IBM Cognos Analytics
Version 11.1

Samples Guide

IBM

Contents

Chapter 1. Cognos Analytics samples

IBM® Cognos® Analytics has an extensive collection of dashboards, stories, explorations, reports, data modules, and sample databases. These samples illustrate the use of many Cognos Analytics features.

Base samples

Base samples include sample reports, explorations, dashboards, and stories that use data modules that are based on uploaded files as their underlying data source so they can be easily imported. For more information about the base samples, see "Importing the base samples" on page 16.

Extended samples

Extended samples use an IBM DB2®, Microsoft SQL Server, or Oracle database and database connection to host the sample databases.

For instructions on downloading and configuring these samples, see Chapter 2, "Downloading and configuring the extended samples," on page 19.

JavaScript samples

These samples demonstrate how to add JavaScript to your reports. For more information, see JavaScript Samples for IBM Cognos Analytics.

Theme and extension samples

You can customize the IBM Cognos Analytics interface to suit the needs of your organization. Customization samples in the form of .zip files are available that demonstrate how to create themes, extensions, and views (perspectives). You can modify these samples to create your own customizations. For more information, see Theme and Extension Samples for IBM Cognos Analytics.

Audit reporting samples

You use the sample audit reports to view the information in a logging database about user and report activity. For more information, see Audit Reporting Samples for IBM Cognos Analytics.

OLAP samples

To demonstrate typical OLAP features, we created a sample dashboard, report, and the underlying OLAP cube. For more information, see OLAP Samples for IBM Cognos Analytics.

Package based drill-through samples

To demonstrate package based drill-through, we provided sample source and target reports that use the sample GO data warehouse (query) package and a drill-through definition. For more information, see Package Based Drill-Through Samples for IBM Cognos Analytics.

Legacy samples

Legacy samples from past versions are available for drill-through, dynamic cubes, IBM Cognos Metrics Manager, PowerCubes, and PowerPlay. For more information, see Legacy Samples.

10.2.2 Cognos Mashup Service (CMS) samples

The IBM® Cognos® Mashup Service includes code samples that illustrate how to use the SOAP and REST interfaces to develop mashup applications. For more information, see 10.2.2 Cognos Mashup Service (CMS) Samples for IBM Cognos Analytics.

Base samples

Base samples include sample reports, explorations, dashboards, and stories that use data modules that are based on uploaded files as their underlying data source so they can be easily imported.

The base samples are installed with the product and demonstrate its core functionality. To open them, click **Team content** > **Samples** and get ready to explore! All the Base Samples use uploaded files/data modules as their underlying data sources. There is no need to create data source connections or restore databases in order to use the base samples.

Boston 311 dashboard sample

This sample demonstrates relative dates in the context of a dashboard. You will see examples of how to use YTD and MTD measures in summaries, tables, maps, and visualizations.
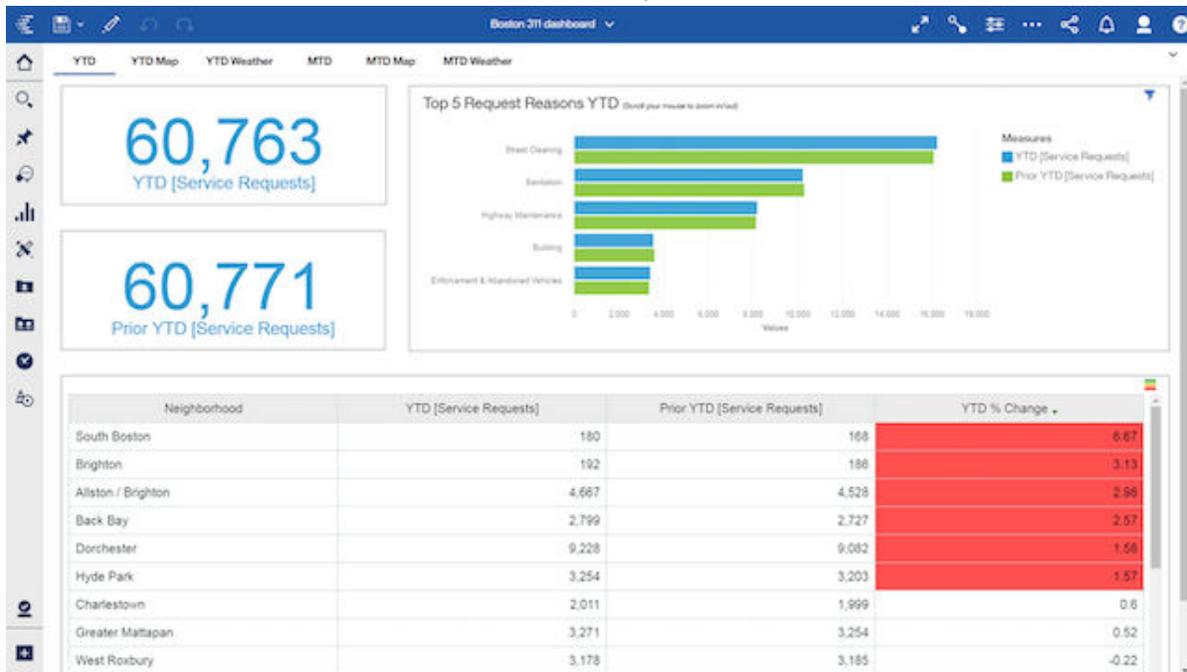
Key features of this dashboard include: summary widgets , maps, regions, bar visualizations, table visualizations, conditional formatting, list visualizations, color palettes, filters, legends , calendar, relative dates, and tabs.

`11.1.0` - `11.1.4` The Boston 311 dashboard is located here: `Team content > Samples > Relative dates > Boston 311 dashboard`.

`11.1.5` The Boston 311 dashboard is located here: `Team content > Samples > By feature > Relative dates > Boston 311 dashboard`.

California website visits dashboard sample

This sample dashboard demonstrates client-side mapping to display 2016 website visit data in California for the fictional Sample Outdoors Company website. The dashboard demonstrates maps with regions and points based on Zip Code, maps using latitude/longitude, and maps with clustering.
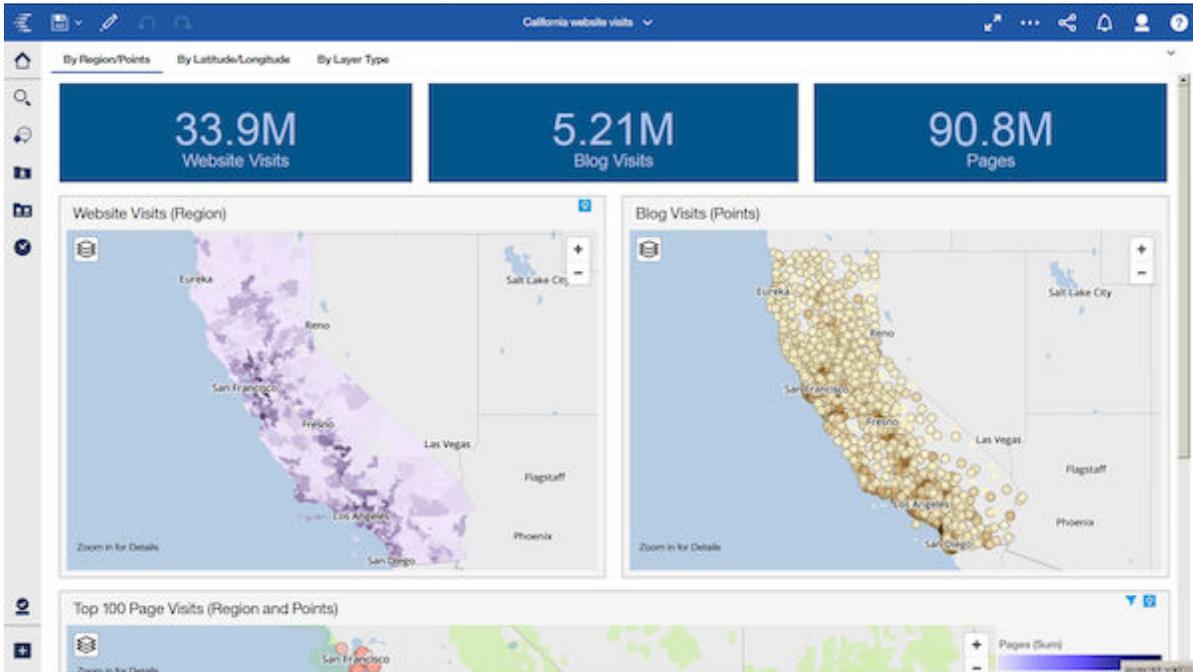
Key features of this sample include: maps with regions, points (normal, heat, cluster), and latitude/ longitude .

`11.1.0` - `11.1.4` This sample is located here: `Team content > Samples > Dashboards > California website visits`.

`11.1.5` This sample is located here: `Team content > Samples > By feature > Core > Dashboards > California website visits`.

Country comparison dashboard sample

This sample dashboard demonstrates how to use connected and disconnected widgets to compare revenue between two product lines at the same time.
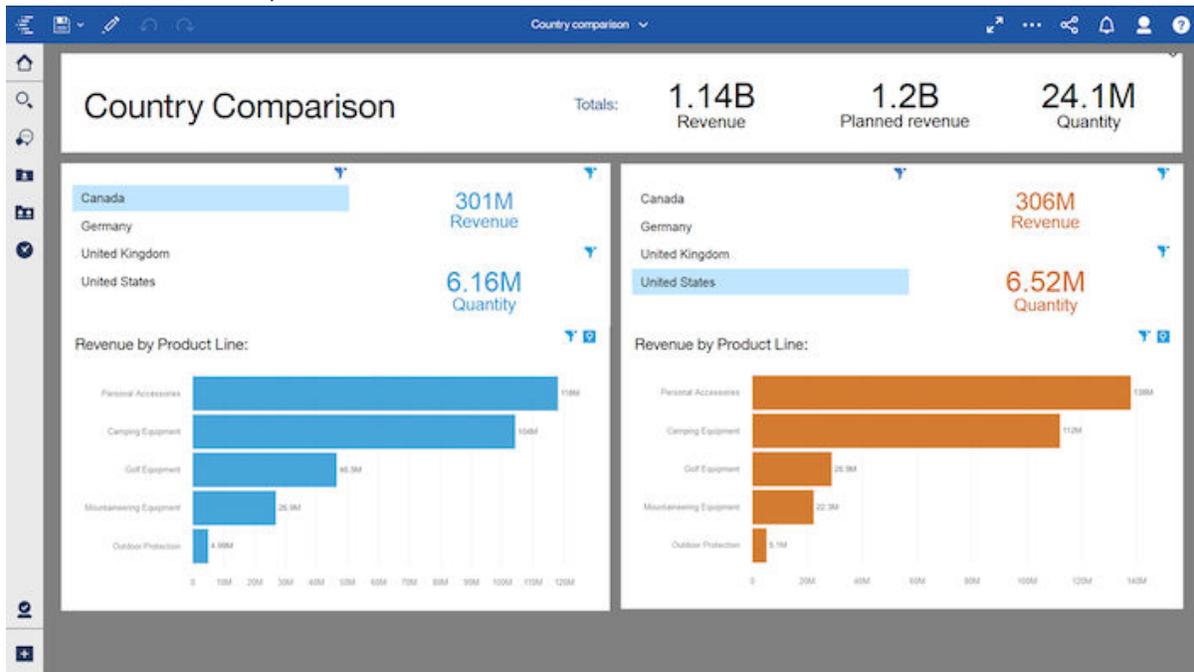
Key features of this sample include: connected and disconnect widgets, and multilingual dashboards.

`11.1.0` - `11.1.4` This sample is located here: `Team content > Samples > Dashboards > Country comparison`.

`11.1.5` This sample is located here: `Team content > Samples > By feature > Core > Dashboards > Country comparison`.

Policy analysis dashboard sample

This sample dashboard showcases the updated 11.1 visualizations that are now available in IBM Cognos Analytics in the context of an automobile insurance policy data set. It also includes a drill-through definition to the Customer lifetime value analysis sample report.
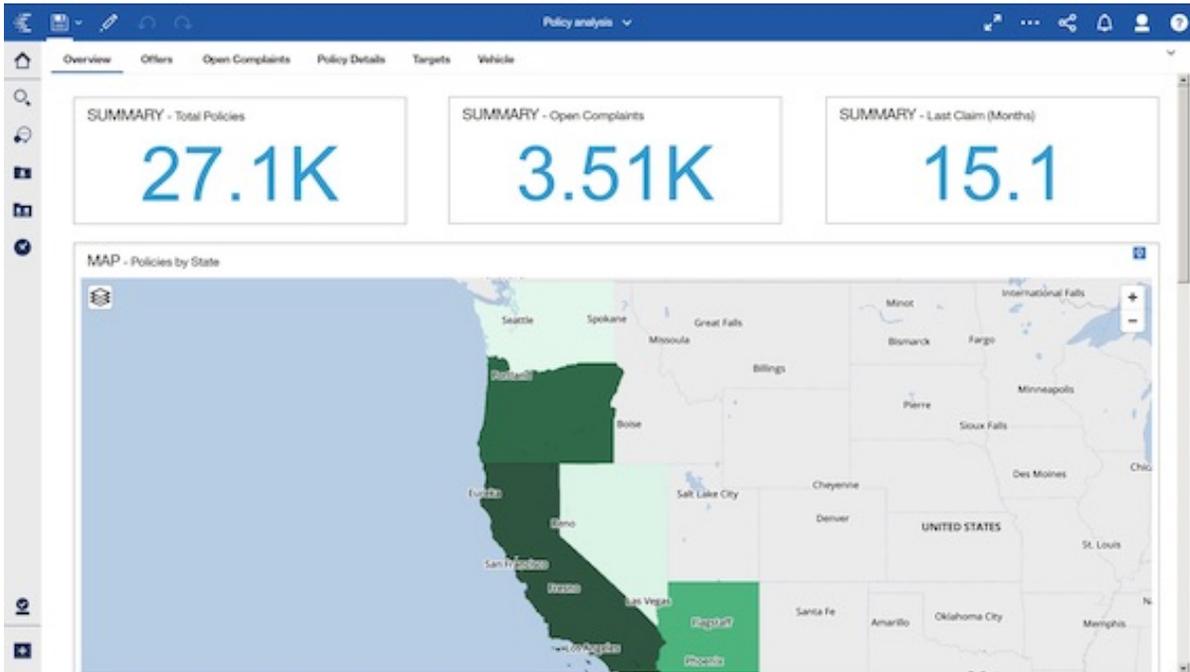
Key features of this sample are the use of multiple 11.1 visualizations and drill-through.

`11.1.0` - `11.1.4` This sample is located here: `Team content > Samples > Dashboards > Policy analysis`.

`11.1.5` This sample is located here: `Team content > Samples > By industry > Insurance > Dashboards > Policy analysis`.

Product line dashboard sample

This sample dashboard illustrates navigation paths. It includes data in a data player, a bar visualization, and a tree map visualization. Color palettes, filters, and sorting have been applied appropriately.
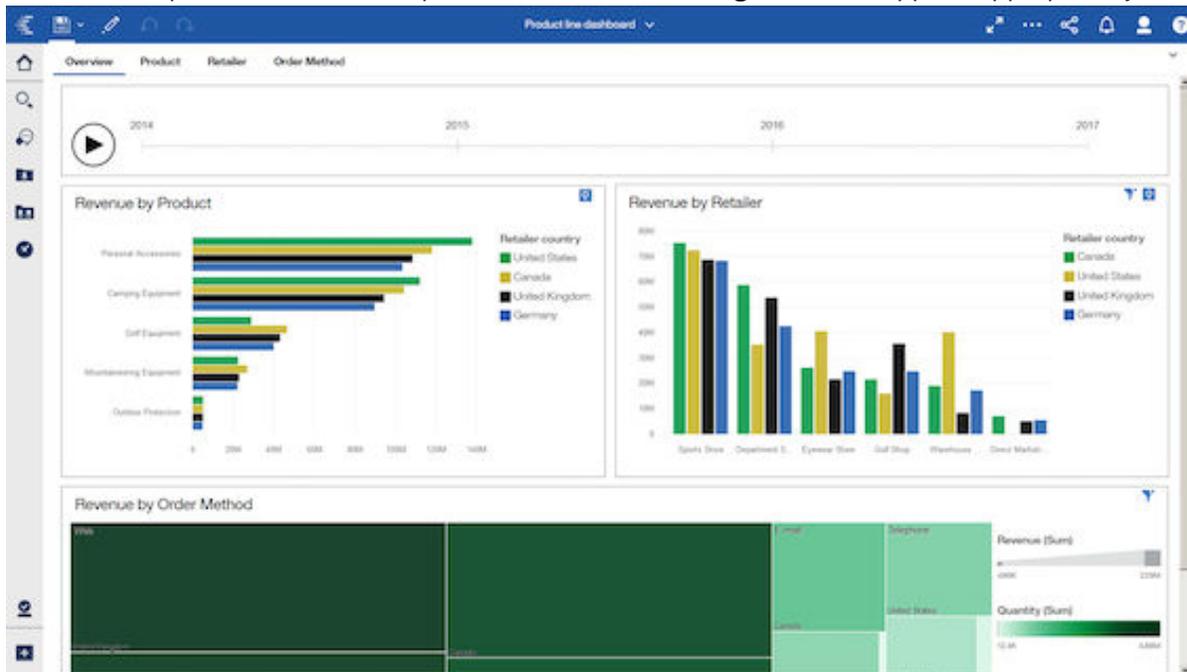
The key feature of this sample is navigation paths.

`11.1.0` - `11.1.4` This sample is located here: Team content > Samples > Dashboards > Product line dashboard.

`11.1.5` This sample is located here: Team content > Samples > By feature > Core > Dashboards > Product line dashboard.

Storm events dashboard sample

This sample dashboard showcases the new mapping functionality in the context of storm event data.
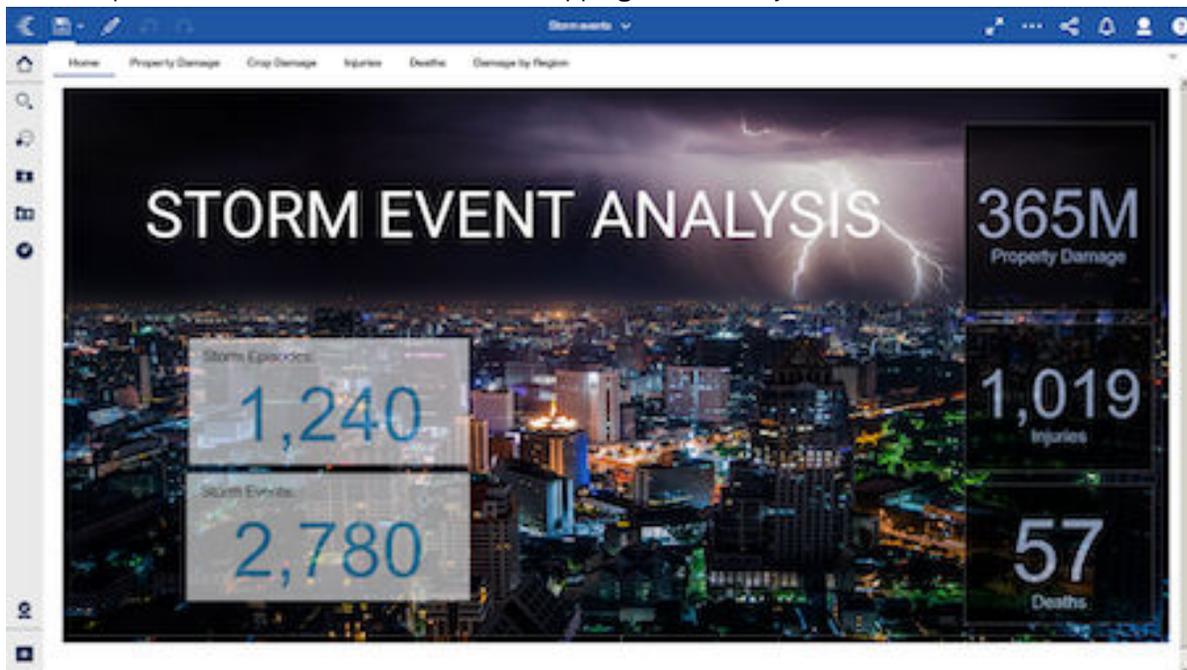
Key features of this sample include: custom polygons, custom regions, images, summary widgets , list visualizations, data player, maps with regions, points, text widgets, shape, word cloud visualizations, pie visualizations, donut radius, map ID, layer names, property names , show titles, and tabs.

`11.1.0` - `11.1.4` This sample is located here: `Team content > Samples > Dashboards > Storm events`.

`11.1.5` This sample is located here: `Team content > Samples > By feature > Core > Dashboards > Storm events`.

