation program in silent mode. For information about silent mode installations, see "Setting Up an Unattended Installation and Configuration" (p. 401).

You can automate the configuration of components by exporting the configuration settings from one computer to another as long as the installed components are the same. We recommend that you run IBM Cognos Configuration in interactive mode the first time. The other option is to edit the cogstartup.xml file, using settings that apply to your environment, and then running the configuration tool in silent mode.

**Interactive Mode**

Unless you intend to complete a silent-mode installation, we recommend that you install the software from an X Window System workstation, an X terminal, or a PC or other system with X server software installed. To run an interactive-mode installation, the console attached to your computer must support a Java-based graphical user interface.

**Install IBM Cognos 8 Server Components**

Use the installation wizard to select the server components that you want to install and the location on your computer where you want to install them. Only the components that you choose to install are copied from the CD to your computer. Samples are on a separate CD in your IBM Cognos 8 product. If you want to use the samples, you must install them from the IBM Cognos 8 Business Intelligence Samples 8.4 CD.

**Stopping the Service**

If you need to stop the IBM Cognos 8 service, it is important to also stop the following:
Web servers that host IBM Cognos 8 content
- applications that are related to the IBM Cognos 8 service, such as Framework Manager, IBM Cognos 8 Transformer, IBM Cognos Connection, IBM Cognos Administration, and Metric Designer
- any SDK applications that are running

**Upgrading your Installation**
If you are upgrading from a previous release of IBM Cognos products, you must use the upgrading steps. For information about upgrading from ReportNet or Metrics Manager, see "Upgrading to IBM Cognos 8" (p. 71).

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, all the distributed components must be the same version of IBM Cognos 8. If you install IBM Cognos 8 in new locations, you must update the locations using IBM Cognos Configuration.

If you are upgrading IBM Cognos 8 BI in an environment that includes earlier versions of other IBM Cognos 8 products, such as IBM Cognos 8 Controller 8.3, IBM Cognos 8 Planning 8.3, or IBM Cognos 8 BI Analysis for Excel 8.3, install the new version of IBM Cognos 8 BI in a separate location from the other IBM Cognos 8 product and configure IBM Cognos 8 BI to operate independently of that product. After you upgrade the other product to a compatible version with IBM Cognos 8 BI, you can then configure the two products to operate together.

**Windows Installations**
For Windows installations, ensure that you have administrator privileges for the Windows computer you are installing on. Also ensure that your computer has a TEMP system variable that points to the directory where you want to store temporary files. During installation, files from the CD are temporarily copied to this directory.

**UNIX Installations**
For UNIX installations, you can install server components using a graphical user interface or by running a silent installation. To run graphical-mode installation, the console attached to your UNIX computer must support a Java-based graphical user interface.

Also, IBM Cognos 8 respects the file mode creation mask (umask) of the account running the installation program. This affects only the installation directories. It does not affect the file permissions within the directories. However, run-time generated files, such as logs, respect the mask. We recommend umask 022 on the installation directory.

**Cognos Content Database as Content Store**
If you want to use Cognos Content Database as your content store, you must select it in the installation wizard. If you are installing components on several computers, you need to only install one Cognos Content Database. If you install Cognos Content Database on the same computer as Content Manager, and you later decide to use another database for your content store, you must uninstall Cognos Content Database.
**Printer Requirements**

To ensure that reports print properly on Windows, Adobe Acrobat requires that you configure at least one printer on the operating system where Application Tier Components are installed. All reports, regardless of the print format that you choose, are sent as temporary PDF files to Adobe Reader for printing.

**Steps for UNIX and Linux**

1. If you are installing to a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

2. Set the JAVA_HOME environment variable to point to the installation location of your Java Runtime Environment (JRE).

   An example of the installation location of a Java Runtime Environment is `/directory/java/java_version/jre`.

   IBM Cognos 8 requires a JVM, such as IBM Java, to run on Linux.

3. On HP-UX, set the _M_ARENA_OPTS environment variable as follows:

   ```
   _M_ARENA_OPTS 1:4
   ```

   This increases the memory allocation for HP-UX to more closely match that of other UNIX platforms.

4. On AIX, if you are using a servlet gateway, set the AIXTHREAD_SCOPE environment variable as follows:

   ```
   AIXTHREAD_SCOPE=S
   ```

   This sets the contention scope for user threads to system-wide, which supports more efficient scheduling of user threads.

5. Mount the CD for your IBM Cognos product using Rock Ridge file extensions.

   **Important:** To mount the IBM Cognos CD on HP-UX, do the following:

   - Add the pfs_mount directory in your path.
     
     For example,
     ```
     PATH=/usr/sbin/:$PATH
     export PATH
     ```

   - To start the required NFS daemons and run the daemons in the background, type `bg pfs_mountd` and then type `bg pfd`

   - To mount the drive, type
     ```
     pfs_mount -t rrip <device><mount_dir> -o xlat=unix
     ```

     For example,
     ```
     pfs_mount /dev/dsk/c0t2d0 /cdrom -o xlat=unix
     ```

     You can now install or copy files as a non-root user using an IBM Cognos CD from this drive.
When the installation is complete, type `pfs_umount /cdrom` and kill the pfsd and pfs_mountd daemons to unmount the CD.

6. To start the installation wizard, go to the operating system directory on the CD or in the directory where the installations files were downloaded and extracted, and then type 
   `./issetup`

   **Note:** When you use the issetup command with XWindows, Japanese characters in messages and log files may be corrupted. When installing in Japanese on UNIX or Linux, first set environment variables LANG=C and LC_ALL=C (where C is the language code, for example ja_JP.PCK on Solaris), and then start the installation wizard.

   If you do not use XWindows, run an unattended installation (p. 401).

7. Follow the directions in the installation wizard and copy the required files to your computer. Install IBM Cognos 8 components in a directory that contains only ASCII characters in the path name. Some UNIX and Linux Web servers do not support non-ASCII characters in directory names.
   
   If you are installing IBM Cognos 8 on a computer that has ReportNet or an earlier version of IBM Cognos 8 and you want to keep the earlier version, you must install IBM Cognos 8 in a different directory.

   If you are installing it in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.

8. When you are prompted about installing non-English product documentation, click OK to continue.

9. Choose how to proceed in the Finish page of the installation wizard:
   
   - We recommend that you do not configure IBM Cognos 8 immediately because you must do other tasks first to ensure that your environment is properly set up. However, if the console attached to your computer supports a Java-based graphical user interface, you can click Start IBM Cognos Configuration.
   
   - If you want to see late-breaking information about IBM Cognos 8, select View the Readme and then click Finish.
   
   - If the console attached to your computer does not support a Java-based graphical user interface, click Finish.

   You can later configure IBM Cognos 8 using IBM Cognos Configuration by starting cogconfig.sh in the `c8_location/bin` directory, or running a silent configuration or editing cogstartup.xml in `c8_location/configuration` directory.

10. Append the `c8_location/bin` directory to the appropriate library path environment variable.
    
    - For Solaris and Linux, `LD_LIBRARY_PATH`
    
    - For AIX, `LIBPATH`
11. For HP-UX, SHLIB_PATH

1. On Linux, set the PRINTER environment variable to the name of your printer.

To ensure the security and integrity of IBM Cognos 8, it is important to protect the installation directory from unauthorized or inappropriate access.

If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation component in the location where you installed the Gateway components. For more information, see "Install Translated Product Documentation" (p. 250).

If you want to use the samples that are available for IBM Cognos 8, install the IBM Cognos 8 samples.

You must also update your Java security framework (p. 125) before you can configure IBM Cognos 8. Otherwise, you may receive the following error:

```
[Cryptography]
1. [ ERROR ] java.lang.NoClassDefFoundError: javax/net/ServerSocketFactory:
```

**Steps for Windows**

1. If you are installing in a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

2. Insert the IBM Cognos product disk or go to the location where the installation files were downloaded.

   The installation wizard starts automatically from the product disk.

3. If no Welcome page appears, go to the operating system directory and double-click the issetup.exe file.

4. Select the language to use for the installation.

   The language that you select determines the language of the user interface. You can change the language to any of the installed languages after installation.

5. Follow the directions in the installation wizard to copy the required files to your computer.

   Install IBM Cognos 8 components in a directory that contains only ASCII characters in the path name. Some Windows Web servers do not support non-ASCII characters in directory names.

   If you are installing IBM Cognos 8 on a computer that already has ReportNet, and you want to keep ReportNet running, you must install IBM Cognos 8 in a different directory.

   If you are installing in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.

6. When you are prompted about installing non-English product documentation, click OK to continue.

7. In the Finish page of the installation wizard,
If you want to configure IBM Cognos components immediately, click **Start IBM Cognos Configuration**.

If you want to see late-breaking information about IBM Cognos components, click **View the IBM Cognos Readme**.

8. Click **Finish**.

   Use the Windows **Start** menu to start **IBM Cognos Configuration** from the shortcut folder.

To ensure the security and integrity of IBM Cognos 8, it is important to protect the installation directory from unauthorized or inappropriate access.

If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation component in the location where you installed the Gateway components. For more information, see "**Install Translated Product Documentation**" (p. 250).

If you want to use the samples that are available for IBM Cognos 8, **install the IBM Cognos 8 samples**.

### Install IBM Cognos 8 Metrics Manager

If you are installing IBM Cognos 8 Metrics Manager with IBM Cognos 8 Business Intelligence, you must install each IBM Cognos 8 Metrics Manager component into the same location as each IBM Cognos 8 Business Intelligence component.

You may also want to install Metric Designer (p. 210).

### Update the Java Environment

IBM Cognos 8 cryptographic services use a .jar (Java Archive) file, named bcprov-jdknn-nnn.jar, that must be located in your Java Runtime Environment (JRE). This file provides additional encryption and decryption routines that are not supplied as part of a default JVM installation. To ensure security, the encryption file must be loaded by the JVM using the java extensions directory.

If you want to use your own JRE and have JAVA_HOME set to that location on Windows or if you are installing on UNIX, you may have to update the Java environment for the cryptographic services.

On Windows, you can set JAVA_HOME as a system variable or a user variable. If you set it as a system variable, it may be necessary to restart your computer for it to take effect. If you set it as a user variable, set it so that the environment in which Tomcat is running can access it.

If you do not have a JAVA_HOME variable already set on Windows or if JAVA_HOME points to a Java version that is not valid for IBM Cognos 8, the JRE files provided with the installation will be used, and you do not have to update any files in your environment.

**Steps**

1. Ensure that the JAVA_HOME environment variable is set to the JRE location.
For example, to set JAVA_HOME to a JRE that you are already using, the path is `Java_location/bin/jre/version`.

2. Copy the `bcprov-jdknn-nnn.jar` file from the `c8_location/bin/jre/version/lib/ext` directory to the `Java_location/jre/lib/ext` directory.

### JDBC Driver Options for Using DB2 Database as a Content Store

IBM Cognos 8 uses JDBC connectivity to access the database used for the content store.

If you use DB2 on Windows, Linux or UNIX as your content store you must choose whether to use the type 2 or type 4 JDBC driver depending on how you want to connect to the content store. If you are using a DB2 database on z/OS for the content store, you must use type 4 JDBC connectivity.

You specify the driver type to use in IBM Cognos Configuration.

#### Configuration Options for the Universal Driver

DB2 introduced a universal JDBC driver that contains both type 2 and type 4 JDBC driver support. The universal driver, `db2jcc.jar`, replaces the deprecated type 2 JDBC driver, `db2java.zip`.

If you are upgrading, you can continue to use type 2 JDBC connectivity with no configuration change required. If you want to use the type 4 JDBC connectivity, you must change your configuration to include the host name and port number of the database server.

For information about configuration requirements, "Set Database Connection Properties for the Content Store" (p. 131).

For both type 2 and type 4 JDBC connectivity, however, you must copy the new universal driver, `db2jcc.jar`, and the accompanying license file, `db2jcc_license_*_jar`, to your IBM Cognos 8 installation location.

For more information, see "Set Up Database Connectivity for the Content Store Database" (p. 127).

#### Using the Type 2 JDBC Driver

Type 2 JDBC drivers are comprised of a native-API component and a Java component.

The connection to the DB2 database occurs through the DB2 CLI libraries, which comprise the native component that communicates with the database server.

Because type 2 JDBC drivers require common client code and rely on the native code of the product, a DB2 product must be installed to use this driver. For example, a DB2 client must be installed on the computer where you have Content Manager installed.

#### Using the Type 4 JDBC Driver

Type 4 JDBC drivers are pure Java drivers which provide direct access to DB2 database features through network communication.

The type 4 driver is considered an independent product. It does not require the DB2 product to be installed. For example, you do not need to install the DB2 client on the computer where you have Content Manager installed.
Set Up Database Connectivity for the Content Store Database

If you are using a database other than Cognos Content Database as the content store, you may have to install database client software, or JDBC drivers, or both, on each computer where you install Content Manager. Doing this allows Content Manager to access the content store database.

Steps for DB2

1. If you are using type 2 JDBC connectivity, install the DB2 client software on the Content Manager computers.
   
   If you use type 4 JDBC connectivity for DB2, you are not required to install the DB2 client software where Content Manager is installed. If you are using a DB2 database on z/OS for the content store, you must use type 4 JDBC connectivity.
   
   For more information about the differences between type 2 and type 4 drivers, see "JDBC Driver Options for Using DB2 Database as a Content Store" (p. 126).

2. If you are using type 2 JDBC connectivity, and the content store is on a different computer than Content Manager, configure a database alias to the content store.
   
   On Windows, run the DB2 Client Configuration Assistant.
   
   On UNIX or Linux, use the DB2 command line interface.
   
   If the content store database and Content Manager are on the same computer, the content store name automatically becomes the alias.
   
   When you configure the Content Manager computers, ensure that they are all configured to use the same content store.

3. On Windows, stop the DB2 services and the HTML Search Server.

4. Copy the following files from $DB2_installation/sqllib/java directory to the $c8_location/webapps/p2pd/WEB-INF/lib directory.
   
   - the universal driver file, db2jcc.jar
   
   - the license file
     
     for DB2 on Linux, UNIX, or Windows, db2jcc_license_cu.jar
     
     for DB2 on z/OS, db2jcc_license_cisuz.jar
   
   If you are connecting to DB2 on z/OS, use the driver version from Linux, UNIX, or Windows version 9.1 fix pack 5 or version 9.5 fix pack 2.
   
   Tip: To check the driver version, run the following command
   
   java -cp path/db2jcc.jar com.ibm.db2.jcc.DB2Jjcc -version

5. On Windows, restart the DB2 services and the HTML Search Server.

6. On UNIX, if you are using type 2 JDBC connectivity, ensure that the 32-bit DB2 libraries are in the library search path, which is usually the $DB2DIR/lib directory or the $DB2DIR/lib32 directory.
7. Repeat this entire procedure on the IBM Cognos 8 computers where Content Manager is installed or where notification is sent to a DB2 database.

You can tune the database to take advantage of DB2 features. For more information, see the "Tuning a DB2 Content Store" (p. 409).

**Steps for Oracle**

1. On the computer where the Oracle client is installed, go to the ORACLE_HOME/jdbc/lib directory.

2. Copy the appropriate JAR file to the c8_location/webapps/p2pd/WEB-INF/lib directory on computers where Content Manager is installed and where notification is sent to an Oracle database.
   - If you use Java 1.4, copy the ojdbc14.jar file
   - If you use Java 1.5, copy the ojdbc5.jar file

If the directory contains the classes12.jar file, delete it before installing the ojdbc14.jar or ojdbc5.jar file.

The driver is available from an Oracle client or server install, and it can also be downloaded from the Oracle technology Web site (http://www.oracle.com/technology).

**Steps for Sybase**

1. On the computer where Sybase is installed, go to the Sybase_location/jConnect-5.5/classes directory.

2. Copy the jconn2.jar file to the c8_location/webapps/p2pd/WEB-INF/lib directory on every computer where Content Manager is installed and where notification is sent to a Sybase database.

**Set Up Database Connectivity for the Reporting Database**

For IBM Cognos 8, the only service that accesses the query database (also known as the reporting database) is the reporting engine that runs reports. The reporting engine is installed with Application Tier Components. To support queries, you must install the database clients for your data sources.

**Step**

- Ensure that you install the database API software for your reporting sources on each computer where Application Tier Components are installed.

  Application Tier Components support either native database connectivity or ODBC.

  On UNIX, for Microsoft SQL Server only, Application Tier Components support the Data Direct ODBC driver. This driver is available from Data Direct.

  IBM Cognos 8 requires TCP/IP connectivity with the Microsoft SQL Server.
Start IBM Cognos Configuration

Use the configuration tool, IBM Cognos Configuration, to configure IBM Cognos 8 components during the installation and configuration process and to start and stop IBM Cognos services.

Before starting IBM Cognos Configuration, ensure that the operating environment is properly set up. For example, ensure that all environment variables have been set.

On UNIX or Linux, do not start IBM Cognos Configuration in the last page of the installation wizard: additional setup is required before you can configure IBM Cognos 8. For example, you must update your Java environment. On Windows, you can start IBM Cognos Configuration in the last page of the installation wizard only if additional setup is not required. For example, if you use a database server other than Microsoft SQL or Cognos Content Database for the content store, we recommend that you copy the JDBC drivers to the appropriate location before you start the configuration tool.

Ensure that user or service account is set up. For information, see "Configure a User Account or Network Service Account for IBM Cognos 8" (p. 64).

Steps on UNIX or Linux
1. Go to the c8_location/bin directory and then type
   
   ./cogconfig.sh

2. If you want to access the help for IBM Cognos Configuration, go to the c8_location/configuration directory and edit the cogconfig.prefs file to add the location of your Web browser.
   For example, if you use Firefox, add the following text to the file:
   
   BrowserPath=Web_browser_location/firefox

   where Web_browser_location is a path, such as /usr/local/bin/

   Your Web browser must support the following syntax:
   
   $ <Web_browser_location> <URL>

Steps on Windows
1. From the Start menu, click Programs, IBM Cognos 8, IBM Cognos Configuration.

2. If you want to access the help for IBM Cognos Configuration, go to the c8_location/configuration directory and edit the cogconfig.prefs file to add the location of your Web browser.
   For example, if you use Firefox, add the following text to the file:
   
   BrowserPath=Web_browser_location/firefox

   where Web_browser_location is a path, such as \usr\local\bin\

   Your Web browser must support the following syntax:
   
   $ <Web_browser_location> <URL>
Configure Environment Properties

We recommend that you specify the server name or an IP address in the URI properties that are used by IBM Cognos 8. By default, the URI properties specify localhost.

Steps
1. Start IBM Cognos Configuration.
2. In the Explorer window, click Environment.
3. In the Properties window, change the localhost portion of all URI properties to the name or IP address of your IBM Cognos 8 server by doing the following:
   - For Content Manager URIs, click the value and then click the edit button. Change the localhost portion and then click OK.
   - For all other URI properties, click the value and change it.
4. In the Explorer window, under Security, Cryptography, click Cognos, the default cryptographic provider.
5. Under the Certificate Authority settings property group, set the Password property. Record the password in a secure location.
6. From the File menu, click Save.

Enable Security

By default, IBM Cognos 8 allows anonymous access. If you want to use security in your IBM Cognos 8 environment, you must disable anonymous access and configure IBM Cognos 8 to use an authentication provider.

Steps
1. In the IBM Cognos Configuration Explorer window, click Security, Authentication, Cognos.
2. Click the Value box for Allow Anonymous Access, and select False.
4. In the Name box, type a name for your authentication namespace.
5. In the Type list, click the appropriate namespace and then click OK.
   The new authentication provider resource appears in the Explorer window, under the Authentication component.
6. In the Properties window, for the Namespace ID property, specify a unique identifier for the namespace.

For more information about configuring IBM Cognos 8 to use an authentication provider, see "Configuring IBM Cognos 8 Components to Use an Authentication Provider" (p. 259).
For more information about configuring IBM Cognos 8 to use an authentication provider, see "Configuring IBM Cognos 8 Components to Use an Authentication Provider" in the Installation and Configuration Guide.

7. From the File menu, click Save.

Set Database Connection Properties for the Content Store

For all installations not using Cognos Content Database, you must specify the database server information to ensure that Content Manager can connect to the database you use for the content store. Content Manager uses the database logon to access the content store. After you set the database connection properties, you can test the connection between Content Manager and the content store.

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, configure IBM Cognos 8 to point to the existing content store. After you save the configuration and start the IBM Cognos 8 service, the content store is automatically upgraded and cannot be used by the earlier version. If you keep ReportNet or the earlier version of IBM Cognos 8 running, you must configure IBM Cognos 8 to point to a new content store.

Ensure that you used one of the supported database servers to create the content store.

Steps for DB2

1. In the location where you installed Content Manager, start IBM Cognos Configuration.

2. In the Explorer window, under Data Access, Content Manager, click Content Store.

3. In the Properties window, for the Database name property, type the name of the database or the database alias.

4. Change the logon credentials to specify a valid user ID and password:
   - Click the Value box next to the User ID and password property and then click the edit button when it appears.
   - Type the appropriate values and click OK.

5. To use type 4 JDBC connectivity, for the Database server and password property, type a value, using host:port syntax.

If you leave this property blank, type 2 JDBC connectivity is used.

For more information about the differences between the driver types, see "JDBC Driver Options for Using DB2 Database as a Content Store" (p. 126).

6. From the File menu, click Save.

   The logon credentials are immediately encrypted.

7. Test the connection between Content Manager and the content store.

   Tip: In the Explorer window, right-click the new database and click Test.
Content Manager connects to the database, checks the database permissions, and creates and populates a table. The table is not deleted and is used each time that the test is repeated.

**Steps for Microsoft SQL Server, Oracle, and Sybase**

1. On the computer where you installed Content Manager, start IBM Cognos Configuration.

2. In the **Explorer** window, under **Data Access, Content Manager**, right-click **Content Store** and click **Delete**.

   This deletes the connection to the default resource. Content Manager must be configured to access only one content store.

3. Right-click **Content Manager**, and then click **New resource, Database**.

4. In the **Name** box, type a name for the resource.

5. In the **Type** box, select the type of database and click **OK**.

   If you are upgrading and want to use an existing content store, ensure that you select the type of database you use for the older version.

   If you installed more than one version of IBM Cognos 8, you must use a different content store for each version. When a content store is used by a new version of IBM Cognos 8, it cannot be used by an older version.

   **Tip:** If you want to use Oracle Net8 keyword-value pair to manage the database connection, select **Oracle database (Advanced)**.

6. In the **Properties** window, provide values depending on your database type:

   - If you use a Microsoft SQL Server database, type the appropriate values for the **Database server with port number or instance name** and **Database name** properties.

     For a Microsoft SQL Server database, you can choose to use a port number, such as 1433, or a named instance as the value for the **Database server with port number or instance name** property.

     To connect to a named instance, you must specify the instance name as a JDBC URL property or a data source property. For example, you can type `localhost\instance1`. If no instance name property is specified, a connection to the default instance is created.

     Note that the properties specified for the named instance, along with the user ID and password, and database name, are used to create a JDBC URL. Here is an example:

     ```
     jdbc:JSQLConnect://localhost\instance1/user=sa/more properties as required
     ```

   - If you use an Oracle database, type the appropriate values for the **Database server and port number** and **Service name** properties.

   - If you use an advanced Oracle database, for the **Database specifier** property, type the Oracle Net8 keyword-value pair for the connection.

     Here is an example:

     ```
     (description=(address=(host=myhost)(protocol=tcp)(port=1521)(connect_data=(sid=(orcl)))))
     ```
When you select the advanced Oracle database, IBM Cognos 8 uses enterprise-oriented Oracle features to select a listener, switch to another listener if the first listener fails, automatically reconnect to the database if the connection fails, balance connection requests among listeners, and balance connection requests among dispatchers.

- If you use a Sybase database, type the appropriate values for the **Database server and port number** and **Database name** properties.

7. If you want to change the logon credentials, specify a user ID and password:
   - Click the **Value** box next to the **User ID and password** property and then click the edit button when it appears.
   - Type the appropriate values and click **OK**.

8. From the **File** menu, click **Save**.

   The logon credentials are immediately encrypted.

9. Test the connection between Content Manager and the content store.
   - **Tip**: From the **Actions** menu, click **Test** to test the connection between Content Manager and the content store.

   Content Manager connects to the database, checks the database permissions, and creates and populates a table. The table is not deleted and is used each time that the test is repeated.

Content Manager can now create the required tables in the content store when you start the IBM Cognos 8 service for the first time. If the connection properties are not specified correctly, you cannot connect to IBM Cognos Connection.

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, Content Manager can now access the required tables in the content store that you used for the older version.

### Specify a Connection to a Mail Server Account

If you want to send reports by email, you must configure a connection to a mail server account. You must also change the host name portion of the Gateway URI from localhost to either the IP address of the computer or the computer name. Otherwise the URL in the email will contain localhost and remote users will not be able to open the report.

**Steps**

1. In the **Explorer** window, under **Data Access**, click **Notification**.

2. In the **Properties** window, for the **SMTP mail server** property, type the host name and port of your SMTP (outgoing) mail server.

   **Tip**: To be able to open reports that are sent by email, you must change the host name portion of the Gateway URI from localhost to either the IP address of the computer or the computer name. Otherwise the URL in the email will contain localhost and remote users will not be able to open the report.
3. Click the **Value** box next to the **Account and password** property and then click the edit button when it appears.

4. Type the appropriate values in the **Value - Account and password** dialog box and then click **OK**.

   **Tip:** If logon credentials are not required for the SMTP server, remove the default information for the **Account and password** property. When you are prompted for confirmation to leave this property blank, click **Yes**. Ensure that the default user name has been removed. Otherwise, the default account is used and notifications will not work properly.

5. In the **Properties** window, type the appropriate value for the default sender account.

6. Test the mail server connections. In the **Explorer** window right-click **Notification** and click **Test**.

   IBM Cognos 8 tests the mail server connection.

   If you do not plan to send reports by email, or do not want to set up a mail server account immediately, you are not required. However, when you save the configuration and then you start the services in IBM Cognos Configuration, you will see a warning message when the mail server connection is tested. You can safely ignore the warning.

---

**Start the IBM Cognos 8 Services**

To register the IBM Cognos 8 service so that users can access it through IBM Cognos Connection, you must start the services. Before you start the services, test the configuration by using the test feature in IBM Cognos Configuration.

Before you can use Framework Manager, IBM Cognos 8 Transformer, or Metric Designer, you must start the IBM Cognos 8 service. On Windows, the IBM Cognos 8 service is configured to start automatically by default. On UNIX and Linux, to start the IBM Cognos 8 process automatically, you must configure the process as a daemon. For more information, see your operating system documentation.

To use IBM Cognos 8 for reporting, you must install and configure the server components, start the IBM Cognos 8 service, and have a package that references an available data source. Note that if you are upgrading, you can continue to use the same data sources.

Before you begin, ensure that a user or service account is set up. For information, see "Configure a User Account or Network Service Account for IBM Cognos 8" (p. 64).

**Steps**

1. Start IBM Cognos Configuration.

2. Ensure that you save your configuration, otherwise you cannot start the IBM Cognos 8 service.

   If you are upgrading, a message appears indicating that configuration files were detected and upgraded to the new version.

3. From the **Actions** menu, click **Test**.
IBM Cognos Configuration checks the common symmetric keys (CSK) availability, tests the namespace configuration, and tests the connections to the content store and logging database. If you are using the notification database and the mail server, they are tested as well.

Tip: If Test is not available for selection, in the Explorer window, click Local Configuration.

4. If the test fails, reconfigure the affected properties and then test again.

   You can test individual services by right-clicking the service in the Explorer panel and selecting Test.

   Do not start the service until all tests pass.

5. From the Actions menu, click Start.

   It may take a few minutes for the IBM Cognos 8 service to start.

   This action starts all installed services that are not running. If you want to start a particular service, select the service node in the Explorer window and then click Start from the Actions menu.

Configure the Web Server

For all installations, before you use Web pages generated by IBM Cognos 8, you must configure your Web server. You must create virtual directories, or aliases, so that users can connect to IBM Cognos 8 in the portal. If you plan to run more than one IBM Cognos 8 product, or several instances of the same product, on one computer, you must create a separate application pool for each product or instance and then associate the aliases for that product or instance to the application pool. The steps for creating an application pool vary depending on your operating system.

For IBM Cognos 8 for reporting, you must also set the content expiry for the images directory in your Web server so that the Web browser does not check image status after the first access.

On UNIX and Linux, the account under which the Web server runs must have read access to the cogstartup.xml file in the c8_location/configuration directory. By default the cogstartup.xml file has read permission for others. If you run your Web server under a specific group, you can change the cogstartup.xml file permissions to ensure that it belongs to the same group as the Web server. You can then remove the read permission for others.

For information on creating a user account or a network service account for IBM Cognos 8, see (p. 64).

Steps to Create Virtual Directories

1. Create the following virtual directories:

<table>
<thead>
<tr>
<th>Alias</th>
<th>Location</th>
<th>Permission</th>
</tr>
</thead>
<tbody>
<tr>
<td>cognos8</td>
<td>c8_location/webcontent</td>
<td>Read</td>
</tr>
<tr>
<td>cognos8/cgi-bin</td>
<td>c8_location/cgi-bin</td>
<td>Execute</td>
</tr>
</tbody>
</table>
You can use a name other than cognos8 in the aliases. However, you must use cgi-bin as the second part of the alias and you must change the virtual directory in the Gateway URI property to match the new IBM Cognos alias. For more information, see "Change a Port or URI Setting" (p. 301).

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, you can continue to use the existing aliases. If you install IBM Cognos 8 reporting components in a different location from the earlier version, change the existing aliases to include the new location. If you have more than one version of ReportNet or IBM Cognos 8 on one computer, you must use different alias names for IBM Cognos 8.

For Apache Web Server, ensure that you define the cognos8/cgi-bin alias before the cognos8 alias in the httpd.conf file located in the Apache_installation/conf directory. The cognos8/cgi-bin alias must be defined as a ScriptAlias.

2. If you want to use Report Studio’s image browser, enable Web Distributed Authoring and Versioning (WebDAV) on your Web server.

   If you use Apache Web Server, specify a directory in which to enable WebDAV. For information about configuring WebDAV, see your Web server documentation.

   If you use Microsoft Internet Information Services (IIS), enable the Read and Directory Browsing properties for the URL you want to access.

3. For IBM Cognos 8 for reporting, set the content expiry on the c8_location/pat/images virtual directory in your Web server.

   Each time a user opens Report Studio, their Web browser checks with the Web server to determine if images are current. Because there are over 600 images, this can result in excess network traffic. You can postpone this check until a specified date by using the content expiry feature of the Web server.

   For information on setting content expiry, see the documentation for your Web server.

   Note: When you upgrade, Report Studio users must clear their Web browser cache to get the latest images.

If you use Web aliases other than cognos8, or your Web server is on another computer, or you are using Microsoft Internet Application Interface (ISAPI), apache_mod or a servlet gateway, change the Gateway URI (p. 344) when you configure IBM Cognos components.

**Steps to Create an Application Pool on Windows Server 2008**

1. From the Start menu, select Control Panel, Performance and Maintenance, Administrative Tools.

2. Launch Internet Information Services (IIS) Manager.

   Web Management Tools and World Wide Web Services are enabled automatically.

3. From the root (your system name and user), select Features View.

4. In the IIS section, launch ISAPI and CGI Restrictions.

5. Select Edit Feature Settings and enable Allow unspecified CGI modules and then click OK.
6. Add your aliases. For example, `c8_location/cgi-bin`.

7. Select your cgi-bin alias and ensure that Features View is selected.

8. Right-click Application Pools and select Add.

9. In the dialog box, enter a Web alias and the corresponding path to IBM Cognos 8 webcontent.

10. Repeat steps 8 and 9 to add the next Web alias.

11. Select Default Web Site.

12. Open Handler Mappings.

13. Select CGI-cgi mappings.

14. In the right pane, click Revert to Inherited.

15. Expand the application that points to your webcontent location.

16. Expand your cgi-bin application node.

17. Add a mapping that points to *.cgi and name it CGI-cgi.

18. Select the CGI-cgi mapping.

19. In the right pane, click Revert to Inherited.

20. Restart the IIS server.

21. Find the folder that contains cgi-bin (`c8_location/cgi-bin`) and right-click it.

22. Select the Security tab.

23. Add the Network Services user, granting all permissions except Full Control.

24. Right-click on Cognos8 service and select Properties.

25. Click the Log On tab.

26. Click This account and enter Network Service as the user.

27. Delete the Password and the Confirm the password values.

28. Click OK.

**Test the Installation and Configuration**

You can test your configuration settings by running the test feature as you configure IBM Cognos 8. After you have completed the configuration and started the services, you can test the installation by connecting to the IBM Cognos 8 portal.

**Steps**

1. Open a Web browser.

2. Test that Content Store was successfully created and Content Manager started by typing
http://host_name:port/p2pd/servlet

3. Test the availability of the dispatcher by typing

http://host_name:port/p2pd/servlet/dispatch

If the response includes the string State: Running, the dispatcher is available.

4. Connect to the IBM Cognos 8 portal by typing one the following, where cognos8 is the virtual directory you created when you configured the Web server.

- For the CGI gateway:
  http://host_name:port/cognos8

- For an ISAPI gateway:
  http://host_name:port/cognos8/isapi

- For Apache Connector:
  http://host_name:port/cognos8/cgi-bin/cognos_module

- For a gateway servlet:
  http://host_name:port/context_root/servlet/Gateway

It may take a few minutes for the Web page to open. If you see the Welcome page in the IBM Cognos 8 portal, your installation is working.

Set Up the Data Source or Import Source Environment

The IBM Cognos 8 modeling tools create and manage metadata. Framework Manager creates and manages metadata for the reporting functions, IBM Cognos 8 Transformer creates and manages metadata for PowerCubes, and Metric Designer creates and manages metadata required for the scorecarding functions. Because metadata is derived from data sources in multi-platform or multi-lingual environments, there are several things you must think about or do when you set up the data source environment for Framework Manager or IBM Cognos 8 Transformer or set up the import source environment for Metric Designer. Commonly, these things depend on the other technology you use for your data or import source.

If you use a Sybase data source, these steps are not necessary.

If you upgraded, you are not required to set up anything in the data source environment. You must set up the data source environment only if you installed your modeling tool in a different location from the older version.

If users operating in different languages will be connecting to a Microsoft Analysis Services (MSAS) 2000 data source, you must create a separate IBM Cognos 8 instance for each language.

Users operating in different languages can connect to an MSAS 2005 data source from the same instance of IBM Cognos 8. Modelers must create a separate package for each language. Users can run reports in any language.

For more information about data source connections, see the Administration and Security Guide.
Ensure that you install the appropriate fonts to support the character sets and currency symbols you use. For Japanese and Korean currency symbols to appear correctly, you must install the additional fonts from the Supplementary Languages Documentation CD. For more information, see "Install and Configure Additional Language Fonts" (p. 251).

**Steps**

1. Set the environment variable for multilingual support:
   - For Oracle, set the NLS_LANG (National Language Support) environment variable on each computer where Framework Manager or Metric Designer and the IBM Cognos 8 server are installed by typing the following command:
     ```
     NLS_LANG = language_territory.character_set
     ```
   Examples are:
   ```
   NLS_LANG = AMERICAN_AMERICA.UTF8
   NLS_LANG = JAPANESE_JAPAN.UTF8
   ```
   The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.
   - For DB2, set the DB2CODEPAGE environment variable to a value of 1252.
     For more information about whether to use this optional environment variable, see the DB2 documentation.

   No settings are required for SAP BW. SAP support only a single code page on non-Unicode SAP BW systems.

2. For Oracle, add $ORACLE_HOME/lib to your LD_LIBRARY_PATH.
   When you set the load library paths, ensure that the 32-bit Oracle libraries are in the library search path, which is usually the $ORACLE_HOME/lib directory or the $ORACLE_HOME/lib32 directory if you installed a 64-bit Oracle client.

3. For Oracle, copy the appropriate JAR file from ORACLE_HOME/jdbc/lib to the c8_location/webapps/p2pd/WEB-INF/lib directory.
   - For Java 1.4, copy the ojdbc14.jar file.
   - For Java 1.5, copy the ojdbc5.jar file.

   If the directory contains the classes12.jar file, delete it before installing the ojdbc14.jar or ojdbc5.jar file.

4. For SAP BW, configure the following authorization objects so that the modeling tool can retrieve metadata.
   Some of the values shown, such as *, are default values that you may want to modify on the SAP system.
<table>
<thead>
<tr>
<th>Authorization object</th>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Name of RFC to be protected</td>
<td>SYST, RSOB, SUGU, RFC1, RS_UNIFICATION, RSAB, SDTX, SU_USER</td>
</tr>
<tr>
<td></td>
<td>Type of RFC object to be protected</td>
<td>FUGR</td>
</tr>
<tr>
<td>S_TABU_DIS</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>Authorization Group</td>
<td>&amp;NC&amp;</td>
</tr>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Name of RFC to be protected</td>
<td>SYST, RSOB, SUGU, RFC1, RS_UNIFICATION, RSAB, SDTX, SU_USER</td>
</tr>
<tr>
<td></td>
<td>Type of RFC object to be protected</td>
<td>FUGR</td>
</tr>
<tr>
<td>S_TABU_DIS</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>Authorization Groups</td>
<td>&amp;NC&amp;</td>
</tr>
<tr>
<td>S_USER_GRP</td>
<td>Activity</td>
<td>03, 05</td>
</tr>
<tr>
<td></td>
<td>User group in user master main</td>
<td>*</td>
</tr>
<tr>
<td>S_RS_COMP</td>
<td>Activity</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Info Area</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Info Cube</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Name (ID) of reporting comp-</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>onents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type of reporting components</td>
<td>*</td>
</tr>
<tr>
<td>S_RS_COMP1</td>
<td>Activity</td>
<td>*</td>
</tr>
</tbody>
</table>
Create the Metric Store Database

A metric store is a database that contains content for metric packages. A metric store also contains scorecarding application settings, such as user preferences. You must create a metric store database using Oracle, Microsoft SQL Server, or DB2. Although you run the command to create the metric store from the location where the Application Tier Components are installed, you can specify a different location for the metric store in the command parameters. If the metric store is on a different computer from the Application Tier Components, you must create an alias to the metric store in the Application Tier Components location.

If you install Cognos Content Database, it cannot be used as a metric store database.
Your database administrator must back up IBM Cognos 8 databases regularly because they contain the IBM Cognos data. To ensure the security and integrity of databases, it is also important to protect them from unauthorized or inappropriate access.

**Steps for DB2**

1. In the Application Tier Components location, in the `c8_location/configuration/schemas/cmm/db2` directory, run the `cmm_create_db.cmd` script by typing the following command:

   On Windows, type
   
   `cmm_create_db dbinstance user_name password dbname drive dbalias`

   On UNIX, type
   
   `cmm_create_db.sh dbinstance user_name password dbname drive dbalias`

   Use the following values in your command.

<table>
<thead>
<tr>
<th>Value</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>dbinstance</td>
<td>The DB2 instance name where the database will be created.</td>
</tr>
<tr>
<td>user_name</td>
<td>The user ID with permissions to create the database. The user ID must have SYSADM or SYSCTRL privileges, and must have DBADM privileges to create the schema.</td>
</tr>
<tr>
<td>password</td>
<td>The password for the <code>username</code>.</td>
</tr>
<tr>
<td>dbname</td>
<td>The name of the database that will be created. The name must have a maximum of 8 characters, and it cannot start with a number.</td>
</tr>
<tr>
<td>drive/path</td>
<td>On Windows, the drive on which the database objects will be created. On UNIX, the path where the database objects will be created.</td>
</tr>
<tr>
<td>dbalias</td>
<td>The database alias name. This value is optional.</td>
</tr>
</tbody>
</table>

   Note: Your database administrator can review the scripts to ensure they suit your environment. The `initializedb.db2` script is invoked by the `cmm_create_db.cmd` script and defines the buffer pools and tablespaces.

2. Determine which user account IBM Cognos 8 Metrics Manager will use to access the database. The user account must have the following privileges.
   - CREATETAB
   - BINDADD
   - CONNECT
Steps for Microsoft SQL Server

1. In the Application Tier Components location, in the `c8_location/configuration/schemas/cmm/sqlserver` directory, run the `cmm_create_db.cmd` script by typing the following command:

```
path_to_script cmm_create_db host_name database_name user_name password [user_to_create]
```

Use the following values in your command.

<table>
<thead>
<tr>
<th>Value</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>host_name</td>
<td>The name of the computer where the database will be created.</td>
</tr>
<tr>
<td>database_name</td>
<td>The name of the database that will be created.</td>
</tr>
<tr>
<td>user_name</td>
<td>The user ID with permissions to create the database.</td>
</tr>
<tr>
<td></td>
<td>The user ID must have permission to create the database, such as the sa user. The user ID must also have a default language of English.</td>
</tr>
<tr>
<td>password</td>
<td>The password for the username.</td>
</tr>
<tr>
<td>user_to_create</td>
<td>The user created by the script and given database owner permissions. This value is optional.</td>
</tr>
</tbody>
</table>

2. Determine which user account IBM Cognos 8 Metrics Manager will use to access the database.
   The user account must be the database owner (dbo) or aliased to the database owner.

Steps for Oracle If the Database Does Not Exist

1. Ensure that you are logged into the Oracle server as a user that is a member of the ORA_DBA user group on Windows or the dba group on UNIX.

2. Set the `NLS_LANG` (National Language Support) environment variable to the UTF-8 character set on the metric store computer by typing the following command:

```
NLS_LANG = language_territory.character_set
```

Examples are:

- `NLS_LANG = AMERICAN_AMERICA.UTF8`
- `NLS_LANG = JAPANESE_JAPAN.UTF8`
The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.

3. In the Application Tier Components location, in the `c8_location/configuration/schemas/cmm/oracle` directory, run the `cmm_create_db.cmd` script by typing the following command:

```
pth_to_script cmm_create_db sid pth database_version [user_to_create]
```

Use the following values in your command.

<table>
<thead>
<tr>
<th>Value</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>path_to_script</td>
<td>The path to the script. For example, <code>c8_location/configuration/schemas/cmm/oracle/</code></td>
</tr>
<tr>
<td>sid</td>
<td>The SID for the new database that will be created.</td>
</tr>
<tr>
<td>path</td>
<td>The path where the data files will be created.</td>
</tr>
<tr>
<td>database_version</td>
<td>The version of Oracle software that is installed. For example, <code>oracle9</code> or <code>oracle10</code>.</td>
</tr>
<tr>
<td>user_to_create</td>
<td>The user created by the script and given database owner permissions. This value is optional.</td>
</tr>
</tbody>
</table>

4. Determine which user account IBM Cognos 8 Metrics Manager will use to access the database.

If you included the optional user in the previous step, this is the user you will use to access the database. If you did not include a user, then you must use a valid Oracle database username with the following permissions granted:

- CREATE TABLE, CREATE VIEW, CREATE PROCEDURE, CREATE TRIGGER, CREATE TYPE, CREATE SEQUENCE, and CREATE SESSION
- EXECUTE on DBMS_LOCK and DBMS_UTILITY packages

The CREATE TABLE and CREATE TRIGGER permissions must be granted directly to the user account rather than to a role.

You must grant these permissions only. If you grant fewer or more privileges than specified above, the metric store will not initialize.

**Steps for Oracle If the Database Exists**

1. Ensure that you are logged into the Oracle server as a user that is a member of the ORA_DBA user group on Windows or the dba group on UNIX.

2. Set the NLS_LANG (National Language Support) environment variable to the UTF-8 character set on the metric store computer by typing the following command:

```
NLS_LANG = language_territory.character_set
```
Examples are:

- NLS_LANG = AMERICAN_AMERICA.UTF8
- NLS_LANG = JAPANESE_JAPAN.UTF8

The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.

3. Determine which user account IBM Cognos 8 Metrics Manager will use to access the database. You must use a valid Oracle database username with the following permissions granted:

- CREATE TABLE, CREATE VIEW, CREATE PROCEDURE, CREATE TRIGGER, CREATE TYPE, CREATE SEQUENCE, and CREATE SESSION
- EXECUTE on DBMS_LOCK and DBMSUTILITY packages.

The CREATE TABLE and CREATE TRIGGER permissions must be granted directly to the user account rather than to a role.

You must grant these permissions only. If you grant fewer or more privileges than specified above, the metric store will not initialize.

4. Determine if the database is Unicode.

Tip: One method is to type the following select statement:

```sql
select * from NLS_DATABASE_PARAMETERS
```

If the result set returns an NLS_CHARACTERSET that is not Unicode, create a new database and specify AL32UTF8 for the database character set parameters. The cmm_create_db.cmd script mentioned in "Steps for Oracle If the Database Does Not Exist" (p. 143) creates a database with AL32UTF8 character encoding.

---

**Set Up the Database Client for the Metric Store**

If you are using a database other than Microsoft SQL as a metric store, you may have to install database client software, or JDBC drivers, or both, on each computer where you install the Application Tier Components for Cognos Metrics Manager. Doing this allows Application Tier Components to access the metric store database.

**Important:** If you use a DB2 database for the content store, notification database, or logging database, you can use the universal JDBC driver file, db2jcc.jar. However, if you use a DB2 database for the metric store, you must use the JDBC2 driver, db2java.zip. If you use the universal JDBC driver, you will not be able to create new metrics packages or access existing metrics packages.

**Steps for DB2**

1. Install the DB2 client software on the Application Tier Components computer.

2. If the metric store is on a different computer from the Application Tier Components, configure a database alias to the metric store by running the DB2 Client Configuration Assistant.

On UNIX or Linux, use the DB2 command line interface.
If the metric store database and the Application Tier Components are on the same computer, the metric store name automatically becomes the alias.

3. On Windows, stop the DB2 services and the HTML Search Server.

4. To copy the JDBC2 driver, copy the DB2_installation/sqllib/java/db2java.zip file to the c8_location/webapps/p2pd/WEB-INF/lib directory.

5. Rename the db2java.zip file to db2java.jar.

6. On Windows, restart the DB2 services and the HTML Search Server.

**Steps for Oracle**

1. On the computer where the Oracle client is installed, go to the ORACLE_HOME/jdbc/lib directory.

2. Copy the ojdbc14.jar file (or, for Oracle 11g, the ojdbc5.jar file) to the c8_location/webapps/p2pd/WEB-INF/lib directory on computers where Content Manager is installed.

   If the directory contains the classes12.jar file, delete it before installing the ojdbc14.jar or ojdbc5.jar file.

   The driver is available from an Oracle client or server install, and it can also be downloaded from the Oracle technology Web site (http://www.oracle.com/technology).

3. Install the SQL Loader utility on the computer where Application Tier Components are installed.

**Steps for Sybase**

1. On the computer where Sybase is installed, go to the Sybase_location/jConnect-5_5/classes directory.

2. Copy the jconn2.jar file to the c8_location/webapps/p2pd/WEB-INF/lib directory on every computer where Content Manager is installed.

**Step for Microsoft SQL**

- Install the bcp utility on every computer where Application Tier Components for IBM Cognos 8 Metrics Manager are installed.

**Create a Metric Package**

Before users can use IBM Cognos 8 Metrics Manager, you must create at least one metric package using the New Metric Package wizard. A metric package is an IBM Cognos Connection representation of an IBM Cognos 8 Metrics Manager application. A metric package contains connection information, reports, and metric management tasks for that application. The metric package content is stored in a metric store.

You open the New Metric Package wizard from the toolbar in IBM Cognos Connection and create a metric package using

- a new data source connection to a metric store
• an existing data source connection to a metric store
• an existing metric store if the database was used with an earlier version of IBM Cognos 8 Metrics Manager 8.1 or later

Use the wizard to define the metric package name and the data source connection to the metric store. For a new metric store, you also provide the information necessary to initialize the database, including the start and end dates of the fiscal year.

Before you can use the New Metric Package wizard, you must have access to a metric store used with Metrics Manager version 2.0 or later or you must create a database for a new metric store (p. 141). For data to be transferred successfully, the user account that is used to access the database must have a default language of English.

**Steps Using a New Data Source Connection**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking IBM Cognos Content on the Welcome page.

2. Click the New metric package button.

3. Type a name and description for the IBM Cognos 8 Metrics Manager application to represent this metric package, and click Next.

4. Click New data source.

5. Type a name and description for the data source connection for the metric store that contains the content for this metric package, and click Next.

6. In the Type box, click the database type.

7. Select the isolation level, and click Next.

8. Specify the information required for your database type and click Finish.

   • For a Microsoft SQL Server database, type the name of the database server and the database. Under Signons, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

   The user account must have the default language set to English.

   • For an Oracle database, type the connection string. Select User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

   • For a DB2 database, type the name of the database and the connection string. Select User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

   In most cases, a collation sequence is not required. If you want to provide one, ensure the value you enter is the same as the collation sequence specified when the database was created. For information about collation sequences, see the database documentation.

   **Tip:** To test whether the parameters are correct, click Test the connection.
9. Click the new data source and click **Next**.

10. Click **Next** and follow the prompts to provide the information necessary to initialize the database. When you see the page that summarizes the data source details and the metric store settings, click **Initialize**.

11. Select **Open this package with Metric Studio after closing the wizard** and then click **Finish**.

Metric Studio opens and the new metric package is displayed in IBM Cognos Connection. For information about managing the metric store, including how to load data, see the IBM Cognos 8 **Administration and Security Guide**.

**Steps Using an Existing Data Source Connection**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking **IBM Cognos Content** on the **Welcome** page.

2. Click the **New metric package** button.

3. Type a name and description for the IBM Cognos 8 Metrics Manager application to represent this metric package, and click **Next**.

4. Click **New data source** and click **Next**.

5. Click **Next** and follow the prompts to provide the information necessary to initialize the database. When you see the page that summarizes the data source details and the metric store settings, click **Initialize**.

6. Select **Open this package with Metric Studio after closing the wizard** and then click **Finish**.

Metric Studio opens and the new metric package is displayed in IBM Cognos Connection. For information about managing the metric store, including how to load data, see the IBM Cognos 8 **Administration and Security Guide**.

**Steps Using an Existing Metric Store**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking **IBM Cognos Content** on the **Welcome** page.

2. Click the **New metric package** button.

3. Type the name and description for the IBM Cognos 8 Metrics Manager application to represent this metric package and click **Next**.

4. Click **New data source**.

5. Type the name and description for the data source connection for the metric store that contains the content for this metric package, and click **Next**.

6. In the **Type** box, click the database type and click **Next**.

7. Specify the information required for your database type:
For a Microsoft SQL Server database, type the name of the database server and the database. Under Signons, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

The user account must have the default language set to English.

For an Oracle database, type the connection string. Under User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

For a DB2 database, type the name of the database and the connection string. Select User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

In most cases, a collation sequence is not required. If you want to provide one, ensure the value you enter is the same as the collation sequence specified when the database was created. For information about collation sequences, see the database documentation.

Tip: To test whether the parameters are correct, click Test the connection.

8. Click Next.

9. Select Open this package with Metric Studio after closing the wizard and then click Finish.

Metric Studio opens and the new metric package is displayed in IBM Cognos Connection.

10. Click the new data source and click Next.

11. Click Upgrade.

The wizard updates the database schemas and other information.

For information about managing the metric store, see the Administration and Security Guide.

Uninstalling IBM Cognos 8

It is important to use uninstall programs to completely remove all files and modifications to system files.

To uninstall IBM Cognos 8, you uninstall server components and modeling tools.

If you are running IBM Cognos 8 in an application server environment, use the administration tool provided with the application server to stop the application if it is running and undeploy the Java portion of IBM Cognos 8 components. Many application servers do not completely remove all deployed application files or directories during an undeployment; therefore, you may have to perform this action manually. After you have undeployed IBM Cognos 8 components, complete the steps in this chapter to uninstall on UNIX (p. 149) and on Windows (p. 150).

Uninstall IBM Cognos 8 on UNIX or Linux

If you no longer require IBM Cognos 8 or if you are upgrading, uninstall IBM Cognos 8.
If you are upgrading from an older version of ReportNet to IBM Cognos 8, follow the uninstallation instructions in the documentation for the older version of ReportNet.

**Steps**

1. If the console attached to your computer does not support a Java-based graphical user interface, determine the process identification (pid) of the IBM Cognos 8 process by typing the following command:
   
   `ps -ef | grep cogbootstrapservice`

2. Stop the IBM Cognos 8 process:
   
   - If you run XWindows, start IBM Cognos Configuration, and from the **Actions** menu, click **Stop**.
   
   - If you do not run XWindows, type:
     
     `kill -TERM pid`

3. To uninstall IBM Cognos 8, go to the `c8_location/uninstall` directory and type the appropriate command:
   
   - If you use XWindows, type
     
     `./uninst -u`
   
   - If you do not use XWindows, do an unattended uninstallation (p. 405).

4. Follow the prompts to complete the uninstallation.

5. Delete all temporary Internet files from the Web browser computers.

Uninstalling does not remove any files that changed since the installation, such as configuration and user data files. Your installation location remains on your computer, and you retain these files until you delete them manually.

**Important:**

- Do not delete the configuration and data files if you are upgrading to a new version of IBM Cognos 8 and you want to use the configuration data with the new version.

- If you are using Cognos Content Database, the default location for the database files is in the `c8_location/contentstore` directory. If you want to keep your database after uninstalling, do not delete this directory.

**Uninstall IBM Cognos 8 on Windows**

If you no longer require IBM Cognos 8 or if you are upgrading, uninstall all IBM Cognos 8 components and the IBM Cognos 8 service.

If you installed more than one component in the same location, you can choose the packages to uninstall using the uninstall wizard. All components of the package will be uninstalled. You must repeat the uninstallation process on each computer that contains IBM Cognos 8 components.
It is not necessary to back up the configuration and data files on Windows. These files are preserved during the uninstallation.

We recommend that you close all programs before you uninstall IBM Cognos 8. Otherwise, some files may not be removed.

Uninstalling does not remove any files that changed since the installation, such as configuration and user data files. Your installation location remains on your computer, and you retain these files until you delete them.

**Important:** Do not delete the configuration and data files if you are upgrading to a new version of IBM Cognos 8 and you want to use the configuration data with the new version.

**Steps**

1. From the Start menu, click Programs, IBM Cognos 8, Uninstall IBM Cognos 8, Uninstall IBM Cognos 8.
   
   The Uninstall wizard appears.
   
   **Tip:** IBM Cognos 8 is the default name of the Program Folder that is created during the installation. If you chose another name, go to that folder to find the program.

2. Follow the instructions to uninstall the components.
   
   The cognos_uninst_log.htm file records the activities that the Uninstall wizard performs while uninstalling files.
   
   **Tip:** To find the log file, look in the Temp directory.

3. Delete all temporary Internet files from the Web browser computers.
   
   For more information, see your Web browser documentation.

**Uninstall Cognos Content Database**

If you want to uninstall only Cognos Content Database and leave other IBM Cognos 8 components on your computer, you must use the following procedure. After you uninstall Cognos Content Database you must configure a new content store before you can restart the IBM Cognos 8 service.

If you installed only Cognos Content Database, use another procedure. For information about this procedure, see "Uninstall IBM Cognos 8 on UNIX or Linux" (p. 149) or "Uninstall IBM Cognos 8 on Windows" (p. 150).

**Steps**

1. On the computer where you installed Cognos Content Database, go to the c8_location\bin directory, and type the following command:
   
   - On Windows, type
     
     derby.bat uninstall
     
     This command removes the Cognos Content Database service.
   
   - On UNIX, type
     
     derby.sh stop
This command stops the Cognos Content Database service.

2. In the c8_location directory, delete the derby10.1.2.1 directory.

3. In the c8_location\bin directory, delete the following files:
   - On Windows, derby.bat
   - On UNIX, derby.sh and derbyenv.sh

4. On Windows, in the c8_location\logs directory, delete the derby.service file.

5. In the c8_location directory, open the cmplst.txt file in a text editor.

6. Remove lines containing Cognos Content Database values. The lines contain CCD and CMDERBY. For example:
   
   C8BISRVRCCD_version=
   C8BISRVRCCD_name=
   CCD_version=
   CCD_name=
   CMDERBY_version=
   CMDERBY_name=

   **Tip:** You can also comment the lines out by inserting # at the start of each line.

7. Save the file.

8. Start IBM Cognos Configuration.

9. Under **Data Access, Content Manager**, do the following:
   - Delete the Cognos Content Database.
   - Configure a new database resource to point to a new content store.

   For more information, see "Set Database Connection Properties for the Content Store" (p. 131).

Chapter 7: Installing IBM Cognos 8 Server Components on Different Computers

Use the installation wizard to select the server components that you want to install and the location on your computer where you want to install them. Only the components that you choose to install are copied from the CD to your computer. If you plan to install two or more IBM Cognos 8 components on the same computer, we strongly recommend that you install them in the same installation location to avoid conflicts among ports and other default settings.

We also recommend that you do an interactive installation (p. 155).

The IBM Cognos 8 server components include the following:

- Content Manager
- Application Tier Components
- Gateway

You can install each component on a separate computer, or on the same computer. You must install the gateway on a computer that is also running a Web server.

If you are installing IBM Cognos 8 Metrics Manager, you must create the metric store database (p. 177) and at least one metric package (p. 182). Next, you must install the client components (p. 199). For uninstalling instructions, see "Uninstalling IBM Cognos 8" (p. 194).

Samples are on a separate CD in your IBM Cognos 8 product. If you want to use the samples, you must install them from the IBM Cognos 8 Business Intelligence Samples 8.4 CD.

Installation Sequence

In a distributed environment, the sequence in which you configure computers is important. Configure and start the computer with the active Content Manager first. Then configure and start the computer with the standby Content Manager, followed by the Application Tier Component computer. Configure the gateway computer last so that cryptographic keys are shared and secure communication can take place among the three components. The server specified for the External Dispatcher URI property on the gateway computer must be the last server that you start.

Stopping Services Sequence

If you need to stop services, the sequence is important. Stop the IBM Cognos 8 service for Application Tier Components first, followed by the standby Content Manager, and then the active Content Manager.

It is important to also stop the following:

- Web servers that host IBM Cognos 8 content
• applications that are related to the IBM Cognos 8 service, such as Framework Manager, IBM Cognos 8 Transformer, IBM Cognos Connection, IBM Cognos Administration, and Metric Designer

• any SDK applications that are running

Upgrading your Installation

If you are upgrading from a previous release of IBM Cognos products, you must use the upgrading steps. For information about upgrading from ReportNet or Metrics Manager, see "Upgrading to IBM Cognos 8" (p. 71).

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, all the distributed components must be the same version of IBM Cognos 8. If you install IBM Cognos 8 in new locations, you must update the locations using IBM Cognos Configuration.

If you are upgrading IBM Cognos 8 BI in an environment that includes earlier versions of other IBM Cognos 8 products, such as IBM Cognos 8 Controller 8.3, IBM Cognos 8 Planning 8.3, or IBM Cognos 8 BI Analysis for Excel 8.3, install the new version of IBM Cognos 8 BI in a separate location from the other IBM Cognos 8 product and configure IBM Cognos 8 BI to operate independently of that product. After you upgrade the other product to a compatible version with IBM Cognos 8 BI, you can then configure the two products to operate together.

Windows Installations

For Windows installations, ensure that you have administrator privileges for the Windows computer you are installing on. Also ensure that your computer has a TEMP system variable that points to the directory where you want to store temporary files. During installation, files from the CD are temporarily copied to this directory.

UNIX Installations

For UNIX installations, you can install server components using a graphical user interface or by running a silent installation. To run graphical-mode installation, the console attached to your UNIX computer must support a Java-based graphical user interface.

Also, IBM Cognos 8 respects the file mode creation mask (umask) of the account running the installation program. This affects only the installation directories. It does not affect the file permissions within the directories. However, run-time generated files, such as logs, respect the mask. We recommend umask 022 on the installation directory.

Cognos Content Database as Content Store

If you want to use Cognos Content Database as your content store, you must select it in the installation wizard. If you are installing components on several computers, you need to only install one Cognos Content Database. If you install Cognos Content Database on the same computer as Content Manager, and you later decide to use another database for your content store, you must uninstall Cognos Content Database.
Recommendation - Install Server Components in Interactive Mode

For a complete installation, you must install components on your server and then configure them to work in your environment.

Typically, you run the IBM Cognos installation and configuration programs in interactive mode. This means that in a graphical user interface (GUI) the installer prompts you to provide information, and the configuration tool enables you to change default settings.

You can choose to install server components in silent mode.

Silent Mode
You can automate the installation of components using response files and running the installation program in silent mode.

For information about silent mode installations, see "Setting Up an Unattended Installation and Configuration" (p. 401).

You can automate the configuration of components by exporting the configuration settings from one computer to another as long as the installed components are the same. We recommend that you run IBM Cognos Configuration in interactive mode the first time.

The other option is to edit the cogstartup.xml file, using settings that apply to your environment, and then running the configuration tool in silent mode.

Interactive Mode
Unless you intend to complete a silent-mode installation, we recommend that you install the software from an X Window System workstation, an X terminal, or a PC or other system with X server software installed.

To run an interactive-mode installation, the console attached to your computer must support a Java-based graphical user interface.

Installing and Configuring Content Manager
In a distributed installation, at least one of the computers where you install Content Manager must be configured, running and accessible before you configure other computers in your IBM Cognos environment. This ensures that the certificate authority service, which is installed with Content Manager, is available to issue certificates to other computers.

Your installation may include more than one Content Manager, each on a different computer. One Content Manager computer is active and one or more Content Manager computers are on standby. The standby Content Manager computers are for failover protection. If the active Content Manager computer is not available because of a software or hardware failure, a standby Content Manager computer becomes active and requests are directed to it.

When the active Content Manager fails, unsaved session data is lost. When another Content Manager becomes active, users may be prompted to log on.
The first Content Manager computer to be started becomes the default active Content Manager. You can designate another Content Manager computer as default active, using the Administration tool. For more information about activating a Content Manager service, see the Administration and Security Guide.

In installations with multiple Content Managers, we recommend that you configure IBM Cognos 8 to use an ISAPI gateway instead of the default CGI gateway. Otherwise, performance may be affected after failover.

If you want to use the Cognos Content Database as your content store, must select it in the installation wizard. If you are installing components on several computers, you need to only install one Cognos Content Database. If you install Cognos Content Database on the same computer as Content Manager, and you later decide to use another database for your content store, you must uninstall Cognos Content Database.

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, you can use the existing configuration data. However, some features in IBM Cognos 8 are new. We recommend that you configure the new features.

If you plan to install IBM Cognos 8 Transformer and you will be using PowerCubes that are secured against an IBM Cognos Series 7 namespace, you must install Content Manager on a computer that supports IBM Cognos Series 7.

Perform the following tasks to install and configure the Content Manager:

- Install the Content Manager components
- Install Content Manager for IBM Cognos 8 Metric Manager, if required
- Update the Java environment
- Set up connectivity to the content store database
- Start IBM Cognos Configuration
- Set the database connection properties for the content store
- Configure environment properties for Content Manager computers
- Specify a mail server account
- Enable security
- Start Content Manager
- Test the Content Manager installation

Install the Content Manager Components

To install Content Manager, use the CD for your operating system. In the installation wizard, clear all components except Content Manager. If you want to use Cognos Content Database, select that component too unless you want to install it on a separate server.
If you are installing multiple Content Managers, you must ensure that the system clocks on the Content Manager computers are synchronized for successful failover between Content Managers.

**Steps for UNIX and Linux**

1. If you are installing to a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

2. Set the JAVA_HOME environment variable to point to the installation location of your Java Runtime Environment (JRE).
   
   An example of the installation location of a Java Runtime Environment is `/directory/java/java_version/jre`.
   
   IBM Cognos 8 requires a JVM, such as IBM Java, to run on Linux.

3. On HP-UX, set the `_M_ARENA_OPTS` environment variable as follows:

   ```
   _M_ARENA_OPTS 1:4
   ```

   This increases the memory allocation for HP-UX to more closely match that of other UNIX platforms.

4. On AIX, set the `AIXTHREAD_SCOPE` environment variable as follows:

   ```
   AIXTHREAD_SCOPE=S
   ```

   This sets the contention scope for user threads to system-wide, which supports more efficient scheduling of user threads.

5. Mount the IBM Cognos product disk using Rock Ridge file extensions or go to the location where the installation files were downloaded and extracted.

   **Important:** To mount the IBM Cognos CD on HP-UX, do the following:

   - Add the `pfs_mount` directory in your path.
     
     For example,

     ```
     PATH=/usr/sbin/:$PATH
     export PATH
     ```

   - To start the required NFS daemons and run the daemons in the background, type `bg pfs_mountd` and then type `bg pf sd`

   - To mount the drive, type
     
     ```
     pfs_mount -t rrip <device><mount_dir> -o xlat=unix
     ```

     For example,

     ```
     pfs_mount /dev/dsk/c0t2d0 /cdrom -o xlat=unix
     ```

     You can now install or copy files as a non-root user using an IBM Cognos CD from this drive.

   - When the installation is complete, type `pfs_umount /cdrom` and kill the `pfsd` and `pfs_mountd` daemons to unmount the CD.
6. To start the installation wizard, go to the operating system directory and then type

```
./issetup
```

**Note:** When you use the issetup command with XWindows, Japanese characters in messages and log files may be corrupted. When installing in Japanese on UNIX or Linux, first set environment variables LANG=C and LC_ALL=C (where C is the language code, for example ja_JP.PCK on Solaris), and then start the installation wizard.

If you do not use XWindows, run an unattended installation [p. 401](#).

7. Follow the directions in the installation wizard and copy the required files to your computer.

   - When selecting the directory, consider the following:
     
     Install Content Manager in a directory that contains only ASCII characters in the path name. Some UNIX and Linux Web servers do not support non-ASCII characters in directory names.
     
     If you are installing IBM Cognos 8 on a computer that has ReportNet or an earlier version of IBM Cognos 8 and you want to keep the earlier version, you must install IBM Cognos 8 in a different directory.
     
     If you are installing in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.
     
   - When selecting components, clear all components except **Content Manager**.
     
     If you want to use the pre configured database, also select **Cognos Content Database**.

8. Choose how to proceed in the **Finish** page of the installation wizard:

   - We recommend that you do not configure IBM Cognos 8 immediately because you must do other tasks first to ensure that your environment is properly set up. However, if the console attached to your computer supports a Java-based graphical user interface, you can click **Start IBM Cognos Configuration**.
     
   - If the console attached to your computer does not support a Java-based graphical user interface, click **Finish**.
     
     You can later configure IBM Cognos 8 using IBM Cognos Configuration by starting cogconfig.sh in the c8_location/bin directory, or editing cogstartup.xml in c8_location/configuration directory.

9. Append the c8_location/bin directory to the appropriate library path environment variable.

   - For Solaris and Linux, LD_LIBRARY_PATH
   
   - For AIX, LIBPATH
   
   - For HP-UX, SHLIB_PATH

10. On Linux, set the PRINTER environment variable to the name of your printer.
If you want to install Cognos Content Database on a separate computer, run the installation wizard on your database server and select only the Cognos Content Database component.

If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation in the same location as the Gateway components. For more information, see "Install Translated Product Documentation" (p. 250).

**Steps for Windows**

1. If you are installing to a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

2. Insert the IBM Cognos product disk or go to the location where the installation files were downloaded and extracted.
   
   The **Welcome** page of the installation wizard appears.

3. If no **Welcome** page appears, go to the operating system directory and double-click the isssetup.exe file.

4. Select the language to use for the installation.
   
   The language that you select determines the language of the user interface. You can change the language to any of the installed languages after installation.

5. Follow the directions in the installation wizard to copy the required files to your computer.
   
   - When selecting the directory, consider the following:
     
     Install Content Manager in a directory that contains only ASCII characters in the path name. Some Windows Web servers do not support non-ASCII characters in directory names.
     
     If you are installing IBM Cognos 8 on a computer that has ReportNet or an earlier version of IBM Cognos 8 and you want to keep the earlier version, you must install IBM Cognos 8 in a different directory.
     
     If you are installing in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.
     
     - When selecting components, clear all components except **Content Manager**.
     
     If you want to use the pre configured database, also select **Cognos Content Database**.

6. In the **Finish** page of the installation wizard,
   
   - If you want to configure IBM Cognos components immediately, click **Start IBM Cognos Configuration**.
     
   - If you want to see late-breaking information about IBM Cognos components, click **View the Readme**.

7. Click **Finish**.
   
   Use the Windows **Start** menu to start **IBM Cognos Configuration** from the shortcut folder.
If you want to install Cognos Content Database on a separate computer, run the installation wizard on your database server and select only the Cognos Content Database component.

If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation in the same location as the Gateway components. For more information, see "Install Translated Product Documentation" (p. 250).

**Install Cognos Content Database on a Separate Server**

If you want to install Cognos Content Database on a separate server, you must do so before you configure Content Manager. In the installation wizard, clear all components and select only Cognos Content Database.

**Steps**

1. On your database server, insert the CD for your IBM Cognos product.
   On UNIX or Linux, mount the CD using Rock Ridge file extensions.

2. If the Welcome page does not appear, start the installation wizard:
   - On UNIX or Linux, from the directory for your operating system, type ./issetup
   - On Windows, in the win32 directory on the CD, double-click issetup.exe.

3. Follow the directions in the installation wizard and copy the required files to your computer.
   Install in a directory that contains only ASCII characters in the path name. Some UNIX and Linux Web servers do not support non-ASCII characters in directory names.
   When selecting the components, clear all components and then select Cognos Content Database.

4. In the Finish page of the installation wizard, click Finish.

**Install Content Manager for IBM Cognos 8 Metrics Manager**

If you are installing IBM Cognos 8 Metrics Manager with IBM Cognos 8 Business Intelligence, you must install each IBM Cognos 8 Metrics Manager component into the same location as each IBM Cognos 8 Business Intelligence component. Install the IBM Cognos 8 Metrics Manager Content Manager component to the same location as you installed the IBM Cognos 8 Business Intelligence Content Manager component.

You may also want to install Metric Designer (p. 210).

**Update the Java Environment**

IBM Cognos 8 cryptographic services use a .jar (Java Archive) file, named bcprov-jdknm-nnn.jar, that must be located in your Java Runtime Environment (JRE). This file provides additional encryption and decryption routines that are not supplied as part of a default JVM installation. To ensure security, the encryption file must be loaded by the JVM using the java extensions directory.

If you want to use your own JRE and have JAVA_HOME set to that location on Windows or if you are installing on UNIX, you may have to update the Java environment for the cryptographic services.
On Windows, you can set JAVA_HOME as a system variable or a user variable. If you set it as a system variable, it may be necessary to restart your computer for it to take effect. If you set it as a user variable, set it so that the environment in which Tomcat is running can access it.

If you do not have a JAVA_HOME variable already set on Windows or if JAVA_HOME points to a Java version that is not valid for IBM Cognos 8, the JRE files provided with the installation will be used, and you do not have to update any files in your environment.

**Steps**

1. Ensure that the JAVA_HOME environment variable is set to the JRE location.
   
   For example, to set JAVA_HOME to a JRE that you are already using, the path is `Java_location/bin/jre/version`.

2. Copy the `bcprov-jdknn-nnn.jar` file from the `c8_location/bin/jre/version/lib/ext` directory to the `Java_location/jre/lib/ext` directory.

---

**Set Up Database Connectivity for the Content Store Database**

If you are using a database other than Cognos Content Database as the content store, you may have to install database client software, or JDBC drivers, or both, on each computer where you install Content Manager. Doing this allows Content Manager to access the content store database.

**Steps for DB2**

1. If you are using type 2 JDBC connectivity, install the DB2 client software on the Content Manager computers.

   If you use type 4 JDBC connectivity for DB2, you are not required to install the DB2 client software where Content Manager is installed. If you are using a DB2 database on z/OS for the content store, you must use type 4 JDBC connectivity.

   For more information about the differences between type 2 and type 4 drivers, see "JDBC Driver Options for Using DB2 Database as a Content Store" (p. 126).

2. If you are using type 2 JDBC connectivity, and the content store is on a different computer than Content Manager, configure a database alias to the content store.

   On Windows, run the DB2 Client Configuration Assistant.

   On UNIX or Linux, use the DB2 command line interface.

   If the content store database and Content Manager are on the same computer, the content store name automatically becomes the alias.

   When you configure the Content Manager computers, ensure that they are all configured to use the same content store.

3. On Windows, stop the DB2 services and the HTML Search Server.

4. Copy the following files from `DB2_installation/sqlib/java` directory to the `c8_location/webapps/p2pd/WEB-INF/lib` directory.

   - the universal driver file, `db2jcc.jar`
the license file
for DB2 on Linux, UNIX, or Windows, `db2jcc_license_cu.jar`
for DB2 on z/OS, `db2jcc_license_cisuz.jar`

If you are connecting to DB2 on z/OS, use the driver version from Linux, UNIX, or Windows version 9.1 fix pack 5 or version 9.5 fix pack 2.

