

IBM EMM Reports
Version 9 Release 0
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Installation and Configuration Guide



Note

Before using this information and the product it supports, read the information in "Notices" on page 111.

This edition applies to version 9, release 0, modification 0 of IBM Marketing Platform and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. Installing reports

This chapter describes how to install and set up reporting for your IBM® EMM applications. Information on upgrading and configuring customized reports is provided elsewhere in this guide.

For its reporting feature, IBM EMM integrates with IBM Cognos® BI, a business intelligence application. Reporting relies on the following components:

- An installation of IBM Cognos BI
- A set of IBM EMM components that integrates with the IBM Cognos installation
- For Campaign, eMessage, and Interact, reporting schemas that enable you to build reporting views or tables in the application's system tables
- The example reports for IBM EMM applications, built with IBM Cognos Report Studio

To install reporting, you do the following:

- Install the IBM EMM integration components and report models on the IBM Cognos system.
- Install the reporting schemas from the application report package on the machine where the Marketing Platform is installed.
- Set up the reporting views or tables.

Reporting installation roadmap

The following table provides a high level overview of the IBM EMM reports installation process, with brief descriptions of the steps involved and information on where to find detailed instructions. For upgrades, see the chapter on upgrading in this guide.

Step	Description	Where to find details
Install reporting components		
Install IBM EMM products.	Install the products that provide the data used in reports.	See the individual product installation guides.
Install IBM Cognos.	Install the supported version of IBM Cognos, which is required for many, but not all, IBM EMM reports.	See the IBM Cognos documentation.
Set up a system user.	Configure a user with access to the Settings > Configuration and Settings > Report SQL Generator pages so you can log in as this user when you need to configure the reporting properties and generate the SQL used to create reporting schema.	See "Step: Set up a user with the ReportsSystem role, if necessary" on page 3.
Install the reporting schemas on the machine where the Marketing Platform is installed.	Place the IBM master installer and the report pack installers in the same directory and launch the master installer.	See "Step: Install the reporting schemas on the IBM EMM system" on page 4
Create JDBC data sources.	In the application server where the Marketing Platform is deployed, create JDBC data source connections to the system table databases for the products you want to use for reporting.	See "Step: Create JDBC data sources" on page 5.
Set up the reporting views or tables		

Step	Description	Where to find details
Load the templates for the Reports SQL Generator.	To implement reporting for Campaign, eMessage, and Interact, you create reporting views or tables from which the reports extract reportable data. The reports packs contain templates that the Reports SQL Generator uses when generating SQL scripts for creating these views or tables. In this step, you load these templates into the Marketing Platform system table database.	See “Step: Load the templates for the Reports SQL Generator” on page 5.
Generate the view or table creation scripts.	Set some required configuration properties, and then use the Report SQL Generator to produce the SQL for creating the reporting views or tables.	See “Step: Generate the view or table creation scripts” on page 5.
Create the reporting views or tables.	Create the views or tables in the IBM EMM product system table databases.	See “Step: Create the reporting views or tables” on page 6.
Set up data synchronization.	If you created materialized views or tables for reports, use your database administration tools to schedule regular data synchronization.	See “Step for tables and materialized views only: Set up data synchronization” on page 10.
Install and test IBM Cognos BI		
Install IBM Cognos BI	Use the IBM Cognos documentation to guide your installation, and then test the system.	See “Test the IBM Cognos BI installation” on page 12.
Install IBM EMM integration components and report models on the Cognos system		
Obtain the JDBC driver used for the Marketing Platform system tables.	Copy the JDBC driver used for Marketing Platform to the machine where the Cognos Content Manager is installed. When IBM authentication is implemented, Cognos uses this when it obtains user information.	See “Step: Obtain the JDBC driver for the Marketing Platform system tables” on page 13.
Install the reporting models and integration component on the Cognos system.	Place the IBM EMM master installer, Marketing Platform installer, and product report pack installers in the same directory on the machine where the Cognos Content Manager is installed, and launch the master installer.	See “Step: Install the reporting models and integration component on the IBM Cognos system” on page 14.
Create the Cognos data sources for the IBM EMM application databases.	The Cognos applications need to connect to the IBM EMM application data sources for the reports. Use the Administration section of Cognos Connection to create these data sources.	See “Step: Create the IBM Cognos data sources for the IBM EMM application databases” on page 14.
Set up email notification (optional).	If you want to enable an option for sending a report as an email attachment, configure notification in Cognos Configuration.	See “Optional step: Set up email notification” on page 15.
Configure the Cognos firewall.	In Cognos Configuration, specify the IBM EMM system as a valid domain or host.	See “Step: Configure the IBM Cognos application's firewall” on page 16.
Import the reports folder.	In Cognos Connection, import the compressed file for reports.	See “Step: Import the reports folder in Cognos Connection” on page 16.
Configure and publish the data model, if necessary.	If the data source login you used when you created the Cognos data sources is not the owner of the IBM EMM system tables, perform this step.	See “Step: Configure and publish the data model, if necessary” on page 17.
Enable internal links in the reports.	The IBM EMM reports have standard links. To enable them, you must configure the redirect URL in the Cognos data model.	See “Step: Enable internal links in the reports” on page 17.

Step	Description	Where to find details
Verify the data source names and publish.	This step varies, depending on whether you used the default data source names in Cognos Connection, as described in that step.	See “Step: Verify the data source names and publish” on page 18.
Configure the Cognos reporting properties in IBM EMM.	Log in to IBM EMM and set Cognos reporting properties.	See “Step: Configure Cognos reporting properties in the Marketing Platform” on page 18.
Configure report folder permissions.	To give users permission to run reports from within IBM EMM applications, assign the default ReportsUser role to the appropriate user groups or users.	See “Step: Set report folder permissions” on page 19.
Test your configuration without authentication enabled.	After the reports are installed and configured, but before you enable authentication, test the setup by running some reports.	See “Step: Test your configuration without authentication enabled” on page 20.
Configure Cognos to use IBM EMM authentication.	The IBM EMM Authentication Provider enables the Cognos applications to use IBM EMM authentication to communicate with the Marketing Platform as if it were another application in the suite. This step has several sub-steps.	See “Configure IBM Cognos to use IBM EMM authentication” on page 20.
Test your configuration with authentication configured.	After you configure Cognos to use IBM EMM authentication, test the system again.	See “Step: Test your configuration with authentication configured” on page 24.
Perform customization steps.	At this point, reporting is working properly and the example reports are in their default state. You may need to customize the reports or reporting schemas for Campaign, Interact, or Marketing Operations.	See “Next steps for reporting” on page 25.

Install reporting components

Installing and configuring IBM EMM product report packages is a multi-step process. Perform the tasks in this section to perform the installation.

Step: Set up a user with the ReportsSystem role, if necessary

Configure a user with access to the IBM EMM **Settings > Configuration** and **Settings > Report SQL Generator** pages so you can log in as this user when you need to configure the reporting properties and generate the SQL used to create reporting schema.

The easiest way to do this is to assign the **ReportSystem** role to the **platform_admin** user. This role is under **Report > PartitionN** on the User Roles and Permissions page.

See “Assigning a role to or removing a role from a user” for general information on performing this task.

Assigning a role to or removing a role from a user

Use this procedure to assign or remove roles.

1. Click **Settings > Users**.
2. Click the name of the user account that you want to work with.
3. Click **Edit Roles**.

Roles that are not assigned to the user are shown in the **Available Roles** box on the left. Roles that are currently assigned to the user are shown in the **Roles** box on the right.

4. Click a role name in the Available Roles box to select it.
5. Click **Add** or **Remove** to move the role name from one box to the other.
6. Click **Save Changes** to save your changes.
7. Click **OK**.

Step: Install the reporting schemas on the IBM EMM system

Use the IBM EMM suite master installer and the reports package installers to install the desired reporting schemas on the machine where the Marketing Platform is installed.

Follow these guidelines when the reports package installer launches.

1. In the **ReportsPackProduct Components** window, select **Reporting Schema**.
2. If more than one option appears in the **Schema Type Selection** window, it means that the IBM application has prepackaged custom attributes. Do one of the following.
 - a. To install reporting schemas that include the custom attributes, select **Custom**. The sample reports for Campaign are configured to use custom attributes. Therefore, if you are installing the Campaign report package and you want the sample reports to function correctly, you must select this option.
 - b. To install reporting schemas that do not include the custom attributes, select **Base**.

The installer places the reporting schema in the file system and registers the schema with the Marketing Platform.

3. Verify that the reporting schema are registered in the Marketing Platform, as follows.
 - a. Log in to the IBM EMM system as the **platform_admin** user.
 - b. Select **Settings > Configuration**.
 - c. Expand **Reports > Schemas > ProductName**.

If you see the schema configuration properties for your application, you installation is complete.

If the schema configuration properties for your application are not present, the report package has not been registered, and you must register them manually as described in the next step.

4. **Only if the schema configuration properties are not present**, register them manually as follows.
 - a. Open the `import_all` script and edit it as follows.

The script is located in the `tools` directory under your reports package installation.

Set the value of the `MANAGER_TOOLS_BIN_DIR` variable to the path of the `tools/bin` directory under your Marketing Platform installation.
 - b. Run the script.

The script invokes the Marketing Platform `configTool` utility and registers the schemas.
 - c. Verify that the schema configuration properties are present.

Step: Create JDBC data sources

The IBM EMM Reports SQL Generator tool must be able to connect to the IBM EMM application databases to generate SQL scripts that create reporting tables. The SQL Generator can generate SQL scripts that create views or materialized views without access to the these application databases, but it cannot validate the SQL without a data source connection.

In the application server hosting the Marketing Platform, configure a JDBC data source for each IBM EMM application for which you want to enable reporting. Use the default JNDI name listed below. If you do not use the default JNDI names described in the following tables, make a note of what they are so you can specify the correct name of the data source when you run the SQL Generator tool.

IBM application	Default JNDI name
Campaign	campaignPartition1DS If there are multiple partitions, create a data source for each partition.
eMessage	campaignPartition1DS for the system tables eMessagePartition1TrackingDS for the tracking tables
Interact	campaignPartition1DS for the design-time database InteractRTDS for the runtime database InteractLearningDS for the learning tables

If you need additional help with this task, see the application server documentation.

Set up the reporting views or tables

To implement reporting for Campaign, eMessage, and Interact, you create reporting views or tables from which the reports extract reportable data. This section describes how to run the Reports SQL Generator, which uses the reporting schemas to generate view or table creation scripts. You then run those scripts on the IBM application database to create the views or tables.

Step: Load the templates for the Reports SQL Generator

The reports packages for IBM EMM applications that have reporting schemas contain a SQL script that loads template SQL select statements into the `uar_common_sql` table. The Reports SQL Generator uses these templates when generating the SQL scripts for creating the reporting views or tables. In this task, you run the script that loads the templates.

1. Navigate to the schema directory under your report pack installation and locate the `templates_sql_load.sql` script.
2. Run the `templates_sql_load.sql` script in the Marketing Platform database.

Step: Generate the view or table creation scripts

Complete the following steps.

1. Log in to IBM EMM as the platform_admin user (or another user with access to the Report SQL Generator menu item).
2. **Only if you did not use the default JNDI names for the JDBC data sources you created in an earlier step**, do the following.
 - a. Select **Settings | Configuration | Reports | Schemas | *ProductName***.
 - b. Change the default values of the JNDI property to match the JNDI names you gave the JDBC connections in an earlier step.
3. Select **Settings | Reports SQL Generator**.
4. In the **Product** field, select the appropriate IBM application.
5. In the **Schema** field, select one or more reporting schemas.
6. Select the **Database Type**.
7. In the **Generate Type** field, select the appropriate option (views, materialized views, or tables).

Materialized views are not an option when **Database Type** is set to MS SQL Server.

If the JNDI data source names are incorrect or have not been configured, the SQL Generator cannot validate the SQL scripts that create tables.
8. Ensure that **Generate Drop Statement** is set to No.

The first time you run the view or table creation scripts there are no existing views or tables to drop so there is no need to create drop scripts.
9. (Optional.) To examine the SQL that will be generated, click **Generate**. The SQL Generator creates the script and displays it in the browser window.
10. Click **Download**.

The SQL Generator creates the script and prompts you to specify where you want to save the file. If you selected a single reporting schema from the **Schema** field, the script name matches the name of schema (eMessage_Mailing_Performance.sql, for example). If you selected more than one reporting schema, the script name uses the product name only (Campaign.sql, for example). For a complete list of names, see “SQL scripts by data source” on page 7.
11. Specify the location where you want to save the script. If you change the name of the file, be sure to use something that clearly indicates which schemas you selected. Then click **Save**.
12. Repeat steps 5 through 12 for each script you need to generate.

Note: The Interact reporting schemas reference more than one data source. Generate a separate SQL script for each data source.

Step: Create the reporting views or tables

Use the SQL you created in a previous step to create the reporting views or tables. Complete one or more of the following, as appropriate for your installation.

Refer to “SQL scripts by data source” on page 7 as necessary.

- “Create views or materialized views for Campaign or eMessage” on page 7
- “Create views or materialized views for Interact” on page 8
- “Create and populate reporting tables for Campaign or eMessage” on page 9
- “Create and populate reporting tables for Interact” on page 10

SQL scripts by data source

The following table shows which scripts you need to generate for each data source, the resulting script names and, for creating views or materialized views, which script should be run against which IBM EMM application database. Note the following.

- The table lists the default names for the data sources and the generated scripts, which you might have changed.
- The Interact reporting schemas reference more than one data source. Generate a separate SQL script for each data source.

Reporting schema	Data source (default names)	Script name (default names)
All Campaign reporting schemas	Campaign system tables (campaignPartition1DS)	Campaign.sql, unless you generated separate scripts for each reporting schema. If you did, each script is named after the individual schema.
eMessage Mailing Performance	eMessage tracking tables, which are with the Campaign system tables (campaignPartition1DS)	eMessage_Mailing_Performance.sql
Interact Deployment History, Interact Performance, and Interact Views	Interact design time database (campaignPartition1DS)	Interact.sql
Interact Learning	Interact Learning tables (InteractLearningDS)	Interact_Learning.sql
Interact Run Time	Interact run time database (InteractRTDS)	Interact_Runtime.sql

Create views or materialized views for Campaign or eMessage

1. Locate the SQL scripts that you generated and saved previously. Refer to "SQL scripts by data source" if necessary.
2. Use your database administration tools to run the appropriate script against the appropriate application database(s) for the report package you are configuring.

Note: When you run a script that creates materialized views on a DB2® database, your database may return the error "SQL20059W The materialized query table-name may not be used to optimize the processing of queries." However, the materialized view is successfully created.

3. **For Campaign with a DB2 database only**, increase the DB2 heap size to 10240 or higher. (The default heap size is 2048.) Use the following command:

```
db2 update db cfg for databasename using stmtheap 10240
```

where *databasename* is the name of the Campaign database.

Increasing the heap size ensures that IBM Cognos does not display SQL error messages if a user selects all the campaigns when running a report like the Financial Summary report.

4. **For eMessage only**, do the following.

- In the ReportsPackCampaign\tools directory under your reports pack installation, locate the uare_lookup_create_DB_type.sql script, where *DB_type* is the database type appropriate for your installation of Campaign.
- Edit the appropriate version of the script to remove the drop table statements and save the script.
- Run the appropriate version of the script against your Campaign system tables database.

Create views or materialized views for Interact

1. Verify that the language setting of the client from which you will run the lookup_create SQL script is UTF-8.

For examples of how to do this for Oracle and DB2, see “Setting the language in Oracle and DB2.”

2. Locate the SQL scripts that you generated and saved previously. Refer to “SQL scripts by data source” on page 7 if necessary.
3. Use your database administration tools to run the appropriate script against the appropriate application database(s) for the report package you are configuring.

Note: When you run a script that creates materialized views on a DB2 database, your database may return the error "SQL20059W The materialized query table-name may not be used to optimize the processing of queries." However, the materialized view is successfully created.

4. Locate the tools subdirectory in the reports package installation directory and find the lookup_create script for your database type. For example, the script for SQL is named uari_lookup_create_MSSQL.sql, and so on.

Run this script on the the Interact design time database. Ensure that the database tool you are using commits the changes. For example, you may need to set the database's auto-commit option to true.

5. Locate the db/calendar subdirectory in the Marketing Platform installation directory and find the ReportsCalendarPopulate script appropriate for the database type. This script creates two more tables: UA_Calendar and UA_Time.
6. Run this script on the Interact run time database (InteractRTDS).

For DB2 only, do one of the following:

- Either run the script from the command line using the command `db2 -td@ -vf ReportsCalendarPopulate_DB2.sql`
- Or, if you use the DB2 client interface, change the termination character to the @ character in the Statement termination character field.

Setting the language in Oracle and DB2:

Oracle example

For example, for Windows and Oracle:

1. Close any open Oracle sessions.
2. Open the Registry Editor.
3. Navigate to HKEY_LOCAL_MACHINE > SOFTWARE > ORACLE and open the folder for your Oracle Home (ex. KEY_OraDb10g_home1).
4. Search for the NLS_LANG setting.
5. Make sure the last part of the value specified is UTF8. For example: AMERICAN_AMERICA.UTF8.

DB2 example

For example, for DB2, from the machine that is running the script and has the DB2 client installed, run a DB2 command window. Then run the following command:

```
db2set
```

In the output, look for the following variable/value pair: DB2CODEPAGE=1208

If this variable is not set, run the following command

```
db2 db2set db2codepage=1208
```

Then close the session window so the change can take effect.

Create and populate reporting tables for Campaign or eMessage

1. Create the new reporting database.
2. Locate the SQL scripts that you generated and saved previously. Refer to “SQL scripts by data source” on page 7 if necessary.
3. Use your database administration tools to run the generated script(s) in the new database.
4. **For Campaign and a DB2 reporting database only**, increase the DB2 heap size to 10240 or higher. (The default heap size is 2048.) Use the following command:

```
db2 update db cfg for databasename using stmtheap 10240
```

where *databasename* is the name of the reporting database.
Increasing the heap size ensures that Cognos does not display SQL error messages if a user selects all the campaigns when running a report like the Financial Summary report.
5. Locate the db/calendar subdirectory of the Marketing Platform installation and find the version of the ReportsCalendarPopulate script appropriate for the database type. This script creates two more tables: UA_Calendar and UA_Time.
6. Run the ReportsCalendarPopulate script on the new database that you created with the table creation script.

For DB2 only, do one of the following:

- Either run the script from the command line using the command

```
db2 -td@ -vf ReportsCalendarPopulate_DB2.sql
```
 - Or, if you use the DB2 client interface, change the termination character to the @ character in the Statement termination character field.
7. Use your database administration tools to populate the new tables with the appropriate data from the production system database.

Note: Note that you must use your own tools for this step. The SQL Generator does not generate this SQL for you.

8. **For eMessage only**, do the following.
 - In the ReportsPackCampaign\tools directory under your reports pack installation, locate the `uare_lookup_create_DB_type.sql` script, where *DB_type* is the database type appropriate for your installation of Campaign.
 - Edit the appropriate version of the script to remove the drop table statements and save the script.
 - Run the appropriate version of the script against your Campaign system tables database.

Create and populate reporting tables for Interact

1. Create the new reporting databases.
2. Locate the SQL scripts that you generated and saved previously. Refer to “SQL scripts by data source” on page 7 if necessary.
3. Use your database administration tools to run the generated script(s) in the new database.
4. Locate the tools subdirectory in the reports package installation directory and find the lookup_create script for your database type. For example, the script for SQL is named `uari_lookup_create_MSSQL.sql`, and so on.
Run this script on the the Interact design time database. Ensure that the database tool you are using commits the changes. For example, you may need to set the database's auto-commit option to true.
5. Locate the db/calendar subdirectory in the Marketing Platform installation directory and find the ReportsCalendarPopulate script appropriate for the database type. This script creates two more tables: `UA_Calendar` and `UA_Time`.
6. Run this script on **both** the set of tables that represents the Interact design time database and the tables that represent the Interact run time database.

For DB2 only, do one of the following:

- Either run the script from the command line using the command `db2 -td@ -vf ReportsCalendarPopulate_DB2.sql`
 - Or, if you use the DB2 client interface, change the termination character to the @ character in the Statement termination character field.
7. Use your database administration tools to populate the new tables with the appropriate data from the production system database.

Note: Note that you must use your own tools for this step. The SQL Generator does not generate this SQL for you.

Step for tables and materialized views only: Set up data synchronization

If you created materialized views, be sure to use your database administration tools to schedule regular data synchronization between the production databases of the IBM EMM application and the materialized views.

If you created reporting tables, be sure to use scheduled ETL (Extraction, Transformation and Load) or any custom method to schedule regular data synchronization, between the the production databases of the IBM EMM application and the new reporting tables.

Install and test IBM Cognos BI

If your license agreement with IBM grants you an IBM Cognos BI license, you can download the IBM Cognos BI installation media from the IBM Customer Central website.

IBM Cognos BI, IBM reporting, and domains

Before you begin, determine whether you are installing IBM Cognos BI in the same domain as the IBM EMM suite. As a best practice, you are encouraged to install IBM Cognos and the IBM EMM system in the same domain. If you do not, you must configure both IBM Cognos and IBM EMM to use SSL.

Note: After you install IBM Cognos BI, be sure to use Cognos Configuration to configure the Cognos URLs appropriately. On a Windows system, the default values for these URLs use the machine name "localhost." You must replace the "localhost" placeholder with the fully qualified host name, including domain.

IBM Cognos BI applications

IBM Cognos BI is a collection of several applications, servers, and services, organized in a multi-tiered architecture. When you use IBM Cognos BI with your IBM EMM suite, you use the following subset of Cognos BI applications:

- IBM Cognos BI Server, which provides storage for reports and folders (plus the queries and metadata models), the Content Manager, and so on.
- IBM Cognos Connection, a web application that you use to import, configure, and schedule the reports. This application also provides access to the following additional components:
 - Cognos Viewer: used for displaying reports. Cognos Viewer is the module that displays the reports in your IBM EMM applications.
 - Report Studio: used for customizing reports and creating new ones.
 - Cognos Administration: used for configuring data sources, and so on.
- IBM Cognos Framework Manager, the metadata modeling tool that you use to configure and customize the Cognos data model that supports the IBM Cognos BI reports for your IBM EMM application.
- IBM Cognos Configuration, the configuration tool that you use to configure individual Cognos BI components.

IBM Cognos BI installation options

Before you install IBM Cognos BI, use the *IBM Cognos BI Architecture and Deployment Guide* to learn about the various components, the installation options, and the configuration approaches recommended by IBM Cognos.