Telco churn dashboard sample

This sample dashboard tracks a fictional telco company's customer churn based on a variety of factors. The Churn Label column indicates whether or not the customer left within the last month. Other columns include location, monthly charges, services, and customer lifetime value. The dashboard serves as a launching point for further exploration.
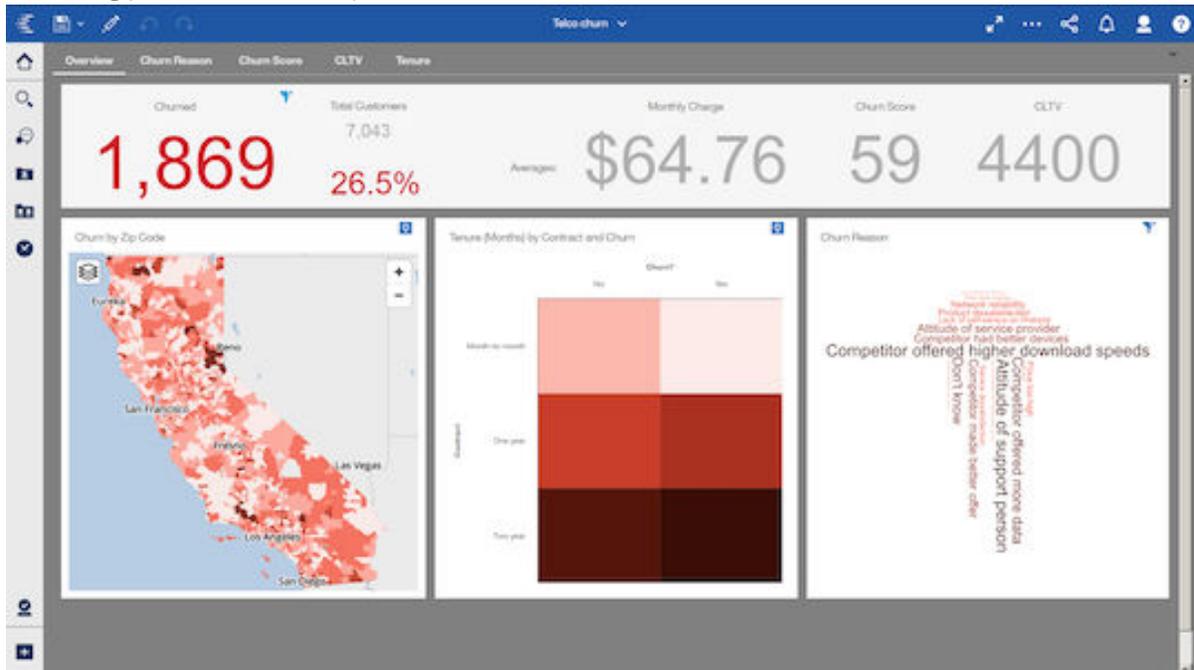
Key features of this dashboard include: explorations, dashboard background color, summary widgets , maps, heat map visualizations, word cloud visualizations, bar visualizations, line visualizations, legends, sunburst visualizations, tree diagram visualizations, rules, global filters , all tabs , filters , and filter areas.

`11.1.0` - `11.1.4` This sample is located here: `Team content > Samples > Dashboards > Telco churn`.

`11.1.5` This sample is located here: `Team content > Samples > By industry > Telecommunications > Dashboards > Telco churn`.

Weather analytics dashboard sample

This sample dashboard combines weather data with data about individual 311 calls from the City of Boston. Business insights resulting from information about the weather conditions at the time of the call can be explored.
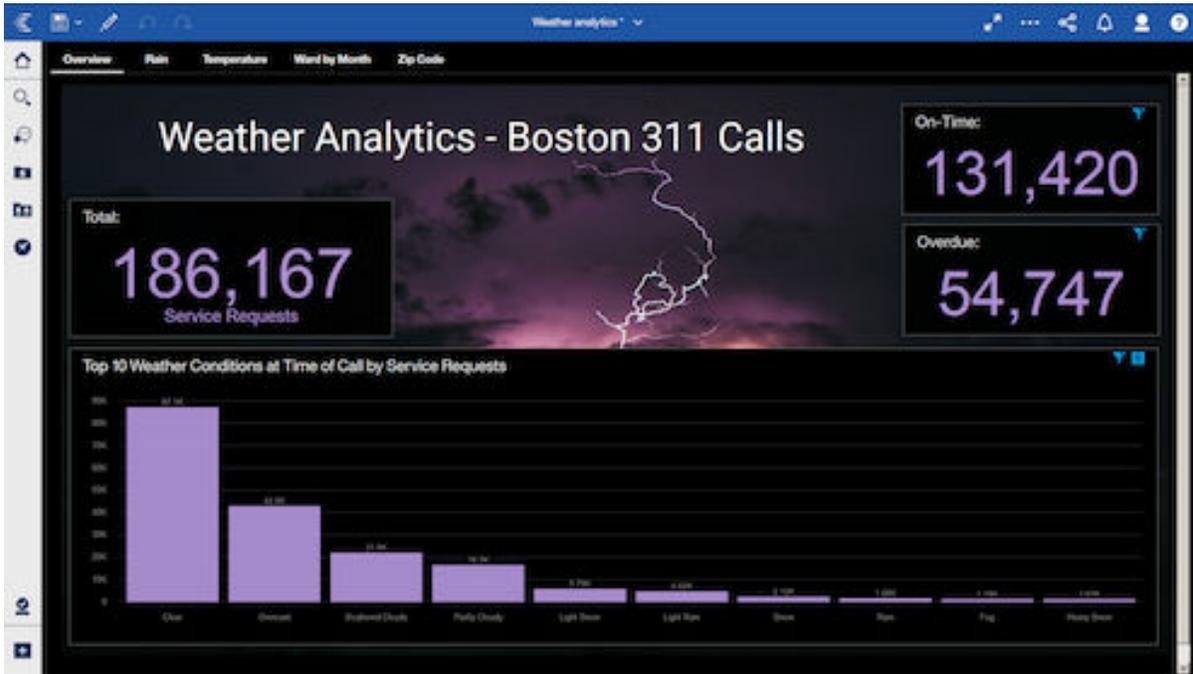
Key features of this dashboard include: images, text , summary widgets, abbreviate, column visualizations, filters, measure sort, background color, word cloud visualizations, line visualizations, crosstab visualizations, conditional formatting, conditional palette, maps, legend, show titles, show value labels , Top 10 , Bottom 10 , filter area, and tabs.

This sample dashboard can be found here: `Team content > Samples > Dashboards> Weather analytics`.

Data for this sample can be found here: `Team content > Samples > Data > Weather analytics`.

Boston 311 report sample

This sample demonstrates relative dates in the context of a report. It shows examples of how to use YTD and MTD measures in summaries, tables, maps, and visualizations.
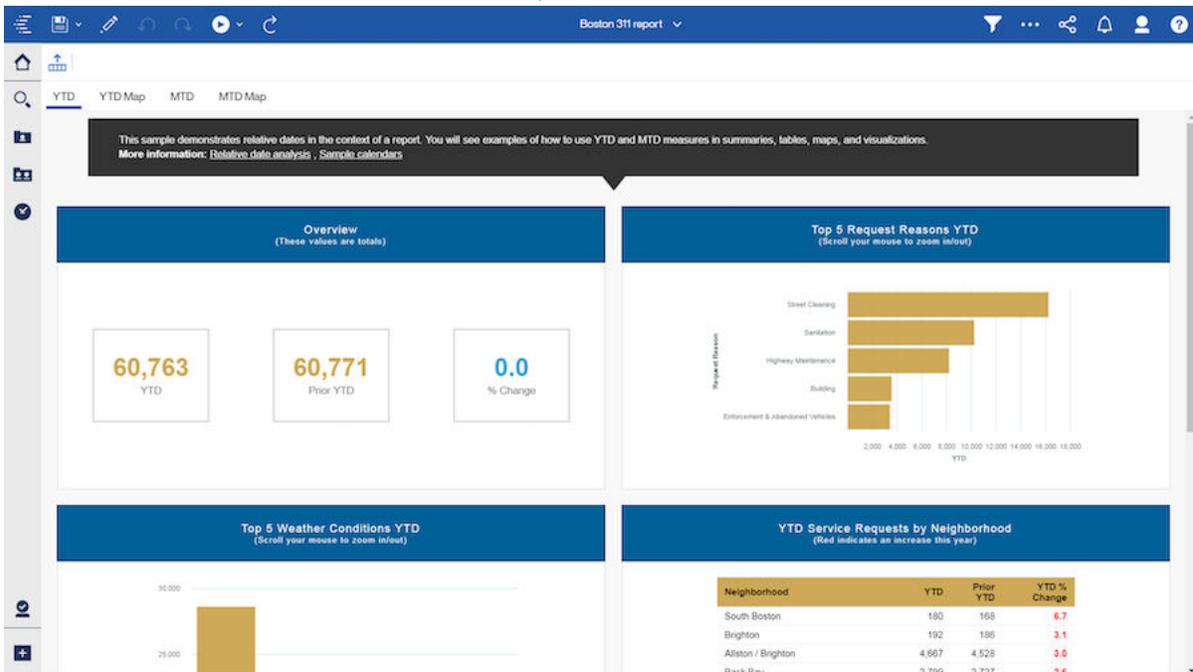
Key features of this report include: text items, maps with regions, clustered bar visualizations, clustered column visualizations, lists, conditional styles, sort, calendar, relative dates, and tabs.

`11.1.0` - `11.1.4` The Boston 311 report can be found here: `Team content > Samples > Relative dates > Boston 311 report`.

`11.1.5` This sample is located here: `Team content > Samples > By feature > Relative dates > Boston 311 report`.

Corporate website visits report sample

This sample report shows client side mapping functionality. Maps demonstrate regions, points (normal, heat, and cluster), and latitude/longitude (normal, heat, and cluster). The maps display 2016 website visit data for the fictional Sample Outdoors Company website by zip code in California.
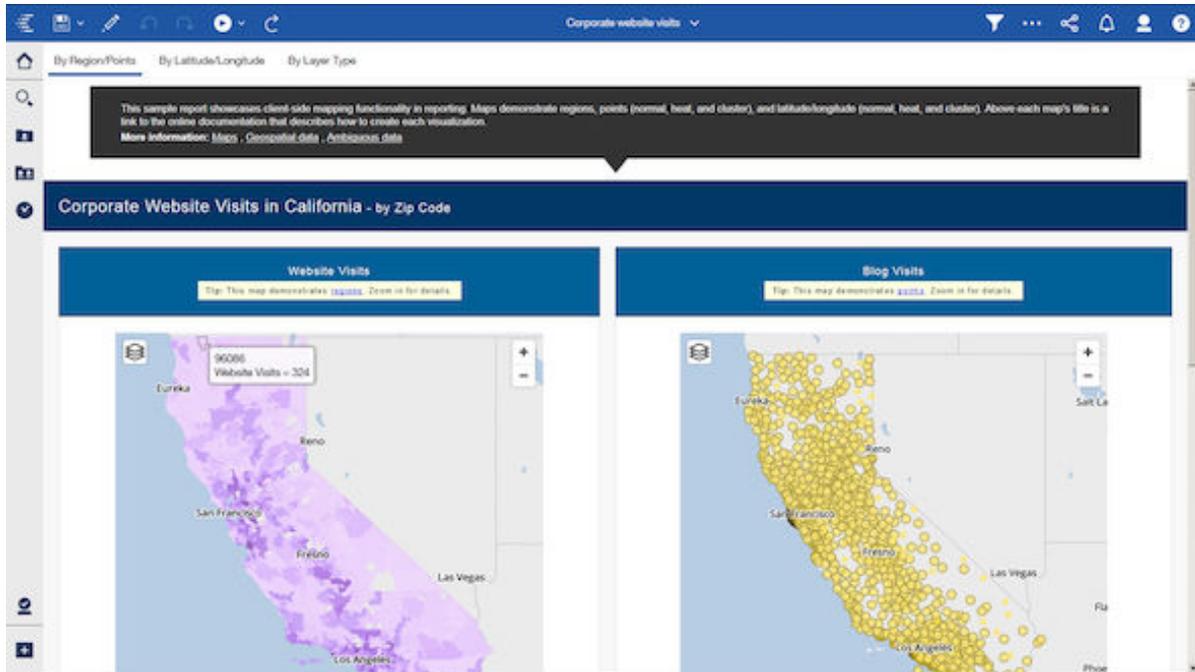
Key features of this report include: maps with regions, maps with points (normal, heat, cluster), maps with latitude/longitude (normal, heat, cluster), tabs.

`11.1.0` - `11.1.4` The corporate website visits sample report can be found here: `Team content > Samples > Reports > Corporate website visits`.

`11.1.5` This sample is located here: `Team content > Samples > By feature > Core > Reports > Corporate website visits`.

Customer claim analysis report sample

This sample active report shows the updated visualizations that are now available in IBM Cognos Analytics. The report shows a breakdown of total claim amount by state and other categories.
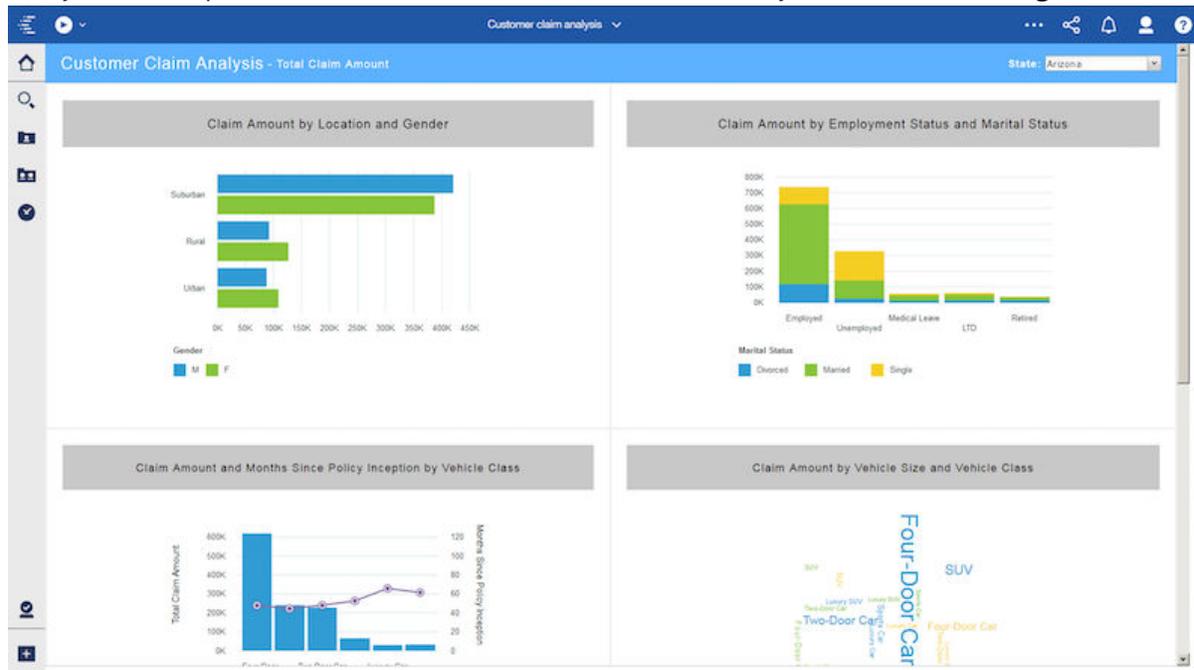
Key features of this report include: active reports, data drop down lists, filters, word cloud visualizations, clustered bar visualizations, stacked column visualizations, line and column visualizations, smooth line visualizations, point visualizations, interactive behavior, and variables.

`11.1.0` - `11.1.4` The customer claim analysis report can be found here: `Team content > Samples > Reports > Customer claim analysis`.

`11.1.5` This sample is located here: `Team content > Samples > By industry > Insurance > Reports > Customer claim analysis`.

Customer lifetime value analysis report sample

This sample standard report features 11.1 visualizations with various display types.
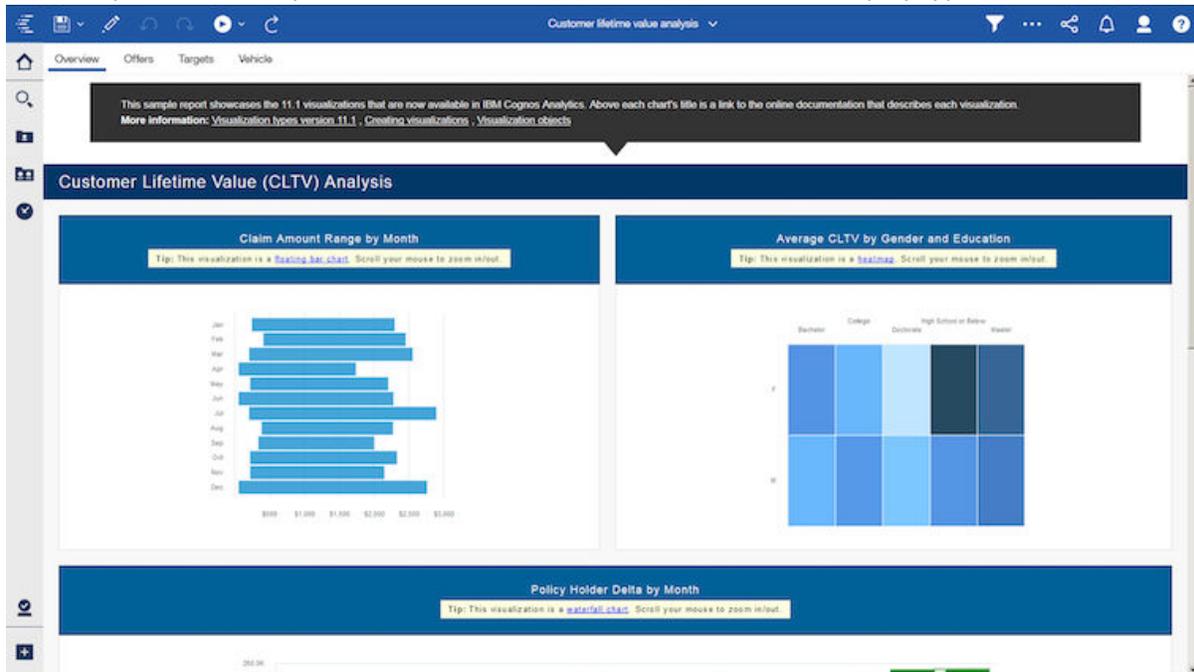
Key features of this report include maps, floating bar visualizations, heatmap visualizations, waterfall visualizations, bubble visualizations, network visualizations, radial visualizations, river visualizations, bullet visualizations, area visualizations, hierarchy packed bubble visualizations, word cloud visualizations, radar visualizations, Marimekko visualizations, 11.1 visualizations, legends, page footers, and tabs.

`11.1.0` - `11.1.4` The customer lifetime report can be found here: `Team content > Samples > Reports > Customer lifetime value analysis`.

`11.1.5` This sample is located here: `Team content > Samples > By industry > Insurance > Reports > Customer lifetime value analysis`.

Global sales report sample

This sample report uses a block, a custom control, and JavaScript to hide and show a panel of filters.
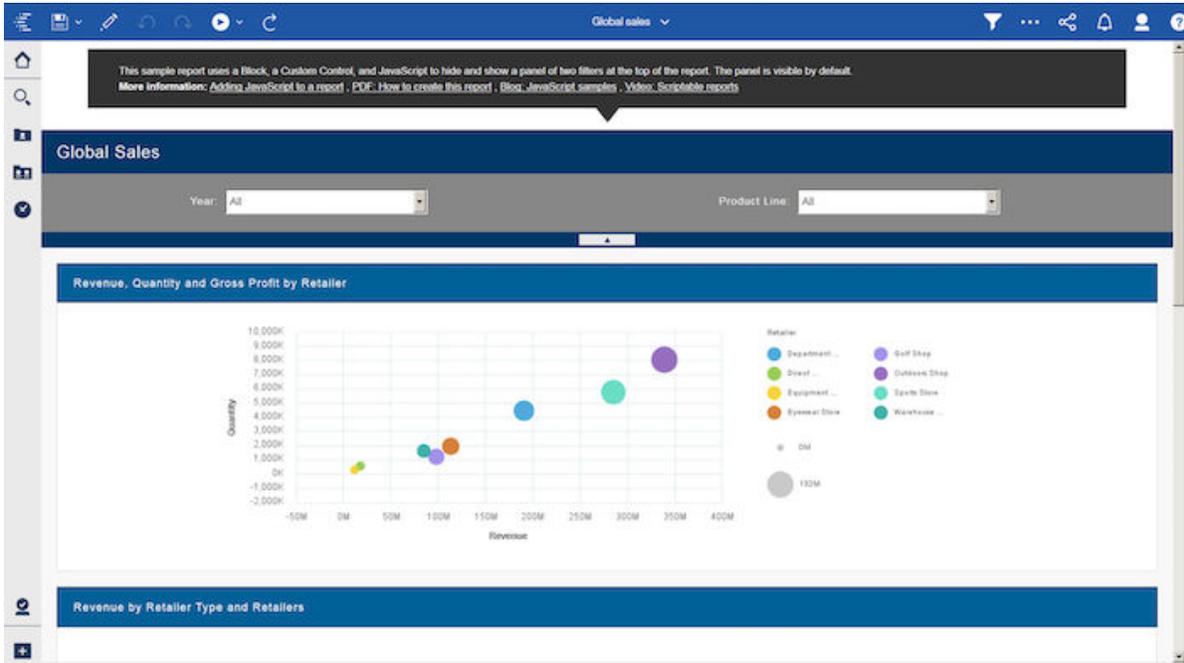
Key features of this report include: JavaScript, blocks, custom controls, filters, hide or show, value prompts, bubble visualizations, network visualizations, lists, conditional styles, legends, and page footers.

