Using the Pentaho BI Suite Online Demonstration

Help and Support Resources

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Evaluating the Pentaho BI Platform

Your organization needs a business intelligence reporting solution, but where do you begin your evaluation? This guide will walk you through using some of Pentaho's end-user reporting and analysis tools via the online demo provided on the pentaho.com Web site. The online demo is as close to using the BI Suite's Web-based graphical user interface as you can get without installing it on a local machine. This enables you to see the BI Suite's ad hoc reporting and Pentaho Analyzer report capabilities without going to the trouble of installing any software. If you would like to go beyond this first stage, you can still download the full Pentaho BI Suite Enterprise Edition (which includes client tools that go far beyond the online demo's Web interface), install it in your test environment, and evaluate it firsthand for 30 days. If you need personal assistance in developing a BI solution, there are Pentaho consultants, salespeople, and pre-sales support specialists available to help you.

Software Requirements

There are no operating system requirements for the online demo. You must use either Internet Explorer 6 or higher or Firefox 3.0 or higher, however, and cookies must be enabled in the browser configuration.

Note: There may be problems with some versions of Firefox 2.x. Other browsers such as Safari and Opera may work, but are neither tested nor supported by Pentaho for this online demo.

Evaluation Overview

The online demo encompasses the BI Suite's Web interface, known as the Pentaho User Console. Through this Web application you will achieve the following goals within 30 minutes (though it may take longer depending on the quality of your network connection and your proclivity for experimentation):

1. Register for the online demo: **5 minutes**.
2. Log into the Pentaho User Console as a guest: **less than a minute**.
3. Follow a step-by-step walkthrough for creating a basic, data-driven ad hoc report with the included sample data: **10 minutes**.
4. Follow a step-by-step walkthrough that drills down into a data source using Pentaho Analyzer: **10 minutes**.
5. View some sample dashboards, which present report data in unique, interactive ways: **5 minutes**.

Online Demo Registration

Before you can begin using the BI Suite online demo, you must provide some contact information. If you'd like, you can also sign up to receive whitepapers, product demonstrations, and newsletters from Pentaho.
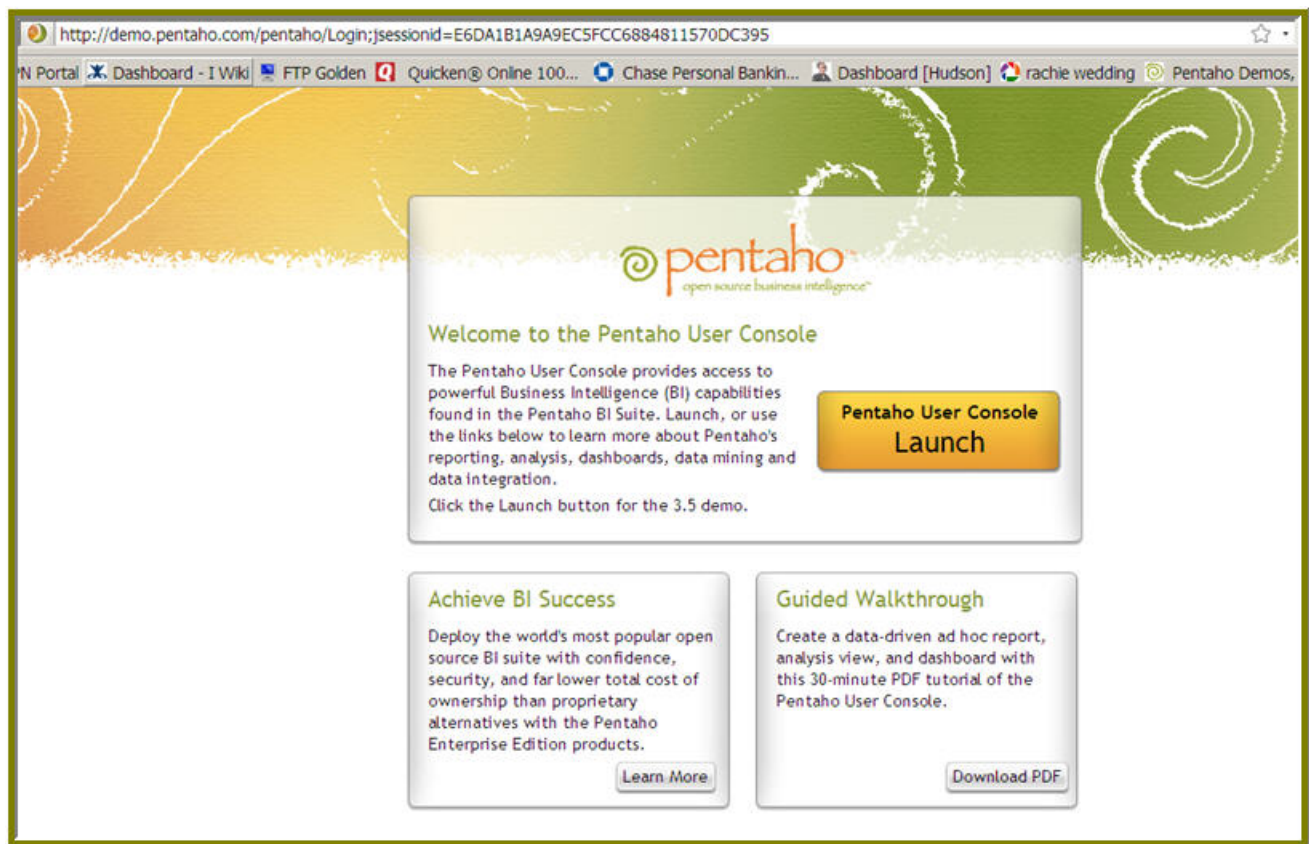
Simply visit `http://demo.pentaho.com/` and fill in the Web form to complete the registration process.