**Tip:** To check the driver version, run the following command

```java -cp path/db2jcc.jar com.ibm.db2.jcc.DB2Jjcc -version```

5. On Windows, restart the DB2 services and the HTML Search Server.

6. On UNIX, if you are using type 2 JDBC connectivity, ensure that the 32-bit DB2 libraries are in the library search path, which is usually the `$DB2DIR/lib` directory or the `$DB2DIR/lib32` directory.

7. Repeat this entire procedure on the IBM Cognos 8 computers where Content Manager is installed or where notification is sent to a DB2 database.

You can tune the database to take advantage of DB2 features. For more information, see the "Tuning a DB2 Content Store" (p. 409).

**Steps for Oracle**

1. On the computer where the Oracle client is installed, go to the `ORACLE_HOME/jdbc/lib` directory.

2. Copy the appropriate JAR file to the `c8_location/webapps/p2pd/WEB-INF/lib` directory on computers where Content Manager is installed and where notification is sent to an Oracle database.
   - If you use Java 1.4, copy the `ojdbc14.jar` file
   - If you use Java 1.5, copy the `ojdbc5.jar` file

If the directory contains the `classes12.jar` file, delete it before installing the `ojdbc14.jar` or `ojdbc5.jar` file.

The driver is available from an Oracle client or server install, and it can also be downloaded from the Oracle technology Web site (http://www.oracle.com/technology).

**Steps for Sybase**

1. On the computer where Sybase is installed, go to the `Sybase_location/jConnect-5_5/classes` directory.

2. Copy the `jconn2.jar` file to the `c8_location/webapps/p2pd/WEB-INF/lib` directory on every computer where Content Manager is installed and where notification is sent to a Sybase database.

**Start IBM Cognos Configuration**

Use the configuration tool, IBM Cognos Configuration, to configure IBM Cognos 8 components during the installation and configuration process and to start and stop IBM Cognos services.
Before starting IBM Cognos Configuration, ensure that the operating environment is properly set up. For example, ensure that all environment variables have been set.

On UNIX or Linux, do not start IBM Cognos Configuration in the last page of the installation wizard: additional setup is required before you can configure IBM Cognos 8. For example, you must update your Java environment. On Windows, you can start IBM Cognos Configuration in the last page of the installation wizard only if additional setup is not required. For example, if you use a database server other than Microsoft SQL or Cognos Content Database for the content store, we recommend that you copy the JDBC drivers to the appropriate location before you start the configuration tool.

Ensure that user or service account is set up. For information, see "Configure a User Account or Network Service Account for IBM Cognos 8" (p. 64).

**Steps on UNIX or Linux**

1. Go to the $c8_location/bin directory and then type
   
   
   
   ```
   ./cogconfig.sh
   ```

2. If you want to access the help for IBM Cognos Configuration, go to the $c8_location/configuration directory and edit the cogconfig.prefs file to add the location of your Web browser.

   For example, if you use Firefox, add the following text to the file:

   ```
   BrowserPath=Web_browser_location/firefox
   ```

   where `Web_browser_location` is a path, such as `/usr/local/bin/`

   Your Web browser must support the following syntax:

   ```
   $ <Web_browser_location> <URL>
   ```

**Steps on Windows**

1. From the Start menu, click Programs, IBM Cognos 8, IBM Cognos Configuration.

2. If you want to access the help for IBM Cognos Configuration, go to the $c8_location/configuration directory and edit the cogconfig.prefs file to add the location of your Web browser.

   For example, if you use Firefox, add the following text to the file:

   ```
   BrowserPath=Web_browser_location\firefox
   ```

   where `Web_browser_location` is a path, such as `\usr\local\bin\`

   Your Web browser must support the following syntax:

   ```
   $ <Web_browser_location> <URL>
   ```

**Set Database Connection Properties for the Content Store**

For all installations not using Cognos Content Database, you must specify the database server information to ensure that Content Manager can connect to the database you use for the content store. Content Manager uses the database logon to access the content store. After you set the database connection properties, you can test the connection between Content Manager and the content store.
If you installed Cognos Content Database on a different computer from where you installed Content Manager, you must set the database connection properties for Cognos Content Database. If you installed Cognos Content Database on the same computer as Content Manager, Content Manager is configured to use Cognos Content Database using the default values. If you install Cognos Content Database on the same computer as Content Manager, and you later decide to use another database for your content store, you must uninstall Cognos Content Database.

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, configure IBM Cognos 8 to point to the existing content store. After you save the configuration and start the IBM Cognos 8 service, the content store is automatically upgraded and cannot be used by the earlier version. If you keep ReportNet or the earlier version, you must configure IBM Cognos 8 to point to a new content store.

Ensure that you used one of the supported database servers to create the content store.

Ensure that a user or service account is set up. For information, see "Configure a User Account or Network Service Account for IBM Cognos 8" (p. 64).

**Steps for Cognos Content Database**

1. On the computer where you installed Content Manager, start IBM Cognos Configuration.
2. In the Explorer window, under Data Access, Content Manager, click Content Store.
3. In the Properties window, change the following properties:
   - For Name, type cm.
   - For Database server and port number, type the name of the computer where you installed Cognos Content Database.
   - For User ID and password, click the edit button and specify cognos for both the userid and password to access Cognos Content Database.
     
     We recommend that you change the default user ID and password after configuring the new resource. For information about changing default values, see "Change Default User and Password for Cognos Content Database" (p. 299).
4. From the File menu, click Save.
   
   The logon credentials are immediately encrypted.
5. From the Actions menu, click Test to test the connection between Content Manager and the content store.

   You must start the Cognos Content Database service on the computer where it is installed before the test will succeed.

   Content Manager connects to the database, checks the database permissions, and creates and populates a table. The table is not deleted and is used each time that the test is repeated.

**Steps for DB2**

1. In the location where you installed Content Manager, start IBM Cognos Configuration.
2. In the Explorer window, under Data Access, Content Manager, click Content Store.
3. In the Properties window, for the Database name property, type the name of the database or the database alias.

4. Change the logon credentials to specify a valid user ID and password:
   - Click the Value box next to the User ID and password property and then click the edit button when it appears.
   - Type the appropriate values and click OK.

5. To use type 4 JDBC connectivity, for the Database server and password property, type a value, using host:port syntax.

   If you leave this property blank, type 2 JDBC connectivity is used.
   
   For more information about the differences between the driver types, see "JDBC Driver Options for Using DB2 Database as a Content Store" (p. 126).

6. From the File menu, click Save.

   The logon credentials are immediately encrypted.

7. Test the connection between Content Manager and the content store.

   Tip: In the Explorer window, right-click the new database and click Test.

   Content Manager connects to the database, checks the database permissions, and creates and populates a table. The table is not deleted and is used each time that the test is repeated.

**Steps for Microsoft SQL Server, Oracle, and Sybase**

1. On the computer where you installed Content Manager, start IBM Cognos Configuration.

2. In the Explorer window, under Data Access, Content Manager, right-click Content Store and click Delete.

   This deletes the connection to the default resource. Content Manager must be configured to access only one content store.

3. Right-click Content Manager, and then click New resource, Database.

4. In the Name box, type a name for the resource.

5. In the Type box, select the type of database and click OK.

   If you are upgrading and want to use an existing content store, ensure that you select the type of database you use for the older version.

   If you installed more than one version of IBM Cognos 8, you must use a different content store for each version. When a content store is used by a new version of IBM Cognos 8, it cannot be used by an older version.

   Tip: If you want to use Oracle Net8 keyword-value pair to manage the database connection, select Oracle database (Advanced).

6. In the Properties window, provide values depending on your database type:
If you use a Microsoft SQL Server database, type the appropriate values for the Database server with port number or instance name and Database name properties.

For a Microsoft SQL Server database, you can choose to use a port number, such as 1433, or a named instance as the value for the Database server with port number or instance name property.

To connect to a named instance, you must specify the instance name as a JDBC URL property or a data source property. For example, you can type localhost\instance1. If no instance name property is specified, a connection to the default instance is created.

Note that the properties specified for the named instance, along with the user ID and password, and database name, are used to create a JDBC URL. Here is an example:

dbc:JSQLConnect://localhost\instance1/user=sa\more properties as required

If you use an Oracle database, type the appropriate values for the Database server and port number and Service name properties.

If you use an advanced Oracle database, for the Database specifier property, type the Oracle Net8 keyword-value pair for the connection.

Here is an example:

description=(address=(host=myhost)(protocol=tcp)(port=1521)(connect_data=(sid=(orcl))))

When you select the advanced Oracle database, IBM Cognos 8 uses enterprise-oriented Oracle features to select a listener, switch to another listener if the first listener fails, automatically reconnect to the database if the connection fails, balance connection requests among listeners, and balance connection requests among dispatchers.

If you use a Sybase database, type the appropriate values for the Database server and port number and Database name properties.

7. If you want to change the logon credentials, specify a user ID and password:

   - Click the Value box next to the User ID and password property and then click the edit button when it appears.

   - Type the appropriate values and click OK.

8. From the File menu, click Save.

    The logon credentials are immediately encrypted.

9. Test the connection between Content Manager and the content store.

    Tip: From the Actions menu, click Test to test the connection between Content Manager and the content store.

    Content Manager connects to the database, checks the database permissions, and creates and populates a table. The table is not deleted and is used each time that the test is repeated.

    Content Manager can now create the required tables in the content store when you start the IBM Cognos 8 service for the first time. If the connection properties are not specified correctly, the tables are not created and you cannot connect to IBM Cognos Connection.
If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, Content Manager can now access the required tables in the content store that you used for ReportNet.

**Configure Environment Properties for Content Manager Computers**

The Content Manager computers must know the location of the content store, the other Content Manager computers, and the database that is used for notification.

After installing Content Manager on the computers you are using for failover protection, you must configure Content Manager on those computers. If you installed more than one Content Manager, you must list all Content Manager URIs on each Content Manager computer.

After you complete the required configuration tasks and start the IBM Cognos 8 service, the certificate authority service is available to issue certificates to other computers. You can then perform the required configuration tasks on other computers, such as the Application Tier Components computer and gateway computers. Otherwise, you can continue to configure the Content Manager computers by changing the default property settings (p. 298) so that they better suit your environment. For example, you can configure IBM Cognos 8 components to use an authentication provider (p. 259), enable and disable services (p. 308) on the Content Manager computers, or change global settings (p. 335).

**Important:** If you change global settings on one Content Manager computer, you must make the same changes on the other Content Manager computers.

**Steps for the First Content Manager Computer**

1. On the Content Manager computer that you want to designate as the default active Content Manager, start IBM Cognos Configuration.

   **Tip:** We recommend that you use the computer with the highest processor speed for the default active Content Manager.

2. In the **Explorer** window, click **Environment**.

3. In the **Properties** window, click the value for **Content Manager URIs** and then click the edit button.

4. Specify the URIs for the other Content Manager computers:

   - In the **Value - Content Manager URIs** dialog box, click **Add**.

   - In the blank row of the table, click and then type the full URI of the Content Manager computer.

     Do not delete the first value in the table. This value identifies the local Content Manager computer and is required.

      **Important:** You must include all Content Manager URIs in the list.

   - Repeat the previous two bulleted steps for each URI to be added.

5. In the **Explorer** window, under **Security**, click **Cryptography**.
6. In the Properties window, under CSK settings, set Store symmetric key locally to True.

7. From the File menu, click Save.

**Steps for Standby Content Manager Computers**

1. Ensure that you already configured the Environment properties on at least one Content Manager computer and that IBM Cognos 8 components are running on that computer.

2. On the standby Content Manager computer, start IBM Cognos Configuration.

3. In the Explorer window, click Environment.

4. In the Properties window, click the value for Content Manager URIs, and then click the edit button.

5. Specify the URIs for the other Content Manager computers:
   - In the Value - Content Manager URIs dialog box, click Add.
   - In the blank row of the table, click and then type the full URI of the Content Manager computer.
     Do not delete the first value in the table. This value identifies the local Content Manager computer and is required.
   - Repeat the previous two bulleted steps for each URI to be added.
     **Important:** You must include all Content Manager URIs in the list.
   - Click OK.

6. In the Explorer window, under Security, Cryptography, click Cognos, the default cryptographic provider.

7. Ensure that all cryptographic settings match what you configured on the default active Content Manager computer.

8. In the Explorer window, under Data Access, Content Manager, click Content Store.

9. Ensure that the values for all of the properties match what you configured on the default active Content Manager computer.

10. From the File menu, click Save.

**Specify a Connection to a Mail Server Account**

If you want to send reports by email, you must configure a connection to a mail server account. You must also change the host name portion of the Gateway URI from localhost to either the IP address of the computer or the computer name. Otherwise the URL in the email will contain localhost and remote users will not be able to open the report.

**Steps**

1. In the Explorer window, under Data Access, click Notification.
2. In the Properties window, for the SMTP mail server property, type the host name and port of your SMTP (outgoing) mail server.

   **Tip:** To be able to open reports that are sent by email, you must change the host name portion of the Gateway URI from localhost to either the IP address of the computer or the computer name. Otherwise the URL in the email will contain localhost and remote users will not be able to open the report.

3. Click the Value box next to the Account and password property and then click the edit button when it appears.

4. Type the appropriate values in the Value - Account and password dialog box and then click OK.

   **Tip:** If logon credentials are not required for the SMTP server, remove the default information for the Account and password property. When you are prompted for confirmation to leave this property blank, click Yes. Ensure that the default user name has been removed. Otherwise, the default account is used and notifications will not work properly.

5. In the Properties window, type the appropriate value for the default sender account.

6. Test the mail server connections. In the Explorer window right-click Notification and click Test.

   IBM Cognos 8 tests the mail server connection.

   If you do not plan to send reports by email, or do not want to set up a mail server account immediately, you are not required. However, when you save the configuration and then you start the services in IBM Cognos Configuration, you will see a warning message when the mail server connection is tested. You can safely ignore the warning.

---

**Enable Security**

By default, IBM Cognos 8 allows anonymous access. If you want to use security in your IBM Cognos 8 environment, you must disable anonymous access and configure IBM Cognos 8 to use an authentication provider.

**Steps**

1. In the IBM Cognos Configuration Explorer window, click Security, Authentication, Cognos.

2. Click the Value box for Allow Anonymous Access, and select False.


4. In the Name box, type a name for your authentication namespace.

5. In the Type list, click the appropriate namespace and then click OK.

   The new authentication provider resource appears in the Explorer window, under the Authentication component.

6. In the Properties window, for the Namespace ID property, specify a unique identifier for the namespace.
For more information about configuring IBM Cognos 8 to use an authentication provider, see "Configuring IBM Cognos 8 Components to Use an Authentication Provider" (p. 259).

For more information about configuring IBM Cognos 8 to use an authentication provider, see "Configuring IBM Cognos 8 Components to Use an Authentication Provider" in the Installation and Configuration Guide.

7. From the File menu, click Save.

**Start Content Manager**

After you have set the database connection properties for the content store, you can start the Content Manager computer.

Ensure that user or service account is set up. For information, see "Configure a User Account or Network Service Account for IBM Cognos 8" (p. 64).

**Step**

- From the Actions menu, click Start.

  It may take a few minutes for the IBM Cognos 8 service to start.

  This action starts all installed services that are not running. If you want to start a particular service, select the service node in the Explorer window and then click Start from the Actions menu.

**Test the Content Manager Installation**

You can test the installation using a Web browser.

**Steps**

1. Open a Web browser.

2. Test that Content Manager is running by typing the Content Manager URIs value from IBM Cognos Configuration. For example,

   http://hostname:port_number/p2pd/servlet

   The State value should be Running.

**Installing and Configuring Application Tier Components**

You can install the Application Tier Components on different computers or on the same computer.

Perform the following tasks to install and configure the Application Tier Components:

- Install the Application Tier Components
- Install Application Tier Components for IBM Cognos 8 Metrics Manager, if required
- Set up database connectivity for the reporting databases.
- Start IBM Cognos Configuration
Configure environment properties for Application Tier computers

Start the Application Tier components

Test the Application Tier components

Create the metric store database

Set up the database client for the metric store, if required

Create a metric package

Install the Application Tier Components

You can install Application Tier Components on one or more computers, depending on your environment.

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, IBM Cognos 8 uses the existing configuration data for the Application Tier Components computers. However, if you installed the Application Tier Components in a new location, you must configure the environment properties.

Ensure that the computer where you installed the active Content Manager is configured and available before you configure Application Tier Components computers.

Printer Requirements

To ensure that reports print properly on Windows, Adobe Acrobat requires that you configure at least one printer on the operating system where Application Tier Components are installed. All reports, regardless of the print format that you choose, are sent as temporary PDF files to Adobe Reader for printing.

Steps for UNIX and Linux

1. If you are installing to a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

2. Set the JAVA_HOME environment variable to point to the installation location of your Java Runtime Environment (JRE).
   
   An example of the installation location of a Java Runtime Environment is /directory/java/java_version/jre.
   
   IBM Cognos 8 requires a JVM, such as IBM Java, to run on Linux.

3. On HP-UX, set the _M_ARENA_OPTS environment variable as follows:
   
   _M_ARENA_OPTS 1:4
   
   This increases the memory allocation for HP-UX to more closely match that of other UNIX platforms.

4. On AIX, if you are using a servlet gateway, set the AIXTHREAD_SCOPE environment variable as follows:
   
   AIXTHREAD_SCOPE=S
This sets the contention scope for user threads to system-wide, which supports more efficient scheduling of user threads.

5. Mount the IBM Cognos product disk using Rock Ridge file extensions or go to the location where the installation files were downloaded.

**Important:** To mount the IBM Cognos CD on HP-UX, do the following:

- Add the pfs_mount directory in your path.
  
  For example,

  ```
  PATH=/usr/sbin/:$PATH  
  export PATH
  ```

- To start the required NFS daemons and run the daemons in the background, type `bg` `pfs_mountd` and then type `bg` `pfsd`

- To mount the drive, type

  ```
  pfs_mount -t rrip <device><mount_dir> -o xlat=unix
  ```

  For example,

  ```
  pfs_mount /dev/dsk/c0t2d0 /cdrom -o xlat=unix
  ```

  You can now install or copy files as a non-root user using an IBM Cognos CD from this drive.

- When the installation is complete, type `pfs_umount /cdrom` and kill the pfsd and pfs_mountd daemons to unmount the CD.

6. To start the installation wizard, go to the operating system directory and then type `./issetup`

**Note:** When you use the issetup command with XWindows, Japanese characters in messages and log files may be corrupted. When installing in Japanese on UNIX or Linux, first set environment variables `LANG=C` and `LC_ALL=C` (where C is the language code, for example `ja_JP.PCK` on Solaris), and then start the installation wizard.

If you do not use XWindows, run an unattended installation (p. 401).

7. Follow the directions in the installation wizard and copy the required files to your computer.

- When selecting the directory, consider the following:

  Install Application Tier Components in a directory that contains only ASCII characters in the path name. Some UNIX and Linux Web servers do not support non-ASCII characters in directory names.

  If you are installing IBM Cognos 8 on a computer that has ReportNet or an earlier version of IBM Cognos 8 and you want to keep the earlier version, you must install IBM Cognos 8 in a different directory.

  If you are installing in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.
• When selecting components, clear all components except **Application Tier Components**.

8. Choose how to proceed in the **Finish** page of the installation wizard:
   • We recommend that you do not configure IBM Cognos 8 immediately because you must do other tasks first to ensure that your environment is properly set up. However, if the console attached to your computer supports a Java-based graphical user interface, you can click **Start IBM Cognos Configuration**.
   • If the console attached to your computer does not support a Java-based graphical user interface, click **Finish**.

You can later configure IBM Cognos 8 using IBM Cognos Configuration by starting cog-config.sh in the `c8_location/bin` directory, or editing cogstartup.xml in `c8_location/configuration` directory.

9. Append the `c8_location/bin` directory to the appropriate library path environment variable.
   • For Solaris and Linux, `LD_LIBRARY_PATH`  
   • For AIX, `LIBPATH`  
   • For HP-UX, `SHLIB_PATH`

10. On Linux, set the `PRINTER` environment variable to the name of your printer.

If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation in the same location as the Gateway components. For more information, see "Install Translated Product Documentation" (p. 250).

**Steps for Windows**

1. If you are installing to a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

2. Insert the IBM Cognos product disk or go to the location where the installation files were downloaded and extracted.

The **Welcome** page of the installation wizard appears.

3. If no **Welcome** page appears, go to the operating system directory and double-click the `issetup.exe` file.

4. Select the language to use for the installation.

The language that you select determines the language of the user interface. You can change the language to any of the installed languages after installation.

5. Follow the directions in the installation wizard and copy the required files to your computer.
   • When selecting the directory, consider the following:
     Install Application Tier Components in a directory that contains only ASCII characters in the path name. Some Web servers do not support non-ASCII characters in directory names.
If you are installing IBM Cognos 8 on a computer that has ReportNet or an earlier version of IBM Cognos 8 and you want to keep the earlier version, you must install IBM Cognos 8 in a different directory.

If you are installing in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.

- When selecting components, clear all components except Application Tier Components.

6. In the Finish page of the installation wizard,

- If you want to configure IBM Cognos components immediately, click Start IBM Cognos Configuration.
- If you want to see late-breaking information about IBM Cognos components, click View the Readme.

7. Click Finish.

Use the Windows Start menu to start IBM Cognos Configuration from the shortcut folder.

If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation in the same location as the Gateway components. For more information, see "Install Translated Product Documentation" (p. 250).

**Install Application Tier Components for IBM Cognos 8 Metrics Manager**

If you are installing IBM Cognos 8 Metrics Manager with IBM Cognos 8 Business Intelligence, you must install each IBM Cognos 8 Metrics Manager component into the same location as each IBM Cognos 8 Business Intelligence component. Install the IBM Cognos 8 Metrics Manager Application Tier component to the same location as you installed the IBM Cognos 8 Business Intelligence Application Tier component.

You may also want to install Metric Designer (p. 210).

**Set Up Database Connectivity for the Reporting Database**

For IBM Cognos 8, the only service that accesses the query database (also known as the reporting database) is the reporting engine that runs reports. The reporting engine is installed with Application Tier Components. To support queries, you must install the database clients for your data sources.

**Step**

- Ensure that you install the database API software for your reporting sources on each computer where Application Tier Components are installed.

On Windows, Application Tier Components support either native database connectivity or ODBC. On UNIX and Linux, Application Tier Components support the native database connectivity.

On UNIX, for Microsoft SQL Server only, Application Tier Components support the Data Direct ODBC driver. This driver is available from Data Direct.
IBM Cognos 8 requires TCP/IP connectivity with the Microsoft SQL Server.

**Start IBM Cognos Configuration**

Use the configuration tool, IBM Cognos Configuration, to configure IBM Cognos 8 components during the installation and configuration process and to start and stop IBM Cognos services.

Before starting IBM Cognos Configuration, ensure that the operating environment is properly set up. For example, ensure that all environment variables have been set.

On UNIX or Linux, do not start IBM Cognos Configuration in the last page of the installation wizard: additional setup is required before you can configure IBM Cognos 8. For example, you must update your Java environment. On Windows, you can start IBM Cognos Configuration in the last page of the installation wizard only if additional setup is not required. For example, if you use a database server other than Microsoft SQL or Cognos Content Database for the content store, we recommend that you copy the JDBC drivers to the appropriate location before you start the configuration tool.

Ensure that user or service account is set up. For information, see "Configure a User Account or Network Service Account for IBM Cognos 8" (p. 64).

**Steps on UNIX or Linux**

1. Go to the `c8_location/bin` directory and then type
   
   ./cogconfig.sh

2. If you want to access the help for IBM Cognos Configuration, go to the `c8_location/configuration` directory and edit the cogconfig.prefs file to add the location of your Web browser.
   
   For example, if you use Firefox, add the following text to the file:

   ```
   BrowserPath=Web_browser_location/firefox
   
   where Web_browser_location is a path, such as /usr/local/bin/
   
   Your Web browser must support the following syntax:
   
   $ <Web_browser_location> <URL>
   ```

**Steps on Windows**

1. From the Start menu, click Programs, IBM Cognos 8, IBM Cognos Configuration.

2. If you want to access the help for IBM Cognos Configuration, go to the `c8_location/configuration` directory and edit the cogconfig.prefs file to add the location of your Web browser.
   
   For example, if you use Firefox, add the following text to the file:

   ```
   BrowserPath=Web_browser_location/firefox
   
   where Web_browser_location is a path, such as \usr\local\bin\
   
   Your Web browser must support the following syntax:
   
   $ <Web_browser_location> <URL>
   ```
Configure Environment Properties for Application Tier Components Computers

If you install the Application Tier Components component on a different computer than Content Manager, you must configure the Application Tier Components computer so that it knows the location of Content Manager. The distributed components can then communicate with each other.

The Application Tier Components computer must know the location of the Content Manager computers and the notification database to use for job and schedule information. The Application Tier Components computer must use the same notification database that the Content Manager computers use. For more information, see "Change the Notification Database" (p. 316).

If you installed more than one Content Manager, you must list all Content Manager URIs on each Application Tier Components computer.

Steps

1. Start IBM Cognos Configuration.
2. In the Explorer window, click Environment.
3. In the Properties window, change the localhost portion of the Content Manager URIs property to the name of any Content Manager computer.
4. Specify the URIs for the remaining Content Manager computers:
   - In the Value - Content Manager URIs dialog box, click Add.
   - In the blank row of the table, click and then type the full URI of the Content Manager computer.
   - Repeat the previous two bulleted steps for each URI to be added.
   - Important: You must include all Content Manager URIs in the list.
   - Click OK.
5. Change the localhost portion of the Gateway URI property to the name of the computer on which you plan to install the gateway component.
6. Change the localhost portion of the remaining URI properties to the name or IP address of your IBM Cognos 8 server.
7. In the Explorer window, under Security, Cryptography, click Cognos, the default cryptographic provider.
8. Under the Certificate Authority settings property group, set the Password property to match what you configured on the default active Content Manager computer.
9. Ensure that all other cryptographic settings match what you set on the default active Content Manager computer.
10. From the File menu, click Save.
Start the Application Tier Components

After you have configured the environment properties, you can start the services on the Application Tier Components computer.

To use IBM Cognos 8 for reporting, you must install and configure the server components, start the IBM Cognos 8 service, and have a package that references an available data source. Note that if you are upgrading, you can continue to use the same data sources.

Ensure that user or service account is set up. For information, see "Configure a User Account or Network Service Account for IBM Cognos 8" (p. 64).

Test the Application Tier Components

You can test the installation using a Web browser.

Steps

1. Open a Web browser.
2. Test the availability of the dispatcher by typing
   
   http://ContentManagerComputer_name:port/p2pd/servlet

   If the response includes the string State: Running, the dispatcher is available.

Create the Metric Store Database

A metric store is a database that contains content for metric packages. A metric store also contains scorecarding application settings, such as user preferences. You must create a metric store database using Oracle, Microsoft SQL Server, or DB2. Although you run the command to create the metric store from the location where the Application Tier Components are installed, you can specify a different location for the metric store in the command parameters. If the metric store is on a different computer from the Application Tier Components, you must create an alias to the metric store in the Application Tier Components location.

If you install Cognos Content Database, it cannot be used as a metric store database.

Your database administrator must back up IBM Cognos 8 databases regularly because they contain the IBM Cognos data. To ensure the security and integrity of databases, it is also important to protect them from unauthorized or inappropriate access.

Steps for DB2

1. In the Application Tier Components location, in the e8_location/configuration/schemas/cmm/db2 directory, run the cmm_create_db.cmd script by typing the following command:

   On Windows, type

   `cmm_create_db dbinstance user_name password dbname drive dbalias`

   On UNIX, type

   `cmm_create_db.sh dbinstance user_name password dbname drive dbalias`

   Use the following values in your command.
<table>
<thead>
<tr>
<th>Value</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>dbinstance</td>
<td>The DB2 instance name where the database will be created.</td>
</tr>
<tr>
<td>user_name</td>
<td>The user ID with permissions to create the database. The user ID must have SYSADM or SYSCTRL privileges, and must have DBADM privileges to create the schema.</td>
</tr>
<tr>
<td>password</td>
<td>The password for the username.</td>
</tr>
<tr>
<td>dbname</td>
<td>The name of the database that will be created. The name must have a maximum of 8 characters, and it cannot start with a number.</td>
</tr>
<tr>
<td>drive/path</td>
<td>On Windows, the drive on which the database objects will be created. On UNIX, the path where the database objects will be created.</td>
</tr>
<tr>
<td>dbalias</td>
<td>The database alias name. This value is optional.</td>
</tr>
</tbody>
</table>

**Note:** Your database administrator can review the scripts to ensure they suit your environment. The initializedb.db2 script is invoked by the cmm_create_db.cmd script and defines the buffer pools and tablespaces.

2. Determine which user account IBM Cognos 8 Metrics Manager will use to access the database.
   The user account must have the following privileges.
   - CREATETAB
   - BINDADD
   - CONNECT
   - IMPLICIT_SCHEMA
   - LOAD

**Steps for Microsoft SQL Server**

1. In the Application Tier Components location, in the c8_location/configuration/schemas/cmm/sqlserver directory, run the cmm_create_db.cmd script by typing the following command:

   ```
   path_to_script cmm_create_db host_name database_name user_name password [user_to_create]
   ```

   Use the following values in your command.
### Setting Values

<table>
<thead>
<tr>
<th>Value</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>host_name</td>
<td>The name of the computer where the database will be created.</td>
</tr>
<tr>
<td>database_name</td>
<td>The name of the database that will be created.</td>
</tr>
<tr>
<td>user_name</td>
<td>The user ID with permissions to create the database.</td>
</tr>
<tr>
<td></td>
<td>The user ID must have permission to create the database, such as the sa user. The user ID must also have a default language of English.</td>
</tr>
<tr>
<td>password</td>
<td>The password for the username.</td>
</tr>
<tr>
<td>user_to_create</td>
<td>The user created by the script and given database owner permissions. This value is optional.</td>
</tr>
</tbody>
</table>

2. Determine which user account IBM Cognos 8 Metrics Manager will use to access the database. The user account must be the database owner (dbo) or aliased to the database owner.

### Steps for Oracle If the Database Does Not Exist

1. Ensure that you are logged into the Oracle server as a user that is a member of the ORA_DBA user group on Windows or the dba group on UNIX.

2. Set the NLS_LANG (National Language Support) environment variable to the UTF-8 character set on the metric store computer by typing the following command:

   ```
   NLS_LANG = language_territory.character_set
   ```

   Examples are:
   - `NLS_LANG = AMERICAN_AMERICA.UTF8`
   - `NLS_LANG = JAPANESE_JAPAN.UTF8`

   The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.

3. In the Application Tier Components location, from the `c8_location/configuration/schemas/cmm/oracle` directory, run the `cmm_create_db.cmd` script by typing the following command:

   ```
   path_to_script cmm_create_db sid path database_version [user_to_create]
   ```

   Use the following values in your command.
<table>
<thead>
<tr>
<th>Value</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>path_to_script</td>
<td>The path to the script. For example, c8_location/configuration/schemas/cmm/oracle/</td>
</tr>
<tr>
<td>sid</td>
<td>The SID for the new database that will be created.</td>
</tr>
<tr>
<td>path</td>
<td>The path where the data files will be created.</td>
</tr>
<tr>
<td>database_version</td>
<td>The version of Oracle software that is installed. For example, oracle9 or oracle10.</td>
</tr>
<tr>
<td>user_to_create</td>
<td>The user created by the script and given database owner permissions. This value is optional.</td>
</tr>
</tbody>
</table>

4. Determine which user account IBM Cognos 8 Metrics Manager will use to access the database.
   If you included the optional user in the previous step, this is the user you will use to access the database. If you did not include a user, then you must use a valid Oracle database username with the following permissions granted:
   - CREATE TABLE, CREATE VIEW, CREATE PROCEDURE, CREATE TRIGGER, CREATE TYPE, CREATE SEQUENCE, and CREATE SESSION
   - EXECUTE on DBMS_LOCK and DBMS_UTILS packages.
   The CREATE TABLE and CREATE TRIGGER permissions must be granted directly to the user account rather than to a role.
   You must grant these permissions only. If you grant fewer or more privileges than specified above, the metric store will not initialize.

**Steps for Oracle If the Database Exists**

1. Ensure that you are logged into the Oracle server as a user that is a member of the ORA_DBA user group on Windows or the dba group on UNIX.

2. Set the NLS_LANG (National Language Support) environment variable to the UTF-8 character set on the metric store computer by typing the following command:

   \[
   \text{NLS\_LANG} = \text{language\_territory}\text{.character\_set}
   \]

   Examples are:
   - \text{NLS\_LANG} = AMERICAN\_AMERICA.UTF8
   - \text{NLS\_LANG} = JAPANESE\_JAPAN.UTF8

   The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.
3. Determine which user account IBM Cognos 8 Metrics Manager will use to access the database. You must use a valid Oracle database username with the following permissions granted:
   - CREATE TABLE, CREATE VIEW, CREATE PROCEDURE, CREATE TRIGGER, CREATE TYPE, CREATE SEQUENCE, and CREATE SESSION
   - EXECUTE on DBMS_LOCK and DBMSUTILITY packages.

   The CREATE TABLE and CREATE TRIGGER permissions must be granted directly to the user account rather than to a role.

   You must grant these permissions only. If you grant fewer or more privileges than specified above, the metric store will not initialize.

4. Determine if the database is Unicode.

   Tip: One method is to type the following select statement:

   ```
   select * from NLS_DATABASE_PARAMETERS
   ```

   If the result set returns an NLS_CHARACTERSET that is not Unicode, create a new database and specify AL32UTF8 for the database character set parameters. The `cmm_create_db.cmd` script mentioned in "Steps for Oracle If the Database Does Not Exist" (p. 143) creates a database with AL32UTF8 character encoding.

---

**Set Up the Database Client for the Metric Store**

If you use DB2, Oracle, or Microsoft SQL Server for the metric store, you must set up the database client or other drivers or utilities on the Application Tier Components computer. Doing this allows IBM Cognos 8 Metrics Manager to access the metric store database.

**Important:** If you use a DB2 database for the content store, notification database, or logging database, you can use the universal JDBC driver file, `db2jcc.jar`. However, if you use a DB2 database for the metric store, you must use the JDBC2 driver, `db2java.zip`. If you use the universal JDBC driver, you will not be able to create new metrics packages or access existing metrics packages.

**Steps for DB2**

1. Install the DB2 client software on the Application Tier Components computer.

2. If the metric store is on a different computer from the Application Tier Components, configure a database alias to the metric store by running the DB2 Client Configuration Assistant.

   On UNIX or Linux, use the DB2 command line interface.

   If the metric store database and Application Tier Components are on the same computer, the content store name automatically becomes the alias.

3. On Windows, stop the DB2 services and the HTML Search Server.

4. To copy the JDBC2 driver, copy the `DB2_installation/sqllib/java/db2java.zip` file to the `c8_location/webapps/p2pd/WEB-INF/lib` directory.
Chapter 7: Installing IBM Cognos 8 Server Components on Different Computers

5. Rename the db2java.zip file to db2java.jar.

**Steps for Oracle**

1. On the computer where the Oracle client is installed, go to the ORACLE_HOME/jdbc/lib directory.

2. Copy the ojdbc14.jar file (or, for Oracle 11g, the ojdbc5.jar file) to the c8_location/webapps/p2pd/WEB-INF/lib directory on the Application Tier Components computer.

   If the directory contains the classes12.jar file, delete it before installing the ojdbc14.jar or ojdbc5.jar file.

   The driver is available from an Oracle client or server install, and it can also be downloaded from the Oracle technology Web site (http://www.oracle.com/technology).

3. Install the SQL Loader utility on every computer where Application Tier Components for IBM Cognos 8 Metrics Manager are installed.

**Step for Microsoft SQL Server**

- Install the bcp utility on every computer where Application Tier Components for IBM Cognos 8 Metrics Manager are installed.

**Create a Metric Package**

Before users can use IBM Cognos 8 Metrics Manager, you must create at least one metric package using the New Metric Package wizard. A metric package is an IBM Cognos Connection representation of an IBM Cognos 8 Metrics Manager application. A metric package contains connection information, reports, and metric management tasks for that application. The metric package content is stored in a metric store.

You open the New Metric Package wizard from the toolbar in IBM Cognos Connection and create a metric package using

- a new data source connection to a metric store
- an existing data source connection to a metric store
- an existing metric store if the database was used with an earlier version of IBM Cognos 8 Metrics Manager 8.1 or later

Use the wizard to define the metric package name and the data source connection to the metric store. For a new metric store, you also provide the information necessary to initialize the database, including the start and end dates of the fiscal year. If the database was used with an earlier version of IBM Cognos 8 Metrics Manager 8.1 or later, you can use the wizard to upgrade the metric store.

Before you can use the New Metric Package wizard, you must have access to a metric store used with Metrics Manager version 2.0 or later or you must create a database for a new metric store.
For data to be transferred successfully, the user account that is used to access the database must have a default language of English.

**Steps Using a New Data Source Connection**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking IBM Cognos Content on the Welcome page.

2. Click the New metric package button.

3. Type a name and description for the IBM Cognos 8 Metrics Manager application to represent this metric package, and click Next.

4. Click New data source.

5. Type a name and description for the data source connection for the metric store that contains the content for this metric package, and click Next.

6. In the Type box, click the database type.

7. Select the isolation level, and click Next.

8. Specify the information required for your database type:
   - For a Microsoft SQL Server database, type the name of the database server and the database. Under Signons, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.
     
     The user account must have the default language set to English.
   
   - For an Oracle database, type the connection string. Select User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.
   
   - For a DB2 database, type the name of the database and the connection string. Select User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.
     
     In most cases, a collation sequence is not required. If you want to provide one, ensure the value you enter is the same as the collation sequence specified when the database was created. For information about collation sequences, see the database documentation.

   **Tip:** To test whether the parameters are correct, click Test the connection.

9. Click the new data source and click Next.

10. Click Next and follow the prompts to provide the information necessary to initialize the database. When you see the page that summarizes the data source details and the metric store settings, click Initialize.

11. Select Open this package with Metric Studio after closing the wizard and then click Finish.
Metric Studio opens and the new metric package is displayed in IBM Cognos Connection. For information about managing the metric store, including how to load data, see the IBM Cognos 8 Administration and Security Guide.

**Steps Using an Existing Data Source Connection**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking IBM Cognos Content on the Welcome page.

2. Click the New metric package button.

3. Type a name and description for the IBM Cognos 8 Metrics Manager application to represent this metric package, and click Next.

4. Click New data source and click Next.

5. Click Next and follow the prompts to provide the information necessary to initialize the database. When you see the page that summarizes the data source details and the metric store settings, click Initialize.

6. Select Open this package with Metric Studio after closing the wizard and then click Finish.

Metric Studio opens and the new metric package is displayed in IBM Cognos Connection. For information about managing the metric store, including how to load data, see the IBM Cognos 8 Administration and Security Guide.

**Steps Using an Existing Metric Store**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking IBM Cognos Content on the Welcome page.

2. Click the New metric package button.

3. Type the name and description for the IBM Cognos 8 Metrics Manager application to represent this metric package and click Next.

4. Click New data source.

5. Type the name and description for the data source connection for the metric store that contains the content for this metric package, and click Next.

6. In the Type box, click the database type and click Next.

7. Specify the information required for your database type:

   - For a Microsoft SQL Server database, type the name of the database server and the database. Under Signons, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

The user account must have the default language set to English.
For an Oracle database, type the connection string. Under User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

For a DB2 database, type the name of the database and the connection string. Select User ID, select the Password and Create a signon that the Everyone group can use check boxes, and type the user ID and password of the user account with access to the database.

In most cases, a collation sequence is not required. If you want to provide one, ensure the value you enter is the same as the collation sequence specified when the database was created. For information about collation sequences, see the database documentation.

Tip: To test whether the parameters are correct, click Test the connection.

8. Click Next.

9. Select Open this package with Metric Studio after closing the wizard and then click Finish. Metric Studio opens and the new metric package is displayed in IBM Cognos Connection.

10. Click the new data source and click Next.

11. Click Upgrade.

   The wizard updates the database schemas and other information.

For information about managing the metric store, see the Administration and Security Guide.

Installing and Configuring the Gateway

You can install the gateway on one or more computers, depending on your environment.

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, IBM Cognos 8 uses the existing configuration data for the gateway computers. However, if you installed the gateway in a new location, you must configure the gateway.

Ensure that the computer where you installed the active Content Manager is configured and available before you configure gateway computers.

Perform the following steps to install and configure the gateway:

- Install the gateway components
- Install the gateway for IBM Cognos 8 Metrics Manager components, if necessary
- Start IBM Cognos Configuration
- Configure environment and security properties for the gateway
- Configure the Web server
- Test the gateway installation
Install the Gateway Components

You can install the gateway on one or more Web server computers.

Steps for UNIX and Linux

1. If you are installing to a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

2. Set the JAVA_HOME environment variable to point to the installation location of your Java Runtime Environment (JRE).

   An example of the installation location of a Java Runtime Environment is /directory/java/java_version/jre.

   IBM Cognos 8 requires a JVM, such as IBM Java, to run on Linux.

3. On HP-UX, set the _M_ARENA_OPTS environment variable as follows:

   _M_ARENA_OPTS 1:4

   This increases the memory allocation for HP-UX to more closely match that of other UNIX platforms.

4. On AIX, set the AIXTHREAD_SCOPE environment variable as follows:

   AIXTHREAD_SCOPE=S

   This sets the contention scope for user threads to system-wide, which supports more efficient scheduling of user threads.

5. Mount the IBM Cognos product disk using Rock Ridge file extensions or go to the location where the installation files were downloaded.

   Important: To mount the IBM Cognos CD on HP-UX, do the following:
   - Add the pfs_mount directory in your path.
     For example,
     
     PATH=/usr/sbin/:$PATH

     export PATH

   - To start the required NFS daemons and run the daemons in the background, type bg pfs_mountd and then type bg pfsd

   - To mount the drive, type

     pfs_mount -t rrip <device><mount_dir> -o xlat=unix

     For example,

     pfs_mount /dev/dsk/c0t2d0 /cdrom -o xlat=unix

     You can now install or copy files as a non-root user using an IBM Cognos CD from this drive.

   - When the installation is complete, type pfs_umount /cdrom and kill the pfsd and pfs_mountd daemons to unmount the CD.
6. To start the installation wizard, go to the operating system directory and then type
   
   ./issetup

   **Note**: When you use the issetup command with XWindows, Japanese characters in messages and log files may be corrupted. When installing in Japanese on UNIX or Linux, first set environment variables LANG=C and LC_ALL=C (where C is the language code, for example ja_JP.PCK on Solaris), and then start the installation wizard.

   If you do not use XWindows, run an unattended installation (p. 401).

7. Follow the directions in the installation wizard and copy the required files to your computer.
   
   - When selecting the directory, consider the following:
     
     Install Gateway components in a directory that contains only ASCII characters in the path name. Some UNIX and Linux Web servers do not support non-ASCII characters in directory names.
     
     If you are installing IBM Cognos 8 on a computer that has ReportNet or an earlier version of IBM Cognos 8 and you want to keep the earlier version, you must install IBM Cognos 8 in a different directory.
     
     If you are installing in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.
     
   - When selecting components, clear all components except Gateway.

8. Choose how to proceed in the **Finish** page of the installation wizard:
   
   - We recommend that you do not configure IBM Cognos 8 immediately because you must do other tasks first to ensure that your environment is properly set up. However, if the console attached to your computer supports a Java-based graphical user interface, you can click **Start IBM Cognos Configuration**.
     
   - If you want to see late-breaking information about IBM Cognos 8, select **View the Readme** and then click **Finish**.

   - If the console attached to your computer does not support a Java-based graphical user interface, click **Finish**.

     You can later configure IBM Cognos 8 using IBM Cognos Configuration by starting cog-config.sh in the c8_location/bin directory, or editing cogstartup.xml in c8_location/configuration directory.

9. Append the c8_location/bin directory to the appropriate library path environment variable.
   
   - For Solaris and Linux, LD_LIBRARY_PATH
   
   - For AIX, LIBPATH
   
   - For HP-UX, SHLIB_PATH

   If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation component in the location where you installed the
Gateway components. For more information, see "Install Translated Product Documentation" (p. 250).

**Steps for Windows**

1. If you are installing to a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

2. Insert the IBM Cognos product disk or go to the location where the installation files were downloaded and extracted.
   
   The Welcome page of the installation wizard appears.

3. If no Welcome page appears, go to the operating system directory and double-click the isetup.exe file.

4. Select the language to use for the installation.
   
   The language that you select determines the language of the user interface. You can change the language to any of the installed languages after installation.

5. Follow the directions in the installation wizard to copy the required files to your computer.
   
   - When selecting the directory, consider the following:
     
     Install Gateway components in a directory that contains only ASCII characters in the path name. Some Windows Web servers do not support non-ASCII characters in directory names.
     
     If you are installing IBM Cognos 8 on a computer that has ReportNet or an earlier version of IBM Cognos 8 and you want to keep the earlier version, you must install IBM Cognos 8 in a different directory.
     
     If you are installing in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.
   
   - When selecting components, clear all components except Gateway.

6. In the Finish page of the installation wizard,
   
   - If you want to configure IBM Cognos components immediately, click Start IBM Cognos Configuration.
   
   - If you want to see late-breaking information about IBM Cognos components, click View the Readme.

7. Click Finish.

   Use the Windows Start menu to start IBM Cognos Configuration from the shortcut folder.

If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation component in the location where you installed the Gateway components. For more information, see "Install Translated Product Documentation" (p. 250).
Install the Gateway for IBM Cognos 8 Metrics Manager

If you are installing IBM Cognos 8 Metrics Manager with IBM Cognos 8 Business Intelligence, you must install each IBM Cognos 8 Metrics Manager component into the same location as each IBM Cognos 8 Business Intelligence component. Install the IBM Cognos 8 Metrics Manager Gateway component to the same location as you installed the IBM Cognos 8 Business Intelligence Gateway component.

You may also want to install Metric Designer (p. 210).

Start IBM Cognos Configuration

Use the configuration tool, IBM Cognos Configuration, to configure IBM Cognos 8 components during the installation and configuration process and to start and stop IBM Cognos services.

Before starting IBM Cognos Configuration, ensure that the operating environment is properly set up. For example, ensure that all environment variables have been set.

On UNIX or Linux, do not start IBM Cognos Configuration in the last page of the installation wizard: additional setup is required before you can configure IBM Cognos 8. For example, you must update your Java environment. On Windows, you can start IBM Cognos Configuration in the last page of the installation wizard only if additional setup is not required. For example, if you use a database server other than Microsoft SQL or Cognos Content Database for the content store, we recommend that you copy the JDBC drivers to the appropriate location before you start the configuration tool.

Ensure that user or service account is set up. For information, see "Configure a User Account or Network Service Account for IBM Cognos 8" (p. 64).

Steps on UNIX or Linux

1. Go to the $c8_location/bin directory and then type
   
   ./cogconfig.sh

2. If you want to access the help for IBM Cognos Configuration, go to the $c8_location/configuration directory and edit the cogconfig.prefs file to add the location of your Web browser.
   
   For example, if you use Firefox, add the following text to the file:

   BrowserPath=Web_browser_location/firefox

   where Web_browser_location is a path, such as /usr/local/bin/

   Your Web browser must support the following syntax:

   $ <Web_browser_location> <URL>

Steps on Windows

1. From the Start menu, click Programs, IBM Cognos 8, IBM Cognos Configuration.

2. If you want to access the help for IBM Cognos Configuration, go to the $c8_location/configuration directory and edit the cogconfig.prefs file to add the location of your Web browser.

   For example, if you use Firefox, add the following text to the file:
Configure Environment and Security Properties for Gateway Computers

If you install the gateway component on a different computer than Content Manager or Application Tier Components, you must configure the gateway computer so that it knows the location of a dispatcher. A dispatcher is installed on every Content Manager and Application Tier Components computer. We recommend that the gateway use the dispatcher on an Application Tier Components computer.

For failover protection, you can configure more than one dispatcher for a gateway computer. When multiple dispatchers are configured, requests are normally routed to the first dispatcher in the list. If this dispatcher becomes unavailable, the gateway determines the next functioning dispatcher on the list and routes requests there. The primary dispatcher status is monitored by the gateway, and requests are routed back to this component when it returns to service.

After you do the required configuration tasks, the gateway computer can work in your environment. Ensure that the computers where you installed Content Manager are configured and the default active Content Manager computer is available before you configure gateway computers.

Steps
1. Start IBM Cognos Configuration.
2. In the Explorer window, click Environment.
3. In the Properties window, under Gateway Settings, specify the values for Dispatcher URIs for the gateway:
   - Click in the value column.
   - Click the edit button.
   - Change the localhost portion of the URI to the name or IP address of an Application Tier Components computer.

Tip: If you want to send requests to the dispatcher from an SDK application or an IBM Cognos 8 modeling tool that is outside of a network firewall, we recommend that you connect to a dedicated gateway that is configured to connect to the dispatcher using the internal dispatcher URI for your environment (for example, http://localhost:9300/p2pd/servlet/dispatch). For security reasons, the default setting for the Dispatcher URI for gateway property prevents the dispatcher from accepting requests for an SDK application or modeling tool that is outside the firewall. Ensure that you configure appropriate security for this dedicated gateway, such as SSL (p. 319). Do not change your main gateway to use the internal dispatcher URI. Doing so will reduce the security of the IBM Cognos 8 portal and studios. For more information about the modeling tool and network firewalls, see "Firewall Considerations" (p. 36).
If you want to add another URI, click Add and change the localhost portion of the new URI to the name or IP address of another Application Tier Components computer.

**Tip:** If you want to use the dispatcher on a standby Content Manager computer, ensure that you add it after you add the Application Tier Components computers. If you add the dispatcher from the active Content Manager computer, ensure that it is last in the list.

- After you specify all the URIs, click OK.

4. In the Explorer window, under Security, Cryptography, click Cognos, the default cryptographic provider.

5. Under the Certificate Authority settings property group, set the Password property to match what you configured on the default active Content Manager computer.

6. Ensure that all other cryptographic settings match what you set on the default active Content Manager computer.

7. Test that the symmetric key can be retrieved. In the Explorer window, right-click Cryptography and click Test.

IBM Cognos 8 components check the common symmetric keys (CSK) availability.

8. From the File menu, click Save.

**Configure the Web Server**

For all installations, before you use Web pages generated by IBM Cognos 8, you must configure your Web server. You must create virtual directories, or aliases, so that users can connect to IBM Cognos 8 in the portal. If you plan to run more than one IBM Cognos 8 product, or several instances of the same product, on one computer, you must create a separate application pool for each product or instance and then associate the aliases for that product or instance to the application pool. The steps for creating an application pool vary depending on your operating system.

For IBM Cognos 8 for reporting, you must also set the content expiry for the images directory in your Web server so that the Web browser does not check image status after the first access.

On UNIX and Linux, the account under which the Web server runs must have read access to the cogstartup.xml file in the `c8_location/configuration` directory. By default the cogstartup.xml file has read permission for others. If you run your Web server under a specific group, you can change the cogstartup.xml file permissions to ensure that it belongs to the same group as the Web server. You can then remove the read permission for others.

For information on creating a user account or a network service account for IBM Cognos 8, see (p. 64).

**Steps to Create Virtual Directories**

1. Create the following virtual directories:
You can use a name other than cognos8 in the aliases. However, you must use cgi-bin as the second part of the alias and you must change the virtual directory in the Gateway URI property to match the new IBM Cognos alias. For more information, see "Change a Port or URI Setting" (p. 301).

If you are upgrading from ReportNet or an earlier version of IBM Cognos 8, you can continue to use the existing aliases. If you install IBM Cognos 8 reporting components in a different location from the earlier version, change the existing aliases to include the new location. If you have more than one version of ReportNet or IBM Cognos 8 on one computer, you must use different alias names for IBM Cognos 8.

For Apache Web Server, ensure that you define the cognos8/cgi-bin alias before the cognos8 alias in the httpd.conf file located in the Apache_installation/conf directory. The cognos8/cgi-bin alias must be defined as a ScriptAlias.

2. If you want to use Report Studio’s image browser, enable Web Distributed Authoring and Versioning (WebDAV) on your Web server.

If you use Apache Web Server, specify a directory in which to enable WebDAV. For information about configuring WebDAV, see your Web server documentation.

If you use Microsoft Internet Information Services (IIS), enable the Read and Directory Browsing properties for the URL you want to access.

3. For IBM Cognos 8 for reporting, set the content expiry on the c8_location/pat/images virtual directory in your Web server.

Each time a user opens Report Studio, their Web browser checks with the Web server to determine if images are current. Because there are over 600 images, this can result in excess network traffic. You can postpone this check until a specified date by using the content expiry feature of the Web server.

For information on setting content expiry, see the documentation for your Web server.

**Note:** When you upgrade, Report Studio users must clear their Web browser cache to get the latest images.

If you use Web aliases other than cognos8, or your Web server is on another computer, or you are using Microsoft Internet Application Interface (ISAPI), apache_mod or a servlet gateway, change the Gateway URI (p. 344) when you configure IBM Cognos components.

**Steps to Create an Application Pool on Windows Server 2008**

1. From the Start menu, select Control Panel, Performance and Maintenance, Administrative Tools.

2. Launch Internet Information Services (IIS) Manager.
Web Management Tools and World Wide Web Services are enabled automatically.

3. From the root (your system name and user), select Features View.
4. In the IIS section, launch ISAPI and CGI Restrictions.
5. Select Edit Feature Settings and enable Allow unspecified CGI modules and then click OK.
6. Add your aliases. For example, c8_location,c8_location/cgi-bin.
7. Select your cgi-bin alias and ensure that Features View is selected.
8. Right-click Application Pools and select Add.
9. In the dialog box, enter a Web alias and the corresponding path to IBM Cognos 8 webcontent.
10. Repeat steps 8 and 9 to add the next Web alias.
11. Select Default Web Site.
12. Open Handler Mappings.
13. Select CGI-cgi mappings.
14. In the right pane, click Revert to Inherited.
15. Expand the application that points to your webcontent location.
16. Expand your cgi-bin application node.
17. Add a mapping that points to *.cgi and name it CGI-cgi.
18. Select the CGI-cgi mapping.
19. In the right pane, click Revert to Inherited.
20. Restart the IIS server.
21. Find the folder that contains cgi-bin (c8_location/cgi-bin) and right-click it.
22. Select the Security tab.
23. Add the Network Services user, granting all permissions except Full Control.
24. Right-click on Cognos8 service and select Properties.
25. Click the Log On tab.
26. Click This account and enter Network Service as the user.
27. Delete the Password and the Confirm the password values.
28. Click OK.
Test the Gateway

You can test the installation using a Web browser.

Steps
1. Ensure that your Web server is running.
2. Open a Web browser.
3. In your address box, type the URI for the gateway. For example
   
   \texttt{http://hostname/cognos8}

   The \texttt{Welcome} page of the IBM Cognos 8 portal appears.

Uninstalling IBM Cognos 8

It is important to use uninstall programs to completely remove all files and modifications to system files.

To uninstall IBM Cognos 8, you uninstall server components and modeling tools.

If you are running IBM Cognos 8 in an application server environment, use the administration tool provided with your application server to stop the application if it is running and undeploy the Java portion of IBM Cognos 8 components. Many application servers do not completely remove all deployed application files or directories during an undeployment; therefore, you may have to perform this action manually. After you have undeployed IBM Cognos 8 components, complete the steps in this chapter to uninstall on UNIX (p. 149) and on Windows (p. 150).

Uninstall IBM Cognos 8 on UNIX or Linux

If you no longer require IBM Cognos 8 or if you are upgrading, uninstall IBM Cognos 8.

If you are upgrading from an older version of ReportNet to IBM Cognos 8, follow the uninstallation instructions in the documentation for the older version of ReportNet.

Steps
1. If the console attached to your computer does not support a Java-based graphical user interface, determine the process identification (pid) of the IBM Cognos 8 process by typing the following command:
   
   \texttt{ps -ef | grep cogbootstrapservice}

2. Stop the IBM Cognos 8 process:
   
   - If you run XWindows, start IBM Cognos Configuration, and from the \texttt{Actions} menu, click \texttt{Stop}.
   - If you do not run XWindows, type:
     
     \texttt{kill -TERM pid}
3. To uninstall IBM Cognos 8, go to the `c8_location/uninstall` directory and type the appropriate command:
   - If you use XWindows, type
     ```
     ./uninst -u
     ```
   - If you do not use XWindows, do an unattended uninstallation (p. 405).

4. Follow the prompts to complete the uninstallation.

5. Delete all temporary Internet files from the Web browser computers.

Uninstalling does not remove any files that changed since the installation, such as configuration and user data files. Your installation location remains on your computer, and you retain these files until you delete them manually.

**Important:**
- Do not delete the configuration and data files if you are upgrading to a new version of IBM Cognos 8 and you want to use the configuration data with the new version.
- If you are using Cognos Content Database, the default location for the database files is in the `c8_location/contentstore` directory. If you want to keep your database after uninstalling, do not delete this directory.

### Uninstall IBM Cognos 8 on Windows

If you no longer require IBM Cognos 8 or if you are upgrading, uninstall all IBM Cognos 8 components and the IBM Cognos 8 service.

If you installed more than one component in the same location, you can choose the packages to uninstall using the uninstall wizard. All components of the package will be uninstalled. You must repeat the uninstallation process on each computer that contains IBM Cognos 8 components.

It is not necessary to back up the configuration and data files on Windows. These files are preserved during the uninstallation.

We recommend that you close all programs before you uninstall IBM Cognos 8. Otherwise, some files may not be removed.

Uninstalling does not remove any files that changed since the installation, such as configuration and user data files. Your installation location remains on your computer, and you retain these files until you delete them.

**Important:** Do not delete the configuration and data files if you are upgrading to a new version of IBM Cognos 8 and you want to use the configuration data with the new version.

**Steps**

1. From the **Start** menu, click **Programs, IBM Cognos 8, Uninstall IBM Cognos 8**.
   
The **Uninstall** wizard appears.

   **Tip:** IBM Cognos 8 is the default name of the Program Folder that is created during the installation. If you chose another name, go to that folder to find the program.
2. Follow the instructions to uninstall the components.
   The cognos_uninst_log.htm file records the activities that the Uninstall wizard performs while uninstalling files.
   **Tip:** To find the log file, look in the Temp directory.

3. Delete all temporary Internet files from the Web browser computers.
   For more information, see your Web browser documentation.

### Uninstall Cognos Content Database

If you want to uninstall only Cognos Content Database and leave other IBM Cognos 8 components on your computer, you must use the following procedure. After you uninstall Cognos Content Database you must configure a new content store before you can restart the IBM Cognos 8 service.

If you installed only Cognos Content Database, use another procedure. For information about this procedure, see "Uninstall IBM Cognos 8 on UNIX or Linux" (p. 149) or "Uninstall IBM Cognos 8 on Windows" (p. 150).

**Steps**

1. On the computer where you installed Cognos Content Database, go to the `c8_location\bin` directory, and type the following command:
   - On Windows, type `derby.bat uninstall`
     This command removes the Cognos Content Database service.
   - On UNIX, type `derby.sh stop`
     This command stops the Cognos Content Database service.

2. In the `c8_location` directory, delete the `derby10.1.2.1` directory.

3. In the `c8_location\bin` directory, delete the following files:
   - On Windows, `derby.bat`
   - On UNIX, `derby.sh` and `derbyenv.sh`

4. On Windows, in the `c8_location\logs` directory, delete the `derby.service` file.

5. In the `c8_location` directory, open the `cmplst.txt` file in a text editor.

6. Remove lines containing Cognos Content Database values. The lines contain CCD and CMDERBY. For example:
   ```
   C8BISRVRCDD_version=
   C8BISRVRCDD_name=
   CCD_version=
   ```
Tip: You can also comment the lines out by inserting # at the start of each line.

7. Save the file.

8. Start IBM Cognos Configuration.

9. Under Data Access, Content Manager, do the following:
   - Delete the Cognos Content Database.
   - Configure a new database resource to point to a new content store.

   For more information, see "Set Database Connection Properties for the Content Store" (p. 131).

After you install and configure IBM Cognos 8 server components (p. 119) or (p. 153), you can install and configure the following modeling components for reporting and scorecarding:

- Framework Manager
- Metric Designer

### Installing and Configuring Framework Manager

You can install Framework Manager, the metadata modeling tool for IBM Cognos 8 for reporting, on the same computer as other IBM Cognos 8 components, or on a different computer. All required files are copied to one computer. Default settings are used for the configuration. You can change these default settings if necessary, or if you install Framework Manager on a separate computer from IBM Cognos 8.

If you upgraded from an older version of Framework Manager, you can use the same models and projects that you used with the older version. To upgrade existing projects, you must open them in the new version of Framework Manager.

If you are upgrading Framework Manager from an older version, you must first uninstall the older version of Framework Manager (p. 150).

Before you install Framework Manager, we recommend that you close all programs that are currently running to ensure that the installation program copies all the required files to your computer.

Also, ensure that you have administrator privileges for the Windows computer you are installing on. If you are not an administrator, ask your system administrator to add you to the Administrator group on your computer. Administrator privileges are also required for the account that is used to run Framework Manager.

We recommend that you install and configure all IBM Cognos 8 server components before you install Framework Manager.

Install in a directory that contains only ASCII characters in the path name. Some servers do not support non-ASCII characters in directory names. Installing Framework Manager in directory that has an apostrophe in the path name may result in the help not opening properly.

If you are installing the modeling tool in the same directory as IBM Cognos 8 and do not stop the IBM Cognos 8 services, you are prompted to do so during the installation.

### System Requirements for Framework Manager

Before you install Framework Manager, ensure that the Windows computer meets IBM Cognos 8 software and hardware requirements. The size of your models determines the hardware requirements, such as disk space.
The following table lists the minimum hardware and software requirements to run Framework Manager.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows</td>
</tr>
<tr>
<td>RAM</td>
<td>Minimum: 512 MB, Recommended: 1 GB</td>
</tr>
<tr>
<td>Disk space</td>
<td>Minimum: 500 MB of free space on the drive that contains the temporary directory used by IBM Cognos 8</td>
</tr>
<tr>
<td>Database</td>
<td>Database client software installed on the same computer as Framework Manager (Oracle, DB2, or Sybase only; Microsoft SQL drivers are installed with IBM Cognos 8 by default) Database connectivity set up</td>
</tr>
<tr>
<td>Other</td>
<td>Microsoft Data Access Component (MDAC) 2.6 or later for use with product samples</td>
</tr>
</tbody>
</table>

To install and configure Framework Manager, follow these steps:

- Install Framework Manager.
- Update the Java Environment.
- Set up the data source environment for Framework Manager
- Configure environment properties for Framework Manager.
- Test the Framework Manager installation

If you install Framework Manager on a different computer from the non-modeling components of IBM Cognos 8, you may also want to perform the following tasks:

- Configure a source control system.
- Update file location properties.

**Default Settings for Framework Manager**

The following table lists the default settings for the IBM Cognos 8 ports and URIs that are used by Framework Manager. After installation, you can use the configuration tool to change the settings.
You can also change them by editing the cogstartup.xml file in the $c8_location/configuration directory.

<table>
<thead>
<tr>
<th>Component</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gateway</td>
<td><a href="http://localhost:80/cognos8/cgi-bin/cognos.cgi">http://localhost:80/cognos8/cgi-bin/cognos.cgi</a></td>
<td>The URI to the IBM Cognos 8 gateway</td>
</tr>
<tr>
<td>Dispatcher URI for external applications</td>
<td><a href="http://localhost:9300/p2pd/servlet/dispatch">http://localhost:9300/p2pd/servlet/dispatch</a></td>
<td>The URI to the dispatcher</td>
</tr>
<tr>
<td>Log Server Port</td>
<td>9362</td>
<td>The port used by the local log server</td>
</tr>
</tbody>
</table>

**Install Framework Manager**

To install Framework Manager, use the IBM Cognos 8 Business Intelligence Modeling CD. When prompted for **Component Selection**, install all the components that are selected by default.

**Steps**

1. If you use an Oracle database as a data source for your reports, set the NLS_LANG environment variable by typing the following command on each computer where Framework Manager and the Application Tier Components are installed:

   \[ \text{NLS\_LANG} = \text{language\_territory.character\_set} \]

   For example, \[ \text{NLS\_LANG} = \text{JAPANESE\_JAPAN.UTF8} \]

   The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.

   If the Application Tier Components are installed on a UNIX computer, the NLS_LANG variable must be set up for the user who owns and starts the IBM Cognos 8 service.

2. If you are installing in a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

3. Insert the Framework Manager disk or go to the location where the installation files were downloaded and extracted.

   The **Welcome** page of the installation wizard appears.

4. If no **Welcome** page appears, go to the operating system directory and double-click the issetup.exe file.

5. Select the language to use for the installation.

   The language that you select determines the language of the user interface. You can change the language to any of the installed languages after installation.
6. Follow the directions in the installation wizard to copy the required files to your computer.

   If you are installing IBM Cognos 8 on a computer that already has ReportNet or an older version of IBM Cognos 8, and you want to keep the older version running, you must install IBM Cognos 8 in a different directory.

   If you are installing in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.

7. In the Finish page of the installation wizard,

   - If you want to configure IBM Cognos components immediately, click **Start IBM Cognos Configuration**.

   - If you want to see late-breaking information about IBM Cognos components, click **View the IBM Cognos Readme**.

8. Click **Finish**.

   Use the Windows **Start** menu to start **IBM Cognos Configuration** from the shortcut folder.

   To ensure the security and integrity of IBM Cognos 8, it is important to protect the installation directory from unauthorized or inappropriate access.

---

**Update the Java Environment**

IBM Cognos 8 cryptographic services use a specific .jar (Java Archive) file, named bcprov-jdknn-nnn.jar, that must be located in your Java Runtime Environment (JRE). This file provides additional encryption and decryption routines that are not supplied as part of a default JVM installation. To ensure security, the encryption file must be loaded by the JVM using the java extensions directory.

If you want to use your own JRE and have JAVA_HOME set to that location on Windows or if you are installing on UNIX, you may have to update the Java environment for the cryptographic services.

On Windows, you can set JAVA_HOME as a system variable or a user variable. If you set it as a system variable, it may be necessary to restart your computer for it to take effect. If you set it as a user variable, set it so that the environment in which Tomcat is running can access it.

If you do not have a JAVA_HOME variable already set on Windows or if JAVA_HOME points to a Java version that is not valid for IBM Cognos 8, the JRE files provided with the installation will be used, and you do not have to update any files in your environment.

**Steps**

1. Ensure that the JAVA_HOME environment variable is set to the JRE location.

   For example, to set JAVA_HOME to the JRE files provided with the installation, the path is $c8_location/bin/jre/version$.

2. Copy the bcprov-jdknn-nnn.jar file from the $c8_location/bin/jre/version/lib/ext$ directory to the $Java_location/jre/lib/ext$ directory.
**Set Up the Data Source Environment for Framework Manager**

The IBM Cognos 8 modeling tools create and manage metadata. Framework Manager creates and manages metadata for the reporting functions. Because metadata is derived from data sources in multi-platform or multilingual environments, there are several things you must think about or do when you set up the data source environment for Framework Manager. Commonly, these things depend on the other technology you use for your data or import source.

If you use a Sybase data source, these steps are not necessary.

If you upgraded from an older version of Framework Manager, you are not required to set up anything in the data source environment. You must set up the data source environment only if you installed Framework Manager in a different location from the older version.

If users operating in different languages will be connecting to a Microsoft Analysis Services (MSAS) 2000 data source, you must create a separate IBM Cognos 8 instance for each language.

Users operating in different languages can connect to an MSAS 2005 data source from the same instance of IBM Cognos 8. Modelers must create a separate package for each language. Users can run reports in any language.

For more information about data source connections, see the *Administration and Security Guide*.

Ensure that you install the appropriate fonts to support the character sets and currency symbols you use. For Japanese and Korean currency symbols to appear correctly, you must install the additional fonts from the Supplementary Languages Documentation CD. For more information, see "Install and Configure Additional Language Fonts" (p. 251).

**Steps**

1. Set the environment variable for multilingual support:
   - For Oracle, set the NLS_LANG (National Language Support) environment variable on each computer where Framework Manager is installed by typing the following command:
     
     \[
     \text{NLS_LANG = language_territory.character_set}
     \]
     
     Examples are:
     - NLS_LANG = AMERICAN_AMERICA.UTF8
     - NLS_LANG = JAPANESE_JAPAN.UTF8
     
     The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.
   - For DB2, set the DB2CODEPAGE environment variable to a value of 1252.
     
     For more information about whether to use this optional environment variable, see the DB2 documentation.
     
     No settings are required for SAP BW. SAP support only a single code page on non-Unicode SAP BW systems.

2. For Oracle, add $ORACLE_HOME/lib to your LD_LIBRARY_PATH.
When you set the load library paths, ensure that the 32-bit Oracle libraries are in the library search path, which is usually the $ORACLE_HOME/lib directory or the $ORACLE_HOME/lib32 directory if you installed a 64-bit Oracle client.

3. For Oracle, copy the ojdbc14.jar file from ORACLE_HOME/jdbc/lib to the c8_location/webapps/p2pd/WEB-INF/lib directory. For Oracle 11 g, copy the ojdbc5.jar file from ORACLE_HOME/jdbc/lib to the c8_location/webapps/p2pd/WEB-INF/lib directory.

If the directory contains the classes12.jar file, delete it before installing the ojdbc14.jar or ojdbc5.jar file.

4. For SAP BW, configure the following authorization objects so that the modeling tool can retrieve metadata.

Some of the values shown, such as *, are default values that you may want to modify for your environment.

<table>
<thead>
<tr>
<th>Authorization object</th>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Name of RFC to be protected</td>
<td>SYST, RSOB, SUGU, RFC1, RS_UNIFICATION, RSAB, SDTX, SU_USER</td>
</tr>
<tr>
<td></td>
<td>Type of RFC object to be</td>
<td>FUGR</td>
</tr>
<tr>
<td></td>
<td>protected</td>
<td></td>
</tr>
<tr>
<td>S_TABU_DIS</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>Authorization Group</td>
<td>&amp;NC&amp;</td>
</tr>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Name of RFC to be protected</td>
<td>SYST, RSOB, SUGU, RFC1, RS_UNIFICATION, RSAB, SDTX, SU_USER</td>
</tr>
<tr>
<td></td>
<td>Type of RFC object to be</td>
<td>FUGR</td>
</tr>
<tr>
<td></td>
<td>protected</td>
<td></td>
</tr>
<tr>
<td>S_TABU_DIS</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>Authorization Groups</td>
<td>&amp;NC&amp;</td>
</tr>
<tr>
<td>S_USER_GRP</td>
<td>Activity</td>
<td>03, 05</td>
</tr>
<tr>
<td>Authorization object</td>
<td>Field</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>S_RS_COMP</td>
<td>User group in user master</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>main</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Activity</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Info Area</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Info Area Technical Name</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Info Cube</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>InfoCube Technical Name</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Name (ID) of reporting com-</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>ponents</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Type of reporting components</td>
<td>*</td>
</tr>
<tr>
<td>S_RS_COMP1</td>
<td>Activity</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Name (ID) of reporting com-</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>ponents</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Type of reporting components</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Owner (Person Responsible)</td>
<td>*</td>
</tr>
<tr>
<td>S_RS_HIER</td>
<td>Activity</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>Hierarchy Name</td>
<td>Hierarchy Name</td>
</tr>
<tr>
<td></td>
<td>InfoObject</td>
<td>InfoObject Technical Name</td>
</tr>
<tr>
<td></td>
<td>Version</td>
<td>Hierarchy Version</td>
</tr>
<tr>
<td>S_RS_ICUBE</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>InfoCube sub-object</td>
<td>DATA</td>
</tr>
<tr>
<td></td>
<td>DEFINITION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Info Area</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>InfoCube Technical Name</td>
<td>*</td>
</tr>
</tbody>
</table>

&NC& represents any table that does not have an authorization group. For security reasons, create a new authorization group and assign the table RSHIEDIR to it. The new authorization group restricts the user’s access to the above table only, which is needed by the modeling tool. Create the new authorization group as a customization in the SAP system.
For more information about SAP BW authorization objects, see Transaction SU03.

**Configure Environment Properties for Framework Manager Computers**

When you install Framework Manager on a different computer from the non-modeling components of IBM Cognos 8, you must configure it to communicate with the other components.

If you install Framework Manager on the same computer as the non-modeling components of IBM Cognos 8, no configuration is required if you

- configure your Web server using the default virtual directories
- use the default ports
- use the default resources
- use the default cryptographic settings

**Important:** If IBM Cognos 8 was installed in more than one location, ensure that all URIs point to the correct version of IBM Cognos 8. Framework Manager must be configured to use the same version of IBM Cognos 8.

**Installations with a Firewall**

When the modeling tool is outside a network firewall that protects the Application Tier Components, communication issues with the dispatcher can arise. To avoid communication issues, you can install the modeling tool in the same architectural tier as the Application Tier Components or you can install and configure a gateway that is dedicated to modeling tool communications. For more information about the modeling tool and network firewalls, see "Firewall Considerations" (p. 36).

The steps in this topic describe how to configure the modeling tool computer. If you are using a gateway that is dedicated to the modeling tool, you must also configure the dedicated gateway computer (p. 190).

**Prerequisites**

Ensure that the IBM Cognos 8 service on at least one Content Manager computer is running. This ensures that the certificate authority service issues a certificate to the Framework Manager computer.

Ensure that the Web server is configured and running (p. 191).

You must also set up the data sources (p. 138) before you configure Framework Manager.

**Steps**

1. On the computer where you installed Framework Manager, start IBM Cognos Configuration.

2. In the **Explorer** window, click **Environment**.

3. In the **Properties** window, in the **Gateway URI** box, type the appropriate value.
   - To use ISAPI, replace cognos.cgi with cognosisapi.dll.
   - To use an Apache Web server, type the following syntax:
     - For Apache 1.3 module,
http://host_name:port/cognos8/cgi-bin/mod_cognos.dll
For Apache 2.0 module,
http://host_name:port/cognos8/cgi-bin/mod2_cognos.dll
For Apache 2.2.x module,
http://host_name:port/cognos8/cgi-bin/mod2_2_cognos.dll

Note: Ensure that you configured your Apache Web Server.

- To use a servlet gateway, type the following syntax:
  http[s]://host_name:port/context_root/servlet/Gateway
  where context_root is the value you assigned to the ServletGateway Web application when you deployed the ServletGateway application.
  Note: Ensure that you configured your Web server to support the servlet gateway.

- If you are not using a Web server, to use the dispatcher as the gateway, type the following syntax:
  http[s]://host_name:port/p2pd/servlet/dispatch

4. Change the host name portion of the Gateway URI from localhost to either the IP address of the computer or the computer name.

5. Specify the value for the Dispatcher URI for external applications.
   - If your Web server is configured not to allow anonymous access, type the URI of the dispatcher, ensuring that you change the host name in the URI from localhost.
   - If your Web server supports chunked transfer encoding and Framework Manager is inside the firewall, type the URI of the dispatcher, ensuring that you change the host name in the URI from localhost.
   - If you are using a dedicated gateway for modeling tool communication, type the dispatcher URI.

6. In the Explorer window, under Cryptography, click Cognos, the default cryptographic provider.

7. Under the Certificate Authority settings property group, for the Password property, type the same password you configured on the default active Content Manager computer.

8. From the File menu, click Save.

Framework Manager is configured to communicate with the other components of IBM Cognos 8. If you installed Framework Manager on a Windows Vista computer, you can update file location properties on Windows Vista computers (p. 352).
Test the Installation and Configuration

You can test your configuration by starting the application and creating a project.

Step

- To start Framework Manager, from the Start menu, click Programs, IBM Cognos 8, Framework Manager.

You may be prompted to upgrade if the model schema version is older than the currently supported version.

If you see the Welcome page of Framework Manager, your installation is working.

Installing and Configuring Metric Designer

You can install Metric Designer, the metadata modeling tool for IBM Cognos 8 Metrics Manager, on the same computer as IBM Cognos 8 components, or on a different computer. All required files are copied to one computer. Default settings are used for the configuration. However, you may want to change these default settings if existing conditions make the default choices inappropriate, or if you installed IBM Cognos 8 on a different computer.

Before you install Metric Designer, we recommend that you close all programs that are currently running to ensure that the installation program copies all the required files to your computer.

Also, ensure that you have administrator privileges for the Windows computer you are installing on. If you are not an administrator, ask your system administrator to add you to the Administrator group on your computer.

We recommend that you install and configure all IBM Cognos 8 server components before you install Metric Designer.

If you are installing the modeling tool in the same directory as IBM Cognos 8 and do not stop the IBM Cognos 8 services, you are prompted to do so during the installation.

Install in a directory that contains only ASCII characters in the path name. Some servers do not support non-ASCII characters in directory names.

You should also install and configure the target application where you will load data or metadata.

System Requirements for Metric Designer

Before you install Metric Designer, ensure that the Windows computer meets IBM Cognos 8 software and hardware requirements. The size of the your models determines the hardware requirements, such as disk space.

The following table lists the minimum hardware and software requirements to run Metric Designer.
If you upgraded from Metrics Manager version 2.0 or later, you can use the same extracts and projects that you used with the older version. To upgrade existing projects, you must open them in the new version of Metric Designer and redefine the data source connections and other references.

Before you configure Metric Designer, other IBM Cognos 8 components must be installed and configured, and Metric Designer must be installed.

To install and configure Metric Designer, follow these steps:

- Install Metric Designer Components.
- Set up the database client for the metric store.
- Configure environment properties for Metric Designer.
- Set up the import source environment for Metric Designer.
- Test the Metric Designer installation

### Default Settings for Metric Designer

The following table lists the default settings for the ports and URIs that are used by Metric Designer. After installation, you can use IBM Cognos Configuration to change the settings. You can also change them by editing the cogstartup.xml file in the `c8_location/configuration` directory.

<table>
<thead>
<tr>
<th>Component</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gateway</td>
<td><a href="http://localhost:80/cognos8/cgi-bin/">http://localhost:80/cognos8/cgi-bin/</a></td>
<td>The URI to the gateway</td>
</tr>
<tr>
<td></td>
<td>cognos.cgi</td>
<td></td>
</tr>
</tbody>
</table>

---

**Operating system**

- Windows (design interface and engine)
- UNIX (engine only):
  - Sun Solaris HP-UX
  - IBM AIX

**RAM**

- Minimum: 512 MB
- Recommended: 1 GB

**Disk space**

- Minimum: 500 MB of free space on the drive that contains the temporary directory

**Other**

- Microsoft Data Access Component (MDAC) 2.6 or later for use with product samples
Install Metric Designer

Use the following steps to install Metric Designer.

**Steps**

1. If you are installing in a directory with other IBM Cognos 8 components, stop the IBM Cognos 8 service.

2. Insert the Metric Designer disk or go to the location where the installation files were downloaded and extracted.

   The **Welcome** page of the installation wizard appears.

3. If no **Welcome** page appears, go to the operating system directory and double-click the `issetup.exe` file.

4. Select the language to use to run the installation wizard.

5. Follow the directions in the installation wizard to copy the required files to your computer.

6. In the **Finish** page of the installation wizard:
   - If you want to configure IBM Cognos components immediately, click **Start IBM Cognos Configuration**.
   - If you want to see late-breaking information about IBM Cognos components, click **View the Readme**.

7. Click **Finish**.

   Use the Windows **Start** menu to start **IBM Cognos Configuration** from the shortcut folder.

To ensure the security and integrity of IBM Cognos 8, it is important to protect the installation directory from unauthorized or inappropriate access.

Set Up the Database Client for the Metric Store

If you use DB2, Oracle, or Microsoft SQL Server for the metric store, you must set up the database client or other drivers or utilities on the Metric Designer computer. Doing this allows Metric Designer to access the metric store database.

**Steps for DB2**

1. If you are using type 2 JDBC connectivity, install the DB2 client software on the Metric Designer computer.

   If you use type 4 JDBC connectivity for DB2, you are not required to install the DB2 client software where Metric Designer is installed.
For more information about the differences between type 2 and type 4 drivers, see "JDBC Driver Options for Using DB2 Database as a Content Store" (p. 126).

2. **On Windows,** stop the DB2 services and the HTML Search Server.

3. Copy the following files from `DB2_installation/sqllib/java` directory to the `c8_location/webapps/p2pd/WEB-INF/lib` directory.
   - the universal driver file, `db2jcc.jar`
   - the license file, for example `db2jcc_license_cu.jar`

4. **On Windows,** restart the DB2 services and the HTML Search Server.

**Steps for Oracle**

1. **On the computer** where the Oracle client is installed, go to the `ORACLE_HOME/jdbc/lib` directory.

2. Copy the `ojdbc14.jar` file (or, for Oracle 11g, the `ojdbc5.jar` file) to the `c8_location/webapps/p2pd/WEB-INF/lib` directory on the Metric Designer computer.
   
   If the directory contains the `classes12.jar` file, delete it before installing the `ojdbc14.jar` or `ojdbc5.jar` file.
   
   The driver is available from an Oracle client or server install, and it can also be downloaded from the Oracle technology Web site (http://www.oracle.com/technology).

3. **Install the SQL Loader utility** on the Metric Designer computer.

**Step for Microsoft SQL Server**

- Install the `bcp` utility on the Metric Designer computer.

**Configure Environment Properties for Metric Designer Computers**

If you install Metric Designer on a different computer from other IBM Cognos 8 components, you must configure it to communicate with the computers where the gateway and Content Manager are installed.

We recommend that you install and configure other IBM Cognos 8 components before you configure Metric Designer. You must first install and configure Content Manager and then start the IBM Cognos 8 service on at least one Content Manager computer before you configure Metric Designer. This ensures that the certificate authority service issues a certificate to the Metric Designer computer.

Before you configure Metric Designer, ensure that the Web server is configured and running, and the IBM Cognos 8 service is running.

If you are using an Apache Web server, ensure that you configure it first (p. 344).

**Installations with a Firewall**

When the modeling tool is outside a network firewall that protects the Application Tier Components, communication issues with the dispatcher can arise. To avoid communication issues, you can install the modeling tool in the same architectural tier as the Application Tier Components or you can...
install and configure a gateway that is dedicated to modeling tool communications. For more information about the modeling tool and network firewalls, see "Firewall Considerations" (p. 36).

The steps in this topic describe how to configure the modeling tool computer. If you are using a gateway that is dedicated to the modeling tool, you must also configure the dedicated gateway computer (p. 190).

**Steps**

1. On the computer where you installed Metric Designer, start IBM Cognos Configuration.
2. In the **Explorer** window, click **Environment**.
3. In the **Properties** window, in the **Gateway URI** box, type the appropriate value:
   - Change the host name portion of the **Gateway URI** from localhost to either the IP address of the computer or the computer name.
   - To use ISAPI, replace cognos.cgi with cognosisapi.dll.
   - To use an Apache Web server, type the following syntax:
     \[http://host_name:port/cognos8/cgi-bin/module.suffix\]
     where module is as follows:

     | Version     | Module     |
     |-------------|------------|
     | Apache 1.3  | mod_cognos |
     | Apache 2.0  | mod2_cognos|
     | Apache 2.2  | mod2_2_cognos|

     and suffix is as follows:

     | Operating system | Suffix |
     |------------------|--------|
     | Windows          | dll    |
     | Solaris, AIX     | so     |
     | HP-UX PA-RISC    | sl     |
     | HP-UX IA, Linux  | so     |

     Apache module 1.3 is not supported on HP-UX IA or Linux.

4. Specify the value for the **Dispatcher URI for external applications**.
   - If your Web server is configured not to allow anonymous access, type the URI of the dispatcher, ensuring that you change the host name in the URI from localhost.
If your Web server supports chunked transfer encoding and Metric Designer is inside the firewall, type the URI of the dispatcher, ensuring that you change the host name in the URI from localhost.

If you are using a dedicated gateway for modeling tool communication, type the dispatcher URI.

5. From the File menu, click Save.

Metric Designer is configured to communicate with other IBM Cognos 8 components.

Set Up the Import Source Environment for Metric Designer

The IBM Cognos 8 modeling tools create and manage metadata. Metric Designer creates and manages metadata required for the scorecarding functions. Because metadata is derived from data sources in multi-platform or multilingual environments, there are several things you must think about or do when you set up the import source environment for Metric Designer. Commonly, these things depend on the other technology you use for your data or import source.

If users operating in different languages will be connecting to a Microsoft Analysis Services (MSAS) 2000 data source, you must create a separate IBM Cognos 8 instance for each language.

Users operating in different languages can connect to an MSAS 2005 data source from the same instance of IBM Cognos 8. Modelers must create a separate package for each language. Users can run reports in any language.

For more information about data source connections, see the Administration and Security Guide.

Ensure that you install the appropriate fonts to support the character sets and currency symbols you use. For Japanese and Korean currency symbols to appear correctly, you must install the additional fonts from the Supplementary Languages Documentation CD. For more information, see "Install and Configure Additional Language Fonts" (p. 251).

Steps

1. Set the environment variable for multilingual support:

   - For Oracle, set the NLS_LANG (National Language Support) environment variable on each computer where Framework Manager or Metric Designer and the IBM Cognos 8 server are installed by typing the following command:

     \[
     \text{NLS_LANG = language	extunderscore territory.character	extunderscore set}
     \]

     Examples are:

     \[
     \text{NLS_LANG = AMERICAN	extunderscore AMERICA.UTF8}
     \]
     \[
     \text{NLS_LANG = JAPANESE	extunderscore JAPAN.UTF8}
     \]

     The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.

   - For DB2, set the DB2CODEPAGE environment variable to a value of 1252.
For more information about whether to use this optional environment variable, see the DB2 documentation.

No settings are required for SAP BW. SAP support only a single code page on non-Unicode SAP BW systems.

2. For Oracle, add $ORACLE_HOME/lib to your LD_LIBRARY_PATH.
   When you set the load library paths, ensure that the 32-bit Oracle libraries are in the library search path, which is usually the $ORACLE_HOME/lib directory or the $ORACLE_HOME/lib32 directory if you installed a 64-bit Oracle client.

3. For Oracle, copy the ojdbc14.jar file from ORACLE_HOME/jdbc/lib to the $c8_location/webapps/p2pd/WEB-INF/lib directory. For Oracle 11g, copy the ojdbc5.jar file from ORACLE_HOME/jdbc/lib to the $c8_location/webapps/p2pd/WEB-INF/lib directory.
   If the directory contains the classes12.jar file, delete it before installing the ojdbc14.jar or ojdbc5.jar file.

4. For SAP BW, configure the following authorization objects so that the modeling tool can retrieve metadata.
   Some of the values shown, such as *, are default values that you may want to modify for your environment.

<table>
<thead>
<tr>
<th>Authorization object</th>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Name of RFC to be protected</td>
<td>SYST, RSOB, SUGU, RFC1, RS_UNIFICATION, RSAB, SDTX, SU_USER</td>
</tr>
<tr>
<td></td>
<td>Type of RFC object to be protected</td>
<td>FUGR</td>
</tr>
<tr>
<td>S_TABU_DIS</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>Authorization Group</td>
<td>&amp;cNC&amp;</td>
</tr>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Name of RFC to be protected</td>
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<td></td>
<td>Type of RFC object to be protected</td>
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</tr>
<tr>
<td>S_TABU_DIS</td>
<td>Activity</td>
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<td>Field</td>
<td>Value</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td></td>
<td>Authorization Groups</td>
<td>&amp;NC&amp;</td>
</tr>
<tr>
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<td></td>
<td>User group in user master</td>
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<td>Activity</td>
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<tr>
<td></td>
<td>Info Area</td>
<td>InfoArea Technical Name</td>
</tr>
<tr>
<td></td>
<td>Info Cube</td>
<td>InfoCube Technical Name</td>
</tr>
<tr>
<td></td>
<td>Name (ID) of reporting com-</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>onents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type of reporting components</td>
<td>*</td>
</tr>
<tr>
<td>S_RS_COMP1</td>
<td>Activity</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Name (ID) of reporting com-</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>onents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type of reporting components</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Owner (Person Responsible)</td>
<td>*</td>
</tr>
<tr>
<td>S_RS_HIER</td>
<td>Activity</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>Hierarchy Name</td>
<td>Hierarchy Name</td>
</tr>
<tr>
<td></td>
<td>InfoObject</td>
<td>InfoObject Technical Name</td>
</tr>
<tr>
<td></td>
<td>Version</td>
<td>Hierarchy Version</td>
</tr>
<tr>
<td>S_RS_ICUBE</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>InfoCube sub-object</td>
<td>DATA</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Info Area</td>
<td>InfoArea Technical Name</td>
</tr>
<tr>
<td></td>
<td>InfoCube</td>
<td>InfoCube Technical Name</td>
</tr>
</tbody>
</table>
&NC& represents any table that does not have an authorization group. For security reasons, create a new authorization group and assign the table RSHIEDIR to it. The new authorization group restricts the user’s access to the above table only, which is needed by the modeling tool. Create the new authorization group as a customization in the SAP system.

For more information about SAP BW authorization objects, see Transaction SU03.

**Step for Oracle on the Application Tier Components Computer**

- For Oracle, on the computer where Application Tier Components is installed, set the NLS_LANG (National Language Support) environment variable by typing the following command:

  NLS_LANG = language_territory.character_set

  Examples are:

  NLS_LANG = AMERICAN_AMERICA.UTF8
  NLS_LANG = JAPANESE_JAPAN.UTF8

  The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.

**Test the Installation and Configuration**

You can test your configuration by starting the application and creating a project.

**Step for Metric Designer**

- To start Metric Designer, from the Start menu, click Programs, IBM Cognos 8, Metric Designer.

  If you see the Welcome page of Metric Designer, your installation is working.
Chapter 9: Install and Configure Optional Components

Optional components provide extended functionality for users.

After you install and configure IBM Cognos 8 server components and modeling tools, you can install the following optional components.

- IBM Cognos 8 Transformer
- IBM Cognos 8 Samples
- Translated Product Documentation
- Additional fonts for Japanese and Korean currency symbols
- IBM Cognos 8 Quick Tours
- IBM Cognos 8 Go! Office

Installing and Configuring IBM Cognos 8 Transformer

You can install IBM Cognos 8 Transformer, the metadata modeling tool for creating PowerCubes for use with IBM Cognos 8, on the same computer as other IBM Cognos 8 components, or on a different computer. You can install IBM Cognos 8 Transformer on the same computer as IBM Cognos Series 7 Transformer.

Transformer can now be made available more easily for business specialists who want to design models and build PowerCubes for their own use. For example, IT departments can provide business specialists or Transformer modelers with a Web-based, downloadable installation program from a corporate or secured portal, allowing for easy distribution of the installation files. For more information, see "Create a Network Installation Location for Transformer Modelers" (p. 357) and "Deploying IBM Cognos 8 Transformer for Modelers" (p. 359).

Default settings are used for the configuration. You can change these default settings if necessary, or if you install IBM Cognos 8 Transformer on a separate computer from IBM Cognos 8.

If you will be using PowerCubes that are secured against an IBM Cognos Series 7 namespace, Content Manager must be installed on a computer that supports IBM Cognos Series 7.

To install and configure IBM Cognos 8 Transformer, follow these steps:

- Install IBM Cognos 8 Transformer
- Review default settings
- Configure IBM Cognos 8 Transformer
- Set up the data source environment for Transformer
- Test the IBM Cognos 8 Transformer installation
Install IBM Cognos 8 Transformer

You install Transformer if you plan to create PowerCubes for use with IBM Cognos 8.

When you select a language in the installation wizard, it determines the language of the user interface. Only that language is installed. You cannot change the language properties after installation. If you want to change the language of the user interface, you must reinstall IBM Cognos 8 Transformer.

For a complete UNIX or Linux installation of IBM Cognos 8 Transformer, you must install IBM Cognos 8 Transformer on both a Windows computer and a UNIX or Linux computer. All components are installed in both environments and you then use the features and tools that are appropriate for each environment. For example, the IBM Cognos 8 Transformer client provides a graphical user interface for designing models on Windows computers. You then build cubes on your UNIX or Linux computer. On Linux, models must contain an IBM Cognos 8 package query as a data source. Models that contain an IBM Cognos Series 7 data source are not supported on Linux.

Install in a directory that contains only ASCII characters in the path name. Some servers do not support non-ASCII characters in directory names.

Before you install IBM Cognos 8 Transformer, we recommend that you close all programs that are currently running to ensure that the installation program copies all the required files to your computer.

If you are installing on Windows, ensure that you have administrator privileges for the Windows computer you are installing on. If you are not an administrator, ask your system administrator to add you to the Administrator group on your computer.

Note: When Transformer 8.4 is installed on Windows Vista, if you do not have Administrator privileges on the computer and you make changes to the cogtr.xml file, the updated file is saved by default to a Virtual Store directory and not to the c8_location/configuration directory.

You must install and configure all IBM Cognos 8 server components before you install IBM Cognos 8 Transformer.

System Requirements for IBM Cognos 8 Transformer

Before you install IBM Cognos 8 Transformer, ensure that the computer meets IBM Cognos 8 software and hardware requirements. The size of your PowerCubes determines the hardware requirements, such as disk space.

The following table lists the minimum hardware and software requirements to run IBM Cognos 8 Transformer.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating system</td>
<td>Windows</td>
</tr>
<tr>
<td></td>
<td>UNIX: Sun Solaris, HP-UX, IBM AIX</td>
</tr>
<tr>
<td></td>
<td>Linux</td>
</tr>
</tbody>
</table>
### Requirement Specification

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAM</td>
<td>Minimum: 512 MB  &lt;br&gt;Recommended: 1 GB</td>
</tr>
<tr>
<td>Disk space</td>
<td>Minimum: 500 MB of free space on the drive that contains the temporary directory used by IBM Cognos 8</td>
</tr>
<tr>
<td>Data source</td>
<td>Database client software installed on the same computer as IBM Cognos 8 Transformer  &lt;br&gt;Database connectivity set up</td>
</tr>
<tr>
<td>Other</td>
<td>Microsoft Data Access Component (MDAC) 2.6 or later for use with product samples</td>
</tr>
</tbody>
</table>

### Steps for UNIX or Linux

1. Insert the CD for IBM Cognos 8 Transformer or go to the directory where the installation files were downloaded and extracted.

2. To start the installation, go to the operating system directory and type `/isssetup`

3. Follow the directions in the installation wizard and copy the required files to your computer.  
   **Tip:** The Series 7 IQD Bridge component is not supported on Linux and HP-UX Itanium.

4. When you are prompted about installing non-English product documentation, click OK to continue.

5. Choose how to proceed in the Finish page of the installation wizard:
   - We recommend that you do not configure IBM Cognos 8 Transformer immediately because you must do other tasks first to ensure that your environment is properly set up. However, if you want to begin configuration immediately and the console attached to your computer supports a Java-based graphical user interface, you can click Start IBM Cognos Configuration.
   
   - **Tip:** For character-mode installations on UNIX and Linux, close the Readme text file by pressing **Ctrl + C** or **Q**.

   - If you want to see late-breaking information about IBM Cognos 8 Transformer, select View the Readme and then click Finish.

   **Tip:** For character-mode installations on UNIX and Linux, close the Readme text file by pressing **Ctrl + C** or **Q**.

   - If the console attached to your computer does not support a Java-based graphical user interface or if you want to configure IBM Cognos 8 Transformer later, click Finish.
You can later configure IBM Cognos 8 Transformer using IBM Cognos Configuration by starting cogconfig.sh in the c8_location/bin directory, or editing cogstartup.xml in c8_location/configuration directory.

6. Create a MANPATH environment variable and configure it with the following value:

