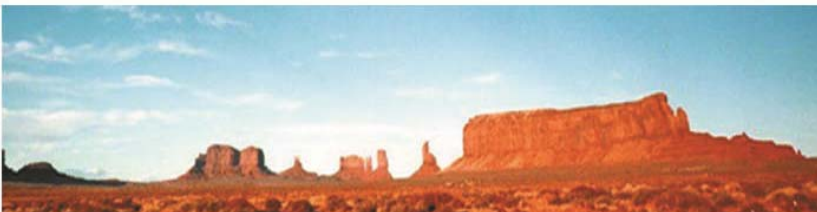




Software for Government

Staff User Manual

Chapter 9 – Ad Hoc Reporting



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Printed in the United States of America

Third Edition

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Chapter 9 – Ad-Hoc Reporting

The B2Gnow ad-hoc reporting tool offers powerful functionality to build and run advanced reports. Authorized users can access published “data models” that are compilations of all relevant fields and parameters in the system for a variety of useful record types. You can customize the included fields and formats plus filter, sort, and layout the results.



Microsoft® SQL Server® 2008 Reporting Services

The underlying technology is Microsoft SQL Server 2008 Reporting Services and Report Builder 2.0. This guide provides a summary overview of accessing ad-hoc reporting and creating a simple report. For more advanced reports, refer to the following manual, *Authoring Reports Using Microsoft SQL Server 2008*

Reporting Services Report Builder 2.0.

Launching Ad-hoc Reporting

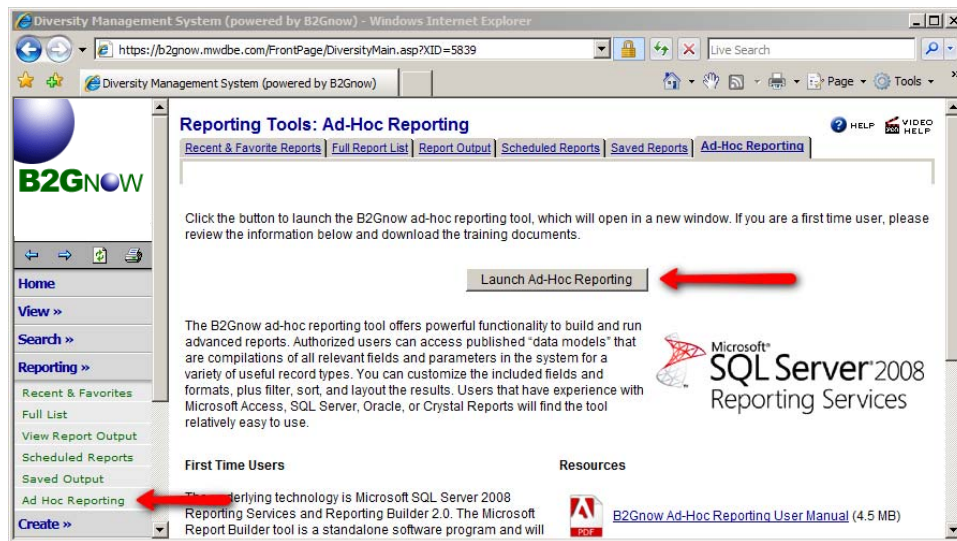
To create and manage ad-hoc reports, first launch the ad-hoc reporting tool from your user account.

NOTE: The Microsoft Report Builder tool is a stand-alone software program and will need to be installed on your computer the first time you run it. Depending on your account privileges, your network/system administrator may need to complete the setup.

To launch ad-hoc reporting

1. Log in to your user account.
2. From the **Reporting** menu, select **Ad-Hoc Reporting**.

3. Click **Launch Ad-Hoc Reporting**.



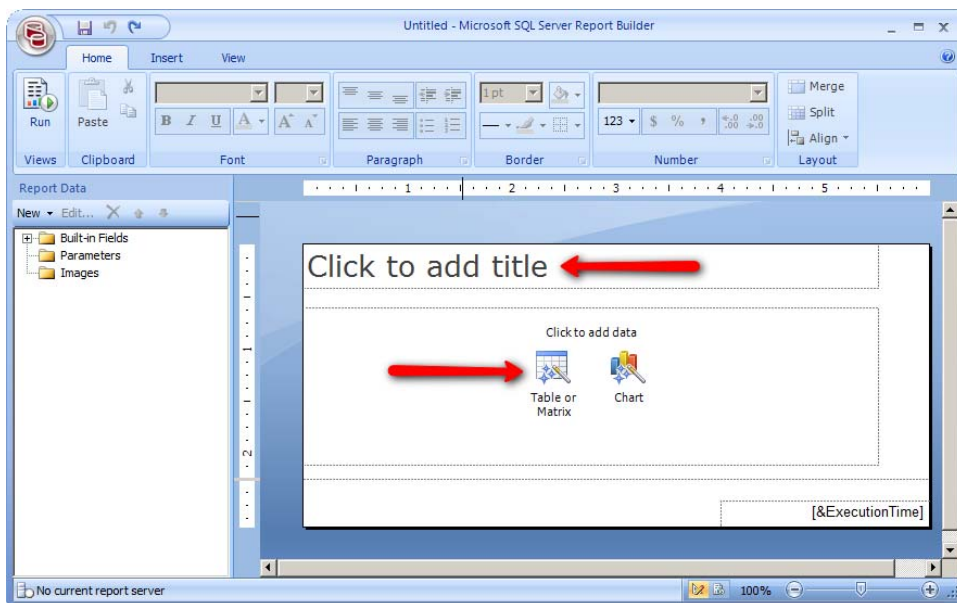
4. If you are presented with a security login, enter your account username and password and click **OK**.

Creating Table or Matrix reports

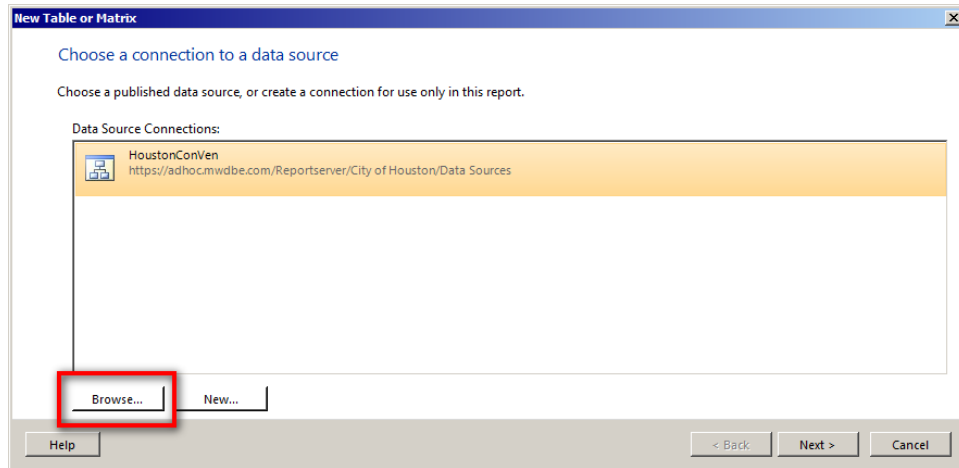
The "Table or Matrix" report is a traditional spreadsheet style report that you can generate in minutes. Your data results display in sorted rows and columns.

To create a table or matrix report

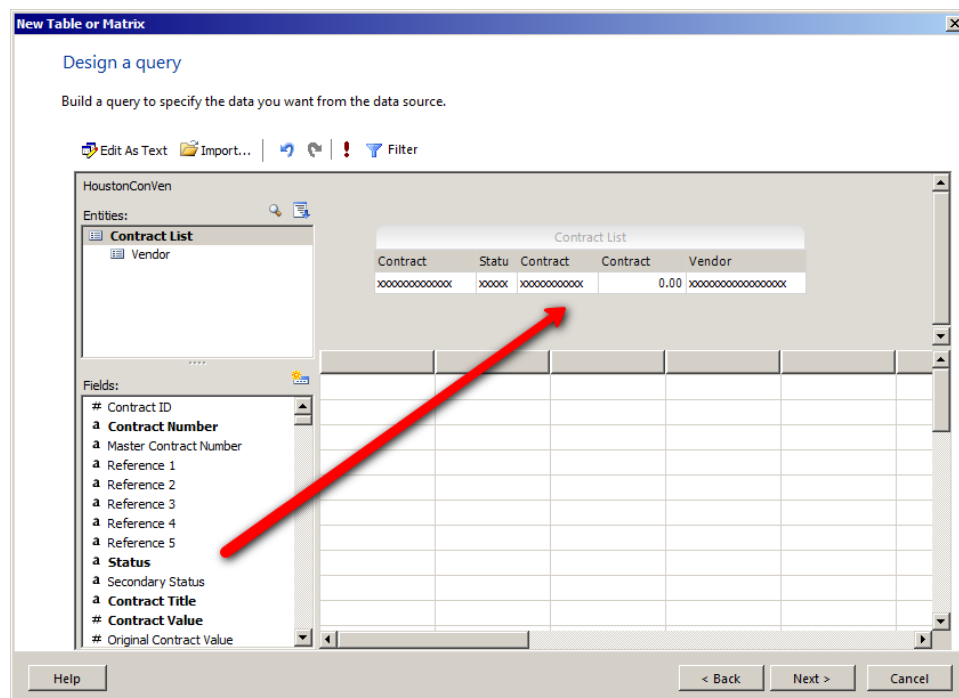
5. In the **Click to add title** field at the top of the report, enter your report title.
6. Click **Table or Matrix** in the main window.



- Click **Browse** to open the Data Source selection window.



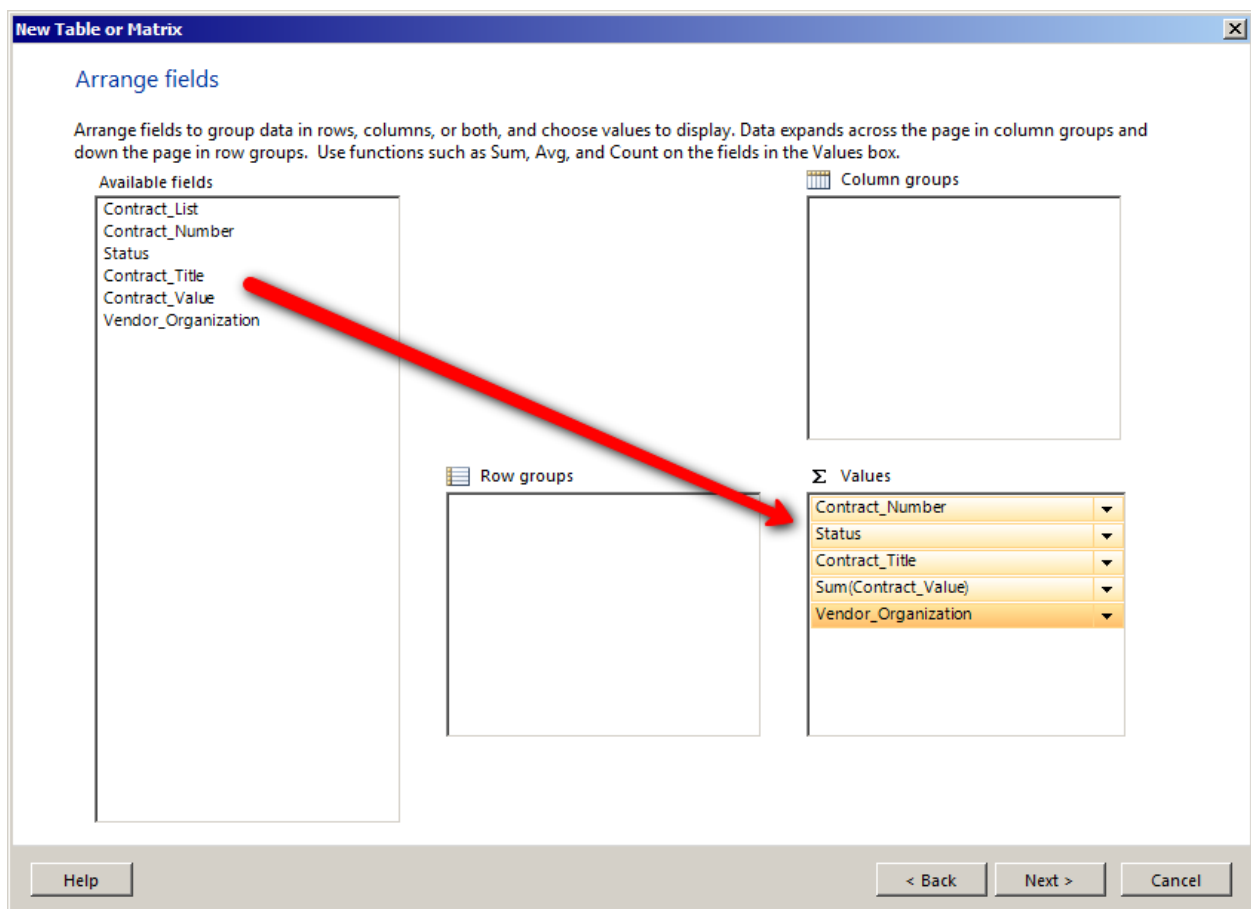
- Open the folder with your organization's name, and then open the **Data Sources** folder.
- Select the Data Source file you want to use, and then click **Open**.
- Click **Next**.
- In the **Fields** list, double-click the fields you want to add. You can also drag and drop the fields into the top right field area.



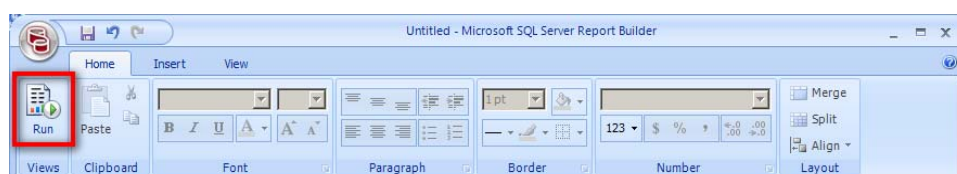
12. To see a sample of the data fields selected, click the exclamation point icon near the top of the window. To apply a filter (e.g. all contracts awarded after 1/1/2006), click the **Filter** icon.



13. Click **Next** when all the field selections are complete.
14. From the **Available fields** area, drag each variable to the **Values** area in the order you want them to display on the report, and then click **Next**.



15. On the **Choose the layout** page, click **Next**.
16. Select the report style you want to use, and then click **Finish**.
17. To run the report, click the **Run** button or press **F5**.





18. To save the report, click the Report Builder icon, then select **Save** or **Save As**. Open the folder with your organization's name, and then open the **Reports** folder. Name your report file using something that clearly represents the contents and click **Save**.

NOTES: All users from your organization have access to the same Reports folder so that reports can be created by anyone and run by anyone. Do not modify or delete other user's reports.

Do not save report files to a location other than the B2Gnow server. Reports saved to other locations may lose compatibility with B2Gnow's ad-hoc reporting function.

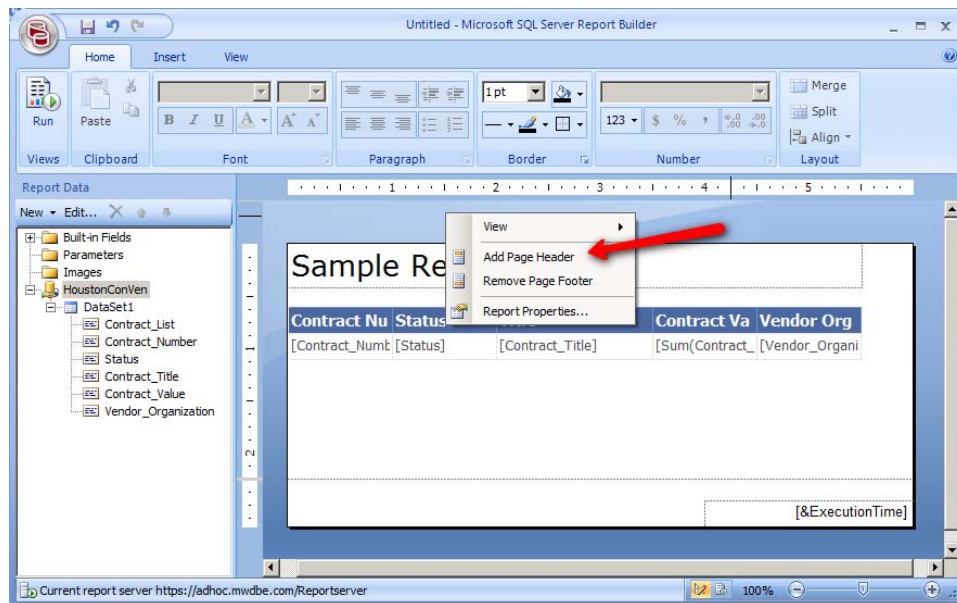
To maintain a clean environment for all users, from time to time the Reports folder will be cleaned of test reports. Accurately name report files to ensure they are not inadvertently deleted.

Adding page headers and footers

If you prefer to put the report title in a page header that will appear and print on every page, Report Builder provides full design functionality.

To add a header or footer

1. Right click on the blue background of the report design window.



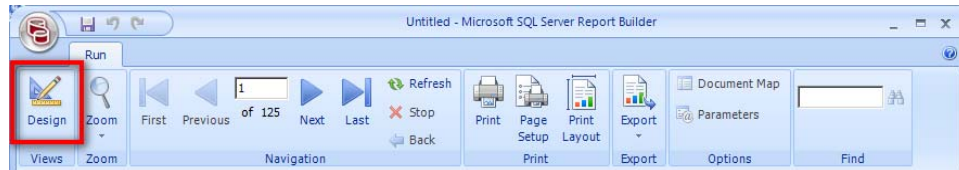
2. Select **Add Page Header** or **Add Page Footer**.
3. To move the report title to the header, drag the field to the header.

