IBM Planning Analytics
Version 2.0.0

Cognos Insight

IBM
Note
Before using this information and the product it supports, read the information in "Notices" on page 213.

Product Information
This document applies to IBM Planning Analytics Version 2.0.0 and may also apply to subsequent releases.

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Introduction

With IBM® Cognos® Insight, you have the power to analyze data, explore scenarios, and influence decisions by creating managed workspaces.

You can use Cognos Insight workspaces to communicate results to line-of-business managers as interactive managed workspaces. Because Cognos Insight supports write-back, you can also use these workspaces to gather and consolidate management targets, commitments, and forecasts.

Finding information

To find documentation on the web, including translated documentation, access IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

For more information about the product, see the following resources:

- IBM Cognos Insight Community (https://www.ibm.com/web/myportal/analytics/analyticszone/forums/PerformanceManagement)

Accessibility features

Accessibility features help users who have a physical disability, such as restricted mobility or limited vision, to use information technology products. Cognos Insight has accessibility features. For information about these features, see “Accessibility features,” on page 191.

IBM Cognos HTML documentation has accessibility features. PDF documents are supplemental and include no added accessibility features.

Forward-looking statements

This documentation describes the current functionality of the product. References to items that are not currently available may be included. No implication of any future availability should be inferred. Any such references are not a commitment, promise, or legal obligation to deliver any material, code, or functionality. The development, release, and timing of features or functionality remain at the sole discretion of IBM.

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used with permission of the copyright holder, for use as sample data to develop sample applications. Product names referenced may be the trademarks of their respective owners. Unauthorized duplication is prohibited.
Chapter 1. New features

This section contains a list of new and changed features for this release. It also contains a cumulative list of similar information for previous releases. It helps you plan your upgrade and application deployment strategies and the training requirements for your users.

To review an updated list of environments that are supported by IBM Cognos Insight, including information about operating systems, Cognos servers, and databases, see Cognos Insight system requirements in Software Environments for IBM Planning Analytics 2.0 (http://www.ibm.com/support/docview.wss?uid=swg27049052).

New features in version 2.0

There are new features in IBM Cognos Insight in IBM Planning Analytics version 2.0.

Row and column headers are highlighted when a cell is selected

When a cell is selected in a grid, the corresponding row and column headers are highlighted as they are in Excel. The color of the highlighting matches the color of the cell.

Search for objects in the content pane

You can search for objects in the content pane. You can type characters to filter on when you are unsure of an exact object name, or if you want to find objects that match specific criteria. The search finds all objects in the tree that match the criteria. For more information, see “Searching in the content pane” on page 55.

Search for members in the dimension editor

When you edit large dimensions, navigation can be difficult. To make it easier, you can search through existing elements of the dimension that is open in the dimension editor. For more information, see “Searching in large dimensions” on page 99.

New right-click menu options for cells

Two new options available on the right-click menu for a cell:

- Export to
- Freeze panes

Previously, these options were available only from the widget toolbar.

New features in version 10.3.0

There are new features in IBM Cognos Insight version 10.3.0.
Support for line returns in a crosstab cell

You can now use the Alt+Enter keyboard shortcut to add a line return to a cell within a crosstab.

History chart scorecarding widget

You can now add a history chart scorecarding widget to an IBM Cognos Insight workspace.

A history chart shows a column chart of actual data for a metric, with a line for target and tolerance indicators. For more information, see "Scorecard widgets" on page 157.

New picklist option for measures

When you format a measure, you can now define a list of values from which a user can select. For more information, see "Changing the format of measures" on page 100.

Data flow diagram

You can now add a data flow diagram to an IBM Cognos Insight workspace to show a visual representation of the links or processes that reference or move data between cubes. For more information, see "Adding a data flow diagram" on page 84.

Model report

You can create a report that contains the properties of each object contained in a model. For more information, see "Creating a model report" on page 177.

Mirroring in the content pane

You can now enable mirroring in the content pane to support bidirectional languages. For more information, see "Bidirectional language support" on page 14.

New features in version 10.2.2.6

There are new features in IBM Cognos Insight version 10.2.2.6.

Deleting comments in cells

You can now delete comments that you added to cells after a workspace is published. Comments can be deleted while you are working in distributed mode or connected mode.

For more information, see "Adding, viewing, and deleting comments in cells" on page 105.

New right-click menu options for cells

Two new options available on the right-click menu for a cell:

- Suppress empty cells
- Autofit
Previously, these options were available only from the widget toolbar.

### New features in version 10.2.2.5

There are new features in IBM Cognos Insight version 10.2.2.5.

**Saving uncommitted data to a Cognos TM1® server automatically**

If you have uncommitted data in Cognos Insight sandbox server, you can now update the Cognos TM1 server with this data automatically. You can choose to update the server before or after an IBM Cognos TM1 TurboIntegrator process executes.

For more information, see “Adding action buttons that run a script” on page 91.

### New features in version 10.2.2.3

There are new features in IBM Cognos Insight version 10.2.2.3.

**Repeat leaves spread now available in consolidated cells**

Repeat Leaves Spread is now an option in the Data Spread dialog box when you type a value into a consolidated cell whose child data items do not contain values.

If the consolidated cell is targeted by a rule, the Data Spread dialog box will open only if it is enabled in IBM Cognos TM1 Performance Modeler.

In Cognos TM1 Performance Modeler, open the Application Design pane and double-click the application name to display the Application Design tab. Select the Spread on Rule Derived Consolidated Cells setting and save. Then deploy the application.

**Dynamically aggregate members in an explore point**

You can dynamically aggregate members in an explore point under a new parent element. The parent element is displayed in the explore point, and in the overview area and the crosstab, if applicable.

This capability is available only for IBM Cognos Insight workspace (.cdd) files. It can be used when working in standalone mode or distributed mode with an IBM Cognos TM1 server but not when working in connected mode.

To aggregate members in an explore point, click the members to be combined, and then click the Create total element icon. The aggregated members are displayed under a parent member called Consolidated total.

To remove the aggregation, click the Remove total element icon.

**Configuring dynamic member aggregation**

This capability has to be configured separately for each Cognos Insight workspace (.cdd) file.

1. Extract the files in a Cognos Insight workspace (.cdd) file with a file archive program.
2. Open cdfDashboardModel.xml with a text editor.
3. Add the `expPointConsTotalShow="true"` attribute to the dashboards element.

4. Save the file and compress the extracted files back into a Cognos Insight workspace (.cdd) file.

5. Open the Cognos Insight workspace (.cdd) file in Cognos Insight.

The dynamic member aggregation capability is now available for this workspace.

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**New features in version 10.2.2.1**

There are new features in IBM Cognos Insight version 10.2.2.1.

**Show alias on grid edge**

You can display aliases along with captions in crosstabs.

To display an alias, right-click a row or column that has an alias defined, click *Show Attribute*, and select an alias from the list of all aliases. The alias text is displayed along with the caption.

To clear the alias display, right-click a row or column that has an alias defined, click *Show Attribute*, and select *Don't Show Any*.

**Show alias in explore points**

You can display aliases in explore points.

If a dimension in an explore point has aliases available, the drop-down icon is displayed next to the *Search* icon.

Click the drop-down icon and select the alias to display. Each member in the dimension must have alias text defined in order for the list of members to be displayed.

**Action button member parameter search**

When launching an action button that has a member parameter, you can now search for members using a case-insensitive "contains" search. Previously, the search was a case-sensitive "starts with" search. The change makes it easier to find members.

For example, a member named *S1000 - Revenue* can now be found by searching on *revenue*, whereas before it would not be found using this search parameter.

**Hard lock all widgets**

Widgets in an application can be hard-locked in IBM Cognos TM1 Performance Modeler. This prevents a non-administrator user from unlocking the widgets in IBM Cognos Insight.

Previously, any Cognos Insight user could unlock widgets using the context-sensitive menus. In this release, widgets can be hard-locked in Cognos TM1 Performance Modeler so that users who are not administrators cannot unlock them in Cognos Insight.

For more information, see the *TM1 Performance Modeler* documentation.
New features in version 10.2.2

There are new features in IBM Cognos Insight version 10.2.2.

Print and export workspaces
In an IBM Cognos Insight workspace, you can now print the contents of the current tab. You can also export a workspace tab as a new PDF file or append it to an existing PDF file as a new page.

Related tasks:
"Printing workspaces" on page 1
Print an entire IBM Cognos Insight workspace, or specific tabs of a workspace, to obtain a hard copy snapshot of your workspace.

Dynamic values
IBM Cognos Insight now includes dynamic values, which are widgets that display single members or measures from a crosstab. For example, if your crosstab displays revenue by year by product line, you can add a dynamic value to the title of your workspace tab that displays the total revenue for this year.

Related tasks:
"Inserting dynamic values" on page 91
You can create a dynamic value widget in an IBM Cognos Insight workspace to emphasize a specific value in your workspace. For example, you can place the total revenue value in its own widget at the top of your workspace.

Emphasize cells by using conditional formatting
You can now add conditional styles to IBM Cognos Insight workspaces to emphasize cells that meet specific conditions.

Related tasks:
"Creating conditional styles" on page 81
You can apply conditional styles to a crosstab in an IBM Cognos Insight workspace to identify cells that are within a range of values or cells that contain a specific string of characters.

Support for importing ragged and unbalanced hierarchies
Ragged and unbalanced hierarchies can now be imported into IBM Cognos Insight. You can choose to preserve the original structure or adjust it.

Ragged hierarchies
In ragged hierarchies, some levels are missing from the data. For example, in the following table, the State level is missing in two rows.

Table 1. Example of a ragged hierarchy before import

<table>
<thead>
<tr>
<th>Region or country</th>
<th>State</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>CA</td>
<td>San Francisco</td>
</tr>
<tr>
<td>USA</td>
<td>CA</td>
<td>Los Angeles</td>
</tr>
<tr>
<td>USA</td>
<td></td>
<td>Washington DC</td>
</tr>
<tr>
<td>Vatican City</td>
<td></td>
<td>Vatican City</td>
</tr>
</tbody>
</table>
If you preserve the ragged structure, blank cells are filled in with placeholder members. For example, Table 1 on page 5 would appear as follows:

- USA
  - CA
    - San Francisco
    - Los Angeles
  - Washington DC (State)
    - Washington DC
- Vatican City
  - Vatican City (State)
  - Vatican City (City)

If you collapse the ragged hierarchy to become an unbalanced hierarchy, blank cells do not appear in the imported dimension. For example, Table 1 on page 5 would appear as follows:

- USA
  - CA
    - San Francisco
    - Los Angeles
  - Washington DC
- Vatican City
  - Vatican City

**Unbalanced hierarchies**

In unbalanced hierarchies, leaf members are not all at the same level. For example, in the following table, some leaf members are at Level 2, and some leaf members are at Level 3.

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee A</td>
<td>Employee B</td>
<td>Employee E</td>
</tr>
<tr>
<td>Employee A</td>
<td>Employee B</td>
<td>Employee F</td>
</tr>
<tr>
<td>Employee A</td>
<td>Employee C</td>
<td></td>
</tr>
<tr>
<td>Employee A</td>
<td>Employee D</td>
<td></td>
</tr>
</tbody>
</table>

If you preserve the unbalanced structure, blank cells do not appear in the imported dimension. For example, Table 2 would appear as follows:

- Employee A
  - Employee B
    - Employee E
    - Employee F
  - Employee C
  - Employee D

If you balance the hierarchy, the lowest level is filled in, leaving the blanks at a higher level. This turns the hierarchy from an unbalanced hierarchy into a ragged hierarchy. For example, Table 2 would appear as follows:
- Employee A
- Employee B
- Employee C (Level 2)
- Employee D (Level 2)
- Employee C
- Employee D

Related concepts:

Chapter 3, “Importing data into Cognos Insight,” on page 17
You can import data into IBM Cognos Insight in different ways depending on the data source, the complexity of the data, and how much control you want to have over the way that your data is mapped as dimensions, measures, and attributes.

Undo and redo

You can now reverse and repeat some actions that you perform on an IBM Cognos Insight workspace.

You can undo or redo up to 45 actions.

Restriction: You cannot use the Undo icon to reverse the following actions:

- Changing the data model, such as adding or removing members, dimensions, and cubes.
- Adding or removing comments.
- Running action buttons that execute IBM Cognos TM1 TurboIntegrator (TI) processes.
- Changing calculations.
- Running imports and exports.
- Connecting to an IBM Cognos Express® or IBM Cognos TM1 server.
- Printing, publishing, or sharing.
- Changes to your Cognos Insight setup or preferences.
- Holding or releasing cells.

Data synchronization

You can now synchronize the data in an IBM Cognos Insight workspace by widget, by tab, or by workspace. For example, you could synchronize the data changes in an explore point on tab A to the data in a crosstab on tab B.

Related tasks:

“Synchronizing widgets” on page 94
When you synchronize widgets in IBM Cognos Insight, changes that you make to the data in one widget are reflected in the synchronized widgets. Synchronization can be applied across tabs, across workspaces, or in smaller groups within a tab.

Widgets and tabs in the content pane

You can now view a list of the tabs and widgets in your IBM Cognos Insight workspace. You can use this list to navigate to specific tabs or widgets and to change tab or widget settings.
The **Workspace** section is a new part of the content pane. The section lists all of the tabs and widgets in the current workspace. From the **Workspace** pane, you can perform the following actions:

- Right-click a widget to access a list of commands for the widget. These commands are the same ones that are available from the **Widget Actions** menu.
- Right-click a tab to rename or delete it.
- Click a tab or widget to navigate to that object in the workspace.

### Multithreaded queries improve performance

You can improve the processing performance of queries in IBM Cognos Insight by allowing queries to be split into multiple processing threads.

Multithreaded queries allow IBM Cognos TM1 to automatically load balance queries by executing each query on a separate core. This multiple processing can improve efficiency and processing time for large queries and rules.

Only servers running at less than 100% capacity can benefit from multithreaded query improvements. For example, if you had 8 cores processing 8 concurrent queries, none could leverage multithreaded queries. The addition of a 9th concurrently processing query would result in splitting the query processing threads across multiple cores.

### Contributor and Reviewer views

Now, when IBM Cognos TM1 administrators connect to Cognos TM1 applications from IBM Cognos Insight, the contributor and reviewer views can appear with different layouts.

When application authors create applications in IBM Cognos TM1 Performance Modeler, they can define separate views for contributors and reviewers. When Cognos TM1 administrators connect to Cognos TM1 from Cognos Insight, they can choose the view that they want to work with: contributor or reviewer. In Cognos Insight, these views can appear with different layouts. For example, the contributor view could display a crosstab with several explore points; whereas, the reviewer view could display only a chart and crosstab.

These different layouts can be created in Cognos Insight. When a Cognos TM1 administrator publishes a workspace back to Cognos TM1, the view that they are publishing includes the workspace layout. So if a Cognos TM1 administrator is connected in the contributor view, that administrator can make changes to the layout of the workspace and publish it as the contributor view of that application.

For more information about Contributor and Reviewer views, see the **TM1 Performance Modeler** documentation. Access this document for your product and version on [IBM Knowledge Center](http://www.ibm.com/support/knowledgecenter).

### Related tasks

- “Connecting to a Cognos TM1 system” on page 169

IBM Cognos TM1 administrators can connect to a Cognos TM1 system from IBM Cognos Insight when they want to import dimensions or cubes, publish a workspace, or contribute to a plan.
IBM Cognos Express administrators can connect to a Cognos Express system from IBM Cognos Insight when they want to import dimensions or cubes, publish a workspace, or contribute to a plan.

**Strategy maps can be filtered by metrics**

You can now filter the strategy maps in an IBM Cognos Insight workspace in a new way: by selecting the metrics that appear when you hover over objects in the widget.

For example, your workspace includes a crosstab, a strategy map, an impact diagram, and a custom diagram. All four widgets are synchronized with each other. Previously, to change the data that is displayed in each widget, you could change the selections in the overview area of each widget. Now, you can also select the metrics that appear when you hover over an objective in the strategy map.

**Related tasks:**

“Adding scorecards” on page 162

When you connect to an IBM Cognos TM1 server from IBM Cognos Insight, you can view and use scorecards that you create in IBM Cognos TM1 Performance Modeler in your workspace.

**Zooming in and out on scorecarding widgets**

You can now zoom in and out on the scorecarding widgets in IBM Cognos Insight.

You can use the **Zoom in** and **Zoom out** icons in each widget's overview area to see finer detail or a broader view. For example, your workspace includes a custom scorecarding widget that shows each product line's revenue on a map of the world. You can zoom in to a part of the map to view more detail about the regions and countries in that area, or you can zoom out to see the entire map.

**Related tasks:**

“Adding scorecards” on page 162

When you connect to an IBM Cognos TM1 server from IBM Cognos Insight, you can view and use scorecards that you create in IBM Cognos TM1 Performance Modeler in your workspace.

**Expanding and collapsing metrics in impact diagrams**

You can now expand and collapse the metrics in impact diagram widgets in IBM Cognos Insight.

You can use the **Expand** and **Collapse** icons next to the metrics to view more or fewer metrics. For example, the impact diagram shows Discount as the focussed metric, and Total Revenue After Discount as the impacted metric. You expand Total Revenue After Discount, and see that the Total Revenue After Discount metric impacts the Profit Before Allocation metric.

In this way, you can follow the chain of metrics to understand how they impact each other.

**Related tasks:**

“Adding scorecards” on page 162

When you connect to an IBM Cognos TM1 server from IBM Cognos Insight, you can view and use scorecards that you create in IBM Cognos TM1 Performance Modeler in your workspace.
Captions in current locale

In workspaces that have different captions for different languages, users now see only the caption that applies to the locale of IBM Cognos Insight, which is set in My Preferences.

Related concepts:

“Language and cultural preferences” on page 13

IBM Cognos Insight uses different settings to determine your language and cultural standard depending on where you access Cognos Insight. This information will help you understand where Cognos Insight finds your language and cultural preferences so that you can change them, if necessary.

Repeat leaves method of data spreading

IBM Cognos Insight now includes the repeat leaves method of data spreading.

The repeat leaves method of data spreading enables you to copy a value to all leaves of the consolidation or only to those leaves that contain non-zero values.

Related tasks:

“Spreading data using repeat leaves” on page 78

In IBM Cognos Insight, use the repeat leaves method copies a specified value to the leaves (children) of a consolidation. When you apply this method, you can copy the value to all leaves of the consolidation or only to those leaves that already contain non-zero values.
Chapter 2. Starting Cognos Insight

IBM Cognos Insight can be installed as a component of IBM Planning Analytics Local, or you can install and start it from IBM Cognos Express or IBM Cognos TM1, depending on your access to these other IBM Cognos products.

The following list describes the different ways that you can start Cognos Insight. How you start Cognos Insight depends on whether Cognos Insight is connected to other Cognos products, such as Cognos TM1 or Cognos Express.

**Cognos Insight and Cognos TM1**
If you are connected to Cognos TM1, start Cognos Insight from the Cognos TM1 Applications portal to create workspaces and contribute to plans.

**Cognos Insight and Cognos Express**
If you are connected to Cognos Express, start Cognos Insight from the Cognos Express Welcome page to create workspaces, share workspaces with others, or contribute to plans.

The Cognos Insight window

Familiarize yourself with the parts of the IBM Cognos Insight window.

The following image displays the parts of the Cognos Insight window.

The Cognos Insight window includes the following parts:
The Actions icon

Clicking the Actions icon expands a menu that includes options to create, open, save, print, export, and close workspaces.

A crosstab and chart widget

Widgets are the pieces of a Cognos Insight workspace. One type of widget contains a crosstab, or grid, and a chart. The data in the crosstab is linked to the data that appears in the chart, so when you change the data in the crosstab, the chart data changes as well, and when you change the data in the chart, the crosstab changes as well.

A widget toolbar

The widget toolbar appears when you are working in a widget. It includes icons that are particular to the widget, such as the Change Display Type icon, which enables you to change the type of the chart that appears in the widget.

The overview area

The overview area is displayed for a crosstab or chart. The overview area tells you what dimensions and measures appear in the crosstab, chart, or crosstab and chart. The overview area is divided into three sections: rows, columns, and context. These sections represent the dimensions and measures that appear in the rows, columns, and context of the crosstab, chart, or crosstab and chart. For example, if the Products dimension appears in the rows section of the overview area, then products also appear in the rows of the crosstab.

The content pane

The content pane displays all of the cubes, dimensions, measures, and attributes that you can work with in the current workspace. From the content pane, you can import, create and delete, move, and edit the elements in the content pane. The content pane also displays import processes, so that you can refresh data from a specific import.

You can also search for objects in the content pane. You can type characters to filter on when you are unsure of an exact object name, or if you want to find objects that match specific criteria. The search finds all objects in the tree that match the criteria.

Explore points

An explore point is a list of the elements in a dimension. You can click the elements to filter the data in the crosstab, chart, or crosstab and chart.

Tabs

Workspaces can be divided into several tabs. From the tabs area, you can create, delete, and rename tabs.

The tab thumbnails icon

Clicking the tab thumbnails icon displays small graphics of each tab so that you can navigate to another tab using these graphics instead of the tab names.

Cognos Insight preferences

You can customize IBM Cognos Insight, including enabling and disabling specific behaviors, setting regional options, and setting up connections to other IBM Cognos products.
You can set the following options in the **My Preferences** window, which you can access from the **Actions** icon:

- Display visual cues for improved accessibility.
- Disable the Getting Started page that displays when Cognos Insight starts.
- Disable hierarchy detection when you import data.
- Disable synchronization for new views.
- Change the default action for double-clicking a crosstab cell in new workspaces. The default action is to edit the cell, and you can change the default action to drill down.
- Change the initial view of dimensions in a workspace after you import data. The default action is to expand hierarchies to the first level, and you can change the default action to collapse all the levels or expand all the levels.
- Change the content language of workspaces.
- Enable bidirectional language support, and choose a text direction for workspace content.
- Add URIs to connect to IBM Cognos Express and IBM Cognos TM1 servers.

**Language and cultural preferences**

IBM Cognos Insight uses different settings to determine your language and cultural standard depending on where you access Cognos Insight. This information will help you understand where Cognos Insight finds your language and cultural preferences so that you can change them, if necessary.

**Cognos Insight and Cognos TM1**

When you install or start Cognos Insight from the IBM Cognos TM1 Applications portal, the product language and content language that you set in the portal determine the language and cultural standards for Cognos Insight. For example, if you set the product language to French (Canada) and the content language to English (Canada), the Cognos Insight user interface appears in French and the cultural standards are Canadian English. If the language settings change, you can close and reopen a workspace in Cognos Insight to refresh the language and cultural standards.

For information about setting the product and content language in the Cognos TM1 Applications portal, see the **TM1 Applications** documentation. You can access this documentation from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

If you are not connected to a Cognos TM1 server, you can set the content language in Cognos Insight by clicking the **Actions** icon, clicking **My Preferences**, and then choosing from the list of content languages. The preference will override the cultural standards that are defined by your operating system or portal. This is useful when you are creating a workspace for users in another region or country, and you want to see how the workspace will appear to those users. For example, you are working in Ottawa, Canada, in French (Canadian), but the workspace you are creating will be consumed by a group of employees in France. You can set the content language of Cognos Insight to be French (France) to see your workspace as it will appear to your users.

If the Cognos TM1 administrator has enabled localization of names on the Cognos TM1 server, then cubes, dimensions, elements, and attributes will display in your
local language as determined by your Microsoft Windows locale setting. If localization is not enabled, object names appear as they were originally created on the Cognos TM1 server.

**Cognos Insight and Cognos Express**

When you install or start Cognos Insight from the IBM Cognos TM1 Applications portal, the product language and content language that you set in the portal determine the language and cultural standards for Cognos Insight. For example, if you set the product language to French (Canada) and the content language to English (Canada), the Cognos Insight user interface appears in French and the cultural standards are Canadian English. If the language settings change, you can close and reopen a workspace in Cognos Insight to refresh the language and cultural standards.

For information about setting the product and content language in the Cognos TM1 Applications portal, see the TM1 Applications documentation. You can access this documentation from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

If you are not connected to a Cognos Express server, you can set the content language in Cognos Insight by clicking the Actions icon, clicking My Preferences, and then choosing from the list of content languages. The preference will override the cultural standards that are defined by your operating system or portal. This is useful when you are creating a workspace for users in another region or country, and you want to see how the workspace will appear to those users. For example, you are working in Ottawa, Canada, in French (Canadian), but the workspace you are creating will be consumed by a group of employees in France. You can set the content language of Cognos Insight to be French (France) to see your workspace as it will appear to your users.

**Bidirectional language support**

Bidirectional language support in IBM Cognos Insight allows you to use the following features:

- Change the direction of text that is shown in a workspace (data content).
- Mirror content in the Cognos Insight user interface (application content).

You can use separate languages for data and application content. For example, you might want to use English for application content, and Hebrew for data content.

**Text direction**

You can choose to display the text in Cognos Insight workspaces from right to left or left to right. You can also choose contextual text direction. In some situations, you want to display some text left to right and some text right to left. For example, Arabic, Hebrew, Urdu, and Farsi are languages that are written from right to left. However, the numbers in those languages, as well as embedded segments of Latin, Cyrillic, or Greek text, are written from left to right. In these situations, set the text direction contextually, based on the first letter in the text. If the letter belongs to a right to left script, the text direction is right to left. Otherwise, the text direction is left to right. Numbers and special characters do not influence the text direction. For example, if the text starts with a number followed by an Arabic letter, the direction is right to left. If the text starts with a number followed by a Latin letter, the direction is left to right.
Changing the text direction of a workspace affects all of the user-entered information, including the data, widget labels and tooltips, comments, and structured text, such as email addresses, file paths, and URLs.

**Mirroring**

You can mirror the Cognos Insight user interface elements, such as menu items, toolbars, and window text. When you enable bidirectional support, mirroring is automatic, and depends on your Microsoft Windows locale setting.

**Enabling bidirectional language support**

Enable bidirectional languages in IBM Cognos Insight to change the direction of text shown in a workspace and to allow mirroring of content in the Cognos Insight user interface.

**Procedure**

1. Click the Actions icon, and then click My Preferences.
2. In the Bidirectional support section, select the Enable bidirectional support check box.
3. To change the direction of text:
   a. Select an option from the Base text direction for content list to specify the text direction in Cognos Insight. When you enable bidirectional support, a Text direction icon is displayed in the toolbar of text widgets.
   b. Optional: To override the text direction that you specified for the workspace, in a text widget, click the Text direction icon, and then select the text direction.
4. To allow mirroring of text, change the system locale to Arabic or Hebrew in the Microsoft Windows control panel.
   You can disable mirroring by clearing the Enable bidirectional support check box or by changing the system locale to another language.
Chapter 3. Importing data into Cognos Insight

You can import data into IBM Cognos Insight in different ways depending on the data source, the complexity of the data, and how much control you want to have over the way that your data is mapped as dimensions, measures, and attributes.

Before you import data

Before you import source data into IBM Cognos Insight, you should understand what data cannot be imported and how Cognos Insight maps the imported data.

Quick import

You can drag simple data files to the Cognos Insight canvas or on to the Getting Started page to use the Quick Import option. Simple data files meet the following conditions:

- Fewer than 10 columns
- Fewer than 100,000 rows (for Microsoft Excel workbooks)
- File size of less than 10 megabytes (for files that contain comma-separated values or tab-separated values)
- Only one column header row
- No merged cells

If the data does not meet these conditions, Cognos Insight opens the Import wizard, which guides you through importing a more complex data set.

How Cognos Insight maps your data

When you import data, Cognos Insight uses advanced data intelligence to map your data depending on your source type. During the import, you can override any of the choices that Cognos Insight makes about how to map your data. You can also disable hierarchy detection for all imports in the My Preferences window.

The following list defines the different types of data in a model:

- **Cube** A cube is the container that stores your data. A cube is defined by a set of dimensions.

- **Dimension** A dimension is a descriptive category of data. For example, your cube might include dimensions called Products, Customers, and Location.

- **Level** A level represents related data within a hierarchy. For example, your Products dimension might contain levels called Product Line and Product Type.

- **Attribute** An attribute is a characteristic of data that the business wants to evaluate. For example, your Products dimension might contain attributes called Color and Size.

- **Measure** A measure is a value that determines how well your business is operating.
For example, you might use measures such as Quantity Sold or Revenue to review the performance of your business.

If you import a Cognos list report or package, Cognos Insight uses the model that was defined in the source. Cognos Insight maps other data sources in the following ways by default:

- The first column in the source file and the measures appear in a crosstab. The other columns are available as dimensions in the overview area.
- Columns of text are added as dimensions.
- Columns of numbers are added as measures if they are values. For example, Cognos Insight can interpret a column called Revenue as a measure, and a column called Telephone number as an attribute.
- When the data that you are importing into Cognos Insight contains any date that is expressed in a typical format, Cognos Insight will generate a full Gregorian calendar with hierarchies. This enables you to view your data by quarter, year, or month, even when the data you imported did not contain that information.
- The first row of data is used as headers for each column.
- A total is added to each dimension.
- The most logical roll-up type for each of your measures is chosen. For example, if your source data includes a column for Price and a column for Cost, Cognos Insight might choose an Average roll-up type for the Price measure and a Sum roll-up type for the Cost measure.
- Caption attributes are preserved.
- Business keys are preserved.

### Importing delimited text files

You can import delimited text files into IBM Cognos Insight, including the following file formats: CSV, TAB, CMA, ASC, and TXT. You can accept the default mapping, or you can make changes to define the model.

**Before you begin**

The way in which Cognos Insight maps data by default, see “Before you import data” on page 17.

Cognos Insight does not support importing TXT and CSV files with legacy encoding if the Microsoft Windows regional settings and system locale do not match the file encoding. To resolve this issue, save the file with UTF-8 encoding or change the Microsoft Windows regional settings and system locale to match the file’s encoding.

If your source data contains decimal values but there are no decimal values within the first 100 records, Cognos Insight detects the data as integers. However, the decimal places are preserved, and you can apply formatting to add the decimals. For information about formatting data, see “Changing the format of measures” on page 100.

**Procedure**

1. Click Get Data, and then click Import Data.
2. Optional: In the **Import name** field, enter a name for this import process. Import processes appear by name in the content pane, where you can select a process and refresh the data for that import.

3. In the **Type** field, select **File**.

4. Click **Browse**, and select the file that you want to import.

5. Optional: In the **File Details** section, complete the following actions:
   a. Specify the comma delimiter.
   b. If you want to use the decimal separator and thousands separator for a specific locale, select that locale from the **Format** field.
   c. Specify the first row of data. You can use this field to avoid importing introductory text or multiple header rows from your text file.
   d. Specify whether the data contains column labels, or headings.
   e. If you are working in connected mode and you want to schedule a process that reimports data, specify the location of the file to be accessed by the remote IBM Cognos TM1 server. For more information about working in connected mode, see “Plans on Cognos Express servers” on page 179 or “Plans on Cognos TM1 servers” on page 155.

6. To finish importing your data, complete one of the following actions:
   - To create a crosstab from your imported data, click **Import**.
   - To view the imported data only in the content pane, click **Advanced**, click **Summary**, and then clear the **Open cube viewer upon completion** check box and click **Import**.

7. To make changes to the default mappings, click **Advanced**.

   By default, Cognos Insight maps your data as described in “Before you import data” on page 17. You can change the mapping type for a column to dimension, level, attribute, or measure.

8. To change how Cognos Insight maps your data, complete one of the following actions:
   a. To remove the default mapping, click **Clear All Mappings**.
   b. When you are importing reports or files, to map your data to a single level, click **Recreate All Mappings**, and then click **Do not Detect Hierarchies**.
   c. When you are importing reports or files, to return the mappings to the default mappings that Cognos Insight provided, click **Recreate All Mappings**, and then click **Detect Hierarchies**.

   **Tip:** You can disable hierarchy detection for all report and file imports by clearing the **Detect hierarchies during import** check box in the **My Preferences** window.

9. To review the properties of the cube:
   a. Select the cube in the **Mapping** field.
   b. Click **Show Properties**.
   c. To ensure that any zero values in your data are preserved instead of being read as blank cells, select the **Store zero values** check box.
   d. To replace empty cells in your source data with the default values for empty cells, select the **Replace empty strings with default values** check box. The default value is **Default dimension_name**.
   e. If your source data contains only one measure, you can remove the default measures dimension by clearing the **Create measure dimension** check box.
CAUTION:
If you choose to remove the default measures dimension during import, you cannot add new measures to this cube at a later time.

10. To define a dimension, complete the following actions:
   a. To map the dimension as a time dimension, in the **Dimension type** field, click **Time**.
   b. Select the dimension in the **Target Items** pane.
   c. If you are importing a dimension that includes element names that are not unique, in the **Properties** pane, expand the **Advanced** section and select the **Include the names of parent elements** check box. This setting prefixes the element names with their parent names to make them unique. A separator character will be added to differentiate the parent name from the element name. You can change the separator character, and you can choose to use unique element names as captions.
   An example of non-unique element names is the North America dimension. Ontario is a child element of the California level, and Ontario is also a child element of the Canada level. California is a child element of the Country or Region level, and Canada is a Country or Region level. If you chose to make these element names unique, the Ontario element that is a child element of the California level would be named California-Ontario, and the Ontario element that is a child element of the Canada level would be named Canada-Ontario.
   d. To include a total for this dimension, ensure that the **Create total element** check box is selected.
   e. To identify the source data as an unbalanced hierarchy, select the **Unbalanced source data** check box, and then choose whether to balance the hierarchy by making all of the child members the same depth, or leave the hierarchy unbalanced.
   f. To identify the source data as a ragged hierarchy, select the **Ragged source data** check box, and then choose whether to keep the ragged structure and what placeholder data to insert in the blank cells.
   g. To move the dimension in the structure, change the **Dimension index** field.

   **Tip:** You can also reorder dimensions by dragging them in the **Target Items** pane.
   h. Optional: Specify how to sort the elements in this dimension. Element sorting determines the order of the parent data items in a dimension. The default element sorting of **None** preserves the order in which the elements were input from the source data. You can also sort elements alphabetically by name or by their level, or depth, in the dimension, or by the order in which they appear in the hierarchy. Sorting by level or by hierarchy can be used for advanced scripting purposes. For example, within the Product Line dimension, you have the following elements: Golf Equipment, Camping Equipment, and Outdoor Protection. You can sort these elements alphabetically by name or leave them in this order.
   i. Optional: Specify how to sort the components within the elements. Component sorting determines the order of the child items of the elements in a dimension. The default component sorting of **None** preserves the order in which the components were input from the source data. You can also sort components alphabetically by name. For example, the Camping Equipment element from the example in the previous step includes the
following components: Tents, Sleeping Bags, and Lanterns. You can sort these components alphabetically by name or leave them in this order.
j. Specify how this import will update existing data. New values can be added to existing values or new values can replace existing values.
11. To define the month on which your fiscal year begins, select the Date dimension, and choose a month from the Fiscal year starts on list.
12. To populate the Date dimension with all dates, regardless of whether data exists for those quarters, months, and days, select the Populate whole years check box.
13. To define a level, complete the following actions:
a. Select the item in the Source Items pane.
b. In the Properties pane, click Level under Mapping type.

  Tip: To define several items as levels at the same time, select the items in the Source Items pane, right-click them, and then click Level.
c. In the Owner dimension field, select the dimension that this level belongs to.
For example, the source lists Years, Quarters, Months, and Days as separate columns. Each column is defined as a separate dimension. To create a hierarchy with Years at the top and Days at the bottom, define Quarters, Months, and Days as levels with Years as the level at the top.
d. To move the level in the structure, change the Level index field.

  Tip: You can also reorder levels by dragging them in the Target Items pane.
14. To add an attribute to a level, complete the following actions:
a. Select the item that you want to make an attribute in the Source Items pane.
b. In the Properties pane, click Attribute under Mapping type.

  Tip: To define several items as attributes at the same time, select the items in the Source Items pane, right-click them, and then click Attribute. When the mapping type changes to Attribute, the attribute becomes a child item of the closest level. You might need to move the attribute to the appropriate level, if it is not nested under the correct level.
c. Specify the data type for the attribute.
d. Optional: Change the attribute type.

A caption provides a descriptive label for a data item. For example, your source data includes an SKU column that displays product codes, and an Item Name column that displays the product name. You make the Item Name data into an attribute of the Item level in your target data so that your workspace shows the product name labels on the Item dimension. To append the original column name to the caption for any captions that are not unique, click Ensure uniqueness.

If your data includes information for several different locales, you can identify attributes as captions and select the locale of each caption. If you do not select a locale for a caption, the default locale will apply.

An alias adds data that can be used as an alternative name for an item, such as a name in another language. Each alias must have a unique name.
e. Select the dimension and level that this attribute belongs to.
15. To define measures for the cube, complete the following actions:
a. Select the item that you want to make a measure in the Source Items pane.

b. In the Properties pane, click Measure under Mapping type.

Tip: To define several items as measures at the same time, select the items in the Source Items pane, right-click them, and then click Measure.

c. Specify the data type for the measure.

Important: If your source data does not include decimals within the first 100 records, your workspace data will not include decimals. However, the decimal data is preserved during the import. You can change the format of this measure to include decimals. For information about formatting measures, see "Changing the format of measures" on page 100.

d. To move the measure in the structure, change the Measure index field.

Tip: You can also reorder measures by dragging them in the Target Items pane.

Tip: Generate a count measure to confirm that your data was imported. The Count column in your crosstab should show the number of rows that you imported. This number will give you a quick indication of any duplicate or missing rows. To generate a count measure, select the cube_name Measures dimension in the Target items pane, and ensure that the Generate count measure check box is selected.

16. To exclude a column from the import, right-click it in the Data Preview pane and click Do not map.

17. To add a calculated column, complete the following actions:

a. Click Add calculated column.

b. In the Properties pane, define the data type and mapping type of the expression.

c. Type the expression in the Expression field. Expressions must end with a semicolon (;

For example, to add a calculated column that concatenates the Surname and Given name items, define the following expression:

```
v_Expression = v_Surname_0 | ', ' | v_Given_name_1;
```

The expressions that you can add during an import are IBM Cognos TM1 TurboIntegrator expressions, so you can only use the functions that are compatible with Cognos TM1 TurboIntegrator. For more information about authoring expressions, see "Calculations" on page 57.

d. Click Preview to see the results of the expression.

18. Complete one of the following actions:

- If you want to create a crosstab from your imported data, click Import.
- If you want to view the imported data only in the content pane, click Next, clear the Open cube viewer upon completion check box, and click Import.

---

**Importing Microsoft Excel files**

You can import Microsoft Excel files into IBM Cognos Insight and accept the default mapping, or you can make changes to define the model.
Before you begin

To review the way in which Cognos Insight maps data by default, see “Before you import data” on page 17.

You cannot schedule an import from a Microsoft Excel file. You must use a Guided Refresh or a Silent Refresh to update data from a Microsoft Excel data source.

Some formulas and functions that are used in Microsoft Excel workbooks are not imported. The solution is to create a copy of the affected column in the Microsoft Excel workbook and use the Paste Special command to paste the values of the affected column into the new column. You can also save the workbook as a CSV file and then import the CSV file.

In a Quick Import, if the Microsoft Excel workbook contains several worksheets, only the data on the current worksheet is imported. For example, if you want to import the data that is on worksheet 3, save the workbook with worksheet 3 as the visible worksheet. When you import from the workbook, only the data on worksheet 3 is imported. Another option is to use the Import Dimensions or Import Data commands.

If your source data contains decimal values but there are no decimal values within the first 100 records, Cognos Insight detects the data as integers. However, the decimal places are preserved, and you can apply formatting to add the decimals. For information about formatting data, see “Changing the format of measures” on page 100.

**Procedure**

1. Click Get Data, and then click Import Data.
2. Optional: In the Import name field, enter a name for this import process. Import processes appear by name in the content pane, where you can select a process and refresh the data for that import.
3. In the Type field, select File.
4. Click Browse, and select the file that you want to import.
5. Expand File Details.
6. Specify whether the data contains column labels.
7. Specify whether the data is structured as a list or a crosstab.
8. Optional: Specify the worksheet, rows, and columns to use.
9. To finish importing your data, complete one of the following actions:
   - To create a crosstab from your imported data, click Import.
   - To view the imported data only in the content pane, click Advanced, click Summary, and then clear the Open cube viewer upon completion check box and click Import.
10. To make changes to the default mappings, click Advanced.

By default, Cognos Insight maps your data as described in “Before you import data” on page 17. You can change the mapping type for a column to dimension, level, attribute, or measure.

11. To change how Cognos Insight maps your data, complete one of the following actions:
   a. To remove the default mapping, click Clear All Mappings.
b. When you are importing reports or files, to map your data to a single level, click **Recreate All Mappings**, and then click **Do not Detect Hierarchies**.

c. When you are importing reports or files, to return the mappings to the default mappings that Cognos Insight provided, click **Recreate All Mappings**, and then click **Detect Hierarchies**.

**Tip:** You can disable hierarchy detection for all report and file imports by clearing the **Detect hierarchies during import** check box in the **My Preferences** window.

