Sterling Commerce
An IBM Company

Sterling Call Center and Sterling Store: Business Intelligence Guide (Operational Reports)

Release 8.5

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Preface

This document describes how to use Sterling Call Center and Sterling Store: Business Intelligence to create operational and analytical reports.

Intended Audience

This document is intended for use by application developers, system administrators, and report administrators who use Sterling Call Center and Sterling Store: Business Intelligence to design, deploy, and analyze reports, which present your multi-enterprise order, inventory, or catalog data from various angles, enabling you to quickly identify performance trends and make consistent, coordinated decisions to strengthen your supply chain relationships.

This document assumes a working knowledge of the related Cognos products and the Sterling Call Center and Sterling Store applications. Therefore, it is highly recommended that you read the related Cognos documentation first for a better understanding of Sterling Call Center and Sterling Store: Business Intelligence.

Structure

This document contains the following sections:

Chapter 1, "Introduction"
This chapter introduces Sterling Call Center and Sterling Store: Business Intelligence and its architecture.

Chapter 2, "Installing and Configuring Sterling Call Center and Sterling Store: Business Intelligence"

This chapter explains how to install and configure Sterling Call Center and Sterling Store: Business Intelligence and Cognos Corporation's Business Intelligence, PowerPlay, and supporting products.

Chapter 3, "Sterling Call Center and Sterling Store: Business Intelligence Framework"

This chapter provides a detailed description of the Sterling Call Center and Sterling Store: Business Intelligence Framework aspects, the foundation where you build a rich set of reports, and (in future releases) other OLAP objects and tools.

Chapter 4, "Reports for Sterling Call Center and Sterling Store: Business Intelligence"

This chapter describes the reports provided with Sterling Call Center and Sterling Store: Business Intelligence.

Chapter 5, "Deploying Reports"

This chapter explains how to deploy the reports of Sterling Call Center and Sterling Store: Business Intelligence reports and the reports that have been created using the Cognos products.

Chapter 6, "Extending the Sterling Call Center and Sterling Store: Business Intelligence Data Model"

This chapter explains how to extend the Data Model.

Chapter 7, "Troubleshooting and Tuning"

This chapter provides information for solving the problems that may occur when using Sterling Call Center and Sterling Store: Business Intelligence.

Chapter A, "Sterling Call Center and Sterling Store: Business Intelligence Views"

This appendix describes the abstraction layer on the YFS tables, called views.

Chapter B, "Server Sizing Requirements"

This appendix describes the server requirements for the Cognos 8.4 Business Intelligence and PowerPlay Web components.

Appendix C, "Cognos Components"

This appendix provides a complete list of Cognos components.

Documentation

For more information about the Sterling Call Center™ and Sterling Store™ components, see the following manuals:

- *Sterling Call Center and Sterling Store: Release Notes*

- *Sterling Call Center and Sterling Store: Installation Guide*

- *Sterling Call Center and Sterling Store: Concepts*

- *Sterling Call Center and Sterling Store: Implementation Guide*

- *Sterling Call Center and Sterling Store: User Guide*

- *Sterling Call Center and Sterling Store: Upgrade Guide*

- *Sterling Call Center and Sterling Store: Business Intelligence Guide*

- *Sterling Call Center and Sterling Store: Javadocs*

For more information about the Selling and Fulfillment Foundation components, see the following manuals:

- *Selling and Fulfillment Foundation: Release Notes*

- *Selling and Fulfillment Foundation: Installation Guide*

- *Selling and Fulfillment Foundation: Upgrade Guide*

- *Selling and Fulfillment Foundation: Configuration Deployment Tool Guide*

- *Selling and Fulfillment Foundation: Performance Management Guide*

- *Selling and Fulfillment Foundation: High Availability Guide*

- *Selling and Fulfillment Foundation: System Management Guide*

- *Selling and Fulfillment Foundation: Localization Guide*

- *Selling and Fulfillment Foundation: Customization Basics Guide*

- *Selling and Fulfillment Foundation: Customizing APIs Guide*

- *Selling and Fulfillment Foundation: Customizing Console JSP Interface for End User Guide*

- *Selling and Fulfillment Foundation: Customizing the RCP Interface Guide*

- *Selling and Fulfillment Foundation: Customizing User Interfaces for Mobile Devices Guide*

- *Selling and Fulfillment Foundation: Customizing Web UI Framework Guide*

- *Selling and Fulfillment Foundation: Customizing Swing Interface Guide*

- *Selling and Fulfillment Foundation: Extending the Condition Builder Guide*

- *Selling and Fulfillment Foundation: Extending the Database Guide*

- *Selling and Fulfillment Foundation: Extending Transactions Guide*

- *Selling and Fulfillment Foundation: Using Sterling RCP Extensibility Tool Guide*

- *Selling and Fulfillment Foundation: Integration Guide*

- *Selling and Fulfillment Foundation: Product Concepts Guide*

- *Sterling Warehouse Management^{TM} System: Concepts Guide*

- *Selling and Fulfillment Foundation: Application Platform Configuration Guide*

- *Sterling Distributed Order Management^{TM}: Configuration Guide*

- *Sterling Supply Collaboration: Configuration Guide*

- *Sterling Global Inventory Visibility^{TM}: Configuration Guide*

- *Sterling Catalog Management^{TM}: Configuration Guide*

- *Sterling Logistics Management: Configuration Guide*

- *Sterling Reverse Logistics^{TM}: Configuration Guide*

- *Sterling Warehouse Management System: Configuration Guide*

- *Selling and Fulfillment Foundation: Application Platform User Guide*

- *Sterling Distributed Order Management: User Guide*

- *Sterling Supply Collaboration: User Guide*

- *Sterling Global Inventory Visibility: User Guide*

- *Sterling Logistics Management: User Guide*

- *Sterling Reverse Logistics: User Guide*

- *Sterling Warehouse Management System: User Guide*

- *Selling and Fulfillment Foundation: Mobile Application User Guide*

- *Selling and Fulfillment Foundation: Business Intelligence Guide*

- *Selling and Fulfillment Foundation: Javadocs*

- *Sterling Selling and Fulfillment Suite: Glossary*

- *Parcel Carrier: Adapter Guide*

- *Selling and Fulfillment Foundation: Multitenant Enterprise Guide*

- *Selling and Fulfillment Foundation: Password Policy Management Guide*

- *Selling and Fulfillment Foundation: Properties Guide*

- *Selling and Fulfillment Foundation: Item Concepts Guide*

- *Selling and Fulfillment Foundation: Pricing Concepts Guide*

- *Business Center: Item Administration Guide*

- *Business Center: Pricing Administration Guide*

- *Business Center: Customization Guide*

- *Business Center: Localization Guide*

For a description of the various documents in the Sterling Call Center and Sterling Store documentation set, see the Sterling Call Center and Sterling Store documentation home page at:

`<INSTALL_DIR>/documentation/YCD_doc_home.html`

`<INSTALL_DIR>` is the directory where Sterling Call Center and Sterling Store and the Selling and Fulfillment Foundation are installed.

Cognos Documentation

For more information about the Cognos components, go to your Cognos customer support site at: http://support.cognos.com/.

Conventions

The components of Sterling Call Center and Sterling Store: Business Intelligence refer to Cognos products only.

Sterling Call Center and Sterling Store: Business Intelligence consists of the corresponding components plus the Sterling Call Center and Sterling Store: Business Intelligence Framework. The PowerPlay Transformer is also referred to as the Transformer.

The Sterling Call Center and Sterling Store: Business Intelligence Framework is the framework that includes the components of Sterling Call Center and Sterling Store: Business Intelligence that are built on Cognos, such as the Catalog or sample reports.

The following conventions may be used in this manual:

Convention	Meaning
. . .	Ellipsis represents information that has been omitted.
< >	Angle brackets indicate user-supplied input.
mono-spaced text	Mono-spaced text indicates a file name, directory path, attribute name, or an inline code example or command.
/ or \	Slashes and backslashes are file separators for Windows, UNIX, and Linux operating systems. The file separator for the Windows operating system is "\" and the file separator for UNIX and Linux systems is "/". The UNIX convention is used unless otherwise mentioned.
<INSTALL_DIR>	User-supplied location of the Selling and Fulfillment Foundation installation directory and Sterling Call Center and Sterling Store installation directory. This is only applicable for Release 8.0.
<ANALYTICS_HOME>	User-supplied location of the Sterling Call Center and Sterling Store: Business Intelligence installation directory. **Note:** This convention is used only in the *Sterling Call Center and Sterling Store: Business Intelligence Guide*.

Convention	Meaning
<COGNOS_HOME>	User-supplied location of the Cognos installation directory. **Note:** This convention is used only in the *Sterling Call Center and Sterling Store: Business Intelligence Guide*.

Notes: The Sterling Call Center and Sterling Store documentation set uses the following conventions in the context of the product name:

- Sterling Customer Order Management PCA is used for Release 7.5 and earlier.

- Sterling Call Center and Sterling Store is used for Release 8.0.

The Selling and Fulfillment Foundation documentation set uses the following conventions in the context of the product name:

- Yantra is used for Release 7.7 and earlier.

- Sterling Supply Chain Applications is used for Releases 7.9 and 7.11.

- Sterling Multi-Channel Fulfillment Solution is used for Releases 8.0 and 8.2.

- Selling and Fulfillment Foundation for Release 8.5.

1

Introduction

The Sterling Call Center and Sterling Store: Business Intelligence component is an optional component, providing powerful analytic and performance metrics that interface with the Sterling Call Center and Sterling Store data set. The Sterling Call Center and Sterling Store: Business Intelligence component enables users to explore and analyze multi-enterprise order, inventory, or catalog data. You can then identify performance trends and make consistent, coordinated decisions to strengthen your extended enterprise and value chain relationships.

The Sterling Call Center and Sterling Store: Business Intelligence component is delivered through a partnership with Cognos Corporation. The goal of Sterling Call Center and Sterling Store: Business Intelligence component is to enhance the value of the Sterling Call Center and Sterling Store applications by providing operational and analytical reporting capabilities to the users, suppliers, and partners of the Sterling Call Center and Sterling Store applications.

This chapter provides information about:

- Cognos Products
- The Sterling Call Center and Sterling Store: Business Intelligence Component
- Report Flow Diagram
- Sterling Call Center and Sterling Store: Business Intelligence and Cognos Integration

1.1 Cognos Products

The Sterling Call Center and Sterling Store: Business Intelligence components integrate with the following Cognos products:

* **Cognos 8.4 Business Intelligence:** Cognos' Web-enabled client-side reporting tool is used for creating and managing ad-hoc and scheduled reports. Cognos 8.4 Business Intelligence includes Query Studio, Report Studio, and Analysis Studio. Query Studio enables you to create ad-hoc reports through a graphical user interface and save the reports in a variety of formats, such as pdf, Excel, real-time reports, or prompted reports. Report Studio is used to create managed reports that are maintained, reused, and require a higher level of complexity than a report produced in Query Studio. Analysis Studio enables you to create ad-hoc cross-tab reports based on the multi-dimensional data sources.

* **Framework Manager**: Framework Manager is used to design the data models for reports.

1.2 The Sterling Call Center and Sterling Store: Business Intelligence Component

The Sterling Call Center and Sterling Store: Business Intelligence components are delivered with the following:

* Data Model

* Database Scripts

* Scripts and Custom Files

The Sterling Call Center and Sterling Store: Business Intelligence Data Model is a metadata model created using Framework Manager. This Data Model is used to build Cognos 8.4 reports and PowerPlays. The reports generated by Report Studio are viewed using Cognos Connection. Cognos Connection is used for administering security.

1.2.1 Data Model

The Data Model provided by Sterling Call Center and Sterling Store: Business Intelligence is the base for creating reports and queries (.iqd).

The Data Model consists of a set of functionally grouped entities. Figure 1–1, "Report Flow Diagram" illustrates the flow of report creation.

