



## Pentaho User Console 3.7.0 Guide



This document is copyright © 2011 Pentaho Corporation. No part may be reprinted without written permission from Pentaho Corporation. All trademarks are the property of their respective owners.

## Help and Support Resources

If you have questions that are not covered in this guide, or if you would like to report errors in the documentation, please contact your Pentaho technical support representative.

Support-related questions should be submitted through the Pentaho Customer Support Portal at <http://support.pentaho.com>.

For information about how to purchase support or enable an additional named support contact, please contact your sales representative, or send an email to [sales@pentaho.com](mailto:sales@pentaho.com).

For information about instructor-led training on the topics covered in this guide, visit <http://www.pentaho.com/training>.

## Limits of Liability and Disclaimer of Warranty

The author(s) of this document have used their best efforts in preparing the content and the programs contained in it. These efforts include the development, research, and testing of the theories and programs to determine their effectiveness. The author and publisher make no warranty of any kind, express or implied, with regard to these programs or the documentation contained in this book.

The author(s) and Pentaho shall not be liable in the event of incidental or consequential damages in connection with, or arising out of, the furnishing, performance, or use of the programs, associated instructions, and/or claims.

## Trademarks

Pentaho (TM) and the Pentaho logo are registered trademarks of Pentaho Corporation. All other trademarks are the property of their respective owners. Trademarked names may appear throughout this document. Rather than list the names and entities that own the trademarks or insert a trademark symbol with each mention of the trademarked name, Pentaho states that it is using the names for editorial purposes only and to the benefit of the trademark owner, with no intention of infringing upon that trademark.

## Company Information

Pentaho Corporation  
Citadel International, Suite 340  
5950 Hazeltine National Drive  
Orlando, FL 32822  
Phone: +1 407 812-OPEN (6736)  
Fax: +1 407 517-4575  
<http://www.pentaho.com>

E-mail: [communityconnection@pentaho.com](mailto:communityconnection@pentaho.com)

Sales Inquiries: [sales@pentaho.com](mailto:sales@pentaho.com)

Documentation Suggestions: [documentation@pentaho.com](mailto:documentation@pentaho.com)

Sign-up for our newsletter: <http://community.pentaho.com/newsletter/>

# Contents

Introduction.....	5
First Steps.....	6
Logging into the Pentaho User Console.....	6
Navigating the Pentaho User Console.....	6
Creating a New Solution Folder.....	7
Deleting a Solution Folder.....	8
Using My Workspace.....	8
Working With Ad Hoc Reports.....	9
Creating An Ad Hoc Report.....	9
Editing an Existing Report.....	10
Deleting a Report.....	10
Running a Report.....	10
Creating a New Analyzer Report.....	12
Simple Conditional Formatting of Measures.....	13
Conditional Formatting Types.....	13
Enhancing the Pentaho Analyzer Report.....	13
Adding Filters to an Analyzer Report.....	14
Adding Query Parameters to Analyzer Reports.....	14
Exporting the Analyzer Report.....	14
Filtering by Member Properties.....	15
Configuring Drill-Down Links.....	15
Displaying Data in a Dashboard.....	16
Creating a New Dashboard.....	16
Working with the Chart Designer.....	16
Adding Data to Your Chart.....	18
Working with Pie Charts.....	21
Working with Dial Charts.....	22
Correcting Scaling Issues.....	23
Rotating Chart Axis Labels.....	23
Editing a Chart.....	23
Adding a Data Table to a Dashboard.....	23
Updating the Data Table Display.....	24
Displaying a Report Designer (.prpt) File in a Dashboard.....	25
Displaying an .xaction File in a Dashboard.....	26
Displaying a Web site in a Dashboard.....	27
Working with Parameters.....	27
Assigning Parameters in the Query Editor.....	28
Working with Filters.....	29
Creating a Static List of Options.....	29
Creating a SQL List.....	30
Creating a Metadata List.....	30
Editing Filters.....	31
Setting the Refresh Interval.....	31
Linking Analyzer Filters to Dashboard Parameters.....	31
Saving Your Dashboard.....	33
Editing Your Dashboard.....	33
Adding Content to a Dashboard Using Drag-and-Drop.....	33
Adjusting Whitespace in Dashboard Panels.....	34
Linking to Content in a Dashboard.....	35
Linking Charts and Data Tables.....	35
Scheduling Reports.....	37
Scheduling a Report.....	37
Quartz Cron Attributes.....	37
Deactivating Schedules.....	38



# Introduction

---

The Pentaho BI Platform is a Web-based framework that leverages elements of Pentaho Analysis and Pentaho Reporting to provide easy-to-use tools for creating and sharing Pentaho Analyzer reports, ad hoc reports, and dashboards. It is the heart of the BI Suite, which also includes powerful software to prepare your data and create detailed reports.

The BI Platform Enterprise Edition includes two graphical user interfaces: The Pentaho User Console, which helps you discover patterns, trends, and other hidden information about your data; and the Pentaho Enterprise Console, which gives sysadmins, IT managers, CIOs, and database administrators fine-grained control over every aspect of BI Platform configuration, management, and security.

The purpose of this guide is to teach business users how to use the Pentaho User Console. The instructions below assume that the BI Platform has been properly configured for users, roles, and data sources through the Pentaho Enterprise Console.

# First Steps

---

Your system administrator, IT manager, or supervisor should have provided you with a Web address and login credentials for the Pentaho User Console. If not, now is the time to inquire about them.

## How to Log Into the Pentaho User Console

---

Follow these steps to log into the Pentaho User Console:

1. Open a Web browser and type in the address of the Pentaho server.  
You'll see an introductory screen with a **Login** button in the middle.
2. Click **Login**.  
A login-related pop-up appears.
3. Type your user name and password in the appropriate fields and click **Login**.

You are now logged into the Pentaho User Console, and ready to start creating and running reports and Pentaho Analyzer reports.

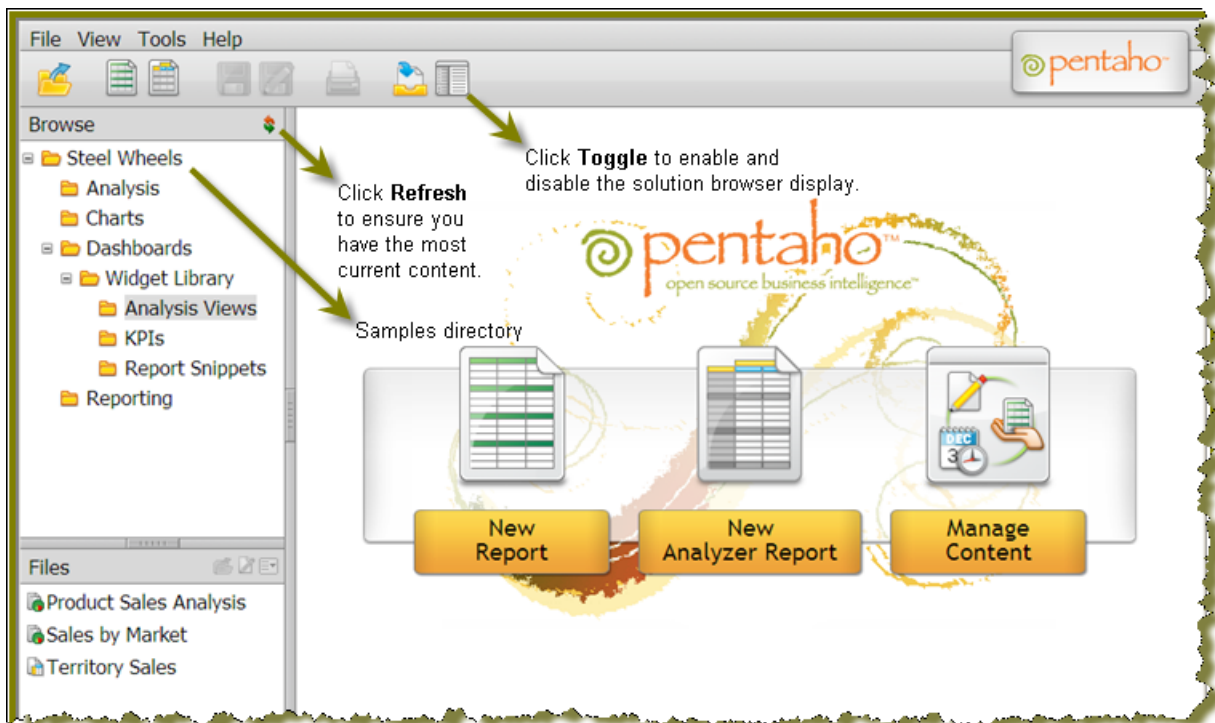



## Navigating the Pentaho User Console

---

The Pentaho User Console was designed to be intuitive to users accustomed to standard file managers like Windows Explorer, and Web browsers like Firefox.

The first thing you will see when logging in is the quick launch, shown below:



 **Note:** If you do not have a Pentaho Dashboards Enterprise Edition entitlement, the **New Dashboard** button will instead be **Manage Content**, which will open a dialog box that offers quick availability to the edit, share, and schedule functions for existing content.

Click one of the three icons in the center of the screen to create a new ad hoc report, Pentaho Analyzer report, or dashboard.

The button bar near the top of the page also contains icons for starting new ad hoc reports, Pentaho Analyzer reports, and dashboards, along with a button to print the current report or Pentaho Analyzer report, and to open a previously saved solution.

The menu above the button bar performs these same functions, plus administrative actions if you are logged in as an administrator, and also offers access to My Workspace and external links to help and support resources.


The three buttons on the quick launch page appear when you log onto the Pentaho User Console for the first time, and when you close all tabs in the solution browser.


You can change views between My Workspace and the solution browser at any time by clicking the rightmost icons in the top button bar, or through the **View** menu.

The navigation pane on the left allows you to browse through your existing solution folders. Solutions are content files such as dashboards and reports inside the folder. You can create and delete solution folders by right-clicking inside the navigation pane. You can also examine information associated with solution folder contents by right-clicking and selecting **Properties**.


## Creating a New Solution Folder

Follow the instructions below to create a new solution folder in which to save solution (content) files such as dashboards, ad hoc, and analyzer reports.

1. Click  (Toggle Browser) so that you can see navigation pane (Browse) on the left.
2. Scroll down to the end of the list of solution folders and right-click to display the **New Folder** dialog box.

 **Note:** If you want to create a sub-folder inside an existing solution folder, right-click on the existing folder and select **New Folder**.


3. In the **New Folder** dialog box, type a name for your folder and click **OK**.


 **Note:** The repository is refreshed. This action may take a moment.

The new folder appears in the navigation pane.

## Deleting a Solution Folder

Follow the instructions below to delete a solution folder.

1. Click  (Toggle Browser) so that you can see navigation pane (Browse) on the left.
2. Scroll down to the solution folder you want to delete, right-click, and select **Delete**.  
You will be asked to confirm your delete request.
3. Click **OK**.

 **Note:** The repository is refreshed. This action may take a moment.

The folder disappears from the navigation pane.

## Using My Workspace

My Workspace is a graphical overview of the reports and Pentaho Analyzer reports you've created and scheduled. Click the triangle on the left side of each category to see the elements it contains.

Reports that you've created or have access to will have options to the right of each report listing to suspend or run them, and schedules have options to suspend, run, or delete them.

### Waiting

This category lists all private schedules that will run in the future. Clicking **Cancel** will delete the schedule. If you want to suspend a schedule, you should use the **Suspend** function of the My Schedules list instead.

### Complete

Each report that has been run via a schedule will show up in this list. Every time the schedule executes, it overwrites that report's previous entry in the Complete list.

### My Schedules

This category contains a comprehensive list of your private schedules, including those that are not currently waiting to run. This will be identical to your Waiting list unless you have suspended any of your schedules.

### All Schedules

This is a combined list of public and private schedules under your control. It is only viewable by administrator-level users.

### Public Schedules

This is a list of all public schedules set by the administrator from the Pentaho Enterprise Console. You can run a public schedule manually, but you cannot change its interval through the Pentaho User Console.



# Working With Ad Hoc Reports

---

The procedures below explain everything you need to know about working with ad hoc reports in the Pentaho User Console.



**Note:** The ordering of all of the list elements in the ad hoc reporting interface is determined by the data source's metadata, which is created and modified through Pentaho Metadata Editor.

