Actuate One™

One Design
One Server
One User Experience

Working with Cube Reports
using Actuate Analytics Option

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About Working with Cube Reports using Actuate Analytics Option

Working with Cube Reports using Actuate Analytics Option provides information about analyzing data from Actuate Cube reports to understand market trends and relationships, such as differences, averages, and growth trends.

Working with Cube Reports using Actuate Analytics Option includes the following chapters:

- *About Working with Cube Reports using Actuate Analytics Option.* This chapter provides an overview of this guide.
- *Chapter 1. Starting Actuate Analytics Cube Viewer.* This chapter provides an overview of Actuate Analytics Cube Viewer and Actuate Analytics option. This chapter also describes how to access a cube report to start using Actuate Analytics Cube Viewer.
- *Chapter 2. Viewing data.* This chapter describes the Actuate Analytics Cube Viewer views, how to set up views of data, and how to navigate the various views. The chapter also describes how to use filters to narrow the scope of a data view.
- *Chapter 3. Customizing data.* This chapter describes how to view and present data in various formats. This chapter also describes ways to analyze data by applying functions to calculate sum, difference, average, ratio of values, minimum value, maximum value, percentage of total, and percentage of growth.
- *Chapter 4. Exporting data.* This chapter describes how to export data to a spreadsheet, to a word processing program, or to a PDF file.

- *Chapter 5. Customizing Actuate Analytics Cube Viewer.* This chapter describes how a BIRT iServer System administrator can customize the user interface and set default preferences.

Chapter

1

Starting Actuate Analytics Cube Viewer

This chapter contains the following topics:

- About Actuate Analytics Cube Viewer and Actuate Analytics option
- Launching Actuate Analytics Cube Viewer using a cube report

About Actuate Analytics Cube Viewer and Actuate Analytics option

Actuate Analytics Cube Viewer supports the multidimensional analysis of data. Actuate Analytics Cube Viewer enables you to view data as tables, bar charts, pie charts, and line graphs. You can then drill down into that data to determine relationships and trends.

Using Actuate Analytics Cube Viewer, you choose which data to include in a graphic comparison. You can then manipulate the data display in tables and charts and save them as cube reports in an Encyclopedia volume.

Actuate Analytics Cube Viewer is an application distributed as a component of Information Console and Actuate Management Console.

Using Actuate Analytics Cube Designer, a developer creates a cube profile and adds it to an Encyclopedia volume where you can access it. A profile contains specifications for building and running a cube.

To use Actuate Analytics Cube Viewer, complete the following tasks:

- In the Encyclopedia volume, run or schedule the cube profile to generate multidimensional data cubes for analysis. BIRT iServer retrieves data, structures the data in a data cube, and adds the data cube to the Encyclopedia volume.
- Analyze the data using Actuate Analytics Cube Viewer. When analyzing a cube, you can aggregate or categorize data, summarize data, and create graphs based on the data.

Using Actuate Analytics Cube Viewer, you can view an existing cube in an Encyclopedia volume. If the Actuate Analytics option is enabled for BIRT iServer System, you can run and schedule cube profile generation in an Encyclopedia volume if you have the appropriate privileges. Actuate Analytics option is a licensing option enabled using a licensing key. For more information about installing and enabling Actuate Analytics option, see *Installing BIRT iServer for Windows.* For information about privileges, see *Using Information Console.*

Actuate Analytics Cube Viewer cannot display data correctly unless the operating system on which you start the web browser has the appropriate locale setting. The operating system locale setting determines which fonts are available for display. For example, if you use a web browser for which the locale setting is US English to access a report containing Chinese characters, Actuate Analytics Cube Viewer cannot display Chinese characters, because the fonts are not available.

Launching Actuate Analytics Cube Viewer using a cube report

Before you can use Actuate Analytics Cube Viewer, you access a cube report in an Encyclopedia volume. The following procedure explains briefly how to access Actuate Analytics Cube Viewer on the web.

How to access a cube report

1. Start your web browser.
2. If your company has a web site with a link to the login page, choose the link. If not, go to the next step.
3. Type a URL for the Information Console login page, such as the following URL sample:

   ```
   http://actuate1:8900/iportal/login.do?repositoryType=Enterprise
      &serverURL=http://actuate2:8000
   ```

   where

   - actuate1:8900 is the BIRT iServer that runs web pages that provide the interface to the Encyclopedia volume.
   - iportal is a keyword that indicates access to Information Console.
   - login.do is the web page that displays the login interface.
   - repositoryType=Enterprise indicates using an Encyclopedia volume.
   - serverURL=http://actuate2:8000 specifies the location of the BIRT iServer System that manages the Encyclopedia volume.

   Your BIRT iServer configuration and security implementation can require you to use a different URL to view a report in the Encyclopedia volume. For more information, see your BIRT iServer System administrator.
4. Press Enter.
5. In the Information Console login page, complete the following tasks:
   - Select a volume from the drop-down list.
   - Type your user name.
   - Type your password.
   - Select a language from the drop-down list. Your selection determines the language to use for the user interface. You can change the language setting when you log in to the volume.

- Select a time zone from the drop-down list. Your selection determines the time stamp the BIRT iServer uses for files. You can change the time zone setting when you log in to the volume.
- Choose Log In.

An initial Encyclopedia volume page appears, as shown in Figure 1-1.

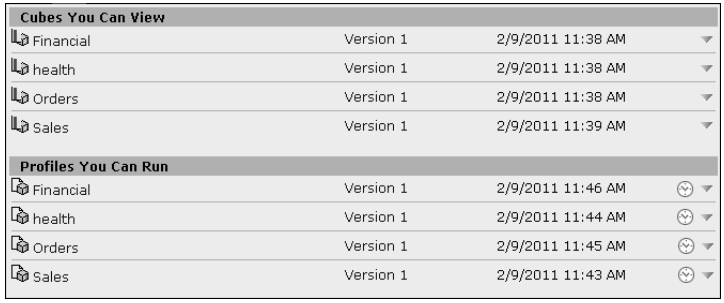

Figure 1-1 An Encyclopedia volume page

How to launch Actuate Analytics Cube Viewer

1. In Cubes You Can View, choose the cube report to view.
2. In Security Warning choose one of the following options:
   - Deselect Always trust content from this publisher then choose Run to start Actuate Analytics Cube Viewer for this particular session.
   - Select Always trust content from this publisher then choose Run to enable Actuate Analytics Cube Viewer for every session.

   Actuate Analytics Cube Viewer appears in a browser and presents a view of the data in the cube. The initial view is in table format, as shown in Figure 1-2.

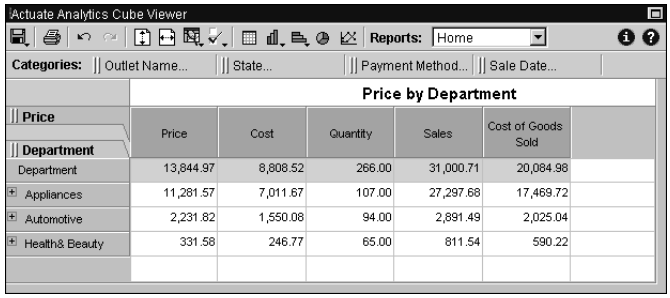

Figure 1-2 The initial view

3. To view another cube report, choose the browser Back button to return to the previous Encyclopedia volume page.

Chapter

2

Viewing data

This chapter contains the following topics:

- About data analysis
- About Actuate Analytics Cube Viewer
- Selecting an experience level
- Expanding and collapsing the data
- Displaying data in tables, charts, and graphs
- Displaying balloon help
- Sorting the data
- Using filters
- Searching for categories and subcategories
- Manipulating the data
- Restoring the initial view

About data analysis

Using Actuate Analytics Cube Viewer, you can view and analyze trends in multiple categories of data simultaneously. Identifying the data and trends among multiple categories is easier than if you used a traditional two-dimensional spreadsheet view. You can apply filters simultaneously to multiple categories so that you can view relationships among them.

Using Actuate Analytics Cube Viewer, you can answer questions such as:

- How do total sales break down by product?
- What are product A's sales over time?
- How many units of product B shipped to all locations in April?

You can quickly manipulate the data in the view and change how the data display appears.

About the data cube

A data cube is a multidimensional data structure that provides multiple measures and categories to access or analyze large quantities of data. A data cube or .cb4 file is generated from a cube profile. For information on building cube profiles see the documentation for Actuate Analytics Cube Designer. You can run cube files or .cb4 files on the BIRT iServer, manipulate the data in the cube, and save it as a cube report or a .cvw file.

About categories and measures

A category is a data grouping used by Actuate Analytics Cube Viewer to create an axis of a cube for presentation of a data view. The view displays two categories of the data at a time. One category appears on the vertical rows axis and one on the horizontal columns axis.

A category lists all the distinct entries found in a specific field. For example, within the payment method category, you can have entries such as Visa™, American Express™, and MasterCard™. Categories that contain numeric data are collectively labeled measures. The category bar that appears in the view contains all the categories of the cube. By default, the measures category appears on the right in the category bar. In the initial view, the measures category appears on the columns axis.

A subcategory is a group within a category. Subcategories appear in rows on the vertical axis and in columns on the horizontal axis. For example, within the category labeled Date, you can have the subcategories labeled 2004 and 2005. Within the measures category, you can have subcategories labeled Cost, Quantity, and Sales.

About Actuate Analytics Cube Viewer

When you start Actuate Analytics Cube Viewer, the initial view of the cube displays all categories on the rows axis and displays the first measures category on the columns axis. This view is the top level of all of the cube categories in table format. No functions or filters apply to the data that appears in the initial view.

Recognizing features in Actuate Analytics Cube Viewer

Figure 2-1 shows the features of Actuate Analytics Cube Viewer.

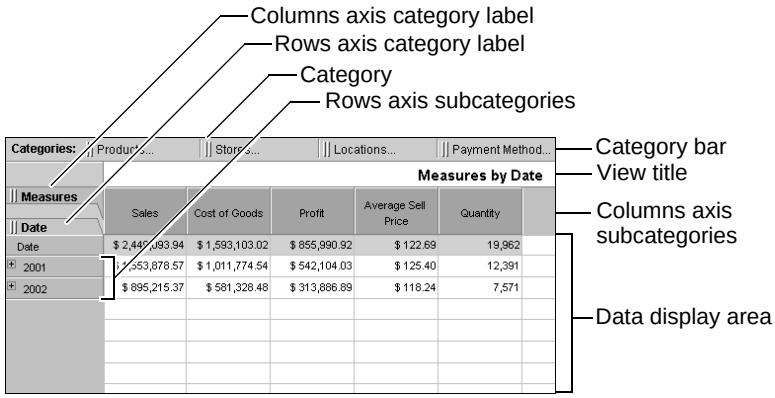

Figure 2-1 Actuate Analytics Cube Viewer features

Using the Actuate Analytics Cube Viewer toolbar

The number of features on the Actuate Analytics Cube Viewer toolbar depends on experience level of the user. The illustrations in this section display the features available for the advanced experience level. The Actuate Analytics Cube Viewer toolbar supports the following tasks:

- Reorganizing the data view with one click
- Expanding the columns or rows display
- Accessing menus with additional view controls
- Accessing menus to export data
- Saving your analysis of cubes files as cube reports

Figure 2-2 shows buttons that control the data display. Each button displays a new graphic view.

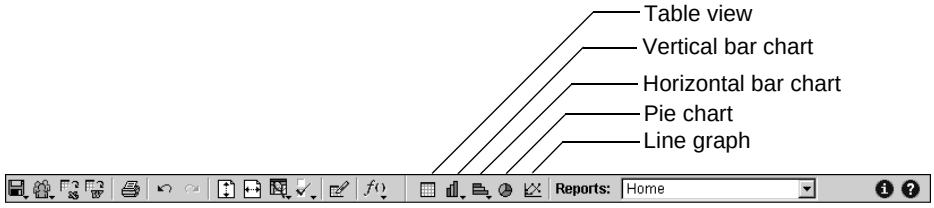

Figure 2-2 Toolbar buttons that control the data display

Figure 2-3 shows buttons that change the view with one click. The Vertical fit to page and Horizontal fit to page buttons change the height of the rows or the width of the columns with the first click. A second click returns the previous view. If you want to change actions you make, choose the Undo or Redo button.

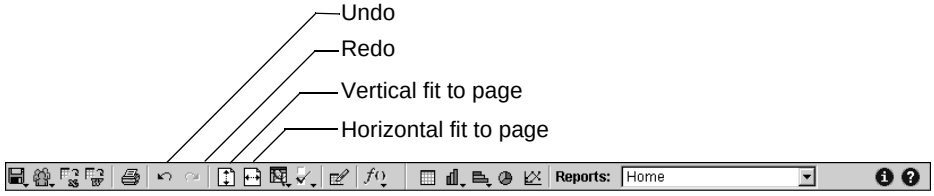

Figure 2-3 Toolbar buttons that change the view with one click

Figure 2-4 shows buttons that access additional menus to perform calculations, set global preferences, choose views, and get help.

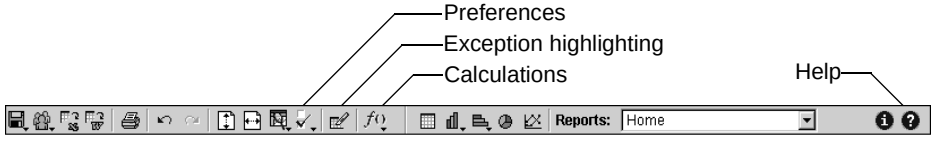

Figure 2-4 Toolbar buttons that access additional menus

Figure 2-5 shows the buttons that access additional menus that enable you to export data in several forms and to e-mail or print the view.