```
/c8_location/webcontent/documentation/en/cogtr.1
```

The cogtr.1 file provides the syntax for UNIX command line options that are supported by IBM Cognos 8 Transformer. The man page for IBM Cognos 8 Transformer is accessible in UNIX by typing `cogtr man` from the c8_location/bin directory.

To ensure the security and integrity of IBM Cognos 8, it is important to protect the installation directory from unauthorized or inappropriate access.

If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation component in the location where you installed the Gateway components. For more information, see "Install Translated Product Documentation" (p. 250).

**Steps for Windows**

1. Insert the CD for IBM Cognos 8 Transformer modeling product or go to the directory where the installation files were downloaded and extracted.

   The Welcome page of the installation wizard should appear.

2. If no Welcome page appears, go to the operating directory and double-click the issetup.exe file.

3. Select the language to use for the installation.

   The language that you select determines the language of the user interface. You cannot change the language after installation because only the selected language is installed.

4. Follow the directions in the installation wizard to copy the required files to your computer.

   If you are installing IBM Cognos 8 on a computer that already has ReportNet, and you want to keep ReportNet running, you must install IBM Cognos 8 in a different directory.

   If you are installing in a directory that contains other IBM Cognos 8 components, you are prompted for the location of a directory in which to store backup copies of the files that will be overwritten.

5. When you are prompted about installing non-English product documentation, click OK to continue.

6. In the Finish page of the installation wizard,

   - If you want to configure IBM Cognos components immediately, click Start IBM Cognos Configuration.
   - If you want to see late-breaking information about IBM Cognos components, click View the IBM Cognos Readme.

7. Click Finish.
Use the Windows **Start** menu to start **IBM Cognos Configuration** from the shortcut folder.

To ensure the security and integrity of IBM Cognos 8, it is important to protect the installation directory from unauthorized or inappropriate access.

If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation component in the location where you installed the Gateway components. For more information, see "Install Translated Product Documentation" (p. 250).

### Default Settings for IBM Cognos 8 Transformer

The following table lists the default settings for the IBM Cognos 8 ports and URIs that are used by IBM Cognos 8 Transformer. After installation, you can use the configuration tool to change the settings. You can also change them by editing the cogstartup.xml file in the `c8_location\configuration` directory.

<table>
<thead>
<tr>
<th>Component</th>
<th>Default</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gateway</td>
<td><a href="http://localhost:80/cognos8/cgi-bin/cognos.cgi">http://localhost:80/cognos8/cgi-bin/cognos.cgi</a></td>
<td>The URI to the IBM Cognos 8 gateway</td>
</tr>
<tr>
<td>Dispatcher URI for external apps</td>
<td><a href="http://localhost:9300/p2pd/servlet/dispatch">http://localhost:9300/p2pd/servlet/dispatch</a></td>
<td>The URI to the dispatcher</td>
</tr>
</tbody>
</table>

### Configure IBM Cognos 8 Transformer Computers

You must configure IBM Cognos 8 Transformer to communicate with the other IBM Cognos 8 components.

The instructions in this topic are for the installer or administrator. If you are the Transformer modeler or business specialist who wants to download and use Transformer, see "Deploying IBM Cognos 8 Transformer for Modelers" (p. 359)

If you install IBM Cognos 8 Transformer on the same computer as the non-modeling components of IBM Cognos 8, no configuration is required if you

- configure your Web server using the default virtual directories
- use the default ports
- use the default resources
- use the default cryptographic settings

You can upgrade models from Series 7.x versions of Transformer if you have saved them as MDL files.

You can continue to use PowerCubes built with Series 7.3 and higher versions of Transformer in IBM Cognos 8. However, to use IBM Cognos 8 authentication providers, you must upgrade the PowerCubes.
To upgrade PowerCubes to IBM Cognos 8 PowerCubes, you must:

- open the Series 7.x Transformer model MDL file in IBM Cognos 8 Transformer
- rebuild the PowerCube in the IBM Cognos 8 Transformer

For more information about upgrading Series 7 PowerCubes, see "Upgrading Transformer Models and PowerCubes" (p. 114).

**Important:** If IBM Cognos 8 was installed in more than one location, ensure that all URIs point to the correct version of IBM Cognos 8. Transformer must be configured to use the same version of IBM Cognos 8.

**Installations with a Firewall**

When the modeling tool is outside a network firewall that protects the Application Tier Components, communication issues with the dispatcher can arise. To avoid communication issues, you can install the modeling tool in the same architectural tier as the Application Tier Components or you can install and configure a gateway that is dedicated to modeling tool communications. For more information about the modeling tool and network firewalls, see "Firewall Considerations" (p. 39).

The steps in this topic describe how to configure the modeling tool computer. If you are using a gateway that is dedicated to the modeling tool, you must also configure the gateway computer (p. 185).

**Prerequisites**

We recommend that you install and configure IBM Cognos 8 components before you configure IBM Cognos 8 Transformer. You must first install and configure Content Manager and then start the IBM Cognos 8 service on at least one Content Manager computer before you configure IBM Cognos 8 Transformer. This ensures that the certificate authority service issues a certificate to the IBM Cognos 8 Transformer computer.

Ensure that the Web server is configured and running (p. 135).

To support the use of IBM Cognos 8 data sources (including packages and reports) in Transformer, ensure that the database client is installed on the Transformer computer.

**Steps**

1. On the computer where you installed IBM Cognos 8 Transformer, start IBM Cognos Configuration.
2. In the **Explorer** window, click **Environment**.
3. In the **Properties** window, in the **Gateway URI** box, type the appropriate value.
   - To use ISAPI, replace cognos.cgi with cognosisapi.dll.
   - To use an Apache Web server, type the following syntax:
     
     http://host_name:port/cognos8/cgi-bin/module.suffix
     
     where *module* is as follows:
### Apache Module Version

<table>
<thead>
<tr>
<th>Version</th>
<th>Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apache 1.3</td>
<td>mod_cognos</td>
</tr>
<tr>
<td>Apache 2.0</td>
<td>mod2_cognos</td>
</tr>
<tr>
<td>Apache 2.2</td>
<td>mod2_2_cognos</td>
</tr>
</tbody>
</table>

And suffix is as follows:

<table>
<thead>
<tr>
<th>Operating System</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>dll</td>
</tr>
<tr>
<td>Solaris, AIX</td>
<td>so</td>
</tr>
<tr>
<td>HP-UX PA-RISC</td>
<td>sl</td>
</tr>
<tr>
<td>HP-UX IA, Linux</td>
<td>so</td>
</tr>
</tbody>
</table>

Apache module 1.3 is not supported on HP-UX IA or Linux.

- To use a servlet gateway, type the following syntax:
  
  \[http[s]://host_name:port/context_root/servlet/Gateway\]

  where `context_root` is the value you assigned to the ServletGateway Web application when you deployed the ServletGateway application.

  **Note:** Ensure that you configured your Web server to support the servlet gateway (p. 347).

- If you are not using a Web server, to use the dispatcher as the gateway, type the following syntax:

  \[http[s]://host_name:port/p2pd/servlet/dispatch\]

4. Change the host name portion of the **Gateway URI** from localhost to either the IP address of the computer or the computer name.

5. Specify the value for the **Dispatcher URI for external applications**.

   - If your Web server is configured not to allow anonymous access, type the URI of the dispatcher, ensuring that you change the host name in the URI from localhost.

   - If your Web server supports chunked transfer encoding and IBM Cognos 8 Transformer is inside the firewall, type the URI of the dispatcher, ensuring that you change the host name in the URI from localhost.

   - If you are using a dedicated gateway for modeling tool communication, type the dispatcher URI.
6. In the Explorer window, under Cryptography, click Cognos, the default cryptographic provider.

7. Under the Certificate Authority settings property group, for the Password property, type the same password you configured on the default active Content Manager computer.

8. From the File menu, click Save.

IBM Cognos 8 Transformer is configured to communicate with the other components of IBM Cognos 8.

9. If you installed Transformer on a Windows Vista computer, or if any IBM Cognos 8 BI component is installed on a Windows Vista computer, update your file location properties:
   - Log on as an administrator.
   - In the c8_location\configuration directory, open cogtr.xml.sample in a text editor.
   - Locate all values that use a relative path, ".\directory".
   - Replace the relative path element, ".\", with the same environment variable and root directory as you use for file locations on the other IBM Cognos 8 computers.
   - Save the file as cogtr.xml.
   - In the c8_location\CS7Gateways\bin directory, open cs7g.ini in a text editor.
   - Add the locations for your IBM Cognos Series 7 data sources to the file.
   - Save the file.

Changes are applied the next time you open Transformer.

Set Up the Data Source Environment for Transformer

The IBM Cognos 8 modeling tools create and manage metadata. IBM Cognos 8 Transformer creates and manages metadata for PowerCubes. Because metadata is derived from data sources in multi-platform or multilingual environments, there are several things you must think about or do when you set up the data source environment for IBM Cognos 8 Transformer. Commonly, these things depend on the other technology you use for your data or import source.

If you use a Sybase data source, these steps are not necessary.

If users operating in different languages will be connecting to a Microsoft Analysis Services (MSAS) 2000 data source, you must create a separate IBM Cognos 8 instance for each language.

Users operating in different languages can connect to an MSAS 2005 data source from the same instance of IBM Cognos 8. Modelers must create a separate package for each language. Users can run reports in any language.

For more information about data source connections, see the Administration and Security Guide. Ensure that you install the appropriate fonts to support the character sets and currency symbols you use. For Japanese and Korean currency symbols to appear correctly, you must install the
additional fonts from the Supplementary Languages Documentation CD. For more information, see "Install and Configure Additional Language Fonts" (p. 251).

**Steps**

1. Set the environment variable for multilingual support:
   - For Oracle, set the NLS_LANG (National Language Support) environment variable on each computer where Framework Manager or Metric Designer and the IBM Cognos 8 server are installed by typing the following command:
     
     \[ \text{NLS\_LANG = language\_territory.character\_set} \]
     
     Examples are:
     
     \[ \text{NLS\_LANG = AMERICAN\_AMERICA.UTF8} \]
     
     \[ \text{NLS\_LANG = JAPANESE\_JAPAN.UTF8} \]
     
     The value of the variable determines the locale-dependent behavior of IBM Cognos 8. Error messages, sort order, date, time, monetary, numeric, and calendar conventions automatically adapt to the native language and locale.
   - For DB2, set the DB2CODEPAGE environment variable to a value of 1252.
     
     For more information about whether to use this optional environment variable, see the DB2 documentation.

   No settings are required for SAP BW. SAP support only a single code page on non-Unicode SAP BW systems.

2. For Oracle, add $ORACLE\_HOME/lib to your LD\_LIBRARY\_PATH.
   
   When you set the load library paths, ensure that the 32-bit Oracle libraries are in the library search path, which is usually the $ORACLE\_HOME/lib directory or the $ORACLE\_HOME/lib32 directory if you installed a 64-bit Oracle client.

3. For Oracle, copy the ojdbc14.jar file from ORACLE\_HOME/jdbc/lib to the c8\_location/webapps/p2pd/WEB-INF/lib directory. For Oracle 11g, copy the ojdbc5.jar file from ORACLE\_HOME/jdbc/lib to the c8\_location/webapps/p2pd/WEB-INF/lib directory.
   
   If the directory contains the classes12.jar file, delete it before installing the ojdbc14.jar or ojdbc5.jar file.

4. For SAP BW, configure the following authorization objects so that the modeling tool can retrieve metadata.
   
   Some of the values shown, such as *, are default values that you may want to modify for your environment.

<table>
<thead>
<tr>
<th>Authorization object</th>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td>16</td>
</tr>
<tr>
<td>Authorization object</td>
<td>Field</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Name of RFC to be protected</td>
<td>SYST, RSOB, SUGU, RFC1, RS_UNIFICATION, RSAB, SDTVX, SU_USER</td>
</tr>
<tr>
<td></td>
<td>Type of RFC object to be</td>
<td>FUGR</td>
</tr>
<tr>
<td>protected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S_TABU_DIS</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>Authorization Group</td>
<td>&amp;NC&amp;</td>
</tr>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Name of RFC to be protected</td>
<td>SYST, RSOB, SUGU, RFC1, RS_UNIFICATION, RSAB, SDTVX, SU_USER</td>
</tr>
<tr>
<td></td>
<td>Type of RFC object to be</td>
<td>FUGR</td>
</tr>
<tr>
<td>protected</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S_TABU_DIS</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>Authorization Group</td>
<td>&amp;NC&amp;</td>
</tr>
<tr>
<td>S_USER_GRP</td>
<td>Activity</td>
<td>03, 05</td>
</tr>
<tr>
<td></td>
<td>User group in user master</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>main</td>
<td></td>
</tr>
<tr>
<td>S_RS_COMP</td>
<td>Activity</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Info Area</td>
<td>InfoArea Technical Name</td>
</tr>
<tr>
<td></td>
<td>Info Cube</td>
<td>InfoCube Technical Name</td>
</tr>
<tr>
<td></td>
<td>Name (ID) of reporting</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>components</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type of reporting components</td>
<td>*</td>
</tr>
<tr>
<td>S_RS_COMP1</td>
<td>Activity</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Name (ID) of reporting</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>components</td>
<td></td>
</tr>
</tbody>
</table>
&NC& represents any table that does not have an authorization group. For security reasons, create a new authorization group and assign the table RSHIEDIR to it. The new authorization group restricts the user’s access to the above table only, which is needed by the modeling tool. Create the new authorization group as a customization in the SAP system.

For more information about SAP BW authorization objects, see Transaction SU03.

**Test the Installation and Configuration**

You can test your configuration by starting the application and creating a project.

**Step for IBM Cognos 8 Transformer**

- To start IBM Cognos 8 Transformer, from the Start menu, click Programs, IBM Cognos 8,Transformer.

To start IBM Cognos 8 Transformer manually, double-click the cogtr.exe file in the c8_location\bin directory.

If you see the Transformer window, your installation is working.

**Samples**

This section explains the purpose, content and location of IBM Cognos 8 samples. It also discusses the sample company, Great Outdoors, its structure, databases, model and packages.
The Great Outdoors Company Samples

The Great Outdoors Company samples illustrate product features and technical and business best practices. You can also use them for experimenting with and sharing report design techniques and for troubleshooting.


Where to Find the Samples

The samples are included with the product and the samples for each studio are described in the related user guide and online help. To use the samples, you must set up and configure them or contact your administrator to find out where they are installed. For instructions on how to set up and configure samples, see the Installation and Configuration Guide or the Administration and Security Guide.

What Samples Exist

The samples consist of

- two databases that contain all corporate data, the related sample models for query and analysis, and sample cubes, reports, queries, query templates, and dashboards
- a metrics database and the associated metrics, including a strategy map for the consolidated company
  
  **Note:** You must have Metric Studio installed to use the metrics database and associated metrics.
- interactive reports that let you hover over report features to learn how the features work and why they were included
  
  **Note:** These reports are stored in the **Interactive Samples** folder of the IBM Cognos 8 installation.

Security

You can add security to the samples using an employee list included with the product. The list is in the form of an LDIF file that can be imported into any directory server, such as the Sun Java System Directory Server.

**Note:** You can download a version of the Sun Java System Directory Server from the Sun Web site ([http://www.sun.com/download/](http://www.sun.com/download/)). For more information, see the Installation and Configuration Guide. For information about conformance, see the IBM Cognos Resource Center ([http://www.ibm.com/software/data/support/cognos_crc.html](http://www.ibm.com/software/data/support/cognos_crc.html)).
The Great Outdoors Group of Companies

To make designing examples faster, especially financial examples, some general information about The Great Outdoors Company is useful. To look for samples that use particular product features, see the individual sample descriptions in this appendix.

Revenue for The Great Outdoors Company comes from corporate stores and from franchise operations. The revenues are consolidated from the wholly-owned subsidiaries. There are six distinct organizations, each with its own departments and sales branches. Five of these are regionally-based companies.

The sixth company, GO Accessories

- has its own collection of products, differentiated from the other GO companies by brand, name, price, color and size
- sells from a single branch to all regions and retailers
- functions both as an operating company based in Geneva, and as a part owner of the three GO subsidiaries in Europe.

The diagram below illustrates the consolidated corporate structure, including the percentage changes in ownership for GO Central Europe, and shows the reporting currency and GL prefix for each subsidiary.

Each corporation has the same departmental structure and the same GL structure, shown in the table below. Divisions may not report in the same currencies. For example, the Americas subsidiary reports in US dollars, but the Corporate division local currency is Canadian dollars, and the Operations division local currency is pesos.
<table>
<thead>
<tr>
<th>Division (GL)</th>
<th>Department (GL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate (1700)</td>
<td>Sales (1720)</td>
</tr>
<tr>
<td></td>
<td>Marketing (1750)</td>
</tr>
<tr>
<td></td>
<td>IS&amp;T (1760)</td>
</tr>
<tr>
<td></td>
<td>Human Resources (1730)</td>
</tr>
<tr>
<td></td>
<td>Finance (1740)</td>
</tr>
<tr>
<td></td>
<td>Procurement (1710)</td>
</tr>
<tr>
<td>Operations (1800)</td>
<td>Production and Distribution (1820)</td>
</tr>
<tr>
<td></td>
<td>Customer Service (1820)</td>
</tr>
</tbody>
</table>

Each corporation has a complete chart of accounts. Most of the accounts, such as those under non-personnel expenses, are at the department level, and contain only summary amounts. For example, although each marketing department has expenses, the cost is unspecified at the transaction level where marketing promotions occur.

**Employees**

The Great Outdoors data contains a full list of employees in all divisions, departments, and locations. Data is available for reports about bonuses (Global Bonus report) and sales commissions (Sales Commissions for Central Europe report), training (Employee Training by Year report), and performance reviews and employee satisfaction surveys (Employee Satisfaction 2006). If you use Metric Studio, sample metrics for human resources are also available.

In the GO Data Warehouse (analysis) package, groups of measures and the related dimensions are organized into folders. The employees are organized in hierarchies for region, manager, position or department, and organization, to make different kinds of aggregation easy to report on. Aggregation has been defined for the Employee Position Summary measures, so that Position count and Planned position count aggregate correctly at each level of time: monthly, quarterly, or yearly. For example, see the Planned Headcount report.

The employees are also listed in a sample LDIF file (p. 228). This authentication directory is necessary for the Transformer 8 cubes and for IBM Cognos Planning samples. No other samples depend on security profiles. For more information, see the *Installation and Configuration Guide*.

**Sales and Marketing**

Data about sales and marketing is available for all of the companies in the Great Outdoors group. GO Accessories has richer details to support analysis examples. For example, see the Revenue vs % Gross Profit by Product Brand analysis, based on the Sales and Marketing cube. Marketing and sales campaigns are tied to the Great Outdoors regional companies.
Overall, the GO companies have experienced solid growth across most product lines (Sales Growth Year Over Year), in all regions (Revenue by GO Subsidiary 2005), because of factors like an increase in repeat business and new or improved products, such as the high margin sunglasses product line. In the product lines sold by the five regional companies (all but GO Accessories) promotions have had mixed success (Promotion Success by Campaign, Bundle and Quarter). If you use Metric Studio, this can also be seen in the sample metrics.

Customer Surveys
The data also contains information from customer surveys. For example, the product line that includes bug spray, sun screen, and so on has not been successful (Product Satisfaction - Outdoor Protection 2005) and a source of retailer dissatisfaction may be the level of customer service rather than the returns (Customer Returns and Satisfaction). If you use Metric Studio, this information can also be monitored in metrics.

Sales Outlets
Revenue from the corporate outlets is available at the transaction level. Revenue from the franchise outlets is available at the consolidated level only (Sales and Marketing cube). Metrics about retailers show that the number of new retail outlets has dropped over the time period covered by this data.

GO Accessories sells worldwide, and sells only accessories. Transaction data for GO Accessories is the primary source for analysis of product by brand, color and size. The other five subsidiaries in the group of companies are regional and sell all product lines for retailers in their region. For example, the report Top 10 Retailers in 2005 uses sparklines and list data to review revenues at the retailer level.

Great Outdoors Database, Models, and Packages
The Great Outdoors models illustrate modeling techniques and support the samples. The models are based on the GO data warehouse and the GO sales transactional database and are the basis for the sample reports and queries. Each model contains two packages for publishing analysis (dimensional) and query views of the data.

For a description of each sample report or query, see the user guide for the studio that you open the sample in. For more information about modeling techniques, see the Guidelines for Modeling Metadata, or the Framework Manager User Guide.

You must have access to Framework Manager, the modeling tool in IBM Cognos 8, to look at the sample models. You may also need to set up the sample databases and connections. For instructions, see the Administration and Security Guide or the Installation and Configuration Guide.

GO Data Warehouse
The GO Data Warehouse model, great_outdoors_data_warehouse.cpf, is based on the database GOSALESDW. It contains data about human resources, sales and marketing, and finance, grouped into business areas. In the Database view, the three business areas are grouped into separate namespaces. The Database view contains a fourth namespace (GO Data) for the common information.

The Database view is very similar to the structure of the underlying database. All tables (database query subjects) are unchanged. This enables IBM Cognos 8 to retrieve metadata directly from the
package in most cases, instead of using a metadata call to the database. The following changes and additions have been made in the Database view:

- Joins have been added as necessary.
- To allow for aggregation at different levels of granularity, some model query subjects have been created. For example, see the relationships between Time and Sales or Sales fact.
- To allow single joins to be made between the lookup tables and each level in a dimension, lookup tables have been copied. For example, see the Products look up tables.

The Business view contains only model query subjects, with no joins. The following changes and additions have been made in the Business view:

- Calculations were added to the model query subjects. For example, the time dimension contains language calculations.
- Where the database has multiple hierarchies, new dimensions have been created to organize each hierarchy. For example, see the employee hierarchies, where employees are organized by manager, organization, region, and position.

The GO Sales Transactional Database

The GO Sales model, great_outdoors_sales.cpf, is based on the GOSALES database, which is structured as a transactional database. It contains principally sales data.

The Database view is very similar to the underlying database structure. The following changes and additions have been made in the Database view:

- To make it possible to join the fact tables to the time dimension, model query subjects and multipart joins have been used.
• Other joins have been added as necessary.

The Business view contains only model query subjects, with no joins. The following changes and additions have been made in the Business view:

• Calculations were added to the model query subjects.

• Model query subjects that were created in the Database view to enable joins on the time dimension have been linked as reference shortcuts.

• Where the database has multiple hierarchies, new dimensions have been created to organize each hierarchy.

• Sales Staff is a subset of the slowly changing Employee dimension. There is no unique Employee key in GO Sales, so a filter retrieves the current record only. This model does not use historical data.

### The Samples Cubes

The following cubes are delivered with the Great Outdoors samples in English, French, German, Japanese and Chinese:

• sales_and_marketing.mdc

• employee_expenses.mdc

• go_accessories.mdc

• go_americas.mdc

• go_asia_pacific.mdc

• great_outdoor_sales.mdc

### The Samples Packages

The Great Outdoors samples include seven packages. Below is a brief description of each available package.

Go Data Warehouse (analysis) is a dimensionally modeled view of the GOSALESDW database. This package can be used in all studios, including Analysis Studio. Using this package you can drill up and down.

Go Sales (analysis) is a dimensionally modeled view of the GOSALES database. This package can be used in all studios, including Analysis Studio. Using this package you can drill up and down.

Go Data Warehouse (query) is a non-dimensional view of the GOSALESDW database. This package can be used in all studios except Analysis Studio, and is useful for reporting when there is no need for drilling up and down.

Go Sales (query) is a non-dimension view of the GOSALES database. This package can be used in all studios except Analysis Studio, and is useful for reporting when there is no need for drilling up and down.
Sales and Marketing (conformed) is based on the GOSALES DW database. Dimensions are conformed with the dimensions found in the Sales and Marketing (cube) package, in order to enable drill-through from the cube package to the dimensional package.

Sales and Marketing (cube) is an OLAP package, based on the sales_and_marketing.mdc cube. Great Outdoor Sales (cube) is an OLAP package, based on the great_outdoor_sales.mdc cube.

Note: The OLAP packages, Great Outdoor Sales (cube) and Sales and Marketing (cube), are not multilingual. The Cognos_PowerCube.zip archive contains five versions of each package; one in English, French, German, Japanese and Chinese.

### Install the IBM Cognos 8 Samples

The IBM Cognos 8 samples illustrate product features and technical and business best practices. You can also use them for experimenting with and sharing report design techniques, and for troubleshooting. If you want to use the samples, install them from the IBM Cognos 8 Business Intelligence Samples CD.

Install in a directory that contains only ASCII characters in the path name. Some servers do not support non-ASCII characters in directory names.

### Steps for UNIX and Linux

1. Mount the IBM Cognos product disk using Rock Ridge file extensions or go to the location where the installation files were downloaded.

   **Important**: To mount the IBM Cognos CD on HP-UX, do the following:
   
   - Add the pfs_mount directory in your path.
     
     For example,
     
     ```
     PATH=/usr/sbin/:$PATH
     export PATH
     ```
   
   - To start the required NFS daemons and run the daemons in the background, type `bg pfs_moun td` and then type `bg pfd`.
   
   - To mount the drive, type
     
     ```
     pfs_mount -t rrip <device><mount_dir> -o xlat=unix
     ```
     
     For example,
     
     ```
     pfs_mount /dev/dsk/c0t2d0 /cdrom -o xlat=unix
     ```
     
     You can now install or copy files as a non-root user using an IBM Cognos CD from this drive.
   
   - When the installation is complete, type `pfs_umount /cdrom` and kill the pfsd and pfs_moun td daemons to unmount the CD.

2. To start the installation wizard, go to the operating system directory and type `. /isssetup`
Note: When you use the issetup command with XWindows, Japanese characters in messages and log files may be corrupted. When installing in Japanese on UNIX, first set environment variables LANG=C and LC_ALL=C (where C is the language code, for example ja_JP.PCK on Solaris), and then run an unattended installation (p. 401).

If you do not use XWindows, run an unattended installation (p. 401).

3. Follow the directions in the installation wizard and copy the required files to your computer.
   Install the samples in the same location as the server components.

4. In the Finish page of the installation wizard, click Finish.

To set up and configure the IBM Cognos 8 samples, see "Setting Up the Samples" (p. 235).

Steps for Windows

1. Insert the Samples disk or go to the location where the installation files were downloaded and extracted.
   The Welcome page of the installation wizard appears.

2. If no Welcome page appears, go to the operating system directory and double-click the issetup.exe file.

3. Select the language to use for the installation.
   The language that you select determines the language of the user interface. You can change the language to any of the installed languages after installation.

4. Follow the directions in the installation wizard to copy the required files to your computer.
   Install the samples in the same location as the server components.

5. In the Finish page of the installation wizard, click Finish.

6. Click Finish.
   Use the Windows Start menu to start IBM Cognos Configuration from the shortcut folder.

Setting Up the Samples

You can use the IBM Cognos samples to learn how to use IBM Cognos 8, including Framework Manager, Metric Studio, Metric Designer, and Event Studio.

IBM Cognos 8 provides sample databases that contain sales, marketing, and financial information for a fictional company named the Great Outdoors Company that sells sporting equipment.

Before you can use the sample databases, IBM Cognos 8 must be installed, configured, and running. For IBM Cognos 8 reports and analyses, Framework Manager should also be installed, configured, and running.

To use the sample content for Metric Designer, the optional modeling tool for Metric Studio, Metric Designer must also be installed, configured, and running.

To set up the samples, do the following:

- Restore the samples databases.
Create the data source connections to the samples databases.

If you plan to use OLAP data source samples, set up the sample cubes, if this is required, and create data source connections to the OLAP data sources you want to use.

Setup tasks are required only for Microsoft Analysis Services cubes and Essbase cubes.

If you plan to use the Metric Studio sample, set up the Metric Studio sample.

If you plan to use the Metric Designer sample, set up a data source connection to it, set up the Metric Studio sample, and import the Cognos_Samples and GO_Metrics deployment archives.

Import the samples content (packages) into the content store.

If you want to test the sample agent ELM Returns Agent using Event Studio, run the sample agent against changed data.

After you complete these tasks, use IBM Cognos 8 to run the sample reports or scorecards. You can later remove the IBM Cognos 8 samples.

Restore Backup Files for the Samples Databases

To use the samples, you must restore backup files for the samples databases. This action re-creates multilingual versions of the Great Outdoors databases.

The following sample databases and associated files are provided with IBM Cognos 8. For SQL Server and Oracle, each database is delivered as a Microsoft SQL Server backup file and an Oracle export file (.dmp). For DB2, the database schemas are delivered in a DB2 move file. The files are compressed, and you must extract them before you can restore the databases or schemas.

### SQL Server Databases and Files

<table>
<thead>
<tr>
<th>Database or schema description</th>
<th>File name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Outdoors sales</td>
<td>GOSALES.zip</td>
</tr>
<tr>
<td>Great Outdoors retailers</td>
<td>GOSALES.zip</td>
</tr>
<tr>
<td>Great Outdoors sales data warehouse</td>
<td>GOSALESDW.zip</td>
</tr>
<tr>
<td>Great Outdoors market research</td>
<td>GOSALES.zip</td>
</tr>
<tr>
<td>Great Outdoors human resources</td>
<td>GOSALES.zip</td>
</tr>
</tbody>
</table>

### Oracle Databases and Files

<table>
<thead>
<tr>
<th>Database or schema description</th>
<th>File name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Outdoors sales</td>
<td>GOSALES.dmp.gz</td>
</tr>
<tr>
<td>Great Outdoors retailers</td>
<td>GOSALESRT.dmp.gz</td>
</tr>
</tbody>
</table>
### Database or schema description

<table>
<thead>
<tr>
<th>Database or schema description</th>
<th>File name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Outdoors sales data warehouse</td>
<td>GOSALESDW. dmp.gz</td>
</tr>
<tr>
<td>Great Outdoors market research</td>
<td>GOSALESMR. dmp.gz</td>
</tr>
<tr>
<td>Great Outdoors human resources</td>
<td>GOSALESHR. dmp.gz</td>
</tr>
</tbody>
</table>

### DB2 Databases and Files

<table>
<thead>
<tr>
<th>Database or schema description</th>
<th>File name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Outdoors sales</td>
<td>GS_DB.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors retailers</td>
<td>GS_DB.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors sales data warehouse</td>
<td>GS_DB.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors market research</td>
<td>GS_DB.tar.gz</td>
</tr>
<tr>
<td>Great Outdoors human resources</td>
<td>GS_DB.tar.gz</td>
</tr>
</tbody>
</table>

When restoring the samples databases, ensure that you do the following:

- Give the restored databases the same names as the backup or export file names. The names are case-sensitive.

- Create users with select privileges for tables in multiple schemas.
  
  Setup for the GO Data Warehouse packages specifies a single connection object and user signon. This requires a single user named GOSALESDW with the select privilege to tables in a single schema named GOSALESDW.
  
  Setup for the GO Sales packages specifies a single connection object and user signon. This requires a single user named GOSALES with the select privilege to tables in four schemas: GOSALES, GOSALESHR, GOSALESMR, and GOSALESRT.

- Use the UTF-8 character set on the database server.

- Use the UTF-8 character set on the Windows computer that is the Oracle or DB2 client to see reports in multiple languages.
  
  For DB2, you must set the DB2CODEPAGE environment variable to a value of 1208. For Oracle, you must set the NLS_LANG environment variable to a value that is specific to a region. For example, set NLS_LANG for Americas to American_America.UTF8.

- Have sufficient disk space available in the target location. Reserve 150MB for the GO Sales data (four schemas) and 200MB for the GO Data Warehouse data (one schema).
Oracle Considerations
To create foreign key constraints in tables that reference different schemas, you must run gs_or_modify.sql, found in the same folder as the .dmp files.

SQL Server Considerations
If you restore the SQL Server backup files, you must use Microsoft SQL Server 2000 or Microsoft SQL Server 2005. Ensure that TCP/IP connectivity is used for the SQL server.

DB2 Considerations
Before you restore the Great Outdoors schemas contained in the DB2 move file on UNIX or Windows, extract the DB2 move file. On UNIX, extract the DB2 move file using the gnutar -xcvf DB2_move_filename or tar -xcvf DB2_move_filename command. If you use WinZip to extract the DB2 move file on Windows, ensure that the TAR file smart CR/LF conversion option is not selected.

After extracting the DB2 move file, restore the schemas to a database named GS_DB.

To add views, constraints, user privileges, and stored procedures to GS_DB, prepare and run the gs_db_modify files included with the samples in the following order:

- Update the user name and password at the top of the gs_db_modify.sql and save it.
- Execute gs_db_modify.bat

Steps
1. On the computer where IBM Cognos 8 is installed, go to the sql server, oracle, or db2 directory located in c8_location/webcontent/samples/datasources.

2. If required, copy the backup files for the samples databases to your database backup directory.
   - To ensure the security and integrity of IBM Cognos 8, copy the files to a directory that is protected from unauthorized or inappropriate access.

3. Restore the samples databases using your database management tool.
   - Tips:
     - For SQL backup files, restore the database from a device, and ensure that the restore locations are correct for the .ldf and .mdf database files. For more information, see the Microsoft SQL Server documentation or the IBM Cognos Knowledge Base on the IBM Cognos Customer Service Center (http://www.ibm.com/software/data/support/cognos_crc.html).
     - For DB2, when you create the GS_DB database, create a buffer pool with a page size of 16 KB and an associated tablespace.

4. For each database, create at least one user who has select permissions for all the tables in the restored databases.

You can now create the data source connections in the portal.
Create Data Source Connections to the Samples Databases

You must create data source connections to the samples databases that you restored. IBM Cognos 8 uses this information to connect to the samples databases and run the sample reports or use the sample package.

The DB2 database name that you type must use uppercase letters. Also, in Framework Manager, the schema names that you type for the DB2 data sources must use uppercase letters.

Before you create the data source connections, you must restore the backup files for the samples databases. Also, ensure that the IBM Cognos 8 service is running.

To create data sources, you must have execute permissions for the Data Source Connections secured feature and traverse permissions for the Administration secured function.

Steps

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking IBM Cognos Content on the Welcome page.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. Click the Configuration tab.
4. Click the new data source button.
5. In the Name box, type great_outdoors_sales and then click Next.
6. In the connection page, click the type of database that you restored and want to connect to, select an isolation level, and then click Next.

   The connection string page for the selected database appears.
   Tip: The user specified in the great_outdoors_sales data source must have select privileges on the tables in each of the GOSALES, GOSALESRT, GOSALESMR, AND GOSALESHR schemas (p. 236).
7. Do one of the following:
   - If you restored the samples databases in SQL Server, in the Server Name box, type the name of the server where the restored databases are located. In the Database name box, type GOSALES.
     IBM Cognos 8 samples require TCP/IP connectivity with SQL Server. Ensure the SQL Server Security is set to SQL Server and Windows, instead of Windows Only. The samples use SQL Server security for authentication.
   - If you restored the samples databases in Oracle, in the SQL*Net connect string box, type the Oracle connection string.
   - If you restored the samples database in DB2, in the DB2 database name box, type GS_DB using uppercase letters. In the DB2 connect string box, type the DB2 connection string.
8. Under Signons, select the both Password and Create a signon that the Everyone group can use check boxes, type the user ID and password for the user that you created when you restored the databases, and then click Finish.

   **Tip:** To test whether the parameters are correct, click Test the connection....

9. Click Finish.

10. Repeat steps 4 to 9 for the GOSALES DW samples database or schema, and type great_outdoors_warehouse in step 5.

11. If the GOSALES model will be used by modelers in IBM Cognos 8 Transformer, the connection string must be manually added to the cs7g.ini file.

   For more information, see “Add IBM Cognos Series 7 Data Sources to Transformer” (p. 356).

The Great Outdoors data source connections appear as entries in Data Source Connections.

You can now import the samples unless there is a syntax error in the connection string or an incorrect parameter.

**Set Up Microsoft Analysis Services Cube Samples**

IBM Cognos Connection or Framework Manager provides sample cubes for Microsoft Analysis Services (MSAS).

For finance data, use the GO Finance Fact cube derived from the GOSALES DW database. This cube contains year-to-date and monthly financial data for all accounts so that you can create financial statements in Analysis Studio, Query Studio, and Report Studio. The data is in actual US dollars submissions for 2004, 2005, 2006, or 2007 (7 months actual data only).

The MSAS2000 version of the finance cube and database is in the GOFinanceFact_XX.cab file. The MSAS2005 version is in the GOFinanceFact_XX.abf file. XX represents the language. For example, XX is replaced with EN which indicates English.

For sales data, use the GOSalesFact cube derived from the GOSalesFact_XX Analysis Services database, based on the GOSALES DW SQLSERVER Database. The cube contains measures such as unit cost, unit price, quantity, and gross profit. Dimensions include Time, Product, and Retailers.

The MSAS2000 version of the sales cube and database is archived in the GOSalesFact_XX.cab. The MSAS2005 version is in the GOSalesFact_XX.abf restorable backup file.

The backup files are located in the c8_location/webcontent/samples/datasources/cubes/MSAS directory. The files must be restored to a Microsoft SQL Server database running the applicable Microsoft Analysis Services (p. 236). and hosting the GOSALES DW database.

**Note:** Both Microsoft XML 6.0 Parser and Microsoft SQL 2005 Analysis Services 9.00 OLEDB Provider must be installed on the local client to establish data source connections to MSAS cubes.

**Steps**

1. On the computer where IBM Cognos 8 is installed, go to the c8_location/webcontent/samples/datasources/cubes/MSAS/en directory.

2. Copy the GOSALES DW.cab and GOSALES DW.abf files to a directory that you can access from the Analysis Manager console in the Analysis Servers of Microsoft SQL Server.
3. Use the Microsoft Analysis Services Analysis Manager to restore the database from the GOSALESDW.cab and GOSALESDW.abf files.

You can now create the data source connections using either the GOSalesFact_XX or GOFinanceFact_XX cubes (p. 242).

Set Up the Essbase Cube Sample

To set up the Essbase cube sample, you must have Hyperion Essbase and Essbase Integration Services Console installed.

Alternatively, you can set up the smaller Essbase cube GODBReduced.zip which is a filtered version of the full version, GODWENU. To set up the small version, unzip GODBReduced.zip, load the OTL and txt file in the Essbase environment, and perform the same steps shown below.

Steps

1. Go to the \c8\_location\\webcontent\\samples\\datasources\\cubes\\Essbase\\Outlines\_and\_Raw\_Data directory.

   This directory contains zip files for the different languages, such as EN.zip or JA.zip for English and Japanese, respectively.

2. Unzip the file for your language.

   Each zip file contains the following two files:
   - languageU\_Data.txt, such as ENU\_Data.txt or JAU\_Data.txt.
   - GODWlanguageU.otl, such as GODWENU.otl or GODWJAU.otl.

3. Using block storage in Essbase, create a Unicode application.

4. Within the application, create a new database.

   You can use GODWlanguageU, such as GODWENU or GODWJAU, as your database name, or use the name of your choice.

5. Copy and paste the GODWlanguageU.otl file in your database directory.

6. If the database name specified in step 4 is different than GODWlanguageU, rename the GODWlanguageU.otl file to match the database name that you created.

   Confirm that you want to overwrite the .otl file.

7. In Essbase Administration Services console, open your database outline and save it.

   Confirm that you want to save the outline even if it was not changed.

8. Copy the languageU\_Data.txt file and paste it in the same directory as the .otl file.

9. In Essbase Administration Services console, right-click the database you created and select Load Data.

10. Browse to the languageU\_Data.txt file in your database directory, select the file, and click OK.

11. After the data loads successfully, right-click the database and select Execute Calculation.
12. Select the default calculation, and click **OK**.

The calculation process may take up to 5 hours, depending on the computer where Essbase OLAP Server is installed.

You can now create a data source connection to the cube.

**Create Data Source Connections to OLAP Data Sources**

IBM Cognos 8 provides the following OLAP samples:

- GO Sales Fact and GO Finance Fact Microsoft Analysis Services cubes
- Great Outdoors Company cube
- Great Outdoors DB2 cube

You must create data source connections to the cubes to use the samples. You must set up the Microsoft Analysis Services cube samples or set up the Essbase cube sample, if you are using them, before creating data source connections.

You can increase the read cache size to improve query performance, although this setting has no effect on the initial time required to open a cube.

To create data sources, you must have execute permissions for the **Data Source Connections** secured feature, and traverse permissions for the **Administration** secured function.

**Steps for PowerCubes**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking **IBM Cognos Content** on the **Welcome** page.

2. In the upper-right corner, click **Launch, IBM Cognos Administration**.

3. On the **Configuration** tab, click **Data Source Connections**.

4. Click the new data source button.

   **Note**: You must add a data source connection for each cube.

5. To create a data source connection for the Sales and Marketing cube, type **sales_and_marketing** in the **Name** box, and then click **Next**.

   You can define a Windows path or a UNIX path.

   If you define a UNIX path and you plan to use Framework Manager, you must also define the Windows path and ensure that the cube is also available in the Windows location. Framework Manager can access cubes only from Windows locations.

6. In the connection page, under **Type** click **IBM Cognos PowerCube**.

   The connection string page for the selected database appears.

7. In the **Read cache size (MB)** box, type the cache size of the cube in megabytes.

   If you leave this field blank or type 0, IBM Cognos Connection uses the default value in the ppds_cfg.xml file in the configuration folder.
8. In the **Windows location** box, type the location and name of the \Sales\_and\_Marketing.mdc file for the data source connection. For example, type