## Creating An Ad Hoc Report

---

Pentaho Report Designer is the most comprehensive report design tool in the Pentaho BI Suite Enterprise Edition, but for preliminary report exploration or to generate a report quickly use the ad hoc report wizard built into the platform. Ad hoc reporting helps you quickly identify and group interesting and relevant data, apply constraints to it, and generate a report. The resulting reports are viewable through the built-in preview feature; through a Pentaho Reporting-based Web application; or as a standalone PDF, XLS, CSV, or HTML file. To create an ad hoc report, follow these steps:

1. In the **File** menu, select the **New** sub-menu, then click **Report**.  
The ad hoc reporting wizard appears in a new solution browser tab.
2. In the first step of the wizard, select a **Data Source**. The **Details** table will populate with available tables and columns.  
Data Sources are defined by your administrator.
3. In the **Apply a Template** field, select a predefined report template. A thumbnail preview of the template will appear in the **Template Details** field.  
A template specifies a variety of properties in the report that affect its appearance, like font size and background colors for various report elements.
4. Click **Next**.
5. In the **Available Items** list, select the business columns that you want to see in your report, and click and drag them to the **Groups**, **Details**, or **Filters** lists on the right. You must have at least one business column in the Details list for a report to be valid.  
You can select multiple items by holding down the **Ctrl** key. If you want to delete an item, click the **X** in the upper right corner of the field the item is in; if you need to move an item up or down in the list or to other groups, click the up or down arrows at the top of the **Groups** list.
6. In the **Preview as** drop-down box, select a preview format, then click **Go**. When the preview appears in a new browser window or tab, verify that it contains the data you selected and that it's presented appropriately.
7. Click **Next** when you're ready to start refining your report.
8. Click the **Level 1** item in the **Groups** list. The **General** options list will appear on the right.
9. Modify the level options to your preference.  
By default, the **Show Group Summary** checkbox is selected; uncheck it if you do not want to see group summary information. The default name for the group summary uses the group name as a variable; you can change this if you like. The options in the **Formatting** lists determine where in the report the information in the selected level will appear.
10. Repeat the above two procedures for other levels that you configured earlier.
11. Click the first item in the **Details** field. Three new options lists will appear on the right.
12. In the **Formatting** field, select the numerical formatting and alignment options appropriate for your situation.
13. In the **Calculation** list, select the function you want to use to refine the element you selected. For instance if you selected a Business Column that contains product prices, clicking on **Sum** would add all of the prices together.
14. Click **Add a Constraint**. The field will expand to show the name of the element, a conditional drop-down box, a text field, and a checkbox.
15. Select a conditional symbol from the drop-down box, then type in a value in the text box.  
This specifies the exact constraint you are applying to the element, meaning that you are decreasing the amount of detail by adding a higher level of specificity.
16. Add further constraints as necessary by clicking **Add a Constraint** again. Remove a constraint by clicking its checkbox and then clicking the **X** at the top of the list.

If there is more than one constraint in the list, you will have the option of adding conditional operators for the constraints via a drop-down box to the left of each item in the list, meaning you can specify AND or OR conditionals on each constraint.

17. In the **Sort Columns** field, click **Add** to specify how each element in the Details list should be sorted, then select the sort order from the drop-down box.

18. Repeat the above steps for any other items in the **Details** list.

19. Click the first item in the **Filters** list. The **Constraints** list will appear on the right.

20. Add constraints as necessary, per the above instructions for adding constraints to items in the Filters list.

For string-type Business Columns, you will have the option of searching the database tables that apply to the column. When this option is available, it is accessible via a magnifying glass icon to the right of the text box.

21. Repeat the above instructions for additional filters.

22. Click **Next** to move on to the next screen.

23. To set the header, footer, description, paper type, and page orientation, change the values accordingly.

PDF is the only output type that has a concept of a page, so the **Page** portion of the **Header** and **Footer** sections only applies to PDFs.

24. Click either the **Save** or **Save As** button to save your report, or select **Save** from the **File** menu. In the ensuing file dialog, navigate to the location you want to save the report to, type in a filename for the report, and click the checkboxes next to the file formats you want to save in.

You can continue to modify your report after it's been saved; just click the **Save** button to update the saved report after you've made changes.



**Note:** The Save dialog does not list output types; instead, it pulls the currently selected preview output type. By default that is HTML, so that will also be the default format to save as. If you want to save as a different output type, select it from the Preview drop-down list before saving.

You now have a complete ad hoc report in the format or formats you specified.

## Editing an Existing Report

---

After you've created and saved a report, you can go back to it later and change its properties.

1. In the upper left pane, navigate to the location of your report. It should appear in the lower left list when you've selected the proper directory.
2. In the lower left pane, right-click the report you want to edit, then click **Edit** in the popup menu.

The ad hoc report wizard will open in a new tab.

## Deleting a Report

---

After you've created and saved a report, you can delete it using the Explorer-like Pentaho User Console file browser.

1. In the left pane, navigate to the location of your report. It should appear in the lower left list when you've selected the proper directory.
2. Right-click the report you want to eliminate, then click **Delete** in the popup menu.

The selected report will be removed from your computer. Any associated artifacts will not be removed, so some manual cleanup may be required if you want to remove more than just the report.

## Running a Report

---

After you've created and saved a report, you can execute it manually at any time.

1. In the left pane, navigate to the location of your report. It should appear in the lower left list when you've selected the proper directory.
2. Right-click the report you want to run, then click **Run** in the context menu.

You can alternatively double-click on a report to run it.

3. In the **Run** sub-menu, select one of the following options: **New Tab**, **New Browser Window**, or **Background**.

The options will open the report in a new tab, a new browser window (which may open in a new browser tab, depending on which Web browser you are using and how it is configured), or it will run in the background and inform you when the report is ready to view. The popup dialogue that informs you of the report's completion will ask you if and where you would like to display it.

The selected report will be executed, and display according to the option you selected.


# Creating a New Analyzer Report

Pentaho Analyzer reports are similar to standard reports, except that they are designed to be completely interactive and dynamic. Unlike standard reports which tend to be static or minimally interactive after they are created, Pentaho Analyzer reports allow you to explore your data dynamically and to drill down into the data to discover previously hidden details.


In this exercise, you will be creating a report that displays the actual versus budgeted expenses by region for each department in the fictitious Steel Wheels company (SampleData).

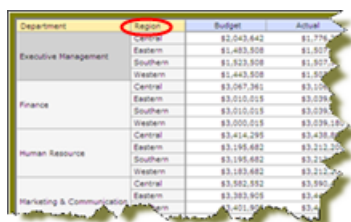
Follow the instructions below to start creating the Analyzer report.

1. In the Pentaho User Console menubar, go to **File -> New** and select **Analyzer Report**.  
Pentaho Analyzer opens.
2. Select your **Schema** and **Cube** from the corresponding lists. For the purposes of this exercise, select **SampleData** and **Quadrant Analysis**, respectively.

 **Note:** The list of available schemas and cubes are provided by your administrator. A **schema** is the structure of the relational database and includes tables, fields, views, and more. A **cube** is a data structure that allows information in a database to be analyzed quickly and from multiple perspectives.

3. In the list of fields, click and drag **Department** to the **Analyzer** workspace in the left pane.  
The **Department** column appears in the workspace.
4. In the list of fields (on the right), click and drag **Department** to the **Analyzer** workspace in the left pane.  
The **Department** column appears in the workspace.
5. Right-click the **Budget** column to display the **Edit Column** dialog box. Select **Column Name and Format -> Currency (\$)** from the **Format** list so that your values display as dollar amounts. Repeat this step for the **Actual** column.
6. Click and drag the **Region** column to the report. (Read the note below.)

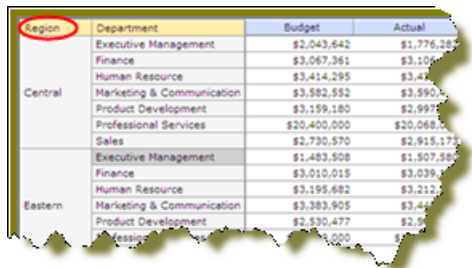
 **Note:** Notice that the **Region** column appears in the workspace; however, you want this column to be the first column in the report.






Department	Region	Budget	Actual
Executive Management	Central	\$2,043,642	\$1,776,384
	Eastern	\$1,483,508	\$1,507,580
	Southern	\$1,523,508	\$1,507,580
	Western	\$1,443,508	\$1,507,580
Finance	Central	\$3,067,361	\$3,106,800
	Eastern	\$3,010,015	\$3,039,500
	Southern	\$3,010,015	\$3,039,500
	Western	\$3,000,015	\$3,039,500
Human Resource	Central	\$3,414,295	\$3,429,500
	Eastern	\$3,195,682	\$3,212,500
	Southern	\$3,195,682	\$3,212,500
	Western	\$3,183,682	\$3,212,500
Marketing & Communication	Central	\$3,582,552	\$3,590,000
	Eastern	\$3,383,905	\$3,444,000
	Southern	\$3,383,905	\$3,444,000
	Western	\$2,401,800	\$2,400,000

7. In the workspace, click and drag the **Region** column to the left of the **Department** column.

Pentaho Analyzer is designed to provide you with great flexibility when designing the visual structure of your report.



Region	Department	Budget	Actual
Central	Executive Management	\$2,043,642	\$1,776,384
	Finance	\$3,067,361	\$3,106,800
	Human Resource	\$3,414,295	\$3,429,500
	Marketing & Communication	\$3,582,552	\$3,590,000
Eastern	Executive Management	\$1,483,508	\$1,507,580
	Finance	\$3,010,015	\$3,039,500
	Human Resource	\$3,195,682	\$3,212,500
	Marketing & Communication	\$3,383,905	\$3,444,000
Southern	Executive Management	\$1,523,508	\$1,507,580
	Finance	\$3,010,015	\$3,039,500
	Human Resource	\$3,195,682	\$3,212,500
	Marketing & Communication	\$3,383,905	\$3,444,000
Western	Executive Management	\$1,443,508	\$1,507,580
	Finance	\$3,000,015	\$3,039,500
	Human Resource	\$3,183,682	\$3,212,500
	Marketing & Communication	\$2,401,800	\$2,400,000

8. At this point you have a functioning report and you can view your data in chart form. Click  (Switch to Chart Format) to examine your report data in a chart format. The default display is a bar chart but if you click  (Choose Chart Type) you can select a different chart type to display your data.
9. Save your report before continuing the exercise. In the Pentaho User Console, click  (Save As). When the **Save As** dialog box appears, save your report as **Regional Expense Report** under `/steel wheels/analysis` and click **OK**.

## Simple Conditional Formatting of Measures

Conditional formatting in the Analyzer data grid means that cells will be physically affected by the data they contain. The most common form of conditional formatting is stoplight reporting, where cell backgrounds are colored red, green, or yellow depending on user-defined thresholds. Analyzer offers some simple pre-defined methods of conditionally formatting numeric data. Follow the directions below to implement conditional cell formatting.

1. Right-click a measure in the grid, then select **Conditional Formatting** from the context menu.  
A sub-menu with conditional formatting types will appear.
2. Select your preferred number format from the list.  
Consult [Conditional Formatting Types](#) on page 13 for more information on simple conditional formatting types.

The analyzer report will refresh and apply the formatting choice you specified.




### Conditional Formatting Types

Indicator Type	Description
Color scale	The background cell color will be shaded according to the value of the cell relative to the highest and lowest recorded values in that measure. There are several color progressions to choose from.
Data bar	The cell background is partially filled with a solid color proportional to the scale of the cell's value relative to the highest and lowest recorded values in that measure.
Trend arrow	An upward or downward arrow is displayed to the right of the cell value depending on whether it is above or below the median value of the selected measure.

## Enhancing the Pentaho Analyzer Report

You have created a working Analyzer report; however you can make the data in the report more useful if you can show the difference, in dollar amounts, between the actual and budgeted expenses.

Follow the instructions below to enhance your report.

1. In the Pentaho User Console menubar, go to **File -> Open**.
2. Browse to `/steel_wheels/analysis` and select **Regional Expense Report**.
3. Click  (Switch to Table Format) if you are in chart mode when the report appears.
4. Right-click the **Actual** column and select **User Defined Number -> Calculated Number**.  
The **New Calculated Number** dialog box appears.
5. In the **Name** field, type **Difference**.  
This step creates a new column in the report.
6. Select **Currency (\$)** from the **Format** list so that the data in your report displays as dollar amounts.
7. In the right pane of the dialog box, click  so that a minus sign appears next to **[Actual]-**.
8. Click **Budget** in the left pane and click  to move it to the right pane so that you create a formula that subtracts the budgeted expenses from the actual expenses, **[Actual]-[Budget]**. Click **OK**.  
The **Difference** column appears in the report.
9. Right-click the **Region** column and select **Show Subtotals**.  
The subtotals for each region is displayed in the report.