The IBM Cognos documentation uses two general categories to describe installations: installing in a distributed environment versus installing all the components on one computer. For best results, do not install all components on one computer unless it is for a proof of concept or is a demonstration environment.

Installing the subset of IBM Cognos BI applications that IBM reporting uses requires that you use two IBM Cognos installers. One provides the IBM Cognos BI server, the Content Manager, Cognos Configuration, and the Web-based user interfaces. You use a separate installer to install Framework Manager, the metadata modeling tool, because it must be installed on a Windows machine.

See the Cognos documentation for complete installation details.

IBM Cognos BI web applications and the web server

IBM does not provide the web server that hosts Cognos Connection and the other IBM Cognos BI web applications. For Windows, the IBM Cognos documentation assumes that you are using Microsoft IIS (Internet Information Services) but you can also use Apache HTTP.

If you use the Apache HTTP server, take care to set up the web aliases for the Cognos web applications in the `VirtualHost` configuration directive of the Apache `httpd.conf` file correctly: be sure to order the most specific alias first (the script alias) and set directory permissions for each alias.

Example httpd.conf code snippet

The following example is from an Apache installation on a Windows system. The Apache server is running on the default port 80.

```
<VirtualHost *:80>
  ScriptAlias /ibmcognos/cgi-bin "C:/cognos/cgi-bin"
    <Directory "C:/cognos/cgi-bin">
      Order allow,deny
      Allow from all
    </Directory>
  Alias /ibmcognos "C:/cognos/webcontent"
    <Directory "C:/cognos/webcontent">
      Order allow,deny
      Allow from all
    </Directory>
</VirtualHost>
```

Note: This httpd.conf file snippet is an example only. Be sure to configure your web aliases appropriately for your systems.

IBM Cognos BI and locale

If you plan to install a localized version of your IBM EMMApplication report package (other than English), be sure to set the product locale to match the language of the application report package.

On the system running the Cognos Content Manager, open IBM Cognos Configuration, select **Actions > Edit Global Configuration**, and configure the locale for the IBM Cognos BI system. For more information, see the *IBM Cognos Configuration User Guide*, available from the Help menu in Configuration Manager.

Test the IBM Cognos BI installation

Test your IBM Cognos installation using the following guidelines.

- Stop and restart the Cognos BI server and check the `cogserver.log` file for errors. The file is located in the `logs` directory of your Cognos installation.
- Verify that database tables exist in the Cognos content store. There should be approximately 134 tables.

If you have a distributed Cognos environment with components installed on different machines, for example Cognos BI server on a UNIX system and Framework Manager installed on a Windows machine, do the following.

- Verify that you can communicate with the internal and external dispatcher and the Content Manager from the machine where the Gateway is installed. To test components that do not have a user interface, enter the URI of the component in a browser's address field. A Cognos page should appear in the browser.
- Open Framework Manager and start to create a project. This test ensures that you can log in. Check the log file again for errors.

Install IBM EMM integration components and report models on the Cognos system

To integrate the IBM EMM suite with Cognos, you need the following installers.

- The IBM EMM master installer—You always run this installer to launch the other installers

- The Marketing Platform installer—You install the Cognos integration component from this installer
- The reports pack installer or installers for the products for which you want to implement reporting—You install the reports archive containing the models and sample reports from this installer

After you perform the installation, you perform the following configuration steps, as described in the remainder of this section.

- Configure IBM EMM and Cognos reporting properties in the Marketing Platform interface
- Import the report into Cognos Connection
- Configure Cognos to use IBM EMM authentication

Installation checklist: IBM Cognos integration

The following list provides a high level overview of how to install and configure the IBM components and reports on the IBM Cognos system. Each step is described in detail later in this section.

1. “Step: Obtain the JDBC driver for the Marketing Platform system tables.”
2. “Step: Install the reporting models and integration component on the IBM Cognos system” on page 14.
3. “Step: Create the IBM Cognos data sources for the IBM EMM application databases” on page 14.
4. “Optional step: Set up email notification” on page 15.
5. “Step: Configure the IBM Cognos application's firewall” on page 16.
6. “Step: Import the reports folder in Cognos Connection” on page 16.
7. “Step: Configure and publish the data model, if necessary” on page 17.
8. “Step: Enable internal links in the reports” on page 17.
9. “Step: Verify the data source names and publish” on page 18.
10. “Step: Configure Cognos reporting properties in the Marketing Platform” on page 18.
11. “Step: Set report folder permissions” on page 19.
12. “Step: Test your configuration without authentication enabled” on page 20.
13. “Configure IBM Cognos to use IBM EMM authentication” on page 20.
14. “Step: Test your configuration with authentication configured” on page 24.

Step: Obtain the JDBC driver for the Marketing Platform system tables

Obtain the JDBC drivers and any required associated files that you used to configure the JDBC data source for the Marketing Platform's system tables when you set up the IBM EMM system. In a task later in this chapter, you configure Cognos to use IBM EMM authentication. Cognos needs the JDBC driver so it can obtain user information from the Marketing Platform system tables when it uses IBM EMM authentication.

Copy the JDBC driver to the machine where the Cognos Content Manager is installed, to the `webapps\p2pd\WEB-INF\AAA\lib` directory under your Cognos installation.

Step: Install the reporting models and integration component on the IBM Cognos system

If yours is a distributed Cognos installation, determine which machine is running the Cognos Content Manager so you can run the IBM EMM installers on this machine.

1. On the machine where the Cognos Content Manager is installed, place the following IBM EMM installers in a single directory.
 - IBM EMM master installer
 - Marketing Platform
 - The reports pack installer or installers for the products for which you want to implement reporting
2. Run the IBM EMM master installer, and select the Marketing Platform and Reports packages you want to install.
3. Following the prompts, enter the connection information for the Marketing Platform system table database.
4. When the Marketing Platform installer launches and the **Platform Installation Components** window appears, select the **Reports for IBM Cognos 10 BI** option and clear the other options
5. When the Marketing Platform installer prompts for the path to the JDBC driver, enter the fully qualified path for the JDBC driver you copied to the Cognos system during the task “Step: Obtain the JDBC driver for the Marketing Platform system tables” on page 13.
6. When the Marketing Platform installer prompts for the location of the IBM Cognos installation, enter or browse to the top level of the IBM Cognos installation directory.

The default value provided in this field is a static value that is not based on the actual file structure of your IBM Cognos system.
7. When the report pack installer or installers displays installation options, select **Product Reports Package**, and clear the option for the reporting schemas.

This option copies the reports archive to the Cognos machine. You import this archive later.

Step: Create the IBM Cognos data sources for the IBM EMM application databases

The IBM Cognos applications need their own data sources that identify the IBM EMM application databases; that is, the source of the data for the reports. The IBM Cognos data models provided in the IBM EMM reports packages are configured to use the following data source names:

Table 1. Cognos data sources

IBM EMM application	Cognos data source name(s)
Campaign	CampaignDS
eMessage	eMessageTrackDS
Interact	InteractDTDS for the design time database InteractRTDS for the runtime database InteractLearningDS for the learning database
Marketing Operations	MarketingOperationsDS
Leads	LeadsDS for the data mart tables

Use the following guidelines to create Cognos data sources for the IBM application databases:

- Use the Administration section of Cognos Connection.
- Use the default data source names that are shown in the Cognos data sources table. That way you can avoid having to alter the data model.
- The database type you select must match that of the IBM application database. Use the Cognos documentation and help topics to determine how to fill out database-specific fields.
- Be sure that you identify the IBM EMM application database and not the Cognos content store.
- When you configure the **Signon** section, select the **Password** and **Create a Signon that the Everyone group can use** options.
- In the **Signon** section, specify the user credentials for the IBM EMM application database user.
- Consult the Cognos data sources table and ensure that you create all the data sources required by the data model for the reports you are configuring. For example, the reporting data for Interact is located in three databases so you must create separate Cognos data sources for each one.
- If the Campaign system has more than one partition, create separate data sources for each partition. For example, if Campaign is configured for multiple partitions, create a separate Campaign data source for each partition.
- Verify that you have configured each data source correctly by using the **Test Connection** feature.

If you have any questions about configuring Cognos data sources, see the *IBM Cognos Administration and Security Guide*, "Chapter 6: Data Sources and Connections" and the Cognos online help.

Optional step: Set up email notification

When an IBM Cognos report is displayed in the IBM EMM interface, the Cognos Viewer toolbar in the window includes an option for sending the report as an attachment in an email. If you want to enable IBM Cognos to send IBM EMM reports as email attachments, configure notification in Cognos Configuration.

Use the following guidelines to set up email notification for the IBM EMM application reports:

Obtain the following information.

- Host name or IP address of your SMTP server
- User name and password for the account on that server
- Email address for the default sender email

In Cognos Configuration, select **Data Access > Notification** and do the following.

- Specify the SMTP mail server using the host name or the IP address plus the port using the format **host:port** or **IPAddress:port**. For example, serverX:25 or 192.168.1.101:25. (The default SMTP port is usually 25.)
- To set the user name and password of the account, click in the **Value** column and click the pencil icon to open the **Value** dialog box.
- Specify the default sender using the pattern user@company.com.

If you have any questions about configuring email notification, see the Cognos Connection online help.

Step: Configure the IBM Cognos application's firewall

To configure the IBM Cognos firewall, you specify the IBM EMM system as a valid domain or host.

1. In Cognos Configuration, select **Security > IBM Cognos Application Firewall**.
2. In the valid domains or hosts property, enter the fully qualified machine host name, including the domain and the port, for the system where the Marketing Platform is running.

Important: If you have a distributed IBM EMM environment, you must do this for every machine on which an IBM EMM product that renders Cognos reports is installed (for example, the Marketing Platform, which has dashboards; Campaign; and Marketing Operations).

For example:

serverXYZ.mycompany.com:7001

3. Save the configuration.
4. Restart the IBM Cognos service.

Step: Import the reports folder in Cognos Connection

The IBM EMM application reports are in the compressed (.zip) file the report package installer copied to the IBM Cognos machine. Use the guidelines in this procedure to import the compressed file for reports into Cognos Connection.

1. Navigate to the Cognos nn directory under your report package installation on the IBM Cognos machine, where nn indicates the version number.
2. Copy the compressed reports archive file (for example IBM EMM Reports for Campaign.zip) to the directory where your Cognos deployment archives are saved. In a distributed IBM Cognos environment, this is a location on the system running the Content Manager.

The default location is the deployment directory under your IBM Cognos installation and it is specified in the Cognos Configuration tool installed with the Cognos Content Manager. For example: cognos\deployment.

3. Locate the Cognos nn \ProductNameModel subdirectory under your report package installation on the Cognos machine.
4. Copy the entire subdirectory to any place on the system running Cognos Framework Manager that Framework Manager has access to.
5. Open Cognos Connection.
6. From the **Welcome** page, click **Administer Cognos Content**.

If your **Welcome** page is turned off, turn it back on in the Cognos Connection user preferences.

7. Click the **Configuration** tab.
8. Select **Content Administration**.



9. Click  (**New Import**) on the toolbar.
10. Follow these guidelines as you step through the **New Import Wizard**:
 - a. Select the reports archive that you copied in the previous procedure.
 - b. In the Public folders content list, select **all** the options, including the package itself (the blue folder).

- c. If you do not want users to access the package and its entries yet, select **Disable after import**. Make this selection if you want to test the reports before you make them available to the IBM EMM application users.

Step: Configure and publish the data model, if necessary

In “Step: Create the IBM Cognos data sources for the IBM EMM application databases” on page 14, you set up the IBM EMM system tables as a Cognos data source. If the data source login you used is not the owner of the IBM EMM application system tables, perform the step described here. If the data source login you used **does** own the IBM EMM application system tables, then you can skip this step.

1. Locate the Model directory under the reports package installation. Copy all of the files in this Model directory to anywhere under your Cognos Framework Manager installation directory. These files constitute the application-specific data model.
2. In Framework Manager, open the project file. The project file has a .cpf extension and the file name includes the IBM EMM application name (for example, *ProductNameModel.cpf*).
3. Open the data model for the application and do the following.
 - a. In the Project Viewer, expand **Data Sources**.
 - b. Click the data source for the application.
 - c. Update the data source as described in the following table.

Database	Fields
SQL Server	<ul style="list-style-type: none"> • Catalog: Enter the name of the IBM EMM application database. • Schema: Enter the name of the IBM EMM application database schema. For example, dbo
Oracle	<ul style="list-style-type: none"> • Schema: Enter the name of the IBM EMM application database schema.
DB2	<ul style="list-style-type: none"> • Schema: Enter the name of the IBM EMM application database schema.

4. Save and republish the package.
If you need basic instructions on publishing a package in IBM Cognos, see the *Cognos Framework Manager User Guide*.

Step: Enable internal links in the reports

The IBM EMM application reports have standard links. To enable these links to work properly, you must configure the Cognos firewall as described in “Step: Configure the IBM Cognos application's firewall” on page 16, and you must configure the redirect URL in the Cognos data model (the .cpf file) for the IBM EMM application reports, as follows.

Note: This step is not necessary for eMessage reports.

1. From Cognos Framework Manager, browse to the <productName>Model subdirectory you copied into the Framework Manager directory structure and select the .cpf file. For example, CampaignModel.cpf.
2. Select **Parameter Maps > Environment**.
3. Right click **Environment** and select **Edit Definition**.

4. In the **Redirect URL** section, select the **Value** field. Edit the server name and port number so they are correct for the IBM EMM system, leaving the rest of the URL intact. By convention, the host name includes the domain name.

For example, for Campaign:

```
http://serverX.ABCompany.com:7001/Campaign/  
redirectToSummary.do?external=true&
```

For example, for Marketing Operations:

```
http://serverX.ABCompany.com:7001/plan/callback.jsp?
```

5. Save the model and publish the package:
 - a. From the navigation tree, expand the **Packages** node of the model.
 - b. Right click the package instance and select **Publish Package**.

Step: Verify the data source names and publish

When you publish the model from Framework Manager to the Cognos content store, the name specified as the data source for the reports in the model must match the name of the data source you created in Cognos Connection. If you used the default data source names as described in “Step: Create the IBM Cognos data sources for the IBM EMM application databases” on page 14, the data source names match. If they do not, you must change the name of the data source in the model.

1. In Cognos Connection, determine the names of the data sources you created.
2. In Framework Manager, select the **Open a Project** option.
3. Browse to the `<productName>Model` subdirectory you copied into the Framework Manager directory structure and select the .cpf file. For example, CampaignModel.cpf.
4. Expand the **Data Sources** entry and examine the names of the data sources. Verify that they match what you named them in Cognos Connection.
 - a. If they match, you are finished with this procedure.
 - b. If they do not match, select the data source instance and edit the name in the **Properties** section. Save your changes.
5. Publish the package to the Cognos content store

Step: Configure Cognos reporting properties in the Marketing Platform

There are several sets of properties for configuring reporting in IBM EMM. Some specify parameter values for the reporting components in the Marketing Platform. You have already set these properties, as described in “Step: Generate the view or table creation scripts” on page 5.

Other properties specify URLs and other parameters for the IBM Cognos system. This procedure describes how to set these Cognos properties.

1. Log in to IBM EMM as the platform_admin user or another user with the ReportsSystem role.
2. Select **Settings > Configuration > Reports > Integration > Cognos version**
3. Set the value of the **Enabled** property to True.
4. Set the value of the **Domain** property to the name of the company domain on which the IBM Cognos system is running.

For example, xyzCompany.com.

If your company uses subdomains, the value in this field should include the company domain and the subdomain.

5. Set the value of the **Portal URL** property, to the URL of the Cognos Connection portal. Use a fully qualified host name, including the domain and any subdomains (specified in the **Domain** property).

For example: `http://MyCognosServer.xyzCompany.com/cognos10/cgi-bin/cognos.cgi`

You can find this URL in the Cognos Configuration utility under **Local Configuration > Environment**.

6. In the **Dispatch URL** field, specify the URL of the primary Cognos Content Manager dispatcher. Use a fully qualified host name, including the domain and any subdomains (specified in the **Domain** property).

For example: `http://MyCognosServer.xyzCompany.com:9300/p2pd/servlet/dispatch`

You can find this URL in the Cognos Configuration utility under **Local Configuration > Environment**.

7. Leave **Authentication mode** set to anonymous for now.
8. Save the settings.

Step: Set report folder permissions

If you configured the system to use the "authenticated per user" mode, ensure that the appropriate IBM users can run the reports from the IBM EMM applications. The easiest way to do this is to assign the default ReportsUser role to the appropriate user groups or users, as described in "Configuring report folder permissions."

Configuring report folder permissions

In addition to controlling access to the **Analytics** menu item and the **Analysis** tabs for object types (campaigns and offers, for example), you can configure permissions for groups of reports based on the folder structure in which they are physically stored on the IBM Cognos system.

Before you run Sync Report Folder Permissions, you must ensure that the following conditions exist:

- Reporting is be enabled after configuration.
- The Cognos server where reports are configured is up and running.
 1. Log in as a Campaign administrator who has the **ReportSystem** role.
 2. Select **Settings > Sync Report Folder Permissions**.

The system retrieves the names the folders located on the IBM Cognos system, for all partitions. (This means that if you decide to configure folder permissions for any partition, you must configure it for all of them.)

3. Select **Settings > User Roles & Permissions > Campaign**.
4. Under the **Campaign** node, select the first partition.
5. Select **Add Roles and Assign Permissions**.
6. Select **Save and Edit Permissions**.
7. On the **Permissions** form, expand **Reports**.

The Reports entry does not exist until after you run the **Sync Report Folder Permissions** option for the first time.
8. Grant permission for **Performance Reports** to the appropriate role.
9. Configure the access settings for the report folders appropriately and then save your changes.
10. Repeat steps 4 through 8 for each partition.

Step: Test your configuration without authentication enabled

After the reports are installed and configured but before you enable authentication, test the setup by running some reports.

1. Verify that IBM EMM is running and that the IBM Cognos BI service is running.
2. Log in to IBM EMM as a user with application access and create some data. (Otherwise the reports have nothing to show.)
3. Open Cognos Connection.
4. Navigate to the report folders you imported and click the link to a basic report. For example, for Campaign, select **Public Folders > Campaign > Campaign > Campaign Summary**.

If the report fails, verify that you configured the Cognos data source for the IBM EMM application database correctly. See “Step: Create the IBM Cognos data sources for the IBM EMM application databases” on page 14.

5. Click a link in the report.

If the internal links from the reports do not work, the redirect URL is not configured correctly. See “Step: Enable internal links in the reports” on page 17.

6. Log in to the IBM EMM application as a user with application access and navigate to the **Analysis** page.

When you specify the URL for the IBM EMM application, be sure to use a fully qualified host name with your company domain (and subdomain, if appropriate). For example:

```
http://serverX.ABCompany.com:7001/unica
```

7. Click the link to the same report that you tested in Cognos.

If you cannot view the report, it is likely that the IBM Cognos firewall isn't configured correctly. See “Step: Configure the IBM Cognos application's firewall” on page 16.

8. Click a link in the report.

If the internal links from the reports do not work, the redirect URL is not configured correctly. See “Step: Enable internal links in the reports” on page 17.

9. Open an individual item, click the **Analysis** tab, and verify that the report is correct.

Configure IBM Cognos to use IBM EMM authentication

The IBM EMM Authentication Provider enables the Cognos applications to use IBM EMM authentication to communicate with the IBM EMM system as though it were another IBM EMM application in the suite.

Before you begin the procedures in this section, be sure that you know which authentication mode you plan to configure (“authenticated” or “authenticated per user”). If you need more information, see “Step: Determine which authentication mode to configure.”

Step: Determine which authentication mode to configure

The IBM EMMAuthentication Provider is one of the components that integrates the IBM Cognos Business Intelligence system with IBM EMM. This component enables the IBM Cognos BI applications to use IBM authentication to communicate with the IBM EMM system as though it were another IBM EMMApplication in the suite.

There are three authentication options: anonymous, authenticated, and authenticated per user.

- **Anonymous** means authentication is disabled. You use this mode to test your configuration without the added complication of authentication settings.
- **Authenticated** means that the communications between the IBM EMM system and the IBM Cognos system are secured at the machine level. You configure a single system user and configure it with the appropriate access rights. By convention, this user is named "cognos_admin."
- **Authenticated per user** means that the system evaluates individual user credentials.

Determine which authentication mode you need to configure. For a complete description of these options, see "About reporting and security" on page 46.

Step: Create the reporting system user, if necessary

Note: If you are setting the authentication mode to "authenticated per user" skip this procedure and continue to "Step: Configure the Cognos authentication properties in IBM EMM."

When you create the reports system user, you create the user and add data source credentials to the user that holds login information for IBM Cognos BI. In this way, you configure two sets of logins for the same user:

- One for the IBM system: the user name and password specified for the reports system user (cognos_admin)
 - One for IBM Cognos BI: the user name and password specified as data source credentials for the reports system user
1. Log in to IBM EMM as the platform_admin user.
 2. Select **Settings > Users**.
 3. Create an IBM user with the following attributes:
 - a. User name: cognos_admin
 - b. Password: admin
 4. Create a new data source for the user with the following attributes:
 - a. Data Source: Cognos
 - b. Data Source Logon: cognos_admin
Ensure that the user name in the data source exactly matches the user name of the IBM user you created in step 3.
 - c. Data Source Password: admin
 5. Add the Reports System role to the user.
 6. If IBM EMM is configured to expire user passwords, log out and then log back in as the reporting system user (cognos_admin). This step ensures that you interact with the IBM security "change password" challenge and reset the password before you log in to IBM Cognos as this user in a later task.

Step: Configure the Cognos authentication properties in IBM EMM

1. Log in to IBM EMM as the platform_admin user.
2. Select **Settings > Configuration**.
3. Expand **Reports > Integrations > Cognos version**.
4. Set the value of the **Authentication Mode** property by selecting either **authenticated** or **authenticatedPerUser**, as appropriate for your system.

5. **For "authenticated" only.** Verify that the values in the **Authentication user name** and **Authentication datasource name** fields match those of the user and data source you created in the previous task, “Step: Create the reporting system user, if necessary” on page 21.
6. Set the value of the **Enable form authentication** property.
This setting indicates that IBM EMM security uses form-based authentication in place of cookies. You set this property to True when either of the following is true.
 - When the IBM EMM is not installed in the same network domain as the Cognos applications.
 - When Cognos is accessed using an IP address (within the same network domain) instead of the Fully Qualified Hostname (which is being used to access the IBM EMM applications), even if both the IBM EMM applications and the Cognos installation are on the same machine.