Figure 1–1   Report Flow Diagram
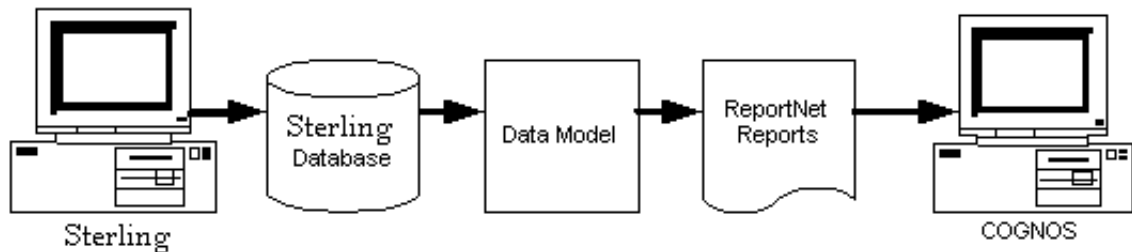
1.2.2 Database Scripts

The Sterling Call Center and Sterling Store: Business Intelligence component provides a set of scripts that create Sterling Analytics views on the Sterling Call Center and Sterling Store Database. These are located in `<ANALYTICS_HOME>/database/<database>/Scripts`

For more information about creating Sterling Call Center and Sterling Store: Business Intelligence views, see Section 2.3.2, "Creating the Sterling Call Center and Sterling Store: Business Intelligence Table Views".

1.2.3 Scripts and Custom Files

The custom files (located in `<ANALYTICS_HOME>/custom`) are used to enhance the user's experience of Analytics. See Chapter 2, "Installing and Configuring Sterling Call Center and Sterling Store: Business Intelligence".

1.3 Sterling Call Center and Sterling Store: Business Intelligence and Cognos Integration

The Sterling Call Center and Sterling Store: Business Intelligence component provides direct access to the Cognos Connection. When you

launch Sterling Call Center and Sterling Store: Business Intelligence, the Sterling Call Center and Sterling Store-customized Cognos Connection is accessed. The Cognos Connection is then used to launch reports. You must, however, have the necessary authorization to perform these functions.

2

Installing and Configuring Sterling Call Center and Sterling Store: Business Intelligence

This chapter describes the Cognos products, the installation requirements when using the Sterling Call Center and Sterling Store: Business Intelligence component, and the subsequent Sterling Call Center and Sterling Store: Business Intelligence setup.

2.1 Cognos Setup

Before using the Sterling Call Center and Sterling Store: Business Intelligence component, install the following Cognos products in accordance with Cognos' installation instructions for each product:

> **Note:**   If you are installing all the Cognos products on one machine, it is recommended that you install them in the order presented here. For a list of the Cognos CDs, see the *Sterling Call Center and Sterling Store: Installation Guide.* When installing the LDAP server, use the same settings used to configure the Sterling Call Center and Sterling Store applications.

- Cognos 8.4 Business Intelligence
- Framework Manager

> **Note:** Depending on your usage (volume, users, data), Cognos recommends different configurations for the various servers used in this setup. Follow these recommendations to avoid setup-related performance issues down the road. For sample server sizing guidelines, see Appendix B, "Server Sizing Requirements".

2.1.1 Security Setup

The Sterling Call Center and Sterling Store: Business Intelligence component does not ship with the security enabled because it would complicate the deployment at a client site. It is recommended that you enable security for the various Cognos components and subsequently the Sterling Call Center and Sterling Store: Business Intelligence component after they are installed.

2.1.1.1 Access Manager

The Access Manager provides authentication information for users. It also provides a level of data access control by allowing the setup of User Classes and Groups. All the users of Sterling Call Center and Sterling Store: Business Intelligence are set up in Access Manager, which provides access configuration for data sources and other Cognos servers.

Access Manager and Sterling Call Center and Sterling Store User Independence

The user and user group setup in the Sterling Call Center and Sterling Store applications are not linked to the user and user class setup in Cognos' Access Manager. Nor are they synchronized between the two products. This is not possible because of the proprietary nature of the Cognos LDAP storage scheme.

The users and user groups for the Sterling Call Center and Sterling Store applications must be maintained independent of the users and user classes for the Sterling Call Center and Sterling Store: Business Intelligence. This is required because each user in the Sterling Call Center and Sterling Store applications may not have access to the Sterling Call Center and Sterling Store: Business Intelligence component, or some users of Sterling Call Center and Sterling Store: Business Intelligence may not have access to the other components of the Sterling

Call Center and Sterling Store applications. Additionally, it is necessary that users common to both the Sterling Call Center and Sterling Store applications and Sterling Call Center and Sterling Store: Business Intelligence have the same user identifier (ID) and password setup. Otherwise that user does not have seamless access to Sterling Call Center and Sterling Store: Business Intelligence from the Sterling Call Center and Sterling Store applications.

2.1.1.2 User Setup

The Sterling Call Center and Sterling Store applications use the concept of user groups and organizations. User classes in Access Manager also support a hierarchical structure. For visual consistency and ease of understanding, it is recommended that you create Sterling Call Center and Sterling Store: Business Intelligence users and user classes in Access Manager, and that they correspond to the users and user Groups in the Sterling Call Center and Sterling Store applications as depicted in Figure 2–1, "Cognos Users".

Figure 2–1   Cognos Users
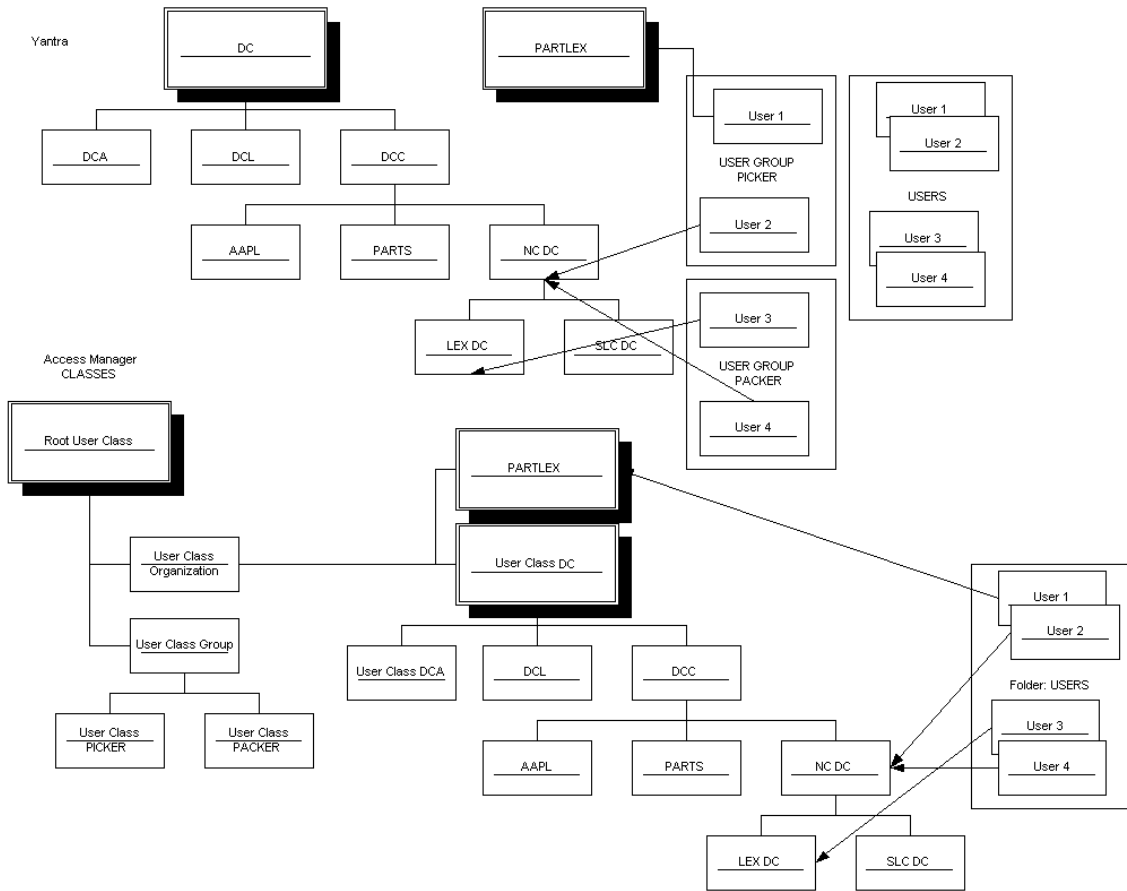
You can also set up the following user classes in Access Manager that relate to the roles played by an organization in the Sterling Call Center and Sterling Store applications:

- Hub
- Enterprise
- Buyer
- Seller

- Carrier

2.2 Cognos 8.4 Business Intelligence

The reporting component does not ship with security enabled. Cognos Connection should be used to enable security for these components.

Implementations must use the Sterling Call Center and Sterling Store Authentication Mechanism to authenticate users for viewing reports.

The database for content store for Oracle must have either UTF-8 or UTF-16 encoding. For more information about creating the database for content store, see the Cognos documentation at: http://support.cognos.com/.

You can copy the Oracle thin driver to `<COGNOS_HOME>/webapps/p2pd/WEB-INF` as `classes12.jar`. For more information about Oracle or DB2 drivers, see the Cognos documentation at: http://support.cognos.com/.

Because Cognos 8.4 cannot access the `<INSTALL_DIR>/properties/` folder, you can include the connectivity information for the Sterling Call Center and Sterling Store applications in the `<ANALYTICS_HOME>/bin/analytics.properties` file.

2.2.1 Sterling Call Center and Sterling Store Authentication Mechanism

To set up the Sterling Call Center and Sterling Store Authentication Mechanism:

- Launch Cognos Configuration.

- Navigate to Security > Authentication.

- Add a new namespace resource "smcfs", of the type Custom Java Provider.

- Assign the namespace ID "smcfs" to this namespace resource.

- Assign the `com.yantra.authenticator.YantraAuthentication` Java class name.

2.2.2 Setting Access to Cognos Administration and Reporting

To help increase the security of your business systems and data with the Sterling Call Center and Sterling Store applications, you can selectively assign access to Cognos administrative functions, reports, folders, and packages. The Business Intelligence Administrator platform resource is used to assign permissions to Cognos.

Setting up access requires the following tasks:

- Controlling access to Cognos Administration (set the permissions for the Business Intelligence Administrator resource in the Channel Applications Manager and remove the Everyone group from the Cognos System Administrator role)

- Controlling access to Cognos reports, folders, and packages (after the above task is completed, only Administrators can set permissions for reports, folders and packages)

2.2.2.1 Controlling Access to Cognos Administration

The first task in limiting user access to Cognos administrative functionality is to grant permissions to the Business Intelligence Administrator resource in the Application Platform.

> **Note:** You must have security groups created in the Sterling Call Center and Sterling Store prior to completing this task.

1. In the Applications Manager, select **Applications** > **Application Platform**.

2. From the tree in the application rules side panel, select **Security** > **Groups**. The Groups window displays in the work area.

3. Select the group to be given permissions to access the Cognos screens.

4. Under the **Permissions** tab, select the Permission box for Application Platform.

5. From the Permissions screen, select **Applications** > **Sterling Business Intelligence** > **Entities** > **Business Intelligence**

Admin, as shown in Figure 2–2, "Setting Entity Permissions in the Applications Manager".

Figure 2–2   Setting Entity Permissions in the Applications Manager
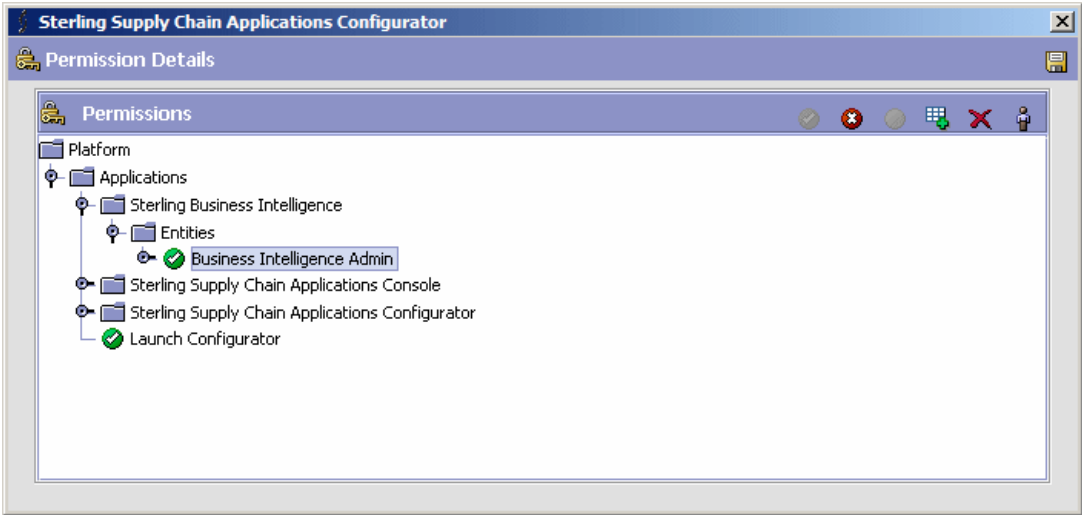
6. Right-click Business Intelligence Admin and select **Grant Permission**.