10. Save the report.

## Adding Filters to an Analyzer Report

---

Filters are used to restrict or limit the data that is presented in a report. For example, a report shows sales by product line. A filter on **Quarter** restricts the data so that sales for the fourth quarter in 2006 only are shown. If you were to add a regional filter of Europe, the report displays data pertaining to European sales in the fourth quarter of 2006, exclusively. If you were to add a filter on the **Product Line** field to exclude **Surfing**, the report displays data pertaining to European sales in the fourth quarter of 2006 that are not in the surfing product line, exclusively.

Follow the steps below to add a filter to your sample report:

1. Open the **Regional Expense Report**.
2. Under the report name click **Show/Hide Filters** next to **No Filter in Use**.  
A workspace for filters appears at the top of the report.
3. Click and drag the **Region** field/column into the filter workspace.  
The **Filter on Region** dialog box appears. Notice that the values, (Central, Eastern, Southern, and Western), associated with the **Region** field are listed in the dialog box. You can choose one of these values or you can enable **Match a specific string** to filter the report on a specific string of data.
4. Select **Eastern** from the list of values and click  (Add Selected) to move it into the right pane.  
**Eastern** appears with a green checkmark next to it in the right pane.
5. Select **Western** from the list of values and click  (Add Selected) to move it into the right pane.  
**Western** appears with a green checkmark next to it in the right pane.
6. Click **OK** to exit the dialog box.  
Your sample report displays data for the **Eastern** and **Western** regions only.
7. Click **Undo** or **Reset** to go back to the previous version of the report.

## Adding Query Parameters to Analyzer Reports

---

You must be logged into the Pentaho User Console, and have an Analyzer report open for editing in order to continue. Follow the below procedure to parameterize your MDX query in Analyzer.

1. Right-click on the dimension member you want to create a parameter for, and select **Filter** from the context menu.
2. Select the level you want to set as the default parameter value, then click the right arrow to move it to the list on the right.
3. Click the checkbox at the bottom of the window, then type in a name for the parameter in the **Parameter Name** field.
4. Click **OK**.

Your parameter is now created as a filter in Pentaho Analyzer. Whenever this Analyzer report is run, users will have a selection of columns to filter by.



**Note:** If you create a dashboard with this Analyzer report, then this filter can be used by Dashboard Designer as a parameter as well.

## Exporting the Analyzer Report

---

Pentaho Analyzer allows you to export your report as a PDF, a Microsoft Excel spreadsheet, or a CSV file.

Follow the instructions below to export your report:

1. In the Pentaho Analyzer toolbar, click **More** and select **Export Report**.  
The export options list appears.
2. Select **Export to PDF**.  
A PDF of the report appears.
3. Examine your report.

Notice that Pentaho Analyzer appends metadata about the report itself in the PDF. Information about the report author, the location of the source file, fields used, filter summary, are included.

## Filtering by Member Properties

---

If a dimension has a number in parenthesis next to it in the field list, that means that it has **member properties** associated with it. To constrain a dimension by controlling its member properties, follow the instructions below.

1. Open the field layout by clicking **Show Field Layout** button above the grid.  
Depending on how you have them oriented, you will see your selected dimensions in either the **Row Labels** or **Col Headers** fields.
2. Right-click on a dimension in the row label or column header fields, then select **Show Properties** from the context menu.  
A sub-menu with all available member properties will appear.
3. Check or un-check the member property boxes to add or remove them from the report, then click **OK**.

The analyzer report will refresh and show the filter choices you've selected.

## Configuring Drill-Down Links

---

To create reports based on specific number value data, you can implement drill-down links in Pentaho Analyzer. This will turn all non-calculated number fields into links which, when clicked, bring up a configurable data grid that enables you to quickly view more details for that data point without having to reconfigure your report. Follow the directions below to turn on drill-linking.



**Note:** Calculated members are unavailable for drill-down at this time.



**Note:** Drill-down links will not work in reports that have filters that are not being used. If you have any filters in an Analyzer report, they must be used in the report in order to view drill-down links.

1. Open the Analyzer report that you want to add drill links to.
2. Go to the **More** menu in the upper right corner of the report, and select **Set Report Options** from it.
3. Select the **Show drillthrough links on Number cells** checkbox, then click **OK**.  
The number fields in your report will turn into links.
4. Click on a drill-down link to see a data grid that shows all of the available details for that value.
5. To add or remove columns from the grid, click on the down arrow on the right side of any column and select the **Columns** sub-menu. From there you can select which columns you want to appear. You can also sort by ascending or descending values for any column through this menu.

You now have drill-down links for numeric, non-calculated members.



# Displaying Data in a Dashboard

---

Dashboard Designer enables you to create dashboards that provide users with immediate access to business-related information they need. Using Dashboard Designer you can customize dashboards to address the needs of different types of users. For example, your sales staff may want see current leads, while your support staff may want to see a list of open issues. You can create dashboard pages that address the needs of both user groups.

Creating a dashboard is as simple as selecting a layout, theme, and the content you want to display. This content can include reports, charts, data tables, URLs, and even interactive Pentaho Analyzer reports. Dashboard Designer also provides you with the ability to add dynamic filter controls making it easy for dashboard consumers to filter the entire contents of their dashboard using a simple pick list

The Dashboard Designer allows you to display the following content types in your dashboard:

- **Chart** — When selected, opens the Chart Designer that allows you to create bar, line, area, pie, and dial charts for display in your dashboard.
- **Data Table** — When selected, allows you to display database-related content in tabular format.
- **File** — When selected, opens a browser window that allows you to locate a file (.xaction or .prpt) that contains the content, usually a report or chart, you want to display in your dashboard.
- **URL** — When selected, opens a dialog box that allows you to enter the URL of the Web site you want to display in your dashboard.


To display the content types in the Pentaho User Console, click  (Insert) in one of the panels in the dashboard.

If you are displaying a chart or data table you must first connect to the data source that contains data you want displayed.

## Creating a New Dashboard

---

You must be logged on to the Pentaho User Console. Follow the instructions below to create a new dashboard:

1. In the Pentaho User Console quick launch bar, click **New Dashboard**. Alternatively, you can click **File > New > Dashboard** or click  (New Dashboard) in the tool bar. The New Dashboard page appears.
2. In the edit pane (lower portion of the page), click **Properties**, and enter a title for your dashboard page in the **Page Title** text box.  
The name you entered appears on the top left corner of the dashboard. This name helps you identify the page if you want to edit, copy, or delete it later.
3. Click **Templates** to select a dashboard layout.  
A blank dashboard with the layout you selected appears.
4. Click **Theme** to select a theme for your dashboard.  
The theme you selected is applied to your dashboard.

## Working with the Chart Designer

The Chart Designer allows you to create bar, pie, line, dial, and area charts that can be added to a dashboard. Below are the general steps associated with creating a chart:

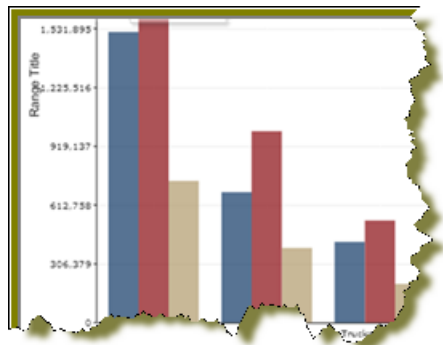
1. Select a data source.
2. Build a query.
3. Set the data definitions: values, series, category.
4. Select a chart type and theme.
5. Enter labels for the chart title, and x,y axes.
6. If applicable, adjust scaling and label rotation.
7. Place your chart in the dashboard.
8. Save your dashboard.

If you are new to charting, here are some minimal guidelines that may help you determine what type of chart is best suited for the data you want to present in your dashboard:



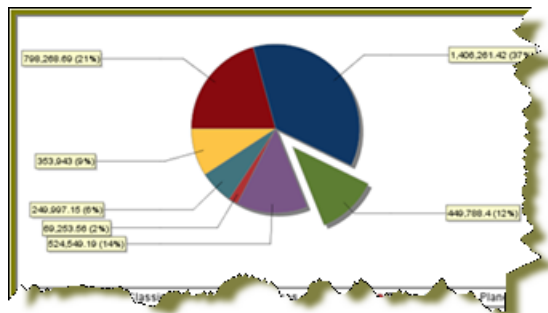
## Bar Charts

If you want to compare items during a specific time period, consider using a bar chart. Key words to think about when creating a bar chart are *compare* or *rank*. For example if you want to compare items sold to show which one made the most profit, you might create a bar chart that ranks the products from the lowest to highest profit. The bar's length determines its ranking; the label identifies the item. Bar chart data can be presented horizontally or vertically depending on your requirements.



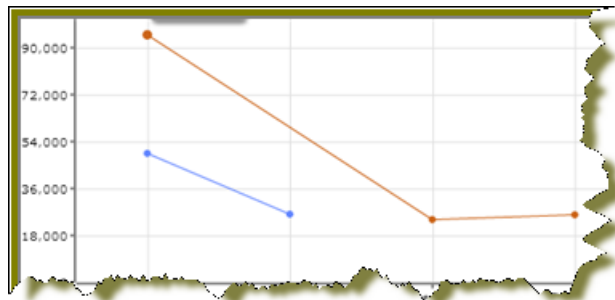
## Pie Charts

If you are comparing parts of a whole, consider using a pie chart. Key words associated with charts include, *portion*, *share*, and *percentage*. If for example, you want to demonstrate the proportion of the company's budget spent on health insurance, use a pie chart. To make the chart easier to read limit the number of slices to five. Pie charts can also be *exploded*, which means certain slices are pulled away from the remainder of the chart for emphasis.



## Line Charts

Line charts are useful for showing changes over time. Key words associated with data that is best suited for a line chart are *trend*, *growth*, and *decline*. If, for example, you want to show how product sales have changed over five years, use a line chart. The slope of the line helps users quickly identify the direction of the trend.



## Dial Charts

Dial charts are often associated with Key Performance Indicators (KPIs). Dial charts are circular and contain a scale, a needle, and one or more a dial sectors. The dial sector is used to identify a specified area on a dial chart using a particular color. For example, you could have a dial plotting inventory with a minimum dial value of 10000 and a maximum dial value of 50000. There could be a red dial sector for the region between 2000 and 4000 indicating that if the needle is in this area, there is a danger of a supply inventory shortage.




## Area Charts

Area charts can be used to show a comparison of the same thing during different points in time. Area charts are not designed to provide exact data but they do give users visual clues of the relative sizes of the items they are representing.




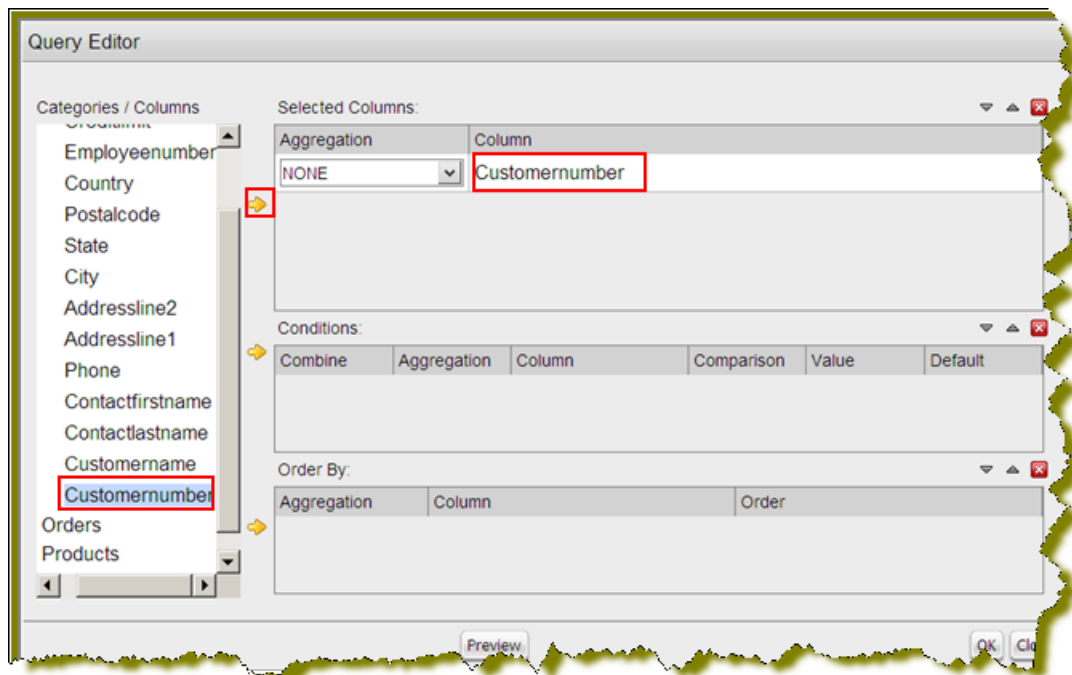
## Adding Data to Your Chart

Before you can start creating a chart you must select a data source that contains the data you want to use. You must then define the data that will be displayed in the chart.

