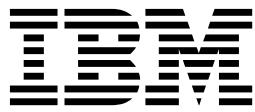


IBM Marketing Software Reports  
Version 11 Release 0.1  
31 August, 2018

*Installation and Configuration Guide*



**Note**

Before using this information and the product it supports, read the information in "Notices" on page 143.

This edition applies to version 11, release 0, modification 1 of IBM Marketing Platform and to all subsequent releases and modifications until otherwise indicated in new editions.

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# Chapter 1. Installation overview

An installation of the IBM® Marketing Software reports is complete when you install IBM Cognos® BI and configure it for IBM Marketing Software applications. This guide provides detailed information about configuring IBM Cognos BI, and integrating IBM Cognos BI with IBM Marketing Software.

If you are using eMessage reports, you must complete additional steps to install or upgrade reports. Also, you must involve your database administrator in the process of installing or upgrading eMessage reports.

Use the Installation Roadmap to understand the installation process for the IBM Marketing Software reports.

## Installation roadmap

Use the installation roadmap to quickly find the information that you need to install IBM Marketing Software reports.

The reports installation process includes the following steps:

- Install the reporting components.
- Install and test IBM Cognos BI.
- Install the IBM Marketing Software integration components and report models on the Cognos system.
- Customize the reports.

The following tables provide high level overviews of the IBM Marketing Software reports installation process, with brief descriptions of the steps involved and information about where to find detailed instructions.

*Table 1. Roadmap for installing the reporting components*

| Step  | Description   | Where to find details  |
|---|---|--|
| Understand prerequisites.   | Understand system prerequisites that are required for installing reports.<br><b>Important:</b> For eMessage, you also need to understand the additional prerequisites for installing eMessage reports.  | See <i>IBM Marketing Software Products Recommended Software Environments and Minimum System Requirements</i> .<br>For eMessage, also see “Prerequisites for eMessage Reports” on page 9. |
| Install IBM Marketing Software products.  | Install the products that provide the data that is used in reports.   | See the individual product installation guides.  |
| Set up a system user.   | Configure a user with access to the <b>Settings &gt; Configuration</b> and <b>Settings &gt; Report SQL Generator</b> pages. Log in as this user when you configure the reporting properties and generate the SQL that is used to create reporting schema. | See “Configuring a user with the ReportsSystem role” on page 11.   |
| 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 “Installing reporting schemas on the IBM Marketing Software system” on page 12   |

*Table 1. Roadmap for installing the reporting components (continued)*

| Step                      | Description   | Where to find details                        |
|---------------------------|---|--|
| Create JDBC data sources. | In the application server where Marketing Platform is deployed, create JDBC data source connections to the system table databases for the products you want to use for reporting. | See “Creating JDBC data sources” on page 12. |

*Table 2. Roadmap for installing and testing IBM Cognos BI*

| Step                  | Description  | Where to find details  |
|-----------------------|--|--|
| Install IBM Cognos BI | Use the IBM Cognos documentation to guide your installation, and then test the system. | See Chapter 4, “Install and test IBM Cognos BI,” on page 15. |

*Table 3. Roadmap for installing the IBM Marketing Software integration components and report models on the Cognos system*

| Step   | Description   | Where to find details  |
|--|---|--|
| 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 “Obtaining the JDBC driver for the Marketing Platform system tables” on page 17.                 |
| Install the reporting models and integration component on the Cognos system.         | Place the IBM Marketing Software master installer, Marketing Platform installer, and product report pack installers in the same directory on the machine where the Cognos Content Manager is installed. Then, launch the master installer.  | See “Installing the reporting models and integration component on the IBM Cognos system” on page 17. |
| Create the Cognos data sources for the IBM Marketing Software application databases. | The Cognos applications need to connect to the IBM Marketing Software application data sources for the reports. Use the Administration section of Cognos Connection to create these data sources.   | See “Creating IBM Cognos data sources for IBM Marketing Software application databases” on page 18.  |
| Set up email notification.   | If you want to enable an option for sending a report as an email attachment, configure notification in Cognos Configuration.  | See “Optional: Setting up email notifications” on page 19.   |
| Configure the Cognos firewall.   | In Cognos Configuration, specify the IBM Marketing Software system as a valid domain or host.   | See “Configuring IBM Cognos Application Firewall for IBM Marketing Software” on page 20.             |
| For eMessage, run scripts to create staging tables, indexes, and stored procedures.  | Run the scripts that are necessary to create staging tables, indexes, and stored procedures for eMessage reports.   | See “For eMessage only: Creating stored procedures, staging tables, and indexes” on page 22          |
| 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 “Loading templates for the Reports SQL Generator” on page 22.                                    |
| 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 “Generating view or table creation scripts” on page 22.  |

*Table 3. Roadmap for installing the IBM Marketing Software integration components and report models on the Cognos system (continued)*

| Step   | Description  | Where to find details  |
|--|--|--|
| Create the reporting views or tables.                                | Create the views or tables in the IBM Marketing Software product system table databases.   | See one of the following topics: <ul style="list-style-type: none"> <li>• “For Campaign only: Creating and populating reporting tables” on page 24</li> <li>• “For Interact only: Creating and populating reporting tables” on page 27</li> <li>• “For Campaign and eMessage only: Creating views or materialized views” on page 25</li> <li>• “For Interact only: Creating views or materialized views” on page 27</li> </ul> |
| Import the reports folder.   | In Cognos Connection, import the compressed file for reports.  | See “Importing the reports folder in Cognos Connection” on page 28.  |
| Configure and publish the data model.                                | You must complete this step if the data source login that you used when you created the Cognos data sources is not the owner of the IBM Marketing Software system tables.  | See “Configuring and publishing the data model” on page 29.  |
| Enable internal links in the reports.                                | The IBM Marketing Software reports have standard links. To enable them, you must configure the redirect URL in the Cognos data model.  | See “Enabling internal links in the reports” on page 30.   |
| Verify the data source names and publish.                            | This step varies depending on whether you used the default data source names in Cognos Connection.   | See “Verifying data source names and publishing” on page 30.   |
| Configure the Cognos reporting properties in IBM Marketing Software. | Log in to IBM Marketing Software and set Cognos reporting properties.  | See “Configuring Cognos reporting properties in Marketing Platform” on page 31.  |
| Configure report folder permissions.                                 | To give users permission to run reports from within IBM Marketing Software applications, assign the default ReportsUser role to the appropriate user groups or users.  | See “Setting report folder permissions” on page 31.  |
| For eMessage, run and schedule stored procedures.                    | eMessage reports use data that is contained in staging tables, which are populated by stored procedures that perform a delta refresh operation. The scheduling of the procedures depends on your database. Scheduling the procedures must be done by a database administrator who is familiar with your IBM Campaign and eMessage environments and with your business requirements.<br><b>Note:</b> You cannot see data in eMessage reports until you run the stored procedures. | See “For eMessage only: How to schedule and run stored procedures” on page 32.   |

*Table 3. Roadmap for installing the IBM Marketing Software integration components and report models on the Cognos system (continued)*

| Step  | Description  | Where to find details   |
|---|--|---|
| Stored procedures for the Interact Event Pattern report.                        | The Interact Event Pattern report uses the data that is contained in staging tables, which are populated by stored procedures. The stored procedures perform a delta refresh operation.<br><br>The Interact ETL triggers the report data aggregation automatically so you do not need to configure database jobs to perform a delta refresh. | See “Stored procedures for the Interact Event Pattern report” on page 39.                         |
| Enable the stored procedures for the Interact Event Pattern report              | The Interact Event Pattern report uses the delta refresh process for data aggregation so that reports can render faster.   | See “Enabling stored procedures for the Interact Event Pattern report” on page 41.                |
| For the Interact Event Pattern report, change the degree of parallel executions | Increase the degree of parallel execution for the Interact Event Pattern report aggregation process to increase speed and improve performance.   | See “Changing the degree of parallel execution for the Interact Event Pattern report” on page 43. |
| Test the configuration without authentication enabled.                          | After the reports are installed and configured, but before you enable authentication, test the setup by running some reports.  | See “Testing your configuration before you enable authentication” on page 46.                     |
| Configure Cognos to use IBM Marketing Software authentication.                  | The IBM Marketing Software Authentication Provider enables the Cognos applications to use IBM Marketing Software authentication to communicate with Marketing Platform as if it were another application in the suite.   | See “How to configure IBM Cognos to use IBM Marketing Software authentication” on page 47.        |
| Test your configuration with authentication configured.                         | After you configure Cognos to use IBM Marketing Software authentication, test the system again.  | See “Testing your configuration with authentication configured” on page 50.                       |

*Table 4. Roadmap for customizing the reports*

| Step                          | Description   | Where to find details                                |
|-------------------------------|---|--|
| Complete customization steps. | At this point, reporting works properly and the example reports are in their default state. You might need to customize the reports or reporting schemas for Campaign, Interact, or Marketing Operations. | See “How to customize reporting schemas” on page 62. |

## How the installers work

You must use the suite installer and the product installer when you install or upgrade any IBM Marketing Software product. For example, for installing , you must use the IBM Marketing Software suite installer and the IBM installer.

Make sure that you use the following guidelines before you use the IBM Marketing Software suite installer and the product installer:

- The suite installer and the product installer must be in the same directory on the computer where you want to install the product. When multiple versions of a product installer are present in the directory with the master installer, the master installer always shows the latest version of the product on the IBM Marketing Software Products screen in the installation wizard.

- If you are planning to install a patch immediately after you install an IBM Marketing Software product, make sure that the patch installer is in the same directory as that of the suite and product installers.
- The default top-level directory for IBM Marketing Software installations is /IBM/IMS for UNIX or C:\IBM\IMS for Windows. However, you can change the directory during installation.

---

## Modes of installation

The IBM Marketing Software suite installer can run in one of the following modes: GUI mode, console mode, or silent mode (also called the unattended mode). Select a mode that suits your requirements when you install .

For upgrades, you use the installer to perform many of the same tasks that you perform during the initial installation.

### GUI mode

Use the GUI mode for Windows or the X Window System mode for UNIX to install by using the graphical user interface.

### Console mode

Use the console mode to install by using the command line window.

**Note:** To display the Installer screens correctly in console mode, configure your terminal software to support UTF-8 character encoding. Other character encoding, such as ANSI, will not render the text correctly, and some information will not be readable.

### Silent mode

Use the silent or unattended mode to install multiple times. The silent mode uses response files for installation, and does not require user input during the installation process.

**Note:** Silent mode is not supported for upgrade installations in clustered web application or clustered listener environments.

## Installation files

Installation files for all IBM Marketing Software products are named according to the version of the product and the operating system on which they must be installed, except UNIX. For UNIX, different installation files exist for the X Window System mode and the console mode.

The following table describes how installation files are named according to the operating system:

*Table 5. Installation files*

| Operating system              | Installation file  |
|-------------------------------|--|
| Windows: GUI and console mode | Depending on your product, the installation file can be <i>Product_N.N.N.N_win64.exe</i> or <i>Product_N.N.N.N_win.exe</i> , where <i>Product</i> is the name of your product, <i>N.N.N.N</i> is the version number of your product. |

*Table 5. Installation files (continued)*

| <b>Operating system</b>    | <b>Installation file</b>   |
|----------------------------|--|
| UNIX: X Window System mode | Depending on your product, the installation file can be <i>Product_N.N.N.N_solaris64.bin</i> or <i>Product_N.N.N.N_solaris.bin</i> , where <i>Product</i> is the name of your product, <i>N.N.N.N</i> is the version number of your product. |
| UNIX: Console mode         | <i>Product_N.N.N.N.bin</i> , where <i>Product</i> is the name of your product, and <i>N.N.N.N</i> is the version number of your product. This file can be used for installation on all UNIX-based operating systems.                         |

---

## Chapter 2. Plan the IBM Marketing Software reports installation

When you plan your IBM Marketing Software reports installation, you must ensure that you correctly set up your system and configure your environment.

Review the prerequisites carefully. For eMessage, also review the prerequisites that are specific to eMessage.

---

### Prerequisites

Before you install or upgrade any IBM Marketing Software product, you must ensure that your computer complies with all of the prerequisite software and hardware.

#### System requirements

For information about system requirements, see the *Recommended Software Environments and Minimum System Requirements* guide.

In order for Opportunity Detect to connect to the DB2 database, the DB2 installation must include the install header files in the /home/db2inst1/include directory on client machine. To include the header files in the installation, select the **Custom Install** option when you install DB2 and select the **Base Application Development Tools** feature.

#### DB2 requirements

In order for Opportunity Detect to connect to the DB2 database, the DB2 installation must include the install header files in the home/db2inst1/include directory on client machine. To include the header files in the installation, select the **Custom Install** option when you install DB2 and select the **Base Application Development Tools** feature.

#### Network domain requirements

The IBM Marketing Software products that are installed as a suite must be installed on the same network domain to comply with the browser restrictions that are designed to limit the security risks that can occur with cross-site scripting.

#### JVM requirements

IBM Marketing Software applications within a suite must be deployed on a dedicated Java™ virtual machine (JVM). IBM Marketing Software products customize the JVM that is used by the web application server. If you encounter errors that are related to the JVM, you must create an Oracle WebLogic or WebSphere® domain that is dedicated to the IBM Marketing Software products.

#### Knowledge requirements

To install IBM Marketing Software products, you must have a thorough knowledge of the environment in which the products are installed. This knowledge includes

knowledge about operating systems, databases, and web application servers.

## Internet browser settings

Make sure that your internet browser complies with the following settings:

- The browser must not cache web pages.
- The browser must not block pop-up windows.

## Access permissions

Verify that you have the following network permissions to complete the installation tasks:

- Administration access for all necessary databases
- Read and write access to the relevant directory and subdirectories for the operating system account that you use to run the web application server and IBM Marketing Software components
- Write permission for all files that you must edit
- Write permission for all directories where you must save a file, such as the installation directory and backup directory if you are upgrading
- Appropriate read, write, and execute permissions to run the installer

Verify that you have the administrative password for your web application server.

For UNIX, all installer files for IBM products must have full permissions, for example, `rwxr-xr-x`.

**Note:** If you are installing version 11.0.1 with non-root user permissions and you plan to install IBM Campaign using those non-root user credentials, then you must add that user into the Sudo list so that the GSKIT components are installed successfully. Refer to the IBM Campaign Installation Guide for more information.

## **JAVA\_HOME** environment variable

If a **JAVA\_HOME** environment variable is defined on the computer where you install an IBM Marketing Software product, verify that the variable points to a supported version of JRE. For information about system requirements, see the *IBM Marketing Software Recommended Software Environments and Minimum System Requirements* guide.

If the **JAVA\_HOME** environment variable points to an incorrect JRE, you must clear the **JAVA\_HOME** variable before you run the IBM Marketing Software installers.

You can clear the **JAVA\_HOME** environment variable by using one of the following methods:

- Windows: In a command window, enter **set JAVA\_HOME=** (leave empty) and press **Enter**.
- UNIX: In the terminal, enter **export JAVA\_HOME=(leave empty)** and press **Enter**.

The IBM Marketing Software installer installs a JRE in the top-level directory for the IBM Marketing Software installation. Individual IBM Marketing Software application installers do not install a JRE. Instead, they point to the location of the JRE that is installed by the IBM Marketing Software installer. You can reset the environment variable after all installations are complete.

For more information about the supported JRE, see the *IBM Marketing Software Recommended Software Environments and Minimum System Requirements* guide.

---

## Prerequisites for eMessage Reports

If you use eMessage reports, you must comply with specific prerequisites in addition to the system requirements for installing reports.

For better performance, you might need 40% of the data size as temporary table space. Work with your database administrator to regularly fine-tune your database. For best results, you can store eMessage system tables in a separate table space that is mounted on a separate, unshared disk.

### Settings for IBM DB2®

If you use IBM DB2, you must use version 9.7.8 or higher.

**Important:** You must set the following value before you begin applying the eMessage reports:

```
db2set DB2_COMPATIBILITY_VECTOR=ORA
```

#### Sample sizes for DB2

For an IBM DB2 Campaign database of approximately 600 GB with most of the data population in the reporting tables (UCC\_\*), you might use the following settings:

- Tablespace page size: 16K
- Temp tablespace: 250 GB
- db2 update db cfg using auto\_reval DEFERRED\_FORCE;
- db2 update db cfg using decflt\_rounding ROUND\_HALF\_UP;
- db2 update db config using LOGFILSIZ 102400;
- db2 update db config using logprimary 13;
- db2 update db config using LOGSECOND 25;
- db2stop force
- db2start

**Important:** The size of your transaction log can affect reports processing. Review your database environment requirements, especially the size of the transaction log, with your database administrator.

### Settings for Oracle

If you use Oracle, you must use version 11g or higher. Review your environment requirements with your database administrator.

#### Sample sizes for Oracle

For an Oracle Campaign database of approximately 650 GB with most of the data population in the reporting tables (UCC\_\*), you might use the following settings:

- Temp tablespace: 250 GB
- Size for REDO logs: 2 GB
- Number of REDO logs: 4

## **Settings for Microsoft SQL Server**

If you use Microsoft SQL, you must use SQL Server 2008 or higher. Review your environment requirements with your database administrator.

### **Sample sizes for Microsoft SQL Server**

For Microsoft SQL Server database of approximately 520 GB with most of the data population in the reporting tables (UCC\_\*), you might use the following settings:

- Temp tablespace: 250 GB

## **Settings for Internet Explorer**

If you use Internet Explorer, make sure that the browser security settings allow automatic prompting for file downloads. Complete the following steps to verify that the browser allows automatic prompting for file downloads:

1. Open Internet Explorer and go to **Tools > Internet Options**.
2. In the Security tab, click **Custom Level**.
3. Scroll down to the **Downloads** section.
4. Make sure that the **Automatic prompting for file downloads** option is set to **Enable**.

---

## Chapter 3. Install reporting components

To install IBM Marketing Software reporting for your products, you must install the reporting components.

Reporting components include the following items:

- IBM Marketing Software integration components
- Report models on the IBM Cognos system
- Reporting schemas

---

### Assigning a role to or removing a role from a user

Use the Edit roles window to assign a role to or to remove a role from a user.

Complete the following tasks to assign or remove a role from a user:

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 **Selected roles** box on the right.

4. Select a role in the **Available roles** box. Complete one of the following tasks:
  - To assign a role to a user, select a role in the **Available roles** box, and click **Add**.
  - To remove a role from a user, select a role in the **Selected roles** box, and click **Remove**.
5. Click **Save changes**, and then click **OK**.

### Configuring a user with the ReportsSystem role

You must configure a user with the ReportsSystem role. This role is used to configure reporting properties and to generate the SQL script that is used to create the reporting schemas.

A user with the ReportsSystem role can access the Configuration and Report SQL Generator pages. You must configure a user with access to the IBM Marketing Software **Settings > Configuration** and **Settings > Report SQL Generator** pages. Then, you can log in as this user to configure the reporting properties and generate the SQL script that is used to create the reporting schemas.

To configure a user with the ReportsSystem role, complete the following steps.

1. Create a user.

**Note:** You can also use the platform\_admin user.

2. Go to **User Roles and Permissions > Report > PartitionN** and assign the ReportsSystem role to that user.
3. Verify that the user has access to the **Settings > Configuration** and **Settings > Report SQL Generator** pages.

## Installing reporting schemas on the IBM Marketing Software system

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

To install the reporting schemas, complete the following steps.

1. In the Reports Pack *Product* 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. Complete one of the following steps depending on whether custom attributes exist:
  - To install reporting schemas that include custom attributes, select **Custom**. The sample reports for Campaign are configured to use custom attributes. If you install the Campaign report package, you must select **Custom** so the sample reports function correctly.
  - To install reporting schemas that do not include custom attributes, except eMessage, select **Base**. For eMessage, always select **Custom**.
3. Complete the following steps to verify that the reporting schemas are registered in Marketing Platform:
  - a. Log in to the IBM Marketing Software suite as the platform\_admin user.
  - b. Go to **Select > Configuration**.
  - c. Expand **Reports > Schemas > *ProductName***.If you see the schema configuration properties for your application, your installation is complete.  
If the schema configuration properties for your application are not shown, the report package has not been registered and you must register the reports package manually. Continue with the next step.
4. Optional: Complete the following steps to register the configuration properties manually:
  - a. In the tools directory under your reports package installation, open the **import\_all** script.
  - b. Set the value of the **MANAGER\_TOOLS\_BIN\_DIR** variable to the tools/bin directory under your Marketing Platform installation.
  - c. Run **import\_all.bat** (for Windows) or **import\_all.sh** (for Unix).  
The script starts the Marketing Platform **configTool** utility and registers the schemas.
  - d. Verify that the schema configuration properties are present.

## Creating JDBC data sources

You must configure a JDBC data source for every IBM Marketing Software application for which you want to enable reporting.

The IBM Marketing Software Reports SQL Generator tool must be able to connect to the IBM Marketing Software application databases to generate SQL scripts that create reporting tables. The Reports SQL Generator can generate SQL scripts that create views or materialized views without access to the application databases. However, the SQL generator cannot validate the SQL code without a data source connection.

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

To create the JDBC data source, complete the following steps.

To configure JDBC data sources, use the default JNDI name that is listed in the following table.

**Note:** If you do not use the default JNDI names, make a note of the names that you use. You must specify the correct name of the data source when you run the SQL Generator tool.

*Table 6. Default JNDI names*

| IBM application | Default JNDI name  |
|-----------------|--|
| Campaign        | <code>campaignPartition1DS</code><br><br>If there are multiple partitions, create a data source for each partition.  |
| Interact        | <ul style="list-style-type: none"><li>For the design-time database: <code>campaignPartition1DS</code></li><li>For the runtime database: <code>InteractRTDS</code></li><li>For the learning tables: <code>InteractLearningDS</code></li></ul> |



---

## Chapter 4. Install and test IBM Cognos BI

Your license agreement with IBM must grant you an IBM Cognos BI license so you can download the IBM Cognos BI installation files. IBM Cognos BI is a collection of applications, servers, and services that is organized in a multi-tiered architecture.