`11.1.0` - `11.1.4` This sample is located here: `Team content > Samples > Reports > Global sales`.

`11.1.5` This sample is located here: `Team content > Samples > By feature > Core > Reports > Global sales`.

Storm events 2015 report sample

This sample report shows custom polygon-mapping functionality in the context of storm event data.
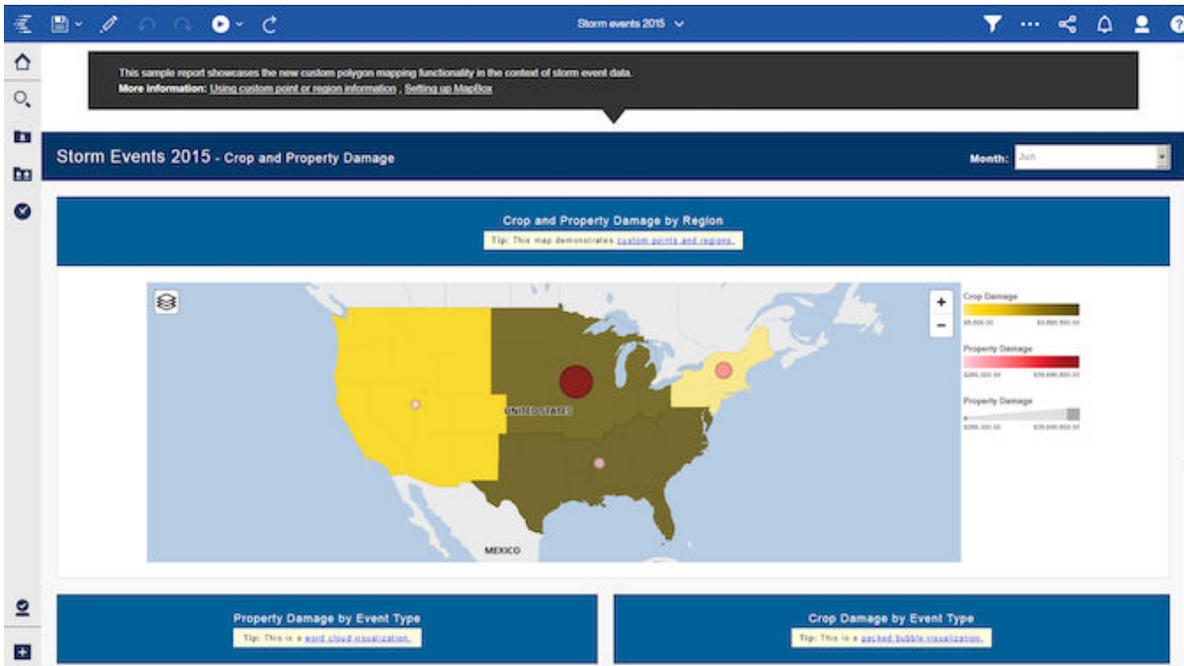
Key features of this report include custom points, custom regions, maps, Tileset Id, layer names, property names, value prompts, filters, legends, word cloud visualizations, packed bubble visualizations, and page footers.

`11.1.0` - `11.1.4` The Storm events 2015 report can be found here: `Team content >Samples > Reports > Storm events 2015`.

`11.1.5` The Storm events 2015 report can be found here: `Team content > Samples > By feature > Core > Reports > Storm events 2015`.

Telco churn relationships exploration sample

This sample exploration tracks a fictional telco company's customer churn based on various factors. The Churn Label column indicates whether the customer left within the last month. Other columns include location, monthly charges, services, and customer lifetime value.
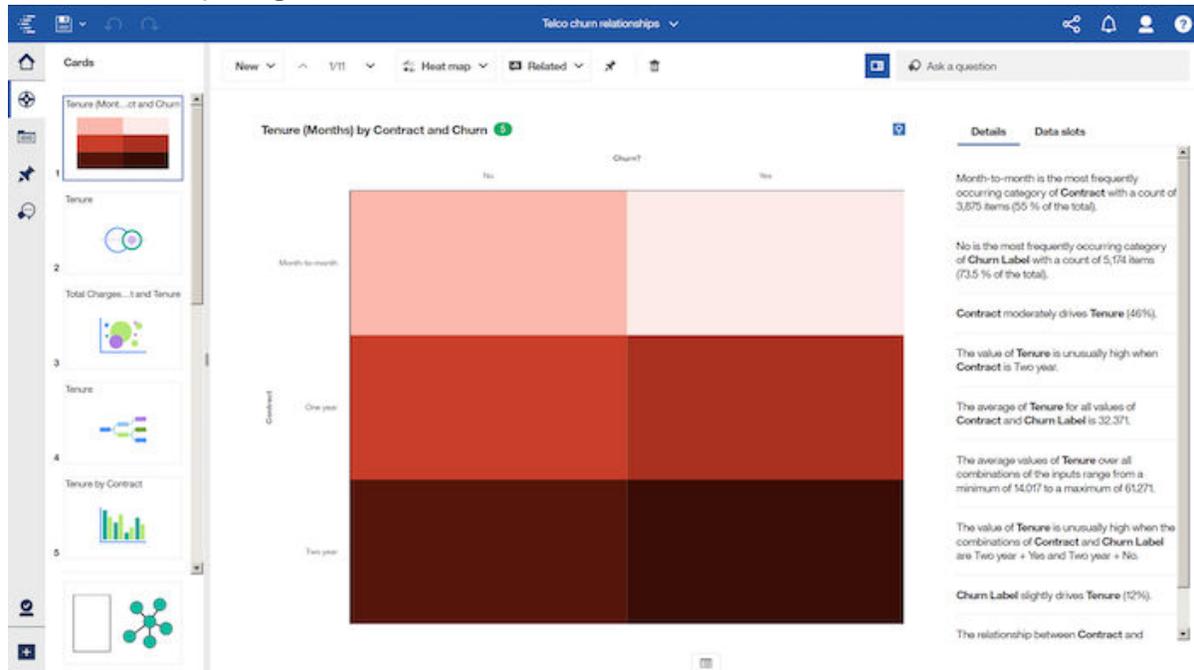
Key features of this sample include starting points card, driver analysis card, compare card, heat map visualization, driver analysis visualization, bubble visualization, decision tree visualization, column visualization, stacked column visualization, word cloud visualization, spiral visualization, and filters.

`11.1.0` - `11.1.4` The Telco churn relationships sample can be found here: `Team content > Samples > Explorations > Telco churn relationships`.

`11.1.5` The Telco churn relationships sample can be found here: `Team content > Samples > By industry > Telecommunications > Explorations > Telco churn relationships`.

Animated path scene transition story sample

This sample story demonstrates the new animated path feature for scene transitions, and timeline highlights.

Key features of this sample include: animated path, scene transition, animation effects, highlighting data, summary widgets, images, column visualization, animation type, animation duration, line visualization, packed bubble visualization, filters, tree map visualization, entrance animation, and exit animation.

`11.1.0` - `11.1.4` This sample can be found here: `Team content > Samples > Stories > Animated path scene transition`.

`11.1.5` This sample can be found here: `Team content > Samples > By feature > Core > Stories > Animated path scene transition`.

Guided journey template story sample

This sample story uses the guided journey template for laying out its contents.
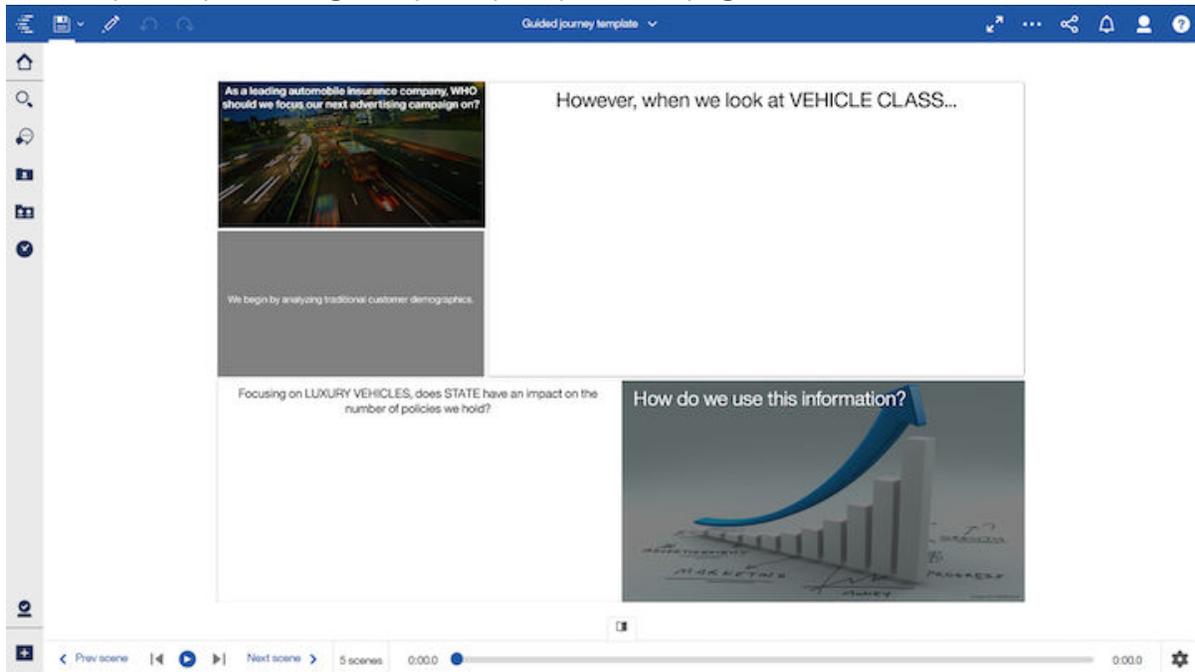
Key features of this sample include: Scene, Animation Effects, Highlighting data, Text, Shape, Summary Widget, Summary Widget with Shape, Image, Stacked Column visualization, Highlight, Timeline, Animation type, Animation duration, List visualization, Filter, Entrance animation, Exit animation

`11.1.0` - `11.1.4` This sample can be found here: `Team content > Samples > Stories > Guided journey template`.

`11.1.5` This sample can be found here: `Team content > Samples > By industry > Insurance > Stories > Guided journey template`.

More valuable customers story sample

This sample story about deciding on an advertising strategy for recruiting more valuable customers is intended to showcase the main features of stories.
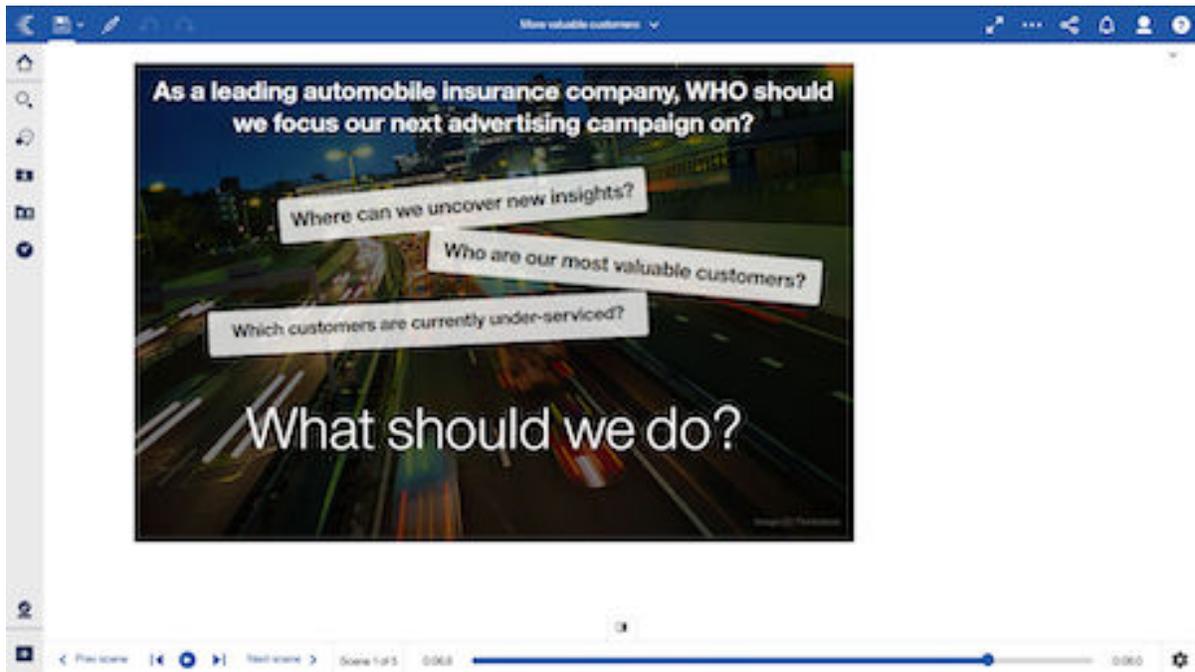
Key features of this sample include Pie visualization, Color palette, Animation Effects, Highlighting data, Text, Shape, Summary Widget, Image, Stacked Column visualization, Highlight, Timeline, Animation type, Animation duration, List visualization, Filter, Entrance animation, Exit animation, Bar visualization, Scene transition, Sweeps, and scenes.

`11.1.0` - `11.1.4` This sample can be found here: `Team content >Samples > Stories > More valuable customers`.

`11.1.5` This sample can be found here: `Team content > Samples > By industry > Insurance > Stories > More valuable customers`.

Importing the base samples

Easy Install of IBM Cognos Analytics installs and imports the base samples for you. If you didn't use Easy Install to install Cognos Analytics, then you must import the base samples from the installation location.

Procedure

1. Locate the deployment archive for the base samples in the installation location:
   `cognos_analytics_server_install_location\samples\deployment\samples_current`
2. Copy the deployment file into your deployment folder:
   `cognos_analytics_server_install_location\deployment`
3. Go to **Manage** > **Administration console** and open **IBM Cognos Administration**.
4. On the **Configuration** tab, click **Content Administration**.
5. On the toolbar, click the **New Import** icon .
6. Select **Samples_for_Install_11_x_x** in the first step of the **New Import** wizard and complete the remaining steps of the wizard using the defaults.

Results

After you import the base samples, you'll see the following folders in **Team content** in your Cognos environment:

Version 11.1.0 - 11.1.4	Version 11.1.5 +
Team Content > Calendars	Team Content > Calendars
Team Content > Get Started	Team Content > Samples
Team Content > Samples	Team Content > Templates
Team Content > Templates	Team Content > The Weather Company, an IBM Business

The base samples supporting files are installed to the
cognos_analytics_server_install_location\samples folder. This folder contains several sub-
folders that contain the samples and associated data from where you import them in to Cognos Analytics.

data
    This folder contains the source files for the data included in the Samples_for_Install.zip
    deployment.

deployment
    This folder contains the Samples_for_Install.zip deployment. This file is also installed in the
    deployment folder for the Cognos Analytics server installation.

embedded_content
    This folder contains the authentication sample with embedded content. For instructions on how to use
    this sample, see the topic on sharing and embedding Cognos Analytics content in the *IBM Cognos
    Analytics Getting Started User Guide*.

extensions
    This folder contains the customization extension samples. For instructions on how to use these
    samples, see the customization samples topic in the *IBM Cognos Analytics Managing User Guide*.

JavaScript
    This folder contains the JavaScript samples. For instructions on how to use the samples, see the PDF
    file included in the folder.

themes
    This folder contains the customization theme samples. For instructions on how to use these samples,
    see the customization samples topic in the *IBM Cognos Analytics Managing User Guide*.

Chapter 2. Downloading and configuring the extended samples

To set up the samples, you must perform several tasks, such as restoring the samples databases and creating data source connections.

Prior to version 11.1.x, the Cognos Analytics Samples was a separate installation from Cognos Analytics Server. Now the required files are downloaded from the IBM Business Analytics Community

After setting up the samples, you can use them to learn how to use IBM Cognos Analytics software.

IBM Cognos Analytics provides sample databases that contain sales, marketing, and financial information for a fictional company named the Sample Outdoors Company that sells sporting equipment.

Before you can use the sample databases, IBM Cognos Analytics must be installed, configured, and running and then the IBM Cognos Analytics Samples must be installed.

Download the Cognos Analytics Extended Samples

Download and extract the Cognos Analytics extended samples.

Download the latest extended samples compressed file here.

Windows: Copy it to your IBM Cognos Analytics server in a location that is distinct from where you installed the product.

UNIX/Linux: FTP it to your IBM Cognos Analytics server in a location that is distinct from where you installed the product.

The file *Extended_Samples.zip* has the following sub-folders:

content
> This folder contains the sample deployment archives.

datasources
> This folder contains the sample databases.

models
> This folder contains the sample IBM Cognos Framework Manager models.

images
> This folder contains the images used in the samples.

Restore backup files for the sample databases

To use the IBM Cognos Analytics samples, you must restore backup files for the samples databases. This action creates multilingual versions of the Samples Outdoors databases.

Db2 sample databases

You can setup the sample databases in an IBM Db2 database.

The Db2 sample database and associated files are located in `<cognos_samples_installation_location>/` webcontent/samples/datasources/Db2. Extract `GS_DB.tar.gz`. This creates the `GS_DB` folder with the following sub-folders.

data
> This folder contains the database files.

logs
> This folder contains the logs that are created when the scripts are run.

unix
   This folder contains the Unix and Linux® scripts.

win
   This folder contains the Microsoft Windows scripts.

IBM Db2 samples

The data files for Db2move (a database movement tool command) and the scripts to add constraints are in the `data` directory.

If you use WinZip to extract the Db2 move file on in a Microsoft Windows environment, ensure that the TAR file smart CR/LF conversion option is not selected.

After you extract the Db2 move file, restore the schemas to a database named GS_DB.

To add views, constraints, user privileges, and stored procedures to GS_DB, prepare and run the gs_db_modify files that are included with the samples in the following order:

1. Update the user name and password in `gs_db_modify.sql` and save it.

2. Run `gs_db_modify.bat`

Note: If the script file attempts to create a stored procedure where the procedure does not exist an error is generated. This error does not affect the samples.

Set the Db2CODEPAGE environment variable to a value of 1208.

When you create the GS_DB database, create a system default buffer pool with a page size of 32 KB and an associated regular tablespace. Ensure that the system temporary tablespace is also 32 KB.

Memory requirements are affected by the size and type of your database system. The GO sample database whose tables are organized by column might require more memory than the typical row-based setup.

Restore the samples on IBM Db2 using a script

You can use scripts to restore backup files for sample databases for Db2.

To set up the sample database, you must extract the `GS_DB tar.gz` file, customize a configuration file, and run the setup script.

There are prerequisites for installing the Great Outdoors sample database for Db2 on Linux, UNIX and Windows. Before you can install the sample databases, you must verify or configure privileges.

1. Extract the `GS_DB.tar.gz` file and retain the original directory structure. If you use WinZip to extract the Db2 move file on Microsoft Windows operating system, ensure that the TAR file smart CR/LF conversion option is not selected.

2. On Linux and UNIX operating systems, modify the file permissions on the `setupGSDB.sh` file so that it is executable: `chmod u+x setupGSDB.sh`.

3. Ensure that the user ID used to set up the database has DBADM authority or the following authorities in Db2:
   - CREATETAB
   - CREATE_NOT_FENCED_ROUTINE
   - LOAD

Optional: Editing the configuration file

The configuration file contains the default configuration options that are used when creating the GOSALES data. The default configuration settings are listed in the following table.

Table 1. Optional values for restoring the samples on IBM Db2		
Configuration Setting	**Default**	**Description**
GOSALES_INST	GS_DB	Used to set the name or alias of the database.
GOSALES_BLU	N	Change to 'Y' if creating tables organized by column.
GOSALES_CREATEDB		Optional: Causes an existing database with the same name to be dropped.
GOSALES_DB_TERRITORY	US	When creating a database this is the territory of the UTF-8 database that is created.
GOSALES_BP GOSALES_TS	GOSALES_BP GOSALES_TS	Optional: Enter the buffer pool and tablespace name, if these are to be created by the script.
GOSALES_GRANTEES	GOSALES, Db2ADMIN	Enter the list of users, groups or PUBLIC that will have CONTROL permissions for the GOSALES, GOSALESHR, GOSALESMR and GOSALESRT schemas. This string needs to follow the syntax of the GRANT command.
GOSALESDW_GRANTEES	GOSALESDW Db2ADMIN	Enter the list of users, groups or PUBLIC that will have CONTROL permissions for the GOSALESDW schema.
GOSALES_DPF	N	Change to 'Y' if installing a database partitioned environment (DPF)
GOSALES_SCHEMA GOSALESHR_SCHEMA GOSALESMR_SCHEMA GOSALESRT_SCHEMA GOSALESDW_SCHEMA	GOSALES GOSALESHR GOSALESMR GOSALESRT GOSALESDW	Enter the names to be used for each schema.