Logging Into the Online Demo

You should have already signed up for access to the online demo.

Follow the below instructions to log into the online demo.

1. Navigate to the following URL to access the demo: `http://demo.pentaho.com/pentaho/Login`

2. Click **Pentaho User Console Login**.

   A popup window will appear with user login details.

3. Select **guest** from the Sample Users drop-down box.

4. Click **Login**.

You're now logged into the Pentaho User Console.
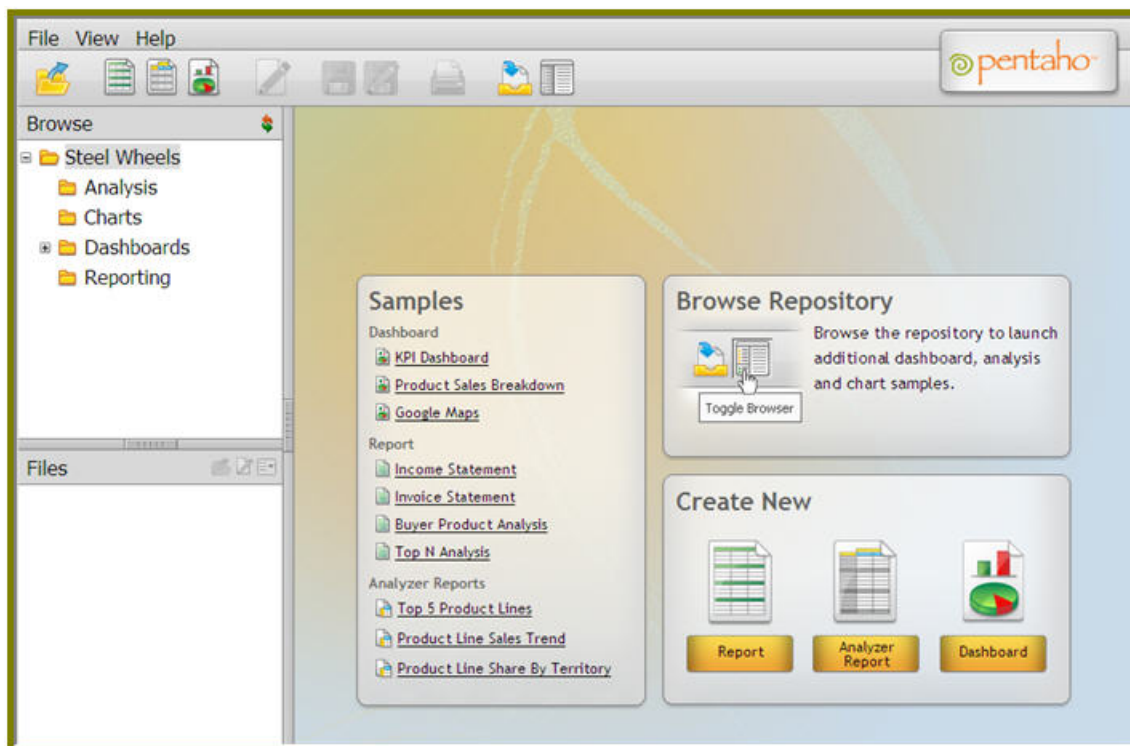
Exploring the Samples