```
c8_location/webcontent/samples/datasources/cubes/PowerCubes/En/Sales\_and\_Marketing.mdc
```

9. To test whether the parameters are correct, click **Test**.

10. Click **Finish**.

You can now import the sample package for the PowerCube to use this data source.

**Steps for Essbase/DB2 Cubes**

1. Open Framework Manager.

2. Click **Create a new project**.

3. In the **New Project** page, specify a name and location for the project.

4. In the **Select Language** page, click the design language for the project.

5. Click **OK**.

   The Metadata wizard appears.

6. In the connection page, under **type** click **Hyperion Essbase/IBM DB2 OLAP Server**, select an isolation level, and then click **Next**.

   The connection string page for the selected database appears.

7. In the **Server name** box, type the name of the server.

8. To test whether the parameters are correct, click **Test**.

9. Click **Finish**.

To use this data source, you must create a package using this data source in Framework Manager, and then publish the package.

**Steps for Microsoft Analysis Service Cubes**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking **IBM Cognos Content** on the **Welcome** page.

2. In the upper-right corner, click **Launch, IBM Cognos Administration**.

3. On the **Configuration** tab, click **New Data Source**.

4. In the **Name** box, type the name of the data source connection, and then click **Next**.

   - For the GOFinanceFact cube, type GOFinanceFact_XX_MSAS2005.
   - For the GOSalesFact cube, type GOSalesFact_XX_MSAS2005.
5. In the Specify Connection page of the New Datasource Wizard, click Microsoft Analysis Services 2005 or click Microsoft Analysis Services (via ODBO) as appropriate to the cube you are accessing.

6. Click Next.

7. In the Server Name box, type the name of the server where the restored databases are located. Back slashes are not required.

8. Under Signon, select the Password check box and then select the Create a signon that the Everyone group can use check box. Type the user ID and password for the MSAS database. For MSAS2005, this is a network login.

9. Click Test the connection, and then click the Test button. Click Close.

10. Click Finish. You are now prompted to create a package.

   Alternatively, you can deploy an existing package from a sample deployment archive. The names of the deployment archives match the datasource connection names specified in step 4 and contain sample reports that work with the associated cubes.

   In Content Administration on the Configuration tab in IBM Cognos Administration, click New Import. The New Import Wizard prompts you to select a deployment archive. When you select a deployment archive, it is important to click Edit and specify a target name for the package to prevent an existing package from being overwritten.

11. To create a package, check Create a Package and then click OK.

12. Specify a package name and then click OK.

   - For the GO Finance Fact cube, type GOFinanceFact_XX_MSAS2005.
   - For the GO Sales Fact cube, type GOSalesFact_XX_MSAS2005.

13. Specify the Analysis Services database you restored either GOFinanceFact_XX or GoSalesFact_XX:

   - For either the GOFinanceFact cube or the GOSalesFact cubes, type GOSALESNW.
   - For the GO Sales Fact cube, type GO Sales Fact.

14. Click the cube applicable to the database.

15. Click Finish.

**Set Up the Metric Studio Sample**

To set up the Metric Studio sample, do the following:

- Create a metric store named GOMETRIC.
- Create a new metric package named GO Metrics that uses the GOMETRIC metric store.

For the data source name, type go_metrics. When prompted by the wizard, select the standard Gregorian calendar and accept the defaults for Years, Quarters, and Months. Select January
1, 2004 as the start date for a period that includes the current year. For example, if it is the year 2008, use a period of at least 5 years.

For more information, see the section about metrics in the Administration and Security Guide.

- Set the import source.
- Import the metric data and files into the metric store.

**Steps to Set the Import Source**

1. Copy all text files from the appropriate folder to the folder `c8_location/deployment/cmm`:
   - For SQL Server or Oracle, copy from `c8_location/webcontent/samples/datasources/metricsdata/GO_Metrics_Unicode`
   - For DB2, copy from `c8_location/webcontent/samples/datasources/metricsdata/GOMetrics_UTF8`

   **Tip:** You may need to create the cmm folder.

2. In Public Folders, click GO Metrics.

3. In Metric Studio, in the Tools list, click Import Sources.

4. Click the Set Properties icon in the Actions column next to the Default Import Source.

5. Under Metric Deployment Location, click `cmm` folder. This is the default deployment location.

6. Click Include sub-directories.

7. In the File format box, click 8.4.2.

8. Under Character Set Encoding, select the appropriate encoding and click OK.
   - For SQL Server or Oracle, select Unicode (UTF-16)
   - For DB2, select Unicode (UTF-8)

You can now use the GO Metrics package in Metric Studio.

**Steps to Import Metric Data and Files into the Metric Store**

1. Choose whether to import the files into the metric store using IBM Cognos Connection or Metric Studio:
   - To use IBM Cognos Connection, in Public Folders or My Folders, open the GO Metrics package by clicking the view metric package contents icon in the Actions column. Click Metric Maintenance.
   - To use Metric Studio, in Metric Studio, in the Tools list, click Metric Maintenance.

2. Click the Import and transfer data from files into metric store metric task.

   **Tip:** If an error occurs, click Clear staging area rejected data logs, Clear metric history data only, and Clear metric history and calendar data.
You can now use the GO Metrics package in Metric Studio.

**Import the Samples**

To use the sample package and other content, you must import them from the sample deployment archive.

Before you import the Cognos_Samples.zip and Cognos_Metrics.zip deployment archives, you must restore the databases (p. 236). You must also create data source connections to the samples databases (p. 239).

Before you import the Cognos_PowerCube.zip or Cognos_PowerCube_Financial.zip deployment archive, you must create a database connection to the appropriate PowerCube (p. 242) and select the language that you want to use. The language that you select must be supported by your locale.

**Steps**

1. Copy the zip file from the `c8_location/webcontent/samples/content` directory to the directory where your deployment archives are saved.
   
   The default location is `c8_location/deployment`. The location is set in the configuration tool. For information about changing the location, see the configuration tool online help.

2. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking **IBM Cognos Content** on the Welcome page.

3. In the upper-right corner, click **Launch, IBM Cognos Administration**.

4. On the **Configuration** tab, click **Content Administration**.
   
   **Note:** To access this area in IBM Cognos Administration, you must have the required permissions for the Administration tasks secured feature.

5. On the toolbar, click the new import button.
   
   The **New Import** wizard appears.

6. In the **Deployment Archive** box, select Cognos_Samples, Cognos_PowerCube, Cognos_Metrics, or Cognos_Audit.

7. Click **Next**.

8. Type a unique name and an optional description and screen tip for the deployment archive, select the folder where you want to save it, and then click **Next**.

9. In the **Public Folders Content** box, select the packages and folders that you want to import.
   
   The Cognos_Samples deployment archive has the following packages or folders:
   
   - GO Data Warehouse (analysis), GO Data Warehouse (query), GO Sales (analysis), GO Sales (query), Sales and Marketing (conformed)
   
   - Dashboard Folder, Dashboard Objects, Sample Template, Practical Examples

   The Cognos_PowerCube deployment archive has packages or folders for the following languages:
   
   - English
The GO_Metrics deployment archive has the following packages or folders:

- **GO Metrics**

10. Select the options you want, along with your conflict resolution choice for options that you select, and then click **Next**.

11. In the **Specify the general options** page, select whether to include access permissions and references to external namespaces, and who should own the entries after they are imported.

12. Click **Next**.

   The summary information appears.

13. Review the summary information and click **Next**.

14. Select the action that you want:

   - To run once now or later, click **Save and run once**. Click **Finish**, specify the time and date for the run, then click **Run**. Review the run time and click **OK**.

   - To schedule at a recurring time, click **Save and schedule**. Click **Finish**, and then select frequency and start and end dates. Click **OK**.

     **Tip:** To temporarily disable the schedule, select the **Disable the schedule** check box.

   - To save without scheduling or running, click **Save only** and click **Finish**.

15. When the import is submitted, click **Finish**.

You can now use the sample packages to create reports and analyses in Report Studio, Query Studio, and Analysis Studio, view extracts in Metric Designer, or create agents in Event Studio. You can also run the sample reports that are available on the Public Folders tab in the portal.

### Sample Database Models

The following sample models provide information for the fictional company, the Great Outdoors and are provided with IBM Cognos 8:

- **great_outdoors_sales**, which refers to the samples database GOSALES

- **great_outdoors_warehouse**, which refers to the database GOSALESDW

- **gosales_scriptplayer**, which refers to the samples databases GOSALES

You can use sample database models on different platforms. For information about moving models from one platform to another, see the Framework Manager *User Guide*. 
Note: Transformer 8 uses some of the reports in the GO Data warehouse (query) package and GO Sales (query) package as source data for various cubes. These reports are meant to be simple list reports with no formatting. The description information for the reports indicates if the report was developed to be source data for Transformer 8.

**GO Sales Model**
This model contains sales analysis information for the fictional company, The Great Outdoors. It also has the query items required by the Event Studio samples. The model accesses three schemas and has two packages. One package is based on the dimensional view and the other is based on the query (relational) view.

**GO Data Warehouse Model**
This model contains financial, human resources, and sales and marketing information for the fictional company, The Great Outdoors. The model accesses a dimensional relational data source. The model has two packages. One package is based on the dimensional view, the other is based on the query (relational) view.

**GO Sales Scriptplayer**
These files can be used to run the action logs in sequence. This action generates a model named gosales_scriptplayer, and publishes a package to the content store.

**Example - Running the Sample ELM Returns Agent Against Changed Data**
You can change data in the GOSALES database if an Event Studio user wants to test the sample agent ELM Returns Agent. The Event Studio user can then run the sample agent twice and detect a new event. For more information, see the Event Studio User Guide.

Running the sample agent against changed data involves the following steps:

- The Event Studio user runs the sample agent against the default data and then asks you to change the data.

- You **simulate the occurrence of some initial events** and then ask the Event Studio user to run the sample agent a second time.

- The Event Studio user runs the sample agent against the changed data. The Event Studio user informs you when the agent has completed running.

- You **simulate the passage of time and the resolution of some events** and then ask the Event Studio user to run the sample agent a third time.

- The Event Studio user runs the sample agent for the final time. The Event Studio user informs you when the agent has completed running.

- You modify the data so that the ELM Returns Agent detects no events.

**Example - Simulate the Occurrence of Initial Events**
Run part of the Event_Studio_ELM_Agent_Modify_GOSALES.sql script to simulate the following data changes:
• change the date to the current date
• change the follow-up code to -1 in four records.
  A code of -1 indicates that follow-up is required.

Steps
1. In SQL Query Analyzer, from the File menu, click Open.
2. Go to c8_location/webcontent/samples/datasources/sqlserver and double-click the Event_Studio_ELM_Agent_Modify_GOSALES.sql file.
3. In the toolbar, from the list of databases, click GOSALES.
4. In the Query window, under Part 1, select all sixteen lines of code.
5. From the Query menu, click Execute.
The database is updated with the changes.

Example - Simulate the Passage of Time and the Resolution of Some Events
Run part of the Event_Studio_ELM_Agent_Modify_GOSALES.sql script to simulate data changes. First, change it so that two days elapsed since the ELM Returns Agent sample was last run. Second, for three of the four event instances found the last time that the ELM Returns Agent sample ran, change the follow-up code from -1 to +1. This indicates that only one of the these event instances still requires follow-up and the other instances are resolved.

Steps
1. In SQL Query Analyzer, from the File menu, click Open.
2. Go to c8_location/webcontent/samples/datasources/sqlserver and double-click the Event_Studio_ELM_Agent_Modify_GOSALES.sql file.
3. On the toolbar, click GOSALES from the list of databases.
4. In the Query window, under Part 2, select all lines of code that appear after the comments.
5. From the Query menu, click Execute.
The database is updated with the changes.

Example - Modify the Data So That the ELM Returns Agent Detects No Events
When the Event Studio user finishes running the sample ELM Returns Agent against changed data, they should notify you. You can then modify the GOSALES database so that the agent no longer detects any event instances.

Step
• Run the following sql commands:
  
  UPDATE GOSALES.RETURNED_ITEM SET FOLLOW_UP_CODE = 0
  UPDATE GOSALES.RETURNED_ITEM SET ASSIGNED_TO = 0
UPDATE GOSALES.RETURNED_ITEM SET DATE_ADvised = NULL

The data is modified. The sample ELM Returns Agent is ready to be used by another Event Studio User.

**Remove the Samples Databases from IBM Cognos 8**

After you finish using the sample reports to learn about IBM Cognos 8, including Framework Manager, you can delete the packages on which the samples are based. This action permanently removes the samples from the content store.

**Steps**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking **IBM Cognos Content** on the **Welcome** page.

2. Click the **Public Folders** tab.

3. Select the check box for the sample package you want to delete.

4. Click the delete button on the toolbar, and click **OK**.

To use the samples again, you must set up the samples.

---

**Install Translated Product Documentation**

To access translated user documentation, you must install it from IBM Cognos 8 Supplementary Languages Documentation.

English product documentation is installed when you install the IBM Cognos 8 gateway component. The **Installation and Configuration Guide**, the **Quick Start Installation and Configuration Guide**, and the **Readme** are the exceptions, and are available in all supported languages.

Before installing the Supplementary Languages Documentation, ensure that

- IBM Cognos 8 is installed and configured correctly
- adequate disk space is available to install supplementary languages documentation
  
  You need at least 220 MB of disk space.
- your software environment is supported

**Steps**

1. In the location where the Gateway component is installed, insert the IBM Supplementary Languages Documentation CD or go to the directory where the installation files were downloaded and extracted.

   On UNIX or Linux, mount the CD using Rock Ridge file extensions.

   On Windows, the installation wizard starts automatically from the product disk.

2. To manually start the installation wizard, go to the operating system directory and do the following:
• On Windows, if no Welcome page appears, double-click the issetup.exe file.
• On UNIX or Linux, type
  ./issetup

  Note: When you use the issetup command with XWindows, Japanese characters may be corrupted.

3. Follow the instructions in the installation wizard to copy the required files to the same location where you installed gateway components for IBM Cognos 8.

   Install in a directory that contains only ASCII characters in the path name. Some Web servers do not support non-ASCII characters in directory names.

   The supplementary languages documentation components is selected by default.

4. Choose the option you want in the Finish page of the installation wizard.

Install and Configure Additional Language Fonts

To add support for the Japanese Yen or Korean Won character, you must install additional fonts from IBM Cognos 8 Supplementary Languages Documentation.

The Unicode code point “U+005C” is officially assigned to the backslash. However, in Japan and Korea, that code point is historically assigned to their currency symbols and many people still prefer to see a yen or won sign in certain parts of software, for example in file paths. To accommodate this, you can install the “Andale WT J” and “Andale WT K” fonts.

Before installing the additional fonts, ensure that
• IBM Cognos 8 is installed and configured correctly
• adequate disk space is available to install additional fonts
   You need at least 220 MB of disk space.
• your software environment is supported

Steps
1. In the location where Application Tier Components are installed, insert the IBM Cognos 8 Supplementary Languages Documentation CD.

   On UNIX or Linux, mount the CD using Rock Ridge file extensions.

2. Go to the directory on the CD that is appropriate for your operating system.

3. Start the installation wizard by typing the following command:
• On Windows,
  issetup
• On UNIX or Linux,
  ./issetup
4. Follow the instructions in the installation wizard to copy the required files to the same location where you installed Application Tier Components.

Install in a directory that contains only ASCII characters in the path name. Some Web servers do not support non-ASCII characters in directory names.

When you are prompted to select components, clear IBM Cognos 8 Business Intelligence Supplementary Languages Documentation. expand Additional Language Fonts, and then select the font.

These fonts are copied to the c8_location/bin/fonts directory. This font location is defined in the Physical fonts location property value in IBM Cognos Configuration under Environment. If you move the fonts to another location, ensure that the new location is added to the Physical fonts location property value.

Fonts used to display data in a report are selected using a matching process between the fonts requested when the report is designed and the fonts that are available when the report is rendered. For PDF output and charts, this process occurs on the server where all fonts on the server that generates the report can be used.

5. Choose the option you want in the Finish page of the installation wizard.

After you install the additional fonts, you must configure support for them. For more information, see "Configure Support for Japanese Yen and Korean Won Characters" (p. 252).

Configure Support for Japanese Yen and Korean Won Characters

For Japanese and Korean currency characters to display correctly, you must define the additional fonts in the global style sheet.

Before you configure these fonts, you must install them from the IBM Cognos 8 Supplementary Languages Documentation CD.

Steps to Configure the Fonts for Yen and Won Characters


   The GlobalReportStyles.css style sheet is located in the c8_location/bin directory.

2. Enable one of the following sections and modify it as shown below:

   • /* For Japanese: */
     
     .pg,
     .pp
     {
       font-family: 'MS UI Gothic', 'Andale WT J', Tahoma, arial, geneva, helvetica, sans-serif;
     }

   • /* For Korean: */
The PDF generator uses the first available font on the server and includes all the characters in the string to be displayed. If you prefer to use other fonts on your server, you can insert them into the list.


4. Restart the IBM Cognos 8 server.

Any changes that you make to the style sheet are overwritten if you upgrade IBM Cognos 8. You must repeat this procedure following an upgrade.

Install Quick Tours

You must download the quick tours from the IBM Cognos Resource Center and install them in the same location as the Gateway component before users can access them. All language versions of the quick tours are available from the Web site.

Steps


2. Search for the appropriate version of IBM Cognos 8 Business Intelligence and then find the link for IBM Cognos 8 Business Intelligence Quick Tours.

3. Follow the instructions to download the package and extract the contents.

4. Run the issetup file and follow the instructions in the installation wizard to install the language versions of the quick tours that you need on the IBM Cognos gateway computer in the c8-location directory.

   For installations of multiple IBM Cognos 8 products that use multiple IBM Cognos gateways, you can install the quick tours on every gateway or on a single gateway.

5. If you install the quick tours on a single gateway in an installation with multiple IBM Cognos gateways, edit the c8_location\webcontent\documentation\language_code\tours\crntours.html file on the other gateways and change the JavaScript string variable sToursLocation to the URL of the gateway that contains the quick tours.

Configuring and Deploying IBM Cognos 8 Go! Office

IBM Cognos 8 Go! Office is available for deployment with all IBM Cognos 8 products, except for IBM Cognos 8 Metrics Manager.
To configure and deploy IBM Cognos 8 Go! Office, you can make the client files available for users to install or you can install the client on the user computers, depending on your environment.

To deploy IBM Cognos 8 Go! Office with PowerPlay, you can configure gateway mappings so that IBM Cognos 8 Go! Office users can access PowerPlay reports that reside on a PowerPlay server. You can also configure the size of report that can be imported from IBM Cognos 8 to IBM Cognos 8 Go! Office. For more information about gateway mappings and report size limits, see the Administration and Security Guide.

Use the following checklist to configure IBM Cognos 8 Go! Office:

- Copy IBM Cognos 8 Go! Office files to the LAN for deployment, if required.
- Enable secure sockets layer support, if required.
- Enable anonymous access, if required.
- Deploy IBM Cognos 8 Go! Office to client environments.

Copy IBM Cognos 8 Go! Office Client Files to a Central LAN Location

Before users can deploy IBM Cognos 8 Go! Office to their computer, they need access to the installation files. You can give users the installation CD that is included with IBM Cognos 8 PowerPlay or you can copy the files from the CD to a central location on the LAN or a Web site.

**Step**

- From the IBM Cognos 8 Go! Office CD or a directory where the installation files were downloaded and extracted, copy the following components to the LAN location:
  - the KB908002 folder
  - the setup.exe file
  - the CognosOfficeSetup.msi file

Users can then run the setup.exe file from the LAN location to deploy IBM Cognos 8 Go! Office.

Enable SSL Support for the HTTPS Interface to PowerPlay

If your environment includes IBM Cognos Series 7 PowerPlay Enterprise Server and you are using the HTTPS interface to access PowerPlay, you must enable Secure Sockets Layer (SSL) support. To enable SSL support for the PowerPlay gateway and the IBM Cognos 8 dispatcher, you must define a password for the IBM Cognos 8 key store and then create and store the Web server Certificate Authority (CA) certificate in the IBM Cognos 8 key store.

**Steps to Enable SSL Support**

1. Save the Web server CA certificate in the e8_location\bin directory and name it ca.cer.
2. If you did not define a password for the IBM Cognos 8 key store, do it now in IBM Cognos Configuration:
   - In the Explorer window, click Cryptography, Cognos.
• In the Properties window, under Certificate Authority settings, set the Certificate Authority key store password.

• From the File menu, click Save.

• From the Actions menu, click Restart.

3. From the command line, go to the `c8_location\bin` directory.

4. Set the JAVA_HOME environment variable to the Java Runtime Environment location used by the application server running IBM Cognos 8.
   
   The following examples assume that the default Tomcat application server is being used:
   
   • For Microsoft Windows, type
     
     `set JAVA_HOME=c8_location\bin\jre\version`
   
   • For UNIX Cshell, type
     
     `setenv JAVA_HOME c8_location/bin/jre/version`

5. From the same command line, run the certificate tool:
   
   • For Microsoft Windows, type
     
     `ThirdPartyCertificateTool.bat -T -i -r ca.cer -k ..\configuration\signkeypair\jCAKeystore -p keystore password`
   
   • For UNIX, type
     
     `ThirdPartyCertificateTool.sh -T -i -r ca.cer -k ../configuration/signkeypair/jCAKeystore-p`

You can now install the CA certificate on all client computers, or make the CA certificate available for users to install with the IBM Cognos 8 Go! Office client.

**Steps to Install the CA Certificate on the Client Workstation**

1. Retrieve the CA certificate from the issuing authority.
   
   The file has a .cer extension. This is not the same certificate as the one used by the Web server. It is the certificate for the issuing authority itself.

2. Double-click the .cer file, click **Install Certificate**, and then click **Next**.

3. Click **Place all certificates in the following store**.

4. Click **Browse**, click **Trusted Root Certification Authorities**, and then click **Next**.

5. Click **Finish**.

**Step to Make the CA Certificate Accessible to Users**

• Copy the CA certificate to a central location on the LAN.
Enable Anonymous Access for PowerPlay

When using single signon with Microsoft Internet Information Services (IIS), anonymous access must be enabled for portal users to access IBM Cognos 8 Go! Office documents that are based on PowerPlay reports.

If necessary, a second PowerPlay gateway can be used to provide anonymous access for IBM Cognos 8 Go! Office. For more information, see the topic about specifying gateway mappings in the Administration and Security Guide.

Steps
1. On each computer where Content Manager is installed, start IBM Cognos Configuration.
2. In the Explorer window, under Security, Authentication, click Cognos.
3. In the Properties window, click the box next to the Allow anonymous access property and then click True.
4. From the File menu, click Save.

Deploying IBM Cognos 8 Go! Office Client

IBM Cognos 8 Go! Office is available for installation with IBM Cognos 8 components. After IBM Cognos 8 is installed and configured, you can install IBM Cognos 8 Go! Office on client workstations.

Deploying IBM Cognos 8 Go! Office to Client Computers

IBM Cognos 8 Go! Office uses Microsoft .NET Framework to allow users to interact with server-based components. Microsoft .NET Framework and the required updates are downloaded and installed by the setup file when you install IBM Cognos 8 Go! Office. The setup file must be run on all user computers.

For a list of supported versions of Microsoft .NET Framework, see the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

Use the following checklist to guide you through the deployment process:

- Install .NET Framework and IBM Cognos 8 Go! Office.
  For more information about installing IBM Cognos 8 Go! Office, see the IBM Cognos 8 Go! Office Installation Guide.

- Set the macro security level for Microsoft Office XP, if required.

- Install the CA certificate for secure sockets layer support, if required.
Set Macro Security Level for Microsoft Office XP

For Microsoft Office XP applications to run IBM Cognos 8 Go! Office, you must set your macro security level to an appropriate level. You must set this for Microsoft Office Excel, Microsoft Office Word, and Microsoft Office PowerPoint.

Steps
1. Open your Microsoft Office XP application.
2. From the Tools menu, click Macros, and then click Security.
3. Choose whether to change the security level or the trusted publishers.
   - On the Security Level tab, click Medium or Low, and then click OK.
   - On the Trusted Publishers tab, select Trust all installed add-ins or templates, and then click OK.

Install the CA Certificate for the HTTPS Interface to Series 7 PowerPlay

If your environment includes IBM Cognos Series 7 PowerPlay Enterprise Server and you are using the HTTPS (https://) interface to access Series 7 PowerPlay, you must install a certificate issued by a certificate authority (CA). The CA certificate is required for secure sockets layer (SSL) support.

Steps
1. Retrieve the CA certificate from your administrator. The file has a .cer extension.
2. Double-click the .cer file, click Install Certificate, and then click Next.
3. Click Place all certificates in the following store.
4. Click Browse, click Trusted Root Certification Authorities, and then click Next.
5. Click Finish.
Chapter 9: Install and Configure Optional Components
IBM Cognos 8 components run with two levels of logon: anonymous and authenticated. By default, anonymous access is enabled.

You can use both types of logon with your installation. If you choose to use only authenticated logon, you can disable anonymous access.

For authenticated logon, you must configure IBM Cognos 8 components with an appropriate namespace for the type of authentication provider in your environment. You can configure multiple namespaces for authentication and then choose at run time which namespace you want to use. For more information, see the *Administration and Security Guide*.

If you upgraded from ReportNet and IBM Cognos 8 detects a previously configured namespace that is no longer configured, the unconfigured namespace appears in the list of authentication providers in the Administration portal. You can configure the namespace if you still require the user account information. Otherwise, you can delete the namespace. For information about deleting the namespace, see the *Administration and Security Guide*.

Also, when upgrading from one version to another, you must use the same authentication namespace for both versions. Otherwise, the new version may not contain the same policies, users, roles, and groups.

IBM Cognos 8 components support the following types of servers as authentication sources:

- Active Directory Server
- IBM Cognos Series 7
- Custom Authentication Provider
- LDAP
- eTrust SiteMinder
- NTLM
- SAP

If you use more than one Content Manager computer, you must configure identical authentication providers on each Content Manager computer. This means that the type of authentication provider you select and the way you configure it must be identical on all computers for all platforms. The configuration must contain information that is accessible by all Content Manager computers.

When IBM Cognos 8 is installed on a single Linux computer, or when Content Manager is installed on a Linux computer, IBM Cognos 8 can be configured to use only LDAP V3-compliant directory servers and custom providers as authentication sources.
Some authentication providers require libraries external to the IBM Cognos 8 environment to be available. If these libraries are not available on Linux, the authentication provider cannot be initialized.

If you want to configure one of the following as your authentication source, you must install Content Manager on a non-Linux computer:

- IBM Cognos Series 7 namespace
- Active Directory Server
- NTLM
- eTrust SiteMinder
- SAP BW

If you enable security, you must configure security settings immediately after you complete the installation and configuration process. For more information, see the Administration and Security Guide.

**Important:** We recommend that you do not disable security after you enable it. If you delete a namespace, the user preferences, My Folders, and My Pages entries are permanently lost. Existing permission settings will refer to users, groups, or roles that no longer exist. While this does not affect how the permissions work, a user administering the permission settings may see "unknown" entries. Because these entries refer to users, groups, and roles which no longer exist, you can safely delete them.

After you configure an authentication provider for IBM Cognos 8 components, you can enable single signon between your authentication provider environment and IBM Cognos 8 components. This means that a user logs on once and can then switch to another application without being asked to log on again.

Users can select namespaces when they log in to the IBM Cognos 8 portal. You can hide Custom Java namespaces (p. 272) and eTrust SiteMinder namespaces (p. 291) from users.

To use an authentication provider and to require users to authenticate

- Disable anonymous access, if required.
- Configure IBM Cognos 8 components to use an authentication provider.

### Disable Anonymous Access

By default, IBM Cognos 8 components do not require user authentication. Users can log on anonymously.

If you want to use authenticated logon only, you can use IBM Cognos Configuration to disable anonymous access.

**Steps**

1. In each location where Content Manager is installed, start Cognos Configuration.
2. In the Explorer window, under Security, Authentication, click Cognos.
The IBM Cognos resource represents the Cognos namespace. The Cognos namespace stores information about IBM Cognos groups, such as the Anonymous User, contacts, and distribution lists, and refers to objects in other security namespaces. For more information, see the Administration and Security Guide.

3. In the Properties window, click the box next to the Allow anonymous access property and then click False.

4. From the File menu, click Save.

Now, users are required to provide logon credentials when they access IBM Cognos resources.

Restrict User Access to the Cognos Namespace

You can restrict access to users belonging to any group or role defined in the IBM Cognos built-in namespace. By default, all users belong to several built-in groups or roles. To restrict access, you must

- enable the property to restrict access
- remove the Everyone group from the IBM Cognos built-in roles and groups
- ensure that authorized users belong to at least one IBM Cognos role or group

Steps

1. On each Content Manager computer, start IBM Cognos Configuration.

2. In the Explorer window, under Security, click Authentication.

3. In the Properties window, change the value of Restrict access to members of the built-in namespace to True.

4. From the File menu, click Save.

You must now use the portal to remove the Everyone group from the IBM Cognos built-in roles and groups, and then ensure that authorized users belong to at least one IBM Cognos built-in role or group.

For information about adding or removing members of an IBM Cognos group or role, see the Administration and Security Guide.

Configuring IBM Cognos 8 Components to Use Active Directory Server

If you install Content Manager on a Windows computer, you can configure Active Directory as your authentication source using an Active Directory namespace.

If you install Content Manager on a UNIX computer, you must instead use an LDAP namespace to configure Active Directory as your authentication source. If you install Content Manager on Windows and UNIX computers, you must use an LDAP namespace to configure Active Directory on all Content Manager computers. When you use an LDAP namespace to authenticate against
Active Directory Server, you are limited to LDAP features only. You do not have access to Active Directory features such as advanced properties for domains (p. 264) and single signon using Kerberos delegation (p. 266).

If you install Content Manager on a Linux computer, the same restrictions apply as for UNIX. You must use an LDAP namespace to configure Active Directory as your authentication source.

For more information, see "Configure an LDAP Namespace for Active Directory Server" (p. 275).

If you want to use Microsoft SQL Server or Microsoft Analysis Server as a data source and use single signon for authentication, you must use Active Directory as your authentication source.

You cannot connect to the Active Directory Global Catalog, which is a caching server for Active Directory Server. If the connection uses port 3268, you must change it. By default, Active Directory Server uses port 389.

To use an Active Directory Server namespace and to set up single signon, do the following:

- Configure IBM Cognos 8 components to use an Active Directory Server namespace
- Enable secure communication to the Active Directory Server, if required
- Enable single signon between Active Directory Server and IBM Cognos 8 components

Configure an Active Directory Namespace

You can use Active Directory Server as your authentication provider.

You also have the option of making custom user properties from the Active Directory Server available to IBM Cognos 8 components.

For IBM Cognos 8 to work properly with Active Directory Server, ensure that the Authenticated users group has Read privileges for the Active Directory folder where users are stored.

If you are configuring an Active Directory namespace to support single signon with a Microsoft SQL Server or Microsoft Analysis Server data source, ensure the following configuration:

- The IBM Cognos 8 gateway is installed on an IIS Web server that is configured for Windows Integrated Authentication.
- The gateway is assigned to the local intranet Web site in your Web browser.
- Content Manager is installed on a Windows 2000 or Windows 2003 server.
- Content Manager, Application Tier Components, IIS Web server, and the data source server (Microsoft SQL Server or Microsoft Analysis Server) belong to the Active Directory domain.
- The data source connection for Microsoft SQL Server or Microsoft Analysis Server is configured for External Namespace and that namespace must be the Active Directory namespace.

For more information about data sources, see the Administration and Security Guide.

Steps

1. On every computer where you installed Content Manager, open IBM Cognos Configuration.
2. In the **Explorer** window, under **Security**, right-click **Authentication**, and then click **New resource**, **Namespace**.

3. In the **Name** box, type a name for your authentication namespace.

4. In the **Type** list, click the appropriate namespace and then click **OK**.

   The new authentication provider resource appears in the **Explorer** window, under the **Authentication** component.

5. In the **Properties** window, for the **Namespace ID** property, specify a unique identifier for the namespace.

6. Specify the values for all other required properties to ensure that IBM Cognos 8 components can locate and use your existing authentication provider.

7. Specify the values for the **Host and port** property.

   To support Active Directory Server failover, you can specify the domain name instead of a specific domain controller. For example, use `mydomain.com:389` instead of `dc1.mydomain.com:389`.

8. If you want to search for details when authentication fails, specify the user ID and password for the **Binding credentials** property.

   Use the credentials of an Active Directory Server user who has search and read privileges for that server.

9. From the **File** menu, click **Save**.

10. Test the connection to a new namespace. In the **Explorer** window, under **Authentication**, right-click the new authentication resource and click **Test**.

    IBM Cognos 8 loads, initializes, and configures the provider libraries for the namespace.

---

**Make Custom User Properties for Active Directory Available to IBM Cognos 8 Components**

You can use arbitrary user attributes from your Active Directory Server in IBM Cognos 8 components. To configure this, you must add these attributes as custom properties for the Active Directory namespace.

The custom properties are available as session parameters through Framework Manager. For more information about session parameters, see the Framework Manager **User Guide**.

You can also use the custom properties inside command blocks to configure Oracle sessions and connections. You can use the command blocks can be used with Oracle light-weight connections and virtual private databases. For more information, see the **Administration and Security Guide**.

**Steps**

1. On every computer where you installed Content Manager, open IBM Cognos Configuration.

2. In the **Explorer** window, under **Security**, **Authentication**, click the Active Directory namespace.
3. In the Properties window, click in the Value column for Custom properties and click the edit button.

4. In the Value - Custom properties window, click Add.

5. Click the Name column and type the name you want IBM Cognos 8 components to use for the session parameter.

6. Click the Value column and type the name of the account parameter in your Active Directory Server.

7. Repeat steps 4 to 6 for each custom parameter.

8. Click OK.

9. From the File menu, click Save.

Enabling Secure Communication to the Active Directory Server

If you are using an SSL connection to the Active Directory Server, you must copy the certificate from the Active Directory Server to the Content Manager computer.

Steps

1. On every Content Manager computer, use your Web browser to connect to the Active Directory Server and copy the CA root certificate to a location on the Content Manager computer.

2. Add the CA root certificate to the certificate store of the account that you are using for the current IBM Cognos session:
   - If you are running the IBM Cognos session under a user account, use the same Web browser as in step 1 to import the CA root certificate to the certificate store for your user account.
     For information, see the documentation for your Web browser.
   - If you are running the IBM Cognos session under the local computer account, use Microsoft Management Console (MMC) to import the CA root certificate to the certificate store for the local computer.
     For information, see the documentation for MMC.

3. In IBM Cognos Configuration, restart the service:
   - In the Explorer window, click IBM Cognos 8 service, IBM Cognos 8.
   - From the Actions menu, click Restart.

Include or Exclude Domains Using Advanced Properties

When you configure an authentication namespace for IBM Cognos 8, users from only one domain can log in. By using the Advanced properties for Active Directory Server, users from related (parent-child) domains and unrelated domain trees within the same forest can also log in.
Authentication in One Domain Tree
If you set a parameter named chaseReferrals to true, users in the original authenticated domain and all child domains of the domain tree can log in to IBM Cognos 8. Users above the original authenticated domain or in a different domain tree cannot log in.

Authentication in All Domain Trees in the Forest
If you set a parameter named MultiDomainTrees to true, users in all domain trees in the forest can log in to IBM Cognos 8.

Steps
1. On every computer where you installed Content Manager, open IBM Cognos Configuration.
2. In the Explorer window, under Security, Authentication, click the Active Directory namespace.
3. In the Properties window, specify the Host and port property:
   - For users in one domain, specify the host and port of a domain controller for the single domain.
   - For users in one domain tree, specify the host and port of the top-level controller for the domain tree.
   - For users in all domain trees in the forest, specify the host and port of any domain controller in the forest.
4. Click in the Value column for Advanced properties and click the edit button.
5. In the Value - Advanced properties window, click Add.
6. Specify two new properties, chaseReferrals and MultiDomainTrees, with the following values:

<table>
<thead>
<tr>
<th>Authentication for</th>
<th>chaseReferrals</th>
<th>MultiDomainTrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>One domain</td>
<td>False</td>
<td>False</td>
</tr>
<tr>
<td>One domain tree</td>
<td>True</td>
<td>False</td>
</tr>
<tr>
<td>All domain trees in the forest</td>
<td>True</td>
<td>True</td>
</tr>
</tbody>
</table>
7. Click OK.
8. From the File menu, click Save.

Enabling Single Signon Between Active Directory Server and IBM Cognos 8 Components
By default, the Active Directory provider uses Kerberos delegation and integrates with the IIS Web server for single signon if Windows integrated authentication (formerly named NT Challenge Response) is enabled on the IIS Web server.
If Windows integrated authentication is enabled, you are not prompted to reenter authentication information when accessing IBM Cognos content that is secured by the Active Directory namespace.

If you do not want Kerberos delegation, you can configure the provider to access the environment variable REMOTE_USER to achieve single signon. You must set the advanced property singleSignOnOption to the value IdentityMapping. You must also specify bind credentials for the Active Directory namespace. Microsoft sets REMOTE_USER by default when you enable Windows integrated authentication. If Kerberos authentication is bypassed, single signon to Microsoft OLAP (MSAS) data sources will not be possible.

**Steps for Single Signon Using Kerberos Delegation**

1. Set up Windows integrated authentication on the IIS Web server.

2. Install Content Manager on a computer that is part of the domain, for the active and standby Content Manager computers.

3. Set up the computers, or the user account under which Content Manager runs, to be trusted for delegation.

   When setting up the computers using the Active Directory user tool, do not select the **Account** attribute, which is sensitive and cannot be delegated.

**Steps for Single Signon Using REMOTE_USER**

1. On every computer where you installed Content Manager, open IBM Cognos Configuration.

2. In the **Explorer** window, under **Security**, **Authentication**, click the Active Directory namespace.

3. Click in the **Value** column for **Advanced properties** and then click the edit button.

4. In the **Value - Advanced properties** dialog box, click **Add**.

5. In the **Name** column, type **singleSignOnOption**

6. In the **Value** column, type **IdentityMapping**.

7. Click **OK**.

8. Click in the **Value** column for **Binding credentials**, and then click the edit button.

9. In the **Value - Binding credentials** dialog box, specify a user ID and password and then click **OK**.

   The Active Directory provider now uses REMOTE_USER for single signon.

**Tip**: To switch back to Kerberos delegation, edit **Advanced properties** and, in the **Value** column, type **KerberosAuthentication**.
Configuring IBM Cognos 8 to Use IBM Cognos Series 7 Namespace

You can configure IBM Cognos 8 components to use an IBM Cognos Series 7 namespace as the authentication provider. Users will be authenticated based on the authentication and signon configuration of the IBM Cognos Series 7 namespace.

A IBM Cognos Series 7 namespace is required if you want to use IBM Cognos Series 7 PowerCubes and Transformer models in IBM Cognos 8. You must configure the namespace before you load the Transformer models.

If you plan to run IBM Cognos 8 products within a 64-bit application server, you cannot configure an IBM Cognos Series 7 namespace as your authentication source.

If you want to configure an IBM Cognos Series 7 namespace as your authentication source, you must install Content Manager on a computer that supports IBM Cognos Series 7.

**Note:** You cannot use an IBM Cognos Series 7 Local Authentication Export (LAE) file for authentication with IBM Cognos 8 components.

You can configure IBM Cognos 8 components to use multiple IBM Cognos Series 7 authentication providers. We recommend that all IBM Cognos Series 7 namespaces use the same primary IBM Cognos Series 7 Ticket Server. Otherwise, you may receive errors or be prompted for authentication more than once. To maintain performance, also ensure that the ticket server is running.

If you change the configuration information stored in the directory server used for IBM Cognos Series 7, you must restart the IBM Cognos 8 service before the changes take effect in the IBM Cognos installation.

A user must be in at least one Access Manager user class to log on to IBM Cognos 8 components.

To use an IBM Cognos Series 7 namespace and to set up single signon, do the following:

- Configure IBM Cognos 8 to use an IBM Cognos Series 7 namespace
- Enable secure communication to the directory server used by the IBM Cognos Series 7 namespace, if required
- Enable single signon between IBM Cognos Series 7 and IBM Cognos 8

Configure an IBM Cognos Series 7 Namespace

You can configure IBM Cognos 8 to use one or more IBM Cognos Series 7 namespaces for authentication.

**Steps**

1. On every computer where you installed Content Manager, open IBM Cognos Configuration.

2. In the **Explorer** window, under **Security**, right-click **Authentication**, and then click **New resource**, **Namespace**.

3. In the **Name** box, type a name for your authentication namespace.

4. In the **Type** list, click the appropriate namespace and then click **OK**.
The new authentication provider resource appears in the Explorer window, under the Authentication component.

5. In the Properties window, for the Namespace ID property, specify a unique identifier for the namespace.

6. Specify the values for all other required properties to ensure that IBM Cognos 8 components can locate and use your existing authentication provider.

   If your IBM Cognos Series 7 namespace version is 16.0, ensure that the Data encoding property is set to UTF-8. In addition, the computers where Content Manager is installed must use the same locale as the data in the IBM Cognos Series 7 namespace.

   The host value can be a computer name or an IP address. If you are publishing from PowerPlay Enterprise Server to IBM Cognos 8, you must use the same value format used in IBM Cognos Series 7 Configuration Manager for the location of the directory server. For example, if the computer name is used in IBM Cognos Series 7 Configuration Manager, you must also use the computer name in IBM Cognos Configuration for IBM Cognos 8.

7. If your namespace environment includes version 15.2 of the IBM Cognos Series 7 namespace, you must disable the Series7NamespacesAreUnicode setting.

   - In the Properties window, in the Advanced Properties value, click the edit button.
   
   - In the Value - Advanced properties window, click Add.
   
   - In the Name box, type Series7NamespacesAreUnicode.
   
   - In the Value box, type False, and then click OK.

8. In the Properties window, under Cookie settings, ensure that the Path, Domain, and Secure flag enabled properties match the settings configured for IBM Cognos Series 7.

9. From the File menu, click Save.

10. Test the connection to a new namespace. In the Explorer window, under Authentication, right-click the new authentication resource and click Test.

### Enabling Secure Communication to the Directory Server Used by the IBM Cognos Series 7 Namespace

If you are using an SSL connection to the Directory Server used by the IBM Cognos Series 7 namespace, you must copy the certificate from the Directory Server to each Content Manager computer.

For more information, see the IBM Cognos Access Manager Administrator Guide and the documentation for your Directory Server.

### Enabling Single Signon Between IBM Cognos Series 7 and IBM Cognos 8

If your IBM Cognos Series 7 namespace has been configured for integration with your external authentication mechanisms for single signon, the IBM Cognos Series 7 provider will automatically use this configuration.
By configuring single signon, you are not prompted to reenter authentication information when accessing IBM Cognos content that is secured by the IBM Cognos Series 7 namespace.

**Steps**

1. Ensure that you configured IBM Cognos 8 components to use an IBM Cognos Series 7 namespace as an authentication provider (p. 267).

2. For IBM Cognos Series 7, start Configuration Manager.

3. Click **Open the current configuration**.

4. On the **Components** tab, in the **Explorer** window, expand **Services**, **Access Manager - Runtime** and click **Cookie Settings**.

5. In the **Properties** window, ensure that the **Path**, **Domain**, and **Secure Flag Enabled** properties match the settings configured for IBM Cognos 8.

6. Save and close Configuration Manager.

7. If the IBM Cognos Series 7 namespace uses the Trusted Signon plug-in for single signon, you must now define the **SaferAPIGetTrustedSignonWithEnv function**.

You can now add IBM Cognos Upfront Series 7 NewsBoxes to your IBM Cognos Connection portal pages.

**IBM Cognos Series 7 Namespaces and the IBM Cognos Series 7 Trusted Signon Plug-in**

If the IBM Cognos Series 7 namespace uses the Trusted Signon plug-in for single signon, you must define the **SaferAPIGetTrustedSignonWithEnv function** in your plug-in. Then you must recompile and redeploy the library for single signon to be achieved between IBM Cognos 8 components and your authentication mechanism.

The **SaferAPIGetTrustedSignonWithEnv function** is an updated version of the **SaferAPIGetTrustedSignon** function. This update is required because IBM Cognos 8 logon is not performed at the Web server as is the case for IBM Cognos Series 7 applications. Therefore, it is not possible for the plug-in to perform a getenv() API call to retrieve Web server environment variables. The plug-in can request that specific environment variables be removed from the Web server using the **SaferAPIGetTrustedSignonWithEnv function**.

If you are running both IBM Cognos Series 7 and IBM Cognos 8 products using the same plug-in, both the **SaferAPIGetTrustedSignonWithEnv** and **SaferAPIGetTrustedSignon** functions are required. For information about the **SaferAPIGetTrustedSignon** function, see the IBM Cognos Series 7 documentation.

**SaferAPIGetTrustedSignonWithEnv Function**

For users to be successfully authenticated by Access Manager, OS signons must exist and be enabled in the current namespace.
The memory for the returned trustedSignonName and trustedDomainName is allocated internally in this API. If the function returns SAFER_SUCCESS, Access Manager calls SaferAPIFreeTrustedSignon to free the memory allocated.

The memory for the returned reqEnvVarList is allocated internally in this API. If the function returns SAFER_INFO_REQUIRED, Access Manager calls SaferAPIFreeBuffer() to free the memory allocated.

You must implement both the SaferAPIGetTrustedSignon and SaferAPIFreeBuffer functions to successfully register the library when SaferAPIGetTrustedSignonWithEnv is implemented. The function SaferAPIGetError is required only if you want specific error messages returned from your plug-in.

**Syntax**

```c
SaferAPIGetTrustedSignonWithEnv(
    EnvVar envVar[],          /*[IN]*/
    char **reqEnvVarList,    /*[OUT]*/
    void **trustedSignonName, /*[OUT]*/
    unsigned long *trustedSignonNameLength, /*[OUT]*/
    void **trustedDomainName, /*[OUT]*/
    unsigned long *trustedDomainNameLength, /*[OUT]*/
    SAFER_USER_TYPE *userType, /*[OUT]*/
    void **implementerData); /*[IN/OUT]*/
```

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[in] envVar</td>
<td>An array of environment variable names and values that were retrieved from the Web server. The end of the array is represented by an entry with a null envVarName and a null envVarValue. Note that the first time this API is called, the envVar array contains only the end of array marker.</td>
</tr>
<tr>
<td>[in] reqEnvVarList</td>
<td>A string that contains a comma separated list of environment variable names that are requested by the Safer implementation. The end of the list must be null-terminated.</td>
</tr>
<tr>
<td>[out] trustedSignonName</td>
<td>A sequence of bytes that identifies the currently authenticated user. This value does not need to be null-terminated. This value is mandatory.</td>
</tr>
<tr>
<td>[out] trustedSignonNameLength</td>
<td>An integer value that indicates the length of the trustedSignonName. This length should exclude the null terminator, if there is one. This value is mandatory.</td>
</tr>
<tr>
<td>[out] trustedDomainName</td>
<td>A sequence of bytes that identifies the domain of the currently authenticated user. You do not need to null-terminate this value. If there is no trustedDomainName, the return is null. This value is optional.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>[out] trustedDomainNameLength</td>
<td>An integer value that indicates the length of the trustedDomainName. This length should exclude the null terminator, if there is one. This value is mandatory and must be set to zero if there is no trustedDomainName.</td>
</tr>
<tr>
<td>[out] userType</td>
<td>A value that indicates the type of user that Access Manager will authenticate. This value is mandatory.</td>
</tr>
<tr>
<td></td>
<td>The following return values are required for Access Manager to successfully authenticate users:</td>
</tr>
<tr>
<td></td>
<td>SAFER_NORMAL_USER</td>
</tr>
<tr>
<td></td>
<td>A named user. OS signons must exist and be enabled in the current namespace.</td>
</tr>
<tr>
<td></td>
<td>SAFER_GUEST_USER</td>
</tr>
<tr>
<td></td>
<td>A guest user. A guest user account must exist and be enabled in the current namespace.</td>
</tr>
<tr>
<td></td>
<td>SAFER_ANONYMOUS_USER</td>
</tr>
<tr>
<td></td>
<td>An anonymous user. An anonymous user account must exist and be enabled in the current namespace.</td>
</tr>
<tr>
<td>[in/out] implementerData</td>
<td>A pointer used to preserve implementation-specific data between invocations. An invocation occurs every time Access Manager calls the trusted signon plug-in. This value is valid only if the trusted signon plug-in was invoked and you set a value for it.</td>
</tr>
</tbody>
</table>

**Configuring IBM Cognos 8 to Use a Custom Authentication Provider**

If you implemented a custom Java authentication provider with your existing security infrastructure, you can configure IBM Cognos 8 components to use it.

You can use a custom authentication provider to access and authenticate users to an alternate authentication source. You can also use it as a single signon mechanism to integrate IBM Cognos 8 components with your security infrastructure. You can hide the namespace from users during logon.

For more information, see the Custom Authentication Provider Developer Guide.

**Configure a Custom Authentication Namespace**

You can configure IBM Cognos 8 components to use a custom authentication namespace. Any additional configuration for authentication source access, single signon, or custom attributes are dependent on the custom authentication provider implementation.
Ensure that the versions of Java Runtime Environment and Java SDK that you use are compatible with each other. If you use supported versions of the JRE and Java SDK that are not compatible with each other, then the custom Java authentication provider that you configure will not appear in the list of namespaces in IBM Cognos Configuration.

**Steps**

1. On every computer where installed Content Manager, open IBM Cognos Configuration.

2. In the Explorer window, under Security, right-click Authentication, and click New resource, Namespace.

3. In the Name box, type a name for your authentication namespace.

4. In the Type list, click Custom Java Provider and then click OK.

   The new authentication provider resource appears in the Explorer window, under the Authentication component.

5. In the Properties window, for the NamespaceID property, specify a unique identifier for the namespace.

   Tip: Do not use colons (:) in the Namespace ID property.

6. Specify the values for all other required properties to ensure that IBM Cognos 8 can locate and use your existing authentication provider.

7. From the File menu, click Save.

8. Test the connection to a new namespace. In the Explorer window, under Authentication, right-click the new authentication resource and click Test.

   IBM Cognos 8 loads, initializes, and configures the provider libraries for the namespace.

**Hide the Namespace from Users During Login**

You can hide namespaces from users during login. You can have trusted signon namespaces without showing them on the namespace selection list that is presented when users log in.

For example, you may want to integrate single signon across systems but maintain the ability for customers to authenticate directly to IBM Cognos 8 without being prompted to choose a namespace.

**Steps**

1. On each computer where you configured a custom Java authentication provider, open IBM Cognos Configuration.

2. In the Explorer window, under Security, Authentication, click the custom Java authentication provider.

3. In the Properties window, click the box next to Selectable for authentication and then click False.

4. From the File menu, click Save.
The namespace is not shown on the selection list that is presented at login.

**Configuring IBM Cognos 8 Components to Use LDAP**

You can configure IBM Cognos 8 components to use an LDAP namespace as the authentication provider. You can use an LDAP namespace for users that are stored in an LDAP user directory, Active Directory Server, IBM Directory Server, Novell Directory Server, or Sun Java System Directory Server.

You can also use LDAP authentication with DB2 and Essbase OLAP data sources by specifying the LDAP namespace when you set up the data source connection. For more information, see the *Administration and Security Guide*.

You also have the option of making custom user properties from the LDAP namespace available to IBM Cognos 8 components.

To bind a user to the LDAP server, the LDAP authentication provider must construct the distinguished name (DN). If the Use external identity property is set to True, it uses the External identity mapping property to try to resolve the user's DN. If it cannot find the environment variable or the DN in the LDAP server, it attempts to use the User lookup property to construct the DN.

If users are stored hierarchically within the directory server, you can configure the User lookup and External identity mapping properties to use search filters. When the LDAP authentication provider performs these searches, it uses the filters you specify for the User lookup and External identity mapping properties. It also binds to the directory server using the value you specify for the Bind user DN and password property or using anonymous if no value is specified.

When an LDAP namespace has been configured to use the External identity mapping property for authentication, the LDAP provider binds to the directory server using the Bind user DN and password or using anonymous if no value is specified. All users who log on to IBM Cognos 8 using external identity mapping see the same users, groups, and folders as the Bind user.

If you do not use external identity mapping, you can specify whether to use bind credentials to search the LDAP directory server by configuring the **Use bind credentials for search** property. When the property is enabled, searches are performed using the bind user credentials or using anonymous if no value is specified. When the property is disabled, which is the default setting, searches are performed using the credentials of the logged-on user. The benefit of using bind credentials is that instead of changing administrative rights for multiple users, you can change the administrative rights for the bind user only.

**Important:** If you use a DN syntax, such as `uid=${userID}, ou=mycompany.com`, for the properties **User lookup**, **External identity mapping**, or **Bind user DN and password**, you must escape all special characters that are used in the DN. If you use a search syntax, such as `(uid=${userID})`, for the properties **User lookup** or **External identity mapping**, you must not escape special characters that are used in the DN.

To use an LDAP namespace and set up single sign-on, do the following:

- Configure IBM Cognos 8 components to use an LDAP namespace
- Make custom user properties available to IBM Cognos 8 components, if required
Enable secure communication to the LDAP server, if required

Enable single signon between LDAP and IBM Cognos 8 components, if required

Configure an LDAP Namespace

You can configure IBM Cognos 8 components to use an LDAP namespace when the users are stored in an LDAP user directory. The LDAP user directory may be accessed from within another server environment, such as Active Directory Server or eTrust SiteMinder.

If you are configuring an LDAP namespace for a directory server other than LDAP, see the appropriate section:

- For Active Directory Server, see Configure an LDAP Namespace for Active Directory Server.
- For IBM Directory Server, see Configure an LDAP Namespace for IBM Directory Server.
- For Novell Directory Server, see Configure an LDAP Namespace for Novell Directory Server.
- For Sun Java System Directory Server, see Configure an LDAP Namespace for Sun Java System Directory Server

You can also use LDAP authentication with DB2 and Essbase OLAP data sources by specifying the LDAP namespace when you set up the data source connection. For more information, see the Administration and Security Guide.

Steps

1. On every computer where you installed Content Manager, open IBM Cognos Configuration.

2. In the Explorer window, under Security, right-click Authentication, and then click New resource, Namespace.

3. In the Name box, type a name for your authentication namespace.

4. In the Type list, click the appropriate namespace and then click OK.

   The new authentication provider resource appears in the Explorer window, under the Authentication component.

5. In the Properties window, for the Namespace ID property, specify a unique identifier for the namespace.

6. Specify the values for all other required properties to ensure that IBM Cognos 8 components can locate and use your existing authentication provider.

7. If you want the LDAP authentication provider to bind to the directory server using a specific Bind user DN and password when performing searches, then specify these values.

   If no values are specified, the LDAP authentication provider binds as anonymous.

   If external identity mapping is enabled, Bind user DN and password are used for all LDAP access. If external identity mapping is not enabled, Bind user DN and password are used only when a search filter is specified for the User lookup property. In that case, when the user DN
is established, subsequent requests to the LDAP server are executed under the authentication context of the end user.

8. If you do not use external identity mapping, use bind credentials for searching the LDAP directory server by doing the following:
   - Ensure that Use external identity is set to False.
   - Set Use bind credentials for search to True.
   - Specify the user ID and password for Bind user DN and password.

   If you do not specify a user ID and password, and anonymous access is enabled, the search is done using anonymous.

9. Check the mapping settings for required objects and attributes.
   Depending on the LDAP configuration, you may have to change some default values to ensure successful communication between IBM Cognos 8 components and the LDAP server.
   LDAP attributes that are mapped to the Name property in Folder mappings, Group mappings, and Account mappings must be accessible to all authenticated users. In addition, the Name property must not be blank.

10. From the File menu, click Save.

11. Test the connection to a new namespace. In the Explorer window, under Authentication, right-click the new authentication resource and click Test.

   IBM Cognos 8 loads, initializes, and configures the provider libraries for the namespace.

**Configure an LDAP Namespace for Active Directory Server**

If you configure a new LDAP namespace for use with an Active Directory Server, you must modify the necessary settings and change the values for all properties of the Active Directory objects.

**Steps**

1. On every computer where you installed Content Manager, open IBM Cognos Configuration.

2. In the Explorer window, under Security, right-click Authentication, and then click New resource, Namespace.

3. In the Name box, type a name for your authentication namespace.

4. In the Type list, click the appropriate namespace and then click OK.

   The new authentication provider resource appears in the Explorer window, under the Authentication component.

5. In the Properties window, for the NamespaceID property, specify a unique identifier for the namespace.

   **Tip:** Do not use colons (:) in the Namespace ID property.
6. Specify the values for all other required properties to ensure that IBM Cognos 8 components can locate and use your existing authentication provider.

The following settings are examples:

- For User lookup, specify \texttt{(sAMAccountName=${userID})}.
- If you use single signon, for Use external identity, set the value to True.
- If you use single signon, for External identity mapping, specify \texttt{(sAMAccountName=${environment("REMOTE_USER")})}.
  
  If you want to remove the domain name from the REMOTE\_USER variable, specify \texttt{(sAMAccountName=${replace(${environment("REMOTE_USER")}, "domain\\", ",")})}.
- For Bind user DN and password, specify \texttt{user@domain}.
- For Unique identifier, specify objectGUID.

7. If you want the LDAP authentication provider to bind to the directory server using a specific Bind user DN and password when performing searches, then specify these values.

If no values are specified, the LDAP authentication provider binds as anonymous.

8. If you do not use external identity mapping, use bind credentials for searching the LDAP directory server by doing the following:

- Ensure that Use external identity is set to False.
- Set Use bind credentials for search to True.
- Specify the user ID and password for Bind user DN and password.

9. To configure the LDAP advanced mapping properties for use with the Active Directory Server objects, use the values specified in the following table.

LDAP attributes that are mapped to the Name property in Folder mappings, Group mappings, and Account mappings must be accessible to all authenticated users. In addition, the Name property must not be blank.

<table>
<thead>
<tr>
<th>Mappings</th>
<th>LDAP property</th>
<th>LDAP value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folder</td>
<td>Object class</td>
<td>organizationalUnit,organization,container</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>description</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>ou,o,cn</td>
</tr>
<tr>
<td>Group</td>
<td>Object class</td>
<td>group</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>description</td>
</tr>
<tr>
<td></td>
<td>Member</td>
<td>member</td>
</tr>
<tr>
<td>Mappings</td>
<td>LDAP property</td>
<td>LDAP value</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Name</td>
<td>cn</td>
<td></td>
</tr>
<tr>
<td>Account</td>
<td>Object class</td>
<td>user</td>
</tr>
<tr>
<td></td>
<td>Business phone</td>
<td>telephonenumber</td>
</tr>
<tr>
<td></td>
<td>Content locale</td>
<td>(leave blank)</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>description</td>
</tr>
<tr>
<td></td>
<td>Email</td>
<td>mail</td>
</tr>
<tr>
<td></td>
<td>Fax/Phone</td>
<td>facsimiletelephonenumber</td>
</tr>
<tr>
<td></td>
<td>Given name</td>
<td>givenname</td>
</tr>
<tr>
<td></td>
<td>Home phone</td>
<td>homephone</td>
</tr>
<tr>
<td></td>
<td>Mobile phone</td>
<td>mobile</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>displayName</td>
</tr>
<tr>
<td></td>
<td>Pager phone</td>
<td>pager</td>
</tr>
<tr>
<td></td>
<td>Password</td>
<td>unicodePwd</td>
</tr>
<tr>
<td></td>
<td>Postal address</td>
<td>postaladdress</td>
</tr>
<tr>
<td></td>
<td>Product locale</td>
<td>(leave blank)</td>
</tr>
<tr>
<td></td>
<td>Surname</td>
<td>sn</td>
</tr>
<tr>
<td>Username</td>
<td>sAMAccountName</td>
<td></td>
</tr>
</tbody>
</table>

These mapping properties represent changes based on a default Active Directory Server installation. If you have modified the schema, you may have to make additional mapping changes.

10. From the File menu, click Save.

11. Test the connection to a new namespace. In the Explorer window, under Authentication, right-click the new authentication resource and click Test.

IBM Cognos 8 loads, initializes, and configures the provider libraries for the namespace.
Configure an LDAP Namespace for IBM Directory Server

If you configure a new LDAP namespace for use with an IBM Directory Server, you must modify the necessary settings and change the values for all properties of the IBM Directory objects.

Steps

1. In each location where you installed Content Manager, open Cognos Configuration.

2. In the Explorer window, under Security, right-click Authentication, and then click New resource, Namespace.

3. In the Name box, type a name for your authentication namespace.

4. In the Type list, click LDAP, and then click OK.

The new authentication namespace resource appears in the Explorer window, under the Authentication component.

5. In the Properties window, for the NamespaceID property, specify a unique identifier for the namespace.

   Tip: Do not use colons (:) in the Namespace ID property.

6. Specify the values for all other required properties to ensure that IBM Cognos 8 can locate and use your existing authentication namespace.

   - For User lookup, specify (cn=${userId})
   - For Bind user DN and password, specify cn=root

7. If you want the LDAP authentication provider to bind to the directory server using a specific Bind user DN and password when performing searches, then specify these values.

   If no values are specified, the LDAP authentication namespace binds as anonymous.

8. If you do not use external identity mapping, use bind credentials for searching the LDAP directory server by doing the following:

   - Ensure that Use external identity is set to False.
   - Set Use bind credentials for search to True.
   - Specify the user ID and password for Bind user DN and password.

9. To configure the LDAP advanced mapping properties for use with IBM Directory Server objects, use the values specified in the following table.

   LDAP attributes that are mapped to the Name property in Folder mappings, Group mappings, and Account mappings must be accessible to all authenticated users. In addition, the Name property must not be blank.

<table>
<thead>
<tr>
<th>Mappings</th>
<th>LDAP property</th>
<th>LDAP value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folder</td>
<td>Object class</td>
<td>organizationalunit,organization,container</td>
</tr>
</tbody>
</table>
## Mappings

<table>
<thead>
<tr>
<th>Group</th>
<th>LDAP property</th>
<th>LDAP value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>description</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>ou,o,cn</td>
<td></td>
</tr>
<tr>
<td>Object class</td>
<td>groupofnames</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>description</td>
<td></td>
</tr>
<tr>
<td>Member</td>
<td>member</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>cn</td>
<td></td>
</tr>
<tr>
<td>Account</td>
<td>Object class</td>
<td>inetorgperson</td>
</tr>
<tr>
<td>Business phone</td>
<td>telephonenumber</td>
<td></td>
</tr>
<tr>
<td>Content locale</td>
<td>(leave blank)</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>description</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td>mail</td>
<td></td>
</tr>
<tr>
<td>Fax/Phone</td>
<td>facsimiletelephonenumber</td>
<td></td>
</tr>
<tr>
<td>Given name</td>
<td>givenname</td>
<td></td>
</tr>
<tr>
<td>Home phone</td>
<td>homephone</td>
<td></td>
</tr>
<tr>
<td>Mobile phone</td>
<td>mobile</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>cn</td>
<td></td>
</tr>
<tr>
<td>Pager phone</td>
<td>pager</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td>userPassword</td>
<td></td>
</tr>
<tr>
<td>Postal address</td>
<td>postaladdress</td>
<td></td>
</tr>
<tr>
<td>Product locale</td>
<td>(leave blank)</td>
<td></td>
</tr>
<tr>
<td>Surname</td>
<td>sn</td>
<td></td>
</tr>
<tr>
<td>Username</td>
<td>uid</td>
<td></td>
</tr>
</tbody>
</table>
These mapping properties represent changes based on a default IBM Directory Server installation. If you have modified the schema, you may have to make additional mapping changes.

10. From the File menu, click Save.

Configure an LDAP Namespace for Novell Directory Server

If you configure a new LDAP namespace for use with a Novell Directory Server, you must modify the necessary settings and change the values for all properties of the Novell Directory objects.

Steps

1. On every computer where you installed Content Manager, open IBM Cognos Configuration.

2. In the Explorer window, under Security, right-click Authentication, and then click New resource, Namespace.

3. In the Name box, type a name for your authentication namespace.

4. In the Type list, click LDAP and then click OK.

   The new authentication namespace resource appears in the Explorer window, under the Authentication component.

5. In the Properties window, for the NamespaceID property, specify a unique identifier for the namespace.

   Tip: Do not use colons (:) in the Namespace ID property.

6. Specify the values for all other required properties to ensure that IBM Cognos 8 can locate and use your existing authentication namespace.

   - For User lookup, specify (cn=${userID})
   - For Bind user DN and password, specify the base DN for an administration user, such as cn=Admin,0=COGNOS

7. If you want the LDAP authentication provider to bind to the directory server using a specific Bind user DN and password when performing searches, then specify these values.

   If no values are specified, the LDAP authentication namespace binds as anonymous.

8. If you do not use external identity mapping, use bind credentials for searching the LDAP directory server by doing the following:

   - Ensure that Use external identity is set to False.
   - Set Use bind credentials for search to True.
   - Specify the user ID and password for Bind user DN and password.

9. To configure the LDAP advanced mapping properties for use with Novell Directory Server objects, use the values specified in the following table.
LDAP attributes that are mapped to the **Name** property in **Folder mappings**, **Group mappings**, and **Account mappings** must be accessible to all authenticated users. In addition, the **Name** property must not be blank.

For users to successfully log in to IBM Cognos Connection, they must have permission to read the ou and o attributes.

<table>
<thead>
<tr>
<th>Mappings</th>
<th>LDAP property</th>
<th>LDAP value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folder</td>
<td>Object class</td>
<td>organizationalunit,organization,container</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>description</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>ou,o,cn</td>
</tr>
<tr>
<td>Group</td>
<td>Object class</td>
<td>groupofnames</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>description</td>
</tr>
<tr>
<td></td>
<td>Member</td>
<td>member</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>cn</td>
</tr>
<tr>
<td>Account</td>
<td>Object class</td>
<td>inetOrgPerson</td>
</tr>
<tr>
<td></td>
<td>Business phone</td>
<td>telephonenumber</td>
</tr>
<tr>
<td></td>
<td>Content locale</td>
<td>Language</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>description</td>
</tr>
<tr>
<td></td>
<td>Email</td>
<td>mail</td>
</tr>
<tr>
<td></td>
<td>Fax/Phone</td>
<td>facsimiletelephonenumber</td>
</tr>
<tr>
<td></td>
<td>Given name</td>
<td>givenname</td>
</tr>
<tr>
<td></td>
<td>Home phone</td>
<td>homephone</td>
</tr>
<tr>
<td></td>
<td>Mobile phone</td>
<td>mobile</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>cn</td>
</tr>
<tr>
<td></td>
<td>Pager phone</td>
<td>pager</td>
</tr>
<tr>
<td></td>
<td>Password</td>
<td>(leave blank)</td>
</tr>
</tbody>
</table>
These mapping properties represent changes based on a default Novell Directory Server installation. If you have modified the schema, you may have to make additional mapping changes.

10. From the File menu, click Save.

### Configure an LDAP Namespace for Sun Java System Directory Server

If you configure a new LDAP namespace for use with Sun Java System Directory Server, you must modify the necessary settings and change the values for all properties of the Sun Java System Directory objects.

**Steps**

1. On every computer where you installed Content Manager, open IBM Cognos Configuration.

2. In the Explorer window, under Security, right-click Authentication, and then click New resource, Namespace.

3. In the Name box, type a name for your authentication namespace.

4. In the Type list, click LDAP and then click OK.

   The new authentication namespace resource appears in the Explorer window, under the Authentication component.

5. In the Properties window, for the NamespaceID property, specify a unique identifier for the namespace.

   **Tip:** Do not use colons (:) in the Namespace ID property.

6. Specify the values for all other required properties to ensure that IBM Cognos 8 can locate and use your existing authentication namespace.

   The following settings are examples:
   
   - For **User lookup**, type `(uid=${userID})`
   
   - If you use single signon, for **Use external identity**, set the value to **True**.
   
   - If you use single signon, for **External identity mapping**, specify any attribute, such as the NT user domain ID or the user ID:
For Unique identifier, type nsuniqueid

7. If you want the LDAP authentication provider to bind to the directory server using a specific Bind user DN and password when performing searches, then specify these values.
   If no values are specified, the LDAP authentication namespace binds as anonymous.

8. If you do not use external identity mapping, use bind credentials for searching the LDAP directory server by doing the following:
   - Ensure that Use external identity is set to False.
   - Set Use bind credentials for search to True.
   - Specify the user ID and password for Bind user DN and password.

9. To configure the LDAP advanced mapping properties for use with Sun Java System Directory Server objects, use the values specified in the following table.

   LDAP attributes that are mapped to the Name property in Folder mappings, Group mappings, and Account mappings must be accessible to all authenticated users. In addition, the Name property must not be blank.

<table>
<thead>
<tr>
<th>Mappings</th>
<th>LDAP property</th>
<th>LDAP value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folder</td>
<td>Object class</td>
<td>organizationalUnit,organization</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>description</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>ou,o</td>
</tr>
<tr>
<td>Group</td>
<td>Object class</td>
<td>groupofuniquenames</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>description</td>
</tr>
<tr>
<td></td>
<td>Member</td>
<td>uniquemember</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>cn</td>
</tr>
<tr>
<td>Account</td>
<td>Object class</td>
<td>inetorgperson</td>
</tr>
<tr>
<td></td>
<td>Business phone</td>
<td>telephonenumber</td>
</tr>
<tr>
<td></td>
<td>Content locale</td>
<td>preferredlanguage</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>description</td>
</tr>
<tr>
<td>Mappings</td>
<td>LDAP property</td>
<td>LDAP value</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Email</td>
<td>mail</td>
<td></td>
</tr>
<tr>
<td>Fax/Phone</td>
<td>facsimiletelephonenumber</td>
<td></td>
</tr>
<tr>
<td>Given name</td>
<td>givenname</td>
<td></td>
</tr>
<tr>
<td>Home phone</td>
<td>homephone</td>
<td></td>
</tr>
<tr>
<td>Mobile phone</td>
<td>mobile</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>cn</td>
<td></td>
</tr>
<tr>
<td>Pager phone</td>
<td>pager</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td>userPassword</td>
<td></td>
</tr>
<tr>
<td>Postal address</td>
<td>postaladdress</td>
<td></td>
</tr>
<tr>
<td>Product locale</td>
<td>preferredlanguage</td>
<td></td>
</tr>
<tr>
<td>Surname</td>
<td>sn</td>
<td></td>
</tr>
<tr>
<td>Username</td>
<td>uid</td>
<td></td>
</tr>
</tbody>
</table>

These mapping properties represent changes based on a default Sun Java System Directory Server installation. If you have modified the schema, you may have to make additional mapping changes.

10. From the **File** menu, click **Save**.

**Make Custom User Properties for LDAP Available to IBM Cognos 8 Components**

You can use arbitrary user attributes from your LDAP authentication provider in IBM Cognos 8 components. To configure this, you must add these attributes as custom properties for the LDAP namespace. The custom properties are available as session parameters through Framework Manager. For more information about session parameters, see the Framework Manager User Guide.

You can also use the custom properties inside command blocks to configure Oracle sessions and connections. You can use the command blocks with Oracle lightweight connections and virtual private databases. For more information, see the Administration and Security Guide.

**Steps**

1. In each location where you installed Content Manager, open Cognos Configuration.

2. In the **Explorer** window, under **Security, Authentication**, click the LDAP namespace.
3. In the **Properties** window, click in the **Value** column for **Custom properties**, and click the edit button.

4. In the **Value - Custom properties** window, click **Add**.

5. Click the **Name** column, and type the name you want IBM Cognos 8 components to use for the session parameter.

6. Click the **Value** column, and type the name of the account parameter in your LDAP authentication provider.

7. Repeat the preceding two bulleted steps for each custom parameter.

8. Click **OK**.

9. From the **File** menu, click **Save**.

### Enable Secure Communication to the LDAP Server

Secure LDAP protocol (LDAPS) encrypts the communication between the Access Manager component of Content Manager and the directory server. LDAPS prevents sensitive information in the directory server and the LDAP credentials from being sent as clear text.

To enable LDAPS, install a server certificate that is signed by a certificate authority in the directory server. Next, create a certificate database to contain the certificates. Finally, configure the directory server and the IBM Cognos 8 LDAP namespace to use LDAPS.

The server certificate must be a copy of either

- the trusted root certificate and all other certificates that make up the chain of trust for the directory server certificate.
  
  The trusted root certificate is the certificate of the root certificate authority that signed the directory server certificate.

- the directory server certificate only

The certificates must be Base64 encoded in ASCII (PEM) format. All certificates except the trusted root certificate must not be self-signed.

IBM Cognos 8 works with both the cert8.db and cert7.db versions of the client certificate database. You must use the certutil tool from Netscape OpenSource toolkit NSS_3_11_4_RTM to create the certificate database. IBM Cognos 8 does not accept other versions of cert8.db files, including those from the certutil tool that is provided with Microsoft Active Directory. The appropriate certutil tool is available from [ftp://ftp.mozilla.org/pub/mozilla.org/security/nss/releases/NSS_3_11_4_RTM](ftp://ftp.mozilla.org/pub/mozilla.org/security/nss/releases/NSS_3_11_4_RTM).


### Steps

1. Create a directory for the certificate database.

2. Create the certificate database by typing

    `certutil -N -d certificate_directory`
Enabling Single Signon Between LDAP and IBM Cognos 8 Components

You achieve single signon to IBM Cognos 8 components by configuring the External Identity mapping property. The External Identity mapping can refer to a CGI environment variable or an HTTP header variable. In the case of an application server gateway or dispatcher entry pointing to IBM Cognos 8 components, the External Identity mapping can refer to the userPrincipalName session variable. The resolved value of the External Identity mapping property at runtime must be a valid user DN.

When an LDAP namespace is configured to use the External Identity mapping property for authentication, the LDAP provider binds to the directory server using the Bind user DN and password.
or using anonymous if no value is specified. All users who log on to IBM Cognos 8 using external identity mapping see the same users, groups, and folders as the Bind user.

If you want IBM Cognos 8 components to work with applications that use Java or application server security, you can configure the External identity mapping property to obtain the user ID from the Java user principal. Include the token ${environment("USER_PRINCIPAL")} in the value for the property. For more information, see the online help for IBM Cognos Configuration.

You can apply limited expression editing to the External Identity mapping property using the replace operation.

**Replace Operation**

The replace operation returns a copy of the string with all occurrences of the old substring replaced by the new substring.

The following rules apply:

- The character \ escapes the characters in the function parameters. Characters such as \ and " need escaping.
- Nested function calls are not supported.
- Special characters are not supported.

**Syntax**

${replace(str, old, new)}

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>str</td>
<td>The string to search.</td>
</tr>
<tr>
<td>old</td>
<td>The substring to be replaced by the new substring.</td>
</tr>
<tr>
<td>new</td>
<td>The substring that replaces the old substring.</td>
</tr>
</tbody>
</table>

**Examples**

${replace(${environment("REMOTE_USER")}, "NAMERICA\", "")}

${replace(${environment("REMOTE_USER")}, "NAMERICA\", "")}

**Configuring IBM Cognos 8 Components to Use eTrust SiteMinder**

You can configure IBM Cognos 8 components to use a Netegrity SiteMinder namespace as the authentication source, provided that you installed Content Manager on a non-Linux computer.

To configure an authentication provider in an eTrust SiteMinder environment, you configure an LDAP, NTLM, or Netegrity SiteMinder namespace depending on your eTrust SiteMinder configur-
Supported eTrust SiteMinder configurations are LDAP, Active Directory Server, and NTLM user directories.

**Note:** The authentication provider uses an eTrust SiteMinder SDK to implement a custom agent. The custom agent deployment requires that you set the Agent Properties in the eTrust SiteMinder Policy server administration console to support 4.x agents.

If you plan to run IBM Cognos 8 products within a 64-bit application server, you cannot configure a Netegrity SiteMinder namespace as your authentication source.

**If eTrust SiteMinder is Configured For More Than One User Directory**

If you configured eTrust SiteMinder for more than one user directory, you must use the Netegrity SiteMinder namespace. After configuring the Netegrity SiteMinder namespace in IBM Cognos 8, you must also add a corresponding LDAP, Active Directory Server, or NTLM namespace to the IBM Cognos configuration for each user directory defined in eTrust SiteMinder.

When configuring a corresponding LDAP namespace, ensure that the External identity mapping property is enabled and that you include the token REMOTE_USER in the value for the property. This does not mean that you must configure eTrust SiteMinder to set REMOTE_USER. The IBM Cognos Netegrity SiteMinder namespace passes user information internally to the corresponding LDAP namespace when it receives successful user identification from the eTrust SiteMinder environment.

When configuring a corresponding Active Directory namespace, ensure that the singleSignOnOption property is set to IdentityMapping. The IBM Cognos Netegrity SiteMinder namespace passes user information internally to the corresponding LDAP namespace using the REMOTE_USER environment variable when it receives successful user identification from the eTrust SiteMinder environment. For more information, see "Enabling Single Signon Between Active Directory Server and IBM Cognos 8 Components" (p. 265).

**If eTrust SiteMinder is Configured With Only One User Directory**

If eTrust SiteMinder is configured with only one user directory, the Netegrity SiteMinder namespace is not required. You can use the user directory as your authentication source by configuring the appropriate namespace, or you can configure the eTrust SiteMinder provider with one user directory. For example, if the eTrust SiteMinder user directory is NTML, you can configure IBM Cognos 8 components with an NTLM namespace or configure IBM Cognos 8 components with one Netegrity SiteMinder namespace, referring to one user directory that is an NTLM namespace.

If the eTrust SiteMinder user directory is Active Directory, you can use an Active Directory namespace or an LDAP namespace that is configured for use with Active Directory.

If you want to use the user directory as your authentication source directly instead of configuring a Netegrity SiteMinder namespace, configure the appropriate LDAP (p. 274), Active Directory (p. 275), or NTLM (p. 291) namespace. In this case, verify the Agent Configuration Object properties in eTrust SiteMinder Policy Server. Ensure that SetRemoteUser is activated.

When configuring the LDAP namespace, in this case, ensure that the External identity mapping property is enabled and that you include the token REMOTE_USER in the value for the property.
When configuring the Active Directory namespace, in this case, ensure that the singleSignOnOption property is set to IdentityMapping. For more information, see "Enabling Single Signon Between Active Directory Server and IBM Cognos 8 Components" (p. 265).

To use an eTrust SiteMinder namespace and to set up single signon, do the following:

- Configure IBM Cognos 8 components to use a Netegrity SiteMinder namespace
- Enable secure communication to the eTrust SiteMinder user directory, if required
- Enable single signon between eTrust SiteMinder and IBM Cognos 8
- Protect the IBM Cognos Web alias

You can hide the namespace from users during login (p. 272).

**Configure a Netegrity SiteMinder Namespace**

If you configured eTrust SiteMinder for more than one user directory, you must use the Netegrity SiteMinder namespace. After adding the Netegrity SiteMinder namespace, you must also add a corresponding LDAP or NTLM namespace for each user directory.

You can also configure an Netegrity SiteMinder namespace if users are stored in

- an LDAP server
- an NTLM server
- an Active Directory server

**Steps**

1. On the computer where you installed Content Manager, open IBM Cognos Configuration.
2. In the **Explorer** window, under **Security**, right-click **Authentication**, and click **New resource**, **Namespace**.
3. In the **Name** box, type a name for your authentication namespace.
4. In the **Type** list, click the Netegrity SiteMinder namespace and then click **OK**.
   
   The new authentication provider resource appears in the **Explorer** window, under the **Authentication** component.
5. In the **Properties** window, for the **NamespaceID** property, specify a unique identifier for the namespace.
   
   **Tip:** Do not use colons (:) in the Namespace ID property.
6. Specify the values for all other required properties to ensure that IBM Cognos 8 components can locate and use your existing authentication provider.
7. In the **Explorer** window, under **Security**, **Authentication**, right-click the namespace and click **New resource**, **SiteMinder Policy Server**.
8. In the **Name** box, type a name for the policy server and click **OK**.
9. In the **Properties** window, specify the **Host** property and any other property values you want to change.

10. In the **Explorer** window, right-click the new SiteMinder Policy Server and click **New resource**, **User directory**.

   **Tip:** Configure a user directory for each user directory in the SiteMinder policy server.

11. In the **Name** box, type a name for the user directory and click **OK**.

   **Important:** The name of the user directory must match the name that appears on the policy server.

12. In the **Properties** window, type a value for the **Namespace ID reference** property.

13. From the **File** menu, click **Save**.

14. Test the connection to a new namespace. In the **Explorer** window, under **Authentication**, right-click the new authentication resource and click **Test**.

15. Configure a corresponding LDAP, Active Directory, or NTLM namespace for each LDAP, Active Directory, or NTLM user directory.

   **Important:** Ensure that you use the same value for the **Namespace ID** property that you use for the **Namespace ID** property for the Netegrity SiteMinder namespace.

### Enabling Secure Communication to the eTrust SiteMinder User Directory

If you use an SSL connection to the directory server, you must appropriately configure the Cognos namespace for the user directory.

For more information, see "Configure an LDAP Namespace" (p. 274).

### Enable Single Signon Between eTrust SiteMinder and IBM Cognos 8

By configuring single signon, you are not prompted to reenter authentication information.

IBM Cognos 8 components automatically refer to the eTrust SiteMinder session cookie for user session data.

If the eTrust SiteMinder user directory is LDAP or Active Directory, you must configure the eTrust SiteMinder user directory to use external identity mapping to the REMOTE_USER environment variable.

If the eTrust SiteMinder user directory is NTLM, Integrated Windows Authentication is used for single signon and no additional configuration is required.

### Protecting the IBM Cognos Web Alias

Ensure that eTrust SiteMinder is configured correctly to protect the IBM Cognos Web alias.

Use the test tool provided with eTrust SiteMinder to verify that the resource is protected, authenticated, and authorized. For more information, see your eTrust SiteMinder documentation.
Hide the Namespace from Users During Login

You can hide namespaces from users during login. You can have trusted signon namespaces without showing them on the namespace selection list that is presented when users login.

For example, you may want to integrate single signon across systems but maintain the ability for customers to authenticate directly to IBM Cognos 8 without being prompted to choose a namespace.

Steps
1. On each computer where you configured an eTrust SiteMinder authentication provider, open IBM Cognos Configuration.
2. In the Explorer window, under Security, Authentication, click the Netegrity Siteminder authentication provider.
3. In the Properties window, click the box next to Selectable for authentication and then click False.
4. From the File menu, click Save.

The namespace is not shown on the selection list that is presented at login.

Configuring IBM Cognos 8 Components to Use an NTLM Namespace

You can configure IBM Cognos 8 components to use the Windows native security, NT LAN Manager (NTLM), as the authentication source.

If you are not using NTLM in your IS environment, you cannot use an NTLM namespace.

If you want to use an NTLM user directory as your authentication source with eTrust SiteMinder, you must verify the Agent Configuration Object properties in the eTrust SiteMinder Policy Server. Ensure that SetRemoteUser is activated.

To use NTLM and to set up single signon, do the following:

- configure an NTLM namespace
- enable single signon between NTLM and IBM Cognos 8 components

Configure an NTLM Namespace

You can configure IBM Cognos 8 components to use an NTLM namespace when users are stored in an NTLM user directory. The NTLM user directory may also be accessed using an eTrust SiteMinder authentication provider.

Steps
1. On the computer where you installed Content Manager, open IBM Cognos Configuration.
2. In the Explorer window, under Security, right-click Authentication, and click New resource, Namespace.
3. In the Name box, type a name for your authentication namespace.

4. In the Type list, click NTLM and click OK.
   The new authentication provider resource appears in the Explorer window, under the Authentication component.

5. In the Properties window, for the NamespaceID property, specify a unique identifier for the namespace.
   Tip: Do not use colons (:) in the NamespaceID property.

6. Specify the values for all other required properties to ensure that IBM Cognos 8 components can locate and use your existing authentication provider.

7. From the File menu, click Save.

8. Test the connection to a new namespace. In the Explorer window, under Authentication, right-click the new authentication resource and click Test.

IBM Cognos 8 loads, initializes, and configures the provider libraries for the namespace.

Enable Single Signon Between NTLM and IBM Cognos 8 Components

By default, the IBM Cognos NTLM provider integrates with the IIS Web server for single signon if Windows integrated authentication (formerly named NT Challenge Response) is enabled on the IIS Web server.

If Windows integrated authentication is enabled, you are not prompted to reenter authentication information when accessing IBM Cognos content that is secured by the NTLM namespace.

Steps

1. Set up Windows integrated authentication on the IIS Web server.

2. Install Content Manager on a computer that is part of the domain, for the active and standby Content Manager computers.

3. Set up the computers, or the user account under which Content Manager runs, to be trusted for delegation.

4. Test the connection to a new namespace. In the Explorer window, under Authentication, right-click the new authentication resource and click Test.

IBM Cognos 8 loads, initializes, and configures the provider libraries for the namespace.

Configuring IBM Cognos 8 to Use SAP

To use an SAP server as your authentication provider, you must use a supported version of SAP BW.

To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, visit the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html). In addition, Content Manager must be installed on a non-Linux computer.
In SAP BW, you can assign users to user groups or roles or both. The SAP authentication provider uses only the roles.

The authorization rights required by the SAP user depend on who uses IBM Cognos 8 components, users or administrators.

**SAP Authorization Settings for IBM Cognos 8 Users**

The following authorization objects are required for any IBM Cognos user. Some of the values shown, such as an asterisk (*), are default values that you may want to modify for your environment.

<table>
<thead>
<tr>
<th>Authorization object</th>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Name of RFC to be protected</td>
<td>RFC1 RS_UNIFICATION, SDTX, SH3A, SU_USER, SYST, SUSO</td>
</tr>
<tr>
<td></td>
<td>Type of RFC to be protected</td>
<td>FUGR</td>
</tr>
<tr>
<td>S_USER_GRP</td>
<td>Activity</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>Name of user group</td>
<td>*</td>
</tr>
</tbody>
</table>

**SAP Authorization Settings for IBM Cognos Administrators**

If users will perform administrative tasks and searches for users and roles, the following values must be added to the S_RFC authorization object in addition to the values listed above for IBM Cognos 8 users. Some of the values shown, such as an asterisk (*), are default values that you may want to modify for your environment.

<table>
<thead>
<tr>
<th>Authorization object</th>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>S_RFC</td>
<td>Activity</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>RFC_NAME</td>
<td>PRGN_J2EE, SHSS, SOA3</td>
</tr>
<tr>
<td></td>
<td>Type of RFC object to be protected</td>
<td>FUGR</td>
</tr>
</tbody>
</table>
Connectivity Between SAP BW and IBM Cognos 8 on UNIX

To configure connectivity between SAP BW and IBM Cognos 8 components on a UNIX operating system, ensure that you install the SAP shared library file (provided by SAP) and add it to the library path environment variable as follows:

- Solaris
  \[LD_LIBRARY_PATH=$LD_LIBRARY_PATH:<librfccm.so_directory>\]

- HP-UX
  \[SHLIB_PATH=$SHLIB_PATH:<librfccm.sl_directory>\]

- AIX
  \[LIBPATH=$LIBPATH:<librfc.a_directory>\]

To use SAP and to set up single signon, do the following:
- Configure IBM Cognos 8 components to use an SAP namespace
- Enable single signon between SAP and IBM Cognos 8 components

Configure an SAP Namespace

You can configure IBM Cognos 8 components to use an SAP server as the authentication source.

Steps

1. On the computer where you installed Content Manager, open IBM Cognos Configuration.
2. In the Explorer window, under Security, right-click Authentication, and click New resource, Namespace.
3. In the Name box, type a name for your authentication namespace.
4. In the Type list, click SAP and then click OK.
   The new authentication provider resource appears in the Explorer window, under the Authentication component.
5. In the Properties window, for the Namespace ID property, specify a unique identifier for the namespace.
   Tip: Do not use colons (:) in the Namespace ID property.
6. Specify the values for all required properties to ensure that IBM Cognos 8 components can locate and use your existing authentication provider.
   Depending on your environment, for the Host property, you may have to add the SAP router string to the SAP host name.
7. If the SAP system encodes the contents of cookies, enable the decode tickets feature:
   - In the Properties window, for Advanced properties, click the Value and then click the edit button.
   - Click Add.
• Enter the name `URLDecodeTickets` and enter the value `true`

• Click OK.

All SAP logon tickets will be decoded by the SAP namespace before establishing a connection.

8. From the File menu, click Save.

9. Test the connection to a new namespace. In the Explorer window, under Authentication, right-click the new authentication resource and click Test.

**Enable Single Signon Between SAP and IBM Cognos 8**

You can enable single signon between SAP Enterprise Portal and IBM Cognos 8 components as well as when using the external namespace function of the SAP BW data source connections. To do so, ensure that you set the following system parameters on the SAP BW server:

• `login/accept_sso2_ticket = 1`

• `login/create_sso2_ticket = 1`

• `login/ticketExpiration_time = 200`

**Test the Namespaces**

After you configure one or more new namespaces for IBM Cognos 8 components, you can test the namespaces. The test can occur before or after you start the IBM Cognos 8 service. You can test all namespaces at the same time or test them individually.

**Step to Test All Namespaces**

• In the Explorer window, right-click Authentication and click Test.

  IBM Cognos 8 components load, initialize, and configure the provider libraries for one namespace before testing the next namespace.

  **Tip:** To cancel a namespace test, click Cancel. The test stops when the current namespace test is complete.

**Step to Test a Single Namespace**

• In the Explorer window, under Authentication, right-click the new authentication resource and click Test.

  IBM Cognos 8 components load, initialize, and configure the provider libraries for the namespace.

**Delete an Authentication Provider**

If they are no longer required, you can delete namespaces that you added, or unconfigure namespaces that IBM Cognos 8 components detected.
You must not delete the Cognos namespace. It contains authentication data that pertains to all users and is required to save the configuration.

When you delete a namespace, you can no longer log on to the namespace. Security data for the namespace remains in Content Manager until you permanently delete it in the portal. For more information, see the *Administration and Security Guide*.

**Steps**

1. In each location where you installed Content Manager, open Cognos Configuration.

2. In the **Explorer** window, under **Security, Authentication**, right-click the namespace and click **Delete**.

3. Click **Yes** to confirm.

   The namespace disappears from the **Explorer** window and you can no longer log on to the namespace on that computer.

4. From the **File** menu, click **Save**.

5. Repeat steps 1 to 4 for each computer where you installed Content Manager.

   You must now log on to the portal and permanently delete the data for the namespace. For more information, see the *Administration and Security Guide*.

After you delete a namespace, it appears as Inactive in the portal.
Chapter 11: Configuration Options

After you install and configure IBM Cognos 8, you can change the configuration for your environment. Initially, default property settings are used to configure the components. However, you may want to change these default settings if existing conditions make the default choices inappropriate, or to better suit your environment.

For example, you can configure features for IBM Cognos Application Firewall or specify the amount of resources IBM Cognos 8 uses. Also, you can deliver IBM Cognos content using another portal by configuring Portal Services.

You can configure IBM Cognos 8 to use other resources, such as using an authentication provider and then enabling single signon for the database connection and the users.

If you use a load-balancing scheme in your environment, you can change settings to improve performance. For example, you can balance requests among dispatchers by changing their processing capacity or by setting the minimum and maximum number of processes and connections. For more information about tuning server performance, see the Administration and Security Guide.

If you are upgrading from ReportNet, you have several configuration options depending on if you want to continue to use your existing installation. For information about upgrade options, see "Upgrading from ReportNet, Metrics Manager, or Earlier Versions of IBM Cognos 8" (p. 87).

For all Windows and most UNIX and Linux installations, use IBM Cognos Configuration to configure your settings. However, if the console attached to the UNIX or Linux computer on which you are installing IBM Cognos 8 components does not support a Java-based graphical user interface you must manually edit the cogstartup.xml file in the c8_location\configuration directory, and then run IBM Cognos Configuration in silent mode.

Use these optional configuration tasks to customize your configuration so that IBM Cognos 8 easily integrates into your existing environment.

- Change default configuration settings.
- Create a new content store using Cognos Content Database.
- Configure the SSL protocol.
- Configure log messages.
- Change global settings.
- Change the gateway.
- Change IP address version.
- Set up ODBC data connections to Sybase IQ or Netezza.
- Configure the router to test dispatcher availability.
- Configure IBM Cognos 8 to work with other IBM Cognos products.
Start IBM Cognos Configuration

Use the configuration tool, IBM Cognos Configuration, to configure IBM Cognos 8, or to start and stop IBM Cognos services.

Before starting IBM Cognos Configuration, ensure that the operating environment is properly set up. For example, ensure that all variables have been set.

You should start IBM Cognos Configuration in the last page of the installation wizard on Windows, UNIX, or Linux only if additional setup is not required. For example, if you use a database server other than Microsoft SQL for the content store, we recommend that you copy the JDBC drivers to the appropriate location before you start the configuration tool.

To start IBM Cognos Configuration on a Windows computer,
- From the Start menu, click Programs, IBM Cognos 8, IBM Cognos Configuration.

To start IBM Cognos Configuration on a UNIX or Linux computer,
- Go to the c8_location/bin directory and then type
  ```bash
  ./cogconfig.sh
  ```

Changing Default Configuration Settings

When you install IBM Cognos 8 components, the installation uses default configuration settings. If you have any reason not to use these default values, such as a port is being used by another process, use IBM Cognos Configuration to change the value.

If you change the value of a property, you must save the configuration and then restart the IBM Cognos 8 service to apply the new settings to your computer.

For distributed installations, ensure that you configured all computers where you installed Content Manager before you change default configuration settings on other IBM Cognos computers. For example you can
- change the default user and password for Cognos Content Database
- change a URI
- configure cryptographic settings
- configure IBM Cognos 8 components to use IBM Cognos Application Firewall
- configure temporary file properties
- configure the gateway to use a namespace
- enable and disable services
specify the amount of resources the IBM Cognos 8 service uses

configure fonts

configure font support for Simplified Chinese

change the default font for reports

save report output to a file system

change the location of map charts for Report Studio

change the notification database

After you change the default behavior of IBM Cognos 8 to better suit your IBM Cognos environment, you can configure Portal Services, configure an authentication provider, or test the installation (p. 137).

For IBM Cognos 8, you can install and configure Framework Manager. For Metric Studio, you can install and configure Metric Designer.

**Change Default User and Password for Cognos Content Database**

If you install Cognos Content Database, the default database that is created is given a user ID and password. We recommend that you change this user ID and password.

Administration tasks for Cognos Content Database are performed using a utility named ij. For information about this utility, see the Apache Derby documentation. The documentation is available in the `c8_location\derby10.1.2.1\docs` directory where you installed Cognos Content Database.

**Steps to Change the Default User Password**

1. On the computer where you installed Cognos Content Database, go to the `c8_location\derby10.1.2.1\bin` directory.

2. Start the ij utility using the ij.bat or ij.ksh script file.

   The ij utility is a command line utility for creating and managing Cognos Content Database.

3. Connect to the default database by typing the following ij utility command:
   
   ```
   connect 'jdbc:derby://localhost:1527/cm;user=cognos;password=cognos';
   ```

   If you changed the port number from the default 1527, use the correct port number for your Cognos Content Database.

   The default database is named cm. The database name is case sensitive.

4. Change the default password for the cognos user by typing the following ij utility command:

   ```
   CALL SYSCS_UTIL.SYSCS_SET_DATABASE_PROPERTY('derby.user.cognos', 'NewPassword');
   ```

   The new password must be used for the next connection to the database.

5. Close the ij utility by typing the following command:
Steps to Create a New User and Password

1. On the computer where you installed Cognos Content Database, go to the `c8_location\derby10.1.2.1\bin` directory.

2. Start the `ij` utility using the `ij.bat` or `ij.ksh` script file.

3. Connect to the default database by typing the following `ij` utility command:
   
   ```
   connect 'jdbc:derby://localhost:1527/cm;user=cognos;password=cognos';
   