You can customize the sample configuration file to use settings other than the default values.

The setup script creates the GS_DB database, table spaces, tables, views, grants privileges, and modifies the schema names for the sample database. In most situations, you can accept the default options. If you want to change the database name or modify the users or groups that have permissions on the data, you must update the GOSalesConfig configuration file.

Edit the configuration file by using a text editor.

Note: If you edit UNIX shell scripts in a Windows environment, ensure that you preserve the UNIX line endings.

The configuration file on Windows is `GOSalesConfig.bat`. The configuration file on UNIX is `GOSalesConfig.sh`.

By default, the GS_DB database name is used and permissions are granted to the Db2ADMIN (Linux, UNIX, Windows) and GOSALES users.

Running the setup script in interactive mode

In interactive mode, the `setupGSDB` script prompts you to confirm or provide configuration information for the GS_DB database installation. You can accept the default settings or provide different settings to replace the defaults.

- Run the setup script for your operating system.

Table 2. Running the samples restore script	
Operating System	**Command**
Microsoft Windows	In a Db2 command window, change to the GS_DB/win directory and run the setupGSDB.bat script.
UNIX	From a shell prompt, source the Db2profile change to the GS_DB/unix directory, and run the setupGSDB.sh script.

- Press Enter to proceed. The script displays a summary of your choices before you commit to changes to your environment. If you approve the choices, press Enter and the script makes the changes. For example, you might see the following message:

```
Please confirm the following settings:
Database Name: GS_DB
Column-organized tables: N (Db2 on UNIX only)
Drop and Recreate Database: Y
DPF environment: N
Create a 32 K Bufferpool named: GOSALES_BP
Create a 32 K Tablespace named: GOSALES_TS
GOSALES Grant users/groups: GOSALES, Db2ADMIN
GOSALESDW Grant users/groups: GOSALESDW, Db2ADMIN
Administration User Name: Db2admin
Import the sample data to the following schemas:
GOSALES
GOSALESHR
GOSALESMR
GOSALESRT
GOSALESDW
WARNING: If the database GS_DB already exists it will be dropped
Continue creating the sample data with these settings? (Y/N) Default=Y:
```

The GS_DB database is set up.

Running the setup script with command line options

The `setupGSDB` script lets you provide information on the command line to reduce the number of prompts from the script.

From a command line, run the script for your operating system. On Windows use `setupGSDB.bat`. On UNIX or Linux operating systems use `setupGSDB.sh`.

You can run the **setupGSDB** script with the following options:

Table 3. setupGSDB options for IBM Db2	
Option	**Description**
-createdb	Creates the database. This option drops any existing database with the same name. It creates the required buffer pool and table space.
-database database name	Specifies the name of the database. This value overrides the default value of GS_DB.
-userid administration_user_ID	Specifies the name of the Db2 administrator user ID that is used to create the database.
-password administration_user_ID	Specifies the password for the Db2 administrator user ID.
-noprompt	Indicates that no prompt will display. This option runs the script in silent mode. Any missing information causes the script to fail. You will not be prompted for any confirmations.

Example 1: You are a Db2 administrator and want to create the default GS_DB database on the local node. You run the following command:

```
setupGSDB -createDB -noprompt
```

Example 2: You want to create the tables in an existing database named GSDBY, and you want to use the administrator user ID Db2admin. Run the following command:

```
setupGSDB -database GSDBY -userid Db2admin
```

The script prompts you for the password when it connects to GSDBY. The script will replace any tables that already exist in the GSDBY database, unless you choose to drop the database.

Optional: Installing the sample data on a remote server

If the GS_DB sample database is installed on a remote server in your environment, you can link to it by cataloguing the remote database on your local computer and then running the setup script locally.

- If the sample database does not yet exist on the remote server, create it with the CREATE DATABASE command. The database requires a UTF-8 codeset and a bufferpool pagesize of 32 KB for the default and temporary table spaces. For example, on the remote server, create the database by running the following command:

```
CREATE
DATABASE GS_DB USING CODESET UTF-8 TERRITORY US PAGESIZE 32K
```

- On your local computer, catalog the remote database:

```
Db2
catalog tcpip node nodename remote ipaddr server port_number
Db2 catalog database GS_DB as GS_DB at node nodename
```

- On your local computer, run the script:

```
setupGSDB
-database GS_DB -userid administration_user_ID
```

You are prompted for a password to connect to the database.

Oracle sample databases

You can setup the sample databases in an Oracle database.

The Oracle sample database and associated files are located in `<cognos_samples_installation_location>/` webcontent/samples/datasources/oracle. Extract `GS_DB_ORA.tar.gz`. This creates the GS_DB_ORA folder with the following sub-folders.

data
> This folder contains the database files.

logs
> This folder contains the logs that are created when the scripts are run.

unix
> This folder contains the Unix and Linux scripts.

win
> This folder contains the Microsoft Windows scripts.

Oracle samples

To create foreign key constraints in tables that reference different schemas, you must run `gs_or_modify.sql`, found in the `data` folder.

Restore the samples on Oracle using a script

You can use scripts to restore backup files for sample databases for Oracle.

To set up the sample database, you must extract the file `GS_DB_ORA.tar.gz`, customize a configuration file, and run the setup script.

There are prerequisites for installing the Great Outdoors sample database for Oracle. Before you can install the sample databases, you must verify or configure privileges.

- Extract the `GS_DB_ORA.tar.gz` file and retain the original directory structure.
- On Linux and UNIX operating systems, modify the file permissions on the `setupGSDB.sh` file so that it is executable: `chmod u+x setupGSDB.sh`.
- Ensure that the user ID used to set up the Oracle database has authority to create users and run the import utility.

Optional: Editing the configuration file

The configuration file contains the default configuration options that are used when creating the GOSALES data.

Table 4. Optional values for restoring the samples on Oracle		
Configuration Setting	**Default**	**Description**
GOSALES_IMP_CMD	imp	If necessary can be modified to specify the complete path to the correct version of the import utility.
GOSALES_INST		Oracle host string.
GOSALES_TS	GOSALES_TS	If users are created by scripts, used to enter the tablespace name to assign to users.

Table 4. Optional values for restoring the samples on Oracle (continued)

Configuration Setting	Default	Description
GOSALES_CREATE_TS		Optional: Used to create the default tablespace for users.
GOSALES_TEMP_TS		If users are created by scripts, used to name a temporary tablespace to assign to users. Leave blank to use the default temporary tablespace.
GOSALES_SCHEMA GOSALES_SCHEMA_PW	GOSALES GOSALESPW	Used to enter the username and password for the GOSALES user. You will be prompted for a password if not entered.
GOSALESHR_SCHEMA GOSALESHR_SCHEMA_PW	GOSALESHR GOSALESHRPW	Used to enter the username and password for the GOSALESHR user. You will be prompted for a password if not entered.
GOSALESMR_SCHEMA GOSALESMR_SCHEMA_PW	GOSALESMR GOSALESMRPW	Used to enter the username and password for the GOSALESMR user. You will be prompted for a password if not entered.
GOSALESSRT_SCHEMA GOSALESRT_SCHEMA_PW	GOSALESRT GOSALESRTPW	Used to enter the username and password for the GOSALESRT user. You will be prompted for a password if not entered.
GOSALESDW_SCHEMA GOSALESDW_SCHEMA_PW	GOSALESDW GOSALESDWPW	Used to enter the username and password for the GOSALESDW user. You will be prompted for a password if not entered.
GOSALES_GRANTEES	GOSALES	Used to enter the users that will have SELECT, INSERT, DELETE, UPDATE, and ALTER permissions for GOSALES, GOSALESHR, GOSALESMR and GOSALESRT schemas. **Note**: The owner of the GOSALES_SCHEMA will always be granted SELECT, INSERT, DELETE, UPDATE and ALTER privilege on all schemas.
GOSALESDW_GRANTEES	GOSALESDW	Used to enter the users that will have SELECT, INSERT, DELETE, UPDATE and ALTER permissions for GOSALESDW schema.

You can customize the sample configuration file to use settings other than the default values.

The setup script creates the users and schemas specified in the configuration file. In most situations, you can accept the default options. If you want to change the schema names or modify the users or groups that have permissions on the data, you must update the `GOSalesConfig` configuration file.

Edit the `GOSalesConfig.bat` or `GOSalesConfig.sh` configuration file by using a text editor.

Running the setup script in interactive mode

In interactive mode, the `setupGSDB` script prompts you to confirm or provide configuration information for the sample database installation. You can accept the default settings or provide different settings to replace the defaults.

- Run the setup script for your operating system.

Table 5. Running the samples restore script	
Operating System	**Command**
Microsoft Windows	In a DOS command window, change to the `GS_DB_ORA\win` directory and run the `setupGSDB.bat` script.
UNIX	From a shell prompt, change to the `GS_DB_ORA/unix` directory, and run the `setupGSDB.sh` script.

- Press Enter to proceed. The script will run the sample database setup and display a summary of your choices before you commit to changes to your environment. If you approve the choices, press Enter and the script makes the changes. For example, you might see the following message:

```
Please confirm the following settings:

Instance Name is ORAINST123
Create the following user accounts and import the data:
    GOSALES
    GOSALESHR
    GOSALESMR
    GOSLAESRT
    GOSALESDW

Default tablespace is GOSALES_TS
Temporary tablespace is DEFAULT
Administration User name is sys

WARNING: If the users already exist they will be dropped

Create a Tablespace named GOSALES_TS

Grant select on the GOSALES schemas to GOSALES
Grant select on the GOSALESDW schema to GOSALESDW

Continue creating the sample data with these settings?
(Y/N) Default=Y:
```

Tip: If you edit UNIX shell scripts in a Windows environment, ensure that you preserve the UNIX line endings.

Running the setup script with command line options

The `setupGSDB` script lets you provide information on the command line to reduce the number of prompts from the script.

From a command line, run the script for your operating system. On Windows use `setupGSDB.bat`. On UNIX or Linux operating systems use `setupGSDB.sh`.

You can run the **setupGSDB** script with the following options:

Table 6. setupGSDB options for Oracle	
Option	**Description**
-createdb	Creates the users. This option drops any existing users with the same name.
-database database name	Specifies the name of the Oracle instance. This value overrides the default value specified in the configuration file.
-userid administration_user_ID	Specifies the name of the Oracle administrator user ID that is used to create the users.
-password administration_user_ID	Specifies the password for the Oracle administrator user ID.
-noprompt	Indicates that no prompt will display. This option runs the script in silent mode. Any missing information causes the script to fail. You will not be prompted for any confirmations.

Example 1: You are an Oracle administrator and want to create the default sample database schemas. You run the following command:

```
setupGSDB -createDB -noprompt
```

Example 2: You want to create the tables in the existing schemas specified in the configuration file, and you want to use the administrator user ID sys. Run the following command:

```
setupGSDB -YourOracleInstance -userid sys -sysdba
```

The script prompts you for the password when it connects to the Oracle instance. The script deletes any existing tables or views in the specified schemas and replaces them.

SQL Server sample databases

You can setup the sample databases in a Microsoft SQL Server database.

The SQL Server sample databases are located in *<cognos_samples_installation_location>*/ webcontent/samples/datasources/sqlserver. Create databases named GOSALES and GOSALESDW in SQL Server and restore the databases from a device, using GOSALES.zip and GOSALESDW.zip, respectively.

Create data server connections to the samples databases

IBM Cognos Analytics uses data server connections to the samples databases to connect to the samples databases and run the sample reports or use the sample packages.

You must create two data server connections, named **great_outdoors_sales** and **great_outdoors_warehouse**. Note the following considerations that depend on which database vendor you are using.

Microsoft SQL Server
    The database name is GOSALES for the **great_outdoors_sales** connection and GOSALESDW for the **great_outdoors_warehouse** connection.
IBM Db2
    The database name is GS_DB for both connections.
Oracle
    Use the instance name of the Oracle database as it is found in tnsnames.ora for both connections.

Create the data server connections in one of two ways.

- If you will be using the **IBM_Cognos_Samples_CQ_Legacy** deployment, follow the steps in the topic on creating a data source connection in the *IBM Cognos Analytics Administration and Security Guide*.
- If you will not be using the **IBM_Cognos_Samples_CQ_Legacy** deployment, follow the steps in the topic on creating a data server connection in the *IBM Cognos Analytics Managing User Guide*.

Import the extended samples

To use the sample packages and other content, you must import the sample deployment archives.

About this task

The Extended_Samples.zip archive contains the following deployments in the `\content` folder.

- **IBM_Extended_Samples.zip**
- **IBM_Cognos_Prompt_API.zip**
- **IBMCognos10\IBM_Cognos_Samples_CQ_Legacy.zip**
- **IBMCognos10\IBM_Cognos_Samples_DQ_Legacy.zip**

Procedure

1. Copy the deployment archive (.zip) file from the source location to the **Deployment files location** specified in Cognos Configuration. The default **Deployment files location** location is `<cognos_analytics_server_installation_location>`/deployment.
2. Use **Manage** > **Administration console** to open **IBM Cognos Administration**.
3. On the **Configuration** tab, click **Content Administration**.
4. On the toolbar, click the **New Import** button.
5. Select the deployment to install in the first step of the **New Import** wizard and complete the remaining steps of the wizard.
6. Repeat the previous step for each deployment that you wish to install.
7. Create data server connections to the samples databases.

Results

You can now use the sample packages to create reports and analyses. You can also run the sample reports that are available in **Team content**.

Copy the sample images

To use the sample content, you must place the required images in the correct location.

The file `Extended_Samples.zip` contains the `images` folder, which contains the images that are used in the samples.

To use the images, copy the files from the `images` folder and paste them to `<cognos_analytics_server_installation_location>`/webcontent/bi/samples/images.

Note: Copy the contents of folder to images location. Don't replace the entire folder because any custom images might be removed.

Optional : Cognos Framework Manager sample database models

The Sample Outdoors Framework Manager models illustrate modeling techniques and support the samples.

The samples, located in `<cognos_samples_installation_location>`/ webcontent/samples/ `models`, include

- great_outdoors_sales, which refers to the samples database GOSALES
- great_outdoors_warehouse, which refers to the database GOSALESDW

You can use sample database models on different platforms. For information about moving models from one platform to another, see the *IBM Cognos Framework Manager User Guide*.

Note: Transformer uses some of the reports in the GO Data warehouse (query) package as source data for various cubes. These reports are meant to be simple list reports with no formatting. The description information for the reports indicates if the report was developed to be source data for Transformer.

GO Sales Model

This model contains sales analysis information for the fictional company, The Sample Outdoors. It also has the query items required by the Event Studio samples. The model accesses three schemas and has two packages. One package is based on the dimensional view and the other is based on the query (relational) view.

GO Data Warehouse Model

This model contains financial, human resources, and sales and marketing information for the fictional company, The Sample Outdoors. The model accesses a dimensional relational data source. The model has two packages. One package is based on the dimensional view, the other is based on the query (relational) view.

Chapter 3. Installing and configuring the supplementary samples

The supplementary samples are samples that are no longer installed with the extended samples. You can download and install these samples from the IBM Cognos Analytics web site.

To download the supplementary samples, go to Supplementary (Legacy) IBM Cognos Analytics 11 Samples (https://www.ibm.com/communities/analytics/cognos-analytics-blog/supplementary-ibm-cognos-analytics-11-samples/) and download `LegacySamples.zip`. Extract the .zip file. It contains a `Samples` folder with sub-folders that contain the supplementary samples. The following topics explain how to install and configure these samples.

Set Up Microsoft Analysis Services Cube Samples

The supplementary samples include cubes for Microsoft Analysis Services (MSAS).

About this task

The MSAS cubes can be found in `Samples\datasources\cubes\MSAS` and the MSAS deployments can be found in `Samples\content\MSAS`.

For finance data, use the GO Finance Fact cube derived from the GOSALESDW database. This cube contains year-to-date and monthly financial data for all accounts so that you can create financial statements in Analysis Studio, Query Studio, and Reporting. The data is in actual US dollars submissions for 2004, 2005, 2006, or 2007 (7 months actual data only).

The MSAS2005 version is in the GOFinanceFact_XX.abf file. XX represents the language. For example, XX is replaced with EN which indicates English. The MSAS2008 version of cubes also exists, with report content only for the 2005 version.

For sales data, use the GOSalesFact cube derived from the GOSalesFact_XX Analysis Services database, based on the GOSALESDW SQLSERVER Database. The cube contains measures such as unit cost, unit price, quantity, and gross profit. Dimensions include Time, Product, and Retailers.

The MSAS2005 version is in the GOSalesFact_XX.abf restorable backup file.

The files must be restored to a Microsoft SQL Server database running the applicable Microsoft Analysis Services and hosting the GOSALESDW database.

Note: Both Microsoft XML 6.0 Parser and Microsoft SQL 2005 Analysis Services 9.00 OLEDB Provider must be installed on the local client to establish data source connections to MSAS cubes.

Procedure

1. Copy the GOSALESDW.cab and GOSALESDW.abf files to a directory that you can access from the Analysis Manager console in the Analysis Servers of Microsoft SQL Server.
2. Use the Microsoft Analysis Services Analysis Manager to restore the database from the GOSALESDW.cab and GOSALESDW.abf files.

Results

You can now create the data source connections to these MSAS datasources in Cognos Administration by referencing either the GOSalesFact_XX or GOFinanceFact_XX cubes you restored.

Set up the Essbase cube sample

The supplementary samples include an Essbase cube sample.

About this task

The cube samples are located in `Samples\datasources\cubes\Essbase\Outlines_and_Raw_Data`.

To set up the Essbase cube sample, you must have Oracle Essbase and Essbase Integration Services Console installed. Alternatively, you can set up the smaller Essbase cube `GODBReduced.zip` which is a filtered version of the full version, `GODWENU`. To set up the small version, unzip `GODBReduced.zip`, load the `otl` and `txt` file in the Essbase environment before you follow the precedure.

Procedure

1. Unzip the file for your language.

   Each zip file contains the following two files:

   - *language*U_Data.txt, such as ENU_Data.txt or JAU_Data.txt.
   - GODW*language*U.otl, such as GODWENU.otl or GODWJAU.otl.

2. Using block storage in Essbase, create a Unicode application.
3. Within the application, create a new database.

   You can use GODW*language*U, such as GODWENU or GODWJAU, as your database name, or use the name of your choice.

4. Copy and paste the GODW*language*U.otl file in your database directory.
5. If the database name specified in step 4 is different than GODW*language*U, rename the GODW*language*U.otl file to match the database name that you created.

   Confirm that you want to overwrite the `otl` file.

6. In **Essbase Administration Services** console, open your database outline and save it.

   Confirm that you want to save the outline even if it was not changed.

7. Copy the *language*U_Data.txt file and paste it in the same directory as the `otl` file.
8. In **Essbase Administration Services** console, right-click the database you created and select **Load Data**.
9. Browse to the *language*U_Data.txt file in your database directory, select the file, and click **OK**.
10. After the data loads successfully, right-click the database and select **Execute Calculation**.
11. Select the default calculation, and click **OK**.

    The calculation process may take up to 5 hours, depending on the computer where Essbase OLAP Server is installed.

Results

You can now create a data source connection to the cube.

Creating Data Source Connections to OLAP Data Sources

Before users can access the data, you must create data source connections to the OLAP data source samples. You must complete set up for Microsoft Analysis Services cube samples and the Oracle Essbase cube sample before creating data source connections.

Samples are accessible to everyone by default. To create customized data sources, you must have execute permissions for the **Data Source Connections** secured feature, and traverse permissions for the **Administration** secured function. You must have write permissions for the Cognos namespace.

The following OLAP data sources are available in `Samples\datasources\cubes`.

- GO Sales Fact and GO Finance Fact Microsoft Analysis Services cubes
- Sample Outdoors Company cubes which includes sales_and_marketing, employee_expenses, go_accessories, go_americas, go_asia_pacific, and great_outdoors_sales_en.
- Sample Outdoors Db2 cube

Create Data Source Connections to PowerCubes

Use the following procedure to create a data source connection to a PowerCube.

Procedure

1. In IBM Cognos Administration, click the **Configuration** tab.

2. Click the new data source button .

3. To create a data source connection for the Sales and Marketing cube, type **sales_and_marketing** in the **Name** box, and then click **Next**.

4. In the connection page, under **Type** click **IBM Cognos PowerCube**, and then click **Next**.

   The connection string page for the selected database appears.

5. Optional: In the **Read cache size (MB)** box, type the cache size of the cube in megabytes.

   To use the default value in the ppds_cfg.xml file, leave this field blank or type 0.

6. In the **Windows location** box, type the location and name of the sales_and_marketing.mdc file for the data source connection. For example, type

   ```
   install_location/webcontent/samples/datasources/cubes/PowerCubes/En/
   Sales_and_Marketing.mdc
   ```

   You can define a Microsoft Windows operating system path or a UNIX operating system path.

   If you define a UNIX path and you plan to use Framework Manager, you must also define the Windows path and ensure that the cube is also available in the Windows location. Framework Manager can access cubes only from Windows locations.