Before you get into creating content with the Pentaho User Console, you may find it useful to examine some premade reports and Pentaho Analyzer reports that show off some of the BI Suite's capabilities. To view Pentaho's sample content, go to the **View** menu and select **Browser** to bring up the solution browser pane. Then click the **+** next to **Steel Wheels** in the upper left corner.

The Pentaho sample solutions are split into three main categories: Analysis, Dashboards, and Reporting. The only samples not created with the Pentaho User Console are the Google Maps, Revenue Analysis, Territory Sales Breakdown, and Top 10 Customers dashboards, which were manually created by Pentaho Web developers. The rest of the samples in the Dashboards directory were created with the Pentaho Dashboard Designer.

Is This Guide For You?

This guide's intended audience is relatively broad, but decidedly technically inclined. You might be anyone from a chief information officer, IT manager, BI administrator, or database administrator, to someone who reports to one of those positions. One thing is certain, however: You should be comfortable with technical details and complex tutorials. If you are not an IT professional, or if you otherwise require a simpler business intelligence evaluation experience that explains many of the related concepts along the way, you may be better suited to the *Getting Started With Pentaho* guide.

Create, Publish, and Share Information

The ad hoc reporting capabilities built into the Pentaho BI Platform use the same Reporting engine as the more sophisticated Pentaho Report Designer client tool. Ad hoc reporting concentrates on simplicity and ease of use, enabling you or your business users to create a basic data-driven report very quickly. For more detailed reports, or for fine-grained control over every aspect of a report, Report Designer is a more appropriate tool.

Pentaho Analyzer reports are an interactive method of using filters and sorting to drill down into a data source to discover hidden details. Pentaho Analyzer reports are more of a personal exploration tool, whereas ad hoc reports are intended to be distributed to others through HTML, PDF, or paper.

Ad Hoc Report Tutorial

Ad Hoc Reporting allows you and your users to create a basic data-driven report quickly and efficiently. With Ad Hoc Reporting, users do not need to know the structure of the database, nor do they need to know any SQL. A metadata model created with the Pentaho Metadata Editor, (a graphical user interface for creating user friendly metadata models), acts as a buffer between users and the complexities of relational data sources. The Pentaho BI Suite comes with three pre-built business models (datasets).

👉 **Note:** What is metadata? Quite simply, metadata is "data about data." For example, a library catalog is considered "metadata" because it contains information about books and other publications. A metadata model, is a collection of related categories of data.