### IBM Cognos BI applications

When you use IBM Cognos BI with the IBM Marketing Software suite, you use the following subset of Cognos BI applications:

- IBM Cognos BI Server provides storage for reports, folders, queries, metadata models, and the Content Manager.
- IBM Cognos Connection is a web application that you use to import, configure, and schedule reports. The application also provides access to the following components:
  - Cognos Viewer displays the reports in your IBM Marketing Software applications.
  - Report Studio allows you to customize and create reports.
  - Cognos Administration allows you to configure data sources.
- IBM Cognos Framework Manager is 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 Marketing Software application.
- IBM Cognos Configuration is the configuration tool that you use to configure individual Cognos BI components.

---

### IBM Cognos BI installation options

You can install IBM Cognos BI applications either in a distributed environment or on one computer.

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

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

Installing the subset of IBM Cognos BI applications that IBM reporting uses requires that you use two IBM Cognos installers. One installer provides the IBM Cognos BI server, Content Manager, Cognos Configuration, and 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 computer.

See the Cognos documentation for complete installation details.

---

## IBM Cognos BI web applications and the web server

You can host the Cognos Connection and the IBM Cognos BI web applications by using either Microsoft Internet Information Services (IIS) or Apache HTTP 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 but you can also use Apache HTTP.

If you use the Apache HTTP server, 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 list the most specific alias first, which is the script alias, and set the 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:** The `httpd.conf` file snippet is an example only. Be sure to configure your web aliases appropriately for your systems.

---

## IBM Cognos BI and locale

You can install a localized version of the IBM Marketing Software application report package (other than English) by setting the product language to match the language of the application report package.

On the system that runs 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.

You can change the product language for the specific user by setting the product language to match the language of the application report package. To set the product language, open Cognos Connection, and under **User Preferences** set the corresponding product language. You should not change the content language. If the content language is changed, then the corresponding xpath for the reports should also be changed.

---

## Chapter 5. Integration roadmap for IBM Marketing Software and Cognos

After you install IBM Cognos, you must integrate the IBM Marketing Software suite with IBM Cognos.

The following list provides a high-level overview of how to integrate IBM Cognos with IBM Marketing Software applications:

1. Create IBM Cognos data sources.
2. Configure the IBM Cognos application firewall.
3. Configure stored procedures.
4. Create views or materialized views.
5. Create and populate reporting tables.
6. Configure Cognos reporting properties in Marketing Platform.
7. Configure and test IBM Cognos to use IBM Marketing Software authentication.

**Note:** The tasks that you need to complete depend on which IBM Marketing Software applications you integrate.

---

## Obtaining the JDBC driver for the Marketing Platform system tables

You must obtain the JDBC driver for the Marketing Platform system tables so that Cognos can obtain the user information from the Marketing Platform system tables. Cognos requires the user information for IBM Marketing Software authentication.

To obtain the JDBC driver, complete the following steps.

1. Obtain the JDBC drivers and any required associated files that you used to configure the JDBC data source for the Marketing Platform system tables when you set up the IBM Marketing Software system.
2. Configure Cognos to use IBM Marketing Software authentication later.
3. Copy the JDBC driver to the computer where the Cognos Content Manager is installed, which is in the `webapps\p2pd\WEB-INF\AAA\lib` directory under your Cognos installation.

**Important:** If the JDBC driver exists in the `webapps\p2pd\WEB-INF\lib` directory, then you do not need to copy it to the `webapps\p2pd\WEB-INF\AAA\lib` directory.

---

## Installing the reporting models and integration component on the IBM Cognos system

You must install the reporting models and integration components on the IBM Cognos system. If your installation of Cognos is in a distributed environment, you must install the reports package on the server where Cognos is installed.

**Important:** If you install eMessage reports pack on IBM DB2, make sure that you set the following value before you begin to apply the eMessage Reports:

```
db2set DB2_COMPATIBILITY_VECTOR=ORA
```

To install the reports pack, complete the following steps.

1. On the server where Cognos Content Manager is installed, place the following IBM Marketing Software installers in a single directory:
  - IBM Marketing Software master installer
  - Marketing Platform
  - The reports pack installer or installers for the products for which you want to implement reporting
2. Run the IBM Marketing Software master installer. Select **Marketing Platform** and the reports packages to install.
3. Following the prompts, enter the connection information for the Marketing Platform system table database. The Marketing Platform installer launches and the Platform Installation Components window appears.
4. Select the **Reports for IBM Cognos 11 BI** option and clear the other options. The Marketing Platform installer prompts for the path to the JDBC driver.
5. Enter the fully qualified path for the JDBC driver that you copied to the Cognos system. The Marketing Platform installer prompts for the location of the IBM Cognos installation.
6. Enter or browse to the top level of the IBM Cognos installation directory.  
The default value that is provided in this field is a static value that is not based on the actual file structure of your IBM Cognos system. The report pack installer or installers displays installation options.
7. Select **Product Reports Package** for the installation option and clear the option for the reporting schemas.  
This option copies the reports archive to the Cognos computer. You must import this archive later.

---

## Creating IBM Cognos data sources for IBM Marketing Software application databases

The IBM Cognos applications need their own data sources that identify the source of the data for IBM Marketing Software application reports.

The IBM Cognos data models that are provided in the IBM Marketing Software reports packages are configured to use the data source names that are given in the following table:

*Table 7. Cognos data sources*

| IBM Marketing Software application | Cognos data source names  |
|------------------------------------|---|
| Campaign                           | CampaignDS  |
| eMessage                           | eMessageTrackDS   |
| Interact                           | <ul style="list-style-type: none"><li>• For the design time database: InteractDTDS</li><li>• For the runtime database: InteractRTDS</li><li>• For the learning database: InteractLearningDS</li><li>• For the ETL database: InteractETLDS</li></ul> |
| Marketing Operations               | MarketingOperationsDS   |
| Distributed Marketing              | <ul style="list-style-type: none"><li>• For the Distributed Marketing database: CollaborateDS</li><li>• For the customer database: CustomerDS</li><li>• For the Campaign database: CampaignDS</li></ul>   |

For more information about configuring Cognos data sources, see *IBM Cognos Administration and Security Guide* and the Cognos online help.

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 to avoid having to alter the data model.
- The database type that you select must match that of the IBM application database. Use the Cognos documentation to determine how to fill database-specific fields.

**Note:** For Campaign and eMessage, the appropriate database is Campaign.

- Be sure that you identify the IBM Marketing Software 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 Marketing Software application database user.
- Consult the Cognos data sources table and ensure that you create all the data sources that are required by the data model for the reports you are configuring. For example, the reporting data for Interact is in three databases, so you must create separate Cognos data sources for each database.
- If the Campaign system has more than one partition, create separate data sources for each partition. For example, if Campaign and eMessage are configured for multiple partitions, create a separate Campaign and eMessage data source for each partition.
- Verify that you configured each data source correctly by using the **Test Connection** feature.

---

## Optional: Setting up email notifications

You can configure IBM Cognos to send IBM Marketing Software reports as email attachments. This task is optional.

Before you can set up email notifications, 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

When an IBM Cognos report is displayed in the IBM Marketing Software interface, the Cognos Viewer toolbar in the window includes an option for sending the report as an attachment in an email.

To set up email notifications, complete the following steps.

1. In the Cognos Configuration window, select **Data Access > Notification**.
2. Specify the host name or IP address of the SMTP mail server and the port by using one of the following formats:
  - *hostname:port*
  - *IPAddress:port*

- For example, enter either serverX:25 or 192.168.1.101:25. The default SMTP port is usually 25.
3. 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.
  4. Specify the default sender by using the user@company.com format.

---

## Configuring IBM Cognos Application Firewall for IBM Marketing Software

IBM Cognos Application Firewall analyzes and validates requests before the requests are processed by IBM Cognos servers.

To configure the IBM Cognos Application Firewall for IBM Marketing Software, you must specify the IBM Marketing Software system as a valid domain or host.

To configure IBM Cognos Application Firewall for IBM Marketing Software, complete the following steps.

1. In the Cognos Configuration window, select **Security > IBM Cognos Application Firewall**.
2. In the Valid domains or hosts property window, enter the fully qualified computer host name that includes the domain and the port for the computer where Marketing Platform is running. For example:  
serverXYZ.mycompany.com:7001

**Important:** In a distributed environment, you must complete this step for every computer on which an IBM Marketing Software application that provides Cognos reports is installed, such as Marketing Platform, Campaign, and Marketing Operations.

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

---

## For eMessage only: Stored procedures for delta processing

IBM eMessage reports require staging tables that are associated with the eMessage system tables. The system tables are part of the Campaign schema. You must periodically run stored procedures to process message response data for use in eMessage reports.

For more information about schema changes, see *IBM eMessage System Tables and Data Dictionary*.

The initial setup for the eMessage stored procedures relies on the following database scripts:

- acer\_indexes\_dbname.sql
- acer\_tables\_dbname.sql
- acer\_scripts\_dbname.sql

The database scripts are in the *Campaign\_reportspack\_home\cognos11\emessage-ddl* directory for the Oracle, IBM DB2, and Microsoft SQL Server databases.

The scripts set up indexes, tables, views, and stored procedures. The stored procedures refresh message data to populate the staging tables. The batch

procedures must be run regularly to populate the staging tables. Running the stored procedures is referred to as delta processing.

The initial runs of the eMessage stored procedures can take a long time to complete, depending on the amount of data that is contained in your tables. Subsequent delta processing also can take a long time to complete. You can significantly reduce the processing time by limiting the number of mailing instances (containers) that are processed by the stored procedures.

By default, data is processed for the past 90 days. However, you can change the default value before or after you run the SQL scripts for eMessage.

## Example for Oracle

The following examples for an Oracle database illustrate the changes that you can make to the **acer\_tables** script to limit processing to the previous 30 days:

**Note:** The changes include modifying the UARE\_MAILING\_MASTER view.

### Definition of the current view

```
CREATE VIEW UARE_MAILING_MASTER AS
(
  SELECT UCC_CONTAINER.CAMPAIGNID,UCC_CONTAINER.CONTAINERID,
  substr(UCC_CONTAINERATTR.STRINGVALUE,1,100) AS CAMPAIGN_NAME,
  UCC_CONTAINER.CONTAINERNAME AS MAILING_INST,
  UCC_CONTAINER.CREATED AS MAILING_CREATED,
  UCC_CONTAINER.CONTAINERTYPEID CONTAINERTYPEID,
  UCC_CONTAINER.CONTCCHANNELTYPEID CONTCCHANNELTYPEID
  FROM
  UCC_CONTAINER,UCC_CONTAINERATTR
  WHERE
  UCC_CONTAINERATTR.CONTAINERID=UCC_CONTAINER.CONTAINERID AND
  UCC_CONTAINERATTR.ATTRIBUTENAME='CampaignName' AND
  UCC_CONTAINER.CREATED >= sysdate - 91
)
```

### Definition of the modified view

```
CREATE VIEW UARE_MAILING_MASTER AS
(
  SELECT UCC_CONTAINER.CAMPAIGNID, UCC_CONTAINER.CONTAINERID,
  substr(UCC_CONTAINERATTR.STRINGVALUE,1,100) AS CAMPAIGN_NAME,
  UCC_CONTAINER.CONTAINERNAME AS MAILING_INST, UCC_CONTAINER.CREATED AS
  MAILING_CREATED FROM UCC_CONTAINER,UCC_CONTAINERATTR WHERE
  UCC_CONTAINERATTR.CONTAINERID=UCC_CONTAINER.CONTAINERID AND
  UCC_CONTAINERATTR.ATTRIBUTENAME='CampaignName'
  AND
  UCC_CONTAINER.CREATED >= sysdate - 30
)
```

To view all available report data, modify the UARE\_MAILING\_MASTER view to remove the date filter from the view. Then, refresh all Oracle or DB2 materialized views. For example, in the sample view creation that is shown above, remove the following line:

```
UCC_CONTAINER.CREATED >= sysdate - 30
```

## For eMessage only: Creating stored procedures, staging tables, and indexes

After you install or upgrade reporting templates, you must run specific SQL scripts before you generate eMessage reports. The SQL scripts create stored procedures and staging tables.

The `Campaign_reportspack_home\cognos11\emessage-ddl` directory is on the server that hosts the IBM Cognos Content Manager. This directory contains the following database scripts for Oracle, IBM DB2, and Microsoft SQL Server:

- `acer_indexes_dbname.sql`
- `acer_tables_dbname.sql`
- `acer_scripts_dbname.sql`

Run the following scripts against the Campaign database in the order listed.

1. **`acer_indexes_dbname.sql`**

Make sure that you allow sufficient time for the script to complete. The time depends on the volume of data that is stored in the eMessage system tables.

2. **`acer_tables_dbname.sql`**

This script creates the delta processing staging tables in the eMessage system schema.

3. **`acer_scripts_dbname.sql`**

**Important:** For DB2 databases, change the termination character from ; (semicolon) to ! (exclamation point).

This script creates the stored procedures that you must configure after you install reports for eMessage.

**Note:** You must configure the stored procedures to run on a regular basis to populate the staging tables. You cannot see data in the reports until you run the stored procedures for eMessage reports.

For more information about running and scheduling the stored procedures, see “For eMessage only: How to schedule and run stored procedures” on page 32.

---

## Loading templates for the Reports SQL Generator

The IBM Marketing Software reports packages that use reporting schemas contain SQL scripts that load template SQL select statements into the `uar_common_sql` table. The Reports SQL Generator uses the templates when it generates SQL scripts to create reporting views and tables.

To run the script that loads the templates, complete the following steps.

1. Browse 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.

---

## Generating view or table creation scripts

When you generate reports, you extract reportable data from the reporting views or tables. You can create reporting views or tables by using the view or table creation scripts. Use the Reports SQL Generator to create view or table creation scripts.

**Note:** For eMessage reports, make sure that you run the SQL scripts against the Campaign database to create the staging tables and batch procedures. For more information, see “For eMessage only: Creating stored procedures, staging tables, and indexes” on page 22.

To create view or table creation scripts, complete the following steps.

1. Log in to IBM Marketing Software as the user who has the ReportsSystem role.  
If you used the default JNDI names for JDBC data sources, continue to step 3.
2. If you did not use the default JNDI names for JDBC data sources, complete steps a and b:
  - a. Select **Settings > Configuration > Reports > Schemas > *ProductName*.**
  - b. Change the default values of the JNDI property to match the JNDI names that you used for the JDBC connections.

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

3. Select **Settings > Reports SQL Generator**.
4. In the **Product** field, select the appropriate IBM Marketing Software 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 for your database type.
  - If the database type is Microsoft SQL Server, you cannot select materialized views.
  - **For eMessage only:**
    - For Oracle and IBM DB2, eMessage requires materialized views.
    - For SQL Server, eMessage requires views.
8. Ensure that **Generate Drop Statement** is set to No.
9. If you want to examine the SQL script that is 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 for a location in which to save the file. If you selected a single reporting schema, the script name matches the name of schema, for example `eMessage_Mailing_Performance.sql`. If you selected more than one reporting schema, the script name uses the product name, for example `Campaign.sql`.

**Note:** When you run a script that creates materialized views on a DB2 database, you might see the following error:

`SQL20059W The materialized query table-name may not be used to optimize the processing of queries.`

However, the materialized view is successfully created.

11. Specify the location where you want to save the script and click **Save**. If you change the name of the file, make sure to use a name that clearly indicates the schemas that you selected.
12. Repeat steps 5 through 11 for each script that you want to generate.

**Note:** The Interact reporting schemas reference multiple data sources. Generate a separate SQL script for each data source.

## SQL scripts by data source

Use separate SQL scripts to create views or materialized views for each data source.

The following table provides information about the scripts that you must generate for each data source, the resulting script name, and the scripts that must be run against the IBM Marketing Software application database for creating views or materialized views:

**Notes:**

- The table lists the default names for the data sources and generated scripts. Your names may be different.
- The Interact reporting schemas reference more than one data source. Generate a separate SQL script for each data source.

*Table 8. SQL scripts by data source*

| Reporting schema  | Data source and default name  | Default script name  |
|---|---|--|
| All Campaign reporting schemas  | Campaign system tables<br>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<br>campaignPartition1DS | eMessage_Mailing_Performance.sql   |
| Interact Deployment History, Interact Performance, and Interact Views | Interact design time database<br>campaignPartition1DS                                       | Interact.sql   |
| Interact Learning   | Interact Learning tables<br>InteractLearningDS  | Interact_Learning.sql  |
| Interact Run Time   | Interact run time database<br>InteractRTDS  | Interact_Runtime.sql   |

## For Campaign only: Creating and populating reporting tables

You can use SQL scripts to create and populate reporting tables for Campaign. The reports application uses reporting tables to extract reportable data.

To create and populate reporting tables for Campaign, complete the following steps.

1. Create the reporting database.
2. Locate the SQL scripts that you generated and saved previously.

3. Use your database administration tools to run the appropriate script against the appropriate application database(s) for the report package that you are configuring.
4. For Campaign with a DB2 database, increase the DB2 heap size to at least 10240. The default heap size is 2048. Use the following command to increase the heap size:
 

```
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 such as the Financial Summary report.
5. In the db/calendar subdirectory in the Marketing Platform installation directory, find the ReportsCalendarPopulate script that is appropriate for the database type. The ReportsCalendarPopulate script creates the following tables:
  - UA\_Calendar
  - UA\_Time
6. Run the **ReportsCalendarPopulate** script on the new database that you created with the table creation script.
7. For DB2 only, complete one of the following tasks:
  - Run the script from the command prompt by using the following command:
 

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

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

Continue with “Setting up data synchronization” on page 28.

## For Campaign and eMessage only: Creating views or materialized views

You can use SQL scripts to create views or materialized views for Campaign and eMessage. The reports application uses views or materialized views to extract reportable data.

**Note:** For Oracle and DB2, eMessage requires materialized views. For SQL Server, eMessage requires views.

To create views or materialized views for Campaign or eMessage, complete the following steps.

1. Locate the SQL scripts that you generated and saved previously.
2. Use the database administration tools to run the appropriate script against the appropriate application database(s) for the report package that you are configuring.

**Note:** When you run a script that creates materialized views on a DB2 database, you might see the following error:

SQL20059W The materialized query table-name may not be used to optimize the processing of queries.

However, the materialized view is successfully created.

Proceed to step 3 for Campaign with a DB2 database.

Proceed to step 4 for eMessage.

3. For Campaign with a DB2 database, increase the DB2 heap size to at least 10240. The default heap size is 2048. Use the following command to increase the heap size:

```
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 such as the Financial Summary report.

4. For eMessage, complete the following steps:

- a. 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 that is appropriate for your installation of Campaign.
- b. Edit the appropriate version of the script to remove the drop table statements and save the script.
- c. Run the appropriate version of the script against your Campaign system tables database.

Continue with “Setting up data synchronization” on page 28.

## For Interact only: Changing language setting in Oracle and DB2

Before you create views or materialized views for Interact, verify that the language setting for the computer where you run the *lookup\_create* SQL script is enabled for UTF-8 en.

To change the language setting, complete either step 1 or step 2 depending on your database type.

1. For Oracle databases, complete the following steps:
  - a. Close all open Oracle sessions.
  - b. Open the **Registry Editor**.
  - c. Browse to **HKEY\_LOCAL\_MACHINE > SOFTWARE > ORACLE** and open the folder for your Oracle Home, for example, **KEY\_OraDb10g\_home1**.
  - d. Search for the **NLS\_LANG** setting.
  - e. Make sure the last part of the value specified is **UTF8**. For example: **AMERICAN\_AMERICA.UTF8**.
2. For DB2 databases, complete the following steps:
  - a. From the computer that is running the script and has the DB2 client installed, open a DB2 command window.
  - b. Run the following command:  
`db2set`
  - c. In the output, look for the following variable-value pair:  
`DB2CODEPAGE=1208`
  - d. If the `DB2CODEPAGE=1208` variable is not set, run the following command:  
`db2 db2set db2codepage=1208`
  - e. Close the session window for the change to take effect.

## For Interact only: Creating views or materialized views

You can use SQL scripts to create views or materialized views for Interact. The reports application uses views or materialized views to extract reportable data.

Before you create views or materialized views for Interact, verify that the language setting for the computer from where you run the `lookup_create` SQL script is enabled for UTF-8 encoding. See “For Interact only: Changing language setting in Oracle and DB2” on page 26.

To create views or materialized views for Interact, complete the following steps.

1. Locate the SQL scripts that you generated and saved previously.
2. Use the database administration tools to run the appropriate script against the appropriate application database(s) for the report package that you are configuring.

**Note:** When you run a script that creates materialized views on a DB2 database, you might see the following 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. In the `tools` subdirectory in the reports package installation directory, find the `lookup_create` script for your database type. For example, the script for SQL is named `uari_lookup_create_MSSQL.sql`.
4. Run the `lookup_create` script on the Interact design time database. Ensure that the database tool that you use commits the changes. For example, you might need to set the auto-commit option of the database to true.
5. Browse to the `<Interact_ReportPack_Installer_Home>\cognos11\interact-ddl\<DB Type>\` folder.
6. For DB2, set the `db2set DB2_COMPATIBILITY_VECTOR=ORA` parameter.
7. Run the `acir_tables_<DB Type>.sql` script on the ETL database.

Continue with “Setting up data synchronization” on page 28.

## For Interact only: Creating and populating reporting tables

You can use SQL scripts to create and populate reporting tables for Interact. The reports application uses reporting tables to extract reportable data.

To create and populate reporting tables for Interact, complete the following steps.

1. Create the reporting databases.
2. Use your database administration tools to run the appropriate script against the appropriate application database(s) for the report package that you are configuring.
3. Run the `lookup_create` script on the Interact design time database. Ensure that the database tool that you use commits the changes. For example, you might need to set the auto-commit option of the database to true.
4. In the `tools` subdirectory in the reports package installation directory, find the `lookup_create` script for your database type. For example, the script for SQL is named `uari_lookup_create_MSSQL.sql`.
5. Use your database administration tools to populate the new tables with the appropriate data from the production system database.

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

Continue with “Setting up data synchronization.”

## Setting up data synchronization

Make sure that you use the database administration tools to schedule regular data synchronization between the production databases of the IBM Marketing Software application and the materialized views.

To set up data synchronization, use the following guidelines depending on your application and database type.