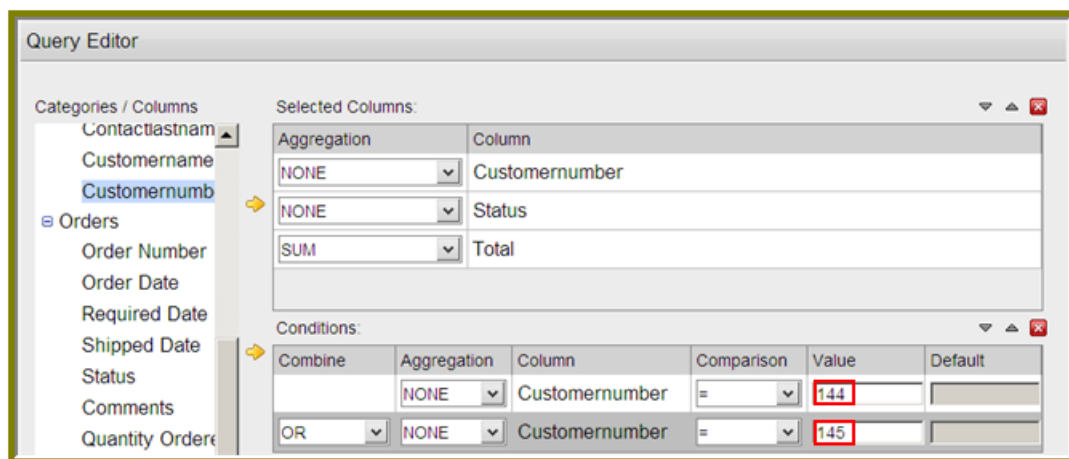
 **Note:** If you are unsure what chart type is best for displaying your data, see [Choosing the Correct Chart Type](#) for more information.

Follow the instructions below to add data to your chart:

1. In the Dashboard, choose a dashboard panel and click  (Insert) and select **Chart**.  
The **Select a Data Source** dialog box appears.
2. Select the data source from the list of available choices. The data source contains the content you want to display in your chart.  
The **Query Editor** appears.
3. The Query Editor allows you to retrieve dynamic data from a database for display in a chart. Defining your query is the first step in ensuring that the correct data is selected. In the Query Editor, click (+) next to a category name to display its associated table columns.
4. Click the small yellow arrow to place the column name under **Selected Columns**. In the example below, the **Customernumber** column has been selected and moved under Selected Columns. Notice that the column names appear under Selected Columns. Continue adding columns as needed.





- Now add the **Conditions**; these are your constraints that filter what you are selecting. You can add multiple conditions. In the example below, the search is limited to customer numbers.



Under **Combine**, you can select your constraint (and, or, and not, or not) from the drop-down list. Under **Comparisons** you can click the drop-down list to display options for comparisons, =, <, >, and so on; (for example, where the customer number is *equal* to 144 or 145). You can also select an aggregation type from the drop-down list for table columns that contain numeric data. The table below contains a definition for each aggregate type:

Aggregate Type	Description
SUM	Sums a column's values
COUNT	Counts a column's values
AVG	Averages a column's values
MIN	Selects the minimum column value
MAX	Selects the maximum column value

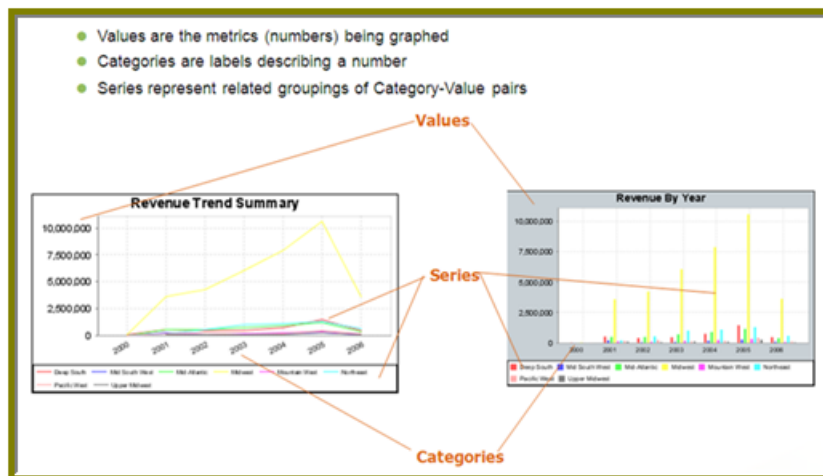
 **Note:** For information about adding parameters in the Query Editor, see [Assigning Parameters in the MQL Query Editor](#).

 **Note:** Click **Preview** at any time to view the data associated with your query.

- Add the columns that you want to **Order By**. The ordering of the selected data is accomplished by one or more columns in a table. For example, you can sort the data by customer name and address.
- Click **OK** in the Query Editor when you are done.  
The Chart Designer appears.


8. Under **Data**, click the drop-down arrow to display and select the table columns.

Data Definition	Description
Values	The value is always numeric. The value determines the height of columns in a bar chart and the height of lines in a line chart. In area charts, the y-axis values determine the heights of the points.
Series	Series show up as the individual columns on a bar chart and as individual lines in a line chart. Area charts display each series as a point.
Category	Categories are displayed as bars or groups of bars on the y-axis (vertical axis). In line charts, categories are usually associated with time periods. In area charts, the x-axis displays the category labels.



A preview of the chart appears in a box in the upper-right corner of the Chart Designer as you select your options.

9. Under **Chart Type**, click on a chart type to select it.

 **Note:** By default, charts display in "animated" Flash mode. You can turn animation off by disabling the **Animated** check box in the Chart Designer. Animated charts bring focus to important aspects of your data. For example, animation allows you to bring out a data point if it reaches a critical value, such as high or low sales numbers.

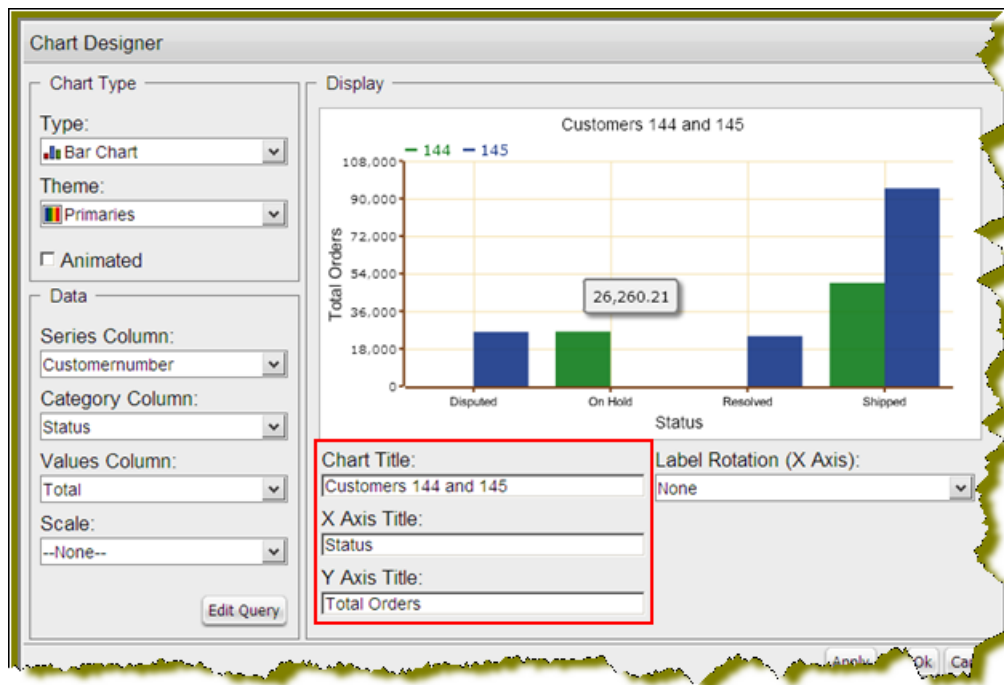
If you selected a pie or dial chart, see [Working with Pie Charts](#) or [Working with Dial Charts](#), respectively.

10. Under **Theme**, select a theme from the list.

The theme is applied to your chart.

11. Enter the labels for the **Chart Title**, **X Axis Title** (horizontal axis), and **Y Axis Title** (vertical axis).

Entries are displayed in the chart preview.

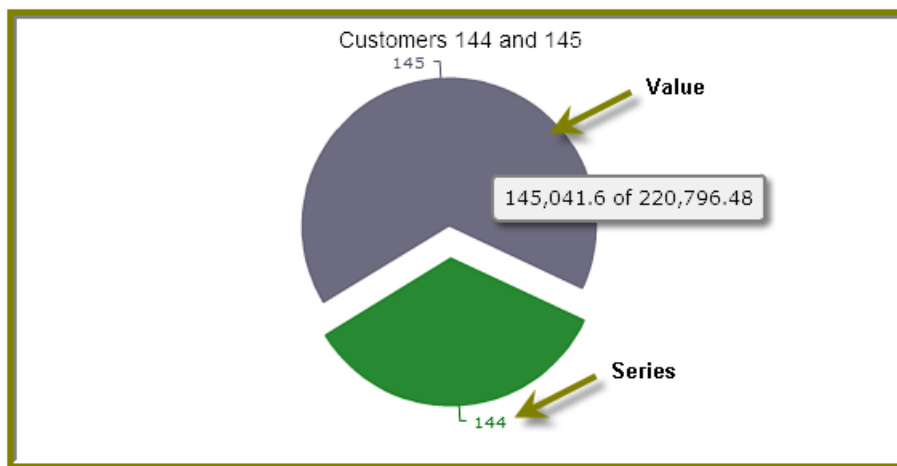


12. Click **Apply** to see the chart preview.

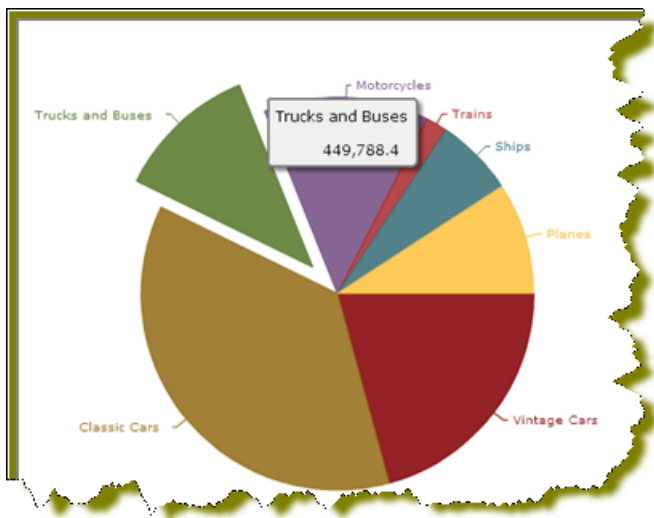
13. Click **OK** display your chart in the dashboard panel.

## Working with Pie Charts

A pie chart gives dashboard consumers an immediate visual clue of the relative sizes of the shares of a whole. Categories are represented by individual slices. The size of the slice in a pie chart is determined by the value.