Updating data display characteristics

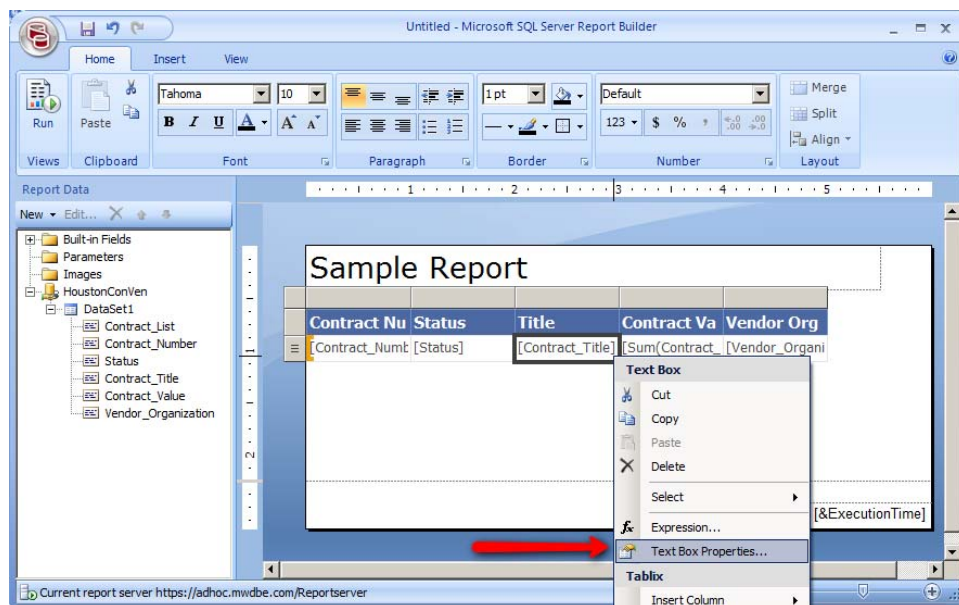
You can modify data display characteristics by updating field formatting in your report.

To update data display characteristics

1. Click **Design** if not already in design view.



2. Click the data box of the data field you want to modify.



3. Right click and select **Text Box Properties**.
4. You can adjust field formatting, alignment, font, border, fill, and visibility. Click **OK** to save changes.
5. To apply your changes, click the **Save** icon in the top menu.

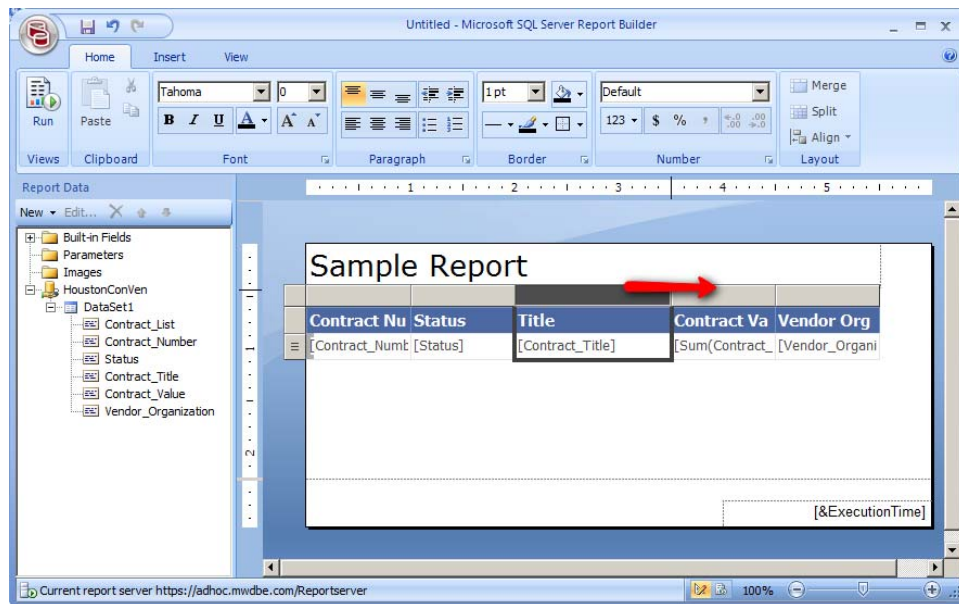
Updating field width

To customize the report layout to better fit on the page, you can update the width of your fields.

To update field width

1. Click **Design** if not already in design view.
2. Click the data box or data field you want to modify.

- Using the gray boxes that display above the field, drag the borders to update the width.



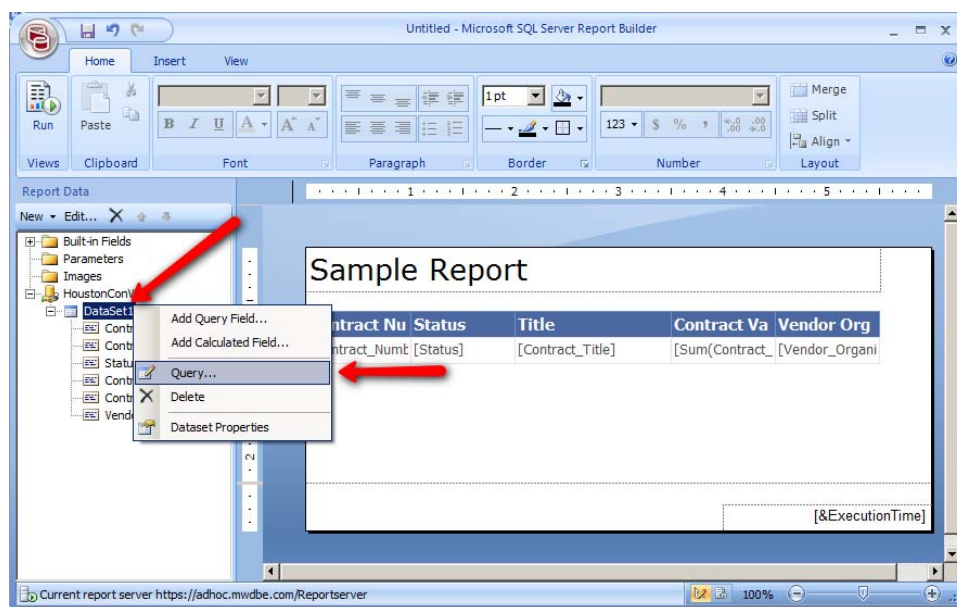
- To apply your changes, click the **Save** icon in the top menu.

Adding fields

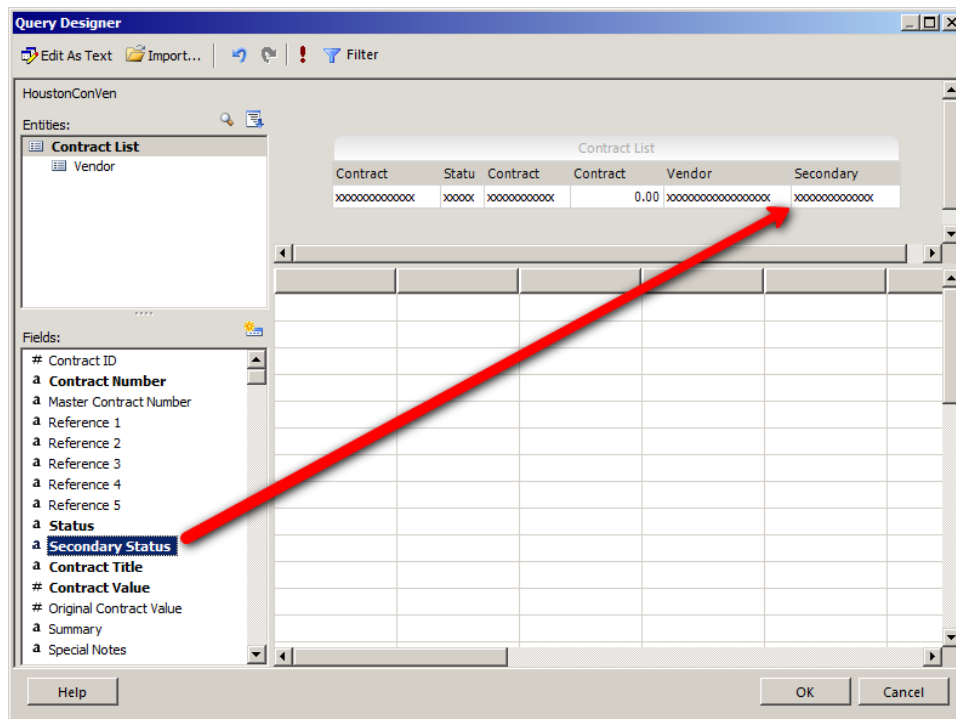
To create a more comprehensive and informative report, you can add more fields.

To add fields

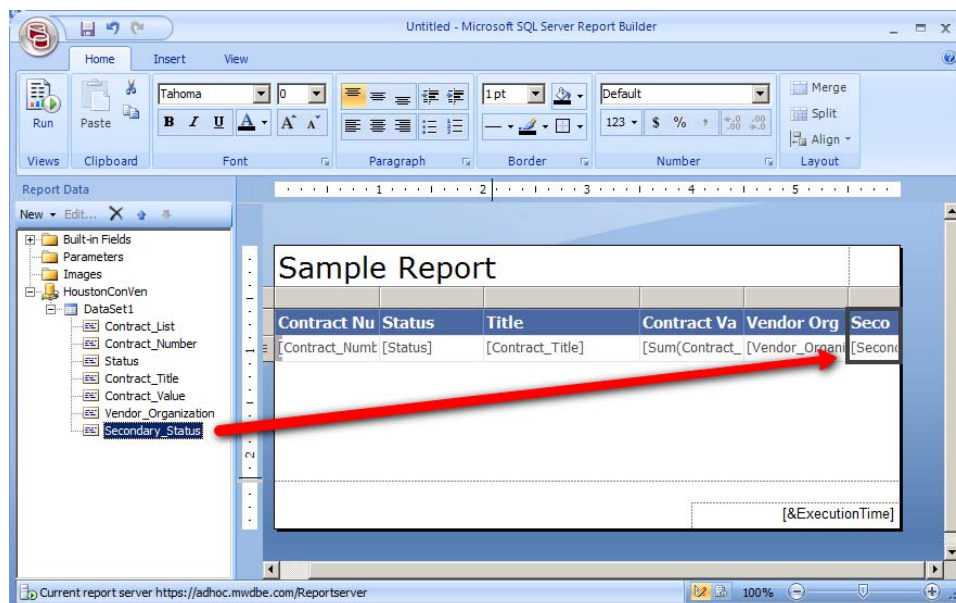
- Click **Design** if not already in design view.
- From the left Report Data window, right click on DataSet1 (or the name of the data set you previously created) and select **Query**.



- From, the **Fields** list, double-click the fields you want to add, and then click **OK**.



- From the **DataSet1** field list in the left Report Data window, drag the fields you selected in the previous step to the **Design** area.



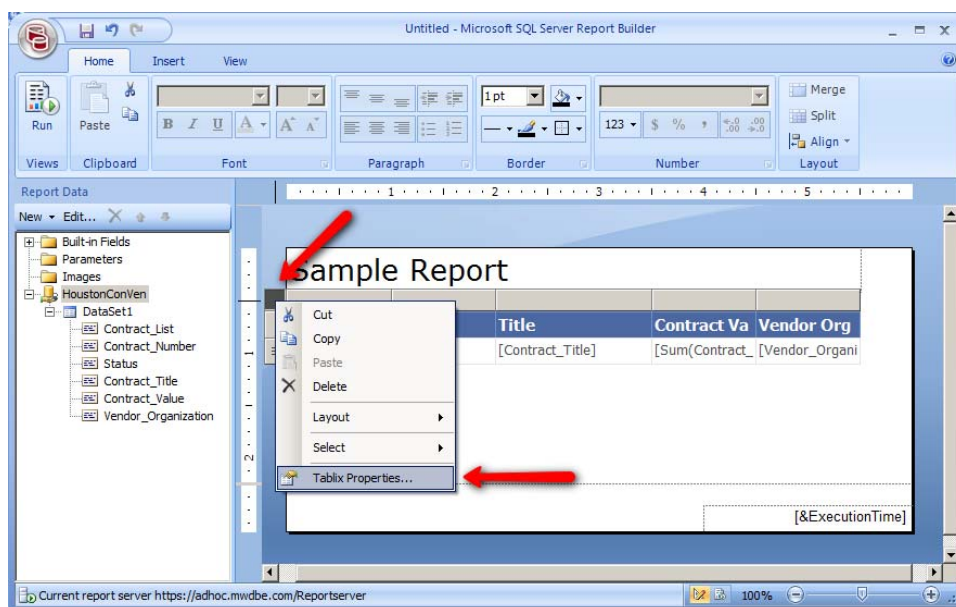
- Click **Run**.
- To apply your changes, click the **Save** icon in the top menu.

Sorting fields

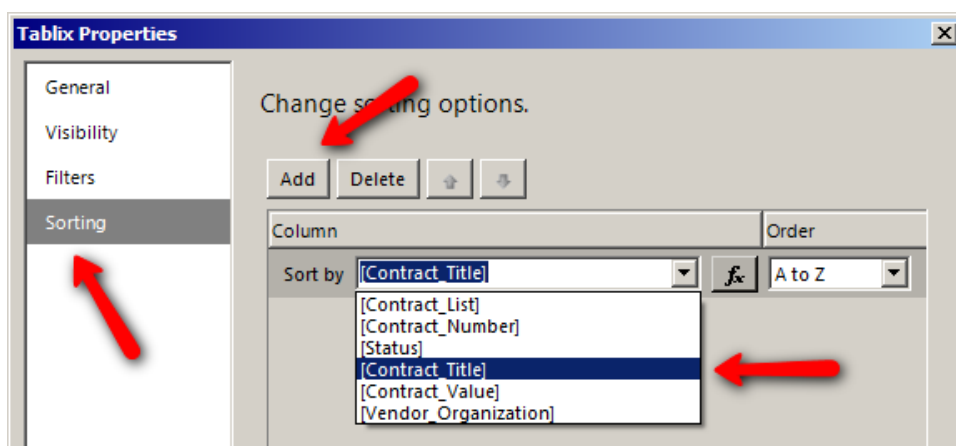
You can specify the order in which data in your report fields automatically displays. Alternatively, you can design the report to allow viewers to set their own sort order by enabling the Interactive Sorting option.

To set sort field order

1. Click **Design** if not already in design view.
2. Click any data field, then right click on the top left border square and select **Tablix Properties**.



3. Go to the **Sorting** tab.



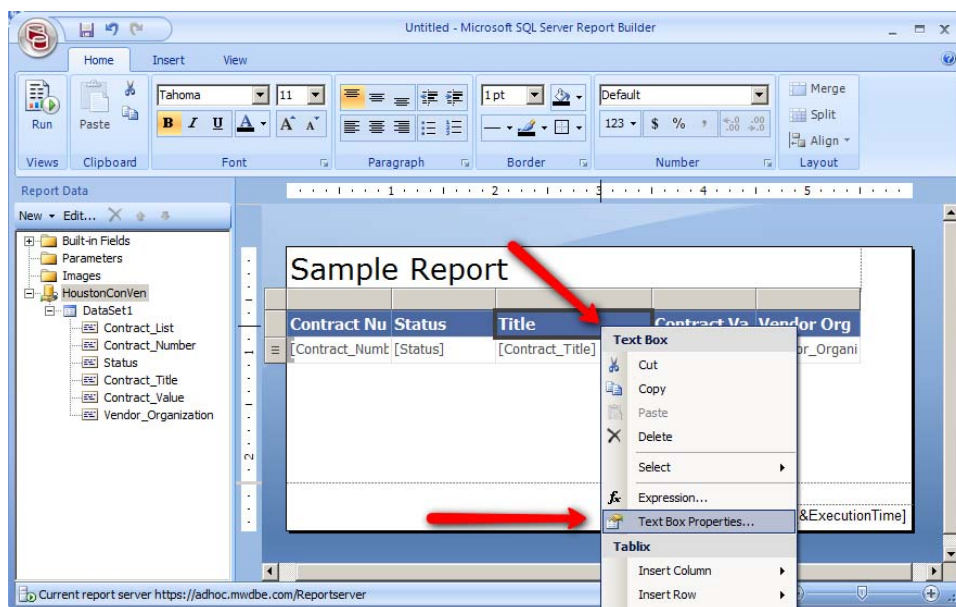
4. Click **Add**.
5. From the **Sort by** list, select the field for which you want to change the sort order.

- From the **Order** list, select the method by which you want to sort the column fields.

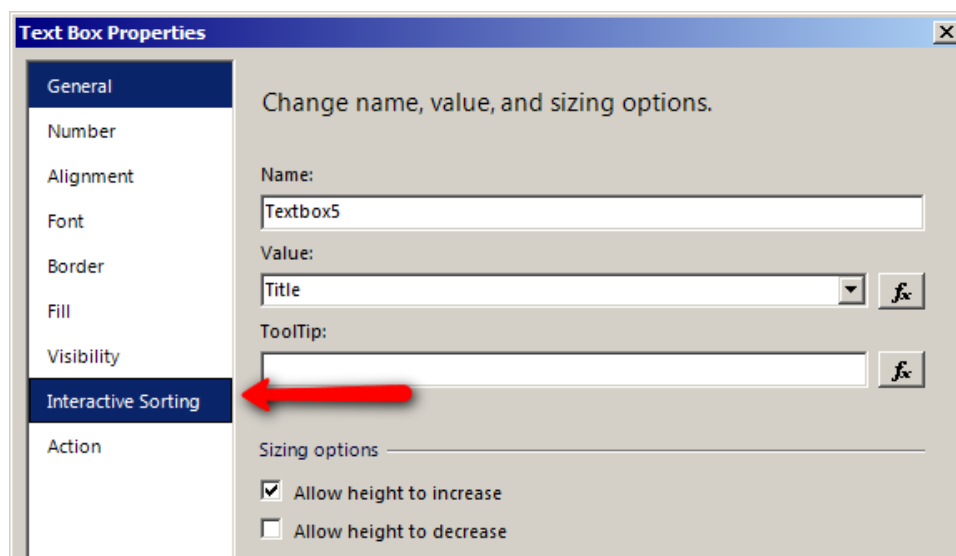
NOTE: By specifying a list of “Sort by” fields, you can create multiple levels of sorting. For example, you can sort by business name, then ethnicity, then gender.

To set interactive sorting for report viewers

- Click **Design**.
- Select a data field header, and then use the right-click menu to select **Text Box Properties**.



- Go to the **Interactive Sorting** tab.
- Select **Enable interactive sorting on this text box**.



- Click **OK**.

6. From the **Sort by** list, select the fields readers can use to sort tables.

NOTE: Viewers cannot sort results by multiple fields at the same time. For example, a viewer cannot sort by Gender, then Ethnicity.

Accessing Saved Reports

1. To open a saved report, click the Report Builder icon, then select **Open**.
2. Open the folder with your organization's name, and then open the **Reports** folder.
3. Select the report and click **Open**.

Converting Saved Ad-hoc Reports Into Standard Reports

Since ad-hoc reporting is limited to specific users in your organization, not everyone has access to run the reports created. When you've created a report that needs to be run by others in your organization, please contact B2Gnow Customer Support to request that the report be converted to a Standard Report.