   If you changed the port number from the default 1527, use the correct port number for your Cognos Content Database.
   
   The default database is named cm. The database name is case sensitive.
   ```

4. Create a new user by typing the following `ij` utility command:
   
   ```
   CALL SYSCS_UTIL.SYSCS_SET_DATABASE_PROPERTY('derby.user.NewUser', 'NewUserPassword');
   ```

5. Give the new user full access to the database by typing the following `ij` utility command:
   
   ```
   CALL SYSCS_UTIL.SYSCS_SET_DATABASE_PROPERTY('derby.database.fullAccessUsers', 'cognos, NewUser');
   ```

   The property that you are changing, the list of users, is a comma-delimited field. In this step, you are including the new user in the list of users with full access. The default user, cognos, is still part of the list of users with full access. You can remove the cognos user.

6. Close the `ij` utility by typing the following command:
   
   ```
   disconnect;
   ```

Steps to Remove a User

1. On the computer where you installed Cognos Content Database, go to the `c8_location\derby10.1.2.1\bin` directory.

2. Start the `ij` utility using the `ij.bat` or `ij.ksh` script file.

3. Connect to the default database by typing the following `ij` utility command:
   
   ```
   connect 'jdbc:derby://localhost:1527/cm;user=NewUser; password=NewUserPassword';
   ```

4. Choose the kind of user that you want to remove:
   
   - To remove a user from the list of users with full access, type the following `ij` utility command:
     
     ```
     CALL SYSCS_UTIL.SYSCS_SET_DATABASE_PROPERTY('derby.database.fullAccessUsers', 'NewUser');
     ```

     You omit the user name from the list of users with full access. For example, the above command removes the default cognos user and keeps the new user that you just created.
To remove a user from the database, type the following ij utility command and omit the user password:

```
CALL SYSCS_UTIL.SYSCS_SET_DATABASE_PROPERTY('derby.user.cognos', '');
```

This command removes the password for the default cognos user, which also removes the user from the database.

5. Close the ij utility by typing the following command:

   ```
disconnect;
   ```

### Change a Port or URI Setting

You can change certain elements in a URI depending on your environment. An IBM Cognos URI contains the following elements:

- For a Content Manager URI, Dispatcher URI for external applications, or dispatcher URI
  
  protocol://host_name_or_IP:port/context_root/alias_path

- For a Gateway URI or a Web content URI
  
  protocol://host_name_or_IP:port/virtual_directory/gateway_application

  OR

  protocol://host_name_or_IP:port/context_root/alias_path

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>protocol</td>
<td>Specifies the protocol used to request and transmit information, either Hyper Text Transfer Protocol or Hyper Text Transfer Protocol (Secure).</td>
</tr>
<tr>
<td>host name or IP</td>
<td>Specifies the identity of the host on the network. You can use an IP address, a computer name, or a fully qualified domain name.</td>
</tr>
</tbody>
</table>

  In a distributed installation, you must change the localhost element of a URI.

  In a mixed environment of UNIX and Windows servers, ensure that host names can be resolved to IP addresses by all servers in the environment.

  **Example:** localhost or 192.168.0.1 or [2001:0db8:0000:0000:0000:148:57ab]:80
<table>
<thead>
<tr>
<th><strong>Element</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>port</td>
<td>Specifies the port on which the host system listens for requests. The default port for Tomcat is 9300. The default port for a Web server is 80.</td>
</tr>
<tr>
<td></td>
<td><strong>Example:</strong> 9300 or 80</td>
</tr>
<tr>
<td>context root</td>
<td>Used by Tomcat or an application server to determine the context of the application so that the request can be routed to the correct Web application for processing.</td>
</tr>
<tr>
<td></td>
<td><strong>Example:</strong> p2pd</td>
</tr>
<tr>
<td>alias path</td>
<td>Used by the application server to route a request to the correct component within a Web application. The alias path must not be modified or IBM Cognos 8 components will not function properly.</td>
</tr>
<tr>
<td></td>
<td><strong>Example:</strong> servlet/dispatch</td>
</tr>
<tr>
<td>virtual directory</td>
<td>Used by the Web server to map a virtual directory or alias to a physical location. For example, in the default Gateway URI of <a href="http://localhost:80/cognos8/cgi-bin/cognos.cgi">http://localhost:80/cognos8/cgi-bin/cognos.cgi</a>, the virtual directory is cognos8/cgi-bin.</td>
</tr>
<tr>
<td></td>
<td><strong>Example:</strong> cognos8/</td>
</tr>
<tr>
<td>gateway application</td>
<td>Specifies the name of the Cognos gateway application that is used. For example, if you are accessing IBM Cognos 8 components using a Common Gateway Interface (CGI), then the default gateway application would be cognos.cgi.</td>
</tr>
<tr>
<td></td>
<td><strong>Example:</strong> cognos.cgi</td>
</tr>
</tbody>
</table>

**Steps**

1. Start IBM Cognos Configuration.

2. In the **Explorer** window click the appropriate group or component:
   - To change an element for the dispatcher, click **Environment**.
   - To change an element for the local log server, under **Environment**, click **Logging**.

3. In the **Properties** window, click the **Value** box next to the URI property that you want to change.

4. Select the element and type the new information.
Tips

- To change the port used by the local dispatcher, change the value of the internal dispatcher URI property. Because the change affects all the URIs that are based on the local dispatcher, you must change the URIs of all local components.

- If you change the dispatcher port in the dispatcher URI, ensure that you specify the new port number when you configure remote computers that use the dispatcher, Content Manager, or SDK services on this system.

5. From the File menu, click Save.

Configure Cryptographic Settings

IBM Cognos 8 components require a cryptographic provider; otherwise they will not run. If you delete the default cryptographic provider, you must configure another provider to replace it.

You can configure cryptographic provider settings, including the following:

- advanced algorithms
  These include signing and digest algorithms.

- common symmetric key store (CSK) properties
  The CSK is used by IBM Cognos 8 to encrypt and decrypt data.

- signing key store properties
  The signing key pair includes the private key used to generate the digital signature and the public key used to verify authenticity.

- encryption key store properties
  The encryption key pair includes the private key used to encrypt data and the public key used to decrypt data.

The default cryptographic provider uses keys up to 56 bits in length for data encryption and secure sockets layer (SSL) protocol. You can configure other cryptographic providers which use key sizes greater than 56 bits, such as the Enhanced Encryption Module for OpenSSL. For more information, see the Enhanced Encryption Module for Entrust Installation and Configuration Guide.

Important: In a distributed installation, IBM Cognos computers communicate with Content Manager to establish trust and obtain some cryptographic keys from Content Manager. If you change the cryptographic keys in Content Manager, such as by changing application servers or reinstalling Content Manager, you must delete the cryptographic keys on the other IBM Cognos computers. You must then save the configuration on each computer so that they obtain the new cryptographic keys from Content Manager. In addition, all IBM Cognos 8 components in a distributed installation must be configured with the same cryptographic provider settings.
Also, in a distributed environment, the symmetric key should only be stored on computers where Content Manager has been installed.

**Steps for Cryptographic Settings**

1. Start IBM Cognos Configuration.
2. In the Explorer window, under Security, click Cryptography.
3. In the Properties window, change the default values by clicking the Value box and then selecting the appropriate value:
   - On computers that do not contain Content Manager, if you do not want to store the CSKs locally, under CSK settings, change Store symmetric key locally to False.
   - When Store symmetric key locally is False, the key is retrieved from Content Manager when required. The Common symmetric key store location property is ignored.
   - If you want the computers at both ends of a transmission to prove their identity, under SSL Settings, change Use mutual authentication to True.
     We recommend that you do not change the Use confidentiality setting.
   - If you want to change the digest algorithm, for the Digest algorithm property, select another value.
4. From the File menu, click Save.
5. Test the cryptographic provider on a gateway computer only. In the Explorer window, right-click Cryptography and click Test.
   IBM Cognos 8 components check the availability of the symmetric key.

After you configure the cryptographic provider, passwords in your configuration and any data you create are encrypted.

**Steps for Cryptographic Provider**

1. Start IBM Cognos Configuration.
2. In the Explorer window, under Security, Cryptography, click Cognos.
   - If you want to change the location of the signing keys, under Signing key settings, change the Signing key store location property to the new location.
   - If you want to change the location of the encryption keys, under Encryption key settings, change Encryption key store location to the new location.
   - If you want to use another certificate authority, under Certificate Authority settings, change Use third party CA to True.
     You must also ensure that you use the same values for the -k parameter as you used for the Signing key store location and Encryption key store location properties.
     For more information, see "Configuring IBM Cognos 8 Components to Use a Another Certificate Authority" (p. 396).
Important: The **Confidentiality algorithm** value determines how data is encrypted by IBM Cognos 8 components. For example, database passwords entered in IBM Cognos Configuration are encrypted when you save the configuration. The algorithm selected when the data is encrypted must also be available for the data to be decrypted at a later date.

The availability of confidentiality algorithms can change if there are changes to your environment. For example, if your Java Runtime Environment (JRE) has changed or if you have installed other cryptographic software on the computer. If you have made changes to a computer, such as upgraded the JRE or installed software that has upgraded the JRE, this may affect the availability of confidentiality algorithms. You must ensure that the **Confidentiality algorithm** that was selected when the data was encrypted is also available when you want to access the data.

3. From the **File** menu, click **Save**.

If you use another Certificate Authority (CA) server, you must now configure IBM Cognos 8 components to use the CA.

### Configure IBM Cognos 8 Components to Use IBM Cognos Application Firewall

IBM Cognos Application Firewall analyzes and validates HTTP and XML requests before they are processed by IBM Cognos servers. IBM Cognos Application Firewall may modify these HTTP and XML requests.

IBM Cognos Application Firewall protects IBM Cognos Web products from malicious data. The most common forms of malicious data are buffer overflows and cross-site scripting (XSS) attacks, either through script injection in valid pages or redirection to another Web site.

Using IBM Cognos Configuration, you can change settings for other XSS tool support, and you can add host and domain names to the IBM Cognos list of valid names.

You can track firewall activity by checking the log file, which contains rejected requests. By default, log messages are stored in the `c8_location\logs\cogserver.log` file.

**Important:** All CAF settings must be the same for all computers where IBM Cognos 8 Application Tier Components are installed within a distributed environment. For example, if CAF is disabled on some computers and enabled on others, unexpected behavior and product errors may result.

The following types of URLs are accepted by CAF validation:

- fully qualified (absolute) URLs
  in the format `protocol://host:port/path`, where `protocol` is http or https and `host` is validated against the valid domain list

- URLs relative to the Web installation directory
  in the format `/Web_installation_root/.*` where `Web_installation_root` is the gateway Web directory, based on the cognos8 alias that you configured on your Web server.

For more information, see "Configure the Web Server " (p. 191).

For example,

/cognos8/ps/portal/images/action_delete.gif
specific allowed URLs, including the following (all case insensitive)

- about:blank
- JavaScript:window.close( )
- JavaScript:parent.close( )
- JavaScript:history.back( )
- parent.cancelErrorPage( )
- doCancel( )

**Steps**

1. In each location where IBM Cognos 8 Application Tier Components are installed, start IBM Cognos Configuration.

2. In the Explorer window, under Security, click IBM Cognos Application Firewall.

3. In the Properties window, for the Enable CAF validation property, set the appropriate values.

   Important: The IBM Cognos Application Firewall is an essential component of IBM Cognos security, helping to provide protection against penetration vulnerabilities. Disabling the IBM Cognos Application Firewall will remove this protection. Under normal circumstances we recommend that you not disable the IBM Cognos Application Firewall.

4. If you are using another XSS tool that checks for specific characters in GET request parameters, in the Properties window, do the following:

   - For the Is third party XSS checking enabled property, change the value to True.
   - For the Third party XSS characters property, add any additional characters that are prohibited by the other XSS tool. The default characters are >, <, and ‘.

5. Add host and domain names to the IBM Cognos list of valid names:

   - For the Valid domains and hosts property, click the value and then click the edit button.
   - In the Value - Valid domains or hosts dialog box, click Add.

     You must include the domains from all hyperlinks that are added in IBM Cognos Connection. For more information, see the topic about creating a URL in the Administration and Security Guide.

     Tip: If you are using drill-through from IBM Cognos Series 7 to reports in IBM Cognos 8, add the hostnames of the IBM Cognos Series 7 gateway servers to the list.

     - In the blank row of the table, click and then type the host or domain name.
     - Repeat the previous two bulleted steps for each name to be added.
     - Click OK.

IBM Cognos Application Firewall validates domain and host names to protect URLs that are created. By default, IBM Cognos Application Firewall considers domain names derived from
6. Save the configuration.

7. Restart the services.

**Configure Temporary File Properties**

You can change the location where IBM Cognos 8 components store recently viewed reports, and you can choose to encrypt their content. By default, IBM Cognos 8 components store temporary files in the $c8_location$\temp directory and the files are not encrypted.

We recommend that all access be denied to the temp directory, except for the service account used to start the IBM Cognos 8 service. Read and write permissions are required for the service account.

**Steps**

1. Start IBM Cognos Configuration.

2. In the **Explorer** window, click **Environment**.

3. In the **Properties** window, for the **Temporary files location** property, specify the new location.

4. If you require the content of temporary files to be encrypted, set the **Encrypt temporary files** property to **True**.

5. Ensure that the user account under which IBM Cognos 8 components run have the appropriate privileges to the temporary files location. For example:
   - on Windows, full control privileges
   - on UNIX or Linux, read-write privileges

**Configure the Gateway to Use a Namespace**

If IBM Cognos 8 components use multiple namespaces or if anonymous access is enabled and IBM Cognos 8 components use one namespace, you can configure the gateway to connect to one namespace. Users logged onto the Web server where the gateway is located are not prompted to choose an authentication source.

For example, if you have two Web servers, you can configure each Web server to use a different namespace.

**Steps**

1. On the computer where the gateway is located, start IBM Cognos Configuration.

2. In the **Explorer** window, click **Environment**.

3. In the **Properties** window, in the **Value** box next to the **Gateway namespace** property, type the Namespace ID of the namespace you want to use.
4. From the File menu, click Save.

5. Restart your Web server.

**Enable and Disable Services**

In a distributed installation, you can send certain types of requests to specific computers by enabling or disabling the installed services.

For example, to dedicate a computer to running and distributing reports, you can disable the presentation service on an Application Tier Components computer. To dedicate a computer in a distributed installation to processing Metric Studio application requests, disable the Data Integration Service on the computer.

**Note:** The default values for dispatcher service and presentation service are false on computers that have the Content Manager only installed. On all other types of installations, the default values are true.

If you installed all components on several computers, you can disable appropriate services on each computer to get the distributed configuration you require. Requests are sent only to dispatchers where a given service is enabled.

Disabling a service prevents the service from loading into memory. When disabled, services do not start and therefore do not consume resources. The service does not run until you enable it.

If you disable the dispatcher service, the dispatcher-related services are disabled. Only dispatcher services that are enabled can process requests.

**Steps**

1. Start IBM Cognos Configuration.

2. In the **Explorer** window, under Environment, click **IBM Cognos 8 service**.

3. In the **Properties** window, click the **Value** next to the service that you want to disable or enable.
   
   By default, all services are enabled.

4. Click the appropriate state for the services:
   
   • To disable the service, click **False**.
   
   • To enable the service, click **True**.

   For example:
   
   • for a Planning job server, you must enable the dispatcher service, the monitoring service, and the Planning job service. All other services can be disabled.

   • for a Planning data server, you must enable the dispatcher service, the monitoring service, and the Planning data service.

   • for a Planning administration server, you must enable the dispatcher service, the monitoring service, and the Planning administration console service.
- for a Planning Web server, you must enable the dispatcher service, the monitoring service, and the Planning Web service.

If you are configuring role-based Planning servers, you must also ensure that at least one Planning server has all the other IBM Cognos 8 services running.

5. From the File menu, click Save.

Specify Resources for the IBM Cognos 8 Service

To improve performance in a distributed environment, you can change the amount of resources that the IBM Cognos 8 service uses by choosing a configuration template.

By default, the IBM Cognos 8 service is configured to use minimal memory resources to optimize startup time.

The configuration template settings apply only to Tomcat, the application server that IBM Cognos 8 uses by default. If you want to configure IBM Cognos 8 to run on another application server, do not use IBM Cognos Configuration to configure the resources. Instead, configure the resources within that application server environment. For more information, see "Configuring IBM Cognos 8 for an Application Server other than Tomcat" (p. 373).

The IBM Cognos 8 service is available only on the computers where you installed Content Manager or the Application Tier Components.

Steps

1. Start IBM Cognos Configuration.

2. In the Explorer window, under Environment, IBM Cognos 8 service, right-click IBM Cognos 8, and click Delete.

   This deletes the default configuration template for the service.

3. Right-click IBM Cognos 8 service, and click New resource, Configuration.

4. Type a name for the service.

   In Windows, the name you choose is used to register the service. You will see this name in the list of services running on your computer.

5. In the Type box, click the configuration template to use:

   - If you previously changed the default setting and now want to reduce the startup time, memory footprint, and resources used, click Small configuration.

   - If you want a balance between fast startup time and quick operating speeds, click Medium configuration.

   - If you want to maximize operating speeds and if performance is more important than fast startup time, and if your computer has a lot of resources, click Large configuration.

6. In the Properties window, edit the properties so that they are appropriate for your environment.

7. From the File menu, click Save.
Configuring Fonts

IBM Cognos 8 components use fonts to render PDF reports on the IBM Cognos server. IBM Cognos 8 components also use fonts to render charts used in PDF and HTML reports.

To show output correctly, fonts must be available where the report or chart is rendered. In the case of charts and PDF reports, the fonts must be installed on the IBM Cognos server. If a requested font is not available, IBM Cognos 8 components substitute a different font.

Because HTML reports are rendered on a browser, the required fonts must be installed on the computer of each IBM Cognos user who will read the HTML report. If a requested font is not available, the browser substitutes a different font.

Use the following checklist if you want to use a new font in your reports.

- Add the font to the list of supported fonts.
- Specify the file location of the new font.
- Map the new font to the physical font name, if required.

Add Fonts to the IBM Cognos Environment

You can add fonts to the list of supported fonts in your IBM Cognos environment if you want to generate reports that use fonts that are currently not available. You can also remove fonts.

By default, IBM Cognos 8 components use a set of global fonts, which are available on all IBM Cognos server computers.

Steps

1. On each Content Manager computer, start IBM Cognos Configuration.
2. From the Actions menu, click Edit Global Configuration.
3. Click the Fonts tab.
4. Click Add.
   - Tip: To remove a font from the list of supported fonts, click the box next to the font name and then click Remove.
5. In the Supported Font Name box, type the font name and then click OK.
6. From the File menu, click Save.
   - All global fonts, including new fonts that you add, must be installed on all IBM Cognos computers in your environment.
   - If a global font is not installed on all IBM Cognos computers, you must map the global font to an installed, physical font.

Specify the Location of Available Fonts

You must specify the installation location of all fonts, including fonts that you add to the list of supported fonts.
By default, the list of fonts consists of fonts installed in the `c8_location\bin\fonts` directory of the IBM Cognos computer. If IBM Cognos 8 components are installed on a Windows computer, they also use the fonts installed in the Windows font directory.

You specify the font location on all computers where Application Tier Components are installed.

**Steps**

1. On each Application Tier Components computer, start IBM Cognos Configuration.
2. In the **Explorer** window, click **Environment**.
3. In the **Properties** window, for the **Physical fonts locations** property, specify the location of the fonts.
   - If there are multiple font paths, separate each path by a semicolon (;).
   - If you are using an application server other than Tomcat, type the fully qualified path to the font location. For example: `c8_location/bin/fonts`.
4. From the **File** menu, click **Save**.

**Map Supported Fonts to Installed Fonts**

You can substitute global fonts, which are not installed on the computer, for physical fonts. You map fonts on each computer where the Application Tier Components are installed.

For example, you add a font to the list of supported fonts that is not installed on the IBM Cognos computer. You can specify which font to use as a substitute.

If you want to print reports faster by using the built-in PDF fonts, you can map a global font such as Arial to one of the built-in PDF fonts, such as Helvetica-PDF, by following the steps below. You can also select one of the built-in PDF fonts for a text object in Report Studio or Query Studio. For more information, see the Query Studio *User Guide* or the Report Studio *Professional Authoring User Guide*.

No mapping is required if you add a font to the supported font list that is installed on IBM Cognos computers. However, you must specify the location of the font.

**Steps**

1. On each Application Tier Components computer, start IBM Cognos Configuration.
2. In the **Explorer** window, click **Environment**.
3. In the **Properties** window, click the **Value** box next to the **Physical fonts map** property, and then click the edit button.
   - The **Value - Physical fonts map** dialog box appears.
4. Click **Add**.
   - **Tip**: To remove a font, select the check box next to the font and click **Remove**.
5. In the **Global Font Name** box, type the name of the font you added to the supported font list.
6. Click the **Physical Font Name** box.
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7. If you know the physical font name, type it. Otherwise, click the edit button. In the Physical Font Name dialog box, click Search Now and then click a font name from the results.

8. Repeat steps 4 to 7 for each global font that requires mapping.

9. Click OK.

10. From the File menu, click Save.

Now, if required, you must specify the installation location of the fonts.

Considerations to Support Simplified Chinese

IBM Cognos 8 products support the GB18030-2000 character set, which is used in the encoding of Simplified Chinese locales. If you install on Windows, support is provided for the GB18030-2000 character set in the NSimSun-18030 font that is provided by Microsoft. If you install on other operating systems, or if you use Internet Explorer 6 on Windows, additional installation tasks are required:

- On operating systems other than Windows, you must install a font that supports GB18030-2000.
- If you use Internet Explorer 6 on Windows, you must update the registry entries for fonts that reference SimSun.

Update the Registry Entries for Windows Font Links

The GB18030-2000 character set includes CJK Unified Ideographs Extension A characters. When these characters are encoded as UTF-8 in Internet Explorer 6, they may not appear correctly in Web pages. To ensure that these characters appear correctly, you must add SimSun-18030 to all font link registry entries that specify SimSun.

Steps

1. From the Start menu, select Run.

2. In the Run dialog box, type regedit.

3. Open the HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\FontLink\SystemLink directory.

4. In Registry Editor, right-click a font that contains SimSun in the Data field and select Modify.

5. In the Edit Multi-String dialog box, under Value data, click under the selected strings and type the following string:

SimSun18030.ttc,SimSun-18030

6. Click OK.

7. Repeat steps 4 to 6 for every font that contains SimSun.

8. When complete, close Registry Editor.
Change the Default Font for PDF Reports

You can change the default font that IBM Cognos 8 components use for PDF reports. You see this default font when you open a report.

You change the default font on the computer where Content Manager is installed. After you make the change, the font becomes the default for all computers in your installation. You change the font used for PDF reports using IBM Cognos Configuration.

Ensure that the default font is installed on all computers in your IBM Cognos installation.

Steps
1. On each Content Manager computer, start IBM Cognos Configuration.
2. From the Actions menu, click Edit Global Configuration.
3. Click the General tab.
4. In the Value box, for Default font, type the font you want to use as the default for reports.
5. Click OK.
6. From the File menu, click Save.
7. On all Application Tier Components computers, ensure that the installation location of the default font is specified in the Physical fonts locations property (under Environment in the Explorer window) or that the font is in the Windows font directory.

Configure Embedded Fonts for PDF Reports

When a PDF report opens in Adobe Reader, all the fonts used in that report must be available. Fonts must be either embedded in the report or installed on the user’s computer. If a font is not available in either of these locations, Adobe Reader tries to substitute an appropriate font. This substitution may cause changes in the presentation of the report or some characters may not be displayed.

To ensure that PDF reports appear correctly in Adobe Reader, IBM Cognos 8 embeds required fonts in reports by default. To minimize the file size, IBM Cognos 8 embeds only the characters (also called glyphs) used in the report rather than all characters in the font set. IBM Cognos 8 embeds fonts only if they are licensed for embedding. The license information is stored in the font itself and is read by IBM Cognos 8.

If you are confident that the fonts used in reports are available on users’ computers, you can limit or eliminate embedded fonts to reduce the size of PDF reports. When limiting fonts, you specify whether a font is always or never embedded, using an embedded fonts list in IBM Cognos Configuration.

Steps
1. On the Content Manager computer, start IBM Cognos Configuration.
2. In the Explorer window, click Environment.
3. In the Properties window, under Font Settings, click the value for Fonts to embed (Batch report service) or Fonts to embed (Report service), and then click the edit button.

4. If you are not using the default fonts directory or if you want to add a path to an additional directory, in the Fonts to Embed in PDF Reports dialog box, specify the new path in the font paths box.

   **Tip:** Click Search Now to get a list of the available fonts in the specified path or paths.

5. For a font that will always be available on users’ computers, scroll to the font name, and click the Never check box.

   IBM Cognos 8 does not embed the font with any reports. Adobe Reader picks up the font from the user’s computer when the report is opened.

6. For a font that may not always be available on the users’ computers, scroll to the font name and click the Always check box.

   IBM Cognos 8 embeds the font with all reports that use it. Adobe Reader uses the embedded font when the report is opened.

7. Click OK.

### Saved Report Output

By default, report output files are saved in the content store. You have the option of saving a copy of the report output in another file location that is outside or inside IBM Cognos 8. If you use this option, a descriptor file with an _descr extension is also saved. Saved files are not managed by IBM Cognos 8.

### Save Report Output Outside IBM Cognos 8

If you configure a file system location that is outside of IBM Cognos 8, you can then share the report output with external applications or people who don’t have IBM Cognos 8. This is how most report output files are saved.

To use this feature, you must first configure a root directory in IBM Cognos Configuration. An administrator must then set the file location in IBM Cognos Administration. For more information, see the topic about setting a file location for report output saved outside of IBM Cognos 8, in the Administration and Security Guide.

### Steps

1. Create a directory for your file system.

   **Tip:** Ensure that the directory is accessible to users and separate from the installation directory. For example, in a distributed installation, an archive folder such as \servername\directory could be used.

2. On the Content Manager computer, start IBM Cognos Configuration.

3. From the Actions menu, click Edit Global Configuration.

4. In the Global Configuration window, click the General tab.
5. For **Archive Location File System Root**, type a URI using the format
   
   `file://directory`
   
   where `directory` is the directory that you created in step 1.

   The `file://` portion of the URI is required. Windows UNC names, such as `\servername\directory`, can be used. If so, the URI must be formatted as follows:
   
   `file://\servername\directory`

6. To confirm that the correct location will be used, click **Test**.

7. Click **OK**.

8. From the **File** menu, click **Save**.

   The administrator must now configure the file location. For information, see the topic about setting a file location for report output saved outside of IBM Cognos 8, in the *Administration and Security Guide*.

**Save Report Output Inside IBM Cognos 8**

If you configure a file system location that is inside IBM Cognos 8, you can then use the report output again. This may also be useful for archive purposes, because files that are saved in the Content Store may be deleted regularly due to retention rules.

To use this feature, you must first enable the **Save report outputs to a file system** property in IBM Cognos Configuration. An administrator must then configure the file location using the CM.OutPutLocation parameter in IBM Cognos Administration. For more information, see the topic about setting a file location for report output saved inside IBM Cognos 8, in the *Administration and Security Guide*.

**Steps**

1. Create a directory for your file system.
   
   **Tip**: Ensure that the directory is accessible to authorized users only.

2. On the Content Manager computer, start IBM Cognos Configuration.

3. In the **Explorer** window, click **Data Access, Content Manager**.

4. For the **Save report outputs to a file system** property, click **True**.

5. To test the connection to the report output directory, from the **Actions** menu, click **Test**.

6. From the **File** menu, click **Save**.

   The administrator must now configure the file location using the CM.OutPutLocation parameter. For information, see the topic about setting a file location for report output saved inside IBM Cognos 8, in the *Administration and Security Guide*.
Change the Location of Map Charts for Report Studio

IBM Cognos 8 comes with a set of sample map charts that you can use in Report Studio. By default, the map charts are stored in the $c8_location$/maps directory on the Application Tier Components computer. You can change the location of the map charts by using IBM Cognos Configuration.

For more information about using map charts, see the Report Studio Professional Authoring User Guide.

For information about using custom maps from other sources, see the Map Manager Installation and User Guide.

Steps
1. On the Application Tier Components computer, start IBM Cognos Configuration.
2. In the Explorer window, click Environment.
3. In the Properties window, click the value for Map files location.
4. Click the edit button.
5. In the Select Folder window, navigate to the directory you want and then click Select.
6. From the File menu, click Save.

Change the Notification Database

By default, the notification server uses the same database that Content Manager uses for the content store. You can use a separate database for notification in situations where you run large volumes of batch reports and email.

Using a separate database for notification involves the following tasks:

- Create a notification database.
  - For DB2, Oracle, Microsoft SQL Server, or Sybase, use the same procedure that was used to create the content store database, "Guidelines for Creating the Content Store" (p. 57).
  - For DB2 on z/OS, use the instructions in "Suggested Settings for Creating a DB2 Notification Database on z/OS" (p. 316).
- Set up the database connectivity. You can use the same procedure as to set the connectivity for the content store database, "Set Up Database Connectivity for the Content Store Database" (p. 127).
- Change the connection properties for the notification database.

Suggested Settings for Creating a DB2 Notification Database on z/OS

The database you create for the notification database must contain some recommended configuration settings.

To ensure a successful installation, use the following guidelines when creating the notification database.
Use the following checklist to help you set up the notification database in DB2 on z/OS.

- Create a database instance, storage group, and a user account for the notification database. A user must have permissions to create and delete tables in the database. IBM Cognos 8 uses the credentials of the user account to communicate with database server.

- Ensure you reserve a buffer pool with a page size of 32 k, and a second one with a page size of 4 k for the database instance.

- Administrators must run a script to create table spaces to hold Large Objects and other data for the notification database to use the table spaces. For information about running the script, see "Create Tablespaces for the DB2 Notification Database on z/OS" (p. 317).

- Your database administrator must back up IBM Cognos 8 databases regularly because they contain the IBM Cognos data. To ensure the security and integrity of databases, protect them from unauthorized or inappropriate access.

### Create Tablespaces for the DB2 Notification Database on z/OS

A database administrator must run a script to create a set of table spaces required for the notification database. The script must be modified to replace the placeholder parameters with ones that are appropriate for your environment.

Ensure that you use the naming conventions for DB2 on z/OS. For example, all names of parameters must start with a letter and the length must not exceed eight characters. For more information, see the IBM DB2 Information Center.

### Steps

1. Connect to the database as a user with privileges to create and drop table spaces and to allow execution of SQL statements.

2. Open the NC_TABLESPACES.sql script file and use the following table to help you to replace the placeholder parameters with ones appropriate for your environment.

   Not all of the parameters listed are in the script, but may be added in the future.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCCOG</td>
<td>Specifies the name of the notification database.</td>
</tr>
<tr>
<td>DSN8G810</td>
<td>Specifies the name of the storage group.</td>
</tr>
<tr>
<td>BP32K</td>
<td>Specifies the name of the buffer pool.</td>
</tr>
</tbody>
</table>

3. Save and run the script.

The notification database is created. You can now change the notification database in IBM Cognos Configuration, (p. 318).
Change the Connection Properties for the Notification Database

After you create a separate database for notification, you must configure IBM Cognos 8 to use the new database.

You must configure all Content Managers and Application Tier Components to use the same notification database.

Steps
1. In each location where Content Manager or Application Tier Components is installed, start IBM Cognos Configuration.
2. In the Explorer window, under Data Access, click Notification.
3. Identify the database that is used for notification:
   - In the Explorer window, right-click Notification and select New resource, Database.
   - Type a name for the database resource.
   - Select the type of database from the pull-down menu.
   - Click OK.
4. In the Properties window, enter the values for the notification database resource.
5. From the File menu, click Save.
6. Test the notification. In the Explorer window right-click Notification and click Test.
   IBM Cognos 8 tests the database connection and tests the mail server connection.
   If you have been using the content store database for notification, the schedules will be replicated in the tables of the new notification database.

Important: Ensure that the values used to identify the notification database resource are the same on all Content Manager and Application Tier Components computers. To use the default notification database, you do not have to edit the values in the Properties window.

Create a New Content Store Using Cognos Content Database

Follow the steps below if you want to create another content store database using Cognos Content Database. This may be required if you install more than one instance of your IBM Cognos 8 product in one location and you want to run the instances separately.

Before you create the new content store, do the following:
- Install the additional instance of your IBM Cognos 8 product in a separate directory on the same computer.

Ensure that you select Cognos Content Database on the Component Selection page of the installation wizard.
• Create a new user and password for the new content store database.

Steps
1. In the location where you installed the new instance of Cognos Content Database, in the `c8_location\derby10.1.2.1\bin` directory, use the ij.bat or ij.ksh script to create a new database. Use the following syntax:

   `connect 'jdbc:derby://host:port/db_name;create=true;user=username; password=password';`

   Ensure that you use a different name, user, and password for the new content store.
   For example, to create a database named contentstore2 on the localhost computer on port number 1527 as a user named cognos2 with a password of cognos2, you would type

   `connect 'jdbc:derby://localhost:1527/contentstore2;create=true;user=cognos2; password=cognos2';`

   The database name is case-sensitive.
   The database files are located in the `c8_location\contentstore` directory.

2. When you are finished with the ij utility, disconnect by using the following command:

   `disconnect;`

Configuring the SSL Protocol

The Secure Sockets Layer (SSL) protocol is used to secure communication between IBM Cognos components installed on the same computer or on different computers.

In addition, you may want to set up SSL connections between IBM Cognos components and other servers. You must ensure that SSL is set up for the other servers and then you must set up a shared trust between IBM Cognos components and the other servers.

Use the following checklist to configure SSL protocol.

- Configure SSL for IBM Cognos components (p. 319).
- Set up shared trust between IBM Cognos components and other servers, if required (p. 322).
- Select and rank Cipher Suites to be used in an SSL connection, if required (p. 323).
- Enable SSL on your Web server (p. 324).

After configuring the SSL protocol, you can select and rank cipher suites, which control the quality of protection used in the SSL connection.

Configure SSL for IBM Cognos 8

You can configure IBM Cognos components to use the SSL protocol for

• internal connections only
• external connections only
• internal and external connections
connections to local and remote log servers

If you configure SSL only for internal connections, IBM Cognos components on the local computer communicate using this protocol. The dispatcher listens for secure connections on a different port than for remote, http requests. Therefore, you must configure two dispatcher URIs.

If you configure SSL only for external connections, communications from remote IBM Cognos components to the local computer use the SSL protocol. You must configure the dispatcher to listen for secure, remote requests on a different port than local, HTTP requests. You must also configure the Content Manager URIs and the dispatcher URI for external applications to use the same protocol and port as the external dispatcher.

If you configure SSL for all connections, the dispatcher can use the same port for internal and external connections. Similarly, if you do not use SSL for local or remote communication, the dispatcher can use the same port for all communications.

You must also update the Content Manager URIs, Dispatcher URI for external applications, and Gateway URI to use SSL, if required.

**Tomcat Connectors**

If the internal dispatcher URI is prefixed with http but the external dispatcher URI is prefixed with https, or vice versa, both the non-SSL Coyote HTTP/1.1 and SSL Coyote HTTP/1.1 connectors are enabled in the server.xml file.

If the internal and external dispatcher URIs use different protocol or ports, the internal dispatcher port is accessible only to the components on the local computer. The internal dispatcher URI must also specify localhost.

**Single Computer Installations**

In single computer installations, if you are running IBM Cognos 8 without SSL, you must stop the service before adding SSL to your configuration. After you save the configuration with SSL settings, you can restart the service.

**Distributed Installations**

In distributed installations, if you are using the IBM Cognos certificate authority service, you must first configure all IBM Cognos computers to use the non-secure (http) protocol before you configure IBM Cognos components to use the SSL protocol. You must do this because you cannot set up the SSL protocol before trust has been established.

Also, ensure that you follow the required order of configuring computers in a distributed environment. That means that you must first configure the computer where the default active Content Manager is installed and then start the services on this computer before you configure other computers or start services on other computers. By first configuring the default active Content Manager computer and starting the services, you ensure that the certificate authority service on the default active Content Manager computer can issue certificates to other computers in the IBM Cognos environment.

After you configure all computers in the distributed installation to use the default, non-secure protocol, we recommend that you test your installation to ensure that IBM Cognos components are working properly. After you test your installation, you can configure the SSL protocol.
When you configure IBM Cognos 8 to use the SSL protocol, ensure that you first configure the default active Content Manager computer to use the protocol and start the services on the default active Content Manager computer. After you do this, you can configure the SSL protocol on other IBM Cognos computers in your environment.

**Add a Computer to an Installation**

If you add a computer to an SSL-enabled environment, you will be prompted to temporarily accept trust for a certificate when you save the configuration. Accepting the temporary certificate will allow permanent trust to be established with the Content Manager computer.

**Add a Component to a Computer**

You can later add a component to the same location as other IBM Cognos components. If you add the component to a different location on the same computer as other IBM Cognos components, you will be prompted to temporarily accept trust for a certificate when you save the configuration. Accepting the temporary certificate will allow permanent trust to be established between the new component and the Content Manager computer.

**Steps**

1. Start IBM Cognos Configuration.

2. In the Explorer window, click Environment.

3. In the Properties window, type the appropriate values for the **Internal dispatcher URI** and **External dispatcher URI** values:

   - To configure SSL for internal connections only, for the **Internal dispatcher URI** property, type `https` and a port for SSL communication. For the **External dispatcher URI** property, type `http` and use the default or another available port.

     If you use Tomcat, the **Internal dispatcher URI** property must also specify `localhost`.

     The ports in the two dispatcher URIs must be different.

   - To configure SSL for external connections only, for the **External dispatcher URI** property, type `https` and a secure port. For the **Internal dispatcher URI** property, type `http` and use the default or another available port.

     If you use Tomcat, the **Internal dispatcher URI** property must also specify `localhost`.

     The ports in the two dispatcher URIs must be different.

   - To configure SSL for all connections, type the same URI for both the **Internal dispatcher URI** and **External dispatcher URI** properties. Type `https` and a secure port, such as 9343.

     **Note:** You do not have to use port 9343, the default SSL port. You can choose any available port.

4. Configure the SSL protocol for the other environment URIs, including the **Content Manager URIs**, the **Dispatcher URI for external applications**, and **Gateway URI**.

   - For internal connections only, type `https` in the URIs that contain `localhost`. 
• For external connections only, type https in the URIs that do not contain localhost.

• For all connections, type https in all the URIs.

5. In the Explorer window, click Security, Cryptography.

6. To use SSL protocol, you must specify passwords for the IBM Cognos 8 encryption key stores. There are more settings under Security, Cryptography, Cognos.

7. From the File menu, click Save.

Set Up Shared Trust Between IBM Cognos Servers and Other Servers

If you want to use the default IBM Cognos certificate authority and you want to use SSL for connections from other servers to IBM Cognos servers, you must add the IBM Cognos certificate to the trust store on the other servers.

Note: If you use browsers to connect to IBM Cognos components, the browsers automatically prompt users to update their trust stores.

If you want the connection between IBM Cognos servers and the other server to be mutually authenticated, you must also copy the certificate from your certificate authority to the trust store for IBM Cognos servers.

If you have configured IBM Cognos components to use another certificate authority (CA), you do not have to set up shared trust between IBM Cognos server and other servers.

Steps to Copy the IBM Cognos Certificate to Another Server

1. Go to the c8_location\bin directory.

2. Extract the IBM Cognos certificate by typing the following command:
   - On UNIX or Linux, type
     ThirdPartyCertificateTool.sh -E -T -r destination_file -k c8_location/configuration/signkeypair/jCAKeystore -p password
   - On Windows, type
     ThirdPartyCertificateTool.bat -E -T -r destination_file -k c8_location\configuration\signkeypair\jCAKeystore -p password

3. Import the certificate to the trust store on your server.
   For information on updating the server trust store, see the documentation for your server.

Steps to Copy the CA Certificate to IBM Cognos Servers

1. Copy the certificate from your certificate authority to a secure location on the IBM Cognos server.
   Ensure that the CA certificate is in Base-64 encoded X.509 format.

2. Import the CA certificate by typing the following command:
   - On UNIX or Linux, type
Select and Rank Cipher Suites for SSL

An SSL connection begins with a negotiation in which the client and server present a list of supported cipher suites in a priority sequence. A cipher suite provides the quality of protection for the connection. It contains cryptographic, authentication, hash, and key exchange algorithms. The SSL protocol selects the highest priority suite that the client and the server both support.

A list of supported cipher suites for SSL is provided. You can eliminate cipher suites that do not meet your requirements and then assign a priority, or preference, to the remaining cipher suites. The selected cipher suites are presented in priority sequence for the client and server sides of the negotiation. At least one of the selected cipher suites between the client and server platforms must match.

The list of supported cipher suites is dynamically generated on each computer, and depends on the Java Runtime Environment (JRE) or whether you have other cryptographic software installed on the computer. If you have made changes to a computer, such as upgraded the JRE or installed software that has upgraded the JRE, this may affect the supported cipher suites available on that computer. If you no longer have a supported cipher suite that matches the other computers in your environment, you may have to change the JRE on the computer to match the other computers in your environment.

Steps

1. Start IBM Cognos Configuration.
2. In the Explorer window, click Cryptography, Cognos.
3. In the Properties window, click the Value column for the Supported ciphersuites property.
4. Click the edit button.
   - To move a cipher suite to the Current values list, click the check box in the Available values list and then click Add.
   - To move a cipher suite up or down in the Current values list, click the check box and then click the up or down arrows.
   - To remove a cipher suite from the Current values list, click the check box and then click Remove.
5. Click OK.
6. From the File menu, click Save.
Enable SSL on the Web Server

Enable secure sockets layer (SSL) to encrypt a user's communication with the Web server.

To enable SSL on your Web server, you must obtain a Web server certificate signed by a Certificate Authority and install it into your Web server. The certificate must not be self-signed, because self-signed certificates will not be trusted by IBM Cognos components.

To enable IBM Cognos components to use an SSL-enabled Web server, you must have copies of the trusted root certificate (the certificate of the root Certificate Authority which signed the Web server certificate) and all other certificates which make up the chain of trust for the Web server's certificate. These certificates must be in Base64 encoded in ASCII (PEM) or DER format, and must not be self-signed. The certificates must be installed on every computer where you have installed Application Tier Components.

For more information about installing certificates into your Web server, see your Web server documentation.

Steps

1. Configure the Web server for SSL and start the Web server.
   For more information, see your Web server documentation

2. On each Application Tier Components computer that points to the gateway on the Web server, in IBM Cognos Configuration, change the gateway URI from HTTP to HTTPS, and save the configuration.
   Important: Do not start the IBM Cognos 8 service yet.

3. On each Planning Server computer that points to the gateway, in IBM Cognos Configuration, change the gateway URI from HTTP to HTTPS, and save the configuration.
   Important: Do not start the IBM Cognos 8 service yet.

4. On each Application Tier Components computer, go to the c8_location/bin directory and import all the certificates that make up the chain of trust, in order starting with the root CA certificate, into the IBM Cognos trust store.
   Import the certificates by typing the following command:

   On UNIX or LINUX, type
   
   ThirdPartyCertificateTool.sh -T -i -r certificate_fileName -D ../configuration/signkeypair -p password

   On Windows, type
   
   ThirdPartyCertificateTool.bat -T -i -r certificate_fileName -D ../configuration/signkeypair -p password

   Note: The password should have already been set. If not, the default password is NoPassWord-Set.

5. On each Planning Server computer, go to the c8_location/bin directory and import all the certificates that make up the chain of trust, in order starting with the root CA certificate, into the IBM Cognos trust store.
Import the certificates by typing the following command:

```
ThirdPartyCertificateTool.bat -T -i -r certificate_fileName -D ../configuration/signkeypair -p password
```

*Note:* The password should have already been set. If not, the default password is NoPassWord-Set.

6. On each Application Tier Components computer, in IBM Cognos Configuration, start the IBM Cognos 8 service.

7. On each Planning Server computer, in IBM Cognos Configuration, start the IBM Cognos 8 service.

You can verify trust, by creating and running a PDF report that contains pictures that are not stored locally but which the gateway gets from a remote computer. If the pictures appear, trust is established. To avoid being prompted by a security alert for each new session, install the certificate into one of your Web browser’s certificate stores.

In addition, you may want to set up SSL connections between IBM Cognos components and other servers. You must ensure that SSL is set up for the other servers and then you must set up a shared trust between IBM Cognos components and the other servers. For more information, see "Configuring the SSL Protocol" (p. 319).

## Configuring Log Messages

Log messages are an important diagnostic tool for investigating the behavior of IBM Cognos 8. In addition to error messages, log messages provide information about the status of components and a high-level view of important events. For example, log messages can provide information about attempts to start and stop services, completion of processing requests, and indicators for fatal errors.

Audit logs, which are available from a logging database, provide information about user and report activity.

The IBM Cognos 8 services on each computer send information about errors and events to a local log server. A local log server is installed in the `c8_location/logs` folder on every IBM Cognos 8 computer that contains Content Manager or Application Tier Components. Because the log server uses a different port from the other IBM Cognos 8 components, it continues to process events even if other services on the local computer, such as the dispatcher, are disabled.

The following workflow shows the tasks that are required to prepare for logging.

- During planning, determine the logging configuration that is suitable for your environment. For example, evaluate various log message destinations, such as remote log servers and log files, such as the UNIX or Linux syslog or the Windows NT Event log, in addition to the local log file. You can also send only audit logging information to a database. Consider security,
such as methods available for protecting log files from system failures and user tampering. For information about planning, see the Architecture and Deployment Guide.

- During configuration, define the startup properties for logging, such as connection settings for databases. You must also create a logging database if you plan to collect audit logs. If communication between a local log server and a remote log server must be secured, make the appropriate configuration changes on both IBM Cognos 8 computers. For information about configuring logging, see the Installation and Configuration Guide.

- When setting up logging, specify the level of detail to log to focus messages on the information that is relevant in your organization. Audit reports may also be set up to track user and report activity. For information about setting up logging, see the Administration and Security Guide.

For information about using log messages to solve problems and resolving logging-related issues, see the Troubleshooting section of the Administration and Security Guide.

Guidelines for Creating a Logging Database

You can create a database to store log messages. Creating a logging database involves the following tasks:

- Create a logging database.
  - For DB2, Oracle, Microsoft SQL Server, or Sybase, use the same procedure that was used to create the content store database (p. 57).
  - For DB2 on z/OS, use the instructions in "Suggested Settings for Creating the DB2 Logging Database on z/OS" (p. 326).

- Set up the database connectivity.

- Specify the log messages destination.

Suggested Settings for Creating the DB2 Logging Database on z/OS

The database you create must contain some recommended configuration settings. Use the following checklist to help you set up the logging database on DB2.

- Log on to the z/OS system as a user with administrator privileges in DB2 on z/OS.

- Create a database instance, storage group, and a user account for the content store. IBM Cognos 8 uses the credentials of the user account to communicate with the database server.

- Ensure that you allocate a buffer pool with a page size of 8 KB for the database instance.

- For a logging database in DB2 on z/OS, administrators must run a tablespace script to create tablespaces to hold large objects and other data for the logging database, and then grant user rights to the table. For information about running the tablespace script, see "Create Tablespaces for DB2 Logging Database on z/OS " (p. 327).
Create Tablespaces for DB2 Logging Database on z/OS

A database administrator must run a script to create a set of tablespaces required for the logging database. The script must be modified to replace the placeholder parameters with ones that are appropriate for your environment.

Ensure that you use the name convention for DB2 on z/OS. For example, all names of parameters must start with a letter and the length must not exceed eight characters. For more information, see the IBM DB2 Information Center.

Steps
1. Connect to the database as a user with privileges to create and drop tablespaces and to allow execution of SQL statements.

2. Open the LS_tablespace_db2zOS.sql script file and use the following table to help you to replace the generic parameters with ones appropriate for your environment.

Not all of the parameters listed are in the script, but may be added in the future.

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPFSCRIPT_DATABASE</td>
<td>Specifies the name of the logging database.</td>
</tr>
<tr>
<td>IPFSCRIPT_STOGROUP</td>
<td>Specifies the name of the storage group.</td>
</tr>
<tr>
<td>IPFSCRIPT_TABLESPACE</td>
<td>Specifies the name of the tablespace that contains the base tables in the logging database. This tablespace is not for Auxiliary tables.</td>
</tr>
<tr>
<td>IPFSCRIPT_LOB_TABLESPACE</td>
<td>Specifies the name of the tablespace that is allocated for auxiliary tables.</td>
</tr>
<tr>
<td>IPFSCRIPT_BP</td>
<td>Specifies the name of the 8 k buffer pool that is allocated for regular objects.</td>
</tr>
<tr>
<td>IPFSCRIPT_USERNAME</td>
<td>Specifies the user account that accesses the logging database.</td>
</tr>
</tbody>
</table>

3. Save and run the script.

4. Grant the IBM Cognos user rights to the tablespaces that were created when you ran the LS_tablespace_db2zOS.sql script file:
   - Open the LS_rightsGrant_db2zOS.sql script file, which is located in the c8_locationconfigurationschemasloggingdb2zOS directory.
   - Replace the parameter values with those that are appropriate for your environment.
     Tip: Ensure you use the same values that you used when you created the buffer pools and user account.
Save and run the LS_rightsGrant_db2zOS.sql script.

The logging database is created.

Set Up the Database Connectivity for the Logging Database

After you create a database for audit logs, additional steps are required to set up the database client if you use Oracle, DB2, or Sybase as the database server.

You cannot use Cognos Content Database as a logging database.

**Note:** In a distributed environment, the local log server on an Application Tier Component computer may send log messages to a remote log server, which then sends messages to the logging database. For Oracle, Sybase, and DB2, the appropriate JDBC driver and database client software (DB2 only) is required only on the Application Tier Components computer with the remote log server that connects to the logging database.

**Microsoft SQL Server Database**

If you use a Microsoft SQL Server database, the JSQLConnect.jar file is installed to the appropriate location by default. The only additional step is to ensure that the Microsoft SQL Server uses TCP/IP connectivity.

**Oracle or Sybase Database**

If you use an Oracle or Sybase database, you must set up the JDBC driver on all Application Tier Components computers with a connection to the logging database. You must also set up the JDBC driver on the Content Manager computer, unless you are using the same type of database for the log messages as you use for the content store.

**DB2 Database**

IBM Cognos 8 uses JDBC connectivity to access the database used for the logging database.

For a DB2 database, you must set up the database client software and the JDBC driver on all Application Tier Components computers with a connection to the logging database. You must also set up the database client software and the JDBC driver on the Content Manager computer, unless you are using the same type of database for the log messages as you use for the content store.

If you use DB2 on Windows, Linux or UNIX as your logging database you must choose whether to use the type 2 or type 4 JDBC driver depending on how you want to connect to the logging database.

If you are using a DB2 database on z/OS for the logging database, you must use type 4 JDBC connectivity.

For more information about JDBC driver options for a DB2 database, see "JDBC Driver Options for Using DB2 Database as a Content Store" (p. 126).

**Steps for Oracle**

1. On the computer where Oracle is installed, go to the ORACLE_HOME/jdbc/lib directory.
2. Copy the appropriate JAR file to the $c8_location/webapps/p2pd/WEB-INF/lib directory on computers where Content Manager or Application Tier Components is installed.
If you use Java 1.4, copy the ojdbc14.jar file
If you use Java 1.5, copy the ojdbc5.jar file

If the directory contains the classes12.jar file, delete it before installing the ojdbc14.jar or ojdbc5.jar file.

Steps for DB2 on Linux, UNIX, and Windows

1. If you are using type 2 JDBC connectivity, install the DB2 client software on the Content Manager computers.
   If you use type 4 JDBC connectivity for DB2, you are not required to install the DB2 client software where Content Manager is installed.
   For more information about the differences between type 2 and type 4 drivers, see "JDBC Driver Options for Using DB2 Database as a Content Store" (p. 126).

2. If you are using type 2 JDBC connectivity, and the logging database is on a different computer than log server, configure a database alias to the logging database.
   - On Windows, run the DB2 Client Configuration Assistant.
   - On UNIX or Linux, use the DB2 command line interface.
   Note: If the logging database and log server are on the same computer, the logging database name automatically becomes the alias.

3. On Windows, stop the DB2 services and the HTML Search Server.

4. Copy the following files from the DB2_installation/sqllib/java directory to the c8_location/webapps/p2pd/WEB-INF/lib directory.
   - the universal driver file, db2jcc.jar
   - the license file
     for DB2 on Linux, UNIX, or Windows, db2jcc_license_cu.jar
     for DB2 on z/OS, db2jcc_license_cisuz.jar
   Tip: To check the driver version, run the command java -cp path/db2jcc.jar com.ibm.db2.jcc.DB2Jcc -version.

5. On Windows, restart the DB2 services and the HTML Search Server.

6. Repeat this entire procedure on the IBM Cognos 8 computers where the software must be installed.

Steps for DB2 on z/OS

1. Go to the DB2_installation/sqllib/java directory.

2. Copy the following files to the c8_location/webapps/p2pd/WEB-INF/lib directory and c8_location/bin directories.
   - the universal driver file, db2jcc.jar

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- the license file, for example, db2jcc_license_cisuz.jar

If you are using a DB2 database on z/OS for the logging database, you must use type 4 JDBC connectivity.

The driver version must be at least JCC 3.7 from Linux, UNIX, or Windows version 9.1 fix pack or JCC 3.42 from Linux, UNIX, or Windows version 9.5 fix pack 2.

Steps for Sybase

1. On the computer where Sybase is installed, enable the JDBC driver using the following script:
   
   ```
   Sybase_location/jConnect-5_5/sp/sql_server12.5.sql
   ```

2. Go to the `Sybase_location/jConnect-5_5/classes` directory.

3. Copy the `jconn2.jar` file to the `c8_location/webapps/p2pd/WEB-INF/lib` directory on the appropriate Content Manager or Application Tier Components computers.

Log Message Destinations

A local log server is automatically installed when you install Content Manager or the Application Tier Components. You can specify one or more destinations where the local log server sends log messages:

- remote log server
- file
- database
- UNIX or Linux syslog or the Windows NT Event log

For information about log messages, see the *Architecture and Deployment Guide*.

Remote Log Server

In a distributed installation, you can configure the log server on each IBM Cognos 8 computer to send log messages to a single remote log server, which acts as a common log server. You can then configure the common log server to send the log messages to a local file or database on the same or different computer.

If the remote log server becomes unavailable, log messages are redirected to recovery files on the local computer in the `c8_location/logs/recovery/remote` directory. These recovery files have timestamp information in their file names, and are not readable like regular log files. When the remote log server becomes available, an automatic recovery process moves all log information to the remote log server and deletes the local log files.

File

The log server is configured by default to send log messages to the `c8_location/logs/cogserver.log` file. If the default log file does not exist when the IBM Cognos 8 service starts, it is created automatically.
You can configure the log server to send log messages to a different file. If you configure a different log file, IBM Cognos 8 attempts to automatically create this file on startup, in addition to the default log file. If the location for the configured log file is different from the `c8_location/logs` directory, you must ensure the path to the log file exists before starting the IBM Cognos 8 service. For example, if you configure the log server to send messages to the `c:/log_files/cognos.log` file, IBM Cognos 8 attempts to automatically create the `cognos.log` file in the `c:/log_files` folder. If this folder does not exist, IBM Cognos 8 does not create the `cognos.log` file and no log messages can be recorded in it. Note that these log messages are not recorded in the default log file. Although IBM Cognos 8 automatically creates the default log file even when another log file is configured, the default log file is not used as a backup.

**Database**

The log server can also send audit logs to a database on the same or another computer. Audit logs provide information about user and report activity.

The logging database has the same configuration and user account requirements as the content store database. After you configure IBM Cognos 8 components to send messages to a logging database, and restart the IBM Cognos 8 service, IBM Cognos 8 components create the required tables and table fields. You can test the connection to the logging database before you restart the IBM Cognos 8 service.

**Specify the Log Messages Destination**

You can configure a type of destination for the log messages, and then configure properties for the specific destination. You can also configure more than one destination for log messages.

Before you specify a database as a destination, ensure that you

- created the logging database
- set up the database client

**Steps for DB2, Linux, and Windows**

1. On the computer where you installed Content Manager or the Application Tier Components, start IBM Cognos Configuration.

2. In the **Explorer** window, under **Environment**, click **Logging**.

3. In the **Properties** window, use the following table to help set the log server properties.

<table>
<thead>
<tr>
<th>Task</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use TCP between IBM Cognos 8 components on a computer and its local log server</td>
<td>Set the Enable TCP property to <strong>True</strong>. UDP provides faster communication with a lower risk of lost connections than TCP. However, the risk of losing a local TCP connection is low. TCP is always used for communication between a local log server and a remote log server.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Task</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change the number of threads available to the local log server</td>
<td>Type the value in the <strong>Local log server worker threads</strong> property.</td>
</tr>
<tr>
<td></td>
<td>Set a value between 1 and 20. The default value of 10 is recommended.</td>
</tr>
<tr>
<td></td>
<td>However, if you have a high number of log messages, you can allocate more threads to improve performance.</td>
</tr>
<tr>
<td>Apply UTF-8 encoding for log messages written to a file</td>
<td>Set the <strong>Use UTF8 encoding</strong> property to <strong>True</strong>.</td>
</tr>
<tr>
<td></td>
<td>If the IBM Cognos 8 component is using multibyte encoding, you must set this property to True and use a UTF-8 editor to view the log file. Otherwise, the log file may contain unreadable characters.</td>
</tr>
</tbody>
</table>

4. In the **Explorer** window, under **Environment**, right-click **Logging**, and click **New resource**, **Destination**.

5. In the **Name** box, type the name of the destination.

6. In the **Type** list, click the type of destination and then click **OK**.

7. If the destination is a **file**, in the **Properties** window, type the appropriate values for the mandatory and optional properties.

8. If the destination is a **remote log server**, in the **Properties** window, type the appropriate values for the mandatory and optional properties.
   - If the **Internal dispatcher URI** of the destination IBM Cognos 8 computer is configured to use SSL, in the **Properties** window, set the **Enable SSL** property to **True**.
   - You must later specify the log messages destination when you configure the remote log server.

9. If the destination is a database, in the **Explorer** window, under **Logging**, specify the type of database and its properties, as follows:
   - Right-click the database name, and click **New resource**, **Database**.
   - In the **Name** box, type the name of the destination.
   - In the **Type** list, click the type of database and then click **OK**.
   - In the **Properties** window, type the appropriate values for the mandatory and optional properties.
     - For a Microsoft SQL Server database, you can choose to use a port number, such as 1433, or a named instance as the value for the **Database server with port number or instance name** property.
To connect to a named instance, you must specify the instance name as a JDBC URL property or a data source property. For example, you can type localhost\instance1. If no instance name property is specified, a connection to the default instance is created.

Note that the properties specified for the named instance, along with the user ID and password, and database name, are used to create a JDBC URL. Here is an example: jdbc:JSQLConnect://localhost\instance1/user=sa/more properties as required

- Test the connection to the new database. In the Explorer window, under Environment, right-click Logging and click Test.
  IBM Cognos 8 components connect to the database. If you configured more than one database for logging messages, IBM Cognos 8 components test all the databases.

10. Repeat steps 5 to 10 for each destination to which you want the log server to send messages.

11. From the File menu, click Save.

12. In the Explorer window, click IBM Cognos 8 service, IBM Cognos 8.

13. From the File menu, click Restart.
   If you selected a database as the destination, IBM Cognos 8 components create the required tables and fields in the database that you created.
   If the destination was a remote log server, configure and start the remote log server. Then restart the IBM Cognos 8 service on the local computer.
   If the destination was a database, you can use IBM Cognos 8 components to run log reports from the database.
   You can also set the logging level, which controls the amount of detail and type of messages that are sent to a log file or database. For instructions, see the Administration and Security Guide.

### Steps for DB2 for z/OS

1. On the computer where you installed Content Manager or the Application Tier Components, start IBM Cognos Configuration.

2. In the Explorer window, under Environment, click Logging.

3. In the Properties window, use the following table to help set the log server properties.

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Chapter 11: Configuration Options

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<tr>
<td>Apply UTF-8 encoding for log messages written to a file</td>
<td>Set the Use UTF8 encoding property to True. If the IBM Cognos 8 component is using multibyte encoding, you must set this property to True and use a UTF-8 editor to view the log file. Otherwise, the log file may contain unreadable characters.</td>
</tr>
</tbody>
</table>

4. In the Explorer window, under Environment, right-click Logging, and click New resource, Destination.

5. In the Name box, type the name of the destination.

6. In the Type list, click Database and then click OK.

7. In the Explorer window, under Logging, right-click the database name, and click New resource, Database.

8. In the Name box, type the name of the destination.

9. In the Type list, click DB2 database and then click OK.

10. In the Properties window, type the Database server and port number, User ID and password, and the z/OS Database name. Ensure that the User ID is the same as the value you specified for the IPFSCRIPT_USERNAME parameter in the LS_tablespace_db2zOS.sql script file, (p. 327).

11. In the Explorer window, click Local Configuration.

12. In the Properties window, next to Advanced properties, click inside the Value box, and then click the edit button.

13. Click Add, and then add the following configuration parameter names and values:

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPFSCRIPT_CREATE_IN</td>
<td>The base tables location.</td>
</tr>
<tr>
<td></td>
<td>For example, databaseName.baseTablespaceName</td>
</tr>
<tr>
<td>IPFSCRIPT_STOGROUP</td>
<td>The name of the storage group.</td>
</tr>
</tbody>
</table>
### Parameter Names and Values

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPFSCRIPT_DATABASE</td>
<td>The name of logging database.</td>
</tr>
<tr>
<td>IPFSCRIPT_LOB_TABLESPACE</td>
<td>The name of the tablespace that is reserved for auxiliary tables in the logging database.</td>
</tr>
</tbody>
</table>

14. From the **File** menu, click **Save**.

15. Test the connection to the new database. In the **Explorer** window, under **Environment**, right-click **Logging** and click **Test**.

IBM Cognos 8 components connect to the database. If you configured more than one database for logging messages, IBM Cognos 8 components test all the databases.

### Changing Global Settings

You change global settings

- to customize language support for the user interface
- to customize currency support
- to customize content locale support
- to map the language used in the product user interface
- to map content locales
- to add fonts to your IBM Cognos environment
- to customize the default time zone
- to change the encoding for email messages
- to customize cookie settings

By default, IBM Cognos 8 components ensure that all locales, which may come from different sources and in various formats, use a normalized form. That means that all expanded locales conform to a language and regional code setting.

Each computer has a default system locale and one user locale per user. The user locales may be different from the default system locale.

**Important**: If you change global settings on one Content Manager computer, you must make the same changes on the other Content Manager computers.

### Customize Language Support to the User Interface

Use the **Product Locales** table to add or remove the user interface language support. For example, if you do not require a German user interface, you can remove the language from the list.

If you change the user interface language of the product, data is not affected.
If you want users to see product documentation in a language other than English, you must install the Supplementary Languages Documentation. For more information, see "Install Translated Product Documentation" (p. 250).

Ensure that you install the appropriate fonts to support the character sets and currency symbols you use. For Japanese and Korean currency symbols to appear correctly, you must install the additional fonts from the Supplementary Languages Documentation CD.

**Steps**

1. On each Content Manager computer, start IBM Cognos Configuration.

2. From the Actions menu, click Edit Global Configuration.

3. Click the Product Locales tab.

4. Click Add.

   **Tip**: To remove support, select the check box next to the Supported Locale and then click Remove.

5. In the second column, type the language portion of a locale.

6. Repeat steps 3 to 5 for other language support that you want to add.

7. Click OK.

8. From the File menu, click Save.

**Customizing Currency Support**

If you require additional currencies or want to remove some from the user interface, you can update the list of supported currencies in the Currencies table. If you use Japanese or Korean currencies, you must configure support so that Japanese Yan and Korean Won characters display correctly.

**Add Currencies to IBM Cognos 8**

You can add supported or unsupported currencies to the user interface. You add supported currencies in IBM Cognos Configuration. You add unsupported currencies to the i18n_res.xml file that is provided in IBM Cognos 8.

By default IBM Cognos 8 components show only a subset of supported currencies in the user interface. Currencies are identified by their ISO 4217 currency code. The complete list of supported currencies that can be added are listed in the i18n_res.xml file in the c8_location\bin directory.

If you add a currency code that is not supported by IBM Cognos, you must manually add it to the i18n_res.xml file in the c8_location\bin directory. Copy this file to each IBM Cognos computer in your installation.

Adding currencies to the IBM Cognos environment does not guarantee that your computer has a font with the required characters to display the currency. Ensure that you install the appropriate fonts to support the currency symbols you use. For example, to display the Indian currency symbol (rupee) correctly, you must install a font that contains that character. In addition, for Japanese and
Korean currency symbols to appear correctly, you must install the additional fonts from the Supplementary Languages Documentation CD.

**Steps**

1. On each Content Manager computer, start IBM Cognos Configuration.
2. From the **Actions** menu, click **Edit Global Configuration**.
3. Click the **Currencies** tab.
4. Click **Add**.
   
   *Tip*: To remove support, select the check box next to the supported item and then click **Remove**.
5. In the second column, type an appropriate value.
   
   The value you add must comply with ISO 4217 codes for the representation of currencies and formats. Usually the value you add is a three-letter alphabetic code. The first two characters are letters representing the ISO 3166 country code for the country the currency is from. The additional letter represents the first letter of the currency.
6. Repeat steps 3 to 5 for other types of support that you want to add.
7. From the **File** menu, click **Save**.

**Customize Content Locale Support**

To ensure users see reports, data or metadata in their preferred language, or specific to their region, you can add partial locales (language) or complete locales (language-region) to the Content Locales table. This way, if content is available in different languages, or in different locales, it is rendered to users based on their user locale. By default, content locale overrides product locale in the portal for some content.

If you view reports in Thai language, digits are not supported.

If a locale is not required, you can remove it from the list. You must leave at least one content locale in the list for the Application Tier Components to operate.

Adding incomplete locales (languages) to the IBM Cognos environment does not guarantee that your computer has a font that can display Web pages in your preferred languages. Ensure that you install the appropriate fonts to support the character sets and currency symbols you use. For Japanese and Korean currency symbols to appear correctly, you must install the additional fonts from the Supplementary Languages Documentation CD. For more information, see "Install and Configure Additional Language Fonts" (p. 251).

**Steps**

1. On each Content Manager computer, start IBM Cognos Configuration.
2. From the **Actions** menu, click **Edit Global Configuration**.
3. Click the **Content Locales** tab.
4. Click **Add**.
Tip: To remove support, select the check box next to the supported item and then click Remove.

5. In the second column, type an appropriate value.
   - To add language support for report data and metadata, type a partial local (language) setting.
   - To add support specific to a region, type a complete locale (language-region) setting.

6. Repeat steps 3 to 5 for each additional locale that you want to support.

7. From the File menu, click Save.

Map Content Locales

Use the Content Locale Mappings table to map user locales to a complete (language-region) or partial (language) locale. You can also map a user’s preferred language to another language if content is not available in the user’s preferred language.

For example, if a report or scorecard is not available in a preferred language, for example Vietnamese, but is available in French and German, you can use the Content Mappings table to map the preferred language (Vietnamese) to another language (French or German). This way, you see the report or scorecard in the mapped language.

By default, the Content Locale Mappings table includes locales that do not contain the region. This allows you to use only the language portion of the locale when you specify locale settings and ensures that you always see the correct information. For example, in a multilingual database, data is usually available in different languages, such as French (fr), Spanish (es) and English (en), rather than being available in different locales, such as English Canada (en-ca), English United States (en-us), or French France (fr-fr).

The following examples show the method that IBM Cognos 8 components use to determine which report or scorecard the user sees if the multiple language versions are available.

Example 1

A report is available in Content Manager in two locales, such as en-us (English-United States) and fr-fr (French-France), but the user locale is set to fr-ca (French-Canadian). IBM Cognos 8 uses the locale mapping to determine which report the user sees.

First, IBM Cognos 8 checks to see if the report is available in Content Manager in the user’s locale. If it is not available in the user’s locale, IBM Cognos 8 maps the user’s locale to a normalized locale configured on the Content Locale Mapping tab. Because the user’s locale is fr-ca, it is mapped to fr. IBM Cognos 8 uses the mapped value to see if the report is available in fr. In this case, the report is available in en-us and fr-fr, not fr.

Next, IBM Cognos 8 maps each of the available reports to a normalized locale. Therefore, en-us becomes en and fr-fr becomes fr.

Because both report and the user locale maps to fr, the user having the user locale fr-ca will see the report saved with the locale fr-fr.
**Example 2**
The user’s locale and the report locales all map to the same language. IBM Cognos 8 chooses which locale to use. For example, if a user’s locale is en-ca (English-Canada) and the reports are available in en-us (English-United States) and en-gb (English-United Kingdom), IBM Cognos 8 maps each locale to en. The user will see the report in the locale setting that IBM Cognos 8 chooses.

**Example 3**
The report and the user locales do not map to a common language. IBM Cognos 8 chooses the language. In this case, you may want to configure a mapping. For example, if a report is available in en-us (English-United States) and fr-fr (French-France), but the user locale is es-es (Spanish-Spain), IBM Cognos 8 chooses the language.

**Steps**
1. On each Content Manager computer, start IBM Cognos Configuration.
2. From the Actions menu, click Edit Global Configuration.
3. Click the Content Locale Mapping tab.
4. Click Add.
5. In the Key box, type the user locale:
   - To ensure all regions for a user locale see content in a specific language, type the language portion of the locale, followed by a dash (-) and an asterisk (*). For example, type fr-*
   - To ensure a user locale (language-region) sees content in a specific language, type the complete locale. For example, type fr-ch
   - To map a preferred language to another language, type the preferred language portion of the locale. For example, type zh

   **Tip:** To specify the locale to use for a range of keys, use the wildcard character (*) with the Key value and then, in the Locale Mapping box, type the locale. For example, if you want all the German keys to use the German locale, type de* in the Key box and type de in the Locale Mapping box.

6. In the Locale Mapping box, type the language portion of the locale. User locales specified in the Key box will see content in this language.
7. Repeat steps 3 to 5 for other mappings you want to do.
8. Click OK.
9. From the File menu, click Save.
Map Product Locales

Use the Product Locale Mappings table to specify the language used in the user interface when the language specified in the user’s locale is not available.

You can ensure that all regions for a locale use the same language, or that a specific, complete locale (language-region) uses a particular language.

By default, the user sees the product interface in the language that matches the language setting of the user locale.

Steps
1. On each Content Manager computer, start IBM Cognos Configuration.
2. From the Actions menu, click Edit Global Configuration.
3. Click the Product Locale Mappings tab.
4. Click Add.
5. In the Key box, type the user locale:
   - To ensure all regions for a locale see the user interface in a specific language, type the language portion of the locale, followed by a dash (-) and an asterisk (*).
     For example, type es-*
   - To ensure a complete locale (language-region) see the user interface in a specific language, type the complete locale.
     For example, type es-es
   - To map a preferred language to another language, type the preferred language portion of the locale.
     For example, type zh
   Tip: To specify which locale to use as the default, use the wildcard character (*) for the Key value and then, in the Locale Mapping box type the locale.
6. In the Locale Mapping box, type the language portion of the locale.
   User locales specified in the Key box will see content in this language.
7. Repeat steps 3 to 5 for other mappings you want to do.
8. Click OK.
9. From the File menu, click Save.

Customize the Server Time Zone

You can customize the time zone used by Content Manager by selecting a different server time zone in IBM Cognos Configuration.
For UNIX installations that do not support a Java-based graphical user interface, you can view the list of acceptable time zones by opening IBM Cognos Configuration on the Windows computer where Framework Manager is installed.

Content Manager is configured to use the time zone of your operating system by default. All scheduled activities in IBM Cognos 8 are set using this time zone. In addition, users in IBM Cognos Connection use this time zone if they set their preferences for the default time zone. For more information about setting user preferences in IBM Cognos Connection, see the Administration and Security Guide.

**Steps**

1. Start IBM Cognos Configuration.
2. From the **Actions** menu, click **Edit Global Configuration**.
3. In the **Global Configuration** window, click the **General** tab.
4. Click the **Value** column for **Server time zone** and select another time zone from the list.
5. From the **File** menu, click **Save**.

**Change Encoding for Email Messages**

By default, IBM Cognos 8 components use UTF-8 encoding in emails. This value sets the default encoding used by the delivery service in this instance for all email messages. You may have older email clients or send email from IBM Cognos 8 to cell phones and PDAs that do not recognize UTF-8. If so, you can change the email encoding to a value that works on all your email clients (for example, ISO-8859-1, Shift-JIS). Each instance of IBM Cognos 8 that has an available delivery service must be changed.

The specified encoding affects the entire message, including the subject, attachments, attachment names, and plain or HTML body text.

<table>
<thead>
<tr>
<th>Character set</th>
<th>Supported encoding value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTF-8</td>
<td>utf-8</td>
</tr>
<tr>
<td>Western European (ISO 8859-1)</td>
<td>iso-8859-1</td>
</tr>
<tr>
<td>Western European (ISO 8859-15)</td>
<td>iso-8859-15</td>
</tr>
<tr>
<td>Western European (Windows-1252)</td>
<td>windows-1252</td>
</tr>
<tr>
<td>Central and Eastern European (ISO 8859-2)</td>
<td>iso-8859-2</td>
</tr>
<tr>
<td>Central and Eastern European (Windows-1250)</td>
<td>windows-1250</td>
</tr>
<tr>
<td>Cyrillic (ISO 8859-5)</td>
<td>iso-8859-5</td>
</tr>
</tbody>
</table>
### Supported encoding values

<table>
<thead>
<tr>
<th>Character set</th>
<th>Supported encoding value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cyrillic (Windows-1251)</td>
<td>windows-1251</td>
</tr>
<tr>
<td>Turkish (ISO 8859-9)</td>
<td>iso-8859-9</td>
</tr>
<tr>
<td>Turkish (Windows-1254)</td>
<td>windows-1254</td>
</tr>
<tr>
<td>Greek (ISO 8859-7)</td>
<td>iso-8859-7</td>
</tr>
<tr>
<td>Greek (Windows-1253)</td>
<td>windows-1253</td>
</tr>
<tr>
<td>Japanese (EUC-JP)</td>
<td>euc-jp</td>
</tr>
<tr>
<td>Japanese (Shift-JIS)</td>
<td>shift_jis</td>
</tr>
<tr>
<td>Traditional Chinese (Big5)</td>
<td>big5</td>
</tr>
<tr>
<td>Simplified Chinese (GB-2312)</td>
<td>gb2312</td>
</tr>
<tr>
<td>Korean (EUC-KR)</td>
<td>euc-kr</td>
</tr>
<tr>
<td>Korean (KSC-5601)</td>
<td>ksc_5601</td>
</tr>
<tr>
<td>Thai (Windows-874)</td>
<td>windows-874</td>
</tr>
<tr>
<td>Thai (TIS-620)</td>
<td>tis-620</td>
</tr>
</tbody>
</table>

### Steps

1. Start IBM Cognos Configuration.
2. From the Actions menu, click Edit Global Configuration.
3. In the Global Configuration window, click the General tab.
4. Click the Value column for the Email Encoding property.
5. Scroll to the desired setting and click it.
6. From the File menu, click Save.
Customize Cookie Settings

Based on the requirements of your IBM Cognos environment, you may need to modify the settings that IBM Cognos 8 components use to create cookies. You can use IBM Cognos Configuration to customize the cookie domain, path, and secure flag.

IBM Cognos 8 components determine the cookie domain from the HTTP request submitted by the client, which is typically a Web browser. In most network configurations, HTTP requests pass through intermediaries such as proxy servers and firewalls as they travel from the browser to IBM Cognos 8 components. Some intermediaries modify the information that IBM Cognos 8 components use to calculate the cookie domain, and IBM Cognos 8 components then cannot set cookies. The usual symptom of this problem is that users are repeatedly prompted to log on. To avoid this problem, configure the cookie domain.

To set the correct value for the cookie domain, use the format and value that represents the widest coverage for the host.

<table>
<thead>
<tr>
<th>Host</th>
<th>Format for domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>computer or server</td>
<td>computer or server name (no dots)</td>
</tr>
<tr>
<td></td>
<td>Example: mycompany</td>
</tr>
<tr>
<td>suffix is .com, .edu, .gov, .int, .mil, .net, or .org</td>
<td>.name.suffix</td>
</tr>
<tr>
<td></td>
<td>(two dots)</td>
</tr>
<tr>
<td></td>
<td>Example: .mycompany.com</td>
</tr>
<tr>
<td>other</td>
<td>.name1.name2.suffix</td>
</tr>
<tr>
<td></td>
<td>(three dots)</td>
</tr>
<tr>
<td></td>
<td>Example: .travelinfo.co.nz</td>
</tr>
</tbody>
</table>

Steps

1. On each Content Manager computer, start IBM Cognos Configuration.
2. From the Actions menu, click Edit Global Configuration.
3. Click the General tab.
4. Click in the Value column under Cookie Settings for each property that you want to change and specify the new value.
   If you leave the Domain property blank, the dispatcher derives the domain from the host name of the request.
5. Click OK.
Changing the Gateway

To improve Web server performance, you can configure IBM Cognos 8 to use alternate gateways that replace the default CGI program. You can use one of the following gateways:

- Microsoft Internet Application Programming Interface (ISAPI) for Microsoft Internet Information Services on Windows
- Apache Web Server module
- Servlet Gateway Java application for application servers

There is no additional Web server configuration required to use ISAPI. To access IBM Cognos 8 components using ISAPI, in IBM Cognos Configuration, change the `cognos.cgi` portion of the Gateway URI property to `cognosisapi.dll`. Then specify the ISAPI URI, `http://host_name/cognos8/isapi`, in your browser.

Before you change the gateway, we recommend that you first ensure that the default CGI gateway and your configuration work in your environment.

Configure the Gateway for IBM Cognos Apache Web Server Module

IBM Cognos 8 provides three Apache modules. The IBM Cognos Apache module requires Apache Server 1.3.x and the IBM Cognos Apache 2 module requires Apache Server 2.0.x. The IBM Cognos Apache 2.2 module requires Apache Server 2.2.x.

Steps

1. Stop Apache Web Server.
2. Append the `c8_location/cgi-bin` directory to the appropriate environment variable:
   - On Solaris or Linux, LD_LIBRARY_PATH
   - On HP-UX, For Apache 1.3, SHLIB_PATH For Apache 2.0 and Apache 2.2.x, SHLIB_PATH and LD_LIBRARY_PATH
   - On AIX, LIBPATH
3. On HP-UX PA-RISC, do the following:
   - Ensure that the LD_PRELOAD environment variable contains `/usr/lib/libcl2`
   - For Apache 1.3, set the COG_CGIBIN_DIR environment variable to `c8_location/cgi-bin`
4. Go to the `Apache_installation/conf` directory.
5. Open the `httpd.conf` file in an editor.
6. Add the following to the end of the load module list:

   ```
   LoadModule cognos_module "c8_location/cgi-bin/module.suffix"
   ```

   where `module` is as follows:
and *suffix* is as follows:

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>dll</td>
</tr>
<tr>
<td>Solaris, AIX</td>
<td>so</td>
</tr>
<tr>
<td>HP-UX PA-RISC</td>
<td>sl</td>
</tr>
<tr>
<td>HP-UX IA, Linux</td>
<td>so</td>
</tr>
</tbody>
</table>

7. For Apache 1.3, add the following to the end of the add module list:

   AddModule mod_cognos.cpp

8. Add the following to the aliases section:

   ScriptAlias /cognos8/cgi-bin "c8_location/cgi-bin"
   Alias /cognos8 "c8_location/webcontent"
   <Directory "c8_location/webcontent">
   Options Indexes MultiViews
   </Directory>

   The <Directory> directive is optional.

   Tip: Ensure that you define the cognos8/cgi-bin alias before the cognos8 alias.

9. For Apache 2.2, add the following security rules:

   ScriptAlias /cognos8/cgi-bin "c8_location/cgi-bin"
   Alias /cognos8 "c8_location/webcontent"
   <Directory "c8_location/webcontent">
   Options Indexes MultiViews
   AllowOverride None
   Options None
   Order allow,deny
   Allow from all

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```xml
</Directory>
<Directory "c8location/cgi-bin">
    AllowOverride None
    Options None
    Order allow,deny
    Allow from all
</Directory>
```