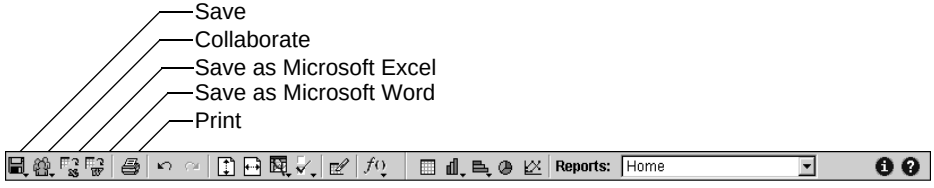

Figure 2-5 Toolbar buttons that access more menus

Selecting an experience level

You can select an experience level that best suits your needs and experience. Each experience level offers a unique set of features for working with data. For example, one experience level can be appropriate for viewing cube reports, while another experience level is appropriate for advanced analysis. The experience levels that are available in Actuate Analytics Cube Viewer are:

- Novice
- Standard
- Advanced

Each experience level sets the visibility of the following user interface elements:

- Bar elements, such as category bar, toolbar, view bar, title banner, and title box
- Toolbar buttons
- Context menu items

The novice experience level enables fewer features than standard or advanced. Set the experience level to standard or advanced to enable the features that appear in Table 2-1.

Table 2-1 Features available to standard and advanced experience levels

	Experience level	
Available feature	**Standard**	**Advanced**
Line chart	✓	✓
Fit to page	✓	✓
Save or Delete view	✓	✓
Categories appear on category bar	✓	✓
Filter, Search, and Expand to Level	✓	✓
Functions		✓
View raw data as text or spreadsheet		✓
Exception highlighting		✓

When working with an Actuate cube report on the web, if you save the cube report in the Encyclopedia volume, Information Console saves the experience level for the saved cube report. Accessing that saved cube report launches cube viewer using the saved experience level.

For more information about how an Information Console Administrator can modify Actuate Analytics experience levels, see *Information Console Developer Guide*.

How to select an experience level

1 On the toolbar, choose Preferences.

2 From the menu, choose Experience Level, then select an experience level, as shown in Figure 2-6. The default experience level is Standard.

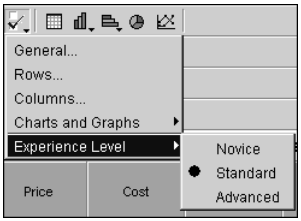

Figure 2-6 Selecting an experience level

How to set a default experience level

You can set a default experience level in Information Console.

1 In Information Console, choose Options, as shown in Figure 2-7.

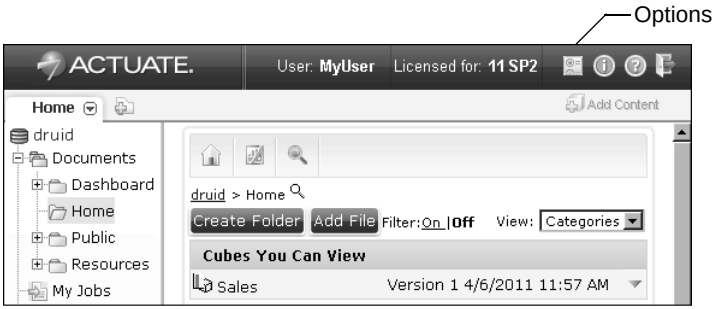

Figure 2-7 Choosing Options in Information Console

2 On Options—General, set an Analytics experience level. For example, set Analytics experience level to Advanced, as shown in Figure 2-8.

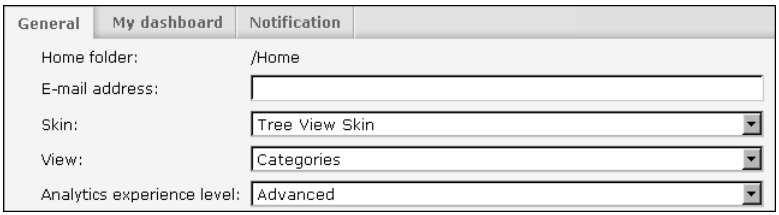

Figure 2-8 Setting Analytics experience level to Advanced

Choose Save Options.

Expanding and collapsing the data

By expanding and collapsing data, you view detailed or summarized information in the cube. You can expand or collapse data. Each time you expand or collapse the data, the selection of data values changes and the view instantly changes.

Expanding the data

To display detailed information, you expand the categories and data in the data display area and on the axes. You can expand the subcategories on the rows or the columns axis in one of the following ways:

- Choose the plus sign (+) on a subcategory.
- Right-click a subcategory label or data in the data display area to show a context menu. Choose Expand to level and select a subcategory level.
- Double-click a subcategory or data element in the view.

The subcategory expands, displays a lower level of subcategories, and updates the data to reflect your selection.

If a plus sign (+) does not appear next to a data label, the subcategory is fully expanded. If Expand to level does not appear on the context menu, the information is the most detailed you can display. In these cases you cannot expand the data any farther.

Collapsing the data

You can collapse subcategories to display summarized information. To collapse subcategories on the rows or columns axis, do one of the following:

- Choose the minus sign (-) on a subcategory.
- Right-click a subcategory label or data element in the data display area to show a context menu. Choose Collapse.

The subcategory collapses, displays a higher level subcategory, and updates the data to reflect your selection.

Collapsing the data displays summarized information and the most inclusive category label appears.

Displaying data in tables, charts, and graphs

To display and work with the data stored in the cube, choose from the buttons on the toolbar to view the data in the following forms:

- Table

- Analysis View

- Presentation View

- Vertical Bar Chart

- Horizontal Bar Chart

- Pie Chart

- Line Graph

Navigating a table

The table compares all of the subcategories on the columns axis with the subcategories on the rows axis. To include more data or less data in the table, expand or collapse the data.

Navigating an analysis view

Choosing View allows you to select between analysis and presentation view. Analysis view presents the data as a table, chart, or graph. You can perform analysis tasks such as arranging data categories and inserting calculated rows and columns.

Navigating a presentation view

Choosing View allows you to select between analysis and presentation view. In the presentation view data is presented as a table, chart, or graph. You can display, hide, or resize a chart or graph legend by selecting and dragging the right edge of the chart or graph. You can also right-click the legend for more options. In a presentation view, categories are not available for analysis tasks such as arranging data categories and inserting calculated rows and columns.

Navigating a vertical bar chart

A vertical bar chart compares all of the subcategories in a bar chart on the columns axis with one or more selected subcategories on the rows axis, as shown in Figure 2-9. The chart appears as a set of vertical bars for the selected data in the rows. To navigate through the data in a vertical bar chart, select any rows axis

subcategory label or labels. The selection changes the base data of the vertical bar chart.

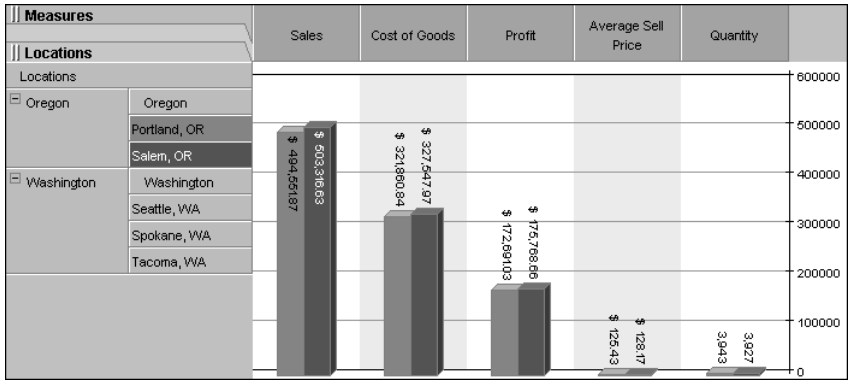

Figure 2-9 A vertical bar chart

If you select a stacked bar chart, you can display data values as segments of a single stacked bar. The height of the bar represents the total value of all the segments in the subcategory, as shown in Figure 2-10.

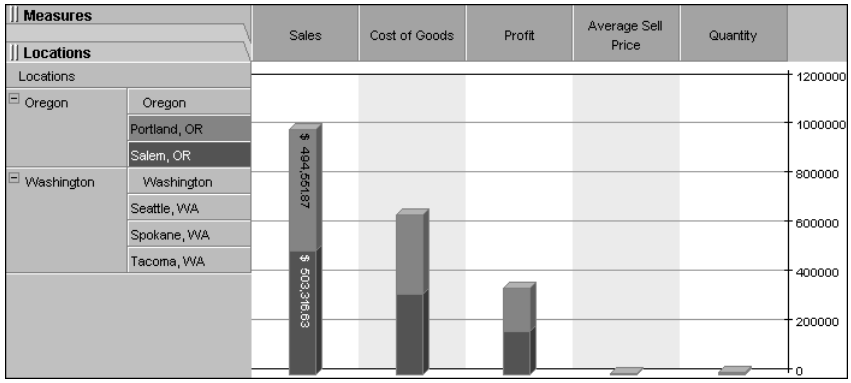

Figure 2-10 A stacked bar chart

If you select a stacked hundred percent bar chart, the chart displays subcategories values as stacked bar segments that add up to 100% in each subcategory.

Navigating a horizontal bar chart

A horizontal bar chart compares all of the subcategories in a bar chart on the rows axis with one or more selected subcategories on the columns axis. The chart appears as a set of horizontal bars for the selected data in the columns. To navigate through the data in a horizontal bar chart, select any columns axis subcategory label or labels. The selection changes the base data of the horizontal bar chart.

Navigating a pie chart

A pie chart compares a selected single base subcategory on the columns axis with one or more selected subcategories on the rows axis. The chart appears as a segmented pie for the selected data in the column and rows. To navigate through the data in a pie chart, select any columns axis subcategory label or labels. The selection changes the base data of the pie chart.

Navigating a line graph

A line graph is a chart that compares a trend for all subcategories on the columns axis with all of the subcategories at the lowest selected level on the rows axis. The chart appears as connected points for the selected data in the columns and rows. To navigate through the data in a line graph, select any rows axis subcategory label or labels. The selection changes the base data of the line graph.

Displaying balloon help

In all of the graphical formats for Actuate Analytics Cube Viewer, you can use balloon help to find more detail about the data display. Hover the pointer over a graphic element, such as a pie chart segment or a data point on a line graph. The balloon help appears with more information about the data element. If you move the pointer over a pie chart segment, the balloon help always displays the numeric value of the section, not the percent represented by the segment.

For example, in Figure 2-11, the balloon help displays a sales revenue amount as well as the row and column reference for the pie chart segment. The balloon help also displays the Right click for options item to choose other options.

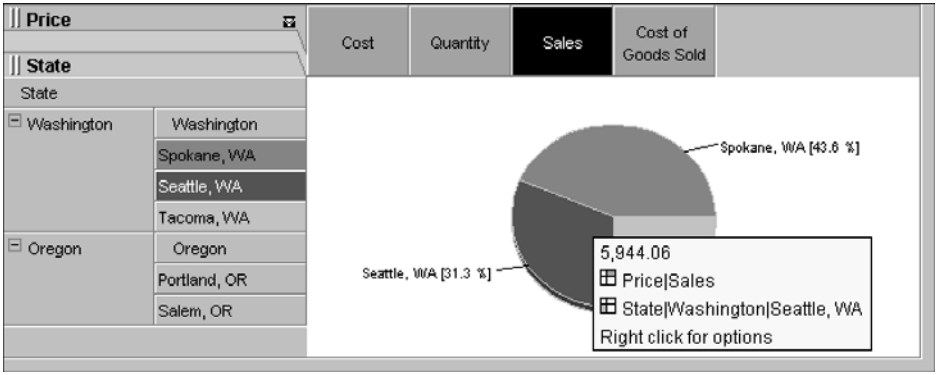

Figure 2-11 Displaying balloon help

Sorting the data

To display trends and deviations, sort columns and rows of data numerically. Use the plus sign (+) or the minus sign (-) to increase or decrease the number of columns and rows that you want to view on each axis.

You can only sort one column subcategory and one row subcategory at the same time. While you view a pie chart, you are unable to sort data.

Sorting data by columns

Sorting data on a column changes the order of the rows that appear.

How to sort data by columns

1 Right-click a subcategory label on the columns axis, such as Sales. A menu appears, as shown in Figure 2-12.

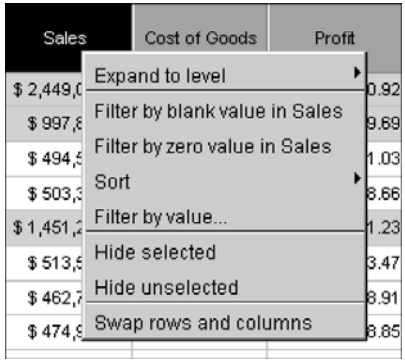

Figure 2-12 Sorting data by columns

2 Choose Sort. The Sort options appear as shown in Figure 2-13.

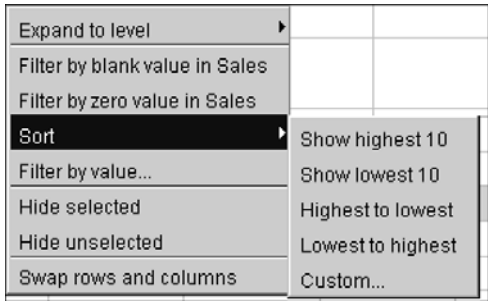

Figure 2-13 Sort options

3 Select one of the following sort options:

- Show highest 10 displays the greatest ten values.
- Show lowest 10 displays the lowest ten values.
- Highest to lowest displays the values with the greatest value at the top of the column.
- Lowest to highest displays the values with the lowest value at the top of the column.
- Custom displays Custom Sort, which enables you to choose to display only a specific number of the highest or lowest values in the column.

An arrow appears in the lower right corner of a sorted subcategory, as shown in Figure 2-14. The arrow points in the direction of the greatest value in the sorted subcategory.

Figure 2-14 An arrow indicates that sorting applies

4 To change the sort order, do one of the following:

- To reverse the sort order, choose the sort arrow.
- Right-click the subcategory and choose between Sort➛Highest to lowest and Sort➛Lowest to highest.