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Authoring Reports Using Microsoft SQL Server 2008 Reporting Services Report Builder 2.0

This document provides step-by-step instructions for building several types of reports using SQL Server 2008 Reporting Services applications, and sample data. The document focuses on the new SQL Server 2008 Report Builder 2.0 application.

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Introduction

This document is a step-by-step instruction manual for building several reports using SQL Server 2008 Reporting Services applications and sample data. The focus is on using the new SQL Server 2008 Report Builder 2.0 application. See the **Required Environment** section for the software required to complete these exercises.

Before You Begin

Estimated time to complete this lab

- Basic Exercises 1 – 5: 30 Minutes
- Advanced Exercises 6 – 9: 45 minutes

Objectives

After completing this lab, you will be able to:

- Launch the new report designer application **Report Builder 2.0**.
- Create a data source and a data set.
- Design a new report using Report Builder 2.0.
- Preview your report from the application and from Report Manager.
- Enrich your report using the richly format-able text box.
- Enrich your report using a chart.
- Enrich your report using gauge.
- Enhance your Tablix and create two dynamic column groups.
- Add end-user power by adding dynamic filtering.

Required Environment

This lab requires the following:

- Microsoft SQL Server Reporting Services Report Server, for publishing reports.
- Microsoft SQL Server 2008 Reporting Services Report Builder 2.0:
<http://www.microsoft.com/downloads/details.aspx?familyid=9F783224-9871-4EEA-B1D5-F3140A253DB6&displaylang=en>
- Microsoft SQL Server 2008 Adventureworks Sample Database:
<http://www.codeplex.com/MSFTDBProdSamples/Release/ProjectReleases.aspx?Released=18407>

Lab Scenario

You are a report author for AdventureWorks—a sporting goods retailer. You have a requirement to develop a new report that displays product sales information. The report is to be designed to show aggregated sales data using two-level dynamic groupings on both the row and column axis. You also need to create an advanced report that leverages some of the new design capabilities introduced with Reporting Services 2008.

A Reporting Services 2005 table enables quick and easy groupings of basic data. A Reporting Services 2005 matrix enables complex groupings of data, including nested groups and inner static members within dynamic columns. In Reporting Services 2008, a new data region called **Tablix**, combines the table and matrix features, combining the best of both. Therefore, the new Tablix functionality allows you to build reports that include the following:

- Multiple parallel row/column members at each level
- A mix of dynamic or static members on both rows and columns
- Optional omission of member headers
- Arbitrary nesting on each axis

Exercise 1: Getting Started and Getting Familiar with Report Builder

In this exercise, you will:

- Launch Report Builder 2.0 (RB2).
- Get started with a blank design surface for creating a new report.
- Review the various key areas of the RB2 user interface (UI).

Launching Report Builder 2.0

To launch the Report Builder, perform the following steps:

1. On the Start menu, click **Programs**, then click **Microsoft SQL Server 2008 Report Builder 2.0**.
2. Click **Report Builder 2.0**.

Report Builder 2.0 launches with a blank report, as shown in Figure 1.

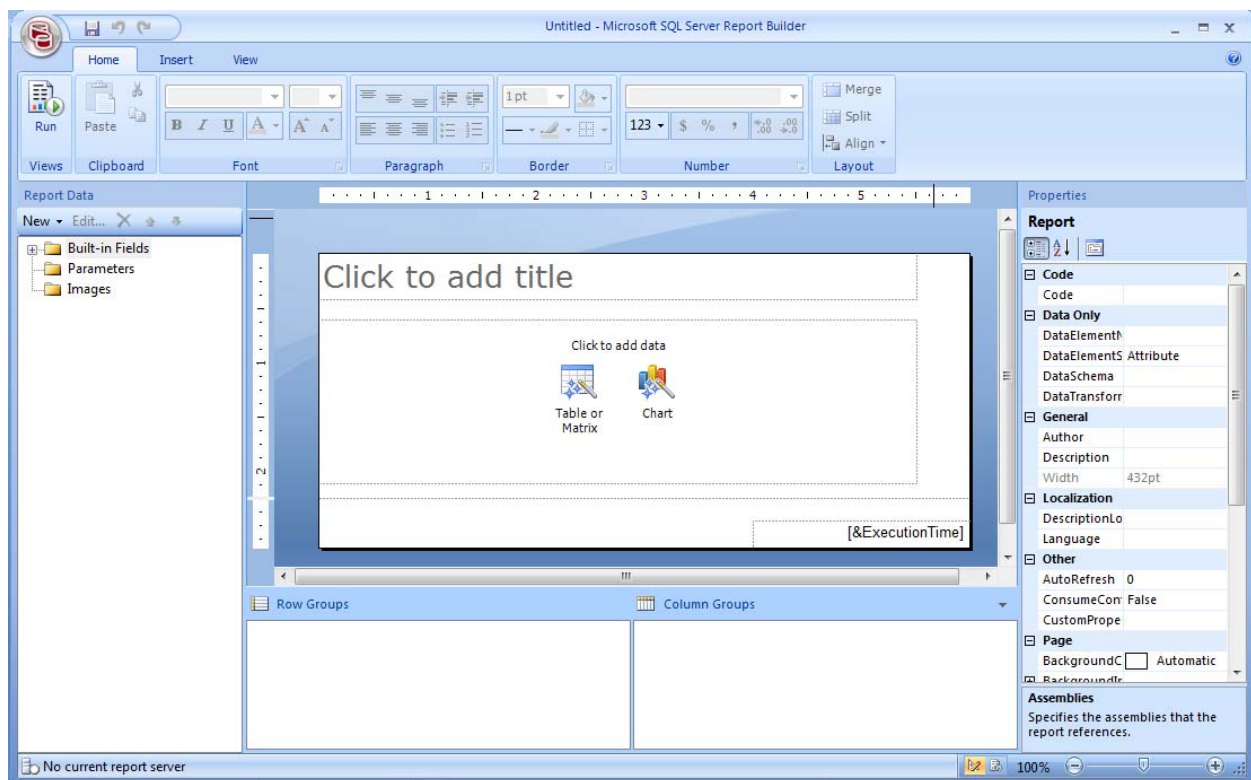
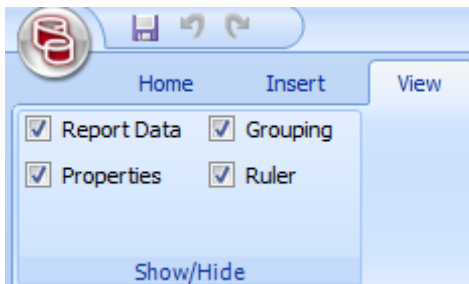


Figure 1: Creating a New Blank Report Using Report Builder 2.0.

Note

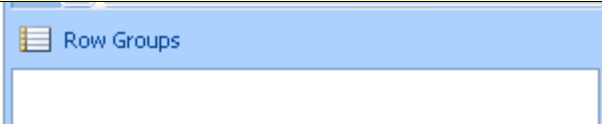



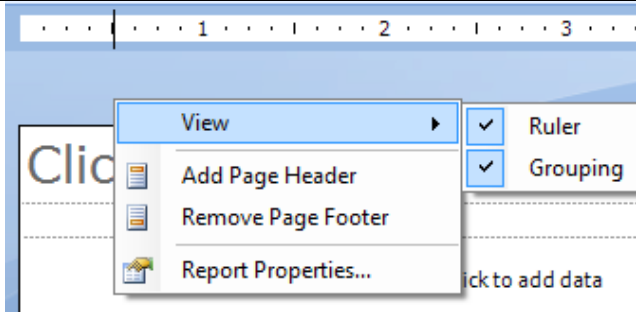
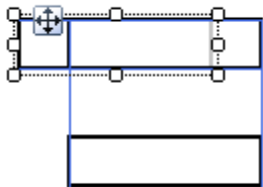
If your screen does not have all the same windows open in RB2, in the Menu bar, click the **View** tab and select all four items.



Exploring Key Areas of RB2.0

The following table describes several key areas of the Report Builder 2.0 User Interface.

Area	Image	Notes
Report Data		This panel provides access to create and use data sources, data sets, parameters, and images—all the key pieces of information you would want to use in your report creation.
Properties		<p>This panel lists and edits the detailed properties of the current report item (textbox, line, and so on) or report section (header, footer, and body).</p> <p>The most common properties are also exposed in property dialogs when you right-click an object.</p>

Area	Image	Notes
Grouping		This section enables you to manage the properties of all of your groups for Tablix report items (table, matrix, list). You can easily create groups using the window, or dragging fields to the grouping window.
Server status in status bar		This area reports the current report server/connection status. The server can be changed from the Report Builder icon menu and choosing Options . 
Zoom control in status bar		Report Builder 2.0 supports zooming in design and run mode.
Context menus		RB2 consists of a rich set of context menus, for accessing almost every feature, including the virtual space around the report.
Snap Lines		Design Surface Snap lines help align objects.

Exercise 2: Pre-Requisite Exercise—Creating a Shared Data Source

In this exercise you will create a shared data source on the report server, which can be used for multiple reports. Utilizing shared data sources on the server allow centralized management of connectivity to data sources.

Creating a Shared Data Source

To complete this exercise, perform the following steps:

1. Open Internet Explorer and type in the URL of the report manager of **http://localhost/Reports** (or your server URL) and press **ENTER**.
2. Click **New Data Source** in the Contents page of the Report Manager, as shown in the **Figure 2**.

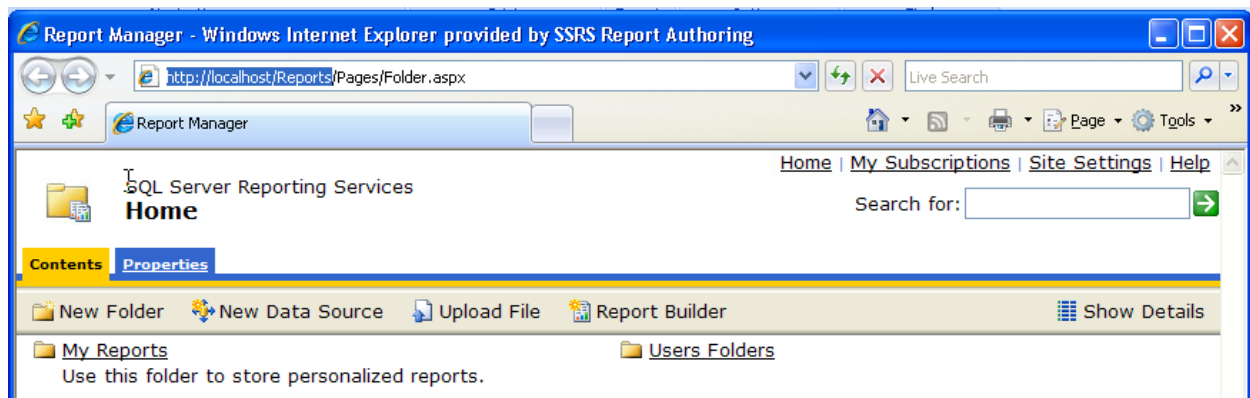


Figure 2: Report Manager

3. On the **New Data Source** page, perform the steps:
 - In the **Name** field, enter **LocalAdventureWorks**.
 - For **Data Source Type**, select **Microsoft SQL Server**.
 - Enter the following in the **Connection String**.

```
Data Source=localhost;Initial Catalog=AdventureWorks2008
```
 - Near the bottom, click to select **Windows Integrated Security**.
4. Click **Apply**.
5. Minimize Internet Explorer to return to it later to preview reports from the server.

Exercise 3: Table and Matrix Wizard—Data Sources, Data Sets, and Building a Matrix

In this exercise, you will:

- Design a new report using the **Table or Matrix** wizard.
- Specify the report data source. The data source to be used is the **AdventureWorks** sample database that you can download from Codeplex. (See references section at the end of the document).
- Specify the Report Data Set. The data set is generated from a custom query that returns sales data, including **ProductCategory**, **SubCategory**, **Product**, and **Year**.
- Specify fields and groupings.

This exercise demonstrates how to create a report showing **Product Category** and **Sub Category** for the row axis, and **Region** and **Order Year** for the column axis.

- Select report layout of style and colors.

This exercise assumes that you have completed Exercise 1.

Designing a New Report Using the Table or Matrix Method

To design a new report, follow these steps:

1. Open the Report Builder 2.0.
2. In the new blank report, click the **Table or Matrix** wizard link in the center of the screen.

The wizard walks you through creating a Table or Matrix. The process includes the creation of the required data source and data set.



Table or
Matrix

Note

You can also access the wizard from the toolbar by selecting **Matrix Wizard** from the **Matrix** Menu as well as the **Table Wizard** from the **Table** menu, both in the **Insert** tab. The icon in your new report disappears after you run the wizard the first time. However, you can re-run the wizard at any time from the Insert ribbon.

3. At this point, you may briefly see the server dialog informing you the application is connecting to the server. The new Table or Matrix Wizard dialog appears. Select the existing data source connection **LocalAdventureWorks**, and click **Next**.

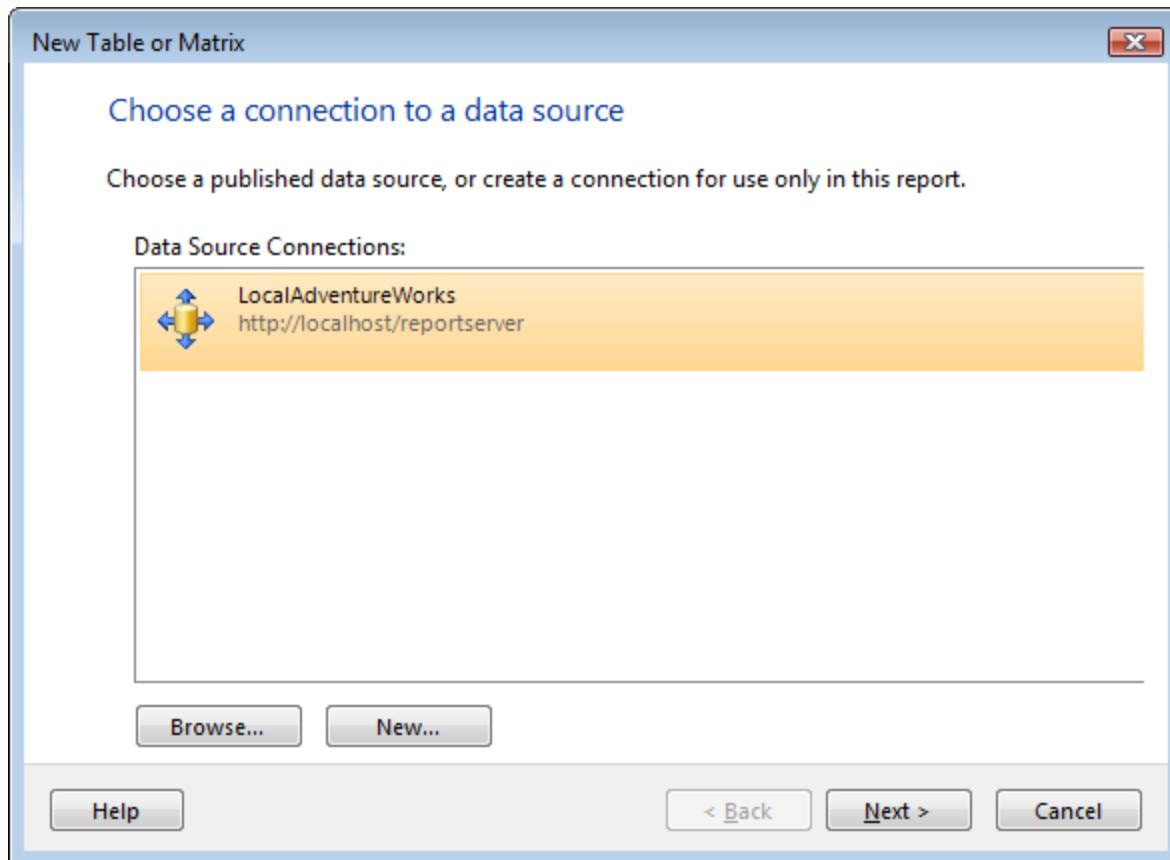


Figure 3: New Table or Matrix Wizard

If you cannot see the shared data source you previously created, click **Browse** to find the data source on the server.