However, when the value is True, the login process to Cognos Connection passes the login name and password in clear text and therefore is not secure unless Cognos and the IBM EMM are configured to use SSL communication. Even with SSL configured, the user name and password appear as clear text in the HTML source code when you "view source" in a displayed report. For this reason, you should install Cognos and IBM EMM in the same network domain. Note that when the **Enable form authentication** property is set to True, the **Authentication mode** property automatically behaves as though it were set to **authenticated**, and you must perform the step required for this mode, described in “Step: Create the reporting system user, if necessary” on page 21.
7. Save the new settings.
8. **For "authenticatedPeruser" only.** Assign the ReportUser role to the default asm_admin user. You perform this step so that you can test reports: you need a user with access to both the IBM EMM application and report data. The platform_admin user does not have access to the IBM EMM application features.

Step: Configure IBM Cognos to use the IBM EMM Authentication Provider

In this task, you use the Cognos Configuration and Cognos Connection applications to configure the IBM Cognos BI applications to use the IBM EMM Authentication Provider.

1. On the machine running the Cognos Content Manager, open Cognos Configuration
2. Select **Local Configuration > Security > Authentication**.
3. Right-click **Authentication** and select **New resource > Namespace**.
4. Complete the fields as follows, and then click OK:
 - a. **Name:** Unica
 - b. **Type:** Custom Java Provider.
5. On the **Resource Properties** page, complete the fields as follows and then save your changes:
 - a. **NamespaceID:** Unica
 - b. **Java class name:**
`com.unica.report.adapter.UnicaAuthenticationProvider`
6. Stop and restart the IBM Cognos BI service.

On a Windows system, sometimes the Cognos interface indicates that the service is stopped when it is not. To ensure that the service has really stopped, use the Windows Administrative tools to stop the service.

7. Under **Local Configuration > Security > Authentication**, right-click **Unica** and select **Test**.

If Cognos Connection displays an error, examine the `cogserver.log` file, located in the logs directory of your Cognos installation to determine the problem.

8. Log in to Cognos Connection as follows to verify that the IBM EMM Authentication provider is configured correctly:
 - If you set the Cognos authentication mode in the IBM EMM configuration properties to **authenticated**, log in as the `cognos_admin` (report system) user.
 - If you set the authentication mode in the IBM EMM configuration properties to **authenticatedPerUser**, log in as the `asm_admin` user.

If IBM Cognos displays the error "The 3rd party provider returned an unrecoverable exception," expand the error message. If it states "invalid credentials," you made an error entering your user credentials. Try again. However, if it states "password expired," IBM EMM expired the password. Log in to IBM EMM application as the reporting system user and reset the password. Then try logging in to Cognos Connection again.

If you still cannot log in to Cognos Connection, examine the `cogserver.log` file, located in the logs directory of your Cognos installation, to determine the problem.

9. When you can successfully log in to Cognos Connection, open Cognos Configuration again.
10. Select **Local Configuration > Security > Authentication > Cognos**.
11. Disable anonymous access to IBM Cognos BI by setting **Allow anonymous access?** to false.
12. Save your changes.
13. Stop and restart the IBM Cognos service.

If the IBM Cognos service cannot communicate successfully with the authentication provider, it cannot start. If the IBM Cognos service fails to start, verify your configuration by retracing the steps in this procedure.
14. **Distributed systems only.** If your IBM Cognos system has backup Content Managers configured for failover support, repeat this procedure on all the servers with Content Manager installed.

At this point, anyone logging in to an application on the Cognos system must be authenticated by IBM EMM. Additionally, the authentication namespace **Unica** now appears in the IBM Cognos user interface for logon and security administration tasks.

Configuration required when the IBM Marketing Platform is integrated with an LDAP server or a web access control system

When the IBM Marketing Platform is integrated with an LDAP server, Windows Active Directory (Windows Integrated Login), or a web access control system such as Tivoli® or SiteMinder®, you must perform the following additional configurations.

1. In Cognos Configuration, set the flag **Selectable for authentication** to **false** for the Unica® authentication namespace.

When you set this flag to **false**, Cognos Connection and Cognos Administration cannot access the Unica namespace for the purpose of authentication. However,

IBM EMM applications can still access the Unica namespace via the Cognos SDK API (for example, when users view Cognos reports from within IBM EMM applications).

2. If you need authenticated access to the Cognos URL, do the following.
 - a. In Cognos Configuration, configure a namespace using the appropriate bundled authentication provider.
 - b. Set **Selectable for authentication** to **true**.
 - c. Use this new namespace for the Cognos URL.

Step: Test your configuration with authentication configured

After configuring IBM Cognos to use IBM authentication, test the system again.

1. Verify that IBM EMM is running and that the IBM Cognos service is running.
2. Open Cognos Connection.
3. Navigate to the report folders you imported and click the link to a basic report. For example, for Campaign, select **Public Folders > Campaign > Campaign > Campaign Summary**.

If the report fails, verify that you configured the IBM Cognos data source for the IBM application database correctly. See “Step: Create the IBM Cognos data sources for the IBM EMM application databases” on page 14.

4. Click a link in the report.

If the internal links from the reports do not work, the redirect URL is not configured correctly. See “Step: Enable internal links in the reports” on page 17.

5. Log in to IBM EMM and navigate to the **Analysis** page.

When you specify the URL for the IBM application, be sure to use a fully qualified host name with your company domain (and subdomain, if appropriate). For example:

`http://serverX.ABCompany.com:7001/unica`

6. Click the link to the same report that you tested in IBM Cognos.

If you see error messages about security, it is likely that the IBM Authentication Provider is not configured correctly. See “Configure IBM Cognos to use IBM EMM authentication” on page 20.

If you are prompted to enter credentials for authentication, it is likely that the domain name is missing from one of your URLs. Log in to IBM EMM as a user with admin privileges. Then select **Settings > Configuration** and ensure that the URLs in the following properties include the domain name and any appropriate subdomain name.

- **Reports > Integration > Cognos > Portal URL and Dispatch URL**
- Any URL properties for the IBM applications, for example: **Campaign > navigation > serverURL**

7. Click a link in the report.

If you are prompted to enter credentials for authentication, it is likely that the domain name is missing from one of the URLs.

8. Open an individual item, click the **Analysis** tab, and verify that the report is correct.

If you see error messages about security, it is likely that the IBM Application Provider is not configured correctly.

Next steps for reporting

At this point, reporting is working properly and the example reports are in their default state. When you finish configuring the actual data design of your IBM EMM applications - things like campaign codes, custom campaign attributes, response metrics, and so on - you will return to reporting because you may need to customize the reports or reporting schemas.

- If you are using Campaign or Interact, see the "Configuring reporting" chapter in the this guide.
- If you are using Marketing Operations, see the "Using Reports" chapter in the *IBM Marketing Operations Administrator's Guide*.
- If you are setting up reporting for eMessage, you are done configuring reporting.

Chapter 2. Upgrading reports

In IBM EMM, reporting is one of the components provided by the Marketing Platform.

When you upgrade, the installer and database scripts also upgrade the reporting feature, retaining the configuration settings for the Campaign and Interact reporting schemas. This chapter describes how to upgrade and configure the other reporting components.

Upgrade scenarios

Source version	Upgrade path
Pre-7.5.1	If you are upgrading an IBM EMM application from a pre-7.5.1 version, there is no upgrade path for reporting. Instead, see Chapter 1, "Installing reports," on page 1.
7.5.1	If you are upgrading an IBM EMM application from the 7.5.1 version, perform the following steps. <ul style="list-style-type: none">• "Initial steps for upgrading reports, all supported versions, all products"• "Upgrading reports from version 7.5.1" on page 31 Note: Because there is no upgrade path for eMessage from version 7.5.x to versions 8.x and later, there is also no upgrade path for the eMessage reports.
8.x	If you are upgrading an IBM EMM application from an 8.x version, perform the steps described in: <ul style="list-style-type: none">• "Initial steps for upgrading reports, all supported versions, all products"• "Upgrading reports from version 8.x" on page 41

Initial steps for upgrading reports, all supported versions, all products

To begin upgrading reports, complete the preparatory tasks in this section. Perform these steps regardless of the product or the version from which you are upgrading.

Step: Verify that a user with the ReportsSystem role exists

If you are upgrading from version 7.x you must configure an IBM EMM user with appropriate permissions to work with reporting. If you are upgrading from 8.x, this user probably exists already.

If you do need to configure this reporting user, see "Step: Set up a user with the ReportsSystem role, if necessary" on page 3 for instructions.

Step: Upgrade IBM Cognos BI, if necessary

If necessary, upgrade your version of IBM Cognos BI to the version supported for the report packs you are installing.

For help with this task, see the IBM Cognos BI documentation.

After you upgrade Cognos, perform the Cognos configuration tasks described in the installation chapter of this guide.

Step: Back up the Cognos model and report archive

On the IBM Cognos BI system, complete the following tasks:

- Make a back up copy of the model subdirectory. That is, locate the application model installed by the IBM EMM reports package installers, and copy the entire model subdirectory to create a backup.
- Use the export deployment specification feature in Cognos Connection to create a backup of the application's reports archive. Export the entire content store.
- Delete the old models and folders from the Cognos user interface. Do not delete them from the file directory structure or from Cognos Framework Manager..

Step: Generate the SQL to drop tables and run the SQL in product databases

In this step, you use the Report SQL Generator to generate drop table SQL commands and run them against the appropriate product system table database. You do this before you upgrade the reporting schemas because you want to generate and run the old SQL drop statements.

1. Log in to IBM EMM as the `platform_admin` user (or another user with access to the Report SQL Generator menu item).
2. **Only if you did not use the default JNDI names for the JDBC data sources you created in an earlier step**, do the following.
 - a. Select **Settings | Configuration | Reports | Schemas | *ProductName*** .
 - b. Change the default values of the JNDI property to match the JNDI names you gave the JDBC connections in an earlier step.
3. Select **Settings | Reports SQL Generator**.
4. In the **Product** field, select the appropriate IBM application.
5. In the **Schema field**, select one or more reporting schemas.
6. Select the **Database Type**.
7. In the **Generate Type** field, select the appropriate option (views, materialized views, or tables).

Materialized views are not an option when **Database Type** is set to MS SQL Server.

If the JNDI data source names are incorrect or have not been configured, the SQL Generator cannot validate the SQL scripts that create tables.

8. Ensure that **Generate Drop Statement** is set to Yes.
9. (Optional.) To examine the SQL that will be generated, click **Generate**. The SQL Generator creates the script and displays it in the browser window.
10. Click **Download**.

The SQL Generator creates the script and prompts you to specify where you want to save the file. If you selected a single reporting schema from the **Schema** field, the script name matches the name of schema (`eMessage_Mailing_Performance.sql`, for example). If you selected more than one reporting schema, the script name uses the product name only (`Campaign.sql`, for example). For a complete list of names, see "SQL scripts by data source" on page 7.

11. Specify the location where you want to save the script. If you change the name of the file, be sure to use something that clearly indicates which schemas you selected. Then click **Save**.

12. Repeat steps 5 through 12 for each drop table script you need to generate.

Note: The Interact reporting schemas reference more than one data source. Generate a separate SQL script for each data source.

There may be times when you want to disable script validation. For example, perhaps the Marketing Platform cannot connect to the IBM application database but you want to generate the scripts anyway. To disable validation, clear the data source names from the data source fields (see step 3, above). When you generate the scripts, the SQL Generator displays a warning that it cannot connect to the data source, but it still generates the SQL script.

13. Run the drop table SQL in your product system table database. Repeat for each product for which you are upgrading reports.

Step: Upgrade the reporting schemas on the Marketing Platform

You must run the IBM EMM master installer with the reports packs installers to upgrade the reporting schemas and reports integration configuration properties.

To perform this portion of the upgrade, run the IBM EMM master installer with the appropriate report package installer on the machine where the Marketing Platform is installed, and select the **IBM EMM Product Reporting Schemas** installation option.

How to verify that the upgrade has been performed

To verify whether the upgrade has been performed, take the following steps.

1. Log in to the IBM EMM system as the **platform_admin** user.
2. Select **Settings > Configuration**.
3. Expand **Reports > Schemas > ProductName** .

If the schema configuration categories for your application were not upgraded, you have not yet upgraded reports on the Marketing Platform.

Note: If you are upgrading Marketing Operations, skip this step (Marketing Operations does not have reporting schemas).

4. Expand **Reports > Integrations**.

If the schema configuration categories were upgraded, and if your current reports installation is pre 8.6.0, you will see a new category for Cognos 10 configuration. Your **Cognos 8** category is disabled, but it is retained for reference purposes, to assist you in setting the configuration properties for Cognos 10. After you have fully configured and tested your reporting upgrade, you should use the **Delete Category** link to remove the Cognos 8 configuration category.

Step: Upgrade the reporting templates in the Marketing Platform

Note: If you are upgrading Marketing Operations, skip this step: Marketing Operations does not have reporting schemas.

After you have run the report pack installer, complete the following steps.

1. Navigate to the Unica\productReportsPack\schema directory, locate the templates_sql_load.sql script and run the script in the Marketing Platform system tables database.
2. Ensure that the Marketing Platform is running.
3. Log in to IBM EMM as a user with administrator privileges.
4. Under **Settings > Users**, give yourself the **ReportsSystem** role. Then log out and log back in.
5. **Campaign only.**
The database schema for adding new campaign attributes changed in Campaign 8.0.0. Therefore, if the reporting schema customizations included additional campaign attributes, do the following.
 - a. Use your database management tools to determine the value from each attribute's AttributeID column in the UA_CampAttribute table.
 - b. In IBM EMM, select **Settings > Configuration** and expand **Reports > Schemas > Campaign > Campaign Custom Attributes > Columns > Campaign**.
 - c. Delete the existing custom campaign attributes that were added for this installation, but do not delete the standard custom campaign attributes. (The standard custom campaign attributes were upgraded by the installer.)
 - d. Re-create the attributes you deleted. Enter the ID of the attribute in the **Attribute ID** field.

Step: Update lookup tables (eMessage and Interact only)

In this step, you use your database client to run some upgrade scripts against the system table database.

1. **eMessage only.**
 - In the ReportsPackCampaign\tools directory under your reports pack installation, locate the uare_lookup_create_DB_type.sql script, where *DB_type* is the database type appropriate for your installation of Campaign.
 - If you are upgrading from an 8.x version of eMessage, edit this script to remove the drop table statements. This is required because the tables do not exist in the 8.x version.
 - Run the appropriate version of the script against your Campaign system tables database.
2. **Interact only.**
 - In the ReportsPackInteract\tools directory under your reports pack installation, locate the uari_lookup_create_DB_type.sql script, where *DB_type* is the database type appropriate for your installation of Campaign.
 - Run the appropriate version of the script against your Interact design time database.

Step: Generate new SQL and upgrade and the views or tables in the product databases

1. Generate updated SQL, as described in “Step: Generate the view or table creation scripts” on page 5.
2. Run the SQL scripts you generated earlier against the product system table databases..
3. For Campaign, eMessage, and Interact, create reporting views or tables using the new SQL and the SQL scripts provided with your reports packs, as described in “Step: Create the reporting views or tables” on page 6.

Step: Run the installers on the Cognos Content Manager machine and upgrade the IBM EMM integration components

If yours is a distributed Cognos installation, determine which machine is running the Cognos Content manager.

1. On the IBM Cognos BI system that runs the Cognos Content Manager, download or copy the following IBM EMM installers to a single directory:
 - IBM EMM master installer
 - Marketing Platform installer
 - IBM EMM application report package installers
2. Run the IBM EMM master installer. (It will launch the sub-installers for the Marketing Platform and the report packages in order.)
3. In the first **Products** window, ensure that both the Marketing Platform and the report package options are selected.
4. In the **Platform Database Connection** window, provide the necessary information for connecting to the Marketing Platform system tables.
5. When the **Platform Installation Components** window appears, select the **Reports for IBM Cognos** option and clear the other options
6. When the Marketing Platform installer prompts for the path to the JDBC driver, enter the fully qualified path for the JDBC driver you copied to the Cognos system during the initial install of reporting.
See “Step: Obtain the JDBC driver for the Marketing Platform system tables” on page 13 for more information.
7. When the Marketing Platform installer prompts for the location of the IBM Cognos installation, enter or browse to the top level of the IBM Cognos installation directory.
The default value provided in this field is a static value that is not based on the actual file structure of your IBM Cognos system.
8. When the report package installer takes over and displays its installation options, select the **IBM Cognos package for IBM EMM [product]** option and clear the option for the reporting schemas. This installation option copies the reports archive to the Cognos machine. You import this archive manually later.
9. When the installers are finished, copy the JDBC driver for the Marketing Platform database to the IBM Cognos webapps\p2pd\WEB-INF\AAA\lib directory. Be sure to **copy** the driver. Do **not** cut and paste the driver.

Upgrading reports from version 7.5.1

After you have performed the steps described in “Initial steps for upgrading reports, all supported versions, all products” on page 27, follow the steps in this section if you are upgrading an IBM EMM application from version 7.5.1.

About upgrading from version 7.5.1

IBM EMM reporting is no longer provided in a separate web application as it was in Affinium Reports 7.5.x.

When you install the IBM Cognos reports archive from the reports package, you run an upgrade script that preserves your customizations to the Cognos data model, but you must replace the 7.5.1 reports with the new reports. Although the majority of the older reports are compatible with the upgraded Cognos models, the new reports packages include new and enhanced reports, and most of the

packages also contain Dashboard reports. The only way to obtain the new or enhanced reports is to install the new reports archive, which overwrites the existing reports.

Therefore, you have two options for upgrading your reports.

- Back up the old reports, install the new reports, and then recreate your customizations using the old reports for reference.
- Back up the old reports and install the new reports. Compare the new reports to your old reports and examine your customizations. If you are certain that a customized report will function properly with the new data model, copy the old customized report back into the reports folder.

Note that the 7.5.1 version of the Campaign Performance by Cell reports and the Offer Performance Summary by Campaign reports do not function at all without manual intervention. Additionally, the new versions of many of the old reports include enhancements and minor bug fixes. This chapter includes procedures that describe how to manually fix the old Campaign Performance by Cell reports and the Offer Performance Summary by Campaign reports so they function with the new model. This chapter does not describe how to manually apply the enhancements or minor fixes to the other 7.5.1 reports. To obtain those changes, you must use the new versions of the reports.

Step: Upgrade the 7.5.1 model and install the new reports

The new report packages include new and changed reports as well as dashboard reports for most of the IBM EMM applications. Although the model can be upgraded, your 7.5.1 reports cannot. Instead you must install the new reports and then either recreate the reporting customizations you made to the 7.5.1 versions or copy the old reports back into the folder.

1. Verify that you backed up the model and the old reports.
2. Navigate to the *ProductName*ReportsPack\Cognos*N* directory under your IBM EMM product installation.

The *N* in the path refers to the Cognos version number.

3. Copy the reports archive .zip file (for example Unica Reports for Campaign.zip) to the directory where your Cognos deployment archives are saved.

The default location is the deployment directory under your IBM EMM Cognos installation and it is specified in the Cognos Configuration tool installed with the Cognos Content Manager.

For example: cognos*N*\deployment.

The *N* in the path refers to the Cognos version number.

In a distributed IBM Cognos environment, this is a location on the system running the Content Manager.

4. If the Reports Pack installation directory and Framework Manager are on different machines, locate the cognos*N*\model directory under the Reports Pack installation directory, and copy it to the directory on the machine where your Framework Manager is installed.

The *N* in the path refers to the Cognos version number.

5. Only if you did not install your IBM EMM product to the default directory (C:\Unica on Windows) you must update some upgrade scripts as described in this step.

You must update the scripts listed here. The scripts you must update differ, depending on the reports package, as shown below.

The scripts are all located in the *ProductNameReportsPack\cognosN\ProductNameModel* directory under your IBM EMM product installation. The *N* in the path refers to the Cognos version number.

Campaign

- upgrade80to81.xml
- upgrade81to85.xml
- upgrade85to86.xml
- upgrade86to90.xml

eMessage

- upgrade80to81.xml
- upgrade81to85.xml
- upgrade86to90.xml

Interact

- upgrade80to81.xml
- upgrade81to85.xml
- upgrade85to86.xml
- upgrade86to90.xml

Leads

- upgrade81to85.xml
- upgrade86to90.xml

Campaign with Marketing Operations

- upgrade80to81.xml
- upgrade82to85.xml
- upgrade86to90.xml

Marketing Operations

- upgrade80to81.xml
- upgrade82to85.xml
- upgrade85to86.xml
- upgrade86to90_DB2.xml (for DB2 database only)
- upgrade86to90_Oracle.xml (for Oracle database only)
- upgrade86to90_Sqlserver.xml (for SQLServer database only)

In each script, edit file paths that point to directories where localized language versions of the models are stored to reflect your product install location. Make this change for every language your users need. For example:

```
install_directory \ReportsPackCampaign\cognosN\CampaignModel\
translations\L\translations.txt
```

The *N* in the path refers to the Cognos version number.

The *L* in the path refers to one of the following language indicators.

- fr
- de
- es
- it
- ja
- ko
- pt
- ru

- zh
6. Open Cognos Connection.
 7. Select **Administer Cognos Content > Configuration > Content Administration**.
 8. Click the **New Import** button on the toolbar  and import the reports folder.
 9. Open Cognos Framework Manager and select the project that corresponds to your old reports.
 10. Select **Project > Run Script**.
 11. Run the following scripts from your new version against your old reports. You must run the scripts listed here. The scripts you must run differ, depending on the reports package, as shown below.

The scripts are all located in the *ProductNameReportsPack\cognosN\ProductNameModel* directory under your IBM EMM product installation.

The *N* in the path refers to the Cognos version number.