10. For Apache 1.3 and Apache 2.0, add the following to the server status reports section:
```xml
<Location /cognos8/cgi-bin/cognos_module>
    SetHandler cognos-handler
</Location>
```

For Apache 2.2.x, add the following to the server status reports section:
```xml
<Location /cognos8/cgi-bin/cognos_module>
    SetHandler cognos-handler
    Order allow,deny
    Allow from all
</Location>
```

Enter the code exactly as specified. The "cognos_module" string refers to the module that you loaded in step 6.

11. For Apache 1.3 and Apache 2.0, to enable the gateway diagnostic page, add the following to the server status reports section:
```xml
<Location /cognos8/cgi-bin/diag_cognos_module>
    SetHandler cognos-handler
</Location>
```

For Apache 2.2.x, add the following to the server status reports section:
```xml
<Location /cognos8/cgi-bin/cognos_module>
    SetHandler cognos-handler
    Order allow,deny
    Allow from all
</Location>
```

Enter the code exactly as specified. The diag_ string is required and the "cognos_module" string refers to the module that you loaded in step 6.

12. For Apache 1.3, on Windows, Solaris, and AIX, add the following to the user directory section:
```xml
<IfModule mod_cognos.cpp>
    CGIBinDir "c8_location/cgi-bin"
</IfModule>
```

13. For Apache 2.0, add the following to the user directory section:
```xml
<IfModule mod_cognos.c>
    CGIBinDir "c8_location/cgi-bin"
</IfModule>
```
For Apache 2.2.x, add the following to the user directory section:

```html
<IfModule mod2_2_cognos.c.c>
  CGIBinDir "c8_location/cgi-bin"
</IfModule>
```

14. Save and close the file.

15. For Apache 2.0, on HP-UX, enable searching for LD_LIBRARY_PATH by running the following command in the `Apache_installation/bin` directory:

```bash
chatr +s enable +b enable httpd
```


17. In IBM Cognos Configuration, configure the Gateway URI property to use the apache_mod gateway:

```plaintext
http://host_name:port/cognos8/cgi-bin/module.suffix
```

where `module` and `suffix` match the values shown previously.

18. Users must then specify the Apache module URI in their browser, as follows

```plaintext
http://host_name/cognos8/module.suffix
```

where `module` and `suffix` match the values that you configured for the Gateway URI in IBM Cognos Configuration.

## Configure the Servlet Gateway

If you configure the IBM Cognos Servlet Gateway to run on a supported application server, your environment does not require a Web server. The application server and the IBM Cognos Servlet Gateway replace the functions provided by a Web server and other IBM Cognos gateways.

Before you build and deploy the IBM Cognos Servlet Gateway, ensure the following:

- The application server is installed and running on each computer where the servlet gateway is to be installed.
- IBM Cognos 8 Gateway components are installed on the same system as the application server.
- The IBM Cognos 8 dispatcher and Content Manager components are installed and running in the environment.
- The application server user account has full access permissions for the IBM Cognos installation.

We recommend that you create a new UNIX or Linux group named cognos8. This group must contain the user that starts the application server and the user that owns the IBM Cognos files. Change the group ownership of the IBM Cognos files to the cognos8 group, and change the file permissions for all IBM Cognos files to GROUP READABLE/WRITABLE/EXECUTABLE. For simplicity, you can also use the application server user account to install and run IBM Cognos components.

To set up the IBM Cognos Servlet Gateway to run on your application server, do the following:
Create a separate JVM instance, if necessary.
If you plan to run IBM Cognos 8 and the IBM Cognos Servlet Gateway on the same application server, the servlet gateway must be deployed to a separate JVM instance.

Check that IBM Cognos components are properly set up.

Set environment variables.

Update the Java environment.

Configure IBM Cognos Servlet Gateway to run on the application server.

Change the application server startup script, if necessary.

Configure application server properties and deploy IBM Cognos Servlet Gateway.

Enable SSL, if required.

Configure the Web server.

You can then access IBM Cognos 8 components using the IBM Cognos Servlet Gateway, by entering the gateway URI. For example,

http[s]:host_name:port/ServletGateway

The IBM Cognos Servlet Gateway URI is case-sensitive.

Change the IP Address Version

IBM Cognos 8 supports two IP address versions: IPv4 and IPv6. IPv4 uses 32-bit IP addresses and IPv6 uses 128-bit IP addresses. For example:

- IPv4: 192.168.0.1:80
- IPv6: [2001:0db8:0000:0000:0000:148:57ab]:80

In IBM Cognos Configuration, you can select IPv4 or IPv6 for IBM Cognos 8 communication using the IP Version for Host Name Resolution property. By default IPv4 is employed.

The setting applies only to the computer where it is set. If you select Prefer IPv4 stack, all outgoing IBM Cognos 8 connections on that computer are established using IPv4 and the dispatcher accepts only incoming IPv4 connections. If you select Prefer IPv6 addresses, all outgoing IBM Cognos 8 connections on that computer are established using IPv6 and the dispatcher accepts both incoming IPv4 and IPv6 connections.

IPv4 client computers can communicate with dispatcher computers that are configured for IPv6. Hostnames specified within a URI are resolved based on the value of the Network Configuration property. However, if a URI has been specified with a numeric address, it has precedence over this setting and communication takes place using IPv4.

The setting applies only to the computer where it is set. If you select Use IPv4 addresses, all outgoing IBM Cognos 8 connections on that computer are established using IPv4 and the dispatcher accepts only incoming IPv4 connections. If you select Use IPv6 addresses, all outgoing IBM Cognos 8 con-
Connections on that computer are established using IPv6 and the dispatcher accepts both incoming IPv4 and IPv6 connections.

IPv4 client computers can communicate with dispatcher computers that are configured for IPv6. Hostnames specified within a URI are resolved based on the value of the IP Version for Host Name Resolution property. However, if a URI has been specified with a numeric address, it has precedence over this setting and communication takes place using IPv4.

For IBM Cognos Configuration to accept IPv6 addresses in the local URI properties, you must start IBM Cognos Configuration with the -ipv6 option. You can specify the option each time you open IBM Cognos Configuration from the command line.

On Windows, you can set the option permanently by adding the option to the Start menu shortcut.

**Steps to Set the IP Version**

1. Start IBM Cognos Configuration.
2. In the Explorer window, click Environment.
3. Click the Value box for IP Version for Host Name Resolution and click Use IPv4 addresses or Use IPv6 addresses.
4. From the File menu, click Save.
5. Close IBM Cognos Configuration.

**Steps to Manually Enable the IPv6 Option When Opening IBM Cognos Configuration**

1. Go to the `c8_location\bin` directory.
2. Start IBM Cognos Configuration by including the IPv6 option in the command, as follows:
   - On Windows, type `cogconfig.bat -ipv6`
   - On UNIX or Linux, type `./cogconfig.sh -ipv6`
3. Edit the URI properties that use IPv6 format, specify the values, and then from the File menu, click Save.

**Steps to Always Open IBM Cognos Configuration With the IPv6 Option on Windows**

1. From the Start menu, select Programs, IBM Cognos 8, and then right-click IBM Cognos Configuration, Properties.
2. On the Shortcut tab, in the Target box, type "`c8_location\bin\cogconfigw.exe -ipv6"`
3. Click OK.
Set Up ODBC Connections to Sybase IQ or Netezza

If you are using an ODBC driver on UNIX or Linux to connect to a Sybase IQ or Netezza ODBC data source, you must configure the environment and define the data sources.

After setting up the ODBC connections, you must create connections to the data sources in IBM Cognos Connection. For information, see the IBM Cognos 8 Administration and Security Guide.

For UNIX, the open source iODBC driver manager provides ODBC connectivity to Sybase IQ or Netezza ODBC data sources. The binaries for this driver manager are automatically installed with IBM Cognos 8.

On Linux, the unixODBC package provided with the operating system provides ODBC connectivity to Sybase IQ or Netezza ODBC data sources.

Steps
1. On the computer where Application Tier Components are installed, verify that the ODBC connectivity software is properly installed:
   - On UNIX, verify that the binaries provided by IBM Cognos 8 for the iODBC installation are properly installed by typing the following at the command prompt:
     ```
     which iodbctest
     c8_location/bin/iodbctest
     ```
   - On Linux, verify that the unixODBC package provided with the operating system is properly installed by typing the following at the command prompt:
     ```
     odbcinst -version unixODBC version
     ```
     If problems occur when using this command, see the documentation provided by your Linux vendor.

2. Set the appropriate library path environment variable to specify the location of the ODBC libraries for your operating system.
   - For Linux, ensure that the variable specifies the /usr/lib directory that contains libodbc.so before any other database installation directories.
   - For UNIX, ensure that the variable includes the c8_location/bin directory before any other database installation directories.

This table lists the environment variables for each operating system that must specify the location of the ODBC libraries.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Environment variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX</td>
<td>LIBPATH</td>
</tr>
<tr>
<td>Solaris and Linux</td>
<td>LD_LIBRARY_PATH</td>
</tr>
<tr>
<td>HP-UX</td>
<td>SHLIB_PATH</td>
</tr>
</tbody>
</table>
3. Copy the `ODBC_location/lib/odbc.ini` file to `c8_location/bin`.

4. Rename the `odbc.ini` file located in the `c8_location/bin` directory to `.odbc.ini`.

5. In the `[ODBC]` section, specify the ODBC root directory and whether Driver Manager tracing is enabled.
   
   Here is an example:

   ```
   [ODBC]
   InstallDir=/isvdb/sql/odbc
   Trace =1
   TraceFile = /uda/dev/boileaum/trace.log
   TraceAutoStop=1
   ```

6. In the `[ODBC Data Sources]` section, define the name and driver for each data source.
   
   Here is an example:

   ```
   [ODBC Data Sources]dsn-name=
   driver-description
   ```

7. Create a copy of the `[dsn-name]` section for each data source defined in the `[ODBC Data Sources]` section.

8. For each data source defined in the `[ODBC Data Sources]` section, define additional details using a `[dsn-name]` section.
   
   Here is an example:

   ```
   [dsn-name]
   Driver=driver_path Keyword=value
   ```

9. If you want to define a data source that is used when no other data source is available, create a `[Default]` section, as shown here:

   ```
   [Default]
   Driver=driver_path Keyword=value
   ```

10. Save and close the `odbc.ini` file.

11. Test the connection to the data source by doing one of the following:

    - On UNIX, type the following command at a command prompt and then run a Select from a known table:
      
      ```
      iodbctest DSN=dsn-name;UID=userID;PWD=password
      ```

    - On Linux, test the connection using the `odbcctest` application.

---

**Configure the Router to Test Dispatcher Availability**

If you use a router to distribute requests to IBM Cognos 8 dispatchers, and the router can test the availability of a server using a test URL, you can configure the router to test the availability of an IBM Cognos 8 dispatcher.

**Step**

- Configure the router to use a URL with the path `/p2pd/servlet/ping`. 
If the dispatcher is not ready, the following response is returned:
503 Service Unavailable
If the dispatcher is ready, the following response is returned:
200 OK

Configuring IBM Cognos 8 to Work with Other IBM Cognos Products

Some IBM Cognos products provide functionality that is not available in IBM Cognos 8. You can continue to use these products in the same environment. Additional configuration tasks may be required to ensure that IBM Cognos 8 can access objects that were created using other IBM Cognos products. Additional requirements for access depend on how you choose to run the two products.

Enable Scheduled Reports and Agents for IBM Cognos Planning Contributor Data Sources

To run scheduled reports and agents, which are based on IBM Cognos Planning Contributor data sources, you must specify a shared, secret password. This helps to ensure secure communication between IBM Cognos 8 servers and Contributor Data Server.

Steps
1. On the Application Tier Components computer, start IBM Cognos Configuration.
2. In the Explorer window, click Data Access, IBM Cognos Planning, Contributor Data Server.
3. In the Properties window, click the Value box next to the Signature password property and then click the edit button when it appears.
4. In the Value - Signature Password dialog box, type the password that will be digitally signed. The password is case-sensitive and must match the Signature password property that you configure in IBM Cognos Series 7, Configuration Manager, Cognos Planning/Cognos 8 - Contributor Data Server/General properties.
5. From the File menu, click Save.

A digital signature, based on the password, is created. The digital signature is encoded by IBM Cognos 8 and decoded by Contributor Data Server.

Update File Location Properties on Windows Vista

If you install IBM Cognos 8 client components in an environment that includes Windows Vista, you must change file locations properties in IBM Cognos Configuration so that IBM Cognos 8 can use a single data location for all users. The changes must be made on all computers where IBM Cognos 8 client components are installed.
Windows Vista has a security enhancement that restricts multiple users from sharing data locations. You can define environment variables and use them in IBM Cognos Configuration when specifying file locations. This allows you to direct applicable files to an area that will be accessible by IBM Cognos 8 users. On Windows, two environment variables are preset for users: one for all users and one for the specific user.

In addition, if you install Transformer on a Windows Vista computer, and you plan to use the cogtr.xml.samples file as a template, you must update default preferences in the Transformer configuration file.

Because the environment variables represent system root locations, we recommend that you also include the root directory name of the installation location when you specify file locations in IBM Cognos Configuration. The default root directory for IBM Cognos 8 is c8.

**Steps**

1. Start IBM Cognos Configuration.

2. In the **Explorer** window, click **Environment**.

3. In the **Properties** window, click **Deployment files location**.

4. Replace the relative path element, "..", with the appropriate environment variable and root directory:
   - For a single file location per user, %LOCALAPPDATA%
   - For a single file location for all users on the computer, %PUBLIC%

   For example,
   
   To set a single file location per user, specify the path %LOCALAPPDATA%/c8/deployment.

5. Repeat step 4 for the following properties:
   - Under **Environment**,  
     - Data files location  
     - Map files location  
     - Temporary files location  
   - Under **Environment**, **Logging**, **File**,  
     - Log file location  
   - Under **Cryptography**,  
     - Common symmetric key store location  
   - Under **Cryptography**, **Cognos**,  
     - Certificate location  
     - Signing key store location  
     - Encryption key store location
Configure a Source Control System for Framework Manager Metadata

To help you manage, share, and secure different versions of your metadata, you can configure Framework Manager to use a source control system.

You must already have one of the following source control system clients set up on the same computer as Framework Manager:

- Component Software Concurrent Versions System
- Visual Source Safe

For more information about installing and setting up source control systems, see Repository Control in the Framework Manager User Guide.

Steps

1. Start IBM Cognos Configuration.

2. In the Explorer window, under Environment, right-click Source Control Systems and click New resource, Source Control System.

   Source Control System is available on Windows computers that have Framework Manager installed and on Windows or UNIX computers that have Application Tier Components installed.

3. In the Name box, type a name for your source control system.

4. In the Type box, select a source control system from the list.

5. Click OK.

6. In the Properties window, for the Source control system executable file (.exe) location property, specify the file location and name of the .exe file.

   - For VSS, type file_location\ss.exe
   - For CVS, type file_location\cvs-version.exe
     where version is the CVS version number.

7. From the File menu, click Save.

You can now test your installation and configuration. You can also change default settings, if required. For example, you can change a port, configure SSL protocol, configure cryptographic settings, or change the Gateway URI to use an alternate gateway.

If you upgraded from an older version of Framework Manager, you can upgrade existing projects in the new version of Framework Manager. For more information, see the Framework Manager User Guide.
Configuring IBM Cognos 8 Transformer

After you install Transformer, you can perform these tasks:

- If you installed Transformer on a Windows Vista computer, and you plan to use the cogtr.xml.samples file as a template, update default preferences for Windows Vista.

- If you want to use Transformer models from IBM Cognos Series 7 and you want to continue to use IQD data sources, add IBM Cognos Series 7 Data Sources to the Transformer.

To make Transformer available for modelers to install and use, you can perform these tasks:

- Create a network installation location for Transformer modelers.

- Export configuration data for Transformer modelers.

- Deploy IBM Cognos 8 Transformers for modelers.

Update Default Preferences for Windows Vista

With security enhancements in Windows Vista, Microsoft changed the structure of user directories. If you want to use the cogtr.xml.samples file as a template, you must edit the default preferences settings. If you want all users to have the same default directories, you must change the default preferences to a common location to which users have access. If you want users to have the Windows Vista directories, you can delete the default preferences for the directories.

The instructions in this topic are for the installer or administrator. If you are the Transformer modeler or business specialist who wants to download and use Transformer, see "Deploying IBM Cognos 8 Transformer for Modelers" (p. 359).

Steps

1. Log on as the administrator.

2. In the c8_location\configuration directory, open cogtr.xml.sample in a text editor in elevated mode by right-clicking on the text editor and selecting Run as Administrator.

3. If you want all users to have the same default directories, change the directories to a location to which all users have read and write access.

   The directories to change are as follows:

   - <Preference Name="CubeSaveDirectory" Type="string" Value="..\temp"/>
   - <Preference Name="DataSourceDirectory" Type="string" Value="..\temp"/>
   - <Preference Name="DataWorkDirectory" Type="string" Value="..\temp"/>
   - <Preference Name="LogFileDirectory" Type="string" Value="..\logs"/>
   - <Preference Name="ModelSaveDirectory" Type="string" Value="..\temp"/>
   - <Preference Name="ModelWorkDirectory" Type="string" Value="..\temp"/>

4. If you want users to have the Windows Vista default directories, delete the preferences specified in step 3 from the file.
The Windows Vista default directories for Transformer are

- CubeSaveDirectory
  Documents\Transformer\PowerCubes

- DataSourceDirectory
  In IBM Cognos Configuration, under Environment, Data files location property

- DataWorkDirectory
  In IBM Cognos Configuration, under Environment, Temporary files location property

- LogFileDirectory
  Documents\Transformer\Logs

- ModelSaveDirectory
  Documents\Transformer\Models

- ModelWorkDirectory
  In IBM Cognos Configuration, under Environment, Temporary files location property

5. Change other settings as required.

6. Save the file as cogtr.xml.

The changes are applied the next time you open Transformer.

Add IBM Cognos Series 7 Data Sources to Transformer

If you plan to use Transformer models and data sources from IBM Cognos Series 7, you must add the location of your IBM Cognos Series 7 data sources to the Transformer gateway file.

The instructions in this topic are for the installer or administrator. If you are the Transformer modeler or business specialist who wants to download and use Transformer, see "Deploying IBM Cognos 8 Transformer for Modelers" (p. 359)

Steps

1. Log on as the administrator.

2. In the c8_location\CS7Gateways\bin directory, open cs7g.ini in a text editor.
   On Windows Vista, open it in elevated mode by right-clicking on the text editor and selecting Run as Administrator.

3. Add the locations for your IBM Cognos Series 7 data sources to the file.

4. Save the file.

   The changes are applied the next time you open Transformer.
Create a Network Installation Location for Transformer Modelers

Your organization may have specialized business or power users who want to build PowerCubes that are modeled on a combination of corporate and personal data sources. These users may want to do their own analysis of the data for their line of business or a small group of users. An installer or administrator can download an executable file to a Web or LAN location, where modelers can run the file to launch the IBM Cognos 8 Transformer installation wizard.

The instructions in this topic are for the installer or administrator. If you are the Transformer modeler or business specialist who wants to download and use Transformer, see "Deploying IBM Cognos 8 Transformer for Modelers" (p. 359)

Before you make the installation file available to Transformer modelers, other resources and permissions must be set up:

- Database client software is installed, or available for modelers to install, on the Transformer computers that are used to access IBM Cognos 8 data sources or IBM Cognos Series 7 IQD data sources.

- Modelers must have privileges to create a data source in IBM Cognos Administration. Modelers do not need direct access to IBM Cognos Administration. They can create and update data sources by using Transformer or command line tools. You can provide modelers with a secured folder in IBM Cognos Connection in which to publish PowerCube packages.

- Modelers must have access to a location in which to store the PowerCube after building it. This location must also be accessible to the IBM Cognos 8 service and can be a secured share on a LAN.

- Modelers may require special privileges to remotely run the IBM Cognos 8 PowerCube Connection utility, which is located on the IBM Cognos 8 server. For more information, see the topic about updating published PowerCubes and PowerCube connections in the Transformer User Guide.

- To build PowerCubes on a specific Transformer server, modelers should have FTP privileges to transfer models and execute privileges to build cubes on that server. Modelers can transfer models and execute cube builds using scripts. Modelers can also use automated methods to build PowerCubes. For more information, see the Administration and Security Guide.

Steps

1. Insert the CD for IBM Cognos 8 Transformer modeling product.

2. If the Welcome page of the installation wizard appears, exit the wizard.

3. On the CD, locate the c8transformerinstall.exe file.

4. Copy the file to a secure location to which your Transformer modelers have access.
Export Configuration Data for Transformer Modelers

If you want to make the Transformer installation file available to Transformer modelers, the modelers will need the dispatcher and encryption settings to configure Transformer on their local computer. You can export the configuration from one Transformer computer for use with all other Transformer computers. The modelers can copy the exported configuration file to their Transformer installation directory and then run the command to configure the Transformer computer silently.

The instructions in this topic are for the installer or administrator. If you are the Transformer modeler or business specialist who wants to download and use Transformer, see "Deploying IBM Cognos 8 Transformer for Modelers" (p. 359)

If you updated the coglocale, cogtr.xml, or cs7g.ini files on the Transformer computer, you must copy these files to the Web or LAN location so that Transformer modelers can download them to their computer.

To export the configuration, the source computer must have the same IBM Cognos 8 components as the Transformer modeler computers (p. 221). If some modelers will be installing on Windows Vista, you must create an export file from a Windows Vista computer. We suggest creating separate folders on the Web or LAN location for Windows and Windows Vista.

Steps to Export the Transformer Computer Configuration

1. In IBM Cognos Configuration, from the File menu, click Export as.
2. If you want to export the current configuration to a different folder, in the Look in box, locate and open the folder.
   Ensure that the folder is protected from unauthorized or inappropriate access.
3. In the File name box, type a name for the configuration file.
4. Click Save.
5. Rename the exported file to cogstartup.xml.
6. Copy the exported cogstartup.xml file from the source computer to the same Web or LAN location as the Transformer installation file.
7. If you changed the global configuration on the source computer, copy the coglocale.xml file from the source computer to the same Web or LAN location as the Transformer installation file.
   The default location of the coglocale.xml file is c8_location\configuration.

Steps to Download Transformer Configuration Files

1. If you updated the cogtr.xml, copy it from the c8_location\configuration directory to the same Web or LAN location as the Transformer installation file.
2. If you updated the cs7g.ini file, copy it from the c8_location\CS7Gateways\bin directory to the same Web or LAN location as the Transformer installation file.
Deploying IBM Cognos 8 Transformer for Modelers

If you are the business specialist or Transformer modeler, you must now deploy Transformer so that you can build PowerCubes and publish them to selected users or groups.

If you have not completed the installation, follow the steps to install Transformer. To configure Transformer so that it can communicate with the IBM Cognos 8 dispatcher, follow the steps to configure Transformer.

If IBM Cognos Connection is secured, you must have privileges to create data sources and publish packages in IBM Cognos Connection.

You can upgrade models from Series 7.x versions of Transformer if you have saved them as MDL files.

You can continue to use PowerCubes built with Series 7.3 and higher versions of Transformer in IBM Cognos 8. However, to use IBM Cognos 8 authentication providers, you must upgrade the PowerCubes. After upgrading, the PowerCubes are no longer compatible with Series 7 Transformer.

To upgrade PowerCubes to IBM Cognos 8 PowerCubes, you must:

- open the Series 7.x Transformer model MDL file in IBM Cognos 8 Transformer
- rebuild the PowerCube in the IBM Cognos 8 Transformer

For more information, see "Upgrading Transformer Models and PowerCubes" (p. 114).

To support the use of IBM Cognos 8 data sources (including packages and reports) in Transformer, ensure that the database client is installed on the Transformer computer.

Steps to Install Transformer

1. From the Web or LAN location that the administrator provided, run the c8transformerinstall.exe file.
   The contents are expanded to the Documents and Settings\username\Local settings\Temp directory and then the Transformer installation wizard opens.

2. Follow the directions in the installation wizard and copy the required files to your computer.
   Tip: The Series 7 IQD Bridge component is not supported on Linux and HP-UX Itanium.

3. In the Finish page of the wizard, select View the Readme and then click Finish.
   Tip: For character-mode installations on UNIX and Linux, close the readme text file by pressing Ctrl + C or Q.

4. Create a MANPATH environment variable and configure it with the following value:
   
   /c8_location/webcontent/documentation/en/cogtr.1
   
   The cogtr.1 file provides the syntax for UNIX command line options that are supported by IBM Cognos 8 Transformer. The man page for IBM Cognos 8 Transformer is accessible in UNIX by typing cogtr man from the c8_location/bin directory.

Steps to Configure Transformer

1. Go to the same Web or LAN location as the Transformer installation file.
Chapter 11: Configuration Options

2. If any .xml files are present, copy them to the Transformer_location\configuration directory, where Transformer_location is the directory where you installed Transformer. The default location is C:\Program Files\Cognos\c8.

3. If an .ini file is present, copy it to the Transformer_location\CS7Gateways\bin directory.

4. Go to the Transformer_location\bin directory.

5. Type the configuration command:

   ./cogconfig.bat -s

   IBM Cognos Configuration applies the configuration settings specified in the local copy of cogstartup.xml, encrypts credentials, generates digital certificates, and starts the IBM Cognos 8 service.

6. To test IBM Cognos 8 Transformer, from the Start menu, click Programs, IBM Cognos 8, Transformer.

   If you see the Transformer window, your installation is working.

7. After Transformer is installed and running successfully, delete the installation files that were extracted from the installation file.
Chapter 12: Configuring Portal Services

Portal Services provides a set of Cognos portlets that you can use in IBM Cognos Connection and in other portals. You can use the portlets to navigate, search, and view IBM Cognos reports in your working environment. Other users can view IBM Cognos information without needing to know how to use IBM Cognos products.

For more information, see the Administration and Security Guide.

Portal Services is installed automatically with IBM Cognos 8 components. In a distributed environment, it is included with the Application Tier Components. The installation includes the deployment files for

- SAP Enterprise Portal (SAP EP)
- IBM WebSphere Portal
- BEA Aqualogic User Interface (ALUI) Portal
- SharePoint Portal

For some deployments of Portal Services, you must modify some Portal Services property settings and prepare the IBM Cognos environment to support the other portal.

When used in another portal, Portal Services can authenticate users in only one namespace. If IBM Cognos 8 components are configured with more than one namespace, you must install a separate gateway for each namespace that will be used to authenticate portal users. You must configure each gateway to use the appropriate namespace (p. 307) and then configure the deployed portlets to use that gateway.

After you configure the required properties, you must deploy the Cognos portlets to the other portal.

For more information, see the Administration and Security Guide.

To use Portal Services with IBM Cognos 8 components, do the following:

- Specify the location of the applications.xml file, if required.

- Install and test the portlets on the other portal.
  
  For more information, see the Administration and Security Guide.

- Configure security for the other portal environment.

Specify the Location of the Applications.xml File

If you use the applications.xml file as part of a custom application portlet, all Application Tier Components computers in a distributed environment must reference the same applications.xml file.

If you have multiple instances of the applications.xml file, they must be identical.
Note: The steps are required only if you want to use the Extended Applications portlet, which is included with the IBM Cognos 8 software development kit.

Steps
1. On the Application Tier Components computer, start IBM Cognos Configuration.
2. In the Explorer window, under Environment, click Portal Services.
3. In the Properties window, click the Value next to Location of 'applications.xml'.
4. Replace localhost with a valid host name or IP address and, if necessary, replace the default port number.
5. From the File menu, click Save.

You can now deploy the Cognos portlets to your portal server. For instructions, see the Administration and Security Guide.

Configuring Security for Portal Services

When using Portal Services in another portal, you must enable single signon to provide seamless integration between the other portal and IBM Cognos 8 components.

Portal Services uses single signon to authenticate users. This means that users do not have to log on to other applications separately through the portal.

You must configure a URI into IBM Cognos 8 components for each portlet in Portal Services.

To enable security between IBM Cognos 8 components and the other portal, do the following:

- Disable anonymous access to IBM Cognos 8 components.
  
  If your security infrastructure requires you to use another method for single signon, use one of the following methods:

- Enable single signon for the other portal using shared secret.
  
  If your security infrastructure requires you to use another method for single signon, use one of the following methods:

  - "Enable Single Signon for WebSphere Portal Using the Application Server" (p. 370)
  - "Enable Single Signon for BEA ALUI Portal Using Basic Authentication" (p. 371)
  - "Enable Single Signon for BEA ALUI Portal Using SiteMinder" (p. 371)

- Configure IBM Cognos 8 components for SSL access, if required.

Disable Anonymous Access to IBM Cognos 8 Components

Portal Services uses single signon for authentication. If anonymous logon is enabled in IBM Cognos 8 components, Portal Services logs all portal users as anonymous. You must ensure that anonymous access is disabled in IBM Cognos 8 components for single signon in Portal Services to be successful.
However, you can test the Portal Services connections using anonymous logon to ensure that the portlets are working in the other portal.

If Portal Services fails to authenticate a user, the user receives an error message at the other portal.

**Steps**
1. Start IBM Cognos Configuration.
2. In the **Explorer** window, under **Security**, **Authentication**, click **Cognos**.
3. In the **Properties** window, ensure that **Allow anonymous access** is set to **False**.
4. From the **File** menu, click **Save**.
5. Repeat steps 1 to 4 on all servers where you installed IBM Cognos 8 components.

---

**Enable Single Signon Using Shared Secret**

You can use shared secret for single signon between Cognos portlets and IBM Cognos 8 components. The Cognos portlets send a message that contains an encrypted version of the portal user ID. The encryption key is determined by the value of a secret character string shared between the portlets and the custom Java security provider on the IBM Cognos server.

You can use shared secret for the other portal only if portal user IDs can be looked up in an NTLM, LDAP, or IBM Cognos Series 7 authentication namespace that is shared by IBM Cognos 8 components.

IBM Cognos 8 components must have access to a directory server that contains user IDs for all your portal users. Using IBM Cognos Configuration, you must configure an authentication namespace so that the portal and IBM Cognos 8 components share the same authentication source.

You must also create a Custom Java Provider namespace to register the shared secret Java provider that is provided with IBM Cognos 8 components. Within the portlets or iViews, you must link the portlets or iViews to the Custom Java Provider namespace within your respective portal:

- Cognos iViews (SAP EP)
- Cognos Portlet Application (WebSphere Portal)
- remote server (BEA ALUI Portal)
- Cognos WebPart (SharePoint Portal)

You are not required to configure access to the Portal Services Web content. However, if you deploy the portlets to another portal, you can configure access to an alternate URI for Portal Services images and Web content.

**Steps to Configure the Required Namespaces**
1. In IBM Cognos Configuration, configure a namespace to authenticate portal users.
   
   For more information, see "Configuring IBM Cognos 8 Components to Use an Authentication Provider" (p. 259).

2. For an LDAP namespace, configure the following properties:
For the Use external identity property, change the setting to True.

For the External identity mapping property, set it to

\[(uid=${environment("REMOTE_USER")})\]

3. For an IBM Cognos Series 7 namespace, map the portal user IDs to IBM Cognos Series 7 user IDs using OS signons.

For more information, see the IBM Cognos Series 7 documentation.

4. In IBM Cognos Configuration, create and configure a Custom Java Provider namespace.

   For the Namespace ID property, specify any new ID.

   For example, cpstrusted

   This new ID must be used in the portlet configuration settings.

   For the Java class name property, type

   \[com.cognos.cps.auth.CPSTrustedSignon\]

   Java class names are case-sensitive.

5. In IBM Cognos Configuration, under Environment, Portal Services, configure the following properties:

   For Trusted Signon Namespace ID, type the namespace ID of the LDAP, NTLM, or IBM Cognos Series 7 namespace that you configured in step 1.

   Tip: The trusted signon namespace acts as an intermediary and must be attached to a real directory-based namespace of type LDAP, NTLM, or IBM Cognos Series 7.

   For Shared Secret, type the key to be used for single signon.

   This parameter represents the authorization secret that must be shared between the Cognos portlets and the IBM Cognos server. Consider this as a secret password. You must use the same character string when you configure the portlet application. You must use a single word as the key.

   For security reasons, we recommend you specify a non-null value.

6. Under Environment, for Gateway Settings, set the Allow Namespace Override property to true.

7. From the File menu, click Save.

8. Restart the IBM Cognos 8 service.

**Steps to Configure Access to the Portal Services Web Content**

1. On the computer where you installed the Application Tier Components, start IBM Cognos Configuration.

2. In the Explorer window, under Environment, click Portal Services.

3. In the Properties window, click the Value box next to Web Content URI.
4. Specify the host name or IP address of the gateway and a port number using the format
   \textit{host\_or\_IP\_address:port}

5. From the File menu, click Save.

\textbf{Steps to Configure the Cognos iViews for SAP EP}

1. Open the iView editor for each Cognos iView.

2. In the Property Category box, select \textit{Show All}.

3. For the \texttt{cpsauthsecret: CPS Authorization Secret} property, enter the secret character string that you used for the Shared Secret property when you configured the Custom Java Provider namespace.

4. For the \texttt{cps: authentication namespace ID} property, enter the Custom Java Provider namespace ID.

5. For the \texttt{cpsserver: CPS Connection Server} property, enter the URL path to access Portal Services components through the gateway.

The format of the URL is as follows:

- For Cognos content portlets
  
  Gateway URI: \texttt{wsrp/cps4/portlets/nav?wsdl&b_action=cps.wsdl}

  Example for a CGI gateway:
  
  \texttt{http://myserver/cognos8/cgi-bin/cognos.cgi/wsrp/cps4/portlets/nav?wsdl&b_action=cps.wsdl}

  Example for a servlet gateway:
  
  \texttt{http://172.0.16.1:9500/wsrp/cps4/portlets/nav?wsdl&b_action=cps.wsdl}

- For Cognos Extended Applications
  
  Gateway URI: \texttt{wsrp/cps4/portlets/sdk?wsdl&b_action=cps.wsdl}

  Example for a CGI gateway:
  
  \texttt{http://myserver/cognos8/cgi-bin/cognos.cgi/wsrp/cps4/portlets/sdk?wsdl&b_action=cps.wsdl}

  Example for a servlet gateway:
  
  \texttt{http://172.0.16.1:9500/wsrp/cps4/portlets/sdk?wsdl&b_action=cps.wsdl}

- For Metrics Manager Watchlist portlets
  
  Gateway URI: \texttt{wsrp/cps4/portlets/cmm?wsdl&b_action=cps.wsdl}

  Example for a CGI gateway:
  
  \texttt{http://myserver/cognos8/cgi-bin/cognos.cgi/wsrp/cps4/portlets/cmm?wsdl&b_action=cps.wsdl}

  Example for a servlet gateway:
Steps to Configure the Cognos Portlets for WebSphere Portal

1. For each Cognos portlet application, click **Modify Parameters**.

2. For the `cps_auth_secret` property, enter the secret character string that you used for the **Shared Secret** property when you configured the Custom Java Provider namespace.

3. For the `cps_auth_namespace` property, enter the Custom Java Provider namespace ID.

4. For the **CPS Endpoint** property, enter the URL path to access Portal Services components through the gateway.

The format of the URL is as follows:

- For Cognos content portlets
  
  \[
  \text{Gateway URI} = \text{wsrp/cps4/portlets/nav?wsdl}&\text{cb_action=cps.wsd}\]

  Example for a CGI gateway:

  \[
  \text{http://myserver/cognos8/cgi-bin/cognos.cgi/wsrp/cps4/portlets/nav?wsdl}&\text{cb_action=cps.wsd}\]

  Example for a servlet gateway:

  \[
  \text{http://172.0.16.1:9500/wsrp/cps4/portlets/nav?wsdl}&\text{cb_action=cps.wsd}\]

- For Cognos Extended Applications
  
  \[
  \text{Gateway URI} = \text{wsrp/cps4/portlets/sdk?wsdl}&\text{cb_action=cps.wsd}\]

  Example for a CGI gateway:

  \[
  \text{http://myserver/cognos8/cgi-bin/cognos.cgi/wsrp/cps4/portlets/sdk?wsdl}&\text{cb_action=cps.wsd}\]

  Example for a servlet gateway:

  \[
  \text{http://172.0.16.1:9500/wsrp/cps4/portlets/sdk?wsdl}&\text{cb_action=cps.wsd}\]

- For Metrics Manager Watchlist portlets
  
  \[
  \text{Gateway URI} = \text{wsrp/cps4/portlets/cmm?wsdl}&\text{cb_action=cps.wsd}\]

  Example for a CGI gateway:

  \[
  \text{http://myserver/cognos8/cgi-bin/cognos.cgi/wsrp/cps4/portlets/cmm?wsdl}&\text{cb_action=cps.wsd}\]

  Example for a servlet gateway:

  \[
  \text{http://172.0.16.1:9500/wsrp/cps4/portlets/cmm?wsdl}&\text{cb_action=cps.wsd}\]

Steps to Configure the Remote Server for BEA Aqualogic User Interaction (BEA ALUI) Portal

1. Using a plain ASCII editor, such as Notepad, edit the `cpspt.properties` file in the `c8_location/cps/bea_aqualogic/webapps/gadgets/WEB-INF/classes` directory.
2. Configure the following settings.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>cps_endpoint</td>
<td>The URL to connect to the Application Tier Components and extract the WSDL information.</td>
</tr>
<tr>
<td></td>
<td>Specify the URI to the gateway.</td>
</tr>
<tr>
<td></td>
<td>For a servlet or ISAPI gateway, replace the localhost/cognos8/cgi-bin/cognos.cgi portion with the values to target the gateway.</td>
</tr>
<tr>
<td></td>
<td>For example,</td>
</tr>
<tr>
<td></td>
<td>http://host_name/cognos8/cgi-bin/cognos.isapi/wsrrp/cps4/portlets/[package]?wsdl&amp;b_action=cps.wsdl</td>
</tr>
<tr>
<td>forward_cookies=</td>
<td>The names of the cookie that should be sent to the Application Tier Components for single signon.</td>
</tr>
<tr>
<td></td>
<td>Leave blank.</td>
</tr>
<tr>
<td>cps_auth_secret</td>
<td>The shared secret code IBM Cognos 8 uses to encrypt an HTTP header variable that carries the user identity.</td>
</tr>
<tr>
<td></td>
<td>This parameter represents the authorization secret that must be shared between the Cognos portlets and the IBM Cognos 8 server.</td>
</tr>
<tr>
<td></td>
<td>Consider this as a secret password. Use the same value that you used for Shared Secret in IBM Cognos Configuration.</td>
</tr>
<tr>
<td></td>
<td>For security reasons, we recommend you specify a non-null value.</td>
</tr>
<tr>
<td>cps_auth_namespace</td>
<td>The namespace ID for the Custom Java Provider.</td>
</tr>
</tbody>
</table>

3. Go to the c8_location/cps/bea_aqualogic directory and run the following build file:
   - On UNIX or Linux, build.sh
   - On Windows, build.bat

   This creates a cps-alui.war file in the c8_location/cps/bea_aqualogic/gadgets directory.

4. If IBM Cognos 8 components are running using Tomcat,
   - Stop IBM Cognos 8.
   - Copy the cps-alui.war file to the c8_location/webapps directory.
     Tomcat automatically expands the WAR file and starts the remote server.
   - Start IBM Cognos 8.

5. If IBM Cognos 8 components are running under another type of application server, copy the cps-alui.war file to the application server.
Chapter 12: Configuring Portal Services

For instructions, see the administration guide for your application server.

Single signon is configured.

**Steps to Configure Properties for the Cognos WebPart for SharePoint Portal**

1. Using a plain ASCII editor, such as Notepad, edit the web.config file in the drive\Program Files\Common Files\Microsoft Shared\web server extensions\12\CONFIG directory.

2. Find the following string:
   
   `<SSO cps_auth_namespace="" cps_auth_secret="" />
   
3. Set cps_auth_namespace to the namespace ID for the Custom Java Provider namespace.

4. Set cps_auth_secret to the value that you used for Shared Secret in IBM Cognos Configuration.

**Enable Single Signon for SAP EP with the SAP Logon Ticket**

If you enable single signon with the SAP Logon Ticket, you must configure IBM Cognos 8 components with an SAP namespace that links to an SAP BW server.

Then you must copy the certificate that was generated during SAP EP installation to the SAP BW personal security environment.

Users must have the same user ID in all SAP systems that are accessed through single signon.

Before you start, ensure that you have

- configured IBM Cognos 8 components to use an SAP authentication source
- enabled single signon between IBM Cognos 8 components and SAP BW
- installed the latest service packs on the SAP BW server
  
  Service packs can be downloaded from SAPNET.

- installed the latest hot patches for the SAP portal
- installed the Enterprise Portal plug-in that corresponds to the SAP EP release or SAP BW server
  
  For SAP releases earlier than 6.2, on SAPNET, download EP50_PLUG-IN for Basis 620 (SAPKINE32A). Using transaction SAINT, install SAPKINE32A.

- installed the SAP Security Library on the SAP BW servers
  
  From sapservX, under /general/misc/security/SAPSECU/platform, download sapsecin and sepsecu.dll and place both files in the /run directory of the SAP BW server.

To enable SSO for SAP EP, complete the procedures for single signon with SAP logon tickets in the SAP Enterprise Portal Security Guide.

You can now use the Cognos iViews in the SAP Enterprise Portal. For more information, see the Administration and Security Guide.
Enable Single Signon for SAP EP with User Mapping

If you enable single signon with user mapping, you define an IBM Cognos data source in SAP EP. Individual users or an administrator can enter the user IDs and passwords for IBM Cognos 8 components in the data source. You must map the users logon credentials in the data source to an LDAP or IBM Cognos Series 7 or NTLM namespace. Portal Services iViews transmit the logon credentials to IBM Cognos 8 components using HTTP Basic Authentication.

Steps to Prepare the Environment

1. Configure the gateway URI that will be used by Portal Services to require authentication using HTTP Basic Authentication.
   For information about configuring a URL to use HTTP Basic Authentication, see the documentation for the gateway or for your Web server.

2. Adjust the iView configuration to access the secure URL.
   For information, see the documentation for your Web server.

3. In IBM Cognos Configuration, configure a namespace to authenticate portal users.

4. If you use an LDAP namespace, configure the following properties:
   • For the Use external identity property, change the setting to True.
   • For the External identity mapping property, set it to (uid=${environment("REMOTE_USER")})

Steps to Create the Data Source and Map the Users

1. In the SAP portal, ensure that the following properties are configured for the data source in the /PortalContent/other_vendors/every_user/com.cognos.pct.c8/systems/Cognos 8 directory:
   • Logon Method = UIDPW
   • server name = the name of the IBM Cognos server
   • port number = port number of the gateway
   • Protocol of Target system = HTTP
   • User Mapping Type = admin,user
   • system alias (Create a system alias)
   For more information, see the SAP Enterprise Portal Administration Guide.

2. For each Cognos iView, enable user mapping for the data source by entering the name of the system alias at the iView level, in an attribute called CPS: User Mapping Datasource.
   For more information, see the SAP Enterprise Portal Administration Guide.

3. For each Cognos iView, set the CPS: Authentication Namespace ID property to the namespace that you want to use for authentication.
4. Register the IBM Cognos credentials for the portal users.

    Users can enter their own user IDs and passwords.

    For more information, see the SAP Enterprise Portal Administration Guide.

We recommend that you enable secure communication between SAP EP and IBM Cognos 8.

You can now use the Cognos iViews in the SAP Enterprise Portal. For more information, see the Administration and Security Guide.

**Enable Secure Communication Between SAP EP and IBM Cognos 8 Components**

A secure connection, using SSL, is not required between SAP EP and IBM Cognos 8 components. It is more important if you enabled single signon with user mapping.

The SSL security supported by SAP uses encryption above 56 bits. By default, IBM Cognos 8 components use an encryption algorithm up to 56 bits. IBM Cognos provides an enhanced encryption module as a complementary product. To enable SSL, you must purchase and install the Enhanced Encryption Module for OpenSSL on top of IBM Cognos 8 components. For more information, see the IBM Cognos Enhanced Encryption Module for OpenSSL Installation and Configuration Guide.

To enable SSL between SAP EP and IBM Cognos 8 components, see your SAP EP security documentation.

After SSL is enabled, edit properties for the all iViews so that the cpsserver: CPS Connection Server property uses https instead of http.

You can now use the Cognos portlets in the SAP Enterprise Portal. For more information, see the Administration and Security Guide.

**Enable Single Signon for WebSphere Portal Using the Application Server**

The Portal Services portlets can use the Active Credentials objects provided by WebSphere Portal to connect to IBM Cognos 8 components. Portal Services supports the following Active Credentials objects: HttpBasicAuth, LtpaToken, SiteMinderToken, and WebSealToken.

Credentials for the portal user are passed to the gateway using this object. For more information about Active Credential objects, see the documentation for IBM WebSphere Portal.

To use application server single signon, see the documentation for IBM WebSphere Application Server.

For information about SSL for IBM Cognos 8 components on a WebSphere Application Server, see "Configuring the SSL Protocol" (p. 319).

After single signon is set up, you can use the Cognos portlets in the WebSphere Portal. For more information, see the Administration and Security Guide.
Enable Single Signon for BEA ALUI Portal Using Basic Authentication

You can configure a portlet in BEA ALUI Portal to send the username and password as an HTTP Basic authentication header. The header can be used with an NTLM, LDAP, or IBM Cognos Series 7 authentication namespace to provide single signon.

Steps
1. In IBM Cognos Configuration, configure a namespace to authenticate portal users.
2. Install an alternate CGI or ISAPI or servlet gateway in IBM Cognos 8.
3. Configure the gateway.
4. In the administration console of the Web server, configure the virtual directories to access the gateway.
   For more information, see the documentation for your Web server.
5. Configure the BEA ALUI remote server to access IBM Cognos 8:
   - Edit the cpspt.properties file in the $c8_location$/cps/bea_aqualogic/webapps/gadgets/WEB-INF/classes directory.
   - Change the cps_endpoint property to indicate the URL of the gateway.
     For a CGI gateway, you can use the default setting if the gateway and the remote server are on the same computer. Otherwise, replace the localhost portion with $host_name$:$port$.
     For a servlet or ISAPI gateway, replace the localhost/cognos8/cgi-bin/cognos.cgi portion with the values to target the gateway.
     For example,
     
     http://$host_name$:$port$/cognos8/cgi-bin/cognos.isapi/wsrp/cps4/portlets/[package]?wsdl&b_action=cps.wsdl
   - Set the cps_auth_namespace property to the namespace that you want to use for authentication.

Enable Single Signon for BEA ALUI Portal Using SiteMinder

If you use eTrust SiteMinder to provide single signon in your security infrastructure, you can also use it for single signon with BEA ALUI Portal.

You must configure a SiteMinder authentication namespace in IBM Cognos 8. BEA ALUI Portal sends the SiteMinder active authentication token to the remote server, which sends the token to the IBM Cognos 8 gateway.

Steps
1. In IBM Cognos Configuration, configure a SiteMinder authentication namespace.
   For instructions, see "Configuring IBM Cognos 8 Components to Use eTrust SiteMinder" (p. 287).
2. Configure the remote server to forward the authentication token:
• Edit the cpspt.properties file in the c8_location/cps/bea_aqualogic/webapps/gadgets/WEB-INF/classes directory.

• Change the forward_cookies property to include the name of the active authentication token that SiteMinder provides.

• Change the cps_endpoint property to indicate the URL of the gateway.
  For a CGI gateway, you can use the default setting if the gateway and the remote server are on the same computer. Otherwise, replace the localhost portion with host_name:port.
  For a servlet or ISAPI gateway, replace the localhost/cognos8/cgi-bin/cognos.cgi portion with the values to target the gateway.
  For example,
  http://host_name:port/cognos8/cgi-bin/cognos.isapi/wsrp/cps4/portlets/[package]?wsdl&b_action=cps.wsd1

• Change the cps_auth_namespace property to the namespace that you want to use for authentication.
Chapter 13: Configuring IBM Cognos 8 for an Application Server other than Tomcat

IBM Cognos 8 installs and uses Tomcat as the application server by default. You can choose to run IBM Cognos 8 within another supported server instead:

- BEA WebLogic Server
- IBM WebSphere Application Server
- Oracle Application Server
- Red Hat JBoss
- SAP NetWeaver
- Sun Java Systems Application Server (for Windows, Linux, and Solaris operating systems only)

To ensure your product works properly, apply all minimum required operating system patches and use only the versions of other software that are supported for an IBM Cognos product.

To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, visit the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

It is important to note that the Linux operating system is available in a number of distributions and supports a number of hardware platforms. Ensure that the operating system and hardware combination you are using is a supported combination.

You can choose to run the IBM Cognos Servlet Gateway on a supported application server instead of using a Web server (p. 347). When using the servlet gateway, your environment does not require a Web server. The application server and the servlet gateway replace the functions provided by the Web server and other IBM Cognos gateways. IBM Cognos 8 must be installed and running prior to configuring and deploying the IBM Cognos Servlet Gateway.

If you are upgrading from ReportNet to IBM Cognos 8, see "Upgrade to IBM Cognos 8 in an Application Server Environment " (p. 391).

If you are upgrading from Metrics Manager to IBM Cognos 8 Metrics Manager, see "Upgrade from Metrics Manager to IBM Cognos 8 in an Application Server Environment" (p. 392).

For information about configuring a multi-server distributed installation of IBM Cognos 8 in an application server environment, contact the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

To set up IBM Cognos 8 to run on your application server, do the following:

- Create a separate JVM instance, if necessary.
- Check that IBM Cognos components are properly set up.
Back up any existing IBM Cognos data and encryption keys, if required.

Set environment variables.

Update the Java environment.

Configure IBM Cognos components to run within the application server.

Identifying the JDK for WebLogic 9 on AIX, if necessary.

Change the application server startup script, if necessary.

Configure application server properties and deploy IBM Cognos 8.

Enable SSL, if required.

Configure the web server.

Unregister dispatchers that are no longer used.

Import any backed up content store data.

After setting up IBM Cognos 8 to run on your application server, you can perform some additional configuration tasks to customize the behavior of IBM Cognos components to better suit your reporting environment (p. 297).

Tip: Do not use install paths that contain spaces for the application server or IBM Cognos 8. Spaces interfere with the internal scripts and command parameters. If you must use an install path that includes spaces, use the 8.3 DOS naming convention when referring to these locations.

Create a Separate JVM Instance

To eliminate potential java class or system resource conflicts, IBM Cognos 8 must be run in a Java Virtual Machine (JVM) instance isolated from other existing applications. This ensures that IBM Cognos 8 does not affect any existing customer applications. When possible, IBM Cognos 8 must be installed in a JVM instance that is separate from the application server admin processes to isolate both IBM Cognos 8 and the administrative functions of the application server.

An isolated JVM instance can be established by creating one of the following:

- a separate managed server in BEA WebLogic
- a separate server instance in IBM WebSphere
- a separate OC4J instance in Oracle 10g Application Server
- a separate server instance for Red Hat JBoss
- a separate Java instance for SAP NetWeaver
- a separate domain for Sun Java Systems Application Server

If you are using the IBM Cognos Servlet Gateway, it must be run in an instance that is separate from IBM Cognos 8.
Check the Setup of IBM Cognos Components

Ensure that the following is done before you set up IBM Cognos components to run on the application server:

- IBM Cognos components are installed (p. 153).

- Before you start IBM Cognos 8, the database for the content store must be set up. Install and configure the database clients, if required (p. 163), and then test the database connectivity.

- The application server is installed and operational on each computer where IBM Cognos components are installed.

  For more information about installation, see your application server documentation.

- The fully qualified installation location of all fonts is specified on all Application Tier Component computers. You specify this location in IBM Cognos Configuration (p. 310). By default, the installation location does not use a fully qualified path.

- The application server user account has full access permissions for the IBM Cognos installation.

  Tip: We recommend that you create a new UNIX or Linux group named cognos8. This group must contain the user that starts the application server and the user that owns the IBM Cognos files. Change the group ownership of the IBM Cognos files to the cognos8 group and change the file permissions for all IBM Cognos files to GROUP READABLE/WRITABLE/EXECUTABLE. For simplicity, you can also use the application server user account to install and run IBM Cognos components.

Back Up Existing IBM Cognos Information

You must back up existing IBM Cognos information if IBM Cognos 8 components are running on an application server (including Tomcat) and you are changing to an application server that ships with its own JVM. You must also back up existing IBM Cognos information if you must change the JVM you are using.

Note: You must back up existing IBM Cognos information within the working environment prior to upgrade.

Before configuring IBM Cognos 8 components to run on the new application server or JVM, you must back up

- content store data by creating a deployment export.

- configuration information by exporting it. Any encrypted data is decrypted during the export.

- cryptographic keys by saving them to an alternate location. New cryptographic keys must be created using the same JVM that the application server uses. Because these keys can be created only if the previous keys are deleted, it is important to back up the previous keys.

To ensure the security and integrity of your IBM Cognos data, back up the content store, configuration information, and cryptographic keys to a directory that is protected from unauthorized or inappropriate access.
Tip: To check if any cryptographic keys exist, look in the $c8\_location/configuration$ directory. Cryptographic keys exist if this directory includes the following subdirectories: csk, encryptkeypair or signkeypair.

**Steps**

1. If data exists in the content store, start the IBM Cognos 8 service and export the entire content store using the Deployment tool.
   For more information, see the topic about creating an export deployment specification in the *Administration and Security Guide*.

2. In IBM Cognos Configuration, from the **File** menu, click **Export As** and save the configuration information in a decrypted format. When naming the file, use a name such as "decrypted.xml".
   Export the data to a directory that is protected from unauthorized or inappropriate access because passwords are stored in plain text. You are prompted to acknowledge that the export is an unsecure operation.

3. Stop the IBM Cognos 8 service:
   - If you use Tomcat, stop the IBM Cognos 8 service and close IBM Cognos Configuration.
   - If you use an application server other than Tomcat, shut down IBM Cognos 8 in your environment.

4. Back up any existing cryptographic keys by saving the appropriate files and directories to an alternate location that is secure.
   The files are
   - $c8\_location/configuration/cogstartup.xml$
   - $c8\_location/configuration/caSerial$
   - $c8\_location/configuration/cogconfig.prefs$
   - $c8\_location/configuration/coglocale.xml$
   The directories are
   - $c8\_location/configuration/csk$
   - $c8\_location/configuration/encryptkeypair$
   - $c8\_location/configuration/signkeypair$

5. Delete the caSerial and cogconfig.prefs files and the three directories: csk, encryptkeypair, and signkeypair.

6. Replace the $c8\_location/configuration/cogstartup.xml$ file with the file that contains the data exported from IBM Cognos Configuration (for example, "decrypted.xml").
   **Important:** In the $c8\_location/configuration$ directory, the file must use the name "cogstartup.xml".
The information in this file will be automatically re-encrypted using new cryptographic keys when you save the configuration in IBM Cognos Configuration.

Set Environment Variables

You must set environment variables to identify the location of the JVM environment and the library path. You can set environment variables using any of the following methods:

- On Windows, set a system or user variable, or edit the application server’s startup script.
  If you set a user variable, ensure that you set it for the user account that will run the application server, or administration console.

- On UNIX and Linux, set an environment variable in the user profile, or edit the application server’s startup script.

For information about editing an application server’s startup script, see "Change the Application Server Startup Script" (p. 380).

Tip: Most application server versions ship with a script specifically intended for setting environment variables. For example, some WebSphere versions ship with setupCmdLine.bat or setupCmdLine.sh, WebLogic ships with setEnv.cmd or setEnv.sh, and Oracle ships with iasenv.bat or iasenv.sh. These scripts can be modified to set appropriate values for use with IBM Cognos components. Most of these scripts set the JAVA_HOME environment variable by default.