Specifying the Data Source

To browse to your specific data source, perform the following steps:

1. Double-click the server name: <http://localhost/reportserver>

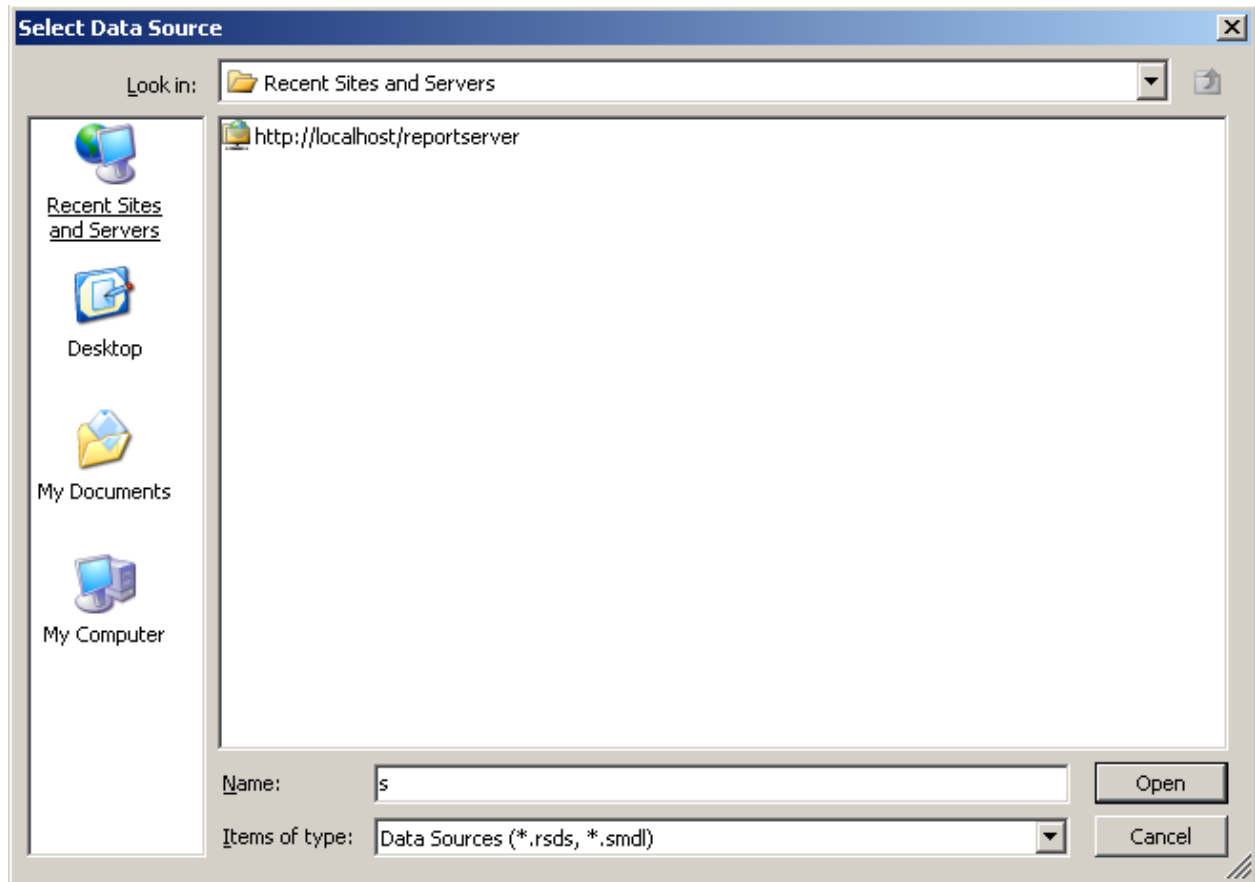


Figure 4: Browse Server to Data Source

2. Double-click the **LocalAdventureWorks** shared data source you previously created.

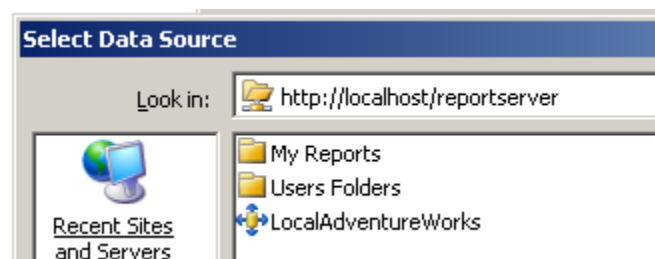


Figure 5: Select Your Data Source

3. Click **Next** to move to the Query Design step of the wizard.

Specifying the Data Set

Here, the data set is generated from a custom query that returns sales data, including **ProductCategory**, **SubCategory**, **Product**, and **Year**.

It follows that the next step in the wizard is to create a query (or a data set) for the matrix.

To streamline the process, perform the following procedure:

1. Copy and paste the query instead of building a query manually.

Note

With the new Query Designer in Report Builder 2.0, you can explore the schema of your data source to make it easier to build queries. You can also import the query syntax from a file using the **Import** functionality.

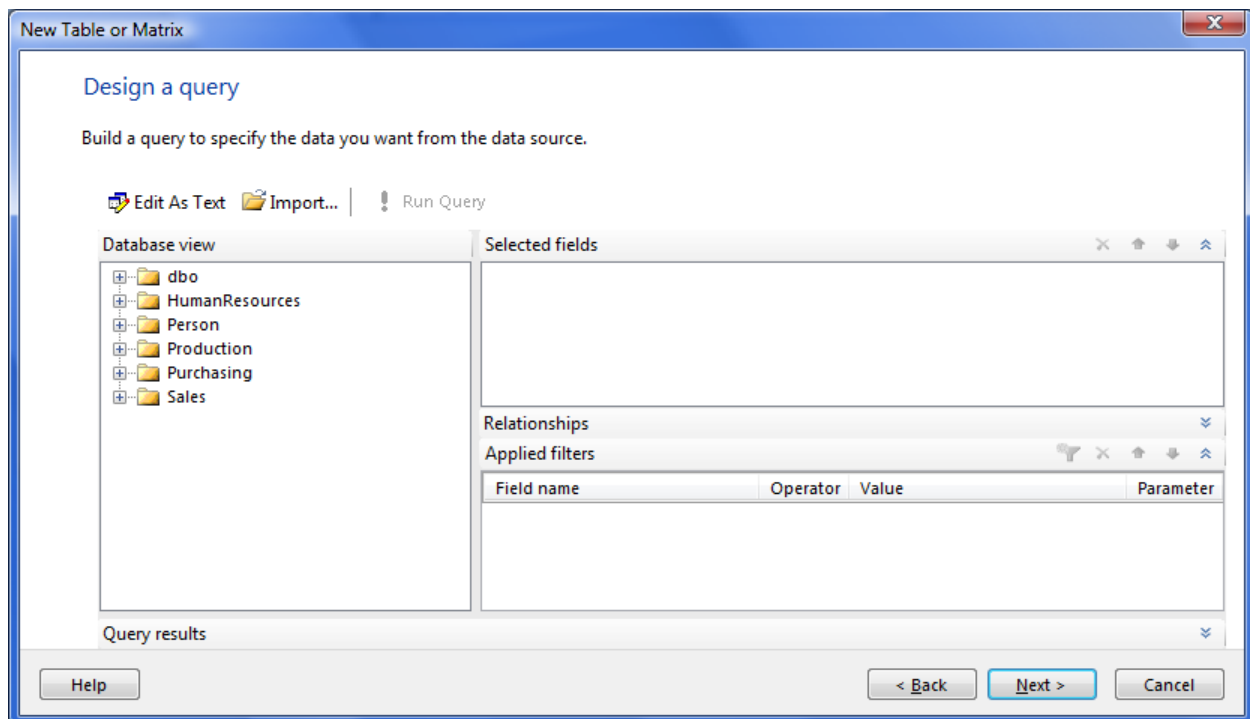


Figure 6: Query Designer

2. Click **Edit as Text** to switch the query designer to text mode.
3. Select all the query text below, copy it, and paste it into the query editor.

```
SELECT
    PC.Name AS ProductCategory,
    PS.Name AS SubCategory,
    DATEPART(yy, SH.OrderDate) AS OrderYear,
    'Q' + DATENAME(qq, SH.OrderDate) AS OrderQtr,
    SUM(SD.UnitPrice * SD.OrderQty) AS SalesAmount,
    Sales.SalesTerritory.[Name] AS Territory,
    Sales.SalesTerritory.[Group] AS Region
FROM
    Production.ProductSubcategory AS PS JOIN
    Sales.SalesOrderHeader AS SH JOIN
    Sales.SalesOrderDetail AS SD ON SH.SalesOrderID = SD.SalesOrderID JOIN
```

```

Production.Product AS P ON SD.ProductID = P.ProductID ON PS.ProductSubcategoryID =
P.ProductSubcategoryID JOIN
Production.ProductCategory AS PC ON PS.ProductCategoryID = PC.ProductCategoryID JOIN
Sales.SalesTerritory ON SH.TerritoryID = Sales.SalesTerritory.TerritoryID
WHERE
(SH.OrderDate BETWEEN '1/1/2003' AND '12/31/2004')
GROUP BY
DATEPART(yy, SH.OrderDate),
PC.Name,
PS.Name,
'Q' + DATENAME(qq, SH.OrderDate),
PS.ProductSubcategoryID,
Sales.SalesTerritory.Name,
Sales.SalesTerritory.[Group]

```

At this point, we suggest you execute the query to ensure everything is working—you can verify this by seeing rows populated in the results pane at the bottom. To execute the query, press **!**.

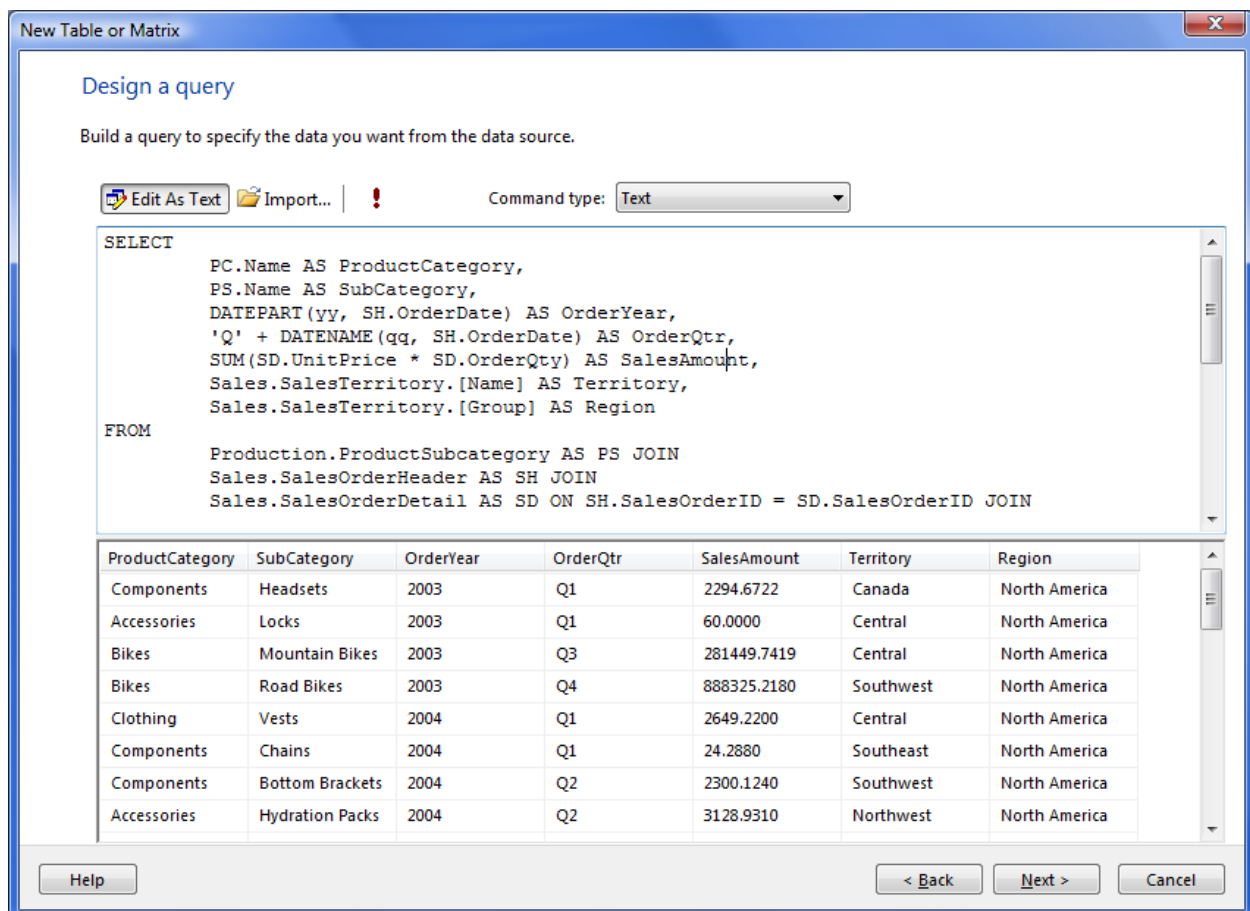


Figure 7: Text-based Query Design in the Wizard

- Click **Next** to continue to arrange the fields.

Specify the Fields and Groupings

In continuation with the Report Builder wizard, specify the fields and groupings in the following steps:

1. To arrange the fields (**Column Groups**, **Row Groups**, and **Values**), do the following:
 - a. Drag **SalesAmount** to the **Values** definition box.
 - b. Drag **ProductCategory** and **SubCategory** to the **Row groups** definition box.
 - c. Drag **Region** and then **OrderYear** to the **Column groups** definition box.

New Table or Matrix

Arrange fields

Arrange fields to group data in rows, columns, or both, and choose values to display. Data expands across the page in column groups and down the page in row groups. Use functions such as Sum, Avg, and Count on the fields in the Values box.

Available fields

- ProductCategory
- SubCategory
- OrderYear
- OrderQtr
- SalesAmount
- Territory
- Region

Column groups

- Region
- OrderYear

Row groups

- ProductCategory
- SubCategory

Σ Values

- Sum(SalesAmount)

Help < Back Next > Cancel

Figure 8: Arrange fields in the Wizard to Specify Groups and Values

Note

If you drag a field to the wrong location, you can fix this by dragging it from one definition box to another, or to the white/blank space in between them to remove it.

2. Click **Next** to continue.

Selecting the Layout and Colors

1. Select the visual layout.

For this exercise, use the default **Blocked, subtotal below** layout. We recommend clicking the other options to understand the options available with the wizard, based on the preview.

Note

The **Expand/Collapse groups** checkbox builds the report with group headers and totals shown, but the detail rows will be hidden by default. However, the report will show +/- symbols on the groups to allow you to expand and see the detailed rows while running or previewing the report.

[-] Bikes	Mountain Bikes
	Road Bikes

New Table or Matrix

Choose the layout

If you choose to show subtotals and grand totals, you can place them above or below the group. Stepped reports show hierarchical structure with indented groups in the same column.

Options:

- ☒ Show subtotals and grand totals
 - ☒ Blocked, subtotal below
 - ☐ Blocked, subtotal above
 - ☐ Stepped, subtotal above
- ☒ Expand/collapse groups

Preview

		[Region]		Total
Product	Sub	[OrderYear]	Total	
[Product Category]	[SubCategory]	[Sum(Sales Amt)]	[Sum(Sales Amt)]	[Sum(Sales Amt)]
	Total	[Sum(Sales Amt)]	[Sum(Sales Amt)]	[Sum(Sales Amt)]
Total		[Sum(Sales Amt)]	[Sum(Sales Amt)]	[Sum(Sales Amt)]

Help < Back Next > Cancel

Figure 9: Select the Visual Layout Type.

2. Click **Next** to proceed to the Style selection.
3. Select the style.

For the purpose of the exercise, we use the default **Ocean** style. From the wizard screen, it is possible to modify the colors and the fonts even after wizard is complete.

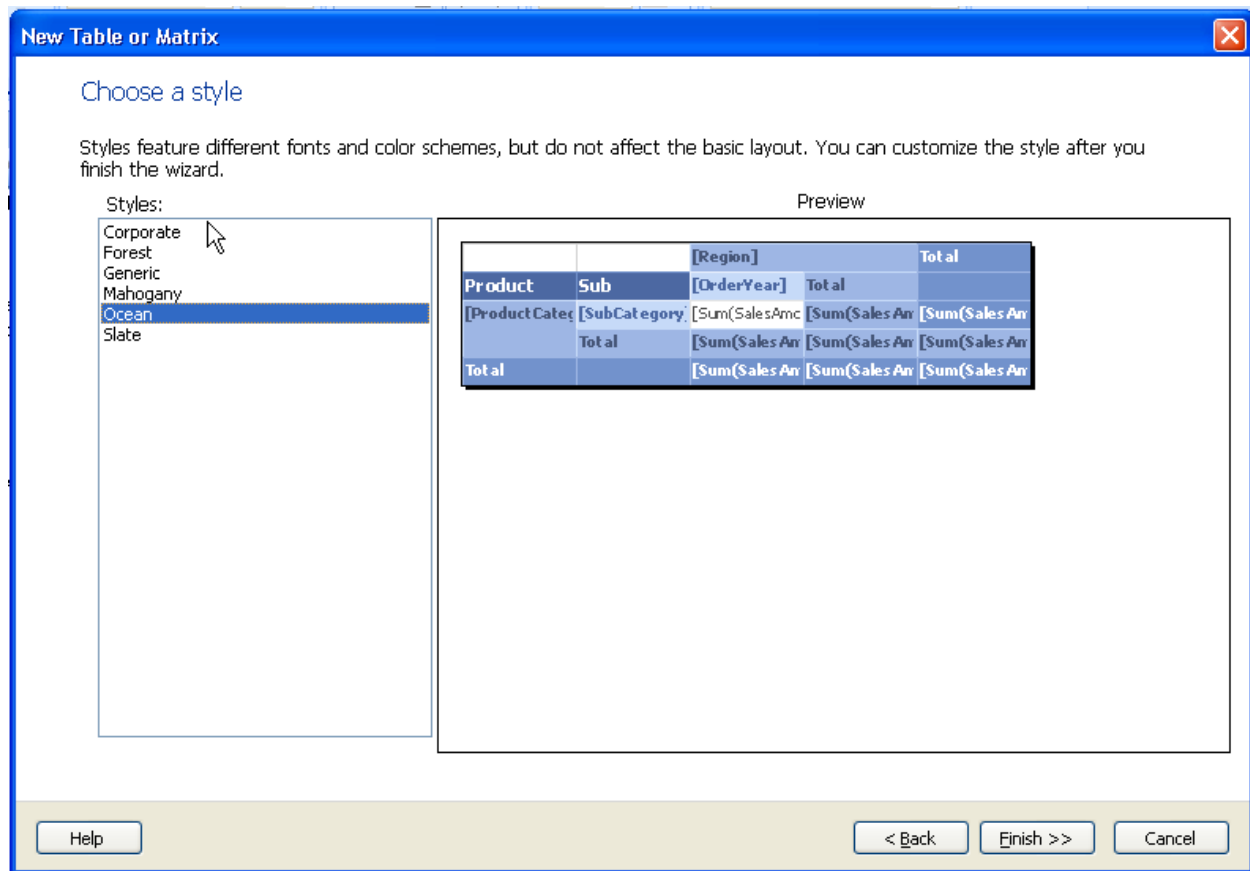


Figure 10: Select a Color Style.

- Click **Finish** to complete the wizard and view your new report.