Campaign

- preUpgrade_86_fromanyversion.xml
- upgrade75to751.xml
- upgrade751to80.xml
- upgrade80to81.xml
- upgrade81to85.xml
- upgrade85to86.xml
- upgrade86to90.xml

eMessage

- upgrade80to81.xml
- upgrade81to85.xml
- upgrade86to90.xml

Interact

- preUpgrade_86_fromanyversion.xml
- upgrade75to751.xml
- upgrade751to80.xml
- upgrade80to81.xml
- upgrade81to85.xml
- upgrade85to86.xml
- upgrade86to90.xml

Leads

- upgrade75to80.xml
- upgrade81to85.xml
- upgrade86to90.xml

Campaign with Marketing Operations

- upgrade80to81.xml
- upgrade81to82.xml
- upgrade82to85.xml
- upgrade86to90.xml

Marketing Operations

- upgrade75to80.xml
 - upgrade80to81.xml
 - upgrade81to82.xml
 - upgrade82to85.xml
 - upgrade85to86.xml
 - upgrade86to90_DB2.xml (for DB2 database only)
 - upgrade86to90_Oracle.xml (for Oracle database only)
 - upgrade86to90_Sqlserver.xml (for SQLServer database only)
12. Publish the package to the Cognos content store.
 13. Run a report to ensure that it works properly.
 14. If the 7.5.1 reports were customized, recreate those customizations.
 Alternately, if you can ensure that an old report will work properly with the upgraded model, copy the old report back.
 For information about fixing the old Campaign Performance by Cell reports and the old Offer Performance Summary by Campaign reports so they work with the new data model, continue with the remaining procedures in this section.
 15. If you have reports installed for multiple partitions, configure reports packages for the additional partitions using the instructions in the chapter that describes how to configure multiple partitions.
 16. Optional. See “Configure IBM Cognos to use IBM EMM authentication” on page 20 for information about the new authentication mode, “authenticate per user.”

Step: Updating the old Campaign Performance by Cell reports

After you upgrade the Campaign model from 7.5.1 to 8.x, the old Campaign Performance by Cell reports do not function properly. If you want to use your old Campaign Performance by Cell reports rather than the new ones, you must manually update them yourself.

How to fix the cross-object Performance by Cell reports

Use this procedure to fix the old versions of the following cross-object reports so they function with the new data model.

- Campaign Performance Summary by Cell
- Campaign Performance Summary by Cell (with Revenue)
- Campaign Performance Summary by Cell by Initiative

Complete the following steps.

1. Open the report in IBM Cognos Report Studio.
2. Click the lock icon on the toolbar to unlock the report.
3. Browse to the **Query Explorer** and open the **Report Query** for a list of all the query items in the report.
4. For all three reports, remap the following query items as follows:

Query item	Mapping
Number of Offers Given	[Campaign Performance Summary].[Campaign Cell CH with Controls Summary].[Number of Offers Given]
Response Transactions	[Campaign Performance Summary].[Campaign Cell RH with Controls Summary].[Response Transactions]

Query item	Mapping
Unique Recipients	[Campaign Performance Summary].[Campaign Cell CH with Controls Summary].[Unique Recipients]
Unique Responders	[Campaign Performance Summary].[Campaign Cell RH with Controls Summary].[Unique Responders]
Unique Recipients Control Group	[Campaign Performance Summary].[Campaign Cell CH with Controls Summary].[Unique Recipients Control Group]
Unique Responders Control Group	[Campaign Performance Summary].[Campaign Cell RH with Controls Summary].[Unique Responders Control Group]

5. For the report with revenue, remap for the **Gross Revenue** item as follows:
[Campaign Performance Summary].[Campaign Cell RH with Controls Summary].[Gross Revenue]
6. Update the formula for the **Responder Rate Control Group** to be the following:
IF((([Unique Responders Control Group]/([Unique Recipients Control Group] * 1.00)) is missing)
THEN (0)
ELSE((([Unique Responders Control Group]/([Unique Recipients Control Group] * 1.00))))
7. From the **Detail Filter** list, select the first detail filter and edit it so it looks like this:
[Campaign Performance Summary] . [Campaign] . [Campaign ID] in (?CampaignIds?)
8. From the **Detail Filter** list, delete the second detail filter – the one that looks like this:
[Campaign Performance Summary].[Responder Rate Control Group at Cell Level].[Campaign ID] in (?CampaignIds?)
9. Lock the report.
10. Do the following in Report Studio for each report.
 - a. Go to **File > Report Package**.
 - b. Select **Unica Campaign Package** and click **OK**.
 - c. Fill in prompts on the report as necessary.
 - d. After the report is validated, click **Close** in the Validation Response window.
11. Save and run the report.

How to fix the object-specific Performance by Cell reports

Use this procedure to fix the old versions of the following object specific reports to function with the new data model.

- Campaign Performance Summary by Cell
- Campaign Performance Summary by Cell (with Revenue)

Complete the following steps.

1. Open the report in IBM Cognos Report Studio.
2. Click the lock icon on the toolbar to unlock the report.
3. Browse to the **Query Explorer** and open the **Report Query** for a list of all the query items in the report.
4. For both reports, remap the following query items as follows:

Query item	Mapping
Number of Offers Given	[Campaign Performance Summary].[Campaign Cell CH with Controls Summary].[Number of Offers Given]
Response Transactions	[Campaign Performance Summary].[Campaign Cell RH with Controls Summary].[Response Transactions]
Unique Recipients	[Campaign Performance Summary].[Campaign Cell CH with Controls Summary].[Unique Recipients]
Unique Responders	[Campaign Performance Summary].[Campaign Cell RH with Controls Summary].[Unique Responders]
Unique Recipients Control Group	[Campaign Performance Summary].[Campaign Cell CH with Controls Summary].[Unique Recipients Control Group]
Unique Responders Control Group	[Campaign Performance Summary].[Campaign Cell RH with Controls Summary].[Unique Responders Control Group]

5. For the report with revenue, remap the **Gross Revenue** query item as follows:
[Campaign Performance Summary].[Campaign Cell RH with Controls Summary].[Gross Revenue]
6. Update the formula for the Responder Rate Control Group to be the following:

```
IF(([Unique Responders Control Group]/([Unique Recipients Control Group] * 1.00)) is missing)
THEN (0)
ELSE(([Unique Responders Control Group]/([Unique Recipients Control Group] * 1.00)))
```
7. From the **Detail Filter** list, select the first detail filter and edit it so it looks like this:
[Campaign Performance Summary].[Campaign].[Campaign ID] in (?CampaignIds?)
8. Delete the second detail filter – the one that looks like this:
[Campaign Performance Summary].[Responder Rate Control Group at Cell Level].[Campaign ID] in (?CampaignIds?)
9. Lock the report.
10. Do the following in Report Studio for each report.
 - a. Go to **File > Report Package**.
 - b. Select **Unica Campaign Package** and click **OK**.
 - c. Fill in prompts on the report as necessary.
 - d. After the report is validated, click **Close** in the Validation Response window.
11. Save and run the report.

Step: Updating the old Offer Performance Summary by Campaign reports

After upgrading the Campaign model from 7.5.1 to 8.x, the old Offer Performance Summary by Campaign reports do not function properly. If you want to use your old Offer Performance Summary by Campaign reports rather than the new ones, you must update them manually.

How to fix the Offer Performance Summary by Campaign cross-object report

Use this procedure to fix the old version of the cross-object Offer Performance Summary by Campaign report so it functions with the new data model.

1. Open the report in IBM Cognos Report Studio.
2. Browse to the **Query Explorer** and open the **Report Query** for a list of all the query items in the report.
3. Configure the aggregation as follows for the following Campaign Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Number of Offers Given	None	Automatic
Response Transactions	None	Automatic
Unique Recipients	None	Automatic
Unique Responders	None	Automatic
Not Contacted Responders	None	Automatic
Responses after Expiration	None	Automatic
Unique Recipients Control Group	None	Automatic
Unique Responders Control Group	None	Automatic

4. Configure the aggregation as follows for the following Campaign Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Response Rate	Automatic	Automatic
Responder Rate	Automatic	Automatic
Responder Rate Control Group	Automatic	Automatic
Best Offer Lift Over This	Automatic	Automatic
Lift Over Worst Offer	Automatic	Automatic
Lift Over Control Group	Automatic	Automatic

5. Configure the aggregation as follows for the following Offer Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Number of Offers Given-Offer	None	Automatic
Unique Responders-Offer	None	Automatic
Not Contacted Responders-Offer	None	Automatic
Responses after Expiration-Offer	None	Automatic
Unique Responders Control Group-Offer	None	Automatic

6. Change the expression for the **Response Transactions-Offer** query item to be the following.

[Offer Performance Summary].[Offer Response History Summary].
 [Response Transactions] / count([Campaign Name] for [Offer ID])

7. Configure the aggregation as follows for the following Offer Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Response Transactions - Offer	Total	Automatic
Unique Recipients - Offer	Total	Automatic
Unique Recipients Control Group - Offer	Total	Automatic

8. Configure the aggregation as follows for the following Offer Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Response Rate - Offer	Automatic	Automatic
Responder Rate - Offer	Automatic	Automatic
Responder Rate Control Group - Offer	Automatic	Automatic
Lift Over Control Group - Offer	Automatic	Automatic

9. For the Report Total level counts, change the expression for **Total Response Transactions** to be the following.
total ([Response Transactions-Offer])
10. Also for **Total Response Transactions**, confirm that **Aggregate Function** is set to Automatic and that **Rollup Aggregate Function** is set to Automatic.
11. Lock the report.
12. Do the following in Report Studio for each report.
- Go to **File > Report Package**.
 - Select **Unica Campaign Package** and click **OK**.
 - Fill in prompts on the report as necessary.
 - After the report is validated, click **Close** in the Validation Response window.
13. Save and run the report.

How to fix the single object Offer Performance Summary by Campaign report

Use this procedure to fix the old version of the single object Offer Performance Summary by Campaign report so it functions with the new data model.

- Open the report in IBM Cognos Report Studio.
- Browse to the **Query Explorer** and open the **Report Query** for a list of all the query items in the report.
- Configure the aggregation as follows for the following Campaign Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Number of Offers Given	None	Automatic
Response Transactions	None	Automatic
Unique Recipients	None	Automatic
Unique Responders	None	Automatic
Not Contacted Responders	None	Automatic
Responses after Expiration	None	Automatic

Query item	Aggregate Function	Rollup Aggregate Function
Unique Recipients Control Group	None	Automatic
Unique Responders Control Group	None	Automatic

4. Configure the aggregation as follows for the following Campaign Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Response Rate	Automatic	Automatic
Responder Rate	Automatic	Automatic
Responder Rate Control Group	Automatic	Automatic
Best Offer Lift Over This	Automatic	Automatic
Lift Over Worst Offer	Automatic	Automatic
Lift Over Control Group	Automatic	Automatic

5. Configure the aggregation as follows for the following Offer Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Number of Offers Given-Offer	None	Automatic
Unique Responders-Offer	None	Automatic
Not Contacted Responders-Offer	None	Automatic
Responses after Expiration-Offer	None	Automatic
Unique Responders Control Group-Offer	None	Automatic

6. Change the expression for the **Response Transactions-Offer** query item to be the following.

[Offer Performance Summary].[Offer Response History Summary].
[Response Transactions] / count([Campaign Name] for [Offer ID])

7. Configure the aggregation as follows for the following Offer Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Response Transactions - Offer	Total	Automatic
Unique Recipients - Offer	Total	Automatic
Unique Recipients Control Group - Offer	Total	Automatic

8. Configure the aggregation as follows for the following Offer Level Counts query items.

Query item	Aggregate Function	Rollup Aggregate Function
Response Rate - Offer	Automatic	Automatic
Responder Rate - Offer	Automatic	Automatic
Responder Rate Control Group - Offer	Automatic	Automatic

Query item	Aggregate Function	Rollup Aggregate Function
Lift Over Control Group - Offer	Automatic	Automatic

9. Lock the report.
10. Do the following in Report Studio for each report.
 - a. Go to **File > Report Package**.
 - b. Select **Unica Campaign Package** and click **OK**.
 - c. Fill in prompts on the report as necessary.
 - d. After the report is validated, click **Close** in the Validation Response window.
11. Save and run the report.

Upgrading reports from version 8.x

After you have performed the steps described in “Initial steps for upgrading reports, all supported versions, all products” on page 27, follow the steps in this section if you are upgrading an IBM EMM application from version 8.x.

For eMessage reports, the only supported upgrade is from version 8.6.

Step: Upgrade the 8.x model and install the new reports

1. Navigate to the Unica*ProductName*ReportsPack\CognosN directory, where N is the version of your Cognos installation..
2. Copy the reports archive .zip file (for example Unica Reports for Campaign.zip) to the directory where your Cognos deployment archives are saved.

The default location is the deployment directory under your IBM Cognos installation and it is specified in the Cognos Configuration tool installed with the Cognos Content Manager. For example: cognos\deployment

In a distributed IBM Cognos environment, this is a location on the system running the Content Manager.

3. If the Reports Pack installation directory and Framework Manager are on different machines, locate the cognos10\model directory under the Reports Pack installation directory, and copy it to the directory on the machine where your Framework Manager is installed.
4. Only if you did not install your IBM EMM product to the default directory (C:\Unica on Windows), you must update some upgrade scripts as described in this step.

You must update the scripts listed here. The scripts you must update differ, depending on the reports package, as shown below.

Also, you should take into consideration the 8.x version from which you are upgrading. You do not have to update the scripts that refer to earlier versions. For example, if you are upgrading Campaign reports from version 8.5.0, you would not have to update the upgrade80to81.xml and upgrade81to85.xml scripts.

The scripts are all located in the *ProductName*ReportsPack\cognosN*ProductName*Model directory under your IBM EMM product installation.

The N in the path refers to the Cognos version number.

Campaign

- upgrade80to81.xml
- upgrade81to85.xml
- upgrade85to86.xml
- upgrade86to90.xml

eMessage

- upgrade80to81.xml
- upgrade81to85.xml
- upgrade86to90.xml

Interact

- upgrade80to81.xml
- upgrade81to85.xml
- upgrade85to86.xml
- upgrade86to90.xml

Leads

- upgrade81to85.xml
- upgrade86to90.xml

Campaign with Marketing Operations

- upgrade80to81.xml
- upgrade82to85.xml
- upgrade86to90.xml

Marketing Operations

- upgrade80to81.xml
- upgrade82to85.xml
- upgrade85to86.xml
- upgrade86to90_DB2.xml (for DB2 database only)
- upgrade86to90_Oracle.xml (for Oracle database only)
- upgrade86to90_Sqlserver.xml (for SQLServer database only)

Distributed Marketing

- upgrade86to90.xml

Upgrade is supported from version 8.6 only

Interaction History

- Upgrade to version 9.0 is not supported.

Attribution Modeler

- Upgrade to version 9.0 is not supported.

In each script, edit file paths that point to directories where localized language versions of the models are stored to reflect your product install location. Make this change for every language your users need. For example:

```
install_directory \ReportsPackCampaign\cognosN\CampaignModel\
translations\L\translations.txt
```

The *N* in the path refers to the Cognos version number.

The *L* in the path refers to one of the following language indicators.

- fr
- de
- es
- it

- ja
 - ko
 - pt
 - ru
 - zh
5. Open Cognos Connection.
 6. Select **Administer Cognos Content > Configuration > Content Administration**.



7. Click the **New Import** button on the toolbar and import the reports folder.
8. Open Cognos Framework Manager and open the project for the version from which you are upgrading.
9. Select **Project > Run Script**.
10. Run the following scripts from the new version.

You must run the scripts listed here. The scripts you must run differ, depending on the reports package, as shown below.

Also, you should take into consideration the 8.x version from which you are upgrading, as follows.

- You do not have to run the scripts that refer to earlier versions. For example, if you are upgrading Campaign reports from version 8.5.0, you would not have to run the `upgrade80to81.xml` and `upgrade81to85.xml` scripts.
- You must run the `preUpgrade_86_fromanyversion.xml` script for upgrades from all versions except 8.6.

The scripts are all located in the `ProductNameReportsPack\cognosM\ProductNameModel` directory under your IBM EMM product installation.

The *N* in the path refers to the Cognos version number.

Campaign

- `preUpgrade_86_fromanyversion.xml`
- `upgrade80to81.xml`
- `upgrade81to85.xml`
- `upgrade85to86.xml`
- `upgrade86to90.xml`

eMessage

- `upgrade80to81.xml`
- `upgrade81to85.xml`
- `upgrade86to90.xml`

Interact

- `preUpgrade_86_fromanyversion.xml`
- `upgrade80to81.xml`
- `upgrade81to85.xml`
- `upgrade85to86.xml`
- `upgrade86to90.xml`

Leads

- `upgrade81to85.xml`
- `upgrade86to90.xml`

Campaign with Marketing Operations

- upgrade80to81.xml
- upgrade81to82.xml
- upgrade82to85.xml
- upgrade86to90.xml

Marketing Operations

- upgrade80to81.xml
- upgrade81to82.xml
- upgrade82to85.xml
- upgrade85to86.xml
- upgrade86to90_DB2.xml (for DB2 database only)
- upgrade86to90_Oracle.xml (for Oracle database only)
- upgrade86to90_Sqlserver.xml (for SQLServer database only)

Distributed Marketing

- upgrade86to90.xml

Upgrade is supported from version 8.6 only

Interaction History

- Upgrade to version 9.0 is not supported.

Attribution Modeler

- Upgrade to version 9.0 is not supported.

11. Publish the package to the Cognos content store.
12. Do the following in Cognos Report Studio for each cross-object Performance by Cell and object-specific Performance by Cell report.
 - a. Go to **File > Report Package**.
 - b. Select **Unica Campaign Package** and click **OK**.
 - c. Fill in prompts on the report as necessary.
 - d. After the report is validated, click **Close** in the Validation Response window.

This is not required for Attribution Modeler or eMessage.

13. Run a report to test your upgrade.

Chapter 3. Configuring reporting

This chapter describes each of the reporting components and provides information about post-installation configuration. Information about installing and upgrading reporting is provided elsewhere in this guide.

For its reporting feature, IBM EMM integrates with IBM Cognos, a third-party business intelligence application. Reporting relies on the following components:

- An installation of IBM Cognos
- A set of IBM EMM components that integrate IBM Enterprise applications with the IBM Cognos installation
- For several IBM EMM applications, reporting schemas that enable you to build reporting views or tables in the IBM system tables of the application
- The example reports for the IBM EMM application, built with IBM Cognos Report Studio

About reporting in the IBM EMM suite

When you install IBM EMM applications, each application registers itself with the Marketing Platform. During that registration process, it adds an entry for itself to the **Analytics** menu item.

After the report package for the application is configured:

- The **Analytics** menu item for the application provides access to its cross-object reports.
- The single object reports then appear on the **Analysis** tabs of the appropriate objects.
- The dashboard reports for the application can be enabled and used in dashboards.

Typically, the reports packages for the IBM EMM products are installed when the IBM EMM applications are installed. Not all of the reports packages contain reporting schemas, but they all contain the following IBM Cognos BI components:

- A customizable IBM Cognos reporting metadata model for the IBM EMM application reports
- Customizable IBM EMM application reports built with IBM Cognos BI Report Studio
- Reference documentation that describes the reporting data model and the reports

The IBM Cognos model references the reporting views (or tables) in the IBM EMM application database, making that data available to the IBM Cognos reports that are also delivered in IBM EMM Reports Packages.

Immediately after installation, the reports are in their default state and are to be considered example reports. Why? Because many IBM EMM applications have a set of objects, attributes, or metrics that can be added or customized. For example, Campaign allows you to add response types, custom campaign attributes,

additional audience levels, and so on. After the data design of your system is implemented, you can revisit reporting to customize the example reports and create new reports.

How you configure the reports after the data design phase of your implementation depends on which IBM EMM applications are included in your IBM EMM system.

- For Campaign and Interact, you customize the reporting schemas and then update the views or reporting tables that were created during installation. At that point, you synchronize the Cognos data model with the newly updated reporting views and publish the revised model to the Cognos content store. Now the new custom attributes are available in Report Studio and you can add them to the sample reports, or create new reports that display the attributes.
- For the IBM EMM applications that do not provide reporting schemas and for eMessage (which provides schemas that cannot be customized), you configure the Cognos IBM reports only.

This section describes the security model, the schemas, the data models, and the reports.

About reporting and security

The reporting feature is controlled by the following access control mechanisms:

- Whether users can run reports from the IBM EMM interface depends on permissions granted by the IBM EMM application access settings. Additionally, for Campaign, eMessage, and Interact, you can grant or deny access to groups of reports based on their folder structure on the IBM Cognos system. (This feature is not available for the other products.)
- Whether an administrator can customize the schemas or run the Report SQL Generator depends on permissions configured for the Marketing Platform.
- You can also configure the IBM Cognos BI system to use IBM EMM authentication, thereby controlling access to the IBM application data from the IBM Cognos system.

About report folder permissions

The IBM Cognos report packages that you install on the IBM Cognos system contains the report specifications for the IBM applications, organized into folders. For example, the folder for Interact is named "Interact Reports" and the reports specifications are physically located in that folder on the IBM Cognos system.

For Campaign, eMessage, and Interact, you can configure permissions for groups of reports based on the folder structure in which they are physically stored on the IBM Cognos system.

Synchronize with the IBM Cognos file directory

After reporting is installed, to make the IBM system aware of the report folders on the IBM Cognos system, you run the **Sync Report Folder Permissions** option located on the **Settings** menu in the IBM interface. This option connects to the IBM Cognos system to determine which folders are present. It then creates an entry in the user permissions lists for the Campaign partitions. The entry, named **Reports**, appears in the permissions lists between the **Logging** and the **System Tables** entries. When you expand it, the report folder names are listed and now represent permissions.

The default setting for the new permissions is "not granted." Therefore, after you run the **Sync Report Folder Permissions** option, you must configure permissions for the report folders. Otherwise, no one has access to the IBM Cognos reports anymore.

Partitions and folder partitions

The folder synchronizing process retrieves the names of all the folders located on the Cognos system, for all partitions. If you decide to configure report folder permissions for any partition, you must configure permissions for all partitions.

About securing the IBM Cognos BI system

When your IBM EMM system integrates with the IBM Cognos BI system, the IBM Cognos system provides access to the IBM EMM application data in two ways.

- From the IBM EMM applications: when someone requests a report from the IBM EMM interface, the IBM EMM system contacts the IBM Cognos system which queries the reporting views or tables and then sends the report back to the IBM EMM interface.
- From the IBM Cognos applications: when you work with the IBM EMM application data model in Framework Manager or the reports in Report Studio, you connect to the database for the IBM EMM application.

In its default state, the Cognos system is unsecured, which means that anyone who has access to the IBM Cognos applications has access to the data from the IBM EMM application database.

IBM EMM Authentication Provider

When IBM Cognos is configured to use IBM EMM authentication, the IBM EMM Authentication Provider installed on the IBM Cognos BI system communicates with the security layer of the Marketing Platform to authenticate users. For access, the user must be a valid IBM EMM user and must have a role that grants one of the following permissions:

- **report_system**, which also grants access to the reporting configuration options in the IBM EMM interface. The default role **ReportsSystem** grants this permission.
- **report_user**, which grants access to the reports but not to the reporting configuration options in the IBM EMM interface. The default role **ReportsUser** grants this permission.

There are two authentication options: authenticated and authenticated per user.

Mode = authenticated

When the authentication mode is set to "authenticated," the communications between the IBM EMM system and the IBM Cognos system are secured at the machine level.