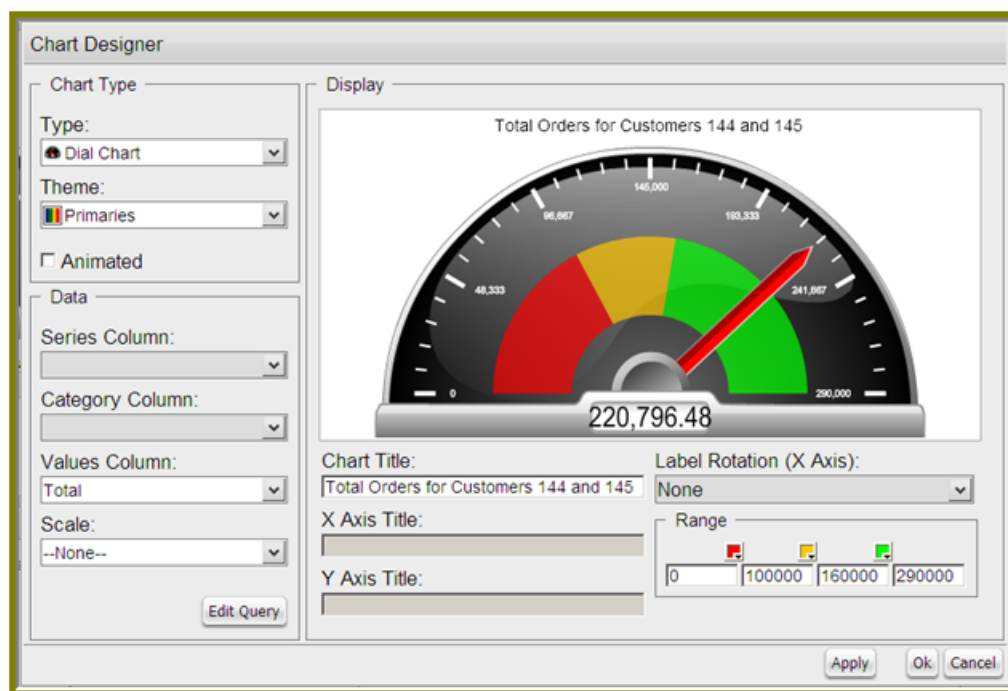
You can animate a pie chart if you want its pieces to be *exploded*, which means that the individual slices of the pie can be pulled away from the rest of the pie.



To animate a pie, enable **Animated** check box in the Chart Designer.

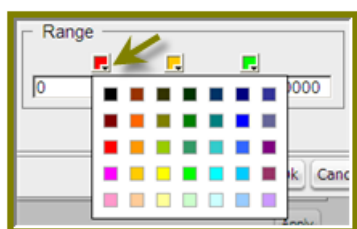
## Working with Dial Charts

For dial charts to display correctly, you must enter values for your range and the chart title. In the example below, the dial chart preview is displaying ranges associated with sales. Notice that each dial sector is represented by a color, red, yellow, or green. The needle is positioned in the 220796.48 range, indicating that total orders, while not stellar, are not near the danger zone indicated by the red sector in the dial.



## Changing Dial Sector Colors

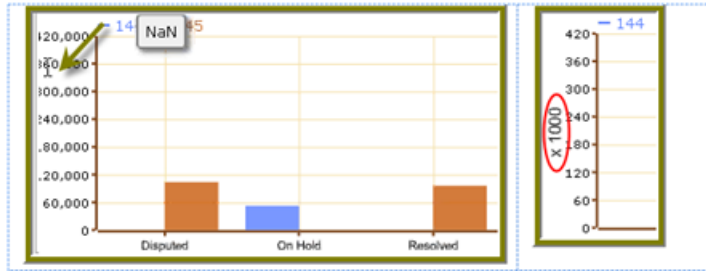
You can change the color of a dial sector by clicking the small down arrow in the color boxes associated with Range. Select a color from the palette so that you can preview it on your dial chart. Click **Apply** to preview your dial chart. Click **OK** to place your dial chart into the dashboard.




## Correcting Scaling Issues

Use the scaling feature in instances where numeric values in a chart are so long that they affect the display.

1. Preview your chart in the Chart Designer.
2. Under **Scale**, click to display the drop-down list of scaling options. In the example below, the scaling option used is "1000." Notice the change in the display of numeric values when scaling is applied. Users of the chart can see actual values when they hover over the bars in the chart.



3. Click **OK** to display the chart in the dashboard.

 **Note:** The scaling feature is available for all chart types except pie.


## Rotating Chart Axis Labels

If your chart axis labels become unreadable because they are too long, **Label Rotation** may correct the problem.

1. In the Chart Designer, display your chart.
2. Under **Label Rotation**, select **Diagonal** or **Vertical** and click **Apply**.  
The labels display with the rotation you set.
3. Click **OK** to display the chart in the dashboard panel.


## Editing a Chart

Follow the instructions below to edit a chart.

1. In the Dashboard Designer, select the panel that is displaying the chart you want to edit.
2. In the upper right corner of the panel click  (Edit)  
The Chart Designer appears.
3. Click **Edit Query**.  
The Query Editor opens.
4. Edit the query as needed and click **OK**.  
The Chart Designer appears.
5. Select the appropriate data definitions to build the chart.
6. If applicable, change the chart type and theme and click **Apply** to see a preview of the edited chart.
7. Click **OK** to display the chart in the dashboard.

## Adding a Data Table to a Dashboard

The Data Table feature allows you to display a tabular representation of a database query in a dashboard. It also allows you and consumers of the dashboard to manipulate the data in the data table, while in the dashboard. For example, users can resize, sort, and change the order of columns. Follow the instructions below to add a data table to your dashboard.

1. Select a panel in the Dashboard Designer.
2. Click  (Insert) and select **Data Table**.  
The **Select a Data Source** dialog box appears.
3. Select a data source from the list of available data sources and click **OK**.



**Note:** The data sources in the list are defined by an administrator.

The Query Editor opens.

4. Begin building your query. Click (+) next to the category name to display its associated table columns. When the column names appear, click to select the column that contains the data you want displayed in your data table.
5. Click the small yellow arrow to place the column name under **Selected Columns**.
6. Now add the **Conditions**; these are your constraints that filter what you are selecting. You can add multiple conditions.

Under **Combine**, you can select your constraint (and, or, and not, or not) from the drop-down list. Under **Comparisons** you can click the drop-down list to display options for comparisons, =, <, >, and so on; (for example, where the customer number is *equal* to 144 *or* 145). You can also select an aggregation type from the drop-down list for table columns that contain numeric data. The table below contains a definition for each aggregate type:

Aggregate Type	Description
SUM	Sums a column's values
COUNT	Counts a column's values
AVG	Averages a column's values
MIN	Selects the minimum column value
MAX	Selects the maximum column value



**Note:** Click **Preview** at any time to view the data associated with your query.

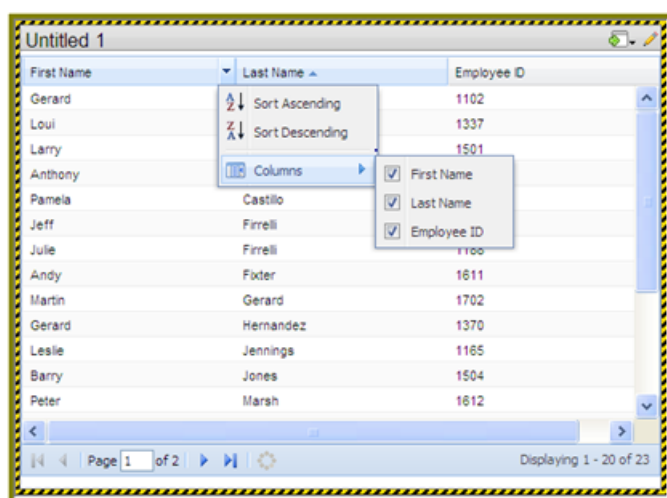
7. Add the columns that you want to **Order By**. The ordering of the selected data is accomplished by one or more columns in a table. For example, you can sort the data by customer name and address.
8. Click **OK** in the Query Editor when you are done.  
The Data Table appears in the dashboard panel.

## Updating the Data Table Display

You can edit the data table display directly in the dashboard panel.

### Sorting Column Data

To change the sort order data under a column, click the drop-down arrow in the header and choose **Sort Ascending** or **Sort Descending**. You can also hide one or more columns by disabling the appropriate check boxes next to the column names.



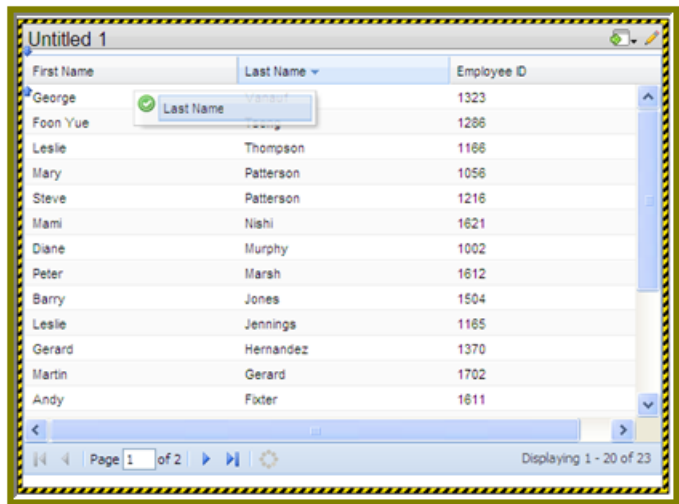
### Adjusting Column Width

You can adjust the width of a column by clicking the right border of the column header and dragging it to the right or left. Release the mouse button when you are done.



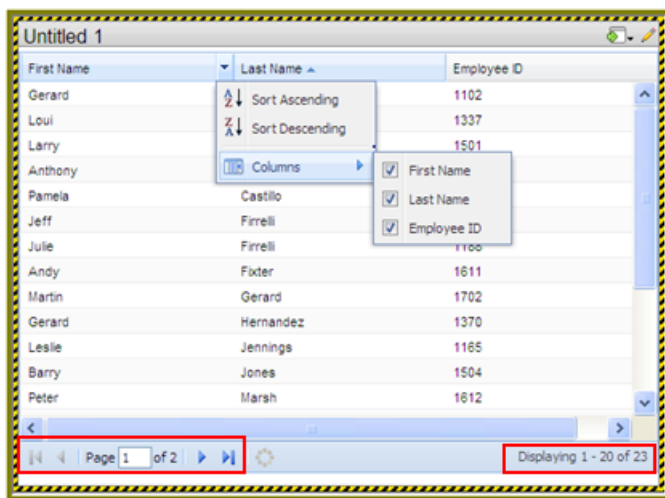
## Moving Columns

To move the placement of a column, click and drag the column it to the appropriate location in the Data Table as shown in the example below:



## Paginating

The pagination feature allows you to page through a large number of records.

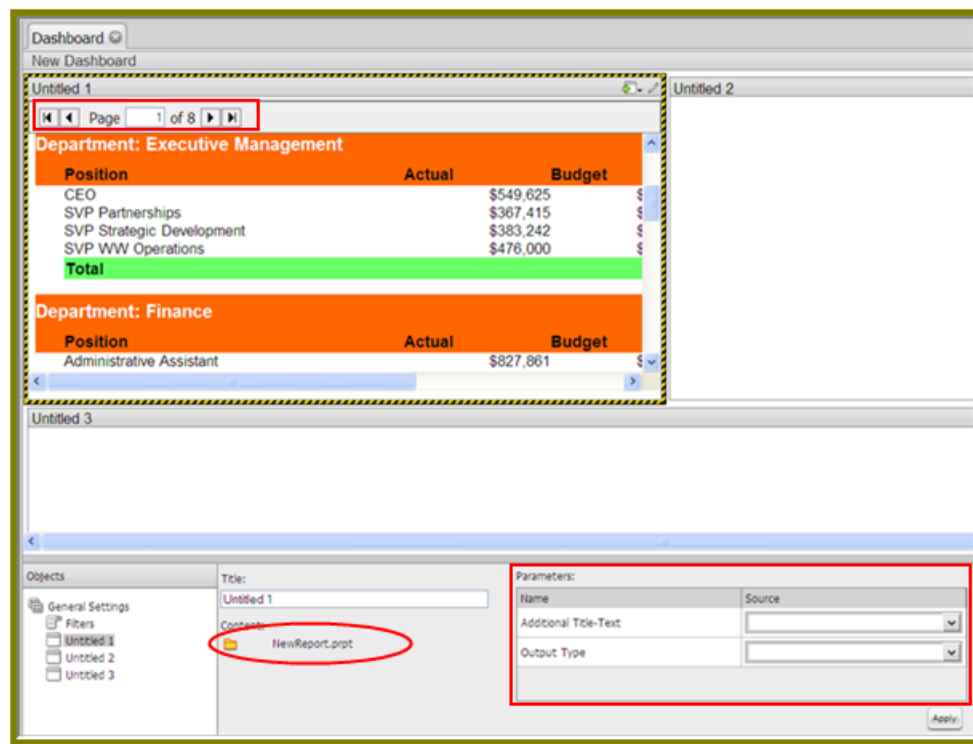


## Displaying a Report Designer (.prpt) File in the Dashboard

Follow the instructions below to display a report created in Report Designer and in a dashboard.