12. To review the properties of the cube:
   a. Select the cube in the **Mapping** field.
   b. Click **Show Properties**.
   c. To ensure that any zero values in your data are preserved instead of being read as blank cells, select the **Store zero values** check box.
   d. To replace empty cells in your source data with the default values for empty cells, select the **Replace empty strings with default values** check box. The default value is **Default dimension_name**.
   e. If your source data contains only one measure, you can remove the default measures dimension by clearing the **Create measure dimension** check box.

**CAUTION:**
If you choose to remove the default measures dimension during import, you cannot add new measures to this cube at a later time.

13. To define a dimension, complete the following actions:
   a. To map the dimension as a time dimension, in the **Dimension type** field, click **Time**.
   b. Select the dimension in the **Target Items** pane.
   c. If you are importing a dimension that includes element names that are not unique, in the **Properties** pane, expand the **Advanced** section and select the **Include the names of parent elements** check box. This setting prefaces the element names with their parent names to make them unique. A separator character will be added to differentiate the parent name from the element name. You can change the separator character, and you can choose to use unique element names as captions.

   An example of non-unique element names is the North America dimension. Ontario is a child element of the California level, and Ontario is also a child element of the Canada level. California is a child element of the Country or Region level, and Canada is a Country or Region level. If you chose to make these element names unique, the Ontario element that is a child element of the California level would be named California - Ontario, and the Ontario element that is a child element of the Canada level would be named Canada - Ontario.
   d. To include a total for this dimension, ensure that the **Create total element** check box is selected.
   e. To identify the source data as an unbalanced hierarchy, select the **Unbalanced source data** check box, and then choose whether to balance the hierarchy by making all of the child members the same depth, or leave the hierarchy unbalanced.
   f. To identify the source data as a ragged hierarchy, select the **Ragged source data** check box, and then choose whether to keep the ragged structure and what placeholder data to insert in the blank cells.
g. To move the dimension in the structure, change the **Dimension index** field.

**Tip:** You can also reorder dimensions by dragging them in the **Target Items** pane.

h. Optional: Specify how to sort the elements in this dimension. Element sorting determines the order of the parent data items in a dimension. The default element sorting of **None** preserves the order in which the elements were input from the source data. You can also sort elements alphabetically by name or by their level, or depth, in the dimension, or by the order in which they appear in the hierarchy. Sorting by level or by hierarchy can be used for advanced scripting purposes. For example, within the Product Line dimension, you have the following elements: Golf Equipment, Camping Equipment, and Outdoor Protection. You can sort these elements alphabetically by name or leave them in this order.

i. Optional: Specify how to sort the components within the elements. Component sorting determines the order of the child items of the elements in a dimension. The default component sorting of **None** preserves the order in which the components were input from the source data. You can also sort components alphabetically by name. For example, the Camping Equipment element from the example in the previous step includes the following components: Tents, Sleeping Bags, and Lanterns. You can sort these components alphabetically by name or leave them in this order.

j. Specify how this import will update existing data. New values can be added to existing values or new values can replace existing values.

14. To define the month on which your fiscal year begins, select the **Date** dimension, and choose a month from the **Fiscal year starts on** list.

15. To populate the **Date** dimension with all dates, regardless of whether data exists for those quarters, months, and days, select the **Populate whole years** check box.

16. To define a level, complete the following actions:
   a. Select the item in the **Source Items** pane.
   b. In the **Properties** pane, click **Level** under **Mapping type**.

   **Tip:** To define several items as levels at the same time, select the items in the **Source Items** pane, right-click them, and then click **Level**.

   c. In the **Owner dimension** field, select the dimension that this level belongs to.

   For example, the source lists Years, Quarters, Months, and Days as separate columns. Each column is defined as a separate dimension. To create a hierarchy with Years at the top and Days at the bottom, define Quarters, Months, and Days as levels with Years as the level at the top.

   d. To move the level in the structure, change the **Level index** field.

   **Tip:** You can also reorder levels by dragging them in the **Target Items** pane.

17. To add an attribute to a level, complete the following actions:
   a. Select the item that you want to make an attribute in the **Source Items** pane.
   b. In the **Properties** pane, click **Attribute** under **Mapping type**.
**Tip:** To define several items as attributes at the same time, select the items in the **Source Items** pane, right-click them, and then click **Attribute**. When the mapping type changes to **Attribute**, the attribute becomes a child item of the closest level. You might need to move the attribute to the appropriate level, if it is not nested under the correct level.

c. Specify the data type for the attribute.

d. Optional: Change the attribute type.

A caption provides a descriptive label for a data item. For example, your source data includes an SKU column that displays product codes, and an Item Name column that displays the product name. You make the Item Name data into an attribute of the Item level in your target data so that your workspace shows the product name labels on the Item dimension. To append the original column name to the caption for any captions that are not unique, click **Ensure uniqueness**.

If your data includes information for several different locales, you can identify attributes as captions and select the locale of each caption. If you do not select a locale for a caption, the default locale will apply.

An alias adds data that can be used as an alternative name for an item, such as a name in another language. Each alias must have a unique name.

e. Select the dimension and level that this attribute belongs to.

18. To define measures for the cube, complete the following actions:

a. Select the item that you want to make a measure in the **Source Items** pane.

b. In the **Properties** pane, click **Measure** under **Mapping type**.

**Tip:** To define several items as measures at the same time, select the items in the **Source Items** pane, right-click them, and then click **Measure**.

c. Specify the data type for the measure.

**Important:** If your source data does not include decimals within the first 100 records, your workspace data will not include decimals. However, the decimal data is preserved during the import. You can change the format of this measure to include decimals. For information about formatting measures, see “Changing the format of measures” on page 100.

d. To move the measure in the structure, change the **Measure index** field.

**Tip:** You can also reorder measures by dragging them in the **Target Items** pane.

**Tip:** Generate a count measure to confirm that your data was imported. The Count column in your crosstab should show the number of rows that you imported. This number will give you a quick indication of any duplicate or missing rows. To generate a count measure, select the `cube_name Measures` dimension in the **Target items** pane, and ensure that the **Generate count measure** check box is selected.

19. To exclude a column from the import, right-click it in the **Data Preview** pane and click **Do not map**.

20. To add a calculated column, complete the following actions:

a. Click **Add calculated column**.

b. In the **Properties** pane, define the data type and mapping type of the expression.
c. Type the expression in the Expression field. Expressions must end with a semicolon (;).
   For example, to add a calculated column that concatenates the Surname and Given name items, define the following expression:
   $$v_{\text{Expression}} = v_{\text{Surname\_0}} \ | \ ', ' | v_{\text{Given\_name\_1}};$$
   The expressions that you can add during an import are IBM Cognos TM1 TurboIntegrator expressions, so you can only use the functions that are compatible with Cognos TM1 TurboIntegrator. For more information about authoring expressions, see “Calculations” on page 57.

d. Click Preview to see the results of the expression.

21. Complete one of the following actions:
   • If you want to create a crosstab from your imported data, click Import.
   • If you want to view the imported data only in the content pane, click Next, clear the Open cube viewer upon completion check box, and click Import.

---

**Importing from relational data sources**

Importing relational data into IBM Cognos Insight requires that you understand your relational data source and be able to define queries. Ensure also that ODBC connections are set up for the data sources that you want to import from.

**Before you begin**

To review the way in which Cognos Insight maps data by default, see “Before you import data” on page 17

**About this task**

When you are working in connected mode, you can use the ODBC relational data sources that are defined on the server. For more information about working in connected mode, see “Plans on Cognos Express servers” on page 179 or “Plans on Cognos TM1 servers” on page 155.

**Procedure**

1. Click Get Data, and then click Import Data.
2. Optional: In the Import name field, enter a name for this import process. Import processes appear by name in the content pane, where you can select a process and refresh the data for that import.
3. In the Source type field, select Relational data source (ODBC).
4. Select an ODBC relational data source from the list that is defined for your system.
5. Open the Query Builder. You can also type the SQL for the query.
6. To specify the columns to use in the query to get data, click the Data View tab and drag the columns or tables from the Metadata Explorer field to the grid. You can add the columns themselves or tables. The query uses the columns that you add directly to the grid to get data. The query also uses the columns that belong to the tables that you add to the grid.
7. To create joins based on relationships between columns in the tables, click the Query Diagram pane and do the following actions:
   a. Drag tables from the Metadata Explorer field to the diagram. The query uses the tables that you add to the diagram to connect other tables. The query does not use the columns that belong to these tables to get data.
b. Select the items for the relationship and click the Create join icon.

c. Specify the cardinality for the relationship. Cardinality is used to avoid double-counting fact data, to support loop joins that are common in star schema models, to optimize access to the underlying data source system, and to identify items that behave as facts or dimensions.

For more information about relationships and cardinality, see the IBM Cognos Framework Manager User Guide. Access this document for your product and version from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

8. To edit the SQL query manually, click the SQL View tab. The actions that you complete in the Data View tab or the Query Diagram tab are reflected in the SQL View tab.

9. If you are satisfied with the query, click OK.

10. To preview the data that is returned by the query that you created manually or in the Query Builder, click Refresh.

11. To finish importing your data, complete one of the following actions:
- To create a crosstab from your imported data, click Import.
- To view the imported data only in the content pane, click Advanced, click Summary, and then clear the Open cube viewer upon completion check box and click Import.

12. To make changes to the default mappings, click Advanced.

By default, Cognos Insight maps your data as described in “Before you import data” on page 17. You can change the mapping type for a column to dimension, level, attribute, or measure.

13. To change how Cognos Insight maps your data, complete one of the following actions:
- To remove the default mapping, click Clear All Mappings.
- When you are importing reports or files, to map your data to a single level, click Recreate All Mappings, and then click Do not Detect Hierarchies.
- When you are importing reports or files, to return the mappings to the default mappings that Cognos Insight provided, click Recreate All Mappings, and then click Detect Hierarchies.

Tip: You can disable hierarchy detection for all report and file imports by clearing the Detect hierarchies during import check box in the My Preferences window.

14. To review the properties of the cube:
- Select the cube in the Mapping field.
- Click Show Properties.
- To ensure that any zero values in your data are preserved instead of being read as blank cells, select the Store zero values check box.
- To replace empty cells in your source data with the default values for empty cells, select the Replace empty strings with default values check box. The default value is Default dimension_name.
- If your source data contains only one measure, you can remove the default measures dimension by clearing the Create measure dimension check box.
CAUTION:
If you choose to remove the default measures dimension during import, you cannot add new measures to this cube at a later time.

15. To define a dimension, complete the following actions:
   a. To map the dimension as a time dimension, in the Dimension type field, click Time.
   b. Select the dimension in the Target Items pane.
   c. If you are importing a dimension that includes element names that are not unique, in the Properties pane, expand the Advanced section and select the Include the names of parent elements check box. This setting prefaces the element names with their parent names to make them unique. A separator character will be added to differentiate the parent name from the element name. You can change the separator character, and you can choose to use unique element names as captions.
   An example of non-unique element names is the North America dimension. Ontario is a child element of the California level, and Ontario is also a child element of the Canada level. California is a child element of the Country or Region level, and Canada is a Country or Region level. If you chose to make these element names unique, the Ontario element that is a child element of the California level would be named California - Ontario, and the Ontario element that is a child element of the Canada level would be named Canada - Ontario.
   d. To include a total for this dimension, ensure that the Create total element check box is selected.
   e. To identify the source data as an unbalanced hierarchy, select the Unbalanced source data check box, and then choose whether to balance the hierarchy by making all of the child members the same depth, or leave the hierarchy unbalanced.
   f. To identify the source data as a ragged hierarchy, select the Ragged source data check box, and then choose whether to keep the ragged structure and what placeholder data to insert in the blank cells.
   g. To move the dimension in the structure, change the Dimension index field.
   Tip: You can also reorder dimensions by dragging them in the Target Items pane.
   h. Optional: Specify how to sort the elements in this dimension. Element sorting determines the order of the parent data items in a dimension. The default element sorting of None preserves the order in which the elements were input from the source data. You can also sort elements alphabetically by name or by their level, or depth, in the dimension, or by the order in which they appear in the hierarchy. Sorting by level or by hierarchy can be used for advanced scripting purposes. For example, within the Product Line dimension, you have the following elements: Golf Equipment, Camping Equipment, and Outdoor Protection. You can sort these elements alphabetically by name or leave them in this order.
   i. Optional: Specify how to sort the components within the elements. Component sorting determines the order of the child items of the elements in a dimension. The default component sorting of None preserves the order in which the components were input from the source data. You can also sort components alphabetically by name. For example, the Camping Equipment element from the example in the previous step includes the
following components: Tents, Sleeping Bags, and Lanterns. You can sort these components alphabetically by name or leave them in this order.

j. Specify how this import will update existing data. New values can be added to existing values or new values can replace existing values.

16. To define the month on which your fiscal year begins, select the Date dimension, and choose a month from the Fiscal year starts on list.

17. To populate the Date dimension with all dates, regardless of whether data exists for those quarters, months, and days, select the Populate whole years check box.

18. To define a level, complete the following actions:
   a. Select the item in the Source Items pane.
   b. In the Properties pane, click Level under Mapping type.

       Tip: To define several items as levels at the same time, select the items in the Source Items pane, right-click them, and then click Level.

   c. In the Owner dimension field, select the dimension that this level belongs to.

       For example, the source lists Years, Quarters, Months, and Days as separate columns. Each column is defined as a separate dimension. To create a hierarchy with Years at the top and Days at the bottom, define Quarters, Months, and Days as levels with Years as the level at the top.

   d. To move the level in the structure, change the Level index field.

       Tip: You can also reorder levels by dragging them in the Target Items pane.

19. To add an attribute to a level, complete the following actions:
   a. Select the item that you want to make an attribute in the Source Items pane.
   b. In the Properties pane, click Attribute under Mapping type.

       Tip: To define several items as attributes at the same time, select the items in the Source Items pane, right-click them, and then click Attribute.

       When the mapping type changes to Attribute, the attribute becomes a child item of the closest level. You might need to move the attribute to the appropriate level, if it is not nested under the correct level.

   c. Specify the data type for the attribute.

   d. Optional: Change the attribute type.

       A caption provides a descriptive label for a data item. For example, your source data includes an SKU column that displays product codes, and an Item Name column that displays the product name. You make the Item Name data into an attribute of the Item level in your target data so that your workspace shows the product name labels on the Item dimension. To append the original column name to the caption for any captions that are not unique, click Ensure uniqueness.

       If your data includes information for several different locales, you can identify attributes as captions and select the locale of each caption. If you do not select a locale for a caption, the default locale will apply.

       An alias adds data that can be used as an alternative name for an item, such as a name in another language. Each alias must have a unique name.

   e. Select the dimension and level that this attribute belongs to.

20. To define measures for the cube, complete the following actions:
a. Select the item that you want to make a measure in the **Source Items** pane.

b. In the **Properties** pane, click **Measure** under **Mapping type**.

   **Tip:** To define several items as measures at the same time, select the items in the **Source Items** pane, right-click them, and then click **Measure**.

c. Specify the data type for the measure.

   **Important:** If your source data does not include decimals within the first 100 records, your workspace data will not include decimals. However, the decimal data is preserved during the import. You can change the format of this measure to include decimals. For information about formatting measures, see “Changing the format of measures” on page 100.

d. To move the measure in the structure, change the **Measure index** field.

   **Tip:** You can also reorder measures by dragging them in the **Target Items** pane.

   **Tip:** Generate a count measure to confirm that your data was imported. The Count column in your crosstab should show the number of rows that you imported. This number will give you a quick indication of any duplicate or missing rows. To generate a count measure, select the **cube_name Measures** dimension in the **Target items** pane, and ensure that the **Generate count measure** check box is selected.

21. To exclude a column from the import, right-click it in the **Data Preview** pane and click **Do not map**.

22. To add a calculated column, complete the following actions:

   a. Click **Add calculated column**.

   b. In the **Properties** pane, define the data type and mapping type of the expression.

   c. Type the expression in the **Expression** field. Expressions must end with a semicolon (;).

      For example, to add a calculated column that concatenates the Surname and Given name items, define the following expression:

      \[
      v_{\text{Expression}} = v_{\text{Surname}_0} | ', ' | v_{\text{Given}_1};
      \]

      The expressions that you can add during an import are IBM Cognos TM1 TurboIntegrator expressions, so you can only use the functions that are compatible with Cognos TM1 TurboIntegrator. For more information about authoring expressions, see “Calculations” on page 57.

   d. Click **Preview** to see the results of the expression.

23. Complete one of the following actions:

   - If you want to create a crosstab from your imported data, click **Import**.
   - If you want to view the imported data only in the content pane, click **Next**, clear the **Open cube viewer upon completion** check box, and click **Import**.

### Importing IBM SPSS statistics

You can import IBM SPSS® statistics into IBM Cognos Insight and accept the default mapping, or you can make changes to define the model.
Before you begin

Before you can import from an IBM SPSS data source, you must ensure that you have downloaded the ODBC driver, which is included in the IBM SPSS Access Pack Package. The SPSS Access Pack Package is available when you purchase IBM SPSS Statistics or IBM SPSS Modeler. Once you have downloaded the ODBC driver, you must also define an ODBC connection to the data source. For more information about defining ODBC connections, see the user documentation for your operating system.

To review the way in which Cognos Insight maps data by default, see “Before you import data” on page 17.

If your source data contains decimal values but there are no decimal values within the first 100 records, Cognos Insight detects the data as integers. However, the decimal places are preserved, and you can apply formatting to add the decimals. For information about formatting data, see “Changing the format of measures” on page 100.

Procedure

1. Click Get Data, and then click Import Data.
2. Optional: In the Import name field, enter a name for this import process. Import processes appear by name in the content pane, where you can select a process and refresh the data for that import.
3. In the Type field, select IBM SPSS Statistics. The Connection Editor window appears.
4. In the Connection Editor window, select the data source and enter your credentials.
5. To define or change the queries for the data source, open the query builder.
6. To finish importing your data, complete one of the following actions:
   • To create a crosstab from your imported data, click Import.
   • To view the imported data only in the content pane, click Advanced, click Summary, and then clear the Open cube viewer upon completion check box and click Import.
7. To make changes to the default mappings, click Advanced.
   By default, Cognos Insight maps your data as described in “Before you import data” on page 17. You can change the mapping type for a column to dimension, level, attribute, or measure.
8. To change how Cognos Insight maps your data, complete one of the following actions:
   a. To remove the default mapping, click Clear All Mappings.
   b. When you are importing reports or files, to map your data to a single level, click Recreate All Mappings, and then click Do not Detect Hierarchies.
   c. When you are importing reports or files, to return the mappings to the default mappings that Cognos Insight provided, click Recreate All Mappings, and then click Detect Hierarchies.

   Tip: You can disable hierarchy detection for all report and file imports by clearing the Detect hierarchies during import check box in the My Preferences window.
9. To review the properties of the cube:
a. Select the cube in the Mapping field.
b. Click Show Properties.
c. To ensure that any zero values in your data are preserved instead of being read as blank cells, select the Store zero values check box.
d. To replace empty cells in your source data with the default values for empty cells, select the Replace empty strings with default values check box. The default value is Default dimension_name.
e. If your source data contains only one measure, you can remove the default measures dimension by clearing the Create measure dimension check box.

CAUTION:
If you choose to remove the default measures dimension during import, you cannot add new measures to this cube at a later time.

10. To define a dimension, complete the following actions:

a. To map the dimension as a time dimension, in the Dimension type field, click Time.
b. Select the dimension in the Target Items pane.
c. If you are importing a dimension that includes element names that are not unique, in the Properties pane, expand the Advanced section and select the Include the names of parent elements check box. This setting prefaces the element names with their parent names to make them unique. A separator character will be added to differentiate the parent name from the element name. You can change the separator character, and you can choose to use unique element names as captions.

An example of non-unique element names is the North America dimension. Ontario is a child element of the California level, and Ontario is also a child element of the Canada level. California is a child element of the Country or Region level, and Canada is a Country or Region level. If you chose to make these element names unique, the Ontario element that is a child element of the California level would be named California - Ontario, and the Ontario element that is a child element of the Canada level would be named Canada - Ontario.
d. To include a total for this dimension, ensure that the Create total element check box is selected.
e. To identify the source data as an unbalanced hierarchy, select the Unbalanced source data check box, and then choose whether to balance the hierarchy by making all of the child members the same depth, or leave the hierarchy unbalanced.
f. To identify the source data as a ragged hierarchy, select the Ragged source data check box, and then choose whether to keep the ragged structure and what placeholder data to insert in the blank cells.
g. To move the dimension in the structure, change the Dimension index field.

Tip: You can also reorder dimensions by dragging them in the Target Items pane.
h. Optional: Specify how to sort the elements in this dimension. Element sorting determines the order of the parent data items in a dimension. The default element sorting of None preserves the order in which the elements were input from the source data. You can also sort elements alphabetically by name or by their level, or depth, in the dimension, or by the order in which they appear in the hierarchy. Sorting by level or by hierarchy can be used for advanced scripting purposes. For example, within the Product
Line dimension, you have the following elements: Golf Equipment, Camping Equipment, and Outdoor Protection. You can sort these elements alphabetically by name or leave them in this order.

i. Optional: Specify how to sort the components within the elements. Component sorting determines the order of the child items of the elements in a dimension. The default component sorting of None preserves the order in which the components were input from the source data. You can also sort components alphabetically by name. For example, the Camping Equipment element from the example in the previous step includes the following components: Tents, Sleeping Bags, and Lanterns. You can sort these components alphabetically by name or leave them in this order.

j. Specify how this import will update existing data. New values can be added to existing values or new values can replace existing values.

11. To define the month on which your fiscal year begins, select the Date dimension, and choose a month from the Fiscal year starts on list.

12. To populate the Date dimension with all dates, regardless of whether data exists for those quarters, months, and days, select the Populate whole years check box.

13. To define a level, complete the following actions:
   a. Select the item in the Source Items pane.
   b. In the Properties pane, click Level under Mapping type.

   Tip: To define several items as levels at the same time, select the items in the Source Items pane, right-click them, and then click Level.

c. In the Owner dimension field, select the dimension that this level belongs to.

   For example, the source lists Years, Quarters, Months, and Days as separate columns. Each column is defined as a separate dimension. To create a hierarchy with Years at the top and Days at the bottom, define Quarters, Months, and Days as levels with Years as the level at the top.

d. To move the level in the structure, change the Level index field.

   Tip: You can also reorder levels by dragging them in the Target Items pane.

14. To add an attribute to a level, complete the following actions:

   a. Select the item that you want to make an attribute in the Source Items pane.
   b. In the Properties pane, click Attribute under Mapping type.

   Tip: To define several items as attributes at the same time, select the items in the Source Items pane, right-click them, and then click Attribute. When the mapping type changes to Attribute, the attribute becomes a child item of the closest level. You might need to move the attribute to the appropriate level, if it is not nested under the correct level.

c. Specify the data type for the attribute.

d. Optional: Change the attribute type.

   A caption provides a descriptive label for a data item. For example, your source data includes an SKU column that displays product codes, and an Item Name column that displays the product name. You make the Item Name data into an attribute of the Item level in your target data so that
your workspace shows the product name labels on the Item dimension. To append the original column name to the caption for any captions that are not unique, click **Ensure uniqueness**.

If your data includes information for several different locales, you can identify attributes as captions and select the locale of each caption. If you do not select a locale for a caption, the default locale will apply.

An alias adds data that can be used as an alternative name for an item, such as a name in another language. Each alias must have a unique name.

e. Select the dimension and level that this attribute belongs to.

15. To define measures for the cube, complete the following actions:

a. Select the item that you want to make a measure in the **Source Items** pane.

b. In the **Properties** pane, click **Measure** under **Mapping type**.

   **Tip:** To define several items as measures at the same time, select the items in the **Source Items** pane, right-click them, and then click **Measure**.

c. Specify the data type for the measure.

   **Important:** If your source data does not include decimals within the first 100 records, your workspace data will not include decimals. However, the decimal data is preserved during the import. You can change the format of this measure to include decimals. For information about formatting measures, see [“Changing the format of measures” on page 100](#).

d. To move the measure in the structure, change the **Measure index** field.

   **Tip:** You can also reorder measures by dragging them in the **Target Items** pane.

   **Tip:** Generate a count measure to confirm that your data was imported. The Count column in your crosstab should show the number of rows that you imported. This number will give you a quick indication of any duplicate or missing rows. To generate a count measure, select the **cube_name Measures** dimension in the **Target items** pane, and ensure that the **Generate count measure** check box is selected.

16. To exclude a column from the import, right-click it in the **Data Preview** pane and click **Do not map**.

17. To add a calculated column, complete the following actions:

   a. Click **Add calculated column**.

   b. In the **Properties** pane, define the data type and mapping type of the expression.

   c. Type the expression in the **Expression** field. Expressions must end with a semicolon (;).

      For example, to add a calculated column that concatenates the Surname and Given name items, define the following expression:

      \[
      v_{Expression} = v_{Surname} \mid ',' \mid v_{Given\ name} \mid ;
      \]

      The expressions that you can add during an import are IBM Cognos TM1 TurboIntegrator expressions, so you can only use the functions that are compatible with Cognos TM1 TurboIntegrator. For more information about authoring expressions, see [“Calculations” on page 57](#).

   d. Click **Preview** to see the results of the expression.

18. Complete one of the following actions:
• If you want to create a crosstab from your imported data, click **Import**.
• If you want to view the imported data only in the content pane, click **Next**, clear the **Open cube viewer upon completion** check box, and click **Import**.

**Importing Cognos TM1 cube views**

You can import IBM Cognos TM1 cube views into IBM Cognos Insight and accept the default mapping, or you can make changes to define the model.

**Before you begin**

To review the way in which Cognos Insight maps data by default, see “Before you import data” on page 17.

Two import sources are only available when you are connected to an IBM Cognos TM1 server: **IBM Cognos TM1 Cube View** and **IBM Cognos TM1 Dimension Subset**. Cognos TM1 cube views and dimension subsets are defined by the Cognos TM1 administrator. When you connect to the Cognos TM1 server, the cubes, views, dimensions, and subsets that you can see in the import wizard reflect the elements that you have permission to access.

If your source data contains decimal values but there are no decimal values within the first 100 records, Cognos Insight detects the data as integers. However, the decimal places are preserved, and you can apply formatting to add the decimals. For information about formatting data, see “Changing the format of measures” on page 100.

**Procedure**

1. Click **Get Data**, and then click **Import Data**.
2. Optional: In the **Import name** field, enter a name for this import process. Import processes appear by name in the content pane, where you can select a process and refresh the data for that import.
3. In the **Type** field, select **IBM Cognos TM1 Cube View**.
4. Select the cube and view that you want to import.
5. To finish importing your data, complete one of the following actions:
   • To create a crosstab from your imported data, click **Import**.
   • To view the imported data only in the content pane, click **Advanced**, click **Summary**, and then clear the **Open cube viewer upon completion** check box and click **Import**.
6. To make changes to the default mappings, click **Advanced**.
   By default, Cognos Insight maps your data as described in “Before you import data” on page 17. You can change the mapping type for a column to dimension, level, attribute, or measure.
7. To change how Cognos Insight maps your data, complete one of the following actions:
   a. To remove the default mapping, click **Clear All Mappings**.
   b. When you are importing reports or files, to map your data to a single level, click **Recreate All Mappings**, and then click **Do not Detect Hierarchies**.
   c. When you are importing reports or files, to return the mappings to the default mappings that Cognos Insight provided, click **Recreate All Mappings**, and then click **Detect Hierarchies**.
Tip: You can disable hierarchy detection for all report and file imports by clearing the Detect hierarchies during import check box in the My Preferences window.

8. To review the properties of the cube:
   a. Select the cube in the Mapping field.
   b. Click Show Properties.
   c. To ensure that any zero values in your data are preserved instead of being read as blank cells, select the Store zero values check box.
   d. To replace empty cells in your source data with the default values for empty cells, select the Replace empty strings with default values check box. The default value is Default dimension_name.
   e. If your source data contains only one measure, you can remove the default measures dimension by clearing the Create measure dimension check box.

   CAUTION:
   If you choose to remove the default measures dimension during import, you cannot add new measures to this cube at a later time.

9. To define a dimension, complete the following actions:
   a. To map the dimension as a time dimension, in the Dimension type field, click Time.
   b. Select the dimension in the Target Items pane.
   c. If you are importing a dimension that includes element names that are not unique, in the Properties pane, expand the Advanced section and select the Include the names of parent elements check box. This setting prefaces the element names with their parent names to make them unique. A separator character will be added to differentiate the parent name from the element name. You can change the separator character, and you can choose to use unique element names as captions.

   An example of non-unique element names is the North America dimension. Ontario is a child element of the California level, and Ontario is also a child element of the Canada level. California is a child element of the Country or Region level, and Canada is a Country or Region level. If you chose to make these element names unique, the Ontario element that is a child element of the California level would be named California - Ontario, and the Ontario element that is a child element of the Canada level would be named Canada - Ontario.
   
   d. To include a total for this dimension, ensure that the Create total element check box is selected.
   e. To identify the source data as an unbalanced hierarchy, select the Unbalanced source data check box, and then choose whether to balance the hierarchy by making all of the child members the same depth, or leave the hierarchy unbalanced.
   f. To identify the source data as a ragged hierarchy, select the Ragged source data check box, and then choose whether to keep the ragged structure and what placeholder data to insert in the blank cells.
   g. To move the dimension in the structure, change the Dimension index field.

   Tip: You can also reorder dimensions by dragging them in the Target Items pane.
   h. Optional: Specify how to sort the elements in this dimension. Element sorting determines the order of the parent data items in a dimension. The default element sorting of None preserves the order in which the elements
were input from the source data. You can also sort elements alphabetically by name or by their level, or depth, in the dimension, or by the order in which they appear in the hierarchy. Sorting by level or by hierarchy can be used for advanced scripting purposes. For example, within the Product Line dimension, you have the following elements: Golf Equipment, Camping Equipment, and Outdoor Protection. You can sort these elements alphabetically by name or leave them in this order.

i. Optional: Specify how to sort the components within the elements.
Component sorting determines the order of the child items of the elements in a dimension. The default component sorting of None preserves the order in which the components were input from the source data. You can also sort components alphabetically by name. For example, the Camping Equipment element from the example in the previous step includes the following components: Tents, Sleeping Bags, and Lanterns. You can sort these components alphabetically by name or leave them in this order.

j. Specify how this import will update existing data. New values can be added to existing values or new values can replace existing values.

10. To define the month on which your fiscal year begins, select the Date dimension, and choose a month from the Fiscal year starts on list.
11. To populate the Date dimension with all dates, regardless of whether data exists for those quarters, months, and days, select the Populate whole years check box.
12. To define a level, complete the following actions:
   a. Select the item in the Source Items pane.
   b. In the Properties pane, click Level under Mapping type.
      Tip: To define several items as levels at the same time, select the items in the Source Items pane, right-click them, and then click Level.
   c. In the Owner dimension field, select the dimension that this level belongs to.
      For example, the source lists Years, Quarters, Months, and Days as separate columns. Each column is defined as a separate dimension. To create a hierarchy with Years at the top and Days at the bottom, define Quarters, Months, and Days as levels with Years as the level at the top.
   d. To move the level in the structure, change the Level index field.
      Tip: You can also reorder levels by dragging them in the Target Items pane.
13. To add an attribute to a level, complete the following actions:
   a. Select the item that you want to make an attribute in the Source Items pane.
   b. In the Properties pane, click Attribute under Mapping type.
      Tip: To define several items as attributes at the same time, select the items in the Source Items pane, right-click them, and then click Attribute.
      When the mapping type changes to Attribute, the attribute becomes a child item of the closest level. You might need to move the attribute to the appropriate level, if it is not nested under the correct level.
   c. Specify the data type for the attribute.
   d. Optional: Change the attribute type.
      A caption provides a descriptive label for a data item. For example, your source data includes an SKU column that displays product codes, and an
Item Name column that displays the product name. You make the Item Name data into an attribute of the Item level in your target data so that your workspace shows the product name labels on the Item dimension. To append the original column name to the caption for any captions that are not unique, click **Ensure uniqueness**.

If your data includes information for several different locales, you can identify attributes as captions and select the locale of each caption. If you do not select a locale for a caption, the default locale will apply. An alias adds data that can be used as an alternative name for an item, such as a name in another language. Each alias must have a unique name.

e. Select the dimension and level that this attribute belongs to.

14. To define measures for the cube, complete the following actions:
   a. Select the item that you want to make a measure in the **Source Items** pane.
   b. In the **Properties** pane, click **Measure** under **Mapping type**.
      
      **Tip:** To define several items as measures at the same time, select the items in the **Source Items** pane, right-click them, and then click **Measure**.
   c. Specify the data type for the measure.
      
      **Important:** If your source data does not include decimals within the first 100 records, your workspace data will not include decimals. However, the decimal data is preserved during the import. You can change the format of this measure to include decimals. For information about formatting measures, see "Changing the format of measures" on page 100.
   d. To move the measure in the structure, change the **Measure index** field.
      
      **Tip:** You can also reorder measures by dragging them in the **Target Items** pane.

15. To exclude a column from the import, right-click it in the **Data Preview** pane and click **Do not map**.

16. To add a calculated column, complete the following actions:
   a. Click **Add calculated column**.
   b. In the **Properties** pane, define the data type and mapping type of the expression.
   c. Type the expression in the **Expression** field. Expressions must end with a semicolon (;).
      
      For example, to add a calculated column that concatenates the Surname and Given name items, define the following expression:
      
      \[ v_{Expression} = v_{Surname}_0 \mid ', ' \mid v_{Given\ name}_1; \]
      
      The expressions that you can add during an import are IBM Cognos TM1 TurboIntegrator expressions, so you can only use the functions that are compatible with Cognos TM1 TurboIntegrator. For more information about authoring expressions, see "Calculations" on page 57.
   d. Click **Preview** to see the results of the expression.
Importing new dimensions into a cube

You can import new dimensions into an existing cube in IBM Cognos Insight when you want to add more data than you originally imported to an existing workspace.

Before you begin

To review the way in which Cognos Insight maps data by default, see “Before you import data” on page 17.

About this task

You can import new dimensions when your workspace requires additional data or new data. For example, you imported an IBM Cognos Report Studio report showing revenue by month, and since you imported, a new dimension, geography, has been added to the report. You can refresh the data in your workspace to include the new dimension.

Procedure

1. Click Get Data, and then click Import Dimensions

   Tip: If your data source is a file, you can also drag the file from your computer to the cube in the content pane to launch the import wizard.

2. Optional: In the Import name field, enter a name for this import process. Import processes appear by name in the content pane, where you can select a process and refresh the data for that import.

3. In the Data Source area, select the data type and define where Cognos Insight can access the source data.

4. In the Columns pane, select only the dimensions that you want to import.

5. To make changes to the way in which the new dimensions are mapped, click Advanced.

6. To change how Cognos Insight maps your data, complete one of the following actions:
   a. If you want to remove the default mapping, click Clear All Mappings.
   b. When you are importing reports or files, to map your data to a single level, click Recreate All Mappings, and then click Do not Detect Hierarchies.
   c. When you are importing reports or files, to return the mappings to the default mappings that Cognos Insight provided, click Recreate All Mappings, and then click Detect Hierarchies.

   Tip: You can disable hierarchy detection for all report and file imports by clearing the Detect hierarchies during import check box in the My Preferences window.

7. To customize the properties of the new dimension, complete the following actions:
   a. Select the dimension in the Target Items pane.
b. Specify how this import will update existing data. New values can be added to existing values or new values can replace existing values.

c. If you are importing a dimension that includes element names that are not unique, in the Properties pane, expand the Advanced section and select the Include the names of parent elements check box. This setting prefixes the element names with their parent names to make them unique. A separator character will be added to differentiate the parent name from the element name. You can change the separator character, and you can choose to use unique element names as captions.

An example of non-unique element names is the North America dimension. Ontario is a child element of the California level, and Ontario is also a child element of the Canada level. California is a child element of the Country or Region level, and Canada is a Country or Region level. If you chose to make these element names unique, the Ontario element that is a child element of the California level would be named California - Ontario, and the Ontario element that is a child element of the Canada level would be named Canada - Ontario.

d. To include a total for this dimension, ensure that the Create total element check box is selected.

e. To identify the source data as an unbalanced hierarchy, select the Unbalanced source data check box, and then choose whether to balance the hierarchy by making all of the child members the same depth, or leave the hierarchy unbalanced.

f. To identify the source data as a ragged hierarchy, select the Ragged source data check box, and then choose whether to keep the ragged structure and what placeholder data to insert in the blank cells.

g. If your source data is organized into two columns, one for parent data items and one for the corresponding child data items, expand the Advanced section and select the Parent-Child check box. This setting adds a Parent Members item and a Child Members item under the selected dimension in the Target Items pane. Drag items from the Source Items pane to the Parent Members and Child Members items in the Target Items pane to define the hierarchy.

h. To move the dimension in the structure, change the Dimension index field.

Tip: You can also reorder dimensions by dragging them in the Target Items pane.

i. Optional: Specify how to sort the elements in this dimension. Element sorting determines the order of the parent data items in a dimension. The default element sorting of None preserves the order in which the elements were input from the source data. You can also sort elements alphabetically by name or by their level, or depth, in the dimension, or by the order in which they appear in the hierarchy. Sorting by level or by hierarchy can be used for advanced scripting purposes. For example, within the Product Line dimension, you have the following elements: Golf Equipment, Camping Equipment, and Outdoor Protection. You can sort these elements alphabetically by name or leave them in this order.

j. Optional: Specify how to sort the components within the elements. Component sorting determines the order of the child items of the elements in a dimension. The default component sorting of None preserves the order in which the components were input from the source data. You can also sort components alphabetically by name. For example, the Camping Equipment element from the example in the previous step includes the
following components: Tents, Sleeping Bags, and Lanterns. You can sort these components alphabetically by name or leave them in this order.

8. To define a level, complete the following actions:
   a. Select the item in the Source Items pane.
   b. In the Properties pane, click Level under Mapping type.

   **Tip:** To define several items as levels at the same time, select the items in the Source Items pane, right-click them, and then click Level.

c. In the Owner dimension field, select the dimension that this level belongs to.
   For example, the source lists Years, Quarters, Months, and Days as separate columns. Each column is defined as a separate dimension. To create a hierarchy with Years at the top and Days at the bottom, define Quarters, Months, and Days as levels with Years as the level at the top.

d. To move the level in the structure, change the Level index field.

   **Tip:** You can also reorder levels by dragging them in the Target Items pane.

9. To add an attribute to a level, complete the following actions:
   a. Select the item that you want to make an attribute in the Source Items pane.
   b. In the Properties pane, click Attribute under Mapping type.

   **Tip:** To define several items as attributes at the same time, select the items in the Source Items pane, right-click them, and then click Attribute.
   When the mapping type changes to Attribute, the attribute becomes a child item of the closest level. You might need to move the attribute to the appropriate level, if it is not nested under the correct level.

c. Specify the data type for the attribute.

d. Optional: Change the attribute type.
   A caption provides a descriptive label for a data item. For example, your source data includes an SKU column that displays product codes, and an Item Name column that displays the product name. You make the Item Name data into an attribute of the Item level in your target data so that your workspace shows the product name labels on the Item dimension. To append the original column name to the caption for any captions that are not unique, click Ensure uniqueness.
   An alias adds data that can be used as an alternative name for an item, such as a name in another language. Each alias must have a unique name.

e. Select the dimension and level that this attribute belongs to.

10. Click Import. The new dimension appears in the content pane in the All Dimensions list.

11. Drag the new dimension to the appropriate cube, and specify whether to share the dimension between the All Dimensions folder and the cube or to copy the dimension into the cube.

---

**Importing Cognos TM1 dimension subsets**

You can import IBM Cognos TM1 dimension subsets into IBM Cognos Insight and accept the default mapping, or you can make changes to define the model.
Before you begin

To review the way in which Cognos Insight maps data by default, see “Before you import data” on page 17.

Two import sources are only available when you are connected to an IBM Cognos TM1 server: IBM Cognos TM1 Cube View and IBM Cognos TM1 Dimension Subset. Cognos TM1 cube views and dimension subsets are defined by the Cognos TM1 administrator. When you connect to the Cognos TM1 server, the cubes, views, dimensions, and subsets that you can see in the import wizard reflect the elements that you have permission to access.

If your source data contains decimal values but there are no decimal values within the first 100 records, Cognos Insight detects the data as integers. However, the decimal places are preserved, and you can apply formatting to add the decimals. For information about formatting data, see “Changing the format of measures” on page 100.

Procedure

1. Click Get Data, and then click Import Dimensions

   Tip: If your data source is a file, you can also drag the file from your computer to the cube in the content pane to launch the import wizard.

2. Optional: In the Import name field, enter a name for this import process. Import processes appear by name in the content pane, where you can select a process and refresh the data for that import.

3. In the Type field, select IBM Cognos TM1 Dimension Subset.

4. Select the dimension and subset that you want to import.

5. To finish importing your data, complete one of the following actions:
   • To create a crosstab from your imported data, click Import.
   • To view the imported data only in the content pane, click Advanced, click Summary, and then clear the Open cube viewer upon completion check box and click Import.