You configure a single report system user and identify it in the reporting configuration settings. To configure the report system user you do the following:

- Create the user and assign to it the ReportsSystem role, which grants it access to all reporting functions.
- Store login credentials for the IBM Cognos system in a user data source.
- Name it, by convention (which is not required), **cognos_admin**.

The IBM EMM Authentication Provider then authenticates users as follows.

- Each time an IBM EMM user attempts to display a report, the Marketing Platform uses the credentials stored in the report system user record in its communication with the Cognos system. The authentication provider verifies the user credentials.
- When report authors log in to the IBM Cognos applications, they log in as the report system user, cognos_admin and the authentication provider verifies the user credentials.

Mode = authenticated per user

When the authentication mode is set to “authenticated per user,” the system does not use a report system user. Instead, it evaluates the user credentials of each individual user.

- Each time an IBM EMM user attempts to display a report, the Marketing Platform includes the user credentials in its communication with the Cognos system. The authentication provider verifies the user credentials.
- When report authors log in to the IBM Cognos applications, they log in as themselves and the authentication provider verifies their credentials.

With this mode, all users must have either the ReportsUser or the ReportsSystem role in order to see the reports. Typically, you assign the ReportsSystem role to one or two administrators and assign the ReportsUser role to the user groups of the IBM EMM users who need to see reports in the IBM EMM interface.

Authentication vs. authorization

Other than checking for a reporting permission, the authentication provider does no authorization checking. Report authors who log in to the Cognos applications have access to all the reports on the Cognos system, no matter how their report folder permissions might be set on the IBM EMM system.

Reporting permissions reference

Access to the reporting configuration functions and to the reports themselves are controlled by the following settings.

User interface item	Access control
Configuration option on the Settings menu (you configure reporting schemas on the Configuration page)	The Platform permission Access to Configuration located under Settings > User Roles & Permissions > Platform
Report SQL Generator and Sync Report Folder Permissions options on the Settings menu	The Report permission report_system , located under Settings > User Roles & Permissions > Report The standard ReportsSystem role has this permission.
Analytics menu	Application access settings that vary by product, as follows: <ul style="list-style-type: none"> • For Campaign, eMessage, and Interact, the Administration > Access Analysis Section permission at the campaign partition level of Settings > User Roles & Permissions . • For Marketing Operations and Distributed Marketing, the Analysis permissions in the security policies.

User interface item	Access control
Analysis tabs	The Analysis (or Analyze) permissions in the security policies for the individual objects.
Data displayed by the reports	When the authentication mode of the Cognos system is "authenticated per user," users must have either the ReportsSystem or ReportsUser role in order to see the data in a report.

About reporting schemas

To implement reporting for Campaign, Interact, and eMessage, you start by creating reporting views or tables so the reports can extract reportable data. The report packages for these applications include reporting schemas that the Reporting SQL Generator uses to produce SQL scripts that create reporting views or tables.

For Campaign and Interact, you customize the schema templates so that all the data you want to include in your reports is represented. Then you run the Reporting SQL Generator, take the resulting scripts, and run them on your application databases.

Although you cannot customize the eMessage reporting schemas, you or the installation team must still generate the SQL that builds the reporting views or tables and then run the scripts on the eMessage databases.

The reporting schemas make it easier for you to use any third-party reporting tool to examine your IBM application data. However, if you want to display reports in the IBM EMM user interface, your installation must be integrated with IBM Cognos BI.

About the Reporting SQL Generator

The Reporting SQL Generator uses the reporting schemas to determine the analytic logic necessary to extract data from the database for the IBM EMM application. It then generates SQL that creates views or reporting tables that implement that logic and that enables business intelligence tools to extract reportable data.

During installation and configuration, the system implementers configured data source properties that identify the IBM EMM application databases. The Reporting SQL Generator connects to the application databases as follows.

- To validate scripts that create views or materialized views.
- To determine the correct data types to use in scripts that create reporting tables.

If the JNDI data source names are incorrect or missing, the Reporting SQL Generator cannot validate scripts that create reporting tables.

About the reporting deployment options

When you run the Report SQL Generator tool, you specify whether you want the script to create views, materialized views, or tables. Which deployment option you use depends on the amount of data contained in your system.

- For smaller implementations, reporting views that directly query the production data might perform sufficiently for your needs. If they do not, try materialized views.

- For medium sized implementations, use either materialized views on the production system database or set up reporting tables in a separate database.
- For large implementations, configure a separate reporting database.

For all implementations, you can use Cognos Connection Administration to schedule reports that retrieve large amounts of data to run during off hours.

Materialized views and MS SQL Server

The reporting feature does not support materialized views for MS SQL Server.

In SQL Server, materialized views are called "indexed views." However, the definition that creates an index in a view on SQL Server cannot use certain aggregations, functions, and options that the reporting views include. Therefore, if you are using a SQL server database, use views or reporting tables.

eMessage and Oracle

If your installation includes eMessage and your database is Oracle, it is a best practice to use materialized views or reporting tables.

Data synchronization

When you deploy with materialized views or reporting tables, determine how frequently you want to synchronize the data with the production system data. Then, use your database administration tools to schedule data synchronization processes to refresh the reporting data regularly.

About control groups and target groups in the reports

The example IBM Cognos BI reports from the report packages include data from both target groups and control groups. To support these reports, the reporting schemas contain two columns for each of the default contact and response history metrics and default response types. One column represents the response from the control group and the other column represents the response from the target group.

If you plan to extend the example reports or create your own new reports, determine whether you want to include response information from both the target and control groups. If the answer is yes and you add metrics or response types, create two columns for that item in the reporting schema, one for the target and one for the control. If the answer is no, you create only the target group column in the reporting schema for that item.

About audience levels and the reports

In their default state, the reporting schemas reference the system tables for the single pre-defined audience level delivered with Campaign, Customer. This means that performance reports and response history reference the Customer audience level by default.

You can change the audience level in your reports by editing the performance and response schemas to reference the system tables for the correct audience level.

Additionally, for Campaign and Interact, you can add reporting schemas for additional audience levels. You create the reporting schemas from the templates in the Marketing Platform's configuration pages. Add the additional reporting views to the Cognos data model; and then modify the Cognos reports to accommodate the additional audience level or levels.

These tasks are described in more detail elsewhere in this chapter.

About audience keys in reporting schemas

When you configure the audience level for performance reports and response history, or when you create new reporting schemas for additional audience levels, you specify the audience key for the audience level. If the key includes more than one database column (sometimes referred to as a multikey audience key), you use commas between the column names. For example, `ColumnX,ColumnY`.

The maximum length of the string you can enter in the Audience Key field of a reporting schema is 255 characters. If the audience key is longer than 255 characters, you can work around this restriction in the generated SQL. Enter the first 255 characters of the key in the Audience Key field and generate the SQL script as usual. Then, open the generated script in an editor and use find and replace to replace each of the truncated audience key references with the complete string.

About partitions and reporting schemas

If Campaign has more than one partition, the system implementer configured a reports package on the Cognos system for each partition. However, after the data design of your system is implemented, you must revisit the reporting views or tables for each partition.

You can add reporting schemas for each partition. You create the reporting schemas from the templates in the Schemas configuration pages.

About the Framework Manager data models

A Cognos model is reporting metadata that describes physical database objects and their relationships to query subjects and query items. When you build reports in IBM Cognos 8 BI Report Studio, you build them from query subjects and items described in the model.

The data model for an IBM EMM application references the reporting views in the IBM EMM application database, making that data available to the Cognos 8 reports that are also delivered in the IBM EMM Reports Package.

When you configure the reporting views to include additional attributes, metrics, response types, and so on, you synchronize the Cognos reporting model with the reporting views and publish the revised model to the Cognos content store. At that point, those new attributes become available in Report Studio and you can add them to the IBM EMM reports.

The IBM Cognos 8 model from a IBM EMM Reports Package presents the IBM EMM application metadata in the following three categories (folders).

- **Import View.** This level represents the data from the reporting schemas in the IBM EMM application database. You use this view to synchronize the data model with the IBM EMM database views, materialized views, or reporting tables through the data source connection.
- **Model View.** This is the working area where you perform basic metadata transformations. You set up relationships between object entities represented by query subjects, creating building blocks that can be used in the Business View.
- **Business View.** This level organizes query subjects in terms of business objects to simplify report building. This is the information you see when you open an IBM EMM application report in Report Studio.

The Campaign and eMessage models include shortcuts from the Model View to the Business View. The Interact model does not use shortcuts in the same way because some of its query subjects span two data sources.

About the Report Studio reports

Each IBM EMM reports package contains several reports for that application built with IBM Cognos Report Studio. When they are installed, you can select and run an example report from the following locations in the IBM EMM suite common user interface.

- The multiple object reports are accessible from the **Analytics** menu.
- The single object reports appear on the Analysis tab of items like campaigns or offers.
- Additionally, for Campaign, Marketing Operations, eMessage, and Interact, the reports packages include pre-configured portlets (reports) for use with IBM EMM dashboards. See the *IBM Marketing Platform Administrator's Guide* for information on how to work with dashboards.

About the folders, subfolders, and access settings

During installation, the system implementers imported the IBM EMM application's reports archive in Cognos Connection to the Public Folders area. Each IBM EMM application's reports are organized into folders and subfolders with names that represent both the application and the purpose of the report in that Public Folders area.

The folders and subfolders are also used by the security access control model for Campaign, Interact, and eMessage, which includes security settings for the reports by folder. That is, the security policies for those applications grant users access to all the reports in a folder. The access control model for Marketing Operations does not provide this level of access. In Marketing Operations, you either have access to all the reports or none of the reports.

As a best practice, you should not rename the folders or subfolders in the IBM Cognos Connection interface. If you do, ensure that you configure your IBM application so that it recognizes the changed folder names.

- For Campaign, eMessage, and Interact, select **Settings > Configuration** and then edit the values of the reporting folder properties under **Campaign > partitions > [partition name] > reports** so they match the actual names of the folders.
- For Marketing Operations, open the `plan_config.xml` file and edit the values for the `reportsAnalysisSectionHome` and `reportsAnalysisTabHome` configuration settings.

About the report styles and appearance

The reporting integration components include a global stylesheet, `GlobalReportStyles.css`. This stylesheet establishes common reporting styles across the reports for all the IBM EMM applications. For information about styles, see the appendix Appendix B, "Formatting the Cognos reports," on page 95. This appendix provides the following information for the various kinds of reports.

- The styles implemented by the `GlobalReportStyles.css` file.
- Style formatting that you must do manually when you author a report because there are certain styles that cannot be implemented by the stylesheet.

The dash character ("-") has special meaning in the IBM EMM reports: it denotes calculations that do not apply. For example, if the unique count in a row that shows totals cannot be calculated, a "-" is displayed to indicate that fact.

Some of the reports do not appear at their best on systems with little or no data. For example, a line graph with one data point cannot display a line, which makes the graph look empty. Additionally, graphical representations of summary data do not list the dates or times for data points that do not have data. For example, if you specify a date range that has only one day with data, the graph shows that date only.

You can customize the reports to use the chart or graph type that works best for the data from your systems.

About setting up schedules for generating reports

In IBM Cognos Connection, you can schedule the automatic running of your reports. For each report, you can select the run frequency, format options, delivery methods, locations for saving, and so on.

For example, you can schedule a report to run every Monday at 9:00 AM, and distribute the report using an auto-generated email to a specified group of recipients.

For details about scheduling and distributing reports, see the schedule chapter in the *IBM Cognos Connection User Guide*.

Customizing reporting schemas

This section describes how to customize your reporting schemas to include custom data so you can display it in your reports. The first step in this task is to determine which schema you want to modify. Then complete the steps in the procedures in this section as appropriate for the reporting goals of your system.

- "Which reporting schema?"
- "To add contact or response metrics" on page 54
- "To add custom attributes" on page 54
- "To add response types" on page 55
- "To add contact status codes" on page 55
- "To specify the calendar time periods for performance reports" on page 56
- "To configure audience level for performance reports and response history" on page 56

Which reporting schema?

The reporting schema you must modify depends on the reports you plan to customize. The appendix named "Reports and Reporting Schemas by Product" provides tables that show which reporting schemas support the sample reports provided in the report packs. Determine which reports you plan to customize and then consult the appropriate report to reporting schema map

- Appendix C, "Reports and reporting schemas by product," on page 103
- "Interact Reports and Reporting Schemas" on page 105
- "eMessage Reports and Reporting Schemas" on page 105

Note: You cannot customize the eMessage reporting schemas, but you can modify and create new eMessage reports.

To add contact or response metrics

You can add contact or response metrics to the Campaign Performance and Offer Performance reporting schemas. Before you begin, determine the following information.

- Which reporting schema supports the report you want to add the metric to. See the appendix Appendix C, “Reports and reporting schemas by product,” on page 103 for information.
- Whether you need to add a column to the reporting schema for the control group in addition to the target group. See “About control groups and target groups in the reports” on page 50.
- How the metric is calculated. For example, it could be summed, averaged, or counted.

Then complete the following steps.

1. Select **Settings > Configuration** and expand **Reports > Schemas > Campaign > *name of the appropriate reporting schema***.
2. Expand the **Columns** node and select either **Contact Metric** or **Response Metric**.
3. In the form on the right, click **New category name** and enter the name of the contact or response metric.
4. For **Column Name**, enter the name to use in the reporting schema for the attribute. Use all UPPERCASE letters with no spaces.
5. For **Function**, specify how the metric is calculated or determined.
6. For **Input Column Name**, enter the name of the column for this attribute from the appropriate table in the IBM application database. Input column names are case-sensitive.
7. For **Control Treatment Flag**, enter the number 0 (zero) to indicate that this column in the reporting schema represents the target group.
8. Click **Save Changes**.
9. Repeat this procedure to add the control group column to the reporting schema, if necessary. This time, enter the number 1 (one) to indicate that this column represents the control group.

To add custom attributes

You can add custom campaign, offer, and cell attributes to the Custom Campaign Attributes reporting schema. Before you begin, determine the following information.

- The value from the attribute's AttributeID column in the UA_CampAttribute, UA_CellAttribute, or UA_OfferAttribute table, as appropriate
- The data type of the attribute: string value, number value, or date/time value

Then complete the following steps.

1. Select **Settings > Configuration** and expand **Reports > Schemas > Campaign > Campaign Custom Attributes > Columns**.
2. Select the type of column that matches the type of attribute you want to add.
3. In the form on the right, click **New category name** and enter the name of the custom attribute.
4. For **Column Name**, enter the name to use in the reporting schema for the attribute. Use all UPPERCASE letters with no spaces.
5. For **Attribute ID**, enter the ID of this attribute.

6. For **Value Type**, specify the data type of the attribute.

Note: If you are adding an attribute that holds a currency value, specify `NumberValue` in the **Value Type** field. If you are adding an attribute whose **Form Element Type** was set to `Select Box - String` in Campaign, specify `StringValue` in the **Value Type** field.

7. Click **Save Changes**.

To add response types

You can add response types to the Campaign Offer Response Breakout schema. Before you begin, determine the following information.

- Whether you need to add a column to the reporting schema for the control group in addition to the target group. See “About control groups and target groups in the reports” on page 50.
- The response type code from the `UA_UsrResponseType` table.

Then complete the following steps.

1. Select **Settings > Configuration** and expand **Reports > Schemas > Campaign > Campaign Offer Response Breakout > Columns > Response Type**.
2. In the form on the right, click **New category name** and enter the name of the response type.
3. For **Column Name**, enter the name to use in the reporting schema for the response type.
4. For **Response Type Code**, enter the three letter code for this response type. Response type codes are case-sensitive.
5. For **Control Treatment Flag**, enter the number 0 (zero) to indicate that this column in the reporting schema represents the target group.
6. Click **Save Changes**.
7. Repeat this procedure to add the control group column to the reporting schema, if necessary. This time, enter the number 1 (one) to indicate that this column represents the control group.

To add contact status codes

You can add contact status codes to the Campaign Offer Contact Status Breakout schema. Before you begin, determine the contact status code from the `UA_ContactStatus` table.

Then complete the following steps.

1. Select **Settings > Configuration** and expand **Reports > Schemas > Campaign > Campaign Offer Contact Status Breakout > Columns > Contact Status**.
2. In the form on the right, click **New category name** and enter the name of the contact status type.
3. For **Column Name**, enter the name to use in the reporting schema for the contact status type.
4. For **Contact Status Code**, enter the three letter code for this contact status. Contact status codes are case-sensitive.
5. Click **Save Changes**.

To specify the calendar time periods for performance reports

The standard reports for both Campaign and Interact include performance reports that summarize data over calendar periods. To specify time periods used in these reports to be something other than the default over time variations, complete the following steps.

1. Select **Settings > Configuration** and expand **Reports > Schemas** and then select either **Campaign** or **Interact**.
2. Select the performance schema of interest.
3. Click **Edit Settings**.
4. In the **Schema Settings** section, select the appropriate values for the **Over Time Variations** option list.
5. Click **Save Changes**.

To configure audience level for performance reports and response history

Before you begin, determine the following:

- The names of the contact history, detailed contact history, and response history tables for the audience level of interest.
- The audience key to the contact history and detailed contact history tables. See “About audience keys in reporting schemas” on page 51.

Then, complete the procedure in this section for each of the appropriate reporting schemas.

- For Campaign: Offer Performance, Campaign Performance, Campaign Offer Response Breakout, Campaign Offer Contact Status Breakout
 - For Interact: Interact Performance
1. Select **Settings > Configuration** and expand **Reports > Schemas > *ProductName* > *SchemaName***.
 2. In the form on the right, click **Edit Settings**.
 3. In the **Input Tables** section, identify the system tables for the audience level and the audience key.

Note: Remember to use commas to separate column names for a multikey audience key. See “About audience keys in reporting schemas” on page 51 for more information.
 4. Click **Save Changes**.

Creating reporting schemas for additional audience levels or partitions

You are likely to create additional reporting schemas for the following reasons:

- You want to report on more than one audience level. Perhaps you plan to create reports that present data for more than one audience level, or add filters that prompt users to specify one of several audience levels. Therefore, you need schemas that point to an additional set of contact and response history table.
- You are configuring reporting for multiple partitions and you need to implement different schema customizations for each set of partition system tables

Before you begin, determine the following information.

- Which reporting schemas to create.

- For Campaign: Campaign Offer Response Breakout, Offer Performance, Campaign Performance, Offer Contact Status Breakout, and Campaign Custom Attributes
- For Interact: Interact Performance
- The names of the following tables for this audience level.
 - For Campaign: contact history, detailed contact history, and response history tables
 - For Interact: detailed contact history and response history tables
- The name of the audience key column (or columns) for this audience level
- Pick a short 2 or 3 letter code to represent the name of the audience level. You use this code when you specify the table or view names for the new reporting schema.

Complete the steps in the following procedures as appropriate for your reporting goals.

To create a Campaign Offer Response Breakout schema

1. Select **Settings > Configuration** and expand **Reports > Schemas > Campaign > Campaign Offer Response Breakout Star Schema**.
2. Click **New category name** and enter a descriptive name for the reporting schema that indicates the audience level. For example, Campaign Offer Response Household.
3. In the **Input Tables** section, enter the name of the response history table for this audience level, and then click **Save Changes**.
A new node appears in the Configuration tree for the schema. You cannot change the name of the node.
4. Under the new node, select **Columns > Response Type** and then configure the response types for this audience level.
For help with this step, see the procedure “To add response types” on page 55.
5. Under the new node, select **SQL Configuration > Campaign Response Breakout** and click **Edit Settings**.
6. In the form that appears, edit the name in the **Table/View Name** field to include the code for the audience level. The name can be no longer than 18 characters and must be in all UPPERCASE letters.
For example, if the name of the audience level is household, you might specify: UARC_CRBO_HH_. For more information about table and view naming conventions, see the “Reports | Schemas | [product] | [schema name] | SQL Configuration” on page 78.
7. Click **Save Changes**.
8. Under the new node, select **SQL Configuration > Campaign Offer Response Breakout** and click **Edit Settings**.
9. Edit the name in the **Table/View Name** field to include the code for the audience level. The name can be no longer than 18 characters and must be in all UPPERCASE letters.
For example, UARC_CORBO_HH_.
10. Click **Save Changes**.

To create a Campaign Offer Contact Status Breakout schema

1. Select **Settings > Configuration** and expand **Reports > Schemas > Campaign > Campaign Offer Response Breakout Star Schema**.
2. Click **New category name** and enter a descriptive name for the reporting schema that indicates the audience level. For example, Campaign Offer Contact Status Household.
3. In the **Input Tables** section, enter the name of the response history table for this audience level, and then click **Save Changes**.
A new node appears in the Configuration tree for the schema. You cannot change the name of the node.
4. Under the new node, select **Columns > Contact Status Code** and then configure the contact status codes for this audience level.
For help with this step, see the procedure “To add contact status codes” on page 55.
5. Under the new node, select **SQL Configuration > Campaign Contact Status Contact History** and click **Edit Settings**.
6. In the form that appears, edit the name in the **Table/View Name** field to include the code for the audience level. The name can be no longer than 18 characters and must be in all UPPERCASE letters.
For example, if the name of the audience level is household, you might specify: UARC_CCSBO_HH_. For more information about table and view naming conventions, see the “Reports | Schemas | [product] | [schema name] | SQL Configuration” on page 78.
7. Click **Save Changes**.
8. Under the new node, select **SQL Configuration > Campaign Offer Contact Status Contact** and click **Edit Settings**.
9. Edit the name in the **Table/View Name** field to include the code for the audience level. The name can be no longer than 18 characters and must be in all UPPERCASE letters.
For example, UARC_COCSBO_HH_.
10. Click **Save Changes**.

To create an Offer Performance schema

1. Select **Settings > Configuration** and expand **Reports > Schemas > Campaign > Offer Performance Star Schema**.
2. In the **New category name**, enter a descriptive name for the reporting schema that indicates the audience level. For example, Offer Performance Household.
3. In the **Input Tables** section, identify the tables that support the audience level and the audience key.
4. In the **Schema Settings** section, select the **Over Time Variations** options that apply and then click **Save Changes**.
A new node appears in the Configuration tree for the schema. You cannot change the name of the node.
5. Under the new node in the Configuration tree, select **Columns > Contact Metric** and then configure the contact metrics for this audience level.
For help with this step, see the procedure “To add contact or response metrics” on page 54.
6. Under the new node, select **Columns > Response Metric** and then configure the response metrics for this audience level.

For help with this step, see the procedure “To add contact or response metrics” on page 54.