1. Select a panel in the Dashboard Designer.
2. Click  (Insert) and select **File**.  
A browser window opens.
3. Locate the appropriate report file. Report Designer files have a .prpt extension.
4. Click **Select** to place the report inside the dashboard panel.

Pagination control arrows at the top of a report allows you to scroll through long reports. Notice that the report file name, *NewReport.prpt*, appears under **Content:** in the dashboard edit pane in the sample below. This sample report contains parameters, (*Additional Title-Text*, *Output Type*), that do not have default values. You can enter values manually and link them to a dashboard filter in the text boxes under **Source**. When the report renders again, the parameter value(s) you entered are included in the report.



**Important:** If you select a Report Designer file to place in a dashboard, but do not supply values for required parameters, the report will show up blank.

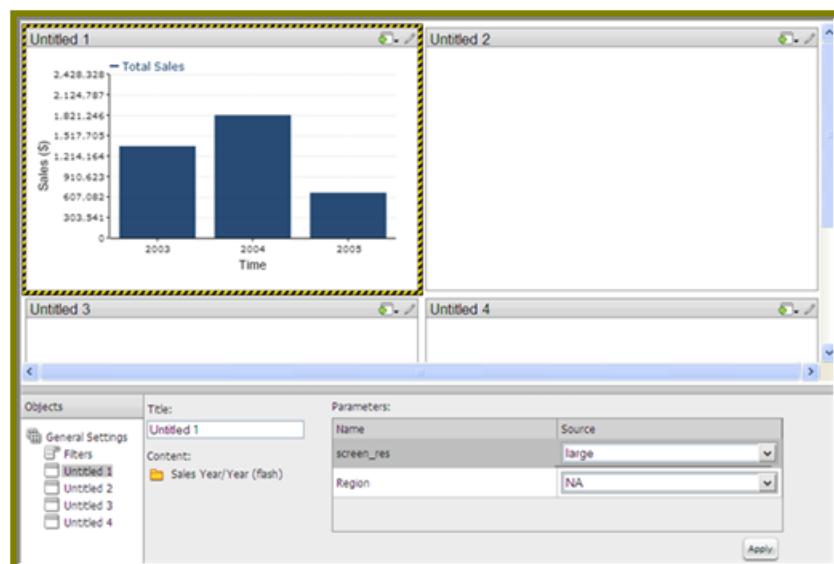
## Displaying an .xaction File in the Dashboard

Follow the instructions below to display the contents of an .xaction file in a dashboard.

**Note:** Generally, .xaction files are provided to you by an administrator. An .xaction file may contain a report, a chart, or other type of content.


1. Select a panel in the Dashboard Designer.
2. Click  (Insert) and select **File**.  
A browser window opens.
3. Locate the appropriate .xaction file.
4. Click **Select** to place the contents of the file inside the dashboard panel.

Notice that the file name, *Sales Year/Year*, appears under **Content**: in the dashboard edit pane of the sample below. This sample chart contains parameters, (*screen\_res*, *Region*), and default values (*large*, *NA*).

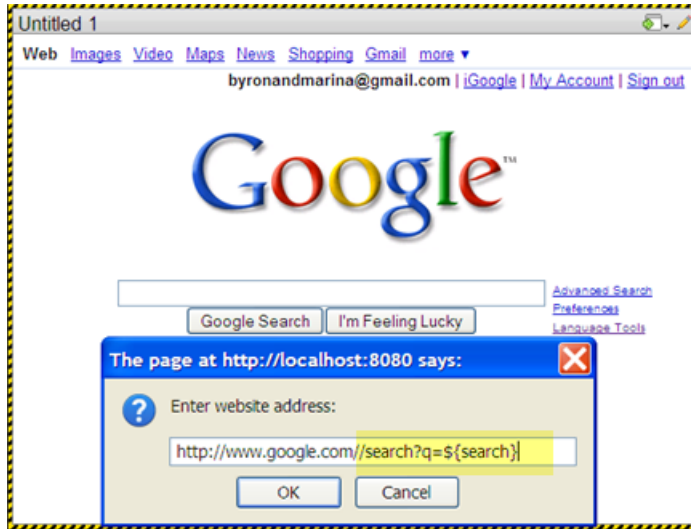


## Displaying a Web site in a Dashboard

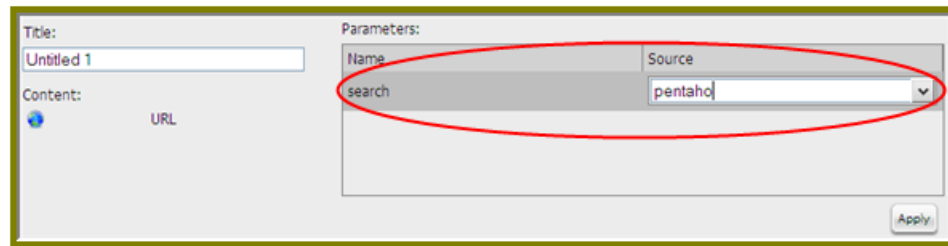
Follow the instructions below to display contents of a Web site in a dashboard panel. You may need administrator privileges to display a Web site content in a dashboard.


1. Select a panel in the Dashboard Designer.
2. Click  (Insert) and select **URL**.  
The **Enter Web site** dialog box appears.
3. Enter the Web site URL in the text box and click **OK**.

In the example below, a search parameter has been added to the URL.



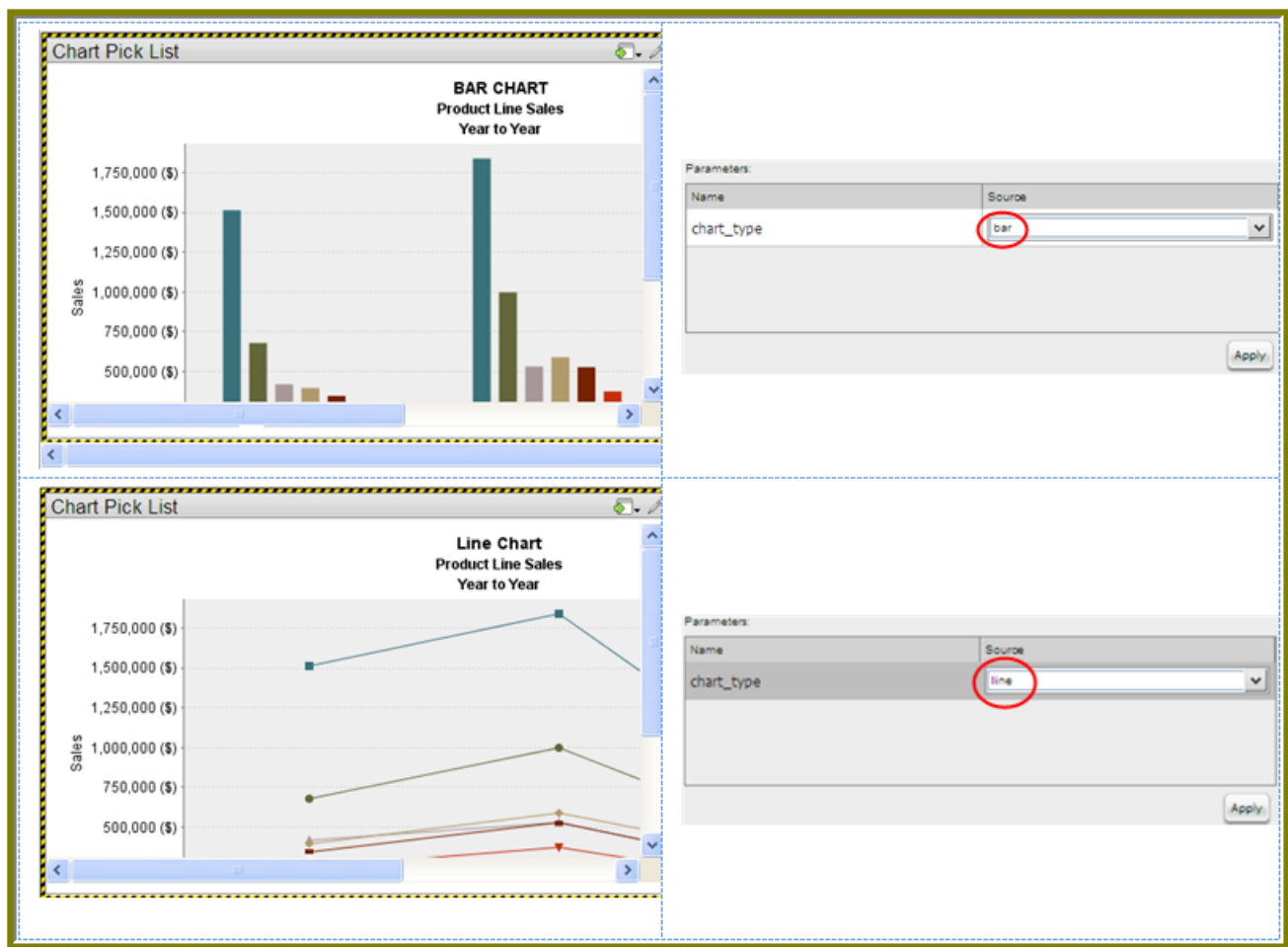
When the parameter displays in the edit pane of the dashboard, you can enter a value for the parameter in the text box next to the parameter name.



4. If applicable, click  (Edit) to make changes.
5. Save your dashboard when you are done.

## Working with Parameters

If you are placing an .xaction or .prpt inside a dashboard panel, it is possible that the author of the .xaction or report, defined meaningful parameters for the content. If previously defined, the parameters and their associated default values, appear under **Parameters** in the edit pane of the dashboard. In the example below, when the chart initially rendered, it displayed a parameter called, "chart\_type" with a default value called, "bar." A user can change the value of the parameter to see the content rendered as a pie, line, or area chart.



Parameter names are "hard-coded," which means they cannot be changed. Neither can you change the number of parameters associated with an .xaction or .prpt file. When you create a chart using the Chart Designer, embed a URL into a dashboard, or create a data table, you can change both the name and value of a parameter.

## Assigning Parameters in the Query Editor

If you have set filter controls/parameters in your dashboard, you can edit them in the Query Editor. Dashboard Designer recognizes when you have set filter controls and displays them in a drop-down list. For example, suppose you have a filter control called "REGION," you can set the default value for your constraint to "North." When the chart renders, it displays data for the North region specifically.

If you haven't set filter controls in the dashboard, you can add them manually in the Query Editor. In the **Value** field type the name of the filter control inside curly braces, as in **{Name\_your\_filter}**. In the example below, the designer created a filter control called, *{letter}*; the default value for the filter control is, "S." When the chart is rendered it displays data associated with customers whose last names start with the letter "S."


Column	Comparison	Value	Default
Contactlastname	begins with	{letter}	S

Suppose the designer chooses not to display parameters and wants to limit the data to names ending with "S," exclusively? In this instance, he or she would not include the curly braces around the letter "S," and the **Default** value is disabled.

Value	Default
S	

## Working with Filters

Filters allow you to display a subset of data based on the dashboard user's point of view. For example, the dashboard user's point of view of *Region* may be "East;" his or her point of view of *Time* may be, "Fourth Quarter." Pentaho Dashboards allows you to designate a point of view based on the filters in your source data. Follow the instructions below to add filters to your dashboard:

1. In the dashboard page, under **Objects**, select **Filters**.  
The Filter Editor appears on the right. No filters are listed if this is the first time you are assigning filters.
2. To display a filter toolbar to users of the dashboard, enable **Show Filter Toolbar**.  
A placeholder for the filter toolbar appears at the top of the dashboard.
3. Click  (Add) to start adding filters.  
The **Filter Control** dialog box appears.
4. In the **Filter Control** dialog box, type a display name for the control label. For example, "Region."
5. Enable **Display Name as Control Label** if you want users to see the display name in the filter toolbar.
6. Select your control type. Control types define how your filter values are selected; for example, in a drop down list, radio button

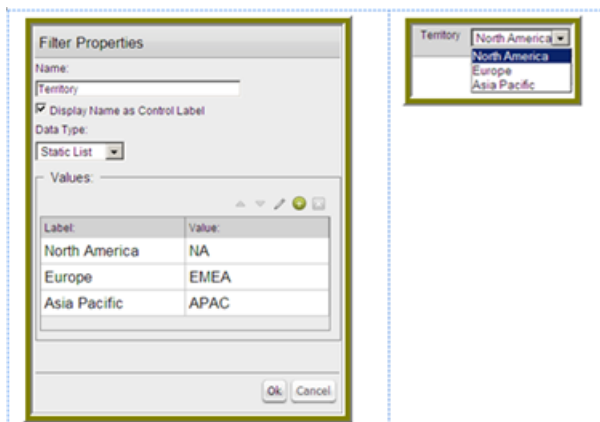
The table below contains information about each control type.