7. To test whether the parameters are correct, do the following:

   - Click **Test the connection**.
   - Click **Test**.
   - When the test finishes, click **Close** twice.

8. Click **Finish**.

Results

You can now import the IBM_Cognos_Powercube.zip sample package for the PowerCube to use this data source or you can create your own package using the cube.

Create Data Source Connections to Oracle Essbase Cubes

Use the following procedure to create a data source connection to an Oracle Essbase cube.

About this task

Note: To connect to an Oracle Essbase data source, the client software must be installed and configured on the IBM Cognos Analytics server and in the same location as IBM Cognos Framework Manager.

Procedure

1. In IBM Cognos Administration, click the **Configuration** tab.

2. Click the new data source button .

3. In the name and description page, type a unique name for the data source and, optionally, a description and screen tip, and then select **Next**.

4. In the connection page, from the Type drop-down list, select **Oracle Essbase**, and then click **Next**.

   The connection string page appears.

5. Type the name of the Oracle Essbase sever.

6. Select **Signons**, and then click **Password** and **Create a signon the Everyone group can use**.

7. Type the User ID, Password, and then confirm the password for the cube.

8. Select **Test the connection**, and then **Test** to test whether parameters are correct.

   In the Status column, you can see if the connection was successful. If it was unsuccessful, select **Close**, return to the previous steps, and verify your connection parameters. If it was successful, go to the next step.

9. Click **Finish**.

Results

To use this data source, you must create a package using this data source in Framework Manager, and then publish the package.

Create Data Source Connections to Microsoft Analysis Service Cubes

Use the following procedure to create a data source connection to a Microsoft Analysis Service cube.

Procedure

1. In IBM Cognos Administration, click the **Configuration** tab.

2. Click the new data source button .

3. In the **Name** box, type the name of the data source connection, and then click **Next**.

   - For the GOFinanceFact cube, type GOFinanceFact_XX_MSAS2005.

   - For the GOSalesFact cube, type GOSalesFact_XX_MSAS2005.

4. In the **Specify Connection** page of the New Datasource Wizard, click **Microsoft Analysis Services 2005**.

5. Click **Next**.

6. In the **Server Name** box, type the name of the server where the restored databases are located. Back slashes are not required.

7. Under **Signon**, select the **Password** check box and then select the **Create a signon that the Everyone group can use** check box. Type the user ID and password for the MSAS2005 database. For MSAS2005, this is a network login.

8. Click **Test the connection**, and then click the **Test** button. Click **Close**.

9. Click **Finish**. You are now prompted to create a package.

   Alternatively, you can deploy an existing package from a sample deployment archive. The names of the deployment archives match the datasource connection names specified in step 4 and contain sample reports that work with the associated cubes.

   In Content Administration on the Configuration tab in IBM Cognos Administration, click **New Import**. The New Import Wizard prompts you to select a deployment archive. When you select a deployment archive, it is important to click **Edit** and specify a target name for the package to prevent an existing package from being overwritten.

10. To create a package, check **Create a Package** and then click **OK**.

11. Specify a package name and then click **OK**.

    - For the GO Finance Fact cube, type GOFinanceFact_XX_MSAS2005.

    - For the GO Sales Fact cube, type GOSalesFact_XX_MSAS2005.

12. Specify the Analysis Services database you restored either GOFinanceFact_XX or GoSalesFact_XX:
    - For either the GOFinanceFact cube or the GOSalesFact cubes, type GOSALESDW.
    - For the GO Sales Fact cube, type GO Sales Fact.
13. Click the cube applicable to the database.
14. Click **Finish**.

Import the supplementary samples

To use the supplementary sample packages and other content, you must import the supplementary sample deployment archives.

Before you begin

Before you import the deployment archives other than `IBM_Cognos_PowerCube.zip`, you must restore the databases. You must also create data source connections to the samples databases. Every deployment requires a data source connection in order to run reports. For more information, see "Create data server connections to the samples databases" on page 27.

Before you import the `IBM_Cognos_PowerCube.zip` deployment archive, you must create a database connection to the appropriate PowerCube and select the language that you want to use. The language that you select must be supported by your locale.

About this task

The following deployments can be found in `Samples\content`

- **IBM_Cognos_DrillThroughSamples**
- **IBM_Cognos_DynamicCube**
- **IBM_Cognos_Metrics**
- **IBM_Cognos_Office**
- **IBM_Cognos_PowerCube**
- **IBM_Cognos_PowerPlay**

Procedure

1. Copy the deployment archive (.zip) file from the source location to the **Deployment files location** specified in Cognos Configuration. The default **Deployment files location** location is `<cognos_analytics_server_installation_location>`/deployment.
2. Use **Manage** > **Administration console** to open **IBM Cognos Administration**.
3. On the **Configuration** tab, click **Content Administration**.
4. On the toolbar, click the **New Import** button.
5. Select the deployment to install in the first step of the **New Import** wizard and complete the remaining steps of the wizard.
6. Repeat the previous step for each deployment that you wish to install.

Results

You can now use the sample packages to create reports and analyses. You can also run the sample reports that are available in the **Team content**.

Setting up the samples for IBM Cognos Dynamic Cubes

You can use the sample data to learn how to design and model dynamic cubes and use the data in reporting environments.

The IBM Cognos Dynamic Cubes samples are based on the `model.fmd` sample database model. This model refers to the GOSALESDW database that contains sample data that other IBM Cognos products use. In Microsoft SQL Server, the dynamic cube uses the GOSALESDW database. In IBM Db2 and Oracle, the dynamic cube uses a single schema from the database.

The sample model is available in `Samples\models\great_outdoors_dynamiccube`.

Deploying sample dynamic cubes

To work with sample dynamic cubes in the IBM Cognos studios, use the IBM Cognos Cube Designer to deploy the sample dynamic cubes and make them available as data sources. The sample dynamic cubes are gosldw_sales, gosldw_target, and gosldw_sales_and_target.

Before you begin

The *great_outdoors_warehouse* data source connection must be set up before you deploy sample dynamic cubes.

If anonymous access is disabled, you must use the credentials that are associated with your account to publish cubes. Go to the **Personal** tab in the **Set preferences** dialog of the IBM Cognos Portal, and create your credentials before you proceed.

About this task

You do not have to publish a package to use the sample reports; the package is part of the sample deployment.

Procedure

1. From the **Start** menu, click **Programs** > **IBM Cognos Cube Designer** > **IBM Cognos Cube Designer**.

    Tip: You can also start the IBM Cognos Cube Designer from IBM Cognos Framework Manager. From the **Tools** menu, select **Run IBM Cognos Cube Designer**.

2. Open the project that contains the dynamic cube that you want to deploy and publish.

    a) From the toolbar, click **Open** .

    b) Navigate to the location where you downloaded the sample model and open `model.fmd`

3. In the **Project Explorer** tree, expand the project and model.

    Note: You may be prompted to log on to an IBM Cognos Analytics Server.

4. Right-click the **gosldw_sales** dynamic cube, and select **Publish**.

5. To deploy the dynamic cube and configure the cube as a data source, in the **Publish** window, expand **Additional Options** and select the **Add the dynamic cube to the default dispatcher** check box.

6. To start the dynamic cube, select the **Start the dynamic cube** check box.

7. If anonymous access is disabled, make sure the **Associate my account and signon with the cube datasource** check box is selected. For anonymous access, clear the check box.

8. Repeat steps 4 - 7 for the cube gosldw_target, and lastly for the virtual cube gosldw_sales_and_target.

9. Click **OK**.

Results

If the deployment and publish process is successful, no errors are reported. A message confirms that the cubes started successfully. You can now use the sample packages to create reports that rely on dynamic cube data sources. You can also run the sample reports that are available in **Team content**.

Chapter 4. Using the samples

This content describes the sample data used in the IBM Cognos Analytics extended samples. The samples are based on the Sample Outdoors Company database. Here you will learn about its structure, databases, model and packages.

The samples described in this chapter are available to download from the IBM Cognos Analytics Community (https://community.ibm.com/community/user/businessanalytics/home).

The Sample Outdoors Company

The Sample Outdoors Company samples illustrate product features and technical and business best practices. You can also use them for experimenting with and sharing report design techniques and for troubleshooting. As you use the samples, you can connect to features in the product.

The Sample Outdoors Company, or GO Sales, or any variation of the Sample Outdoors name, is the name of a fictitious business operation whose sample data is used to develop sample applications for IBM and IBM customers. Its fictitious records include sample data for sales transactions, product distribution, finance, and human resources. Any resemblance to actual names, addresses, contact numbers, or transaction values, is coincidental. Unauthorized duplication is prohibited.

Samples outline

The samples consist of the following:

- Two databases that contain all corporate data, and the related sample models for query and analysis
- Sample cubes and the related models
- A metrics data source including associated metrics and a strategy map for the consolidated company, and a model for Metric extracts.
- Reports, queries, query templates, and workspaces

  To run interactive reports, scripts are required. To see all the reports included in the samples packages, copy the files from the samples content installation into deployment folder and then import the deployments into the IBM Cognos Business Intelligence product.

Security

Samples are available to all users.

The Sample Outdoors Group of Companies

To make designing examples faster, especially financial examples, some general information about The Sample Outdoors Company is useful. To look for samples that use particular product features, see the individual sample descriptions in this section.

Revenue for The Sample Outdoors Company comes from corporate stores and from franchise operations. The revenues are consolidated from the wholly-owned subsidiaries. There are six distinct organizations, each with its own departments and sales branches. Five of these are regionally-based companies.

The sixth company, GO Accessories:

- Has its own collection of products, differentiated from the other GO companies by brand, name, price, color and size.
- Sells from a single branch to all regions and retailers.
- Functions both as an operating company based in Geneva, and as a part owner of the three GO subsidiaries in Europe.

The following diagram illustrates the consolidated corporate structure of the Sample Outdoors Company. The diagram also includes the percentage changes in ownership for GO Central Europe, and the reporting currency and GL (general ledger) prefix for each subsidiary. In year 1, GO Asia Pacific owns 60% of GO Central Europe, and in year 3, its ownership decreases to 50%. In year 1, GO Accessories owns 40% of GO Central Europe, and in year 3 its ownership increases to 50%.
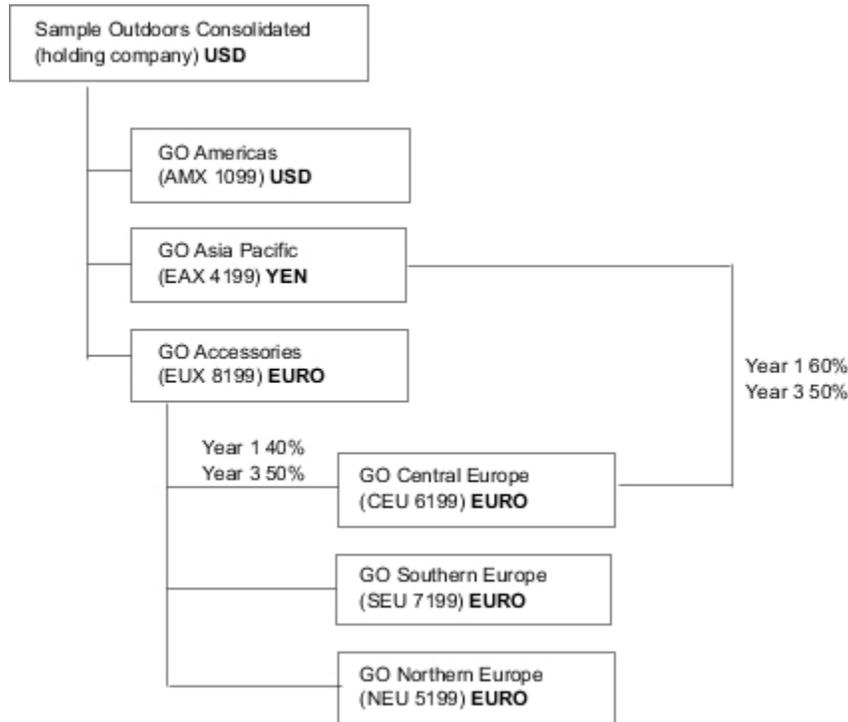
Figure 1. Consolidated corporate structure of the Sample Outdoors Company

Each corporation in the Sample Outdoors Company has the same departmental structure and the same general ledger (GL) structure, as shown in the following table. Divisions may not report in the same currencies. For example, the Americas subsidiary reports in US dollars, but the Corporate division local currency reports in Canadian dollars, and the Operations division local currency is pesos.

Table 7. Departmental structure	
Division (GL)	**Department (GL)**
Corporate (1700)	Sales (1720)
	Marketing (1750)
	IS&T (1760)
	Human Resources (1730)
	Finance (1740)
	Procurement (1710)
Operations (1800)	Production and Distribution (1820)
	Customer Service (1820)

Each corporation has a complete chart of accounts. Most of the accounts, such as those under non-personnel expenses, are at the department level, and contain only summary amounts. For example, although each marketing department has expenses, the cost is unspecified at the transaction level where marketing promotions occur.

Employees

The Sample Outdoors data contains a full list of employees in all divisions, departments, and locations.

Data is available for reports about bonuses (Global Bonus report) and sales commissions (Sales Commissions for Central Europe report), training (Employee Training by Year report), and performance reviews and employee satisfaction surveys (Employee Satisfaction 2012). If you use Metric Studio, sample metrics for human resources are also available.

In the GO Data Warehouse (analysis) package, groups of measures and the related dimensions are organized into folders. The employees are organized in hierarchies for region and manager, to make different kinds of aggregation easy to report on. Aggregation has been defined for the Employee Position Summary measures, so that Position count and Planned position count aggregate correctly at each level of time: monthly, quarterly, or yearly. For example, see the Planned Headcount report.

The employees are also listed in a sample LDIF file which could be used for any LDAP IBM product authentication including Tivoli®. This authentication directory is necessary for IBM Cognos Planning samples. No other samples depend on security profiles.

Sales and marketing

Data about sales and marketing is available for all of the companies in the Sample Outdoors group.

GO Accessories has richer details to support analysis examples. For example, see the Revenue vs % Profit Margin by Product Brand analysis, based on the Sales and Marketing cube. Marketing and sales campaigns are tied to the Sample Outdoors regional companies.

Overall, the GO companies have experienced solid growth across most product lines (Sales Growth Year Over Year), in all regions (Revenue by GO Subsidiary 2011), because of factors like an increase in repeat business and new or improved products, such as the high margin sunglasses product line. In the product lines sold by the five regional companies (all but GO Accessories) promotions have had mixed success (Promotion Success by Campaign, Bundle and Quarter). If you use Metric Studio, this can also be seen in the sample metrics.

Customer surveys

The data also contains information from customer surveys. For example, the product line that includes bug spray, sun screen, and so on has not been successful (Product Satisfaction - Outdoor Protection 2011) and a source of retailer dissatisfaction may be the level of customer service rather than the returns (Customer Returns and Satisfaction). If you use Metric Studio, this information can also be monitored in metrics.

Sales outlets

Revenue from the corporate outlets is available at the transaction level. Revenue from the franchise outlets is available at the consolidated level only (Sales and Marketing cube). Metrics about retailers show that the number of new retail outlets has dropped over the time period covered by this data.

GO Accessories sells worldwide, and sells only accessories. Transaction data for GO Accessories is the primary source for analysis of product by brand, color and size. The other five subsidiaries in the group of companies are regional and sell all product lines for retailers in their region. For example, the report Top 10 Retailers in 2011 uses sparklines and list data to review revenues at the retailer level.

Sample Outdoors Company models, Powercubes, and packages

The sample Outdoors Company Framework Manager models that are included with the extended samples illustrate modeling techniques and support the samples. The models are based on the GO data warehouse and the GO sales transactional databases and are the basis for the sample reports and queries. Each model contains two packages for publishing analysis (dimensional) and query views of the data.

To look at the sample models, you must have access to Framework Manager, the modeling tool in IBM Cognos Business Intelligence. You also need to set up the sample databases and connections. See Chapter 2, "Downloading and configuring the extended samples," on page 19.

GO Data Warehouse

The GO Data Warehouse model, `great_outdoors_data_warehouse.cpf`, is based on the database GOSALESDW. It contains data about human resources, sales and marketing, and finance, which is grouped into business areas. In the Database view, the three business areas are grouped into separate namespaces. The Database view contains a fourth namespace (GO Data) for the common information.

The Database view is similar to the structure of the underlying database. All tables (database query subjects) are unchanged. This enables IBM Cognos Analytics to retrieve metadata directly from the package in most cases, instead of using a metadata call to the database. The following changes and additions were made in the Database view:

- Joins were added as necessary.
- To allow for aggregation at different levels of granularity, some model query subjects were created. For example, see the relationships between Time and Sales or Sales fact.
- To allow single joins to be made between the lookup tables and each level in a dimension, lookup tables were copied. For example, see the Products look up tables.

The Business view contains only model query subjects, with no joins. The following changes and additions were made in the Business view:

- Calculations were added to the model query subjects. For example, the time dimension contains language calculations.
- Where the database has multiple hierarchies, new dimensions were created to organize each hierarchy. For example, the employee hierarchies are organized into several categories, such as manager and region.

The GO Sales transactional database

The GO Sales model, `great_outdoors_sales.cpf`, is based on the GOSALES database, which is structured as a transactional database. It contains principally sales data.

The Database view is similar to the underlying database structure. The following changes and additions were made in the Database view:

- To make it possible to join the fact tables to the time dimension, model query subjects and multipart joins are used.
- Other joins were added as necessary.

The Business view contains only model query subjects, with no joins. The following changes and additions were made in the Business view:

- Calculations were added to the model query subjects.
- Model query subjects that were created in the Database view to enable joins on the time dimension were linked as reference shortcuts.
- Where the database has multiple hierarchies, new dimensions were created to organize each hierarchy.
- Sales Staff is a subset of the slowly changing Employee dimension. There is no unique Employee key in GO Sales, so a filter retrieves the current record only. This model does not use historical data.

The samples PowerCubes

The following cubes are delivered with the Sample Outdoors samples in English, French, German, Japanese, and Chinese:

- `sales_and_marketing.mdc`
- `employee_expenses.mdc`
- `go_accessories.mdc`
- `go_americas.mdc`
- `go_asia_pacific.mdc`
- `great_outdoors_sales_en.mdc`
- `great_outdoors_7.mdc`

The samples packages

The Sample Outdoors samples include six packages. A brief description of each available package is provided.

Go Data Warehouse (analysis) is a dimensionally modeled view of the GOSALESDW database. This package can be used in all studios, including IBM Cognos Analysis Studio. Using this package, you can drill up and down.

Go Sales (analysis) is a dimensionally modeled view of the GOSALES database. This package can be used in all studios, including Analysis Studio. Using this package, you can drill up and down.

Go Data Warehouse (query) is a non-dimensional view of the GOSALESDW database. This package can be used in all studios except Analysis Studio, and is useful for reporting when there is no need for drilling up and down.

Go Sales (query) is a non-dimension view of the GOSALES database. This package can be used in all studios except Analysis Studio, and is useful for reporting when there is no need for drilling up and down.

Sales and Marketing (cube) is an OLAP package, based on the `sales_and_marketing.mdc` cube.

Great Outdoor Sales (cube) is an OLAP package, based on the `great_outdoors_sales_en.mdc` cube.

Note: The OLAP packages, Great Outdoor Sales (cube), and Sales and Marketing (cube), are not multilingual. The `IBM_Cognos_PowerCube.zip` archive contains five versions of each package; one in English, French, German, Japanese, and Chinese. For more information about `IBM_Cognos_PowerCube.zip`, see Legacy Samples.

Sample audit model and audit reports

IBM Cognos Analytics audit samples include a sample model and sample audit reports.

Sample audit model

The default location of the Framework Manager sample audit model `Audit.cpf` is *installation_location*/samples/Audit_samples/Audit.

Sample audit reports

The default location of the audit samples deployment `IBM_Cognos_Audit.zip` is *installation_location*/samples/Audit_samples.

You must set up the sample audit reports before you can use them.

The following table lists the sample audit reports and describes the content of each report.

Table 8. Sample audit reports	
Audit report name	**Description**
Weekly action details by user	This active report uses a prompt to show weekly details of user actions that have been logged for the selected value. The default value is DATASET, that is logged by using My Data Sets functionality.
Agent execution history by user	Lists the agents that were run by user, date, and time. It includes a bar chart. You can select a date and time range.
Daily metric exceptions	Lists daily metric exceptions for all services.
Execute reports by package and report	Lists the reports that were run, by package. It also includes the user, timestamp, and execution time in milliseconds for each report. You can select a date and time range, one or more users, one or more packages, and one or more reports.
Execute reports by tenant	Lists the tenant IDs and tenant users. This report provides package, report, and time stamp information.
Execute reports, dashboards and stories by user	This report contains user and timestamp prompts, and local filters for report type and package.
Execution history by user	Lists the reports that were run alphabetically, along with the package and timestamp, by user, since the logging database was created. It includes the total number of reports each user ran and the total number of times each user ran each report. It also includes the total number of reports run by all users. You can select one or more users for the report. After you run the audit report, you can choose to view the statistics for a particular report or for all reports.
Failed report executions - by package	Lists report failure executions by package and includes a pie chart, which also shows the failed percentage of each package.
Logon operations by time stamp	Shows logon and logoff timestamps and operations, by user. It also includes the total number of logons and the total number of logons for each user. You can select the time period and one or more users for the report.
Logon operations by tenant	Lists the logon actions for each tenant ID and provides the total number of logons for each user and tenant ID.