Your report will look like the following figure:

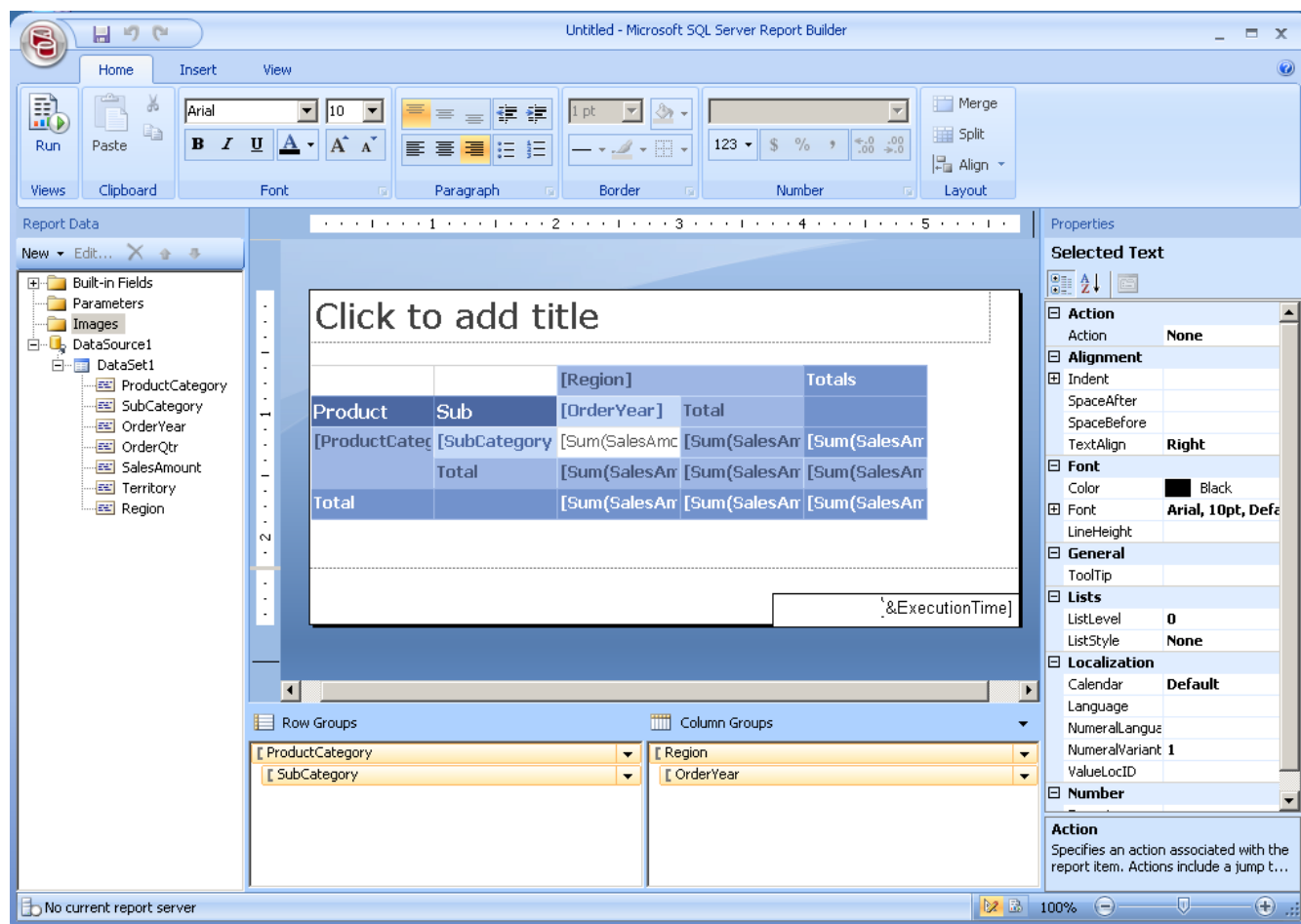


Figure 11: Completed Wizard

Note

- Notice your data source and data set in the Report Data window on the left.
- As you click on the each field in the grouping window, it is selected in the **Tablix**. The column and row selectors provide an additional visual cue of how elements are grouped. For example, if you click on **[ProductCategory]** in the **Row Groups** area, you can see the grouping indicators such as below:

**Grouping Indicators**

- Try the Zoom slider on the status bar at the lower right corner of the screen.



To run the report, perform the following procedure:

1. Click the **Home** tab, and click **Run** button or press **F5**.

Your report will look similar to the following.

		Europe	North America	Pacific	Total
Product Category	Sub Category	Total	Total	Total	
Accessories	Bike Racks	63771.6000	157240.8000	18424.8000	239437.2000
	Bike Stands	10653.0000	18603.0000	10335.0000	39591.0000
	Bottles and Cages	19024.4834	33721.5715	11607.5440	64353.5989
	Cleaners	4463.5275	11768.6235	2286.4200	18518.5710
	Fenders	8945.8600	30530.2200	7143.5000	46619.5800
	Helmets	113559.6069	226707.6405	51848.1820	392115.4294
	Hydration Packs	28065.2463	64047.4029	14217.1146	106329.7638
	Locks	750.0000	5409.0000		6159.0000
	Pumps	815.5920	4329.8340		5145.4260
	Tires and Tubes	70921.9564	128730.9020	46801.9880	246454.8464
	Total	320970.8725	681088.9944	162664.5486	1164724.4155
Bikes	Total	13636198.4470	37438536.6641	6740590.7604	57815325.8715
Clothing	Total	355739.6391	1147988.3374	113491.5624	1617219.5389
Components	Total	1584398.0247	5793102.7282	203791.0536	7581291.8065
Total		15897306.9833	45060716.7241	7220537.9250	68178561.6324

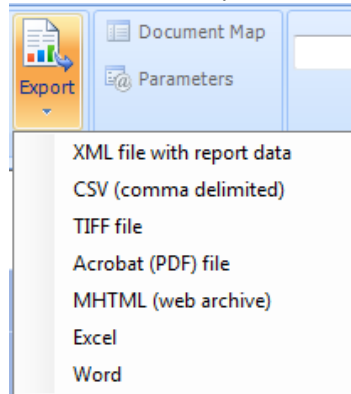
9/16/2008 6:16:12 AM

Figure 12: Completed Wizard with Expanded Accessories Product Group

2. Use the **Expand and Collapse (+/-)** functionality in the **Accessories** group to explore the report.

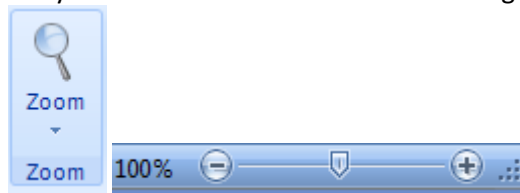
Note

- The **Export** button on the Run ribbon includes various options for export formats.




Export Menu

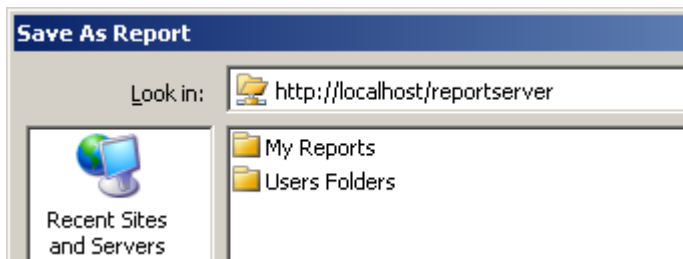
- Try the run time Zoom functionality on both the Ribbon and the lower right status bar.



3. To switch back to design mode, Click **Design** or press **F8**.

4. To save your report to the server, do the following:

- Click the Report Builder icon  , then click **Save As**.
- Double-click **My Reports** in the folder list.
- Enter the file name **SalesbyRegion_ex3.rdl**.
- Click **Save**.



If you are unable to see **My Reports**, perform the following steps to save the report:

- Click **Recent Sites and Servers** in the left panel.
- Double click **http://localhost/reportserver**.
- Double-click **My Reports**.

- If **My Reports** was not enabled on the server, you can save to the root of your report server.
- d. Enter the file name **SalesbyRegion.rdl**.
 - e. Click **Save**.

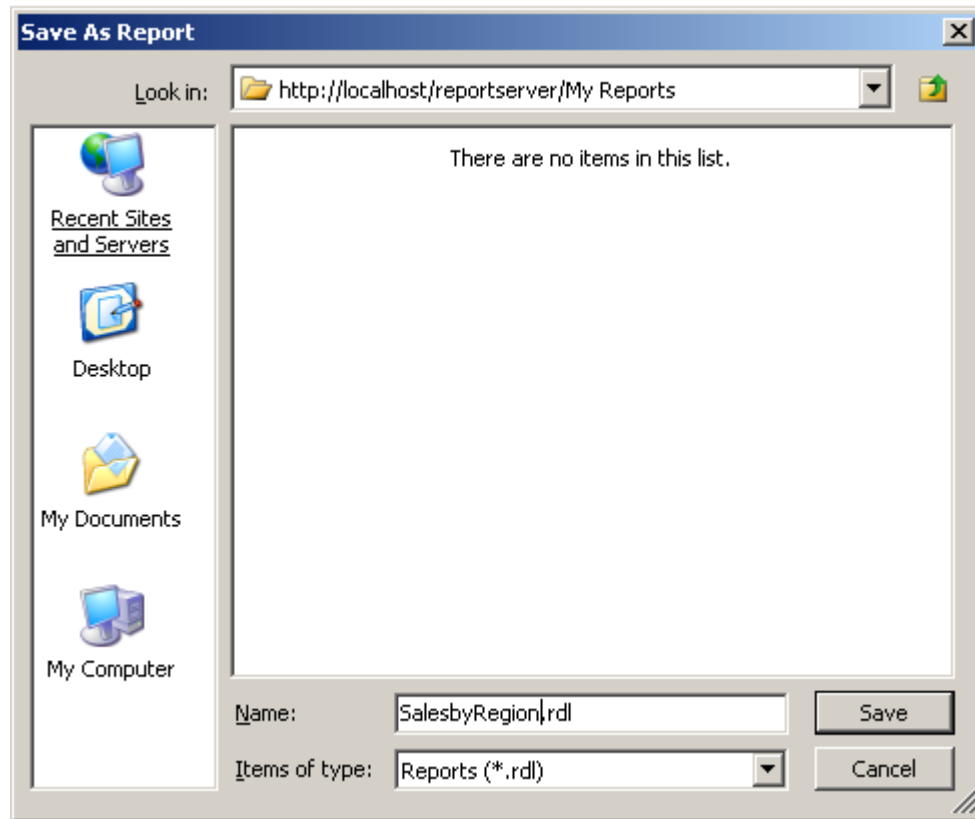


Figure 13: Save As Dialog

Exercise 4: Enhancing Your Report with Richly-Formatted Text

In this exercise, you will:

- Enhance the look of your report by using rich formatting on a report title.
- Use place holders for dynamic text.


This exercise assumes that you have completed Exercise 3

Enhancing the Look of the Report

To enhance the look of the report, follow these steps:

1. Open the **SalesbyRegion_ex3.rdl** report created in the previous exercises, if it is not already open.
2. To set the sum fields to show currency format, do the following:
 - a. Click the upper-left sum field, the **Sum(SalesAmount)** under **[OrderYear]**,
 - b. Hold down the **SHIFT** key, and click **Sum(SalesAmount)** in the lower-right corner to select all of the sum fields.

[OrderYear]	Total	
[Sum(SalesAmount)]	[Sum(SalesAmount)]	[Sum(SalesAmount)]
[Sum(SalesAmount)]	[Sum(SalesAmount)]	[Sum(SalesAmount)]
[Sum(SalesAmount)]	[Sum(SalesAmount)]	[Sum(SalesAmount)]

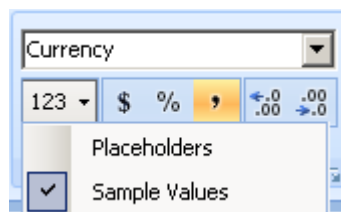
- c. Click the currency format button  on the ribbon.

\$320,970.87	\$681,088.99
\$13,636,198.45	\$37,438,536.66

You can also click and format each field individually. When you run the report, you will see the currency format. When in design mode, you can resize your columns wider so numbers do not wrap.

Note

The ribbon allows you to toggle the design time view of placeholders from sample values to actual placeholder text.



3. Click in the textbox at the top of the report showing **Click to Add Title**, and enter a title **Sales by region**.

4. Select the word **Sales** you just typed in, and use the Ribbon to format the font color to red.
5. Select the words **by region** and use the Ribbon to change the font size to 10.
6. Click between the words **Sales** and **by** and press **ENTER**.

This creates a line break with the small text forced to a second line. You can resize the title textbox and move the **Tablix** down. The design view of the report looks like the following figure.

Sales by Region		
		[Region]
Product	Sub	[OrderYear]
[ProductCategory]	[SubCategory]	[\$12,345.00]
Total		[\$12,345.00]

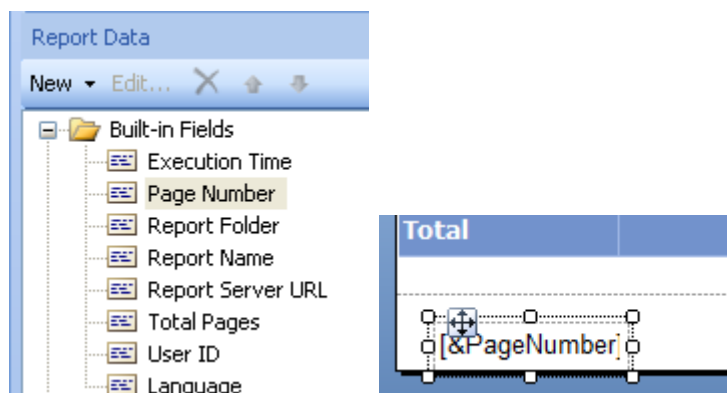
Figure 14: Formatted Report Title

Using Placeholders for Dynamic Text

To use placeholders, perform the following steps:

1. Click in the textbox in the lower-right corner of the page footer showing **[&ExecutionTime]**.
This text box contains a **Place Holder** specifically for the built-in field **ExecutionTime**, which prints the time at which the report was executed on the report.
2. Type **Executed:** before the **[&ExecutionTime]** so the whole string is **Executed: [&ExecutionTime]**.
3. Expand the **Built-in fields** list in the Report Data window, and drag **Page Number** to the lower left corner of the report footer.

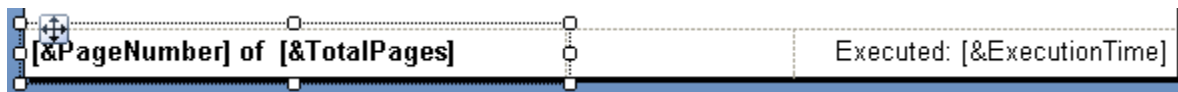
A new text box is created with the **[&PageNumber]** place holder.



4. Click the right edge of the new textbox and resize the box to the right to make the textbox wider. You can also use **SHIFT+ Right Arrow** to resize the box.



5. In the text box, type **of** after the **[&PageNumber]** place holder, and from the Report data window, drag **Total Pages** to the end.
6. Select the text and make it bold. You can make the selected text made bold by pressing **CTRL+B**, similar to Microsoft Office Applications.



7. To run the report, click the **Home** tab, and click **Run** or press **F5**.

The placeholder now changes to actual values. For example, here, the **[&ExecutionTime]** placeholder is now a date and time.

By default, the report layout appears in a small/collapsed size. If you expand several product categories (+), and switch to the **layout** mode, the page total reflects the increased number of pages. To change the layout, click the **Print Layout** button in the ribbon.



Click **Design** or press **F8** to return to Design view.

Note

This exercise only gives you an idea of how you can enhance your report with the new text box and the ability to richly format your text. Various combinations of static text (such as **Executed**), placeholders, support for one to many lines, numbered or bulleted lists, paragraph alignment, and the rich font formatting make the new textbox a powerful addition in SQL Server Reporting Services 2008.



Save your report to the server: To save your report on the server, perform the following steps:



1. Click the Report Builder icon, then select **Save As**.
2. Select the **My Reports** folder, if present, on your local server.
3. Enter the file name '**SalesbyRegion_ex4.rdl**'.

Exercise 5: View Your Report from the Server


In this exercise, you will:

- View your report from Report Manager using Internet Explorer.

This exercise assumes that you have completed Exercise 4

Viewing the Report from Report Manager

To complete this exercise, follow these steps:

1. Open Internet Explorer and type in the URL to the report manger of <http://localhost/Reports>, then press **ENTER**.
2. Click **My Reports** to open the folder.
3. Click the **SalesbyRegion_ex4** report (or the name you saved it as)  **SalesByRegion_ex4 !NEW**.

Your report looks like the way you saw before when you ran it inside Report Builder 2.0.

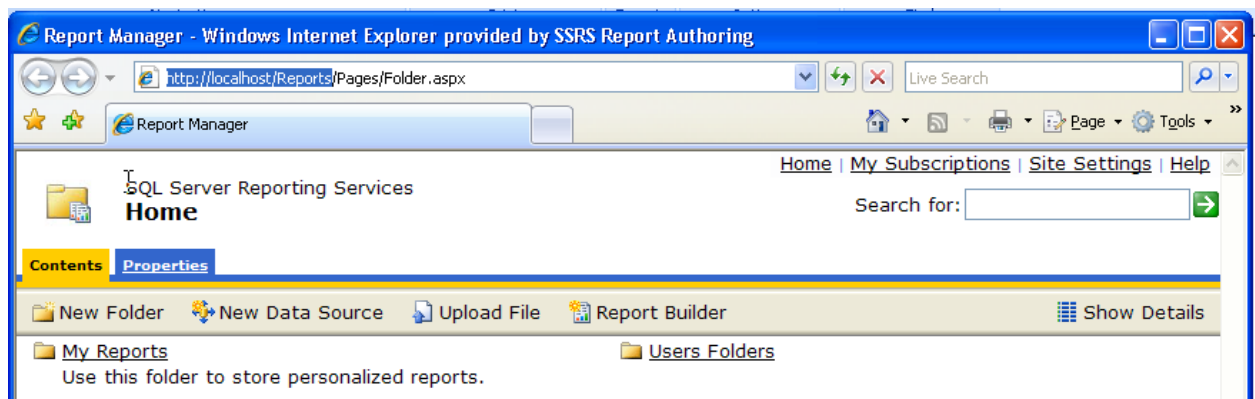


Figure 15: Report Manager

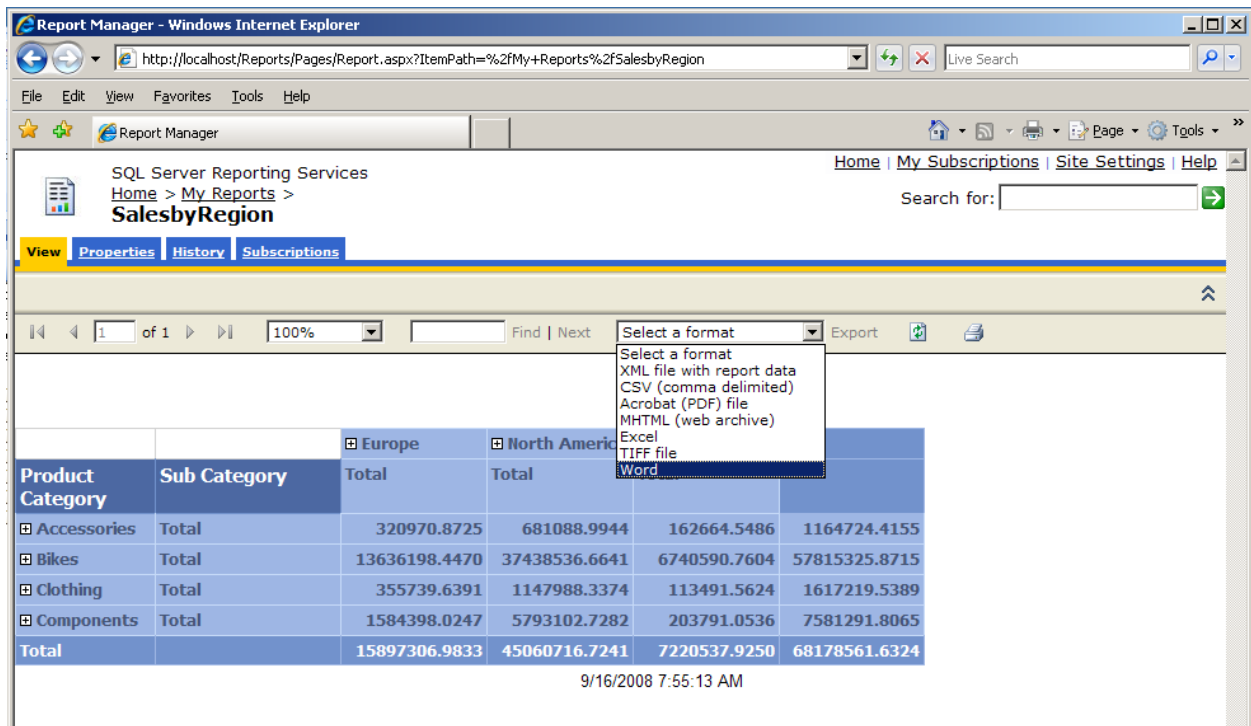


Figure 16: Viewing the Report in Report Manager

Note that the same export options in the Report Builder 2.0 application are available in the Report Manager as well as zoom and printing.