New in version 3.5.1, is the ability to quickly access data in your own relational database or CSV flat file for evaluation or testing purposes.
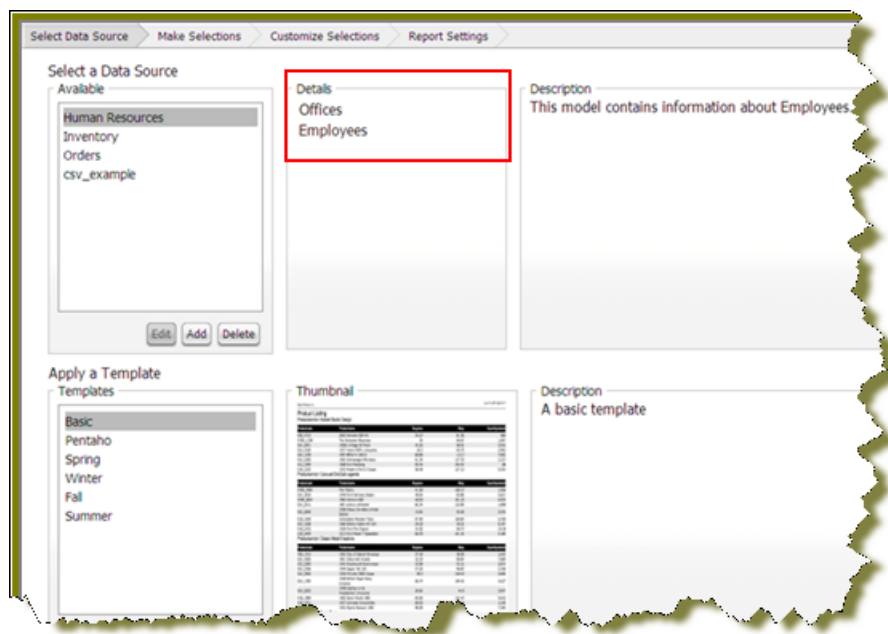
Ad Hoc Reporting Interface provides...

- Easy-to-create connections to your relational or CSV (flat file) data sources for evaluation and testing purposes
- Interactive "drag and drop" Web interface for business user self-service report creation
- Wizard-driven authoring supporting report templates, metadata-based query creation, sorting, and filtering
- Interoperability with Pentaho Report Designer allowing ad hoc reports to be "promoted" for fine-tuning by IT professionals
- Single reporting engine for ad hoc and pixel-perfect reports for lowest possible total cost of ownership

To create an ad hoc report, you must logged onto the Pentaho User Console.

1. In the Pentaho User Console click **Create New Report**.

   The ad hoc query wizard starts.

2. In the first step of the wizard, select **Orders** from the list under **Select a Data Source**.

As you become more familiar with Ad Hoc Reports features, you can add your own relational or flat file (CSV) data sources to ad hoc reports.

The tables associated with the **Orders** data source are listed in the **Details** pane.

3. In the **Apply a Template** field, select a predefined report template.

A thumbnail preview of the template appears 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.
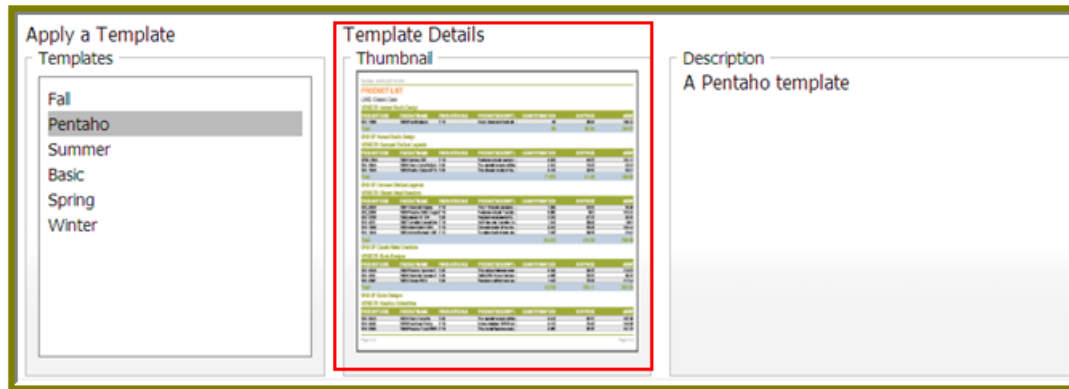
4. Click **Next**.