6. To make changes to the default mappings, click Advanced.

   By default, Cognos Insight maps your data as described in “Before you import data” on page 17. You can change the mapping type for a column to dimension, level, attribute, or measure.

7. To change how Cognos Insight maps your data, complete one of the following actions:
   a. To remove the default mapping, click Clear All Mappings.
   b. When you are importing reports or files, to map your data to a single level, click Recreate All Mappings, and then click Do not Detect Hierarchies.
   c. When you are importing reports or files, to return the mappings to the default mappings that Cognos Insight provided, click Recreate All Mappings, and then click Detect Hierarchies.

   Tip: You can disable hierarchy detection for all report and file imports by clearing the Detect hierarchies during import check box in the My Preferences window.

8. To review the properties of the cube:
   a. Select the cube in the Mapping field.
b. Click Show Properties.

c. To ensure that any zero values in your data are preserved instead of being read as blank cells, select the Store zero values check box.

d. To replace empty cells in your source data with the default values for empty cells, select the Replace empty strings with default values check box. The default value is Default dimension_name.

e. If your source data contains only one measure, you can remove the default measures dimension by clearing the Create measure dimension check box.

   CAUTION: If you choose to remove the default measures dimension during import, you cannot add new measures to this cube at a later time.

9. To define a dimension, complete the following actions:

   a. To map the dimension as a time dimension, in the Dimension type field, click Time.

   b. Select the dimension in the Target Items pane.

   c. If you are importing a dimension that includes element names that are not unique, in the Properties pane, expand the Advanced section and select the Include the names of parent elements check box. This setting prefaces the element names with their parent names to make them unique. A separator character will be added to differentiate the parent name from the element name. You can change the separator character, and you can choose to use unique element names as captions.

   An example of non-unique element names is the North America dimension. Ontario is a child element of the California level, and Ontario is also a child element of the Canada level. California is a child element of the Country or Region level, and Canada is a Country or Region level. If you chose to make these element names unique, the Ontario element that is a child element of the California level would be named California - Ontario, and the Ontario element that is a child element of the Canada level would be named Canada - Ontario.

   d. To include a total for this dimension, ensure that the Create total element check box is selected.

   e. To identify the source data as an unbalanced hierarchy, select the Unbalanced source data check box, and then choose whether to balance the hierarchy by making all of the child members the same depth, or leave the hierarchy unbalanced.

   f. To identify the source data as a ragged hierarchy, select the Ragged source data check box, and then choose whether to keep the ragged structure and what placeholder data to insert in the blank cells.

   g. To move the dimension in the structure, change the Dimension index field.

      Tip: You can also reorder dimensions by dragging them in the Target Items pane.

   h. Optional: Specify how to sort the elements in this dimension. Element sorting determines the order of the parent data items in a dimension. The default element sorting of None preserves the order in which the elements were input from the source data. You can also sort elements alphabetically by name or by their level, or depth, in the dimension, or by the order in which they appear in the hierarchy. Sorting by level or by hierarchy can be used for advanced scripting purposes. For example, within the Product Line dimension, you have the following elements: Golf Equipment,
Camping Equipment, and Outdoor Protection. You can sort these elements alphabetically by name or leave them in this order.

i. Optional: Specify how to sort the components within the elements.
Component sorting determines the order of the child items of the elements in a dimension. The default component sorting of None preserves the order in which the components were input from the source data. You can also sort components alphabetically by name. For example, the Camping Equipment element from the example in the previous step includes the following components: Tents, Sleeping Bags, and Lanterns. You can sort these components alphabetically by name or leave them in this order.

j. Specify how this import will update existing data. New values can be added to existing values or new values can replace existing values.

10. To define the month on which your fiscal year begins, select the Date dimension, and choose a month from the Fiscal year starts on list.

11. To populate the Date dimension with all dates, regardless of whether data exists for those quarters, months, and days, select the Populate whole years check box.

12. To define a level, complete the following actions:
   a. Select the item in the Source Items pane.
   b. In the Properties pane, click Level under Mapping type.

   Tip: To define several items as levels at the same time, select the items in the Source Items pane, right-click them, and then click Level.
   c. In the Owner dimension field, select the dimension that this level belongs to.
   For example, the source lists Years, Quarters, Months, and Days as separate columns. Each column is defined as a separate dimension. To create a hierarchy with Years at the top and Days at the bottom, define Quarters, Months, and Days as levels with Years as the level at the top.
   d. To move the level in the structure, change the Level index field.

   Tip: You can also reorder levels by dragging them in the Target Items pane.

13. To add an attribute to a level, complete the following actions:
   a. Select the item that you want to make an attribute in the Source Items pane.
   b. In the Properties pane, click Attribute under Mapping type.

   Tip: To define several items as attributes at the same time, select the items in the Source Items pane, right-click them, and then click Attribute. When the mapping type changes to Attribute, the attribute becomes a child item of the closest level. You might need to move the attribute to the appropriate level, if it is not nested under the correct level.
   c. Specify the data type for the attribute.
   d. Optional: Change the attribute type.
   A caption provides a descriptive label for a data item. For example, your source data includes an SKU column that displays product codes, and an Item Name column that displays the product name. You make the Item Name data into an attribute of the Item level in your target data so that your workspace shows the product name labels on the Item dimension. To append the original column name to the caption for any captions that are not unique, click Ensure uniqueness.
If your data includes information for several different locales, you can identify attributes as captions and select the locale of each caption. If you do not select a locale for a caption, the default locale will apply.

An alias adds data that can be used as an alternative name for an item, such as a name in another language. Each alias must have a unique name.

e. Select the dimension and level that this attribute belongs to.

14. To define measures for the cube, complete the following actions:
   a. Select the item that you want to make a measure in the Source Items pane.
   b. In the Properties pane, click Measure under Mapping type.

   **Tip:** To define several items as measures at the same time, select the items in the Source Items pane, right-click them, and then click Measure.

c. Specify the data type for the measure.

   **Important:** If your source data does not include decimals within the first 100 records, your workspace data will not include decimals. However, the decimal data is preserved during the import. You can change the format of this measure to include decimals. For information about formatting measures, see “Changing the format of measures” on page 100.

d. To move the measure in the structure, change the Measure index field.

   **Tip:** You can also reorder measures by dragging them in the Target Items pane.

   **Tip:** Generate a count measure to confirm that your data was imported. The Count column in your crosstab should show the number of rows that you imported. This number will give you a quick indication of any duplicate or missing rows. To generate a count measure, select the cube_name Measures dimension in the Target items pane, and ensure that the Generate count measure check box is selected.

15. To exclude a column from the import, right-click it in the Data Preview pane and click Do not map.

16. To add a calculated column, complete the following actions:
   a. Click Add calculated column.
   b. In the Properties pane, define the data type and mapping type of the expression.
   c. Type the expression in the Expression field. Expressions must end with a semicolon (;).

   For example, to add a calculated column that concatenates the Surname and Given name items, define the following expression:

   \[
   v_{\text{Expression}} = v_{\text{Surname}_0} \mid \text{','} \mid v_{\text{Given}_{\text{name}_1}};
   \]

   The expressions that you can add during an import are IBM Cognos TM1 TurboIntegrator expressions, so you can only use the functions that are compatible with Cognos TM1 TurboIntegrator. For more information about authoring expressions, see “Calculations” on page 57.

d. Click Preview to see the results of the expression.

17. Complete one of the following actions:
   - If you want to create a crosstab from your imported data, click Import.
   - If you want to view the imported data only in the content pane, click Next, clear the Open cube viewer upon completion check box, and click Import.
Adding existing dimensions

If you have already imported or built dimensions in an IBM Cognos Insight workspace, you might want to use them in the new cube that you create when you import data.

Before you begin

To review the way in which Cognos Insight maps data by default, see “Before you import data” on page 17.

About this task

You can include an existing dimension to the data that you are importing. For example, you create a Version dimension and then add it to a new import to define different scenarios. In this case, you would use the import's Slice on feature to specify a version for the new import. Or you could have an existing Products dimension that you want to include in a new cube that you import. In this case, you would map a source column to the existing dimension.

Procedure

1. From the Get Data menu, click Import Dimensions.
2. Optional: In the Import name field, enter a name for this import process. Import processes appear by name in the content pane, where you can select a process and refresh the data for that import.
3. Select the data source that you want to import.
   
   Tip: If your data source is a file, you can also drag the file from your computer to the cube in the content pane to start the import wizard.
4. In the Import Wizard, click Advanced.
5. Click Show Properties.
6. Click the Advanced section for the cube item, and in the Use existing dimensions in the import area, add the existing dimensions you want to include in your cube.
7. Map columns from your source to the existing dimension. If your source does not contain a mappable column for the dimension, in the Slice on area, click Select and choose an appropriate member in the dimension. For example, you select the Base member in a Versions dimension to assign your data to that member of the cube.

Refreshing data

When you want to update an IBM Cognos Insight workspace with new values from the same data source, you can reimport data.

About this task

If the values in your data source have changed and you want to import the new data, you can refresh it. For example, you imported a spreadsheet showing your company's average sales by quarter, and since you imported, the average has improved because sales have improved. You can refresh the data in your workspace to update the workspace.
You can only refresh data from one data source at a time. If your workspace includes data from several data sources, perform a refresh for each data source. When you import data into IBM Cognos Insight, each import process is displayed in the content pane in the All Imports list. You can run or edit a specific import process.

If you have published the workspace that you want to refresh with new data to an IBM Cognos Express or IBM Cognos TM1 server, instead of using this procedure to refresh your workspace data, you should update the cube in Cognos TM1 Performance Modeler by connecting the cube to your data source. If you choose to refresh the data on your computer and then republish it to Cognos Express or Cognos TM1, the publish process will create a new Cognos TM1 server instead of replacing the data in the existing Cognos TM1 application. For information about connecting a cube to a data source, open the document for your product and version from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

**Procedure**

1. To open the content pane, click the content pane icon.
2. Right-click the cube that contains the data that you want to refresh, and click one of the following commands:
   - To keep the mappings that you defined earlier and refresh only the data, click Run Import, and then choose the import process that you want to run. The import processes are identified either by the name that you entered in the first step of the import wizard, or by the default name, New Import, and the import number. If you run the import process, you do not have any more steps to complete.
   - To define different mappings than you defined when you imported this cube, click Edit Import, and then choose the import process that you want to edit. The import processes are identified by the name that you entered in the first step of the import wizard, or by the default name, New Import, and the import number. Then go to step 4.

   **Tip:** You can also reimport data by expanding the All Imports folder in the content pane and double-clicking the import process that you want to run.
3. Complete the following actions for each import process that you want to edit:
   a. To make mapping changes, click Advanced.
   b. If you want to remove the default mapping, click Clear All Mappings.
   c. To open the Properties pane, click Show Properties.
   d. If necessary, from the Measure dimension list, specify the dimension that contains the measures in your cube.
   e. From the Data update behavior list, specify how to update the cube. New values can be added to existing values or new values can replace existing values.
   f. In the Data Preview pane, select the columns of data that you want to update or add, and define each data item’s mapping type. Any columns that you drag to an existing cube can be measures or attributes. You cannot change them to be dimensions or levels.
   g. If you want to import only fact data, or measures, map to the leaf level of a hierarchy.

You can change the mappings for measures. For example, you earlier imported a measure called Cost. You are now importing a measure called
Unit Cost and you want the data for Unit Cost to be in the Cost measure. You map the Unit Cost measure to the Cost measure in the Import wizard.

4. Complete one of the following actions:
   - If you want to the imported data to appear only in the content pane, click Summary, clear the Open cube viewer upon completion check box, and click Import.
   - If you want to the imported data to appear in a crosstab and in the content pane, click Import.

Results

If you want to schedule a process to refresh the data, search for chores in the documentation for your product and version. You can access all Cognos documentation from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).
Chapter 4. Data analysis

When you explore, sort, and nest data in IBM Cognos Insight, you see the information from different perspectives and can use your analysis to make better business decisions. For example, you can use a line chart to help you identify trends.

Entering data

You can enter in your data directly into the IBM Cognos Insight crosstab and use commands to perform simple calculation tasks. You can also copy and paste into the cells or import data from a Microsoft Excel workbook or a CSV file.

Procedure

1. To change the values in a cell, select the cell and type the new values, and then press Enter or use the arrow keys to move to another cell.
   When you press Enter, the data is displayed in blue and the row and column headers are highlighted in blue. This indicates that the data you have entered is different than the original values on the IBM Cognos Express or IBM Cognos TM1 server. If other cells are related to the cell where you entered data, pressing Enter results in these cells turning blue to indicate that their values are also different than the original values on the server.
   When you use the arrow keys to move to another cell, the data is displayed in green if you are contributing to a plan. This indicates that the data in the cell has changed and that the change is pending. Recalculations are not performed and related cells are not updated. If you are working with personal data, the data is displayed in blue until you save the workspace.
   When you commit your changes by clicking the Commit icon, the changed values are saved on the Cognos Express or Cognos TM1 server. The data is then displayed in black to indicate that others can see the changes to the data.
   Data that will appear in a chart must be in the following range: 0.000000001 to 99,999,999,999,999,999,999,999,999,999.
   If you are working in distributed mode and delete data, the data is still available on the server until you submit the data. This is because the data is stored locally in distributed mode.

2. You can use the following commands to enter data in a cell. These commands are processed when you press Enter and can apply only to the current crosstab. These commands are not case-sensitive.

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>Enters the value in thousands.</td>
</tr>
<tr>
<td></td>
<td>For example, 5K results in 5000 being entered in the cell.</td>
</tr>
<tr>
<td>M</td>
<td>Enters the value in millions.</td>
</tr>
<tr>
<td></td>
<td>For example, 10M results in 10,000,000 being entered in the cell.</td>
</tr>
<tr>
<td>Add, +</td>
<td>Adds a number to the cell value.</td>
</tr>
<tr>
<td></td>
<td>For example, Add50 adds 50 to the cell value.</td>
</tr>
</tbody>
</table>
Table 3. Commands for entering data (continued)

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub</td>
<td>Subtracts a number from the cell value. For example, Sub50 subtracts 50 from the cell value.</td>
</tr>
<tr>
<td>Increase, Inc, &gt;</td>
<td>Increases the cell value by a number used as a percentage. For example, inc6 or 6&gt; increases the cell value by 6%.</td>
</tr>
<tr>
<td>Decrease, Dec, &lt;</td>
<td>Decreases the cell value by a number used as a percentage. For example, Dec6 or 6&lt; decreases the cell value by 6%.</td>
</tr>
<tr>
<td>Hold, Hol</td>
<td>Holds the cell value from data spreads.</td>
</tr>
<tr>
<td>Release, Rel</td>
<td>Releases held cells.</td>
</tr>
<tr>
<td>Multiply, Mul</td>
<td>Multiplies the cell value by a number. For example, Mul50 multiplies each cell value by 50.</td>
</tr>
<tr>
<td>Divide, Div</td>
<td>Divides each cell value by a number. For example, Div50 divides each cell value by 50.</td>
</tr>
<tr>
<td>Grow</td>
<td>Applies compound growth to the percentage that you enter. For example, Grow5 adds 5% to every member in a dimension.</td>
</tr>
<tr>
<td>Power, Pow</td>
<td>Raises the number of one cell to the power that you enter. For example, the number in the cell is 10. Entering Pow3 raises 10 to 1000.</td>
</tr>
<tr>
<td>&gt;</td>
<td>Copies the value to the right to all child items, or leaves, of the consolidation or only to those child items that contain non-zero values.</td>
</tr>
<tr>
<td>&lt;</td>
<td>Copies the value to the left to all child items, or leaves, of the consolidation or only to those child items that contain non-zero values.</td>
</tr>
<tr>
<td></td>
<td>Copies the value down to all child items, or leaves, of the consolidation or only to those child items that contain non-zero values.</td>
</tr>
<tr>
<td>^</td>
<td>Copies the value up to all child items, or leaves, of the consolidation or only to those child items that contain non-zero values.</td>
</tr>
<tr>
<td>: ( a colon)</td>
<td>Stops copying.</td>
</tr>
</tbody>
</table>

3. To change the heading for a row or column, select the heading, type in the new name, and press Enter.

Filtering data

Filter the dimensions, measures, attributes, and data that appears in an IBM Cognos Insight workspace to analyze information from different viewpoints and understand it better.

Nesting and swapping dimensions in crosstab and charts

Replace the items that appear in crosstabs and charts to view your data from a different perspective in IBM Cognos Insight.
About this task

If the widget contains both a crosstab and a chart, changes that you make to the crosstab will be reflected in the chart, and changes that you make to the chart will be reflected in the crosstab.

Procedure

1. To change the dimensions, measures, or attributes that appear in a crosstab or chart, complete one of the following actions:
   - Drag the item from the content pane to the rows, columns, or context of the crosstab.
   - Drag the item from the content pane to a chart element, such as the x-axis, a bar in a bar chart, or the chart legend.
   - Drag the item from the rows section, columns section, or context section of the overview area to another section of the overview area.

2. To filter which elements in a dimension, measure, or attribute appear in a crosstab or chart, in the overview area, click the dimension, measure, or attribute, and select the level of detail that you want. You can filter the elements that appear in an entire workspace by using explore points or the explore pane. For more information, see “Filtering by dimensions and attributes.”

3. To exchange the rows and columns in a crosstab, click the Swap icon.

Filtering by dimensions and attributes

Use explore points or the explore pane to filter the data that is displayed in the crosstabs and charts in your IBM Cognos Insight workspace. Explore points and the explore pane also identify how your dimensions and attributes are related and where they are not connected.

About this task

Explore points are widgets that list the elements in a dimension. You can click each element to filter the workspace to display only elements you select. For example, one explore point shows months, a second explore point shows products, and a third explore point shows your stores. If you select January, February, and March, you see which stores sold which products in any of these months. The products and stores are highlighted only if they contain data for January or February or March. If you then select two products as well as these months, you see a further refinement of the data. The stores that are highlighted have sold at least one of the two products in January or February or March.

You can create explore points from attributes as well as dimensions. Attributes enable you to group dimension elements in a different way. For example, the product dimension includes five products. Three of the products are new this year, and two of the products were created five years ago. You can use an attribute to define which elements of the dimension are new and which are old, and then filter your crosstab and chart to show only new or old products. This helps you compare the new products to the old.
The explore pane is similar to an explore point, but the explore pane includes all dimensions, attributes, and measures, and the explore pane is docked at the side of the workspace.

**Procedure**

1. To view the explore pane, click **Explore**, and then click **View Explore Pane**.
2. To create an explore point, drag a dimension or attribute from the content pane to the canvas. An explore point widget is added to the canvas.

   **Tip:** If the dimension contains attributes, you can change the element that is displayed in the explore point by clicking the explore point title and then clicking a dimension or attribute from the list.

3. Select one or more elements in each explore point or in the explore pane to change what appears in the workspace widgets.
4. If you do not want the selected elements and the elements that are associated with the selected elements to be highlighted, click **Explore**, and then clear **Identify Related Items**.
5. If you do not want the selected items and the items that are related to the selected items to appear at the top of explore points, click **Explore**, and then clear **Show Related Items First**.
6. To clear the selections in explore points, complete one or more of the following actions:
   - If you want to clear the selections in one explore point, click **Explore**, and then click **Clear Specific Explore Point**.
   - If you want to clear the selections in all explore points, click **Explore**, and then click **Clear All Explore Points**.

**Results**

If you select multiple members, data for any of the selected members is highlighted.

If the data in the crosstab is aggregated, selecting members in the explore points changes the totals. For example, the crosstab shows revenue for all products for each quarter. If you select a specific product in an explore point, the crosstab still shows all products in the headings but the total is now the total for the product that you selected.

**Related concepts:**
- "Multi-selection in an explore point displays #N/A in some cells” on page 207

When you select two or more members in an explore point in IBM Cognos Insight, the cells in widgets with crosstabs sometimes display the calculated values and sometimes display #N/A.

**Searching for data**

When a dimension contains many elements, you can use an explore point to search for an element in IBM Cognos Insight.

**Procedure**

1. If the dimension is not in an explore point, drag it to the canvas.
2. In the title bar of the explore point, click the **Search** icon.
3. In the text box that appears, type a character string.
Related tasks:

“You can add members to dimensions” on page 104

You can add members to dimensions in IBM Cognos Insight by adding rows and columns to a crosstab at different levels.

Searching in the content pane

You can search for objects in the content pane.

About this task

You can type characters to filter on in the content pane when you are unsure of an exact object name, or if you want to find objects that match specific criteria. The search finds all cubes, dimensions, links, processes, chores, scorecards, and imports that match the criteria.

Procedure

To search for objects whose names contain a specific series of characters, in the content pane, enter the characters in the search box. The search is a live filter of results that match the search criteria. The objects that appear in the content pane match the criteria in any part of the object name.

Drilling up and drilling down

You can drill up and drill down on the data in an IBM Cognos Insight crosstab or a chart to review different levels of the data.

About this task

Drilling up and drilling down are defined as follows:

Drilling up

Drilling up means to replace the data you are drilling up on with the data for the parent element of that data. You drill up to compare data. For example, your crosstab contains revenue by year for the Dishwashers product line. You drill up on the Dishwashers product line to display revenue by year for all product lines. This view of the data enables you to compare the revenue that you earned from the Dishwasher product line to the revenue that you earned for other product lines.

Drilling down

Drilling down means to replace the data you are drilling down on with the data for the child element of that data. You drill down to see more detail about data. For example, your crosstab contains revenue by year for the Dishwashers product line. You drill down to analyze the revenue you collected for each dishwasher product within the Dishwashers product line.

You can drill up or drill down on the following elements in a crosstab:

• Crosstab cells.
  If a crosstab cell appears within a row and a column, you can choose whether you want to drill up or drill down on the row or the column. For example, a cell appears in the January column and in the Quantity row. When you right-click the cell and choose Drill down, you can click January or Quantity.

• Row or column headings.
You can also drill up or drill down on the following elements in a chart:

- Labels, such as the legend title, the items in a legend, or the axis labels.
- Data, such as the columns in a column chart or the lines in a line chart.

Tip:

You can change the behavior of double-clicking on a crosstab cell so that double-clicking drills down on the data in the cell. From the Explore menu, in the Double-click in Crosstabs section, click Drill down. To return the behavior to the default, where you can double-click a cell to edit the data in that cell, from the Explore menu, in the Double-click in Crosstabs section, click Edit. The setting you choose is saved with your workspace, so your workspace users get the same setting when they open your workspace.

You can also change the default behavior for new workspaces that you create so that double-clicking a cell in a crosstab drills down on the data in the cell. Click the Actions icon, click My Preferences, and then, in the Default action for new workspaces when double-clicking on a cell section, click Drill down. The setting you choose in the My Preferences window applies only to new workspaces you create, and this setting is not saved with your workspace.

Procedure

1. Right-click the data item in the crosstab or chart, click Drill up or Drill down, and, if necessary, click the data item that you want to drill up or drill down on. If the Drill up option does not appear, the data item has no parent data, so you can not drill up. If the Drill down option does not appear, the data item has no child data, so you can not drill down.

   Tip:

   You can double-click a row or column heading in a crosstab or an element in a chart to drill up or down on the item. When you hover over the item, your cursor changes to show you in which direction double-clicking the item will drill, up or down.

   You can click an item in the overview area to display the parent items and child items of the data that is currently displayed in the crosstab or chart. Clicking a parent item drills up in the crosstab or chart, and clicking a child item drills down in the crosstab or chart.

2. To remove all the drill-up and drill-down actions you have performed on a data item, click the item in the rows area, columns area, or context area, and then click View All - item_name.

Filtering to show top or bottom results

You can filter to display only the top or bottom results in an IBM Cognos Insight crosstab.

About this task

You can apply filters to a crosstab in the following ways:
• Show only the top results to quickly determine the highest values in your data. For example, you want to know which months had the highest revenue, so you filter to show only the top three results.

• Show only the bottom results to quickly determine the lowest values in your data. For example, you want to know which employees have spent the fewest dollars on travel, so you filter to show only the bottom five results.

Procedure
1. Click the column or row heading for which you want to display only the top or bottom values.

2. Right-click the item, click Top or Bottom, and then click one of the options to choose the number of values you want to display. If you click Custom, a new window appears where you can limit the results that are displayed in the crosstab by choosing one of the following options:
   • Enter a custom number of top or bottom results. For example, you can type 50 to display the top 50 customers by revenue.
   • Enter a custom percentage of top or bottom results. For example, you can type 10 to display the customers who contribute to the top 10% of revenue.
   • Enter a number up to which your top or bottom results will sum. For example, you can type 10000000 to display the customers who contribute to the first 10 million dollars of revenue.

3. In the Based on list, choose the measure for which you want to specify top or bottom results.

4. Click OK.

5. To remove a top or bottom filter, right-click the filtered item, click Top or Bottom, and then click No Top or Bottom.

Sorting

Sorting the range of values in an ascending or descending order makes it easier for you to organize and analyze your data in IBM Cognos Insight.

Procedure
1. Select the entire row or column you want to sort.

2. Right-click the header and click Sort.

3. Specify if you want to sort by value or label and then click Sort Ascending or Sort Descending.

Calculations

Calculations are important to solving problems and making decisions. They can help you define the relationships between items of interest. For example, calculations such as variance and variance percentage can assist with your cost-benefit analysis in IBM Cognos Insight by enabling you to compare costs versus revenues and actual sales versus projected sales.

Dimension calculations

Dimension calculations are performed from a row or column in a crosstab. For example, your crosstab shows profits and losses for each year from 2008 to 2014. You add a new column and use it to show the calculation of profits minus losses in each year.
Note the following considerations when you write dimension calculations:

• If you are using a number that is greater than zero but less than one, preface the number with a leading zero. For example, 0.10.

• Use single quotes and square brackets around names. For example, ['item_name'].

• End each calculation with a semicolon (;).

• You can use spaces to improve clarity.

• You can use both uppercase and lowercase letters. The syntax is not case-sensitive.

Dimension calculations in Cognos Insight have the same syntax as expressions in IBM Cognos TM1. For more information about how to author expressions, review the following sections in the TM1 Reference documentation:

• Rules Functions

• TM1 TurboIntegrator Functions

You can access the TM1 Reference documentation for your product and version from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

Cube calculations

Unlike dimension calculations, cube calculations are a way of simplifying the creation of rules to complete common modeling operations, such as managing and maintaining the model. You can add a calculation to make your model meaningful by deriving more information from the data source.

If you must create calculations that do not involve aggregating, such as calculating exchange rates or revenue, you can build formula expressions in the calculation editor. You can use functions that apply to both dimensions and cubes.

By using the calculation editor, you can view what calculations are applied to a selected cell and modify the precedence of the calculations or rules on the cube. You can use the rule editor to change the order of the rule block that is associated with the cube calculation.

Following are some of the benefits of building cube calculations:

• Obtain data from other cubes to build the calculation expression.
  For example, you can use attributes that exist in a dimension other than the one where the calculation is defined.

• Apply calculations to the leaf of consolidated levels.

• Apply calculations to string elements.

• Reference element attributes.

• Use standard IBM Cognos TM1 functions for the leaf level and the consolidated level

The scope of the calculation is inferred from the selection in the cube or cube view. When you create a calculation, only the row and column dimensions are included. The calculation applies to all members on any context dimensions. If all the members of either the row or column dimension are selected, the calculation applies to all the members of the dimension. The dimension is not included in the default calculation name or the context.
The modeler can change the scope of the selection by adding, removing, and changing member selections for a dimension in one of the following ways:

- Use the dimension context area in the calculation editor.
- Add or remove the dimensions by dragging them to or from the context area of the parent cube.

Data and cube calculations maintain their integrity even when you add or remove a dimension from the cube in which you are creating calculations. However, you must ensure that you adjust links to the new dimension, if one was added. This retention is useful when you are prototyping and restructuring your cubes to adjust to the new business requirements.

**Adding a simple dimension calculation**

You can add, subtract, multiply, or divide rows or columns in an IBM Cognos Insight crosstab. You can also create a custom calculation.

**Before you begin**

The data that you want to use in the calculation must appear in the rows or columns.

For more information about authoring expressions, review the following sections in the *TM1 Reference* documentation:

- Rules Functions
- TM1 TurboIntegrator Functions

You can access the *TM1 Reference* documentation for your product and version from [IBM Knowledge Center](http://www.ibm.com/support/knowledgecenter).

**Procedure**

1. Select one or more rows or columns for the calculation.
2. Right-click the rows or columns and click **Calculate**.
3. Select one of the calculation commands: add, subtract, multiply, divide, or **Custom**.
4. If you select **Custom**, complete the following actions:
   a. In the **Expression** field, enter the calculation. After you enter `[`, a list appears that you can use to select items.
   b. Specify whether the total for the arguments is summarized first or the arguments are applied first.
   c. Click **OK**.
5. To rename the new row or column, highlight it and type a new name.

**Important:** When you rename a data item, you are renaming it in the cube, not just in the current widget. Therefore, the new name will be reflected in every widget that includes this data item.

**Results**

The default behavior for new calculations is to exclude the calculation value from any parent summaries. To include the calculation value in parent summaries, right-click the calculation, click **Calculate**, and then click **Edit this calculation**. Then, under **Parent summary**, click **Include calculation value**.
Creating a cube calculation

To create a cube calculation in IBM Cognos Insight, you combine operators, functions, attributes, and values, such as text strings and numbers, into an expression that evaluates to a single value.

About this task

Formulas for calculated data items can be simple or complex. Simple formulas consist of a combination of other dimension members, numeric constants, and arithmetic operators. Complex formulas can include these elements and functions and links to other cube data. When you add a calculated data item to the cube, it becomes an element of the dimension.

Feeders are automatically generated when you create a calculation to ensure that all rule-derived values consolidate correctly. You can refine the feeders or the generated rules by disabling the rules in the rule editor and using your own.

If the dimension you select as a constant includes user-defined attributes, you can use the attributes, such as Product Type, as elements in your expression. System-defined attributes, such as leaf-level calculation or consolidated-level calculation attributes for a calculation dimension, are not displayed. A dimension attribute that is referenced in a cube calculation means it is a reference to the values of that attribute for all members of the dimension. You can also reference members from different dimensions of the cube.

Procedure

1. Right-click the cell or range of cells where you want to calculate a value, and click **Create Cube Calculation**. When you select a column, the calculation editor assumes that the calculation applies to every dimension. However, you can create calculations that apply to a dimension filtered on a specific attribute.

2. In the **Enter a name for the cube calculation** field, enter a meaningful name for your calculation so that you can identify it when you click cells in the cube view, and click **OK**. The default name is the name of the cube, dimension on row, row member, dimension on column, and column member. The selection of dimension members in the context area is excluded.

3. To change the scope of the calculation, complete the following steps:
   a. In the context area of the calculation editor, click the dimension, and click **Edit Member Selection**.
   b. In the **Select Scope for dimension member** window, remove or add a dimension members or subsets by clearing or selecting check boxes.
   c. Optional: To remove a dimension from the calculation scope, in the context area, right-click the dimension context filter, and click **Remove**. If you remove all the dimensions in the context area of the calculation editor, the calculation applies to all the cells of the cube.
   d. To add dimension members to your scope, drag the dimension from the **Terms** tab to the context area of the calculation editor, and select the members that you require.

4. Choose the type of expression that you want to create:
   * To evaluate the expression at leaf level, under **Expression**, click the **Leaf-level expression** tab.
   * To evaluate the expression at a consolidated level, under **Expression**, click the **Consolidated-level expression** tab.
Note: To use the same expression for the leaf level and the consolidated level expressions, select the Combine leaf and consolidated check box.

- To return a string value, under Expression, click the String expression tab.

Note: If the target area of the calculation includes both numeric and string elements, the string expression applies only to the cells included in the scope of the calculation that are formatted as strings. To return a string value, the context area must contain some string-formatted cells.

5. In the Expression box, type the formula that defines the calculated item. To create the formula, you can use a combination of the following elements:

6. To use a dimension element in your calculation, from the Terms tab, drag a dimension member to the Expression box. All the dimensions of the cube are displayed in a tree. If a hierarchy exists, dimensions in the cube or view are displayed hierarchically in the tree.

The members are displayed as fully qualified members. If the name includes a character space, it is enclosed in brackets.

7. To select an arithmetic element, from the Simple tab, in the Operation type list, select Arithmetic, and then select an operation. IBM Cognos Insight evaluates arithmetic operators in the following order:
   a. Exponentiation
   b. Multiplication
   c. Division
   d. Addition
   e. Subtraction

   You must use parentheses to force a different order of evaluation. The expression 2*3+4 produces the same result as (2*3)+4 because multiplication takes precedence.

8. To select a time or weighted average, from the Simple tab, in the Operation type list, select Average, and select an operation.

9. To include a built-in Cognos TM1 function, from the Functions tab, drag the function to the Expression box. A short description of each function is displayed on the Tips tab in the Power editing support pane.

   For a full explanation of the various functions, see the TM1 Reference documentation for your version of Cognos TM1. Planning Analytics documentation can be found online (http://www.ibm.com/support/knowledgecenter).

10. To insert a data item from another cube, from the Terms tab, select a link or create a link to import the value:
   - To choose a link, expand the Imported values folder.
   - To create a link, click Import terms.

11. To use string or numeric attributes in a conditional expression, such as IF-THEN-ELSE, on the Terms tab, expand the Attributes folder under the dimension, and drag the attribute member to the Expression box.

12. When you are finished, you can choose to view the results or save the calculation.
   - To apply the changes and view the results of the calculation, click Apply.
   - To save the calculation and close the calculation editor, click OK.
Creating a cube calculation that references data from other cubes

To define a cube calculation in IBM Cognos Insight, you can reference data that exists in another cube by creating a link to the target cube.

About this task

Similar to cube rules, you can use data in one cube to create calculations in another cube. For example, you can pull sales data into a cube that contains profit and loss information.

Suppose you want to calculate revenue that uses the formula that is based on price by number of units. The data for prices is in a cube other than the one in which you are creating the calculation; rather, the data is in the target cube that contains price information. To reference the external data, you must import it by creating a link to the Price cube.

When you create a link in the calculation editor, it is implemented as a rule. When a link is implemented as a rule, the calculation is stored solely in the source cube, but is used and displayed in the target cube as required. If data referenced in the calculation changes in the source cube, the changes are automatically reflected in the target cube. However, because the data is stored only in the source cube, all edits to data values must occur in the source cube. You cannot edit data values that are displayed in target cubes through rule links.

Procedure

1. Right-click the cell or range of cells where you want to calculate a value, and click Create Cube Calculation.
   An example of a range is revenue for Actuals and Budget across four fiscal quarters.

2. In the Enter a name for the cube calculation field, enter a meaningful name for your calculation so that you can identify later, and click OK.
   The default name is the name of the cube, dimension on row, row member, dimension on column, and column member. The selection of dimension members in the context area is excluded.

3. In the calculation editor, choose the type of expression you want to create:
   - To evaluate the expression at the leaf level, under Expression, click the Leaf-level expression tab.
   - To evaluate the expression on aggregated results, under Expression, click the Consolidated-level expression tab.

   Note: To use the same expression for both leaf- and consolidated-level expressions, select the Combine leaf and consolidated check box.

   • To return a string value, under Expression, click the String expression tab.

   Note: To return a string value, the context area must some contain string-formatted cells.

4. On the Terms tab, click Import Terms.

5. In the Enter a name for the calculation field, enter a descriptive name for the calculation link so that it can be easily identified.
In the Define a Link for Importing Terms window, you specify where you want to use the data from the link by mapping the external data to the dimension member in the cube that contains the calculation.

6. In the Define a Link for Importing Terms window, select the cube that contains the data that you want to reference in the calculation.
   The cube in which the calculation is defined is automatically displayed as the target cube.
   If a dimension is used in both cubes, the two dimensions are mapped automatically. For all other dimensions, you must either establish correspondence between the source and target cube or slice on selected dimension members.

7. Optional: If necessary, establish correspondence between the source and target cube or slice on selected dimension members.

8. When you are satisfied with the mapping, click OK to save the calculation link.
   The link is validated to ensure that the source of the link is consistent with the scope of the calculation that is used in the target cube. This validation also ensures that the expression returns valid results.
   The link that contains the data from the external cube is displayed in the Imported values folder in the Terms tree.

9. Drag the link to the Expression box to add it as an element in your formula.

10. When you are finished, you can choose to view the results or save the calculation.
    • To apply the changes and view the results of the calculation, click Apply.
    • To save the calculation and close the calculation editor, click OK.

### Calculating a subtotal

You can calculate a subtotal for part of your data in IBM Cognos Insight. For example, your crosstab shows revenue by product line by year, and you want to calculate a subtotal for the years before you hired a new sales manager and a subtotal for the years after the new sales manager was hired.

**Procedure**

1. Ctrl+click the row or column headings for the data that you want to summarize in a subtotal.
2. Use one of the following methods to create a subtotal:
   • Right-click your selection, click Calculate, and then click the option that summarizes the members you selected (for example, Item 1 + Item 2).
   • Right-click your selection, click Insert Parent.
3. Rename your subtotal by selecting the row or column heading and typing a new name.

   **Important:** When you rename a data item, you are renaming it in the cube, not just in the current widget. Therefore, the new name will be reflected in every widget that includes this data item.

### Comparing rows or columns to highlight exceptions

You can compare two rows or columns in IBM Cognos Insight to identify information that might need further exploration.
Procedure

1. Select the two rows or columns that you want to compare.

2. Click the Calculate icon, and then select a way to compare the rows or columns.

A new row or column displays the following icons to indicate the result of the comparison:

- The Excellent icon indicates that the first element is 10 percent higher than the second element.
- The Average icon indicates that the first element is neither 10 percent higher nor 10 percent lower than the second element.
- The Poor icon indicates that the first element is 10 percent lower than the second element.

3. To change what is identified as excellent, average, or poor, complete the following actions:
   a. Click Calculate, and then click Edit this calculation.
   b. To change the definition for excellent, change the 1.1.
   c. To change the definition for poor, change the 0.9.

Calculating variance

You can find the difference between the data in any two columns or rows in IBM Cognos Insight by calculating the variance.

About this task

The steps use forecast revenue and actual revenue for each product line as example data.

Procedure

1. Select the rows or columns that you want to use.

2. From the Calculate icon, select one dimension member minus another dimension member. For example, click Forecast Revenue - Actual Revenue.

3. To rename the new row or column that contains the calculation, highlight it and type Variance.

Important: When you rename a data item, you are renaming it in the cube, not just in the current widget. Therefore, the new name will be reflected in every widget that includes this data item.

Calculating variance percentage

You can find the percentage difference between two rows or columns in IBM Cognos Insight by calculating the variance percentage. The variance percentage calculation is the difference between two numbers, divided by the first number, then multiplied by 100.

About this task

The steps use forecast revenue and actual revenue for each product line as example data.
Procedure

1. Select the rows or columns that you want to use.
2. Right-click the rows or columns and click **Calculate**, and then click **Custom**.
   The Calculation window appears with a default expression in the **Expression** field.
3. In the **Expression** field, create the following expression: 
   \[
   \left[ \text{first\_data\_item} \right] - 
   \left[ \text{second\_data\_item} \right] / \left[ \text{first\_data\_item} \right] \times 100
   \]
   **Tip:** When you type '[' into the **Expression** field, a list appears with the dimensions in your cube. You can select the dimension from this list instead of typing it into the **Expression** field. The same list will appear any time you type '['.
   For example, type the following expression: 
   \[
   \left[ \text{actual\_revenue} \right] - 
   \left[ \text{forecast\_revenue} \right] / \left[ \text{forecast\_revenue} \right] \times 100
   \]
4. Under **Calculation order**, ensure that **Summarize first, then apply the calculation** is selected. This option means that Cognos Insight performs the calculation on the total values. Choosing **Apply the calculation first, then summarize** applies the calculation to each row or column first, and then sums the calculation results.
5. In the **Name** field, type **Variance Percentage**.
6. Click **OK**.
7. To format the new calculated data to appear with a percentage symbol, right-click a calculated cell and click **Format Measure measure\_name**.
8. In the list of formats, click **Number**.
9. On the **Advanced** tab, type % in the positive and negative **Suffix** fields.

**Counting the unique elements in a dimension**

In IBM Cognos Insight, you can create a calculation to calculate the number of unique elements in a dimension that have values. For example, you know that some employees received a bonus and some did not, but you have too many employees to count the number of employees with bonus values in the Bonus column of your crosstab. You can use a calculation to quickly determine how many employees received a bonus.