- For Campaign, use the scheduled Extraction, Transformation, and Load (ETL) method, or any custom method to schedule regular data synchronization between the production databases and the new reporting tables.
- For eMessage, the materialized views for Oracle and DB2 are refreshed by stored procedures. Stored procedures also update the `uare_delta_refresh_log` table. If the refresh process for DB2 fails, the log table displays the error.  
For information about stored procedures, see “For eMessage only: How to schedule and run stored procedures” on page 32.
- For Interact on Oracle or DB2 databases, use the scheduled Extraction, Transformation, and Load (ETL) method or any custom method to schedule regular data synchronization between the production databases and the new reporting tables.
- For Interact on a SQL server, use the scheduled Extraction, Transformation, and Load (ETL) method, or any custom method to schedule regular data synchronization between the production databases and the new reporting tables.

---

## Importing the reports folder in Cognos Connection

The IBM Marketing Software application reports are in the compressed (.zip) file that the report package installer copied to the IBM Cognos computer. You must import the compressed file into Cognos Connection.

To import the compressed file that contains reports to Cognos Connection, complete the following steps.

1. Browse to the `Cognosnn` directory under your report package installation on the IBM Cognos computer, where `nn` indicates the version number.
2. Copy the compressed reports archive file (for example `Unica 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. The default location is specified in the Cognos Configuration tool that is installed with the Cognos Content Manager. For example:  
`cognos\deployment`.

3. Locate the `Cognosnn\ProductNameModel` subdirectory under your report package installation on the Cognos computer.
4. Copy the entire subdirectory to any place on the system that runs Cognos Framework Manager and to which Framework Manager has access.
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 the **New Import** ( ) icon 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 options including the package itself, which is indicated by 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 Marketing Software application users.

---

## Configuring and publishing the data model

You must configure and publish the data model only if, when you set up the data source, you were logged in as a user who is not the owner of the application system tables.

**Note:** You do not need to configure and publish the data model if the data source login that you used is the owner of the IBM Marketing Software application system tables.

**Note:** This task is optional for eMessage reports.

To configure and publish the data model, complete the following steps.

1. In the Model directory under the reports package installation, copy all files in the Model directory to your Cognos Framework Manager installation directory. The 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 Marketing Software application name, for example *ProductNameModel.cpf*.
3. Open the data model for the application and complete the following steps:
  - a. In the Project Viewer, expand **Data Sources**.
  - b. Click the data source for the application.
  - c. Update the data source, depending on your database type:

*Table 9. Data source.*

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

4. Save and republish the package.

For more information about publishing a package in IBM Cognos, see the *Cognos Framework Manager User Guide*.

---

## Enabling internal links in the reports

The IBM Marketing Software application reports have standard links. To enable the links to work properly, you must configure the IBM Cognos Application Firewall. You must also configure the redirect URL in the Cognos data model for the IBM Marketing Software application reports.

**Note:** This step is not necessary for eMessage reports.

To configure the redirect URL in the Cognos data model for the IBM Marketing Software application reports, complete the following steps.

1. In Cognos Framework Manager, browse to the `<productName>Model` subdirectory that you copied into the Framework Manager directory structure. 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 Marketing Software suite but leave 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 by completing the following steps:
  - a. From the navigation tree, expand the **Packages** node of the model.
  - b. Right-click the package instance and select **Publish Package**.

---

## Verifying data source names and publishing

The name that is specified as the data source for the reports in the model must match the name of the data source that you created in Cognos Connection. Before you publish the model from Framework Manager to the Cognos content store, you must verify that the data source names match.

If you used the default data source names, the data source names match. If you did not use default data source names, you must change the data source names in the model.

To verify and change the data source names in the model, complete the following steps.

1. In Cognos Connection, determine the names of the data sources you created.
2. In Framework Manager, select **Open a Project**.
3. Browse to the `<productName>Model` subdirectory you copied into the Framework Manager directory structure. 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.

5. If the names do not match, select the data source instance and edit the name in the **Properties** section. Save your changes.
6. Publish the package to the Cognos content store.

---

## Configuring Cognos reporting properties in Marketing Platform

There are several sets of properties for configuring reporting in IBM Marketing Software. Some properties define parameter values for the reporting components in Marketing Platform. Some properties define URLs and other parameters for the IBM Cognos system. The properties that define parameter values are specified when the view or table creation scripts are generated. You must specify the properties that define URLs and other parameters for the IBM Cognos system.

Find the **Portal URL** and **Dispatch URL** in the Cognos Configuration utility under **Local Configuration > Environment**. You will need this information in step 5 and step 6.

To configure properties that define URLs and other parameters for the IBM Cognos system, complete the following steps.

1. Log in to IBM Marketing Software 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 must 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, which are specified in the **Domain** property.  
For example: <http://MyCognosServer.xyzCompany.com/cognos11/cgi-bin/cognos.cgi>
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, which are specified in the **Domain** property.  
For example: <http://MyCognosServer.xyzCompany.com:9300/p2pd/servlet/dispatch>.
7. Leave **Authentication mode** set to **anonymous** for now.
8. Save the settings.

---

## Setting report folder permissions

If you configure the reports system to use the authenticated per user mode, make sure that the appropriate IBM users can run the reports from the IBM Marketing Software applications. The easiest way to do this is to assign the default ReportsUser role to the appropriate user groups or users.

## 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 that are 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 enabled.
- The Cognos server where reports are configured is up and running.

Complete the following steps to configure report folder permissions:

1. Log in as a Campaign administrator who has the **ReportSystem** role.
2. Select **Settings > Sync report folder Permissions**.

The system retrieves the names of the folders that are 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 and 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.

---

## For eMessage only: How to schedule and run stored procedures

eMessage reports use the data that is contained in staging tables, which are populated by stored procedures. The stored procedures perform a delta refresh operation. Run the stored procedures at least once per day. If you run the procedures more frequently, the delta refresh method prevents multiple concurrent runs.

The following table provides information about the stored procedures and the tasks that they complete:

*Table 10. Stored procedures for eMessage*

| Stored procedure                     | Task   |
|--------------------------------------|--|
| <b>sp_runid</b>                      | Creates a unique run identifier. The list of the run IDs is stored in the <b>UARE_Runid</b> table.                           |
| <b>sp_update_ucc_tables_stats</b>    | Updates statistics for the <b>ucc_*</b> tables. You can run this script before the <b>sp_populate_*</b> scripts.             |
| <b>sp_populate_mailing_contacts</b>  | Processes the mailing contact data that is received since the previous run of stored procedures.                             |
| <b>sp_populate_mailing_responses</b> | Processes the mailing response data that is received since the previous run of stored procedures.                            |
| <b>sp_populate_sms_contacts</b>      | If the SMS feature is enabled: Processes the SMS contact data that is received since the previous run of stored procedures.  |
| <b>sp_populate_sms_responses</b>     | If the SMS feature is enabled: Processes the SMS response data that is received since the previous run of stored procedures. |

*Table 10. Stored procedures for eMessage (continued)*

| Stored procedure                      | Task  |
|---------------------------------------|---|
| <b>sp_get_delta_mailing_contacts</b>  | Called internally by <b>sp_populate_mailing_contacts</b> procedure. Responsible for retrieving the mailing contacts that were sent since the previous run of the stored procedures.   |
| <b>sp_generate_mailing_contacts</b>   | Called internally by the <b>sp_populate_mailing_contacts</b> procedure. Responsible for retrieving the mailing and link level counts on contacted customers for the mailings that were run since the previous run of the stored procedures. |
| <b>sp_get_delta_mailing_responses</b> | Called internally by <b>sp_populate_mailing_responses</b> procedure. Responsible for retrieving the responses that were received since the previous run of the stored procedures.   |
| <b>sp_generate_mailing_responses</b>  | Called internally by <b>sp_populate_mailing_responses</b> procedure. Responsible for retrieving mailing and link level responses since the previous run of the stored procedures.   |
| <b>sp_get_delta_sms_contacts</b>      | Called internally by <b>sp_populate_sms_contacts</b> procedure. Responsible for retrieving SMS since the previous run of the stored procedures.   |
| <b>sp_generate_sms_contacts</b>       | Called internally by <b>sp_populate_sms_contacts</b> procedure. Responsible for retrieving the mailing and link level counts on contacted customers since the previous run of the stored procedures.  |
| <b>sp_get_delta_sms_responses</b>     | Called internally by <b>sp_populate_sms_responses</b> procedure. Responsible for retrieving SMS responses since the previous run of the stored procedures.  |
| <b>sp_generate_sms_responses</b>      | Called internally by <b>sp_populate_sms_responses</b> procedure. Responsible for retrieving the mailing and link level SMS responses since the previous run of the stored procedures.   |
| <b>sp_populate_mobile_responses</b>   | Processes the mobile response data that was received since the previous run of stored procedures.   |
| <b>sp_get_delta_mobile_responses</b>  | Called internally by <b>sp_populate_mobile_responses</b> procedure. Responsible for retrieving the responses that were received since the previous run of the stored procedures.  |
| <b>sp_generate_mobile_responses</b>   | Called internally by <b>sp_populate_mobile_responses</b> procedure. Responsible for retrieving mobile responses since the previous run of the stored procedures.  |

## Guidelines for running stored procedures

Use the following guidelines when you run the stored procedures:

- You must create the stored procedures for your database by using the scripts that are provided with the installation files.

- Consider the size of the tables and indexes in your installation. Larger tables require more time to update. Allow sufficient time to process the contact and response data. The initial runs are likely to require more time to complete than subsequent runs.
- Because the stored procedures can run for an extended amount of time, consider running the procedures at times of reduced system activity, such as overnight.
- You can reduce the amount of the time that is required to refresh the reports data by limiting the scope of the reports data processed.
- You must `schedule sp_populate_mailing_contacts` and `sp_populate_mailing_responses` to run at least 10 minutes after `scheduling sp_runid`.

When the scripts have run successfully, they display a final return code of 0.

## Sample configuration of stored procedures for Oracle

Use the following guidelines when you configure stored procedures for the Oracle database.

### Guidelines for configuring stored procedures

- IBM recommends using Oracle Automatic Memory Management (AMM). For more information, go to [http://docs.oracle.com/cd/B28359\\_01/server.111/b28310/memory003.htm](http://docs.oracle.com/cd/B28359_01/server.111/b28310/memory003.htm).
- Create stored procedures by using a database utility, such as SQL Plus.
- Schedule the `sp_runid` procedure to run at least 10 minutes before the other scripts.

### Example for creating a run identifier

The following example illustrates how to create a job and generate a run identifier. The example also illustrates the job ID when the job completes.

The example shows how to get a job number every day at 21:00 hours without an end date. The jobs start on November 29, 2014.

```
declare
jobno number;

BEGIN
DBMS_JOB.submit (job =>:jobno,
what => 'sp_runid;',
next_date => to_date('29-Nov-2014 21:00','DD-MON-YYYY HH24:MI' ),
interval => 'sysdate+1');
commit;
END;
/
```

### Example for processing email contact data

The following example shows how to schedule a batch job to process contact data. The job runs at 21:10 hours every day.

```
declare
jobno number;

BEGIN
DBMS_JOB.submit (job =>:jobno,
what => 'sp_populate_mailing_contacts;',
next_date => to_date('29-Nov-2014 21:10','DD-MON-YYYY HH24:MI' ),
```

```

interval => 'sysdate+1');
commit;
END;
/

```

## Example for processing email response data

The following example shows how to schedule a batch job to process response data. The job runs at 21:10 hours every day.

```

declare
jobno number;

BEGIN
DBMS_JOB.submit (job =>:jobno,
what => 'sp_populate_mailing_responses;',
next_date => to_date('29-Nov-2014 21:10','DD-MON-YYYY HH24:MI' ),
interval => 'sysdate+1');
commit;
END;
/

```

## Example for processing SMS contact data

**Important:** The SMS feature is not a part of the default Reports offering, and you must buy a license for the feature separately. However, the delta placement takes place regardless of whether you bought the SMS feature.

The following example shows how to get a job number every day at 21:00 hours without an end date. The jobs start on November 29, 2014.

```

BEGIN
DBMS_JOB.submit (job =>:jobno,
what => 'sp_populate_SMS_contacts;',
next_date => to_date('29-Nov-2014 21:10','DD-MON-YYYY HH24:MI' ),
interval => 'sysdate+1');
commit;
END;
/

```

## Example for processing SMS response data

The following example shows how to get a job number every day at 21:00 hours without an end date. The jobs start on November 29, 2014.

```

BEGIN
DBMS_JOB.submit (job =>:jobno,
what => 'sp_populate_SMS_responses;',
next_date => to_date('29-Nov-2014 21:10','DD-MON-YYYY HH24:MI' ),
interval => 'sysdate+1');
commit;
END;
/

```

## Example for processing mobile response data

The following example shows how to get a job number every day at 21:00 hours without an end date. The jobs start on November 29, 2014.

```

BEGIN
DBMS_JOB.submit (job =>:jobno,
what => 'sp_populate_MOBILE_responses;',
next_date => to_date('29-Aug-2014 21:10','DD-MON-YYYY HH24:MI' ),

```

```
interval => 'sysdate+1');  
commit;  
END;  
/
```

## Sample configuration of stored procedures for Microsoft SQL Server

Use the following guidelines when you configure stored procedures for the Microsoft SQL Server database.

### Guidelines for configuring stored procedures

- Use the SQL Server Agent to create new jobs for each stored procedure.
- Schedule the jobs to run at least daily. You must schedule **sp\_runid** to run at least 10 minutes before the other scripts.
- For each job in the SQL Server Agent interface, you must specify the step type as Transact-SQL script (T-SQL) and select the Campaign database.

### Example for creating a run identifier

The following example shows how to create a run identifier.

```
DECLARE @return_value int  
EXEC @return_value = [dbo].[SP_RUNID]  
SELECT 'Return Value' = @return_value  
GO
```

### Example for processing email contact data

The following example shows how to process email contact data. Schedule the job to run at least 10 minutes after the job that generates the run identifier.

```
DECLARE @return_value int  
EXEC @return_value = [dbo].[SP_POPULATE_MAILING_CONTACTS]  
SELECT 'Return Value' = @return_value  
GO
```

### Example for processing email response data

The following example shows how to process email response data. Schedule the job to run at least 10 minutes after the job that generates the run identifier.

```
DECLARE @return_value int  
EXEC @return_value = [dbo].[SP_POPULATE_MAILING_RESPONSES]  
SELECT 'Return Value' = @return_value  
GO
```

### Example for processing SMS contact data

The following example shows how to process SMS contact data.

```
DECLARE @return_value int  
EXEC @return_value = [dbo].[SP_POPULATE_SMS_CONTACTS]  
SELECT 'Return Value' = @return_value  
GO
```

### Example for processing SMS response data

The following example shows how to process SMS response data.

```

DECLARE @return_value int
EXEC @return_value = [dbo].[SP_POPULATE_SMS_RESPONSES]
SELECT 'Return Value' = @return_value
GO

```

## Example for processing mobile response data

The following example shows how to process mobile response data.

```

DECLARE @return_value int
EXEC @return_value = [dbo].[SP_POPULATE_MOBILE_RESPONSES]
SELECT 'Return Value' = @return_value
GO

```

## Granting permissions for stored procedures for IBM DB2

Before you configure stored procedures for IBM DB2, you must grant permissions.

To grant permissions, complete the following steps.

1. Enable the registry by completing the following steps:
  - a. Set the **DB2\_ATS\_ENABLE** registry variable to one of the following values:
    - YES
    - TRUE
    - 1
    - ON
  - b. Restart the DB2 database after you set the variable.
2. Create the SYSTOOLSPACE table space.  
Users who belong to the SYSADM or SYSCTRL group can create this space.  
Use the following query to verify that the space exists:  

```
SELECT TBSPACE FROM SYSCAT.TABLESPACES WHERE TBSPACE = 'SYSTOOLSPACE'
```
3. Grant permissions. In the following examples, substitute the values that are appropriate for your environment.
  - EMESSAGE: Database that contains the eMessage system tables
  - USER1: Owner of the EMESSAGE database
  - DB2ADMIN: DB2 administrative user
  - Administrator: Super user
4. Connect to DB2 as an administrative user and run the following grant commands:
  - db2 GRANT DBADM ON DATABASE TO USER DB2ADMIN
  - db2 GRANT DBADM ON DATABASE TO USER USER1
  - db2 grant all on table SYSTOOLSADMINTASKS to USER1
  - db2 grant all on table SYSTOOLSADMINTASKS to DB2ADMIN
5. If the SYSPROC.ADMIN\_TASK\_ADD table exists, run the following grant commands:
  - db2 grant execute on procedure SYSPROC.ADMIN\_TASK\_ADD to USER1
  - db2 grant execute on procedure SYSPROC.ADMIN\_TASK\_ADD to DB2ADMIN

## Sample configuration of stored procedures for IBM DB2

Use the following guidelines when you configure stored procedures for the IBM DB2 database.

## **Guidelines for configuring stored procedures**

- The database must be DB2 version 9.7.8 or higher.
- Create new jobs in DB2 Administrative Task Scheduler (ATS)
- Schedule the jobs to run at least daily. You must schedule **sp\_runid** to run at least 10 minutes before the other scripts.

### **Example for creating a run identifier**

The following example shows how to get a job number every day at 20:50 hours without an end date.

```
call SYSPROC.ADMIN_TASK_ADD('RunID_Job',null,null,  
null,'50 20 * * *','USER1','SP_RUNID',null,null,null)
```

### **Example for processing mailing contact data**

The following example shows how to schedule a batch job to process contact data. In this example, the job runs at 21:00 hours every day. Schedule the job to run at least 10 minutes after the job that generates the run identifier.

```
call SYSPROC.ADMIN_TASK_ADD('Email_Contact_Job',null,null,null,'00 21 * * *',  
'USER1','SP_POPULATE_MAILING_CONTACTS',null,null,null)
```

### **Example for processing mailing response data**

The following example shows how to schedule a batch job to process response data. In this example, the job runs at 21:00 hours every day. Schedule the job to run at least 10 minutes after the job that generates the run identifier.

```
call SYSPROC.ADMIN_TASK_ADD('Email_Response_Job',null,null,  
null,'00 21 * * *','USER1','SP_POPULATE_MAILING_RESPONSES',null,  
null,null)
```

### **Example for processing SMS contact data**

The following example shows how to schedule a batch job to process contact data. In this example, the job runs at 21:00 hours every day. Schedule the job to run at least 10 minutes after the job that generates the run identifier.

```
call SYSPROC.ADMIN_TASK_ADD('SMS_Contact_Job',null,null,null,'00 21 * * *',  
'USER1','SP_POPULATE_SMS_CONTACTS',null,null,null)
```

### **Example for processing SMS response data**

The following example shows how to schedule a batch job to process response data. In this example, the job runs at 21:00 hours every day.

```
call SYSPROC.ADMIN_TASK_ADD('SMS_Response_Job',null,null,  
null,'00 21 * * *','USER1','SP_POPULATE_SMS_RESPONSES',null,  
null,null)
```

### **Example for processing email contact data**

The following example shows how to schedule a batch job to process contact data. In this example, the job runs at 21:00 hours every day. Schedule the job to run at least 10 minutes after the job that generates the run identifier.

```
call SYSPROC.ADMIN_TASK_ADD('SMS_Response_Job',null,null,null,'00 21 * * *',  
'USER1','SP_POPULATE_MAILING_RESPONSES',null,null,null)
```

## Example for processing mobile response data

The following example shows how to schedule a batch job to process response data. In this example, the job runs at 21:00 hours every day.

```
call SYSPROC.ADMIN_TASK_ADD('MOBILE_Response_Job',null,null,
null,'00 21 * * *','USER1','SP_POPULATE_MOBILE_RESPONSES',null,
null,null)
```

---

## Stored procedures for the Interact Event Pattern report

The Interact Event Pattern report uses the data that is contained in staging tables, which are populated by stored procedures. The stored procedures perform a delta refresh operation.

Interact Event Pattern report data is processed in two steps:

1. The Interact ETL process transforms the audience blob data into ETL database tables.
2. The reports aggregator aggregates the data incrementally for each pattern type in preconfigured parallel execution. This is specific Interact reports pack.

Both processes are integrated with the database trigger on the UACI\_ETLPATTERNSTATERUN table. This trigger is fired on successful ETL execution and submits database jobs to aggregate the reports data.

The following tables provide information about the stored procedures and the tasks that they complete:

*Table 11. Stored procedures for the Interact Event Pattern report*

| Stored procedure             | Task   |
|------------------------------|--|
| SP_GENERATE_PATTERN_MATCHALL | Called internally by the SP_POPULATE_PATTERN_MATCHALL procedure. Responsible for retrieving the data for Match All patterns that were executed since the previous run of the stored procedures.  |
| SP_GENERATE_PATTERN_COUNTER  | Called internally by the SP_POPULATE_PATTERN_COUNTER procedure. Responsible for retrieving the data for Counter patterns that were executed since the previous run of the stored procedures.     |
| SP_GENERATE_PATTERN_WC       | Called internally by the SP_POPULATE_PATTERN_WC procedure. Responsible for retrieving the data for Weighted Counter patterns that were executed since the previous run of the stored procedures. |
| SP_POPULATE_PATTERN_MATCHALL | Processes the Match All Pattern type data that was received since the previous run of stored procedures.   |
| SP_POPULATE_PATTERN_COUNTER  | Processes the Counter Pattern type data that was received since the previous run of stored procedures.   |
| SP_POPULATE_PATTERN_WC       | Processes the Weighted Counter Pattern type data that was received since the previous run of stored procedures.  |

*Table 11. Stored procedures for the Interact Event Pattern report (continued)*

| Stored procedure  | Task  |
|---|---|
| <b>SP_UPDATE_UACI_TABLES_STATS</b>                      | Called by the trigger to update the database statistics and the database jobs are submitted for reports data aggregation.<br><br>Updates the statistics for the following ETL tables: <ul style="list-style-type: none"><li>• <b>UACI_ETLPATTERNSTATE</b></li><li>• <b>UACI_ETLPATTERNSTATEITEM</b></li><li>• <b>UACI_ETLPATTERNEVENTINFO</b></li></ul>                       |
| <b>SP_POPULATE_PATTERN_LOCK<br/>(p_parallel_degree)</b> | Updates the <b>UARI_PATTERN_LOCK</b> table with the degree of parallel execution configured.<br><br><b>p_parallel_degree</b> is the degree at which the aggregation processes run in parallel.  |
| <b>SP_AGGR_RUN_STATUS</b>                               | Called by the Interact ETL process before the start of the aggregation process to check the lock status of the running stored procedures. Run against the <b>UARI_PATTERN_LOCK</b> table.   |
| <b>SP_REFRESH_PATTERNINFO</b>                           | <b>For Oracle and DB2 only</b><br><br>Refreshes the <b>UARI_PATTERNSTATE_INFO</b> table to get the state and audience level information for the ICs and Categories.<br><br>The call to this procedure is given by a trigger before the aggregation procedures start.<br><br>Because Mviews are not supported for SQL Server, this procedure is not applicable for SQL Server. |
| <b>SP_UARI_REBIND_PACKAGES</b>                          | <b>For DB2 only</b><br><br>Rebinds the packages that are associated with the aggregation trigger and procedures. Called from the trigger after the <b>SP_UPDATE_UACI_TABLES_STATS</b> procedure call.   |

*Table 12. Database sequence for Oracle and DB2*

| Stored procedure   | Task  |
|--------------------|---|
| <b>SQ_UARI_RUN</b> | Creates a unique run identifier. The list of the run IDs is stored in the <b>UARI_RUNS</b> table. |

For SQL Server, RunID is generated by using the **IDENTITY** property on the **RunId** column, which generates new IDs on each run.