5. In the **Available Items** list, click the **Territory** business column and drag it to the upper right into the **Level 1 box**.

This determines how the data is grouped.

6. Drag and drop the **Amount** and **Buy Price** into the **Details** box on the right.

This determines which fields to display for the given groups.

7. Click **Go** to preview how these new items have affected the report, then close the preview tab when you're done.

8. Click **Next**.

9. Click the **Territory** item in the **Groups** list.

A list of general options appear on the right.

10. Click **Center**.

This centers the territory name above each table, making it easier to read.

11. Click **Amount**, then click **Add** in the **Sort Detail Columns** area on the right.

This sorts the sales amounts from lowest to highest.

12. Click **Go** to test the new change, or **Next** to continue to the next part of the wizard.

13. To set the header, footer, description, paper type, and page orientation, change the on-screen values for these elements 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.

14. Click the blue **Save** button in the top toolbar to save your report. In the ensuing file dialog, navigate to the location you want to save the report to, and type in a filename for the report.

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

You now have a report that shows how much revenue is coming from each sales territory, and the itemized price of each purchased product. As you can see, ad hoc reporting provides business users with a quick and simple solution for building basic reports. For report designers who need access to more advanced features like pixel perfect layout, conditional formatting, or parameterization, Pentaho provides the full-client Report Designer.

Territory: APAC

Amount
$2,476.8
$9,738.18
$10,640.29
$12,334.82
$21,730.03
$23,294.8
$24,219.59
$26,421.24
$27,098.8
$28,397.26
$29,852.17
$34,332.29
$35,160.25
$35,911.81
$36,409.31
$37,754.33
$37,878.55
$37,905.15
$39,267.74
$40,034.67
$41,297.14
$41,418.55
$41,791.95
$42,902.84
$43,930.62

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.

   Note: If you need help to understand the options in any Pentaho Analyzer dialog box, click (Help).

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.

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.

8. At this point you have a functioning report and you can view your data in chart form. Click ![icon] (Switch to Chart Format) to examine your report data in a chart format. The default display is a bar chart but if you click ![icon] (Choose Chart Type) you can select a different chart type to display your data.

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. Click ![icon] (Switch to Table Format) if you are in chart mode when the report appears.

2. Right-click the **Actual** column and select **User Defined Number** -> **Calculated Number**.
The **New Calculated Number** dialog box appears.

3. In the **Name** field, type **Difference**.

This step creates a new column in the report.

4. Select **Currency ($)** from the **Format** list so that the data in your report displays as dollar amounts.

5. In the right pane of the dialog box, click ![icon] so that a minus sign appears next to **[Actual]-**.

6. Click **Budget** in the left pane and click ![icon] 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.

7. Right-click the **Region** column and select **Show Subtotals**.
The subtotals for each region is displayed in 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.

   👉 **Note:** You can click **Undo** or **Reset** to return to the previous version of the report.

7. Click **OK** and save your report.

Dashboards

Reporting may only be the first step for you in terms of information delivery. When you have data that needs to be updated frequently or in real-time and delivered to a large number of people, static reports become cumbersome and bandwidth-intensive. In these situations, you may be better served by a Web portal that shows rich and interactive charts, graphs, and stoplight reporting dashboard elements. Pentaho offers a Dashboard Designer tool to create dashboards from existing content (charts, reports, Pentaho Analyzer reports, graphics, etc.) with a variety of interesting features, including:

- Stoplight alerting and conditional formatting
- Google Maps integration
- Adobe Flash widget support

To see some dashboards in action, click the plus sign next to **Steel Wheels** in the browser pane on the left to expand it. (If you don't see a browser pane, go to the **View** menu in the Pentaho User Console, then select **Browser**. The browser pane will appear on the left). A list of example files will appear in the lower left pane; in it, double-click on the **Google Maps**, **Revenue Analysis**, and **Top 10 Customers** items to see different interactive dashboard examples. These are similar in appearance and functionality to actual production dashboards used by Pentaho customers.