7. Click **Save**.

2.2.2.1.1   Editing the System Administrator Role in Cognos

The second task in limiting access to Cognos administration functionality is to make two changes to the System Administrator role in Cognos. You can only complete this task after you set access to Cognos administration (as described in "Adding the sscap/SYSTEM Group" on page 12.

When a user launches Cognos Connection through the Console, all user groups to which that user belongs are displayed. If the user has permission to access the Business Intelligence Administrator, the user sees all groups defined in the database and an additional group called sscap/SYSTEM. Otherwise, the user sees only the groups to which he belongs.

In Cognos, by default, all users have administrative capabilities because the Everyone group (which includes all users) is included in the System Administrator role.

Adding the sscap/SYSTEM Group

> **Note:** You *must* complete this task before deleting the Everyone group (see "Removing the Everyone Group from the Sys Admin Role" on page 14).

When you grant BI Admin rights to a user in the Channel Applications Manager, a new group called SYSTEM is displayed in the user's list of groups under the sscap namespace in Cognos. Add this sscap/SYSTEM group to the System Administrator role in Cognos:

1. Start your Web browser and enter the URL of your Cognos applications (the default is http://localhost/cognos8).

   The Cognos 8.4 home page displays.

2. Click Cognos Connection.

3. Log in to the Cognos Connection portal as a System Administrator.

4. Locate sscap in the list of roles, and click 🖼️ in the Action column next to it.

5. Locate SYSTEM in the list, and click 🖼️ in the Action column next to it.

6. The Set Properties - SYSTEM screen displays, as shown in Figure 2–3. Select the Permissions tab.

7. Check the Override the access permissions acquired from the parent entry checkbox, as shown in Figure 2–3.

8. Click Add.

Figure 2–3   Set Properties - SYSTEM
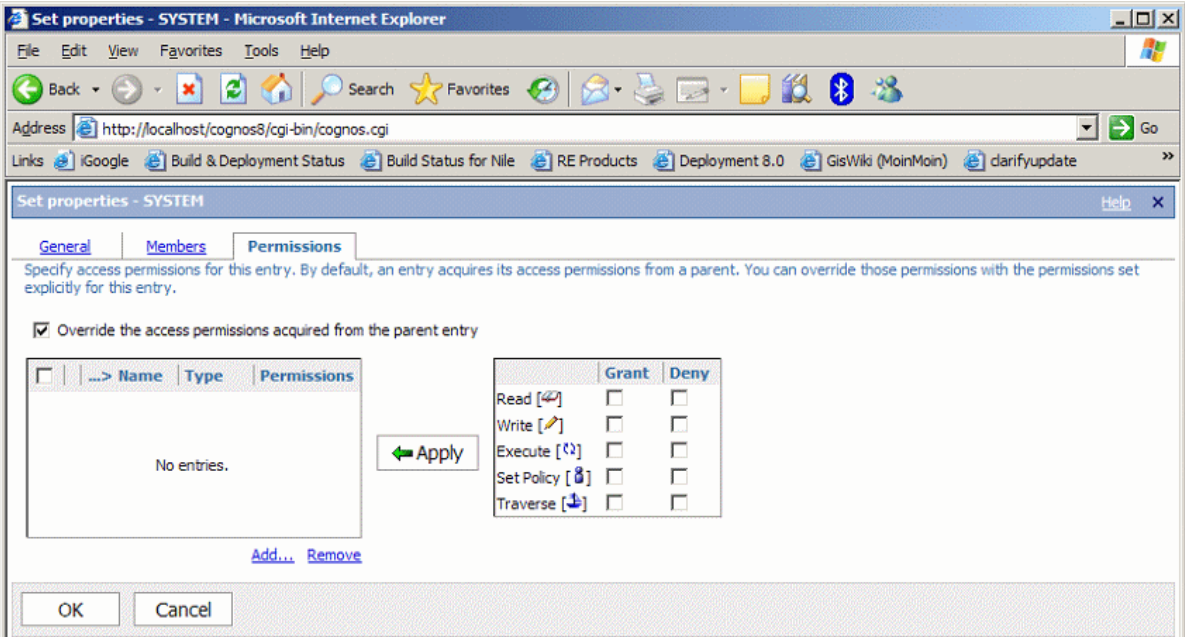
9. The screen shown in Figure 2–9, "Select Entries" displays. Select System Administrators. Click OK.

Figure 2–4   Set Properties - Adding Entries
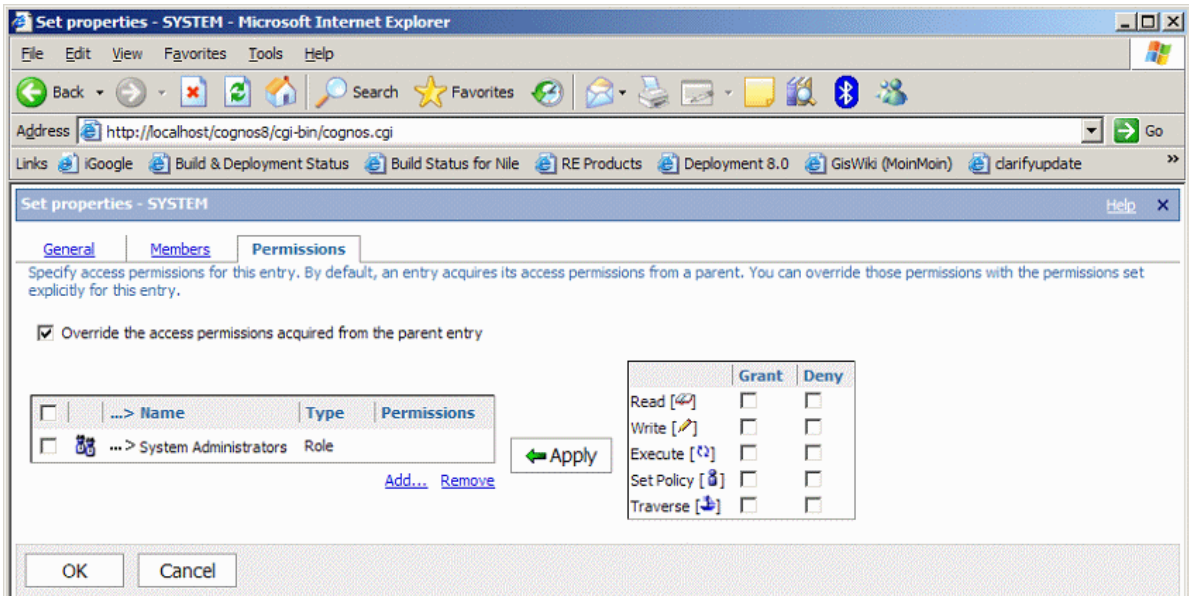
Removing the Everyone Group from the Sys Admin Role

After adding the sscap/SYSTEM group to the System Administrator role, remove the Everyone group from the System Administrator role:

1. Log in to the Cognos Connection portal as a System Administrator.

2. Go to Tools > Directory and select the Cognos namespace.

3. Locate System Administrator in the list of roles, and click 🖼 in the Action column next to it.

4. Select the Members tab. Select Everyone, and click Remove, as shown in Figure 2–5.

Figure 2–5   Removing Everyone Group
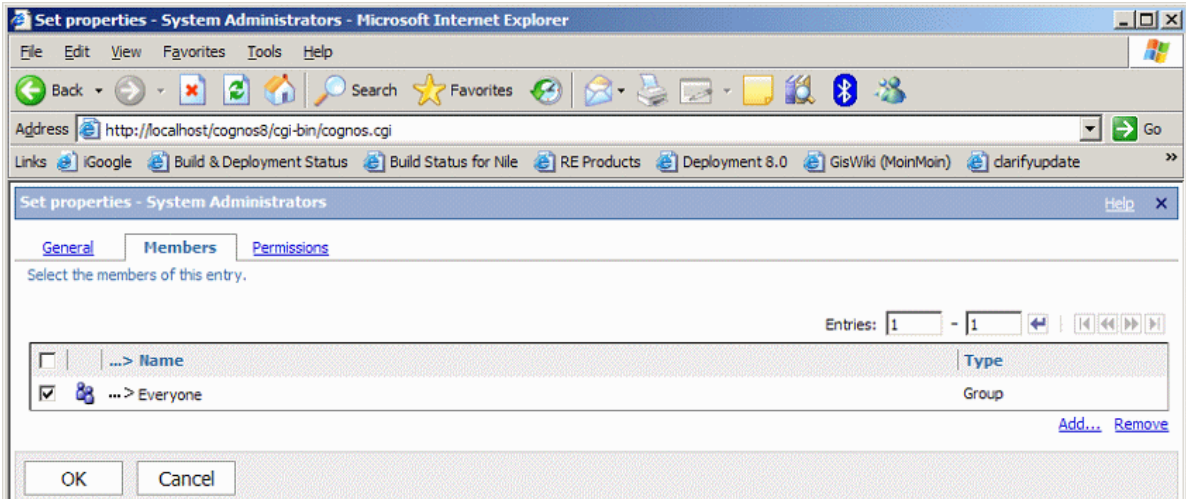
The result is that only users who have permission to access the Business Intelligence Administrator have administrative capabilities in Cognos.

2.2.2.2 Controlling Access to Cognos Reports, Folders, and Packages

The second part of controlling Cognos access through Sterling Call Center and Sterling Store is to set specific permissions to entries in Cognos.

1. In Cognos Connection, on the Capabilities screen, locate the entry for which you want to set access permissions, as shown in Figure 2–6.

Figure 2–6   Capabilities - Select Functionality
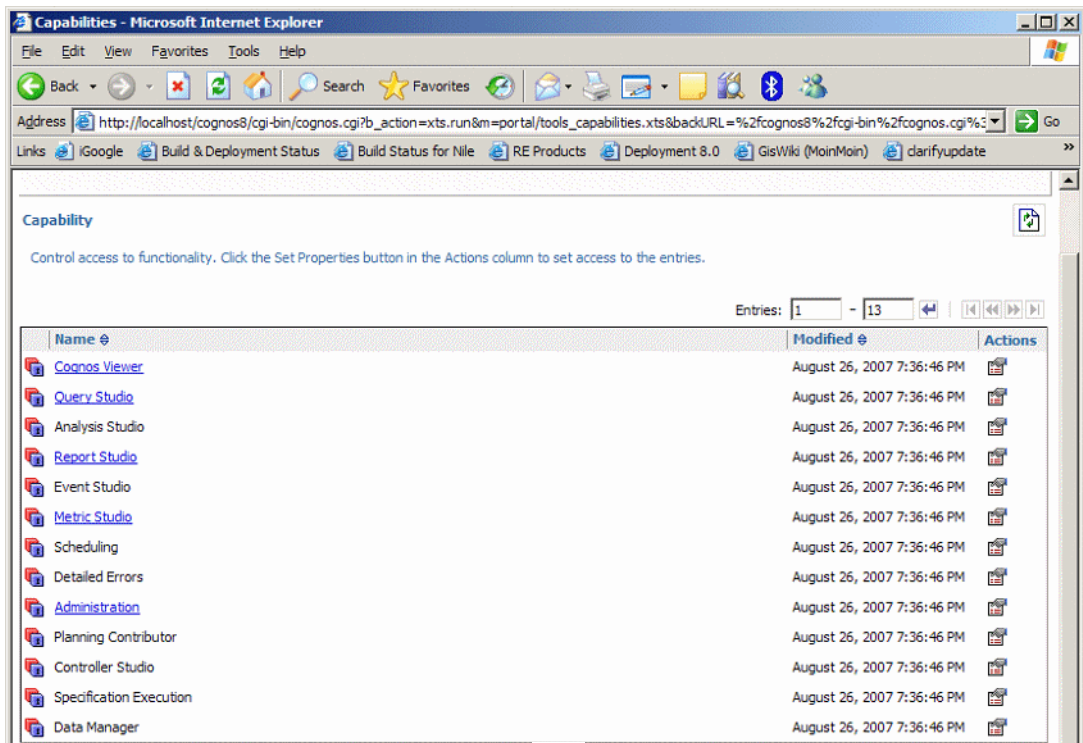
2. In the Actions column, click ⊞ in the Action column next to the desired entry. The Set Properties screen displays.