**About this task**

You can use the **ConsolidatedCountUnique** function to count the number of cells that contain data. For example, you could use the following expression to find out how many cities sold the Golf Equipment product line in 2013:

\[
\text{ConsolidatedCountUnique} (0, 'City', 'All Cities', '2013', 'Golf Equipment');
\]

**Procedure**

1. Right-click the column where you want the calculated values to appear, and then click **Calculate > Edit this calculation**.
2. In the **Expression** field, enter a calculation in the following format:
   \[
   \text{ConsolidatedCountUnique} (0, 'Dimension1', 'Cube', 'Element1', 'Element2', 'Element3');
   \]
   Where the following variables represent parts of the cube:
   - **'Dimension1'** is the name of the dimension that you want to count values for.
     For example, if you want to know how many cells in the Employees column have entries for sick days, you can specify the Employees dimension.
   - **'Cube'** is the name of the cube that you are working with.
• 'Element1', 'Element2', and 'Element3' represent all the dimensions in the cube and how they are filtered. For example, if your cube includes a Date dimension, a Geography dimension, and an Employment type dimension, you can specify to filter the data to '2012', 'Canada', and 'Full time'.

Calculating the average from a total

In IBM Cognos Insight, you can use a calculation to calculate the average value from the child elements of a consolidation, or total.

About this task

You can use the ConsolidatedAvg function to return the average value from the child elements of a consolidated, or total, value. For example, if your crosstab displays revenue by year by product line, you can use the following expression to find the average revenue value for all years, or you can use a consolidated average on each year's total to find the average revenue for each year:

ConsolidatedAvg (0, 'Total of Years', 'Product Revenue', 'All Products');

Procedure

1. Right-click the column in your crosstab that will display the calculation results, and then click Calculate > Edit this calculation.
2. In the Expression field, enter a calculation in the following format:
   ConsolidatedAvg (Number, 'Cube', 'Element1', 'Element2', 'Element3');

   Where the following variables represent parts of the cube:
   • Number can be 0, 1, or 2. Zero (0) includes all child elements in the calculation; 1 ignores consolidation weighting; and 2 ignores zero values.
   • 'Cube' is the name of the cube that you are working with.
   • 'Element1', 'Element2', and 'Element3' represent the other dimensions and how they are filtered. These elements must be listed in the order that their parent dimensions appear in the cube. For example, if your cube includes a Date dimension, a Geography dimension, and an Employment type dimension in this order, you can specify to filter the data to '2012', 'Canada', and 'Full-time'.

Banding values during import

You can create banding calculations during an import to IBM Cognos Insight when you want to define ranges of values. For example, you can create a band for revenue between 0 and 500,000, another band for revenue between 500,000 and 1,000,000, and another band for revenue above 1,000,000. Then you can display text for each band, such as low, medium, and high.

About this task

You can use the IF and ElseIf functions to create as many bands as necessary. You can also create bands using the greater than (>) or less than (<) symbols, or both.

For example you could use the following expression to identify for low, medium, and high inventory quantities:

IF (Inventory < 2500); Expression='low';
ElseIf (Inventory < 5000); Expression='medium';
Else; Expression='high';
EndIf;
You can use bands for non-numeric data as well. In that case, you must use an @ symbol to precede the comparison symbol (such as the equals sign). For example, the following calculation bands textual data:

```plaintext
IF (Title@='Manager'), Expression='yes';
ElseIf (Title@='Employee'), Expression='no';
Else; Expression='no';
EndIf;
```

**Procedure**

1. On the Advanced page of the import wizard, click Add Calculated Column. A new item, named Expression, appears in the Source Items list and the Target Items hierarchy.

2. In the Properties pane, in the Mapping Type section, click Dimension. The expression is defined as a dimension, and a dimension and level appear in the Target Items hierarchy.

3. Select the expression in the Source Items list.

4. In the Properties pane, in the Source Item field, enter a name for the expression. The name you choose will identify the expression in the content pane and in the crosstabs and charts in the workspace.

5. In the Properties pane, in the Expression field, enter the calculation in the following format:

```plaintext
IF (Column < Value1); Expression='Text1';
Elseif (Column < Value2); Expression='Text2';
EndIf;
```

Where the following variables represent parts of the expression:

- **Column** is the ID of the source item that you want to divide into bands.
- **Value1** is the value below which you want to define the first band.
- **Value2** is the value below which you want to define the second band.
- **Text1** is the text that you want to display for the values that are within the first band.
- **Text2** is the text that you want to display for the values that are within the second band.

**Calculating contribution margin**

You can use a contribution margin in IBM Cognos Insight to show which products are the most profitable, which ones are breaking even, and which ones are costing you more than they earn in revenue.

**About this task**

You can use this information when planning sales forecasts and sales incentives as well as the product mix for next year. You can also add measures to allocate additional costs that are not included in the unit cost, such as overhead. You can spread these additional costs proportionally, and include them in your contribution margin calculation.

The steps use unit price and cost of goods listed for each product as an example. You want to calculate the contribution margin for each product.

**Procedure**

1. Select the rows or columns that you want to use.
2. Click the **Calculate** icon, and then click one dimension minus another dimension. For example, select Unit Price - Cost of Goods.

3. To rename the new row or column that contains the calculation, highlight it and type **Contribution Margin**.

   **Important:** When you rename a data item, you are renaming it in the cube, not just in the current widget. Therefore, the new name will be reflected in every widget that includes this data item.

4. To see which products contribute the most, right-click the Contribution Margin heading, and click **Sort**.

5. Specify if you want to sort by value or label and then click **Sort Ascending** or **Sort Descending**.

### Changing how totals are displayed for measures

You can change how to display the summaries, or totals, for measures in IBM Cognos Insight.

**Procedure**

1. Right-click the cell of the measure or right-click the heading for the measure that you want to change.

2. Click **Rollup** and select a rollup type:
   - **Summary** to display the total for the members that make up the measure
   - **Average** to display the average value of the members that make up the measure
   - **Minimum** to display the minimum value of the members that make up the measure
   - **Maximum** to display the maximum value of the members that make up the measure
   - **Count** to display the number of members that make up the measure, excluding null values

3. Click **Show Value as** and then click a value format.

### Creating time roll-up calculations

A time roll-up in IBM Cognos Insight summarizes the data for a range of dates that is relative to a specific date. For example, a year to date calculation is a time roll-up.

**Procedure**

1. Right-click the time dimension in the crosstab, and click **Time Roll-ups**.

   **Tip:** If the time dimension is not included in your crosstab, you can create or edit a time roll-up calculation by right-clicking the time dimension in the content pane, clicking **Edit**, and then clicking the **Time roll-ups** icon. The name of the time dimension will match name used in the data source. For example, if your data was a spreadsheet with a column called Date, then the time dimension that Cognos Insight created during import will be called Date.

2. Choose a reference date. The date range you choose in the next step will be relative to the reference date you choose in this step. For example, if you...
choose October 21, 2011 as the reference date and **Week to date** as the date range, your crosstab will summarize data for the week of October 21 up to that date.

3. Choose a date range.
4. To edit a time roll-up, right-click the time dimension in the crosstab, and then click **Time Roll-ups**.
5. To refresh all time roll-ups in a workspace relative to today's date, right-click the time dimension in the crosstab, and then click **Refresh time roll-ups**.

### Editing all calculations

If you want to view and edit all the calculations that are defined in an IBM Cognos Insight workspace, you can edit the underlying Cognos TM1 cube rules.

#### About this task

Here is an example of a cube rule:

```plaintext
['Profitability Measures': 'Purchase cost'] * N: ['Profitability Measures': 'Quantity purchased in kilograms'] * ['Profitability Measures': 'Price per kilogram'];
```

This cube rule contains the following components:

- An area definition: ['Profitability Measures': 'Purchase cost']
- A leaf qualifier: N:
- A formula: ['Profitability Measures': 'Quantity purchased in kilograms'] * ['Profitability Measures': 'Quantity price per kilogram']
- A terminator: ;

This cube rule states that if the cube uses any value from the Purchase cost item in the Profitability measures dimension, then instead of returning that value, the workspace will return the product of the corresponding value from Quantity purchased in kilograms multiplied by Price per kilogram at the leaf, or lowest, level.

#### Procedure

1. Click the **Widget actions** icon and click **Set Cube Rules**.
2. Make the required edits to the cube rules, and click **OK**.

#### What to do next

For more information about cube rules, review the following topics from the **TM1 Rules** documentation:

- Overview of Cube Rules
- Components of a Rule
- How Rules Work

Access this document for your product and version from [IBM Knowledge Center](http://www.ibm.com/support/knowledgecenter).

Related concepts:

- "Example: using rules to compare two members" on page 70

Rules in IBM Cognos Insight enable you to calculate cell values through the use of functions, numeric operations, conditional expressions, and inter-cube references.
Example: using rules to compare two members

Rules in IBM Cognos Insight enable you to calculate cell values through the use of functions, numeric operations, conditional expressions, and inter-cube references.

When you use the Calculate options in IBM Cognos Insight, rules that perform the desired comparison are automatically generated. You can click the Set Cube Rules command from the Widget actions icon to review or edit the rules.

When you select two members and use the Compare command from the Calculate icon, each member is evaluated against a rule that is generated for you.

You see a new row or column that shows a green circle for excellent, or 10 percent higher than expected, a yellow diamond for average, and a red square for poor, or 10 percent lower than expected.

The following rule defines the terms for excellent, average, and poor:

\[
\text{[}'Measures': 'Compare Forecast Revenue vs. Actual Revenue'\text{]} = \begin{cases} 
-1, & \text{if } [\text{}'Measures': 'Forecast Revenue'\text{]} < [\text{}'Measures': 'Actual Revenue'\text{]} \times 0.9; \\
1, & \text{if } [\text{}'Measures': 'Forecast Revenue'\text{]} > [\text{}'Measures': 'Actual Revenue'\text{]} \times 1.1; \\
0, & \text{otherwise}
\end{cases}
\]

This rule statement indicates that for the Compare Forecast Revenue vs. Actual Revenue member in the Measures dimension, if the value of Forecast Revenue is less than 90% of Actual Revenue, then the value of the Compare Forecast Revenue vs. Actual Revenue member is -1. If the value of Forecast Revenue is greater than 110% of Actual Revenue, then the value of the Compare Forecast Revenue vs. Actual Revenue member is 1. Otherwise, the value of Compare Forecast Revenue vs. Actual Revenue member is 0.

In this case, a value of -1 for Compare Forecast Revenue vs. Actual Revenue displays a green circle. A value of 1 for Compare Forecast Revenue vs. Actual Revenue displays a red square. A value of 0 for Compare Forecast Revenue vs. Actual Revenue displays a yellow diamond.

You can edit the rule statement to modify the thresholds at which these visual indicators appear. For example, if you want the green circle to appear when Actual Revenue exceeds Forecast Revenue by 20%, and you want the red square to appear when Actual Revenue falls short of Forecast Revenue by 20%, you would modify the statement as follows:

\[
\text{[}'Measures': 'Compare Forecast Revenue vs. Actual Revenue'\text{]} = \begin{cases} 
-1, & \text{if } [\text{}'Measures': 'Forecast Revenue'\text{]} < [\text{}'Measures': 'Actual Revenue'\text{]} \times 0.8; \\
1, & \text{if } [\text{}'Measures': 'Forecast Revenue'\text{]} > [\text{}'Measures': 'Actual Revenue'\text{]} \times 1.2; \\
0, & \text{otherwise}
\end{cases}
\]

For a complete description of rules, including a comprehensive example of developing a complex application with rules, see the TM1 Rules documentation.
For descriptions of all the functions that can be used in rules, see the TM1 Reference documentation. You can access these documents from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

Related tasks:
- “Editing all calculations” on page 69

If you want to view and edit all the calculations that are defined in an IBM Cognos Insight workspace, you can edit the underlying Cognos TM1 cube rules.

Displaying values as percentages

By default, measures appear in IBM Cognos Insight as the actual values from your database. You can now compare the relative contributions of each value by displaying the values as percentages of the total.

Procedure

To display cell values as a percentage of a total value, right-click a cell, click Show Value as, and then choose an option. The cells that display a percentage are shaded. This shading indicates that the values in these cells are calculated, as opposed to those values representing items in the dimension.

Data spreading

Use the predefined data spreading options in IBM Cognos Insight to distribute numeric data to cells in a crosstab. For example, you can use data spreading to evenly distribute a value across a range of cells or to increment all values in a range of cells by a desired percentage.

Data spreading uses the following terms to identify data items in a hierarchy:

- **Leaf or leaves**
  The leaf data items are the lowest child data items. For example, if the data hierarchy includes a Year level, a Month level, and a Day level, and the Day level has no child data items, then Day is the leaf.

- **Consolidation**
  A consolidation is a parent data item. For example, if the data hierarchy includes a Year level, a Month level, and a Day level, and the Day level has no child data items, then Year and Month are consolidations.

- **Contiguous**
  Contiguous cells are cells that are next to each other, or adjoining, in a row or column. For example, contiguous cells in a crosstab that displays years would be 2011, 2012, and 2013. Non-contiguous cells would be 2011 and 2013.

There are several types of data spreading, and each type is available in different situations and has different benefits. The following table explains the differences.

**Table 4. Comparison of data spreading methods**

<table>
<thead>
<tr>
<th>Data spreading method</th>
<th>Selections that offer this method</th>
<th>What this method does</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative proportional</td>
<td>Single cell that contains a parent data item</td>
<td>Applies the proportions from one parent data item’s child data items to the child data items of another parent data item.</td>
</tr>
</tbody>
</table>
Table 4. Comparison of data spreading methods (continued)

<table>
<thead>
<tr>
<th>Data spreading method</th>
<th>Selections that offer this method</th>
<th>What this method does</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal leaves</td>
<td>Single cell that contains a parent data item</td>
<td>Distributes data equally across the lowest child data items for a parent data item.</td>
</tr>
<tr>
<td>Equal spread</td>
<td>Single cell that contains a parent data item Contiguous range of data items at the same level</td>
<td>Distributes data equally across the immediate child data items for a parent data item.</td>
</tr>
<tr>
<td>Repeat</td>
<td>Single cell Contiguous range of data items at the same level</td>
<td>Replaces the selected cells with a value, adds a value to the selected cells, or subtracts a value from the selected cells.</td>
</tr>
<tr>
<td>Straight line</td>
<td>Single cell Contiguous range of data items at the same level Non-contiguous cells</td>
<td>Populates a range of cells with values at equal intervals between two endpoints.</td>
</tr>
<tr>
<td>Growth percentage</td>
<td>Single cell Contiguous range of data items at the same level</td>
<td>Sequentially increments the values in a range by a growth percentage.</td>
</tr>
<tr>
<td>Repeat leaves</td>
<td>Single cell that contains a parent data item</td>
<td>Replaces data in the lowest child data items for a parent data item.</td>
</tr>
</tbody>
</table>

Three types of data spreading, relative proportional, equal leaves, and repeat leaves, are available when you type a value into a consolidated cell whose child data items do not contain values. For example, you add a member to a crosstab, which creates an empty column with a column total. When you type a value into the column total cell, the Data Spread dialog box opens, and you can choose to spread data to the child cells using a relative proportional spread or an equal leaves spread.

**Spreading data using a relative proportion**

In IBM Cognos Insight, use the relative proportional spread method to spread values to the leaves (children) of a consolidation proportional to the leaves of a reference cell. The reference cell can be located in the cube from which you initiate spreading or in a separate cube. However, the reference cell must share the same consolidations as the cell from which you initiate spreading.

The following example illustrates relative proportional spreading where the initial cell and the reference cell are in the same cube.

Table 5. A crosstab that illustrates relative proportional spreading

<table>
<thead>
<tr>
<th>Country or region</th>
<th>1 Quarter</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Belgium</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Brazil</td>
<td>100</td>
<td>10</td>
<td>20</td>
<td>70</td>
</tr>
</tbody>
</table>

IBM Planning Analytics Version 2.0.0: Cognos Insight
Table 5. A crosstab that illustrates relative proportional spreading (continued)

<table>
<thead>
<tr>
<th>Country or region</th>
<th>1 Quarter</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chile</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Denmark</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The previous example shows a single consolidated value of 100 in the cell at the intersection of 1 Quarter and Brazil. The leaves of 1 Quarter are Jan, Feb, and Mar. In this example, the following things are true:

- Jan contains the value 10, which is 10% of 100.
- Feb contains the value 20, which is 20% of 100.
- Mar contains the value 70, which is 70% of 100.

If you initiate relative proportional spreading from the intersection of 1 Quarter and Argentina, and specify an Update Action of Replace when spreading the value 400, the leaves of 1 Quarter, Argentina are populated as proportional to the leaves of 1 Quarter, Brazil:

- Jan contains the value 40, which is 10% of 400.
- Feb contains the value 80, which is 20% of 400.
- Mar contains the value 280, which is 70% of 400.

**Procedure**

1. Select the consolidated cell from which you want to initiate the data spreading.
2. Right-click the cell and click Data Spread > Relative Proportional Spread.
3. In the Cube list, select the cube in which the reference cell is located.
4. If necessary, click any of the Dimension buttons to select a different dimension element that identifies the reference cell.
   - When you click a Dimension button, the Subset Editor opens and displays all elements of the dimension. You can then select a single element and click OK.
   - For example, click account1, select a different element in the Subset Editor, and click OK.

   **Note:** The Dimension buttons for consolidated elements are unavailable because the cell from which spreading is initiated and the reference cell must share common consolidated elements.
5. Click Select.
   - The Reference Cell field on the Relative Proportional Spread window is now populated with the cell you selected.
6. In the Value field, enter the value to be spread.
7. Select an Update Action.
8. Click Apply.

**Spreading data equally across leaves of a cell**

In IBM Cognos Insight, use the equal leaves method to distribute a specified value equally across all leaves of a consolidated cell. When you apply this method, you can choose to distribute the value to all leaves of the consolidation or only to those leaves that already contain non-zero values.
For example, assume that there are several leaves of Year, Argentina with zero values. If you use the equal leaves method to distribute the value 1200 to all the leaves of Year, Argentina, the result is as follows.

*Table 6. A crosstab that illustrates equal leaves spreading from a single consolidation*

<table>
<thead>
<tr>
<th>Country or region</th>
<th>Year</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>1200</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Belgium</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Brazil</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

If you initiate the equal leaves method from a cell identified by more than one consolidated element, the specified value is distributed to all leaves associated with the cell. For example, assume the selected cell is identified by two consolidated elements: Year and S Series Sedan.

If you initiate equal leaves spreading from the intersection of Year, S Series Sedan, then the specified value is distributed to all cells identified by the leaves of Year and the leaves of S Series Sedan. For instance, if you use equal leaves to distribute the value 1200 to all leaves of the intersection of Year, S Series Sedan, the result is as follows.

*Table 7. A crosstab that illustrates equal leaves spreading from the intersection of two consolidations*

<table>
<thead>
<tr>
<th>Type of automobile</th>
<th>Year</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Series Sedan</td>
<td>1200</td>
<td>300</td>
<td>300</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>S Series 1.8 L Sedan</td>
<td>150</td>
<td>37.5</td>
<td>37.5</td>
<td>37.5</td>
<td>37.5</td>
</tr>
<tr>
<td>S Series 2.0 L Sedan</td>
<td>150</td>
<td>37.5</td>
<td>37.5</td>
<td>37.5</td>
<td>37.5</td>
</tr>
<tr>
<td>S Series 2.5 L Sedan</td>
<td>150</td>
<td>37.5</td>
<td>37.5</td>
<td>37.5</td>
<td>37.5</td>
</tr>
</tbody>
</table>

When you initiate equal leaves from a cell that is identified by multiple consolidated elements, the RAM requirements of the cube can increase significantly. To address this issue, the system issues a warning in circumstances where more than 10,000 cells are affected by the equal leaves method. In circumstances where more than one million cells are affected, the spreading operation does not execute.

**Procedure**

1. Select the consolidated cell from which you want to initiate data spreading.
2. Right-click the cell and click **Data Spread > Equal Leaves**.
3. In the **Value** field, enter the value that you want to distribute.
4. Select an **Apply To** option.
<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Populated Leaf Cells</td>
<td>The specified value is distributed only to leaf cells currently containing non-zero values.</td>
</tr>
<tr>
<td>All Leaf Cells</td>
<td>The specified value is distributed to all leaf cells regardless of current values.</td>
</tr>
</tbody>
</table>

5. Select an Update Action.
6. Click Apply.

**Spreading data equally across cells**

In IBM Cognos Insight, use the equal spread method to distribute a specified value equally across the selected cells.

For example, in the following crosstab, a range of 12 cells is selected, as indicated by italic font and asterisks (*).

*Table 8. A crosstab with a range of cells selected*

<table>
<thead>
<tr>
<th>Country or region</th>
<th>1 Quarter</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>300</td>
<td>25*</td>
<td>75*</td>
<td>65*</td>
</tr>
<tr>
<td>Belgium</td>
<td>0</td>
<td>45*</td>
<td>85*</td>
<td>55*</td>
</tr>
<tr>
<td>Brazil</td>
<td>0</td>
<td>35*</td>
<td>55*</td>
<td>75*</td>
</tr>
<tr>
<td>Canada</td>
<td>0</td>
<td>35*</td>
<td>65*</td>
<td>45*</td>
</tr>
<tr>
<td>Chile</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Denmark</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

When you equally spread the value 60 to these cells and select the Add update action, the value is equally spread across the range and added to the existing cell values. The result is that each cell value is increased incrementally by 5 ($60/12=5$), as shown in the following example.

*Table 9. A crosstab with equal spreading applied*

<table>
<thead>
<tr>
<th>Country or region</th>
<th>1 Quarter</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>300</td>
<td>30</td>
<td>80</td>
<td>70</td>
</tr>
<tr>
<td>Belgium</td>
<td>0</td>
<td>50</td>
<td>90</td>
<td>60</td>
</tr>
<tr>
<td>Brazil</td>
<td>0</td>
<td>40</td>
<td>60</td>
<td>80</td>
</tr>
<tr>
<td>Canada</td>
<td>0</td>
<td>40</td>
<td>70</td>
<td>50</td>
</tr>
<tr>
<td>Chile</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Denmark</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Procedure**

1. Select the cell or range of cells from which you want to initiate data spreading.
2. Right-click the selection and click Data Spread > Equal Spread.
3. Enter the value you want to spread in the Value field.
4. If necessary, select Extend options to specify the directions for the data spread.
5. Select an Update Action.
6. Click **Apply**.

   The value you entered spreads equally in the directions that you specified, or across the range of cells that you selected.

   When you apply an equal spread to a single consolidated cell without specifying a direction for the spreading operation, the value being spread is distributed proportionally to all leaves of the consolidated cell.

### Repeating data in cells

In IBM Cognos Insight, use the repeat method to repeat a specified value across selected cells in a crosstab.

In the following example, data spreading begins at the cell at the intersection of Feb and Brazil, and the value 25 is repeated to the right and down.

<table>
<thead>
<tr>
<th>Country or region</th>
<th>1 Quarter</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Belgium</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Brazil</td>
<td>50</td>
<td>0</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Canada</td>
<td>50</td>
<td>0</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Chile</td>
<td>50</td>
<td>0</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Denmark</td>
<td>50</td>
<td>0</td>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

Unlike the other spreading methods, repeat is available when you select cells that are not touching. For example, in the previous example, if you select the cell at the intersection of Chile and Feb and the cell at the intersection of Brazil and Mar, you can still apply the repeat spreading method to these cells.

**Procedure**

1. Select the cell or range of cells from which you want to initiate data spreading.
2. Right-click the cell or range and click **Data Spread > Repeat**.
3. In the **Value** field, enter the value that you want to repeat.
4. If necessary, select **Extend** options to specify the direction(s) for the data spread.
5. Select an **Update Action**.
6. Click **Apply**.

   The value you entered repeats in the directions that you specified, or across the range of cells that you selected.

   When you apply the repeat spreading method to a single consolidated cell without specifying a direction for the spreading operation, the value being spread is distributed proportionally to all leaves of the consolidated cell.

### Populating cells with a range of values

In IBM Cognos Insight, use the straight line method to populate cells by linear interpolation between two specified endpoints.

For example, the following crosstab shows the effect of Straight Line spreading across a range of six cells with the endpoints 100 and 200.
Table 11. A crosstab that illustrates straight line spreading

<table>
<thead>
<tr>
<th>Country or region</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>100</td>
<td>120</td>
<td>140</td>
<td>160</td>
<td>180</td>
<td>200</td>
</tr>
<tr>
<td>Belgium</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Brazil</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Canada</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chile</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Denmark</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

With the start value of 100 and the end value of 200, straight line spreading populates the intervening cells with values at equal intervals between the two endpoints.

**Procedure**

1. Select the cell or range of cells from which you want to initiate the data spreading.

   **Remember:** You can apply straight line spreading only across a single row or column, not across rectangular ranges.

2. Right-click the cell or range and click **Data Spread > Straight Line**.

3. In the **Start Value** field, enter the starting value for the spreading.

4. In the **End Value** field, enter the ending value for the spreading.

5. If necessary, select **Extend** options to specify the directions for the data spread, left and right within rows or up and down within columns.

6. Select an **Update Action**.

7. Click **Apply**.

   The data is spread in a straight line in the directions that you specified, or across the range of cells that you selected.

**Spreading data using a growth percentage**

In IBM Cognos Insight, use the growth percentage method to sequentially increment all values in a range by the specified growth percentage, starting at an initial cell.

For example, the following crosstab shows the result of applying the growth percentage method to a range of six cells where the initial value is 100 and the growth percentage is 10%. This example uses the **Replace data** action.

Table 12. A crosstab that illustrates growth percentage spreading

<table>
<thead>
<tr>
<th>Country or region</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>100.00</td>
<td>110.00</td>
<td>121.00</td>
<td>133.10</td>
<td>146.41</td>
<td>161.05</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Canada</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Chile</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>
The initial value of 100 displays in the cell identified by Jan, Argentina. Applying the growth percentage of 10% to 100 yields 110, the value in Feb, Argentina. Applying the growth percentage of 10% to 110 yields 121, the value in Mar, Argentina.

**Procedure**
1. Select the cell or range of cells from which you want to initiate the data spreading.
   
   **Remember:** You can apply Growth % spreading only across a single row or column, not across rectangular ranges.
2. Right-click the cell or range and click Data Spread > Growth %.
3. In the **Start Value** field, enter the starting value for the spreading.
4. In the % **Growth** field, enter the growth percentage for the spreading.
5. If necessary, select **Extend** options to specify the direction for the data spread, left and right within rows or up and down within columns.
6. Select an **Update Action**.
7. Click **Apply**.
   
   The growth percentage is applied in the directions you specified, or across the range of cells you selected.

**Spreading data using repeat leaves**

In IBM Cognos Insight, use the repeat leaves method copies a specified value to the leaves (children) of a consolidation. When you apply this method, you can copy the value to all leaves of the consolidation or only to those leaves that already contain non-zero values.

For example, in Table 13 there are several leaves of Year, Argentina with values. If you use the repeat leaves method to copy the value 400 to the leaves of Year, Argentina currently populated with non-zero values, the value 400 is copied to all leaves that contained non-zero values.

Table 13. A crosstab that illustrates repeat leaves spreading from a single consolidation

<table>
<thead>
<tr>
<th>Country or region</th>
<th>Year</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>1200</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>Belgium</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Brazil</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

If you initiate the repeat leaves method from a cell identified by more than one consolidated element, the specified value is copied to all leaves associated with the cell. For example, in Table 14 on page 79, the selected cell is identified by two consolidated elements: Year and S Series Sedan.

If you initiate repeat leaves spreading from the consolidated cell at Year and S Series Sedan, the specified value is copied to all cells identified by the leaves of Year and the leaves of S Series Sedan. For instance, if you use repeat leaves to copy the value 25 to all leaves of the highlighted cell, the result is as follows.
Table 14. A crosstab that illustrates equal leaves spreading from the intersection of two consolidations

<table>
<thead>
<tr>
<th>Type of automobile</th>
<th>Year</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Series Sedan</td>
<td>1200</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>S Series 1.8 L Sedan</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>S Series 2.0 L Sedan</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>S Series 2.5 L Sedan</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

When you initiate repeat leaves from a cell identified by multiple consolidated elements, the RAM requirements of the cube can increase significantly. To address this issue, the system issues a warning in circumstances where more than 10,000 cells are affected by the repeat leaves method. In circumstances where more than one million cells are affected, the spreading operation does not execute.

**Procedure**

1. Select the consolidated cell from which you want to initiate data spreading.
2. Right-click the cell and click Data Spread > Repeat Leaves.
3. In the Value field, enter the value that you want to repeat.
4. Select an option from the Apply to field.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Populated Leaf Cells</td>
<td>The specified value is copied only to leaf cells currently containing non-zero values.</td>
</tr>
<tr>
<td>All Leaf Cells</td>
<td>The specified value is copied to all leaf cells regardless of current values.</td>
</tr>
</tbody>
</table>

5. Select an Update Action.
6. Click Apply.

**Adjusting chart data**

Adjusting your IBM Cognos Insight charts enables you to interact with your data in a chart instead of working with data only in crosstabs.

**About this task**

You can interact with your Cognos Insight charts by dragging the edges of bars and columns to adjust the values in bar and column charts.

For example, if you created a crosstab and column chart that represented your yearly travel budget, you could apply a Hold to your total and to any set values, and then drag the columns in your chart to decide how the remainder of the budget could be spent. When the total value is held and you increase one value, the other values decrease. This can help you visualize how your values relate to each other.
Procedure
1. Place your cursor at the top of the column or at the end of the row you want to adjust. A handle appears.
2. Drag the handle to adjust the data. A window appears with a text field and a slider. You can type the new value into the text field or you can adjust the slider to set the new value.

Related concepts:
“Charts” on page 85
Charts communicate comparisons, relationships, and trends. They emphasize and clarify numbers. To choose the appropriate type of chart in IBM Cognos Insight, first define what you want the chart to communicate, and then identify the most effective chart to suit that purpose. For example, you can use a line chart to show trends.

Freezing rows or columns
When scrolling through a large data set in IBM Cognos Insight, you can freeze the rows or columns so that you do not lose sight of the headings or other relevant data.

Procedure
1. Click the cell where you want to freeze the rows or columns.
2. Click the Widget actions icon and click Freeze Panes.

Hiding rows or columns
You can hide rows or columns in IBM Cognos Insight that are not needed. For example, after creating a calculation, you can hide rows or columns that are used in the calculation but are not needed in the workspace.

Procedure
Right-click one or more rows or columns and click Hide. To show the hidden items, right-click a row or column and click Show all hidden.

Suppressing empty rows or columns
You can hide an entire row or column that contain empty cells in IBM Cognos Insight. This function is useful when adding charts because including empty cells can skew the results.

Before you begin
You must have a null row or column.

Procedure
Click the Suppress empty cells icon, and click Rows or Columns. Note that zeros are not suppressed when you use this command because zeros are values. For information about changing the default value in the cube, see the topic about the UNDEFVALS function in the TM1 Reference documentation. Access this document
Creating conditional styles

You can apply conditional styles to a crosstab in an IBM Cognos Insight workspace to identify cells that are within a range of values or cells that contain a specific string of characters.

About this task

For example, you want to automatically highlight in green the departments in your organization that meet their budget quotas and highlight in red the departments that go over budget. Creating conditional styles color-codes information in your reports so that you can find areas that need attention.

You can create the following types of conditional styles:

Numeric range

Emphasizes numerical data, such as revenues and losses.

String

Emphasizes specific alphanumeric items in a workspace. For example, you can emphasize all instances of a specific word, such as Equipment, or phrase, such as Rent and Utilities. String criteria are case-sensitive.

If multiple string conditions are met, only the first conditional style is applied.

Procedure

1. Do one of the following:
   - To create a condition for a single dimension, click the row or column heading that represents the dimension. For example, to create a condition for the Date dimension, click the Date column heading.
   - To create a condition for more than one dimension, click the intersection of the dimensions in the crosstab. For example, to create a condition for Revenue, Date, and Product Line, click the crosstab cell where these three dimensions intersect, such as the intersection at Revenue, 2004, and Golf Equipment.

2. Click the Conditional Styles icon, and then click Conditional Style.

3. Click the Add icon, click New Conditional Style, and then choose a dimension or measure to define a condition for. If you chose a measure, continue with the next step. If you chose a dimension, go to step 10.

   Tip: You can also create a new style starting with an existing style by clicking Use Existing Conditional Style and then choosing the style.

4. In the Numeric Condition window, enter a name for the style in the Style Name field. For example, Budget + or -.

5. In the Range value field, enter the first number in the range you want to define, and press Enter. For example, type 100 and press Enter. The number appears in the range pane and style rows appear above and below the number row.
6. In the Range value field, enter the second number in the range you want to define, and press Enter. For example, type 10 and press Enter. The number appears in the range pane.

7. If necessary, add more numbers to the range pane. For example, type 0 and press Enter.

8. To define the styles for the values that are above, below, and between the numbers you added, perform one of the following actions:

   • From the list in the Style column, choose a predefined style. For example, click Average for the range between 100 and 10 and then click Poor for the range between 10 and 0.

   • Click the Edit icon, and then click the ellipsis button (...) to define a custom style. For example, edit the style for the range between 100 and 10 to have a blue background and white text. Then edit the style for the range between 10 and 0 to have a purple background and white text.

9. If necessary, choose a style for the values that do not fall within the ranges that you created.

10. In the String Condition window, enter a name for the style in the Style Name field. For example, type A or B.

11. Click the Add icon. The new style appears in the string pane.

12. In the Operator column, click In (enter values) to view the choices, and choose which condition type you want to create. For example, choose Contains.

13. If necessary, add other conditions. For example, add a second Contains condition.

14. In the Values column, enter the string that will activate the condition. For example, enter the letter A for the first condition, and enter the letter B for the second condition.

15. To define the styles for the string conditions you added, perform one of the following actions:

   • In the Style column, click (Default) and choose a predefined style. For example, click Excellent for the condition that contains the letter A and Poor for the condition that contains the letter B.

   • Click the Edit icon, and then click the ellipsis button (...) to define a custom style. For example, edit the style for the condition that contains the letter a to have green text and edit the style for the condition that contains the letter b to have red text.

16. If necessary, choose a style for the values that do not meet the conditions that you created.
Chapter 5. Workspace design

Add widgets to the canvas in IBM Cognos Insight to create attractive data layouts for yourself or others.

Adding or removing tabs

Tabs make it easy to organize and browse through an IBM Cognos Insight workspace that contains a lot of information. For example, you could provide an overview on one tab and details on another.

Procedure

1. To add a new tab, click the Actions icon and then click New Tab.
2. Right-click the tab and click Rename.
   If you want to include an ampersand (&) as part of the tab name, enter two ampersands. For example, to name a tab Revenue & Expenses, enter Revenue && Expenses.
3. To add the ability to navigate to the tab by using a character that is in the tab name, add an ampersand (&) immediately before the character. The character is then underlined.
   For example, if you name a tab &Expenses, you can later use Alt+E to navigate to the Expenses tab.
4. To remove a tab, right-click the tab and click Remove This Tab.

Adding crosstabs

Use a crosstab in IBM Cognos Insight to view dimensions and perform basic analysis on your data. By default, a chart is also displayed.

About this task

This task only applies to add a crosstab that is based on an existing cube to your workspace. To create a blank cube and also add a crosstab that is based on the blank cube to your workspace, from the Insert menu, click New Crosstab. A blank cube appears in the content pane and a crosstab and chart appear on the canvas.

For more information about modifying the contents of the new cube, see “Editing dimensions and measures” on page 99.

Procedure

1. Complete one of the following actions:
   • Drag a cube from the content pane onto the canvas.
   • From the Insert menu, click Crosstab and Chart, and then click the cube that you want to base the crosstab and chart on.
2. To align the crosstab widget with another widget in your workspace, drag the new widget until you see dotted lines appear. The dotted lines show you where to drop the widget so that it lines up with the other widgets.
Displaying different data in a crosstab and a chart

You can use two widgets in IBM Cognos Insight to display different data perspectives in a crosstab and a chart that use the same cube.

About this task

You can have changes in the data in one widget be reflected in the other widget, or you can have the two widgets remain independent of each other. For example, you have a chart on the canvas that shows products by year and a crosstab that shows products by region. If you focus on a particular region and hide all other regions on the crosstab, the chart will also show the products for the selected region.

Procedure

1. Drag a cube from the content pane or select it from the Crosstab and Chart submenu.
   By default, the data is displayed in both a crosstab and a chart.

2. To hide the crosstab, click the Change display icon, and then click Crosstab.

3. Drag a different cube or the same cube from the content pane or select it from the Crosstab and Chart submenu.

4. To hide the chart, click the Change display icon, and then click Chart.

5. Change which dimensions appear in the chart and in the crosstab.

6. To create a new cube that contains only the dimensions you want to keep, click Create a new cube, specify whether data is copied or referenced, and click OK.
   If the data is referenced, changes made in one cube are automatically made in the other cube.

What to do next

You can also create a copy of a cube and delete dimensions from the copy.
Changes made to data in the original cube are reflected in the copy, and vice versa.

Related tasks:

“Sharing or copying dimensions” on page 98
Share a dimension in IBM Cognos Insight to have changes in one cube reflected in the other cubes. The result is that your analysis is synchronized across the cubes and their associated crosstabs. Another option is to create a copy of the dimension in both cubes.

Adding a data flow diagram

You can add a data flow diagram to an IBM Cognos Insight workspace to show a visual representation of the connections between cubes.

Procedure

1. Click Insert > Data Flow.

2. Drag the cubes from the content pane into the data flow diagram.

3. You can take the following actions in the diagram:
   - Select or unselect the Rule Links, Process Links, Rules, or Feeders to control the display of those elements.
   - Control the zoom with + and -
   - Use Reset Layout to organize the diagram in the most logical fashion.
• Move a cube to a new location within the diagram by dragging it.
• Right-click the diagram and select Export to file to save the data flow as a .png file.
• Group items by pressing CTRL and right-clicking and then selecting Group. To ungroup items, right-click the group and select Ungroup. You can also create a new diagram from grouped data
• To remove an item from the diagram, right-click an item and select Remove
• To remove an item from a group, right-click a group and select Remove from group, and then select the item to remove.

Charts

Charts communicate comparisons, relationships, and trends. They emphasize and clarify numbers. To choose the appropriate type of chart in IBM Cognos Insight, first define what you want the chart to communicate, and then identify the most effective chart to suit that purpose. For example, you can use a line chart to show trends.

Related tasks:
“Adjusting chart data” on page 79
Adjusting your IBM Cognos Insight charts enables you to interact with your data in a chart instead of working with data only in crosstabs.

Adding charts

In IBM Cognos Insight, charts communicate comparisons, relationships, and trends. They emphasize and clarify the meaning of numbers.

Procedure
1. Click the widget that you want to add a chart to.
2. Click the Change display icon, and then click one of the following commands:
   • Chart to display only a chart
   • Split View, and then Crosstab on Top or Chart on Top to display both the chart and the crosstab
3. If the crosstab and chart contain more than 50 series and 50 categories, navigate to the next set of data points by using the arrows in the chart.

   To hide the navigation controls, click the Change chart icon, click View Options, and then click Always Hide the Data Pagination Control.

Chart types

There are many types of charts in IBM Cognos Insight for presenting your data in a way that is meaningful to you and your users.

To choose the appropriate type of chart, first define what you want the chart to communicate, and then identify the most effective chart to suit that purpose.

Table 15. Types of charts

<table>
<thead>
<tr>
<th>Purpose of the chart</th>
<th>Type of chart to use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Show trends over time.</td>
<td>Column chart, line chart, point chart</td>
</tr>
</tbody>
</table>

Chapter 5. Workspace design   85
Table 15. Types of charts (continued)

<table>
<thead>
<tr>
<th>Purpose of the chart</th>
<th>Type of chart to use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compare data.</td>
<td>Bar chart, column chart</td>
</tr>
<tr>
<td>Show the relationship of parts to the whole or highlight proportions.</td>
<td>Pie chart</td>
</tr>
<tr>
<td>Show the parts that contribute to the total and compare change over time.</td>
<td>Stacked column chart</td>
</tr>
<tr>
<td>Show groups of related data.</td>
<td>Bar chart, column chart</td>
</tr>
<tr>
<td>Emphasize the magnitude of change over time.</td>
<td>Area chart</td>
</tr>
<tr>
<td>Show the relationship between two measures.</td>
<td>Scatter chart</td>
</tr>
<tr>
<td>Show the relationships between three measures.</td>
<td>Bubble chart</td>
</tr>
<tr>
<td>Show trends over time or compare data with two measures.</td>
<td>Combination chart</td>
</tr>
<tr>
<td>Identify patterns of high and low values.</td>
<td>Tree map</td>
</tr>
</tbody>
</table>

You can select the following formats for the chart types:

- **standard**
  Standard charts compare specific values and represent discrete data, such as data for different regions or individual employees.

- **stacked**
  Stacked charts compare the proportional contributions within a category, showing the relative value that each data series contributes to the total. The top of each stack represents the accumulated totals for each category.

- **100 percent stacked**
  100 percent stacked charts compare the proportional contributions across all categories, showing the relative contribution of each data series to the total. This format highlights proportions. When actual values are important, use another format.

- **three-dimensional**
  Three-dimensional charts are a visually effective display for presentations. When exact values are important, such as for control or monitoring purposes, use another format. The distortion in three-dimensional charts can make them difficult to read accurately.

**Column charts**

Column charts are useful for comparing discrete data or showing trends over time.

Column charts use vertical data markers to compare individual values.