Table 8. Sample audit reports (continued)	
Audit report name	**Description**
Logon operations by user name	Shows logon and logoff timestamp by user, along with the type of logoff operation that occurred. It includes the total number of logons and the total number of logons for each user. You can select one or more users for the report.
Migration exceptions	A list report shows exceptions for migration tasks.
Operations by selected object and users	Shows the operations that are performed on target objects, by user. It includes the target object path, timestamp, and the status of the operation. You can select one or more objects, operations, or users for the report.
Report execution history (detailed report)	Lists reports alphabetically along with the associated package and the timestamp for each time the report was executed. It also shows the total number of times each report was executed and the total number of reports that were executed. It also includes a color-coded pie chart that gives an overview of how often the reports are used.
Report execution and user logon history	This active report displays the report execution history and user logon information for a specified period of time.
Report execution history (summary report)	Lists reports alphabetically along with the timestamp for each time the report was run since the logging database was created.
Report execution history by tenant	Lists the executed reports, timestamps, and the associated package names for a tenant. This report provides a summary of total activity and the report can by filtered for a specific tenant.
Report usage	Lists reports by frequency of use. For each report, it lists the user and the number of times it was run by the user since the logging database was created. This report can help you determine if there are any reports that are not being used. If so, you may want to remove them.
Service requests metrics - day report	Shows percentage of successful and failed requests for IBM Cognos services for the current day. Includes a bar chart.
User session - abnormal termination	Shows logon date and time of abnormally terminated user sessions. It also includes a total of session termination for all dates. You can select a date and time range.

Table 8. Sample audit reports (continued)	
Audit report name	**Description**
User session - details	Shows user session details, including the logon time, logoff time, logoff operation, and session duration.
	It also includes the total amount of session time for each user and the total amount of session time for all users.
	You can select a date and time range and one or more users.
User session - logon errors for past 30 days chart	This audit report shows a bar graph of logon failures for the past 30 days.
User session - summary	This audit report shows the average session duration by user. It also shows the total average session duration by user.
	You can select a date and time range and one or more users.
Execute reports, dashboards and stories by package for past 30 days	This active report displays report, dashboard, and story execution details by package for the past 30 days. The report prompts users to select packages, reports, dashboards, or stories, and shows the execution history for the past 30 days by selected prompt values.
View reports by package and report	This report lists users, reports, timestamps, and packages for the tenant that you select.
Report execution by mobile client type	This report lists reports that were run by different mobile client types. For each listed report, the sample report shows the mobile user agent that was used to run the report, and the total number of times when the report was run by each client. You can select the date and time range when running the report.
Report execution by mobile user	This report lists reports that were run by a specific mobile user. For each user, the report specifies the mobile user agent, the types of reports that were run, and the time when the report was run. You can select the user, date, and time range when running the report.
Scheduled mobile report delivery	This report shows the name of the scheduled report, the report mobile recipients, and the number of times when the report was run during the scheduled time. You can select the date and time range when running the report.
Logon operations by mobile user	This active report shows logon and logoff operations for each mobile user and the total number of logon operations for all users for the past seven days. You can drill down on the dates to see the number of logon and logoff operations at a specific hour of day.

Setting up sample audit reports

To set up sample audit reports you need to create a data server connection to the **Audit** database, and import the samples deployment.

Procedure

1. Create a logging database named **Audit** in a supported database system, such as Db2®, Oracle, or Microsoft SQL Server.

For more information, see the guidelines for creating a logging database in the *IBM Cognos Analytics Installation and Configuration Guide*.

2. In IBM Cognos Configuration, configure the **Audit** database.

   a) Under **Environment**, right-click **Logging**.

   b) Select **New resource** > **Destination**. Type the name **Audit**, and choose the type **Database**. Click **OK**.

   c) Right-click **Audit**, and select **New resource** > **Database**. Type the name **Audit** again, and choose the database type that was used to create your logging database in step 1.

   d) Specify the required properties for the **Audit** database, including the user ID and password, and test the database.

   e) Save the configuration, and re-start **IBM Cognos** service.

3. Create a data source connection to the **Audit** database.

   a) Go to **Manage** > **Administration console**.

   b) On the **Configuration** tab, select **Data Source Connections**.

   c) Follow the wizard to create a new data source connection. The database and data source must be named `Audit`.

4. Copy the samples deployment file `IBM_Cognos_Audit.zip` from the location where it was installed to the `ca_install_location`/deployment directory.

   Tip: By default, the `IBM_Cognos_Audit.zip` file is installed to the `installation_location`/samples/Audit_samples directory.

5. Import the audit deployment `IBM_Cognos_Audit.zip` file.

   a) Go to **Manage** > **Administration console**.

   b) On the **Configuration** tab, select **Content Administration**.

   c) Follow the import wizard to import `IBM_Cognos_Audit.zip`. Ensure that the **Samples_Audit** folder is selected in one of the steps.

   After the import, the sample audit reports are available in the **Team content** > **Samples_Audit** > **Audit** folder.

6. Test the audit reports.

   a) Check if audit reporting is enabled. To enable audit reporting, the logging level for selected IBM Cognos services must be set to **Basic** (auditing enabled) or **Request**. If the logging level is set to **Minimal**, auditing is disabled. For more information, see the topic about setting up audit reporting in the *IBM Cognos Analytics Administration and Security Guide*.

   b) Run some of your organization reports or dashboards from **Team content**. This step is needed to collect some data that the sample audit reports can use when you run them for the first time.

   c) Run the sample audit reports from **Team content** > **Samples_Audit** > **Audit**, and view their contents.

Sample reports for the dynamic query mode

Sample models and reports that are optimized for the dynamic query mode are included with IBM Cognos Analytics.

When installed and deployed, you can find the samples in a folder named **Samples_DQ**. The updated reports were also renamed with the suffix **_DQ**.

The samples were modified slightly to benefit from the key improvements of the dynamic query mode. For example, reports were updated to apply a specific sorting order and to specify an aggregation mode.

To access the dynamic query mode samples, you must modify the data source connections to two sample data sources to enable JDBC connections and then import the updated samples deployment archive.

Modify the data source connections to the sample data sources

To import and then use the dynamic query sample reports, you must modify the existing data source connections to two sample relational databases to enable a JDBC connection.

Procedure

1. In IBM Cognos Administration, click the **Configuration** tab and click **Data Source Connections**.

   Note: To access this area in IBM Cognos Administration, you must have the required permissions for the **Administration tasks** secured feature.

2. Click the **great_outdoors_sales** sample data source.

3. In the **Actions** columns, click the **Set properties** icon for the **great_outdoors_sales** data source connection.

4. On the **Connection** tab, under **Connection string**, click the **Edit the connection string** icon.

5. On the **JDBC** tab, select the **Enable JDBC connection** check box.

6. Specify the JDBC connection parameters for the data source.

7. Click **Test the connection** and click **Test**.

   On the results page of the connection test, notice the JDBC results under the **Type / Query Mode** column.

8. Repeat the previous steps with the **great_outdoors_warehouse** sample data source connection.

Import the dynamic query samples content (packages) into the content store

After you have modified the data source connections to the sample data sources, you must import the dynamic query samples content, or packages from the sample deployment archive.

About this task

The dynamic query samples are in the deployment archive named
IBM_Cognos_Samples_DQ_Legacy.zip.

For information about importing the deployment archive, see "Import the extended samples" on page 28.

IBM Cognos Analytics - Reporting samples

The sample reports for IBM Cognos Analytics - Reporting are based on the fictional retail company that is named the Sample Outdoors Company, or on uploaded files.

Samples in the Sample Outdoors Sales (cube) package

The following report is found in the Sample Outdoors Sales (cube) package.

Consecutive Periods Comparison

This report shows the revenue and gross profit for Camping Equipment and Personal Accessories, as well as quantity for Camping Equipment, in two consecutive periods selected by the user.

Samples in the Sales and Marketing (Cube) Package

The following reports are some of the reports found in the Sales and Marketing (Cube) package.

Actual vs. Planned Revenue

This report shows the actual revenue versus planned revenue by order method and year. This report is also a target for the measure based scope drill-through from other reports in the same package.

This report uses the following features:

- lists
- filters
- multiple prompts
- grouping
- sorting
- summarizing

Historical Revenue

This prompted report shows a 13-month rolling forecast of monthly and year-to-date revenue.

This report uses the following features:

- filters
- cascading prompts
- combination charts
- axis titles

Revenue by Date Range

This report shows revenue for a date range that is specified on a prompt page.

This report uses the following features:

- lists
- crosstabs
- context filters
- custom headers and footers
- multiple prompts
- calculations

Revenue by Product Brand (2011)

This report shows the revenue and gross profit by product filtered by the product brand. There is always product turnover, so the report conditionally highlights products that are discontinued.

This report uses the following features:

- lists
- filters
- prompts
- combination charts
- bar charts
- HTML items
- grouping
- sorting
- axis titles

Same Month Prior Year

This report shows sales volume by product line in one or more months. The report is filtered by a prompt for month. The report generates totals for the selected months and for the same months in the prior year.

This report uses the following features:

- crosstabs

- prompts
- custom headers and footers

Selected Retailer Country or Region

This report uses the revenue from a selected country or region as a baseline value for a set of countries or regions. A chart shows the difference in revenue for each country and region as it compares to the base country and region. The report is filtered by a prompt for country and region.

This report uses the following features:

- crosstabs
- bar charts
- tables to control where objects appear

Top Retailers by Country or Region

This report shows the top 10 retailers by country or region. It is used as source for drill-through to the Total Revenue by Country or Region report.

This report uses the following features:

- crosstabs
- prompts
- filters
- line charts
- prompt pages
- query calculations
- calculations
- singletons
- bar charts
- custom headers and footers

Samples in the GO Data Warehouse (analysis) Package

The following reports are some of the reports found in the GO Data Warehouse (analysis) package.

Sample reports that were created in Reporting are located in the Active Report folder and the Reporting Report Samples folder.

Budget vs. Actual

This report shows three years of data by retailer and retailer site for the camping equipment product line. Each year includes budget and actual data.

This report uses the following features:

- summarizing
- crosstabs
- context filters

Core products results

This active report shows revenue data for the core products Camping Equipment and Golf Equipment.

This list report uses two drop-down list controls to filter data by the following criteria:

- core product

- country or region

Customer Returns and Satisfaction

This report shows the customer satisfaction survey results for Asia Pacific in 2013. It highlights the customers who are the least satisfied. It also provides information about customers with the highest number of product returns.

This report uses the following features:

- combination charts
- customizing the color and size of a chart
- lists
- formatting a list
- conditional highlighting
- filters
- custom headers and footers
- colors
- lineage
- text items
- grouping
- baselines
- summarizing
- calculations
- drilling through

Employee Satisfaction 2012

This report shows employee satisfaction survey results by department, compared to targets and industry standards. It also shows employee rankings and terminations.

This report uses the following features:

- crosstabs
- conditional highlighting
- combination charts
- lineage
- text items
- calculations

Employee Training by Year

This report shows employee training data for the selected year and quarter(s). A bar chart shows training costs by region and a crosstab shows data for the selected quarter(s).

This report uses the following features:

- context filters
- cascading prompts
- bar charts
- customizing the color of a chart
- crosstabs
- calculations

Eyewear Revenue by Brand and Size

This report shows a summary of eyewear revenue by brand and compares two prompted retailer sites. The report is filtered by prompts for region, retailer type, and year.

This report uses the following features:

- prompts
- bar charts
- lists
- conditional styles
- calculations
- text items
- custom headers and footers
- combination charts
- axis titles
- crosstabs
- grouping

Global Bonus Report

This list report shows employees who received more than $2,500 bonus in a year by region. It is grouped by country or region. It also shows how much the sales target was exceeded for each region.

This report uses the following features:

- lists
- page sets (page breaks by country or region with different sorting and grouping)
- multiple prompts and parameters
- calculations
- filters
- conditional highlighting
- hidden objects
- lineage

GO Balance Sheet as at Dec 31 2012

This is the Balance sheet report for Americas where current year data is compared to the previous year data. Analysts can see negative trends under Variance where negative percentages are highlighted.

This report uses the following features:

- conditional highlighting
- padding
- crosstabs
- text items
- context filters

Sample Outdoors Company Balance Sheet as at Dec 31 2012

This report shows a simple balance sheet with assets, liabilities, and equity for 2012 with a 2011 comparative. The IBM Cognos Analytics Getting Started guide provides a step-by-step example of how to create this report.

This report uses the following feature:

- crosstabs

Manager Profile

This report shows information about managers, including salary, bonuses, and all compensations grouped by year.

This report uses the following features:

- column charts
- lists
- grouping
- summarizing
- custom chart palette
- prompts

Planned Headcount

This chart report shows headcount variance compared to the plan for each organization for 2013.

This report uses the following features:

- progressive column charts
- templates
- hidden objects
- custom headers and footers
- lists
- baselines

Positions to Fill

This report shows a list of department names, positions, longest days to fill the positions, and ranking. The report uses a prompt for the year and is a drill-through target for the Recruitment report.

This report uses the following features:

- combination charts
- lists
- prompts
- baselines

Promotion Plan Revenue

This report shows the planned revenue for all the promotions of a selected campaign. It is a drill-through target for the Top 10 Promotions by Retailer report that is based on the Sales and Marketing (cube) package.

This report uses the following features:

- prompts
- bar charts
- crosstabs
- axis titles

Promotion Success

This report shows the financial results of the company's promotions. It shows how much of the company's total revenue is attributable to each promotional campaign.

This report uses the following features:

- prompt pages
- HTML items
- summarizing
- axis titles
- bar charts
- lists
- grouping

Quantity Sold vs. Shipped and Inventory

This report compares the quantity of goods sold and shipped with the opening and closing inventory levels.

This report uses the following features:

- filters
- combination charts
- defined y-axes
- custom headers and footers

Recruitment Report

This report shows a variety of recruitment techniques for certain positions or organizations.

This report uses the following features:

- drilling through
- crosstabs
- prompt pages
- colors
- floating object adjustment
- custom headers and footers

Return Quantity by Order Method

This report shows quantity sold, number of returns, and percentage of returns (with those greater than 5% highlighted) by return reason for each product in the Outdoor Protection product line.

This report uses the following features:

- filters
- lists
- conditional highlighting
- grouping

Returned Items

This report shows the number of returned items by return reason and retailer type. A column chart shows returned items by product line and region for the selected date range.

This report uses the following features:

- date and time prompts
- crosstabs
- bar charts
- drilling down
- text items
- sorting

Returns by Damage, Failed Orders and Complaints in 2012

This report shows quality measures based on product returns.

This report uses the following features:

- pie charts
- crosstabs
- indented text
- singletons
- calculations
- drilling through
- text items
- custom headers and footers

Returns by Failed Orders in 2012

This report shows quality measures based on product returns and focuses on failed orders.

This report uses the following features:

- pie charts
- crosstabs
- indented text
- singletons
- drilling through
- calculations, including the `tuple` function

Returns by Order Method

This report shows product returns and reasons filtered on the order method. The Getting Started guide provides a step-by-step example of how to create this report.

This report uses the following features:

- bar charts
- prompts
- crosstabs
- filters
- custom headers and footers

Returns by Order Method - Prompted Chart

This prompted chart report shows product returns and reasons filtered on a prompted order method.

This report uses the following features:

- bar charts

- prompts
- crosstabs
- filters
- custom headers and footers

Revenue by GO Subsidiary 2011

This prompted chart report shows 2011 quarterly revenues for each GO subsidiary.

This report uses the following features:

- templates
- colors
- prompts
- hyperlinks
- customizing charts
- singletons
- bar charts
- drilling through
- layout calculations
- pie charts
- calculations
- combination charts
- text items
- blocks
- sorting

Sales Commissions for Central Europe

This report shows an annual summary of sales commissions, revenues, and gross profit for each branch in Central Europe. It also compares actual commission expenses with planned commission expenses.

This report uses the following features:

- prompts
- calculations
- bar charts
- lists
- conditional highlighting
- drilling through
- custom headers and footers
- axis titles

Sales Growth Year Over Year

This report shows annual sales growth in both percentage and dollar amounts.

This report uses the following features:

- bar charts
- lists
- filters

- sorting
- baselines
- axis titles

Sales target by region

This active report shows sales target by region, including the percentage differences between planned and actual revenue.

Succession Report

This report shows the succession data by department and status for percent ready in a column chart. It also contains a detailed crosstab for the managers associated with the possible successors.

This report uses the following features:

- drilling through to the Manager Profile report
- filters
- lists
- grouping

Top 10 Retailers for 2011

This report shows the top 10 retailers for 2011 by revenue and sales target.

This report uses the following features:

- bar charts
- lists
- filters
- multiple queries
- combination charts
- line charts
- notes
- axis titles
- text items
- custom headers and footers

Samples in the GO Data Warehouse (query) Package

The following reports are some of the reports found in the GO Data Warehouse (query) package.

Sample reports that were created in Reporting are located in the Active Report folder and the Reporting Report Samples folder.

Advertising-cost vs revenue

This active report shows the advertising cost vs revenue by year. Tab controls are used for grouping similar report items.

Bursted Sales Performance Report

This list report shows how to burst a product sales report to a sales manager for Northern Europe sales staff. To successfully burst this report, IBM Cognos Analytics must be configured to use an email server.

This report uses the following features:

- lists

- bursting
- conditional highlighting
- filters
- calculations
- summarizing
- blocks
- custom headers and footers
- sorting
- grouping

Revenue (by product)

This active report shows the revenue by selected product. The sample report is developed for use on a mobile phone device.

Employee Expenses (report)

This report is used as a data source for the Employee Expenses Power Cube.

This report uses the following feature:

- lists

Health Insurance

This report is used as a data source for the Employee Expenses Power Cube.

This report uses the following features:

- lists
- filters

Pension Plan

This report is used as a data source for the Employee Expenses Power Cube.

This report uses the following features:

- lists
- filters

Regular Salary

This report is used as a data source for the Employee Expenses Power Cube.

This report uses the following features:

- lists
- filters

TOC Report

This report takes advantage of the bookmark object to allow a user to navigate through this report easily. This report should be run in PDF or saved HTML format. The report contents show a product order table and an expected volume fact table.

This report uses the following features:

- lists
- bookmarks

- background color
- multiple pages
- grouping

Total Revenue by Country or Region

This report summarizes revenue for Retailer Country or Region and Product Line. It is also a drill-through target for the Top Retailers by Country or Region and Revenue by Order Method reports.

This report uses the following features:

- crosstabs
- combination charts
- summarizing
- tables to control where objects appear

Samples in the GO Sales (analysis) Package

The following reports are some of the reports found in the GO Sales (analysis) package.

2011 Quarterly Sales Forecast

This report shows the sales forecast by product line and region for each quarter in 2011.

This report uses the following features:

- lists
- summarizing
- grouping
- sorting

2011 Sales Summary

This report summarizes revenue and gross profit for 2011 and shows the best sales representatives by revenue and quantity sold.

This report uses the following features:

- lists
- filters
- combination charts
- axis titles
- custom headers and footers
- conditions

Samples in the GO Sales (query) Package

The following reports are some of the reports found in the GO Sales (query) package.

Sample reports that were created in Reporting are located in the Active Report folder and the Reporting Report Samples folder.

Active Report Techniques

This report demonstrates common active report and dashboard features and functionality.

Briefing Book

This report shows a Briefing Book style of report.

This report uses the following features:

- multiple pages
- crosstabs
- multiple queries
- filters
- pie charts
- singletons
- tables of contents
- bookmarks
- PDF options
- horizontal pagination
- sorting
- custom headers and footers
- text items

Film strip

This active report shows detailed sales facts in different charts. Deck controls are used for navigation.

Horizontal Pagination

This report shows crosstabs rendered across several horizontal pages. The first crosstab shows the fit-to-page behavior while the second crosstab shows the horizontal pagination.

This report uses the following features:

- multiple pages
- horizontal pagination
- crosstabs
- custom headers and footers

Matrix-chart and graph

This active report shows a summary of sales facts for each province or state in the Americas. Clicking a category in the map displays the data in a list.

Order Invoices - Donald Chow, Sales Person

This report generates invoices for all the sales by Donald Chow.

This report uses the following features:

- lists
- adding list row cells
- calculations
- formatting tables
- calculations

- filters
- grouping
- tables to control where objects appear

No Data

Each page of this report presents a different option for dealing with a No Data condition. It also generates invoices of sales for the Order Invoices - Donald Chow, Sales Person report in the GO Sales (query) package.

This report uses the following features:

- crosstabs
- custom headers and footers
- no data
- lists

PDF Page Properties

The two pages of this report appear with different Page Orientation (portrait and landscape) when the report is run in PDF format.

This report uses the following features:

- crosstabs
- lists
- page orientation
- PDF options
- custom headers and footers

Product details

This active report shows attributes as color, size, and description for products.