Sorting data by rows

You can sort rows of data numerically to display trends and deviations. Sorting data on a row changes the order of the columns in the data display.

How to sort data by rows

1 Right-click a subcategory on the rows axis. A menu appears, as shown in Figure 2-15.

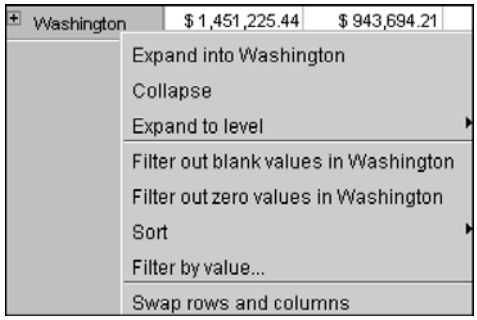

Figure 2-15 Sorting data by rows

2 Choose Sort. The Sort options appear, as shown in Figure 2-16.

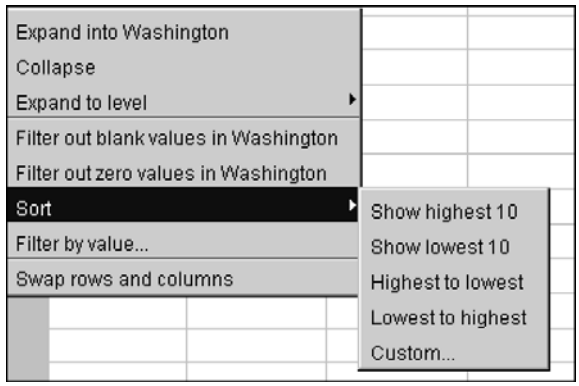

Figure 2-16 Sort options

3 Select one of the following sort options:

- Show highest 10 displays the greatest ten values.
- Show lowest 10 displays the lowest ten values.
- Highest to lowest displays the values with the greatest value in the left column.
- Lowest to highest displays the values with the lowest value in the right column.
- Custom displays Custom Sort, which enables you to choose to display only a specific number of the highest or lowest values in the column.

An arrow appears on the right side of the sorted subcategory, as shown in Figure 2-17. The arrow points in the direction of the greatest value in the sorted subcategory.

Figure 2-17 An arrow indicates that sorting applies

4 To change the sort order, do one of the following:

- To reverse the sort order, choose the arrow.
- Right-click the subcategory and choose between Sort➛Highest to lowest and Sort➛Lowest to highest.

Canceling sorting on columns or rows

After applying sorting, an arrow appears in the lower right corner of the subcategory label to indicate a change in the data display, as shown in Figure 2-18.

Figure 2-18 An arrow indicates that sorting applies

How to cancel sorting on a columns or rows axis

1. Right-click the sorted subcategory.
2. On the menu, choose Sort➛Cancel sorting. Actuate Analytics Cube Viewer removes the sorting. The arrow disappears from the subcategory to indicate there is no sorting.

Applying a filter to sort the highest or lowest values

In a subcategory, to determine the lowest or highest subcategories, you can filter and sort the data to display only the highest or lowest values. When you apply a highest or lowest filter, an arrow appears in the lower right corner of a subcategory to indicate sorting of the data.

How to sort the highest or lowest values

1. Right-click a subcategory in the column or row. The selected subcategory menu appears.
2. Choose Sort➛Custom. Sort appears, as shown in Figure 2-19.

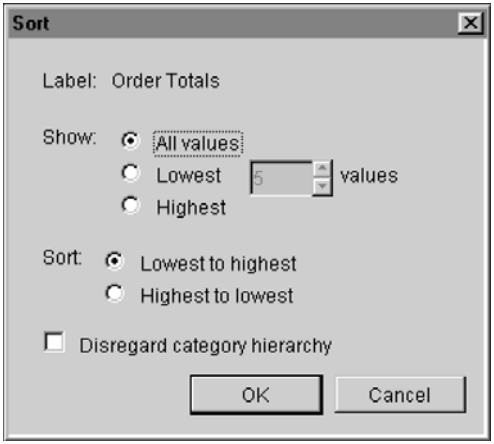

Figure 2-19 Selecting Sort options

3. In Sort, you can do the following:
   - In Show, select lowest or highest and enter the number of values you want to appear in the view.

- In Show, if you select all values, you can select Disregard hierarchy. This option enables sorting data numerically without displaying the value in its category hierarchy.
- In Sort, select the sort order, lowest to highest or highest to lowest.

4 Choose OK. The sorted numbers appear in the view.

Using filters

Using Actuate Analytics Cube Viewer, you apply a filter that specifies a range of data that appear in the view. You can apply filters simultaneously to multiple categories so that you can view their relationships.

Writing filter expressions

Use the following syntax conventions for filter expressions:

- X to represent the subcategory name
- Parentheses ( ) to indicate the order of the operations
- OR, AND, or NOT if you use more than one expression
- Operators: <, <=, >, >=, =

Do not use commas or dollar signs. For example, if you want to display sales between $10,000 and $100,000, inclusive, type the filter expression:

```
(x>=10000) AND (x<=100000)
```

To apply filters to floating point numbers, do not use the expression x=. Use the expressions x> and x<. For example, if you want to display values between $2.25 and $10.50, type the filter expression:

```
(x>2.25) AND (x<10.5)
```

If none of the data that appears meets the filter criteria, you see the following message:

```
There is no data to display.
```

Applying filters to columns or rows

You can filter the data that appears in a cube by selecting a subcategory on the columns axis or rows axis. This filter selects and displays values on the columns or rows axes that meet certain conditions.

How to apply a filter on a subcategory

1 Right-click a subcategory on the columns axis or rows axis. The selected subcategory menu appears.

2 On the menu, choose Filter by value, as shown in Figure 2-20.

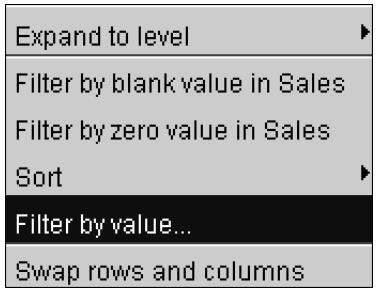

Figure 2-20 Choosing Filter by value

3 In Filter by Value in the Filter field, as shown in Figure 2-21, type the required filter expression using the displayed operators. Choose OK.

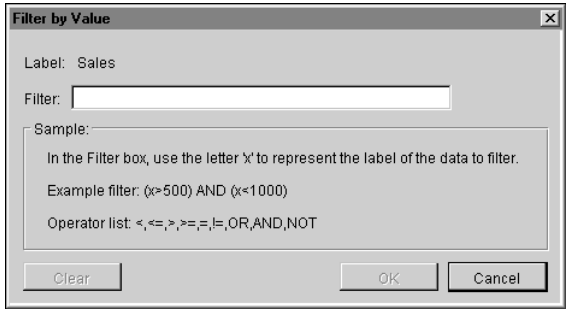

Figure 2-21 Filter by Value

A filter icon appears in the lower right corner of the subcategory to indicate that there is a filter, as shown in Figure 2-22.

Figure 2-22 An arrow indicates that filtering applies

Clearing filters on columns or rows

After applying a filter, a filter icon appears in the lower right corner of the subcategory label to indicate a change in the data display, as shown in Figure 2-23.

Figure 2-23 An arrow indicates that filtering applies

How to clear a filter on a columns or rows axis

1. Right-click the filtered subcategory.
2. On the menu, choose Cancel value filter. Actuate Analytics Cube Viewer removes the selected subcategory filter. The filter icon disappears from the subcategory to indicate there is no filter.

You can choose Reports➛Home to clear all filters, cancel all sorting, and return to the default preferences of the initial view.

Applying filters in the category bar

You can filter the data in a cube by selecting one or more subcategories from one or more categories in the category bar.

How to apply a filter in the category bar

1. On the category bar, right-click a category label. Select: <category name> displays the chosen category's list of subcategories, as shown in Figure 2-24.

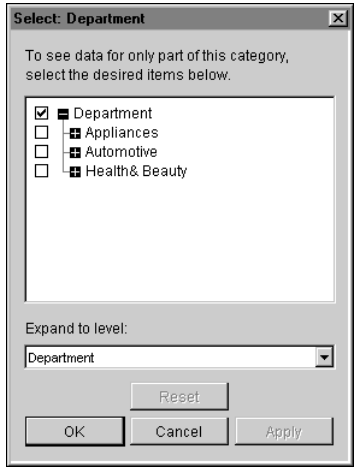

Figure 2-24 Select: <category name> dialog box

   In the list, if necessary, choose the plus sign (+) next to a subcategory to display the underlying subcategories. You can also use the Expand to level drop-down list to expand the various subcategories.

2. Select the subcategories through which you want to filter the data, as shown in Figure 2-25.

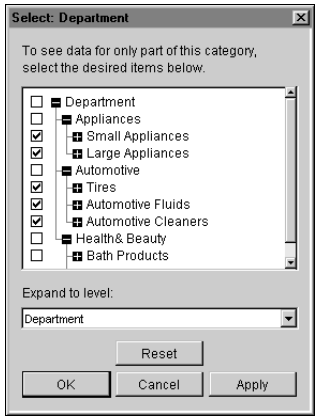

Figure 2-25 Selecting subcategories

Only the data for the specific subcategories you select appears in the display area of the view. A filter icon appears next to the category label in the category bar to indicate the filtering, as shown in Figure 2-26.

Figure 2-26 A filter icon indicates that filtering applies

If you are selecting from a date category, Select can offer the option to use relative time periods, as shown in Figure 2-27. This option is available if the data in the cube supports relative time periods.

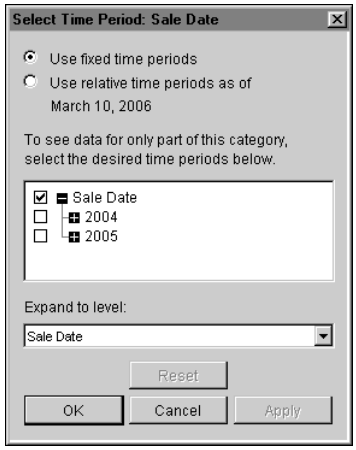

Figure 2-27 Select Time Period dialog box

If you select a relative time period, such as previous year to date, the resulting table, chart, or graph shows only data for that time period. The available time

periods are relative to the reference date of the data that appears in Select Time Period. For example, Figure 2-28 shows the selection of Previous year to date and Use relative time periods as of March 10, 2006.

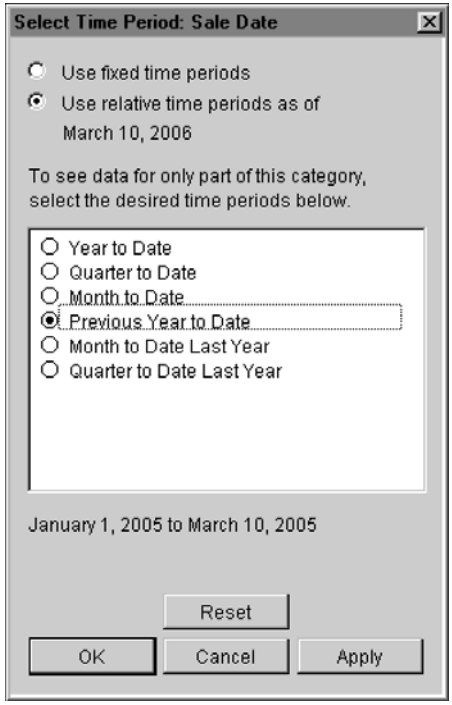

Figure 2-28 Selecting Previous Year to Date

3 To remove the sorting, choose the subcategory at the top of the list, or choose Reset.

Applying filters on a category axis

You can apply filters on the category axis to filter the categories and subcategories that you want to show on a rows or columns axis. You filter the categories and subcategories using the categories and subcategories labels text.

How to apply a filter on a category axis

Apply a filter to specify which category and subcategory labels appear in the view.

1 On an axis, right-click a category label and choose Filter by pattern.

Filter by Pattern appears, as shown in Figure 2-29.

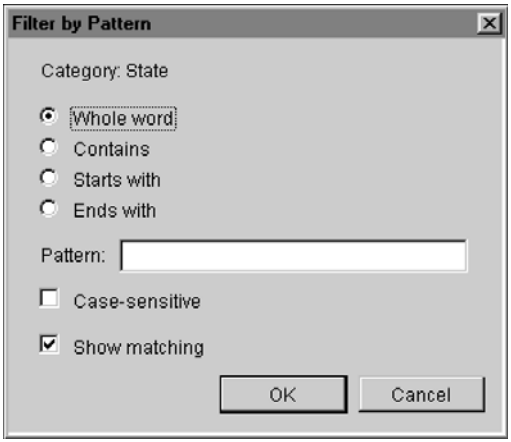

Figure 2-29 Filter by Pattern

2 To specify the category or subcategory label to filter, select one of the following:

- Whole word if you know the exact text in the label
- Contains if you want to use specific letters or numbers in the label
- Starts with if you want to use the text with which the label starts
- Ends with if you want to use the text with which the label ends

3 In Patterns, type the letters or numbers you want to filter.

4 You can select the following to apply to the filter:

- Case-sensitive requires that the category text matches the case of the text you type in Patterns.
- Show matching enables the filter to apply to all subcategories on the axis.

5 Choose OK. Actuate Analytics Cube Viewer applies the filter. A filter icon appears next to the category axis label to indicate the filtering, as shown in Figure 2-30.

Figure 2-30 A filter icon indicates that filtering applies

How to cancel or edit a filter on a category axis

1 On an axis, right-click a category label.

2 On the menu, do one of the following:

- To cancel the filter, choose Cancel pattern filter. Actuate Analytics Cube Viewer removes the filter.

- To edit the filter, choose Edit pattern filter.
  In Filter by Pattern, complete the following tasks:
  - Edit the filter criteria.
  - Choose OK to apply the changes.

Searching for categories and subcategories

You can search an axis for category and subcategory labels.