Steps

1. Set the JAVA_HOME environment variable to point to the JVM used by the application server.
   **Tip**: If the application server ships with a JVM, then the JAVA_HOME environment variable must be set to reference it.

   IBM Cognos Configuration uses this variable to create encryption keys for IBM Cognos components that are compatible with the JVM used by the application server.

   For example, for WebLogic under Windows, the JVM used by the application server is specified as:

   `drive:/WebLogic_location/jdk142_04`

2. Append `c8_location/bin` to the appropriate environment variable.
   This variable is used to locate the IBM Cognos library files.

   Operating system | Environment variable
   ------------------|----------------------
   Windows           | PATH
   AIX               | LIBPATH
   Solaris and Linux | LD_LIBRARY_PATH
   HP-UX             | SHLIB_PATH
Tip: To install multiple instances of IBM Cognos 8 on a single server, set the PATH, LIBPATH, LD_LIBRARY_PATH, or SHLIB_PATH variable within the application server instance scope and not as a global variable to ensure that each instance has a unique value.

Note: The CRN_ROOT and COG_ROOT variables are no longer required in a non-clustered environment and should be removed if they were used in a previous installation.

Update the Java Environment

IBM Cognos 8 cryptographic services use a specific .jar (Java Archive) file, named bcprov-jdkmm-nnn, that must be located in the JVM environment used by your application server. This file provides additional encryption and decryption routines that are not supplied with a default JVM installation. To ensure security, the encryption file must be loaded by the JVM using the Java extensions directory.

Steps
1. Ensure that the JAVA_HOME environment variable is set to the JRE location.
   For example, to set JAVA_HOME to a JRE that you are already using, the path is Java_location/bin/jre/version.
2. Copy the bcprov-jdkmm-nnn.jar file from the c8_location/bin/jre/version/lib/ext directory to the Java_location/jre/lib/ext directory.

Configure IBM Cognos Components to Run Within the Application Server

IBM Cognos 8 must be configured with the application server configuration information, and the configuration must be saved to create new cryptographic keys. IBM Cognos Configuration uses the JVM that is defined by the JAVA_HOME environment variable.

Important: You must set the JAVA_HOME environment variable to the JVM supplied or used by the application server and then copy the security provider files before you run IBM Cognos Configuration to ensure valid encryption keys are generated.

Steps
1. From the c8_location/bin directory, start IBM Cognos Configuration:
   - On Windows, type cogconfig.bat in a command window or select IBM Cognos Configuration from the Start menu.
   - On UNIX or Linux, type cogconfig.sh

If you have existing incompatible encryption keys, you will be prompted to automatically generate new ones at this time.

Tip: Ensure that the existing keys are backed up to a secure location before proceeding. There is no undo action available after you generate new keys.
2. For WebSphere 5.1, in the file `c8_location/webapps/p2pd/WEB-INF/p2pd_deploy_defaults.properties`, uncomment the following line:

   #noJMX=true

3. For WebSphere 5.1, move the `mx4j*.jar` files from the `c8_location/webapps/p2pd/WEB-INF/lib` directory to a location outside the `/webapps` directory.

4. Use the Build Application Wizard to create the application file that will be deployed to the application server. To launch the Build Application Wizard from IBM Cognos Configuration under Actions, click Build Application Files. The wizard allows you to select the type of application to build and the context root used to access the application.

   You must build the application file on the same computer on which you will be deploying the file.

   The context root value entered in the wizard must be the same as is entered in the Environment tab, and used to deploy to the application server. For IBM Cognos 8, the default context root and application directory name is `p2pd`, which can be used in most cases. For the IBM Cognos Servlet Gateway, the default context root and application directory name is ServletGateway. Other default application deployment values, such as the application name, may be changed to better suit your environment.

   **Tip:** It is not necessary to rebuild or redeploy the archive file when you make configuration changes because configuration information is stored externally to the application.

   For WebLogic and JBoss, you can use the Build Application wizard in IBM Cognos Configuration to build the application to an expanded directory.

   For example, for WebLogic, you put the application in `C:\bea\user_projects\domains\apps\p2pd`, where `p2pd` is the name of the application. When deploying the application from the WebLogic Administration Console, you would select the `p2pd` directory.

   **Important:** For JBoss, if you use the Expand files into a folder option, you must include the `.war` extension in the name of the folder where the wizard will create the `p2pd` application. When the wizard prompts for the folder location, go to `JBoss_location/server/instance_name/deploy` and create a folder named `p2pd.war`.

   For information about which type of application file, WAR, EAR or expanded directory, is supported in your environment, see your application server documentation.

5. In the **Explorer** window of IBM Cognos Configuration, expand **Environment** and then change the following properties to use the port number and host name or IP address of the server where the IBM Cognos 8 component and application server are installed:

   - All URIs for the dispatcher, including
     
     **Dispatcher URIs for Gateway**
     
     **External dispatcher URI**
     
     **Internal dispatcher URI**
     
     **Dispatcher URI for external applications**

   - **Gateway URI**
- **Content Manager URIs**

  The application server must be configured to listen on the host name or IP address entered in the URI. For more information, see your application server documentation.

  If you change the context root from the default value of p2pd, you must change the context root portion of the URI as well.

6. **Under Environment, IBM Cognos 8 service, right-click IBM Cognos 8, and then click Delete.**

   The entry for the IBM Cognos 8 service is used to configure environment settings for running under Tomcat. The entry is not required when using a different application server.

7. **Complete other required configuration changes such as**

   - specifying properties for the Content Manager database
   - entering user IDs and passwords

   If you used the default settings for the IBM Cognos installation, you may only have to make minor changes to the default configuration settings (p. 297).

8. **Save the configuration.**

   New cryptographic keys are created using the JVM that is defined by the JAVA_HOME variable.

9. **Close IBM Cognos Configuration.**

**Identifying the JDK for WebLogic 9 on AIX**

WebLogic 9 requires JDK 1.5. If you use WebLogic Server 9 on AIX, you must update the Java options in the commEnv.sh file to specify the appropriate serial version unique identifier (UID). If you do not make this update, a serial version UID mismatch occurs when using WebLogic Server 9 with IBM Java 5.

**Steps**

1. **Open the WebLogic9_location/common/bin/commEnv.sh file.**

2. **Modify the file to include the following command:**

   ```bash
   JAVA_OPTIONS="$JAVA_OPTIONS
   -Dcom.sun.xml.namespace.QName.useCompatibleSerialVersionUID=1.0"
   export JAVA_OPTIONS
   ```

3. **Save and close the commEnv.sh file.**

**Change the Application Server Startup Script**

Some application servers have specific requirements that you must meet before you can run IBM Cognos 8. Depending on the application server, you may have to define environment variables, copy files, and add or change code in files.

If you are using BEA WebLogic Server 8.1 or Red Hat JBoss, you must make changes to the application server startup script. The startup script must be modified to specify JVM settings. For
JBoss, you must also specify a log4j argument. For WebLogic 9, we recommend that you use the Administration Console to modify the WebLogic environment.

If you are using IBM WebSphere Application Server, SAP NetWeaver 6.40, or Oracle Application Server, no changes to its startup script are required unless you want to add the environment variable changes. If you do make changes, the Administrative Console can be used.

For Red Hat JBoss, we recommend that you create a copy of the default server instance so that you can use the original default server instance as a backup. Give the copy a name that does not use spaces, such as cognos.

If your environment contains a JRE that you are using for other products, the JRE folder may contain .jar files that are not compatible with the .jar files that are provided with IBM Cognos 8. This may result in a failure to start IBM Cognos 8 on your application server. In this situation, we recommend that you direct IBM Cognos 8 to use the endorsed .jar files by including the following parameter in the Java command line:

```
-Djava.endorsed.dirs=${cognos8_home}/tomcat[version]/common/endorsed
```

### Steps for WebLogic

1. Create a WebLogic Server (WLS) domain for IBM Cognos 8.

   If you are configuring the IBM Cognos Servlet Gateway, create a second domain for this application.

   For information about creating domains, see the WebLogic documentation.

2. Go to the appropriate directory and open the application server startup script in an editor. The following are possible directories:

   - `WebLogic8.1_location/user_projects/domains/domain_name`
   - `WebLogic9_location/user_projects/domains/domain_name/bin`

   The name of the startup script may vary depending on the type of WebLogic installation performed. For example, in a managed server installation, the name of the startup script is `startManagedWebLogic.sh` (UNIX) or `startManagedWebLogic.cmd` (Windows).

3. For non-IBM JRE versions, select the JVM run mode, and change the default setting from `JAVA_VM=` to `JAVA_VM=-server`

4. Modify the JAVA_OPTIONS to set the appropriate XML parser for IBM Cognos 8. Add the third line, as shown in this example:

   ```
   JAVA_OPTIONS=
   -Dweblogic.security.SSL.trustedCAKeyStore=%WL_HOME%/server/lib/cacerts-Dorg.xml.sax.driver=org.apache.xerces.parsers.SAXParser
   ```

5. Set the minimum and maximum memory used by the JVM.

   Typically, the memory is set using two JVM parameters: `-Xms` and `-Xmx`. A minimum of 256 MB and a maximum of 768 MB are suggested starting values. You can change these values to suit your environment.

   For WebLogic 9, the `MaxPermSize` parameter must also be set. Here is an example:

   ```
   -XX:MaxPermSize=128m
   ```
For information about JVM parameters, see the JVM or application server documentation.

6. Ensure that the production mode is enabled.

For WebLogic 8 & 9, change `PRODUCTION_MODE=` to `PRODUCTION_MODE=true`

7. Save and close the file.

**Steps for JBoss**

1. Go to the `JBoss_location/bin` directory and open the application server startup script in an editor. Do one of the following:
   - For Windows, open `run.bat`
   - For UNIX or Linux, open `run.sh`

2. Go to the `JAVA_OPTS` variable and increase the memory used by the JVM.

   Typically, the memory is set using two JVM parameters: `-Xms` and `-Xmx`. A minimum of 256 MB and a maximum of 768 MB are suggested starting values. You can change these values to suit your environment.

   Here is an example:

   ```
   rem Sun JVM memory allocation pool parameters. Modify as appropriate.
   set JAVA_OPTS=%JAVA_OPTS% -Xms\192\m -Xmx\768\m -Dsun.rmi.dgc.client.gcInterval=3600000 -
   Dsun.rmi.dgc.client.gcInterval=3600000 -
   ``

   For information about these parameters, see the JVM or application server documentation.

3. Add a `log4j` argument, as shown in the following example:

   ```
   rem Sun JVM memory allocation pool parameters. Modify as appropriate.
   set JAVA_OPTS=%JAVA_OPTS% -Xms256m -Xmx512m -Dsun.rmi.dgc.client.gcInterval=3600000 -
   Dsun.rmi.dgc.client.gcInterval=3600000 -
   DLog4j.defaultInitOverride=true
   ``

   For information about these parameters, see the JVM or application server documentation.

4. Save and close the file.

**Configure Application Server Properties and Deploy IBM Cognos Components**

You must configure application server properties and deploy the IBM Cognos components.

**Steps for WebSphere**

1. Start the WebSphere Application Server, and then access the WebSphere Administrative Console.

2. Create a new server instance into which the IBM Cognos 8 application will be deployed, if this option is available in the version you are running.
If you are deploying the IBM Cognos Servlet Gateway, create a second separate server instance.

3. Install a new Enterprise Application using the application file that was built by IBM Cognos Configuration.

For IBM Cognos 8, the default context root is p2pd, which can be used in most cases. For the IBM Cognos Servlet Gateway, the default context root is ServletGateway. Other default application deployment values, such as the application name, may be changed to better suit your environment. The context root value used to deploy the application must be the same as the context root value entered in IBM Cognos Configuration when running the Build Application wizard.

4. Set the memory used by the JVM.

Usually, the memory is set by adding or changing the initial and maximum Java heap size. For information about these parameters, see the JVM or application server documentation.

Tip: A minimum of 256 MB and a maximum of 768 MB are suggested starting values. You can change these values to suit your environment.

5. In the server properties, add an environment variable, as listed in the following table, that references the installation_location/bin directory.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Environment variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>PATH</td>
</tr>
<tr>
<td>AIX</td>
<td>LIBPATH</td>
</tr>
<tr>
<td>Solaris</td>
<td>LD_LIBRARY_PATH</td>
</tr>
<tr>
<td>HP-UX</td>
<td>SHLIB_PATH</td>
</tr>
</tbody>
</table>

6. Stop and then restart the WebSphere application server instance used for IBM Cognos components.

7. Verify that IBM Cognos components are running by looking for the following message in the application server admin console or in the application server log file:

   The dispatcher is ready to process requests.

**Steps for WebLogic**

1. If you used the expanded directory option when building the application in IBM Cognos Configuration, go to step 2. If you created a WAR file, expand the application manually:

   - Create a directory in a location that is accessible to the application server, giving the directory the same name as the context root.

   For IBM Cognos 8, the default context root and application directory name is p2pd, which can be used in most cases. For the IBM Cognos Servlet Gateway, the default context root is ServletGateway. Other default application deployment values, such as the application
name, may be changed to better suit your environment. The context root value used to deploy the application must be the same as the context root value entered in IBM Cognos Configuration.

- From the directory you just created, extract the application WAR file to the WebLogic installation using the following command from a command prompt:

```
WebLogic_location/jdk_version/bin/jar xvfm "installation_location/application.war" .
```

**Important:** A space and then a period are required at the end of the command. In this command, the period does not refer to the current directory.

2. Start the WebLogic Administration Server and the WebLogic Managed Server associated with the IBM Cognos domain.

   Node Manager must be started before you can start and stop Managed Server instances using the Administration Console.

3. For WebLogic 9, you must modify the environment in the WebLogic Administration Console before deploying IBM Cognos 8. Logon to the Administration Console and navigate to the Managed Server instance that will host the IBM Cognos 8 application. Select the Server Start tab for the Managed Server instance and enable edit mode.

4. In the Java Home box, enter the path for the JVM. This value must be the same as is used for IBM Cognos 8. You must use the JVM that is included with the WebLogic installation.

5. Set the Java arguments.

   The Java arguments include all JVM settings, such as memory settings specified using two JVM parameters: -Xms and -Xmx. For WebLogic 9, the MaxPermSize must also be set. You must also set the appropriate XML parser for IBM Cognos 8.

   For example, in the Arguments box, type

   ```
   -Xms768m -Xmx768m -XX:MaxPermSize=128m -Dorg.xml.sax.driver=org.apache.xerces.parsers.SAXParser
   ```

   If you use WebLogic Server 9 on AIX, you must also specify the appropriate serial version UID in the Java arguments. If you do not make this update, a serial version UID mismatch occurs when using WebLogic Server 9 with IBM Java 5 because WebLogic 9 requires JDK 1.5.

   For example, in the Arguments box, type

   ```
   -Xms768m -Xmx768m -XX:MaxPermSize=128m -Dorg.xml.sax.driver=org.apache.xerces.parsers.SAXParser -Dcom.sun.xml.namespace.QName.useCompatibleSerialVersionUID=1.0
   ```

   For information about JVM parameters, see the JVM or application server documentation.

6. Save and apply the changes.

   You can now start and stop the Managed Server instance from the Control tab.

7. Start the server instance. The server instance must be started before deploying IBM Cognos 8 or IBM Cognos Servlet Gateway.
Chapter 13: Configuring IBM Cognos 8 for an Application Server other than Tomcat

8. Deploy the IBM Cognos 8 or IBM Cognos Servlet Gateway application in the WebLogic console using a new Web application as follows:
   - Set the application name.
     For example, cognos8
   - Set the path to the directory where the expanded application files are located.
     **Note:** IBM Cognos 8 uses a custom loader. You must use the expanded directory option when deploying.
   - Select the target server instance.
     It is recommended that the Administration Server be used only for WebLogic administration tasks and that the IBM Cognos 8 application be deployed to its own Managed Server instance.

9. After the deployment has completed successfully, set the reload period for the Web application to -1 to improve performance. This will prevent WebLogic from checking for updated application files that are used only in a development environment.

10. Stop and then restart the WebLogic Managed Server associated with the IBM Cognos domain to activate the changes.

11. Verify that IBM Cognos components are running by looking for the following message in the application server console window or in the application server log file:
    The dispatcher is ready to process requests.

**Steps for SAP NetWeaver 6.40 on Windows**

1. Open the configuration tool by typing
   
   drive:\usr\sap\sapid\JCxx\j2ee\configtool\configtool.bat

   For example, if the SAP ID is J2E and the installation is on drive D, you would type
   
   D:\usr\sap\j2E\JC00\j2ee\configtool\configtool.bat

2. When prompted to use the default DB settings, click Yes.

3. Under cluster-data, instance_IDxxxxxxx, Dispatcher_IDxxxxxxx, services, where xxxxxxx is the ID number for your installation, highlight http.

4. Under Global Properties, highlight KeepAliveTimeout and type a higher number and then click Set.
   
   **Tip:** We suggest an initial KeepAliveTimeout number of at least 60.


6. Set the memory used by the JVM.
   
   Follow the recommendations from SAP. For more information, see SAP Note 723909 in the SAP Support Portal.
If your computer has less than 1.5 GB of memory, you may have issues when you run SAP NetWeaver. We suggest a minimum value of 768 MB.

7. In the Java parameters box, set the XML parser as follows:
   -Dorg.xml.sax.driver=org.apache.xerces.parsers.SAXParser

8. For IBM Cognos 8 environments that use Report Studio, under cluster-data, instance_IDxxxxxxx, highlight Server_IDxxxxxxx, services, and highlight http.

9. Under Global Properties, highlight CompressedOthers, type false, and then click Set.

10. Save the changes.

    You are prompted to restart the server.

11. Restart the server by using the SAP Management Console or by restarting the services in Services.

12. Use the Deploy tool to create a new project.

13. Load the IBM Cognos application file you created using IBM Cognos Configuration. By default, the file is named p2pd.ear for IBM Cognos 8 and ServletGateway.ear for IBM Cognos Servlet Gateway.

14. Using the Deploy tool, connect to the Administration tool and deploy the application file.

15. When you are prompted to start the application, click Yes.

16. Save the project.

**Steps for Oracle Application Server Release 2**

1. Create an OC4J instance for IBM Cognos components to run within.

2. Set the memory used by the JVM.

   Typically, the memory is set by adding or changing two JVM parameters: -Xms and -Xmx. A minimum of 256 MB and a maximum of 768 MB are suggested starting values. You can change these values to suit your environment. For information about these parameters, see the JVM or application server documentation.

3. In the server properties, add "-userThreads" to the OC4J Options.

4. In the server properties, add an environment variable, as listed in the following table, that references the installation_location/bin directory.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Environment variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>PATH</td>
</tr>
<tr>
<td>AIX</td>
<td>LIBPATH</td>
</tr>
<tr>
<td>Solaris</td>
<td>LD_LIBRARY_PATH</td>
</tr>
</tbody>
</table>
5. Deploy the IBM Cognos application file (named p2pd.ear for IBM Cognos 8 or ServletGateway.ear for IBM Cognos Servlet Gateway, by default) created by IBM Cognos Configuration. The value of the Map to URL parameter must be the same as the context root value entered in IBM Cognos Configuration.

6. Start the OC4J instance that you created for IBM Cognos components.

7. Verify that IBM Cognos components are running by looking for the following message in the application server console window or in the application server log file:

   The dispatcher is ready to process requests.

---

### Steps for Oracle Application Server Release 3

1. Create an OC4J instance for IBM Cognos components to run within.

2. On Windows only, comment out the following entries in the `Oracle_location\j2ee\Cognos_OC4J_instance\config\global-web-application.xml` file:

   ```
   <welcome-file-list>
     <welcome-file>index.html</welcome-file>
     <welcome-file>default.jsp</welcome-file>
     <welcome-file>index.htm</welcome-file>
     <welcome-file>index.jsp</welcome-file>
   </welcome-file-list>
   ```


4. Add an environment variable that references the `installation_location/bin` directory and set variables for data sources.

   Here is an example for Windows and DB2:

   ```
   <environment>
     <variable id="PATH" value="c8_location/bin" append="true"/>
     <variable id="DB2DIR" value="location"/>
     <variable id="DB2INSTANCE" value="instance_name"/>
     <variable id="INSTHOME" value="location"/>
   </environment>
   ```

   This table lists the environment variables for each operating system that must reference the `c8_location/bin` directory.

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Environment variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>PATH</td>
</tr>
</tbody>
</table>

---
<table>
<thead>
<tr>
<th>Operating system</th>
<th>Environment variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIX</td>
<td>LIBPATH</td>
</tr>
<tr>
<td>Solaris</td>
<td>LD_LIBRARY_PATH</td>
</tr>
<tr>
<td>HP-UX</td>
<td>SHLIB_PATH</td>
</tr>
</tbody>
</table>

5. Set the memory used by the JVM.

A minimum of 256 MB and a maximum of 768 MB are suggested starting values. You can change these values to suit your environment. For information about these parameters, see the JVM or application server documentation.

Here is an example:

```xml
<java-options value="-server -Xmx768m -XX:MaxNewSize=384m -XX:NewSize=192m -XX:MaxPermSize=128m -classpath c8_location/bin;c8_location/webapps\p2pd\WEB-INF\lib -">
```

6. Define the OC4J userThreads setting.

Here is an example:

```xml
<oc4j-options value="-properties -userThreads"/>
```

7. Save and close the Oracle_location/opmn/conf/opmn.xml file.

8. Deploy the IBM Cognos application file (named p2pd.ear for IBM Cognos 8 or ServletGateway.ear for IBM Cognos Servlet Gateway, by default) created by IBM Cognos Configuration. The value of the Map to URL parameter must be the same as the context root value entered in IBM Cognos Configuration.

9. Start the OC4J instance that you created for IBM Cognos components.

10. Verify that IBM Cognos components are running by looking for the following message in the application server console window or in the application server log file:

    The dispatcher is ready to process requests.

**Steps for JBoss**

1. If you do not want to use the default port of 8080, open the JBoss_location/server/instance_name/deploy/jbossweb-tomcat55.sar/server.xml file.

2. In the server.xml file, change the default port number of 8080 used by the server instance to the port specified in IBM Cognos Configuration. For example,

```xml
<Service name="jboss.web"
   className="org.jboss.web.tomcat.tc5.StandardService">
   <!-- A HTTP/1.1 Connector on port 8080 -->
   <Connector port="8080" address="$\{jboss.bind.address}\" maxThreads="250" strategy="ms" maxHttpHeaderSize="8192" emptySessionPath="true"
```
3. Save and close the server.xml file.

4. Put the p2pd application in the JBoss_location/server/instance_name/deploy folder, if it is not already in this location.

5. Start the application server.
   The p2pd application is automatically detected and started by the application server.

6. Verify that IBM Cognos components are running by looking for the following message in the application server console window or in the application server log file:
   The dispatcher is ready to process requests.

Steps for Sun Java System Application Server

1. Use the Sun Java System Application Server Admin Console to add a new JVM Option to set the XML Parser that will be used by the IBM Cognos Application. For example:
   
   
   

2. Add a JVM Option to set the Maximum Java Heap Size to limit the maximum amount of memory that can be used by the Java process.
   Usually, the memory is set by adding or changing the initial and maximum Java heap size. For information about these parameters, see the JVM or application server documentation.
   For example, add "-Xmx768M" to set 768M of memory as a maximum value for the Java process.
   Tip: A minimum of 256 MB and a maximum of 768 MB are suggested starting values. You can change these values to suit your environment.

3. Increase the "Maximum number of request processing threads" from the default of 5 to a value appropriate for your environment.
   Tip: Start with a value of 250. If the value is too low, system instability and failed processes occur. If the value is too high, system resources are reserved unnecessarily.

4. Copy the c8_location\webapps\p2pd\WEB-INF\lib\xercesImpl.jar file to SJSAS_location\domains\<domain name>\lib\ext.

Enable SSL

If you use the Secure Socket Layer (SSL) for IBM Cognos components, you must also enable SSL in the application server environment. You then identify the SSL server certificate to IBM Cognos components.

Steps

1. Configure the application server to use SSL.
   An SSL server certificate is generated by another Certificate Authority (CA). The certificate of the CA that generated the SSL server certificate is also provided.
For more information about configuring the application server to use SSL, refer to the application server documentation. For information about using CA certificates with your application server, see the CA documentation.

2. Copy the CA certificate to the \installation_location\bin directory and rename the file to ca.cer. This file must be Base-64 encoded X.509 format.

3. From the \installation_location\bin directory:
   - On Windows, type:
     ```
     ThirdPartyCertificateTool.bat -T -i -r ca.cer -k ../configuration/signkeypair/jCAKeystore -p password
     ```
   - On UNIX or Linux, type:
     ```
     ThirdPartyCertificateTool.sh -T -i -r ca.cer -k ../configuration/signkeypair/jCAKeystore -p password
     ```

   **Important:** You must type jCAKeystore as the name of the CA key store.

### Configuring the Web Server

If you are using a Web server in your environment, configure it now. For information about configuring the web server, see "Configure the Web Server" (p. 135).

For information about configuring the WebSphere Web server plugin, contact the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

If you are using SAP NetWeaver on Windows and you are not using a Web Server and an IBM Cognos gateway for web communication, you may need to create a virtual directory, also known as a Web alias. This virtual directory is required to allow the static content (html pages, images, and so on) to load. When building the IBM Cognos application file, select the option to include the static files from the webcontent folder. Create a virtual directory that uses the context root value as a name (by default, p2pd for IBM Cognos 8 or ServletGateway for the IBM Cognos Servlet Gateway). Ensure the virtual directory points to the \c8_location\webcontent folder.

#### Step to Define the Additional Virtual Directory for SAP NetWeaver on Windows

- Create the following virtual directory:

<table>
<thead>
<tr>
<th>Alias</th>
<th>Location</th>
<th>Permission</th>
</tr>
</thead>
<tbody>
<tr>
<td>context_root (for example, p2pd)</td>
<td>\c8_location\webcontent</td>
<td>Read</td>
</tr>
</tbody>
</table>
**Unregister Dispatchers**

After you start the application server and the IBM Cognos application, unregister any IBM Cognos dispatchers that were previously registered and that are no longer used. For example, unregister any Tomcat dispatchers that are now running under the application server.

You remove dispatchers using IBM Cognos Administration. To access this tool, you must have execute permissions for the Administration secured function.

**Steps**

1. Open IBM Cognos Connection by connecting to the IBM Cognos 8 portal and clicking **IBM Cognos Content** on the **Welcome** page.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Configuration** tab, click **Dispatchers and Services**.
4. For the dispatcher you want to unregister, from the **Actions** column, click **More**.
5. Click **Unregister**.
6. In the confirmation dialog box, click **OK**.

The dispatcher information is removed from Content Manager.

**Import Content Store Data**

If you exported the content store before setting up IBM Cognos components to run in your application server (p. 375), import the deployment to restore and encrypt the data using the new encryption keys.

**Steps**

2. Import the entire content store using the Deployment tool.
   
   For more information, see the topic about importing to a target environment in the *Administration and Security Guide*.

**Upgrade to IBM Cognos 8 in an Application Server Environment**

If you are upgrading from a supported release to IBM Cognos 8, perform the following steps.

**Steps**

1. Back up your existing IBM Cognos information (p. 375).
2. Use the administrative tools for your application server to undeploy the existing IBM Cognos application.

   For information about undeploying applications, see your application server documentation.
If the directory to which the existing IBM Cognos application was originally deployed is not removed during the undeploy process, delete the directory.

Also, remove any IBM Cognos .jar files that are cached in your application server environment.

In WebLogic 8.1, the cache location is `%WL_HOME%\user_projects\domains\domain-name\managed-server-name\wlnotdelete\extract\crn_p2pd_p2pd\jarfiles`.

3. Uninstall the existing version. (p. 149).

4. Install IBM Cognos 8 (p. 153).

5. Follow the appropriate instructions in this chapter for changing to your application server.

Most installations must perform the following:

- Configure IBM Cognos 8 to run within the application server.
- Configure application server properties and deploy IBM Cognos 8.

6. To activate new features after upgrading, save the configuration in IBM Cognos Configuration, and then restart the services.

---

**Upgrade from Metrics Manager to IBM Cognos 8 in an Application Server Environment**

If you are upgrading from Metrics Manager to IBM Cognos 8, perform the following steps.

**Steps**

1. Follow the procedure to upgrade Metrics Manager to IBM Cognos 8 (p. 104).

2. Follow the appropriate instructions in this chapter for changing to your application server.

Most installations must perform the following:

- Configure IBM Cognos 8 to run within the application server.
- Configure application server properties and deploy IBM Cognos 8.

3. To activate new features after upgrading, you must save the configuration in IBM Cognos Configuration, and then restart the services.
Chapter 14: Advanced Configuration Options

Advanced configuration options are changes that you make after installation to the configuration properties of the resources that IBM Cognos 8 components use. You cannot use IBM Cognos Configuration to make these changes. Advanced configuration options enhance security, improve performance, or change the default behavior of IBM Cognos 8 components.

Changing the Version of Java Runtime Environment Used by IBM Cognos 8 Components

IBM Cognos 8 components require Java Runtime Environment (JRE) to operate. If you want to change your current JRE, some configuration changes are required. Changing may be appropriate in the following situations:

- You want to use IBM Cognos 8 components with an application server that requires a specific JRE version.
- You already use a JRE version with other applications.

The current version provided with IBM Cognos 8 is JRE 1.5.0. For more information about the supported JRE versions, see the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

If you are using IBM Cognos 8 components in an application server environment, follow the process in "Configuring IBM Cognos 8 for an Application Server other than Tomcat" (p. 373). The process includes steps for updating the Java environment.

IBM Cognos Configuration and other IBM Cognos 8 components use the JRE referenced by the JAVA_HOME environment variable. On Windows, if JAVA_HOME is not set, the JRE that is packaged with IBM Cognos 8 components is used by default.

Before you begin, ensure that IBM Cognos 8 components are installed and that JRE you want to use is installed.

To change JRE versions, do the following:

- Back up existing IBM Cognos data and encryption keys, if required.
- Updated the Java environment.
- Import data to the content store, if required.

Back Up Existing IBM Cognos Information

You must back up existing IBM Cognos information if IBM Cognos 8 components are running on an application server (including Tomcat) and you are changing to an application server that ships with its own JVM. You must also back up existing IBM Cognos information if you must change the JVM you are using.
Note: You must back up existing IBM Cognos information within the working environment prior to upgrade.

Before configuring IBM Cognos 8 components to run on the new application server or JVM, you must back up

- content store data by creating a deployment export.
- configuration information by exporting it. Any encrypted data is decrypted during the export.
- cryptographic keys by saving them to an alternate location. New cryptographic keys must be created using the same JVM that the application server uses. Because these keys can be created only if the previous keys are deleted, it is important to back up the previous keys.

To ensure the security and integrity of your IBM Cognos data, back up the content store, configuration information, and cryptographic keys to a directory that is protected from unauthorized or inappropriate access.

Tip: To check if any cryptographic keys exist, look in the c8_location/configuration directory. Cryptographic keys exist if this directory includes the following subdirectories: csk, encryptkeypair or signkeypair.

Steps

1. If data exists in the content store, start the IBM Cognos 8 service and export the entire content store using the Deployment tool.
   
   For more information, see the topic about creating an export deployment specification in the Administration and Security Guide.

2. In IBM Cognos Configuration, from the File menu, click Export As and save the configuration information in a decrypted format. When naming the file, use a name such as "decrypted.xml".
   
   Export the data to a directory that is protected from unauthorized or inappropriate access because passwords are stored in plain text. You are prompted to acknowledge that the export is an unsecure operation.

3. Stop the IBM Cognos 8 service:
   
   - If you use Tomcat, stop the IBM Cognos 8 service and close IBM Cognos Configuration.
   
   - If you use an application server other than Tomcat, shut down IBM Cognos 8 in your environment.

4. Back up any existing cryptographic keys by saving the appropriate files and directories to an alternate location that is secure.

   The files are
   
   - c8_location/configuration/cogstartup.xml
   - c8_location/configuration/caSerial
   - c8_location/configuration/cogconfig.prefs
   - c8_location/configuration/coglocale.xml
The directories are

- \texttt{c8\_location/configuration/csk}
- \texttt{c8\_location/configuration/encryptkeypair}
- \texttt{c8\_location/configuration/signkeypair}

5. Delete the caSerial and cogconfig.prefs files and the three directories: csk, encryptkeypair, and signkeypair.

6. Replace the \texttt{c8\_location/configuration/cogstartup.xml} file with the file that contains the data exported from IBM Cognos Configuration (for example, "decrypted.xml").

\textbf{Important:} In the \texttt{c8\_location/configuration} directory, the file must use the name "cogstartup.xml".

The information in this file will be automatically re-encrypted using new cryptographic keys when you save the configuration in IBM Cognos Configuration.

**Update the Java Environment**

The IBM Cognos security provider files must be located in the JVM environment for the new version of Java.

IBM Cognos 8 cryptographic services use a .jar (Java Archive) file, named bcprov-jdknn-nnn.jar, that must be located in your Java Runtime Environment (JRE). This file provides additional encryption and decryption routines that are not supplied as part of a default JVM installation. To ensure security, the encryption file must be loaded by the JVM using the java extensions directory.

If you want to use your own JRE and have JAVA_HOME set to that location on Windows or if you are installing on UNIX, you may have to update the Java environment for the cryptographic services.

On Windows, you can set JAVA_HOME as a system variable or a user variable. If you set it as a system variable, it may be necessary to restart your computer for it to take effect. If you set it as a user variable, set it so that the environment in which Tomcat is running can access it.

If you do not have a JAVA_HOME variable already set on Windows or if JAVA_HOME points to a Java version that is not valid for IBM Cognos 8, the JRE files provided with the installation will be used, and you do not have to update any files in your environment.

**Steps**

1. Ensure that the JAVA_HOME environment variable is set to the JRE location.
   
   For example, to set JAVA_HOME to the JRE files provided with the installation, the path is \texttt{c8\_location/bin/jre/version}.

2. Copy the bcprov-jdknn-nnn.jar file from the \texttt{c8\_location/bin/jre/version/lib/ext} directory to the \texttt{Java\_location/lib/ext} directory.


4. Save the configuration.
IBM Cognos Configuration generates new keys and encrypts the data.

**Import Content Store Data**

If you exported the content store before changing the JVM, import the deployment to restore and encrypt the data using the new encryption keys.

**Step**

- To import the content store data, start the IBM Cognos 8 service and import the entire content store using the Deployment tool. For more information, see the topic about importing to a target environment in the *Administration and Security Guide*.

**Configuring IBM Cognos 8 Components to Use a Another Certificate Authority**

By default, IBM Cognos 8 components use their own certificate authority (CA) service to establish the root of trust in the IBM Cognos security infrastructure. You can configure IBM Cognos 8 components to use another certificate authority, if you already have an existing certificate authority, such as iPlanet or Microsoft, in your reporting environment.

When you configure IBM Cognos 8 components to use another certificate authority, ensure that you specify the same information in both the command line utility tool and in IBM Cognos Configuration.

Use the following checklist to configure IBM Cognos 8 components to use another certificate authority.

- Generate IBM Cognos security keys and certificate signing requests to use with your CA.
- Submit the Cognos security keys and certificates to your third-party certificate authority.
- Configure IBM Cognos 8 components to use a your certificate authority.

**Generate Keys and Certificate Signing Requests**

Use the command line utility to generate all the keys for the IBM Cognos key stores and to generate the certificate signing requests (CSR).

The following table lists the options for the command-line tool used to generate keys and signing requests.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-c</td>
<td>Create a new CSR</td>
</tr>
<tr>
<td>-i</td>
<td>Import a certificate</td>
</tr>
</tbody>
</table>
Command | Description
--- | ---
**Operation modifiers**
-s | Work with the signing identity
-e | Work with the encryption identity
-T | Work with the trust store (only with -i)

**Information Flags**
-d | DN to use for certificate
-r | CSR or certificate file location (depends on mode)
-t | certificate authority certificate file (only with -i)
-p | Key Store password (must be provided)
-a | Key pair algorithm. RSA or DSA.
    **Default:** RSA
-D | Directory location

The following sample values are used:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signing certificate DN</td>
<td>CN=SignCert,O=MyCompany,C=CA</td>
</tr>
<tr>
<td>Encryption certificate DN</td>
<td>CN=EncryptCert,O=MyCompany,C=CA</td>
</tr>
<tr>
<td>Key store password</td>
<td>password</td>
</tr>
</tbody>
</table>

**Steps**
1. In the `c8_location\configuration` directory, back up the cogstartup.xml file to a secure location.
2. Back up the contents of the following directories to a secure location:
   - `c8_location\configuration\signkeypair`
   - `c8_location\configuration\encryptkeypair`
3. Using IBM Cognos Configuration, export the configuration in clear text by doing the following:
   - Open IBM Cognos Configuration.
- From the File menu, click Export As.
- When prompted about exporting decrypted content, click Yes.
- In the Export As dialog box, select cogstartup.xml and then click Save.
- When prompted about replacing the existing file, click Yes.
- When the tasks are complete, close the IBM Cognos Configuration dialog box.
- Save the configuration.
- Close IBM Cognos Configuration.

4. Go to the c8_location/bin directory.

5. Create the certificate signing request for the signing keys by typing the following command:
   On UNIX or Linux, type
   ```
   ThirdPartyCertificateTool.sh -c -s -d "CN=SignCert,O=MyCompany,C=CA" -r signRequest.csr -D ../configuration/signkeypair -p password
   ```
   On Windows, type
   ```
   ThirdPartyCertificateTool.bat c -s -d "CN=SignCert,O=MyCompany,C=CA" -r signRequest.csr -D ../configuration/signkeypair -p password
   ```
   Tip: UNIX or Linux filenames are case-sensitive and must be entered exactly as shown.
   You can safely ignore any warnings about logging.
   The command creates the jSignKeystore file in the signkeypair directory, sets the specified password, creates a new keypair and stores it in the keystore, and exports the signRequest.csr file to the c8_location/bin directory.

6. Create the certificate signing request for the encryption keys by typing the following command:
   On UNIX or Linux, type
   ```
   ThirdPartyCertificateTool.sh -c -e -d "CN=EncryptCert,O=MyCompany,C=CA" -r encryptRequest.csr -D ../configuration/encryptkeypair -p password
   ```
   On Windows, type
   ```
   ThirdPartyCertificateTool.bat -c -e -d "CN=EncryptCert,O=MyCompany,C=CA" -r encryptRequest.csr -D ../configuration/encryptkeypair -p password
   ```
   You can safely ignore any warnings about logging.
   The command creates the jEncKeystore file in the encryptkeypair directory, sets the specified password, creates a new keypair and stores it in the keystore, and exports the encryptRequest.csr file to the c8_location/bin directory.

7. Copy the signRequest.csr and encryptRequest.csr files that were generated in steps 5 and 6 to a directory that is accessible by your certificate authority.

8. Input the signRequest.csr and encryptRequest.csr files into the certificate authority.
   The certificate authority produces a signing certificate and an encryption certificate.
For more information, see your CA documentation.

9. Copy the contents of the signing certificate into a file named signCertificate.cer.

10. Copy the contents of the encryption certificate into a file named encryptCertificate.cer.

11. Find the root CA certificate for the certificate authority and copy the contents into a file named ca.cer.

12. Copy ca.cer, signCertificate.cer, and encryptCertificate.cer to c8_location/bin. These files must be PEM (Base-64 encoded ASCII) format.

13. Import the signing certificate from step 10 into the IBM Cognos signing key store by typing the following command:
   On UNIX or Linux, type
   ```
   ThirdPartyCertificateTool.sh -i -s -r signCertificate.cer -D ../configuration/signkeypair -p password -t ca.cer
   ```
   On Windows, type
   ```
   ThirdPartyCertificateTool.bat -i -s -r signCertificate.cer -D ../configuration/signkeypair -p password -t ca.cer
   ```
   You can safely ignore any warnings about logging.
   The command reads the signCertificate.cer and ca.cer files in the c8_location\bin directory and imports the certificates from both files into the jSignKeystore file in the signkeypair directory using the specified password.

14. Import the encryption certificate from step 11 into the IBM Cognos encryption key store by typing the following command:
   On UNIX or Linux, type
   ```
   ThirdPartyCertificateTool.sh -i -e -r encryptCertificate.cer -D ../configuration/encryptkeypair -p password -t ca.cer
   ```
   On Windows, type
   ```
   ThirdPartyCertificateTool.bat -i -e -r encryptCertificate.cer -D ../configuration/encryptkeypair -p password -t cacert.cer
   ```
   You can safely ignore any warnings about logging.
   The command reads the encryptCertificate.cer and ca.cer files in the c8_location\bin directory and imports the certificates from both files into the jEncKeystore file in the encryptkeypair directory using the specified password.

15. Import the CA certificate from step 12 into the IBM Cognos trust store by typing the following command:
   On UNIX or Linux, type
   ```
   ThirdPartyCertificateTool.sh -i -T -r ca.cer -D ../configuration/signkeypair -p password
   ```
   On Windows, type
ThirdPartyCertificateTool.bat -i -T -r ca.cer -D ../configuration/signkeypair -p password

The command reads the ca.cer file and imports the contents into the jCAKeystore file in the signkeypair directory using the specified password.

The certificates are now ready to be configured for IBM Cognos 8.

Configure IBM Cognos 8 Components to Run Within Another Certificate Authority

You must configure each IBM Cognos computer to use an external certificate authority by setting the appropriate property in IBM Cognos Configuration.

By setting this property, IBM Cognos 8 components assume that all required keys have been generated and vetted by the external certificate authority.

Ensure that the key store locations and password in IBM Cognos Configuration match the ones you typed in the command-line tool.

Steps

1. Start IBM Cognos Configuration.

2. In the Explorer window, under Security, Cryptography, click Cognos.

3. In the Properties window, under Certificate Authority settings property group, click the Value box next to the Use third party CA property and then click True.

   Note: When you set this property to true, all properties for the certificate authority and identity name are ignored.

4. Configure the following properties to match the ones you typed in the command line utility:
   - Signing key store location
   - Signing key store password
   - Encryption key store location
   - Encryption key store password
   - Certificate Authority key store password

5. From the File menu, click Save.

6. If you want to start the IBM Cognos 8 service, from the Actions menu, click Start.

   This action starts all installed services that are not running. If you want to start a particular service, select the service node in the Explorer window and then click Start from the Actions menu.
Chapter 15: Setting Up an Unattended Installation and Configuration

Set up an unattended installation and configuration to

- install an identical configuration across several computers on your network
- automate the installation and configuration process by specifying options and settings for users
- install and configure components in a UNIX or Linux environment that does not have XWindows

Before you set up an unattended installation and configuration, ensure that all the system requirements and prerequisites are met and that all other software that you need is installed and configured.

You can also set up an unattended uninstallation.

To set up an unattended installation and configuration, perform the following tasks:

- Configure a transfer specification file (.ats) to specify installation options.
- Run the installation tool in silent mode.
- Use a pre configured configuration file from another computer.
- Run the configuration tool in silent mode.

After you complete these tasks, ensure that the Cognos 8 installation directory on all computers is protected from unauthorized or inappropriate access. Then you will be ready to use Cognos 8.

Set Up an Unattended Installation

Use a transfer specification file (.ats) to copy IBM Cognos 8 components, including Framework Manager or Metric Designer, to your computer without being prompted for information.

By default, each time you install IBM Cognos 8 components using the installation wizard, the options you select are recorded in a transfer specification file. Therefore, if you already installed IBM Cognos 8 components on a sample computer, you can use the generated transfer specification file as a template for unattended installations on different computers.

If you do not use the installation wizard to install components, you can use the default transfer specification file named response.ats that is available on the CD. You must modify the response.ats file for your environment before you can use it for an unattended installation.

You can check if the unattended installation was successful by checking the return status. A value of zero (0) indicates success and all other values indicate that an error occurred.

Steps Using a File Generated by an Installation on Another Computer

1. Use the installation wizard to install IBM Cognos 8 components on one computer.
2. Go to *c8_location*/instlog.

3. Locate the transfer specification file (ats) that was generated.
   The filename format is *ts-product_code-version-yyyyymmdd_hhmm.ats*
   where *product_code* is as follows:

<table>
<thead>
<tr>
<th>Product_code</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>C8BISRVR</td>
<td>IBM Cognos 8 BI Server</td>
</tr>
<tr>
<td>C8BIMODEL</td>
<td>Framework Manager</td>
</tr>
<tr>
<td>CMMSRVR</td>
<td>IBM Cognos Metrics Manager</td>
</tr>
<tr>
<td>C8BIMEMOD</td>
<td>Metric Designer</td>
</tr>
<tr>
<td>C8BISAMPLES</td>
<td>Samples</td>
</tr>
<tr>
<td>LP</td>
<td>Supplementary Languages Documentation</td>
</tr>
</tbody>
</table>

4. Copy the transfer specification file to the computer where you plan to install IBM Cognos 8.

5. On the computer where you plan to install the software, insert the appropriate CD and copy the contents of the CD to your computer.

6. Open the transfer specification file that you copied in a text editor.

7. In the section named License Agreement, change the ACCEPTED= property to y.

8. Save the transfer specification file in the directory where you copied the contents of the installation CD.

9. Install IBM Cognos 8:
   - On Windows, open a *Command Prompt* window, and change to the win32 directory where you copied the contents of the CD, and then type the following command, where *location* is the directory where you copied *filename*, the transfer specification file:
     
     ```
     issetup -s location/filename.ats
     ```
   - On UNIX or Linux, change to the directory where you copied the contents of the CD, and in the directory for your operating system, type the following command, where *location* is where you copied *filename*, the transfer specification file:
     
     ```
     ./issetup -s location/filename.ats
     ```

   If a return status other than zero (0) is returned, check the log files for error messages. Errors are recorded in the *c8_location*/instlog directory in a summary error log file. The filename format is *tl-product_code-version-yyyyymmdd-hhmm_summary-error.txt*. 
If errors occur before sufficient initialization occurs, log messages are sent to a log file in the Temp directory. The filename format is \( tl\)-product_code-version-yyymmdhhmm.txt.

Also ensure that the installation directory is protected from unauthorized or inappropriate access.

After all errors are resolved, you can set up an unattended configuration.

### Steps Using the Response.ats File

1. **On the target computer,** insert the CD and copy the contents to your computer.

2. **Go to the operating system directory** and open the response.ats file in a text editor.
   
   Each section in the response.ats file corresponds to a dialog box in the installation wizard.

3. **In the section named License Agreement,** change the ACCEPTED= property to \( y \).

4. **Type the installation location of the program files for IBM Cognos 8 in APPDIR=location.**
   
   **Tip:** There should be no space on either side of the equal sign, (=).

5. **For the server components of IBM Cognos 8,** in the section named \[Component List\], next to each component:
   
   - To install the component, type \( 1 \)
   
   - To not install the component, type \( 0 \)

   **Note:** You do not select components for Framework Manager.

   You do not select components for Metric Designer.

   All required files are installed.

6. **For a Windows installation,** for the APPFOLDER= property, type the name of the Start menu folder that contains your program shortcuts.

   **Tip:** To ensure that the shortcut folder is visible to all users, type \( 1 \) for the ALLUSERS_FLAG= property.

7. **For the install information in the [Install Conditions] section:**
   
   - To specify the condition is true, type \( 1 \)
   
   - To specify the condition is false, type \( 0 \)

8. **Save the response.ats file to a local directory after you make the necessary changes.**

9. **Go to the operating system directory.**

10. **At the command prompt type the following command,** where location is the directory where you copied response.ats:

    - **On Windows,**

      \( \text{issetup} \ -s \ location/response.ats \)

    - **On UNIX or Linux,**

      \( ./\text{issetup} \ -s \ location/response.ats \)
If a return status other than zero (0) is returned, check the log files for error messages. Errors are recorded in the c8_location\instlog directory in a summary error log file. The filename format is tl-product_code-version-yyyyymmdd-hhmm_summary-error.txt.

If errors occur before sufficient initialization occurs, log messages are sent to a log file in the Temp directory. The filename format is tl-product_code-version-yyyyymmdd-hhmm.txt.

Also ensure that the installation directory is protected from unauthorized or inappropriate access.

After all errors are resolved, you can set up an unattended configuration.

**Set Up an Unattended Configuration**

Before you set up an unattended configuration, you must export a configuration from another computer that has the same IBM Cognos 8 components installed. You can then run IBM Cognos Configuration in silent mode.

The exported configuration contains the properties of the IBM Cognos 8 components that you installed on the source computer. If you made changes to the global configuration, you must also copy the global configuration file from the source computer to the computer where you plan to run an unattended configuration. Global configuration includes such settings as content locale, product locale, currencies, fonts, and cookie settings. For more information, see "Changing Global Settings" (p. 335).

Ensure that the configuration settings on the local computer are appropriate to use to configure another IBM Cognos 8 computer with the same installed components. For example, if you changed the host name portion of the Gateway URI property from local host to an IP address or computer name, ensure this setting is appropriate for the new computer’s configuration.

**Steps**

1. In IBM Cognos Configuration, from the File menu, click **Export as**.

2. If you want to export the current configuration to a different folder, in the **Look in** box, locate and open the folder.

   Ensure that the folder is protected from unauthorized or inappropriate access.

3. In the **File name** box, type a name for the configuration file.

4. Click **Save**.

5. Copy the exported configuration file from the source computer or network location to the c8_location/configuration directory on the computer where you plan to run an unattended configuration.

6. Rename the file to cogstartup.xml.

7. If you changed the global configuration on the source computer, copy the coglocale.xml file from the source computer to the c8_location/configuration directory on the computer where you plan to run an unattended configuration.

8. Go to c8_location/bin.
9. Type the configuration command:
   - On UNIX or Linux, type
     ```bash
     ./cogconfig.sh -s
     ```
   - On Windows, type
     ```bash
     cogconfig.bat -s
     ```

   **Tip:** To view log messages that were generated during an unattended configuration, see the `cogconfig_response.csv` file in the `c8_location/logs` directory.

   You can check if the unattended configuration was successful by checking the return status. A value of zero (0) indicates success and all other values indicate that an error occurred.

IBM Cognos Configuration applies the configuration settings specified in the local copy of cogstart-up.xml, encrypts credentials, generates digital certificates, and if applicable, starts IBM Cognos 8 service or process.

## Set Up an Unattended Uninstallation

Set up an unattended installation and configuration to

- automate the removal of components on several computers that have the same components
- remove components in a UNIX or Linux environment that does not have XWindows

### Steps

1. Go to `c8_location/instlog`.
2. Open the transfer specification .ats file for the product in a text editor:

   The filename format of the transfer specification .ats file is `ts-product_code-version-yyyyymmdd_hhmm.ats`

   where `product_code` is as follows:

<table>
<thead>
<tr>
<th>Product_code</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>C8BISRVR</td>
<td>IBM Cognos 8 BI Server</td>
</tr>
<tr>
<td>C8BIMODEL</td>
<td>Framework Manager</td>
</tr>
<tr>
<td>CMMSRVR</td>
<td>IBM Cognos Metrics Manager</td>
</tr>
<tr>
<td>C8BIMEMOD</td>
<td>Metric Designer</td>
</tr>
<tr>
<td>C8BISAMPLES</td>
<td>Samples</td>
</tr>
<tr>
<td>LP</td>
<td>Supplementary Languages Documentation</td>
</tr>
</tbody>
</table>
If you have more than one .ats file for a product, you only need to edit one of the .ats files.

3. In the section named [Component List], specify the components to remove.
   - To remove the component, type 1
   - To leave the component installed, type 0

4. Save and close the file.

5. Go to the operating system directory.

6. At the command prompt, type the following command, where filename is the name of the transfer specification .ats file that you edited:
   - On Windows,
     ```
     uninist -u -s c8_location/instlog/filename.ats
     ```
   - On UNIX or Linux,
     ```
     ./uninst -u -s c8_location/instlog/filename.ats
     ```

7. Repeat the entire procedure for each product that you want to uninstall.
Chapter 16: Performance Maintenance

This section includes topics about using IBM Cognos and other tools and metrics to maintain the performance of your IBM Cognos 8 environment.

System Performance Metrics

IBM Cognos 8 provides system metrics that you can use to monitor the health of the entire system and of each server, dispatcher, and service. You can also set the thresholds for the metric scores. Some examples of system performance metrics are the number of sessions in your system, how long a report is in a queue, how long a Java Virtual Machine (JVM) has been running, and the number of requests and processes in the system.

System performance metrics are available in IBM Cognos Administration, which you can access from IBM Cognos Connection. For more information about using system performance metrics, see the Administration and Security Guide.

An added feature is that you can take a snapshot of the current system metrics so that you can track trends over time or review details about the state of the system at a particular time. For more information, see the topic about the metric dump file in the troubleshooting chapter of the Administration and Security Guide.

Enabling Only Services That are Required

If some IBM Cognos 8 services are not required in your environment, you can disable them to improve the performance of other services.

For example, to dedicate a computer to running and distributing reports, you can disable the presentation service on an Application Tier Components computer. When you disable the presentation service, the performance of the Application Tier Components will improve.

Notes:

- The Presentation service must remain enabled on at least one computer in your IBM Cognos 8 environment.
- If you want to use Query Studio, you must enable the Presentation service.
- If you want to use Analysis Studio, you must enable the Report service.
- If some IBM Cognos 8 components are not installed on a computer, you should disable the services associated with the missing components. Otherwise the IBM Cognos 8 components will randomly fail.

IBM Cognos 8 Services

After you install and configure IBM Cognos 8, one dispatcher is available on each computer by default. Each dispatcher has a set of associated services, listed in the following table.
<table>
<thead>
<tr>
<th>Service</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent service</td>
<td>Runs agents. If the conditions for an agent are met when the agent runs, the agent service asks the monitor service to run the tasks.</td>
</tr>
<tr>
<td>Batch report service</td>
<td>Manages background requests to run reports and provides output on behalf of the monitor service.</td>
</tr>
<tr>
<td>Content Manager service</td>
<td>• Performs object manipulation functions in the content store, such as add, query, update, delete, move, and copy</td>
</tr>
<tr>
<td></td>
<td>• Performs content store management functions, such as import and export</td>
</tr>
<tr>
<td>Data movement service</td>
<td>Manages the execution of data movement tasks in IBM Cognos 8. Data movement tasks, such as Builds and JobStreams, are created in Data Manager Designer and published to IBM Cognos 8.</td>
</tr>
<tr>
<td>Delivery service</td>
<td>Sends emails to an external SMTP server on behalf of other services, such as the report service, job service, agent service, or data integration service</td>
</tr>
<tr>
<td>Event management service</td>
<td>Creates, schedules, and manages event objects that represent reports, jobs, agents, content store maintenance, deployment imports and exports, and metrics</td>
</tr>
<tr>
<td>Job service</td>
<td>Runs jobs by signaling the monitor service to run job steps in the background. Steps include reports, other jobs, import, exports, and so on.</td>
</tr>
<tr>
<td>Log service</td>
<td>Records log messages generated by the dispatcher and other services. The log service can be configured to record log information in a file, a database, a remote log server, Windows Event Viewer, or a UNIX system log. The log information can then be analyzed by customers or by Cognos Software Services, including:</td>
</tr>
<tr>
<td></td>
<td>• security events</td>
</tr>
<tr>
<td></td>
<td>• system and application error information</td>
</tr>
<tr>
<td></td>
<td>• selected diagnostic information</td>
</tr>
<tr>
<td>Service</td>
<td>Purpose</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Metric Studio service</td>
<td>Provides the Metric Studio user interface for monitoring and entering performance information</td>
</tr>
<tr>
<td>Migration service</td>
<td>Manages the migration from IBM Cognos Series 7 to IBM Cognos 8.</td>
</tr>
<tr>
<td>Monitor service</td>
<td>• Manages the monitoring and execution of tasks that are scheduled, submitted for execution at a later time, or run as a background task</td>
</tr>
<tr>
<td></td>
<td>• Assigns a target service to handle a scheduled task. For example, the monitor service may ask the batch report service to run a report, the job service to run a job, or the agent service to run an agent.</td>
</tr>
<tr>
<td></td>
<td>• Creates history objects within the content manager and manages failover and recovery for executing entries</td>
</tr>
<tr>
<td>Presentation service</td>
<td>• Transforms generic XML responses from another service into output format, such as HTML or PDF</td>
</tr>
<tr>
<td></td>
<td>• Provides display, navigation, and administration capabilities in IBM Cognos Connection</td>
</tr>
<tr>
<td>Report data service</td>
<td>Manages the transfer of report data between IBM Cognos 8 and applications that consume the data, such as IBM Cognos 8 Go! Office and IBM Cognos 8 Go! Mobile.</td>
</tr>
<tr>
<td>Report service</td>
<td>Manages interactive requests to run reports and provides output for a user in IBM Cognos Connection or a studio</td>
</tr>
<tr>
<td>System service</td>
<td>Defines the Business Intelligence Bus API-compliant service used to obtain application-wide IBM Cognos 8 configuration parameters. It also provides methods that normalize and validate locale strings and map locale strings to locales supported by your application.</td>
</tr>
</tbody>
</table>

### Tuning a DB2 Content Store

If you use a DB2 database for the content store, you can take steps to improve the speed with which requests are processed.
By default, DB2 assigns tables that contain large objects (LOBS) to a database-managed tablespace. As a result, the LOBS are not managed by the DB2 buffer pools. This results in direct I/O requests on the LOBS, which affects performance. By reassigning the tables that contain LOBS to a system-managed tablespace, you reduce the number of direct I/O requests.

Before changing a DB2 content store, allocate sufficient log space to restructure the database.

To reconfigure the DB2 content store, do the following:

- Export the data from the tables that contain at least one large object (LOB).
- Create the tables in a system-managed table space.
- Import the data into the tables.

**Tune Apache Tomcat Settings**

If you use Apache Tomcat, you can edit settings to improve performance.

You can edit the maxProcessor and acceptCount settings in the server.xml file.

**Steps**

1. Open the server.xml file.
2. Edit the settings that appear after the following comment:
   ```
   <!-- Define a non-SSL Coyote HTTP/1.1 Connector on port 8080 -->
   ```
   Find the following line:
   ```
   maxProcessors="75"
   ```
   and change it to the following:
   ```
   maxProcessors="1000"
   ```
3. Find the following line:
   ```
   acceptCount="100"
   ```
   and change it to the following:
   ```
   acceptCount="500"
   ```
4. Save the updated server.xml file.

**Increase the Request-handling Capacity for Cognos Content Database**

Cognos Content Database is configured for use with a small system. If you use Cognos Content Database in a large system, where the number of simultaneous requests is greater than ten, you must adjust the default JVM memory settings and increase the page cache size for Derby.

**Steps**

1. In the c8_location\bin directory, open the derby.sh file.
2. Find the following line:
   
   MEM_SETTINGS=-Xmx256m

   and change it to the following:

   MEM_SETTINGS="-Xmx1152m -XX:MaxPermSize=128M -XX:MaxNewSize=576m
   -XX:NewSize=288m"

3. In the c8_location\configuration directory, rename derby.properties.sample to derby.properties.

4. In the same directory, open the derby.properties file.

5. Comment out the following line:
   
   derby.storage.pageCacheSize=15000

---

### Improve Metric Store Database Performance

IBM Cognos 8 provides a script called cmm_update_stats that updates your metric store database indexes, which improves performance. Typically, you use this script before or after loading data when the volume or distribution of data has changed significantly. For example, performance may improve if you run this script after increasing the number of scorecards from 100 to 1000.

**Steps**

1. Ensure that there is no activity in the metric store database.

2. Go to the following directory:
   
   c8_location\configuration\schemas\cmm

3. Go to the appropriate database directory.

4. Depending on the database type, run one of the following scripts from the command line:
   
   - For Microsoft SQL Server or DB2:
     
     cmm_update_stats host_name metric_store_name Admin_user_name password
   
   - For Oracle:
     
     cmm_update_stats metric_store_name Admin_user_name password

---

### Reduce Delivery Time for Reports in a Network

Reports that are distributed globally take longer to open in remote locations than to open locally. In addition, HTML reports take longer than PDF reports to open because more requests are processed for HTML reports.

You can reduce the amount of time for reports to open in remote locations in two ways. You can reduce the number of requests between the browser and the server by running the report in PDF format. If HTML reports are required, you can speed up the delivery of the report by configuring additional gateways in some of the remote locations. Static content, such as graphics and style sheets, will be delivered faster.
Increase Asynchronous Timeout in High User Load Environments

If you have a high user load (over 165 users) and interactive reports are running continuously in a distributed installation, you may want to increase the asynchronous timeout setting to avoid getting error messages. The default is 30000.

You may also want to set the Queue Time Limit setting to 360. For information, see the IBM Cognos 8 Administration and Security Guide.

To resolve this problem:

Steps
1. Go to the following directory:
   
   `c8_location/webapps/p2pd/WEB-INF/services/`

2. Open the reportservice.xml file in a text editor.

3. Change the async_wait_timeout_ms parameter to 120000.

4. Save the file.

5. Restart the service.
Appendix A: Manually Configuring IBM Cognos 8

The console attached to the UNIX or Linux computer on which you are installing IBM Cognos 8 may not support a Java-based graphical user interface. You must perform the following tasks manually.

- Manually change default configuration settings by editing the cogstartup.xml file, located in the `c8_location/configuration` directory.

- Manually change language or currency support, or locale mapping by editing the coglocale.xml file, located in the `c8_location/configuration` directory.

- Apply the configuration and the locale settings to your computer by starting the IBM Cognos 8 services in silent mode.

- Deploy IBM Cognos 8 into an application server environment by manually creating an IBM Cognos application file.

For all installations, some configuration tasks are required so that IBM Cognos 8 works in your environment. If you distribute IBM Cognos 8 components across several computers, the order in which you configure and start the computers is important.

Other configuration tasks are optional and depend on your reporting environment. You can change the default behavior of IBM Cognos 8 by editing the cogstartup.xml file to change property values. You can also use sample files that enable IBM Cognos 8 to use resources that already exist in your environment.

Manually Configuring IBM Cognos 8 on UNIX and Linux

The console attached to the UNIX or Linux computer on which you are installing IBM Cognos 8 may not support a Java-based graphical user interface. You must

- manually change default configuration settings by editing the cogstartup.xml file, located in the `c8_location/configuration` directory

- manually change language or currency support, or locale mapping by editing the coglocale.xml file, located in the `c8_location/configuration` directory

- apply the configuration and the locale settings to your computer by running IBM Cognos Configuration in silent mode

For all installations, some configuration tasks are required so that IBM Cognos 8 works in your environment. If you distribute IBM Cognos 8 components across several computers, the order in which you configure and start the computers is important.

Other configuration tasks are optional and depend on your reporting environment. You can change the default behavior of IBM Cognos 8 by editing the cogstartup.xml file to change property values. You can also use sample files that enable IBM Cognos 8 to use resources that already exist in your environment.
Manually Change Default Configuration Settings on UNIX and Linux Computers

If the console attached to your UNIX or Linux computer does not support a Java-based graphical user interface, you must edit the cogstartup.xml to configure IBM Cognos 8 to work in your environment.

Note: Some configuration settings are not saved in the cogstartup.xml file unless you use the graphical user interface. For example, the server time zone is not set for your IBM Cognos components when you modify the cogstartup.xml file directly and then run IBM Cognos Configuration in silent mode. In this case, other user settings that rely on the server time zone may not operate as expected.

If you want IBM Cognos 8 to use a resource, such as an authentication provider that already exists in your environment, you can add a component to your configuration. You do this by copying the required XML code from the sample files into the cogstartup.xml file and then edit the values to suit your environment.

Important: By default, the cogstartup.xml file is encoded using UTF-8. When you save the cogstartup.xml file, ensure that you change the encoding of your user locale to match the encoding used. The encoding of your user locale is set by your environment variables.

When you edit the cogstartup.xml file, remember that XML is case-sensitive. Case is important in all uses of text, including element and attribute labels, elements and values.

Before you edit the cogstartup.xml file, ensure that you

- make a backup copy
- create the content store on an available computer in your network
- review the configuration requirements for your installation type

Steps

1. Go to the $c8_location/configuration directory.
2. Open the cogstartup.xml file in an editor.
3. Find the configuration setting you want to change by looking at the help and description comments that appear before the start tag of the `<crn:parameter>` elements.
4. Change the value of the `<crn:value>` element to suit your environment.
   
   Tip: Use the `type` attribute to help you determine the data type for the configuration property.
5. Repeat steps 3 to 4 until the configuration values are appropriate your environment.
6. Save and close the file.

You should now use a validating XML editor to validate your changes against the rules in the cogstartup.xsd file, located in the $c8_location/configuration.

Add a Component to Your Configuration

The cogstartup.xml file contains configuration settings used by IBM Cognos 8 and by default components. You can change the components that IBM Cognos 8 uses by copying XML elements
from sample files into the cogstartup.xml file. You can then edit the configuration values to suit your environment.

For example, to use an Oracle database for the content store, you can use the ContentManager_language_code.xml sample file to replace the default database connection information.

IBM Cognos 8 can use only one instance at a time of the following elements:

- the database for the content store
- a cryptographic provider
- a configuration template for the IBM Cognos 8 service

You should be familiar with the structure of XML files before you start editing them.

**Steps**

1. Go to the c8_location/configuration/samples directory.

2. Choose a sample file to open in an editor:
   - To use Oracle, DB2, or Sybase for the content store, open the ContentManager_language_code.xml file.
   - To use an authentication provider, open the Authentication_language_code.xml file.
   - To use a cryptographic provider, open the Cryptography_language_code.xml file.
   - To send log messages somewhere other than a file, open the Logging_language_code.xml file.
   - To use a medium or large template for the amount of resources the IBM Cognos 8 process uses, open the CognosService_language_code.xml file.

3. Copy the elements that you need. **Tip:** Ensure that you copy the code including the start and end tags for the <crn:instance> element.

   For example, look for the (Begin of) and (End of) comments:

   ```xml
   <!--
   (Begin of) DB2 template
   -->
   <crn:instance ...
   ...
   </crn:instance>
   <!--
   (End of) DB2 template
   -->
   ```

4. Go to the c8_location/configuration directory.

5. Open the cogstartup.xml file in an editor.

6. Paste the code from the sample file to the cogstartup.xml file and replace the appropriate <crn:instance> element.
7. Change the values of these new elements to suit your environment.

For the `<crn:instance>` element, don’t change the class attribute. You can change the name attribute to suit your environment.

For example, if you use an Oracle database for the content store, change only the name attribute to suit your environment.

`<crn:instance class="Oracle" name="MyContentStore">`

8. Save and close the file.

9. Run IBM Cognos Configuration in silent mode by typing the following command:

```
./cogconfig.sh -s
```

This ensures that the file is valid and that passwords are encrypted.

---

**Manually Change Encrypted Settings**

You can manually change encrypted settings, such as passwords and user credentials, in the cogstartup.xml file.

To prompt IBM Cognos Configuration to save an encrypted setting, you change the value and then set the encryption flag to false.

**Steps**

1. Go to the `<c8_location>/configuration` directory.

2. Open the cogstartup.xml file in an editor.

3. Find the encrypted setting you want to change by looking at the help and description comments that appear before the start tag of the `<crn:parameter>` elements.

4. Change the value of the `<crn:value>` element to suit your environment.

   **Tip:** Use the type attribute to help you determine the data type for the configuration property.

5. Change the encryption value to false.

   For example,
   ```xml
   <crn:value encrypted="false">
   ```

6. Repeat steps 3 to 5 until the configuration values are appropriate for your environment.

7. Save and close the file.

8. Type the following configuration command:

   ````
   ./cogconfig.sh -s
   ```

The new settings are saved and encrypted.
Manually Change the Global Settings on UNIX and Linux Computers

If the console attached to your UNIX or Linux computer does not support a Java-based graphical user interface, you must manually edit the cognlocale.xml file located in the c8_location/configuration directory.

You can change global settings

- to specify the language used in the user interface when the language in the user’s locale is not available
- to specify the locale used in reports when the user’s locale is not available
- to add currency or locale support to report data and metadata
- to add language support to the user interface

By default, IBM Cognos 8 components ensure that all locales, which may come from different sources and in various formats, use a normalized form. That means that all expanded locales conform to a language and regional code setting.

Before you can add language support to the user interface, you must install the language files on all computers in your distributed installation. For more information, contact your support representative.

Example 1

A report is available in Content Manager in two locales, such as en-us (English-United States) and fr-fr (French-France), but the user locale is set to fr-ca (French-Canadian). IBM Cognos 8 uses the locale mapping to determine which report the user sees.

First, IBM Cognos 8 checks to see if the report is available in Content Manager in the user’s locale.

If it is not available in the user’s locale, IBM Cognos 8 maps the user’s locale to a normalized locale configured on the Content Locale Mapping tab. Because the user’s locale is fr-ca, it is mapped to fr. IBM Cognos 8 uses the mapped value to see if the report is available in fr. In this case, the report is available in en-us and fr-fr, not fr.

Next, IBM Cognos 8 maps each of the available reports to a normalized locale. Therefore, en-us becomes en and fr-fr becomes fr.

Because both report and the user locale maps to fr, the user having the user locale fr-ca will see the report saved with the locale fr-fr.

Example 2

The user’s locale and the report locales all map to the same language. IBM Cognos 8 chooses which locale to use. For example, if a user’s locale is en-ca (English-Canada) and the reports are available in en-us (English-United States) and en-gb (English-United Kingdom), IBM Cognos 8 maps each locale to en. The user will see the report in the locale setting that IBM Cognos 8 chooses.

Example 3

The report and the user locales do not map to a common language. IBM Cognos 8 chooses the language. In this case, you may want to configure a mapping. For example, if a report is available
in en-us (English-United States) and fr-fr (French-France), but the user locale is es-es (Spanish-Spain), IBM Cognos 8 chooses the language.

Steps

1. On every computer where you installed Content Manager, go to the c8_location/configuration directory.

2. Open the coglocale.xml file in an editor.

3. Add or modify the required element and attribute between the appropriate start and end tags.

<table>
<thead>
<tr>
<th>Type of element</th>
<th>Start tag</th>
<th>End tag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language</td>
<td>&lt;supportedProductLocales&gt;</td>
<td>&lt;/supportedProductLocales&gt;</td>
</tr>
<tr>
<td>Content Locales</td>
<td>&lt;supportedContentLocales&gt;</td>
<td>&lt;/supportedContentLocales&gt;</td>
</tr>
<tr>
<td>Currency</td>
<td>&lt;supportedCurrencies&gt;</td>
<td>&lt;/supportedCurrencies&gt;</td>
</tr>
<tr>
<td>Product Locale Mapping</td>
<td>&lt;productLocaleMap&gt;</td>
<td>&lt;/productLocaleMap&gt;</td>
</tr>
<tr>
<td>Content Locale Mapping</td>
<td>&lt;contentLocaleMap&gt;</td>
<td>&lt;/contentLocaleMap&gt;</td>
</tr>
<tr>
<td>Fonts</td>
<td>&lt;supportedFonts&gt;</td>
<td>&lt;/supportedFonts&gt;</td>
</tr>
<tr>
<td>Cookie settings, archive</td>
<td>&lt;parameter name=&quot;setting&quot;&gt;</td>
<td>&lt;/parameter&gt;</td>
</tr>
<tr>
<td>location for reports</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tip:** To remove support, delete the element.

4. Save and close the file.

**Tip:** We recommend that you use a validating XML editor to validate your changes against the rules in the cogstartup.xsd file, located in the c8_location/configuration.

If you add a currency code that is not supported, you must manually add it to the i18n_res.xml file in the c8_location/bin/ directory. Copy this file to each IBM Cognos computer in your installation.

Starting and Stopping IBM Cognos 8 in Silent Mode on UNIX and Linux Computers

You run IBM Cognos Configuration in silent mode to apply the configuration settings and start the services on UNIX or Linux computers that do not support a Java-based graphical user interface.
Before you run the configuration tool in silent mode, you should ensure the cogstartup.xml file is valid according to the rules defined in the cogstartup.xsd file. The cogstartup.xsd file is located in the $c8_location/configuration directory.

**Steps to Start IBM Cognos 8**
1. Ensure that the cogstartup.xml file, located in the $c8_location/configuration directory, has been modified for your environment.
   For more information, see "Manually Change Default Configuration Settings on UNIX and Linux Computers" (p. 414).
2. Go to the $c8_location/bin directory.
3. Type the following command
   ./cogconfig.sh -s
   
   Tip: To view log messages that were generated during an unattended configuration, see the cogconfig_response.csv file in the $c8_location/logs directory.

IBM Cognos Configuration applies the configuration settings specified in the cogstartup.xml file, encrypts credentials, generates digital certificates, and if applicable, starts the IBM Cognos 8 service or process.

**Steps to Stop IBM Cognos 8**
1. Go to the $c8_location/bin directory.
2. Type the following command
   ./cogconfig.sh -stop

**Manually Create an IBM Cognos Application File**

IBM Cognos 8 and the servlet gateway must be packaged into an application file for deployment to supported application servers (p. 380), (p. 347). IBM Cognos 8 provides a Build Application wizard that you can use to create the application file.

You can create a Web archive (.war) file, an Enterprise archive (.ear) file, or an expanded directory that includes all the files necessary for the application. For information about WAR and EAR files or expanded directories and to determine what is supported by your application server, see the documentation provided with the application server.

If you choose not to use the Build Application wizard, you must complete the following steps to create the application file.

If the application server is not being used as a Web server, you do not need to include the IBM Cognos static content (html pages, images, and so on) in the application file. Excluding the static content when creating the application file reduces the size of the file.