3. In the Set properties page, select the Permissions tab. The Permissions tab displays, as shown in Figure 2–7.

Figure 2–7   Set Properties - Permissions
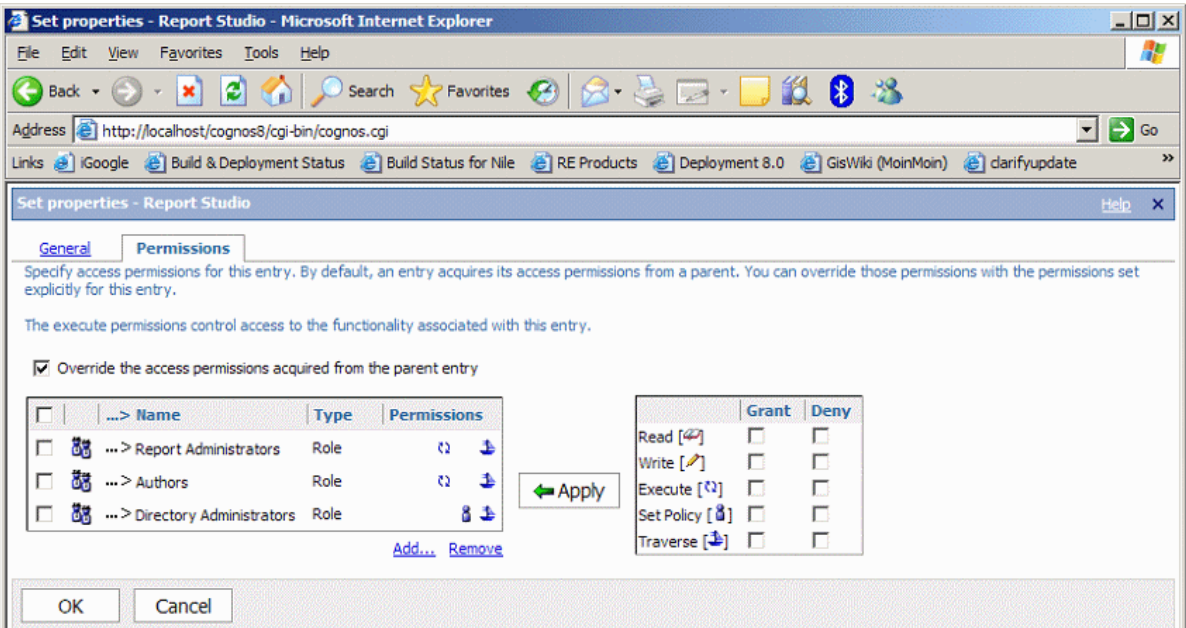
4. Choose whether to use the permissions of the parent entry or select permissions specifically for the entry:

   • To use the permissions of the parent entry, clear the Override the access permissions acquired from the parent entry option. If you are prompted to use the parent permissions, click OK in the prompt dialog. Click OK on the Set Properties screen.

   • To set access permissions for the entry, select the Override the access permissions acquired from the parent entry option, then proceed to step 5.

5. To remove an entry from the list, select it and click Remove.

6. To specify a new entry for which you want to grant or deny access, click Add.

7. The screen shown in Figure 2–8, "Select Entries" displays. In the Available entries, select the sscap checkbox and click the arrow to move it to the Selected Entries. Click OK.

Figure 2–8   Select Entries
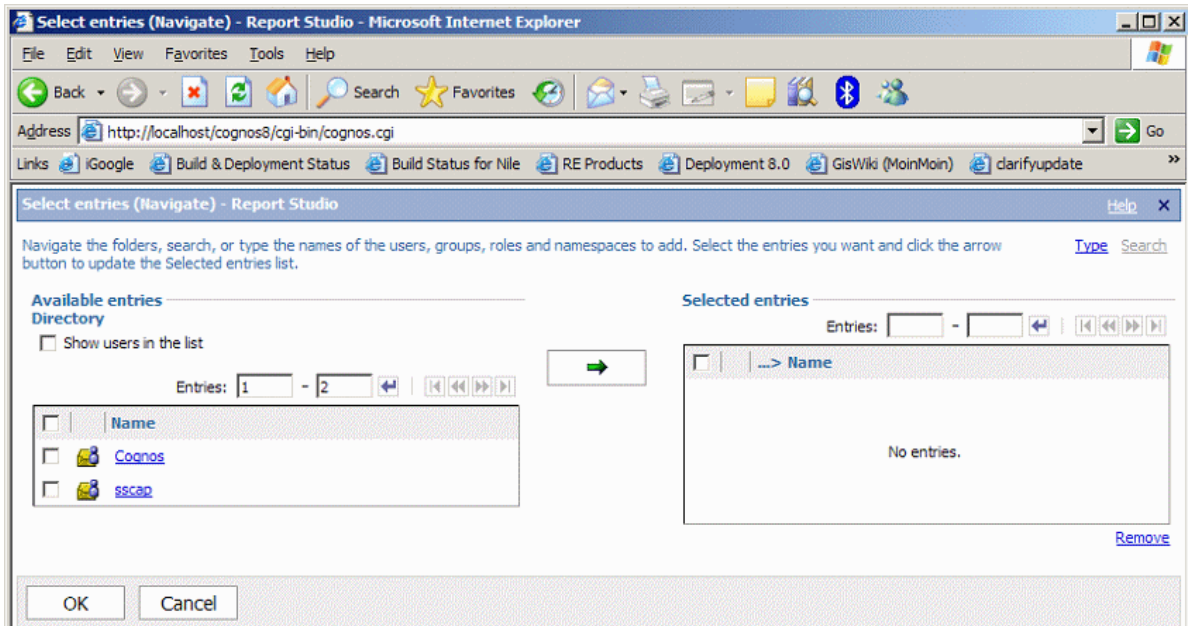
8. The screen shown in Figure 2–9 displays. In the Available entries, select the SYSTEM checkbox and click the arrow to move it to the Selected Entries. Click OK.

Figure 2–9   Select Entries
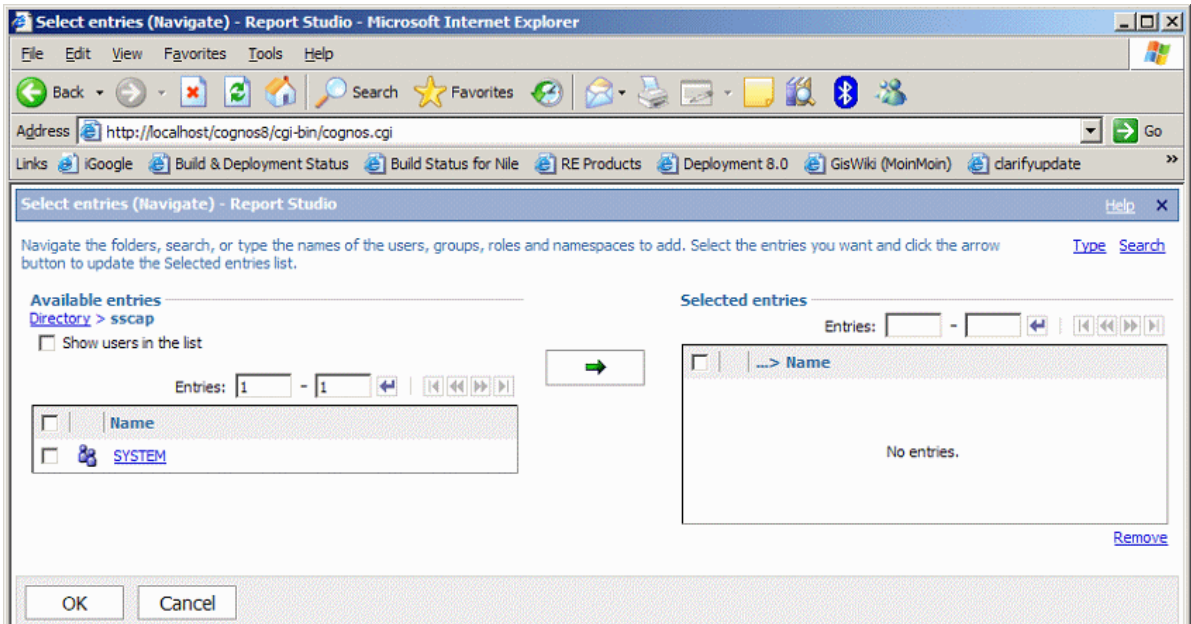
9. Select entries using one of the following methods:

- To choose from the listed entries, click the appropriate namespace, and select the users, groups, or roles.

- To enter new names, click Type and type the names of the groups, roles, or users into the Entries field. Separate multiple entries with a semicolon (;), as shown in the following example and in Figure 2–10.

  For example: sscap/SYSTEM;Cognos/Everyone

Figure 2–10   Selecting Entries
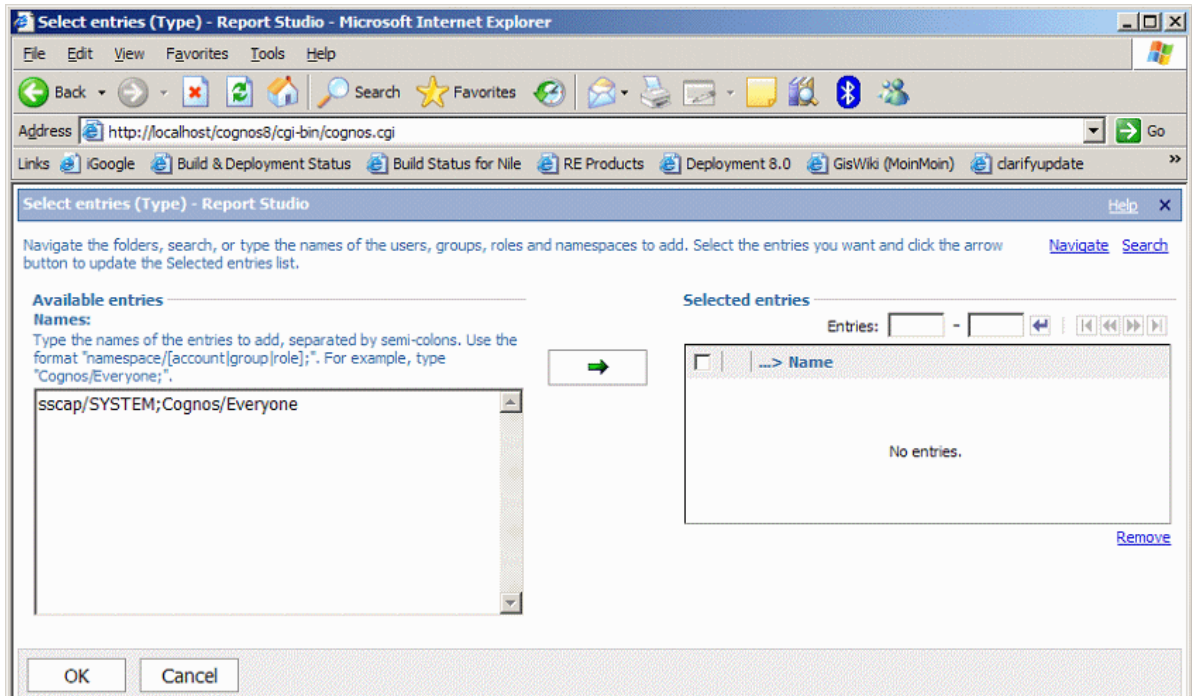
10. Click the right-arrow to move entries to the Selected entries box and click OK when done. You return to the Permissions tab, as shown in Figure 2–11.