**Line charts**

Line charts are useful for showing trends over time and comparing many data series.

Line charts plot data at regular points connected by lines.

**Pie charts**

Pie charts are useful for highlighting proportions.
They use segments of a circle to show the relationship of parts to the whole. To highlight actual values, use another chart type, such as a stacked chart.

Pie charts plot a single data series. If you need to plot multiple data series, use a 100 percent stacked chart.

**Bar charts**

Bar charts are useful for plotting many data series.

Bar charts use horizontal data markers to compare individual values.

**Area charts**

Area charts are useful for emphasizing the magnitude of change over time. Stacked area charts are also used to show the relationship of parts to the whole.

Area charts are like line charts, but the areas below the lines are filled with colors or patterns.

**Point charts**

Point charts are useful for showing quantitative data in an uncluttered fashion.

Point charts use multiple points to plot data along an ordinal, or non-numeric, axis. A point chart is the same as a line chart without the lines. Only the data points are shown.

**Scatter charts**

Scatter charts are useful for showing relationships between two measures.

Scatter charts use colored circles to represent two measures for each dimension. The x-axis represents one measure, and the y-axis represents a second measure.

For example, you create a scatter chart that shows Cost and Revenue by Product. Your scatter chart consists of one circle for each Product. Each Product circle is plotted on the chart based on Cost, on the x-axis, and Revenue, on the y-axis.

**Bubble charts**

Bubble charts are useful for showing relationships between three measures.

Bubble charts use colored circles of different sizes to show three measures for each dimension. The x-axis represents one measure, the y-axis represents a second measure, and the size of the bubbles represent a third measure.

For example, you create a bubble chart that shows Cost, Revenue, and Quantity Sold by Product. Your bubble chart consists of one circle for each Product. Each Product circle is plotted on the chart based on Cost, on the x-axis, and Revenue, on the y-axis. The size of the circle represents the Quantity Sold for that Product.

**Combination charts**

Combination charts are useful for showing a comparison of two measures over time.
Combination charts include a column chart and a line chart, both on the same x-axis. The column chart represents one measure, and the line chart represents a second measure. By default, the first measure in the content pane is represented by the columns and the second measure is represented by the line. If the y-axes do not have the same range of values, the y-axis on the left of the chart displays values for the columns, and the y-axis on the right of the chart displays values for the line.

For example, you create a combination chart that shows Cost, Revenue, and Quantity Sold by Product. Your combination chart consists of columns that represent Revenue, and a line that represents Quantity Sold. Each product is represented by a column and a point on the line.

**Restriction:** You cannot drag columns up or down to change their values in a combination chart. Because dragging is not supported for line charts, dragging is also not supported in combination charts.

**Tree maps**

Tree maps are useful for showing patterns of high and low values.

Tree maps use colored rectangles of different sizes to show two measures for each dimension. A tree map is similar to a pie chart, in that the size of the rectangles identifies the proportion of the whole that is represented by each element.

For example, you create a tree map showing Revenue and Quantity Sold by Product Line and Product. Your tree map consists of several rectangles, one for each Product Line. Each Product Line rectangle contains several Product rectangles, and the size of the rectangle in proportion to the whole represents the product’s Revenue, and the color of the rectangle represents the product’s Quantity Sold.

**Changing chart types**

To choose the appropriate type of chart in IBM Cognos Insight, first define what you want the chart to communicate, and then identify the most effective chart to suit that purpose. For example, you can use a line chart to show trends.

**About this task**

To choose a chart type, consider what you want the chart to illustrate. Different chart types emphasize different things.

**Procedure**

1. Click the widget that contains the chart you want to work with.
2. Click the Change chart icon, and choose a chart type.
3. Optional: Choose a chart format, such as stacked or 3D.
4. If the crosstab and chart contain more than 50 series and 50 categories, navigate to the next set of data points by using the arrows in the chart.

   To hide the navigation controls, click the Change chart icon, click View Options, and then click Always Hide the Data Pagination Control.

**Showing or hiding totals on charts**

You can display or hide the summary item in the chart in IBM Cognos Insight.
**Procedure**

1. Click the widget that contains the chart you want to work with.

2. To show the total, click the Change chart icon, and select *Show Summaries in Charts*. To hide the total, clear *Show Summaries in Charts*.

### Charting nested data

If the data in the table is nested, you have additional options when adding a chart in IBM Cognos Insight.

**Procedure**

1. Click the widget that contains the chart that you want to work with.

2. By default, the nested rows and nested columns are displayed in separate charts. To display them in one chart, click the Change chart icon and then clear the *Matrix Charts* item.

   To display one chart for each nested row or nested column, select *Matrix Charts*.

   If several rows or columns are nested, the outer row or column is displayed in the chart. For example, you have three dimensions nested as rows: Years, Regions, and Products in this order. By default, Years is displayed in the chart so there is one chart for each year.

3. To hide the label for the nested rows, click the Change chart icon, and then click View Options and clear *Show Row Headers*.

4. To hide the label for the nested columns, click the Change chart icon, and then click View Options and clear *Show Column Headers*.

### Using the same axis for all charts

If the IBM Cognos Insight charts use the same proportions, using the same axis makes it easier to compare rows and columns in the charts. However, if the charts use different proportions, such as gross profit margin and gross margin percentage, do not share the axis so that you have improved visibility into trends and variance in the charts.

**Procedure**

1. Click the widget that contains the chart you want to work with.

2. Click the Change chart icon, and select *Share Axis Across Charts*.

### Changing the display of chart axes

In IBM Cognos Insight, the chart axes correspond to the rows and columns displayed in the table. To make your chart easier to read, remove axis values or change the axis ranges to fit your data.

**About this task**

In a crosstab and chart widget, the series axis of the chart plots the data in the columns and the category axis of the chart plots the data in the rows.

**Procedure**

1. Click the widget that contains the chart.
2. To hide the values on the series axis of the chart, click the **Change chart** icon 🔄, click **View Options**, and then clear **Show Series**.

3. To hide the values on the category axis of the chart, click the **Change chart** icon 🔄, click **View Options**, and then clear **Show Category**.

4. To change the axis range to begin at the lowest value in your data, click the **Change chart** icon 🔄, click **View Options**, and then click **Optimize X-axis Range** or **Optimize Y-axis Range**.

### Showing or hiding the legend

The legend provides useful information and a context for the chart in IBM Cognos Insight. However, if the context is available elsewhere, you can hide the legend to conserve space.

**Procedure**

1. Click the widget that contains the chart you want to work with.

2. Click the **Change chart** icon 🔄, click **View Options**, and then click **Show Legends**. To hide the legend, clear **Show Legends**.

### Showing or hiding the labels

You can hide the labels that appear on the horizontal and vertical axes of the chart in IBM Cognos Insight.

**Procedure**

1. Click the widget that contains the chart you want to work with.

2. To show the labels on the horizontal axis, click the **Change chart** icon 🔄, click **View Options**, and then click **Show Series**. To hide the labels, clear **Show Series**.

3. To show the labels on the vertical axis, click **View Options**, and then click **Show Category**. To hide the labels, clear **Show Category**.

### Hiding charts

You can hide charts by displaying only the numbers in the crosstab in IBM Cognos Insight.

**Procedure**

1. Click the widget that contains the chart you want to hide.

2. Click the **Change display** icon 🔄, and then click **Crosstab**.

### Adding action buttons to navigate the tabs

To guide users through the analysis that you provided in the workspace, use action buttons to go from tab to tab in IBM Cognos Insight. For example, on the overview tab, provide buttons to go to the details on the other tabs. You can also use an image for the button.

**Procedure**

1. Click **Insert**, and then click **Action Button**.
If you know where you want to place the action button on the canvas, right-click the location and click Insert Widget, and then click Action Button.

2. Select the Go To Tab action and specify which tab to navigate to.
3. To change the label or image for the action button, click the Style tab.
4. Click OK.

5. To edit the action button, click the Widget actions icon and click Edit Properties.

### Adding action buttons that run a script

You can add a button to run an IBM Cognos TM1 TurboIntegrator script that was created by the Import wizard or by the Cognos TM1 administrator.

#### Before you begin

Before you can add an action button that runs a script, the Cognos TM1 administrator must enable cube import using IBM Cognos TM1 Performance Modeler. For more information, see the TM1 Performance Modeler documentation on IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter/).

#### About this task

Use a script that was created by the Import wizard to reimport data with the click of a button. If you use a script that the administrator added to the Cognos TM1 server, you must be authorized to connect to the server.

#### Procedure

1. Click Insert, and then click Action Button.
   - If you know where you want to place the action button on the canvas, right-click the location and click Insert Widget, and then click Action Button.
2. Select a script to run.
3. Set the parameters by completing each field.
4. To change the label or image for the action button, click the Style tab.
5. Click OK.

6. To edit the action button, click the Widget actions icon and click Edit Properties.

### Inserting dynamic values

You can create a dynamic value widget in an IBM Cognos Insight workspace to emphasize a specific value in your workspace. For example, you can place the total revenue value in its own widget at the top of your workspace.

#### About this task

The value in the dynamic value widget changes just like any other data in your workspace. For example, if you filter the data that is displayed in your workspace to show only revenue from 2013, the dynamic value widget is filtered in the same way.
Procedure

Right-click the crosstab cell from which you want to create a dynamic value, and then click **Insert Dynamic Value** If the value you want is not displayed in the workspace, you can change the way in which the crosstab is filtered to change the data that appears. The dynamic value appears along with some template text that you can modify or delete. You can also change the text properties, such as the color or font, of the text and value.

Adding text

Use text in IBM Cognos Insight to create a title or to add explanatory text that describes the assumptions behind your analysis. You can change the font, style, color, and size of your text.

**Procedure**

1. Do one of the following actions to add the text widget:
   - Double-click the canvas where you want to place the text widget.
   - Click **Insert**, and then click **Text**
   - Right-click the canvas where you want the text widget, and click **Insert Widget**, and then click **Text**.
2. Select the text that you entered and format it.
3. Optional: To override the text direction that you specified for the workspace, in a text widget, click the **Text direction** icon, and then select the text direction that you want to apply to the text in the text widget.

Adding images

You can add images to an IBM Cognos Insight workspace in an image widget, which enables you to position the image anywhere on the workspace. Or, you can add an image as a background to the current tab or to all the tabs in the workspace, which displays the image behind the widgets.

**Before you begin**

The following image types are supported: GIF, JPEG, BMP, and PNG.

**Procedure**

1. To add an image as a widget, perform the following actions:
   a. Click **Insert > Image**.
   b. Browse for the image and click **Open**.

   **Tip:** If you know where you want to place the image on the canvas, right-click the location and click **Insert Widget > Image**.
2. To add a background image to the current tab, perform the following actions:
   a. Right-click the canvas background, and click **Set Tab Background Image > Set Image**.
   b. Browse for the image and click **Open**.
3. To add a background image to all the tabs in the workspace, including new tabs, perform the following actions:
   a. From the **Style** menu, click **Edit Workspace Style**.
b. Click the **Browse for Workspace Background Image** icon beside **Background image**, and then click **Set Image**.

c. Browse for the image and click **Open**.

---

**Adding web pages for additional context**

Provide web content for additional information or context to the data shown in the IBM Cognos Insight workspace.

**Procedure**

1. Click **Insert**, and then click **Web Page**.
   If you know where you want to place the web page on the canvas, right-click the location and click **Insert Widget**, and then click **Web Page**.
2. Browse for the web page on your hard drive or type in the URL, and click **OK**.
3. In the message about accessing the Internet, select **Permit Always** and click **OK**.
   When exploring the web page, use Alt+left arrow and Alt+right arrow to navigate back and forth in the web page.
4. To change which web page is displayed, click the **Widget actions** icon and click **Edit Properties**.

---

**Modifying widgets**

Customize how your IBM Cognos Insight widgets appear in your workspace to help you view and analyze your data.

**About this task**

You can do the following things to customize your workspace from the **Widget actions** icon:

- Add a title to your widget to define it for your users. The widget's title is defined by the name of the cube. You can change the cube name and widget title by right-clicking the cube in the content pane and renaming it.
- Add borders or a background color to a widget to customize your workspace.
- Layer widgets to save space on your canvas and to help you design a visually appealing workspace. For example, layer a text widget on top of a crosstab to highlight a specific value, or layer a logo on top of a chart to help identify the product brand.
- Move widgets without aligning them automatically with other widgets:
  1. Click the **Widget actions** icon, and then click **Move**.
  2. Use the arrow keys on the keyboard to move the widget.
  3. To set the widget's position, press Ctrl+Enter.
   You can also align widgets by dragging one widget towards another widget until a dotted line appears, and then dropping the widget.
- Remove widgets from the workspace.

---

**Applying themes**

Styles or themes personalize your IBM Cognos Insight workspace by having different color schemes, font styles, and designs.
**Procedure**

1. Click **Style**, and then click **Apply Workspace Theme**.
2. Select an existing theme or browse to a theme that you have created.
3. Click **OK**.

**Customizing backgrounds**

You can customize an IBM Cognos Insight workspace by specifying a background color or image. You can change the background for the current tab, or you can change the background for all tabs in the workspace.

**About this task**

Supported image formats include JPG, GIF, PNG, and BMP.

**Procedure**

1. To change the background of the current tab, right-click an empty area of the canvas, and click **Set Tab Background Color** or **Set Tab Background Image**, and then select a color or image.
2. To change the background for all tabs in the workspace, click **Style > Edit Workspace Style**, and then choose a color or background image. The background you choose will apply to all the tabs in the workspace, including new tabs.

**Synchronizing widgets**

When you synchronize widgets in IBM Cognos Insight, changes that you make to the data in one widget are reflected in the synchronized widgets. Synchronization can be applied across tabs, across workspaces, or in smaller groups within a tab.

**About this task**

Only changes that affect the data in a widget are shared with other widgets. For example, if you filter a dimension in one crosstab, the changes also appear in other crosstabs.

To synchronize a widget with only some of the other widgets in the tab, you can create a synchronization group and add the widgets to the group.

**Procedure**

1. In the content pane, expand the **Synchronization** section.
2. Right-click the object that you want to define synchronization for (a tab or a widget), and then choose the extent to which you want to synchronize the object with the other tabs and widgets in this workspace. By default, each widget is synchronized with the other widgets in the tab. If a widget is not synchronized with the other widgets in the tab, the icon to the right of the widget name indicates the scope of the synchronization.
3. To create a synchronization group, perform the following actions:
   a. In the **Synchronization** section of the content pane, right-click the tab in which you want to create the new group, and then click **New Group**.
   b. Drag the widgets that you want to synchronize with each other to the new group.
c. Rename the new group if necessary.

Protecting workspaces

You can control the format of the IBM Cognos Insight workspace when it is published by preventing your users from moving widgets on the canvas and by hiding the toolbar on the widgets. You can add a password to the workspace.

About this task

To prevent users from moving the widgets accidentally, and to hide the widget toolbars, right-click the canvas and click Lock All Widgets. Users can unlock the widgets to move them if necessary.

To add a password for your users to enter in order to use the workspace, click the Actions icon and then click Protect Workspace. Passwords must be at least five characters, and they are case-sensitive.

CAUTION:
If you lose your password, it cannot be retrieved.
Chapter 6. Data modeling

You can complete simple modeling tasks in IBM Cognos Insight to prepare data to be shared with others.

The data that you restructure can be your personal data or it can be in an editable application on a server when you are in connected mode. For more information about working in connected mode, see “Plans on Cognos TM1 servers” on page 155 or “Plans on Cognos Express servers” on page 179.

Creating elements in the model

You can add to your IBM Cognos Insight model by creating cubes, dimensions, measures, and attributes in the content pane.

About this task

Cube  A cube is a store of data within a model. It is multidimensional and contains rows, columns, and any number of pages. You use one or more cubes to create an application.

Unlike a spreadsheet, cubes can be sliced so that any pair of dimensions can be the rows and columns, and more dimensions can be the pages. While a cube can contain any number of dimensions, the only practical limitation is the amount of memory on the server. Typically a cube contains no more than five or six dimensions. A cube must contain at least two dimensions, similar to a flat spreadsheet. Alternatively, a cube can have three dimensions, in which case it resembles a three-dimensional worksheet that consists of several flat sheets that are stacked behind one another. A four or five-dimensional cube can be considered the same as a cross between a three-dimensional spreadsheet and a set of query reports from a relational database. For example, a typical four-dimensional cube could contain the following dimensions: Profit and Loss, Divisions, Months, and Variance.

Dimension  A dimension is a broad grouping of related data about a major aspect of your business. For example, you have a dimension that is called Products.

Measure  A measure is a performance indicator that is quantifiable and used to determine how well a business is operating. For example, useful measures are Quantity Sold or Revenue.

Attribute  An attribute is a characteristic of a dimension that is used to differentiate dimension elements. For example, useful attributes are Color or Version.

Procedure

1. Expand the content pane.

2. To create a cube, click the New icon, and then click Blank Cube. New cubes are populated with two blank dimensions and a measure folder that contains a blank measure.
3. To create a dimension, select the cube in which you want to create the dimension, click the **New** icon, and then click **Dimension**.

4. To create a measure, select the measure folder for the cube in which you want to create the measure, click the **New** icon, and then click **Measure**.

5. To create an attribute, select the dimension in which you want to create the attribute, click the **New** icon, and then click **Attribute**.

**Results**

To enter data into the new dimensions, measures, and attributes, see “**Editing dimensions and measures**” on page 99.

---

**Duplicating cubes**

Copy a cube in IBM Cognos Insight to create a copy of the structure and contents of the cube or dimension.

**Procedure**

1. From the content pane, right-click the cube that you want to copy, and click **Copy**.
2. Right-click an empty part of the content pane and click **Paste**.
3. In the Copy Cube window, choose one of the following options:
   - Share the dimensions and measures in the original cube with the dimensions and measures in the new cubes. This option keeps the dimensions and measures connected, so that changes to the original dimensions and measures will also apply to the dimensions and measures in the new cube.
   - Duplicate the dimensions and measures to the new cube. This option separates the dimensions and measures, so that changes to the original dimensions and measures do not apply to the dimensions and measures in the new cube.

---

**Sharing or copying dimensions**

Share a dimension in IBM Cognos Insight to have changes in one cube reflected in the other cubes. The result is that your analysis is synchronized across the cubes and their associated crosstabs. Another option is to create a copy of the dimension in both cubes.

**Procedure**

1. From the content pane, expand the cube that contains the dimension that you want to copy.
2. Drag the dimension to the other cube.
3. In the Copy Dimension window, choose one of the following options:
   - Share the original dimension and the new dimension to keep the dimensions connected, so that changes to the original dimension apply to the new dimension.
   - Duplicate the dimension to separate the dimensions, so that changes to the original dimension do not apply to the new dimension.

**Related tasks:**

“**Displaying different data in a crosstab and a chart**” on page 84

You can use two widgets in IBM Cognos Insight to display different data
perspectives in a crosstab and a chart that use the same cube.

**Editing dimensions and measures**

When editing a dimension or measure in IBM Cognos Insight, you can edit its attributes, change the order of its child items, create a hierarchy of items, or add items. You can also change how the data in a dimension is displayed.

**Procedure**

1. In the content pane, right-click the dimension or measure that you want to edit, and click *Edit*.

2. If you want to edit the system-defined attributes, right-click the *Name* label in the header and select the attribute.

   The following system-defined attributes are available, depending on whether you selected a dimension or measure:
   - **Pick List** is used to define a list of values for the measure. This attribute is applicable to measures only.
   - **Format** is used to define the format of a measure. This attribute is applicable to measures only.
   - **Caption** is the caption that is used for the item.
   - **Weight** is a factor that is applied to change a positive value to a negative value. This factor is usually negative one. For example, if the unit price for a product is 50 euros and the discount is 5 euros, when a weight of -1 is applied to the discount, the calculation result is negative.
   - **Index** defines the order of the items in the dimension. If you change the order of an item, the index value changes to reflect the new order.
   - **Invariant Name** is the system name for the item.
   - **Level** is the level of the item in the hierarchy.

3. If you want to define a new attribute, right-click the header and click *Add a new attribute*. Name the new attribute and define whether its type is numeric, text, or alias.

   An alias adds data that can be used as an alternate name for an item, such as a name in another language.

4. If you want to change the order of items, right-click the item and click *Move Up* or *Move Down*.

5. If you want to nest items under other items, right-click the item and click *Promote Selected Members* or *Demote Selected Members*.

6. If you want to rename an item in the dimension, select the item and type a new name.

   **Important:** When you rename a data item, you are renaming it in the cube, not just in the current widget. Therefore, the new name will be reflected in every widget that includes this data item.

7. Click *Close*.

8. If you want to change how the data for the dimension is displayed, right-click the dimension, click *Show Totals*, and then click one of the commands.

**Searching in large dimensions**

When you edit large dimensions, navigation can be difficult. To make it easier, you can search through existing elements of the dimension that is open in the dimension editor.
When an element appears in more than one hierarchy, you can get multiple results when you search for that element. The search results show all the hierarchies that contain matching elements. For highly nested elements, these search results can be difficult to navigate. When you search for subtotals, you can see the top level of the nested search results and expand them to reveal their children.

**Procedure**

1. In the content pane, right-click the dimension or measure that you want to edit, and click **Edit**.
2. In the search field, enter the search criteria of the elements that you want to find and click the search icon. The search returns the elements that match the criteria currently. You can expand the children to explore further.
3. To clear the search and see all elements in the dimension, click the clear search button.

---

### Changing the format of measures

The format of measures is defined by the IBM Cognos Insight workspace user’s preferences. For example, if a user has set the operating system to German (Germany), measures will be displayed with the standard formatting for German. You can specify formatting for measures to add formatting options or override the user preferences.

**Procedure**

1. To change the format of a measure, right-click a row or column header that represents the measure, and then click **Format selected measure Data**. The selected measure identifies the measure to which you will apply formatting.
2. To change the format of multiple measures, click the row or column headings that represent the measures, then right-click the selection and click **Format All Highlighted Measures**. You can only apply formatting to 100 measures at once. This limit is in place to avoid performance issues.
3. Select the format style and options for the measure. As you select options, the examples in the **Samples** pane change to display the results of your selections according to your culture. However, when other users open the workspace, they will see your customizations according to their cultures. For example, the standard in French (Canada) is to put the currency symbol after the number, preceded by a space. In English (Canada), the standard is to put the currency symbol before the number with no space. So if you customized the format of a Revenue measure to display two decimal places, in French (Canada), users would see 3000,00 $ and in English (Canada), users would see $3,000.00.

**Restriction:** If you are connected to IBM Cognos TM1, version 10.1.1 or previous, you will see the previous formatting options, which do not include some of the following formats and settings. To format measures when you are connected to IBM Cognos TM1, version 10.1.1 or previous, see the Cognos Insight documentation, for your product and version on IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

<table>
<thead>
<tr>
<th>Format style</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>The <strong>General</strong> format has no specific formatting. You can use this option to clear formatting that you have set for a measure.</td>
</tr>
<tr>
<td>Format style</td>
<td>Options</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
</tr>
</tbody>
</table>
| Number       | On the **Basic** tab, you can set the following options:  
|              | • Specify the number of decimal places.  
|              | • Define groups of digits.  
|              | • Choose to show a zero value as blank.  
|              | On the **Advanced** tab, you can choose to inherit the user’s preference for negative numbers, as set by their operating system format, or display negative numbers in parentheses or with a minus sign. |
| Currency     | On the **Basic** tab, you can set the following options:  
|              | • Select a specific currency and change how the number and currency symbol are displayed.  
|              | • Choose a custom currency format. For example, if you want to identify this measure with a prefix that your company uses to identify Canadian currency, you can select **Custom currency** and type CAD in the text field.  
|              | • Specify the number of decimal places.  
|              | • Define groups of digits.  
|              | • Choose to show a zero value as blank.  
|              | On the **Advanced** tab, you can choose to inherit the user’s preference for negative numbers, as set by their operating system format, or display negative numbers in parentheses or with a minus sign. |
| Date         | You can choose a date pattern and whether to use four digits or two digits to express years. For example, 8/25/13 or Aug 25, 2013. |
| Time         | On the **Basic** tab, you can choose a time pattern. For example, 7:00 AM or 7:00:00 AM GMT.  
|              | On the **Advanced** tab, you can choose to use a 24-hour clock. |
| Date and Time| On the **Basic** tab, you can choose a date and time pattern and whether to use four digits or two digits to express years. For example, 8/25/13 4:55 PM or Aug 25, 2013 4:55:23 PM.  
|              | On the **Advanced** tab, you can choose to use a 24-hour clock. |
| Percentage   | On the **Basic** tab, you can set the following options:  
|              | • Specify the number of decimal places.  
|              | • Define groups of digits.  
|              | • Choose to show a zero value as blank.  
|              | On the **Advanced** tab, you can choose to inherit the user’s preference for negative numbers, as set by their operating system format, or display negative numbers in parentheses or with a minus sign. |
| Text         | Text is a string format. No other choices are available. |
| Picklist     | You can define a list of values that a user can select for a measure.  
|              | For more information, see “Creating pick lists” on page 102. |
| Custom       | You can use a custom defined number or date template. |
CAUTION:
Custom formatting patterns are saved with the data. When other users see this data, their user preferences will be overridden by this pattern. Use custom formatting patterns only when the format you need is not available from the Format types list.

4. To remove formatting from a measure, right-click any cell that represents the measure and then click Clear Format of Measure selected measure.

Creating pick lists

A pick list contains values that a user can select in a crosstab cell. The values can correspond to all members of a dimension or subset of a dimension. The list of values is dynamic - if the dimension members change, the values available in the pick list also change. Alternatively, a pick list can consist of a static list of values that you specify.

You can create pick lists only for measures. The benefit of using a pick list is that it provides a fixed list of choices so a user has better understanding about the input required. For example, when staff managers do performance planning; they might be required to assign to their staff a performance grade by selecting from a fixed list of Low, Medium, High, and Excellent, instead of typing a freeform text string.

Procedure

1. In the content pane, right-click the measure dimension that contains the measure, and click Edit.
2. Double-click the Format field for the measure.
3. Select the Picklist format type.
4. To create a static pick list, select Static list, then enter the values in the Static list box.
   You can type each value on a separate line in the box or use the following syntax:
   \[\text{string}_1:\text{string}_2:\text{string}_3\]
5. To create a dynamic pick list that uses members from either a subset or dimension as list values, select Dimension or Subset, then select the dimension or subset that contains the elements you want to appear in your pick list.
6. Select either Text or Numeric to determine the element type that is applied to pick list values. If you are creating a dynamic pick list to be used in a link, select Text. If you do not select Text, the link validates correctly, but no data is put into the target cube.
7. Click OK.
8. Save the measure dimension.
9. To remove a pick list from a measure, double-click the Format field, select the Picklist format type, then select None.
   When you remove a pick list, the element type is still applied to the measure.
Custom formats

In IBM Cognos Insight, you can specify custom display formats for measures.

Attention: Custom formatting patterns are saved with the data. When other users see this data, their user preferences are overridden by this pattern. Use custom formatting patterns only when the format you need is not available from the Format Type list.

There are two different types of custom format syntax that you can use: ICU-based formatting, and MDX-based custom formatting.

ICU syntax is used by default. To use the MDX syntax, the following flag must be set in the config.ini file for IBM Cognos Insight. The location of config.ini depends on your installation, for example: C:\Users\user name\AppData\Local\Programs\IBM\Cognos Insight\configurations\config_version_number\config.ini.

MDX_FORMAT_EDITOR=true

If this flag is not set, or not included, ICU syntax must be used.

ICU syntax for custom formats

Format expressions that use ICU syntax consist of a pattern and a set of symbols (characters). You can specify how both positive and negative numbers are formatted. If you do not specify a negative subpattern, negative numbers use the positive formatting that is prefixed by the localized minus sign.

For example, if you type the following pattern in the custom formatting field: #,##0.00;(#,##0.00)

- Positive numbers are formatted as: 123,456,789.00
- Negative numbers are formatted as: (123,456,789.00)

The semicolon (;) separates positive and negative subpatterns.

Another example shows how you can change where the grouping separator that is used to make large numbers more legible appears.

Type the following pattern in the custom formatting field: #,##,#0.00; This pattern formats numbers as:

- Positive: 12,34,56,789
- Negative: -12,34,56,789

For more information, go to the following web site: http://icu-project.org/apiref/icu4c/classDecimalFormat.html and search for “Special Pattern Characters”.

For custom date formats, you use a date pattern. In a date pattern, strings of characters are replaced with date and time data.

For example: hh:mm a formats time as:

- 12:00 AM
- 06:00 PM

Another example:EEE, MMM d, ''yy formats the date like this:

Mon, Oct 30, '15
For more information and examples, go to the following web site: http://userguide.icu-project.org/formatparse/datetime and look for “Date/Time Format Syntax”.

MDX syntax for custom formats

For examples of expressions that use MDX syntax, see the “Numeric Values” topic in TM1 Perspectives, TM1 Architect, and TM1Web documentation.

Adding members to dimensions

You can add members to dimensions in IBM Cognos Insight by adding rows and columns to a crosstab at different levels.

Procedure

1. Complete one of the following actions, depending on where in the dimension you want to add the new member:
   - To add a blank member, right-click where you want to add a new member, and then click Insert.
   - To create a parent member for several existing members, Ctrl+right-click the members and click Insert Parent.
   - To add a child member, right-click the member that you want to be the parent member and click Insert Child.
   - To duplicate an existing member, right-click the member that you want to duplicate, and click Duplicate Member.
2. To rename the new member, right-click the member and click Rename.

   Important: When you rename a data item, you are renaming it in the cube, not just in the current widget. Therefore, the new name will be reflected in every widget that includes this data item.

Related tasks:

“Searching for data” on page 54

When a dimension contains many elements, you can use an explore point to search for an element in IBM Cognos Insight.

Expanding hierarchies to display all members

In a hierarchy, members are organized into a tree structure in the crosstab, with each member that has one or more parent members and an arbitrary number of child members. You can show or hide all levels of the hierarchy in IBM Cognos Insight, or you can show only the members at a specified level.

Procedure

1. If the dimension is not viewed as a hierarchy in the crosstab, right-click the dimension and click Show Totals, and then click Show Totals Leading.
2. To view the child members of one parent member, click the plus sign next to the parent member.
   For example, you want to see the months under the first quarter of the year.
3. To show all members, right-click the dimension and click Expand to Level and then select the level that you want to show.
   For example, you want to see all months under all quarters, not just for one quarter. If you want to see all days of the year, you expand to the lowest level in the dimension.
Organizing dimensions into a hierarchy

Dimensions can be organized into a hierarchical structure in IBM Cognos Insight, with each dimension representing a different level of the hierarchy. For example, you have separate dimensions for days, months, and quarters. You group them into a dimension called year.

Procedure
1. Click the content pane icon and then click Data.
2. Right-click the cube that contains the dimensions you want to organize into a hierarchy and click Group Dimensions.
3. Enter a name for the grouped dimension.
4. Select the dimensions that you want to include in the grouped dimensions. The order of the dimensions defines the order of the hierarchy.
5. Specify whether data is copied from the original cube or whether data is referenced from the original cube, and click OK.

Adding text measures

Use a text measure in IBM Cognos Insight to describe a measure or add other comments about a measure. For example, you add a text measure to explain the significance of the variance between forecast revenue and actual revenue for each product line.

Procedure
1. In the content pane, right-click the measures dimension, and click Edit.
2. In the Name column, right-click the row where you want the new text measure to appear, and click Insert New Text Member.
3. Type a name for the text measure, and click Close.
4. Drag the text measure from the content pane to the crosstab where you want it to appear.
5. Type the appropriate text in the cells of the text measure.

Adding, viewing, and deleting comments in cells

Use comments in IBM Cognos Insight to note for others the significance of the cell value, such as why the variance between forecast revenue and actual revenue for a product is high. You can view all comments that were added to a cell. You can also browse all comments that were added to all cells in the selected crosstab.

About this task

If you are working in distributed mode or connected mode and have taken ownership of a node, you can add comments to cells but the comments are not visible to everyone who has access to that cell until you commit all your changes by clicking the Commit icon.

If you are working in distributed mode or connected mode and someone else has taken ownership of a node, you can add comments to cells and your comments are immediately visible to everyone who has access to that cell.
For information about working in connected and distributed modes, see “Plans on Cognos TM1 servers” on page 155.

**Procedure**

1. Right-click the cell where you want to add a comment and click **Comment**, and then click **Add Comment**.
2. Type the comment in the field.
3. Click **OK**.
4. To view the comments in one cell, pause the pointer over the cell.
5. To view all comments, right-click any cell and click **Browse All Comments**.
6. You can delete your own comments, but not comments added by other users. In the **Browse All Comments** dialog box, select the comment, and click **Delete**.

If you are using IBM Cognos Insight 10.2.2.5 or a previous version, you can delete comments only if the workspace is not already published, and you must be working in personal mode, that is, not in connected mode or distributed mode. If you need to delete comments from a published workspace, contact your Administrator who can delete them on your behalf.

---

**Organizing cubes into folders**

When you organize cubes into folders in IBM Cognos Insight, you make it easier to find and understand the data.

**Procedure**

1. In the content pane, click the **New** icon and select **Folder**.
2. Add cubes to the folder.

---

**Deleting items**

If you delete a member, measure, or dimension that is shared in several cubes, it is deleted from all cubes in IBM Cognos Insight. You can also delete the entire cube.

**About this task**

You must keep a minimum of two dimensions or one dimension and one measure. You can also create copies of a cube with each copy containing different dimensions.

**Important:** You cannot use the **Undo** icon to revert these deletions.

**Procedure**

Complete one or more of the following actions:

*Table 17. How to delete items*

<table>
<thead>
<tr>
<th>Goal</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remove a member from a dimension.</td>
<td>Right-click the member in the crosstab and click <strong>Delete from Dimension</strong>.</td>
</tr>
<tr>
<td>Delete a measure.</td>
<td>Click the measure in the content pane and click the <strong>Delete</strong> icon.</td>
</tr>
</tbody>
</table>
Table 17. How to delete items  (continued)

<table>
<thead>
<tr>
<th>Goal</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delete a cube.</td>
<td>Click the cube in the content pane and click the <strong>Delete</strong> icon.</td>
</tr>
<tr>
<td>Delete a dimension.</td>
<td>In the content pane, click the dimension and click the <strong>Delete</strong> icon.</td>
</tr>
<tr>
<td></td>
<td>If you want to delete more dimensions, add them to the <strong>Removed Dimensions</strong> field in the <strong>Remove Dimensions from Cube</strong> window.</td>
</tr>
<tr>
<td></td>
<td>Specify the value to keep for each deleted dimension. For example, you are creating a dimension for each sales region. You remove the sales regions that are not applicable but you keep the total for all sales regions.</td>
</tr>
<tr>
<td></td>
<td>Complete one of the following actions:</td>
</tr>
<tr>
<td></td>
<td>• To delete the selected dimensions from the current cube, click <strong>Apply changes to current cube</strong> and click <strong>OK</strong>.</td>
</tr>
<tr>
<td></td>
<td>• To create a new cube that contains only the dimensions you want to keep, click <strong>Create a new cube</strong>, specify whether data is copied or referenced, and click <strong>OK</strong>.</td>
</tr>
</tbody>
</table>

If you are working in distributed mode and delete data, the data is still available on the server until you submit the data. This is because the data is stored locally in distributed mode.
Chapter 7. Exporting and printing workspaces

You can share the workspaces that you create in IBM Cognos Insight with other people by exporting to various file types or by printing them on paper.

Exporting crosstabs to CSV files

To back up your data to another location, transfer your dimensions from the IBM Cognos Insight crosstab to a CSV file. You can view and edit the file in a Microsoft Excel spreadsheet.

Procedure

1. In the crosstab, click the Widget actions icon and click Export to > Export to CSV File.
2. Enter a file name, and click Save.

Exporting data to Microsoft Excel spreadsheets

To export the data in an IBM Cognos Insight widget to a Microsoft Excel spreadsheet, use the Quick Export.

Procedure

Click the Widget actions icon and click Export to > Quick Export. The crosstab data is exported, and a Microsoft Excel spreadsheet opens, displaying the crosstab data.

Creating an export process

If you plan to regularly export the data in an IBM Cognos Insight widget to a Microsoft Excel spreadsheet, you can create an export process. Then you can run the export process whenever you want to export the data. You can also share export processes with colleagues.

Procedure

1. Click the Widget actions icon and click Export to > Export to Microsoft Excel.
2. To create an export process, perform the following steps:
   a. Click New.
   b. In the Name field, enter a name for this export process. This is the name you will use to identify this export process when you want to run it again, so the name should be descriptive and unique.
   c. In the Available list, select the cubes that you want to export data for, and click Next.
   d. Click the dimensions in each cube, and then move elements from the Included list to the Available list to include the elements in the exported data.
e. If a dimension is shared between cubes and you want to export the same elements from each copy of the dimension, select the elements from one dimension that you want to export, and then click **Apply to All**. The same elements will be exported from the dimension in other cubes.

f. To include all the elements in a dimension, including elements that might be added after you create the export process, click the dimension and then select the **Include all** check box.

g. Click **Next**.

h. Use the up and down arrows to identify which dimensions will appear in the spreadsheet rows, columns, and pages. For example, if you have chosen to include the Product, Country or Region, Year, and Measures dimensions in the spreadsheet, you can put Country or Region and Product on the rows of the spreadsheet, Measures on the columns, and Years on the pages to put each year on a different tab of the spreadsheet.

i. Click **Next**.

j. Choose whether to merge cells and run the export, and then click **Finish**.

3. To run an export process, select the process and click **Run**.

4. To export an export process, click **Export**, and save the export process file to your computer.

5. To import an export process, such as an export process you received from a colleague, click **Import**, and select the export file from your computer.

---

### Exporting workspaces to PDF files

Export the current tab of an IBM Cognos Insight workspace to a new PDF file or as a new page in an existing PDF file to obtain a snapshot of the current view of your workspace.

**About this task**

The PDF that you create by exporting includes everything that appears on the current tab, including the current view of the canvas, the filters that you have applied, and any other changes that you have made. For example, if your workspace tab includes a very long crosstab, scroll down or scroll up to display the crosstab rows that you want to appear in the PDF.

**Procedure**

From the tab and view that you want to export, click the **Actions** icon and then complete one of the following actions:

- To export to a new PDF file, click **Export to PDF > Create file**. A navigation window appears where you can enter a file name and choose a location on your computer in which to save the file.

- To append the exported workspace tab as a page at the end of an existing PDF, click **Export to PDF > Append to file**. A navigation window appears where you can choose the PDF file to add the workspace tab to.

---

### Printing widget data

You can print the data in an IBM Cognos Insight widget as a hard copy. You can choose the parts of the dimensions in context that you want to print.
Procedure

1. Click the **Widget actions** icon and click **Print Data**.

   **Restriction:** The following steps only apply if the widget includes dimensions in context. If the widget only has dimensions in the rows and columns, you will not be prompted to change the dimensions in context.

2. To print the data as it is filtered in the widget, click **Finish**. For example, if a crosstab widget displays Products in the rows, Months in the columns, and Shipped Quantity as the measure in context, you can print the data as it appears in the crosstab, filtered to display only the Shipped Quantity measure.

3. To change the dimensions in context in the printed copy, select the elements that you want to appear in the printed copy, and click **Next**. For example, if a crosstab widget displays Products in the rows, Months in the columns, and Shipped Quantity as the measure in context, you can change the measure that is in context to another measure in the cube, such as Revenue, and print the widget with Revenue in context.

4. To exclude certain pages from the printed data, clear the check boxes for the pages that you want to exclude.

5. Click **Finish**, and then click **Print**.

---

**Printing workspaces**

Print an entire IBM Cognos Insight workspace, or specific tabs of a workspace, to obtain a hard copy snapshot of your workspace.

**Procedure**

1. Ensure that the widgets in your workspace are displaying the data that you want to appear in the printed copy. For example, if you want to print the data for only one product line, ensure that your workspace is filtered to show only that product line.

2. Click the **Actions** icon , and then click **Print**.

3. From the **Print** list, select an option to define what you want to print. To print specific tabs, click **A range of tabs** and then type the tab numbers as a range or separated by commas.

4. To resize the workspace tabs to print on only one page per tab, select the **Fit to one page** check box.

5. To add information about your workspace to the header and footer of the printed pages, select the **Include header and footer** check box. The information in the header and footer includes the workspace file name, the tab name, the page number, and the date and time that you printed.

6. To change your printer or its settings, click **Advanced**.

7. Click **Print**.

---

**Deleting workspaces from your computer**

If you no longer need an IBM Cognos Insight workspace, you can remove the workspace from your computer.
**Procedure**

Delete the workspace, or CDD file, from your computer. The CDD file contains the model and data in your workspace and the layout of your workspace.