The Role Report Manager also enables you to assign permissions and create **Subscriptions** for reports, and can automatically e-mail the report results to required e-mail aliases. This report dispatch can even be scheduled, for example every morning at 8:30.

Exercise 6: Enrich Your Report Using Charts

In this exercise, you will:

- Add a basic Chart to the Report you previously created.

We will manually build a simple chart rather than use the wizard to get a feel of modifying the report items. SQL Server Reporting Services 2008 introduced new Data Visualization functionality in the form of a richer chart report item, and an all-new gauge report item.

Note

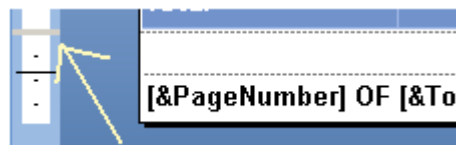
The **Data Region** report items such as **Chart**, **Gauge**, and **Tablix** are only allowed in the **Report Body** section, and not in the Header and Footer sections.

This exercise assumes that you have completed Exercise 4.

Adding a Basic Chart to Previously Created Report

To add a Basic Chart to a previously created Report, follow these steps:

1. Open the previously created report, **SalesbyRegion4_ex.rdl**.
2. To add a chart report item to the design surface below your existing Tablix, do the following:
 - a. Create some space at the bottom of your report by dragging the report body sizing handle down in the vertical ruler. This will create a blank space below your Tablix, and will be used to accommodate the chart.



3. In the ribbon, click the **Insert** tab, then select **Insert chart** under **Chart**. The mouse cursor is now in **Insert** mode.
4. Place the pointer to upper-left corner of the new chart, or drag to place and size the new chart.

5. Click immediately beneath the lower-left edge of the Tablix in the Report body.

The Select Chart Type dialog box appears.

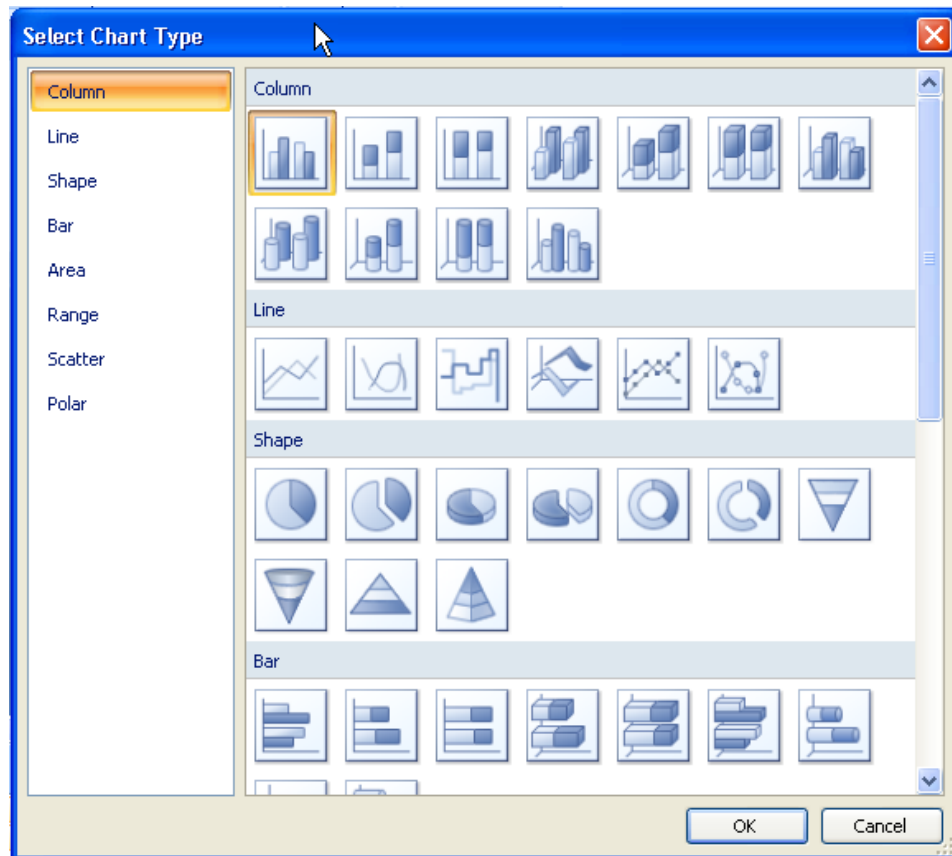
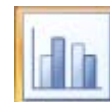


Figure 17: Selecting the Chart Type

6. Select the default column chart in the upper left corner, then click **OK**.

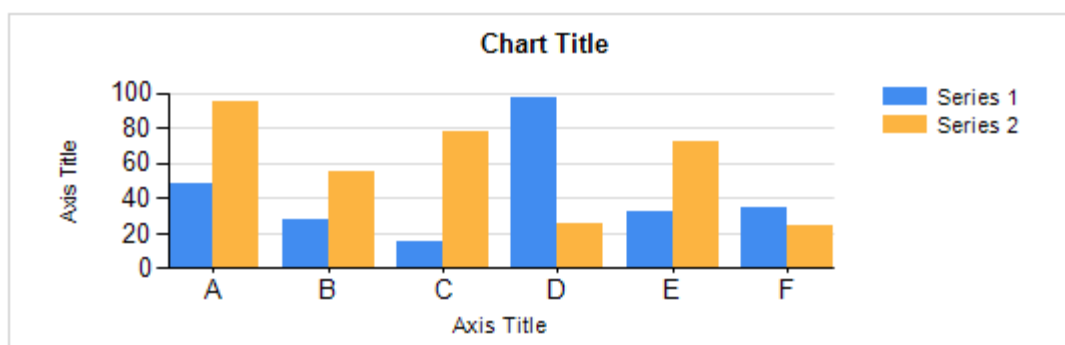


The chart report item is now placed on the design surface. There is no need to select a Data Source and Data Set because the report already has only one, so Report Builder will have set it for you. The Design Time view of your report will look like the following.

Sales

by Region

		[Region]		Total
Product	Sub	[OrderYear]	Total	
[ProductCategory]	[SubCategory]	[Sum(SalesAmount)]	[Sum(SalesAmount)]	[Sum(SalesAmount)]
	Total	[Sum(SalesAmount)]	[Sum(SalesAmount)]	[Sum(SalesAmount)]
Total		[Sum(SalesAmount)]	[Sum(SalesAmount)]	[Sum(SalesAmount)]



[&PageNumber] of [&TotalPages]

Executed: [&ExecutionTime]

Figure 18: Chart Report Item is Created

7. To put the chart into edit mode, double-click the chart.

Your Chart report item now looks like the one below, with the field areas visible.

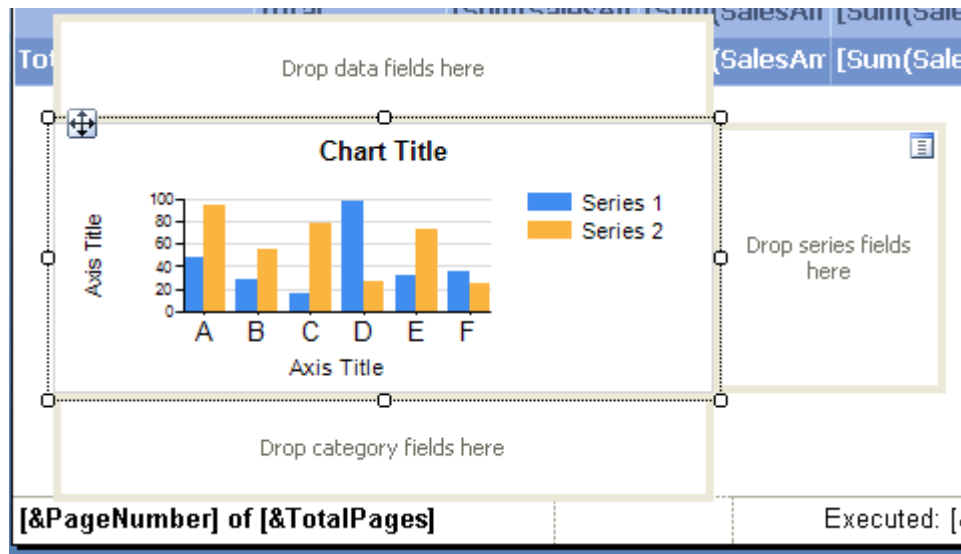


Figure 19: Chart Showing Field Areas Where You Drag From the Report Data Window

In the previous Figure, notice that there are three editing areas.

8. Drag and drop fields from the **Report Data** window as follows:
- **Drop data fields here** – Area for fields that represent the numeric **measures** in the chart. In this example, the data field would be the **SalesAmount** field, which represents numeric sales data. Drag this field into the data fields area.
 - **Drop series fields here** – Area for individual bars (series) within a category. In this example, if you want to see one bar for each year of sales within a category, select the **OrderYear** series field. Drag this field into the Series area.
 - **Drop category fields here** – Area for categories of data. This area is represented by the **A through F** labels at the bottom of the chart. In this example, if all series bars should be grouped by **Region**, drag this field into the category area.
9. To change the chart title, double-click the title and enter **Yearly Sales by Region**.
10. To change the vertical axis title, double-click the text box and enter **Sales (1k)**.
11. To remove the horizontal axis title, right-click the axis and clear the **Show Axis Title** check box.

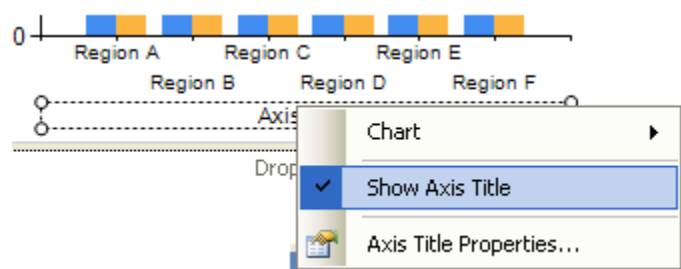


Figure 20: Turn Off the Horizontal Axis Title

The chart will look like the following figure:

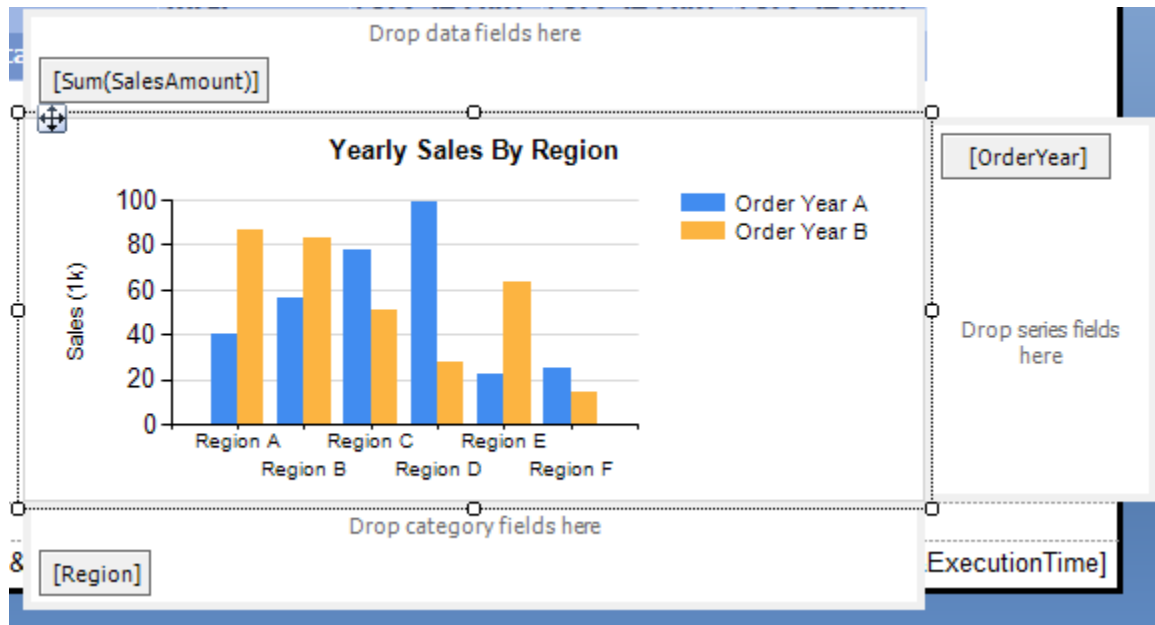


Figure 21: Chart Design

12. To run your report, click the **Home** tab and click **Run** or press **F5**.

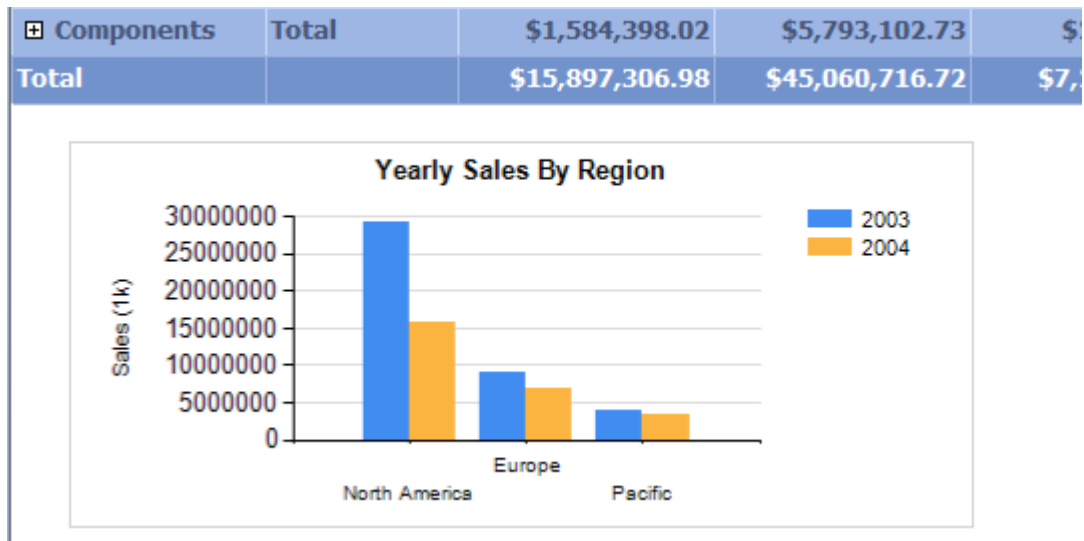


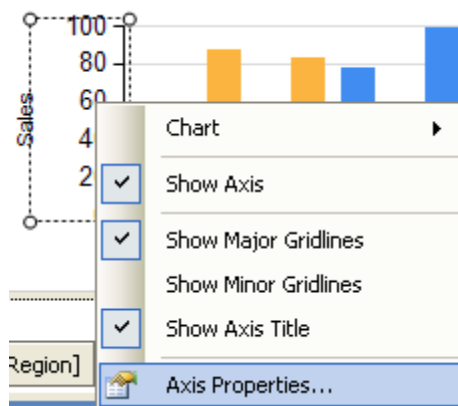
Figure 22: Previewing the chart

The result should resemble the chart above. Let's modify this chart further, and format the sales numbers on the left X-Axis for currency.

To format the Sales numbers in the X Axis for currency, perform the following steps:

1. Switch back to design mode by clicking **Design** or press **F8**.

2. Right-click the numbers of the sales at the X- Axis, then select **Axis Properties....**



To see the **Axis Properties** option, right-click on the Axis Title instead of the actual Axis Numbers.