Pentaho offers a Dashboards Enterprise Edition support module that provides two service enhancements: A Dashboard Designer plugin for the Pentaho User Console, which makes simple dashboard creation capabilities available to business users; and Pentaho dashboard development consultative support and expertise available to your JSP developers.

Dashboard Designer Tutorial

You must be logged into the Pentaho User Console.

Context for the current task

   👉 **Note:** See the *Getting Started with Pentaho Guide* for details about new dashboard features.

1. Go to the **File** menu, then select **Dashboard** from the **New** sub-menu.
   A **New Dashboard** page will appear with the default **2 by 2** layout selected.

2. Click back to the **Templates** tab. then select the two-column dashboard layout from the horizontal list.
   The dashboard layout will change from four panes to two.

3. Click the **Theme** tab to switch to the Theme pane.

4. Select the **Cool Blue** theme.

5. In **Objects** list on the left, click the **Untitled 1** item.
   The left panel in the two-column layout will be selected.

6. In the upper right corner of the **Untitled 1** panel click the **Insert Content** down arrow and choose **File**. In the browser, navigate to **/steel-wheels/Dashboards/Widget Library/KPIs/Sales Year /Year (Flash)** and click **Select**.

7. In the **Title** field below, type **Yearly Sales Trend**.

8. Click **Apply**.

9. Click **Untitled 2** in the **Objects** list to switch to the right panel.

10. In the upper right corner of the **Untitled 2** panel click the **Insert Content** down arrow and choose **File**. In the browser, navigate to **/steel-wheels/dashboards/Widget Library/KPIs/Productline Mix - Total Sales (flash)** and click **Select**.

11. In the **Title** field in the lower portion of the screen, type **Product Share**.

12. Click **Apply**.

13. Click **Filters** in the **Objects** list.

    The **Filter Editor** will appear on the right.

14. Click the **Show Filter Toolbar** checkbox.

    This toolbar enables user-interactive controls at the top of the dashboard.

15. Click the **+** in the upper right corner of the Filter Editor.

    The **Filter Properties** dialog box appears.

16. In the **Name** field, type **Territory**.

    This is display name for the filter control label.

17. Enable **Display Name as Control Label** if you want users to see the display name in the filter toolbar.

18. In the Filter Properties dialog, click **+**
    The **List Value** dialog appears.

19. Type **North America** into the **Label** field, and **NA** in the **Value** field, then click **Add**.

20. Add two more list values for **Europe**/**EMEA** and **Asia Pacific**/**APAC**, then click **Close**.

21. Click **Ok** in the **Filter Properties** dialog to finish creating the filter list.

    A drop-down box will appear in the filter toolbar at the top.