**Remember:** The user data for Cognos Insight workspaces is stored separately from the workspaces themselves. The user data includes log files, themes, PNG files of recent workspaces, and the Cognos TM1 cubes that are created when you create or change a workspace. You cannot delete data for a single workspace. You can only delete all user data at once. If you want to delete this user data, such as when you are uninstalling Cognos Insight, delete the .CognosInsight folder for your environment:

- On a Microsoft Windows XP operating system: C:\Documents and Settings\user name\.CognosInsight
- On a Microsoft Windows 7 operating system: C:\Users\user name\.CognosInsight
Chapter 8. Cognos Insight Tutorial

This tutorial consists of interactive tasks that help you learn how to use IBM Cognos Insight. Cognos Insight is a data exploration and planning solution.

Prerequisites

To prepare for this tutorial, you must install IBM Cognos Insight as a component of IBM Planning Analytics Local, download the samples, and learn about the Cognos Insight user interface.

For more information about installing IBM Planning Analytics Local, see Planning Analytics Installation and Configuration (Local only) (https://www.ibm.com/support/knowledgecenter/SSD29G_2.0.0/kc_gen/com.ibm.swg.ba.cognos.ipa.doc_getting_started_toc-gen2.html).

You can also review the supported environments in Software Environments for IBM Planning Analytics 2.0 (http://www.ibm.com/support/docview.wss?uid=swg27049052).

Downloading the samples

In this tutorial, you work for the Sample Outdoors Company. You will use IBM Cognos Insight with the samples to examine and review corporate data.

By using the sample workspaces to perform a set of tasks, you can explore Cognos Insight and learn how it can help you use your corporate data to fully understand how your company is doing now and what lies ahead.

To use this tutorial, you must download the Cognos Insight samples (http://www.ibm.com/support/docview.wss?uid=swg27046864).

Each workspace sample includes the following widgets that enable you to understand and interact with your data:

• Tabs, to make it easy to browse through the workspace.
• Crosstabs, to view dimensions and perform basic analysis on your data.
• Charts, to clarify numbers and communicate comparisons, relationships, and trends.
• Text, to create a title or add an explanation.
• Images, to add visual impact.

The Cognos Insight user interface

Review the parts of the IBM Cognos Insight window. Some of the terms that are used in this tutorial are unique to the elements of the Cognos Insight user interface.

The following image displays the parts of the Cognos Insight window.
The Cognos Insight window includes the following parts:

The Actions icon

Clicking the **Actions** icon expands a menu that includes options to create, open, save, print, export, and close workspaces.

A crosstab and chart widget

Widgets are the pieces of a Cognos Insight workspace. One type of widget contains a crosstab, or grid, and a chart. The data in the crosstab is linked to the data that appears in the chart, so when you change the data in the crosstab, the chart data changes as well, and when you change the data in the chart, the crosstab changes as well.

A widget toolbar

The widget toolbar appears when you are working in a widget. It includes icons that are particular to the widget, such as the **Change Display Type** icon, which enables you to change the type of the chart that appears in the widget.

The overview area

The overview area is displayed for a crosstab or chart. The overview area tells you what dimensions and measures appear in the crosstab, chart, or crosstab and chart. The overview area is divided into three sections: rows, columns, and context. These sections represent the dimensions and measures that appear in the rows, columns, and context of the crosstab, chart, or crosstab and chart. For example, if the Products dimension appears in the rows section of the overview area, then products also appear in the rows of the crosstab.

The content pane

The content pane displays all of the cubes, dimensions, measures, and
attributes that you can work with in the current workspace. From the content pane, you can import, create and delete, move, and edit the elements in the content pane. The content pane also displays import processes, so that you can refresh data from a specific import.

You can also search for objects in the content pane. You can type characters to filter on when you are unsure of an exact object name, or if you want to find objects that match specific criteria. The search finds all objects in the tree that match the criteria.

**Explore points**
An explore point is a list of the elements in a dimension. You can click the elements to filter the data in the crosstab, chart, or crosstab and chart.

**Tabs**
Workspaces can be divided into several tabs. From the tabs area, you can create, delete, and rename tabs.

**The tab thumbnails icon**
Clicking the tab thumbnails icon displays small graphics of each tab so that you can navigate to another tab using these graphics instead of the tab names.

---

**Lessons**

Each lesson of the IBM Cognos Insight Tutorial focusses on different features. The Cognos Insight samples will show you these features in real-world examples.

This tutorial can be completed in the order in which the lessons appear. However, each lesson stands alone as well, so if you are interested in a particular feature, you can skip to that lesson.

**Importing order data from a spreadsheet file**

This tutorial covers the following skills in IBM Cognos Insight: importing a file, creating a workspace, understanding data mapping, and learning the parts of a workspace.

As a sales executive at the Sample Outdoors Company, you want to review your order data to analyze your company’s performance. You have a spreadsheet file that includes this data, so you decide to import the file into a new IBM Cognos Insight workspace for analysis.

**Procedure**

1. From the Microsoft Windows **Start** menu, click **IBM Cognos Insight**.
2. From the **Get Data** menu, click **Import Data**. The import wizard appears, displaying the **Import Data - Select Data Source** page.
3. To import a file, next to the **Name** field, click **Browse**. A new **Open** window appears where you can browse the files on your computer.
4. Navigate to where you downloaded the samples, and then open the **Orders_language_code.csv** file. For example, if you want to work with the Spanish sample file, open the **Orders_ES.csv** file. The data from the file appears in the import wizard.

**Tip:** You can expand the **File Details** section to display details about how your source data is imported. In this example, the default options are
appropriate.
You decide that you don't want to import all of the data from your file into Cognos Insight.

5. In the Columns section, in the Import column, clear the check boxes for the following data items to indicate that these items should not be imported:
   a. Order number
   b. Month
   c. Order size
   d. Unit price
   e. Ship date
   f. Sales representative

6. Click Advanced. The Import Data - Data Mapping page of the import wizard appears. This page provides details about how your data will be imported. Note that Cognos Insight automatically nested the City element within the Country or Region element, because cities are logically child items of countries or regions.

   Tip: You can drag items from the Source Items list to the Target Items hierarchy, and you can drag items to different positions in the Target items hierarchy. When you drag items, your cursor changes to display information about where you can drop the item and what the item will become if you drop it in that position.

   The following image shows the Mapping pane as it should appear after step 6.

7. Click Summary. The Import Data - Importing page of the import wizard appears. The Import Messages pane displays the actions that Cognos Insight will perform when you import the data. The Property Summary pane displays the settings that you chose in the Properties pane for each target item. You can use this summary to review and compare the properties of each type of data, including the cube you are creating and its dimensions, levels, attributes, and measures.

8. Click Finish.

   Your data appears in a new Cognos Insight workspace. The workspace includes a crosstab and a column chart, and your data hierarchy appears in the content pane, under the heading Data.

   The following image shows the workspace after importing the CSV file.
The crosstab displays the following data from your new cube:

- The **Product** dimension appears in the rows of the crosstab.
- The three measures in your cube, **Order Revenue**, **Order Quantity**, and **Count**, appear in the columns of the crosstab.

The chart displays the following data from your new cube:

- Products are plotted as columns in the chart. For example, there is a column for **Infinity** in each group of columns.
- The three measures in your cube are plotted as groups of columns in the chart. For example, there is a group of three columns for **Order Revenue**.

The overview area identifies the data that appears in your crosstab:

- The rows section shows that the **Product** dimension appears in the rows of the crosstab.
- The columns section shows that the **Orders language_code Measures** dimension appears in the columns of the crosstab. The name of the measures dimension depends on the name of the cube, which comes from the name of the file that you imported. For example, if you imported the Spanish sample file, **Orders_ES.csv**, your cube would be named **Orders ES**, and the measures dimension would be called **Orders ES Measures**.
- The context section shows that the **Customer** dimension, the **City** dimension, and the **Order date** dimension appear in the context of the crosstab. The dimension names in the context section represent the totals for the dimensions, such as **Total of Customer** and **Total of City**. The **Order date** dimension appears as **2007** in the context section, because only 2007 was included in the source file.

**Tip:** You can click the dimensions in the rows, columns, and context sections of the overview area to change the data that is displayed in your crosstab and chart. For example, click **Total of City**, and then click **Austria**. Now only the data for Austria is displayed in your crosstab and chart instead of the data for
all cities. To return to displaying the data for all cities, click Austria in the context section, and then click Total of City.

You decide that you want to add data about sales representatives to your workspace so that you can see which sales representatives were responsible for the most revenue.

9. Click the Actions icon, and then click Close.

10. When you are prompted to save the changes you made to the sample, click No.

Reviewing sales data in an existing workspace

This tutorial covers the following skills in IBM Cognos Insight: navigating tabs and using an existing workspace to make decisions.

As a sales executive at the Sample Outdoors Company, you want to see an overview of the company’s sales data to gain an understanding of the company’s overall performance.

Using tabs can help you organize data and filters to hide or focus on specific data. For example, you can use tabs to tell a story about your own business by separating the aspects of your business into meaningful divisions that allow you to quickly view and analyze your data. Each tab displays different information, but all the tabs are part of the same workspace.

Procedure

1. Click the Actions icon, and then click Open.

2. Navigate to where you downloaded the samples and double-click Orders_language_code.cdd. For example, if you want to work in the Hungarian sample, double-click Orders_HU.cdd. An information message appears to tell you that this workspace includes web widgets. Web widgets, because they display content from online sources, can contain malicious content, just like web pages can. Click OK to dismiss this message.

3. Navigate from one tab to another in the following ways:
   - From the Workspace section of the content pane, click the Products tab.
   - From the named tabs along the Cognos Insight window, click the Orders tab.
   - In the canvas, click the Samples action button. You can add action buttons like these to any workspace by clicking Action button from the Insert menu.

4. Click the Actions icon, and then click Close.

5. When you are prompted to save the changes you made to the sample, click No.

Filtering data to view details about specific products and customers

This tutorial covers the following skills in IBM Cognos Insight: filtering data using explore points and changing the level of detail in charts and crosstabs.

As a sales representative at the Sample Outdoors Company, you want to gain a deeper understanding of sales for each product and customer to determine whether there are problem areas that need further investigation.
Procedure

1. Click the **Actions** icon, and then click **Open**.

2. Navigate to where you downloaded the samples and double-click `Orders_language_code.cdd`. For example, if you want to work in the Hungarian sample, double-click `Orders_HU.cdd`. An information message appears to tell you that this workspace includes web widgets. Web widgets, because they display content from online sources, can contain malicious content, just like web pages can. Click **OK** to dismiss this message.

3. Click the **Orders** tab.

   On the **Orders** tab, there are three crosstab widgets and two chart widgets. The workspace also includes three explore point widgets. The **Orders information** crosstab shows that sales are much lower for the **Kodiak** line than for the other two lines. You want to explore the data to find more information about the sales.

4. In the **Products** explore point, click **Kodiak**.

   This selection filters out product information for the **Infinity** and **Legend** products as shown in the following image.

   ![Image of the workspace](image)

   **Tip:** You can use the **Clear this explore point** icon to display all the products again. If you clear the explore points, ensure that you select **Kodiak** again to continue with this tutorial.

5. In the pie chart, hover over the pie slices to display sales information for the countries or regions where the **Kodiak** product line is sold.

6. In the **Customers** explore point, click **Kanga Kampers**. The following image shows the resulting workspace.
The following information appears on the **Orders** tab now:

- **The Orders information** crosstab shows that all sales of the **Kodiak** product line to the **Kanga Kampers** customer occurred in **February**.
- **The Sales by country or region** crosstab shows that all sales of the **Kodiak** product line to the **Kanga Kampers** customer occurred in **Australia**.
- The area chart is a graphical display of the **Orders information** crosstab.
- The pie chart is a graphical display of the **Sales by country or region** crosstab.
- **The Order details** crosstab shows more details about the **Kanga Kampers** sales, such as **City**, **Order quantity**, and **Sales representative**.
- In the **Order size** explore point, note that all orders are within the **1-5000** range.

7. Click the **Actions** icon, and then click **Close**.

8. When you are prompted to save the changes you made to the sample, click **No**.

### Grouping months into a quarter

This tutorial covers the following skills in IBM Cognos Insight: inserting a new column in a crosstab, grouping data, and inserting a parent member.

As the manager of the Sample Outdoors Company who is responsible for training, you need to cut costs. To help you determine where you can cut costs, you want to compare costs for given periods of the year.

**Procedure**

1. Click the **Actions** icon , and then click **Open**.

2. Navigate to where you downloaded the samples and double-click **HumanResources_language_code.cdd**. For example, if you want to work in the Norwegian sample, double-click **HumanResources_NO.cdd**.

3. Click the **Employee training** tab.
This tab provides at-a-glance course information. It shows the courses by name, a list of attendees, and course costs, the number of days on course, and the enrolment by month.

Now, you want to group January, February, and March so that you can analyze the data by quarter.

5. Right-click the selected columns, and then click Insert Parent. The selected members are summarized in a new member called Member 1.
6. To rename Member 1 to something more meaningful, click Member 1 and type Quarter 1.

You can now see that the course costs for the quarter are $32000, which is close to the total for the month of July. You might want to explore further to see why there is such a difference so that you can decide whether you need to take action.

Creating hierarchies of parent-child relationships allows you to expand your data set and gives you enhanced control of your application.

7. Click the Actions icon, and then click Close.
8. When you are prompted to save the changes you made to the sample, click No.

**Calculating a salary increase with a dimension calculation**

This tutorial covers the following skills in IBM Cognos Insight: creating a new column in a crosstab and creating a dimension calculation.

As the human resources manager, you need to determine the business impact of making changes that affect the structure and staff of the Sample Outdoors Company. In this case, you want to see the effect of increasing salaries by 5%.

**Procedure**

1. Click the Actions icon, and then click Open.
2. Navigate to where you downloaded the samples and double-click HumanResources_language_code.cdd. For example, if you want to work in the Korean sample, double-click HumanResources_KO.cdd.
3. Click the Employee expenses tab. You decide to use a formula to calculate a 5% increase in salaries. For more information about formulas, see the Cognos Insight documentation in IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).
4. In the Employee Expenses crosstab, right-click the Pay column heading, click Duplicate, and type What-if Pay 5 to rename the column.
5. Click the cell at the intersection of the What-if Pay 5 column and the All Countries or regions row, type incr5, and then press Enter.

The values in all the cells in the What-if Pay 5 column increase incrementally by five percent. The following image shows the updated crosstab and chart.
6. Click the **Actions** icon, and then click **Close**.
7. When you are prompted to save the changes you made to the sample, click **No**.

### Identifying high and low revenue with color

This tutorial covers the following skills in IBM Cognos Insight: creating conditional styles and identifying trends.

As a sales account manager at the Sample Outdoors Company, you want to know which products are selling well and which products are selling poorly. You also want to see changes over the year to determine the months in which each product does not perform well.

**Procedure**

1. Click the **Actions** icon, and then click **Open**.
2. Navigate to where you downloaded the samples and double-click `Orders_language_code.cdd`. For example, if you want to work in the Japanese sample, double-click `Orders_JA.cdd`. An information message appears to tell you that this workspace includes web widgets. Web widgets, because they display content from online sources, can contain malicious content, just like web pages can. Click **OK** to dismiss this message.
3. Click the **Orders** tab. You decide to use a conditional style to identify months with higher or lower revenues.
4. In the **Orders information** crosstab, right-click a cell that is not a row or column heading, and then click **Conditional Style**.
5. In the **Conditional Style** window, click the **Add** icon, click **New Conditional Style Using > Order Revenue**.
6. In the **Numeric Condition** window, in the **Range value** field, type 5000, and press Enter. The new condition appears in the list.
7. In the **Range value** field, type **10000**, and press Enter. The list now displays the two values you entered in between three empty rows. These rows are where you will define the conditions. For example, you can define a condition for the values that are below **5,000** by setting the style in the row after the value **5,000**.

8. In the row after the **5,000** value, click the cell in the **Style** column, and then click **Poor**.

9. In the row before the **5,000** value, click the cell in the **Style** column, and then click **Average**.

10. In the row before the **10,000** value, click the cell in the **Style** column, and then click **Excellent**. The conditions you created now indicate the following information:

   - Order revenue above **10,000** is excellent.
   - Order revenue between **5,000** and **10,000** is average.
   - Order revenue below **5,000** is poor.

11. Click **OK** twice to see the workspace. The **Orders information** crosstab, as shown in the following image, now displays excellent, average, and poor values in the styles that you defined.

12. In the **Customers** explore point, click each of the customers to see sales by month and country or region to help you determine when and where to target your sales campaigns.

13. Click the **Actions** icon, and then click **Close**.

14. When you are prompted to save the changes you made to the sample, click **No**.

**Results**

From exploring the data in the workspace, you can tell that there might be sales opportunities with the **Sportworld** customer, as they did not order the **Kodiak** nor the **Legend** products.
Calculating revenue by modifying the model

This tutorial covers the following skills in IBM Cognos Insight: creating a cube calculation, inserting a tab, creating a crosstab, creating a chart, replacing dimensions and measures, suppressing empty cells, and changing how totals appear.

As a data analyst at the Sample Outdoors Company, you want to change the Order Revenue column so that it reflects changes to the Quantity and Unit price values. This will enable you to decide how the quantities and unit prices of products affect the company's revenue.

Procedure

1. Click the Actions icon, and then click Open.
2. Navigate to where you downloaded the samples and double-click Orders_language_code.cdd. For example, if you want to work in the Italian sample, double-click Orders_IT.cdd. An information message appears to tell you that this workspace includes web widgets. Web widgets, because they display content from online sources, can contain malicious content, just like web pages can. Click OK to dismiss this message.
3. In the Cognos Insight window, next to the tabs, click the Insert a new tab icon.
   A new tab appears in the Cognos Insight window. The new tab is called Tab 5.
4. Right-click the new tab, click Rename, and then enter Test.
   You now have a blank canvas to use for creating a new view of the data.
5. Open the content pane to see all the dimensions and measures that have been imported into this workspace.
6. Drag the Order details cube onto the workspace.
   By default, dragging the cube to the workspace creates a crosstab and a chart. The crosstab and chart display the first dimension in the cube, Order number, and all the measures that are available in the cube.
   The overview area identifies the data that appears in your crosstab:

   • The rows section shows that the Order number dimension appears in the rows of the crosstab.

   • The columns section shows that the Order details Measures dimension appears in the columns of the crosstab. This dimension includes all of the measures in the Order details cube.

   • The context section shows the remaining dimensions in the context of the crosstab. The dimension names in the context section represent the data that is displayed in the crosstab. For example, the context section displays All Products, so the data in the crosstab represents all of the products. If you filter the Products dimension to display the Legend item in the context section of the overview area, then the data in the crosstab represents only the Legend product.

   You decide that you want to see all the data, but nested in a way that is easy to understand at a glance. To do this, you need to change the dimensions in the rows, columns, and context sections of the overview area.
7. From the content pane, from the Order details cube, drag the Products dimension and position it after the Order number dimension in the rows section of the overview area. The cursor changes as you hover over the overview area to show you where you can and cannot drop the dimension.

Tip: You can also drag dimensions from one section of the overview area to another.

8. From the Order details cube, drag the Customers dimension and position it after the Products dimension in the rows section of the overview area.

9. From the Order details cube, drag the Order size dimension and position it after the Customers dimension in the rows section of the overview area. The rows section now includes the following dimensions, nested in this order: Order number, Products, Customers, and Order size, as shown in the following image. The columns section includes the Order details Measures dimension.

10. Right-click each of the four totals in the rows of the crosstab (such as All Order numbers), and then click Show Totals > Don't Show Totals. The crosstab is still mostly empty, because it is showing a cell for each data intersection. You decide to remove the empty cells.

11. In the widget toolbar, click the Suppress empty cells icon, and then click Rows.

The crosstab now displays all the data in the cube as shown in the following image.

You decide that you want to focus on the Kanga Kampers customer.
12. In the overview area, click the Customers dimension, and then click Kanga Kampers. The crosstab and chart now show only the Kanga Kampers data.

13. Multi-select all of the cells in the Order Revenue column of the crosstab, and then right-click the selection and click Create Cube Calculation.

14. In the Cube Calculation Name window, enter Order Revenue Calculation, and press Enter. The calculation that you are creating applies only to the dimensions and measures as they are filtered in the crosstab. For example, the Customers dimension is filtered to include only the Kanga Kampers product in the crosstab, so the calculation applies only to the Kanga Kampers product.

Tip: You can change these filters in the expression editor. Each dimension in the filter area, under Define a new expression for, displays the members that appear in the crosstab and the dimension name. For example, the Customers dimension is filtered to include only the Kanga Kampers product, so the Customers dimension includes Kanga Kampers, the member that appears in the crosstab, and Customers, the name of the dimension.

15. In the data hierarchy, in the Terms tab, scroll down and expand Order details Measures. The Terms tab includes the dimensions and measures that are available in the current cube. These are called the terms in your expression.

Tip: You can use expression terms from other cubes in the workspace by importing a term. Importing a term from another cube enables you to add a dimension or measure from another cube to your calculation. You do this by mapping the dimensions in the current cube to the dimensions in the cube that you want to import from.

16. Drag the Quantity measure to the Expression pane.

17. In the Expression pane, type an asterisk (*), which is the symbol for multiplication.

Tip: You can add calculation templates to the Expression pane by choosing them from the Simple tab. For example, on the Simple tab, if you click Arithmetic in the Operation type list, and * (Multiplication) in the Operation list, the following template for a multiplication appears in the Expression pane: ( [<operand 1>] * [<operand 2>] ). You can then replace [<operand 1>] and [<operand 2>] with the dimensions and measures you want to use in the calculation.

18. Drag the Unit price measure to the Expression pane, placing it after asterisk (*).

19. To save and apply the calculation, click OK. Now the Order Revenue column in the crosstab is calculated by multiplying the Quantity by the Unit price.

20. Click a cell in the Unit price column, type a new price, and press Enter. The Order Revenue value in that row changes to reflect the new unit price. You can also change the values in the Quantity column to see how a change in the quantity that you sell impacts the Order Revenue.

21. Click the Actions icon, and then click Close.

When you are prompted to save the changes you made to the sample, click No.

Analyzing revenue

This tutorial covers the following skills in IBM Cognos Insight: creating a variance, hiding rows or columns, sorting a column, and nesting dimensions.
In this tutorial, you create an analysis by dragging an existing .csv file onto the workspace in Cognos Insight. You rearrange the dimensions on the crosstab to produce different views of the data. You examine graphs and see that there are various graph types that can be used in an analysis. You look for trends in the data and add text comments about your findings. You save this analysis as a basis for further work.

**Procedure**

1. Open IBM Cognos Insight.
2. Choose Classic theme.
3. Drag the Net_Revenue.csv file onto the new Workspace.

4. Drag the Net Revenue dimension to the **Rows** box.
5. Delete Total of Net Revenue. When prompted to confirm your action, select **Delete**.
6. Add a variance of the Actual Last Year and Actual Last Year-1.

7. Rename Actual Last Year and Actual Last Year-1 to Variance.
8. Right-click Count and then select **Insert Text Measure**.
9. Name the text measure Comment – note it is only possible to add text items to the measure dimension.

   **Note:** The count item shows the number of records that have been imported using the drag and drop feature. In some circumstances, this is useful. For this exercise, after the initial import, we will not use this.

10. Delete the Count item by right-clicking the item and selecting **Delete** and confirming with the **Delete** button in the dialog.

11. To make it easier to do the analysis, remove the chart from the widget by selecting **Crosstab** from the **Change Display** drop-down menu.

12. Reorient the cube, as shown in the following figure.
13. We want to sort on the detail items only. To make this easier to understand, we will hide the Total of Products. Two menu options allow you to do this: 1. The Hide option and 2. The Show Totals options.
   - Right-click on the item and then select Hide. You can hide rows or columns that are not needed. For example, after creating a calculation, you can hide rows or columns that are used in the calculation but are not needed in the workspace. This can be applied to any item - detail or consolidated.
Right-click on the item, select **Show Totals**, and then choose an option.
14. In this case, we will select **Don’t Show Totals**, which will hide all consolidated items in a dimension, rather than just hiding one item. In this example, the result would be the same. However, the use of **Don’t Show Totals** is more appropriate in this case should further totals be added later.

15. Sort the Variance column by Value Ascending.

16. Add a comment on the product that has the largest negative Variance.
17. Select Net Revenue from the Net Revenue dimension and add a comment on the product with the biggest Variance for Net Revenue. Note that it is a different product from that with the biggest decrease in Volume.

18. Rename the tab to Net Revenue Analysis.

19. Click the icon to add a new tab.

20. Rename it Net Revenue Trend.

21. Right-click the workspace and select Insert Widget > Crosstab > Net revenue.

Note: Reorient, as shown below, selecting Net Revenue in the context and hiding the Comment item. Use the Autofit icon to resize the items in
Examine the trends for Last Year and Last Year 1 - are they the same?

22. Add a third tab and name it Net Revenue by City.

23. Go back to the Net Revenue Trend tab and select Copy Widget from the widget menu.

24. Right-click on the Net Revenue by City tab and select Paste Widget.
25. Reorient as shown in the following figure, again focusing on Net Revenue, hiding the Comment, and not showing the Total of Cities.

Are there any cities consistently under-performing across the two-year period? Which city has seen the greatest decline in performance over the two years?


27. Click the Change Display icon’s icon, and select Split View > Crosstab on Top.
28. Then change the display type to a Tree Map.

29. Nest the Cities dimension outside the Products dimension on the rows by dragging it and dropping it outside as shown by the arrow in the following figure.
30. Drag the Net Revenue Dimension onto the columns to replace the Net revenue measures dimension. You may need to click onto the dimension and select View All – Net Revenue to get the Volume to show on the columns.

31. The result looks as follows:
32. On the Tree Map, hover over one of the cities to see the values that are associated with that city.

33. Which product is selling best in the top three cities?

34. Save the workspace as A01_Simple_Revenue_Analysis. This will create a .cdd file that can be used by anyone with IBM Cognos Insight.
Results

This completes the tutorial "Analyzing revenue". You will build on this .cdd file in the next tutorial.

Modeling and analyzing discounts

This tutorial covers the following skills in IBM Cognos Insight: changing the view, creating a cube calculation, formatting items, applying calculations to both and leaf and consolidated values, and preparing a workspace as a presentation.

In [“Analyzing revenue” on page 126] we looked at the Volume, Net Revenue and Variance for a set of products which are sold through outlets in a number of cities over a two-year year period. We discovered that the product which had the greatest decrease in volume sold was not the same product that showed the biggest decrease in Net Revenue. To fully understand this and make appropriate business decisions, further information is required. Maybe some cities are giving over generous discounts?

To find out more detail, we will bring in List Prices from the previous two years and use them to calculate the Gross revenue. The difference between the Gross and Net revenue will be the discount that was given. For additional information, we will also calculate the discount percentage. This will give us more insight into how the different cities are discounting the products so that we can take appropriate action.

Calculating the Gross Revenue

Procedure
1. Open A01_Simple_Revenue_Analysis.cdd and Save As A02_Discount_Analysis.cdd.
2. Add a new tab and rename it Discount Analysis.
3. Drag the List_Prices.csv file onto the workspace of this new tab.
4. Change the Display View to Crosstab.
5. Delete the Count from the List Price Measures dimension.
6. Place the List Price dimension onto the columns and delete the Total of List Price member.
7. Arrange the view, as shown in the following image.

8. Click the Restore this widget icon and position the List Prices so that it appears in the top half of the pane.

9. Click the View Content Pane icon in the upper left of workspace. The objects associated with this Workspace appear.
10. Drag the Net Revenue cube to the workspace so that it appears in the bottom half of the pane.
11. Change the display of the Net Revenue cube to Crosstab and then re-orient it, as shown in the following image.

12. Right-click the Net Revenue Member and then select Insert.
13. Name the new member Gross Revenue.
14. Highlight the two cells of Actual Last Year and Actual Last Year -1 for the Gross Revenue item.
15. Right-click and select Create Cube Calculation.

16. We will calculate the Gross revenue as Volume * List Price. The list price can be used directly from the List Price Cube.
17. If prompted to save the pending changes, commit the data by clicking the check mark icon on the main menu bar.
18. Name the calculation Gross Revenue and then select OK.
19. Click Import Terms and then name the term import link List Prices.

20. On the source, select the List Price cube from the drop-down list.

**Note:** Products and Months are mapped automatically.

21. Drag List Price Measures onto Net revenue measures and then select Automatic as the mapping type.

22. Click List Price and then select the List Price slice.

23. Click Cities and then select the root of the Cities dimension.
24. Click Net Revenue and then select the Gross Revenue slice.

25. Select OK to save the Import link.

26. In the calculation, expand the Import terms and drag List prices to the Leaf-level expression.
27. Complete the calculation by typing an asterisk (*) to multiply the two values or by selecting it from the simple tab and the arithmetic options.

28. Click OK and then check the result at the detail level. An example is shown in the following image.

Calculating the Discount

Now we will calculate the difference between the Net Revenue and Gross revenue. This difference represents the Discount that was given.

**Note:** In this example, we could select the predefined Calculation of Gross Revenue – Net revenue from the Right Mouse menu. This would then apply to the Discount across all members in the other dimensions. However, as we develop this model, we plan to add new members to the Net Revenue Measures dimension (which represent versions in this model) for future planning. Therefore, we will instead enter Discount for these slices, rather than have them calculated. Using a
cube calculation, we can control the scope of the calculation so that it applies only to the Actual slices and leaves the planning items available for data entry.

Procedure
1. Right-click the Gross Revenue item and then select **Insert**. Name the new item **Discount**.
2. Highlight only the Actual last Year and Actual Last Year-1 for the Discount item to fix the scope of the calculation. Right-click and select **Create cube calculation**. Name the calculation Discount.
3. Drag items from the terms hierarchy to the **Expression** box to create the following calculation:
   
   $\text{Discount} = \text{[Net Revenue]} : \text{[Gross Revenue]} - \text{[Net Revenue]} : \text{[Net Revenue]}

4. Click **OK** and then check that the resulting data is being calculated correctly.

**Calculating the Discount Percentage**

Last, we will create the discount percentage. We want to apply this percentage both to the leaf level and the consolidated level. Therefore, we will use the Cube calculation instead of just the Calculate function.

Procedure
1. Right-click the Discount item and then click **Insert**. Name the new item **Discount %**.
2. Highlight only the Actual last Year and Actual Last Year-1 for the Discount % item to fix the scope of the calculation. Right-click the selection and then select **Create cube calculation**. Name it Discount %.
3. Drag and drop items from the terms area to create the following calculation:

   $\text{Discount} % = \frac{\text{[Net Revenue]} : \text{Discount}}{\text{[Net Revenue]} : \text{[Gross Revenue]}}$

4. Select the **Combine leaf and consolidated** check box.
   
   **Tip:** If you do not select this check box, the sum will be calculated.

5. Click **OK**.
6. Apply a format to the item by right-clicking the Discount % member and selecting **Format Discount % data**. Select the percentage and 2dp.
Note: A default format is automatically applied to the measures dimension after the initial import. Therefore, you must clear the format for both Actual Last Year and Actual Last Year -1.

7. Right-click the Actual Last year item and then select Clear Format Actual Last Year. Repeat this for Actual Last Year -1.

8. The following image shows an example of the results of the Discount % for London in January:

![Discount % Table]

Adding business logic

Note that the Variance calculation is always the same, that is, Actual last Year – Actual Last Year-1. However, we want to bring business logic into the variance. For example, a negative variance for Gross Revenue is a decrease from one year to another and should be represented as a negative. However, a decline in discount could be viewed as a positive result and the variance can be displayed as positive instead of negative. We can use attributes to bring this business logic into our model.

Procedure

1. Re-orient to see all of the measures for London, Jan, and Whacky Widgets.

   Note: These measures are all negative

2. In the Data pane, right-click the Net Revenue Measures Dimension, and then select New Data > Attribute.
3. Name the attribute Sign for Variance, change the Attribute type to Text, and then select OK.

4. Right-click the Net Revenue dimension again and then select Edit.
5. In the Dimension editor, right-click the header for **Format** and then select the **Sign for Variance** attribute in the list.

6. Edit the attribute as shown in the following image.
7. Click Close.
8. Right-click the Variance Column, select Create Cube calculation, and then name the calculation Variance.
9. In the Leaf-level expression, drag and drop elements to create the following expression:

   \[
   =\begin{cases} 
   \text{IF netrevenue.\{Sign for Variance\} = "Positive"} \\
   \text{THEN netrevenue.measures:\{Actual Last Year\} - netrevenue.measures:\{Actual Last Year -1\}} \\
   \text{ELSE netrevenue.measures:\{Actual Last Year-1\} - netrevenue.measures:\{Actual Last Year\}}
   \end{cases}
   \]

10. Select the Combine leaf and consolidated check mark so that the expression is applied to both.

11. Select OK and then observe the effect on the Variance data. It should now appear similar to the following image.
12. We also must ensure that the data is correct at the consolidated level. Re-orient the data as shown in the following image.

Tip: If you see that the sign change is not being applied correctly. For example, for Artful Artifacts the discount going from down Actual Last Year-1 to Actual Last Year would be considered as favorable. It should therefore be displayed as a positive value rather than a negative value as it is here.

13. To ensure that the correct sign is being applied, we should check the order of calculation and summarization. To do this, right-click the Variance column header, then select **Calculate > Edit this Calculation**.
The correct data appears as shown in the following image.

**Presenting the data**

To present the data effectively, we will create a more meaningful workspace.

**Procedure**

1. Add a second widget with the Revenue Cube to the Discount Analysis tab. Arrange and orient the data as shown in the following image.
2. Hide the Total of Cities and the comment.

3. Add another widget to show the Discount Summary, as shown in the following image.

4. Add text boxes for the widget headings by selecting Insert > Text from the top menu bar. Type the names, and then enlarge, embolden, and underline the text to make it stand out.

5. Once the positioning and titles are complete, right-click the white area of the workspace, and select Lock All Widgets to fix the workspace.
6. Save the workspace again.

The finished workspace appears as shown in the following image.

7. Exit Cognos Insight.
Chapter 9. For Cognos TM1 users

IBM Cognos Insight workspaces can be stored as applications on an IBM Cognos TM1 server. If you have permission to access the application on the IBM Cognos TM1 Applications portal, you can open the workspace in Cognos Insight from the portal.

There are two modes that you can use to edit a workspace from the Cognos TM1 Applications portal. The Cognos TM1 server administrator determines the connection modes that are available in IBM Cognos Insight.

You can access a workspace from the Cognos TM1 Applications portal by working in distributed mode or connected mode, or by working offline and committing your changes when you reconnect. The mode that you are working in is indicated in the Cognos Insight title bar. The following list describes distributed mode, connected mode, and working offline.

**Distributed mode**
Distributed mode is useful when many users need to access the same workspace, with each user working on a part of the workspace, or plan. When you work in distributed mode, data is copied from the shared Cognos TM1 server on request, and you can work with the copy that is stored locally on your computer. The data is regularly updated on your computer from the server. When you are finished, you must commit and submit your changes to the server.

**Connected mode**
Connected mode is useful when you are working with a large volume of data and only small amounts of data are updated frequently. Data is kept on the Cognos TM1 server, and you work directly on the server data. You cannot save data locally on your computer.

**Working offline**
If you are working on a workspace in distributed mode, you can choose to disconnect from a Cognos TM1 server when you want to make changes on your local computer and commit the changes later.

**Plans on Cognos TM1 servers**

When your IBM Cognos TM1 server administrator distributes an enterprise-wide plan in an IBM Cognos Insight workspace, you can review, analyze, and update the portion of the plan that was assigned to you.

**Adding your contribution in a Cognos TM1 environment**

You need to contribute data to your part of an IBM Cognos Insight plan, such as the Sales Division, Marketing Division, Development Division, or Cost Center.

**About this task**

Each part of the plan is known as a node. In connected or distributed mode, you can take ownership of a node from any level.
Procedure

1. Open IBM Cognos Insight from the IBM Cognos TM1 Applications portal in connected or distributed mode.

2. Click the Take ownership icon.

3. Explore and analyze the data.

4. Enter or select data.

   The administrator might have defined a list of values for you to select from. The administrator might have provided more information about the views included in the plan in IBM Cognos TM1 Performance Modeler. To view this information, click Help, and then click View Help. If the administrator did not add help text in Cognos TM1 Performance Modeler, the View Help dialog box is empty. If you are not connected to a Cognos TM1 server, the View Help option is not available on the Help menu.

Committing or resetting the data in Cognos TM1

To share your contribution with others while continuing to make changes in IBM Cognos Insight, commit your contribution. Commit enables you to take your personal changes that are highlighted in blue and make them part of the base data. Your colleagues who have access to the plan can view your contribution. If you want to revert your changes to the last committed data, reset all data.

Procedure

1. To share your contribution with others while continuing to make changes, click the Commit icon.

   The Commit icon is enabled only if you have changed or entered data.

2. To revert to the last committed data, click the Widget actions icon and click Reset All Data.

Submitting your contribution in a Cognos TM1 environment

When the IBM Cognos TM1 administrator has deployed an approval application, you enter data in IBM Cognos Insight and then submit your contribution as final. Submit locks the data.

Procedure

When you are finished with your contribution, click the Submit icon.

   The Submit icon is enabled only if all changes have been committed.

Results

The reviewer can now take ownership of your contribution and review it.

Rejecting a submission in a Cognos TM1 environment

A submission is ready to be reviewed. As a reviewer, you can view the latest committed changes in IBM Cognos Insight. If you do not approve of certain data, you can reject the submission. This means another user can take ownership of the submission and make the necessary corrections.
**Procedure**

1. Open the submission to review.
2. Explore and analyze the data that was submitted to you.
3. If you do not approve of the submitted changes, click the **Reject** icon.

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**Scorecard widgets**

Scorecard widgets are objects that can be created in IBM Cognos TM1 Performance Modeler. When you connect to a Cognos TM1 server, you can add scorecard widgets to IBM Cognos Insight workspaces.

Scorecard widgets can include the following objects that you can add to a Cognos Insight workspace: impact diagrams, strategy maps, custom diagrams, and history charts.

**Impact Diagram**

An impact diagram defines the relationships between metrics of three types: impacting metrics, a focused metric, and impacted metrics.

It uses traffic lights to show you how each metric is performing. Yellow diamonds represent neutral values, green circles represent positive values, and red squares represent negative values. Beside each traffic light is a trend indicator. Arrows indicate an increase or decrease, and a dash signifies no change has occurred.

Line styles in an impact diagram indicate whether the impact is positive, negative, or undefined.

The following image is an example of an impact diagram.

- The focused metric is Employee survey.
- The status of the Employee survey metric is Average and the trend is Getting Better.
• The focused metric is impacted by the following two metrics: Vacation days taken and Training days.
• The Vacation days taken metric positively impacts the focused metric.
• The impact of the Training days metric on the focused metric is undefined.
• The focused metric is negatively impacting the Employee Termination metric.

Tip: You can view details about the metrics that impact or are impacted by a metric by clicking the Expand icon beside the metric. You can expand all the metrics or collapse all the metrics by using the Expand all and Collapse all icons in the widget's overview area.

Strategy Map

A strategy map include business perspectives and objectives, the positive or negative performance of which is indicated by red, yellow, and green traffic lights.

Perspectives
Perspectives are areas of your business that you can use to group your business objectives. Four perspectives are included by default in Cognos TM1 Performance Modeler when you create a strategy map: Financial, Customer, Internal Business Processes, and Learning and Growth. You can also create your own perspectives.

Objectives
Objectives are the individual goals that you have within each perspective. In the following example, the financial perspective includes two objectives: grow revenue and lower operating costs.

Tip: When you hover over an objective, the metrics within that objective appear. You can filter the data in the workspace by clicking one of the metrics there.

Traffic lights
Traffic lights appear on objectives and perspectives to represent the performance of the objective or perspective. Yellow diamonds represent neutral values, green circles represent positive values, and red squares represent negative values.

In an objective, individual metrics are represented by traffic lights and numbers. In the following example, the Lower operating costs objective contains three metrics with traffic lights: one green circle represents advertising, one yellow diamond represents salaries, and one red square represents overhead costs.

These traffic lights are summarized in an objective traffic light, located beside the objective title, that signifies the overall performance of the objective. In the following example, the green circle beside the Lower operating costs objective signifies that the objective is performing positively overall.

The objective traffic lights are then summarized for each perspective to represent how the entire perspective is performing. In the following example, the yellow diamond beside the Financial perspective indicates that the perspective is performing neutrally overall.

The following image is an example of a strategy map. This example does not reflect exactly what appears in Cognos Insight.
In the example, the following elements are displayed:

- The status of the Financial perspective is Average. The Financial perspective has the following objectives:
  - The status of the Grow Revenue objective is Average with the following metric values:
    - The status of the Expenses metric is Average.
    - The status of the Profit metric is Average.
  - The status of the Lower Operating Costs objective is Excellent with the following metric values:
    - The status of the Hiring Cycle metric is Excellent.
    - The status of the Product Cost metric is Average.
    - The status of the Administration Cost metric is Poor.
- The status of the Customer perspective is Excellent. The Customer perspective has the following objectives:
  - The status of the Improve Brand Awareness objective is Excellent.
  - The status of the Memorable Shopping Experience objective is Excellent with the following metric values:
    - The status of the Cost of Employee Training metric is Excellent.
- The status of the Internal Processes perspective is Excellent. The Internal Processes perspective has the following objectives:
  - The status of the Improve Vendor Process objective is Excellent.
  - The status of the Improve Brand Management Process objective is Excellent.
  - The status of the Improve Supply Chain objective is Excellent.
The status of the Learning & Innovation perspective is Average. The Learning & Innovation perspective has the following objectives:

- The status of the Grow Revenue objective is Excellent.
- The status of the Employee Development objective is Average with the following metric values:
  - The status of the Product Cost metric is Average.
  - The status of the Expenses metric is Poor.