7. Under the new node, expand **SQL Configuration**, select the first item (Offer Contact History) and click **Edit Settings**.
8. In the form that appears, edit the value in the **Table/View name** field to include the code for the audience level. The name can be no longer than 18 characters and must be in all UPPERCASE letters.
For example, if the name of the audience level is household, you might specify: UARC_OCH_HH_. For more information about table and view naming conventions, see “Reports | Schemas | [product] | [schema name] | SQL Configuration” on page 78.
9. Click **Save Changes**.
10. Repeat steps 7 through 9 for each item listed under the **SQL Configuration** section of the new reporting schema.

To create a Campaign Performance schema

1. Select **Settings > Configuration** and expand **Reports > Schemas > Campaign > Campaign Performance Star Schema**.
2. Click **New category name** and enter a descriptive name for the reporting schema that indicates the audience level. For example, Campaign Performance Household.
3. In the **Input Tables** section, identify the tables that support the audience level and the audience key.
4. In the **Schema Settings** section, select all the **Over Time Variations** options that apply and then click **Save Changes**.
A new node appears in the Configuration tree for the schema. You cannot change the name of the node.
5. Under the new node, select **Columns > Contact Metric** and then configure the contact metrics for this audience level.
For help with this step, see the procedure “To add contact or response metrics” on page 54.
6. Under the new node, select **Columns > Response Metric** and then configure the response metrics for this audience level.
For help with this step, see the procedure “To add contact or response metrics” on page 54.
7. Under the new node, select **SQL Configuration** and select the first item, Campaign Contact History.
8. In the form that appears, edit the value in the **Table/View name** field to include the code for the audience level. The name can be no longer than 18 characters and must be in all UPPERCASE letters.
For example, if the name of the audience level is household, you might specify: UARC_CCH_HH_. For more information about table and view naming conventions, see the “Reports | Schemas | [product] | [schema name] | SQL Configuration” on page 78.
9. Click **Save Changes**.
10. Repeat steps 8 and 9 for each item listed under the **SQL Configuration** section of the new reporting schema.

To create a Campaign Custom Attributes schema

You need just one Campaign Custom Attributes schema for each partition. The same schema is used for all audience levels.

1. Select **Settings > Configuration** and expand **Reports > Schemas > Campaign > Campaign Custom Attributes**.
2. In the **New category name**, enter a descriptive name for the reporting schema that indicates the partition. For example, Campaign Custom Attributes Partition 2.
3. Under the new node in the Configuration tree, expand **Columns** and then add the custom cell, offer, and campaign attributes required by the partition for which you are creating this reporting schema.
For help with this step, see the procedure “To add custom attributes” on page 54.
4. (Optional) You can optionally edit the view or table names. Under the new node, expand **SQL Configuration** and select each item and examine the view or table names. If you decide to change the names, note that names can be no longer than 18 characters, must be in all UPPERCASE letters, and can include no spaces. For more information about table and view naming conventions, see “Reports | Schemas | [product] | [schema name] | SQL Configuration” on page 78
5. Click **Save Changes**.

To create an Interact Performance schema

1. Select **Settings > Configuration** and expand **Reports > Schemas > Interact > Interact Performance Star Schema**.
2. In the **New category name** field, enter a descriptive name for the reporting schema that indicates the audience level. For example, Interact Performance Household.
3. In the **Input Tables** section, identify the tables that support the audience level and the audience key.
4. In the **Schema Settings** section, select all the **Over Time Variations** options that apply and then click **Save Changes**.
A new node appears in the Configuration tree for the schema. You cannot change the name of the node.
5. Under the new node, select **SQL Configuration** and select the first item, Interactive Channel Offer Contact History Summary.
6. In the form that appears, edit the value in the **Table/View name** field to include the code for the audience level. The name can be no longer than 18 characters and must be in all UPPERCASE letters.
For example, if the name of the audience level is household, you might specify: UARI_ICP_OCH_HH_. For more information about table and view naming conventions, see the “Reports | Schemas | [product] | [schema name] | SQL Configuration” on page 78.
7. Click **Save Changes**.
8. Repeat steps 6 and 7 for each item listed under the **SQL Configuration** section of the new reporting schema.

Generating updated view or table creation scripts

This section describes the process you follow to update the default reporting views or schemas that were set up during installation and configuration of Campaign, eMessage, and Interact. If reporting has not yet been set up for your IBM EMM system, do not use the procedures in this section. Instead, see the installation information elsewhere in this guide.

Before you begin updating views or reporting tables

Before you begin, verify that the data source properties are configured correctly:

1. Consult the table in “SQL scripts by data source” on page 7 to verify the database where you will run the updated scripts.
2. Select **Settings > Configuration** and expand **Reports > Schemas > ProductName**.
3. Verify that the values set in the data source fields match the actual JNDI names of the appropriate data sources.

Generate updated SQL scripts for the reporting views or tables

This procedure describes how to generate updated SQL scripts for existing reporting views or tables. If you are configuring views or tables for the first time, do not use this procedure. Instead, see the installation chapter in this guide.

To generate updated SQL scripts, complete the following steps:

1. Select **Settings > Reports SQL Generator**. The SQL Generator page appears.
2. In the **Product** field, select the appropriate IBM application.
3. In the **Schema** field, select one or more reporting schemas. Use the table in “SQL scripts by data source” on page 7 to determine the appropriate schemas to select.
4. Select the **Database Type**. This option must match the database type of the database for which you are generating the script.
5. In the **Generate Type** field, select the appropriate option (views, materialized views, or tables).

Materialized views are not an option when **Database Type** is set to MS SQL Server.

If the JNDI data source names are incorrect or have not been configured, the SQL Generator cannot validate scripts that create tables.

6. Set the value in the **Generate Drop Statement** field to Yes.
7. (Optional.) To examine the SQL, click **Generate**. The SQL Generator creates the script and displays it in the browser window.
8. Click **Download**.

The SQL Generator creates the script and prompts you to specify where you want to save the file. If you selected a single reporting schema from the **Schema** field, the script name matches the name of schema (eMessage_Mailing_Execution.sql, for example). If you selected more than one reporting schema, the script name uses the product name only (Campaign.sql, for example). For a complete list of names, see “SQL scripts by data source” on page 7.

9. Specify the location where you want to save the script. If you change the name of the file, be sure to use something that clearly indicates which schemas you selected. Then click **Save**.

10. Repeat steps 7 through 10 but select No in the **Drop Statement** field this time.
11. Repeat steps 3 through 11 for each script you want to generate.

Note: There might be times when you want to disable script validation. For example, perhaps the Marketing Platform cannot connect to the IBM application database but you want to generate the scripts anyway. To disable validation, clear the values in the data source configuration properties for reporting. When you generate the scripts, the Reports SQL Generator displays a warning that it cannot connect to the data source, but it still generates the SQL script.

Update the views or reporting tables

Note that this procedure describes updating existing views or reporting tables. If you are creating views or reporting tables for the first time, do not use this procedure. Instead, use the reports chapter in the installation guide for your IBM application.

After you generate and download the SQL scripts that update your views or tables, run them on the application databases.

1. Locate the SQL scripts that you generated and saved. Use the table in “SQL scripts by data source” on page 7 to determine which scripts to run against which database.
2. Use your database administration tools to run the drop scripts.
3. Use your database administration tools to run the creation scripts.
4. **For reporting tables**, use your database administration tools to populate the new tables with the appropriate data from the production system database.
5. **For reporting tables and materialized views**, use your database administration tools to schedule data synchronization processes between the IBM application's production databases and the new reporting tables or materialized views to run regularly.

Note: You must use your own tools for this step. The Reports SQL Generator does not generate this SQL for you.

SQL scripts by data source

The following table shows which scripts you need to generate for each data source, the resulting script names and, for creating views or materialized views, which script should be run against which IBM EMM application database. Note the following.

- The table lists the default names for the data sources and the generated scripts, which you might have changed.
- The Interact reporting schemas reference more than one data source. Generate a separate SQL script for each data source.

Reporting schema	Data source (default names)	Script name (default names)
All Campaign reporting schemas	Campaign system tables (campaignPartition1DS)	Campaign.sql, unless you generated separate scripts for each reporting schema. If you did, each script is named after the individual schema.

Reporting schema	Data source (default names)	Script name (default names)
eMessage Mailing Performance	eMessage tracking tables, which are with the Campaign system tables (campaignPartition1DS)	eMessage_Mailing_Performance.sql
Interact Deployment History, Interact Performance, and Interact Views	Interact design time database (campaignPartition1DS)	Interact.sql
Interact Learning	Interact Learning tables (InteractLearningDS)	Interact_Learning.sql
Interact Run Time	Interact run time database (InteractRTDS)	Interact_Runtime.sql

Reports SQL Generator page reference

The Reports SQL Generator uses the reporting schemas you configure to generate SQL that creates views and reporting tables.

Item	Description
Product	Lists the products whose reporting schema templates are installed.
Schema	Lists the reporting schemas for the product you selected. For more information see the following descriptions. <ul style="list-style-type: none"> • Appendix C, “Reports and reporting schemas by product,” on page 103 • “eMessage Reports and Reporting Schemas” on page 105 • “Interact Reports and Reporting Schemas” on page 105
Database Type	Indicates the database type of the application database where you plan to run the scripts you are generating.
Generate Type	Indicates whether the scripts you are generating should create views, materialized views, or reporting tables. <ul style="list-style-type: none"> • Materialized views are not an option when Database Type is set to MS SQL Server. • If the JNDI data source names are incorrect or have not been configured, the SQL Generator cannot validate scripts that create tables. • The fourth option, XML, doesn't result in a SQL script. Instead, it creates a description of the schema in XML. You can then use the XML file as needed with your third-party ETL or import tools. <p>See also, “About the reporting deployment options” on page 49.</p>
Generate Drop Statement?	Indicates whether the scripts you are generating are drop scripts or not. When updating existing views or tables, it is best practice to generate a drop script and a creation script and to then run the drop script before you run the new creation script. <p>When you select Yes in the field, the SQL Generator appends the word DROP to the end of the script.</p>
Generate	Click this option to have the SQL Generator create the script and then display it in this window. You can then copy and paste it as appropriate.

Item	Description
Download	<p>Click this option to have the SQL Generator create the script and then prompt you to save it to your system. For information about the names it uses for the generated scripts, see:</p> <p>“SQL scripts by data source” on page 7.</p>

Customizing the IBM Cognos Model

When you customize an IBM EMM reporting schema to include additional metrics, attributes, or audience levels and then modify the reporting view or tables that are based on that schema, you must also edit the IBM Cognos BI model. Use IBM Cognos Framework Manager features to query the views or tables and then import the additional items in the data model.

The way you update the Cognos model depends on the changes you made in the IBM EMM reporting views or tables.

- If you modified existing views by adding columns for attributes, metrics, or response types, import the new columns by updating the query object that represents the associated view.
- If you modified the over time variations for performance or runtime reports or created new reporting schemas for additional audience levels, you have added new views. In this case, use the Framework Manager MetaData Wizard to import the views into the data model.

This section provides examples that you can use as guidelines for adding your customizations to the Cognos model. For more information, see the *IBM Cognos BI Framework Manager User Guide* and the Framework Manager online help.

Example: Add attributes to an existing view or table in a data model

The following example procedure shows how to add an item to an existing view in the IBM Cognos model. For this example, assume that you need to add a custom offer attribute to the Campaign database and then include it in a report. You have already completed the following tasks:

- Created the offer attribute in the UA_offerAttribute table.
- Added the offer attribute to the Campaign Custom Attributes reporting schema.
- Used the Reports SQL Generator to generate the view creation script.
- Ran the generated script in the Campaign database to update the Offer Custom Attribute reporting view, UARC_OFFEREXTATTR.

Now, to add the new offer attribute to the Cognos Campaign model, you would complete the following steps.

1. Make a backup of the Campaign model. That is, navigate to the Cognos/models directory and copy the CampaignModel subdirectory. In a distributed Cognos environment, the models directory is in a location on the system running the Content Manager.
2. In Framework Manager, open the Campaign.cpf file (the project) and expand the **Import View** node.

3. Under **Import View**, select the query object that represents the reporting view for custom offer attributes: **Import View > Campaign Custom Attributes > UARC_OFFEREXTATTR**.
4. Select **Tools > Update Object**. Cognos refreshes the columns listed under the node for the view so they reflect all the columns currently present in the UARC_OFFEREXTATTR reporting view in the Campaign database.
5. Expand the **Model View** and select the node that represents custom offer attributes in this view: **Model View > Campaign Custom Attributes > Offer Custom Attributes**.
6. Double-click the **Offer Custom Attributes** node to open the **Query Subject Definition** dialog box.
7. Locate the new column and add it to the **Model View**. Then edit the name of the query item so it can be read easily. For example, the column named LASTRUNDATE in the **Import View** of the Campaign data model appears as **Last Run Date** in the **Model View**.

Note: Because the **Business View** contains a shortcut to the **Offer Custom Attributes** node in the **Model View**, the new query item now available in the **Business View** without your having to add it manually.

8. Save the model.
9. Publish the package to the Cognos content store.

Now you can add the attribute to the appropriate report using IBM Cognos Report Studio.

Example: Add new views to IBM Cognos data model

The following example procedure shows how to add new views or tables to the IBM Cognos data model. For this example, assume that you changed the Over Time Variations for the Campaign Performance reporting schema and now need to import the change in the Cognos model. You have already completed the following tasks:

- Modified the Campaign Performance schema by adding Quarterly to the **Over Time Variations** options.
- Used the Reporting SQL Generator to generate the view creation script. This script now contains instructions to create the following additional reporting views: UARC_CCCH_QU, UARC_CCH_QU, UARC_CCRH_QU, UARC_COCH_QU, UARC_CORH_QU, and UARC_CRH_QU
- Ran the generated script in the Campaign database to create the additional reporting views.

Now, to add the new reporting views to the Cognos Campaign data model, you would complete the following steps.

1. Make a backup of the Campaign model.
That is, navigate to the Cognos/models directory and copy the CampaignModel subdirectory. In a distributed Cognos environment, the models directory is in a location on the system running the Content Manager.
2. In Framework Manager, open the Campaign project and expand the **Import View** node
3. Select the **Campaign Performance** folder and run the **Metadata Wizard** (accessed through the right-mouse menu).
4. Use the Metadata Wizard to import the new views.

5. Expand the **Model View > Campaign Performance** node and model a new entry named Campaign Performance by Quarter.
For help with this step, examine the other entries for reference. Be sure to maintain the same structure and relationships that are included in the other over time variation nodes. Additionally, consult the *Cognos BI Framework Manager User Guide* for information about the following:
 - Creating a new namespace.
 - Creating star schema groupings.
 - Adding joins.
6. Expand the **Business View** and create a shortcut to the Campaign Performance by Quarter node in the **Model View** .
7. Save the model.
8. Publish the package to the Cognos content store.
9. Open Report Studio and create a new report with the objects from the Campaign Performance by Quarter schema that you just created.

Customizing or creating Cognos reports for IBM EMM applications

You can customize the example reports so they include your custom data and you can create new reports. From Cognos Connection, you can configure options for the reports, schedule them to run at regular times, and use Report Studio to customize them.

Consult the following sources when you are planning and implementing your reports.

- The user's guides for your IBM EMM applications include short descriptions of all the reports in the IBM EMM reports package for that product.
- The IBM EMM reports packages provide reference documentation that describes the specifications of each of the reports in the pack and the Framework Manager metadata model that supports the reports. You can find the reference documentation in the reports package installation directory, in a location similar to `<ReportsPackInstallationDirectory>/cognos10/<Product>Docs`.

For example, the IBM EMM Campaign reports package documentation might be found in the Reports Pack installation directory under `/IBM/EMM/ReportsPackCampaign/cognos10/CampaignDocs`.

Examine these documents before you customize a model or a report. Be sure that you understand how a report is constructed before you modify it.

- For detailed documentation about creating and editing IBM Cognos BI reports, see the IBM Cognos BI documentation, especially the *IBM Cognos BI Report Studio Professional Authoring User Guide*.
- For information about the report styles to use, see the appendix Appendix B, "Formatting the Cognos reports," on page 95.
- For information about customizing Marketing Operations reports, see the *Marketing Operations Administration Guide*.

Guidelines for creating new Campaign reports

Use the following guidelines to create new reports for Campaign in IBM Cognos Report Studio:

- Examine the reference documentation that describes the metadata model and the specifications of the example reports from the Campaign report package. It is

located in the CampaignReportPack\cognosM\docs subdirectory in the report package installation directory, where *N* is the version number of your Cognos installation.

- Using Report Studio, create a new report, or copy and modify an existing report. For details, see the Cognos Report Studio documentation.
- If you are modifying a copy of an existing report (or the report itself), ensure that you understand how the report is constructed. Then you can add your custom attributes and metrics, and modify the objects and query items in an appropriate way, using the toolbar and Properties pane in Report Studio. For information about using Report Studio, see the Cognos Report Studio documentation. For information about the objects and query items in an example report, consult the reference documentation from the report package.
- For object-specific reports that appear on the Analysis tab, create a parameter ID that accepts the passed value from the object. For a system-wide report that appears on the Analysis page, create a prompt that contains all object values for campaigns or offers. For details, see the Cognos Report Studio documentation.
- Save the new report into the appropriate folder under **Public Folders** to make it visible in Campaign.
 - If it should appear on the **Analysis** tab, save it in the **Campaign - Object Specific Reports** folder.
 - If it should appear on the **Analysis** page, save it in the **Campaign** folder.
 - If you plan to add it to a dashboard portlet, save it in the **Unica Dashboards\Campaign** folder.

Configuring the Interaction Point Performance dashboard portlet

Interact has one IBM Cognos dashboard report: Interaction Point Summary. Because Dashboard reports do not prompt users for query parameters, the channel ID of the interactive channel in the Interaction Point Performance report is a static value. By default, the channel ID for this report is set to 1. If the channel ID is not correct for your implementation, you can customize the report and change the channel ID in the report's filter expression.

To customize any of the IBM Cognos reports, you need IBM Cognos report authoring skills. For detailed documentation about creating and editing IBM Cognos BI reports, see the IBM Cognos BI documentation, especially *IBM Cognos BI Report Studio Professional Authoring User Guide* for the version of Cognos you are using.

For information about the queries and data items in the Interaction Point Performance report, see the reference documentation provided in the Interact report package.

If you need to display a chart for more than one interactive channel in the Dashboard, make a copy of the Interaction Point Performance Dashboard and modify the channel ID. Then create a new dashboard portlet for the new report and add it to your dashboards.

Guidelines for creating new, custom dashboard reports

The IBM EMM reporting packages for Campaign, Interact, eMessage, and Marketing Operations include pre-configured reports (portlet) that are specially

formatted to for use with IBM EMM dashboards. See the *IBM Marketing Platform Administrator's Guide* for details on working with dashboards and using these pre-configured portlets.

If you want to create new, custom dashboard reports in Cognos Report Studio, use the following guidelines.

- Examine the reference documentation that describes the metadata model and the specifications of the example reports from the report package. It is located in the *ProductNameReportPack\cognosN\docs* subdirectory in the report package installation directory, where *N* is the version number of your Cognos installation.
- Save all dashboard reports in the appropriate product subdirectory under the main **Unica Dashboards** folder.
- The report must be formatted and sized so it fits properly in a dashboard portlet. See "Dashboard report styles" on page 101 in the "Style Guide for the IBM Cognos BI reports" appendix for a description of the formatting you should use.
- Do not include a title in a dashboard report. The portlet it appears in will give the report its title.
- Do not include hyperlinks in a dashboard report.
- Do not include page numbers in a dashboard report.

To create a new dashboard portlet and add the report to it, see the *IBM EMM Marketing Platform Administrator's Guide*.

Chapter 4. Configuring reporting for multiple partitions

Follow the instructions in this chapter to set up reporting when you have configured multiple partitions in Campaign and eMessage.

For instructions on configuring partitions in Campaign and eMessage, see the *IBM Campaign Administrator's Guide*.

Configuring the IBM Cognos Reports for multiple partitions

If you are using Campaign, eMessage, and/or Interact with more than one partition, you must configure IBM Cognos reports packages for each partition. A utility, `partition_tool.sh`, is provided to help with this process.

When you run the `partition_tool.sh` utility, it does the following:

- Copies the xml files from the original reports zip archive.
- Replaces the package references in the xml files to reference a new package under a new folder that you specify.
- Zips up the new files into a new archive, adding the new partition name to the end of the file name.

After running the `partition_tool.sh` utility, you create a folder in Cognos Connection using the name you specified, and import the new archive into that folder. Finally, you copy the original project file (which contains the model) so you can change the datasource to point to the new partition, and then publish the model to the new folder.

This section describes how to configure the IBM Cognos reports for multiple partitions.

Before you begin

The reporting partition utility, `partition_tool.sh`, is a UNIX shell script. Before you run the utility, do the following.

Determine values for input parameters

The reporting partition tool has two input parameters: the name of the partition folder you want to create in Cognos, and the location of the reports archive to copy.

- Decide the name of the top-level partition folder you plan to create in Cognos. This name is used in Cognos for the package references. For example, "Partition2."
- Note the path to the original reports archive. For example: `IBM\Unica\ReportsPacksCampaign\cognos<version>\IBM EMM Reports for Campaign.zip`

Windows only: obtain a shell script simulator

If Cognos is running on Windows, you must run the script from a shell script simulator (for example, Cygwin).

If you do not have a shell script simulator installed on the machine that is running the Cognos Content Manager, download and install one now.

Ensure that a zip utility is installed

The reporting partition tool creates a zip archive for the new partition reports. To enable this function, a zip utility must be installed on the Cognos system.

If you do not have a zip utility installed on the machine that is running the Cognos Content Manager, download and install one now.

Run the reporting partition tool to create a copy of the reports archive .zip file

Perform this procedure for each partition in your system.

1. From the shell or the shell simulator, navigate to the IBM\Unica\Platform\tools\cognos<version>\bin directory.
2. Run the partition_tool.sh utility, providing values for the partition name and archive path parameters.

Examples

For a Campaign reports archive

```
partition_tool.sh Partition2 "IBM\Unica\ReportsPacksCampaign\  
cognos<version>\Unica Reports for Campaign.zip"
```

For an eMessage reports archive

```
partition_tool.sh Partition2 "IBM\Unica\ReportsPackseMessage\cognos10\  
Unica Reports for eMessage.zip"
```

Note: You must use quote characters around the parameter values if they contain spaces, as shown above for the archive paths.