How to search for categories and subcategories

1. On the rows or columns axis, right-click a category label. The selected category menu appears.
2. On the menu, choose Find. Find appears, as shown in Figure 2-31.

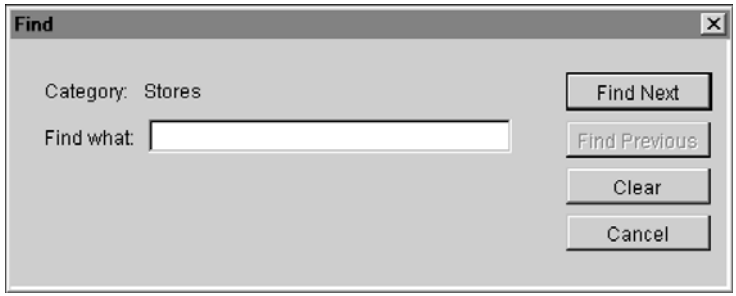

Figure 2-31 The Find dialog box

3. Type one or more characters.
4. Choose Find Next. Actuate Analytics Cube Viewer searches the selected category, navigates to the first category or subcategory label that matches the search string, and highlights the label in the view.
5. To find another match, choose Find Next.

Manipulating the data

You can manipulate the data in the following ways:

- Display categories on rows and columns.
- Swap rows and columns.
- Sort the data by rows or columns.
- Select and deselect subsets of data.

- Hide data.
- Suppress rows and columns with no data or with zero values.

Displaying categories on rows and columns

You can display any categories in a cube on the rows or columns axis. When you display a category on a row or column, you can collapse, expand, filter, sort, and hide the data using its subcategories. You can also create a hierarchy of categories by adding as many as four categories to an axis.

How to replace and display a category on a row or column

1 From the categories bar, select and hold the raised move handle on the left side of the category label, as shown in Figure 2-32.

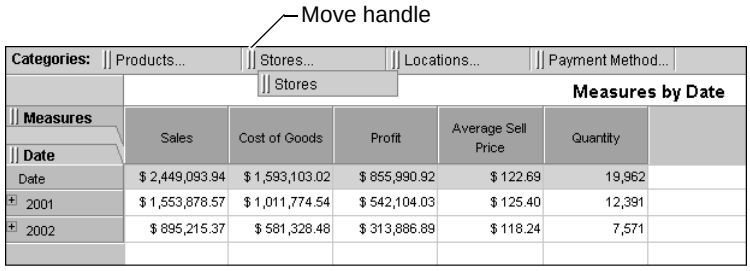

Figure 2-32 Selecting the move handle on a category label

2 Drag the category label and position it over the category you want to replace on the row or column until you see the rectangular highlight box appear, as shown in Figure 2-33.

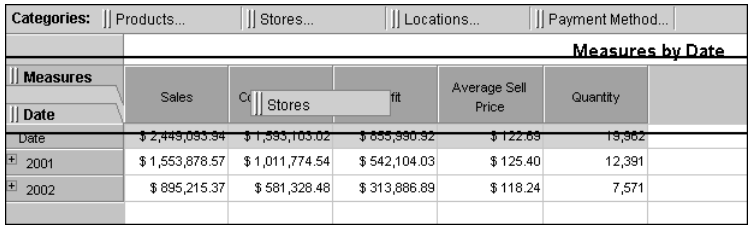

Figure 2-33 Dragging a category label

3 Release the category label. The category appears on the axis and updates the data to reflect your selection.

How to display more than one category on an axis

1 From the category bar, select and hold the raised move handle on the left side of a category label, as shown in Figure 2-34.

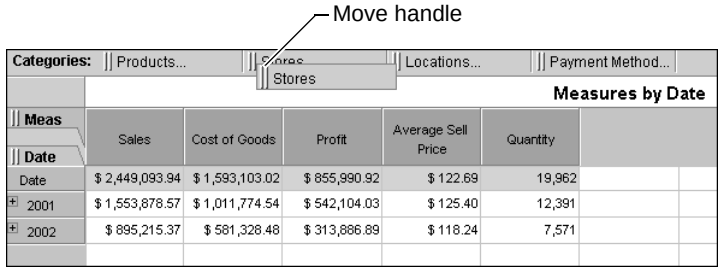

Figure 2-34 Selecting a move handle

2 Drag the category label and position the label to the left or right side of the rows axis subcategory labels until you see a black highlight line appear, as shown in Figure 2-35.

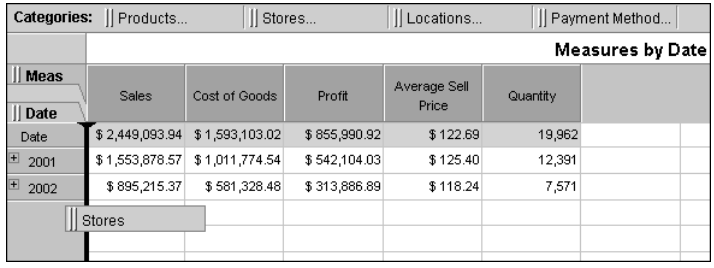

Figure 2-35 Dragging a category label

3 Release the category label. The category label appears on the rows axis, as shown in Figure 2-36.

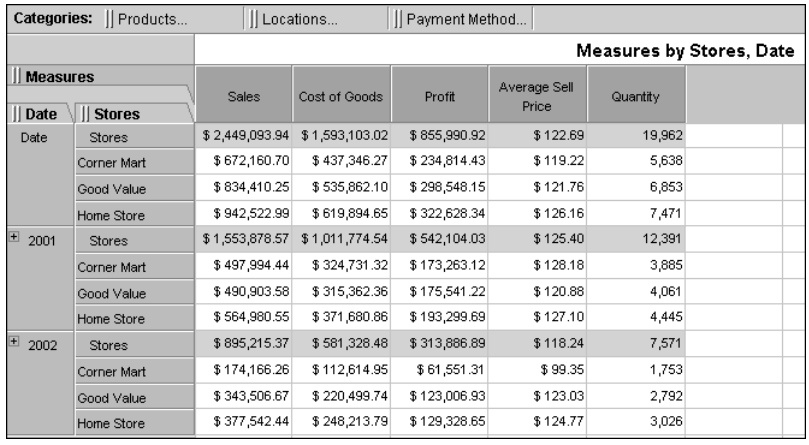

Figure 2-36 The category label appears on the rows axis

The category appears on the rows axis in the place that you released it and updates the data to reflect your change.

By dragging a category label from the category bar to the columns axis, you can display more than one row on the columns axis, as shown in Figure 2-37.

Categories: Products... | Payment Method...

		Locations, Measures by Stores, Date						
Measures		Sales			Cost of Goods			
Locations		Locations	Oregon	Washington	Locations	Oregon	Washington	Locations
Date	Stores	$ 2,449,093.94	$ 997,868.50	$ 1,451,225.44	$ 1,593,103.02	$ 649,408.81	$ 943,694.21	$ 855,990.92
Date	Corner Mart	$ 672,160.70	$ 250,036.12	$ 422,124.58	$ 437,346.27	$ 162,607.88	$ 274,738.39	$ 234,814.43
Date	Good Value	$ 834,410.25	$ 355,778.09	$ 478,632.16	$ 535,862.10	$ 228,719.03	$ 307,143.07	$ 298,548.15
Date	Home Store	$ 942,522.99	$ 392,054.29	$ 550,468.70	$ 619,894.65	$ 258,081.90	$ 361,812.75	$ 322,628.34
2001	Stores	$ 1,553,878.57	$ 642,251.15	$ 911,627.42	$ 1,011,774.54	$ 417,868.16	$ 593,906.38	$ 542,104.03
2001	Corner Mart	$ 497,994.44	$ 164,444.01	$ 333,550.43	$ 324,731.32	$ 107,337.13	$ 217,394.19	$ 173,263.12
2001	Good Value	$ 490,903.58	$ 244,578.49	$ 246,325.09	$ 315,362.36	$ 156,975.39	$ 158,386.97	$ 175,541.22
2001	Home Store	$ 564,980.55	$ 233,228.65	$ 331,751.90	$ 371,680.86	$ 153,555.64	$ 218,125.22	$ 193,299.69
2002	Stores	$ 895,215.37	$ 355,617.35	$ 539,598.02	$ 581,328.48	$ 231,540.65	$ 349,787.83	$ 313,886.89

Figure 2-37 Displaying more than one row on the columns axis

Swapping rows and columns

You can view the data in the data display area from a different perspective by swapping the category on one axis with the category on the other axis.

How to swap axes

1. Right-click the rows or columns category label.
2. Choose Swap rows and columns from the context menu, as shown in Figure 2-38.

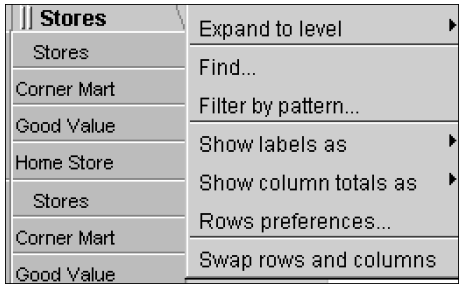

Figure 2-38 Swapping rows and columns

The categories swap on the axes and update the data to reflect your selection.

Selecting and deselecting subsets of data

You can view subsets of data by selecting and grouping subcategories. After you select subcategories, you can hide the selected subcategories, hide the unselected subcategories, or apply a function to the selected subcategories.

How to select a subcategory

1. Move the pointer over a subcategory label.
2. Choose the subcategory label.

How to select a group of subcategories

1. Select one subcategory label.
2. To add a subcategory to the current set of selected subcategories, press and hold down Ctrl. Then, select a subcategory label. Using Ctrl keeps the subcategories in the order that you selected them.

How to select a range of subcategories

1. Select one subcategory label.
2. Press and hold down Shift. Then select the subcategory label of the last subcategory in the range. Using Shift does not preserve the order of the subcategories selected. By default, the selected subcategories appear in order from left to right or from top to bottom. The first subcategory in the sort is the left or top subcategory.

How to deselect a subset of data

Do one of the following:

- Press Esc.
- Press and hold Ctrl. Then, click the selected subcategory label.

Hiding data

To hide a small number of subcategories, select the subcategories you want to hide. Then, choose Hide selected. To hide a large number of subcategories, select the subcategories you do not want to hide. Select Hide unselected.

The Hide option is not available in the pie chart view.

How to hide selected subcategories

1. Select one subcategory label.
2. To add or remove subcategories in the current set of selected subcategories, press and hold Ctrl. Then, select additional subcategory labels.
3. Right-click the subcategory label of a selected subcategory. The selected subcategory menu appears, as shown in Figure 2-39.

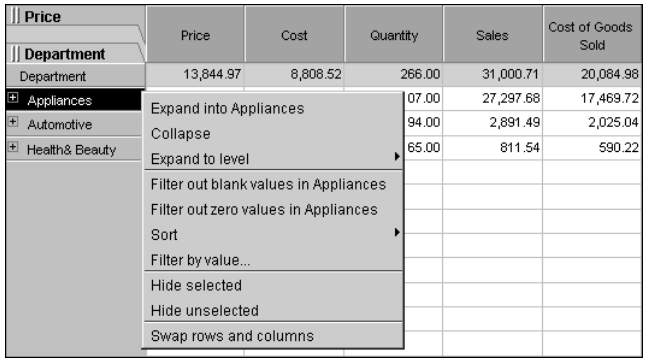

Figure 2-39 Hiding selected categories

4 On the context menu, complete one of the following tasks:

- Choose Hide selected. The selected subcategories do not appear in the display.
- Choose Hide unselected. The unselected subcategories do not appear in the display.

A filter icon appears next to the category label to which the filter applies as shown in Figure 2-40.

Figure 2-40 A filter icon indicates that a filter applies

How to display hidden subcategories

1 Right-click a subcategory or axis label.

2 On the menu, choose Cancel hiding. The hidden subcategories appear.

Expanding to level in a category

Using Expand to level, you can quickly expand a category or data item to a specific level in its hierarchy. For example, in a Date category with a Year, Quarter, and Month hierarchy, you can use Expand to level to expand Date to the month level in a single step.

How to expand a category or data item to a specific level

1 Right-click a category label or data item label.

2 Move the pointer over Expand to level in the menu, as shown in Figure 2-41. Select a level name.

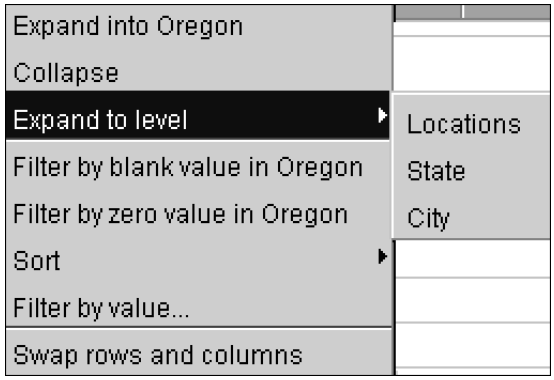

Figure 2-41 Expanding a category or data item

3 To collapse the category or data level, choose Collapse in the menu.

Suppressing rows and columns with no data

By suppressing rows or columns that do not contain any data, you can filter out all empty rows subcategories in a cube. When you suppress empty rows, rows that contain data with zero values appear.

You can suppress all rows and columns that have no data in the cube by setting a general preference or you can suppress subcategories that have no data in one or more rows or columns. The filter expression x!=nan applies to the view or to a selected row, column, or subcategory. In this expression, x!=nan, nan means not a number.

In Preferences, if you set a general preference, the view does not display an indication that a general preference applies to the view.

If you apply a preference to a row, column, or category label, Actuate Analytics Cube Viewer displays a filter icon to indicate that the view contains suppressed rows or columns. A filter icon appears in a category label as shown in Figure 2-42.