The objectives are connected as follows:

- The Improve Brand Awareness objective in the Customer perspective is connected to the Grow Revenue objective in the Financial perspective.
- The Improve Brand Awareness objective in the Customer perspective is connected to the Grow Revenue objective in the Learning & Innovation perspective.
- The Improve Brand Management Process objective in the Internal Processes perspective is connected to Employee Development objective in the Learning & Innovation perspective.
- The Improve Supply Chain objective in the Internal Processes perspective is connected to the Memorable Shopping Experience objective in the Customer perspective.
- The Employee Development objective in the Learning & Innovation perspective is connected to the Improve Brand Management Process objective in the Internal Processes perspective.
- The Lower Operating Costs objective in the Financial perspective is connected to the Grow Revenue objective in the Financial perspective.

**Custom Diagram**

A custom diagram consists of a custom background graphic on which you can place data points when you create the diagram in Cognos TM1 Performance Modeler. These diagrams include dimensions, traffic lights, and trend indicators.

Custom diagrams include at least one dimension, called the primary dimension, and can include two dimensions to provide data points that represent intersections of data. In the following example, the primary dimension is the metrics dimension, which includes two metrics: profit and revenue. The secondary dimension is geography. The custom diagram displays data representing the intersections between metrics and geographical locations.

Custom diagrams also include traffic lights, which signify how the intersection of the metric with the dimension is performing. Yellow diamonds represent neutral values, green circles represent positive values, and red squares represent negative values. The trend indicators beside the traffic lights signify whether performance has improved or declined. In the following example, Revenue in Italy is positive, but it has declined.

The following image is an example of a custom diagram. This example does not reflect exactly what appears in Cognos Insight.
In the example, the following elements are displayed:

- The diagram uses a world map for the background image.
- There are 12 data points on the diagram:
  - The status of the Revenue - Canada data point is Excellent and the trend is Getting Better.
  - The status of the Revenue - France data point is Poor and the trend is Getting Worse.
  - The status of the Revenue - United States data point is Excellent and the trend is Getting Better.
  - The status of the Revenue - Italy data point is Excellent and the trend is Getting Worse.
  - The status of the Revenue - India data point is Excellent and the trend is Getting Better.
  - The status of the Revenue - Australia data point is Excellent and the trend is Getting Better.
  - The status of the Revenue - Brazil data point is Average and the trend is Getting Worse.
  - The status of the Profit - North America data point is Excellent and the trend is Getting Better.
  - The status of the Profit - Europe data point is Average and the trend is Getting Worse.
  - The status of the Profit - South America data point is Average and the trend is Getting Worse.
  - The status of the Profit - Australia data point is Average and the trend is Getting Better.
  - The status of the Profit - Asia data point is Excellent and the trend is Getting Better.
History Chart

A history chart shows a bar chart of data for a metric. By default, it compares the actual value against the target value for each time period, and indicates whether the result is within an accepted tolerance. You can change the visible range of time periods to increase or reduce the level of detail, by sliding the focus bar.

When you hover over a bar, more detail is shown about the underlying values, including traffic lights and trend indicators. Traffic lights show the status according to the performance pattern defined for a metric. For example, if the performance pattern is set to **Above target is favorable**, the status can be one of the following:
- Green circles indicate excellent performance - the actual value is equal to, or exceeds, the target value.
- Yellow diamonds indicate average performance - the actual value is below the target value, but is within the accepted tolerance.
- Red squares indicate poor performance - the actual value is below the target value, and it is below the accepted tolerance.

The trend indicators signify whether performance improved, declined, or remained the same when compared to the previous time period. Where no previous time period is available, such as the initial bar in a history chart, no trend information is shown.

The following image shows a history chart that focuses on eight months of revenue data. For every month except February 2013, total revenue performance is average. With the focus on February 2013, you can see that the performance is poor, and the trend is declining when compared to January 2013.

Adding scorecards

When you connect to an IBM Cognos TM1 server from IBM Cognos Insight, you can view and use scorecards that you create in IBM Cognos TM1 Performance Modeler in your workspace.
About this task

Scorecards that are created in Cognos TM1 Performance Modeler appear in the Cognos Insight content pane in a **Scorecards** folder, which has the same contents as the **Scorecards** folder in Cognos TM1 Performance Modeler. You can use these scorecards in your workspace in the same way as you would use other cubes: drag them to the canvas and manipulate the data that is displayed.

The objects that appear in Cognos Insight depend on how the scorecard was defined in Cognos TM1 Performance Modeler. The following diagrams might be available:

- Impact diagram
- Strategy map
- Custom diagram
- History chart

The scorecard widgets in your workspace automatically synchronize with each other, so if you change the data in one widget, the data that appears in the other widgets changes as well. For example, the metrics cube widget, which appears as a crosstab and chart in your workspace, displays revenue by month by metric. Also on your workspace is a strategy map, which displays the same data in a different way. When you filter the data that appears in the crosstab and chart to display the data for only the month of January, the strategy map also changes to display only the data for the month of January.

Procedure

1. From the content pane, drag an object from the **Cubes** folder or **Scorecards** folder onto the workspace.
   
   **Tip:** You can also add objects to the workspace by double-clicking them in the content pane.

2. To filter the data that appears in a scorecard object, click a different element in the list in the widget overview area.

3. To stop a widget from synchronizing its data with the other widgets, in the content pane, expand the **Synchronization** section, and then right-click the widget to choose synchronization options.

4. To view details about part of a scorecarding widget, click the **Zoom in** icon.

   **Note:** The **Zoom in** icon is not available for a history chart. Instead, you can zoom in by using the focus bar.

Importing external data into a plan

When you access IBM Cognos Insight from IBM Cognos TM1 in connected or distributed mode, you can import data to the plan from an ASCII file on your computer.

Add local data to a plan to create a local link to a source file on your computer. This link maps the columns in your local file to the dimensions in the cube that
you are working with in Cognos Insight. Then, when you run the local link, the
data from the source file appears in the crosstab that you are working on in
Cognos Insight.

You cannot use this method to make changes to the structure of a Cognos Insight
cube. For example, this method applies only to updating data in existing
dimensions, not adding or removing dimensions.

**Restriction:** You can import data to a plan only when the plan is a responsibility
type application or an approval type application.

**Procedure**

1. From the Get Data menu, click **Import Cell Data**.
2. To create a new local link, in the Get Data window, click **New**.
3. Enter a name for the local link that you are creating. The name of the link
should identify the cube that you are linking to.
4. Enter a description for the link that you are creating. The description of the
link should describe the contents of the cube that you are linking to.
5. In the **Data source type** list, click **ASCII**. ASCII files are currently the only
supported file type.
6. Click **Next**.
7. In the **Target View** list, click the cube that you want to import the data into,
and click **Next**.
8. In the **Source** field, click the ellipsis button (...), navigate to the file that you
want to import, and open the file.
9. If necessary, modify the details about the source file, including how the values
are delimited and the text qualifier. The **Preview** pane displays the data that
you are importing.
10. Optional: Change the row number in the **Start import at row** field.
11. To identify the row that includes column headers, type the row number in the
**Rename columns using row** field.
12. To specify which columns should be mapped as dimensions, select the
columns and click **Dimension**. Any rows or columns that you do not map to
an existing dimension in the cube will be imported as values. The column
names appear in the **Source dimensions** list. The dimensions that already
exist in the cube are listed in the **Target dimensions** list.
13. Click **Next**.
14. Map the columns in the ASCII file to the target dimensions in the Cognos
Insight cube in the following ways:
   • To manually map the columns to dimensions, click the dimension in the
     **Source dimensions** list, click the dimension in the **Target dimensions** list to
     which you want to map, and then click **Map**.
   • To automatically map the columns to dimensions by using the names of the
dimensions, click **Map All**. Any dimensions that do not have a match are
left in the **Source dimensions** or **Target dimensions** lists. When you click
dimensions in the **Mapped source dimensions** or the **Mapped target
dimensions** list, the **Preview Members** panes display the elements within
the source and target dimensions.
   • To edit an existing mapping, perform the following actions:
     a. Click an item in the **Mapped source dimensions** list, and then click
        **Edit**.
b. To manually map columns to dimensions, click **Manually map**, click the dimensions in the **Source Items** and **Target Items** lists, and then click **Add**.

c. To map columns using only a part of the column header, click **Substring** and identify the characters to use. For example, if the source file includes full month names, such as January, and the target cube includes three-letter month codes, such as Jan, you can use a substring to select only the first three characters of the month names in the source items.

15. Click **Next**.

16. To map a target dimension that was not mapped to a column, click the target dimension in the **Unmapped target dimensions** list, and move measures from the **Available** list to the **Included** list using the arrows.

17. Click **Finish**.

18. Click the link that you created in the **Local Links** list, and click **Run**.

19. To save a local link to send to other users, in the Get Data window, click **Save As**. For example, you have imported data from your time sheet into the cube, but you know that other employees will have to do the same with their time sheets, so you save the local link so that other employees can use the same mappings with their local files.

**Results**

If the source data and target data do not match, an error message appears telling you where the data does not match.

If the data matches, the imported data appears in the crosstab in blue. You can now commit the data or undo the import.

**Viewing related data**

If links are defined in the cube, then when you are working in IBM Cognos Insight in connected or distributed mode, you can access additional details from another cube.

IBM Cognos TM1 administrators create links from one cube to another in IBM Cognos TM1 Performance Modeler. These links identify related data in another cube. Cognos Insight users can then view the related data from a Cognos Insight workspace.

For example, you are contributing to a plan in Cognos Insight, and the crosstab displays Revenue by Product line by Date. Product A has very low revenue in 2012 Q4, so you request details about the cell at the intersection of Product A and 2012 Q4. The administrator has linked the cube you are working in to a cube with data about training. When you request details about the cell at the intersection of Product A and 2012 Q4, a window appears that includes information about the number of training days each sales representative took in 2012. You see that all sales representatives spent two weeks in November of 2012 learning the new sales software system. This explains the lower revenue for that quarter.

**Procedure**

To view related data in Cognos Insight, right-click a cell in a crosstab, click **Get Detail**, and then click a cube name to drill to. The cubes that are available are the
cubes that the Cognos TM1 administrator has defined links to. The related data appears in a new window.

### Working offline from a Cognos TM1 system

When you are working in IBM Cognos Insight in distributed mode, disconnect from an IBM Cognos TM1 system to make changes to a workspace on your computer and then commit the changes later.

#### Before you begin

Working offline is only available when you start Cognos Insight in distributed mode from the IBM Cognos TM1 Applications portal.

#### About this task

When you know that you will not be able to commit your changes to the Cognos TM1 server, you can take ownership of a workspace and then set Cognos Insight to work offline.

For example, if you plan to work in an area with no Internet connection, you can save a local copy and then set Cognos Insight to work offline. You can work on your local copy while disconnected from the server. Then, when you reconnect, you can commit any changes that you made to your workspace to the Cognos TM1 server.

#### Procedure

1. Click the **Actions** icon 🔄, and then click **Work Offline**. A check mark appears beside the **Work Offline** menu item.
2. When you want to reconnect to the Cognos TM1 server, click the **Actions** icon, and then click **Work Offline**. The check mark beside the **Work Offline** menu item disappears, indicating that you are connected.
3. Commit your changes by clicking the **Commit** icon ✅. Your data is merged with the data on the server.

### Deleting workspaces as a Cognos TM1 user

If you no longer need an IBM Cognos Insight workspace, you can remove the workspace and data from your computer.

#### Procedure

If you saved the workspace to your computer, delete the workspace, or CDD file, from your computer. The CDD file contains the model and data in your workspace and the layout of your workspace.

**Remember:** The user data for Cognos Insight workspaces is stored separately from the workspaces themselves. The user data includes log files, themes, PNG files of recent workspaces, and the Cognos TM1 cubes that are created when you create or change a workspace. You cannot delete data for a single workspace. You can only delete all user data at once. If you want to delete this user data, such as when you are uninstalling Cognos Insight, delete the `.CognosInsight` folder for your environment:
• On a Microsoft Windows XP operating system: C:\Documents and Settings\user name\CognosInsight
• On a Microsoft Windows 7 operating system: C:\Users\user name\CognosInsight
Chapter 10. For Cognos TM1 administrators

Administrators of IBM Cognos TM1 servers can deploy applications to enable users to work with data in IBM Cognos Insight workspaces.

If the modeler has defined views in IBM Cognos TM1 Performance Modeler or in IBM Cognos TM1 Architect and you publish an editable application, all views in the IBM Cognos TM1 server are included as part of the application.

**Important:** The default "All" view that is created in Cognos TM1 Performance Modeler is not available Cognos Insight.

If the application is not editable, you can change the layout only.

For more information about editable applications, see the *TM1 Performance Modeler* documentation. You can access this documentation for your product and version from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

Connecting to a Cognos TM1 system

IBM Cognos TM1 administrators can connect to a Cognos TM1 system from IBM Cognos Insight when they want to import dimensions or cubes, publish a workspace, or contribute to a plan.

**Before you begin**

Only Cognos TM1 administrators can connect to a Cognos TM1 system from IBM Cognos Insight.

**About this task**

All views and applications that were created in Cognos TM1 Architect and IBM Cognos TM1 Performance Modeler appear.

**Important:** The default "All" view that is created in Cognos TM1 Architect is not available Cognos Insight.

**Procedure**

1. Click the Actions icon, and then click **Connect to IBM Cognos TM1**.
2. In the **IBM Cognos TM1 system URL**, specify the URL. The URL is case sensitive.
3. Enter your credentials for the specified system.
4. Click **Next**.
5. Choose a planning server and application, and choose whether to connect to the contributor or reviewer views of the application.
6. Click **Finish**.
Publishing workspaces to Cognos TM1

Publishing a workspace from IBM Cognos Insight copies the data in your workspace to the IBM Cognos TM1 server and creates an application in the IBM Cognos TM1 Applications portal.

Before you begin

Only Cognos TM1 administrators can publish workspace content to Cognos TM1. If you are republishing an existing workspace, connect to the Cognos TM1 server, choosing the application and view that you want to update. If you try to update a workspace by publishing it again without connecting to it first, you will create a second application using the same cube, and you will receive an error message that indicates that the validation logic has failed.

You can create and save connections to IBM Cognos Express and IBM Cognos TM1 in My Preferences. For more information, see “Cognos Insight preferences” on page 12.

About this task

Important: If you want to publish a workspace to a multitier Cognos TM1 server, see “Publishing workspaces to a multitier Cognos TM1 server” on page 172.

When you publish your workspaces and cubes, other users who have access to the Cognos TM1 server can access your workspaces from the IBM Cognos TM1 Applications portal and work with them in Cognos Insight. The underlying data is stored on the Cognos TM1 server, and Cognos Insight is used to connect to the server.

Restriction: By default, Cognos Insight does not publish when more than 10 Cognos TM1 servers are running at one time. This configuration prevents users from overloading the system resources.

The following figure shows the workflow for publishing from Cognos Insight. When you publish a workspace from Cognos Insight to Cognos TM1, the data in your workspace is copied to the Cognos TM1 server, and an application is added to the IBM Cognos TM1 Applications portal.
Procedure

1. Click the Actions icon and then click Publish. If you are publishing a new workspace, Cognos Insight prompts you to save the workspace before proceeding.
   CAUTION: When you click Publish, any changes you made to an existing workspace are saved.
2. Click the Publish option.
3. In the IBM Cognos TM1 system URL field, specify the Cognos TM1 system that you want to use.
4. Enter your credentials for the specified system. If the Cognos TM1 Application server uses Cognos Access Manager, you can log in as Anonymous or as another user.
5. Specify the name of the Cognos application that you want to create.
   Attention: The application name must be unique.
6. Optional: If you want to publish a responsibility application type, select the dimension that controls access to the data. If you want to publish a central application type, do not select a dimension.
   A responsibility application type is based on a reporting structure, such as the structure of your business. It does not have a defined end date, such as rolling forecasts or continuous planning processes. You cannot lock this application.
   A central application type is used by a small group of users who share central planning or analysis.
   For more information about application types, see Chapter 10, “For Cognos TM1 administrators,” on page 169
7. Click Next to review your choices.
8. Click Finish when you are ready to publish the workspace.
Publishing workspaces to a multitier Cognos TM1 server

The Publish and Publish and Distribute options in IBM Cognos Insight place data on the same computer as the IBM Cognos TM1 Applications server. If you want IBM Cognos TM1 data to be published to a data tier that is independent from the Cognos TM1 Applications server, use the IBM Planning Service Archive option when you publish a workspace.

Before you begin

Only Cognos TM1 administrators can publish workspace content to Cognos TM1.

About this task

If the Cognos TM1 server is not on the same computer as the Cognos TM1 Applications server, when you use the Publish or Publish and Distribute options, you might receive the following error message:

An exception occurred on the server. Please contact your System administrator. :java.lang.IllegalArgumentException: The file: \bin64\tm1s.exe does not exist.

This error occurs because the Publish and Publish and Distribute options make requests to the Cognos TM1 Application server to start a new Cognos TM1 server, and these requests can be fulfilled only if the Cognos TM1 server is on the same computer as the Cognos TM1 Applications server.

Use the following steps when you publish or publish and distribute a workspace to a multitier Cognos TM1 server for the first time. When you need to make updates to your workspace, connect to the Cognos TM1 server, and then you can publish or publish and distribute without repeating these steps.

You can create and save connections to IBM Cognos Express and IBM Cognos TM1 in My Preferences. For more information, see “Cognos Insight preferences” on page 12.

Procedure

1. Click the Actions icon , and click Publish.
2. On the first page of the wizard, click IBM Planning Service Archive in the lower left of the wizard.
3. Specify the information requested, including the destination directory, application name, and control dimension information, and finish the steps in the wizard. The destination directory will contain two ZIP files that are named according to the application name you specified: application_name.zip and application_name.data.zip.
4. Move the application_name.data.zip file to the Cognos TM1 server.
5. Move the application_name.zip file to the Cognos TM1 Applications server.
6. On the Cognos TM1 server, decompress application_name.data.zip using the tm1xfer utility. See the TM1 Operations documentation for instructions on using the tm1xfer utility.
7. Add a subdirectory to the directory that you unzipped the application_name.data.zip file to, and name the subdirectory tunit.
8. Find and edit the tm1s.cfg file to add the following properties:
   
   ServerName=server_name
   AdminHost=administrator_computer_name
   DataBaseDirectory=PortNumber=port_number

   IBM Planning Analytics Version 2.0.0: Cognos Insight
9. Specify values for the properties that you just added:
   a. ServerName Enter the name of the application that is specified when publishing.
   b. AdminHost Enter the name of the Cognos TM1 server administrator's computer.
   c. DataBaseDirectory=PortNumber Enter the port number of the Cognos TM1 server. When you install a Cognos TM1 server, the default port number is 12345. Valid port values are between 000 and 49151.
   d. IntegratedSecurityMode Enter a number for the security mode.
      The security mode can be changed later if you are using CAM security. You can then specify values for ServerCAMURI and ClientCAMURI. The following default values are used for CAM authentication:
      ServerCAMURI=http://localhost:9300/p2pd/servlet/dispatch
      ClientCAMURI=http://localhost/ibmcognos/cgi-bin/cognos.cgi

10. Add a new Cognos TM1 Server Instance in IBM Cognos Configuration, and then start the new service.

    Tip: You can also start the Cognos TM1 server by starting tm1s.exe or tm1sd.exe from the Cognos_TM1_installation_location/bin folder.

11. Use Cognos TM1 Architect to set up the security on the new server. The username for the new Cognos TM1 server is admin and the password is blank. You should set a password as soon as possible to secure the server.

12. Save the security changes.

13. In the Cognos TM1 Applications portal, go to the IBM Cognos TM1 Application Configuration page and add the Cognos TM1 server.

14. Click Import Applications to import the application.

15. On the Import Application page, specify the Cognos TM1 server that was created, and browse to the location of the application_name.zip file.

    Tip: If you are using Cognos TM1, version 10.1, and you receive an error when you import the application, create a webapps/pmpsvc/desktop folder if it does not exist in the IBM Cognos TM1 Applications server install.

Results

Now that you have published the workspace, connect to the Cognos TM1 server from Cognos Insight to make updates.

CAUTION:
If you repeat these steps for the same workspace, you will create a second application on the Cognos TM1 Applications portal.

Application maintenance in a Cognos TM1 environment

After publishing an application from IBM Cognos Insight to an IBM Cognos TM1 server, you have a number of options to maintain it.

If the modeler has defined views in IBM Cognos TM1 Performance Modeler or in IBM Cognos TM1 Architect and you publish an editable application, all views in
the Cognos TM1 server are included as part of the application. If the application is not editable, you can change the layout only.

For more information about editable applications, see the TM1 Performance Modeler documentation. You can access this document from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

You can perform the following actions to maintain a published application:

- Schedule a process that imports data. For more information, see the topics about chores in the TM1 Perspectives, TM1 Architect, and TM1 Web documentation. You can access this document from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).
- Connect to the Cognos TM1 server to make changes on the server. These changes are made immediately on the server and cannot be undone. If you try to update a workspace by publishing it again without connecting to it first, you will create a second application using the same cube, and you will receive an error message that indicates that the validation logic has failed.
- Add or remove cubes, dimensions, measures, levels, or attributes. These changes are made immediately on the server and cannot be undone.
- Add or remove data. These changes are made immediately on the server and cannot be undone.
- Make changes to the layout of the workspace. If you make changes to the layout, you must republish the workspace because layout changes are not made immediately on the server.

Design of a contribution experience in a Cognos TM1 environment

After an application is created in IBM Cognos TM1 Performance Modeler, you can enhance it in IBM Cognos Insight for your contributors and reviewers.

Review the different application types and then use the procedures to design a contribution experience.

Application types

When designing the application in Cognos TM1 Performance Modeler, the modeler defines the application type.

Responsibility
The responsibility application type is based on a reporting structure, such as the structure of your business, department, or enterprise. Changes can be made without having to be submitted and approved. The responsibility application type is used for rolling forecasts or continuous planning processes where there is no defined end date.

Central
The central application type is used by a small group of users who equally share the task of performing central planning or analysis. Taking ownership is an option, and is not enforced as in the other application types. Changes cannot be locked.

Approval
The approval application type is based on a reporting structure, such as the approval or reporting structure of your business, department, or enterprise. After a change has been submitted, the application is locked for any new changes until the approving person has rejected the change.
Applications that are created in Cognos Insight can be either a responsibility application type or a central application type. You cannot create an approval application type in Cognos Insight but you can use Cognos Insight to enhance one that was created in Cognos TM1 Performance Modeler.

**Procedure**

1. Connect to an IBM Cognos TM1 application and log on as the administrator.
2. Explain your plan and detail each individual's responsibilities on the first tab to help them contribute to the plan.
   The administrator might have provided more information about the views included in the plan in Cognos TM1 Performance Modeler. To view this information, click **Help**, and then click **View Help**. If the administrator did not add help text in Cognos TM1 Performance Modeler, the **View Help** dialog box is empty. If you are not connected to a Cognos TM1 server, the **View Help** option is not available from the **Help** menu.
3. Present your findings as starting points to a deeper analysis. Add your requirements for contributors to explain exceptions that are highlighted in the data.
4. Add additional tabs that are required for your plan and include action buttons to guide users through the different tabs or to run processes.
5. Add text, images, and web pages that provide additional context to the plan or analysis.
   If your users will be working in multiple languages, include text widgets and web pages in each language.
6. To prevent your users from moving the widgets and to hide the toolbar from them, right-click the canvas and click **Lock All Widgets**.
7. Publish the workspace.

**Results**

For all application types, your users can do the following actions:

- Analyze data by sorting, swapping rows and columns, suppressing empty cells, resizing cells, and working with charts.
- Run scripts from action buttons, if you provided them with these buttons.
- Contribute to the slice of the plan that you have granted them access to.
- Use explore points to analyze data.

For the central application type, your users can also do the following actions:

- Design the workspace; you can navigate, minimize, and maximize the widgets that the administrator has prepared for you unless the administrator has locked the widgets, but you cannot add new content of your own
- Import data.
- Restructure data.

For the approval and responsibility application types, your users cannot do the following actions:

- Design the workspace; they can navigate, minimize, and maximize the widgets that you have prepared for them unless you have locked the widgets, but they cannot add new content of their own.
- Import data, unless you provide them with an action button to do so.
- Restructure data, unless you provide them with an action button to do so.
Creating a Cognos Planning Service archive in a Cognos TM1 environment

You can create an archive of the IBM Cognos Insight data directory and layout when you want to move the IBM Cognos TM1 server.

About this task

The following two archive files are created when you create an archive:

- A data directory file for the system administrator to transfer to another computer and to start a Cognos TM1 process against it
- An application file that can be imported into the Cognos TM1 Applications portal

Procedure

1. Click the Actions icon and then click Publish.
2. Click IBM Planning Service Archive.
3. In the Destination directory field, specify the location where the archive will be stored.
4. Specify the name of the application that you want to create.
5. If you want to archive a responsibility application type, select the dimension that will control access to data. If you want to archive a central application type, do not select a dimension.
   A responsibility application type is based on a reporting structure, such as the structure of your business. It does not have a defined end date, such as rolling forecasts or continuous planning processes. You cannot lock this application.
   A central application type is used by a small group of users who equally share the task of performing central planning or analysis.
   For more information about application types, see Chapter 10, “For Cognos TM1 administrators,” on page 169.
6. Click Next to review what will be archived.
7. Click Finish when you are ready to create the two archive files.

Deleting workspaces as a Cognos TM1 administrator

If you no longer need an IBM Cognos Insight workspace, you can remove the application from IBM Cognos TM1.

Procedure

Perform all of the following actions that apply:

- If you saved the workspace to your computer, delete the workspace, or CDD file, from your computer. The CDD file contains the model and data in your workspace and the layout of your workspace.
- If you published the workspace to IBM Cognos TM1, delete the application and the server instance from Cognos TM1.
   For more information, access the documentation for your product and version from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

Remember: The user data for Cognos Insight workspaces is stored separately from the workspaces themselves. The user data includes log files, themes, PNG files of
recent workspaces, and the Cognos TM1 cubes that are created when you create or change a workspace. You cannot delete data for a single workspace. You can only delete all user data at once. If you want to delete this user data, such as when you are uninstalling Cognos Insight, delete the .CognosInsight folder for your environment:

- On a Microsoft Windows XP operating system: C:\Documents and Settings\user name\.CognosInsight
- On a Microsoft Windows 7 operating system: C:\Users\user name\.CognosInsight

## Creating a model report

You can create a report that contains the properties of each object contained in a model. The report is saved as a Microsoft Excel spreadsheet.

### About this task

If you are connected to an IBM Cognos TM1 server that includes one or more deployed applications, the report also includes the objects from each application.

### Procedure

1. Click Actions [Actions], and then click Generate Report.
2. Type the name of the report, then click Save to create the report.
Chapter 11. For Cognos Express users

You can share the workspaces that you create in IBM Cognos Insight with other people by sharing them on the IBM Cognos Express server.

Plans on Cognos Express servers

When your IBM Cognos Express server administrator distributes an enterprise-wide plan in an IBM Cognos Insight workspace, you can review, analyze, and update the portion of the plan that was assigned to you.

Adding your contribution in a Cognos Express environment

You need to contribute data to your part of an IBM Cognos Insight plan, such as the Sales Division, Marketing Division, Development Division, or Cost Center.

About this task

Each part of the plan is known as a node. In connected or distributed mode, you can take ownership of a node from any level.

Procedure

1. Open IBM Cognos Insight from the IBM Cognos TM1 Applications portal in connected or distributed mode.
2. Click the Take ownership icon.
3. Explore and analyze the data.
4. Enter or select data.

The administrator might have defined a list of values for you to select from. The administrator might have provided more information about the views included in the plan in IBM Cognos TM1 Performance Modeler. To view this information, click Help, and then click View Help. If the administrator did not add help text in Cognos TM1 Performance Modeler, the View Help dialog box is empty. If you are not connected to a Cognos TM1 server, the View Help option is not available on the Help menu.

Committing or resetting the data in a Cognos Express environment

To share your contribution with others while continuing to make changes in IBM Cognos Insight, commit your contribution. Commit enables you to take your personal changes that are highlighted in blue and make them part of the base data. Your colleagues who have access to the plan can view your contribution. If you want to revert your changes to the last committed data, reset all data.

Procedure

1. To share your contribution with others while continuing to make changes, click the Commit icon.

The Commit icon is enabled only if you have changed or entered data.
2. To revert to the last committed data, click the **Widget actions** icon and click **Reset All Data**.

**Submitting your contribution in a Cognos Express environment**

When the IBM Cognos Express administrator has deployed an approval application, you enter data in IBM Cognos Insight and then submit your contribution as final. Submit locks the data.

**Procedure**

Click the **Submit** icon. The **Submit** icon is enabled only if all changes have been committed.

**Results**

The reviewer can now take ownership of your contribution and review it.

**Rejecting a submission in a Cognos Express environment**

A submission is ready to be reviewed. As a reviewer, you can view the latest committed changes in IBM Cognos Insight. If you do not approve of certain data, you can reject the submission. This means another user can take ownership of the submission and make the necessary corrections.

**Procedure**

1. Open the submission to review.
2. Explore and analyze the data that was submitted to you.
3. If you do not approve of the submitted changes, click the **Reject** icon.

**Working offline from a Cognos Express system**

When you are working in IBM Cognos Insight in distributed mode, disconnect from an IBM Cognos Express system to make changes to a workspace on your computer and then commit the changes later.

**Before you begin**

Working offline is only available when you start Cognos Insight in distributed mode from the IBM Cognos TM1 Applications portal.

**About this task**

When you know that you will not be able to commit your changes to the Cognos Express server, you can take ownership of a workspace and then set Cognos Insight to work offline.

For example, if you plan to work in an area with no Internet connection, you can save a local copy and then set Cognos Insight to work offline. You can work on your local copy while disconnected from the server. Then, when you reconnect, you can commit any changes that you made to your workspace to the Cognos Express server.
Procedure

1. Click the Actions icon, and then click Work Offline. A check mark appears beside the Work Offline menu item.
2. When you want to reconnect to the Cognos Express server, click the Actions icon, and then click Work Offline. The check mark beside the Work Offline menu item disappears, indicating that you are connected.
3. Commit your changes by clicking the Commit icon. Your data is merged with the data on the server.

Deleting workspaces as a Cognos Express user

If you no longer need an IBM Cognos Insight workspace, you can remove the workspace from IBM Cognos Express.

Procedure

Perform all of the following actions that apply: If you saved the workspace to your computer, delete the workspace, or CDD file, from your computer. The CDD file contains the model and data in your workspace and the layout of your workspace.

Remember: The user data for Cognos Insight workspaces is stored separately from the workspaces themselves. The user data includes log files, themes, PNG files of recent workspaces, and the Cognos TM1 cubes that are created when you create or change a workspace. You cannot delete data for a single workspace. You can only delete all user data at once. If you want to delete this user data, such as when you are uninstalling Cognos Insight, delete the .CognosInsight folder for your environment:

- On a Microsoft Windows XP operating system: C:\Documents and Settings\user name\.CognosInsight
- On a Microsoft Windows 7 operating system: C:\Users\user name\.CognosInsight
Chapter 12. For Cognos Express administrators

IBM Cognos Express administrators can publish and distribute workspaces that were created in IBM Cognos Insight to the Cognos Express server for Cognos Express users to access.

Connecting to a Cognos Express system

IBM Cognos Express administrators can connect to a Cognos Express system from IBM Cognos Insight when they want to import dimensions or cubes, publish a workspace, or contribute to a plan.

Before you begin

Only Cognos Express administrators can connect to a Cognos Express system from IBM Cognos Insight.

About this task

All views and applications that were created in IBM Cognos TM1 Architect and IBM Cognos TM1 Performance Modeler appear.

Procedure

1. Click the Actions icon  
2. In the IBM Cognos TM1 system URL, specify the URL to the Cognos Express server. The URL is case sensitive.
3. Enter your credentials for the specified system.
4. Click Next.
5. Choose a planning server and application, and choose whether to connect to the contributor or reviewer views of the application.
6. Click Finish.

Publishing workspaces to Cognos Express

Publishing a workspace from IBM Cognos Insight copies the data in your workspace to the Cognos Express server and creates an application in the IBM Cognos TM1 Applications portal.

Before you begin

Only Cognos Express administrators can publish workspace content to Cognos Express.

You can create and save connections to IBM Cognos Express and IBM Cognos TM1 in My Preferences. For more information, see “Cognos Insight preferences” on page 12.
About this task

When you publish your workspaces and cubes, other users who have access to the Cognos Express server can access your workspaces from the IBM Cognos TM1 Applications portal and work with them in Cognos Insight. The underlying data is stored on the Cognos Express server, and Cognos Insight is used to connect to the server.

Restriction: By default, Cognos Insight does not publish when more than 10 Cognos TM1 servers are running at one time. This configuration prevents users from overloading the system resources.

The following figure shows the workflow for publishing from Cognos Insight. When you publish a workspace from Cognos Insight to Cognos Express, the data in your workspace is copied to the Cognos Express server, and an application is added to the IBM Cognos TM1 Applications portal.

Procedure

1. Click the Actions icon and then click Publish. If you are publishing a new workspace, Cognos Insight prompts you to save the workspace before proceeding.
   CAUTION: When you click Publish, any changes you made to an existing workspace are saved.

2. Click the Publish option.

3. In the IBM Cognos TM1 system URL field, specify the Cognos Express system that you want to use.

4. Enter your credentials for the specified system. If the Cognos TM1 Application server uses Cognos Access Manager, you can log in as Anonymous or as another user.

5. Specify the name of the Cognos application that you want to create.
Attention: The application name must be unique.

6. Optional: If you want to publish a responsibility application type, select the dimension that controls access to the data. If you want to publish a central application type, do not select a dimension.

A responsibility application type is based on a reporting structure, such as the structure of your business. It does not have a defined end date, such as rolling forecasts or continuous planning processes. You cannot lock this application.

A central application type is used by a small group of users who share central planning or analysis.

For more information about application types, see Chapter 12, “For Cognos Express administrators,” on page 183.

7. Click Next to review your choices.

8. To publish the workspace, click Finish.

---

Publishing and distributing workspaces to Cognos Express

Publishing and distributing a workspace from IBM Cognos Insight copies the data in your workspace to the IBM Cognos Express server and creates an application in the IBM Cognos TM1 Applications portal.

**Before you begin**

To publish and distribute a workspace, you must have administrator rights on the Cognos Express server.

You can create and save connections to IBM Cognos Express and IBM Cognos TM1 in My Preferences. For more information, see “Cognos Insight preferences” on page 12.

**About this task**

When you publish and distribute a workspace, users on the Cognos Express server can access your data as an application on the Cognos TM1 Applications portal, and users on the Cognos Express server can open workspaces in IBM Cognos Workspace or IBM Cognos Workspace Advanced and reports in IBM Cognos Report Studio.

The following figure shows the workflow for publishing and distributing from Cognos Insight. When you publish and distribute a workspace from Cognos Insight to Cognos Express, the data in your workspace is copied to the Cognos Express server, an application is added to the IBM Cognos TM1 Applications portal.
Each time you publish and distribute a workspace, Cognos Insight creates a Cognos TM1 server service. Each new Cognos TM1 server service impacts the performance of Cognos TM1 server. You can avoid this performance issue by working in connected mode, which means that you are connected to the Cognos TM1 server, so you can commit your changes to the server without republishing them. For information about working in connected mode, see “Plans on Cognos Express servers” on page 179.

By default, Cognos Insight does not publish if more than 10 Cognos TM1 servers are running at a time. This configuration prevents users from overloading the system resources.

**Procedure**

1. Click the **Actions** icon , and then click **Publish**.
   **CAUTION:**
   When you click **Publish**, any changes you made to an existing workspace are saved.
2. Click the **Publish & Distribute** option.
3. In the **IBM Cognos TM1 system URL** field, specify the Cognos Express system that you want to use.
4. Enter your credentials for the specified system.
   If the Cognos TM1 planning service uses Cognos Access Manager, you can log in as Anonymous or as another user.
5. Specify the name of the Cognos application that you want to create.
   **Attention:** The application name must be unique.
6. If you want to publish a responsibility application type, select the dimension that controls access to data. If you want to publish a central application type, do not select a dimension.
A responsibility application type is based on a reporting structure, such as the structure of your business. It does not have a defined end date, such as rolling forecasts or continuous planning processes. You cannot lock this application.

A central application type is used by a small group of users who share central planning or analysis.

For more information about application types, see Chapter 12, “For Cognos Express administrators,” on page 183.

7. Click Next.
8. In the IBM Cognos system URL field, specify the Cognos Express server that you want to use.
9. Log in as Anonymous or as another user.
10. Click Next to review your choices:
   - You can change the names of the reports.
   - You can change the name or location of the package that contains the reports.
   CAUTION:
   If you choose a package name that exists on the server, the original package is overwritten.
11. To publish the workspace, click Finish.

Application maintenance in a Cognos Express environment

After publishing an application from IBM Cognos Insight to an IBM Cognos Express server, you have a number of options to maintain it.

If the modeler has defined views in IBM Cognos TM1 Performance Modeler or in IBM Cognos TM1 Architect and you publish an editable application, all views in the Cognos Express server are included as part of the application. If the application is not editable, you can change the layout only.

For more information about editable applications, see the TM1 Performance Modeler documentation. You can access this document from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

You can perform the following actions to maintain a published application:
- Schedule a process that imports data. For more information, see the topics about chores in the TM1 Perspectives, TM1 Architect, and TM1 Web documentation. You can access this document from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).
- Connect to the Cognos Express server to make changes on the server. These changes are made immediately on the server and cannot be undone. If you try to update a workspace by publishing it again without connecting to it first, you will create a second application using the same cube, and you will receive an error message that indicates that the validation logic has failed.
- Add or remove cubes, dimensions, measures, levels, or attributes. These changes are made immediately on the server and cannot be undone.
- Add or remove data. These changes are made immediately on the server and cannot be undone.
- Make changes to the layout of the workspace. If you make changes to the layout, you must republish the workspace because layout changes are not made immediately on the server.
Design of a contribution experience in a Cognos Express environment

After an application is created in IBM Cognos TM1 Performance Modeler, you can enhance it in IBM Cognos Insight for your contributors and reviewers.

Review the different application types and then use the procedures to design a contribution experience.

Application types

When designing the application in Cognos TM1 Performance Modeler, the modeler defines the application type.

Responsibility

The responsibility application type is based on a reporting structure, such as the structure of your business, department, or enterprise. Changes can be made without having to be submitted and approved. The responsibility application type is used for rolling forecasts or continuous planning processes where there is no defined end date.

Central

The central application type is used by a small group of users who equally share the task of performing central planning or analysis. Taking ownership is an option, not enforced as in the other application types. Changes cannot be locked.

Approval

The approval application type is based on a reporting structure, such as the approval or reporting structure of your business, department, or enterprise. After a change has been submitted, the application is locked for any new changes until the approving person has rejected the change.

Applications that are created in Cognos Insight can be either a responsibility application type or a central application type. You cannot create an approval application type in Cognos Insight but you can use Cognos Insight to enhance one that was created in Cognos TM1 Performance Modeler.

Procedure

1. Connect to an IBM Cognos TM1 application and log on as the administrator.
2. Explain your plan and detail each individual's responsibilities on the first tab to help them contribute to the plan.
   The administrator might have provided more information about the views included in the plan in Cognos TM1 Performance Modeler. To view this information, click Help, and then click View Help. If the administrator did not add help text in Cognos TM1 Performance Modeler, the View Help dialog box is empty. If you are not connected to a IBM Cognos Express server, the View Help option is not available from the Help menu.
3. Present your findings as starting points to a deeper analysis. Add your requirements for contributors to explain exceptions that are highlighted in the data.
4. Add additional tabs that are required for your plan and include action buttons to guide users through the different tabs or to run processes.
5. Add text, images, and web pages that provide additional context to the plan or analysis.
   If your users will be working in multiple languages, include text widgets and web pages in each language.
6. To prevent your users from moving the widgets and to hide the toolbar from them, right-click the canvas and click **Lock All Widgets**.

7. Publish the workspace.

**Results**

For all application types, your users can do the following actions:
- Analyze data by sorting, swapping rows and columns, suppressing empty cells, resizing cells, and working with charts.
- Run scripts from action buttons, if you provided them with these buttons.
- Contribute to the slice of the plan that you have granted them access to.
- Use explore points to analyze data.