Control Type	Description
Drop Down	Users select filter values from a drop-down list. You can provide static...
List	Users select filter values from a scrolling list.
Radio button	Users click radio buttons to select filter values.
Checkbox	Users click checkboxes to select filter values.
Button	User click buttons to select filter values.
Text Field	Users enter a value into a text field.
Date Picker	Users examine data based on calendar date.


7. If you plan to provide hard-coded names and values for your dashboard users, see [Creating a Static List of Filters](#). If you plan to provide a dynamic list of filters based on a SQL query, see [Creating a SQL List of Filters](#).

### Creating a Static List of Options

When you create a static list, you define a static list of options to present to the dashboard user. Each option consists of a display name that appears in a drop-down list in the filter toolbar as shown in the sample on the right.



Follow the instructions below to create a static list:

1. In the **Filter Properties** dialog box, under **Data Type**, select **Static List**.
2. Click  (Add).  
The **List Value** dialog box appears.

3. In the **List Value** dialog box, enter the label and a value for the first option in the list. The label is the option that is visible to dashboard users; the value is an internal name.
4. When you are done adding options, click **Close**.
5. Click **OK** to exit the **Filter Properties** dialog box.  
The filter options are displayed to the dashboard user. In the sample screen capture above, **North America** is the first option on the list.

## Creating a SQL List

When you create an SQL List, you are using an SQL query to dynamically retrieve a list of display names and corresponding values directly from a relational database.



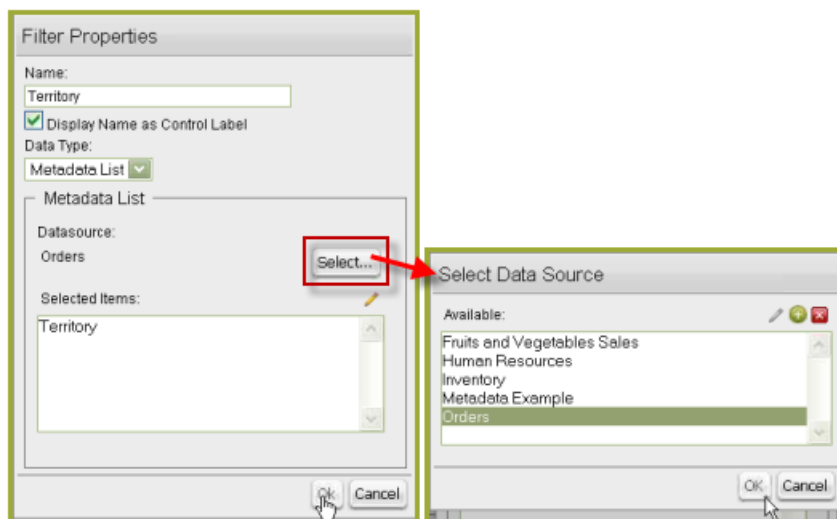
**Note:** You must have administrative permission to create SQL-based filters.

Follow the instructions below to create an SQL List:

1. In the **Filter Properties** dialog box, enter a **Name** for your filter.
2. Enable the **Display Name as Control Label**, if appropriate.
3. Under **Type**, select **SQL List**.
4. Select the data source (Connection) that contains the content you need to set options from the drop-down list.
5. Click \_\_\_\_\_ to display the Query input text box.
6. Type the SQL query in the area provided for you.
7. Click **Test** to ensure that your SQL query is displaying the correct values.
8. Adjust your SQL query as needed and click **OK**.  
The list of values appear in the filter toolbar in the dashboard.

## Creating a Metadata List

When you create a Metadata List, you are defining a query to retrieve a list of display names and corresponding values from a metadata data source provided by your administrator.



1. In the **Filter Properties** dialog box, enter a **Name** for your filter.
2. Under **Data Type**, select **Metadata List**.
3. Click **Select** to choose the data source that contains the content you need to set options from the drop-down list and click **OK**.  
The **Query Editor** opens.
4. In the **Query Editor**, build a query to select either a single column (that represents both a name and a value), or two columns representing the display names and corresponding values.




**Note:** If a single column query is defined the values of that column will be used for both the display names and the values.

5. Click **OK** to exit the Query Editor.  
Your options under **Selected Items** in the Filter Properties dialog box.
6. Click **OK** to exit the Filter Properties dialog box and save your dashboard.

## Editing Filters

You can edit filters as needed. Follow the instructions below to edit filters:

1. In the dashboard page, select an existing dashboard.
2. Under **Objects**, click **Filters** to display the filters associated with the dashboard you selected.
3. Select the filter you want to edit and click  .  
The **Filter Properties** dialog box appears.
4. Make your changes as needed and click **OK** to update the filter-related options in the dashboard.

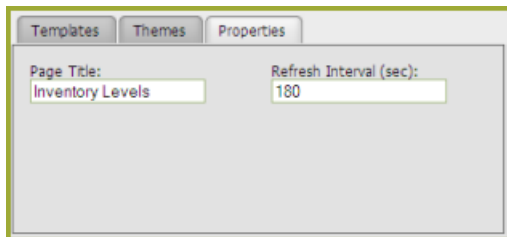
## Setting the Refresh Interval

The content in your dashboard may need to be refreshed periodically if users are examining real-time data. You can set refresh intervals for individual panels on your dashboard or for the entire dashboard.

To set the refresh interval for *individual panels* in the dashboard, select the panel that contains the content you want refreshed. Under **Refresh Interval (sec)** enter the interval time in seconds and click **Apply**.



If you want the *entire dashboard* to refresh, click the **Properties** tab in the dashboard and set your refresh interval.



## Linking Analyzer Filters to Dashboard Parameters

This process only applies to dashboards that include parameterized Analyzer reports. You must have an Analyzer report with a query parameter in it in order to proceed.

The instructions below explain how to link a query parameter from an Analyzer report to a dashboard in Dashboard Designer.

1. In Analyzer, select a parameter in your report to which you want to link; then, right-click and choose **Filter**.  
In the example below, data will be filtered by **Territory**.

Territory	Line			
	Classic Cars	Motorcycles	Planes	Ships
	Sales	Sales	Sales	Sales
APAC	193,086	89,969	74,854	4,...
	167,198	99,849	46,572	34,...
	132,890	4,176	-	14,...
	101,459	26,048	17,860	9,...
EMEA	20,137	-	5,625	31,...
	157,182	-	7,586	35,...
	153,552	47,867	34,375	29,...
	388,951	226,390	108,156	66,...
	148,315	7,498	23,001	5,...
	31,689	4,953	11,784	
Show Subtotals	133,183	11,609	113,718	17,...
Tell me about...	134,787	51,769	29,501	
Remove from Report	476,165	74,635	89,986	12,...
		15,653	8,900	

- In the **Filter** dialog box, enter a name for the parameter in the **Parameter Name** text box and click the check box to enable it.

Showing all 5 values

☒ TERRITORY\_PARAM Parameter Name

- Select the values you want associated with the parameter. Use the arrows to add values to the box on the right.

**Filter on Territory**

☒ Select from a list (Includes, Excludes)

☐ Match a specific string (Contains, Doesn't Contain)

Choose values from list: Currently Included

#null  
APAC  
EMEA  
Japan  
NA

☒ APAC  
☒ EMEA  
☒ Japan  
☒ NA

- Click **OK** to exit the Filter dialog box.
- Save your Analyzer report.

In the upper left corner of the report, you can see that a filter is in use. Click  (Edit) to edit your filter; click  to delete the filter.



1 Filter in use

Territory includes APAC, EMEA, Japan and NA

Territory	Country	Line	
		Classic Cars	Motorcycles
		Sales	Sales
	Australia	193,086	89,9
APAC	New Zealand	167,198	99

6. Create a dashboard and drag the Analyzer report into a panel.

The name of the parameter appears in the lower portion of the dashboard under **Parameters**.

7. Add a filter to the dashboard based on the parameter you created in your Analyzer report.  
The filter appears in the dashboard.

## Saving Your Dashboard

Follow the instructions below to save your dashboard:

1. In the Pentaho User Console toolbar, click (Save) to open the **Save** dialog box.
2. In the **File Name** text box, type a file name for your dashboard.
3. Enter the path to the location where you want to save your dashboard. Alternatively, use the up/down arrows or click **Browse** to locate the solution (content files) directory in which you will save your dashboard.
4. Click **Save**. See [Editing Your Dashboard](#).

## Editing Your Dashboard

Follow the instructions below to edit an existing dashboard:

1. In the lower left corner of the Pentaho User Console, (under Files), select an existing dashboard file.  
The dashboard panels and their related content appear.

2. Click (Edit) in the upper-right corner of the dashboard panel you want to edit.

**Note:** Some content such as .xaction and .prpt files cannot be edited directly in the dashboard. In such instances, (Edit) is disabled.

3. Make your changes as needed.
4. In the toolbar, click (Save As) to open the **Save As** dialog box.
5. In the **File Name** text box, type a file name for your dashboard. Alternatively, use the up/down arrows or click **Browse** to locate the solution (content files) directory in which you will save your dashboard.
6. Click **Save**.  
The name of your dashboard file appears in the list under **Files** in the lower left portion of the Pentaho User Console.

## Adding Content to a Dashboard Using Drag-and-Drop

Follow the instructions below to add an existing chart, table, or file to your dashboard panels using the drag-and-drop feature.

1. Create a new dashboard. See [Creating a New Dashboard](#) for specific instructions.
2. In the left pane of the Pentaho User Console, under **Files**, locate to the content (chart, table, or file) you want added to your dashboard.

3. Click and drag the content into a blank panel on your dashboard. You will see the "title" of the content as you move it around the dashboard. Notice that the title background is red; it turns green when you find a panel where the content can be dropped.

Repeat steps 2 and 3 until your dashboard contains all the content you want to display. To swap content from one panel to another, click the title bar of the panel that contains the content you want moved and drag it over the panel you want swapped. You will see the swap icon as you are moving the content.

If you are working with an existing dashboard, you can perform steps 2 and 3 steps; however, a warning message appears when you try to place content in a panel that already contains content. The new content will override the existing content.

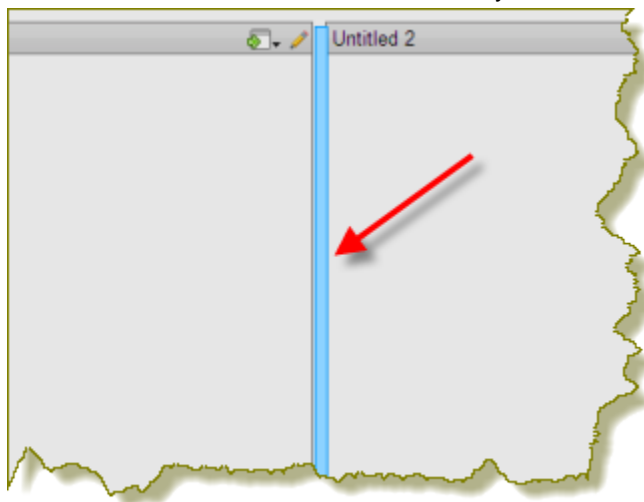
4. Save your dashboard.

## Adjusting Whitespace in Dashboard Panels

---

Sometimes you must adjust the whitespace in dashboard panels so that the content appears correctly. Follow the instructions below to adjust whitespace.


1. Open an existing dashboard.
2. In the lower pane, click the **Properties** tab.
3. Click **Resize Layout**.  
The whitespace between the dashboard panels turns blue.
4. Adjust the panel size by clicking and holding the left mouse button down as you move the blue lines (whitespace) around. Release the mouse button when you are satisfied with the positioning of the panel.



5. Click **Close** in the lower right corner of the dashboard to exit resize layout mode.
6. Examine the dashboard contents to make sure they are placed correctly. You can return to the resize layout mode if you need to make additional changes.
7. Save your dashboard.