Sales analysis

This active report shows interactions with charts. Clicking a pie series in a chart filters the product line selected.

Sales Dashboard

This active report focuses on sales details by region and product brand. Describes the best performers and the best performance by region.

Singletons on Page Body

This report uses singleton results to display information with no data relationship in the same layout context.

This report uses the following features:

- singletons
- tables
- custom headers and footers

Table of Contents

This report shows two Tables of Contents: one for the main pages and another for the appendices.

This report uses the following features:

- crosstabs
- pie charts
- bookmarks
- tables
- tables of contents
- custom headers and footers
- hyperlinks

Prompt API samples

The following reports are some of the reports found in the Samples_Prompt_API folder.

Clear prompt selections

This report demonstrates using the prompt API to clear selections from all prompts.

Date prompt presets

This report uses the prompt API to provide the user with a set of prompt selection presets based on today's date.

Display all prompt values ignoring user selections

This report uses the prompt API to display all the values in the prompt, whether they are selected or not.

Display user selected prompt values

This report uses the prompt API to display the prompt values selected by the user.

Filter country by letter

This report uses a custom prompt control to provide parameters to filter the report.

Limit date prompt selection by database value

This report demonstrates limiting the selection of a date to a value less than or equal to a latest date value in a query item.

Limit numeric prompt selection by database value

This report demonstrates limiting the selection of a value less than or equal to a largest value in a query item.

Limit time between two dates

This report demonstrates preventing the user from selecting a date range greater than 10 days.

Limit user selection to two items

This report shows how to validate prompt values to stop the user from selecting more than two items.

Pass parameter via hidden prompt

This report demonstrates setting the value of a hidden prompt.

Personal default prompt selections - set selections

This report allows the user to save a set of default prompt selections for use in subsequent reports. The prompt selections are saved to browser cookies for reuse in other reports.

Personal default prompt selections - use selections

This report shows how to use the personal default prompt selections.

Validate prompt values when button pushed

This sample shows how to validate prompt values when a prompt button is clicked.

Validate type-in postal code values

The report uses the prompt API to validate user input character by character as the user types to ensure that a valid postal code is entered.

Validate type-in product line code

The report uses the prompt API to validate user input as the user types.

Cognos Workspace samples

The samples installation includes several IBM Cognos Workspace samples.

Samples in the GO Data Warehouse (analysis) package

The following IBM Cognos Workspace report is found in the GO Data Warehouse (analysis) package.

Employee Satisfaction Workspace

This report shows different measures for employee satisfaction, such as investment in training, employee survey results (by department and by topic, including a comparison with the planned survey results), and a list of bonuses for employees, sorted by country or region. The slider filter applies to the bonus list.

Samples in the GO Data Warehouse (query) package

The following workspaces are found in the GO Data Warehouse (query) package.

Marketing workspace

This workspace shows the results of different promotional campaigns.

The select value filter for campaign name applies to the first two charts. The product line select value filter applies to the advertising cost chart, and the year slider filter applies to the advertising cost crosstab.

Recruitment workspace

This workspace shows the recruitment results (average number of days to fill positions) for different indicators: by organization, department, branch, and year, and detailed information about the success of different recruiting techniques.

Two select value filters control three of the widgets.

Revenue data workspace

This workspace shows the revenue by location, product type, and order method.

The location and product type are controlled by a select value filter.

Sales By Year workspace

This workspace shows different sales indicators for a year range controlled by the slider filter: profit margin, gross profit, product cost, quantity sold, revenue by region, and a comparison between actual and planned revenue.

The slider filter controls all widgets.

Tabbed workspace

This workspace shows a global area and three different tabs: revenue and sales data, human resources data, and financial data.

The global area has action buttons that help you go from tab to tab. There is also a slider filter on the global area that controls widgets on two of the three tabs.

Using the Java samples

The IBM Cognos Software Development Kit includes Java™ program samples that show you some of the types of applications you can design. These samples include source files so that you can test changes to the sample code, and batch files or shell scripts for compiling and running the samples.

Comments in the source files describe the main purpose of each sample, including a summary of which BI Bus API Software Development Kit methods are used. The batch files and shell scripts contain instructions that you must follow before you run them.

Each subdirectory in `installation_location/sdk/java` contains the following files.

Table 9. Files in the `installation_location/sdk/java` subdirectory

File	Description
build.bat	Builds the individual sample on Windows operating systems
build.sh	Builds the individual sample on UNIX or Linux operating systems
run.bat	Runs the individual sample on Windows operating systems
run.sh	Runs the individual sample on UNIX or Linux operating systems

In addition, the *installation_location*/sdk/java directory contains the following files.

Table 10. Files in the `installation_location/sdk/java` directory

File	Description
build-samples.bat	Builds all the Java samples on Windows operating systems
build-samples.sh	Builds all the Java samples on UNIX or Linux operating systems

Before you modify any of the Java samples, familiarize yourself with basic Java programming techniques.

Before you use these Java samples, check to see if you have anonymous access enabled. Although the samples will work with anonymous access, security features will not be demonstrated. To use the security features of the samples, ensure that you have a secured NTLM, LDAP, or other namespace, and that you disable anonymous access.

Because some of the Java samples issue output to the command console, ensure that the console is visible when you run the samples.

Java samples setup for Windows operating systems

Use this procedure to setup the Java samples on Windows operating systems.

Procedure

1. Install a Java Development Kit (JDK). To determine the supported Java. versions, see IBM Cognos Analytics 11.0.0 Supported Software Environments (http://www-01.ibm.com/support/docview.wss?uid=swg27047186). Select your product and product version and create a report for related software. Choose Development Tools under Supported software.

   The report that is generated lists the supported Java versions.
2. Ensure that your PATH environment variable includes the location where the JDK is installed.
3. Edit *installation_location*/sdk/java/Common/CRNConnect.java by locating the line

   ```
   public static String CM_URL = "http://localhost:9300/p2pd/servlet/dispatch";
   ```

   and replacing `localhost:9300` with the name and, if necessary, port number of your IBM Cognos dispatcher.
4. If you want to compile all the samples, edit *installation_location*/sdk/java/build-samples.bat and change the lines

   ```
   set JAVA_HOME=c:/jdk1.5
   set CRN_HOME=../../
   ```

   so that they point to the locations where the JDK and the IBM Cognos Analytics server are installed, respectively.
5. If you want to compile individual samples, edit *installation_location*/sdk/java/*sample_name*/build.bat and change the lines

   ```
   set JAVA_HOME=c:/jdk1.5
   set CRN_HOME=../../
   ```

   so that they point to the locations where the JDK and the IBM Cognos Analytics server are installed, respectively.
6. Compile the Java samples by running build-samples.bat (to compile all samples) or build.bat (to compile an individual sample).

Java setup for Linux and UNIX operating systems

Use this procedure to setup the Java samples on Linux and UNIX operating systems.

Procedure

1. Install a Java Development Kit (JDK). To determine the supported Java versions, see IBM Cognos Analytics 11.0.0 Supported Software Environments (http://www-01.ibm.com/support/docview.wss?uid=swg27047186). Select your product and product version and create a report for related software. Choose Development Tools under Supported software.

   The report that is generated lists the supported Java versions.
2. Set the JAVA_HOME environment variable to point to the location where the JDK is installed.
3. Edit *installation_location*/sdk/java/Common/CRNConnect.java by locating the line

   ```
   public static String CM_URL = "http://localhost:9300/p2pd/servlet/dispatch";
   ```

   and replacing `localhost:9300` with the name and, if necessary, port number of your IBM Cognos dispatcher.
4. If you want to compile all the samples, edit *installation_location*/sdk/java/build-samples.sh and change the lines

```
CRN_HOME=/usr/cognos/xxx
JAVA_HOME=/c/j2sdk1.5
```

so that they point to the locations where JDK and the IBM Cognos Analytics server and the JDK are installed, respectively.

5. If you want to compile individual samples, edit *installation_location*/sdk/java/*sample_name*/build.sh and change the lines

```
CRN_HOME=/usr/cognos/xxx
JAVA_HOME=/c/j2sdk1.5
```

so that they point to the locations where JDK and the IBM Cognos Analytics server and the JDK are installed, respectively.

6. Compile the Java samples by running build-samples.sh (to compile all samples) or build.sh (to compile an individual sample).

IBM Cognos Analysis Studio samples

IBM Cognos Analysis Studio includes sample analyses that are based on the fictional retail company, the Sample Outdoors.

Combine Filters Sample

This analysis uses several combined filters to answer a business question. This report uses the following features:

- combining filters
- using custom filters

Custom Rank Sample

This analysis shows a crosstab that uses custom ranking to override the default rank behavior. This report uses the feature:

- custom ranking

QTD Growth by Product Brand

This analysis uses a cube calculation to show the QTD growth compared to the overall revenue for the product brand. This analysis uses the following features:

- finding top or bottom values
- charting

Top 10 Promotions by Retailers

This analysis uses two filters to show the top retailers that have regular sales greater than 100,000,000, as well as the percentage of the overall total that is generated by promotions. The user selects the year to be shown. This analysis uses the following features:

- % calculations of total
- finding top or bottom values
- showing an analysis as a crosstab and a chart
- using a context filter as a Go To parameter

Difference between Actual and Planned Revenue

This analysis uses a crosstab to show the difference between Actual and Planned Revenue for the top three camping equipment products. This analysis uses the following features:

- finding top or bottom values
- showing an analysis as a crosstab and a chart
- difference calculations

Revenue vs per cent Gross Profit by Product Brand

This analysis uses the Sales and Marketing (cube) package to show the revenue and percentage of gross profit by product brand. This analysis uses the following features:

- charting
- per cent calculation

IBM Cognos Query Studio samples

IBM Cognos Query Studio includes sample reports that are based on the fictional retail company, the Sample Outdoors.

Samples in the Go Data Warehouse (analysis) Package

The following reports are some of the reports found in the GO Data Warehouse (analysis) package.

Return Quantity by Product Line

This crosstab report shows return quantities of product lines for all subsidiaries.

Return Quantity by Product Line Chart

This pie chart report shows return quantities of product lines for all subsidiaries.

Returns by Product Type

This report shows product type return quantities and lost revenue as a result of returns for all subsidiaries.

Sample in the Go Sales (query) Package

The following report is found in the GO Sales (query) package.

Gross Profit for Bella Eyewear Brand

This report shows the gross profit for the Bella eyewear brand. It uses a text filter to retrieve the brand, and a concatenation to get the unique combination of product name and color.

Chapter 5. Sample Outdoors organization and schemas

Under the holding company GO Consolidated, there are six distinct sales organizations, each with their own departments and sales branches.

GO Consolidated consists of sales organizations for GO Americas, GO Asia Pacific, and GO Accessories. The GO Accessories sales organization consists of GO Northern Europe, GO Central Europe, and GO Southern Europe.
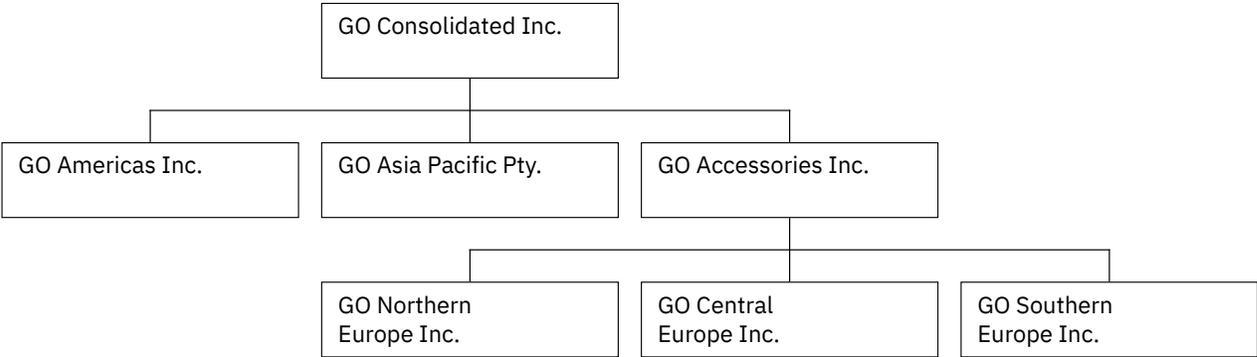
Figure 2. GO Organization

The Outdoors Companies

Five of the six companies are regionally-based companies, whose sales region is identified in the company name. These five companies sell the complete line of outdoor products including:

- Camping Equipment
- Golf Equipment
- Mountaineering Equipment
- Personal Accessories
- Outdoor Protection

The Accessory Company

GO Accessories Inc. operates differently than the five outdoor companies and stands apart in several other areas:

- GO Accessories has its own collection of accessories, differentiated from the outdoor companies by brand, name, price, color and size.
- GO Accessories sells from a single branch to all regions and retailers.
- GO Accessories functions both as an operating company based in Geneva, and as owner or part owner of three GO subsidiaries in Europe. This offers a complex structure that is useful in samples that show office-of-finance type reporting.

Unbalanced hierarchy

The ownership by GO Accessories of the European companies supports applications designed for office-of-finance reporting. Samples applications can include inter-company eliminations and consolidation up to the highest level node - GO Consolidated. In this structure, aggregations of the European organizations occur through GO Accessories.

The resulting unbalanced hierarchy has one additional level, as shown in the following table. At level 3 of the organization structure, GO Central Europe (GOCEU) is at the same level as the operations department for GO Americas (GOAMXOP).

Table 11. Sample GO Accessories Hierarchy		
Level	**Example (ID)**	**Example (data)**
Org level 1	GOCON	GO CONSOLIDATED
Org level 2	GOAMX GOEUX	GO Americas GO Accessories
Org level 3	GOAMXOP GOCEU	GO Americas operations GO Central Europe
Org level 4	30 GOCEUOP	Sales branch 30 - Sao Paulo - BRA GO Central Europe operations
Org level 5	30 6	Sales branch 30 - Sao Paulo - BRA Sales branch 6 - Paris - FRA

Balanced hierarchy - view

You can use views to balance the organization hierarchy by side-stepping the relationship between GO Accessories and the European companies. Use a view when you want to create samples that show metrics and aggregations that are distinct for each corporate entity.

Gosales VIEW_BALANCED_ORG

```
SELECT TOP 100 PERCENT ORGANIZATION_1.ORGANIZATION_PARENT AS ORG_LEVEL1_CODE,
       gosaleshr.ORGANIZATION.ORGANIZATION_PARENT AS ORG_LEVEL2_CODE,
       gosaleshr.ORGANIZATION.ORGANIZATION_CODE
FROM   gosaleshr.ORGANIZATION ORGANIZATION_1 RIGHT OUTER JOIN
       gosaleshr.ORGANIZATION ON ORGANIZATION_1.ORGANIZATION_CODE =
       gosaleshr.ORGANIZATION.ORGANIZATION_PARENT
WHERE (gosaleshr.ORGANIZATION.ORGANIZATION_CODE BETWEEN N'006' AND
       N'8820')
ORDER BY ORGANIZATION_1.ORGANIZATION_PARENT,
         gosaleshr.ORGANIZATION.ORGANIZATION_PARENT DESC,
         gosaleshr.ORGANIZATION.ORGANIZATION_CODE
```

gosalesdw.VIEW_BALANCED_ORG

```
SELECT gosalesdw.GO_ORG_DIM.ORGANIZATION_KEY, GO_ORG_DIM_1.ORGANIZATION_PARENT AS
              ORG_LEVEL1_CODE, GO_ORG_NAME_LOOKUP_1.ORGANIZATION_NAME_EN AS ORG_LEVEL1_NAME,
       gosalesdw.GO_ORG_DIM.ORGANIZATION_PARENT AS ORG_LEVEL2_CODE,
       GO_ORG_NAME_LOOKUP_2.ORGANIZATION_NAME_EN AS ORG_LEVEL2_NAME,
       gosalesdw.GO_ORG_DIM.ORGANIZATION_CODE AS ORG_CODE,
       gosalesdw.GO_ORG_NAME_LOOKUP.ORGANIZATION_NAME_EN AS ORG_NAME
FROM gosalesdw.GO_ORG_NAME_LOOKUP GO_ORG_NAME_LOOKUP_2 INNER JOIN
       gosalesdw.GO_ORG_DIM INNER JOIN
       gosalesdw.GO_ORG_NAME_LOOKUP ON
       gosalesdw.GO_ORG_DIM.ORGANIZATION_CODE =
              gosalesdw.GO_ORG_NAME_LOOKUP.ORGANIZATION_CODE ON
       GO_ORG_NAME_LOOKUP_2.ORGANIZATION_CODE =
       gosalesdw.GO_ORG_DIM.ORGANIZATION_PARENT INNER JOIN
       gosalesdw.GO_ORG_NAME_LOOKUP GO_ORG_NAME_LOOKUP_1 INNER JOIN
       gosalesdw.GO_ORG_DIM GO_ORG_DIM_1 ON GO_ORG_NAME_LOOKUP_1.ORGANIZATION_CODE =
              GO_ORG_DIM_1.ORGANIZATION_PARENT ON
       gosalesdw.GO_ORG_DIM.ORGANIZATION_PARENT =
```

```
      GO_ORG_DIM_1.ORGANIZATION_CODE
WHERE (gosalesdw.GO_ORG_DIM.ORGANIZATION_CODE BETWEEN N'006' AND N'8820')
```

GO Departments

The Sample Outdoors companies are divided into operating and corporate departments. Each organization has the same structure.

Applications for financial and planning data use the department structure in the sample budgets and forecasts.

Sales branches under operations, and HR departments under corporate, are the richest sources of data for querying and analysis.

Table 12. Sample Outdoors Departments	
Division (GL)	**Department (GL)**
Corporate	Sales (Corporate)
Corporate	Marketing (1750)
Corporate	IS&T
Corporate	Human Resources
Corporate	Finance
Corporate	Procurement
Operations	Sales branches
Operations	Production and Distribution
Operations	Customer Service

GO Operations

Metrics such as revenue, quantities, and cost of goods, aggregate through levels from sales rep to branch to operations under each corporate banner.

Data from other departments ties into the sales data. For example, the marketing department implements sales campaigns.

Human Resources

Human resources data exists for metrics such as compensation, benefits, training and surveys. Employees are paid hourly, or receive salaries. Compensation may including commission and bonuses. Vacation and sick days are part of the benefits package.

Each Sample Outdoors organization is staffed by a variety of employees including personnel for marketing, finance, sales, as well as those in other departments. Employee history exists for employees that change positions or have new managers.

In the warehouse data (GOSALESDW), the employee history is contained in a slowly changing dimension, in which an employee code may be a repeating value and the employee key is unique.