*Table 13. Database trigger*

| Stored procedure                   | Task  |
|------------------------------------|---|
| <b>TR_AGGREGATE_DELTA_PATTERNS</b> | After the <b>UACI_ETLPATTERNSTATERUN</b> table is updated with the value 3, the trigger is invoked by submitting the jobs that call the stored procedures for data aggregation. |

## The ETL process

On the first run, ETL does not insert any values against the respective PatternID in the UARI\_DELTA\_PATTERNS table because all patterns are new or delta. The reports aggregation process collects all PatternID from the ETL tables and inserts them into the UARI\_DELTA\_PATTERNS table.

The ETL process calls the **SP\_AGGR\_RUN\_STATUS** procedure. The **SP\_AGGR\_RUN\_STATUS** procedure checks the UARI\_PATTERN\_LOCK table for running jobs based on the JobID:

| JobID value | Reason   |
|-------------|--|
| Y           | The job is running. Scenarios are running or failed. |
| N           | Failed job.  |

The ETL process always checks the status of the reports aggregation by checking the status of the submitted jobs. If the ETL finds reports aggregation running, the ETL does not start its run. The ETL starts again according to the schedule.

The ETL process checks the UARI\_PATTERN\_LOCK table for the number of JobIDs with value **Y**. The ETL process starts only if no JobIDs have the value **Y**. If any JobIDs have the value **Y**, then the ETL process is skipped and runs at the next scheduled interval. For more information about the ETL process, see the *IBM Interact Administrator's Guide*.

From the second run onwards, the ETL process updates the UARI\_DELTA\_PATTERNS table with the update flag for the updated PatternID:

- For updated data, the PatternID is marked with **U**.
- For deleted data, the PatternID is marked with **D**.
- For newly added data, the PatternID is identified by the reports aggregation code and is marked with **P**.

The aggregation process is run for only the PatternIDs that are marked with the **U** or **D** flag.

## Enabling stored procedures for the Interact Event Pattern report

In addition to the steps that you followed to enable reports, you must enable the Interact Event Pattern report. The Interact Event Pattern report uses the delta refresh process for data aggregation so that reports can render faster.

Administrative Task Scheduler (ATS) depends on table space to store historical data and configuration information. To verify if the table space is defined in the database or to create the table space, see:

<http://www.ibm.com/developerworks/data/library/techarticle/dm-0809see/>

To execute the scheduled job from Task Scheduler, the database must be active. Refer to the developer works article at:

<http://www.ibm.com/developerworks/data/library/techarticle/dm-0809see/>

The **ADMIN\_TASK\_STATUS** is an administrative view that is created when the **ADMIN\_TASK\_ADD** procedure is called for the first time. These views must exist in the

database. If the views are missing, create the views with the help of your database administrator. You must have access privilege on the ADMIN\_TASK\_STATUS administrative view. For more information, see [http://www-01.ibm.com/support/knowledgecenter/api/content/SSEPGG\\_9.7.0/com.ibm.db2.luw.admin.gui.doc/doc/t0054396.html](http://www-01.ibm.com/support/knowledgecenter/api/content/SSEPGG_9.7.0/com.ibm.db2.luw.admin.gui.doc/doc/t0054396.html) and <http://www.ibm.com/developerworks/data/library/techarticle/dm-0809see/>.

To enable stored procedures for the Interact Event Pattern report, complete the following steps.

1. Browse to the *<Interact\_ReportPack\_Installer\_Home>\cognos11\interact-dd1\<DB Type>\* folder.
2. For DB2, set the following parameters:
  - **db2set DB2\_COMPATIBILITY\_VECTOR=ORA**
  - **db2set DB2\_ATS\_ENABLE=YES**
3. When the instance is restarted, you must activate DB2 by running the following commands in the order listed:
  - a. db2 force application all Stop the application on this instance.
  - b. db2stop force Stop DB2.
  - c. db2start Start the database.
  - d. db2 activate db <dbname> Explicitly activate the database.  
You should see this message:  
`DB20000I The ACTIVATE DATABASE command completed successfully.`
  - e. db2 list active databases Verify that the database is activated.  
You should see output similar to the following output.  

```
Active Databases
Database name      = <dbname>
Applications connected currently      = 0
Database path     = /data04/<DB instance owner>/NODE0000/SQL00001/
```
4. On the ETL database, run the following scripts in the order listed:
  - a. **acir\_tables\_<DB Type>.sql**
  - b. **acir\_scripts\_<DB Type>.sql**

**Note:** You must run the **acir\_tables\_<DB Type>.sql** script if it was not run earlier.

**Note:** If an exception is thrown after you run the **acir\_scripts\_db2.sql** script on the target database, delete the trigger and create it with the appropriate database user.

For SQL server, run the **acir\_jobs\_sqlserver.sql** script. The script creates database jobs for degree 2. To change the degree, see “Changing the degree of parallel execution for the Interact Event Pattern report” on page 43.

**Note:** Make sure that the SQL Server Agent service is running.

5. Before the ETL process starts, you must create parallel batch degree records in the UARI\_PATTERN\_LOCK table. Run one of the following commands on the ETL database to create these records:
  - For Oracle: `execute SP_POPULATE_PATTERN_LOCK(2)`
  - For DB2: `call SP_POPULATE_PATTERN_LOCK(2)`
  - For SQL Server: `EXEC [dbo].[SP_POPULATE_PATTERN_LOCK] @p_parallel_degree = 2`

In this example, 2 is the degree at which the aggregation processes run in parallel.

The UARI\_PATTERN\_LOCK table is populated with the stored procedures with the degree value. The degree value is configurable. Increase the degree of parallel execution for the Interact Event Pattern report aggregation process to reduce the elapse time. If the degree is set to a higher value, hardware resource requirements increase proportionally. The number of procedures that are run for data aggregation depend on the degree value.

6. Optional: While the ETL feature is running, you can disable the trigger so that reports aggregation is not called. To disable the trigger and turn off the reports aggregation process, run one of the following commands depending on your database type:
  - For DB2 refer to <http://www.ibm.com/developerworks/data/library/techarticle/0211swart/0211swart.html>.
  - For Oracle: `alter trigger TR_AGGREGATE_DELTA_PATTERNS disable;`
  - For SQL Server: `Disable Trigger TR_AGGREGATE_DELTA_PATTERNS on uaci_etlpatternstaterun`
7. Optional: To enable the trigger and turn on the reports aggregation process, run one of the following commands depending on your database type:
  - For DB2 refer to <http://www.ibm.com/developerworks/data/library/techarticle/0211swart/0211swart.html>.
  - For Oracle: `alter trigger TR_AGGREGATE_DELTA_PATTERNS enable;`
  - For SQL Server: `Enable Trigger TR_AGGREGATE_DELTA_PATTERNS on uaci_etlpatternstaterun`

When ETL completes successfully, the status in the UACI\_ETLPATTERNSTATERUN table is updated as 3, and the trigger `TR_AGGREGATE_DELTA_PATTERNS` is called. The trigger calls the stored procedure for the set parallel degree.

**Note:** When the system aggregates all data for the first time, the report aggregation process may take a longer time than subsequent aggregations.

---

## Changing the degree of parallel execution for the Interact Event Pattern report

The degree of parallel execution value is configurable. Increase the degree of parallel execution for the Interact Event Pattern report aggregation process to reduce the elapse time. If the degree is set to a higher value, hardware resource requirements also increase proportionally

Configure the degree at which the aggregation process runs so that the Interact Event Pattern report can render faster.

To configure database jobs for a degree value of 3, complete one of the following steps, depending on your database:

- For Oracle: Run the `execute SP_POPULATE_PATTERN_LOCK(3)` command against the Interact ETL database.
- For IBM DB2: Run the `call SP_POPULATE_PATTERN_LOCK(3)` command against the Interact ETL database.

- For SQL Server: Run the default **acir\_jobs\_sqlserver.sql** script to create database jobs for degree value 1 and 2. The patterns with degree values 1 and 2 are aggregated in the UARI\_PROCESSED\_PATTERNS table.

To modify the degree to 3 for the Match All Pattern, copy the sample code for degree 1 and complete the following steps:

- Set the value of @job\_name to JOB\_MA\_3.
- Set the value of @p\_parallel\_degree to 3.

Run the following command against the Interact ETL database:

```
DECLARE
@jobId BINARY(16),
@status int,
@schedule_name varchar(16),
@dbname varchar(100)
set @dbname= (SELECT DB_NAME());

EXEC msdb.dbo.sp_add_job @job_name=N'JOB_MA_3',
@job_id = @jobId OUTPUT;

EXEC msdb.dbo.sp_add_jobstep @job_id=@jobId, @step_name=N'first',
@command=N'EXEC [dbo].[SP_POPULATE_PATTERN_MATCHALL]
@p_parallel_degree = 3',
@database_name=@dbname;

EXEC msdb.dbo.sp_add_jobserver @job_id=@jobId,
@server_name=N'(Local)';
GO
```

You can create the degree for the Counter Pattern and the Weighted Counter Pattern and run the commands against the ETL database.

To modify the degree to 3 for the Counter Pattern, copy the sample code for degree 1 and complete the following steps:

- Set the value of @job\_name to JOB\_C\_3.
- Set the value of @p\_parallel\_degree to 3.

To modify the degree to 3 for the Weighted Counter Pattern, copy the sample code for degree 1 and complete the following steps:

- Set the value of @job\_name to JOB\_WC\_3.
- Set the value of @p\_parallel\_degree to 3.

## Log messages in the UARI\_DELTA\_REFRESH\_LOG table for the Interact Event Pattern report

The UARI\_DELTA\_REFRESH\_LOG table contains logging information for all procedures.

### Aggregation process status

To verify the status of the aggregation process, look for the following text:

MESSAGE\_LINE:

```
<patterntype> patterns delta refresh started for parallel degree <degree value>
<patterntype> patterns delta refresh completed for parallel degree <degree value>
```

where:

- <patterntype> is Match All, Counter, or Weighted Counter.
- <degree value> is the value with which patterns are processed in parallel.

For example, when the degree value is 2, the following messages are logged:

```
MatchAll patterns delta refresh started for parallel degree 1
MatchAll patterns delta refresh completed for parallel degree 1
MatchAll patterns delta refresh started for parallel degree 2
MatchAll patterns delta refresh completed for parallel degree 2
```

### **UARI\_PATTERNSTATE\_INFO table**

To verify if the UARI\_PATTERNSTATE\_INFO table is refreshed, look for the following text:

MESSAGE\_LINE:

```
Pattern State information refresh procedure started
--The procedure to refresh the data in UARI_PATTERNSTATE_INFO is running.
```

MESSAGE\_LINE:

```
Pattern State information refresh procedure completed
--The procedure to refresh the data in UARI_PATTERNSTATE_INFO is completed.
```

### **Lock flags reset by the SP\_AGGR\_RUN\_STATUS procedure**

To verify if the lock flags are reset by the SP\_AGGR\_RUN\_STATUS procedure, look for the following text:

MESSAGE\_LINE:

```
patterns lock has been reset for parallel degree <degree value>
```

The OBJECT column of the UARI\_DELTA\_REFRESH\_LOG table contains the procedure name for which the lock is reset.

where: <degree value> is the value with which patterns are processed in parallel.

For example, when the degree value is 1, the following message is logged:

```
patterns lock has been reset for parallel degree 1
```

### **For DB2 only: rebinding of packages**

For DB2 only: to verify that rebinding of the packages completed, look for the following text:

MESSAGE\_LINE:

```
Rebind of packages started
--Rebinding of the packages started
```

MESSAGE\_LINE:

```
Rebinding of packages completed successfully on <datetime>
--Rebinding of the packages completed successfully on the given date.
```

### **Statistics updated on ETL tables**

To verify if the statistics were updated on the ETL tables, look for the following text:

MESSAGE\_LINE:

```
Table statistics update started
--Update statistics on the ETL tables is in process
```

#### MESSAGE\_LINE:

```
Statistics on Tables UACI_ETLPATTERNSTATE UACI_ETLPATTERNSTATEITEM  
UACI_ETLPATTERNEVENTINFO and indexes have been updated successfully  
on <datetime>  
--Statistics are updated on the mentioned ETL tables on the given date.
```

#### Degree of parallel execution

To verify the degree of parallel execution, look for the following text:

#### MESSAGE\_LINE:

```
Pattern aggregation processing Parallel degree is set to <degree value>  
--Parallel degree with which report aggregation will run is set to <degree value>.
```

For example, when the degree value is 2, the following message is logged:

```
Pattern aggregation processing Parallel degree is set to 2.
```

---

## Testing your configuration before you enable authentication

After the reports are installed and configured, you must test the configuration before you enable authentication. You can test the configuration by running a sample of reports.

Verify that IBM Marketing Software is running and that the IBM Cognos BI service is running.

To test your configuration before you enable authentication, complete the following steps.

1. Log in to IBM Marketing Software as a user with application access.
2. Create data so that the reports have something to show.
3. Open Cognos Connection.
4. Browse 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 Marketing Software application database correctly. See “Creating IBM Cognos data sources for IBM Marketing Software application databases” on page 18.

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 “Enabling internal links in the reports” on page 30.
6. Log in to the IBM Marketing Software application as a user with application access and browse to the **Analysis** page.

When you specify the URL for the IBM Marketing Software 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 is not configured correctly. See “Configuring IBM Cognos Application Firewall for IBM Marketing Software” on page 20.

**Note:** If you cannot view an eMessage report, verify that the eMessage stored procedures were run.

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 "Enabling internal links in the reports" on page 30.

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

---

## How to configure IBM Cognos to use IBM Marketing Software authentication

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

Before you configure IBM Cognos to use IBM Marketing Software authentication, be sure that you know which authentication mode you plan to configure: "authenticated" or "authenticated per user".

### Creating the reports system user

There are two authentication modes: "authenticated" and "authenticated per user". If you use "authenticated per user" mode, you do not need to create the reports system user. If you use "authenticated" mode, you must create a reports system user. When you create the reports system user, you can create the user and data source credentials for the user with IBM Cognos BI credentials.

When you create the reports system user, you can configure the following login credentials for that user:

- One set of login credentials for the IBM Marketing Software suite: The user name and password are specified for the reports system user (cognos\_admin).
- One set of login credentials for IBM Cognos BI: The user name and password are specified as data source credentials for the reports system user.

To create the reports system user, complete the following steps.

1. Log in to IBM Marketing Software 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 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 who you created in step 3.

  - c. Data Source Password: admin
5. Add the Reports System role to the user.
6. If IBM Marketing Software 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.

## Configuring Cognos authentication properties in IBM Marketing Software

If the IBM Marketing Software and Cognos applications are installed in different network domains, you must configure Cognos authentication properties in IBM Marketing Software. This action ensures that the IBM Marketing Software applications can communicate with the Cognos applications.

The setting of the **Enable form authentication** property indicates that IBM Marketing Software security uses form-based authentication in place of cookies. You set this property to True when either of the following is true:

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

When the value is True, the login process to Cognos Connection passes the login name and password in clear text and is not secure unless Cognos and the IBM Marketing Software are configured to use SSL communication.

However, even with SSL configured, the user name and password appear as clear text in the HTML source code when someone views the source of a displayed report. For this reason, you should install Cognos and IBM Marketing Software in the same network domain.

To configure Cognos authentication properties in IBM Marketing Software, complete the following steps.

1. Log in to IBM Marketing Software 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**.  
For **authenticated** mode, continue with step 5.  
For **authenticatedPerUser** mode, continue with step 8.
5. **For "authenticated" mode:** Verify that the values in the **Authentication user name** and **Authentication datasource name** fields match those of the user and data source that you created in the previous task, "Creating the reports system user" on page 47.
6. Set the value of the **Enable form authentication** property.

**Note:** When the **Enable form authentication** property is set to True, the **Authentication mode** property automatically behaves as though it were set to **authenticated**. You must complete the step that is required for this mode, which is described in "Creating the reports system user" on page 47.

7. Save the new settings.
8. **For "authenticatedPerUser" mode:** Assign the Report User role to the default **asm\_admin** user. To test reports, you need a user with access to both the IBM

Marketing Software application and the report data. The platform\_admin user does not have access to the IBM Marketing Software application features.

## Configuring IBM Cognos to use IBM Marketing Software Authentication Provider

You must use the Cognos Configuration and Cognos Connection applications to configure the IBM Cognos BI applications to use the IBM Marketing Software Authentication Provider.

**For distributed systems only:** If your IBM Cognos system has backup Content Managers configured for failover support, complete this task on each server where Content Manager is installed.

To configure IBM Cognos to use the IBM Marketing Software Authentication Provider, complete the following step.

1. On the computer where the Cognos Content Manager is running, 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 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 Marketing Software Authentication provider is configured correctly:
  - If you set the Cognos authentication mode in the IBM Marketing Software configuration properties to **authenticated**, log in as the `cognos_admin` (report system) user.
  - If you set the authentication mode in the IBM Marketing Software configuration properties to **authenticatedPerUser**, log in as the `asm_admin` user.

If IBM Cognos displays the following error, expand the error message.

The third-party provider returned an unrecoverable exception.

If the expanded message states `invalid credentials`, you made an error entering your user credentials. Try to log in again.

If the expanded message states password expired, IBM Marketing Software expired the password. Log in to IBM Marketing Software 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 in the `logs` directory of your Cognos installation.

9. When you successfully log in to Cognos Connection, open Cognos Configuration.
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.

Now, anyone who logs in to an application on the Cognos system is authenticated by IBM Marketing Software. Additionally, the authentication namespace **Unica** now appears in the IBM Cognos user interface for logon and security administration tasks.

## Configuring additional settings for Marketing Platform

When IBM Marketing Platform is integrated with an LDAP server, Windows Active Directory, or a web access control system such as Tivoli® or Site Minder, you must configure additional settings.

To configure additional settings for Marketing Platform, complete the following steps.

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 authentication. However, IBM Marketing Software applications can still access the Unica namespace through the Cognos SDK API (for example, when users view Cognos reports from within IBM Marketing Software applications).

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

---

## Testing your configuration with authentication configured

You must test your configuration of IBM Cognos BI after you configure IBM authentication.

To test your configuration of IBM Cognos BI, complete the following steps.

1. Verify that IBM Marketing Software and the IBM Cognos service are both running.
2. Open Cognos Connection.

3. Browse 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 “Creating IBM Cognos data sources for IBM Marketing Software application databases” on page 18.
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 “Enabling internal links in the reports” on page 30.
5. Log in to IBM Marketing Software and browse 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 “How to configure IBM Cognos to use IBM Marketing Software authentication” on page 47.  
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 Marketing Software 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.

Now, reporting works properly and the example reports are in their default state. Finish configuring the data design of your IBM Marketing Software applications, such as campaign codes, custom campaign attributes, response metrics. To customize the reports or reporting schemas, see the following topics:

- If you are using Campaign or Interact, see the topics under Chapter 6, “How to configure reporting,” on page 53.
- If you are using Marketing Operations, see the “Using Reports” topics in the *IBM Marketing Operations Administrator’s Guide*.
- If you are setting up reporting for eMessage, you are done configuring reporting.



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## Chapter 6. How to configure reporting

After you install or upgrade your reporting packages, you must configure your reporting installation.

For its reporting feature, IBM Marketing Software 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 Marketing Software components that integrate IBM Enterprise applications with the IBM Cognos installation
- For several IBM Marketing Software applications, reporting schemas that enable you to build reporting views or tables in the IBM system tables for the application
- The example reports for the IBM Marketing Software application, which are built with IBM Cognos Report Studio

When you install IBM Marketing Software applications, each application registers itself with Marketing Platform. During that registration process, the application 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 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 Marketing Software products are installed when the IBM Marketing Software 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 Marketing Software application reports
- Customizable IBM Marketing Software 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 Marketing Software application database. This makes the data available to the IBM Cognos reports that are delivered in IBM Marketing Software Reports Packages.

Immediately after installation, the reports are in their default state and can be considered example reports. Many IBM Marketing Software 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, and additional audience levels. 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 Marketing Software applications are included in your IBM Marketing Software suite.

- 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 Marketing Software applications that do not provide reporting schemas and for eMessage (which provides schemas that cannot be customized), you configure the IBM Cognos reports only.

---

## Reporting and security

For security, the reporting feature is controlled by specific access control mechanisms.

The following list describes the access control mechanisms:

- Application access control settings: Whether users can run reports from the IBM Marketing Software interface depends on the permissions that are granted by the IBM Marketing Software 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.
- Marketing Platform access control settings: Whether an administrator can customize the schemas or run the Report SQL Generator depends on the permissions that are configured for Marketing Platform.
- IBM Marketing Software authentication: You can also configure the IBM Cognos BI system to use IBM Marketing Software authentication to control access to the IBM application data from the IBM Cognos system.