Figure 2-42 A filter icon indicates that a filter applies

How to hide all rows and columns with no data

1 On the toolbar, choose Preferences➛Rows.

2 On Rows, deselect Show blank rows, as shown in Figure 2-43.

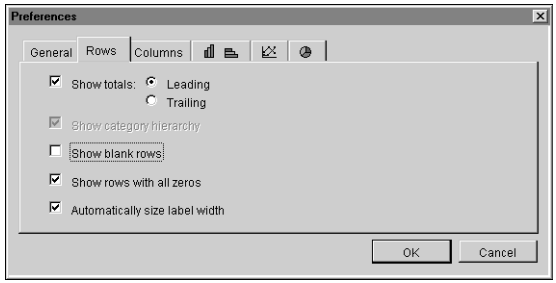

Figure 2-43 Deselecting Show blank rows

3 Choose Columns.

4 On Columns, deselect Show blank columns, as shown in Figure 2-44.

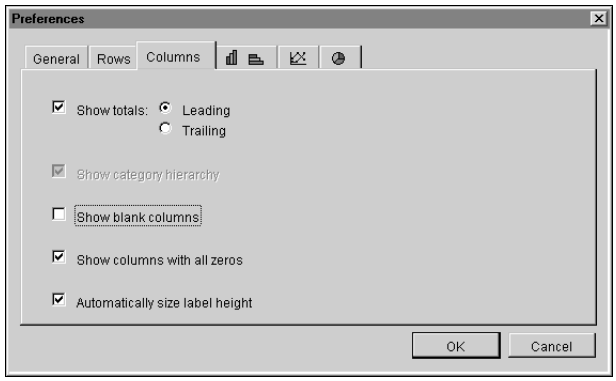

Figure 2-44 Deselecting Show blank columns

Choose OK. All the rows and columns subcategories that do not contain data do not appear.

How to display all rows and all columns with no data

1 On the toolbar, choose Preferences➛Rows.

2 On Rows, select Show blank rows.

3 Choose Columns.

4 On Columns, select Show blank columns. Choose OK. All the rows and columns subcategories that do not contain data appear.

How to hide rows or columns with no data

1 Right-click a subcategory label on a row or column.

2 On the subcategory menu, choose Filter out blank values, as shown in Figure 2-45.

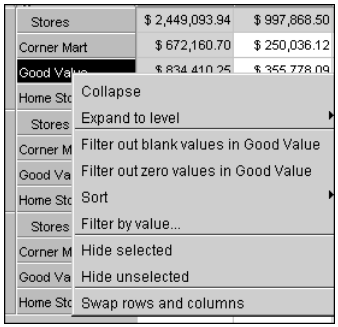

Figure 2-45 Filtering out blank values

The subcategories in the row or column that do not contain data do not appear. A filter icon appears next to the category label to which the filter applies.

Suppressing rows and columns with zero values

By suppressing rows or columns that contain only data with zeros, you display only the rows or columns that contain values greater than zero.

You can suppress all rows and columns that have a value of zero in the cube by setting a general preference, or you can suppress data that have a value of zero in one or more rows or columns. The filter expression x!=0 applies to the view or to a selected row, column, or subcategory.

In Preferences, if you set a general preference, the view does not display an indication that a general preference applies to the view.

If you apply a preference to a row, column, or category label, Actuate Analytics Cube Viewer displays a filter icon next to a row, column, or category label to indicate that the view contains suppressed rows or columns. A filter icon appears next to a category label in Figure 2-46.

Figure 2-46 A filter icon indicates that a filter applies

How to suppress all rows and columns with only zeros

1. On the toolbar, choose Preferences➛Rows.
2. On Rows, deselect Show rows with all zeros.
3. Choose Columns.
4. On Columns, deselect Show columns with all zeros. Choose OK.

How to display all rows and all columns with only zeros

1 On the toolbar, choose Preferences➛Rows.

2 On Rows, select Show rows with all zeros, as shown in Figure 2-47.

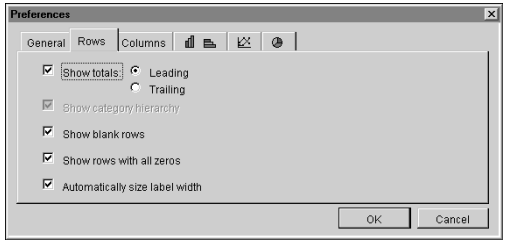

Figure 2-47 Selecting Show rows with all zeros

3 Choose the Columns.

4 On Columns, select Show columns with all zeros. Choose OK.

How to suppress rows or columns with a value of zero

1 Select a subcategory label.

2 Right-click the selected subcategory label.

3 From the subcategory menu, choose Filter out zero values. The row or column subcategories that have a value of zero do not appear. A filter icon appears next to the subcategory label to which the filter applies.

How to display rows or columns with zero value

1 Right-click the subcategory label that contains a filter icon.

2 From the subcategory menu, choose Cancel filter.

Restoring the initial view

When you start Actuate Analytics Cube Viewer, the initial view appears, displaying data in table format with no sorting or filters applied. After applying filters and sorting, you can quickly restore the initial view, removing all filters and sorting and resetting preferences to the default settings.

How to restore the initial view

To restore the initial view, on the toolbar, choose Reports➛Home. Actuate Analytics Cube Viewer removes all sorting, filtering, and customizing and displays the data in table format.

Chapter

3

Customizing data

This chapter contains the following topics:

- About customizing data
- Presenting data
- Analyzing data
- About exception highlighting
- About exporting detail data to a spreadsheet

About customizing data

Using Actuate Analytics Cube Viewer, you can do the following:

- Arrange and present the data in table or chart format.
- Show or hide features in the display to present a custom data view.
- Analyze data by applying functions to compare or combine the data in subcategories.

Presenting data

By customizing the presentation of data, you choose categories and subcategories to view, select ranges of data values, and choose the display type.

Use the options in Table 3-1 to customize your data presentation.

Table 3-1 Presentation options

Presentation features	Effects
Chart style	Displays data in a table, vertical bar chart, horizontal bar chart, pie chart, or line graph
Fit to page	Adjusts the rows and columns to fill the data display area
Main title	Displays text
Preferences	Changes settings to modify how your data appears in the data display area

Selecting a chart style

To select a chart style, you choose one of the chart style buttons to select the corresponding view of the data. The view updates to reflect your selection.

On the toolbar, choose from the following data displays:

- Table

- Vertical Bar Chart

- Horizontal Bar Chart

- Pie Chart

- Line Graph

Setting preferences for a chart

You can customize a chart's display using Preferences, as described in the Table 3-2.

Table 3-2 Chart preferences

Chart style	Preference selection	Preference value	Effect on chart appearance
Bar	Show 3D visual effect		Select to display three-dimensional visual effects. Deselect to display two-dimensional visual effects.
	Show data values as	Percentage (%)	Displays values of each bar as a percent of the total subcategory.
		Number	Displays numeric values of each bar.
Pie	Show 3D visual effect		Select to display three-dimensional visual effects. Deselect to display two-dimensional visual effects.
	Show data values as	Percentage (%)	Displays percent values of each segment as a percent of the whole pie. Deselect Show data values as to hide the data values.
		Number	Displays the numeric values of each segment.
	Show labels		Select to display labels for each segment.
	Pie slices	Show all slices	Displays all segments.
		Limit display by combining slices that are less than this % of the pie	Sets a value for the smallest pie segment that appears in the view. Smaller segments combine to display as the Other segment. If you choose a percent value that results in the Other pie segment equalling 100%, Actuate Analytics Cube Viewer does not combine the subcategories.
		Limit display by number of slices	Sets a limit on how many pie segments appear in the view. Additional segments combine to display as the Other segment.

(continues)

Table 3-2 Chart preferences (continued)

Chart style	Preference selection	Preference value	Effect on chart appearance
Line	Show data values as	Percentage (%)	Displays values of each point as a percent of the total subcategory.
		Number	Displays numeric values of each point.
	Show labels		Displays labels for each point.

How to set preferences for a bar chart, pie chart, or line graph

1 On the toolbar, choose Preferences➛General.

2 On Preferences—General, choose one of the following:

- Bar charts

- Line graph

- Pie chart

3 Select the preferences you want to apply. Choose OK.

Adjusting the fit to page options

You can adjust the width and height of the view in the following ways:

- Choose the Vertical fit to page button on the toolbar to expand the rows to fill the height of the data display area. Choose the Vertical fit to page button again to shrink the rows to the previous size.

- Choose the Horizontal fit to page button on the toolbar to expand the columns to fill the width of the data display area. Choose the Horizontal fit to page button again to shrink the columns to the previous size.
- Drag the line between two subcategories to enlarge or shrink the size of the subcategory in the display area.
- Drag the border between the subcategories and the data display area to change the size of the display area.

If the width of columns in the table is too narrow to fully display data values in the cells, the values appear as gray bars in the cells, or pound signs (#) appear in the cell. You can choose the Horizontal fit to page button, or drag the border between the cells to increase the width of the cells, enabling the full number of digits to appear.

Opening the cube in a new window

To open a cube in a new Java window, on the Actuate Analytics Cube Viewer title bar, choose the New window button.

A new window opens and fills your screen.

Displaying variables in the main title, subtitle, and footer

You can use text and variables in the main title, subtitle, and footer. The main title can display a maximum of four lines of text. The subtitle and footer appear in documents you save as RTF and PDF files. Use the following syntax for variables in the main title, subtitle, and footer:

```
%<variable name>%
```

The supported variables for use in the main title, subtitle, and footer appear in Table 3-3.

Table 3-3 Variables for use in the main title, subtitle, and footer

Variable name	Displays these values
column-categories	Name of the categories on the columns axis
company-name	Name of the company, as shown in the About box
cube-name	Name of the cube, as shown in the About box
current-view	Current categories in the columns and the rows
data	Name of the current numerical data
date-created	Date the cube was created, as shown in the About box
description	Description of the cube, as shown in the About box
filters	Names of all category filters currently applied to the cube
measure	Name of the current measure appearing in the data display area
product-name	Name of the product, as shown in the About box
row-categories	Name of the categories on the rows axis
version	Actuate Analytics Cube Viewer build number

How to add a variable to the main title

1. In the view, select the view title.
2. Type:

   ```
   %<variable name>%
   ```

where <variable name> is one of the supported variables, for example, %company-name%.

3 Press Enter. The variable name appears in the view title.

How to change the main title of the view

1 Select Main Title above the columns labels.

2 Type the new title or variable name.

3 To start a new line, you can type:

```
\n
```

Then type text or a variable name. You can display a maximum of four lines in the view title.

4 Press Enter.

Selecting Preferences

You can customize your presentation of the data in the display area with the options on the toolbar in Preferences.

The options include:

- Show leading or trailing column totals
- Show leading or trailing row totals
- Show or hide expand and collapse controls (+) or (-)
- Show or hide gridlines
- Resize width for new labels
- Show labels as hierarchical
- Show labels as columnar
- Show cell value with percentage of total
- Decimal places for percentage of total

Preferences return to the default settings when you analyze another cube report. You can save the Preferences settings in Actuate Analytics Cube Viewer for one session. If you restart Actuate Analytics Cube Viewer, the default settings apply to the view.

How to show leading or trailing column totals

In the table, the default settings for Actuate Analytics Cube Viewer show leading column totals. Most of the illustrations in this document show the table using the default settings. A system administrator can change the default settings to show the leading or trailing column totals.

If you choose to show leading or trailing column totals, the displayed total might combine measures that you do not intend to combine in a sum. For example, Actuate Analytics Cube Viewer might analyze an order number as a measure and display a sum total of order numbers.

1 On the toolbar, choose Preferences➛Columns.

2 On Preference—Columns, to show leading totals for columns, select Show totals. Select leading.

3 To show trailing totals for columns, select Show totals. Select trailing. Choose OK.

The Preferences settings that do not show leading or trailing totals on the rows or columns appear in the table in Figure 3-1.

Measures / OfficeName	OfficeForecastControl	CustomerForecastCo ...	SalesRepTotalControl
Boston Office	15,869,320,788.00	643,537,851.00	3,395,330,632.00
NYC Office	8,076,786,179.00	341,334,365.00	2,091,591,615.00
Philadelphia Office	9,687,606,831.00	559,038,788.00	2,513,141,895.00

Figure 3-1 Preferences settings that do not show leading or trailing totals

The Preferences settings that show leading totals on the rows and columns appear in the table in Figure 3-2.

Measures / OfficeName	Measures	OfficeForecastC ...	SalesRepTotalCo ...	CustomerForecas ...
txtOfficeName	1,736,334,900.00	1,736,334,900.00	415,318,160.00	65,800,538.00
Boston Office	785,609,940.00	785,609,940.00	167,004,425.00	26,186,998.00
NYC Office	469,353,192.00	469,353,192.00	129,485,990.00	19,556,383.00
Philadelphia Office	481,371,768.00	481,371,768.00	118,827,745.00	20,057,157.00

Figure 3-2 Preferences settings that show leading and trailing totals

How to show leading or trailing row totals

If you choose to show leading or trailing row totals, the displayed total might combine measures that you do not intend to combine in a sum. For example, Actuate Analytics Cube Viewer might analyze an order number as a measure and display a sum total of order numbers.