3. Copy each new zip file to the Cognos deployment directory.
If you used the partition name provided in the example above, the new zip file would be named as follows.
 - Campaign - Unica Reports for Campaign_Partition2.zip
 - eMessage - Unica Reports for eMessage_Partition2.zip
4. Open Cognos Connection.
5. Under Public Folders, create a folder for the reports partition.
For example, Campaign Partition 2.
6. Import each new zip archive, selecting the folder you created in step 5 as the target location in the import wizard.
If you followed the example, you would target the "Campaign Partition 2" folder.

Create a copy of the Cognos model for Campaign

Perform this step if you plan to use Campaign reports in multiple partitions.

In this task, you create a copy of the IBM Cognos data model for the new Campaign reports and ensure that the model references the correct data source name.

1. Verify that you created a IBM Cognos data source for this partition. If you have not yet created the data source for this partition, see “Step: Create JDBC data sources” on page 5.
2. Use Framework Manager to open the Campaign project (cpf file), the CampaignModel.cpf file.
3. Use **Save As** to copy the CampaignModel project and give it a new name that indicates the partition where it is used.
For example, CampaignModelPartition2.
4. In the **Project Viewer**, expand the **Data Sources** node and select **CampaignDS**.
If the **Properties** pane does not appear by default, select **View > Properties**.
5. Click in the **Name** field and change the value from the default data source (CampaignDS) to the correct data source name for this Campaign partition.
For example, CampaignDS_partition2.
6. Click in the **Content Manager Datasource** field and change the value of the default data source (CampaignDS) to the same value that you specified in the previous step.
In this example, the value is CampaignDS_partition2.
7. Save your changes.
8. Publish the package to the content store and when the publish wizard displays the **Select Location Type** window, navigate to and specify the folder where you imported the reports archive in Cognos Connection in the previous task.
In the example, the folder is Campaign Partition 2.

Create a copy of the Cognos model for eMessage

Perform this step if you plan to use eMessage reports in multiple partitions.

In this task, you create a copy of the IBM Cognos data model for the new eMessage reports and ensure that the model references the correct data source name.

1. Verify that you created a IBM Cognos data source for this partition. If you have not yet created the data source for this partition, see “Step: Create JDBC data sources” on page 5.
2. Use Framework Manager to open the eMessage project file, eMessageModel.cpf.
3. Use **Save As** to copy the eMessageModel project and give it a new name that indicates the partition where it is used.
For example, eMessageModelPartition2.
4. In the **Project Viewer**, expand the **Data Sources** node and select **eMessageTrackDS**.
If the **Properties** pane does not appear by default, select **View > Properties**.
5. Click in the **Name** field and change the value of the default data source (eMessageTrackDS) to the new data source name for this eMessage partition.
For example, eMessageTrackDS_partition2.
6. Click in the **Content Manager Datasource** field and change the value of the default data source (eMessageTrackDS) to the same value that you specified in the previous step.
In this example, the value is eMessageTrackDS_partition2.
7. Save your changes.

8. Publish the package to the content store and when the publish wizard displays the **Select Location Type** window, navigate to and specify the folder where you imported the reports archive in Cognos Connection in the previous task.
In the example, the folder is Campaign Partition 2.

Update the partition's report properties on the IBM EMM Configuration page

Each partition has a set of reports properties that specifies the location of the report folders. You must edit the values of each of the reports properties to reflect the actual path of the folders by inserting the string that identifies the new top-level partition folder.

Campaign example

If the new partition folder in Cognos Connection is named "Campaign Partition 2", you would edit the report property settings as shown in the following example.

```
folder[@name='Campaign Partition 2']/
```

For example, to update the offerAnalysisTabCachedFolder property, you would change the value from

```
/content/folder[@name='Affinium Campaign - Object Specific Reports']/folder[@name='offer']/folder[@name='cached']
```

to

```
/content/folder[@name='Campaign Partition 2']/folder[@name='Affinium Campaign - Object Specific Reports']/folder[@name='offer']/folder[@name='cached']
```

eMessage example

If the new partition folder in Cognos Connection is named "Campaign Partition 2", you would edit the report property settings as shown in the following example.

```
folder[@name='Campaign Partition 2']/
```

For example, to update the campaignAnalysisTabEmessageOnDemandFolder property, you would change the value from

```
/content/folder[@name='Affinium Campaign']/folder[@name='eMessageReports']
```

to

```
/content/folder[@name='Campaign Partition 2']/folder[@name='Affinium Campaign']/folder[@name='eMessage Reports']
```

To update the partition's report properties

1. Log in to IBM EMM as the platform_admin user.
2. Select **Settings > Configuration** .
3. Expand **Campaign > partitions > *partitionName* > reports**

4. Edit the value of each of the properties in this section so they reflect the actual path to the reporting folders as described above.
5. Save your changes.
6. Repeat steps 3 through 5 for each partition.

Appendix A. Reporting configuration properties

For reporting, the IBM EMM suite integrates with IBM Cognos, a third-party business intelligence application. You use the Cognos properties to identify the IBM Cognos system used by your IBM installation. Then, for Campaign, eMessage, and Interact, there are additional configuration properties that you use to set up and customize reporting schemas.

Reports | Integrations | Cognos [version]

This page displays properties that specify URLs and other parameters for the IBM Cognos system used by this IBM system.

Integration Name

Description

Read-only. Specifies that IBM Cognos is the third-party reporting or analytical tool used by the IBM EMM to display the reports.

Default value

Cognos

Vendor

Description

Read-only. Specifies that IBM Cognos is the name of the company that provides the application specified by the Integration Name property.

Default value

Cognos

Version

Description

Read-only. Specifies the product version of the application specified by the Integration Name property.

Default value

<version>

Enabled

Description

Specifies whether IBM Cognos is enabled for the suite.

Default value

False

Valid Values

True | False

Integration Class Name

Description

Read-only. Specifies the fully-qualified name of the Java™ class that creates the integration interface used to connect to the application specified by the Integration Name property.

Default value

`com.unica.report.integration.cognos.CognosIntegration`

Domain

Description

Specifies the fully-qualified company domain name in which your Cognos server is running. For example, `myCompanyDomain.com`.

If your company uses subdomains, the value in this field must include the appropriate subdomain as well.

Default value

[CHANGE ME]

Valid Values

A string no longer than 1024 characters.

Portal URL

Description

Specifies the URL of the IBM Cognos Connection portal. Use a fully qualified host name, including the domain name (and subdomain, if appropriate) that is specified in the **Domain** property. For example:
`http://MyReportServer.MyCompanyDomain.com/cognos<version>/cgi-bin/cognos.cgi`

You can find the URL in IBM Cognos Configuration at: **Local Configuration > Environment** .

Default value

`http://[CHANGE ME]/cognos<version>/cgi-bin/cognos.cgi`

Valid Values

A well-formed URL.

Dispatch URL

Description

Specifies the URL of the IBM Cognos Content Manager. Use a fully qualified host name, including the domain name (and subdomain, if appropriate) specified in the Domain property. For example:
`http://MyReportServer.MyCompanyDomain.com:9300/p2pd/servlet/dispatch`

You can find the URL in Cognos Configuration at: **Local Configuration > Environment** .

Default value

`http://[CHANGE ME]:9300/p2pd/servlet/dispatch`

Note that 9300 is the default port number for the Cognos Content Manager. Be sure that the port number specified matches that used in the Cognos installation.

Valid Values

A well-formed URL.

Authentication mode

Description

Specifies whether the IBM Cognos application is using the IBM Authentication Provider, which means it relies on the Marketing Platform for authentication.

Default value

anonymous

Valid Values

- `anonymous`: means authentication is disabled.
- `authenticated`: means that the communications between the IBM system and the Cognos system are secured at the machine level. You configure a single system user and configure it with the appropriate access rights. By convention, this user is named "cognos_admin."
- `authenticatedPerUser`: means that the system evaluates individual user credentials.

Authentication namespace

Description

Read only. The namespace of the IBM Authentication Provider.

Default value

Unica

Authentication user name

Description

Specifies the login name for the reporting system user. The IBM applications log in to Cognos as this user when Cognos is configured to use the Unica Authentication provider. Note that this user also has access to IBM EMM.

This setting applies only when the **Authentication mode** property is set to **authenticated**.

Default value

cognos_admin

Authentication datasource name

Description

Specifies the name of the data source for the reporting system user that holds the Cognos login credentials.

Default value

Cognos

Enable form authentication

Description

Specifies whether form-based authentication is enabled. You set this property to True when either of the following is true:

- When the IBM EMM is not installed in the same domain as the IBM Cognos applications.
- When IBM Cognos is accessed using an IP address (within the same network domain) instead of the Fully Qualified Hostname (which is being used to access the IBM EMM applications), even if both the IBM EMM applications and the IBM Cognos installation are on the same machine.

However, when the value is True, the login process to Cognos Connection passes the login name and password in clear text and therefore is not secure unless IBM Cognos and the IBM EMM are configured to use SSL communication.

Even with SSL configured, the user name and password appear as clear text in the HTML source code when you "view source" in a displayed report. For this reason, you should install IBM Cognos and IBM EMM in the same domain.

Default value

False

Valid Values

True | False

Reports | Schemas | [product] | [schema name] | SQL Configuration

Table/View Name

Description

Specifies the name of the view or table that the SQL script you generate for this reporting schema will create. As a best practice, you should not change the name for any of the standard or default Table/View names. If you do, you must also change the name of the view in the Cognos model in IBM Cognos Framework Manager.

When you create a new reporting schema for a new audience level, you must specify the names of all the new reporting tables/views.

Default value

Varies by schema

Valid Values

A string with the following restrictions.

- It can be no longer than 18 characters
- It must use all UPPER-CASE letters

Following is the naming convention you should use:

- Start the name with the letter "UAR"
- Add a one-letter code to represent the IBM EMM application. See the list of codes, below.
- Add an underscore character

- Add the table name, including a one or two letter code to indicate the audience level
- Finish with an underscore character.

The SQL generator appends a time dimension code, if appropriate. See the list of codes, below.

For example: UARC_COPERF_DY is the name of the reporting view or table for Campaign Offer Performance by Day.

Following is the list of IBM EMM application codes.

- Campaign: C
- eMessage: E
- Interact: I
- Distributed Marketing: X
- Marketing Operations: P
- Leads: L

Following is the list of the Time Dimension Codes added by the generator.

- Hour: HR
- Day: DY
- Week: WK
- Month: MO
- Quarter: QU
- Year: YR

Reports | Schemas | Campaign

Input Datasource (JNDI)

Description

Specifies the name of the JNDI data source that identifies the Campaign database, specifically, the system tables. This data source must exist if you want to use the SQL generation tool to generate scripts that create reporting tables. The SQL generation tool can generate scripts that create reporting views without this data source, but it cannot validate them.

The database type of this data source must match the database type you select when you generate the SQL scripts for the Campaign views or reporting tables.

Default value

campaignPartition1DS

Reports | Schemas | Campaign | Offer Performance

The Offer Performance Schema yields contact and response history metrics for all offers and for offers by campaign. By default, the schema is configured to generate a “summary” view (or table) across all time.

Audience Key

Description

Specifies the name of the column that is the Audience Key for the audience level supported by this reporting schema.

Default value

CustomerID

Valid Values

A string value no longer than 255 characters

If the key includes more than one column, use commas between the column names. For example, ColumnX,ColumnY.

Contact History Table**Description**

Specifies the name of the Contact History table for the audience level supported by this reporting schema.

Default value

UA_ContactHistory

Detailed Contact History Table**Description**

Specifies the name of the Detailed Contact History table for the audience level supported by this reporting schema.

Default value

UA_Dt1ContactHist

Response History Table**Description**

Specifies the name of the Response History table for the audience level supported by this reporting schema.

Default value

UA_ResponseHistory

Over Time Variations**Description**

Specifies the calendar time periods used by the "over time" reports supported by this schema.

Default value

Day, Month

Valid Values

Day, Week, Month, Quarter, Year

Reports | Schemas | Campaign | [schema name] | Columns | [Contact Metric]

Use this form to add contact metrics to the Campaign Performance or Offer Performance reporting schemas.

Column Name

Description

Specifies the name to use in the reporting view or table for the column specified in the **Input Column Name** field.

Default value

[CHANGE ME]

Valid Values

The name can be no longer than 18 characters, it must be in all UPPER-CASE letters, and it cannot have spaces.

Function

Description

Specifies how the contact metric is determined or calculated.

Default value

count

Valid Values

count, count distinct, sum, min, max, average

Input Column Name

Description

The name of the column that provides the contact metric you are adding to this reporting schema.

Default value

[CHANGE ME]

Valid Values

The name of the column in the Contact History and Detailed Contact History tables.

Control Treatment Flag

Description

If you use the sample IBM Cognos reports or create your own custom reports that include control groups, then each contact metric must have two columns in the reporting schema. One column represents the metric for the control group and the other column represents the metric for the target group. The value in **Control Treatment Flag** specifies whether the column in the view represents the control group or the target group.

If your reports do not include control groups, you do not need the second column for the control group.

Default value

0

Valid Values

- 0: the column represents the target group
- 1: the column represents the control group

Reports | Schemas | Campaign | [schema name] | Columns | [Response Metric]

Use this form to add the response metrics you want to include in your reports to the Campaign Performance or Offer Performance reporting schemas.

Column Name

Description

Specifies the name to use in the reporting view or table for the column specified in the **Input Column Name** field.

Default value

[CHANGE ME]

Valid Values

The name can be no longer than 18 characters, it must be in all UPPER-CASE letters, and it cannot have spaces.

Function

Description

Specifies how the response metric is determined or calculated.

Default value

count

Valid Values

count, count distinct, sum, min, max, average

Input Column Name

Description

The name of the column that provides the response metric you are adding to this reporting schema.

Default value

[CHANGE ME]

Valid Values

The name of the column in the Response History table.

Control Treatment Flag

Description

If you use the standard IBM Cognos reports or create your own custom reports that include control groups, then each response metric must have two columns in the reporting schema. One column represents the response from the control group and the other column represents the response from the target group. The value in **Control Treatment Flag** specifies whether the column in the view represents the control group or the target group.

If your reports do not include control groups, you do not need the second column for the control group.

Default value

0

Valid Values

- 0: the column represents the target group
- 1: the column represents the control group

Reports | Schemas | Campaign | Campaign Performance

The Campaign Performance schema yields contact and response history metrics at the campaign, campaign-offer, and campaign-cell level.

Audience Key

Description

Specifies the name of the column that is the Audience Key for the audience level supported by this reporting schema.

Default value

CustomerID

Valid Values

A string value no longer than 255 characters

If the key includes more than one column, use commas between the column names. For example, ColumnX,ColumnY.

Contact History Table

Description

Specifies the name of the Contact History table for the audience level supported by this reporting schema.

Default value

UA_ContactHistory

Detailed Contact History Table

Description

Specifies the name of the Detailed Contact History table for the audience level supported by this reporting schema.

Default value

UA_DtlContactHist

Response History Table

Description

Specifies the name of the Response History table for the audience level supported by this reporting schema.

Default value

UA_ResponseHistory

Over Time Variations

Description

Specifies the calendar time periods used by the "over time" reports supported by this schema.

Default value

Day, Month

Valid Values

Day, Week, Month, Quarter, Year

Reports | Schemas | Campaign | Campaign Offer Response Breakout

This schema supports reporting on campaign-detailed responses, broken out by response type and by offer data. This schema template gives different response counts for each custom Response Type for campaigns and offers grouped by campaign.

Response History Table

Description

Specifies the name of the Response History table for the audience level supported by this reporting schema.

Default value

UA_ResponseHistory

Reports | Schemas | Campaign | Campaign Offer Response Breakout | Columns | [Response Type]

Use this form to add to the reporting schema any custom response types you want to include in your reports.

Column Name

Description

Specifies the name to use in the reporting view or table for the column specified in the **Response Type Code** field.

Default value

[CHANGE ME]

Valid Values

The name can be no longer than 18 characters, it must be in all UPPER-CASE letters, and it cannot have spaces.

Response Type Code

Description

The response type code for the specified response type. This is the value held in the ResponseTypeCode column in the UA_UsrResponseType table.

Default value

[CHANGE ME]

Valid Values

The example response type codes are as follows:

- EXP (explore)
- CON (consider)
- CMT (commit)
- FFL (fulfill)
- USE (use)
- USB (unsubscribe)
- UKN (unknown)

Your Campaign installation may have additional custom response type codes.

Control Treatment Flag

Description

If you use the standard IBM Cognos reports provided in the IBM EMM Reports Pack or custom reports that include control groups, then each response type must have two columns in the reporting schema. One column represents the response type from the control group and the other column represents the response type from the target group. The value in **Control Treatment Flag** specifies whether the column in the view represents the control group or the target group.

If your reports do not include control groups, you do not need the second column for the control group.

Default value

0

Valid Values

- 0: the column represents the target group
- 1: the column represents the control group

Reports | Schemas | Campaign | Campaign Offer Contact Status Breakout

This schema supports reporting on campaign-detailed contacts, broken out by contact status type and by offer data. This schema template gives different contact counts for each custom Contact Status Type for campaigns and offers grouped by campaign.

By default, none of the example Campaign reports use this schema.

Audience Key

Description

Specifies the name of the column that is the Audience Key for the audience level supported by this reporting schema.

Default value

CustomerID

Valid Values

A string value no longer than 255 characters

If the key includes more than one column, use commas between the column names. For example, ColumnX,ColumnY.

Contact History Table

Description

Specifies the name of the Contact History table for the audience level supported by this reporting schema.

Default value

UA_ContactHistory

Detailed Contact History Table

Description

Specifies the name of the Detailed Contact History table for the audience level supported by this reporting schema.

Default value

UA_Dt1ContactHist

Reports | Schemas | Campaign | Campaign Offer Contact Status Breakout | Columns | [Contact Status]

Column Name

Description

Specifies the name to use in the reporting view or table for the column specified in the **Contact Status** field.

Default value

[CHANGE ME]

Valid Values

The name can be no longer than 18 characters, it must be in all UPPER-CASE letters, and it cannot have spaces.

Contact Status Code

Description

The name of the contact status code. This is the value held in the ContactStatusCode column in the UA_ContactStatus table.

Default value

[CHANGE ME]

Valid Values

The example contact status types are as follows.

- CSD (campaign send)
- DLV (delivered)
- UNDLV (undelivered)
- CTR (control)

Your Campaign installation may have additional custom contact status types.

Reports | Schemas | Campaign | Campaign Custom Attributes | Columns | [Campaign Custom Column]

Use this form to add to the reporting schema any custom campaign attributes that you want to include in your reports.

Column Name

Description

Specifies the name to use in the reporting view or table for the attribute identified in the **Attribute ID** field.

Default value

[CHANGE ME]

Valid Values

The name can be no longer than 18 characters, it must be in all UPPER-CASE letters, and it cannot have spaces.

Attribute ID

Description

The value from the attribute's AttributeID column in the UA_CampAttribute table.

Default value

0

Value Type

Description

The data type of the campaign attribute.

Default value

StringValue

Valid Values

StringValue, NumberValue, DatetimeValue

If this campaign attribute holds a currency value, select NumberValue.

If this campaign attribute's **Form Element Type** was set to Select Box - String in Campaign, select StringValue.

Reports | Schemas | Campaign | Campaign Custom Attributes | Columns | [Offer Custom Column]

Use this form to add to the reporting schema any custom offer attributes that you want to include in your reports.

Column Name

Description

Specifies the name to use in the reporting view or table for the attribute identified in the **Attribute ID** field.

Default value

[CHANGE ME]

Valid Values

The name can be no longer than 18 characters, it must be in all UPPER-CASE letters, and it cannot have spaces.

Attribute ID**Description**

The value from the attribute's AttributeID column in the UA_OfferAttribute table.

Default value

0

Value Type**Description**

The data type of the offer attribute.

Default value

StringValue

Valid Values

StringValue, NumberValue, DatetimeValue

If this offer attribute holds a currency value, select NumberValue.

If this offer attribute's **Form Element Type** was set to Select Box - String in Campaign, select StringValue.

Reports | Schemas | Campaign | Campaign Custom Attributes | Columns | [Cell Custom Column]

Use this form to add to the reporting schema any custom cell attributes that you want to include in your reports.

Column Name**Description**

Specifies the name to use in the reporting view or table for the attribute identified in the **Attribute ID** field.

Default value

[CHANGE ME]

Valid Values

The name can be no longer than 18 characters, it must be in all UPPER-CASE letters, and it cannot have spaces.

Attribute ID**Description**

The value from the attribute's AttributeID column in the UA_CellAttribute table.

Default value

0

Value Type**Description**

The data type of the cell attribute.

Default value

StringValue

Valid Values

StringValue, NumberValue, DatetimeValue

Reports | Schemas | Interact

The Interact reporting schemas reference three separate databases: the design time, run time, and learning databases. Use the properties from this page to specify the JNDI names of the data sources for those databases.

The data sources specified on this page must exist if you want to use the Reporting SQL generation tool to generate scripts that create reporting tables. The SQL generation tool can generate scripts that create reporting views without these data sources, but it cannot validate the scripts.

Note that the database type of the data sources must match the database type you select when you generate the SQL scripts for the views or reporting tables.

Interact Design Datasource (JNDI)

Description

Specifies the name of the JNDI data source that identifies the Interact design time database, which is also the Campaign system tables.

Default value

campaignPartition1DS

Interact Runtime Datasource (JNDI)

Description

Specifies the name of the JNDI data source that identifies the Interact runtime database.

Default value

InteractRTDS

Interact Learning Datasource (JNDI)

Description

Specifies the name of the JNDI data source that identifies the Interact learning database.

Default value

InteractLearningDS

Reports | Schemas | Interact | Interact Performance

The Interact Performance schema yields contact and response history metrics at the channel, channel-offer, channel-segment, channel-interaction point, interactive cell, interactive cell-offer, interactive cell-interaction point, interactive offer, interactive offer-cell and interactive offer-interaction point levels.

Audience Key

Description

Specifies the name of the column that is the Audience Key for the audience level supported by this reporting schema.

Default value

CustomerID

Valid Values

A string value no longer than 255 characters.

If the key includes more than one column, use commas between the column names. For example, ColumnX,ColumnY.

Detailed Contact History Table

Description

Specifies the name of the Detailed Contact History table for the audience level supported by this reporting schema.

Default value

UA_Dt1ContactHist

Response History Table

Description

Specifies the name of the Response History table for the audience level supported by this reporting schema.

Default value

UA_ResponseHistory

Over Time Variations

Description

Specifies the calendar time periods used by the "over time" reports supported by this schema.