22. In the **Objects** list, click **Yearly Sales Trend**.

23. In the **Region** line, click the down-arrow and select **Territory**.

24. Repeat the previous step for **Product Share**.

You now have a functional dashboard that shows bar and pie chart data filtered by sales region. To switch to a different region, select it from the Territory drop-down box in the upper left corner of the dashboard. You can now save your dashboard and share it normally through the Pentaho User Console. Feel free to experiment further with Dashboard Designer.
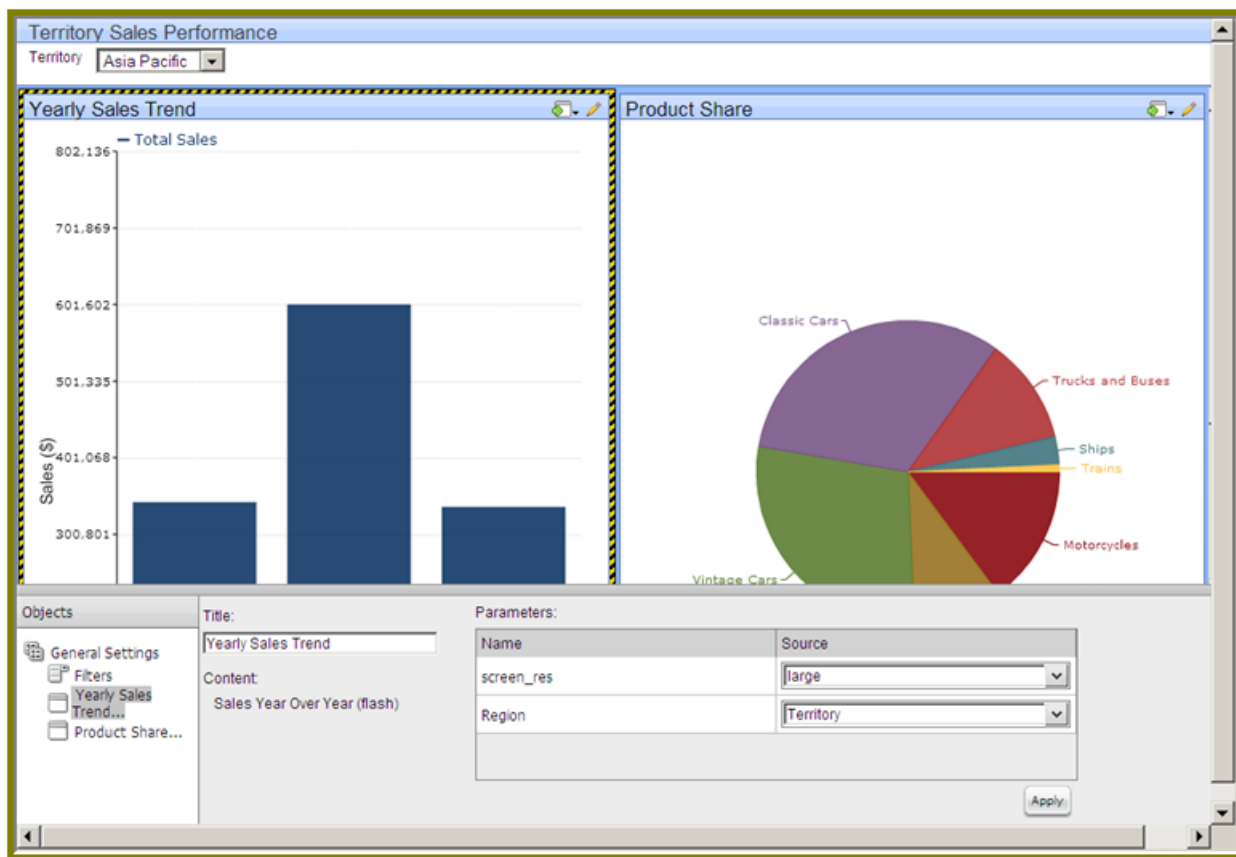
Further Evaluation

This is only a basic, business user-oriented, preliminary evaluation and as such, it only covers a small subset of the Pentaho BI Suite's reporting and analysis capabilities. In addition to the Pentaho User Console, the full BI Suite includes:

- **Pentaho Enterprise Console** for easy setup and maintenance of your BI solution.
- **Report Designer** for "pixel-perfect" report creation and publishing.
- **Design Studio** for complex fine-tuning of reports.
- **Metadata Editor** for creating an information layer around a data source.
- **Schema Workbench** for creating ROLAP analysis schemas.
- **Aggregation Designer** for improving analysis cube performance.

You can try out the full BI Suite by requesting a 30-day Enterprise Edition evaluation package from your Pentaho sales representative.