1 On the toolbar, choose Preferences➛Rows.

2 On Preferences—Rows, to show leading totals for rows, select Show totals. Select leading.

3 To show trailing totals for rows, select Show totals. Select trailing. Choose OK.

How to show or hide expand and collapse controls (+) or (-)

1 On the toolbar, choose Preferences➛General. Preferences—General appears as shown in Figure 3-3.

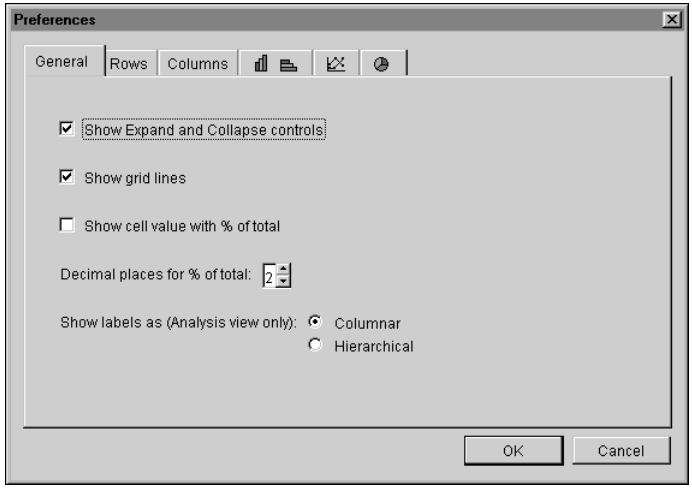

Figure 3-3 Preferences—General options

2 To show expand and collapse controls, select Show Expand and Collapse controls.

3 To hide drill controls, deselect Show Expand and Collapse controls. Choose OK.

How to show or hide gridlines

1 On the toolbar, choose Preferences➛General.

2 On Preferences—General, to show gridlines, select Show grid lines.

3 To hide gridlines, deselect Show grid lines. Choose OK.

How to resize subcategory width for labels

1 On the toolbar, choose Preferences➛Rows.

2 On Preferences—Rows, select Automatically size label width. Choose OK.

How to show or hide row and column hierarchy

1 On the toolbar, choose Preferences➛General.

2 On Preferences—General, in Show labels as (Analysis view only), select Hierarchical.

3 Choose Rows.

4 On Rows:

- To show hierarchy for rows, select Show category hierarchy.
- To hide hierarchy for rows, deselect Show category hierarchy.

5 Choose Columns.

6 On Columns:

- To show hierarchy for columns, select Show category hierarchy.
- To hide hierarchy for columns, deselect Show category hierarchy.

Choose OK.

How to show labels as hierarchical

1 On the toolbar, choose Preferences➛General.

2 On Preferences—General, to show hierarchy in labels, in Show labels as (Analysis view only), select Hierarchical.

3 To hide hierarchy in labels, in Show labels as (Analysis view only), select Columnar.

4 Choose OK.

How to show labels as columnar

1 On the toolbar, choose Preferences➛General.

2 On Preferences—General, to show labels as columnar, in Show labels as (Analysis view only), select Columnar. Choose OK.

Using Undo and Redo

Using Undo and Redo, you can reverse or restore the last ten actions you performed on your data.

How to undo or redo an action

Choose Undo to undo an action.

Choose Redo to redo an action.

Analyzing data

With the Calculate option, you can compare and summarize data using the functions that appear in Table 3-4. Applying each of these functions to one or more selected columns or rows creates a new column or row that displays calculated values.

Table 3-4 Functions

Function	Description
Sum	Calculates the value of the following formula for the selected subcategories: $a_1+a_2+\ldots+a_n$
Average	Calculates the value of the following formula for the selected subcategories: $(a_1+a_2+\ldots+a_n)/n$
Difference	Calculates the value of the following formula for the two subcategories: `a-b`
Percent of total	Calculates a percentage value that is equal to the ratio between the cell's value and the total value for the subcategory in which the cell appears. You can also display each data value in the table as a percentage of a column, row, or grand total.
Ratio	Calculates the value of the following formula for the two subcategories: `a/b`
Percentage growth	Calculates the value of the following formula for the two subcategories: `(b-a)/a`
Minimum value	Determines the minimum value among the selected subcategories.
Maximum value	Determines the maximum value among the selected subcategories.
Relative time periods	Filters a date category to show only the data items in a specific time period, such as Previous Year to Date or Current Month.
Sum over relative time periods	Calculates the sum of values for a time period, such as Current Year to Date, or Previous Month and displays the sum in a row or column.

Table 3-4 Functions

Function	Description
Union (Or)	Determines the number of data rows that contain a value in the selected subcategories. The union function counts data rows that are in one subcategory or another subcategory, inclusive. For example, to count the number of sales in the large appliances subcategory or the small appliances subcategory, select both subcategories and apply the union function. The count represents the total number of data rows that contain a sale value in the large appliances subcategory or the small appliances subcategory.
Intersection (And)	Determines the number of data rows that apply to the selected subcategories. The intersection function counts data rows that are in all selected subcategories. For example, to count the number of sales that include an item from the large appliances subcategory and an item from the small appliances subcategory, select both subcategories and apply the intersection function. The count represents the total number of data rows that contain a sale in the large appliances subcategory and the small appliances subcategory.

Note that you cannot combine subcategories that are in rows and columns. You must select either rows or columns. The function type appears in the table next to the last subcategory that you selected.

When you use the difference, ratio, or percentage growth functions, the subcategory that you select first is a, and the subcategory that you select second is b.

When you include subcategories that contain empty data fields, Actuate Analytics Cube Viewer does not use the empty data fields in calculations. As in OLAP tools, including null values in data analysis does not generate an error message.

For a calculation function, if you choose data that results in division by zero, the data field for that calculation shows /0 in the table. When plotting charts, Actuate Analytics Cube Viewer treats division by zero as an empty cell.

For a subcategory label, you cannot use a backslash (\), a slash (/), an asterisk (*), a dash (-), or any other symbol that normally appears as an operator. When using NOT, place it inside brackets.

If you apply functions both in the rows axis and the columns axis, the columns axis function applies at the intersection of the rows and columns. In the example in Table 3-5, the intersection applies the sum function, A+B, and not the ratio

function, C/D.

Table 3-5 An example of the columns axis function taking precedence over the rows axis function

	A	B	A+B
C	1	2	3
D	3	4	7
C/D	0.33	0.50	0.83

When you analyze ZIP codes, Actuate Analytics Cube Viewer treats a ZIP code as a measure, unless the report designer identifies the control as a category. Actuate Analytics Cube Viewer sums measures and uses them in other calculations. This applies if the ZIP codes contain numbers only. For example, if a 9-digit ZIP code contains a hyphen, the ZIP code is not treated as a measure.

By default, Actuate Analytics Cube Viewer creates cubes with precision of three decimal places. For values in the cube, a BIRT iServer System administrator can specify between 0 and 10 decimal places. When analyzing numbers that contain more than two decimal places, you get different results if you work with numbers without rounding. The number of categories Actuate Analytics Cube Viewer uses to build the cube affects the results. The differences are typically in the hundredths place. For example, add three numbers, each equal to 1.004. If you round the numbers to two decimal places before the addition, the calculation is 1.00 + 1.00 + 1.00 = 3.00. If you perform the addition before you round the numbers, the calculation is 1.004 + 1.004 + 1.004 = 3.012. The rounded result is 3.01.

Analyzing subcategory data

You can apply the following functions to subcategory data:

- Sum
- Average
- Difference
- Percent of total
- Ratio
- Percentage growth
- Minimum value
- Maximum value
- Union (Or)
- Intersection (And)

When you apply one of these functions, a new subcategory appears in the table view. Actuate Analytics Cube Viewer calculates values and displays them in the new subcategory.

A cube developer must include a count measure in the cube to use the union (or) and intersection (and) functions. If the cube does not contain a count measure, the union (or) and intersection (and) functions do not appear in the Calculate menu.

How to apply a function to a subcategory

Use this procedure to apply a sum, average, difference, percent of total, ratio, percentage growth, minimum value, maximum value, union, or intersection function to a selected subcategory.

1 Select the row or column subcategories to which to apply a function.

- If the formula for the function uses a and b values, press and hold Ctrl. Select the first subcategory label, a. Then, select the second subcategory label, b.
- If you want to select a range to sum or average, select the first subcategory label. Then, press and hold Shift and select the last subcategory label.

Choose Calculate.

2 On the Calculate menu, choose one of the following functions:

- Sum
- Average
- Difference
- % of total
- Ratio
- % growth
- Minimum value
- Maximum value
- Union (Or)
- Intersection (And)

Calculate appears.

Figure 3-4 shows Calculate with a default label value that appears when you apply a sum function to Appliances and Automotive subcategories.

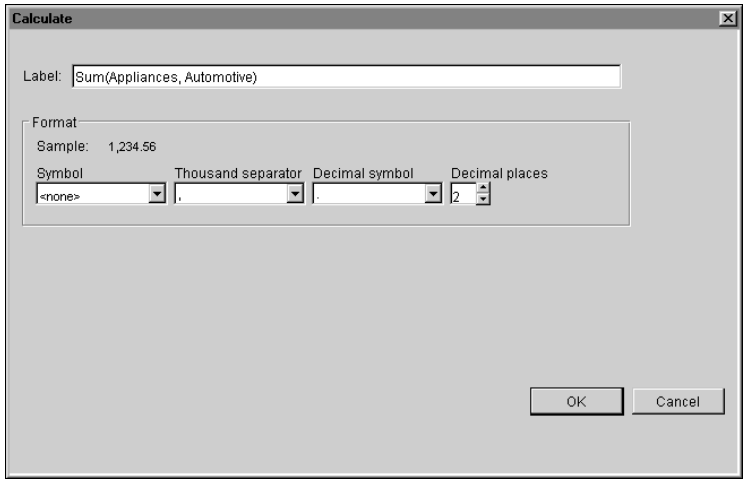

Figure 3-4 The Calculate dialog box

3 On Calculate, you can specify the following information:

- In Label, type the name for the new subcategory.
- In Format, to specify a number format, select the symbol, thousands separator, decimal separator, and number of decimal places.

  In Sample, you can view an example of the number format.

Choose OK. The new subcategory appears next to the last selected subcategory, as shown in Figure 3-5.

Appliances	11,281.57
Automotive	2,231.82
Sum(Appliances, Automotive)	13,513.39

Figure 3-5 A new calculated subcategory

How to modify a function

1 Right-click a function subcategory.

2 Choose Edit calculation.

3 On Calculate, you can

- Change the name of the function subcategory.
- Change the number format.

Choose OK to apply the changes.

How to delete a function

1. Right-click a function subcategory.
2. Choose Delete calculation.

Displaying data values as a percentage of a total

When working with data in the table, you can display data values as a percentage of the following values:

- Column total
  Each cell displays a percentage value that is equal to the ratio of the value of that cell compared to the value of the column total.
- Row total
  Each cell displays a percentage value that is equal to the ratio between the value of that cell compared to the value of the row total.
- Grand total
  Each cell displays a percentage value that is equal to the ratio between the value of that cell compared to the table root value, which is the sum of all the cell values.

If you change the display from a table to either a horizontal or vertical bar chart, or a line graph, only the cell values from the table appear in the chart or graph. The percentages do not appear in the chart or graph.

How to show data as a percentage of a total

Use this procedure to display all data values in the table as percentages or as both percentages and cell values.

1. Right-click a table cell and choose Show Data as.
2. Choose one of the following options:
   - % of column total
   - % of row total
   - % of grand total
3. To display both a cell value and the percentage of the total in a table cell, right-click a table cell and choose Show cell value with % of total. A cell value and a percentage appear in each cell, as shown in Figure 3-6.

167,004,425.00 [40.21 %]	26,186,998.00 [39.80 %]
129,485,990.00 [31.18 %]	19,556,383.00 [29.72 %]
118,827,745.00 [28.61 %]	20,057,157.00 [30.48 %]

Figure 3-6 Displaying a cell value and a percentage in each cell

The table maintains any sorting that applies to the columns and rows axes.

Analyzing data in relative time periods

You can analyze data in relative time periods in the following ways:

- Filter by relative time periods

  You can filter a date category to show only the data items in a specific time period, such as Previous Year to Date or Current Month. This option temporarily hides all other date data items in your table, chart, or graph. If you apply a relative time period filter, the category expands to the appropriate level. For example, if you filter on Current Month, the category expands to the month level.

- Sum over relative time periods

  You can insert a row or column in a date category that calculates the sum of values for a given time period, such as Current Year to Date, or Previous Month. To insert a calculated row or column, you must be working in a table.

How to filter by relative time periods

1. On the rows or columns axis, select a Date category that you want to filter. Choose Calculate➛Relative time periods.
2. In Calculate Relative Time Periods, in Available Time periods, select a time period and choose Add to add your selection to Insert Relative Time Periods. Choose OK.

   All data items that do not meet the filter criteria do not appear. An icon appears in the lower right corner of the category button, indicating that a filter applies.
3. To show a given time period in regular intervals, for example, to show the current month for each of the past five years:
   1. Select Show more than one time period.
   2. Specify the number of intervals and the repeat period.

   If you apply a filter that hides all items in a category, you receive message that indicates that there is no data to display.

How to calculate a sum over relative time periods

1. Select a row or column in a date category.

2. On the toolbar choose Calculate➛Relative time periods.

   Calculate Relative Time Periods appears, as shown in Figure 3-7.

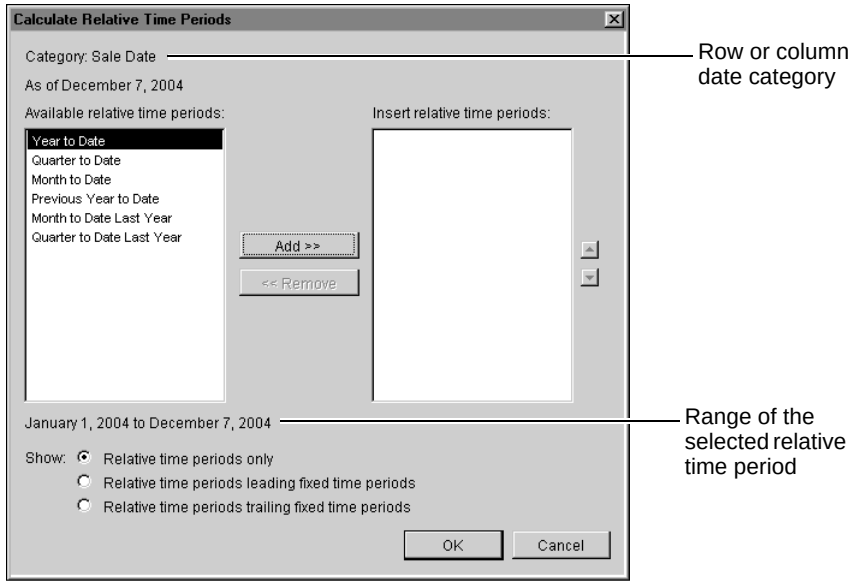

Figure 3-7 Calculate Relative Time Periods dialog box

3 To insert a row or column:

1. In Available relative time periods, select the time period.
2. Choose Add. The time period moves to Insert relative time periods.