## Report folder permissions

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

## Synchronizing with the IBM Cognos file directory

After you install the reports application, you must make the IBM system aware of the report folders on the IBM Cognos system. Run the **Sync Report Folder Permissions** option 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 **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.

## Partitions and folder partitions

The folder synchronizing process retrieves the names of all the folders 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.

## The IBM Marketing Software Authentication Provider and the IBM Cognos BI system

By default, the Cognos system is unsecured because anyone who has access to the IBM Cognos applications can access the data from the IBM Marketing Software application database. You can secure the Cognos system by using the IBM Marketing Software Authentication Provider.

When your IBM Marketing Software system integrates with the IBM Cognos BI system, the IBM Cognos system provides access to the IBM Marketing Software application data in the following ways:

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

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

- `report_system` grants access to the reporting configuration options in the IBM Marketing Software interface. The **ReportsSystem** role grants this permission.
- `report_user` grants access to the reports but not to the reporting configuration options in the IBM Marketing Software interface. The **ReportsUser** role grants this permission.

There are two authentication modes:

- authenticated
- authenticated per user

## Authenticated mode

When the authentication mode is set to authenticated, the communications between the IBM Marketing Software system and the IBM Cognos system are secured at the machine level. To use the authenticated mode for a user, you must configure a report system user and identify the user in the reporting configuration settings.

When you assign the ReportsSystem role to a user, the user is granted access to all reporting functions. Store the login credentials for the IBM Cognos system in a user data source. The data source is normally named `cognos_admin`.

The IBM Marketing Software Authentication Provider uses the following method to authenticate the report system user:

- Each time that an IBM Marketing Software user attempts to display a report, Marketing Platform uses the credentials that are 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.

### **Authenticated per user mode**

When the authentication mode is set to authenticated per user, the reports system does not use a report system user but instead evaluates the credentials of each user. The IBM Marketing Software Authentication Provider uses the following method in the authenticated per user mode:

- Each time that an IBM Marketing Software user attempts to display a report, 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 the authenticated per user mode, all users must have either the ReportsUser or the ReportsSystem role to see reports. Typically, you assign the ReportsSystem role to one or two administrators and assign the ReportsUser role to the user groups of the IBM Marketing Software users who need to see reports in the IBM Marketing Software interface.

Except for checking for a reporting permission, the authentication provider does not check for other authorization. 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 Marketing Software suite.

## **Reporting permissions configuration properties**

You can give access to the reporting configuration functions and to reports by configuring the settings on the Configuration page.

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

| User interface item   | Access control  |
|---|---|
| <b>Configuration</b> option on the <b>Settings</b> menu<br><br>You configure reporting schemas on the Configuration page. | The Marketing Platform permission <b>Access to Configuration</b> , which is under <b>Settings &gt; User Roles &amp; Permissions &gt; Platform</b>                                     |
| <b>Report SQL Generator</b> and <b>Sync Report Folder Permissions</b> options on the <b>Settings</b> menu                 | The Report permission <b>report_system</b> , which is under <b>Settings &gt; User Roles &amp; Permissions &gt; Report</b><br><br>The standard ReportsSystem role has this permission. |

| User interface item           | Access control  |
|-------------------------------|---|
| Analytics menu                | Application access settings that vary by product: <ul style="list-style-type: none"> <li>For Campaign, eMessage, and Interact, the <b>Administration &gt; Access Analysis Section</b> permission at the campaign partition level of <b>Settings &gt; User Roles &amp; Permissions</b></li> <li>For Marketing Operations and Distributed Marketing, the Analysis permissions in the security policies</li> </ul> |
| 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 so that they can see the data in reports.   |

## Reporting schemas

You must create reporting view or tables to implement reporting for Campaign, Interact, and eMessage. Reports can extract reportable data in the reporting views or tables. The report packages for Campaign, Interact, and eMessage include reporting schemas that the Reporting SQL Generator uses to produce SQL scripts that create reporting views or tables.

For Campaign and Interact, you must customize the schema templates so that the data that you want to include in your reports is represented. You can run the Reporting SQL Generator after you customize the schema templates. You can run the SQL scripts that the SQL Generator generated and run the scripts on your application databases.

You cannot customize the eMessage reporting schemas. However, you must generate the SQL script 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 Marketing Software user interface, your installation must be integrated with IBM Cognos BI.

## The Report SQL Generator

The Report SQL Generator uses the reporting schemas to determine the analytic logic that is necessary to extract data from the database for the IBM Marketing Software application. The Report SQL Generator then generates the SQL script that creates views or reporting tables that implement the logic and that enable business intelligence tools to extract reportable data.

During installation and configuration, the system implementers configured data source properties that identify the IBM Marketing Software application databases. The Report SQL Generator connects to the application databases to complete the following tasks:

- Validate scripts that create views or materialized views
- Determine the correct data types to use in scripts that create reporting tables

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

## Reporting deployment options

You can choose a deployment option when you run the Report SQL Generator tool.

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 that is 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 Microsoft SQL Server

The reports application does not support materialized views for Microsoft 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.

**Note:** For eMessage, you must use views.

## eMessage and Oracle

If your installation includes eMessage and your database is Oracle, you must use materialized views or reporting tables.

## eMessage and IBM DB2

If your installation includes eMessage and your database is IBM DB2, you must 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.

For eMessage, the materialized views are automatically refreshed when you run the eMessage delta refresh stored procedures. For more information, see "For eMessage only: How to schedule and run stored procedures" on page 32.

## Control groups and target groups in the reports

The example IBM Cognos BI reports in 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 reports, determine whether you want to include response information from both 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, create only the target group column in the reporting schema for that item.

## Audience levels and reports

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.

In their default state, the reporting schemas reference the system tables for the single pre-defined audience level "Customer", which is delivered with Campaign. By default, performance and response history reports reference the "Customer" audience level.

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 **Settings > Configuration** pages. Add reporting views to the Cognos data model and modify the Cognos reports to accommodate the additional audience level or levels.

## Audience keys in reporting schemas

When you configure the audience level for performance reports and response history or when you create reporting schemas for additional audience levels, you must 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 replace each of the truncated audience key references with the complete string.

## Partitions and reporting schemas

If Campaign uses more than one partition, you can add reporting schemas for each partition. Create the reporting schemas from the templates in the Schemas configuration pages.

When Campaign uses multiple partitions, the system implementer configured a reports package on the Cognos system for each partition. After the data design of your system is implemented, you must revisit the reporting views or tables for each partition.

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## 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 use IBM Cognos 10 BI Report Studio, you build reports from query subjects and items that are described in the data model.

The data model for an IBM Marketing Software application references the reporting views in the IBM Marketing Software application database. The data is made available to the Cognos 10 reports that are also delivered in the IBM Marketing Software Reports Package.

When you configure the reporting views to include additional attributes, metrics, and response types, you synchronize the Cognos reporting model with the reporting views and you 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 Marketing Software reports.

The IBM Cognos 10 model from the IBM Marketing Software Reports Package presents the IBM Marketing Software application metadata in the following three folders:

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

**Note:** When you create a project in IBM Cognos Configuration, select **Open Project** to create a project. When you use the **Open Project** option, the query mode is set to **Compatible**. Do not use the **Create New Project** option, which uses the default template that sets the query mode to **Dynamic**.

---

## Report Studio reports

Each IBM Marketing Software reports package contains several reports for the application that are built with the IBM Cognos Report Studio.

Run sample reports from the following locations in the IBM Marketing Software suite common user interface:

- From the **Analytics** menu, run a multiple object report.

- On the Analysis tab of items like campaigns or offers, run a single object report.
- On the Campaign, Marketing Operations, eMessage, and Interact dashboards, run a pre-configured report. See the *IBM Marketing Platform Administrator's Guide* for information about dashboards.

## Folders, subfolders, and access settings

The reports for each IBM Marketing Software application are organized into folders and subfolders with names that represent both the application and the purpose of the report in the Public Folders area.

During installation, the system implementers imported the Cognos Connection reports archive for each IBM Marketing Software application to the 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. The security policies for those applications grant users access to all 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 reports or no reports.

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

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

## Report styles and appearance

Use the `GlobalReportStyles.css` style sheet to establish common reporting styles for reports across all IBM Marketing Software applications.

For information about styles, see Chapter 12, “Formats for the Cognos reports,” on page 119. These topics provide the following information about reports:

- The styles that are implemented by the `GlobalReportStyles.css` file
- Style formatting that you must do manually when you author a report because you cannot implement certain styles with the style sheet

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

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.

## 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, and locations for saving.

For example, you can schedule a report to run every Monday at 9:00 AM, and distribute the report by 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*.

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## How to customize reporting schemas

You can customize your reports to include custom data. The reporting schema that you modify depends on the reports that you plan to customize.

For information about which reporting schemas support the sample reports provided in the report packs, see Chapter 14, “Reports and reporting schemas by product,” on page 135.

Determine which reports that you plan to customize and consult the appropriate report to reporting schema map:

- “eMessage Reports and Reporting Schemas” on page 137
- “Interact Reports and Reporting Schemas” on page 137

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

## Adding contact or response metrics

You can add contact or response metrics to the Campaign Performance and Offer Performance reporting schemas.

Determine the following information:

- Which reporting schema supports the report that you want to add the metric to. See Chapter 14, “Reports and reporting schemas by product,” on page 135 for information.
- Whether you need to add a column to the reporting schema for the control group in addition to the target group. See “Control groups and target groups in the reports” on page 59.
- How the metric is calculated. For example, it could be summed, averaged, or counted.

To add contact or response metrics, complete the following steps.

1. Select **Settings > Configuration**.
2. Expand **Reports > Schemas > Campaign > name of the appropriate reporting schema**.
3. Expand the **Columns** node and select either **Contact Metric** or **Response Metric**.
4. In the form on the right, click **New category name** and enter the name of the contact or response metric.

5. For **Column Name**, enter the name to use in the reporting schema for the attribute. Use all uppercase letters with no spaces.
6. For **Function**, specify how the metric is calculated or determined.
7. 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.
8. For **Control Treatment Flag**, enter the number **0** to indicate that this column in the reporting schema represents the target group.
9. Click **Save Changes**.
10. Optional: Repeat this task to add the control group column to the reporting schema, if necessary. This time, enter the number **1** to indicate that this column represents the control group.

## Adding custom attributes

You can add custom campaign, offer, and cell attributes to the Custom Campaign Attributes reporting schema.

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

To add custom attributes, complete the following steps.

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

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

8. Click **Save Changes**.

## Adding response types

You can add response types to the Campaign Offer Response Breakout schema.

Determine the following information:

- Whether you need to add a column to the reporting schema for the control group and the target group. See “Control groups and target groups in the reports” on page 59.
- The response type code from the UA\_UsrResponseType table.

To add response types, complete the following steps.

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

## **Adding contact status codes**

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

To add the contact status codes, complete the following steps.

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

## **Specifying 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 that are used in these reports to be something other than the default over time variations, complete the following steps:

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

## Configuring audience level for performance reports and response history

You can customize your Campaign and Interact reporting schemas to include custom data to display in your reports.

Determine the following information:

- 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 “Audience keys in reporting schemas” on page 59.

Complete the following steps 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**.
  2. Expand **Reports > Schemas > *ProductName* > *SchemaName***.
  3. In the form on the right, click **Edit Settings**.
  4. In the **Input Tables** section, identify the system tables for the audience level and the audience key.

**Note:** Use commas to separate column names for a multikey audience key. For more information, see “Audience keys in reporting schemas” on page 59.

5. Click **Save Changes**.

---

## Reporting schemas for extra audience levels or partitions

You can create reporting schemas for extra audience levels and partitions.

You might want to create additional reporting schemas for the following reasons:

- You want to report on more than one audience level. You can 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 tables.
- You configure 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 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

- A short two- or three-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.

## **Creating a Campaign Offer Response Breakout schema**

If you want to configure reporting for multiple audience levels or multiple partitions, you can create reporting schemas.

To create a Campaign Offer Response Breakout schema, complete the following steps.

1. Select **Settings > Configuration**.
2. Expand **Reports > Schemas > Campaign > Campaign Offer Response Breakout Star Schema**.
3. Click **New category name** and enter a descriptive name for the reporting schema that indicates the audience level. For example, Campaign Offer Response Household.
4. In the **Input Tables** section, enter the name of the response history table for this audience level and 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 > Response Type** and then configure the response types for this audience level.  
For help with this step, see “Adding response types” on page 63.
6. Under the new node, select **SQL Configuration > Campaign Response Breakout** and click **Edit Settings**.
7. In the form, 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 102.
8. Click **Save Changes**.
9. Under the new node, select **SQL Configuration > Campaign Offer Response Breakout** and click **Edit Settings**.
10. 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\_.
11. Click **Save Changes**.

## **Creating a Campaign Offer Contact Status Breakout schema**

If you want to configure reporting for multiple audience levels or multiple partitions, you can create reporting schemas.

To create a Campaign Offer Contact Status Breakout schema, complete the following steps.

1. Select **Settings > Configuration**.
2. Expand **Reports > Schemas > Campaign > Campaign Offer Response Breakout Star Schema**.

3. 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.
4. In the **Input Tables** section, enter the name of the response history table for this audience level and 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 Status Code** and configure the contact status codes for this audience level.  
For help with this step, see “Adding contact status codes” on page 64.
6. Under the new node, select **SQL Configuration > Campaign Contact Status Contact History** and click **Edit Settings**.
7. In the form, 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\_.
8. Click **Save Changes**.
9. Under the new node, select **SQL Configuration > Campaign Offer Contact Status Contact** and click **Edit Settings**.
10. 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\_OCSBO\_HH\_.
11. Click **Save Changes**.

## Creating an Offer Performance schema

Use **Offer Performance Star Schema** to create an Offer Performance schema.

To create an Offer Performance schema, complete the following steps.

1. Select **Settings > Configuration**.
2. Expand **Reports > Schemas > Campaign > Offer Performance Star Schema**.
3. In the **New category name**, enter a descriptive name for the reporting schema that indicates the audience level. For example, Offer Performance Household.
4. In the **Input Tables** section, identify the tables that support the audience level and the audience key.
5. In the **Schema Settings** section, select the **Over Time Variations** options that apply and click **Save Changes**.  
A new node appears in the Configuration tree for the schema. You cannot change the name of the node.
6. Under the new node in the Configuration tree, select **Columns > Contact Metric** and configure the contact metrics for this audience level.  
For help with this step, see “Adding contact or response metrics” on page 62.
7. Under the new node, select **Columns > Response Metric** and configure the response metrics for this audience level.  
For help with this step, see “Adding contact or response metrics” on page 62.
8. Under the new node, expand **SQL Configuration**, select the first item (Offer Contact History) and click **Edit Settings**.
9. In the form, 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\_.

10. Click **Save Changes**.
11. Repeat steps 8 through 10 for each item that is listed under the **SQL Configuration** section of the new reporting schema.

## **Creating a Campaign Performance schema**

Use **Campaign Performance Star Schema** to create a Campaign Performance schema.

To create a Campaign Performance schema, complete the following steps.

1. Select **Settings > Configuration**.
2. Expand **Reports > Schemas > Campaign > Campaign Performance Star Schema**.
3. Click **New category name** and enter a descriptive name for the reporting schema that indicates the audience level. For example, Campaign Performance Household.
4. In the **Input Tables** section, identify the tables that support the audience level and the audience key.
5. In the **Schema Settings** section, select all **Over Time Variations** options that apply and click **Save Changes**.

A new node appears in the Configuration tree for the schema. You cannot change the name of the node.

6. Under the new node, select **Columns > Contact Metric** and configure the contact metrics for this audience level.  
For help with this step, see “Adding contact or response metrics” on page 62.
7. Under the new node, select **Columns > Response Metric** and configure the response metrics for this audience level.  
For help with this step, see “Adding contact or response metrics” on page 62.
8. Under the new node, select **SQL Configuration** and select the first item, Campaign Contact History.
9. In the form, 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\_.
10. Click **Save Changes**.
11. Repeat steps 9 and 10 for each item that is listed under the **SQL Configuration** section of the new reporting schema.

## **Creating 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.

To create a Campaign Custom Attributes schema, complete the following steps.

1. Select **Settings > Configuration**.
2. Expand **Reports > Schemas > Campaign > Campaign Custom Attributes**.
3. In the **New category name**, enter a descriptive name for the reporting schema that indicates the partition. For example, Campaign Custom Attributes Partition 2.
4. Under the new node in the Configuration tree, expand **Columns** and add the custom cell, offer, and campaign attributes that are required by the partition for which you are creating this reporting schema.

- For help with this step, see “Adding custom attributes” on page 63.
5. Optional: You can edit the view or table names. Under the new node, expand **SQL Configuration** and select each item to examine the view or table names. If you change names, make sure that names are no longer than 18 characters, are in all uppercase letters, and include no spaces.
  6. Click **Save Changes**.

## Creating an Interact Performance schema

Use **Interact Performance Star Schema** to create Interact Performance Schema.

To create an Interact Performance schema, complete the following steps.

1. Select **Settings > Configuration**.
2. Expand **Reports > Schemas > Interact > Interact Performance Star Schema**.
3. In the **New category name** field, enter a descriptive name for the reporting schema that indicates the audience level. For example, Interact Performance Household.
4. In the **Input Tables** section, identify the tables that support the audience level and the audience key.
5. In the **Schema Settings** section, select all **Over Time Variations** options that apply and click **Save Changes**.  
A new node appears in the Configuration tree for the schema. You cannot change the name of the node.
6. Under the new node, select **SQL Configuration** and select the first item, Interactive Channel Offer Contact History Summary.
7. In the form, 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\_.
8. Click **Save Changes**.
9. Repeat steps 7 and 8 for each item that is listed under the **SQL Configuration** section of the new reporting schema.

## How to customize the IBM Cognos Model

When you customize an IBM Marketing Software 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 the IBM Cognos Framework Manager features to query the views or tables and import the additional items into the data model.

The way you update the Cognos model depends on the changes you made in the IBM Marketing Software 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 if you 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.

The following topics provide examples that you can use as guidelines for when you customize the Cognos model. For more information, see the *IBM Cognos BI Framework Manager User Guide* and the Framework Manager online help.

## Adding attributes to an existing view or table in a data model

You can add attributes to an existing view or table in a data model by using the IBM Cognos Report Studio.

Make sure you have 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.
- Run the generated script in the Campaign database to update the Offer Custom Attribute reporting view, `UARC_OFFEREXTATTR`.

The following example task 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 include it in a report.

To add the new offer attribute to the Cognos Campaign model, complete the following steps.

1. Make a backup of the Campaign model. Browse to the `Cognos/models` directory and copy the `CampaignModel` subdirectory. In a distributed Cognos environment, the `models` directory is 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 that are listed under the node for the view so they reflect all 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**.
8. Edit the name of the query item so it can be read easily. For example, the column that is 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**.

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

You can add the attribute to the appropriate report by using IBM Cognos Report Studio.

## Adding views to the IBM Cognos data model

You can add views or tables to the IBM Cognos data model. Use IBM Cognos Framework Manager features to query the views or tables and then import the additional items in the data model.

Make sure you 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
- Run the generated script in the Campaign database to create the additional reporting views.

The following example task shows how to add views or tables to the IBM Cognos data model. For this example, assume that you changed the Over Time Variations for the Campaign Peformance reporting schema and need to import the change into the Cognos model.

To add the new reporting views to the Cognos Campaign data model, complete the following steps.

1. Make a backup of the Campaign model. Browse to the Cognos/models directory and copy the CampaignModel subdirectory. In a distributed Cognos environment, the models directory is on the system running the Content Manager.
2. In Framework Manager, open the Campaign project and expand the **Import View** node.
3. Right-click the **Campaign Performance** folder and select **Metadata Wizard**.
4. Step through 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. Consult the *IBM Cognos BI Framework Manager User Guide* for the following tasks:

- Creating a 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 report with the objects from the **Campaign Performance by Quarter** schema that you created.

---

## How to customize and create Cognos reports for IBM Marketing Software applications

You can create your own reports and customize the example reports to include your custom data. 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 Marketing Software applications include short descriptions of all reports in the IBM Marketing Software reports package for that product.
- The IBM Marketing Software reports packages provide reference documentation that describes the specifications of each report 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, under `<ReportsPackInstallationDirectory>/cognos11/<Product>Docs`.

For example, the IBM Marketing Software Campaign reports package documentation is in the Reports Pack installation directory under `/IBM/IMS/ReportsPackCampaign/cognos11/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 report styles, see Chapter 12, "Formats for the Cognos reports," on page 119.
- For information about customizing Marketing Operations reports, see the *Marketing Operations Administration Guide*.

## Guidelines for creating Campaign reports

The IBM Marketing Software reporting package for Campaign includes example reports. Use IBM Cognos Report Studio to create and modify reports.

Use the following guidelines to create 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 reports package. This documentation is in the `CampaignReportPack\cognosN\docs` subdirectory in the reports package installation directory, where *N* is the version number of your Cognos installation.
- Using Report Studio, create or copy and modify a report. For details, see the Cognos Report Studio documentation.
- If you modify a copy of a 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 by 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 the example reports, consult the reference documentation from the reports 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 report into the appropriate folder under Public Folders to make it visible in Campaign.
  - To display the report on the Analysis tab, save it in the Campaign - Object Specific Reports folder.
  - To display the report on the Analysis page, save it in the Campaign folder.
  - To add the report to a dashboard portlet, save it in the Unica Dashboards\Campaign folder.

## How to configure 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 your version of Cognos.

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

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 custom dashboard reports

The IBM Marketing Software reporting packages for Campaign, Interact, eMessage, and Marketing Operations include pre-configured reports (portlets) that are specially formatted for use with IBM Marketing Software dashboards.

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

If you want to create 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. This documentation is in the *ProductNameReportPack\cognosN\docs* subdirectory in the reports 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 125 for a description of the formatting you must use.
- Do not include a title in a dashboard report. The portlet it appears in gives the report its title.
- Do not include hyperlinks in a dashboard report.
- Do not include page numbers in a dashboard report.