In the transactional data (GOSALES), employee history requires filtering on a date range in order to assign transaction records to employees in the appropriate time period. Filtering also prohibits double-counting that can occur with repeating employee codes. For example, to capture an accurate history of an employee at the time of training, the date range is qualified.

```
WHERE (TRAINING_DETAILS.TRAINING_DATE BETWEEN
EMPLOYEE_HISTORY.RECORD_START_DATE AND EMPLOYEE_HISTORY.RECORD_END_DATE)
```

Alternatively, you can select active records by filtering out employee history, which returns only the current manager or job position of the employee.

```
WHERE (EMPLOYEE_HISTORY.RECORD_END_DATE IS NULL)
```

Warehouse Schema

Gosalesdw Schema

Table	Record count	Functional area
Table 13. Great Outdoors sales data warehouse schema		
DIST_INVENTORY_FACT	53,837	Distribution
DIST_PRODUCT_FORECAST_FACT	129,096	Distribution
DIST_RETURN_REASON_DIM	5	Distribution
DIST_RETURNED_ITEMS_FACT	10,249	Distribution
EMP_EXPENSE_FACT	127,984	Distribution
EMP_EXPENSE_PLAN_FACT	30,150	Distribution
EMP_EXPENSE_TYPE_DIM	39	Distribution
FIN_ACCOUNT_DIM	242	Finance
FIN_FINANCE_FACT	164,132	Finance
FIN_SUBM_DIM	52	Finance
GO_BRANCH_DIM	29	Geography
GO_REGION_DIM	21	Geography
MRK_PROD_SURVEY_TARG_FACT	5,824	Marketing
MRK_PRODUCT_SURVEY_DIM	7	Marketing
MRK_PRODUCT_SURVEY_FACT	165,074	Marketing
MRK_PROMOTION_DIM	112	Marketing
MRK_PROMOTION_FACT	11,034	Marketing
MRK_PROMOTION_PLAN_FACT	8,652	Marketing
MRK_RTL_SURVEY_DIM	9	Marketing
MRK_RTL_SURVEY_FACT	22,508	Marketing
MRK_RTL_SURVEY_TARG_FACT	64	Marketing
EMP_POSITION_DIM	57	Organization
GO_ORG_DIM	123	Organization
EMP_EMPLOYEE_DIM	972	Personnel
EMP_POSITION_SUMMARY_FACT	15,050	Personnel
EMP_RANKING_DIM	5	Personnel
EMP_RANKING_FACT	1,897	Personnel
EMP_RECRUITMENT_DIM	14	Personnel

Table 13. Great Outdoors sales data warehouse schema (continued)		
Table	**Record count**	**Functional area**
EMP_RECRUITMENT_FACT	416	Personnel
EMP_SUCCESSION_FACT	181	Personnel
EMP_SUCCESSION_STATUS_DIM	5	Personnel
EMP_SUMMARY_FACT	24,233	Personnel
EMP_SURVEY_FACT	5,725	Personnel
EMP_SURVEY_TARG_FACT	20	Personnel
EMP_SURVEY_TOPIC_DIM	5	Personnel
EMP_TRAINING_DIM	42	Personnel
EMP_TRAINING_FACT	4,465	Personnel
GO_SATISFACTION_DIM	5	Personnel
SLS_PRODUCT_DIM	274	Product
MRK_ACTIVITY_STATUS_DIM	2	Retailer
SLS_RTL_DIM	847	Retailer
SLS_ORDER_METHOD_DIM	7	Sales
SLS_SALES_FACT	446,023	Sales
SLS_SALES_ORDER_DIM	446,023	Sales
SLS_SALES_TARG_FACT	233,625	Sales
GO_TIME_DIM	1,465	Time
Xgorev	15	Database Admin

Gosalesdw Lookup tables

Table 14. Great Outdoors sales data warehouse Lookup		
Table	**Record count**	**Functional area**
EMP_EXPENSE_UNIT_LOOKUP	3	Expenses
FIN_ACCOUNT_CLASS_LOOKUP	5	Finance
FIN_ACCOUNT_NAME_LOOKUP	242	Finance
FIN_ACCOUNT_TYPE_LOOKUP	4	Finance
FIN_SUBM_CURRENCY_LOOKUP	7	Finance
FIN_SUBM_TYPE_LOOKUP	3	Marketing
MRK_BUNDLE_GROUP_LOOKUP	15	Marketing
MRK_CAMPAIGN_LOOKUP	12	Organization
EMP_POSITION_LOOKUP	57	Organization
GO_ORG_NAME_LOOKUP	123	Personnel
EMP_TERMINATION_LOOKUP	6	Personnel

Table 14. Great Outdoors sales data warehouse Lookup (continued)		
Table	**Record count**	**Functional area**
GO_GENDER_LOOKUP	2	Product
SLS_PRODUCT_BRAND_LOOKUP	28	Product
SLS_PRODUCT_COLOR_LOOKUP	27	Product
SLS_PRODUCT_LINE_LOOKUP	5	Product
SLS_PRODUCT_LOOKUP	274 per language	Product
SLS_PRODUCT_SIZE_LOOKUP	55	Product
SLS_PRODUCT_TYPE_LOOKUP	21	Product
GO_TIME_QUARTER_LOOKUP	20	Time

Transaction Schemas

Gosales Schema

Table 15. Great Outdoors sales schema		
Table	**Record count**	**Functional area**
INVENTORY_LEVELS	53,837	Distribution
PRODUCT_FORECAST	129,096	Distribution
RETURN_REASON	5	Distribution
RETURNED_ITEM	10,249	Distribution
BRANCH	29	Geography
COUNTRY	21	Geography
SALES_REGION	5	Geography
PRODUCT	274	Product
PRODUCT_BRAND	28	Product
PRODUCT_LINE	5	Product
PRODUCT_TYPE	21	Product
CONVERSION_RATE	624	Sales
EURO_CONVERSION	8	Sales
ORDER_DETAILS	446,023	Sales
ORDER_HEADER	53,256	Sales
ORDER_METHOD	7	Sales
SALES_TARGET	233,625	Sales
TIME_DIMENSION	1,465	Time
xgorev	16	Database admin

Gosales Lookup tables

Table 16. Great Outdoors sales Lookup tables		
Table	**Record Count**	**Functional Area**
PRODUCT_COLOR_LOOKUP	27	Product
PRODUCT_NAME_LOOKUP	274 per language	Product
PRODUCT_SIZE_LOOKUP	55	Product
CURRENCY_LOOKUP	21	Sales
TIME_QUARTER_LOOKUP	20	Time

Gosaleshr Schema

Table 17. Great Outdoor sales human resources schema		
Table	**Record count**	**Functional area**
EMPLOYEE_EXPENSE_DETAIL	127,997	Expenses
EMPLOYEE_EXPENSE_PLAN	37,317	Expenses
EMPLOYEE_SUMMARY	24,233	Expenses
EMPLOYEE_SURVEY_TOPIC	5	Expenses
EXPENSE_GROUP	10	Expenses
EXPENSE_TYPE	39	Expenses
EXPENSE_UNIT	3	Expenses
ORGANIZATION	123	Organization
POSITION_DEPARTMENT	445	Organization
POSITION_SUMMARY	15,050	Organization
EMPLOYEE	766	Personnel
EMPLOYEE_HISTORY	972	Personnel
EMPLOYEE_SURVEY_RESULTS	5,725	Personnel
EMPLOYEE_SURVERY_TARGETS	20	Personnel
RANKING	5	Personnel
RANKING_RESULTS	1,898	Personnel
RECRUITMENT	416	Personnel
RECRUITMENT_MEDIUM	14	Personnel
RECRUITMENT_TYPE	7	Personnel
SATISFACTION_INDEX	5	Personnel
SUCCESSION_DETAILS	182	Personnel
SUCCESSOR_STATUS	5	Personnel
TRAINING	42	Personnel

Gosaleshr Lookup tables

Table 18. Great Outdoors sales human resources Lookup tables		
Table	**Record count**	**Functional area**
DEPARTMENT_LOOKUP	12	Organization
POSITION_LOOKUP	45	Organization
GENDER_LOOKUP	2	Personnel
TERMINATION_LOOKUP	6	Personnel
TRAINING_DETAILS	4,471	Personnel

Gosalesmr Schema

Table 19. Great Outdoors sales marketing schema		
Table	**Record count**	**Functional area**
PRODUCT_SURVEY_RESULTS	165,074	Marketing
PRODUCT_SURVEY_TARGETS	5,824	Marketing
PRODUCT_SURVEY_TOPIC	7	Marketing
PROMOTION_BUNDLE_GROUP	15	Marketing
PROMOTION_CAMPAIGN	12	Marketing
PROMOTION_PLAN	8,652	Marketing
PROMOTIONS	112	Marketing
RETAILER_SURVEY_RESULTS	22,508	Marketing
RETAILER_SURVEY_TARGETS	64	Marketing
RETAILER_SURVEY_TOPIC	9	Marketing

Gosalesrt Schema

Table 20. Great Outdoors sales retailer		
Table	**Record count**	**Functional area**
ACTIVITY_STATUS_LOOKUP	2	Retailer
RETAILER	562	Retailer
RETAILER_ACTIVITY	17,754	Retailer
RETAILER_CONTACT	847	Retailer
RETAILER_SITE	847	Retailer
RETAILER_SITE_MB	847	Retailer
RETAILER_TYPE	8	Retailer

Chapter 6. Cognos Analytics for Jupyter Notebook samples

Before you can use the IBM Cognos Analytics for Jupyter Notebook samples, Cognos Analytics for Jupyter Notebook must be enabled in your IBM Cognos Analytics environment.

Importing and configuring the Jupyter samples

To set up the samples, you must perform several tasks, such as importing the Jupyter samples.

Before you begin

Before importing these samples, please ensure that you have installed and configured the Jupyter Notebook server. For more information, see *Installing IBM Cognos Analytics for Jupyter Notebook Server* in the *Installing and configuring guide*.

Steps for Cognos Analytics versions 11.1.0 to 11.1.4

1. Locate the deployment archive, *IBM_Cognos_Notebook_Samples.zip*, for the notebook samples in the installation location: `cognos_analytics_server_install_location\samples\notebooks`.
2. Copy the deployment file into your deployment folder: `cognos_analytics_server_install_location\deployment`.
3. Go to **Manage** > **Administration console** and open **IBM Cognos Administration**.
4. On the **Configuration** tab, click **Content Administration**.
5. On the toolbar, click the **New Import** icon .
6. Select **IBM_Cognos_Notebook_Samples** in the first step of the **New Import** wizard.
7. At the **Run with options** screen, ensure that **Do not Assign new IDs during import** is selected. Click **Run** and complete process using default settings.
8. After the import is complete, you can navigate to the notebook samples by clicking *Team content > Samples > Notebooks*.

Steps for Cognos Analytics versions 11.1.5 and higher

1. Locate the deployment archive, *IBM_Cognos_Notebook_Samples.zip*, for the notebook samples in the deployment folder: `cognos_analytics_server_install_location\deployment`.
2. Go to **Manage** > **Administration console** and open **IBM Cognos Administration**.
3. On the **Configuration** tab, click **Content Administration**.
4. On the toolbar, click the **New Import** icon .
5. Select **IBM_Cognos_Notebook_Samples** in the first step of the **New Import** wizard.
6. At the **Run with options** screen, ensure that **Do not Assign new IDs during import** is selected. Click **Run** and complete process using default settings.
7. After the import is complete, you can navigate to the notebook samples by clicking *Team content > Samples > By feature > Notebooks*.

Jupyter notebook samples

The notebook samples in this section are designed to provide ideas for using Jupyter notebooks with IBM Cognos Analytics.

Flexible lightweight ETL notebook sample

This sample demonstrates ETL tasks within Cognos Analytics for Jupyter Notebook.

This sample notebook demonstrates how to conduct lightweight ETL (extract, transform, and load) tasks by connecting to an external data asset, performing some data cleansing, and writing the data into a Cognos Analytics asset.

This sample can be found here: `Team content > Samples > Notebooks > Flexible lightweight ETL`

Time series analysis notebook sample

Use an external CSV file in Cognos Analytics for Jupyter Notebook.

This sample notebook demonstrates how to connect to an external CSV file, display the data, write the data as a Cognos Analytics asset, modify the presentation of the data, and create a visualization.

`Team content > Samples > Notebooks > IoT time series analysis`

Visualization creation notebook sample

This sample notebook demonstrates how to connect to a local data file and create several visualizations (bar, column, line, pie, and bubble).

Sample can be found in `Team content > Samples > Notebooks > Visualization notebook`.

Retailer dashboard notebook sample

This sample demonstrates the integration of notebooks and dashboards.

Sample report can be found here: `Team content > Samples > Notebooks > Retailer dashboard`

Telecom data analysis notebook sample

`11.1.5` This sample notebook demonstrates how to perform customer churn analysis on a sample dataset. Predictive analytics models are used to predict customer churn by evaluating their probability of risk to churn.

This sample can be found here: `Team content > Samples > By feature > Notebooks > Notebooks`.

Telecom data visualizations notebook sample

`11.1.5` This sample notebook demonstrates how to explore data and create visualizations in the context of a fictional telecommunications company.

This sample can be found here: `Team content > Samples > By feature > Notebooks > Notebooks`

Unit infection data notebook sample

`11.1.5` This sample notebook demonstrates how to create a dataset and use visualization with a slider to display the rates of infection in a group of fictional hospital units over a given time period.

This sample can be found here: `Team content > Samples > By feature > Notebooks > Notebooks`.

Data quality template notebook sample

11.1.5 This notebook template can be applied to any dataset. It demonstrates how to read, review, quality check, and clean data.

This sample can be found here: `Team content > Samples > By feature > Notebooks > Notebooks.`

Schedule data creation notebook sample

11.1.5 This sample notebook demonstrates patient visit and nurse shift data at a fictional hospital.

This sample can be found here: `Team content > Samples > By feature > Notebooks > Notebooks.`

Schedule data creation notebook widget sample

11.1.5 This sample report demonstrates how to add notebook widgets to a report. These widgets display fictional health insurance coverage data from a notebook.

This sample can be found here: `Team content > Samples > By feature > Notebooks > Reports.`

Health insurance coverage analysis notebook sample

11.1.5 This sample notebook demonstrates how to create and merge geographic data with other data, modify the presentation of the data, and create map and trend line visualizations.

This sample can be found here: `Team content > Samples > By feature > Notebooks > Notebooks.`

Retailer report notebook widget sample

11.1.5 This sample report demonstrates how to add notebook widgets to a report. These widgets display fictional health insurance coverage data from a notebook.

This sample can be found here: `Team content > Samples > By feature > Notebooks > Reports.`

Chapter 7. The Weather Company sample

The Weather Company sample includes metadata corresponding to The Weather Company analytic tooling services. This data module can be joined to other data modules to create relationships between your application tables and data from The Weather Company.

Importing The Weather Company sample

The Weather Company sample demonstrates how to use The Weather Company data.

Before you begin

You must have a Weather Company API key. For more information, see Weather Data Packages (https://business.weather.com/products/weather-data-packages). If you want historical weather data, then you must have the History on Demand Data Package. If you want forecast data, then you must have the Enhanced Forecast Weather Data Package.

Procedure

1. Go to https://public.dhe.ibm.com/software/data/sw-library/cognos/mobile/C11/TWC/ and download the file called `The_Weather_Company.zip` to the `cognos_analytics_server_install_location\deployment` folder.
2. Go to **Manage** > **Administration console** and open **IBM Cognos Administration**.
3. On the **Configuration** tab, click **Content Administration**.
4. On the toolbar, click the **New Import** icon .
5. Select **The_Weather_Company.zip** in the first step of the **New Import** wizard and complete the remaining steps of the wizard using the defaults.
6. Update the **IBM Weather Company** data source connection signon with your Weather Company API key as the password.

   For information about how to update the signon, see *Creating a data server connection* in the *Managing User Guide*.

Results

The sample appears in the **Team content** > **The Weather Company, an IBM business** > **The Weather Company** folder. It contains the following objects:

Boston 311 calls data module
  Created from the `Boston_311_calls.xlsx` uploaded file. It is one of the sources in **Boston 311 plus weather data module**.

Boston 311 plus weather data module
  Demonstrates how to combine business data (**Boston 311 calls data module**) and weather data (**The Weather Company data module**) into a single data module using filter joins.

Boston_311_calls.xlsx
  Demonstrates how to add date and `postalKey` fields to support weather analytics. The file contains 311 calls to the city of Boston, MA. Like many other cities, Boston logs hundreds of thousands of requests each year for 311 services such as snow plowing, street cleaning, and pot hole repair. Source: City of Boston.

Historical weather report
  Demonstrates weather analytics in the context of a report.

The Weather Company data module
Includes metadata corresponding to The Weather Company analytic tooling services. This data module must be joined to other data modules to create relationships between application tables and data from The Weather Company as demonstrated in **Boston 311 plus weather data module**.

The Weather Company data module contains the following tables:

Forecast on demand
The forecast on demand (FDAT) table returns information for a 14-day forecast, which is computed on demand by The Weather Company.

Historical weather data
The historical weather data (HDAT) table returns historical weather data, starting from June 2015. Summarized by day for a postal code.

A request to HDAT returns data for a date range. If you omit the date range, all data is returned.

Locations
Countries and postal codes supported by The Weather Company. This table returns examples of the countries and postal code values that are supported. Do not use this table in other joins. It is intended to be used only to help verify whether the values in the source columns or calculated columns are postal codes and countries that are recognized by The Weather Company.

Product entitlement
The products provided by The Weather Company that the API key is entitled to access.

To retrieve HDAT or FDAT data, The Weather Company requires requests to specify a `postalKey` field. The `postalKey` can be provided using relationships or embedded filters. The `postalKey` field is of the form *postal_code:country_code*, where *postal_code* is a postal code (also known as ZIP code or similar name) and *country_code* is a two-digit country code. You can find a list of the supported postal codes and country codes in the `Locations` table in the **The Weather Company** data module.

If you are retrieving HDAT data, then you can also specify a date range. You must join on a column of DATE data type. If the source value has the TIMESTAMP data type, then convert it to the DATE data type.

You create the join by specifying one of the following filters in your data module or Framework Manager model:

Embedded filter
Filter on the `postalKey` column by specifying either one value or a list of values. For information about embedded filters, see the *Data Modeling Guide*.

Filter join or relationship
To create a relationship in data modeling in IBM Cognos Analytics, see *Creating a relationship from scratch* in the *Data Modeling Guide*. Make sure that the source table is on the left side of the relationship (**Table 1**) and that The Weather Company table is on the right side of the relationship (**Table 2**). Also make sure that you select **Unique or range of values** for the **Optimization** option.

To create a filter join in Framework Manager, see *Optimizing joins by applying filters* in the *Framework Manager User Guide*.

By default, an "equals" comparison is done. When a filter join is computed, a list of dynamically calculated values is used in the query to access The Weather Company data. If the source table has two or more `postalKeys`, an "in" comparison is done. If the source column for a date is specified, a "between" comparison is done. The low value is the minimum date in the table and the high value is the maximum date in the table.

Note: To see an example of how to join a data asset to The Weather Company data module, look at the **Boston 311 plus weather data module**.

The FDAT and HDAT tables contain the following columns:

• The `postalKey` that describes the location associated to the weather data
• The day for which the weather was observed or forecast

- A folder corresponding to each of the products offered by the The Weather Company. The following list describes the available products. The products that you have access to depend on your organization's product entitlement.

Dew point

The temperature which air must be cooled at constant pressure to reach saturation. The dew point is also an indirect measure of the humidity of the air. The dew point never exceeds the temperature. When the dew point and temperature are equal, clouds or fog usually form. The closer the values of temperature and dew point, the higher the relative humidity. The dew point unit of measure is Kelvin (K).

Feels like

An apparent temperature. It represents what the air temperature "feels like" on exposed human skin due to the combined effect of the wind chill or heat index. The unit of measure is Kelvin (K).

Gust

The wind gust speed. The gust unit of measure is meters/second (m/s).

Mean sea level pressure

The mean sea level pressure (MSLP) unit of measure is Pascal (Pa).

Precipitation

The hourly rate of observed liquid precipitation in millimeters per hour (mm/h).

Relative humidity

The relative humidity of the air, which is the ratio of the amount of water vapor in the air to the amount of vapor required to bring the air to saturation at a constant temperature. The relative humidity unit of measure is percentage (%).

Snow amount

The hourly rate of observed snowfall in meters per hour (m/h).

Temperature

The temperature of the air, measured by a thermometer 1.5 meters (4.5 feet) above the ground that is shaded from the other elements. The temperature unit of measure is Kelvin (K).

UV index

The UV index is an enumerated integer. The following table shows the values for ultraviolet index.

Range	Description
0 - 2	low
3 - 5	moderate
6 - 7	high
8 - 10	very high
11 - 16	extreme

Visibility

The horizontal visibility at the observation point. Visibility can be reported as fractional values, particularly when visibility is less than 2 miles. Visibility greater than 10 statute miles (16.1 kilometers), which is considered "unlimited" is reported as 999. It is possible to have visibility values that equal zero. Dense fogs and heavy snows can produce values near zero. Fog, smoke, heavy rain, and other weather phenomena can reduce visibility to near zero miles or kilometers. The visibility unit of measure is meters (m).

Wind speed

The wind information reported in the hourly current conditions corresponds to a 10-minute average called the *sustained wind speed*. Sudden or brief variations in the wind speed are known as "wind gusts" and are reported in a separate data field (gust). The wind speed unit of measure is meters/ second (m/s).

Each product (for example, snow amount) is returned as an aggregate value such as sum if applicable, minimum, maximum, and average, based on the following definitions:

Day
Measurements from 00:00 hours to 24:00 hours.

Daytime
Measurements from 07:00 hours up to 19:00 hours.

Nighttime
Measurements from 09:00 hours up to 07:00 hours of the next day.

Morning
Measurements from 07:00 hours up to 13:00 hours.

Afternoon
Measurements from 13:00 hours up to 19:00 hours.

Evening
Measurements from 19:00 hours up to 01:00 hours of the next day.

Overnight
Measurements from 01:00 hours up to 07:00 hours in the following day.

Index

Special Characters

.otl files 32

A

aggregation
    samples and time dimensions 39
Analysis Studio
    samples 65
audit reports 41

B

base samples 2

C

Cognos Analytics,, *See* IBM Cognos Analytics
Cognos Workspace samples 62
connections
    OLAP data sources 32

D

data
    IBM Cognos Analytics Jupyter Notebook samples 75
    IBM Cognos samples 19
database models 36
databases
    IBM Cognos samples 19
deploying dynamic cubes 36
deploying sample cube 36
deploying sample data 36
dynamic cubes 36

E

Essbase
    cube sample 32

F

Framework Manager
    sample models 28

G

gosldw_sales sample dynamic cube 36
gosldw_sales_and_target sample dynamic cube 36
gosldw_target sample dynamic cube 36

I

IBM Cognos

IBM Cognos *(continued)*

samples 19, 75
IBM Cognos samples 19, 75
importing
    samples 28, 35

J

Java
    setup procedures 64
    using the samples 63

M

Microsoft Analysis Services
    setting up MSAS cube samples 31
model.fmd 36
models
    database samples 28
    modifying for samples 28, 35
    sample models and packages 39
    samples 45

O

OLAP data sources
    connections 32

P

packages
    samples 45

Q

Query Studio
    samples 66

R

Reporting
    samples 46
reports
    samples 45
restoring
    samples databases 19

S

Sample Outdoors Company
    databases, models, and packages 39
    samples 37
Sample Outdoors,, *See* IBM Cognos samples
samples
    Analysis Studio 65