Figure 2–11   Granting Permissions
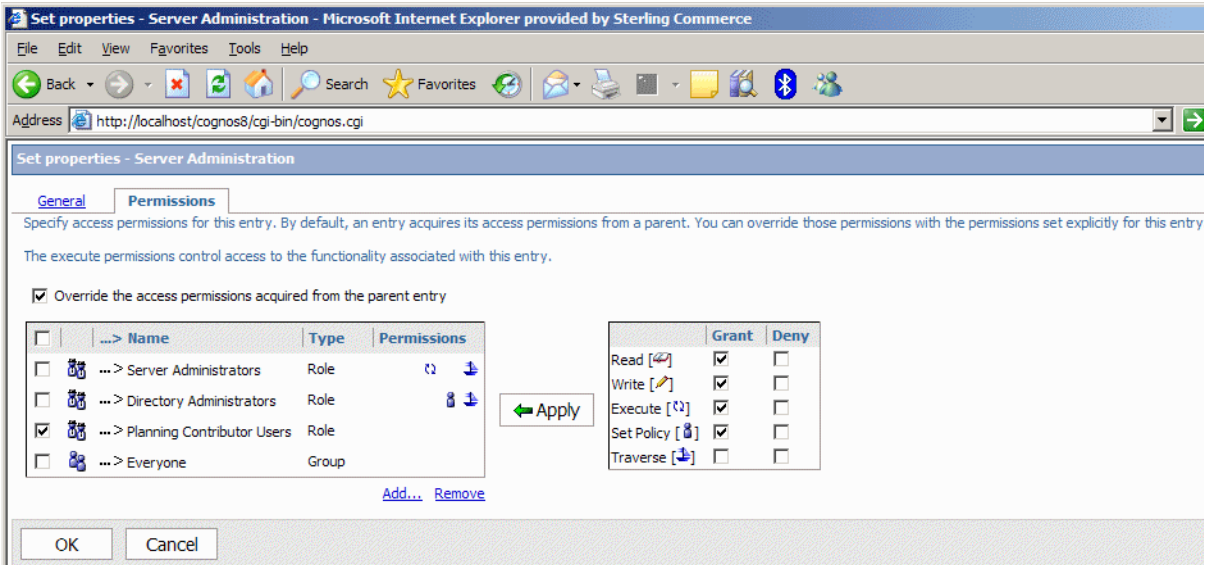
11. For each entry in the list, check the box for the types of access you want to grant or deny.

12. Click Apply. The icon next to each user, group, or role in the Permissions column represents the type of access granted or denied.

13. If you want to replace the existing permissions of the child entries with the permissions you set for this entry, in the Option section, select the Delete the access permissions of all child entries check box. This option appears only with the entries that are containers.

14. Click OK.

2.2.2.3 User Authentication Between Cognos and Sterling Call Center and Sterling Store: Business Intelligence

In Sterling Call Center and Sterling Store: Business Intelligence, the YantraAuthenticationServlet authenticates the user credentials being passed from Cognos. The servlet resides on the Sterling Call Center and Sterling Store server and does the following:

- Authenticates the user

- Provides information about user details/user groups

- Verifies that the user is a Cognos Administrator and returns user groups based on the user resource permissions

The following table contains the interfaces provided by Cognos that are used for authentication:

Table 2–1   Cognos Authentication Interfaces

Interface	Description
com.cognos.CAM_AAA.authentication. INamespaceAuthenticationProvider2	Main interface. Must be implemented for authenticating users to log in to the Cognos applications. YantraAuthentication is the implementation class.
com.cognos.CAM_AAA.authentication.IAccount	Interface that holds user information. YantraAccount is the implementation class.
com.cognos.CAM_AAA.authentication.IGroup	Interface that holds user group information. YantraGroup is the implementation class.
com.cognos.CAM_AAA.authentication.IVisa	Interface that holds user information such as user details/user groups and user roles. YantraVisa is the implementation class.

Figure 2–12 illustrates the Cognos authentication process flow:

Figure 2–12   Cognos Authentication Process Flow Chart
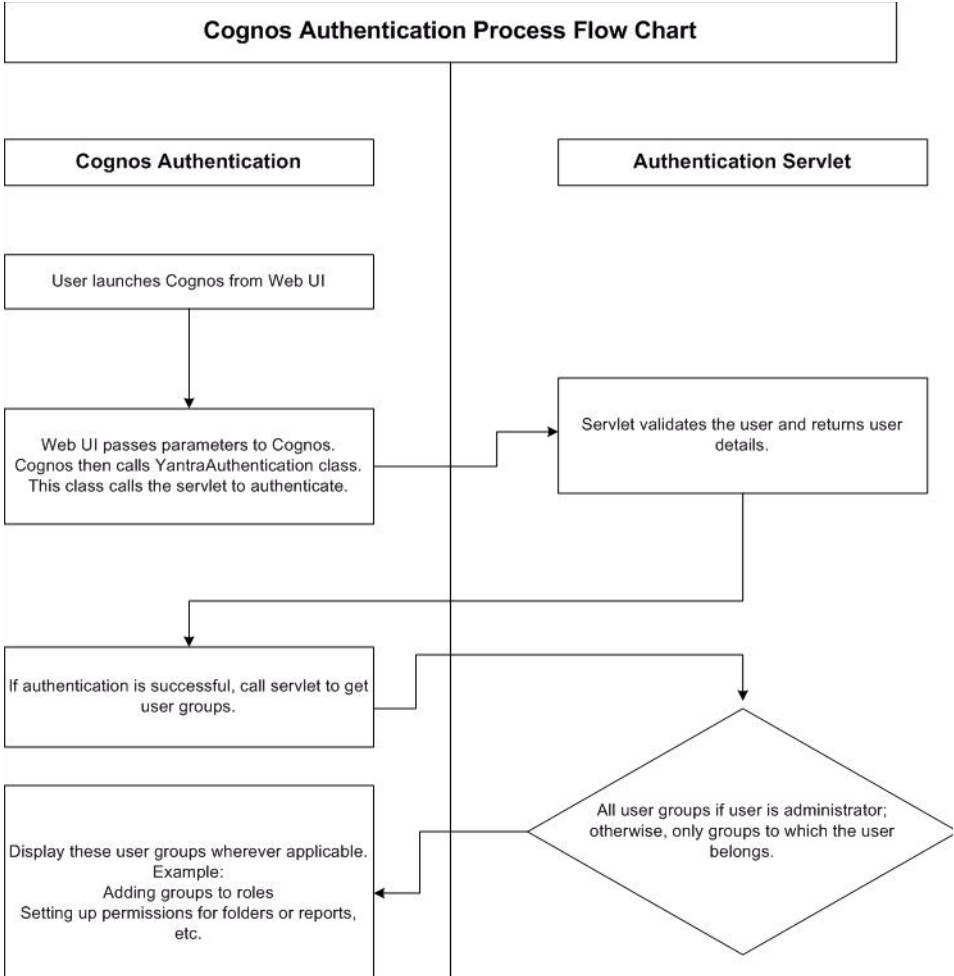
2.2.3 Isolating Sterling Call Center and Sterling Store Data from Sterling Call Center and Sterling Store: Business Intelligence

Typically, users who use the Sterling Call Center and Sterling Store: Business Intelligence and Cognos prefer to separate the Sterling Call Center and Sterling Store data from Sterling Call Center and Sterling

Store: Business Intelligence and grant read-only permissions to the Cognos data source because:

- Users do not want to risk the unauthorized usage of the database user name or password or both pertaining to the Sterling Call Center and Sterling Store: Business Intelligence in Cognos.

- If the user name or password or both pertaining to the Sterling Call Center and Sterling Store: Business Intelligence changes, the Cognos data source must be modified.

To overcome these limitations, users must create and expose views without having the need for the Sterling Call Center and Sterling Store: Business Intelligence user name or password or both.

To separate the Sterling Call Center and Sterling Store: Business Intelligence data from the Foundation tables:

1. In the Sterling Call Center and Sterling Store Database, create the Sterling Call Center and Sterling Store: Business Intelligence views. For more information about creating table views, see Section 2.3.2, "Creating the Sterling Call Center and Sterling Store: Business Intelligence Table Views".

2. Grant select privileges to a non-Sterling Call Center and Sterling Store: Business Intelligence administrative user (for example, yanalytics).

3. Create synonyms under the yanalytics schema to point to the views created in the Sterling Call Center and Sterling Store schema.

4. Create or modify the Cognos data source to point to the yanalytics schema.

2.3 Sterling Call Center and Sterling Store: Business Intelligence Setup

Before using the Sterling Call Center and Sterling Store: Business Intelligence component, you must:

1. Install Sterling Call Center and Sterling Store: Business Intelligence. See Section 2.3.1, "Installing Sterling Call Center and Sterling Store: Business Intelligence".

2. Create the Sterling Call Center and Sterling Store: Business Intelligence views in the Sterling Call Center and Sterling Store database. See Section 2.3.2, "Creating the Sterling Call Center and Sterling Store: Business Intelligence Table Views".

3. Run scripts to install the custom files. See Section 2.3.3, "Running Custom Scripts".

2.3.1 Installing Sterling Call Center and Sterling Store: Business Intelligence

To install Sterling Call Center and Sterling Store: Business Intelligence, perform the following tasks:

1. Place the Sterling Call Center and Sterling Store installation CD in the appropriate drive.

2. From the installation CD, copy the `YCDAnalytics.jar` file to your home directory or base directory. This directory is referred to as the `<TEMP>` directory.

If you are using FTP to copy the files, ensure that your session is set to binary mode.

3. Create a directory where you want to install Sterling Call Center and Sterling Store: Business Intelligence, and navigate to that directory. This directory is referred to as the `<ANALYTICS_HOME>` directory.

4. Run the following command:

```
<JAVA_HOME>/bin/jar -xvf <TEMP>/YCDAnalytics.jar
```

2.3.2 Creating the Sterling Call Center and Sterling Store: Business Intelligence Table Views

Before using the Sterling Call Center and Sterling Store: Business Intelligence component, create the Sterling Call Center and Sterling Store: Business Intelligence Framework views in the Sterling Call Center and Sterling Store database. The Sterling Call Center and Sterling Store: Business Intelligence metadata model is created from a set of Framework views instead of from the YFS tables directly.

> **Note:** If you are using the Microsoft SQL Server® database, ensure that Sterling Call Center and Sterling Store: Business Intelligence is installed on Windows.

The Framework views that are created are used specifically by the Sterling Call Center and Sterling Store: Business Intelligence framework. The naming convention for these views is `YCD_<view_name>_VW`.

You can choose to generate WithHistory views or WithoutHistory views, based on your implementation requirements.

For more information about WithHistory and WithoutHistory views, see Section 3.1, "Sterling Call Center and Sterling Store: Business Intelligence Framework Views".

2.3.2.1 Creating WithHistory Views

To create WithHistory views:

1. If the Sterling Call Center and Sterling Store application and Sterling Call Center and Sterling Store: Business Intelligence are installed on the same server, ensure that the `<INSTALL_DIR>` and `<ANALYTICS_HOME>` environment variables are set to the Sterling Call Center and Sterling Store installation directory and the Sterling Call Center and Sterling Store: Business Intelligence Installation directory respectively.

    If the Sterling Call Center and Sterling Store application and Sterling Call Center and Sterling Store: Business Intelligence are installed on different servers, perform the following tasks:

    *   Create a new directory and set the `<INSTALL_DIR>` environment variable to point to the new directory.

    *   In the new directory, create the `properties` subdirectory.

    *   Copy the `jdbc.properties`, `sandbox.cfg`, and `noapp.properties` file from the Sterling Call Center and Sterling Store application installation directory to the `properties` subdirectory.