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

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## Chapter 7. User authorization for Cognos folders and reports

A Custom Java Authentication Provider (CJAP) provides authorization for users who access Cognos report folders and reports. You can implement this feature after you implement the IBM Marketing Software Authentication Provider, which provides single sign-on authentication between IBM Marketing Software applications and Cognos.

### Limitations of the IBM Marketing Software Authentication Provider

After Cognos has been configured to use the IBM Marketing Software Authentication Provider, users are authenticated automatically in Cognos when they access reports in an IBM Marketing Software application. If a user accesses the Cognos URL in the same browser session used to access IBM Marketing Software products, Cognos does not prompt the user to log in again.

A user who is logged in to the Cognos user interface becomes a part of the Cognos **Everyone** group. This is the default Cognos namespace implementation. The **Everyone** group in Cognos has System Administrator privileges by default. This is a security risk, because every user becomes an admin user. A malicious user can take advantage of this permission to delete or edit reports in public folders.

The IBM Marketing Software Authentication Provider authenticates users in Cognos, but it does not authorize them in Cognos. To correct this limitation, the CJAP implementation makes users visible in the security section of the Cognos namespace. When this is done, you can administer user roles and permissions in Cognos.

### Overview of the CJAP implementation

The CJAP implementation brings all users in the IBM Marketing Software application who have report access into a Cognos namespace that you specify. The CJAP associates IBM Marketing Software users with Cognos groups based on their IBM Marketing Software product access. Users who have the **ReportsUser** role in IBM Marketing Software receive read-only, limited access to Cognos folders and reports. Users who have the **ReportsSystem** role in IBM Marketing Software receive administrator permission in Cognos. You can also customize groups and roles to secure custom reports and report folders in Cognos.

### CJAP prerequisite

Before you implement CJAP, ensure that the IBM Marketing Software Authentication Provider is implemented and tested.

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## How to implement CJAP security

To implement CJAP security, complete the tasks in this section in the order shown.

Before you begin the implementation tasks, read this topic to understand the special considerations that might apply to your environment.

## **Authenticated mode**

When you configure the IBM Marketing Software Authentication Provider, you can set the value of the **Authentication Mode** property by selecting either **authenticated** or **authenticatedPerUser**.

If you selected **authenticated**, all users are authenticated using the same user account. Note the following considerations when you use the **authenticated** option:

- By default, the user account that the system uses for authentication is **Cognos\_admin**. When you implement CJAP authentication, it is a best practice to give the **Cognos\_admin** user the **ReportUser** role in IBM Marketing Software.
- You do not have to perform the following tasks. These tasks apply only when you select **authenticatedPerUser** for the IBM Marketing Software Authentication Provider.
  - Giving all Reports users read-only permissions in public folders
  - Securing public folders
  - Verifying user permissions in Cognos

## **Backing up the Cognos environment for CJAP**

Before you implement CJAP, back up your Cognos environment.

To back up your Cognos environment, complete the following steps.

1. Stop the Cognos service.
2. To back up your Cognos configuration, from the **Cognos Configuration File** menu, select the export option.
3. Back up the content database.
4. Manually back up the `webapps\p2pd\WEB-INF\AAA` folder located under your Cognos installation.

## **Editing and synchronizing the property file**

The property file determines which groups in IBM Marketing Software are duplicated in Cognos. Edit the property file to specify the Marketing Platform groups that you want to synchronize into Cognos.

Design the reports access in Marketing Platform by creating groups, associating them with roles, and making users members of these groups.

Stop the Cognos service. Restart the service after you edit the properties file.

To edit and synchronize the property file, complete the following steps.

1. Browse to `\webapps\p2pd\WEB-INF\AAA\lib\` under your Cognos installation.
2. Open `ReportSecurityConfig.properties` in a text editor.
3. To set the properties, follow the instructions in the file.

For example, you might set the properties as follows:

- `useFolderSecurity=true`
- `createEMMProductReportGroupsToSecureCognosReportFolders=Campaign`  
In Cognos, sub folders are created under the folder you specify here.
- `createCampaignReportsSyncFolderPermissionGroups=true`
- `createUserGroupInCognosSameAsPlatformGroup=Test_grp`  
Groups you specify here must exist in Marketing Platform.

- createUserGroupInCognosWithPlatformUserRole=User\_Defined\_Role01  
Roles you specify here must exist in Marketing Platform.
4. Restart the Cognos service.
  5. To synchronize the property file, select **Settings > Sync Report Folder Permissions** in the IBM Marketing Software user interface.

## Configuring the new namespace provider in Cognos

Configure a new namespace provider in Cognos for CJAP.

To configure the namespace provider, complete the following steps.

1. In Cognos Configuration, navigate to the **Security > Authentication** folder.
2. Add a Namespace resource to the **Authentication** folder.
3. Give the namespace a name.
4. Select **Type > Custom Java Provider** and click **OK**.  
This creates a namespace for the security CJAP.
5. Select the namespace and enter the name you gave the namespace as the ID for the provider.
6. Enter `com.ibm.emm.cognos.provider.EMMSuiteSecurityCJAP` for the class name.  
Ensure that there are no leading or trailing spaces.
7. Set the **Selectable for authentication?** property to **True** for test purposes.
  - **True** allows users to log in to Cognos by using IBM Marketing Software credentials.  
External users can log in without a password, so this is not recommended for production.
  - **False** means that the namespace is not available for authentication on the Cognos UI, but the IBM Marketing Software integration will work.  
After you complete testing, change this setting.
8. Log in to Cognos under the new namespace with an IBM Marketing Software account that has the **Report\_System** role in IBM Marketing Software.  
The URL is similar to `http://host:port/ibmCognos/cgi-bin/Cognos.cgi`  
If you see the Cognos application, the authentication provider is working.
9. In IBM Marketing Software, navigate to **Settings > Configuration** and set the **Reports | Integrations | Cognos 10 | Autentication namespace** configuration property to the same name you set in Cognos.
10. Verify that the Cognos reports are running correctly in IBM Marketing Software.

## Verifying synchronization

Verify that groups, users, and roles exist as expected in the Cognos namespace.

To verify synchronization, complete the following steps.

1. In Cognos Connection, select **Launch > Cognos Administration**.
2. On the Security tab, click **Users, Groups, and Roles**.
3. Select the namespace you created.
4. Click the **Groups** folder and verify that groups have synchronized correctly, as follows:
  - Verify that the following three default groups are present and that they have the expected members:

- **EMM\_Report\_System\_Admin\_User**  
Users with the **ReportsSystem** role in IBM Marketing Software are members of this group.
  - **EMM\_Report\_User\_Role\_Users**  
Users with the **ReportsUser** role in IBM Marketing Software are members of this group.
  - **EMM\_Report\_Access\_All\_Users**  
Users with the **ReportsUser** role in IBM Marketing Software are members of this group.
  - Verify that the groups you specified in the `ReportSecurityConfig.properties` file are present and that they have the expected members.
5. Click the **Users** folder and verify that all users with the **ReportsSystem** or **ReportsUser** role in Marketing Platform are listed in this folder.  
**Attention:** Users who are granted report permissions through group membership appear in Cognos after they access reports in IBM Marketing Software. Also, new users are listed after Cognos is restarted or after the user accesses reports in IBM Marketing Software.
  6. Click the **Roles** folder and verify that the expected role members are present, as follows:
    - All users with the **ReportsSystem** role in Marketing Platform have the **Reports\_System\_Role** in Cognos.
    - All users with the **ReportsUser** role in Marketing Platform have the **Reports\_User\_Role** in Cognos.

## Assigning Cognos permissions to the new roles

Assign permissions to the Cognos **Reports\_System\_Role** and **Report\_User\_Role** roles in Cognos that are equivalent to the Marketing Platform **ReportSystem** role and **ReportUser** role, respectively.

To assign Cognos permissions to the new roles, complete the following steps.

1. In Cognos Connection, select **Launch > IBM Cognos Administration**.
2. On the Security tab, click **Users, Groups, and Roles**.
3. Navigate to **Directory > [your namespace] > Roles**.
4. Click the **Report\_User\_Role** icon and give this role read-only permissions as follows:
  - a. On the Permissions tab, select **Add > Cognos Namespace**.
  - b. Select the **All authenticated Users** group, click **Add**, and click **OK**.
  - c. Grant **Read, Execute, and Traverse** permissions.
  - d. Deny **Write and Set Policy** permissions.
  - e. Click **OK**.
5. Click the **Reports\_System\_Role** icon and give this role all permissions as follows:
  - a. On the Permissions tab, select **Add > Cognos Namespace**.
  - b. Select the **All authenticated Users** group, click **Add** and click **OK**.
  - c. Grant **Read, Write, Execute, Set Policy, and Traverse** permissions.
  - d. Click **OK**.

## Removing the Everyone group from the Cognos System Administrators role

By default all authenticated users are members of the **Everyone** group in Cognos. Members of this group have the **System Administrators** role in Cognos. This grants all users administrator rights in Cognos by default.

Use this task to assign the **EMM\_Report\_System\_Admin\_User** group or **Reports\_System\_Role** role as administrators in Cognos and remove the **Everyone** group from the Cognos System Administrators role.

1. In Cognos Connection, select **Launch > IBM Cognos Administration**.
2. On the Security tab, click **Users, Groups, and Roles**.
3. Click the **Cognos** namespace.
4. Find the **System Administrators** role, click the **Set properties** icon, and modify the **Everyone** group as follows:
  - a. Click the **Members** tab.  
The **Everyone** group is listed.
  - b. Click **Add** and click your namespace.
  - c. Add the **EMM\_Report\_System\_Admin\_User** group or the **Reports\_System\_Role** role.
  - d. Click **OK**.
  - e. Select the **Everyone** group and click **Remove**.

## Giving reports users read-only permissions in public folders

Make users with the Marketing Platform **ReportSystem** and **ReportUser** roles members of the **EMM\_Report\_Access\_All\_Users** group. Give members of this group read-only access for the public folders in Cognos.

**Note:** The **EMM\_Report\_System\_Admin\_User** group has system administrator permissions in Cognos. To grant an IBM Marketing Software user this level of permissions in Cognos, make that user a member of the **EMM\_Report\_System\_Admin\_User** group.

To give reports users read-only permissions in public folders, complete the following steps.

1. In Cognos Connection, click the **Set properties for Public Folders** icon.
2. On the Permissions tab, click **Add**, click your namespace, and click **Groups**.
3. Add the **EMM\_Report\_Access\_All\_Users** group from your namespace.
4. Remove all other roles and groups from the permissions.
5. Grant **Read**, **Execute**, and **Traverse** permissions.
6. Deny **Write** and **Set Policy** permissions.
7. Click **OK**.

## Securing public folders

To ensure that you control access to public folders in Cognos, complete this task on all public folders, including the folders created for each IBM Marketing Software product reports pack.

**Note:** In the example below, *fff* represents any public folder that must be assigned to a user group in your namespace.

To secure public folders, complete the following steps.

1. Select **Set properties of *fff* folder** and click the **Permissions** tab.  
By default, permissions are the **EMM\_Report\_Access\_All\_Users** group permissions that you provided for all folders.
2. Click the **Override the access permissions acquired from the parent entry** check box and specify a different group as follows:
  - a. Click **Add**, click your namespace, click **Groups**, and click **Select, and add your desired group**.
  - b. Add your desired group and click **OK**.
  - c. Remove all other groups and grant the desired permissions to the new group.
  - d. Click **OK**.
3. Verify that users in the selected group have the expected access to the folder. Verify that users who are not members of the group do not have access to the folder.

## Verifying user permissions in Cognos

Verify that your implementation of CJAP is working as expected.

Cognos authentication is based on cookies. To execute these tests, delete the Cognos cookies and open a new browser window when you switch between users.

To verify user permissions, complete the following steps.

1. Log in to Cognos by using an account with the **Report\_User\_Role** role.
2. Verify that this user has the following access:
  - No access to IBM Cognos Administration.
  - No access to the public folder that you secured.
  - The **Cut**, **Paste**, and **Delete** buttons are disabled.
  - Can copy but can paste only in the user's folder under **My Folders**.
  - Can add a folder under **My Folders** but not under Public Folders.
3. Verify that the members of Marketing Platform groups that you specified in the properties file are in the expected groups and have the expected permissions.
4. Use the following information to help resolve problems:
  - If reports are not accessible to a user, verify that the user has either the **Report\_User\_Role** or the **Reports\_System\_User** role in Cognos.
  - Enable logs in the property file by providing the path to the log file.
5. In Cognos Configuration, navigate to **Security > Authentication** and, in the namespace you used for CJAP, set the **Selectable for authentication?** property to **False**.

---

## Removing the CJAP implementation from your environment

Complete this task only if you implemented CJAP security and decided to roll back your environment to use the IBM Marketing Software Authentication Provider.

To remove CJAP implementation, complete the following steps.

1. Reverse the following steps that you performed to implement CJAP:
  - a. Restore the `reportSecurityConfig.properties` file from your backup.

- b. To synchronize the property file, select **Settings > Sync Report Folder Permissions** in the IBM Marketing Software user interface.
  - c. Add the **Cognos Administrators** role to the **Everyone** group in the Cognos namespace.

When you configured CJAP, you removed this role from the **Everyone** group in the Cognos namespace. You must add it back or Cognos will have no users with administrator permissions. If that occurs, you must set up a new content data store database, or restore the content store from the backup database.
2. Stop and restart the Cognos service.



---

## Chapter 8. How to configure the IBM Cognos Reports for multiple partitions

If you use Campaign, eMessage, or Interact with more than one partition, you must configure the IBM Cognos reports packages for each partition. You can set up reporting on multiple partitions after you configure the partitions in Campaign and eMessage.

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

Use the **partition\_tool.sh** utility to configure reports for multiple partitions. The **partition\_tool.sh** utility performs the following tasks:

- 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.
- Compresses the new files into a new .zip archive, adding the new partition name to the end of the file name.

After you run the **partition\_tool.sh** utility, you create a folder in Cognos Connection by using the name that you specified, and import the new archive into that folder. Then, you copy the original project file (which contains the model) so you can change the datasource to point to the new partition and publish the model to the new folder.

---

### Prerequisites for multiple partitions

The reporting partition utility, **partition\_tool.sh**, is a UNIX shell script. You can configure IBM Cognos reports packages for multiple partitions by using the **partition\_tool.sh** utility.

Before you run the utility, complete the following steps:

#### 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 that 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>\Unica 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 computer that is running the Cognos Content Manager, you must download and install one before continuing.

## **Ensure that a file compression utility is installed**

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

If you do not have a file compression utility installed on the computer that is running the Cognos Content Manager, you must download and install one before continuing.

---

## **Running the reporting partition tool to create a copy of the reports archive .zip file**

You must create a copy of the reports archive .zip file by running the **partition\_tool.sh** utility for each partition.

Complete the following steps for each partition in your system.

1. From the shell or shell simulator, browse 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\cognos11\  
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 that is provided in the example above, the new .zip file would be named as follows:
  - For Campaign: Unica Reports for Campaign\_Partition2.zip
  - For 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 that 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.

---

## **Creating a copy of the Cognos model for Campaign**

If you plan to use Campaign reports in multiple partitions, you must create a copy of the IBM Cognos data model for the new Campaign reports. You also must ensure that the model references the correct data source name.

To create a copy of the Cognos model for Campaign, complete the following steps.

1. Verify that you created an IBM Cognos data source for this partition. If you have not yet created the data source for this partition, see “Creating JDBC data sources” on page 12.
2. Use Framework Manager to open the Campaign project file, `CampaignModel.cpf`.
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. Change the default value (`CampaignDS`) to the correct data source name for this Campaign partition. For example, `CampaignDS_partition2`.
6. Click in the **Content Manager Datasource** field. Change the default value (`CampaignDS`) to the value that you specified in step 5. For example, `CampaignDS_partition2`.
7. Save your changes.
8. Publish the package to the content store. When the publish wizard displays the Select Location Type window, browse to and select the folder where you imported the reports archive in Cognos Connection in the previous task.  
In the example, the folder is `Campaign Partition 2`.

---

## Creating a copy of the Cognos model for eMessage

If you plan to use eMessage reports in multiple partitions, you must create a copy of the IBM Cognos model for new eMessage reports. You also must ensure that the model references the correct data source name.

To create a copy of the Cognos model for eMessage, complete the following steps.

1. Verify that you created an IBM Cognos data source for this partition. If you have not yet created the data source for this partition, see “Creating JDBC data sources” on page 12.
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. Change the default (`eMessageTrackDS`) to the new data source name for this eMessage partition. For example, `eMessageTrackDS_partition2`.
6. Click in the **Content Manager Datasource** field. Change the default value (`eMessageTrackDS`) to the value that you specified in step 5. For example, `eMessageTrackDS_partition2`.
7. Save your changes.
8. Publish the package to the content store. When the publish wizard displays the Select Location Type window, browse to and select the folder where you imported the reports archive in Cognos Connection in the previous task.  
In the example, the folder is `Campaign Partition 2`.

## Updating the report properties for each partition on the IBM Marketing Software Configuration page

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

To update the report properties, complete the following steps for each partition.

1. Log in to IBM Marketing Software as the platform\_admin user.
2. Select **Settings > Configuration**.
3. Expand **Campaign > partitions > *partitionName* > reports**.
4. Edit the value of each of the properties so that they reflect the actual path to the reporting folders.

### Campaign example

If the new partition folder in Cognos Connection is named Campaign Partition 2, edit the report property settings as follows:

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

To update the offerAnalysisTabCachedFolder property, 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, edit the report property settings as follows:

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

To update the campaignAnalysisTabEmessageOnDemandFolder property, 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']
```

5. Save your changes.
6. Repeat step 3 through step 5 for each partition.

---

## Chapter 9. How to upgrade reports

You can upgrade your current version of IBM Marketing Software reports to bring it up-to-date with the latest features.

In IBM Marketing Software, reporting is one of the components that is provided by 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.

### Upgrade scenarios

To upgrade an IBM Marketing Software application from version 8.x or 9.x, complete the steps that are described in the following topics:

- “Upgrade prerequisites”
- Chapter 10, “Upgrading the 8.x or 9.x model and installing new reports,” on page 93

For eMessage, the following upgrade paths are supported:

- From version 8.6.0.4 or later fix packs to version 9.1
- From version 9.0 or later fix packs to version 9.1

**Note:** If you customized your eMessage reports, you have less report customization work if you upgrade to 9.0 rather than 8.6.0.4 or later fix packs.

If you use eMessage with Oracle or IBM DB2, you must use materialized views.

---

## Upgrade prerequisites

Before you upgrade your version of IBM Marketing Software reports, you must complete specific tasks.

### User with ReportsSystem role

When you are upgrade from version 8.x, a user with the ReportsSystem role may exist already. If you need to configure this reporting user, see “Configuring a user with the ReportsSystem role” on page 11.

### Upgrade requirements for IBM Cognos BI

You must upgrade your version of IBM Cognos BI to the version that is supported for the report packs that you are installing. See the *IBM Marketing Software Recommended Software Environments and Minimum System Requirements* document for more information about the supported IBM Cognos BI version.

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

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

## **Back up requirements for Cognos model and report archive**

On the IBM Cognos BI system, make sure the following tasks are complete:

- Back up the model subdirectory: Locate the application model that is installed by the IBM Marketing Software 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 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.

## **Additional requirements for eMessage reports**

See “Prerequisites for eMessage Reports” on page 9 for additional requirements for eMessage reports.

---

## **Generating SQL to drop views, materialized views, or tables and run SQL in product databases**

You can use the Reports SQL Generator to generate drop table SQL commands and run them against the appropriate product system table database. Complete this task before you upgrade the reporting schemas.

**Note:** This procedure applies to Campaign, eMessage, and Interact.

The following table shows which object types are supported in Campaign, eMessage, and Interact for Oracle, DB2, and SQL server.

*Table 14. Supported object types*

|            | Campaign           | eMessage           | Interact           |
|------------|--------------------|--------------------|--------------------|
| Oracle     | Views              | Materialized Views | Views              |
|            | Materialized Views |                    | Materialized Views |
|            | Table              |                    | Table              |
| DB2        | Views              | Materialized Views | Views              |
|            | Materialized Views |                    | Materialized Views |
|            | Table              |                    | Table              |
| SQL Server | Views              | Views              | Views              |
|            | Table              |                    | Table              |

Complete the following tasks to generate and run the SQL commands:

1. Log in to IBM Marketing Software as the platform\_admin user (or another user with access to the Report SQL Generator menu item).
2. Optional: **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).

**Notes:**

- Materialized views are not an option when **Database Type** is set to Microsoft SQL Server.
  - If the JNDI data source names are incorrect or not 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 is 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 24.
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 11 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 might be times when you want to disable script validation. For example, perhaps 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.

---

## Upgrading reporting schemas on Marketing Platform

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

Run the IBM Marketing Software master installer with the appropriate report package installer on the computer where Marketing Platform is installed, and select the **IBM Marketing Software Product Reporting Schemas** installation option.

After you upgrade reporting schemas, you can verify the upgrade by completing the following steps:

1. Log in to the IBM Marketing Software 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 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 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 must use the **Delete Category** link to remove the Cognos 8 configuration category.

---

## Upgrading reporting templates on Marketing Platform

You must upgrade reporting templates in Marketing Platform before you upgrade reports. If you are upgrading reports for Marketing Operations, do not upgrade reporting templates because Marketing Operations does not have reporting schemas.

After you run the report pack installer, complete the following steps:

1. Browse 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 Marketing Platform is running.
3. Log in to IBM Marketing Software as a user with administrator privileges.
4. Under **Settings > Users**, give yourself the **ReportsSystem** role. Then, log out and log back in.

---

## Upgrading IBM Marketing Software integration components

To upgrade the IBM Marketing Software integration components, you must run the installers on the computer where Cognos Content Manager is installed.

To upgrade IBM Marketing Software integration components, complete the following steps.

1. On the IBM Cognos BI system that runs the Cognos Content Manager, download or copy the following IBM Marketing Software installers to a single directory:
  - IBM Marketing Software master installer
  - Marketing Platform installer
  - IBM Marketing Software application reports package installers
2. Run the IBM Marketing Software master installer. It launches the sub-installers for Marketing Platform and the report packages in order.
3. In the first Products window, ensure that both Marketing Platform and the reports package options are selected.
4. In the Platform Database Connection window, provide the necessary information for connecting to the Marketing Platform system tables.

5. In the Platform Installation Components window, 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 that you copied to the Cognos system during the initial install of reporting.  
For more information, see “Obtaining the JDBC driver for the Marketing Platform system tables” on page 17.
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 that is provided in this field is a static value that is not based on the file structure of your IBM Cognos system.
8. When the report package installer displays its installation options, select the **IBM Cognos package for IBM Marketing Software [product]** option and clear the option for the reporting schemas. This installation option copies the reports archive to the Cognos computer. 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.  
Make sure that you copy the driver. Do not cut and paste the driver.

## Updating lookup tables for eMessage and Interact

If you use reports for eMessage and Interact, you must update the lookup tables. Use your database client to run specific upgrade scripts against the system table database.

Depending on your product, complete one of the following steps:

- **To upgrade eMessage from version 8.6.0.4 or 9.0:** In the ReportsPackCampaign\tools directory under your reports pack installation, run the `uare_lookup_create_DB_type.sql` script.  
Where *DB\_type* is the database type appropriate for your installation of Campaign.
- **For Interact, do the following steps:**
  1. 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.
  2. Run the appropriate version of the script against your Interact design time database.

## Upgrading views or tables in the product databases

To upgrade your version of reports, you must generate an updated SQL and upgrade the views or tables in your product databases.

**Note:** For eMessage, skip this task.

To upgrade the views or tables in your product databases, complete the following steps.

1. Generate updated SQL, as described in “Generating view or table creation scripts” on page 22.

2. Run the SQL scripts that you generated earlier against the product system table databases.
3. For Campaign and Interact, create reporting views or tables by using the new SQL and the SQL scripts that are provided with your reports packs.

---

## Chapter 10. Upgrading the 8.x or 9.x model and installing new reports

Upgrading the 8.x or 9.x model and installing the new reports are the first steps that you must complete to upgrade your reports.

**Note:** In the following steps, Cognos*N* refers to the Cognos version number.

To upgrade the 8.x or 9.x model and install new reports, complete the following steps.

1. Browse to the Unica\*ProductName*ReportsPack\Cognos*N* directory.
2. Copy the reports archive .zip file, such as 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. The directory is specified in the Cognos Configuration tool that is installed with the Cognos Content Manager, for example: cognos\deployment. In a distributed IBM Cognos environment, the directory is located on the system that runs the Content Manager.
3. Copy the pre-upgrade version of the Campaign model to a directory on the server where Framework Manager is installed.
  - a. If the Reports Pack installation directory and Framework Manager are on different servers, locate the upgraded cognos11\model directory under the Reports Pack installation directory.
  - b. Copy the appropriate upgrade.xml files to the directory on the server where Framework Manager is installed.
  - c. Copy the translation folder of the updated model (from the old model) to the directory on the server where Framework Manager is installed.
  - d. If prompted for replacement, click Yes.
4. Optional: If you did not install your IBM Marketing Software product to the default C:\Unica directory on Windows, you must update the upgrade scripts. Modify the file path in each script for every language that your users need, for example:  
*install\_directory*\ReportsPackCampaign\cognos*N*\CampaignModel\translations\*L*\translations.txt

*L* is the two-letter language indicator:

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

Edit the upgrade scripts for your product:

### **Campaign**

- upgrade85to86.xml
- upgrade86to90.xml
- upgrade90to91.xml
- upgrade91to911.xml
- upgrade911to9112.xml
- upgrade912to100.xml

### **eMessage**

- upgrade86to90.xml
- upgrade8604to91.xml
- upgrade90to91.xml
- upgrade91to911.xml
- To upgrade from version 9.1.0.x.0.0 (x >= 2)
  - If you have not applied 9.1.0.2 Reports Feature Pack 1:  
upgrade9102to911.xml
  - If you applied 9.1.0.2 Reports Feature Pack 1: upgrade910201to911.xml

### **Interact**

- upgrade85to86.xml
- upgrade86to90.xml
- upgrade90to91.xml
- upgrade91to911.xml
- upgrade911to9112.xml

### **Campaign with Marketing Operations**

- upgrade86to90.xml
- upgrade90to91.xml
- upgrade91to911.xml
- upgrade911to9112.xml

### **Marketing Operations**

- upgrade85to86.xml
- To upgrade from version 8.6 to version 9.0, depending on your database type:
  - For DB2: upgrade86to90\_DB2.xml
  - For Oracle: upgrade86to90\_Oracle.xml
  - For SQL server: upgrade86to90\_Sqlserver.xml
- upgrade90to91.xml
- upgrade91to911.xml
- upgrade911to9112.xml

### **Distributed Marketing**

- upgrade86to90.xml
- upgrade911to9112.xml

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 scripts from the new version of your product. All scripts are in the *ProductNameReportsPack\cognosN\ProductNameModel* directory under your IBM Marketing Software product installation.

**Note:** You must consider the following points for the 8.x or 9.x version from which you are upgrading:

- You must run the `preUpgrade_86_fromanyversion.xml` script for upgrades from all versions except 8.6.
- You cannot upgrade reports from any source version to a destination version. For example, to upgrade reports from version 9.0.0 to version 9.1.1, you must first upgrade from version 9.0.0 to version 9.1, and then upgrade from version 9.1 to version 9.1.1.
- Only for eMessage reports, you must upgrade from version 8.6.0.4 or later to 9.1 directly.

#### Campaign

- `preUpgrade_86_fromanyversion.xml`
- `upgrade85to86.xml`
- `upgrade86to90.xml`
- `upgrade90to91.xml`
- `upgrade91to911.xml`
- `upgrade911to9112.xml`
- `upgrade912to100.xml`

#### eMessage

- `upgrade86to90.xml`
- `upgrade8604to91.xml`
- `upgrade90to91.xml`
- `upgrade91to911.xml`
- To upgrade from version 9.1.0.x.0.0 ( $x \geq 2$ )
  - If you have not applied 9.1.0.2 Reports Feature Pack 1: `upgrade9102to911.xml`
  - If you applied 9.1.0.2 Reports Feature Pack 1: `upgrade910201to911.xml`

#### Interact

- `preUpgrade_86_fromanyversion.xml`
- `upgrade85to86.xml`
- `upgrade86to90.xml`
- `upgrade90to91.xml`
- `upgrade91to911.xml`
- `upgrade911to9112.xml`
- `upgrade912to9121.xml`

#### Campaign with Marketing Operations

- `upgrade86to90.xml`
- `upgrade90to91.xml`
- `upgrade91to911.xml`
- `upgrade911to9112.xml`

## **Marketing Operations**

- upgrade85to86.xml
- To upgrade from version 8.6 to version 9.0, depending on your database type:
  - For DB2: upgrade86to90\_DB2.xml
  - For Oracle: upgrade86to90\_Oracle.xml
  - For SQL server: upgrade86to90\_Sqlserver.xml
- upgrade90to91.xml
- upgrade91to911.xml
- upgrade911to9112.xml

## **Distributed Marketing**

- upgrade86to90.xml
- upgrade911to9112.xml

11. For eMessage only: To upgrade eMessage reports, complete the following steps:

**Note:** If your database is DB2, change the statement termination character from ; (semicolon) to ! (exclamation point).

- a. Browse to *Campaign\_ReportPack\_Installer\_Home\cognos11\emessage-dd1\DB\_Type\Upgrade*.
- b. Run the following scripts in the sequence shown:
  - To upgrade from 8.6.0.4 or later to 9.1:  
acer\_tables\_upgrade\_dbname.sql. Search for the base version name and run the following script:  
**--8.6.0.4 Updates--**
  - To upgrade from 9.0 or later to 9.1:  
acer\_indexes\_upgrade\_dbname.sql. Search for the base version name and run the following script:  
**--9.0.x Updates--**
  - To upgrade from 9.1.0.x.0.0 (x >= 0) to 9.1.1:  
acer\_tables\_upgrade\_dbname.sql. Search for the base version name and run the following script:  
**--9.1.0.x updates (Not applicable for 9.1.0 Feature Pack 1 upgrade)--**

**Note:** If you applied the 9.1.0 Feature Pack 1, you do not need to run the table or index upgrade scripts.

- c. Browse to *Campaign\_ReportPack\_Installer\_Home\cognos11\emessage-dd1\DB\_Type* and run the following script:  
acer\_tables\_upgrade\_dbname.sql

**Note:** You must run the acer\_tables\_upgrade\_dbname.sql script for a both a fresh installation and an upgrade of reports.

**Note:** If you use Microsoft SQL Server, you must drop the 8.6.0.4 version procedures before you complete this step.

- d. Use the Reports SQL Generator to generate report view scripts. For Microsoft SQL Server, generate views. For Oracle and IBM DB2, create materialized views.
- e. Run and schedule the stored procedures.

**Note:** To ensure proper report performance, you must schedule the stored procedures to run regularly. For more information about eMessage stored procedures, see “For eMessage only: How to schedule and run stored procedures” on page 32.

- 12. Publish the package to the Cognos content store.
- 13. For all IBM Marketing Software products, complete the following steps:
  - a. Browse to **File > Report Package**.
  - b. Select the appropriate reports package according to your product and click **OK**.
  - c. Complete prompts on the report as necessary.
  - d. After the report is validated, click **Close** in the Validation Response window.
- 14. Run a report to test your upgrade.



---

## Chapter 11. Report configuration properties

The report configuration properties for IBM Marketing Software are at **Settings > Configuration > Reports**.

To generate reports, the IBM Marketing Software suite integrates with IBM Cognos, a business intelligence application. You use the **Integrations > Cognos** properties to identify your IBM Cognos system. Then, for Campaign, eMessage, and Interact, you must configure additional properties to set up and customize the reporting schemas.

---

### Reports | Integrations | Cognos [version]

The IBM Marketing Software suite integrates with IBM Cognos to generate reports.

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

#### Integration Name

##### Description

Read-only. Specifies that IBM Cognos is the third-party reporting or analytical tool that is used by the IBM Marketing Software 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 that is specified by the Integration Name property.

##### Default value

Cognos

#### Version

##### Description

Read-only. Specifies the product version of the application that is 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 that is 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`

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 that 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. This user also has access to IBM Marketing Software.

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 condition is true:

- When the IBM Marketing Software is not installed in the same domain as the IBM Cognos applications.
- When IBM Cognos accessed by using an IP address (within the same network domain) instead of the Fully Qualified Hostname (which is being used to access the IBM Marketing Software applications), even if both the IBM Marketing Software 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 Marketing Software 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 must install IBM Cognos and IBM Marketing Software in the same domain.

**Default value**

False

**Valid Values**

True | False

---

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

The SQL script creates views or tables for the reporting schemas. The **Reports | Schemas | [product] | [schema name] | SQL Configuration** property provides information about the name of the views or tables.

**Table/View Name****Description**

Specifies the name of the view or table that the SQL script you generate for this reporting schema creates. 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 uppercase letters

You must use the following naming convention:

- Start the name with the letter "UAR"
- Add a one-letter code to represent the IBM Marketing Software 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 following list of codes:

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 Marketing Software 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**

The **Reports | Schemas | Campaign** property provides information about the data source that identifies the Campaign database.

### **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 that 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 that is 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 that is 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 that is 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 that is supported by this reporting schema.

#### Default value

UA\_ResponseHistory

### Over Time Variations

#### Description

Specifies the calendar time periods that are 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 the **Reports | Schemas | Campaign | [schema name] | Columns | [Contact Metric]** property 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 that is 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 uppercase 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 the **Reports | Schemas | Campaign | [schema name] | Columns | [Response Metric]** property to add the response metrics that 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 that is 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 uppercase 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 that is 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 that is 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 that is 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 that is supported by this reporting schema.

### **Default value**

UA\_ResponseHistory

## **Over Time Variations**

### **Description**

Specifies the calendar time periods that are 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**

The Campaign Offer Response Breakout schema supports reporting on campaign-detailed responses, which are 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.

This schema

## **Response History Table**

### **Description**

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

### **Default value**

UA\_ResponseHistory

---

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

Use the **Reports | Schemas | Campaign | Campaign Offer Response Breakout | Columns | [Response Type]** property to add any custom response types that you want to include in your reports to the reporting schema.

## **Column Name**

### **Description**

Specifies the name to use in the reporting view or table for the column that is 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 uppercase letters, and it cannot have spaces.

## Response Type Code

### Description

The response type code for the specified response type. This value is 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 Marketing Software 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

The Campaign Offer Contact Status Breakout schema supports reporting on campaign-detailed contacts, which are 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 that is 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 that is 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 that is supported by this reporting schema.

### **Default value**

UA\_DtlContactHist

---

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

Use the Reports | Schemas | Campaign | Campaign Offer Contact Status Breakout | Columns | [Contact Status] to add the contact status that you want to include in your reports to the reporting schemas.

## **Column Name**

### **Description**

Specifies the name to use in the reporting view or table for the column that is 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 uppercase letters, and it cannot have spaces.

## **Contact Status Code**

### **Description**

The name of the contact status code. This value is 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 the Reports | Schemas | Campaign | Campaign Custom Attributes | Columns | [Campaign Custom Column] property to add any custom campaign attributes that you want to include in your reports to the reporting schema.

**Column Name**

**Description**

Specifies the name to use in the reporting view or table for the attribute that is 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 uppercase 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 the **Reports | Schemas | Campaign | Campaign Custom Attributes | Columns | [Offer Custom Column]** property to add any custom offer attributes that you want to include in your reports to the reporting schema.

Use this form to add

### Column Name

#### Description

Specifies the name to use in the reporting view or table for the attribute that is 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 uppercase 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 the **Reports | Schemas | Campaign | Campaign Custom Attributes | Columns | [Cell Custom Column]** property to add any custom cell attributes that you want to include in your reports to the reporting schema.

### **Column Name**

#### **Description**

Specifies the name to use in the reporting view or table for the attribute that is 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 uppercase 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, runtime, and learning databases. Use the **Reports | Schemas | Interact** property to specify the JNDI names of the data sources for those databases.

The data sources that are 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.

The database type of the data sources must match the database type that 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 that is 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 that is 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 that is supported by this reporting schema.

### Default value

UA\_ResponseHistory

## Over Time Variations

### Description

Specifies the calendar time periods that are 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

The Reports | Schemas | eMessage property specifies the name of the data source that identifies the eMessage tracking tables, which are in the Campaign system tables.

## eMessage Tracking Datasource (JNDI)

### Description

Specifies the name of the JNDI data source that identifies the eMessage tracking tables, which are 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 that you select when you generate the SQL scripts for the views or reporting tables.

### Default value

campaignPartition1DS

---

## Campaign | partitions | partition[n] | reports

The Campaign | partitions | partition[n] | reports property defines the different types of 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 by using the 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 by using the 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 by using the 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 by using the 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 by using the 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 by using the 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 by using the 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 by using the 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 install 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 install Interact.



---

## Chapter 12. Formats for the Cognos reports

The IBM Cognos reporting integration components include a global report style sheet, `GlobalReportStyles.css`.

Use these styles, with additional manual formatting, for your IBM Marketing Software application reports. In this way, you can match the styles in your new reports with the styles that are used by the reports in the IBM Marketing Software reports packages.

You must format styles manually when you author a report because there are cases in which the style cannot be provided by the style sheet.

The styles are defined for the different types of reports:

- List reports
- Crosstab reports
- Charts
- Dashboard reports

---

### Global report styles

Use the styles included with the global report style sheet, `GlobalReportStyles.css`, to format your new IBM Cognos reports. The styles in your new reports must match the styles in the reports in the IBM Marketing Software reports packages.

*Table 15. Global report styles*

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

*Table 15. Global report styles (continued)*

| Item                            | CSS class name              | Style   |
|---------------------------------|-----------------------------|---|
| Crosstab                        | xt                          | border-collapse:collapse;   |
| Crosstab - Default Measure Cell | xm                          | border-top:1px solid silver;<br>border-left:1px solid silver;<br>border-bottom:1.5pt solid black;<br>border-right:1.5pt solid black;  |
| Crosstab - Member Label Cell    | ml                          | background-color: transparent;<br>border:1px solid silver;  |
| Crosstab - Outer Level Total    | ol                          | background-color:#F7F7F7; /*offwhite*/  |
| Crosstab - Spacer               | xs                          | background-color: transparent;<br>font-weight: bold;  |
| Chart                           | ch                          | border:1pt solid #E4E4E4;   |
| Chart - Title                   | ct                          | font-size:10pt;<br>font-weight:bold;  |
| Chart - Axis Labels             | al                          | font-size:10pt;   |
| Chart - Axis Line               | at                          | color:#939393;  |
| Chart - Chart Palette           | In XML Report Specification | Before the closing chart tag (</combinationChart>) in the XML Report Specification, paste the following lines:<br><br><chartPalette><br><chartColor value="#00a6a0"/><br><chartColor value="#734098"/><br><chartColor value="#7cc7ff"/><br><chartColor value="#a6266e"/><br><chartColor value="#d74108"/><br><chartColor value="#efc100"/><br><chartColor value="#aeb8b8"/><br><chartColor value="#4178be"/><br></chartPalette> |

---

## Report page styles

Use the styles included with the global report style sheet, `GlobalReportStyles.css`, to format the report page.

*Table 16. 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

Use the styles included with the global report style sheet, `GlobalReportStyles.css`, to format list reports.

The following table shows formatting from the `GlobalStyleSheet.css` style sheet for list reports:

*Table 17. List report styles*

| 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   |
| 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, use the following guidelines to match existing reports:

- Use List Headers (not List Footers) to display summarization at the object level.
- Manually right-justify any numbers that are 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. When you summarize information into a List Header, you must complete the extra step and right-justify the values.
- Optionally, add 1.5 pt solid black borders to group columns.

The following example shows 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                |

The following example shows a list report that uses the global styles:

| Multi-Offer LFR Information    |  |                             |              |                       |                |                    |                 |                           |
|--------------------------------|--|-----------------------------|--------------|-----------------------|----------------|--------------------|-----------------|---------------------------|
| Number of Offer(s) Selected: 8 |  |                             |              |                       |                |                    |                 |                           |
| Offer Name                     |  | Campaign Name               | Offers Given | Response Transactions | Response Ratio | Unique Respondents | Respondent Rate | Not Contacted Respondents |