To insert additional relative time period calculations, repeat this step.

4 To remove a row or column:

1. In Insert relative time periods, select the time period.
2. Choose Remove. The time period moves to Available relative time periods.

To remove additional relative time period calculations, repeat this step.

5 In Show, select one of the following options:

- To show only the calculated rows or columns, select Only relative time periods.
- To show the calculated rows or columns before all other rows or columns, select Relative time periods leading fixed time periods
- To show the calculated rows or columns after all other rows or columns, select Relative time periods trailing fixed time periods.

Choose OK.

The calculated rows or columns appear in the table. The available time periods are relative to the reference date of the data, which appears on Calculate

Relative Time Periods after As of. If you select Only relative time periods in Show, Actuate Analytics Cube Viewer filters the fixed time rows or columns out of the table. You can later cancel this filter by returning to Calculate Relative Time Periods and selecting another option in Show.

About exception highlighting

You can use exception highlighting to reveal anomalies and significant trends in data. With exception highlighting, you use color to highlight table cells based on the cell value or how the cell value compares to other values. You can apply more than one exception highlighting rule to cells. For example, to analyze sales among different departments, you can display cells with values that are less than $2500 with red background color and cells with values greater than $10,000 with green background color.

If more than one exception highlighting rule applies to the same table cell, the exception highlighting rules apply in the order in which they appear in the Exception Highlighting dialog box. The first exception highlighting rule in the list takes precedence over the second rule, the second rule takes precedence over the third rule, and so on.

How to apply exception highlighting

1. On the toolbar, choose Exception Highlighting.
2. In Exception Highlighting, choose New. A new rule appears in Exception Highlighting, as shown in Figure 3-8.
3. In Rule Properties, specify the following properties:
   - Type a name for a label to identify the exception highlighting rule.
   - Specify the exception condition, operator, and value using the drop-down lists.
     In Rule Properties, if Condition is set to % of row total, % of column total, or % of grand total, then type a percentage value in Value. For example, in Value, type 20 for 20%, rather than 0.2.
   - Specify the font color and fill color.
   - In Apply to, select one of the following options to which to apply the exception highlighting rule:
     - All rows and columns
     - This row or column: <selected row or column name>

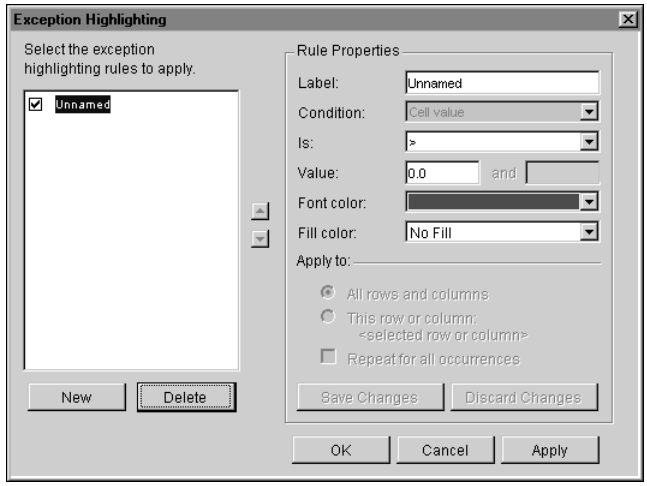

Figure 3-8 Exception Highlighting dialog box

4 Choose Save Changes.

5 Choose OK or Apply.

About exporting detail data to a spreadsheet

Use Export detail data to spreadsheet to retrieve the source data records used to calculate the value of a data element in a table, chart, or graph. The detail data is presented in CSV format in a new browser window.

An BIRT iServer administrator can make the drill to details functionality available in the user interface.

Export detail data to spreadsheet is unavailable when you work offline.

Export detail data to spreadsheet performance affects system performance and database performance. Performance might degrade if you perform multiple export detail data to spreadsheet operations on different data elements during a single cube viewing session.

How to export detail data to a spreadsheet

1 Right-click one of the following data elements:

- Cell in a table
- Bar in a bar chart
- Segment in a pie chart
- Point in a line graph

Select Menu appears.

2 Choose Export detail data to spreadsheet.

Depending on your BIRT iServer configuration, it may take a few seconds or minutes to retrieve the detail data. The detailed source records appear in a new window in CSV format.

Chapter

4

Exporting data

This chapter contains the following topics:

- About exporting data
- Exporting data to a spreadsheet
- Exporting data to a document
- Saving a cube locally for offline viewing
- Saving cube reports
- Sending cube reports by e-mail
- Viewing cubes managed by Microsoft Analysis Services

About exporting data

After you manipulate the data and arrange the view, you are ready to export the data. You can export the data to the following formats:

- CSV file, which contains comma-separated values in text format
- Microsoft Excel
- PDF file for viewing using Adobe Acrobat Reader
- RTF file for viewing using Microsoft Word or a plug-in
- TSV file, which contains tab-separated values in text format

Exporting to PDF or RTF saves or prints the charts. Exporting to a CSV, spreadsheet, or TSV exports only the data, not the charts.

Exporting data to a spreadsheet

You can use the Save as Microsoft Excel option to export the data you view in a cube to a spreadsheet program installed on your computer. Using this option to export the data to a spreadsheet program saves cube data values, row heading labels, and column heading labels in a Microsoft Excel file. You can then work with the data in a Microsoft Excel spreadsheet. Choosing Save as Microsoft Excel exports only the data values that are visible in the table view, chart, or graph, not the values that a hidden or collapsed category contains.

A BIRT iServer System administrator can also enable exporting the detail data values from a cube view to Microsoft Excel.

How to export data to a spreadsheet

1. Choose Save as Microsoft Excel. Save as Microsoft Excel (*.xls) appears.

   For some report servers, a Java security message appears. You must choose Grant to display Save as Microsoft Excel (*.xls).
2. In Save in, select a location for the file.
3. In File name, type a file name with the extension, .slk or .xls. For spreadsheets, the default file format is .slk. Microsoft Excel recognizes both .xls and .slk extensions.
4. If required, in Save as type, select the file type.
5. Choose Save. If you have a spreadsheet plug-in installed with your browser, the spreadsheet appears, but you can only view the document.

The recommended limit for data export to a spreadsheet is 64,000 rows by 256 columns. Exceeding the limit may result in incorrect data transfer.

If you export data to a spreadsheet, you can export functions only if the functions do not rely on a hidden row or column. If a function does rely on a hidden column or row, the function is preserved during exporting, but the function is not translated into cell references.

How to export detail data to a spreadsheet

A BIRT iServer System administrator must enable exporting detail data to a spreadsheet for this functionality to be available. If you are working offline, exporting detail data to a spreadsheet is unavailable.

1. In the data display area, right-click one of the following data elements:
   - Cell in a table
   - Bar in a bar chart
   - Segment in a pie chart
   - Point in a line graph

   A context menu appears.
2. Choose Export detail data to spreadsheet.

   Actuate Analytics Cube Viewer retrieves the detailed data source records from the BIRT iServer System and saves them to a file. Microsoft Excel starts in a new browser window and displays the detail data. Depending on your BIRT iServer System configuration, retrieving and displaying the detail data can take several seconds to several minutes.

Exporting data to a document

You can export data to text documents such as an RTF file, a tab-separated text file, a comma-separated text file, or a PDF file.

How to export data to an RTF file

1. Choose Save as Microsoft Word.
2. In Page Setup, make selections for the following settings:
   - Paper size and orientation
   - Margins
   - Output
     Select Subtitle or Footer to enable typing text or a variable name.
3. Select Show Save as dialog box. Choose OK.

If you do not select this option, Actuate Analytics Cube Viewer saves the file using the default file name and location. The new file overwrites any previous file with the same name in the default location.

4 In Page Range, select the page range. Choose OK.

5 In Save as Microsoft Word (*.doc), in Save in, select a location for the file.

6 In File name, type a name for the file using the extension, .doc.

7 If required, in the Save as type field, select the file type. Choose Save. If you have a document plug-in installed with your browser, the document appears, but you can only view the document.

When you export bar charts and line graphs to an RTF file, Actuate Analytics Cube Viewer sets the scale range for the charted data. The scale range changes to present a meaningful scale for each set of data.

How to export data to a tab-separated text file

Data that you export to a tab-separated file does not include special characters, such as dollar sign ($) and greater than (>).

1 Choose Save➛Save As➛Tab-Separated Values (.tsv).

2 In Save as Separated Values (*.tsv), in Save in, select a location for the file.

3 In File name, type a name for the file using the extension, .txt or .tsv.

4 If required, in the Save as type field, select the file type. Choose Save.

5 Open the saved file using a text editor such as Notepad.

How to export data to a comma-separated text file

Data you export to a comma-separated file does not include special characters, such as a dollar sign ($) and greater than (>).

1 Choose Save➛Save As➛Comma-Separated Values (.csv).

2 In Save as Separated Values (*.csv), in File name, type a name for the file using the extension .txt or .csv.

3 If required, in Save as type, select a file type. Choose Save.

4 If you have a spreadsheet plug-in installed with your browser, and you have the extension .csv on the file name, the spreadsheet appears. If you do not have a spreadsheet plug-in, open the saved file using a text editor such as Notepad.

How to export data to a PDF file

You can export the view to a PDF file for viewing, saving, or printing. You must have Adobe Acrobat Reader or Adobe Acrobat installed to view a PDF file.

1 Choose Save➛Save As➛Adobe PDF (.pdf).

2 In Page Setup, select the settings needed for your document, which include:

- Paper size and orientation.
- Margins.
- In Output, you can select Subtitle and Footer to enable typing text or a variable name, which appears in the document.

3 To enable saving the PDF file before printing, select Show Save as dialog box. Choose OK.

If you do not select Show Save as dialog box, Actuate Analytics Cube Viewer saves the file using the default file name and location. The new file overwrites any previous file with the same name in the default location.

4 In Page Range, select the page range and choose OK.

5 In Save as PDF (*.pdf), in Save as Adobe PDF (*.pdf), type a file name for your document and select a location. Choose Save. The document opens in Adobe Acrobat Reader.

6 To print the file, from the File menu, choose Print.

7 Select your print options. Choose OK.

When you export bar charts and line graphs to a PDF file, Actuate Analytics Cube Viewer sets the scale range for the charted data. The scale range changes to present a meaningful scale for each set of data.

Saving a cube locally for offline viewing

You can save a cube locally on your computer's hard disk, which enables you to work offline without the need for a network or an Internet connection. BIRT iServer System saves the title of the view on the web server.

When you work offline, features that require access to network or server resources are not available. For example, drilling through to detail data and saving a cube report in an Encyclopedia volume are not available.

How to save a cube locally

1 On the toolbar, choose Save➛Work Offline.

2 In Save Offline, type a name for your cube in File name. Choose Save. The cube opens in a fresh browser window. The address bar shows the location of the saved cube.

3 To quickly access the cube in the future, bookmark the cube in your browser window.

Saving cube reports

In Actuate Analytics Cube Viewer, the Reports drop-down list displays the cube reports available for viewing. You can also use the Reports drop-down list to overwrite a modified cube report or to save a modified cube report as a new report. An asterisk (*) next to a cube report in the Reports drop-down list indicates that the file has been modified.

On an Encyclopedia volume, you can save a maximum of thirty cube report (.cvw) files for each cube (cb4) file. To manage cube reports, use Actuate Management Console or Information Console. For more information about managing cube reports, see *Managing an Encyclopedia Volume* and *Using Information Console.*

How to save a cube report

1. To overwrite a cube report in the Encyclopedia volume with the modified cube report:
   1. On the toolbar, choose Reports➛Save, as shown in Figure 4-1.

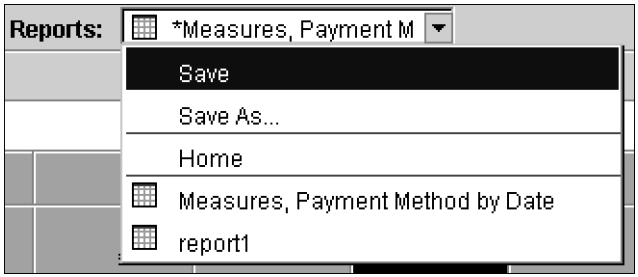

Figure 4-1 Saving a cube report

   A message stating that the report already exists in the Encyclopedia volume appears.

   2. In the message, choose OK.
2. To save a new cube report to the Encyclopedia volume:
   1. Choose Reports➛Save As.
   2. In Save As, type an appropriate name for the report. Choose OK. The new report appears in the Reports drop-down list.

Sending cube reports by e-mail

You can send a cube report via e-mail to a person or group of people. The cube report contains the current table, chart, or graph, and is delivered as a document

attached to an e-mail message. The send mail feature is available only if your machine has the following applications:

- Microsoft Internet Explorer with Microsoft JVM enabled
- Microsoft Outlook as the e-mail client with MAPI enabled

How to send a report

1. On the toolbar, choose Collaborate➛Send report through mail client.

   Select from the following report formats:

   - PDF
   - Word
   - Excel
   - Tab-Separated Values
   - Comma-Separated Values
2. In Page Setup, select page setup options. Choose OK.
3. In Message, in your e-mail, type your e-mail address.
4. In To and CC, type the e-mail addresses of the people to whom you want to send the report.
5. In Subject, type an appropriate subject for your message.
6. Type a message to send with the report.
7. Choose Send. The report is sent to the e-mail addresses listed.