Default value

Hour, Day

Valid Values

Hour, Day, Week, Month, Quarter, Year

Reports | Schemas | eMessage

eMessage Tracking Datasource (JNDI)

Description

Specifies the name of the JNDI data source that identifies the eMessage tracking tables, which are located in the Campaign system tables. This data source must exist if you want to use the Reports SQL generation tool to validate scripts that create reporting tables. The SQL generation tool can generate scripts that create reporting views without this data source, but it cannot validate them.

The database type of this data source must match the database type you select when you generate the SQL scripts for the views or reporting tables.

Default value

campaignPartition1DS

Campaign | partitions | partition[n] | reports

These configuration properties define folders for reports.

offerAnalysisTabCachedFolder

Description

The offerAnalysisTabCachedFolder property specifies the location of the folder that contains the specification for bursted (expanded) offer reports listed on the Analysis tab when you reach it by clicking the Analysis link on the navigation pane. The path is specified using XPath notation.

Default value

```
/content/folder[@name='Affinium Campaign - Object Specific Reports']/folder[@name='offer']/folder[@name='cached']
```

segmentAnalysisTabOnDemandFolder

Description

The segmentAnalysisTabOnDemandFolder property specifies the location of the folder that contains the segment reports listed on the Analysis tab of a segment. The path is specified using XPath notation.

Default value

```
/content/folder[@name='Affinium Campaign - Object Specific Reports']/folder[@name='segment']/folder[@name='cached']
```

offerAnalysisTabOnDemandFolder

Description

The offerAnalysisTabOnDemandFolder property specifies the location of the folder that contains the offer reports listed on the Analysis tab of an offer. The path is specified using XPath notation.

Default value

```
/content/folder[@name='Affinium Campaign - Object Specific Reports']/folder[@name='offer']
```

segmentAnalysisTabCachedFolder

Description

The segmentAnalysisTabCachedFolder property specifies the location of the folder that contains the specification for bursted (expanded) segment

reports listed on the Analysis tab when you reach it by clicking the Analysis link on the navigation pane. The path is specified using XPath notation.

Default value

```
/content/folder[@name='Affinium Campaign - Object Specific Reports']/folder[@name='segment']
```

analysisSectionFolder

Description

The analysisSectionFolder property specifies the location of the root folder where report specifications are stored. The path is specified using XPath notation.

Default value

```
/content/folder[@name='Affinium Campaign']
```

campaignAnalysisTabOnDemandFolder

Description

The campaignAnalysisTabOnDemandFolder property specifies the location of the folder that contains the campaign reports listed on the Analysis tab of a campaign. The path is specified using XPath notation.

Default value

```
/content/folder[@name='Affinium Campaign - Object Specific Reports']/folder[@name='campaign']
```

campaignAnalysisTabCachedFolder

Description

The campaignAnalysisTabCachedFolder property specifies the location of the folder that contains the specification for bursted (expanded) campaign reports listed on the Analysis tab when you reach it by clicking the Analysis link on the navigation pane. The path is specified using XPath notation.

Default value

```
/content/folder[@name='Affinium Campaign - Object Specific Reports']/folder[@name='campaign']/folder[@name='cached']
```

campaignAnalysisTabEmessageOnDemandFolder

Description

The campaignAnalysisTabEmessageOnDemandFolder property specifies the location of the folder that contains the eMessage reports listed on the Analysis tab of a campaign. The path is specified using XPath notation.

Default value

```
/content/folder[@name='Affinium Campaign']/folder[@name='eMessage Reports']
```

campaignAnalysisTabInteractOnDemandFolder

Description

Report server folder string for Interact reports.

Default value

/content/folder[@name='Affinium Campaign']/folder[@name='Interact Reports']

Availability

This property is applicable only if you have installed Interact.

interactiveChannelAnalysisTabOnDemandFolder

Description

Report server folder string for Interactive Channel analysis tab reports

Default value

/content/folder[@name='Affinium Campaign - Object Specific Reports']/folder[@name='interactive channel']

Availability

This property is applicable only if you have installed Interact.

Appendix B. Formatting the Cognos reports

The IBM Cognos reporting integration components include a global report stylesheet, `GlobalReportStyles.css`. When you create new IBM Cognos reports for your IBM EMM applications, your reports should use the styles from this css file with some additional manual formatting. That way the styles in the new reports match those used by the reports provided in the IBM EMM reports packages.

This appendix provides the following information for the various kinds of reports (lists, charts, and so on).

- The styles implemented with the `GlobalReportStyles.css` file.
- Style formatting is something that you must do manually when you author a report, because there are certain cases in which the style cannot be provided by the stylesheet.

Global report styles

Item	CSS class name	Style
General font family	pg, pp	font-family: Arial, ...
Report title	ta	font-size: 10pt;
Page – Header	ph	padding-bottom:10px; font-size:8pt; font-weight:bold;
Page – Footer	pf	padding-top:10px; font-size:8pt; font-weight:bold;
Field Set Labels	fs	font-size:8pt;
Table	tb	border-collapse:collapse
Table - List Column Title Cell	lt	text-align:left; background-color:#F2F2F2; /*light grey*/ font-weight:bold; border-top:1px solid silver; border-left:1px solid silver; border-bottom:1.5pt solid black; border-right:1px solid silver; padding-top: 13px;
Table - List Column Body Cell	lc, lm	border:1px solid silver;
Table – Outer header	oh	background-color:#FFFFCC; /*light yellow*/
Table – List Footer	of, os	border-top:1.5pt solid black;
Crosstab	xt	border-collapse:collapse;

Item	CSS class name	Style
Crosstab – Default Measure Cell	xm	border-top:1px solid silver; border-left:1px solid silver; border-bottom:1.5pt solid black; border-right:1.5pt solid black;
Crosstab – Member Label Cell	ml	background-color: transparent; border:1px solid silver;
Crosstab – Outer Level Total	ol	background-color:#F7F7F7; /*offwhite*/
Crosstab – Spacer	xs	background-color: transparent; font-weight: bold;
Chart	ch	border:1pt solid #E4E4E4;
Chart – Title	ct	font-size:10pt; font-weight:bold;
Chart – Axis Labels	al	font-size:10pt;
Chart – Axis Line	at	color:#939393;
Chart - Gradient	In XML Report Specification	Before the closing chart tag (</combinationChart>) in the XML Report Specification, paste the following: <fillEffects> <chartGradient direction="up" fromColor="#F2F2F2" toColor="#FFFFFF"/> </fillEffects>

Item	CSS class name	Style
Chart – Chart Palette	In XML Report Specification	<p>Before the closing chart tag (</combinationChart>) in the XML Report Specification, paste the following:</p> <pre> <chartPalette> <chartColor value="#00508A"/> <chartColor value="#376C37"/> <chartColor value="#FB9A4D"/> <chartColor value="#B8351F"/> <chartColor value="#69817B"/> <chartColor value="#473E9A"/> <chartColor value="#5384AE"/> <chartColor value="#61C2A3"/> <chartColor value="#FF5656"/> <chartColor value="#A583BB"/> <chartColor value="#506079"/> <chartColor value="#A0A080"/> <chartColor value="#F1EDC1"/> <chartColor value="#A6A6A6"/> <chartColor value="#818181"/> </chartPalette> </pre>

Report page styles

Item	Style
Text	Arial font
Report title text	Arial 10 point
Page footer text	Arial 8 point
Field Set labels	Arial 8 point

List report styles

List reports obtain the following formatting from the GlobalStyleSheet.css:

Item	Style
Cells	1 px silver line borders (unless otherwise noted)
Column header	Light gray background; 1.5 pt black line separates column header from rest of table
Summary header rows (list headers)	Light yellow background

Item	Style
Total row at bottom	Dark gray background; 1.5 pt black line separates row from rest of table

Additionally, when you create a new list report, do the following to make it match the existing reports:

- Use List Headers (and not List Footers) to display summarizations at the object level.
- Manually right-justify any numbers displayed in List Headers. Unlike List Footers, List Headers are not separated into the outer component and summary component, which use a right-justified style by default. So when summarizing information into a List Header, you must perform this extra step and right-justify the values.
- Optionally add 1.5 pt solid black borders to group columns

Following is a list report that does not use the global styles.

Example List Report

Campaign Name	Offer Name	Number of Offers Given	Unique Recipients	Response Transactions	Unique Responders
Mortgage Multi-Channel Acquisition Campaign	Low Cost Refinance DM	3,973	3,973	1,239	1,117
	Low Cost Refinance TM	2,696	2,696	875	787
Multi - Wave Campaign		18,611	18,243	312	67
Multi - Wave Campaign	15 Pct Off \$75 Direct Mail	300	300		
	Buy One Get One 50 Pct Off Direct Mail	300	300		
	Money Market Savings	18,011	18,011	312	67
Multi-Channel Category Cross-Sell		19,672	19,672	4,825	2,541
Multi-Channel Category Cross-Sell	Bath Dmail	1,552	1,552	1,013	417
	Bath Email	2,260	2,260	1,281	528
	Clearance Dmail	145	145	26	16
	Clearance Email	200	200	33	22
	Electronics Dmail	207	207	47	30
	Electronics Email	270	270	59	39
	Home Care Dmail	71	71	20	12
	Home Care Email	92	92	22	13
	Home Decor Dmail	4,190	4,190	676	446
	Home Decor Email	6,250	6,250	931	605
	Juniors Dmail	11	11		
	Juniors Email	8	8		
	Kitchen Dmail	62	62	9	6
Kitchen Email	86	86	15	11	

Following is a list report that uses the global styles.

Example List Report

Manually right justify summary headers

Campaign Name	Offer Name	Number of Offers Given	Unique Recipients	Response Transactions	Unique Responders
1. Retention for High Value Customer - eMail		12,756	12,756	3,376	3,130
1. Retention for High Value Customer - eMail	Phone Credit \$20 (English)	1,592	1,592	420	391
	Phone Credit \$20 (Spanish)	1,596	1,596	420	396
	PPV - \$ Free (English)	4,803	4,803	1,262	1,174
	PPV - \$ Free (Spanish)	4,763	4,763	1,266	1,170
2. Targeted Acquisition		5,000	5,000	1,601	1,606
2. Targeted Acquisition	Free Webcam High Speed Internet	2,500	2,500	432	426
	Gift Certificate Offer	2,500	2,500	1,169	1,180
3. Direct Mail Multi-Wave		8,337	8,337	1,929	1,834
3. Direct Mail Multi-Wave	New Phone Existing Cable - Initial	8,337	8,337	1,929	1,834
Association Campaigns		150	150	9	3
Association Campaigns	DM-20 pct off Books	25	25		
	DM-20 pct off Education	25	25	3	1
	DM-Pharma Donation Match	25	25		
	EM-20 pct off Books	25	25		
	EM-20 pct off Education	25	25	6	2
	EM-Pharma Donation Match	25	25		
Casino Marketing Campaign C000007923		886	886	10,423	1,894
Casino Marketing Campaign C000007923	Free Buffet Dinner Offer	443	443	47	37
	Free Gas Card Offer	443	443	10,376	1,857
Credit Card Acquisition		364	364	44	16
Credit Card Acquisition	Credit Card Offer	364	364	44	16
Customer Winback		3,856	3,856	396	149
Customer Winback	15 Pct Off On Purchase \$100+ DM	2,961	2,961		
	20 Percent Off Any Single Item Offer	895	895	396	149
Gaming Re-Activation C000007921		2,456	2,456	1,812	353
Gaming Re-Activation C000007921	Play Multipliers Offer	2,456	2,456	1,812	353
Home Equity Cross Sell		6,941	6,937	746	268
Home Equity Cross Sell	Fee based Home Equity Line of Credit	6,941	6,937	746	268

Sample Informational Text
Aug 13, 2008
Top Page Up Page Down System

1

10:55:17 AM

Crosstab report styles

Crosstab reports obtain the following formatting from the GlobalStyleSheet.css.

Item	Style
Cells	Transparent background; 1 px silver line borders
Measure cell (upper left)	1.5 pt black line separates the cell from the rest of the crosstable
Outer level totals	Gray/offwhite background

Additionally, when you create a new list report, do the following to make it match the existing reports.

- Use 1.5 pt black borders to separate summarizations from measures.
- Use 1.5 black borders to group logical column groupings.
- General guideline: avoid summarizing both columns and rows in the same report.

Following is a crosstab report that does not use the global styles.

Example Crosstab Report

	1		2		3		4		7		9	
	Number of Offers Given	Unique Recipients										
Cross Sell	1,263	1,263	6,941	6,637	8,404	7,157	8,337	8,337			9,563	9,563
Loyalty	3,856	3,856			4,414	4,414						
Retention	150	150			12,756	12,756						23,114
Acquisition					13,339	13,339	5,000	5,000				

Following is a crosstab report that uses the global styles and has 1.5 px borders applied to show column groupings.

	1		2		3		4		7		8		10		11		12		Total(Month)			
	Number of Offers Given	Unique Recipients																				
Cross Sell	1,263	1,263	6,941	6,637	8,404	7,157	8,337	8,337			9,563	9,563			18,911	18,243			888	888	44,442	42,332
Loyalty	3,856	3,856			4,414	4,414									2,458	2,458					11,827	11,827
Retention	150	150			12,756	12,756					25,114	25,114									38,329	38,329
Acquisition					13,339	13,339	5,000	5,000					384	384							18,783	18,783

Chart styles

Charts obtain the following formatting from the GlobalStyleSheet.css.

Item	Style
Charts	1 pt light gray border
Titles and labels	10 point bold font

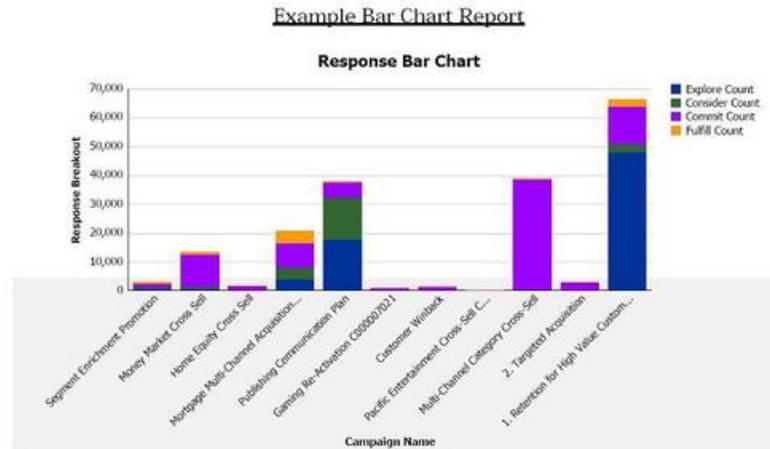
Additionally, when you create a new chart, do the following to make it match the existing chart reports.

- Use the default width, unless there is more than one chart on the report. When you include multiple charts in a single report, set the chart width to 750px.
- To use gradients and color palettes, copy and paste the strings from the table in “Global report styles” on page 95 into the XML report specification.
- General guideline: select the chart type based on the data you expect to be returned.
 - Use line graphs as the chart type only when you can guarantee the report will retrieve continuous data.
 - If there are multiple series, a stacked bar works better than a non-stacked bar.

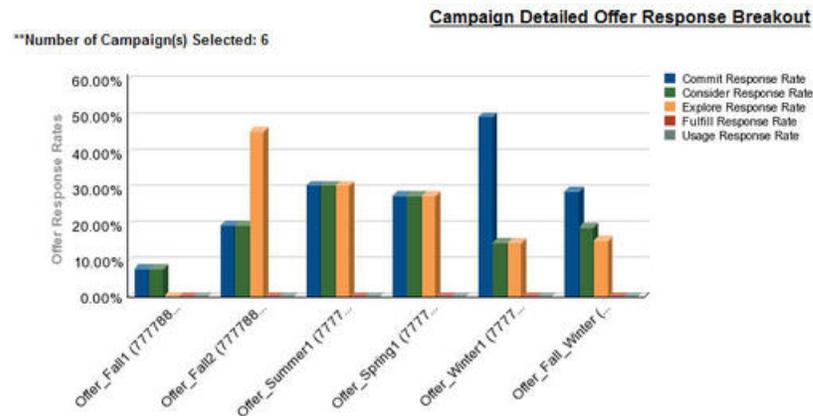
- As a best practice, use percentages only when the total percentage equals 100%. Pie charts tend to confuse people when the values do not add up to 100%.

If there are only two series on a chart and you display both the Y1 and Y2 axes, as a best practice you should match the colors to the first two palette colors for the axis labels.

Following is a chart that does not use the global styles.



Following is a chart that uses the global styles and has additional formatting applied.



Dashboard report styles

Dashboard reports use the global styles with some manual formatting. Be sure to format reports that will be displayed in the Dashboard according to the following guidelines so they fit properly in Dashboard portlets.

Item	Style
Background color	Keep background color set to gray (hex value F2F2F2).

Item	Style
Size	Specify size by using percentages whenever possible. When sizing with a percentage is not possible, set the size to 323 pixels wide by 175 pixels tall.
Subtitles	Put subtitles on the left side.
Dates	Put dates on the right side.
Legends	Center legends below the chart.
Lines in line charts	Display horizontal lines only. Do not display vertical lines.
Axis line color	Keep axis lines set to black.
Grid line color	Keep grid lines set to gray (hex value D9D9D9).
Lists (tables)	Display a maximum of 10 lines.

Appendix C. Reports and reporting schemas by product

The reporting schemas in the Campaign Report Package can be customized in the following ways.

- Add contact or response metrics
- Add custom campaign, offer, or cell attributes
- Add response types
- Configure the audience level for performance reports
- Create reporting schemas for additional audience levels.

The following table maps the individual IBM Cognos BI reports provided in the Campaign Reports Package to the reporting schemas that support them.

	Campaign Views schema	Campaign Custom Attributes schema	Campaign Performance schema	Offer Performance schema	Campaign Offer Response Breakout	Offer Contact Status Breakout
What If Offer Financial Summary report	X	X		X		
Campaign Detailed Offer Response Breakout	X		X		X	
Offer Response Breakout, Dashboard version	X		X		X	
Campaign Financial Summary by Offer (Actual)	X	X	X			
Campaign Return on Investment Comparison	X	X	X			
Campaign Offer Performance by Month	X		X			
Campaign Performance Comparison	X		X			
Campaign Response Rate Comparison	X		X			
Campaign Performance Comparison with Revenue	X		X			

	Campaign Views schema	Campaign Custom Attributes schema	Campaign Performance schema	Offer Performance schema	Campaign Offer Response Breakout	Offer Contact Status Breakout
Campaign Performance Comparison by Initiative	X		X			
Campaign Performance Summary by Cell	X		X			
Campaign Performance Summary by Cell with Revenue	X		X			
Campaign Performance Summary by Cell and Initiative	X		X			
Campaign Performance Summary by Offer	X		X			
Campaign Performance Summary by Offer with Revenue	X		X			
Campaign Revenue Comparison by Offer	X		X			
Campaign Summary	X					
Offer Campaign Listings	X					
Offer Performance Metrics	X			X		
Offer Performance by Day	X			X		
Offer Responses for Last 7 Days	X			X		
Offer Performance Comparison	X			X		
Offer Response Rate Comparison	X			X		

	Campaign Views schema	Campaign Custom Attributes schema	Campaign Performance schema	Offer Performance schema	Campaign Offer Response Breakout	Offer Contact Status Breakout
Offer Performance Summary by Campaign	X		X	X		

The following reports rely on the standard set of custom contact and response metric attributes that are provided in Campaign:

- What If Offer Financial Summary
- Campaign Detailed Offer Response Breakout
- Campaign Financial Summary by Offer (Actual)
- Campaign Performance Comparison with Revenue
- Campaign Performance Summary by Cell with Revenue
- Campaign Performance Summary by Offer with Revenue

eMessage Reports and Reporting Schemas

The following table maps the individual IBM Cognos BI reports provided in the eMessage Reports Package to the IBM reporting schemas that support them.

	Mailing Performance Schema
Message Overview report	X
Detailed Link report	X
Detailed Link by Cell report	X
Detailed Bounce report	X
A/B Testing Performance Report	X

Interact Reports and Reporting Schemas

You can customize the reporting schemas in the Interact Report Package in the following ways:

- Specify calendar time periods for performance reports
- Configure the audience level for performance reports
- Create additional performance reporting schemas for additional audience levels

The following table maps the individual IBM Cognos BI reports provided in the Interact Reports Package to the IBM reporting schemas that support them.

	Interactive View schema	Interact Performance View schema	Interactive Channel / Campaign Deployment History	Interact Runtime View schema	Interact Learning View schema
Campaign - Interactive Channel Deployment History	X		X		
Campaign - Interactive Cell Performance Over Time	X	X		X	
Campaign - Interactive Cell Performance by Offer	X	X		X	
Campaign - Interactive Offer Performance Over Time	X	X		X	
Campaign - Interactive Offer Performance by Cell	X	X		X	
Campaign - Interactive Offer Learning Details	X				X
Interactive Cell Lift Analysis	X	X		X	X
Interactive Channel - Channel Deployment History	X		X		
Interactive Channel - Channel Event Activity Summary report	X			X	

	Interactive View schema	Interact Performance View schema	Interactive Channel / Campaign Deployment History	Interact Runtime View schema	Interact Learning View schema
Interactive Channel - Channel Interaction Point Performance Summary	X	X		X	
Interactive Channel - Channel Treatment Rule Inventory	X				
Interactive Segment Lift Analysis	X	X		X	
Interaction Point Performance	X	X		X	

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If you encounter a problem that you cannot resolve by consulting the documentation, your company's designated support contact can log a call with IBM technical support. To ensure that your problem is resolved efficiently and successfully, you collect information before you log your call.

If you are not a designated support contact at your company, contact your IBM administrator for information.

Information to gather

Before you contact IBM technical support, gather the following information:

- A brief description of the nature of your issue.
- Detailed error messages that you see when the issue occurs.
- Detailed steps to reproduce the issue.
- Related log files, session files, configuration files, and data files.
- Information about your product and system environment, which you can obtain as described in "System information."

System information

When you call IBM technical support, you might be asked to provide information about your environment.

If your problem does not prevent you from logging in, much of this information is available on the About page, which provides information about your IBM applications.

You can access the About page by selecting **Help > About**. If the About page is not accessible, you can obtain the version number of any IBM application by viewing the `version.txt` file that is located under the installation directory for each application.

Contact information for IBM technical support

For ways to contact IBM technical support, see the IBM Product Technical Support website: (http://www.ibm.com/support/entry/portal/open_service_request).

Note: To enter a support request, you must log in with an IBM account. If possible, this account must be linked to your IBM customer number. To learn more about associating your account with your IBM customer number, see **Support Resources > Entitled Software Support** on the Support Portal.

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