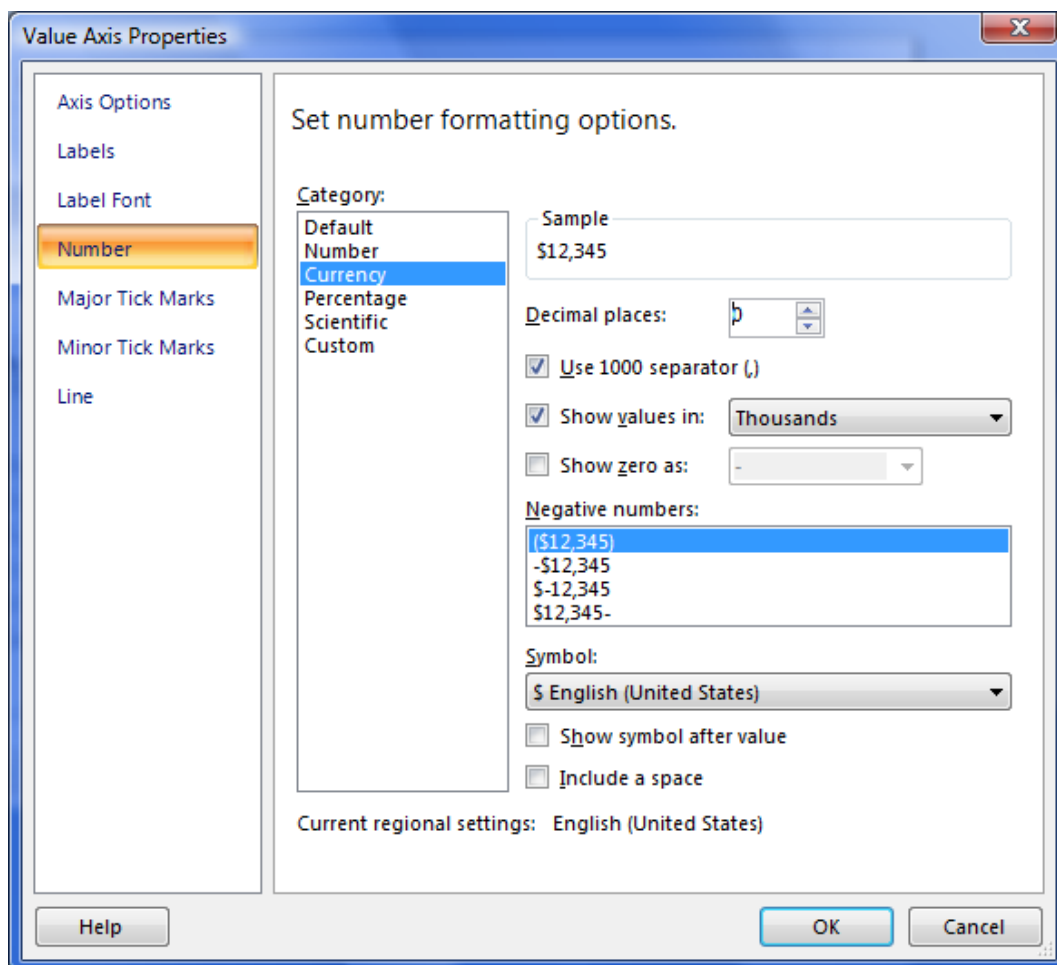


Figure 23: Value Axis properties Dialog

3. In the Value Axis Properties dialog box, select the **Number** pane and select the **Currency** category.
4. Set **Decimal places** to **0**.
5. Select the **Use 1000 separator** check box.
6. Select the **Show values in** check box, then select **Thousands** from the drop-down list.
7. To run your report, click the **Home** tab, then click **Run** or press **F5**.

Note the X-Axis and the currency format.

Sales

By Region

		⊕ Europe	⊕ North America	⊕ Pacific	Total
Product Category	Sub Category	Total	Total	Total	
⊕ Accessories	Total	\$320,970.87	\$681,088.99	\$162,664.55	\$1,164,724.42
⊕ Bikes	Total	\$13,636,198.45	\$37,438,536.66	\$6,740,590.76	\$57,815,325.87
⊕ Clothing	Total	\$355,739.64	\$1,147,988.34	\$113,491.56	\$1,617,219.54
⊕ Components	Total	\$1,584,398.02	\$5,793,102.73	\$203,791.05	\$7,581,291.81
Total		\$15,897,306.98	\$45,060,716.72	\$7,220,537.93	\$68,178,561.63

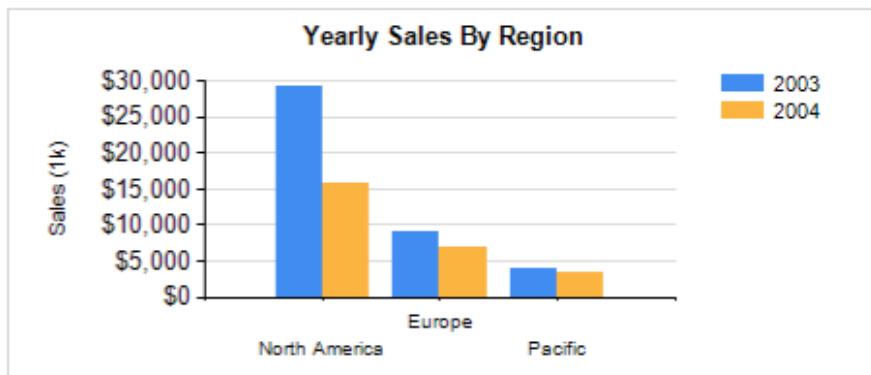



Figure 24: Previewing the Completed Chart

 **Save your report to the server:** To save your report to the server, perform the following steps:



1. Click the Report Builder icon, then select **Save As**.
2. Select the **My Reports** folder, if present, on your local server.
3. Enter the file name '**SalesbyRegion_ex4.rdl**'.

Chart Wizard and Styles

The Chart Wizard enables you to easily create charts. The Chart wizard includes a list of pre-defined chart styles to select from, and it also guides you through creating data sets.

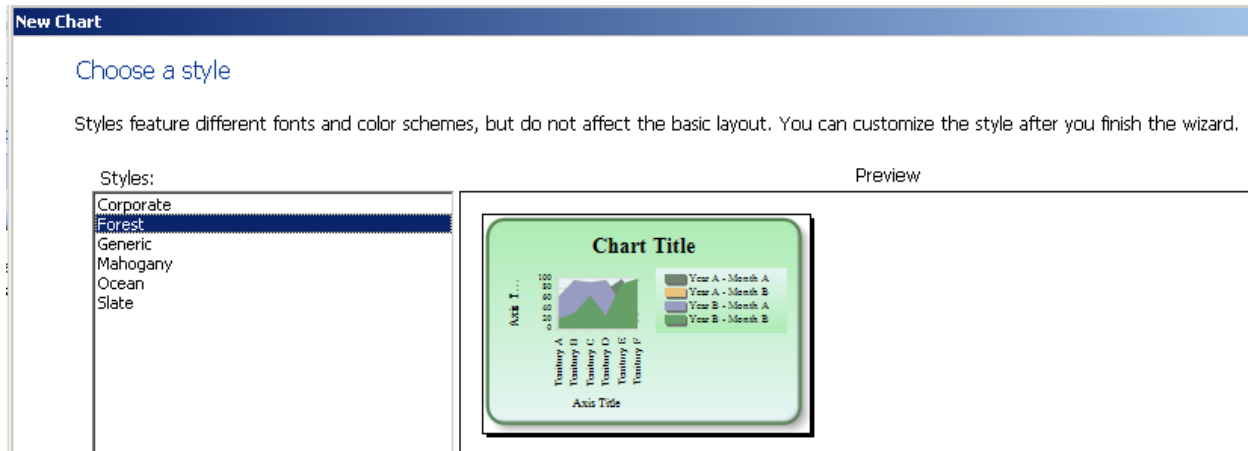


Figure 25: Sample of the Chart Styles Found in the Chart Wizard

Exercise 7: Enrich Your Data Visualization Using a Gauge

In this exercise, you will:

- Add a basic horizontal gauge to the Report you previously created.
The gauge adds a visual queue regarding the sum of sales amount per category, and the way they stack up to a desired goal of 80 million.

Note

Remember the design time functionality to zoom in/out, which becomes more useful as your report gets larger and more complex.

This exercise assumes that you have completed Exercise 6.

Adding a Horizontal Gauge to the Report

To complete this exercise, follow these steps:

1. Open the report **SalesbyRegion_Ex6.rdl** created previously.
2. To add a new column to the right edge of the Tablix, right-click the header and select **Insert Column** and then click **Right**.

Note

If you do not see the headers, click anywhere in the Tablix.

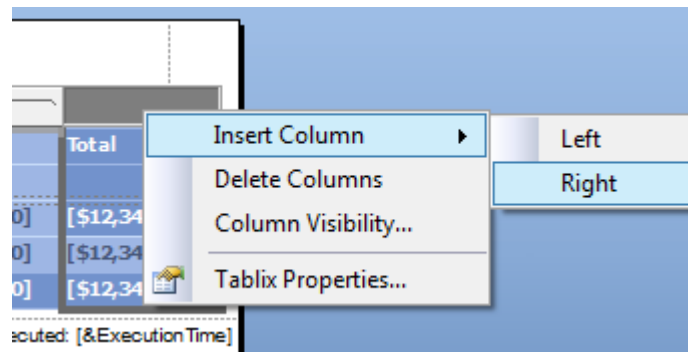
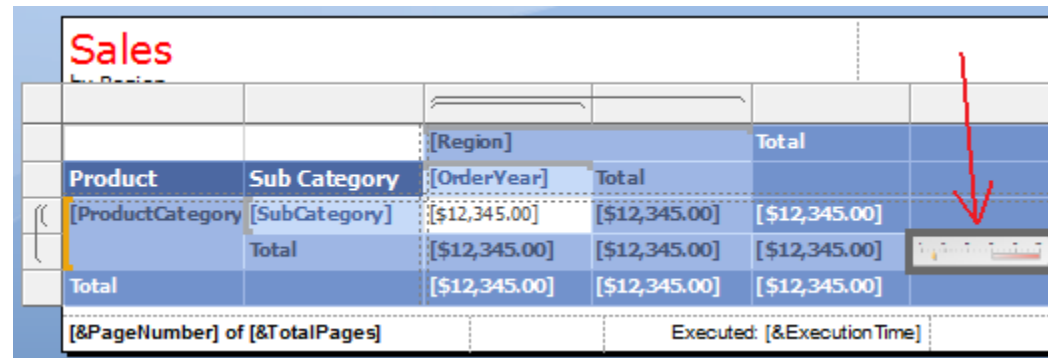


Figure 26: Insert a New Column

3. In the **Insert** ribbon, click **Gauge** and then click in the last cell of the newly added **Total** row of the **ProductCategory** group.



Sales				
		[Region]		
Product	Sub Category	[OrderYear]	Total	
[ProductCategory]	[SubCategory]	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]
	Total	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]
Total		[\$12,345.00]	[\$12,345.00]	[\$12,345.00]

[&PageNumber] of [&TotalPages] Executed: [&ExecutionTime]

Figure 27: Insert a Gauge into the new column on the Total row

The **Select Gauge Type** dialog appears.

4. Select the first **Linear** type, **Horizontal**, then click **OK**.

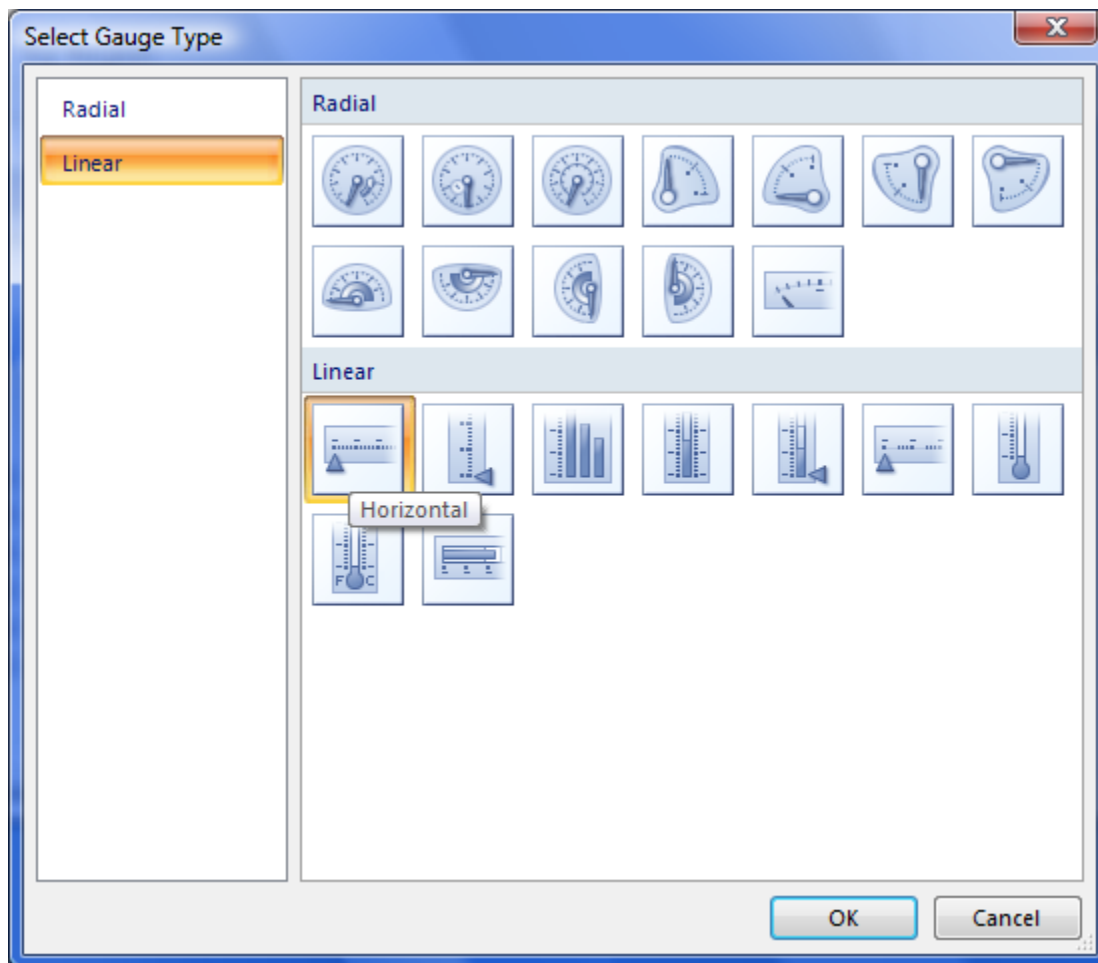



Figure 28: Select Gauge Type

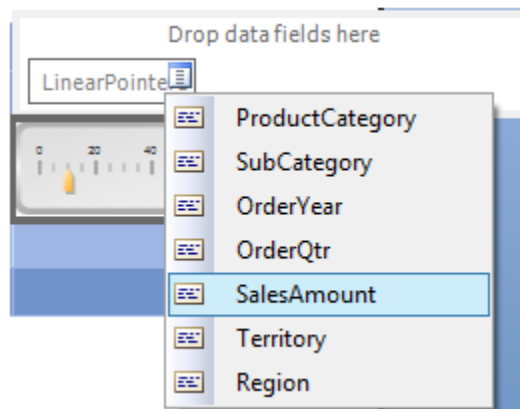
- To adjust the size of the Tablix and Gauge, drag the row and column wider to view and to click on individual elements within the gauge, such as the rectangular **pointer** and the **scale** of numbers.

The Tablix looks as below.

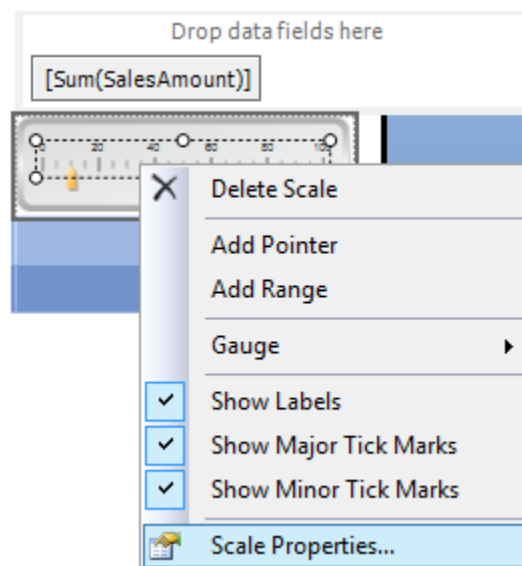
		[Region]	Total	
Product Catego	Sub Catego	[OrderYear]	Total	
[ProductCategory]	[SubCategory]	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]
	Total	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]
Total		[\$12,345.00]	[\$12,345.00]	[\$12,345.00]

Figure 29: Resize Gauge

- To add the Data field in the Gauge, click the Field Selector  inside the Gauge and select **SalesAmount**.
- Click the Gauge so field area is visible, then click the **LinearPointer** area to see the field selector.



- To set the **Scale Properties**, right-click the scale and select **Scale Properties....**



9. In the Linear Scale Properties dialog box, select the **General** category.
 - a. Set the **Minimum** scale to **1000000** (one million).
 - b. Set the **Maximum** scale to **80000000** (eighty million).

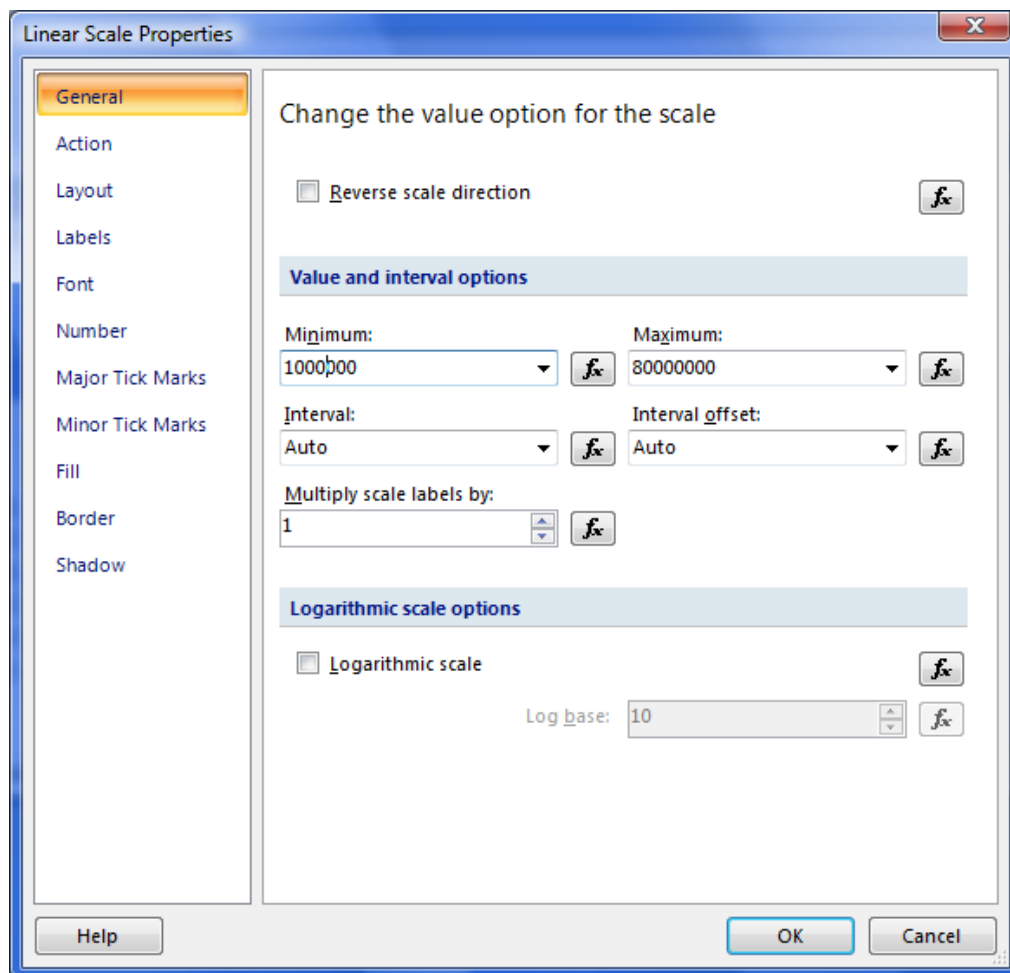


Figure 30: Linear Scale Properties—Setting the Min/Max

10. Select the **Number** category, then do the following:
 - a. In the **Category** list, select **Currency**.
 - b. Set **Decimal places** to **0**.
 - c. Select the **Show values in** check box, then select **Millions** from the drop down list.