Viewing cubes managed by Microsoft Analysis Services

Actuate Analytics option supports viewing cubes managed by Microsoft Analysis Services using Actuate Analytics Cube Viewer. The following features are not available when working with Microsoft Analysis Services:

- Drill to detail data
- Expand to level
- Export data to a spreadsheet
- Filter by pattern
- Find
- Intersection and union functions that use a distinct count measure

- Relative time periods
- Work offline
- Percentage calculations

  For example, percentage of total, percentage of row total, percentage of column total, and performance index are not available.

The following Actuate Analytics Cube Viewer features are restricted when working with cubes managed by Microsoft Analysis Services:

- Arranging categories

  Adding a category to an axis does not automatically expand the category to the first level.
- Expand or collapse

  All instances of a category item expand or collapse simultaneously.
- Hide

  You cannot apply Hide to the unselected rows or columns.
- Hide row or column selection

  Shift Select is not available to select a range of rows or columns.
- Selection

  You can select only one item from a category on the category bar at a time.
- Show totals

  Totals always appear, if available in the cube, and are shown in the leading position.
- Sort

  Category items are always sorted independent of their position in the category hierarchy.

Chapter

5

Customizing Actuate Analytics Cube Viewer

This chapter contains the following topics:

- About customizing Actuate Analytics Cube Viewer
- Exporting detail data to a spreadsheet
- Customizing the graphic resources
- Locating the branding kits
- Customizing the About box
- Understanding Actuate Analytics Cube Viewer localization limitations
- Localizing the user interface
- Unsupported changes

About customizing Actuate Analytics Cube Viewer

This chapter describes how a BIRT iServer System administrator can customize Actuate Analytics Cube Viewer by completing the following tasks:

- Exporting detail data to a spreadsheet
- Customizing the graphic resources
- Customizing the About box
- Localizing the user interface

Exporting detail data to a spreadsheet

From a cube view, you can choose Save as Microsoft Excel to save the visible cube data values, row heading labels, and column heading labels in Microsoft Excel. You can then work with the data in Microsoft Excel.

A BIRT iServer System administrator can also enable the exportation of detail data to Microsoft Excel. For example, a user can right-click a table cell, pie chart segment, or bar chart bar and choose to export the source data for that data element to a spreadsheet.

How to enable exporting detail data to a spreadsheet for Management Console and Information Console

1. In a text editor that supports UTF-8 encoding, open web.xml:
   - For Management Console, to enable Export detail data to spreadsheet, open \Program Files\Actuate11\iServer\servletcontainer\mgmtconsole \WEB-INF\web.xml.
   - For Information Console, to enable Export detail data to spreadsheet, open \Program Files\Actuate11\iPortal\webapps\iportal\WEB-INF\web.xml.

   Web.xml contains the following code:

```
<context-param>
   <!--
      Enables or disables the drill to detail functionality in
         the cube viewer.
      Overrides the setting in the cube design.
   -->
   <param-name>ANALYTICS_CUBE_VIEW_RECORDS</param-name>
   <param-value>false</param-value>
</context-param>
```

2 To enable Export detail data to spreadsheet, set the parameter value to true:

```
<param-value>true</param-value>
```

3 Save the file.

4 To view the change, restart the Apache Tomcat for Actuate Information Console service, and close all browser instances before you start another applet.

Customizing the graphic resources

Files that are associated with Actuate Analytics Cube Viewer, such as applet archives and images, are in the analytics folder in the Information Console and Management Console application root folders, as shown in Table 5-1.

Table 5-1 Paths to Actuate Analytics Cube Viewer files

Application	Path to Actuate Analytics Cube Viewer files
Actuate Information Console	C:\Program Files\Actuate11\iPortal\analytics
Management Console	C:\Program Files\Actuate11\iServer \servletcontainer\mgmtconsole\analytics

Table 5-2 lists the files that you can modify or replace to customize Actuate Analytics Cube Viewer.

Table 5-2 Files to use to customize Actuate Analytics Cube Viewer

File name	Pixel coordinates	Size (width x height) in pixels	Contents and usage
dbimage.gif	0, 210	250 x 50	Logo that appears when Actuate Analytics Cube Viewer launches.
dbimage.gif	102, 67	12 x 12	Icon that appears at the upper left corner of the Actuate Analytics Cube Viewer title bar.
AboutBox .properties			Text that appears in the Actuate Analytics Cube Viewer title bar.
collab-header.gif		695 x 65	Header that appears on the e-mail message when you e-mail a cube report.

(continues)

Table 5-2 Files to use to customize Actuate Analytics Cube Viewer (continued)

File name	Pixel coordinates	Size (width x height) in pixels	Contents and usage
collab-footer.gif		695 x 50	Footer that appears on the e-mail message when you e-mail a cube report.

Locating the branding kits

To customize the About box and localize Actuate Analytics Cube Viewer, you work with the following branding kits:

- Sun Microsystems JDK 1.4.1 or later

  The JDK is available at the following URL:

  `http://java.sun.com/products/`

- Microsoft Cabinet Software Development Kit

  The Microsoft Cabinet Software Development Kit is available at the following URL:

  `http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dncabsdk/html/cabdl.asp`

Customizing the About box

When you enable Actuate Analytics option for BIRT iServer System, the About box looks like the one in Figure 5-1.

A BIRT iServer System administrator can change some information that appears in the About box, using the following resources:

- AboutBox.properties, which is in resource.jar and resource.cab
- The Sun Microsystems jar.exe utility, which is in \JDK1.4.1\bin
- cabarc.exe, which is part of the Microsoft Cabinet Software Development Kit

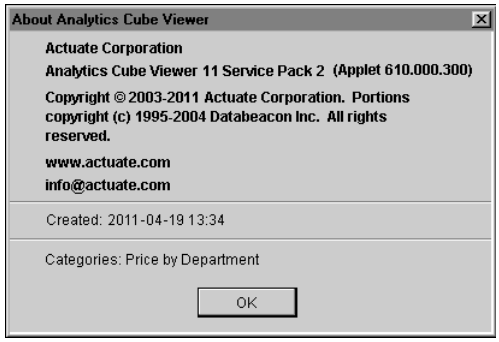

Figure 5-1 The About box

How to customize the About box

1. Copy the resource.jar and resource.cab files from the following locations:
   - For a Management Console installation, resource.jar and resource.cab are in \Program Files\Actuate11\iServer\servletcontainer\mgmtconsole \analytics.
   - For an Information Console installation, resource.jar and resource.cab are in \Program Files\Actuate11\iPortal\iportal\analytics.
2. Paste resource.jar and resource.cab in a new folder:

   ```
   C:\Temp\Analytics
   ```
3. Modify the string values for the About box:
   1. At the command prompt, change directories to C:\Temp\Analytics.
   2. Verify that the folder C:\Temp\Analytics\com does not exist.
   3. At the command prompt, type:

      ```
      <path to jdk>\bin\jar.exe xvf resource.jar
      ```

      The string resource files and AboutBox.properties files are extracted to com\in\databeacon\resources.
   4. Open AboutBox.properties in a text editor, such as Notepad.

      AboutBox.properties contains the keys and string values, as shown in Table 5-3.

Table 5-3 Modifying AboutBox.properties to customize the About box

Key name	Default string value	Description
CUSTOMIZED_COMPANY_NAME	Actuate Corporation	Company name in About Box.

(continues)

Table 5-3 Modifying AboutBox.properties to customize the About box (continued)

Key name	Default string value	Description
CUSTOMIZED_PRODUCT_NAME	Analytics Cube Viewer	Product Name in About Box.
CUSTOMIZED_TITLE_BAR	Actuate Analytics Cube Viewer	About box title bar text.
CUSTOMIZED_RELEASE_NUMBER	11 Service Pack 2	Product release number.
CUSTOMIZED_COPYRIGHT_YEAR	2003-2011	Copyright year in copyright message.
CUSTOMIZED_WEB_ADDRESS	www.actuate.com	Company web address.
CUSTOMIZED_EMAIL_ADDRESS	info@actuate.com	Company e-mail address.
CUSTOMIZED_COPYRIGHT		Company copyright. Actuate and Databeacon copyrights should always appear after this message.
CUSTOMIZED_EXPORT _FILENAME	analytics	Default export file.
CUSTOMIZED_TITLE_OFFSET	2	Offset of the title bar from the left side of the box.

5. To customize the About box text, modify the string values. Do not change the key names.
6. Save the customized AboutBox.properties file in \com\in\databeacon \resources.

4. Create new JAR and CAB files:
   - To create a new JAR file, at the command prompt, type:

     ```
     <path_to_jdk>/bin/jar.exe cvf  resource.jar  com\in
        \databeacon\resources\*.*
     ```

   - To create a new CAB file, at the command prompt, type:

     ```
     <path_to_cab_utility>/cabarc.exe -r -p -s 6144 n resource.cab
        com\in\databeacon\resources\*.*
     ```

5. Copy the customized resource.jar and resource.cab files and paste them in the installation directories from which you copied them in step 1.
6. To view the changes in AboutBox.properties in the web browser, close the browser, then restart it.

Understanding Actuate Analytics Cube Viewer localization limitations

Before you begin the process of localizing the user interface for Actuate Analytics Cube Viewer, you should review the following localization limitations:

- You cannot use a comma as the decimal separator in the Filter by Value dialog box with the French numeric format.
- Multilingual data is not always displayed correctly in dialogs.
- The following languages are not supported:
  - Arabic
  - Hindi
  - Hebrew
  - Farsi
  - Urdu
  - Japanese Gaiji
- Asian character input is supported only with the Microsoft virtual machine.
- Subcategory names cannot be sorted if they contain non-Latin 1 characters.
- If the About box uses a localized date format and you build the cube on a BIRT iServer System running in a different locale, the About box displays the date using US English format.
- The workstation locale setting determines the fonts available for display.

  For example, if the report contains Chinese characters, you must set the workstation locale to Chinese to display these characters correctly.
- If Actuate Analytics Cube Viewer encoding does not match the source data encoding, the Drill to detail generation of source data records fails.
- Actuate Analytics Cube Viewer does not display localized AM/PM symbols or date formats.
- Cubes managed by the Microsoft Analysis Service do not display with localized decimal and thousands separators.
- If a cube contains Thai characters and the JVM is running on a Solaris platform, you must set the locale of the Solaris machine to US English to build the cube.

  The locale parameter for the cube profile is changed to US English.
- Right to left character display is not supported.

- If the JVM runs on a Solaris platform or a Sun VM runs on a Microsoft Windows platform, Thai dates use the Buddhist calendar, not the Gregorian calendar.

Localizing the user interface

A BIRT iServer System administrator can customize Actuate Analytics Cube Viewer to display localized strings in the user interface. A BIRT iServer System administrator can set the user interface to display the following languages:

- English (United States)
- French
- German
- Indonesian
- Japanese
- Korean
- Simplified Chinese
- Spanish
- Thai
- Traditional Chinese

To localize or customize the strings, modify the files that are listed in Table 5-4. These files are in resource.jar and resource.cab.

Table 5-4 Localized string files

Language	Localized string file name
English (United States)	StringBundle_en_US.properties
French	StringBundle_fr_FR.properties
German	StringBundle_de_DE.properties
Indonesian	StringBundle_id_ID.properties
Japanese	StringBundle_ja_JP.properties
Korean	StringBundle_ko_KR.properties
Simplified Chinese	StringBundle_zh_CN.properties
Spanish	StringBundle_es_ES.properties
Thai	StringBundle_th_TH.properties
Traditional Chinese	StringBundle_zh_TW.properties

How to localize the user interface

You need access to the Sun Microsystems jar.exe utility and Microsoft Cabinet Software Development Kit to complete this procedure.

1. Copy the resource.jar and resource.cab files from the following locations:
   - For Management Console that uses Apache Tomcat for Actuate Information Console service, resource.jar and resource.cab are in \Program Files\Actuate11\iServer\servletcontainer\mgmtconsole\analytics.
   - For an Information Console installation, resource.jar and resource.cab are in \Program Files\Actuate11\iPortal\iportal\analytics.
2. Paste resource.jar and resource.cab in C:\Temp\Analytics.
3. Modify the string bundle files:
   1. Choose Start➛Programs➛Command Prompt.
   2. Change directories to C:\Temp\Analytics.
   3. At the command prompt, type:

      ```
      <path to jdk>\bin\jar.exe xvf resource.jar
      ```

   4. Using a text editor, modify the string bundle files.

      If your modifications include characters that are encoded with more than one byte, such as Chinese and Japanese, you must convert the native encoding to an encoding that is compatible with Actuate Analytics Cube Viewer.

      To convert the encoding, use native2ascii.exe, which is available as part of the Sun Microsystems JDK at the following URL:

      ```
      http://java.sun.com/products/
      ```

   5. To customize the string bundle files, modify the string values. Do not change the key names.
   6. Save the customized string bundle files in \com\in\databeacon \resources.

      Follow Actuate's naming conventions when you save the string bundle:

      ```
      StringBundle_<languageCode>_<countryCode>.properties
      ```

      where

      - <languageCode> is a valid ISO Language Code. These codes are lowercase, two-letter codes as defined by ISO-639.
      - <countryCode> is a valid ISO Country Code. These codes are uppercase, two-letter codes as defined by ISO-3166.

4 Create new JAR and CAB files:

- To create a new JAR file, at the command prompt, type:

```
<path_to_jdk>/bin/jar.exe cvf  resource.jar  com\in
   \databeacon\resources\*.*
```

- To create a new CAB file, at the command prompt, type:

```
<path_to_cab_utility>\cabarc.exe -r -p -s 6144 n resource.cab
   com\in\databeacon\resources\*.*
```

5 Copy the customized resource.jar and resource.cab files and paste them in the installation directories from which you copied them in step 1.

6 To view the changes in AboutBox.properties in the web browser, close the browser, then restart it.

Unsupported changes

Actuate does not support changes to the following information:

- Copyright information in the About box
- The security warning message, as shown in Figure 5-2

Figure 5-2 Security warning message

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