**Steps to Create an IBM Cognos 8 Application File**
1. Go to the $c8_location/war/p2pd directory.
2. Run the build script by using the following command syntax:

- For Windows,
  ```
  build.bat file_type option
  ```

- For UNIX or Linux,
  ```
  build.sh file_type option
  ```

where `file_type` can be one of the following:

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>war</td>
<td>WAR file with static content</td>
</tr>
<tr>
<td>war_without_webcontent</td>
<td>WAR file with no static content</td>
</tr>
<tr>
<td>war_without_docsamples</td>
<td>WAR file with static content and with no documentation and sample files</td>
</tr>
<tr>
<td>ear</td>
<td>EAR file with static content</td>
</tr>
<tr>
<td>ear_without_webcontent</td>
<td>EAR file with no static content</td>
</tr>
<tr>
<td>ear_without_docsamples</td>
<td>EAR file with static content and with no documentation and sample files</td>
</tr>
<tr>
<td>expand</td>
<td>directory containing the application with static content</td>
</tr>
<tr>
<td>expand_without_webcontent</td>
<td>directory containing the application with no static content</td>
</tr>
<tr>
<td>expand_without_docsamples</td>
<td>directory containing the application with static content and with no documentation and sample files</td>
</tr>
</tbody>
</table>

and where `option` can be one or more of the following:

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Dappserver_type=value</td>
<td>jboss</td>
<td>Perform actions for a JBoss application server</td>
</tr>
<tr>
<td></td>
<td>other (default)</td>
<td>Perform actions for a non-JBoss application server</td>
</tr>
<tr>
<td>Option</td>
<td>Value</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>-Dcontext_root=value</td>
<td>p2pd (default)</td>
<td>Preset a context root value for the application</td>
</tr>
<tr>
<td>-Dwar_name=value</td>
<td>path/filename</td>
<td>Path and name of the WAR file to be created</td>
</tr>
<tr>
<td></td>
<td>Default is ../../../p2pd.war</td>
<td></td>
</tr>
<tr>
<td>-Dear_name=value</td>
<td>path/filename</td>
<td>Path and name of the EAR file to be created</td>
</tr>
<tr>
<td></td>
<td>Default is ../../../p2pd.ear</td>
<td></td>
</tr>
<tr>
<td>-Dexpand_location=value</td>
<td>path/directory</td>
<td>Path to directory where the application files are to be expanded</td>
</tr>
<tr>
<td>(For expand file types)</td>
<td>Default is ../../../temp/expand</td>
<td></td>
</tr>
</tbody>
</table>

### Steps to Create a Servlet Gateway Application File

1. Go to the `c8_location/war/gateway` directory.

2. Run the build script by using the following command syntax:
   - For Windows,
     ```plaintext
     build.bat file_type option
     ```
   - For UNIX or Linux,
     ```plaintext
     build.sh file_type option
     ```

   where `file_type` can be one of the following:

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>gateway_war</td>
<td>WAR file with static content</td>
</tr>
<tr>
<td>gateway_war_without_docsamples</td>
<td>WAR file with static content and with no documentation and sample files</td>
</tr>
<tr>
<td>gateway_ear</td>
<td>EAR file with static content</td>
</tr>
<tr>
<td>gateway_ear_without_docsamples</td>
<td>EAR file with static content and with no documentation and sample files</td>
</tr>
<tr>
<td>expand</td>
<td>directory containing the application with static content</td>
</tr>
</tbody>
</table>
Appendix A: Manually Configuring IBM Cognos 8

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>expand_without_docsamples</td>
<td>directory containing the application with static content and with no documentation and sample files</td>
</tr>
</tbody>
</table>

and where option can be one or more of the following:

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-Dappserver_type=value</td>
<td>jboss</td>
<td>Perform actions for a JBoss application server</td>
</tr>
<tr>
<td></td>
<td>other (default)</td>
<td>Perform actions for a non-JBoss application server</td>
</tr>
<tr>
<td>-Dcontext_root=value</td>
<td>ServletGateway (default)</td>
<td>Preset a context root value for the application</td>
</tr>
<tr>
<td>-Dwar_name=value</td>
<td>path/filename</td>
<td>Path and name of the WAR file to be created</td>
</tr>
<tr>
<td></td>
<td>Default is ../../ServletGateway.war</td>
<td></td>
</tr>
<tr>
<td>-Dear_name=value</td>
<td>path/filename</td>
<td>Path and name of the EAR file to be created</td>
</tr>
<tr>
<td></td>
<td>Default is ../../ServletGateway.ear</td>
<td></td>
</tr>
<tr>
<td>-Dexpand_location=value</td>
<td>path/directory</td>
<td>Path to directory where the application files are to be expanded</td>
</tr>
<tr>
<td></td>
<td>Default is ../../temp/expand</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B: Troubleshooting

Use this troubleshooting reference information and solutions as a resource to help you solve specific problems you may encounter during or after the installation of IBM Cognos 8 components.

For more information about troubleshooting resources, see the Troubleshooting section of the Administration and Security Guide.

Problems are characterized by their symptoms. Each symptom can be traced to one or more causes by using specific troubleshooting tools and techniques. After being identified, each problem can be fixed by implementing a series of actions.

When you are troubleshooting, log files can help you. Another valuable troubleshooting tool is the Knowledge Base, which is available on the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html). The Knowledge Base is a database of problems and solutions for all IBM Cognos products.

When you cannot resolve a problem, the final resource is your technical support representative. To analyze a problem, your technical support representative requires information about the situation and the symptoms that you are experiencing. To help isolate the problem, collect the necessary data before you contact your representative.

Log Files

Log files can help you troubleshoot problems by recording the activities that take place when you work with a product. Operations performed in IBM Cognos 8 are recorded in various log files for tracking purposes. For example, if you experienced problems installing IBM Cognos 8, consult the transfer log file to learn what activities the installation wizard performed while transferring files.

Before you begin viewing log files, ensure that they contain the information that you need. The number of log files and the information they contain are set by parameters in IBM Cognos Connection and in IBM Cognos Configuration.

Use IBM Cognos Administration to learn about logging categories and how to set the level of detail to log for each category.

For more information, see the IBM Cognos 8 Administration and Security Guide.

Use IBM Cognos Configuration to specify the size, number, and location of log files, and to configure the properties of the log server. For more information, see the IBM Cognos Configuration User Guide.

When troubleshooting, the following files can assist you:

The Transfer Log File

This file records the activities that the installation wizard performed while transferring files. The transfer log file is located in the c8_location\unstlog directory. The file name identifies the product name, version, and build number, and includes a time stamp. The following is an example of the file name format:
Appendix B: Troubleshooting

The Transfer Summary-Error Log File
This file records the components you installed, disk space information, the selections you made in the transfer dialogs, and any errors the installation wizard encountered while transferring components. The transfer summary-error log file is located in the \c8_location\instlog directory. The file name identifies the product name, version, and build number, and includes a time stamp. The following is an example of the file name format:

tl-C8BISRVR-8.1-0.0-20080901_1122_summary_error.txt

The Startup Configuration File
This file records your configuration choices each time you save your property settings. The file name is cogstartup.xml. If you are unable to save your configuration, or are having problems you can revert to a previously saved configuration file. The backup configuration files are located in the \c8_location\configuration directory. The following is an example of the file name format for backup configuration files:
cogstartup_200811231540.xml

The Startup Configuration Lock File
This file is created each time you open IBM Cognos Configuration. It prevents you from opening more than one IBM Cognos Configuration window. If you experience problems opening IBM Cognos Configuration, you can check the \c8_location\configuration directory for the cogstartup.lock file. If the file exists and IBM Cognos Configuration is not open, it means that IBM Cognos Configuration did not shut down properly the last time you used it. You can delete the lock file and then open IBM Cognos Configuration.

The Locale Configuration File
This file records the configuration choices you make in IBM Cognos Configuration for product and content locales, locale mapping, and currency support. If you experience problems with language support in the user interface or in reports, use these files to track your changes. The backup configuration files are located in the \c8_location\configuration directory. The following is an example of the file name format:
coglocale_200811231540.xml

The Run-Time Log File
The default IBM Cognos log file named cogserver.log file, or other log files that you configure to receive log messages from the log server, record information after you start the IBM Cognos 8 service. They are located in the \c8_location\logs directory. If you configured another destination for log messages, check the appropriate file or database.

Some log messages indicate problems. Most messages provide information only, but others can help you to diagnose problems in your run-time environment.
The Gateway Log File
The gateways record errors in the gateway log file, which is located in the `c8_location/logs` directory. You can use the gateway log file to troubleshoot problems that prevent the gateway from processing requests or from using encryption. Symptoms of these problems are user IDs and passwords do not work, single signon does not work, and the dispatcher is running but users receive the following error message: The IBM Cognos BI server is not available. The gateway log file uses the following naming format, where `gateway_interface` is cgi, mod (Apache 1.3 module), mod2 (Apache 2.0 module), or isapi.

gateway_interface.log (for example, gwcgi.log)

The Uninstallation Log File
This file records the activities that the Uninstall wizard performed while uninstalling files. The log file is named `cognos_uninst_log.htm` and is located in the Temp directory. You can use the log file to troubleshoot problems related to uninstalling IBM Cognos 8 components.

The Silent Mode Log File
This file records the activities that IBM Cognos Configuration performed while running in silent mode. This log file is named `cogconfig_response.csv` and is located in the `c8_location/logs` directory.

The ReportNet® to IBM Cognos 8 Upgrade File
This file contains a summary of the results of an upgrade from ReportNet to IBM Cognos 8. The log file is named `upgradeLog.xml` and is located in the `c8_location/logs` directory. The file is in xml format and references an xslt style sheet. You can double-click the file to have it appear in your browser.

Problems Starting IBM Cognos 8
You may encounter problems when you try

- to start the IBM Cognos 8 service
- to open the Welcome page for the IBM Cognos 8 portal for the first time
- to start an application server, such as WebLogic or WebSphere

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>You do not see the splash screen for the IBM Cognos 8 portal when you start IBM Cognos 8.</td>
<td>Check your Web server configuration.</td>
</tr>
<tr>
<td>The service starts but no tables are created in the content store database.</td>
<td>Check your content store configuration.</td>
</tr>
<tr>
<td>The service does not start.</td>
<td>Ensure that you wait a few moments before submitting a request.</td>
</tr>
</tbody>
</table>
The application server does not start. Check the file permissions and directory names of the application server installation location.

Ensure that you use other software that is supported by IBM Cognos components. You can view an up-to-date list of environments, such as operating systems, patches, browsers, Web servers, directory servers, and database servers on the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

**CFG-ERR-0106 Error When Starting the IBM Cognos 8 Service in IBM Cognos Configuration**

When you start the IBM Cognos 8 service, you may receive the following error message:

```
CFG-ERR-0106 Cognos Configuration received no response from the Cognos 8 service in the allotted time. Check that Cognos 8 service is available and properly configured.
```

There are two possible causes for this problem:

- The IBM Cognos 8 service needs more time to start.
- A standby Content Manager computer may be configured incorrectly.

**The IBM Cognos 8 Service Needs More Time**

By default, IBM Cognos Configuration checks the progress of the start request every half second for three minutes. If IBM Cognos Configuration does not receive a response within this time, the error message appears.

To avoid this error, you can change the amount of time that IBM Cognos Configuration waits to receive a response from the IBM Cognos 8 service. You do this by configuring the ServiceWaitInterval and ServiceMaxTries properties in the `c8_location/configuration/cogconfig.prefs` file.

The `ServiceWaitInterval` property represents the time interval, in milliseconds, at which IBM Cognos Configuration checks the progress of the start request. By default, its value is 500, which is equivalent to half a second.

The `ServiceMaxTries` property represents the number of times that IBM Cognos Configuration checks the progress of the start request. By default, its value is 360.

**Content Manager Is Configured Incorrectly**

If the error message appears on a standby Content Manager computer, the setting for storing the symmetric keys may be incorrect.

To avoid this problem, configure the standby Content Manager computer to store the symmetric keys locally.

**Steps to Change the Wait Time**

1. Using IBM Cognos Configuration, stop the IBM Cognos 8 service.
2. Open the `c8_location/configuration/cogconfig.prefs` file in an editor.
This file is created automatically the first time you open IBM Cognos Configuration.

3. Add the following code to the file:

ServiceWaitInterval=number of milliseconds
ServiceMaxTries=number of times

Tip: Add the numeric values that correspond to your configuration needs.

4. Save the file.

5. Using IBM Cognos Configuration, start the IBM Cognos 8 service.

Steps to Store Symmetric Keys Locally
1. On the standby Content Manager computer, start IBM Cognos Configuration.

2. In the Explorer window, under Security, click Cryptography.

3. In the Properties window, under CSK settings, set Store symmetric key locally to True.

4. From the File menu, click Save.

5. From the Actions menu, click Start.

   This action starts all installed services that are not running. If you want to start a particular service, select the service node in the Explorer window and then click Start from the Actions menu.

Cryptographic Error When Starting IBM Cognos 8

You received the following error when you tried to start the IBM Cognos 8 service after installing server or client components:

[Cryptography]

1. [ERROR] java.lang.NoClassDefFoundError:
javax/net/ServerSocketFactory:

Your Java Runtime Environment (JRE) is missing the encryption and decryption routines that are required by IBM Cognos 8. You must copy the Java Archive (.jar) file that is provided to your JRE directory.

Step
- Copy the bcprov-jdknm-nnn.jar file from the c8_location/bin/jre/version/lib/ext directory to the Java_location/jre/lib/ext directory.

Unable to Start the IBM Cognos 8 Service Because the Port is Used by Another Process

You may not be able to start the IBM Cognos 8 service or process if one of the default ports is used by another process.

Tip: To view the current network TCP/IP network connections, use the netstat command.
Use IBM Cognos Configuration to change the default port that IBM Cognos 8 uses.

When you change the port used by the local dispatcher, you must change the value of the Dispatcher URI properties. Because the change affects all the URIs that are based on the local dispatcher, you must change the URIs of all local components. By default, local components contain localhost in the URI.

For example, if you install all components on one computer and you want to change the dispatcher port, replace 9300 in all dispatcher and Content Manager URIs with the new port number.

**Steps to Change the Default Port**

1. Start IBM Cognos Configuration.

2. In the **Explorer** window, click the appropriate group or component:
   - To access the port number in the dispatcher and Content Manager URIs, click **Environment**.
   - To access the port number for the local log server, under **Environment**, click **Logging**.
   - To access the shutdown port number, under **Environment**, click **IBM Cognos 8 service**, **IBM Cognos 8**.
   - To access the port number for the location of the applications.xml file used by Portal Services, under **Environment**, click **Portal Services**.

3. In the **Properties** window, click the **Value** box next to the property that you want to change.

4. Change the value from 9300 to the new value.
   - Ensure that you change the ports in all URIs that contain localhost:9300.

5. From the **File** menu, click **Save**.

6. From the **Action** menu, click **Start**.

**IBM Cognos 8 Service Does Not Start or Fails After Starting**

You start the IBM Cognos 8 service but services either do not start correctly or are very slow to start. After services start, the system fails a short time afterwards. While services are starting, Java uses 100 percent of the CPU time. You may also receive multiple occurrences of error messages such as the following:

- **DPR-DPR-1035 Dispatcher detected an error.**
- **CAM-CRP-1157 Unable to synchronize the local common symmetric key store with Content Manager.**

If you use a DB2 database for the content store, ensure that the database version and Java version are compatible. For DB2 version 8.2, Java 1.5 is not supported. For DB2 version 9, Java 1.5 is supported on all operating systems except HPUX and Solaris.

To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers,
visit the IBM Cognos Resource Center (http://www.ibm.com/software/data/support/cognos_crc.html).

**IBM Cognos 8 Server Fails to Start and Gives No Error Message**

A IBM Cognos 8 server may fail to start after an upgrade or new installation, but no error message appears. This may occur when a previously running or new IBM Cognos 8 server is configured to use a large amount of memory.

If the server on which IBM Cognos 8 is installed contains version 1.0 of Microsoft security update 921883, there may be an issue when a lot of contiguous memory is requested by an application. This is a known issue with version 1.0 of Microsoft security patch 921883. Microsoft distributed a second version of the patch to fix the problem. As a workaround, uninstall the first security patch, or install version 2.0 of the patch. Alternatively, you can configure the IBM Cognos 8 server to use less memory.

For more information, see the Microsoft knowledge base article about programs using a lot of contiguous memory failing, at http://support.microsoft.com.

**IBM Cognos BI Server Not Available When Starting IBM Cognos 8**

After you configure IBM Cognos components and start the IBM Cognos 8 services, when you connect to the IBM Cognos 8 portal, the following error message may appear:

*The Cognos Gateway is unable to connect to the Cognos BI server.*

*The server may be unavailable, or the gateway may not be correctly configured.*

Check the IBM Cognos server log file for more information. By default, the cogserver.log file is located in the $c8_location/logs directory. If you configured another destination for log messages, check the appropriate file or database.

Content Manager may not be able to connect to the content store if the content store is not configured properly. This may occur if

- the content store uses an unsupported character encoding
- the content store uses a database collation sequence that is case sensitive
- the configuration settings you specified in IBM Cognos Configuration are not valid

**Unsupported Character Encoding**

If the following messages appear in the log file, the database you created for the content store does not use a supported character encoding:

- For Oracle:
  
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.

  CM-SYS-5121 Content Manager cannot start because the database character set for the content store is not supported.

  CM-SYS-5126 The content store database server uses the character set US7ASCII.
CM-SYS-5125 The content store database client uses the character set US7ASCII.

- For DB2 UDB:
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.
  CM-SYS-5121 Content Manager cannot start because the database character set for the content store is not supported.
  CM-SYS-5124 The content store database server uses the code page 1252.

- For Sybase:
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.
  CM-SYS-5121 Content Manager cannot start because the database character set for the content store is not supported.

For Content Manager to connect to the content store, the content store must use the appropriate character encoding.

<table>
<thead>
<tr>
<th>Database</th>
<th>Character encoding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle 9i</td>
<td>AL32UTF8</td>
</tr>
<tr>
<td></td>
<td>AL32UTF16</td>
</tr>
<tr>
<td>DB2 UDB</td>
<td>Codeset UTF-8</td>
</tr>
<tr>
<td>Sybase ASE</td>
<td>UTF-8</td>
</tr>
<tr>
<td>Microsoft SQL Server</td>
<td>UTF8</td>
</tr>
<tr>
<td></td>
<td>UTF16</td>
</tr>
</tbody>
</table>

To resolve this problem, you must recreate the content store database using the correct character encoding, or convert the character encoding. For more information, see the database documentation.

**Case Sensitive Collation Sequence**

If the following messages appear in the log file, the database you created for the content store uses a database collation sequence that is case sensitive:

CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.

CM-SYS-5122 The content store database has a default collation that is case-sensitive. Content Manager requires a content store that has a case-insensitive collation.

CM-SYS-5123 The content store database server uses the collation <parameter>.

CM-SYS-5007 Content Manager build @cm_build_version@ failed to start! Review the Content Manager log files and then contact your system administrator or customer support.
To resolve this problem, you must recreate the content store database using a database collation sequence that is not case sensitive. For more information, see the database documentation.

**Invalid Configuration Settings**

If the following or similar messages appear in the log file, you did not configure the content store correctly in IBM Cognos Configuration.

- For Microsoft SQL Server:
  
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.
  
  CM-CFG-5036 Content Manager failed to connect to the content store. The connection string is "jdbc:JSQLConnect://localhost:1433/cm".
  
  Failed Logon:com.jndirect.jsql.x: Cannot open database requested in login 'cm'. Login fails.
  
  url;jdbc:JSQLConnect://localhost:1433/cm.

- For DB2:
  
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.
  
  CM-SYS-5003 Content Manager is unable to access the content store. Verify your database connection parameters and then contact your database administrator.
  
  [IBM][CLI Driver] SQL1013N The database alias name or database name "CM123" could not be found.

- For Oracle:
  
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.
  
  CM-CFG-5036 Content Manager failed to connect to the content store. The connection string is "jdbc:oracle:thin:@localhost:1521:pb1".
  
  ORA-01017: invalid username/password; logon denied.

- For Sybase:
  
  CM-CFG-5063 A Content Manager configuration error was detected while connecting to the content store.
  
  CM-CFG-5036 Content Manager failed to connect to the content store. The connection string is "jdbc:sybase:Tds:localhost:5000/cm".
  
  JZ006: Caught IOException: java.net.ConnectException: Connection refused: connect.

If you are using an Oracle database, do not use illegal characters such as an underscore in IBM Cognos Configuration for the Service Name property. If the Service Name includes illegal characters, tables are not created in the content store database when the IBM Cognos 8 service is started.

**Steps for Microsoft SQL Server, Oracle, DB2, and Sybase**

1. On the computer where you installed Content Manager, start IBM Cognos Configuration.
2. In the Explorer window, under Data Access, Content Manager, right-click Content Store and click Delete.

   This deletes the default resource. Content Manager must be configured to access only one content store.

3. Right-click Content Manager, and then click New resource, Database.

4. In the Name box, type a name for the resource.

5. In the Type box, select the type of database and click OK.

   If you are upgrading and want to use an existing content store, ensure that you select the type of database you use for the older version of ReportNet or IBM Cognos 8.

   If you installed more than one version of IBM Cognos 8, you must use a different content store for each version. When a content store is used by a new version of IBM Cognos 8, it cannot be used by an older version of ReportNet or IBM Cognos 8.

   Tip: If you want to use Oracle Net8 keyword-value pair to manage the database connection, select Oracle database (Advanced).

6. In the Properties window, provide values depending on your database type:

   - If you use a Microsoft SQL Server database, type the appropriate values for the Database server with port number or instance name and Database name properties.

     For a Microsoft SQL Server database, you can choose to use a port number, such as 1433, or a named instance as the value for the Database server with port number or instance name property.

     To connect to a named instance, you must specify the instance name as a JDBC URL property or a data source property. For example, you can type localhost\instance1. If no instance name property is specified, a connection to the default instance is created.

     Note that the properties specified for the named instance, along with the user ID and password, and database name, are used to create a JDBC URL. Here is an example: jdbc:JSQLConnect://localhost\instance1/user=sa/more properties as required

   - If you use a DB2 database, for the Database name property, type the database alias.

   - If you use an Oracle database, type the appropriate values for the Database server and port number and Service name properties.

   - If you use an advanced Oracle database, for the Database specifier property, type the Oracle Net8 keyword-value pair for the connection.

     Here is an example:

     (description=(address=(host=myhost)(protocol=tcp)(port=1521)(connect_data=(sid=(orcl)))))

   - If you use a Sybase database, type the appropriate values for the Database server and port number and Database name properties.

7. If you want to change the logon credentials, specify a user ID and password:
Click the Value box next to the User ID and password property and then click the edit button when it appears.

Type the appropriate values and click OK.

8. From the File menu, click Save.
   The logon credentials are immediately encrypted.

9. Test the connection between Content Manager and the content store.
   **Tip:** In the Explorer window, right-click the new database and click Test.
   Content Manager connects to the database, checks the database permissions, and creates and populates a table. The table is not deleted and is used each time that the test is repeated.

### Cannot Log On to a Namespace When Using IBM Cognos Connection

You open IBM Cognos 8 through IBM Cognos Connection. However, when you attempt to create a data source and log on to a namespace, the following error messages appear:

- **PRS-CSE-1255** Exception error encountered in data decryption.
- **CAM-CRP-1064** Unable to process the PKCS #7 data because of an internal error. Reason: java.lang.IndexOutOfBoundsException.

This issue may occur if you do not have the necessary permissions for the following directories:

- `c8\configuration`
- `c8\configuration\csk`
- `c8\configuration\encryptkeypair`
- `c8\configuration\signkeypair`

The solution is to enable the read and execute permissions on the directories listed above for anyone who must start the IBM Cognos 8 service.

### IBM Cognos 8 Services Fail to Restart After a Network Outage

The IBM Cognos Bootstrap Service restarts IBM Cognos 8 services after a network outage for Tomcat installations where a network IP address is specified in the internal dispatcher URI. During the restart, the IBM Cognos 8 services may not initialize successfully, requiring a manual restart after the network is restored.

To resolve the problem, configure the Internal dispatcher URI property in IBM Cognos Configuration to use localhost or the network host name.

### No Warning That Installing a Later Version of IBM Cognos 8 Will Automatically Update the Earlier Version of the Content Store

You have a version of ReportNet or IBM Cognos 8 installed on your computer. You install a later version into a new location. You use the same database for the content store for both versions.
After you configure the later version and start the IBM Cognos 8 service, the earlier version of ReportNet or IBM Cognos 8 no longer works because all content is automatically upgraded.

If you want to use different versions of ReportNet and IBM Cognos 8 after you upgrade, ensure that before you install the later version, you

- back up the database you use for the content store
- restore the backup to a new location

Alternatively, you can choose to use the deployment tool to import the entire content store from an earlier version to the later version. All existing content in the content store database is replaced by the imported content. You receive a warning message about this.

**Download of Resource Fails**

You start Report Studio in Internet Explorer and the following error message appears:

_The download of the specified resource has failed._

This problem may be caused by recent Microsoft XMLHTTP upgrades if you do not have a language preference set in Internet Explorer.

To resolve the problem, specify a language preference in Internet Explorer.

**DB2 Returns SQL1224N Error When Connecting from AIX**

If your content store is a DB2 database and you receive an SQL1224N error on AIX, check the db2diag.log file for additional information about the error.

If the error includes reason code 18, you may need to change the DB2 configuration to accept more connections. For more information, see the IBM DB2 support pages for the error SQL1224N.

**Content Manager Error When Starting IBM Cognos 8**

After starting IBM Cognos 8, no BIBUSTKSERVMA process is started. There are errors listed in the pogo******.log and cogserver.log files. Users receive errors in the browser when connecting to the IBM Cognos 8 portal.

In the pogo******.log file, an error related to Content Manager appears.

In the cogserver.log file, the following error appears:

_An attempt to register the dispatcher in Content Manager was unsuccessful. Will retry periodically._

When connecting to http://computer name/cognos8, the following error messages appear in the browser:

- **DPR-ERR-2058 The dispatcher cannot service the request at this time. The dispatcher is still initializing**
- **SoapSocketException: Connection Refused**

IBM Cognos Configuration uses a user ID to bind to the LDAP database. If this user ID is moved to another group, IBM Cognos Configuration can no longer locate it.

To correct the problem, move the user ID back to the original group.
DPR-ERR-2014 Error Appears in Log File on Content Manager Computer

If Content Manager is installed on a separate computer and the event management service on the Content Manager computer is disabled, the following error message may appear in the cogserver.log file:

DPR-ERR-2014 Unable to load balance the request because no nodes in the cluster are available, or no nodes are configured for the service: eventManagementService

To correct the problem, do the following:

● Start IBM Cognos Configuration on the Content Manager computer.
● In the Explorer pane, go to Environment, IBM Cognos 8 service.
● Set the Event management service enabled? property to False.

Non-ASCII Characters in Installation Directory Cause Run-time Errors

On all operating systems, if you use non-ASCII characters in the installation directory for IBM Cognos 8, it causes run-time errors. It also causes some product functions, such as report execution, to fail.

To resolve this issue, install IBM Cognos 8 in the default directory or use a directory name that contains only ASCII Latin-1 characters.

Cannot Open an MS Cube or PowerCube

You are unable to open an MS Cube or PowerCube, or you can open an MS Cube but only metadata is shown. For an MS Cube, you may receive the following error message:

MO-ERR-0030

*Cannot connect to the datasource. Please set the service to run as a domain user with the correct privileges.*

To solve this problem, ensure that the user running the IBM Cognos 8 service has access rights to the cube.

PowerCubes are accessed through mapped drives or UNC path names.

Steps for MS Cubes

1. Add the domain user account that starts the IBM Cognos 8 service to the Act as part of the operating system privilege:
   ● Under Administrative Tools, select Local Security Policy.
   ● Expand Security Settings, Local Policies and click User Rights Assignment.
   ● Right-click the Act as part of the operating system policy and select Properties.
   ● Click Add User or Group and add the user account that starts the IBM Cognos 8 service.

2. If you use the domain userID and password method of authentication, add the user account that starts the IBM Cognos 8 service to the domain that includes Content Manager, the
Application Tier Components, IIS Web server, and the data source server (Microsoft SQL Server or Microsoft Analysis Server).

3. If you use an external namespace, such as Active Directory Server, for authentication, add the user account that starts the IBM Cognos 8 service to the domain that includes the authentication provider.

   This domain must also include Content Manager, the Application Tier Components, IIS Web server, and the data source server (Microsoft SQL Server or Microsoft Analysis Server).

   For more information about configuring external namespaces for authentication, see the topics about authentication providers in the *Installation and Configuration Guide*.

   **Step for PowerCubes**
   
   - Ensure that the IBM Cognos user profile has sufficient operating system or domain access rights to open the PowerCube file.

   For information, see the *Administration and Security Guide*.

**Cannot Open an OLAP Data Source**

You cannot open one of the following data sources:

- MSAS
- Essbase
- DB2

You can try opening the same cube with Excel. This will tell you whether the OLAP server is configured and running, and whether the appropriate client software is installed.

**The Page Cannot Be Found When Starting IBM Cognos 8 in Windows 2003**

After installing IBM Cognos 8 on Windows 2003, the following message may appear when you try to start IBM Cognos 8:

*The page cannot be found. The page you are looking for might have been removed, had its name changed, or is temporarily unavailable. HTTP Error 404 - File or Directory not found.*

This error is caused by a security feature in Windows 2003 Internet Information Services (IIS). This security feature does not allow unknown cgi file extensions.

To resolve this problem, add a new file extension in IIS for the cognos.cgi file. For more information, see the IIS documentation.

**The Page Is Not Shown When Opening a Portal After Installing IBM Cognos 8**

After you install and configure IBM Cognos 8, you are unable to connect to the Cognos 8 portal. This may be because the Web server is not properly configured. For example, the virtual directories required for IBM Cognos 8 may not exist or they may point to the wrong physical folders.

For information about configuring the Web server, see the *Installation and Configuration Guide*. 
DPR-ERR-2058 Error Appears in Web Browser When Starting IBM Cognos 8

After you start the services in IBM Cognos Configuration and then try to open the portal, a message similar to one of the following may appear:

*DPR-ERR-2058* The dispatcher encountered an error while servicing a request. XTS handler must be initialized before being invoked.

*DPR-ERR-2058* The dispatcher cannot service the request at this time. The dispatcher is still initializing. Please try again or contact your administrator.

These error messages usually occur when the dispatcher cannot communicate with Content Manager. To help you determine the specific cause, look in the cogserver.log file in the `c8_location/logs` directory. The most common causes are listed below, with solutions.

**IBM Cognos Services are Not Done Initializing**

After you start the services in IBM Cognos Configuration and the configuration tool shows that the services are running, wait a few minutes for all services to start before you open the portal.

**Content Manager is Not Available**

In a distributed installation, ensure that Content Manager is installed, configured, and running. Ensure also that the other IBM Cognos computers are configured with the correct Content Manager URI.

**The Content Store is Not Available or is Not Configured Properly**

Ensure that the content store database was created and that you configured it correctly in IBM Cognos Configuration.

**Tables are Not Created in the Content Store**

Ensure that you are using a version of DB2, Microsoft SQL Server, Oracle, or Sybase that is supported by IBM Cognos components.

**The Logon Credentials for the Content Store Are Incorrect**

Check whether the information changed. For example, DB2 reads information from the NT user management. If the password for the NT account changed, you must also change the logon credentials for the content store in IBM Cognos Configuration.

Check for special characters in the logon password. Occasionally, the JDBC driver does not accept characters that are reserved for xml, such as %, !, <, and >.

**The User Does not Have Appropriate Permissions**

Ensure that the user has the appropriate permissions.

**Out of Memory on HP-UX**

If you are using Tomcat, you can determine the issue is related to HP-UX server configuration. You may be exceeding the expected maximum number of simultaneously active threads per process.

**Steps to Check for an HP-UX Configuration Problem**

1. In the `/bin/startup.sh` file, find
2. Change it to the following:

```
./tomcat4.1.27/bin/catalina.sh run "$@
```

The run command causes the Tomcat output to appear in the console window for IBM Cognos 8.

3. Stop and restart IBM Cognos 8 using the ./shutdown.sh and ./startup.sh commands.

If the following error message appears in the console window for any of the application servers, the issue is an HP-UX configuration problem:

```
OutofMemoryException error: Unable to create new native thread on HP-UX.
```

The problem is that the default values for HP-UX 11.0 and 11i are set too low for most Java applications.

Tip: You can check the number of threads in your process by using the -eprof option available in JDK 1.1.8 and by analyzing the Java.eprof file using HPjmeter by selecting the threads metric.

### Steps to Increase the maximum Number of Threads Per Process

1. Have your system administrator change the Kernel parameter as follows:
   - `max_thread_proc = 512`
   - `nkthread = 1024`

2. Ensure that the ulimit settings are unlimited.

### Content Manager Cannot Connect to the Content Store on Oracle

If you are using an Oracle database as a content store, the DPR-ERR-2058 error may be generated when logging onto the portal http://host_name/cognos8. All tables are created on the database.

You may also receive the following error messages:

- `CM-CFG-5036 Content Manager failed to connect to the content store.`
- `ORA-01017: invalid username/password; logon denied`

### Steps to Set the Oracle Database Server Name

1. In the Explorer window, click **Data Access**, **Content Manager**, **Content Store**.

2. Change the Oracle database server name to a fully qualified name such as `host_name.company-name:1534` to match the name in the tnsnames.ora file.

### EBA-090034 Error When Starting WebLogic 8

After configuring WebLogic 8 to use SSL, you used the command `startManagedWebLogic.cmd` to start the application server. The application server did not start and you received the following error message:

```
EBA-0990034 Not listening for SSL
```
The problem occurred because WebLogic 8 has a feature that is incompatible with the IBM Cognos 8 bcprov-jdk14.134.jar file.

To resolve the problem, you must add a new version of the BouncyCastle bcprov.jar file to the WebLogic Java extension directory.

**Steps**

1. From the BouncyCastle Web site, [http://www.bouncycastle.org/download/](http://www.bouncycastle.org/download/), download a compatible BouncyCastle bcprov.jar file, such as bcprov-jdk14-137.jar.

2. Copy the downloaded .jar file to the WebLogic Java extension directory, `WebLogic_location\jdk142_nn\jre\lib\ext`.

3. In the `WebLogic_location\jdk142_nn\jre\lib\security` directory, edit the `java.security` file and add the following line to the provider list:
   
   ```
   security.provider.6=org.bouncycastle.jce.provider.BouncyCastleProvider
   ```

**Report Studio Does Not Start**

You may not be able to start Report Studio if you are using pop-up blocking software on your computer.

When you start Report Studio, it opens in a new browser window. In addition, a new browser window opens when you run a report and when an error is detected.

To correct the problem, disable any pop-up blocking software when working in Report Studio.

**DPR-ERR-2022 Error Appears in Web Browser When Starting IBM Cognos 8**

After you start the services in IBM Cognos Configuration and then try to open the portal, a message similar to the following may appear:

*DPR-ERR-2022 No response generated. This may be due to an incorrect configuration, a damaged installation, or the dispatcher not having finished initializing.*

**Opening the Portal Too Soon**

This problem can occur if you try to open the portal before IBM Cognos services are initialized.

To avoid this problem, after you start the services in IBM Cognos Configuration and the configuration tool shows that the services are running, wait a few minutes for all services to start before you open the portal.

**The system.xml File Contains Errors**

The system.xml file may have been edited.

Replace the system.xml file in the `c8_location\templates\ps\portal` directory with a copy from backup or use an XML editor to edit it.
Unable to Download the cognos.xts File

After installing IBM Cognos 8, you are prompted to download the cognos.xts file when connecting to the IBM Cognos 8 portal. The following error message may appear:

*You have chosen to download a file from this location. cognos.xts from servername*

This problem occurs when the permissions on the virtual directories are not set properly. You must provide the cgi-bin virtual directory in the Microsoft Internet Information Service (IIS) with execute permissions.

To resolve this problem, recreate the virtual directories in IIS with the following permissions.

<table>
<thead>
<tr>
<th>Alias</th>
<th>Path</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>cognos8</td>
<td>$c8_location\Program Files\Cognos\c8\webcontent</td>
<td>Read</td>
</tr>
<tr>
<td>cognos8\cgi-bin</td>
<td>$c8_location\Program Files\Cognos\c8\cgi-bin</td>
<td>Read Execute</td>
</tr>
<tr>
<td>cognos8\help</td>
<td>$c8_location\Program Files\Cognos\c8\webcontent\documentation</td>
<td>Read</td>
</tr>
</tbody>
</table>

Application Server Startup Script Fails

You may have problems running the startup scripts for an application server to deploy the IBM Cognos application if IBM Cognos 8 components are installed in a directory with a name that includes spaces.

To resolve this problem, rename the directory and do not include spaces in the new name. If this solution is not easily handled by the startup scripts, try adding quotation marks around the directory name that includes spaces or use the 8.3 DOS naming convention.

Issues with IBM WebSphere 6.0 on AIX 5.3

Testing has found difficulties with IBM WebSphere 6.0 on AIX 5.3. Upgrading to AIX 5.3 Technology Level 4, Service Pack 2 is recommended.

IBM Cognos 8 Running under WebLogic Application Server on AIX Fails

The IBM Cognos 8 server instance may go into a FAILED_NOT_RESTARTABLE state in the WebLogic Administration Console. Numerous core files and Java core files are written to the IBM Cognos 8 domain directory. IBM Cognos 8 terminates and is not accessible via the portal.

This behavior occurs only when the IBM Cognos 8 Managed Node is started with the WebLogic Administration Console. Start the IBM Cognos 8 Managed Node using the WebLogic startup scripts instead.
Deploying IBM Cognos 8 to an Oracle Application Server or IBM WebSphere Application Server Fails

Deploying IBM Cognos 8 to an Oracle application server or an IBM WebSphere application server may fail with any of the following errors:

- Browser timeout in administration console
- Error Message: HTTP 500 Internal Error
- Error Message: Deployment failed: Base Exception: java.rmi.RemoteException (Oracle)
- Return to application file selection page (IBM WebSphere)

These errors can occur because the application file that you are trying to deploy is too large.

To solve this problem, do the following:

- If you are using the Build Application Wizard, clear the Include static files from the Webcontent folder check box when you select the application to build. This will reduce the size of the application file. If static content is required, you can manually copy it to the deployed application location after you have successfully deployed IBM Cognos 8 into the application server.

- If you are deploying the application file manually for an Oracle application server, type the following command:

```
dcmctl deployapplication -f path_and_name_of_ear_file -a application_name -co OC4j_instance_name
```

This command is not supported for Oracle Release 3.

For more information about deploying IBM Cognos 8 to an application server, see the Installation and Configuration Guide.

Microsoft Excel 2000 Multipage Report Type Does Not Work

To ensure that report URLs cannot be changed when passed from a client browser to the Application Tier Components, IBM Cognos 8 applies signatures to the URLs it generates. However, Excel 2000 multipage (XLS) does not support signed URLs. To use the Excel 2000 multipage report type, you must disable digital signing of the URLs by doing the following:

Steps to Disable Signed URLs

1. Stop the dispatcher.
2. In the c8_location/configuration directory, rename the cafconfig.xml.sample file to cafconfig.xml.
3. Open the cafconfig.xml and find the following section:

```
<!--Should we reject unsigned requests for /gd/ urls. (e.g. multipage excel reports) Default: true-->
<crn:parameter name="caf_signedReportUrls">
<crn:value xsi:type="xsd:boolean">true</crn:value>
```

For more information about deploying IBM Cognos 8 to an application server, see the Installation and Configuration Guide.
Appendix B: Troubleshooting


5. Restart your dispatcher.

6. Repeat the above steps for every dispatcher in your environment, or copy the cafconfig.xml to each c8_location/configuration directory and restart the dispatchers.

Unable to Deserialize Context Attribute Error When Deploying the p2pd.war File to WebLogic

When you deploy the p2pd.war file to WebLogic, you may see the following error:

Error [context]Could not deserialize context attribute
java.io.NotSerializableException: com.cognos.logserver.LogService

This error does not affect the deployment of the p2pd.war file.

To avoid this problem, add at least one language preference in Internet Explorer.

Error Appears After Upgrading IBM Cognos 8 on a WebLogic Application Server

You are using WebLogic and upgrade IBM Cognos 8 from an earlier release. After you deploy the p2pd.war file for the new installation, a message similar to the following may appear:

<BEA-101215> <Malformed Request "null". Request parsing failed, Code: -10>

This can occur if you undeploy IBM Cognos 8 from WebLogic and some files from the earlier version are not removed from the system.

To solve this problem, use the administrative tools for your application server to ensure that IBM Cognos 8 has been undeployed. For information about undeploying applications, see your application server documentation.

If the directory to which IBM Cognos 8 was originally deployed is not removed during the undeploy process, delete the directory. Also, remove any IBM Cognos 8 .jar files that are cached in your application server environment. For example, in WebLogic 7.0, .jar files are sometimes left in %WL_HOME%/user_projects\<domain-name>\<managed-server-name>\wnotdelete\c8_p2pd_p2pd\jarfiles

You can remove them by deleting the WEB-INF directory.

In WebLogic 8.1.2, the cache location is %WL_HOME%/user_projects\domains\<domain-name>\<managed-server-name>\wnotdelete\extract\c8_p2pd_p2pd\jarfiles

After you remove all files from the previous installation, you can redeploy IBM Cognos 8.

Chinese, Japanese, or Korean Characters Are Different After Upgrade

If you use Chinese, Japanese, or Korean characters, you may notice differences in some characters after upgrading from ReportNet to IBM Cognos 8.

Examples
You run an existing report. When you compare the output to the same report in ReportNet, you see that some of the characters are different.

You do a search that you did in ReportNet and get different results.

The differences occurred because the conversion tables that are used for Chinese, Japanese, and Korean were modified to meet global standards. If your report specifications or search filters contain expressions that use constant values, the results may be affected.

If you want to use the same conversion table that you used in ReportNet, run the following script in the c8_location/bin directory:

- On UNIX, type `conv_compat.sh`
- On Linux, type `conv_compat.sh`
- On Windows, type `conv_compat.cdm`

**Accented or Double-Byte Characters May Not Display Correctly When Installing IBM Cognos 8 on Linux**

If you are using issetup under a UTF-8 locale, accented or double-byte characters may not display correctly.

To resolve this problem when installing in German or French, use a non-UTF-8 locale and then launch issetup to install IBM Cognos 8.

To resolve this problem when installing in Japanese, change the encoding setting of X Terminal to Shift-JIS, and then install IBM Cognos 8 using an unattended installation (p. 401).

**RSV-SRV-0066 A soap fault has been returned or RQP-DEF-0114 The user cancelled the request Errors Appear in High User Load Environments**

These errors may appear in the C8 cogserver.log if you have a high user load (over 165 users) and interactive reports are running continuously in a distributed installation.

To resolve this problem, increasing the async_wait_timeout_ms parameter parameter in webapps/p2pd/WEB-INF/services/reportservice.xml file. For more information, see the Cognos 8 Installation and Configuration Guide.

Also, increase the Queue Time Limit setting to 360. For information, see the IBM Cognos 8 Administration and Security Guide.

**Problems Configuring IBM Cognos 8**

After you install IBM Cognos 8 components, you may encounter problems when you save changes in IBM Cognos Configuration.
Ensure that you

- configure and start the services on the computer where Content Manager is located before you configure other components
- restart the IBM Cognos 8 service after you make any configuration changes

**Configuration Tool cogconfig.sh Return Values Are Not Compliant with Conventional UNIX Return Values**

On UNIX platforms, the configuration tool command cogconfig.sh returns 0 for an unsuccessful execution and 1 for a successful execution. These return values are not compliant with the conventional UNIX return results, where a return value of 0 indicates a successful execution and a non-zero return value indicates an error.

The non-compliant behavior will be corrected in a future release. You may be required to make changes to your customer applications and scripts before making use of the new behavior.

**Run Database Cleanup Scripts**

In some troubleshooting situations, you may be advised to start with new configuration data.

You can run an SQL script to delete all the tables in any of the following databases that IBM Cognos 8 components use:

- content store for data that IBM Cognos 8 needs to operate
- delivery database for report notifications
- log database for log messages
- metric store for metric package content and Metric Studio user preferences

When you delete a table, its structural definition and data are deleted permanently from the database. For the metric store, database objects may also be deleted.

When you restart the IBM Cognos 8 service, a new set of required database tables are created automatically in the location specified by your configuration settings.

**Steps**

1. On each computer where Content Manager is located, stop the IBM Cognos 8 service.

2. Go to the appropriate directory:
   - To delete tables from the log database, go to `c8_location\configuration\schemas\logging`.
   - To delete tables from the content store, go to `c8_location\configuration\schemas\content`.
   - To delete tables from the notification database, go to `c8_location\configuration\schemas\delivery`.
   - To delete tables from the metric store, go to `c8_location\configuration\schemas\cmm`.

3. Go to the appropriate database directory.
4. Depending on the database and database type, run one of the following scripts in the appropriate database tool to delete the tables.

<table>
<thead>
<tr>
<th>Database</th>
<th>Database Type</th>
<th>Script Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content store</td>
<td>DB2</td>
<td>dbClean_db2.sql</td>
</tr>
<tr>
<td></td>
<td>Derby</td>
<td>dbClean_derby.sql</td>
</tr>
<tr>
<td></td>
<td>Microsoft SQL Server</td>
<td>dbClean_mssqlserver.sql</td>
</tr>
<tr>
<td></td>
<td>Oracle</td>
<td>dbClean_oracle.sql</td>
</tr>
<tr>
<td></td>
<td>Sybase</td>
<td>dbClean_sybase.sql</td>
</tr>
<tr>
<td>Notification</td>
<td>DB2</td>
<td>NC_DROP_DB2.sql</td>
</tr>
<tr>
<td></td>
<td>Derby</td>
<td>NC_DROP_Derby.sql</td>
</tr>
<tr>
<td></td>
<td>Microsoft SQL Server</td>
<td>NC_DROP_MS.sql</td>
</tr>
<tr>
<td></td>
<td>Oracle</td>
<td>NC_DROP_ORA.sql</td>
</tr>
<tr>
<td></td>
<td>Sybase</td>
<td>NC_DROP_SYBASE.sql</td>
</tr>
<tr>
<td>Log</td>
<td>DB2</td>
<td>LS_dbClean_db2.sql</td>
</tr>
<tr>
<td></td>
<td>Derby</td>
<td>LS_dbClean_derby.sql</td>
</tr>
<tr>
<td></td>
<td>Microsoft SQL Server</td>
<td>LS_dbClean_mssql.sql</td>
</tr>
<tr>
<td></td>
<td>Oracle</td>
<td>LS_dbClean_oracle.sql</td>
</tr>
<tr>
<td></td>
<td>Sybase</td>
<td>LS_dbClean_sybase.sql</td>
</tr>
<tr>
<td>Metric store</td>
<td>DB2</td>
<td>cmm_uninstall dbalias username password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specify the dbalias only if a database with the same name is already cataloged.</td>
</tr>
<tr>
<td></td>
<td>Microsoft SQL</td>
<td>cmm_uninstall metric_store_name database_name Admin_user_name password</td>
</tr>
</tbody>
</table>
5. Start the IBM Cognos 8 service.

**Error Trying to Encrypt Information When Saving Your Configuration**

When you save your configuration using the configuration tool, you may see an error message that the cryptographic information cannot be encrypted. An error occurred when requesting a certificate from the Certificate Authority.

*The cryptographic information cannot be encrypted. Do you want to save the configuration in plain text?*

Before you can encrypt your configuration settings, the computer where Content Manager is installed must be configured and running. On UNIX, ensure that you copied the appropriate .jar files to the installation location of your Java Runtime Environment. In addition, ensure that your Java environment is configured correctly, the URIs are correct, and the same certificate authority password is configured for all Content Manager computers.

On Linux, ensure that you copied the appropriate .jar files to the installation location of your Java Runtime Environment.

Also, an error message similar to the following may appear:

```
java.lang.NoClassDefFoundError: javax/net/ServerSocketFactory
```

The cryptographic error usually means the Java environment is not configured correctly. Ensure that the JAVA_HOME environment variable is set correctly and the appropriate security providers are installed, such as JSSE for JRE 1.31.

**Steps to Check the Configuration**

1. On the Content Manager computer, start IBM Cognos Configuration.
2. In the **Explorer** window, click **Environment**.
3. In the **Properties** window, verify these properties:
   - Under **Gateway Settings**, Gateway URI
   - Under **Dispatcher Settings**, External dispatcher URI and Internal dispatcher URI
Under Other URI Settings, Dispatcher URI for external applications and Content Manager URIs

4. In the Explorer window, click Security, Cryptography, Cognos.

5. In the Properties window, under Certificate Authority settings, click the value for Password. Ensure that the same password is used on all Content Manager computers.

6. Save the configuration and restart IBM Cognos 8.

Problems Generating Cryptographic Keys in IBM Cognos Configuration

When you uninstall IBM Cognos 8, some temporary folders are left behind. Reinstalling the product to the same location without first removing the temporary folders may cause problems while attempting to generate the cryptographic keys in IBM Cognos Configuration.

To resolve this problem, uninstall IBM Cognos 8, remove the c8_location/temp/cam folder, and install IBM Cognos 8 again.

CAM-CRP-1315 Error When Saving Configuration

When you save your configuration, you may receive the following error message:

CAM-CRP-1315 Current configuration points to a different Trust Domain than originally configured.

This error occurs when there has been a change to your environment's trust domain. The trust domain is managed by the Certificate Authority associated with the content store. This error can occur if the content store you originally used has been removed or if you modified your configuration to use a Content Manager associated with a different content store after you have saved your original configuration.

To resolve the problem, change your configuration to use the original content store or regenerate the cryptographic keys.

Steps to Regenerate Cryptographic Keys

1. On the Content Manager computer, back up the existing cryptographic keys by saving the following directories to an alternate location that is secure:
   - c8_location/configuration/csk
   - c8_location/configuration/encryptkeypair
   - c8_location/configuration/signkeypair

2. Delete the csk, encryptkeypair, and signkeypair directories.

3. In IBM Cognos Configuration, save the configuration and restart the services.

4. Repeat steps 1 to 3 on all computers that have IBM Cognos 8 components installed.
Manually Changing the Installation Directory Name Affects Installations Running Under an Application Server

You installed IBM Cognos 8 using the installation wizard and later renamed the installation directory or manually copied the contents to another directory. When you attempt to run IBM Cognos 8 within an application server, you may have one of the following problems:

- IBM Cognos 8 does not start.
- Log directories are empty.
- Logs contain a linkage error or unsatisfied link error.

When you manually change the installation directory, the information in the IBM Cognos 8 root directory becomes invalid. To resolve the problem, you must either update the IBM Cognos 8 root directory before you create the IBM Cognos 8 application file to deploy to the application server or you must reinstall IBM Cognos 8 in the original location. If you reinstall IBM Cognos 8, follow the process for upgrading.

Steps

1. In the new or renamed installation directory, open `c8_location/webapps/p2pd/WEB-INF/classes/cogroot.link` in a text editor.
2. Replace the path with the new location of the installation directory and save the file.
3. To build the application file to be deployed to the application server, in IBM Cognos Configuration, from the Actions menu, select Build Application Files.
4. If you built and deployed an application file to the application server before updating the cogroot.link file, undo the deployment.
5. Deploy the new application file to the application server.

For more information about configuring IBM Cognos 8 for another application server, see the Installation and Configuration Guide.

Configuration Data is Locked by Another Instance of IBM Cognos Configuration

You may get an error message that the configuration data is locked by another instance of IBM Cognos Configuration.

When you start IBM Cognos Configuration, it checks to see if the cogstartup.lock file exists in `c8_location/configuration`. The file may exist if a previous instance did not shut down properly or if another instance of IBM Cognos Configuration is running.

If another instance of IBM Cognos Configuration is running, you should exit that instance. Otherwise, any changes you make to the local configuration may result in errors.

If no other instance of IBM Cognos Configuration is running, delete the cogstartup.lock file in `c8_location/configuration`.

If the IBM Cognos 8 service is stopped, click Start.
Unable to Exit a Tab Sequence When Using Keyboard-only Navigation in IBM Cognos Configuration

If you use the Tab key to navigate in IBM Cognos Configuration, you may experience problems exiting a tab sequence. For example, in the Properties window, you can press the Tab key to move from one property to another.

However, because IBM Cognos Configuration is a Java application, when you want to close the Properties window, you must press Ctrl+Tab.

Unable to Save Your Configuration

You may be unable to save your configuration because you are missing a resource. For example, you delete a resource such as the Cognos namespace, a cryptographic provider, or the content store. You can replace the default database type for the content store with Oracle, DB2, or Sybase. You cannot replace the Cognos namespace. You can recreate it, but you must then recreate your Cognos groups and roles.

For more information about creating groups and roles in IBM Cognos Connection, see the Administration and Security Guide.

Steps to Recreate the Cognos Namespace

1. Start IBM Cognos Configuration.
2. In the Explorer window, under Security, right-click Authentication and then click New resource, Namespace.
3. In the Name box, type a name for the resource.
4. In the Type box, click Cognos, and then click OK.
   The Cognos namespace appears in the Explorer window.
5. From the File menu, click Save.

Java Error When Starting IBM Cognos Configuration

When you start IBM Cognos Configuration, you may receive an error message that the Java Runtime Environment (JRE) has changed and that the current cryptographic information is not compatible with the new JRE. You may then be prompted to regenerate the cryptographic information for the new JRE or exit to switch back to the previous JRE.

This error may occur for one of these reasons:

- Your configuration data was encrypted using a different JRE than the one IBM Cognos 8 components are currently using.
- The cryptographic information may have been corrupted.

If you click Regenerate in the error dialog, the IBM Cognos 8 service is stopped and the cryptographic information is regenerated.
If you click Exit in the error dialog, you must set the JAVA_HOME environment variable to point to the JRE that you used to save your configuration.

On Windows, if you want IBM Cognos 8 components to use the JRE that is installed by default, unset JAVA_HOME or set JAVA_HOME to c8_location/bin/jre.

Note: If you want to change from one JRE to another, see the topic on changing the version of JVM that IBM Cognos 8 components use. For more information, see the Installation and Configuration Guide.

Cryptographic Error When Starting IBM Cognos Configuration

When you start IBM Cognos Configuration, the following error message may appear:

The cryptographic information may have been corrupted or the cogstartup.xml file is invalid. You may have to fix this file or remove it from disk. For more information, see the Installation and Configuration Guide.

This error occurs when IBM Cognos 8 components detect an error in the cogstartup.xml file. This can occur when the cogstartup.xml file is manually edited and there is an error in the changed text. To resolve the problem, replace the cogstartup.xml file with a copy from your backup location.

Current Configuration Settings Are Not Applied to Your Computer

You change default property values or add a resource to your installation in IBM Cognos Configuration. After saving the current configuration, you may not see the changes or be able to use the resource in the run-time environment.

To apply the new settings to your computer, you must restart the IBM Cognos 8 service.

Steps to Restart the IBM Cognos 8 Service

1. Start IBM Cognos Configuration.
2. From the Actions menu, click the appropriate command:
   - If the IBM Cognos 8 service is currently running, click Restart.
     This action starts all installed services that are not running and restarts services that are running. If you want to restart a particular service, select the service node in the Explorer window and then click Restart from the Actions menu.
   - If the IBM Cognos 8 service is stopped, click Start.
     This action starts all installed services that are not running. If you want to start a particular service, select the service node in the Explorer window and then click Start from the Actions menu.

CM-CFG-029 Error When Trying to Save a Configuration That Specifies a SQL Server Content Store

In IBM Cognos Configuration, you try to save a configuration and the following error message appears in the cogserver.log file:
CM-CFG-029 Content Manager is unable to determine whether the content store is initialized.

EXECUTE permission is denied on object "sp_tables", database "master", owner "dbo".

This indicates that you do not have the correct permissions to initialize a content store or create a table in the database.

The solution is to ensure that the content store user has permissions to use the sp_tables stored procedure in the master database.

DPR-ERR-2079 When Content Manager Configured For Failover

You configured multiple computers as standby computers to ensure failover for Content Manager. However, the following error message appears to the user:

DPR-ERR-2079 Firewall Security Rejection. Your request was rejected by the security firewall

This error message can occur if you have not configured all the standby computers as valid hosts for the IBM Cognos Application Firewall.

To solve this problem, on each distributed computer, start IBM Cognos Configuration and do the following:

1. In the Explorer pane, click Security, IBM Cognos Application Firewall.
2. In the right pane, click in the Value column next to Valid domains or hosts.
3. Click the edit button.
4. Enter the names of all the computers that you are configuring for failover.
5. Save and start the configuration.

Importing a Large Content Store in Solaris using JRE 1.5 Fails

If you export a content store that is greater than 2 GB when exported, and then attempt to import it in Solaris using JRE 1.5, the import fails with the error message "CM-SYS-5001 A Content Manager internal error occurred."

This is due to a bug in JRE 1.5 on Solaris. Use JRE 1.4.2 instead.

Users are Prompted for Active Directory Credentials

The single signon mechanism does not work when IBM Cognos 8 is configured as follows:

- Microsoft Internet Explorer runs on a Windows NT computer.
- The authentication namespace is configured with the Active Directory provider.

As a result, users are prompted for their Active Directory credentials.

This problem occurs because the IBM Cognos 8 Active Directory provider uses ADSI protocol and Kerberos delegation for authentication in a single signon environment. When Microsoft Internet Explorer runs on Windows NT, it cannot authenticate to the IIS server using Kerberos delegation.
When your system is configured for Windows Integrated Authentication, for the single signon to work with IIS, you must

- configure IBM Cognos 8 to communicate with the Active Directory server using the LDAP provider.
- configure the external identity mapping property to read the REMOTE_USER environment variable.

**Font on UNIX Not Found When Starting IBM Cognos Configuration**

When you start IBM Cognos Configuration, the following error message may appear:

*Font specified in font.properties not found...*

This is a common problem on UNIX. It means that the Java Virtual Machine (JVM) is trying to use one or more fonts that are not installed on your computer. However, the JVM should use the system default, and IBM Cognos Configuration should start and run normally.

To avoid these errors, add the missing fonts to your Java Runtime Environment by editing the font.properties files. Several font.properties files, which contain standard font environment information, are installed with your Java SDK. You can find these files in the `JRE_location/lib` directory.

For more information, see the Java documentation.

**Unable to Load Essbase/DB2 OLAP Library in Framework Manager**

If you install an earlier Essbase/DB2 OLAP client version than what is configured for IBM Cognos 8, you may receive this error:

`DB2-ERR-0028 Unable to load the following DB2 OLAP library: "C:\ibm\db2olap\bin\essapin.dll "`

For example, you installed DB2 OLAP 8.1 client and the qfs_config.xml file in IBM Cognos 8 is configured to use the DB2 OLAP library for Version 8.2.

To resolve this problem, you must edit the qfs_config.xml file and change the library name for the appropriate client version you are installing.

**Steps**

1. In the `c8_location\configuration` directory, edit the qfs_config.xml file.
2. Find the following code:
   ```xml
   <provider name="DB2OlapODP" libraryName="doodp82" connectionCode="DO"/>
   ```
3. Change the library name from doodp82 or doodp81 and save the changes.

Hyperion Essbase version 9.3.1 is the default client configuration. If you are installing DB2 OLAP client for either Version 8.1 or 8.2, you must edit the qfs_config.xml file and change the library name for the appropriate client version you are installing.

**Steps**

1. In the `c8_location\configuration` directory, edit the qfs_config.xml file.
2. Find the following code:
   <provider name="DB2OlapODP" libraryName="essodp93" connectionCode="DO"/>

3. Change the library name from essodp93 to doodp81 or doodp82 and save the changes.

**Group Membership is Missing From Active Directory Namespace**

If an Active Directory namespace is configured for the same forest and a user is authenticated using a credential, the group membership will be missing.

The process identity of IBM Cognos 8, when running as a local system account or a domain user, must have one of these privileges:

- impersonate a client after authentication
- act as part of the operating system

If the privilege is missing, there is no group membership for the authenticated user.

To solve this problem, perform the following steps.

**Steps**

1. From the **Start** menu, click **Settings**, **Control Panel**.
2. Click **Administrative Tools**, and then double-click **Local Security Policy**.
3. In the console tree, click **Security Settings**, **Local Policies**.
4. Click **User Rights Assignment**.
5. Add the process identity of IBM Cognos 8 to one of the following policies:
   - Impersonate a client after authentication
     
     The default is Administrators, Service.
     
     For more information, see [http://technet2.microsoft.com/WindowsServer/en/Library/fe1fb475-4bc8-484b-9828-a096262b54ca1033.mspx](http://technet2.microsoft.com/WindowsServer/en/Library/fe1fb475-4bc8-484b-9828-a096262b54ca1033.mspx)
   - Act as part of the operating system
     
     The default is Local system.
     
     For more information, see [http://technet2.microsoft.com/WindowsServer/en/Library/ec4fd2bf-8f91-4122-8968-2213f96a95dc1033.mspx](http://technet2.microsoft.com/WindowsServer/en/Library/ec4fd2bf-8f91-4122-8968-2213f96a95dc1033.mspx)

Both of these privileges give an account the ability to act as another user.

The privilege Impersonate a client after authentication is similar to the Act as part of the operating system privilege except that it will only allow a process to impersonate after authentication, whereas the privilege Act as part of the operating system allows a process to impersonate before authentication.

Deploying IBM Cognos 8 to an Oracle Application Server or IBM WebSphere Application Server

You are deploying IBM Cognos 8 to an Oracle application server or an IBM WebSphere application server and you receive the following errors:

- **Browser timeout in administration console**
- **Error Message: HTTP 500 Internal Error**
- **Error Message: Deployment failed: Base Exception: java.rmi.RemoteException (Oracle)**
- **Return to application file selection page (IBM WebSphere)**

This error can occur because the application file that you are trying to deploy is too large.

To solve this problem, on an Oracle application server, you can deploy the application file manually using the following command:

```bash
dcmctl deployapplication -f <path and name of ear file> -a <application name> -co <OC4J instance name>
```

For either IBM WebSphere or Oracle application servers, clear the Include static files from the Webcontent folder option when you use the Build Application Wizard. Not including the static content will reduce the size of the application file. If static content is required, you can manually copy it to the deployed application location after you have successfully deployed IBM Cognos 8 into the application server. For more information about deploying IBM Cognos 8 to an application server, see the Installation and Configuration Guide.

Errors Displayed Deploying to Oracle 10G Application Server

You are deploying IBM Cognos 8 to an Oracle 10G Application Server, and get the following error messages:

CMM-APP-3254 The initialization of the metrics store failed. DIS-ERR-3115 Task execution failed.
MDS-RUN-3213 Unable to locate database bulk load utility. Please install the appropriate database tool for this platform ('bcp' for SQL Server, 'sqlldr' for Oracle)

This occurs because the bulk loading utilities (SQL Loader on Oracle) are not included in the deployment file created by IBM Cognos Configuration.

To resolve this error, you must use the Oracle client software on the computer where you installed the Oracle 10G Application Server to install the missing components. Ensure that you install SQL Loader.

Page Cannot be Found Error Running Reports using IBM Cognos 8 Go! Office

In a Microsoft Office document configured for IBM Cognos 8 Go! Office, you use Run Report but receive a "The page cannot be found" error message.

This can occur if the IBM Cognos 8 gateway and dispatcher use "localhost" as the server name values on the IBM Cognos 8 server.

To correct this, use the computer name for the gateway and dispatcher host values instead of "localhost".
Error Initializing Oracle Content Store After Upgrade from ReportNet

You are creating a content store in Oracle or upgrading a ReportNet content store in Oracle to IBM Cognos 8, and you receive the following error message:

*Content Manager can not initialise the content store with the assistance of the initialisation file: dbupgrade2_0021-to-2_0022_oracle.sql ORA-22858 invalid alteration of datatype*

This error occurs if the Oracle database compatibility level is set lower than 9.0.1.

You can correct this by changing the compatibility level to 9.0.1 or higher and restarting the Oracle instance.

CGI Timeout Error While Connected to IBM Cognos 8 Components Through a Web Browser

When performing operations through your Web browser, you receive the following error message:

*CGI Timeout, process will be deleted from server.*

The error occurs when you use Windows Internet Information Services (IIS) as your Web server and the gateway is configured to use CGI. IIS has a default timeout for CGI applications.

To resolve this problem, you can configure the gateway to use ISAPI. IIS does not have a default timeout for ISAPI applications. Or, if you want to keep using a CGI gateway, you can increase the CGI timeout in IIS.

Steps to Change the Gateway to ISAPI

1. On the gateway computer, start IBM Cognos Configuration.
2. Under *Environment*, for the *Gateway URI* property, change the cognos.cgi portion of the URI to
   
   *cognosisapi.dll*
3. In your Web browser, specify the ISAPI URI:
   
   *http://computer_name/cognos8/isapi*

Steps to Increase the CGI Timeout

1. In the Windows administrative tools, open Internet Information Services.
2. Under the local computer node, right-click *Websites* and select *Properties*.
3. In the *Home Directory* tab, click *Configuration*.
4. In the *Process Options* tab, increase the CGI script timeout.

Servlet Class Fails to Load in WebLogic

You may have problems when configuring a distributed server installation and using WebLogic as the application server for IBM Cognos 8.

When deploying the p2pd.war for the Application Tier Components computer, you may receive servlet exceptions and the dispatcher does not start. The cogserver.log is also not created.
The following error messages appear in the WebLogic Server console:

<Jul 9, 2004 3:47:37 PM EDT> <Error> <HTTP><BEA-101249> < ServletContext (id=19023494,name=p2pd,context-path=/p2pd):Servlet class com.cognos.pogo.isolation.ServletWrapper for servlet cfgss could not be loaded because the requested class was not found in the classpath /host2/bea812/user_projects/domains/c8/applications/p2pd/WEB-INF/classes.


<Jul 9, 2004 3:47:37 PM EDT> <Error> <HTTP> <BEA-101216> < Servlet: "cfgss" failed to preload on startup in Web application: "p2pd".

javax.servlet.ServletException: [HTTP:101249]| ServletContext(id=19023494,name=p2pd,context-path=/p2pd):Servlet class com.cognos.pogo.isolation.ServletWrapper for servlet cfgss could not be loaded because the requested class was not found in the classpath /host2/bea812/user_projects/domains/c8/applications/p2pd/WEB-INF/classes.java.lang.ClassNotFoundException: com.cognos.pogo.isolation.ServletWrapper. at weblogic.servlet.internal.ServletStubImpl.prepareServlet (ServletStubImpl.java:799)

at weblogic.servlet.internal.WebAppServletContext.preload Servlet(WebAppServletContext.java:3252)

To avoid this problem, do not deploy the p2pd application from the WebLogic applications directory. Create the p2pd directory in another location and deploy p2pd from there.

**Steps**

1. Open IBM Cognos Configuration and configure the Application Tier Components computer.
2. Restart the Content Manager computer.
3. Create a p2pd directory in a location that is accessible by the WebLogic server but is not in the WebLogic applications directory.
   
   For example, create a directory named p2pd in the following location:

   WebLogic_location/user_projects/domain_name

4. Create the p2pd.war file.
5. In the p2pd directory, extract the p2pd.war file to the WebLogic installation using the following command:
   
   %JAVA_HOME%/bin/jar xvfm "c8_location/p2pd.war" .

7. In the WebLogic Server Console, deploy the p2pd application.

**Desktop Icons or IBM Cognos Configuration Window Flicker on Windows**

When you run IBM Cognos Configuration on Windows, you may notice that the desktop icons or the IBM Cognos Configuration window flickers.

To resolve this issue, start IBM Cognos Configuration using the -nodraw command line option.
Glossary

access permissions
Rules defining the access rights to resources. Access permissions can be granted to any combination of namespaces, groups, or users. Examples of resources are reports and folders.

alias
In modeling and database terminology, a secondary name for a database table. Aliases are used to create a distinct reference to the table in the model, so that self-joins can be created or ambiguous query paths can be resolved.

In map information technology, a secondary name for a map feature. Aliases are used to create a reference between custom map feature names and feature names in databases.

anonymous access
A method of accessing resources in which users are not authenticated, and all users gain the same access permissions.

application tier components
For installation, the processors that access the query databases to gather information and then render the results as PDF and HTML reports and metrics. Application tier components also pass requests to Content Manager and render the results that Content Manager retrieves from the content store.

authentication
The process of verifying the identity of users when they log on. Users must be authenticated before they can be authorized to use any secured resources.

authentication provider
The communication mechanism to an external authentication source. Functionality such as user authentication, group membership, and namespace searches are made available through authentication providers.

certificate
A document that identifies someone or something by name. Certificates are issued by certification authorities. Each IBM Cognos computer in a distributed installation uses a different certificate. Certificates are used to positively identify an entity. They are used for digital signatures and secure communications, and can be used for encryption or decryption.

certification authority
Certification authority (CA) is the IBM Cognos component that issues certificates identification to each computer on which components are installed. You can also use other (non-IBM Cognos) certificate authorities.
cipher suite
In SSL, a set of authentication, encryption, and data integrity algorithms used for exchanging messages between network nodes. During an SSL handshake, the two nodes negotiate to see which cipher suite to use when transmitting messages back and forth.

common gateway interface
(CGI) A standard that describes how Web servers should access other programs to create a document that will appear in a Web browser. For example, Web servers often use CGI programs to process forms.

connection
The named information that defines the type of the data source, its physical location, and any signon requirements. A data source can have more than one connection.

content locale
A code that is used to set the language or dialect used for browsers, report text, and so on; and the regional preferences, such as formats for time, date, money, money expressions, and time of day. For IBM Cognos products, you can specify a locale for the product interface (product locale) and for the data in the report (content locale).

Content Manager
The IBM Cognos 8 service that manages the storage of customer applications, including application-specific security, configuration data, models, metrics, reports, and report output. Content Manager is needed to publish models, retrieve or store report specifications, manage scheduling information, and manage the Cognos namespace.

content store
The database that contains data that IBM Cognos 8 needs to operate, such as report specifications, published models, and the packages that contain them; connection information for data sources; information about the external namespace, and the Cognos namespace itself; and information about scheduling and bursting reports.

Design models and log files are not stored in the content store.

The IBM Cognos 8 service that uses the content store is named Content Manager.

credentials
Information stored about the identity of an IBM Cognos user, usually a user name and password. You can assign your credentials to someone else so that they can use resources that you are authorized to use.

Credentials are created for IBM Cognos components. If a user schedules or programs an action, credentials must be stored in the content store.
**data source**
A relational database, dimensional cube, file, or other physical data store that can be accessed through IBM Cognos 8.

**deployment archive**
A file used for deployment. A deployment archive contains the data from the content store that is being moved.

**gateway**
An extension of a Web server program that transfers information from the Web server to another server. Gateways are often CGI programs, but may follow other standards such as ISAPI and Apache Modules.

**glyph**
An image of a character in a font.
Letters are glyphs, but in most cases, the term is used in discussions of non-alphabetic writing systems.

**group**
In security, a list of users or other groups that can be used to assign access permissions and capabilities.
Groups can be referenced from other authentication sources or can be local to IBM Cognos 8. Local groups are managed from the administration portal. The list of groups that an authentication user is a member of is part of the user's passport for an IBM Cognos 8 session.
In reporting, grouping is the action of organizing common values of query item together and only displaying the value once. Headers and footers often appear after each instance of a common value in a grouped column.

**HTTPS**
A secure version of HTTP Hypertext Transfer Protocol that incorporates secure sockets layer (SSL). IBM Cognos products use HTTPS and SSL to encrypt and transmit passwords securely over the Internet.

**job**
A group of runnable objects, such as reports, agents, and other jobs that you run and schedule as a batch.

**job step**
The smallest part of a job that can be run separately. Usually, a job step is a report. A job step can also be another job.

**locale**
A code that is used to set the language or dialect used for browsers, report text, and so on; and the regional preferences, such as formats for time, date, money, and money expressions.
For IBM Cognos products, you can specify a locale for the product interface (product locale) and for the data in the report (content locale).

**metric package**

An IBM Cognos Connection representation of a Metric Studio application. A metric package contains connection information, reports, and metric management tasks for that application.

**metric store**

A database that contains content for metric packages. A metric store also contains Metric Studio settings, such as user preferences.

**namespace**

For authentication and access control, a configured instance of an authentication provider. Allows access to user and group information.

In XML, a collection of names, identified by a URI reference, which are used in XML documents as element types and attribute names.

In Framework Manager, namespaces uniquely identify query items, query subjects, and so on. You import different databases into separate namespaces to avoid duplicate names.

**passport**

Session-based information regarding authenticated users. A passport is created the first time a user accesses IBM Cognos 8. It is retained until a session ends, either when the user logs off, or after a specified period of inactivity.

Passport information is stored in Content Manager memory. Credentials are stored encrypted.

A passport is stored in a memory-only browser cookie for the duration of the session.

**portlet**

A mechanism for displaying Web content as part of a portal page.

**product locale**

The code or setting that specifies what language, regional settings, or both to use for parts of the product interface, such as menu commands.

**prompt**

A report element that asks for parameter values before the report is run.

**report specification**

The definition of queries, prompts, layouts, and styles that make up a report. A report specification is combined with data by a run operation to create report outputs. You create report specifications by using Report Studio, Query Studio, Analysis Studio, or through the Software Development Kit.
**response file**
An ASCII file that contains the setup data that is needed to automate an installation. For IBM Cognos installations, the response file automates only the process of copying files with the default configuration.

**security provider**
See authentication provider.

**user**
A person accessing an IBM Cognos 8 application. User information, such as the location of personal folders or preferred formats for viewing reports, is stored in IBM Cognos 8.

Authenticated user definitions and information, such as passwords and IDs, are maintained in other authentication sources.
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