2. Invoke the following script in the `<ANALYTICS_HOME>/database/<database>/Scripts/WithHistory` folder, where `<database>` refers to `oracle`, `db2`, or `sqlserver`:

```
ant -f ycd_master_db_script.xml -logfile
ycd_master_db_script.log
```

3. On executing this command, the `ycd_master_db_script.log` file is created under the `WithHistory` folder.

2.3.2.2 Creating WithoutHistory Views

To create WithoutHistory Views:

1. If the Sterling Call Center and Sterling Store application and Sterling Call Center and Sterling Store: Business Intelligence are installed on the same server, ensure that the `<INSTALL_DIR>` and `<ANALYTICS_HOME>` environment variables are set to the Sterling Call Center and Sterling Store installation directory and the Sterling Call Center and Sterling Store: Business Intelligence Installation directory respectively.

   If the Sterling Call Center and Sterling Store application and Sterling Call Center and Sterling Store: Business Intelligence are installed on different servers, perform the following actions:

   - Create a new directory and set the `<INSTALL_DIR>` environment variable to point to the new directory.

   - In the new directory, create the `properties` subdirectory.

   - Copy the `jdbc.properties`, `sandbox.cfg`, and `noapp.properties` file from the Sterling Call Center and Sterling Store application installation folder to the `properties` subdirectory.

2. Invoke the following script in the `<ANALYTICS_HOME>/database/<database>/Scripts/WithoutHistory` folder, where `<database>` refers to `oracle`, `db2`, or `sqlserver`:

   ```
   ant -f ycd_master_db_script.xml -logfile
   ycd_master_db_script.log
   ```

3. On executing this command, the `ycd_master_db_script.log` file is created under the `WithoutHistory` folder.

2.3.3 Running Custom Scripts

To install a set of customized Web pages and images that enhance the users' experience of the Sterling Call Center and Sterling Store: Business

Intelligence Web component and to enable the Sterling Call Center and Sterling Store applications branding in this installation, you must complete the following tasks:

For Windows

1. Set the environment variables for COGNOS_HOME and ANALYTICS_HOME in the following scripts:

   - `Image_Setup.bat`

   - `Customize_Cognos_Connection.bat`

2. Set the environment variables for SKIN_DIR in the `Image_Setup.bat` script.

3. Images: Run `<ANALYTICS_HOME>\scripts\Image_Setup.bat`. This copies some of the Sterling Call Center and Sterling Store: Business Intelligence images over the Cognos 8.4 images.

4. Customizing Cognos Connection: Run `<ANALYTICS_HOME>\scripts\Customize_Cognos_Connection.bat`. This customizes Cognos Connection according to the specifications of the Sterling Call Center and Sterling Store applications.

For UNIX

1. Set the environment variables for COGNOS_HOME and ANALYTICS_HOME in the following scripts:

   - `$ANALYTICS_HOME/scripts/image_setup.sh`

   - `$ANALYTICS_HOME/scripts/customize_cognos_connection.sh`

2. Set the environment variables for SKIN_DIR in the `image_setup.sh` script.

3. Images: Run `$ANALYTICS_HOME/scripts/image_setup.sh`. This copies some of the Sterling Call Center and Sterling Store: Business Intelligence images over the Cognos 8.4 images.

4. Customizing Cognos Connection: Run `$ANALYTICS_HOME/scripts/customize_cognos_connection.sh`. This customizes Cognos Connection according to the specifications of the Sterling Call Center and Sterling Store: Business Intelligence.

2.4 Configuring Cognos to Run with Sterling Call Center and Sterling Store: Business Intelligence

Before running Cognos Connection or PowerPlay with the Sterling Call Center and Sterling Store, you must ensure that you:

- Set up the Cognos components as described (see Chapter 2.1, "Cognos Setup")

- Deploy reports for Sterling Call Center and Sterling Store: Business Intelligence (see Section 2.4.1, "Deploying the Sterling Call Center and Sterling Store: Business Intelligence Reports")

- Modify your `customer_overrides.properties` file (see Section 2.4.2, "Properties Modifications")

2.4.1 Deploying the Sterling Call Center and Sterling Store: Business Intelligence Reports

Ensure that the following tasks have been completed:

- Cognos Connection has been installed.

- The content repository has been created through the Cognos Configurator.

- Data sources, which have the following names, have been created using Cognos Connection:

    - `ycd-meta`

    - `ycd-config-default`

    - `ycd-transaction-default`

    - `ycd-masterdata-default`

Optionally, for transaction and master data schema types, you can create data sources in the following pattern:

`ycd-<transaction|masterdata>-<pk_prefix>`

For example:

- `ycd-transaction-01`

- `ycd-transaction-02`

> **Note:** Selling and Fulfillment Foundation does not allow you to configure multiple meta and config schema types.

For more information about colony IDs and multischema features, see the *Selling and Fulfillment Foundation: Multitenant Enterprise Guide*.

For more information, see the *Cognos Configuration User Guide*.

To deploy the Sterling Call Center and Sterling Store: Business Intelligence reports:

1. Copy the `YCD-Analytics.zip` deployment file from the `<Sterling Call Center and Sterling Store: Business Intelligence Installation Directory>/deployment` folder into the deployment directory as specified in the Cognos Configurator. The default is `<Cognos_8_Installation_Directory>/deployment`

2. Follow these steps to import `YCD-Analytics.zip` into the Cognos Content Repository.

   - Set the `ANALYTICS_HOME` environment variable as the Sterling Call Center and Sterling Store: Business Intelligence Installation directory.

   - Set the `COGNOS_HOME` environment variable as the parent of the Cognos 8.4 Installation directory, for example, if Cognos 8.4 is installed in the `/usr/local/cognos/c8` directory, `COGNOS_HOME` should point to the `/usr/local/cognos` directory.

   - The `ycdinstallanalytics.xml` file assumes that you have installed Cognos 8.4 and Sterling Call Center and Sterling Store: Business Intelligence on the same machine. If, however, you have installed Cognos 8.4 and Sterling Call Center and Sterling Store: Business Intelligence on two separate machines, modify the following line of this XML by replacing `localhost` with the IP address of the machine where Cognos 8.4 has been installed:

   - `<property name="cognosurl" value="http://localhost:9300/p2pd/servlet/dispatch"/>`

> **Note:** For all Web communications in Cognos 8.4, Sterling Call Center and Sterling Store: Business Intelligence supports only CGI as the Cognos 8.4 Gateway.

> **Note:** Ensure that you copy the following third-party JAR files from the `<COGNOS_HOME>/c8/webapps/p2pd/WEB-INF/lib` folder to the `<ANALYTICS_HOME>/lib` folder:
>
> - axis.jar
> - axisCrnpClient.jar
> - CAM_AAA_CustomIF.jar
> - commons-discovery.jar
> - commons-logging.jar
> - dom4j.jar
> - jaxrpc.jar
> - saaj.jar
> - wsdl4j.jar
> - xalan.jar
> - xercesImpl.jar
> - xml-apis.jar

3. Run the following command from the `<ANALYTICS_HOME>/bin` directory:

   ```
   ant -f ycdinstallanalytics.xml
   ```

   This publishes the Sterling Call Center and Sterling Store: Business Intelligence package with reports into the Cognos Content Repository.

> **Note:** Before running the above command, ensure that the Cognos service has been started with `Allow anonymous access` set to 'True'.
>
> After successful import of the content repository, set `Allow anonymous access` to 'False'.

4. If Sterling Call Center and Sterling Store: Business Intelligence and Cognos 8.4 are installed on the same machine, you must additionally run the target `copylib` in `ycdinstallanalytics.xml`

Run the following command from the `<ANALYTICS_HOME>/bin` directory:

`ant -f ycdinstallanalytics.xml copylib`

Running this target copies:

— `<ANALYTICS_HOME>/lib/sscap-auth.jar` to `<Cognos 8 Installation Directory>/webapps/p2pd/WEB-INF/lib` folder

— `<ANALYTICS_HOME>/bin/analytics.properties` to `<Cognos 8 Installation Directory>/webapps/p2pd/WEB-INF/classes` folder

> **Note:** Ensure that in the analytics.properties file, the sscap.app.url property is set to Selling and Fulfillment Foundation application server URL.

If Sterling Call Center and Sterling Store: Business Intelligence and Cognos 8.4 are installed on different machines, copy the `<ANALYTICS_HOME>/lib/sscap-auth.jar` to the `<Cognos 8 Installation Directory>/c8/webapp/p2pd/WEB-INF/lib` folder on the machine where Cognos 8.4 is installed.

5. Restart the Cognos service.

2.4.2 Properties Modifications

Sterling Call Center and Sterling Store: Business Intelligence is provided in the form of eight reports for the Distributed Order Management (DOM) and the Warehouse Management System (WMS). For DOM, Sterling Call

Center and Sterling Store: Business Intelligence is also provided in the form of PowerPlay.

2.4.2.1 Launching Sterling Call Center and Sterling Store: Business Intelligence

To launch Sterling Call Center and Sterling Store: Business Intelligence from the Sterling Call Center and Sterling Store console, you must configure the `analytics.reportnet.url` property in the `<INSTALL_DIR>/properties/customer_overrides.properties` file.

The Sterling Call Center and Sterling Store: Business Intelligence URL format is:

`http://<machinename>/cognos8/cgi-bin/cognos.cgi`

`<machinename>` should be replaced with the machine name or the IP address of the Cognos ReportNet installation machine.

For additional information about modifying properties and the `customer_overrides.properties` file, see the.

> **Note:** Do not change the other parts of this URL. Sterling Call Center and Sterling Store: Business Intelligence access from the Sterling Call Center and Sterling Store applications may fail.

You must also set the `analytics.namespace` property to "YCD" in the `<INSTALL_DIR>/properties/customer_overrides.properties` file. This property indicates the namespace that is to be configured to authenticate users in COGNOS 8.4 BI.

3

Sterling Call Center and Sterling Store: Business Intelligence Framework

This chapter provides a detailed description of the Sterling Call Center and Sterling Store: Business Intelligence Framework, which is the foundation on which you build a set of reports.

The Sterling Call Center and Sterling Store: Business Intelligence Framework consists of:

- Sterling Call Center and Sterling Store: Business Intelligence Framework views in the Sterling Call Center and Sterling Store database (see Section 3.1, "Sterling Call Center and Sterling Store: Business Intelligence Framework Views" on page 36)

- Data Model (see Section 3.2, "Data Model")

You must complete the following tasks for effective utilization of Sterling Call Center and Sterling Store: Business Intelligence for analysis and reporting:

1. Create views in the Sterling Call Center and Sterling Store database (see Section 2.3.2, "Creating the Sterling Call Center and Sterling Store: Business Intelligence Table Views" on page 25).

2. Optionally, build reports (see Section 3.4, "Designing Reports" on page 44).

3. Deploy reports (see Chapter 5, "Deploying Reports").

4. Refresh reports (see Chapter 5, "Deploying Reports").

5. Optionally, extend reports.

Figure 1–1, "Report Flow Diagram" illustrates the flow for report building.

3.1 Sterling Call Center and Sterling Store: Business Intelligence Framework Views

The Sterling Call Center and Sterling Store: Business Intelligence Framework views are the foundation for the Sterling Call Center and Sterling Store: Business Intelligence metadata model. They provide flexibility when exposing the underlying table changes in the database. These views also hide some of the complex table joins and the "where" clauses that are specific to the design of the Sterling Call Center and Sterling Store system. If you extend the basic Data Model to include other tables from the Sterling Call Center and Sterling Store Database, It is recommended that you follow the same methodology. For more details about extending the Data Model, see Chapter 6, "Extending the Sterling Call Center and Sterling Store: Business Intelligence Data Model". Column names of the views are usually identical to the underlying table field name.

Most of the views span one table. Others span multiple related tables, providing a list of columns containing important transactional information. Some views contain denormalized information that help reduce the complexity of the Data Model, for example, the YFS_PERSON_INFO table has been denormalized in all the related views.

Sterling Call Center and Sterling Store: Business Intelligence provides two sets of views: WithHistory and WithoutHistory. WithHistory views contain the Sterling Call Center and Sterling Store: Business Intelligence view set and run against historical and non-historical data. WithoutHistory views contain the Sterling Call Center and Sterling Store: Business Intelligence view set but only run against non-historical data.

> **Important:**   WithHistory and WithoutHistory views work off the same view names and set of folders. Configure the model to access different view sets from different schema, one for historical data and one for non-historical data.