| Offer_M100 (00000000)          |  |                             | 24           | 10                    | 240.00%        | 24                 | 100.00%         | 0                         |
| Offer_M101 (00000001)          |  |                             | 24           | 10                    | 240.00%        | 24                 | 100.00%         | 0                         |
| Offer_M102 (00000002)          |  |                             | 25           | 70                    | 244.00%        | 33                 | 236.36%         | 5                         |
|                                |  | Offer_Campaign_1 (00000004) | 0            | 0                     | 0.00%          | 0                  | 0.00%           | 0                         |
|                                |  | Offer_Campaign_2 (00000005) | 0            | 0                     | 0.00%          | 0                  | 0.00%           | 0                         |
|                                |  | Offer_Campaign_3 (00000006) | 0            | 0                     | 0.00%          | 0                  | 0.00%           | 0                         |
|                                |  | Offer_Campaign_4 (00000007) | 0            | 0                     | 0.00%          | 0                  | 0.00%           | 0                         |
|                                |  | Offer_Campaign_5 (00000008) | 0            | 0                     | 0.00%          | 0                  | 0.00%           | 0                         |
|                                |  | Offer_Campaign_6 (00000009) | 0            | 0                     | 0.00%          | 0                  | 0.00%           | 0                         |
|                                |  | Offer_Campaign_7 (00000010) | 0            | 0                     | 0.00%          | 0                  | 0.00%           | 0                         |
|                                |  | Offer_Campaign_8 (00000011) | 0            | 0                     | 0.00%          | 0                  | 0.00%           | 0                         |
| Report Total                   |  |                             | 84           | 254                   | 321.57%        | -                  | -               | 25                        |

## Date formats for globalized versions

If you use a globalized version of the IBM Marketing Software reports package, you see a different date format in your list reports depending on which locale you use. Cognos list reports use the date style medium.

The following table shows the date formats for list reports for all available locales.

*Table 18. Cognos list reports date formats for globalized versions*

| Locale               | Cognos list reports date format example |
|----------------------|---|
| English              | Mar 18, 2014                            |
| Brazilian Portuguese | 18/03/2014                              |
| French               | 18 mars 14                              |
| German               | 18.03.2014                              |
| Italian              | 18/mar/2014                             |
| Japanese             | 2014/03/18                              |
| Korean               | 2014-03-18                              |
| Russian              | 18.03.2014                              |
| Simplified Chinese   | 2014-3-18                               |
| Spanish              | 18-Mar-14                               |

---

## Crosstab report styles

Use the styles included with the global report style sheet, `GlobalReportStyles.css`, to format crosstab reports.

The following table shows formatting from the `GlobalStyleSheet.css` style sheet for crosstab reports:

*Table 19. Crosstab report styles.*

| 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, use the following guidelines to match the existing reports.

- Use 1.5 pt black borders to separate summarization from measures.
  - Use 1.5 black borders to group logical column groupings.
  - As a general guideline, avoid summarizing both columns and rows in the same report.

The following example shows a crosstab report that does not use the global styles.

## Example Crosstab Report

The following example shows a crosstab report that uses the global styles and has 1.5 px borders that are applied to show column groupings.

## Chart styles

Use the styles included with the global report style sheet, `GlobalReportStyles.css`, to format charts.

The following table shows formatting from the GlobalStyleSheet.css style sheet for charts:

Charts obtain the following formatting from the GlobalStyleSheet.css.

*Table 20. Chart styles.*

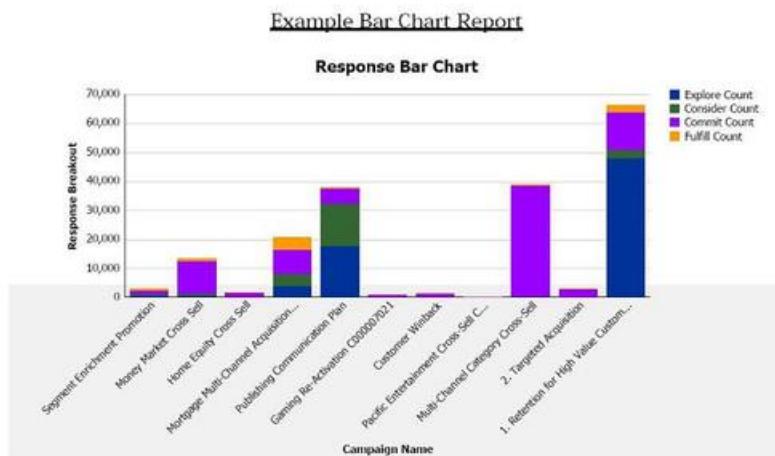
| Item              | Style                  |
|-------------------|------------------------|
| Charts            | 1 pt light gray border |
| Titles and labels | 10 point bold font     |

Additionally, when you create a new chart, use the following guidelines to match the existing chart reports.

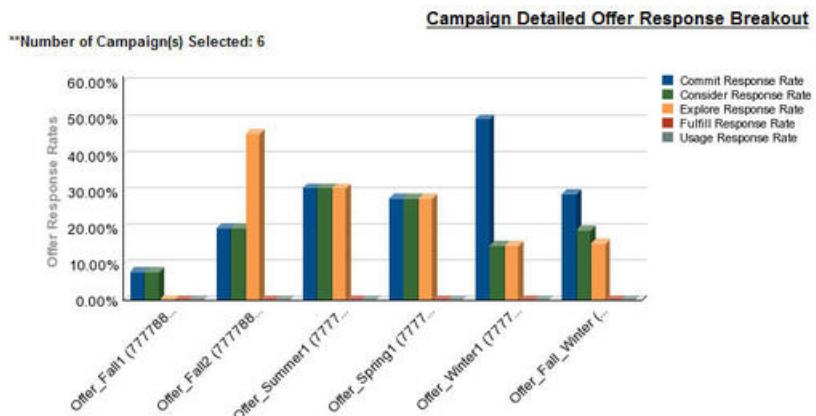
- Use the default width, unless there is more than one chart on the report. When you include multiple charts in a single report, set the chart width to 750px.
  - To use gradients and color palettes, copy and paste the strings from the table in “Global report styles” on page 119 into the XML report specification.
  - As a general guideline, select the chart type based on the data that you expect to be returned.

- Use line graphs as the chart type only when you can guarantee the report retrieves 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 must match the colors to the first two palette colors for the axis labels.

The following example shows a chart that does not use the global styles.



The following example shows a chart that uses the global styles and has additional formatting applied.



## Date formats for globalized versions

If you use a globalized version of the IBM Marketing Software reports package, you see a different date format in your chart reports depending on which locale you use. Cognos chart reports use the date style short.

The following table shows the date formats for chart reports for all available locales.

*Table 21. Cognos chart reports date formats for globalized versions*

| Locale               | Cognos chart reports date format example |
|----------------------|--|
| English              | 3/18/14                                  |
| Brazilian Portuguese | 18/03/14                                 |
| French               | 18/03/14                                 |
| German               | 18.03.14                                 |
| Italian              | 18/03/14                                 |
| Japanese             | 14/03/18                                 |
| Korean               | 14-03-18                                 |
| Russian              | 18.03.14                                 |
| Simplified Chinese   | 14-3-18                                  |
| Spanish              | 18/03/14                                 |

---

## Dashboard report styles

Dashboard reports use the global styles with some manual formatting.

Use the following guidelines to make sure that reports that are displayed in the Dashboard fit properly in Dashboard portlets.

*Table 22. Dashboard report styles.*

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



---

## Chapter 13. Formats for the Campaign, eMessage, and Interact Cognos reports

Additional styling is required for Campaign, eMessage, and Interact Cognos reports. The global report styles are modified to add classes to override the styling of existing classes to improve the look and feel of Campaign, eMessage, and Interact reports.

The page class, peretz, is used to style Campaign, eMessage, and Interact reports. All reports are modified to use the peretz class for the page style. Child classes are added to the peretz parent class in the GlobalReportStyles.css and GlobalReportStyles\_10.css.

Use the new page class, peretz, for creating new report pages when styling Campaign, eMessage, and Interact Cognos reports

You must format styles manually when you author a report because there are cases in which the style cannot be provided by the style sheet.

The styles are defined for the different types of reports:

- List reports
- Crosstab reports
- Charts
- Dashboard reports

---

### Global report styles

Use the styles included with the global report style sheet, GlobalReportStyles.css and GlobalReportStyles\_10.css, to format your new IBM Campaign, eMessage, and Interact Cognos reports.

Table 23. Global report styles

| Item                           | CSS class name | Style   |
|--------------------------------|----------------|---|
| Page - Header                  | ph             | font-family: "Helvetica Neue", helvetica, arial, sans-serif;  |
| Page - Footer                  | pf             | padding-top:10px;<br>font-size:8pt;<br>font-weight:bold;  |
| Table - List column title cell | lt             | text-align:left;<br>border: 1px solid #d9dbdc;<br>background-color: #f7f7f7;<br>background-image: none !important;<br>font-weight:normal;<br>vertical-align: top;<br>padding: 10px 20px;<br>font-family: "Helvetica Neue", Helvetica, Roboto, Arial, sans-serif;<br>color: #58595b;<br>font-size: 14px; |

*Table 23. Global report styles (continued)*

| Item                                   | CSS class name | Style  |
|--|----------------|--|
| Table - List column body cell interior | lci            | border: none;<br>background-color: white !important;<br>text-align: right;<br>padding: 3px 5px;<br>vertical-align: middle;   |
| Table - List column body cell          | lc             | border-top:1px solid #ddd ;<br>border-bottom:1px solid #ddd ;<br>padding: 3px 5px;<br>text-align: left;<br>vertical-align: middle;<br>font-family: "Helvetica Neue", Helvetica, Arial, sans-serif; |
| Table - List column body measure cell  | lm             | vertical-align: top;<br>border:1px solid #ddd;<br>border-right: 0;<br>border-left: 0;<br>padding: 3px 5px;<br>text-align: right;   |
| Crosstab - Totals first row            | tr             | border-left: 2px solid black;<br>background-color: #bebebe !important;<br>font-weight: bold;<br>padding: 3px 5px;  |
| Complex table total -new class added   | ctth           | color: #5a5a5a;<br>background-color: #bebebe;<br>border-bottom:2px solid black;<br>padding: 3px 5px;<br>border-left: 2px solid #bebebe;  |
| Table totals row                       | ttr            | color: #5A5A5A;<br>font-weight: bold;<br>background-color: #E0E0E0;<br>padding: 3px 5px;   |
| Table totals row                       | ctr            | color: #000000;<br>font-weight: bold;<br>border-left:2px solid black;<br>background-color: white;<br>border-bottom:1px solid #a2a2a2;  |
| Table totals header                    | cth            | color: #000000;<br>border-bottom:2px solid black;<br>border-left:1.5px solid white;<br>border-right:1.5px solid white;<br>font-weight: 100;  |
| List - Inner header cell               | ih             | border-top:1px solid #A0A0A0 ;<br>border-bottom:1px solid #A0A0A0;<br>padding: 3px 5px;<br>vertical-align: middle;   |
| List - Outer header cell               | oh             | font-weight: bold;<br>vertical-align: top;<br>border: 1px solid #CCCCCC;<br>border-right: 0;<br>border-left: 0;<br>padding: 3px 5px;<br>word-break:keep-all;<br>background-color: #fff;            |

Table 23. Global report styles (continued)

| Item                              | CSS class name | Style   |
|-----------------------------------|----------------|---|
| Outer header cell with top border | ohl            | font-weight: bold;<br>vertical-align: top;<br>background-color: #ddd;<br>padding: 3px 5px;<br>word-break:keep-all;<br>border-top:2px solid black;<br>border-left:1.5px solid #ddd;<br>border-right: 5pt solid #ddd;<br>border-style:solid;<br>border-bottom:none; |
| Crosstab                          | xt             | border: 1px solid #d9dbdc;<br>color: #6d6e70;<br>empty-cells: show;<br>font-size: 14px;   |
| Crosstab - Member label cell      | ml             | font-style: normal !important;<br>color: black;<br>font-weight: 300;<br>height: 30px;<br>border-left: none;<br>border-right: none;<br>border-bottom:1px solid #a2a2a2;  |
| Crosstab - Member label cell      | cht            | vertical-align: top;<br>background-color:transparent;<br>padding: 3px 5px;<br>text-align: left;   |
| Crosstab - Member value cell      | mv             | vertical-align: top;<br>white-space: nowrap;<br>border: 1px solid #a2a2a2;<br>padding: 3px 5px;<br>text-align: right;<br>border-left:none;<br>border-right:none;<br>vertical-align: top;<br>white-space: nowrap;<br>padding: 3px 5px;<br>text-align: right;       |
| Field set                         | fs             | display: -moz-inline-block;<br>display: inline;<br>text-align: left;<br>font-size:8pt;<br>margin-bottom: 15px;<br>color : #5a5a5a;  |
| Chart                             | ch             | border:1pt solid #E4E4E4;   |
| Chart - Title                     | ct             | font-size:10pt;<br>font-weight:bold;  |
| Chart - Axis labels               | al             | font-size:10pt;   |
| Chart - Axis title                | at             | font-weight:bold;<br>text-align:center;<br>font-size:10pt;<br>color:#939393;  |

*Table 23. Global report styles (continued)*

| Item                    | CSS class name              | Style   |
|-------------------------|-----------------------------|---|
| Chart - Chart Palette   | In XML Report Specification | Before the closing chart tag (</combinationChart>) in the XML Report Specification, paste the following lines:<br><pre>&lt;chartPalette&gt; &lt;chartColor value="#00a6a0"/&gt; &lt;chartColor value="#734098"/&gt; &lt;chartColor value="#7cc7ff"/&gt; &lt;chartColor value="#a6266e"/&gt; &lt;chartColor value="#d74108"/&gt; &lt;chartColor value="#efc100"/&gt; &lt;chartColor value="#aeb8b8"/&gt; &lt;chartColor value="#4178be"/&gt; &lt;/chartPalette&gt;</pre> |
| Hyperlink               | .hy                         | color: #037bbf;<br>font-size: 14px;<br>font-family: "Helvetica Neue", helvetica, arial, sans-serif;   |
| Totals first Column     | tf                          | border-left: 2px solid black;<br>background-color: #bebebe !important;<br>font-weight: bold;<br>padding: 3px 5px;   |
| Complex table total     | ctt                         | color: #000000;<br>background-color: #bebebe !important;<br>border-left: 2px solid black;<br>border-bottom: 1px solid #a2a2a2;<br>padding-left: 5px 5px;  |
| Complex table total row | ctr                         | color: #000000;<br>background-color: #bebebe;<br>font-weight: bold;<br>border-bottom: 1px solid #a2a2a2;  |
| List                    | ls                          | border: 1px solid #d9dbdc;<br>color: #6d6e70;<br>empty-cells: show;<br>margin-top: 10px;<br>font-size: 14px;  |
| Hover selection class   | hoverSelection              | background-color: transparent !important;<br>color: #6d6e70 !important;   |

---

## List report styles

Use the styles included with the global report style sheet, `GlobalReportStyles.css` and `GlobalReportStyles_10.css`, to format list reports.

The following table shows formatting from the `GlobalStyleSheet.css` and `GlobalReportStyles_10.css` style sheet for list reports:

*Table 24. List report styles.*

| Item                               | Style  |
|------------------------------------|--|
| Cells                              | 1 px solid very light gray border at the top and bottom                                      |
| Column header                      | White background; 1.5 pt black line at the bottom separates column header from rest of table |
| Summary header rows (list headers) | Light gray background  |

*Table 24. List report styles (continued).*

| Item                | Style                |
|---------------------|----------------------|
| Total row at bottom | Dark gray background |

The following example a list report that uses the global styles:

| Report Summary                                       |  |                            |              |                       |                |                   |                   |                |
|--|--|----------------------------|--------------|-----------------------|----------------|-------------------|-------------------|----------------|
| Offer Name   |  | Campaign Name              | Offers Given | Response Transactions | Response Rate  | Unique Recipients | Unique Responders | Responder Rate |
| Offer_Winter (0000000046)                            |  | Fall Campaign (C000000023) | 14           | 18                    | 128.57%        | 14                | 6                 | 42.86%         |
| Offer_Fall1 (0000000024)                             |  | 25                         | 72           | 288.00%               | 11             | 15                | 136.36%           | 5              |
| Winter_Campaign_1 (C000000006)                       |  | 6                          | 30           | 500.00%               | 6              | 9                 | 150.00%           | 3              |
| Test Campaign 1 (C000000020)                         |  | 5                          | 18           | 360.00%               | 5              | 5                 | 100.00%           | 0              |
| Fall Campaign (C000000022)                           |  | 5                          | 16           | 320.00%               | 5              | 6                 | 120.00%           | 1              |
| IBM Campaign ProjectFall_Campaign_Test1 (C000000018) |  | 9                          | 8            | 88.89%                | 5              | 7                 | 140.00%           | 2              |
| Campeng Test 1 (C00000008)                           |  | 0                          | 0            | 0.00%                 | 0              | 0                 | 0.00%             | 0              |
| Offer_Fall2 (000000026)                              |  | 27                         | 64           | 237.84%               | 21             | 21                | 100.00%           | 0              |
| IBM Campaign ProjectFall_Campaign_Test1 (C000000018) |  | 3                          | 15           | 500.00%               | 2              | 2                 | 100.00%           | 0              |
| Fall Campaign (C000000023)                           |  | 10                         | 30           | 300.00%               | 10             | 10                | 100.00%           | 0              |
| Test Campaign 1 (C000000020)                         |  | 10                         | 15           | 150.00%               | 10             | 10                | 100.00%           | 0              |
| Winter_Campaign_1 (C000000006)                       |  | 4                          | 4            | 100.00%               | 4              | 3                 | 75.00%            | 0              |
| <b>Report Total</b>                                  |  |                            | <b>66</b>    | <b>154</b>            | <b>233.33%</b> | -                 | -                 | <b>25</b>      |

## Date formats for globalized versions

If you use a globalized version of the IBM Marketing Software reports package, you see a different date format in your list reports depending on which locale you use. Cognos list reports use the date style medium.

The following table shows the date formats for list reports for all available locales.

*Table 25. Cognos list reports date formats for globalized versions*

| Locale               | Cognos list reports date format example |
|----------------------|---|
| English              | Mar 18, 2014                            |
| Brazilian Portuguese | 18/03/2014                              |
| French               | 18 mars 14                              |
| German               | 18.03.2014                              |
| Italian              | 18/mar/2014                             |
| Japanese             | 2014/03/18                              |
| Korean               | 2014-03-18                              |
| Russian              | 18.03.2014                              |
| Simplified Chinese   | 2014-3-18                               |
| Spanish              | 18-Mar-14                               |

## Crosstab report styles

Use the styles included with the global report style sheet, `GlobalReportStyles.css` and `GlobalReportStyles_10.css`, to format crosstab reports.

The following example shows a crosstab report that uses the global styles.

| Example Crosstab Report |                             |                             |                             |                             |                             |                             |                             |                             |                             |                             |                             |               |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|
|                         | 1                           | 2                           | 3                           | 4                           | 5                           | 6                           | 7                           | 8                           | 9                           | 10                          | 11                          | 12            |
|                         | Number of Unique Recipients | Total (Month) |
| Cross Sell Loyalty      | 1,263                       | 1,261                       | 8,541                       | 6,517                       | 8,404                       | 7,187                       | 8,557                       | 8,557                       | 10,811                      | 10,247                      | 688                         | 44,442        |
| Referrals               | 12,942                      | 19,606                      | 24,324                      | 24,324                      | 4,414                       | 4,414                       | 9,663                       | 9,663                       | 23,114                      | 23,114                      | 364                         | 53,837        |
| Acquisition             | 3,899                       | 3,858                       | 152                         | 152                         | 12,761                      | 12,761                      | 6,000                       | 6,000                       | 2,458                       | 2,458                       | 364                         | 49,729        |
|                         | 13,680                      | 19,606                      | 13,539                      | 13,539                      | 13,539                      | 13,539                      | 13,539                      | 13,539                      | 23,114                      | 23,114                      | 364                         | 56,829        |
|                         |                             |                             |                             |                             |                             |                             |                             |                             |                             |                             |                             | 56,760        |
| Sectors added manually  |                             |                             |                             |                             |                             |                             |                             |                             |                             |                             |                             | 56,760        |

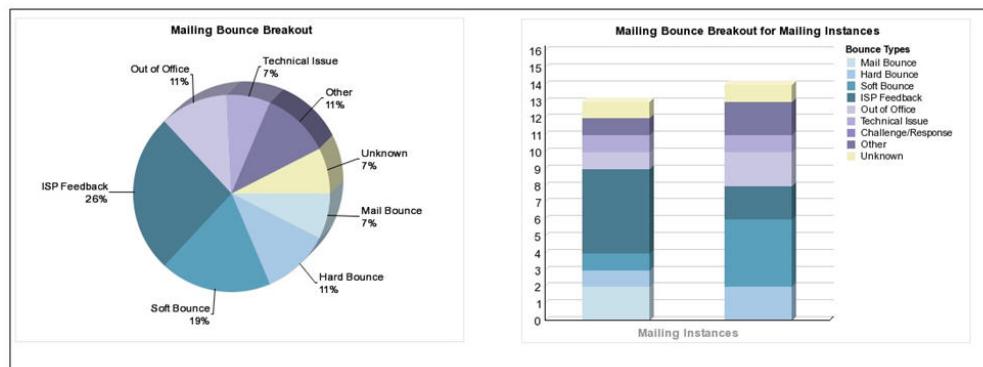
## Chart styles

Use the styles included with the global report style sheet, `GlobalReportStyles.css` and `GlobalReportStyles_10.css`, to format charts.

When you create a new chart, use the following guidelines to 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 color palettes, copy and paste the strings from the table in “Global report styles” on page 127 into the XML report specification.
- If there are only two series on a chart and you display both the Y1 and Y2 axes, as a best practice you must match the colors to the first two palette colors for the axis labels.

The following example shows a chart that uses the global styles and has additional formatting applied.



## Date formats for globalized versions

If you use a globalized version of the IBM Marketing Software reports package, you see a different date format in your chart reports depending on which locale you use. Cognos chart reports use the date style short.

The following table shows the date formats for chart reports for all available locales.

*Table 26. Cognos chart reports date formats for globalized versions*

| Locale               | Cognos chart reports date format example |
|----------------------|--|
| English              | 3/18/14                                  |
| Brazilian Portuguese | 18/03/14                                 |
| French               | 18/03/14                                 |
| German               | 18.03.14                                 |
| Italian              | 18/03/14                                 |
| Japanese             | 14/03/18                                 |
| Korean               | 14-03-18                                 |
| Russian              | 18.03.14                                 |
| Simplified Chinese   | 14-3-18                                  |
| Spanish              | 18/03/14                                 |

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## Dashboard report styles

Dashboard reports use the global styles with some manual formatting.

Use the following guidelines to make sure that reports that are displayed in the Dashboard fit properly in Dashboard portlets.

*Table 27. Dashboard report styles.*

| 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.  |



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## Chapter 14. Reports and reporting schemas by product

You can customize the reporting schemas in the Campaign Report Package by adding contact or response metrics, attributes, or response types.

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.

*Table 28. Mapping of IBM Cognos BI reports to the reporting schema*

|  | 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                           |                          |                                  |                               |

*Table 28. Mapping of IBM Cognos BI reports to the reporting schema (continued)*

|   | Campaign Views schema | Campaign Custom Attributes schema | Campaign Performance schema | Offer Performance schema | Campaign Offer Response Breakout | Offer Contact Status Breakout |
|---|-----------------------|-----------------------------------|-----------------------------|--------------------------|----------------------------------|-------------------------------|
| Campaign Performance Comparison with Revenue        | X                     |                                   | X                           |                          |                                  |                               |
| 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                        |                                  |                               |

*Table 28. Mapping of IBM Cognos BI reports to the reporting schema (continued)*

|                                       | Campaign Views schema | Campaign Custom Attributes schema | Campaign Performance schema | Offer Performance schema | Campaign Offer Response Breakout | Offer Contact Status Breakout |
|---------------------------------------|-----------------------|-----------------------------------|-----------------------------|--------------------------|----------------------------------|-------------------------------|
| Offer Performance Comparison          | X                     |                                   |                             | X                        |                                  |                               |
| Offer Response Rate Comparison        | X                     |                                   |                             | X                        |                                  |                               |
| 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

Several reports, such as Message Overview report, Detailed Link report, eMessage Reports Processing Overview, and SMS Message Summary Report are available in the eMessage Reports Package.

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

*Table 29. eMessage reports and reporting schemas*

| Report name                          | 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                          |
| eMessage Reports Processing Overview | X                          |
| SMS Message Summary Report           | X                          |

## Interact Reports and Reporting Schemas

The Interact Report Package reports are supported by IBM reporting schemas. You can customize the schemas to specify time periods, configure audience levels, and create extra performance 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 extra performance reporting schemas for extra 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.

|   | <b>Interactive View schema</b> | <b>Interact Performance View schema</b> | <b>Interactive Channel / Campaign Deployment History</b> | <b>Interact Runtime View schema</b> | <b>Interact Learning View schema</b> |
|---|--------------------------------|---|--|-------------------------------------|--------------------------------------|
| 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                                   |                                      |

|   | <b>Interactive View schema</b> | <b>Interact Performance View schema</b> | <b>Interactive Channel / Campaign Deployment History</b> | <b>Interact Runtime View schema</b> | <b>Interact Learning View schema</b> |
|---|--------------------------------|---|--|-------------------------------------|--------------------------------------|
| 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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## Before you contact IBM technical support

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. Use these guidelines to ensure that your problem is resolved efficiently and successfully.

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

**Note:** Technical Support does not write or create API scripts. For assistance in implementing our API offerings, contact IBM Professional Services.

### 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 installed IBM applications.

You can access the About page by selecting **Help > About**. If the About page is not accessible, check for a `version.txt` file that is located under the installation directory for your 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](http://www.ibm.com/support/entry/portal/open_service_request)).

**Note:** To enter a support request, you must log in with an IBM account. 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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