# Linking to Content in a Dashboard

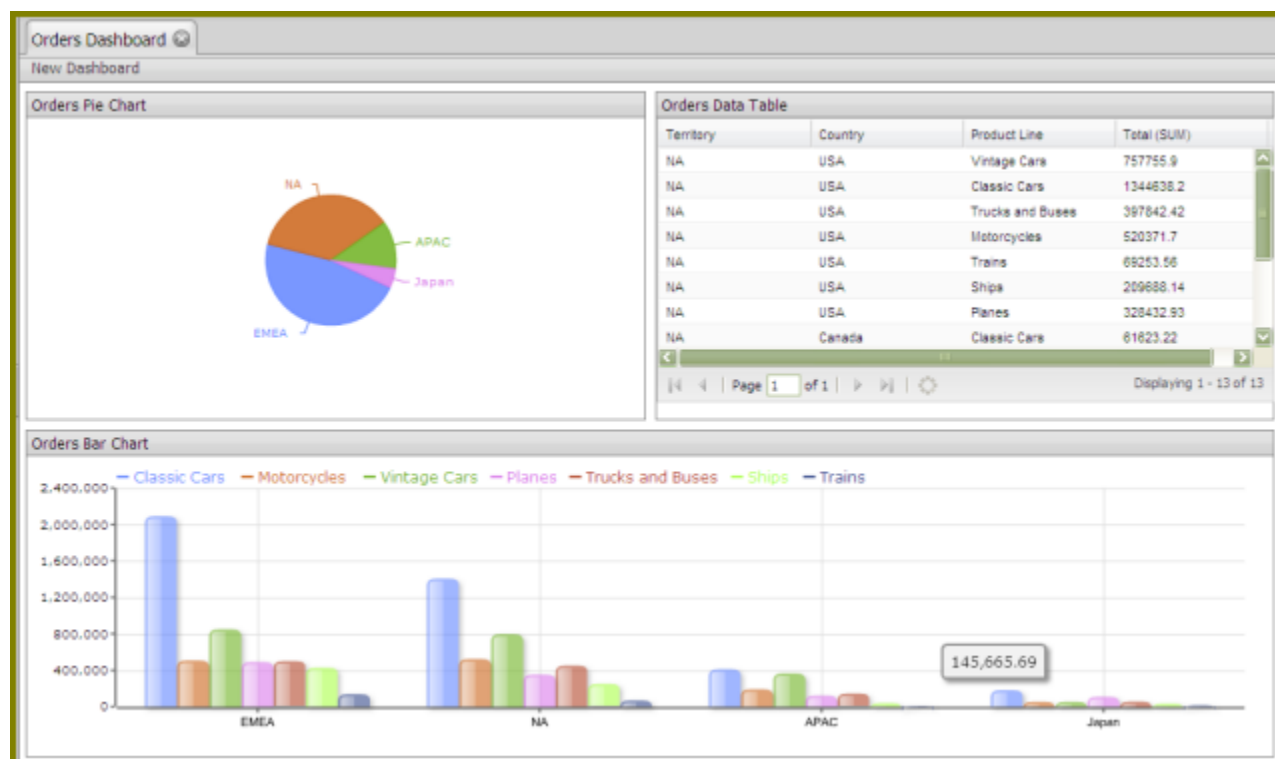
The content linking features in dashboards allow you to link to content in one dashboard panel to another dashboard panel as long as parameters have been assigned. You can use content linking if your dashboard panel contains a data table, chart, .xaction, or file.

 **Note:** Content linking is not available for dashboard panels that contain URL-based content.

## Linking Charts and Data Tables

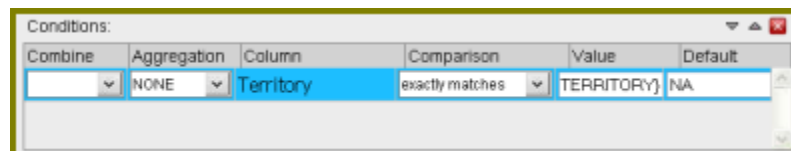
Below are general instructions for linking charts and data tables in a dashboard. This is just an example. You must adjust the instructions when working with your own data.

1. Create a simple dashboard that contains two charts, a data table. At this point, none of the content has been linked and you have a "static" dashboard.



Notice the pie chart in the example above. You want report consumers to click on a slice (NA, APAC, Japan, EMEA) and have the data table on the right update with the values associated with that slice specifically. For example, if a report consumer clicks on the EMEA slice, the data table will display values associated with EMEA only. To get the correct filter display, you must first create a parameterized query that drives the content in the data table.

2. Add a condition to the query so that you can filter the data in your data table. In the example below, the parameter/filter is **{TERRITORY}** and the default value is **NA** (North America).

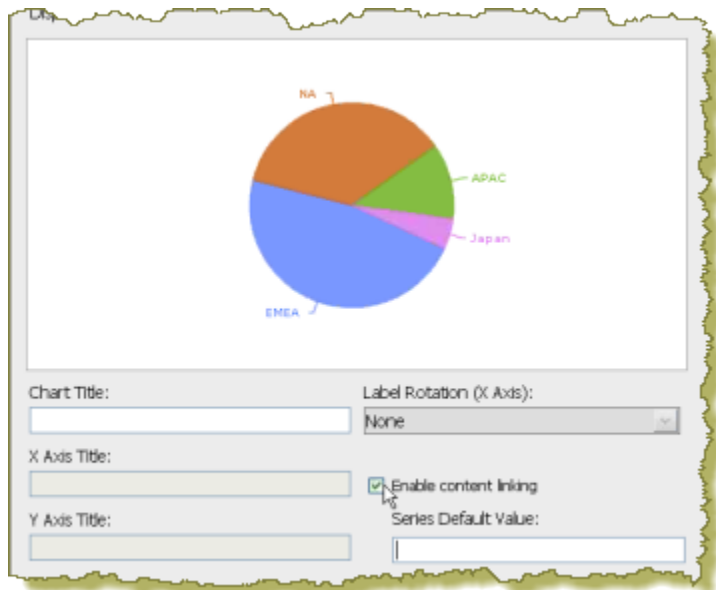


Combine	Aggregation	Column	Comparison	Value	Default
	NONE	Territory	exactly matches	{TERRITORY}	NA

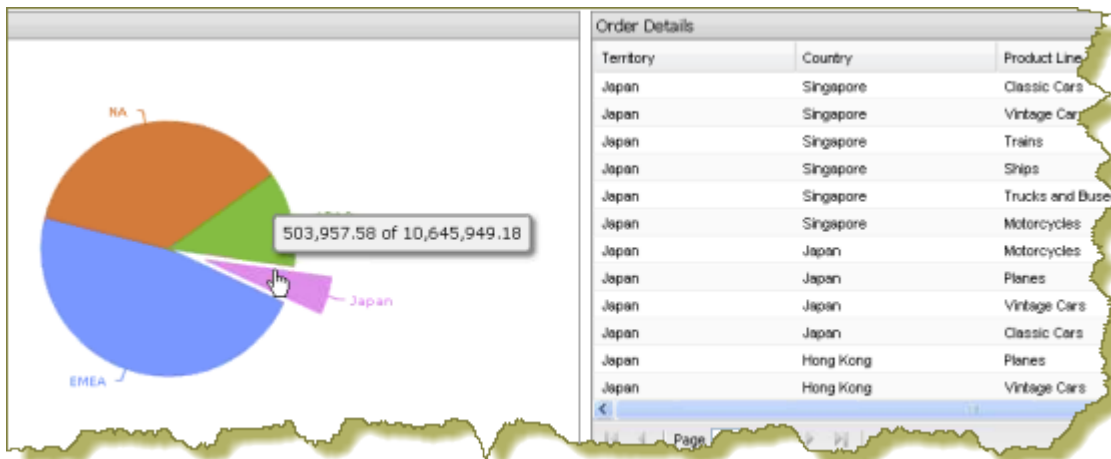
In the Pentaho User Console, when you click on the data table, you can see that you have an available parameter called **TERRITORY**.



3. Edit your data chart to enable linking. In the **Chart Designer**, click **Enable content linking**. To display a default value when your chart renders for the first time, enter a value in the **Series Default Value** text box.



When the report renders, the data table updates each time a user clicks a slice.



# Scheduling Reports

The Pentaho User Console has the ability to run reports at specified intervals, even if user input is required to properly execute the report. The sections that follow explain how to set up and configure private schedules. Private schedules are ad hoc, non-subscription schedules; subscription schedules, also referred to as *public schedules* are set up by an administrator. You must have proper permissions to set up a private schedule.

For more information about schedules, see the demo, [Scheduling, Subscription and Distribution](#), on the Pentaho Pre-Sales Sandbox.

## Scheduling a Report

You can configure the Pentaho BI Server to run reports at regular intervals, or on certain dates and times. Follow the instructions below to create a private schedule.

1. In the left pane, navigate to the location of your report. It should appear in the lower left list when you've selected the proper directory.
2. Right-click the report you want to schedule, then click **Schedule** in the context menu.  
The **New Schedule** window appears.
3. Type in a name to identify the schedule by in the **Name** field, and a group name (for groups of schedules) in the **Group** field. Optionally you can also enter a description of the schedule in the **Description** field.
4. Select an interval from the **Recurrence** drop-down box. If you would like to enter a custom interval, select **Cron** and consult [the Quartz reference](#) to learn the Quartz syntax.
5. Adjust the interval settings accordingly; these settings should be self-explanatory.
6. Click **OK** to complete the schedule.

The report is scheduled to execute at the interval you specified. It will also be listed in My Workspace.

## Quartz Cron Attributes

The Quartz cron engine supports a seven-attribute time declaration with many possible values. The number format is the same for every expression, even if the values are different -- it must be listed as seconds, minutes, hours, day of month, month, day of week, then the year. A space separates each attribute.

Possible values for each attribute should be mostly obvious -- 0 to 59 for seconds and minutes, 0 to 23 for hours, 1 to 31 for days, 1 to 12 for months, 1 to 7 for day of week, and a four-digit year. Alternatively you can use three-letter values for the day of week (MON, TUE, WED, THU, FRI, SAT, SUN), and three-letter values for the month (JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, DEC).

An asterisk (\*) indicates *all values*, so an asterisk in the minute field would mean that the report runs once every minute. You can specify a range of values with the - (dash) operator, and you can specify multiple individual values with a comma. If you need to excuse a value in the day of month and day of week field from a cron job, you can use the question mark (?) character to indicate that this value doesn't matter. If you need to split values, you can do so with the slash (/) character -- this operator literally means "every," so \*/15 would mean "Every 15." In the day of month field, you can use the # character to indicate a certain instance of a day of the month, for instance the second Friday of the month would be 6#2. Lastly, you can use a capital L in the day of month and day of week field to indicate "Last," as in the last day of the week. A capital C in either of these fields means "Calendar," and combined with a number means that the report should execute at the interval indicated by the C number according to the loaded calendar. A capital W in the day of month attribute means "Weekday," which only encompasses Monday through Friday. Most of these values can be combined to create unusual cron schedules.

Attribute	Conditionals and Operators
Seconds	, - * /
Minutes	, - * /
Hours	, - * /
Day of month	, - * ? / L W C
Month	, - * /
Day of week	, - * ? / L C #
Year	, - * /

Execute a report at 10:15 AM on every last friday of every month during the years 2008, 2009, and 2010:

```
0 15 10 ? * 6L 2008-2010
```

## Deactivating Schedules

---

Once you've scheduled a report, you can easily delete the schedule without deleting the report. You must have administrative privileges to delete a schedule.



**Note:** To reliably delete a schedule, suspend the schedule first then delete it from your workspace. After the delete process completes, you may restart the schedule.

1. Click the **My Workspace** button, which is the second one in from the right side of the toolbar.
2. Click the triangle next to the **Waiting** section to see a list of scheduled reports.
3. Click **Cancel** next to the schedules you'd like to delete.

The previously scheduled report will no longer run at the specified interval.

Below are problems that have been discovered by other Pentaho User Console users and testers, and solutions for addressing them.

## **Internet Explorer 8 can't preview CSV/PDF/XLS ad hoc report content**

Internet Explorer 8 has extra security features that prevent users from downloading content files generated by the ad hoc reporting interface. In order to work around this, you must force IE8 to recognize the BI Server host as an intranet zone.

To do this, go to the **Tools** menu in Internet Explorer, then select **Internet Options**. In the ensuing options screen, click the **Security** tab, then the **Local Intranet** icon. Click the **Sites** button. In the dialogue that follows, deselect the **Automatically detect intranet network** option, then click **OK** to close this window, then **OK** again to close the Internet Options window.