3.2 Data Model

The Data Model is a metadata model that provides:

* A single administration point for metadata supporting Cognos 8.4 reports and PowerPlay.

- Centralized business rule definitions for maintenance and consistency.

- Access to data from several different types of sources.

- Expanded querying and reporting capabilities.

- Centralized data access setup (permissions)

3.2.1 Data Model Objects

The Data Model provides a simplified, English-oriented, non-technical view of the metadata. In the Data Model, business entities are defined and renamed such that they can be represented using common business names and grouped from a business perspective. The Data Model provides intuitive access to the report building blocks. Using Tools > Modify Names, you can change the names of the columns. This function provides a list of name rules that are run for these entities. The Data Model has the following components:

- Filters

- Entities

- Joins

- Prompts

- Parameter Maps

3.2.1.1 Filters

Sterling Call Center and Sterling Store applications provides filters that can be used to narrow down the selected data. Filters are also required for limiting access to data for different classes of users.

A filter includes the data that is "filtered" (filtered in, not filtered out). For condition-level details of a filter, see the filter properties in the model. The SQL that is formed in cases where a filter is applied contains the condition of that filter. Following is the filter that is provided:

- **Sales Order** – Limits data to the Document_Type 0001.

3.2.1.2 Entities

The Data Model includes entities from the views and entities created in the model.

Entities from Views

For details about these entities, see Appendix A, "Sterling Call Center and Sterling Store: Business Intelligence Views".

Entities Created in the Catalog

When a normalized database, typically represented as a star model, is modeled, it is denormalized in the model to allow multiple joins in the same tables. That is, a star model is expanded into a snowflake. Some of this denormalization is done in the Sterling Call Center and Sterling Store: Business Intelligence Framework views for commonly joined tables, such as YFS_PERSON_INFO. Other entities have been duplicated in the Data Model.

3.2.1.3 Joins

Joins are created in the Data Model. This reduces the maintenance overhead for the model.

Cardinality for Joins

The cardinality for the joins are specified in accordance with the database design logic for the various entities, for example, an Order Header may not always have a Carrier Service Code. Therefore, the cardinality for the Order Header join with Organization Carrier is 0:1 on the Carrier side.

Additionally, to allow flexibility in reporting, some of the joins have optional cardinality (0:1 or 0:n). This is done so that, in a query, the main entity's data set is not restricted because of lack of data in the views it is joined with. Typically, the transactional views do not have optional joins, however, the master views have them.

The Data Model allows changing of the optional cardinality to a direct join at an individual report level, for example, see "Join Cardinality Flexibility".

Join Cardinality Flexibility

The Item and Item Alias entities have a 1:1-0:n join in the business layer. When a Cognos 8.4 report containing these two entities is created, it is as follows:

```
select T1."MANUFACTURER_NAME" as c1,
  T2."ALIAS_NAME" as c2
from ("YAF_ITEM_VW" T1 left outer join "YAF_ITEM_ALIAS_VW" T2 on T2."ITEM_KEY" =
```

```
T1."ITEM_KEY")
--If we now uncheck the Report->Query->Access->"Include the missing table join
--values (outer join)" check box, the query changes to
select T1."MANUFACTURER_NAME" as c1,
  T2."ALIAS_NAME" as c2
from "YAF_ITEM_ALIAS_VW" T2,
YAF_ITEM_VW" T1
where (T2."ITEM_KEY" = T1."ITEM_KEY")
```

However, if the join in the business layer was 1:1-1:n instead, the flexibility described here is not possible to achieve.

3.2.1.4 Prompts

A "Sales Order #" prompt is provided for selecting a single order based on Data Model organization.

The Data Model contains *Subject Folders* that group functionally related *Subjects* together. This is done to easily locate the Subject Attributes needed to create reports (Impromptu Query Definitions - IQDs). Some of the subjects contain sets of attributes that are further grouped into subject folders for the same reasons. This creates a hierarchical folder structure for easy lookup. Such subjects, called "Categorized Subjects", have a Subject Folder and a Subject by the same name. For example, see Item under the Catalog Subject Folder as illustrated in Figure 3–1.

Figure 3–1   Item Subject Folder
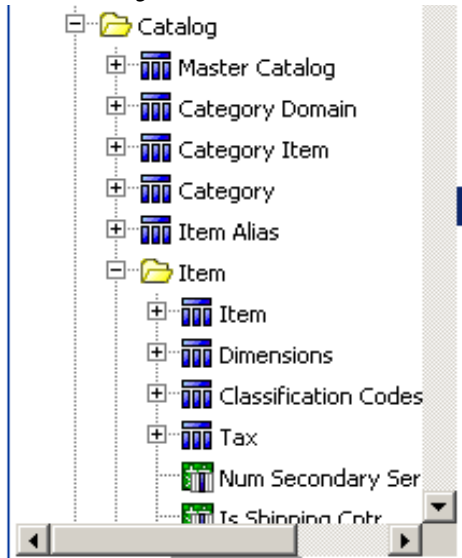
An example of a case that uses multiple categorized subjects is the Order folder. Multiple categorized subjects create a more complex hierarchical folder structure and are accessed as in the following Order Line example:

- Order/Order Line/Order Line/Order Line for the general attributes of Order Line

- Order/Order Line/Order Line/Financials for the Financial attributes

Figure 3–2 illustrates the Order Line subject folder hierarchy.

Figure 3–2   Orders Subject Folder
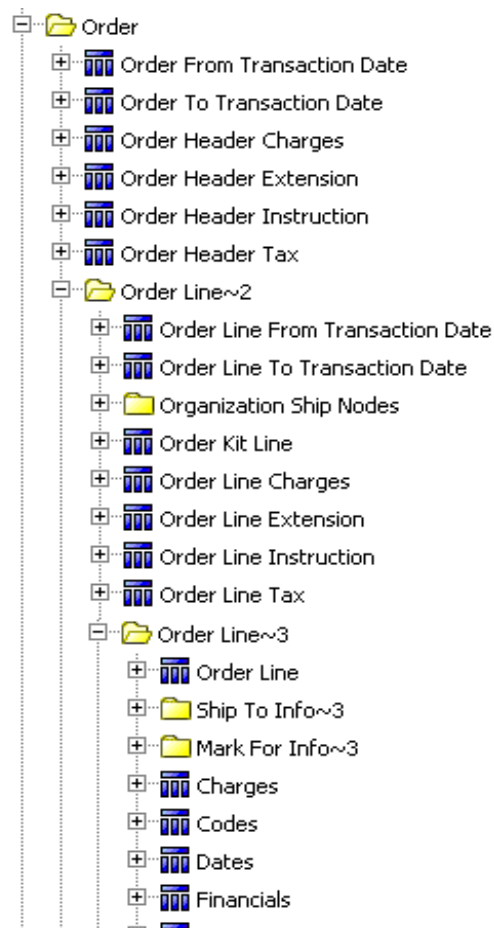
Other cases that use multiple categorized subjects are Order Release and the Order Header folders. For more details about each subject, see the corresponding view in Appendix A, "Sterling Call Center and Sterling Store: Business Intelligence Views" and the Entity Relationship Diagrams (ERDs) HTML.

3.2.1.5 Parameter Maps

Sterling Call Center and Sterling Store supports multiple schemas in an installation. This multiple schema implementation of Sterling Call Center

and Sterling Store: Business Intelligence requires you to select tables from the correct schema. A Cognos data source for each schema facilitates this. The schema is then dynamically selected for the report through the Enterprise option, which is a part of the Enterprise drop-down list.

**Choose the Enterprise**

Enterprise

Four data sources are present within the Cognos Framework Manager, based on the following schema types:

- Configuration
- Metadata
- Masterdata
- Transaction

Data sources within the Framework Manager are pointers to the true data sources defined in the Cognos connection. Database query subjects are hard coded with one of these four schemas. (For a list of tables associated with a particular schema, see the *Selling and Fulfillment Foundation: Multitenant Enterprise Guide*.) In Sterling Call Center and Sterling Store, Release 8.5, the Transaction and Masterdata data sources will point to the same schema.

You can define multischema prompts in the Parameter Map Definition - MultiSchema_Prompts window. The key associated with a prompt will be used as an input when an enterprise is selected while creating an

Sterling Call Center and Sterling Store: Business Intelligence report. All reports are specific to an enterprise.

This input will be used by other parameter maps that map Enterprise Code to Datasource and Schema. A chain of parameter maps can be

created by associating the value of one parameter map with the next parameter map in the Properties window.

The prompt that is defined in the parameter map is used in Sterling Call Center and Sterling Store: Business Intelligence reports. The parameters defined in the Framework Manager can be reused in Cognos Report Studio.

> **Note:**   Multiple schemas do not support cross-schema unions.

3.3 Limiting Access to Data

Creating filters and user classes limit access to data. Users' access to data in reports is restricted in Cognos using filters that are associated with user classes. For example, to allow various ship node users to see a common ship node report, you can create a filter for each ship node user and associate it with the user class for the corresponding user.

It is not necessary to create filters or user classes to start using Analytics. However, it is strongly recommended that you set these up before you deploy the reports. For details on how to set up Users and User Classes, see the Cognos Access Manager documentation. For details on creating filters, see the Cognos 8.4 documentation.

3.4 Designing Reports

Reports are created using Cognos 8.4. Please refer to the Cognos 8.4 documentation for information about designing reports.

4

Reports for Sterling Call Center and Sterling Store: Business Intelligence

Sterling Call Center and Sterling Store: Business Intelligence provides the capability to generate many reports. Call center managers and store managers may need information about the performance of a particular CSR or store associate, or the best cross-sell item. Pricing analysts and product managers may need information about the items that are frequently price matched.

Access to these reports is controlled, based on the group to which the user belongs to.

After the user navigates to the Search screen of a specific report, the criteria for generating the report can be entered in the Search screen. Based on the specified criteria, Sterling Call Center and Sterling Store: Business Intelligence generates and displays the report appropriately.

Sterling Call Center and Sterling Store: Business Intelligence provides the following reports:

- Cross Sell Report
- CSR Report
- Price Match Report

4.1 Cross Sell Report

Call Center Managers and Store Managers may need information about the cross sales performance of the call center or store. This report provides information about the best cross selling items. This report also allows you to compare the average cross sell revenue per order for a given period with the previous period.

4.2 CSR Report

Call Center Managers and Store Managers may need to track information about the number of sales and revenue generated by a particular CSR or store associate. This report provides visibility into the number of sales, total cross sell, revenue generated, and alerts resolved during a specific period of time.

4.3 Price Match Report

Pricing Analysts and Product Managers may need information about the items that are frequently price matched, competitor against who the items are frequently priced matched etc. This report helps in making decisions such as:

- If a large number of items are price matched against a particular competitor, verify if there is a sale or if the competitor is a discount retailer and exclude the competitor from the price match list.

- If an item has been price matched frequently, then the pricing analyst may need to re-price the item. If an item is not price matched, then the pricing analyst may want to re-price the item at a higher price.

For more information about the various reports provided by Sterling Call Center and Sterling Store: Business Intelligence, see the *Sterling Call Center and Sterling Store: User Guide*.

5

Deploying Reports

The Cognos 8.4 Reports and Sterling Call Center and Sterling Store: Business Intelligence Transformer Cube Models (.mdl files) described in Chapter 4, "Reports for Sterling Call Center and Sterling Store: Business Intelligence" are merely report designs. To view the data, you must deploy the reports and refresh them against your database. The resulting reports allow you to analyze the data in various forms.

Read the Cognos 8.4, PowerPlay Enterprise Server, Impromptu, and Access Manager administration guides before deploying Sterling Call Center and Sterling Store: Business Intelligence.

5.1 Deploying Reports

For more information about deploying Sterling Call Center and Sterling Store: Business Intelligence reports, see the corresponding Cognos 8.4 documentation.

Ensure that appropriate filter values are provided for any reports that have filters, for example, for data or security.