For the central application type, your users can also do the following actions:
- Design the workspace; you can navigate, minimize, and maximize the widgets that the administrator has prepared for you unless the administrator has locked the widgets, but you cannot add new content of your own
- Import data.
- Restructure data.

For the approval and responsibility application types, your users cannot do the following actions:
- Design the workspace; they can navigate, minimize, and maximize the widgets that you have prepared for them unless you have locked the widgets, but they cannot add new content of their own.
- Import data, unless you provide them with an action button to do so.
- Restructure data, unless you provide them with an action button to do so.

---

**Creating a Cognos Planning Service archive in a Cognos Express environment**

You can create an archive of the IBM Cognos Insight data directory and layout when you want to move the IBM Cognos Express server.

**About this task**

The following two archive files are created when you create an archive:
- A data directory file for the system administrator to transfer to another computer and to start a Cognos TM1 process against it
- An application file that can be imported into the Cognos TM1 Applications portal

**Procedure**

1. Click the **Actions** icon and then click **Publish**.
2. Click **IBM Planning Service Archive**.
3. In the **Destination directory** field, specify the location where the archive will be stored.
4. Specify the name of the application that you want to create.
5. If you want to archive a responsibility application type, select the dimension that will control access to data. If you want to archive a central application type, do not select a dimension.

A responsibility application type is based on a reporting structure, such as the structure of your business. It does not have a defined end date, such as rolling forecasts or continuous planning processes. You cannot lock this application.

A central application type is used by a small group of users who equally share the task of performing central planning or analysis.

For more information about application types, see Chapter 12, “For Cognos Express administrators,” on page 183.

6. Click Next to review what will be archived.

7. To create the two archive files, click Finish.

Deleting workspaces as a Cognos Express administrator

If you no longer need an IBM Cognos Insight workspace, you can remove the workspace, application, server, data source, package, and report from the IBM Cognos Express server.

Procedure

Perform all of the following actions that apply:

- If you saved the workspace to your computer, delete the workspace, or CDD file, from your computer. The CDD file contains the model and data in your workspace and the layout of your workspace.

- If you published and distributed the workspace, delete the application from the Cognos TM1 Applications portal and delete the server instance from Cognos Express

For more information, access the documentation for your product and version from IBM Knowledge Center (http://www.ibm.com/support/knowledgecenter).

Remember: The user data for Cognos Insight workspaces is stored separately from the workspaces themselves. The user data includes log files, themes, PNG files of recent workspaces, and the Cognos TM1 cubes that are created when you create or change a workspace. You cannot delete data for a single workspace. You can only delete all user data at once. If you want to delete this user data, such as when you are uninstalling Cognos Insight, delete the .CognosInsight folder for your environment:

- On a Microsoft Windows XP operating system: C:\Documents and Settings\username\CognosInsight

- On a Microsoft Windows 7 operating system: C:\Users\username\CognosInsight
Appendix A. Accessibility features

IBM Cognos Insight’s accessibility features help users who have a physical disability, such as restricted mobility or limited vision, to use information technology products.

For best results, use the following environment to take advantage of accessibility in IBM Cognos Insight:
- Microsoft Windows 7 operating system or later
- Internet Explorer 9 web browser or later
- JAWS 14 screen reader or later

Keyboard shortcuts

IBM Cognos Insight includes keyboard shortcuts to help you navigate Cognos Insight and perform tasks using only a keyboard.

You might also want to turn high contrast on in your operating system so the lines in diagrams and charts in the application are more visible.

The following keyboard shortcuts are based on U.S. standard keyboards.
- “Importing data”
- “General” on page 192
- “Tabs” on page 193
- “Canvas” on page 194
- “Application bar” on page 195
- “Content pane” on page 195
- “Crosstab and chart widgets” on page 196
- “Scorecard widgets” on page 199
- “Explore points” on page 199
- “Action button widgets” on page 200
- “Text widgets” on page 200
- “Dimension Editor” on page 201
- “Query Builder” on page 201

Importing data

Table 18. Keyboard shortcuts for the import wizard

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Mapping step</td>
<td>Map an element to a dimension.</td>
<td>Mapping an element to a dimension has multiple steps: 1. Press Tab to select <strong>Dimension</strong>. 2. Press the right arrow to select <strong>Level</strong>, and then quickly press the left arrow to select <strong>Dimension</strong>.</td>
</tr>
</tbody>
</table>
Table 18. Keyboard shortcuts for the import wizard (continued)

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Mapping step</td>
<td>Map an element to a level.</td>
<td>Mapping an element to a level has multiple steps:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Press Tab to select <strong>Dimension</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Press the right arrow to select <strong>Level</strong>.</td>
</tr>
<tr>
<td>Data Mapping step</td>
<td>Map an element to a measure.</td>
<td>Mapping an element to a measure has multiple steps:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Press Tab to select <strong>Dimension</strong>, and then quickly press the right arrow to select <strong>Measure</strong>.</td>
</tr>
<tr>
<td>Data Mapping step</td>
<td>Map an element to an attribute.</td>
<td>Mapping an element to an attribute has multiple steps:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Press Tab to reach the <strong>Attribute Name</strong> field.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Press Shift+Tab to select <strong>Attribute</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Press the left arrow to select <strong>Measure</strong>, and then quickly press the right arrow to select <strong>Attribute</strong>.</td>
</tr>
</tbody>
</table>

**General**

Table 19. General keyboard shortcuts

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Perform the command for an active command button.</td>
<td>Enter</td>
</tr>
<tr>
<td>General</td>
<td>Move forward to the next item in the tab index order. Cycle to the first tab index when at the end.</td>
<td>Tab</td>
</tr>
<tr>
<td>General</td>
<td>Move backward to the previous item in the tab index order. Cycle to the last tab index when at the beginning.</td>
<td>Shift+Tab</td>
</tr>
<tr>
<td></td>
<td>If Shift+Tab does not work, press Tab to cycle forward until you reach the item that you want.</td>
<td></td>
</tr>
<tr>
<td>Check boxes</td>
<td>Select or clear the check box.</td>
<td>Spacebar</td>
</tr>
<tr>
<td>Radio buttons</td>
<td>Move to the next radio button and select it.</td>
<td>Right arrow and then down arrow</td>
</tr>
<tr>
<td>Radio buttons</td>
<td>Move to the previous radio button and select it.</td>
<td>Up arrow and then left arrow</td>
</tr>
<tr>
<td>Tree controls</td>
<td>Move to the next node in the tree.</td>
<td>Down arrow</td>
</tr>
<tr>
<td>Tree controls</td>
<td>Move to the previous node in the tree.</td>
<td>Up arrow</td>
</tr>
<tr>
<td>Tree controls</td>
<td>Expand the current tree node.</td>
<td>Right arrow</td>
</tr>
<tr>
<td>Tree controls</td>
<td>Collapse the current tree node.</td>
<td>Left arrow</td>
</tr>
<tr>
<td>Tree controls</td>
<td>Move to the first node in a tree control.</td>
<td>Home</td>
</tr>
</tbody>
</table>
Table 19. General keyboard shortcuts (continued)

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree controls</td>
<td>Move to the last node in a tree control.</td>
<td>End</td>
</tr>
<tr>
<td>Menus</td>
<td>Navigate down a menu and select a menu item.</td>
<td>Down arrow and then Enter</td>
</tr>
<tr>
<td>Menus</td>
<td>Navigate up a menu and select a menu item.</td>
<td>Up arrow and then Enter</td>
</tr>
<tr>
<td>Menus</td>
<td>Open a menu.</td>
<td>Shift+F10</td>
</tr>
<tr>
<td>Menus</td>
<td>Close an open menu.</td>
<td>Esc</td>
</tr>
<tr>
<td>Scrolling</td>
<td>Scroll down.</td>
<td>Down arrow</td>
</tr>
<tr>
<td>Scrolling</td>
<td>Scroll up.</td>
<td>Page Down</td>
</tr>
<tr>
<td>Application bar</td>
<td>Set focus to the application bar.</td>
<td>F6</td>
</tr>
<tr>
<td>Application bar</td>
<td>Navigate to items in the application bar.</td>
<td>Tab or Shift-Tab</td>
</tr>
<tr>
<td>Application bar</td>
<td>Open the application bar item’s menu.</td>
<td>Spacebar</td>
</tr>
<tr>
<td>Application bar</td>
<td>Close the application bar item’s menu.</td>
<td>Esc</td>
</tr>
<tr>
<td>Content pane</td>
<td>Open and close the content pane.</td>
<td>Ctrl+F4</td>
</tr>
<tr>
<td>Explore pane</td>
<td>Open and close the Explore pane.</td>
<td>Ctrl+F3</td>
</tr>
<tr>
<td>Menu</td>
<td>Display a window's menu.</td>
<td>Alt+Spacebar</td>
</tr>
</tbody>
</table>
| Application window | Move the application window.               | Moving an application window has multiple steps:  
|                 |                                             | 1. To open the window’s menu, press Alt+Spacebar.  
|                 |                                             | 2. Select **Move** and press Enter.              |
| Application window | Resize the application window.             | Resizing an application window has multiple steps:  
|                 |                                             | 1. To open the window’s menu, press Alt+Spacebar.  
|                 |                                             | 2. Select **Size** and press Enter.              |
|                 |                                             | 3. To move the window, use the arrows and Ctrl+arrows.  
|                 |                                             | 4. To stop moving the window, press Enter.       |

**Tabs**

The following table identifies the keyboard shortcuts that are available when the focus is on the tabs.
Table 20. Keyboard shortcuts for tabs

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigate</td>
<td>Move forward to the next tab.</td>
<td>Ctrl+Shift+right arrow</td>
</tr>
<tr>
<td>Navigate</td>
<td>Move backward to the previous tabs.</td>
<td>Ctrl+Shift+left arrow</td>
</tr>
<tr>
<td>Navigate</td>
<td>Navigate to the left tab or right tab.</td>
<td>Left and right arrows</td>
</tr>
<tr>
<td>Reposition</td>
<td>Move the current tab one tab to the right.</td>
<td>Shift+Page up</td>
</tr>
<tr>
<td>Reposition</td>
<td>Move the current tab one tab to the left.</td>
<td>Shift+Page down</td>
</tr>
<tr>
<td>Rename</td>
<td>Rename the current tab.</td>
<td>F2</td>
</tr>
</tbody>
</table>

Canvas

The following table identifies the keyboard shortcuts that are available when focus is on the canvas.

Table 21. Keyboard shortcuts for the canvas

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widget navigation</td>
<td>Move forward to the next widget on the same level and within the canvas according to the tab index order.</td>
<td>Right arrow</td>
</tr>
<tr>
<td>Widget navigation</td>
<td>Move backwards to the previous widget on the same level and within the canvas according to the tab index order.</td>
<td>Left arrow</td>
</tr>
<tr>
<td>Widget navigation</td>
<td>Move to the child level of the current widget (widget content).</td>
<td>Tab</td>
</tr>
<tr>
<td>Widget context toolbar</td>
<td>Move focus to the on demand toolbar for the selected widget.</td>
<td>F10</td>
</tr>
<tr>
<td>Widget mode</td>
<td>Show the widget's menu items.</td>
<td>Shift+F10</td>
</tr>
<tr>
<td>Widget mode</td>
<td>Move the selected widget.</td>
<td>Moving a widget has multiple steps:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. To open the widget's menu, press Alt+Spacebar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Select Move and press Enter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. To move the widget, use the arrows and Ctrl+arrows.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. To stop moving the widget, press Enter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Tip:</strong> To move a widget without aligning it automatically with other widgets:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. Click the Widget actions icon, and then click Move.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Use the arrow keys on the keyboard to move the widget.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. To set the widget's position, press Ctrl+Enter.</td>
</tr>
</tbody>
</table>
Table 21. Keyboard shortcuts for the canvas (continued)

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
</table>
| Widget mode | Resize the selected widget.           | Resizing a widget has multiple steps:  
|             |                                       | 1. To open the widget's menu, press Alt+Spacebar.  
|             |                                       | 2. Select Size and press Enter.  
|             |                                       | 3. To resize the widget, use the arrows and Ctrl+arrows.  
|             |                                       | 4. To stop resizing the widget, press Enter.  |
| Widget mode | Exit the Move or Resize Mode.         | Esc           |

Application bar

The following table identifies keyboard shortcuts that are available when focus is in the application bar.

Table 22. Keyboard shortcuts for the application bar

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application bar</td>
<td>Create a workspace.</td>
<td>Ctrl+N</td>
</tr>
<tr>
<td>Application bar</td>
<td>Open a workspace.</td>
<td>Ctrl+O</td>
</tr>
<tr>
<td>Application bar</td>
<td>Close a workspace.</td>
<td>Ctrl+F4</td>
</tr>
<tr>
<td>Application bar</td>
<td>Save a workspace.</td>
<td>Ctrl+S</td>
</tr>
<tr>
<td>Application bar</td>
<td>Save a workspace with a different name or in a different location.</td>
<td>Ctrl+Shift+S</td>
</tr>
<tr>
<td>Application bar</td>
<td>Undo the last action.</td>
<td>Ctrl+Z</td>
</tr>
<tr>
<td>Application bar</td>
<td>Redo the last action.</td>
<td>Ctrl+Y</td>
</tr>
<tr>
<td>Application bar</td>
<td>Open the Cognos Insight documentation.</td>
<td>F1</td>
</tr>
<tr>
<td>Application bar</td>
<td>Activate the Help menu.</td>
<td>Alt+H</td>
</tr>
<tr>
<td>Application bar</td>
<td>Move forward to the next control in the application bar.</td>
<td>Tab</td>
</tr>
<tr>
<td>Application bar</td>
<td>Move backwards to the previous control in the application bar.</td>
<td>Shift+Tab</td>
</tr>
</tbody>
</table>

Content pane

The following table identifies keyboard shortcuts that are available when focus is in the content pane.
Table 23. Keyboard shortcuts for the content pane

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Navigation</td>
<td>When the application toolbar’s content pane button is in focus, open or close the content pane.</td>
<td>Enter</td>
</tr>
<tr>
<td>Toolbar</td>
<td>Move between the <strong>Data</strong> and <strong>Toolbox</strong> panes within the content pane.</td>
<td>Tab or Shift-Tab</td>
</tr>
<tr>
<td>Toolbar</td>
<td>Move forward to the next toolbar control.</td>
<td>Right arrow</td>
</tr>
<tr>
<td>Toolbar</td>
<td>Move backwards to the previous toolbar control.</td>
<td>Left arrow</td>
</tr>
<tr>
<td>Toolbar</td>
<td>View the menu items for toolbar controls.</td>
<td>Down arrow</td>
</tr>
<tr>
<td>Tree control</td>
<td>Move forward to the next node in the tree.</td>
<td>Down arrow</td>
</tr>
<tr>
<td>Tree control</td>
<td>Move backwards to the previous node in the tree.</td>
<td>Up arrow</td>
</tr>
<tr>
<td>Tree control</td>
<td>Expand the current tree node.</td>
<td>Right arrow</td>
</tr>
<tr>
<td>Tree control</td>
<td>Collapse the current tree node.</td>
<td>Left arrow</td>
</tr>
<tr>
<td>Tree control</td>
<td>Go to the first node in a tree control.</td>
<td>Home</td>
</tr>
<tr>
<td>Tree control</td>
<td>Go to the last node in a tree control.</td>
<td>End</td>
</tr>
<tr>
<td>Menu Items</td>
<td>List the menu items for the items in the content pane.</td>
<td>Shift+F10</td>
</tr>
</tbody>
</table>
| Menu Items | Insert an explore point onto the canvas.                              | Inserting an explore point has multiple steps:  
1. In the content pane, navigate to the dimension using the up and down arrows.  
2. To insert the dimension as an explore point, press Shift+F10 and then Enter. |
| Menu Items | Insert selected item onto the canvas.                                 | Inserting an item has multiple steps:  
1. With the item in focus, open the menu by pressing Shift+F10.  
2. To insert the item, press Insert. |

Crosstab and chart widgets

The following table identifies keyboard shortcuts that are available when you are working in a crosstab or chart widget.

Table 24. Keyboard shortcuts for crosstab and chart widgets

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
</table>
| View tabs  | Navigate between the tabs in a crosstab widget.                        | Left or right arrow  
Tab or Shift+Tab |
| On demand toolbar | Move focus to the on demand toolbar.                                  | F10           |
| Overview area | Move from the on demand toolbar to the overview area.                | Tab           |
Table 24. Keyboard shortcuts for crosstab and chart widgets (continued)

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview area</td>
<td>Navigate the dimensions in the overview area.</td>
<td>Left and right arrows</td>
</tr>
<tr>
<td>Overview area</td>
<td>List the members of the dimension that is in focus in the overview area. The list will appear in a drop down.</td>
<td>Alt+down arrow</td>
</tr>
<tr>
<td>Overview area</td>
<td>Close the drop down that shows the members of a dimension in the overview area.</td>
<td>Esc</td>
</tr>
<tr>
<td>Overview area</td>
<td>Switch the context of the dimension that is in focus in the overview area.</td>
<td>Up and down arrows and then Enter</td>
</tr>
<tr>
<td>Overview area</td>
<td>Move the dimension that is in focus in the overview area to columns.</td>
<td>Ctrl+C</td>
</tr>
<tr>
<td>Overview area</td>
<td>Move the dimension that is in focus in the overview area to rows.</td>
<td>Ctrl+R</td>
</tr>
<tr>
<td>Overview area</td>
<td>Move the dimension that is in focus in the overview area to context.</td>
<td>Ctrl+T</td>
</tr>
<tr>
<td>Overview area</td>
<td>Move the selected dimension to the left.</td>
<td>Ctrl+left arrow</td>
</tr>
<tr>
<td>Overview area</td>
<td>Move the selected dimension to the right.</td>
<td>Ctrl+right arrow</td>
</tr>
<tr>
<td>Crosstab</td>
<td>Move from the overview area to a crosstab.</td>
<td>Tab</td>
</tr>
<tr>
<td>Crosstab</td>
<td>Show the menu items for row or column headers.</td>
<td>Shift+F10</td>
</tr>
<tr>
<td>Crosstab</td>
<td>Add a line return within a cell.</td>
<td>Alt+Enter</td>
</tr>
<tr>
<td>Crosstab</td>
<td>Show the menu items for cells.</td>
<td>Shift+F10</td>
</tr>
</tbody>
</table>
| Crosstab     | Widen the column width in a crosstab. | Adjusting column width has multiple steps:  
1. With focus on a column header, press Shift+F10.  
2. Use the up and down arrows to choose Expand to.  
3. Press Enter. |
| Crosstab     | Expand or collapse a node in column or row headers. | Enter                                  |
| Crosstab     | Navigate the cells in a crosstab. | Arrows or Tab and Shift+Tab            |
| Crosstab     | Edit member captions (row and column headings). | F2                                     |
| Chart        | Move to the chart from the crosstab. | Ctrl+Tab                               |
Table 24. Keyboard shortcuts for crosstab and chart widgets  (continued)

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
</table>
| Chart      | Change the chart type. | Changing the chart type has multiple steps:  
  1. To open the Widget actions menu, press F10.  
  2. To reach the Change chart icon, press the right arrow.  
  3. To open the chart types menu, press the down arrow.  
  4. To select a chart type, press the down arrow.  
  5. To navigate the chart types, use the up or down arrows.  
  6. To select a chart type, press Enter.  
  7. To reach the list of charts for a given chart type, press Tab.  
  8. To navigate the list of charts, press the spacebar.  
  9. To select a chart, press Enter.  
 10. To reach the chart options list, press Tab.  
 11. To exit the chart types menu, press Esc. |
| Cell       | Enter a new cell value. | Type the value and press Enter |
| Cell       | Enter the value as thousands. | K  
  For example, entering 5K enters 5000 in the cell. |
| Cell       | Enter the value as millions. | M  
  For example, entering 10M enters 10,000,000 in the cell. |
| Cell       | Add a number to the cell value. | +, Add  
  For example, entering +50 adds 50 to the cell value. |
| Cell       | Subtract a number from the cell value. | -, Sub  
  For example, entering Sub50 subtracts 50 from the cell value. |
| Cell       | Increase the cell value by a percentage. | Inc, Increase  
  For example, entering Inc6 increases the cell value by 6%. |
| Cell       | Decrease the cell value by a percentage. | Dec, Decreases  
  For example, entering Dec6 decreases the cell value by 6%. |
Table 24. Keyboard shortcuts for crosstab and chart widgets (continued)

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell</td>
<td>Spread the value to the right.</td>
<td>&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For example, entering 1000&gt; spreads the value 1000 to all columns to the right.</td>
</tr>
<tr>
<td>Cell</td>
<td>Spread the value down.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For example, entering 1000</td>
</tr>
<tr>
<td>Cell</td>
<td>Hold the cell value from data spreads.</td>
<td>Hold, Hol</td>
</tr>
<tr>
<td>Cell</td>
<td>Release held cells.</td>
<td>Release, Rel</td>
</tr>
</tbody>
</table>

Scorecard widgets

The following table identifies keyboard shortcuts that are available when you are working in a scorecard widget.

Table 25. Keyboard shortcuts for metrics widgets

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>On demand toolbar</td>
<td>Move focus to the on demand toolbar.</td>
<td>F10</td>
</tr>
<tr>
<td>Overview area</td>
<td>Move from the on demand toolbar to the overview area.</td>
<td>Tab</td>
</tr>
<tr>
<td>Overview area</td>
<td>Navigate the dimensions in the overview area.</td>
<td>Left and right arrows</td>
</tr>
<tr>
<td>Overview area</td>
<td>List the members of the dimension that is in focus in the overview area. The list will appear in a drop down.</td>
<td>Spacebar</td>
</tr>
<tr>
<td>Overview area</td>
<td>Close the drop down that shows the members of a dimension in the overview area.</td>
<td>Esc</td>
</tr>
<tr>
<td>Overview area</td>
<td>Switch the context of the dimension that is in focus in the overview area.</td>
<td>Up and down arrows and then spacebar</td>
</tr>
<tr>
<td>Overview area</td>
<td>Expand the currently selected item in a drop down list.</td>
<td>Right arrow</td>
</tr>
<tr>
<td>Overview area</td>
<td>Collapse the currently selected item in a drop down list.</td>
<td>Left arrow</td>
</tr>
<tr>
<td>Overview area</td>
<td>Move from the overview area to the interactive chart graphic area.</td>
<td>Tab</td>
</tr>
</tbody>
</table>

Explore points

The following table identifies keyboard shortcuts that are available when you are working with explore points.
### Table 26. Keyboard shortcuts for explore points

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content pane</td>
<td>Insert an explore point on the canvas by choosing a dimension in the</td>
<td>Inserting an explore point has multiple steps:</td>
</tr>
<tr>
<td></td>
<td>content pane.</td>
<td>1. In the content pane, select a dimension using the up and down arrows.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. To open the menu, press Shift+F10.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Press Insert.</td>
</tr>
<tr>
<td>Menu items</td>
<td>View the menu items for a facet.</td>
<td>Shift+F10</td>
</tr>
<tr>
<td>Explore point</td>
<td>Navigate the list of members for an explore point.</td>
<td>Up and Down arrows</td>
</tr>
<tr>
<td>Explore point</td>
<td>Select or clear a member in an explore point.</td>
<td>Ctrl+Spacebar</td>
</tr>
<tr>
<td>Explore point</td>
<td>Select another member in an explore point.</td>
<td>Up and down arrows and then Ctrl+Spacebar.</td>
</tr>
<tr>
<td>Explore point</td>
<td>Select a member in an explore point, clearing all previous selections.</td>
<td>Spacebar</td>
</tr>
<tr>
<td>Explore point</td>
<td>Show explore point members in hierarchical mode.</td>
<td>Press Shift+F10 and choose Show Hierarchy</td>
</tr>
<tr>
<td>Explore point</td>
<td>Collapse or expand a node in a facet when in hierarchical mode.</td>
<td>Enter</td>
</tr>
</tbody>
</table>

### Action button widgets

The following table identifies keyboard shortcuts that are available when focus is in an action button widget.

#### Table 27. Keyboard shortcuts for action button widgets

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action button</td>
<td>Invoke the action.</td>
<td>Spacebar</td>
</tr>
</tbody>
</table>

### Text widgets

The following table identifies keyboard shortcuts that are available when you are working with text widgets.

#### Table 28. Keyboard shortcuts for text widgets

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
<td>Highlight text for formatting.</td>
<td>Shift+right arrow</td>
</tr>
<tr>
<td>Toolbar</td>
<td>With text highlighted, set focus on the</td>
<td>F10</td>
</tr>
<tr>
<td></td>
<td>text widget toolbar.</td>
<td></td>
</tr>
<tr>
<td>Toolbar</td>
<td>Navigate to major landing areas in the</td>
<td>Tab</td>
</tr>
<tr>
<td></td>
<td>toolbar.</td>
<td></td>
</tr>
<tr>
<td>Toolbar</td>
<td>From a major landing area, navigate to</td>
<td>Right or left arrow</td>
</tr>
<tr>
<td></td>
<td>items in the toolbar.</td>
<td></td>
</tr>
</tbody>
</table>
Table 28. Keyboard shortcuts for text widgets (continued)

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toolbar</td>
<td>From the font size or font type list in the text widget toolbar, choose an option.</td>
<td>Up or down arrow</td>
</tr>
<tr>
<td>Toolbar</td>
<td>From the font size or font type list, select a font setting.</td>
<td>Enter</td>
</tr>
</tbody>
</table>

Dimension Editor

The following table identifies keyboard shortcuts that are available when you are working in the Dimension Editor.

Table 29. Keyboard shortcuts for the Dimension Editor

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree control</td>
<td>Open a node in the Dimension Editor tree hierarchy.</td>
<td>Ctrl+right arrow</td>
</tr>
<tr>
<td>Tree control</td>
<td>Close a node in the Dimension Editor tree hierarchy.</td>
<td>Ctrl+left arrow</td>
</tr>
<tr>
<td>Launch</td>
<td>Open the Dimension Editor when a row or item caption is in focus in the content pane.</td>
<td>Shift+F10 and then select Edit</td>
</tr>
<tr>
<td>Edit</td>
<td>Open the menu for an item in the tree.</td>
<td>Shift+F10</td>
</tr>
<tr>
<td>Edit</td>
<td>Set an item as the child of another item.</td>
<td>Shift+F10 and then select Demote Selected Members</td>
</tr>
<tr>
<td>Edit</td>
<td>Set an item as the parent of another item.</td>
<td>Shift+F10 and then select Promote Selected Members</td>
</tr>
</tbody>
</table>

Query Builder

The following table identifies keyboard shortcuts that are available when you are working with the Query Builder.

Table 30. Keyboard shortcuts for the Query Builder

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu items</td>
<td>Open a menu to navigate to major landing areas.</td>
<td>Ctrl+;</td>
</tr>
<tr>
<td>Menu items</td>
<td>From a major landing area, set focus to the Query Diagram landing area.</td>
<td>Ctrl+;</td>
</tr>
<tr>
<td>Data view</td>
<td>Refresh content in the Data View.</td>
<td>Tab to the refresh button, and then press Enter.</td>
</tr>
</tbody>
</table>
Table 30. Keyboard shortcuts for the Query Builder (continued)

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
<tbody>
<tr>
<td>Query</td>
<td>Add a table to the query.</td>
<td>Adding a table to a query has multiple steps:</td>
</tr>
<tr>
<td>Builder</td>
<td></td>
<td>1. Press Ctrl+; and choose <strong>Metadata Explorer</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Use the arrows to navigate to the table.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Press Shift+F10 to list the menu items for the table.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. <strong>Select Add to Query</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. To refresh your content, tab to the refresh button and press Enter.</td>
</tr>
<tr>
<td>Query</td>
<td>Open the menu.</td>
<td>Shift+F10</td>
</tr>
<tr>
<td>Diagram</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set focus to a table.</td>
<td>Setting focus to a table has multiple steps:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. To open the menu, press Shift+F10.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Choose <strong>Select on Diagram</strong>, and then choose <strong>Select Table</strong>.</td>
</tr>
<tr>
<td>Table</td>
<td>Choose table join properties.</td>
<td>Choosing table join properties has multiple steps:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1. To open the menu, press Shift+F10.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Choose <strong>Select on Diagram</strong>, and then choose <strong>Select Table</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Tab to <strong>Table header Column</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. To set focus on a row of join properties, use the up and down arrows.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. To set focus on a join property, use the right and left arrows.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. To edit table join properties, press the Spacebar.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. To show a list of options, press Enter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. To navigate the list, use the up and down arrows.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. To select an option in the list, press Enter.</td>
</tr>
</tbody>
</table>
Table 30. Keyboard shortcuts for the Query Builder (continued)

<table>
<thead>
<tr>
<th>Applies to</th>
<th>Action</th>
<th>Shortcut keys</th>
</tr>
</thead>
</table>
| Join properties | Edit relationships between columns. | Editing relationships between columns has multiple steps:  
1. Tab to Specify the relations between the columns.  
2. To set focus on the relationship properties, use the up and down arrows.  
3. To set focus on a relationship property, use the right and left arrows.  
4. To edit relationship properties, press the Spacebar.  
5. To open the list of options, press Enter.  
6. To navigate the list, use the up and down arrows.  
7. To select an option in the list, press Enter. |

### Additional cues for screen readers

In IBM Cognos Insight, when you change the content of cells in a crosstab, the cell contents appear in a different color. You can specify that colored text be displayed with visual cues as well so that screen readers can announce the cues.

1. Click the Actions icon and then click My Preferences.
2. To specify that colored text in the crosstab will be highlighted when you use a screen reader, select the Add visual cues to colored text check box.
3. Click OK.

### JAWS screen reader issues

IBM Cognos Insight includes keyboard shortcuts to help you navigate Cognos Insight and perform tasks using only a keyboard. However, some screen readers might not work with some keyboard shortcuts. Issues and their resolutions are documented here.

#### JAWS announces an outdated cell state or value

In a crosstab widget, after you change a cell state or cell format using the cell menu items, JAWS announces the old cell state or formatted value. You can change a cell’s state by choosing Hold or Release in the cell’s menu. And you can change a cell’s format values by choosing a different data format from the cell’s menu, such as a percentage of the total or maximum roll-up.

To have JAWS announce the new cell state or formatted value, use the arrow key to move away from the changed cell and then return to the cell. The updated state and formatted value are announced by JAWS.
JAWS incorrectly announces the OK button in some Query Builder windows

In some cases, when you are working in a Query Builder window, JAWS announces the OK button, and then announces another control. If this happens, you can safely ignore the OK button announcement, and listen only to the subsequent part of the announcement.

JAWS does not announce new cell values

Using JAWS, when you type a new value in a cell in a crosstab and press Enter, the new value is not announced. Also, after entering the new cell value, navigating using arrow keys does not announce any cell values.

To force JAWS to announce the cell values, press Ctrl+Tab to leave the crosstab, then Ctrl+Shift+Tab to return to the crosstab. JAWS will announce the cells as you navigate using the arrow or Tab keys.

JAWS does not announce the elements in a relative proportional spread

In the Data Spread window, when you are reviewing the elements that the relative proportional spread is based on, JAWS does not announce the element names when you use the arrow keys for navigation.

Press Tab to navigate the element, and JAWS announces the element names. You can also click the Preview link to review a summary of the dimensions and elements. However, this summary is read only. Elements can only be edited from the Data Spread window.

JAWS does not announce date or navigation controls in a calendar

In the Time Roll-ups window and in crosstab cells, the dates and navigation controls in calendars are not announced by JAWS.

To edit a date in a time roll-up:
1. In the Time Roll-ups window, press Tab to select the fixed date option.
2. Press the down arrow to open the calendar.
3. Use the right arrow to advance one day at a time (JAWS will announce when a new month is entered), and then press Enter to select the date. JAWS will read the newly selected date, and the list of date ranges will be updated based on the new reference date selection.

To edit a crosstab cell date, type the new date in the cell. The format of the new date must match the format of existing dates.

JAWS does not announce Query Definition tree control

When you are importing a package into Cognos Insight, in the Select Data Source step of the import wizard, JAWS does not identify the Query Definition section as a tree control.

To use the tree control, perform the following actions:
1. Navigate the tree with the up and down arrows.
2. Expand and collapse tree items with the right and left arrows.
3. Select one or more tree items with the spacebar. When an item is selected, the selected items table is automatically populated.

**JAWS 13 does not announce items that are cleared and closed in the Query Definition tree**

When you are importing a package into Cognos Insight, in the Select Data Source step of the import wizard, in the Query Definition tree control, you can select items in the tree by pressing the spacebar.

JAWS 13 announces whether open tree items are cleared or selected. JAWS 13 also announces whether closed leaf items are cleared or selected. However, for items that are cleared and closed, JAWS 13 announces only that the item is closed and does not announce whether that the item is cleared.

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**IBM and accessibility**

See the IBM Accessibility Center for more information about the commitment that IBM has to accessibility.

The [IBM Accessibility Center](http://www.ibm.com/able) is available online.
Appendix B. Troubleshooting information

Troubleshooting is a systematic approach to solving a problem. The goal of troubleshooting is to determine why something does not work as expected and how to resolve the problem.

Review the following table to help you or customer support resolve a problem in IBM Cognos Insight.

Table 31. Troubleshooting actions and descriptions

<table>
<thead>
<tr>
<th>Actions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A product fix might be available to resolve your problem.</td>
<td>Apply all known fix packs, or service levels, or program temporary fixes (PTF).</td>
</tr>
<tr>
<td>Ensure that the configuration is supported.</td>
<td>Review the Cognos Insight system requirements in Software Environments for IBM Planning Analytics 2.0 (<a href="http://www.ibm.com/support/docview.wss?uid=swg27049052">http://www.ibm.com/support/docview.wss?uid=swg27049052</a>).</td>
</tr>
<tr>
<td>Look up error messages by selecting the product from the [IBM Support Portal] and then typing the error message code into the Search support box on the right vertical menu bar (<a href="http://www.ibm.com/support/entry/portal/">http://www.ibm.com/support/entry/portal/</a>).</td>
<td>Error messages give important information to help you identify the component that is causing the problem.</td>
</tr>
<tr>
<td>Reproduce the problem to ensure that it is not just a simple error.</td>
<td>If samples are available with the product, you might try to reproduce the problem by using the sample data.</td>
</tr>
<tr>
<td>Ensure that the installation successfully finished.</td>
<td>The installation location must contain the appropriate file structure and the file permissions. For example, if the product requires write access to log files, ensure that the directory has the correct permission.</td>
</tr>
<tr>
<td>Review all relevant documentation, including release notes, technotes, and proven practices documentation.</td>
<td>Search the IBM knowledge bases to determine whether your problem is known, has a workaround, or if it is already resolved and documented.</td>
</tr>
<tr>
<td>Review recent changes in your computing environment.</td>
<td>Sometimes installing new software might cause compatibility issues.</td>
</tr>
</tbody>
</table>

If the items on the checklist did not guide you to a resolution, you might need to collect diagnostic data. This data is necessary for an IBM technical-support representative to effectively troubleshoot and assist you in resolving the problem. You can also collect diagnostic data and analyze it yourself.

Multi-selection in an explore point displays #N/A in some cells

When you select two or more members in an explore point in IBM Cognos Insight, the cells in widgets with crosstabs sometimes display the calculated values and sometimes display #N/A.
When you select two or more items in an explore point, the crosstabs in your workspace try to show cell values that are calculated based on the items you selected.

**Cells display the calculated values correctly**

The calculated values can be shown when both of the following statements are true:

- All the members in rows, columns, or context have either no calculations or have simple calculations such as addition, subtraction, multiplication, division, or average.
- If rows, columns, or context have calculated members, then there is no intersection of these calculated members. For example, if rows has a calculated member, then no member on columns can be calculated.

For example, your crosstab shows the Product Lines dimension, with members such as Microwaves and Stoves, the Revenue measure, and the Brands dimension in context and as an explore point. When you click a brand, the data that appears in your crosstab changes to show only that brand’s revenue.

**Cells display #N/A**

Cells will display the text #N/A when you select more than one item in an explore point in the following two circumstances:

- Your crosstab includes one or more calculated members that are based on a complex calculation.
- You select more than one item in an explore point and when the crosstab includes an intersection of calculated members on columns, rows, or context.

Cells will display #N/A when you select more than one item in an explore point and when your crosstab includes one or more calculated members that are based on a complex calculation. Complex calculations are minimum, maximum, compare, or references to a database. Continuing with our previous example, you add a summary row to the crosstab to show the minimum value in the column. Minimum is a complex calculated member. Now, when you select two or more brands in the explore point, the values in the crosstab change to #N/A.

Cells will display #N/A when you select more than one item in an explore point and when the crosstab includes an intersection of calculated members on columns, rows, or context. Continuing with our previous example, you add an Average calculation as a new column, and you add an Average calculation as a new row. Now, when you select two or more brands in the explore point, the values in the crosstab change to #N/A.

**Related tasks:**

[“Filtering by dimensions and attributes” on page 53](#)

Use explore points or the explore pane to filter the data that is displayed in the crosstabs and charts in your IBM Cognos Insight workspace. Explore points and the explore pane also identify how your dimensions and attributes are related and where they are not connected.
Troubleshooting resources

Troubleshooting resources are sources of information that can help you resolve a problem that you are having with IBM Cognos Insight. Many of the resource links provided in this section can also be viewed in a short video demonstration.

To view the video version, search for “IBM Cognos troubleshooting” through either an Internet search engine or YouTube video community.

Support Portal

The IBM Support Portal is a unified, centralized view of all technical support tools and information for all IBM systems, software, and services, including IBM Cognos Insight.

The IBM Support Portal lets you access all the IBM support resources from one place. You can tailor the pages to focus on the information and resources that you need for problem prevention and faster problem resolution. Familiarize yourself with the IBM Support Portal by viewing the demo videos.

Find the Cognos content that you need by selecting your products from the IBM Support Portal.

Searching and navigating IBM Cognos Insight product information

Access to IBM Cognos product information can now be configured in the IBM Support Portal, which provides the ability to see all of your links on a single page.

Best practices for searching and navigating for IBM Cognos product information are available on the IBM Cognos Support Portal and Technote Search Best Practices page.

Gathering information

Before contacting IBM Support, you will need to collect diagnostic data (system information, symptoms, log files, traces, and so on) that is required to resolve a problem in IBM Cognos Insight. Gathering this information will help to familiarize you with the troubleshooting process and save you time.

Information on what data to collect is available in the form of MustGather technotes.

Problem determination

Several IBM Cognos problem determination tools are available to diagnose and troubleshoot common problems.

These tools can be downloaded from the Cognos Diagnostic Utilities page. IBM Education Assistant provides video and other training resources on some of these diagnostic tools on the IBM Education Assistant Problem Determination website.

Service requests

Service requests are also known as Problem Management Reports (PMRs). Several methods exist to submit diagnostic information to IBM Software Technical Support.

To open a PMR or to exchange information with technical support, view the IBM Software Support Exchanging information with Technical Support page. PMRs can
also be submitted directly by using the Service requests (PMRs) tool, or one of the other supported methods detailed on the exchanging information page.

Cognos Customer Center
The IBM Cognos Customer Center provides Cognos-specific information, updates, and troubleshooting resources.

To view Cognos troubleshooting information, access the Cognos Customer Center and view the information under "Contacting Support" or "Troubleshooting Tips".

Fix Central
Fix Central provides fixes and updates for your system’s software, hardware, and operating system.

Use the pull-down menu to navigate to your product fixes on Fix Central. You might also want to view Fix Central help.

Knowledge bases
You can find solutions to problems by searching IBM knowledge bases.

You can use the IBM masthead search by typing your search string into the Search field at the top of any ibm.com page.

IBM Knowledge Center
IBM Knowledge Center includes documentation for each release of an IBM product.

IBM Knowledge Center, including translated documentation, is available at http://www.ibm.com/support/knowledgecenter/.

To find links to the latest known problems and APARs, access the Release Notes available for your product and version.

IBM Redbooks
IBM Redbooks® are developed and published by IBM’s International Technical Support Organization, the ITSO.

IBM Redbooks provide in-depth guidance about such topics as installation and configuration and solution implementation.

Proven Practices documentation
Created by IBM Cognos experts from customer experiences, Business Analytics Proven Practices documentation provides verified technical information in specific technology environments.

As a troubleshooting resource, Business Analytics Proven Practices documentation provides easy access to the top ten most popular practices for Financial Performance Management, in addition to videos and other information: Cognos Proven Practice documentation.

Software support and RSS feeds
IBM Software Support RSS feeds are a quick, easy, and lightweight format for monitoring new content added to websites.
After you download an RSS reader or browser plug-in, you can subscribe to IBM product feeds at [IBM Software Support RSS feeds](#).

**Forums and communities**

IBM Cognos product forums offer a place to share ideas and solutions with your peers in the IBM Cognos community.

Active Cognos forums are available at [Cognos forums and communities](#). [AnalyticsZone.com](#) provides additional forums for IBM Cognos Insight users, as well as the tutorial and samples files (https://www.analyticszone.com/wikis/home?lang=en_US#/wiki/W688ee50d7e7f_4322_b0bb_006007324321/page/IBM%20Cognos%20Tutorial%20and%20Samples).
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