5.1.1 Suggested Folder Structure for Reports

It is recommended that you perform the following steps to create your folder structure for report deployment:

1. Create a folder named Staging (or similar) under
   `/<INSTALL_DIR>/<ANALYTICS_HOME>`.

2. Under the Staging folder create a folder named Publish.

3. Under the Publish folder, create a folder for Reports where the reports that are ready to be deployed are stored.

4. You can create additional folders under Reports to group reports, for example, Finance or Marketing.

5.2 Refreshing Reports

Based on the type of report deployed, the report could be either scheduled to refresh at certain times, or is run at the time it is viewed, for example, Burst Reports. See the Cognos 8.4 documentation for more information about refreshing reports.

6

Extending the Sterling Call Center and Sterling Store: Business Intelligence Data Model

The Sterling Call Center and Sterling Store: Business Intelligence Data Model can be modified to incorporate the specific needs of your Sterling Call Center and Sterling Store applications installation by extending the Catalog. This chapter discusses how you can extend the Catalog.

For information about extending your Sterling Call Center and Sterling Store applications installation, see the *Selling and Fulfillment Foundation: Customization Guide.*

Before you extend the Data Model, read the Cognos 8.4 documentation so that you understand how to use the product and you can apply that knowledge to the Data Model. Ensure that you to backup all the components will be modified.

The Data Model is extended by adding, deleting or renaming fields, tables and views, or entities.

6.1 Adding Fields, Tables and Views

To add fields, tables, and views, follow the instructions in the Cognos 8.4 documentation.

6.2 Deleting or Renaming Fields, Tables, and Views

It is recommended that you do **not** delete or rename the objects that already exist in the Catalog delivered with Sterling Call Center and

Sterling Store: Business Intelligence. This can create compatibility problems with future versions of the Sterling Call Center and Sterling Store: Business Intelligence Framework components. However, if it is absolutely necessary to delete some objects, follow the guidelines in the Cognos 8.4 documentation.

7

Troubleshooting and Tuning

This chapter explains some of the issues that may be encountered when using Sterling Call Center and Sterling Store: Business Intelligence. It also includes tips about overcoming these issues. However, this chapter does not include troubleshooting instructions for standard Cognos products or issues. For Cognos related troubleshooting, see the Cognos documentation.

7.1 The Access Manager is Not Working

Perform the following verifications to ensure that the Access Manager is running correctly:

1. Make sure that the Access Manager is installed after the Netscape LDAP server is installed, configured, and registered.

2. Configure the Cognos LDAP authentication using the same settings as that used to configure the Sterling Call Center and Sterling Store applications.

3. When registering the Access Manager using the Access Manager Wizard, use the same information as in step 2.

4. If for some reason, the authentication is not working for the default namespace, then uninstall the Access Manager, re-install LDAP, and re-configure with proper parameters, re-register and then try connecting again.

7.2 SQL Net Connect String Error

If you get the "The SQL Net connect string shown on the Analytics catalog is BLACKHOLE after installing the Sterling Call Center and

Sterling Store: Business Intelligence Framework on a fresh server" error when trying to open the catalog:

"The catalog's available user classes do not correspond to any defined by the Common Logon Server"

Follow these steps to ensure that the YAF-catalog can be opened:

1. Launch the Access Manager Administrator.

2. Right-click Root User Class, and select Add User Class and perform the following functions:

    –   Under the General tab enter Creator in the Name text box.

    –   Select the Permissions tab and set the permissions for the Creator user class.

    –   Click Apply to save information.

    –   Click OK to return to the Access Manager Administration Tree.

3. From the Administration Tree select the folder named Users.

    –   Select the user(default is administrator) that you would like to associate with the user class, right-click, and select Membership.

    –   Select the user class that the user belongs to. In this case the Creator user class. Alternatively you can associate the user by selecting the user named Administrator, and then drag it into the Creator user class.

An error occurs if users not belonging to a specific user class attempt to log in to the catalog. Therefore, ensure that all the users belong to a user class before attempting to open an Impromptu catalog.

7.3 Failed to Change User Class

If you receive the "Failed to change the User Class. Unable to access the user profile creator. Incomplete catalog login information for user class" error message when running reports through the browser, embed a user ID and password in the catalog.

To embed a database user id and password in a catalog:

1. Open the catalog in Cognos 8.4.

2. Select Catalog > Profiles from the main menu.

3. Select the Database tab.

4. For each User Class, in the Database Security Options section, select Database Logon and supply a database ID and password.

Perform the following steps to change the Database Logon type:

1. Launch Report Administration.

2. Select the Report Project view.

3. Highlight the report set.

4. Select the User radio button in the Database Logon Type section.

If the reports have already been published, delete them all and re-publish with the change mentioned above.

This chapter provides some tips for tuning reports and your Sterling Call Center and Sterling Store: Business Intelligence installation. For information about performance tuning individual Cognos products, see the Cognos Administration Guides.

7.4 Could Not Locate analytics.properties File Error

When performing custom authentication, if an error "Could not locate the file analytics.properties in the classpath" displays, ensure that the `analytics.properties` file is located in the correct path.

7.5 Tuning the Sterling Call Center and Sterling Store: Business Intelligence Reports

Because all the Sterling Call Center and Sterling Store: Business Intelligence reports are eventually based on SQL statements, it is recommended that you tune the SQL underlying the reports and sub-reports, and tune the IQDs. You can avoid complicated report SQLs by breaking the reports up into sub-reports.

7.6 Tuning your Sterling Call Center and Sterling Store: Business Intelligence Installation

Tuning your Sterling Call Center and Sterling Store: Business Intelligence installation involves sizing the servers where the installation is installed. For information about sizing your servers for Sterling Call Center and Sterling Store: Business Intelligence, see Appendix B, "Server Sizing Requirements".

A

Sterling Call Center and Sterling Store: Business Intelligence Views

Sterling Call Center and Sterling Store: Business Intelligence Views are a layer of abstraction on the YFS tables. Most of these views are straight select statements from the table, having a UNION with its history (archived) table, if one exists. The fields in these views are derived directly from the underlying table without any calculations. These views are not described in detail in this appendix. For their descriptions, see the Entity Relationship Diagrams .html. For a complete list of the view SQLs, see the corresponding .sql files located in:

- `<ANALYTICS_HOME>\Database\oracle\Scripts\WithHistory`

- `<ANALYTICS_HOME>\Database\oracle\Scripts\WithoutHistory`

- `<ANALYTICS_HOME>\Database\db2\Scripts\WithHistory`

- `<ANALYTICS_HOME>\Database\db2\Scripts\WithoutHistory`

- `<ANALYTICS_HOME>\Database\sqlserver\Scripts\WithHistory`

- `<ANALYTICS_HOME>\Database\sqlserver\Scripts\WithoutHistory`

For more information about WithHistory and WithoutHistory views, see Section 3.1, "Sterling Call Center and Sterling Store: Business Intelligence Framework Views".

The following sets of views are described in this appendix:

- Catalog (see Section A.1, "Catalog Views")

- Exceptions (see Section A.2, "Exception Views")

- Order Header (see Section A.3, "Order Header Views")

- Order Line (see Section A.4, "Order Line Views")

- Organization Views (see Section A.5, "Organization Views")
- Price Match Views (see Section A.6, "Price Match Views")

> **Note:** Relationship diagrams for all of the views are available under `<ANALYTICS_HOME>\database\ERD`.

A.1 Catalog Views

This set of views expose the Item and Catalog-related data. The set consists of the views described in Table A–1.

Table A–1 Catalog Views

View	Description	Interpreted Columns	SQL Filename
YCD_ITEM_VW	This view exposes the data in the YFS_ITEM table.	None	`YCD_ITEM_VW.sql`

A.2 Exception Views

This set of views expose the Exception-related data. The set consists of the views described in Table A–2.

Table A–2 Exception Views

View	Description	Interpreted Columns	SQL Filename
YCD_ALERTS_RELATED_VW	This view exposes the data in the YFS_INBOX table.	None	`YCD_ALERTS_RELATED_VW.sql`

A.3 Order Header Views

This set of views expose the Order Header related data. The set consists of the views described in Table A–3.

Table A–3   Order Header Views

View	Description	Interpreted Columns	SQL Filename
YCD_ORDER_DETAILS_VW	This view exposes the data in the YFS_ORDER_HEADER and YFS_ORDER_LINE tables. It provides Order line details including order details.	None	`YCD_ORDER_DETAILS_VW.sql`
YCD_ORDER_RELATED_VW	This view exposes the data in the YFS_ORDER_HEADER, YFS_ORDER_LINE and YFS_ORDER_LINE_RELATIONSHIP tables. It provides Order line relationship details including order and order line details for the lines involved in the relationships.	None	`YCD_ORDER_RELATED_VW.sql`

A.4 Order Line Views

This set of views expose the Order Line-related data. The set consists of the views described in Table A–4.

Table A–4   Order Line Views

View	Description	Interpreted Columns	SQL Filename
YCD_OL_RELATIONSHIP_VW	This view exposes the data in the YFS_ORDER_LINE and YFS_ORDER_LINE_RELATIONSHIP tables. It provides Order line relationship details including order line details for the lines involved in the relationships.	None	`YCD_OL_RELATIONSHIP_VW.sql`

A.5 Organization Views

This set of views expose the data related to any organization. The set consists of the views described in Table A–5.

Table A–5   Organization Views

View	Description	Interpreted Columns	SQL Filename
YCD_RELATION SHIP_RELATED _VW	This view exposes the data in the YFS_ORGANIZATION and YFS_ASSC_RELATIONSHIP tables. It provides association relationship details for an organization.	None	`YCD_RELAT IONSHIP_R ELATED_VW .sql`

A.6 Price Match Views

This set of views expose the Price-related data. The set consists of the views described in Table A–6.

Table A–6   Pricing Views

View	Description	Interpreted Columns	SQL Filename
YCD_PRICE_MATC H_RELATED_VW	This view exposes the data in the YFS_PRICE_MATCH and YFS_COMPETITOR tables. It provides Price match details including competitor details.	None	`YCD_PRICE_MATCH_ RELATED_VW.sql`
YCD_OL_PRICE_M ATCH_RELATED_V W	This view exposes the data in the YFS_ORDER_HEADER, YFS_ORDER_LINE and YFS_ORDER_LINE_PRICE_MAT CH tables. It provides Order line price match details including order and order line details for the price matched order lines.	None	`YCD_OL_PRICE_MAT CH_RELATED_VW.sq l`

B

Server Sizing Requirements

B.1 Cognos Server Sizing Requirements

Before you install Cognos 8 Business Intelligence, ensure that the requirements described in Table 7–1, "Cognos 8 Business Intelligence Server Requirements" are met.

Table 7–1   Cognos 8 Business Intelligence Server Requirements

Characteristics	Users	RAM (# of Processes * RAM)	Disk and CPU
• 8 catalogs • 3 databases – DB2, Microsoft SQL Server, Oracle • 10 reports per catalog • 75% personnel, 25% public	• 200 users • 10% concurrent (20) • Users are evenly distributed across catalogs	• PROCESSES • Not applicable - dynamic • TOTAL RAM = 256 - 512MB • Difficult to calculate. Dependent on the size of the reports • Memory for IWR= 256 – 512 MB • Memory for NT Server = 70 MB • Memory for Web Server= 5 MB • Memory for database drivers	• DISK SPACE • Temporary disk space needed for report rendering to PDF (5X final report size) and final report storage. Difficult to estimate. • Temporary disk space for IWR= 1 GIG • IWR Software= 100 MB • Reports and Catalogs = 100 MB • NT Server = 500 MB • Database drivers • TOTAL Disk Space= 1.7 GIG • CPU • # of PROCESSORS = 1 scalable to 2 • PROCESSOR = 200+ MHz

C

Cognos Components

This chapter provides a complete list of the Cognos components. Most of these components are automatically installed with the main Cognos components.

C.1 Client and Authoring Components

Cognos 8 Business Intelligence Administrator—This is used to build reports from the Sterling Call Center and Sterling Store: Business Intelligence catalog (`YCD-Analytics.cpf`).

C.2 Server Components

Cognos 8 Business Intelligence Report—This is used to Web-enable reports.

C.3 Security Components

Access Manager—This is used for user authentication.

C.4 Tools

- Cognos 8 Business Intelligence Report Administrator
- Cognos 8 Business Intelligence Server Administrator
- PDF Servers (for reports)
- Access Manager Configuration Wizard
- Other Server Administrator applications

- Scheduler

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