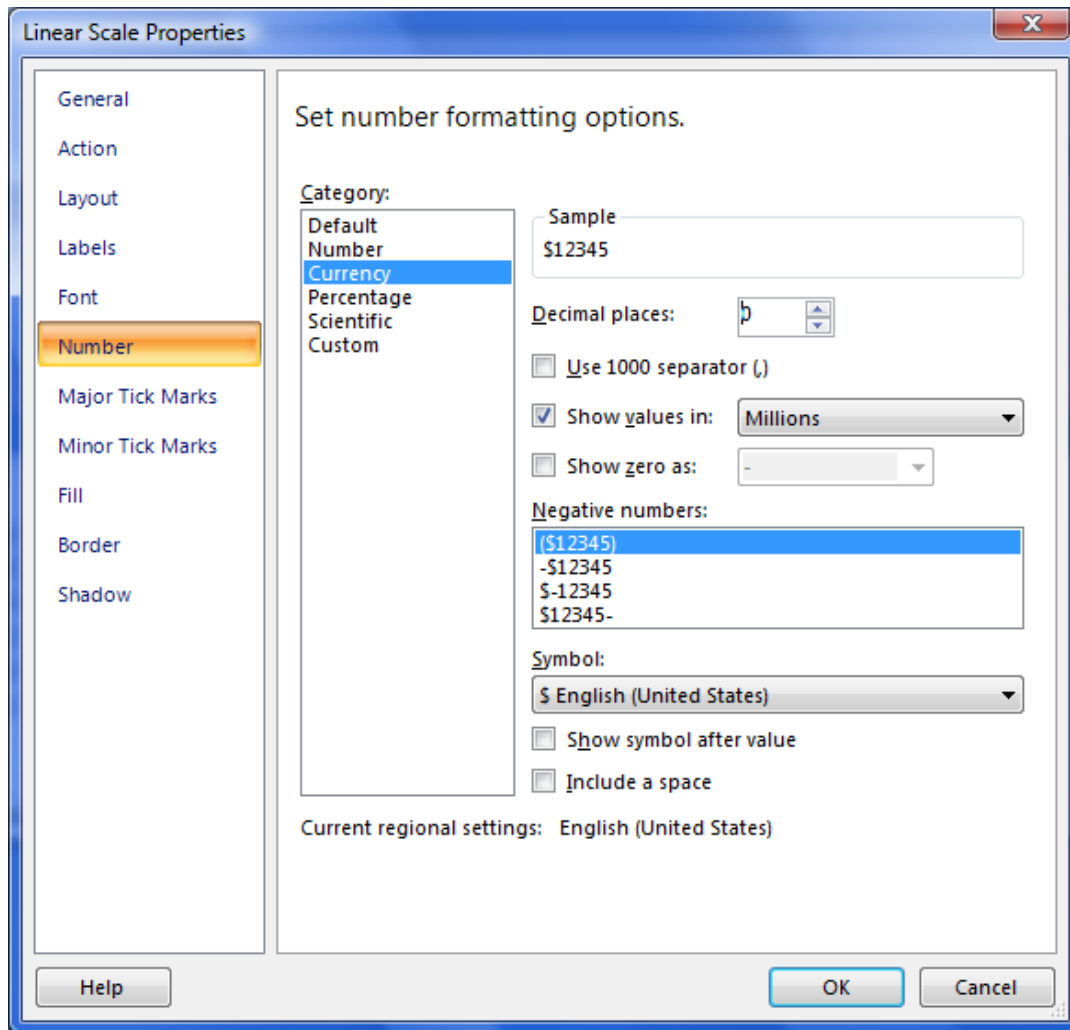
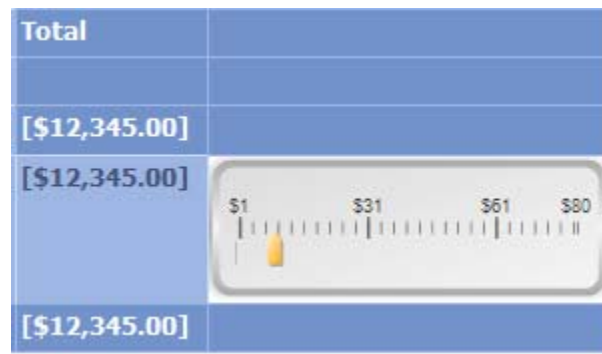


Figure 31: Currency Settings

11. Click **OK**.



12. To run your report, click the **Run** tab or press **F5**.

The rendered report will look similar to the second figure.

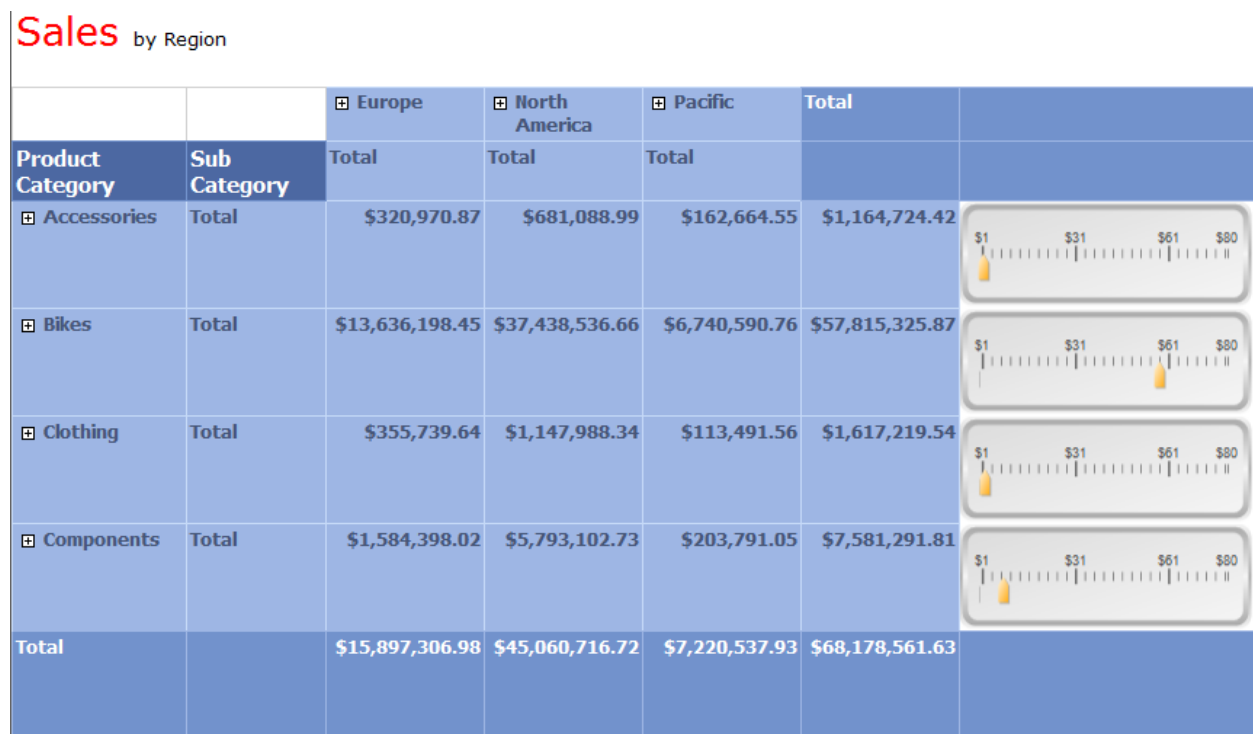
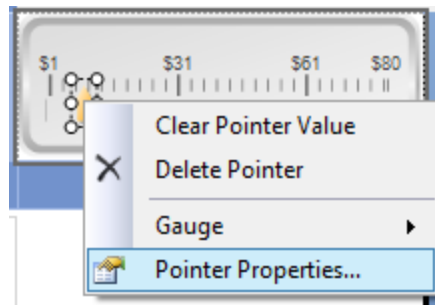


Figure 32: Previewing with the Gauge

The report now has the visual aid of the gauge to make it easy to understand the relative sales performance of the different categories.

Take it one step further and, using an expression, alter the gauge so the gauge pointer color depends on the sales amount itself. At this point, we should also make the pointers larger for better readability.

1. Right-click the pointer, then select **Pointer Properties**.



2. In the Linear Pointer Properties dialog box, select the **Pointer Options** category. To enlarge the pointer for easy viewing, do the following:
 - a. Set the **Width** of the pointer to **15**.
 - b. Set the **Length** of the pointer to **30**.

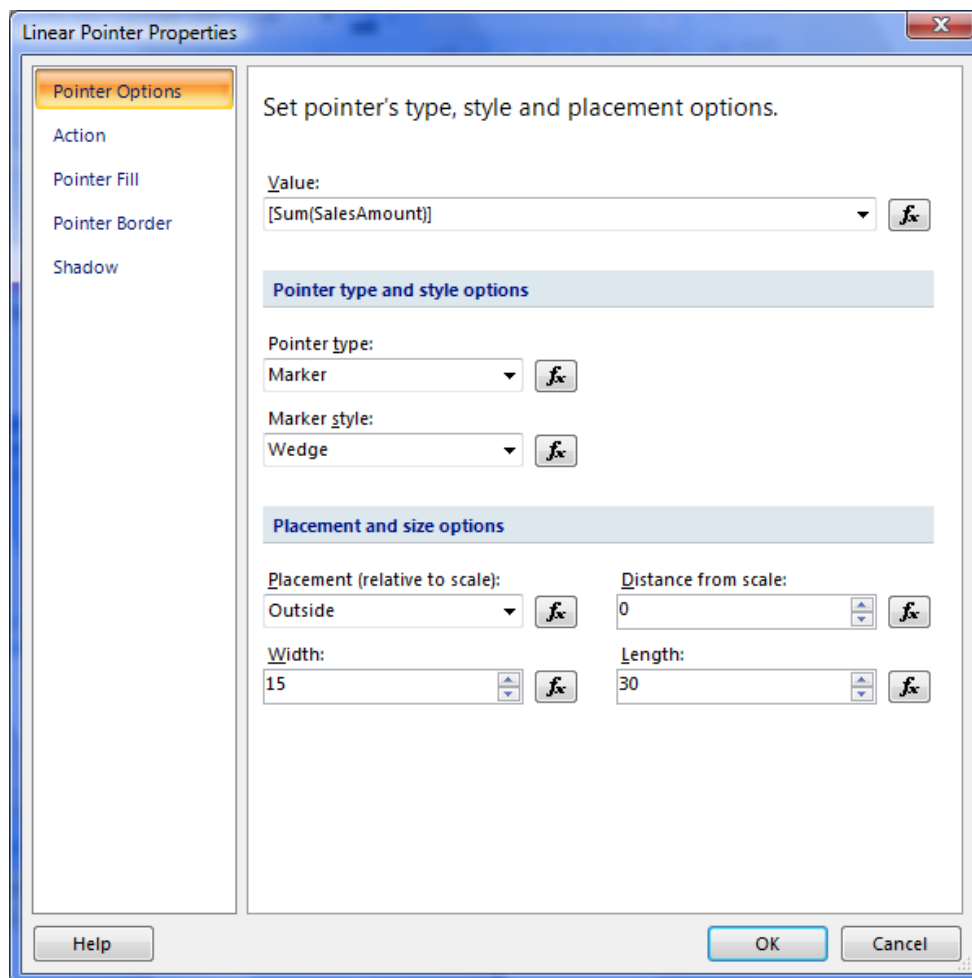



Figure 33: Resizing the Pointer

3. Select the **Pointer Fill** category and do the following:
 - a. Select the **Solid** option for **Fill Style**.
 - b. To select the color, click the function button  at the **Color** drop-down list.

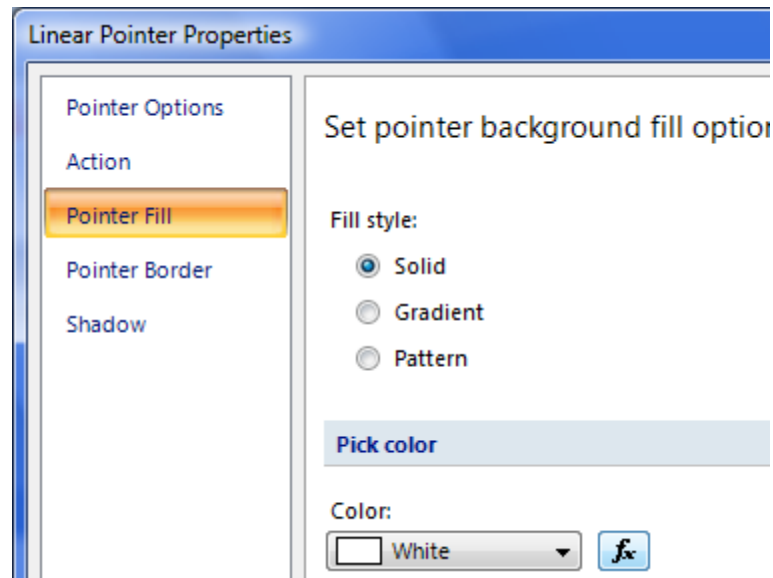


Figure 34: Pointer Fill Style and Color

To relate the color with the position of the guess, perform the following steps:

1. In the Expression dialog, enter a formula that supplies the following logic for pointer color:

Red: SalesAmount < five million.

Yellow: SalesAmount > five million but less than fifty million.

Green: SalesAmount > fifty million.

- a. Delete the default 'White' entry.
- b. Copy and paste the following formula into the expression editor.

```
=iif(Sum(Fields!SalesAmount.Value)<5000000,"red",iif(Sum(Fields!SalesAmount.Value)<50000000,"yellow",  
,"green"))
```

2. Click **OK**.

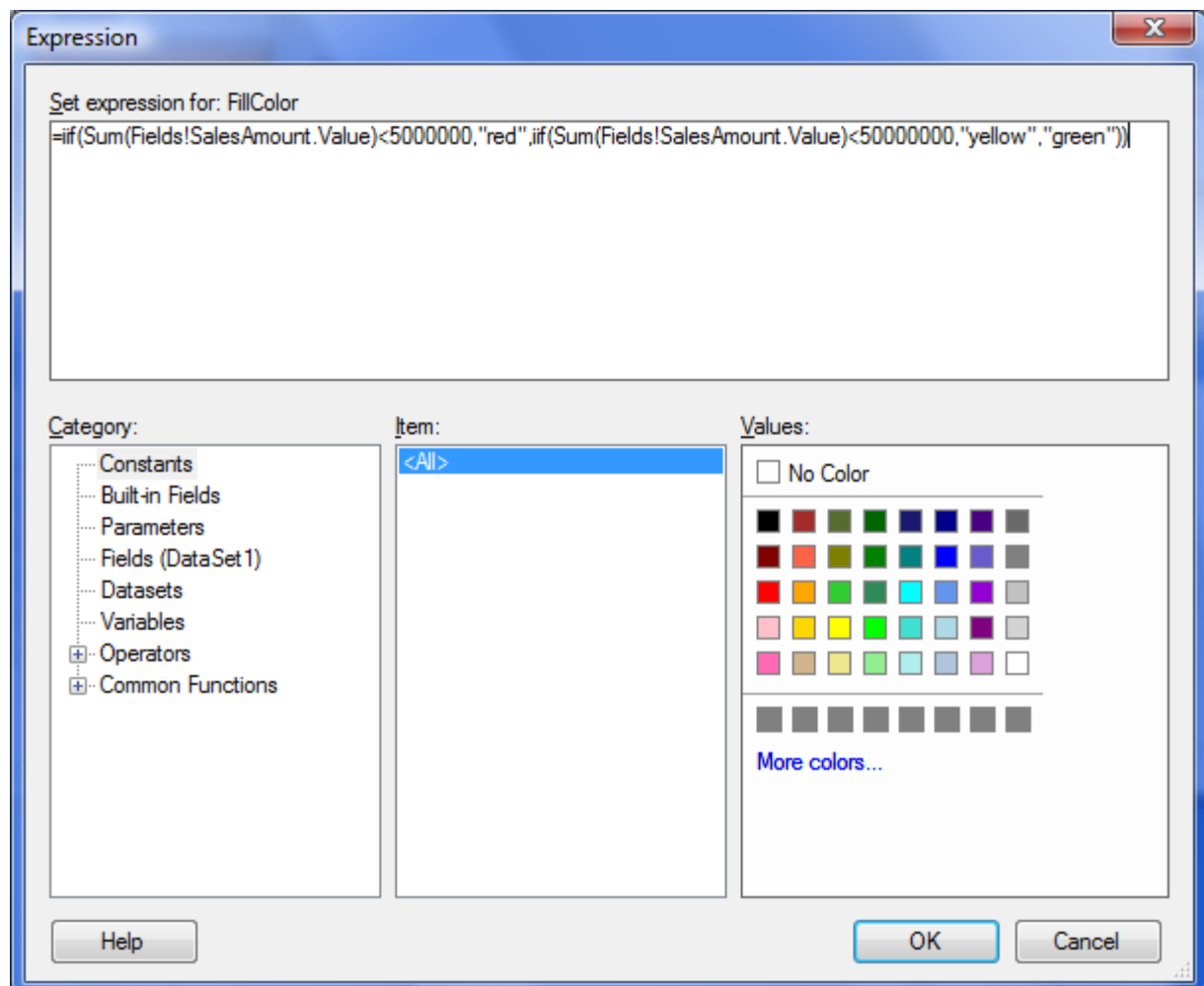


Figure 35: Expression Dialog

3. Run your report: Go to the 'Home' tab, then click the 'Run' button or press **F5**.

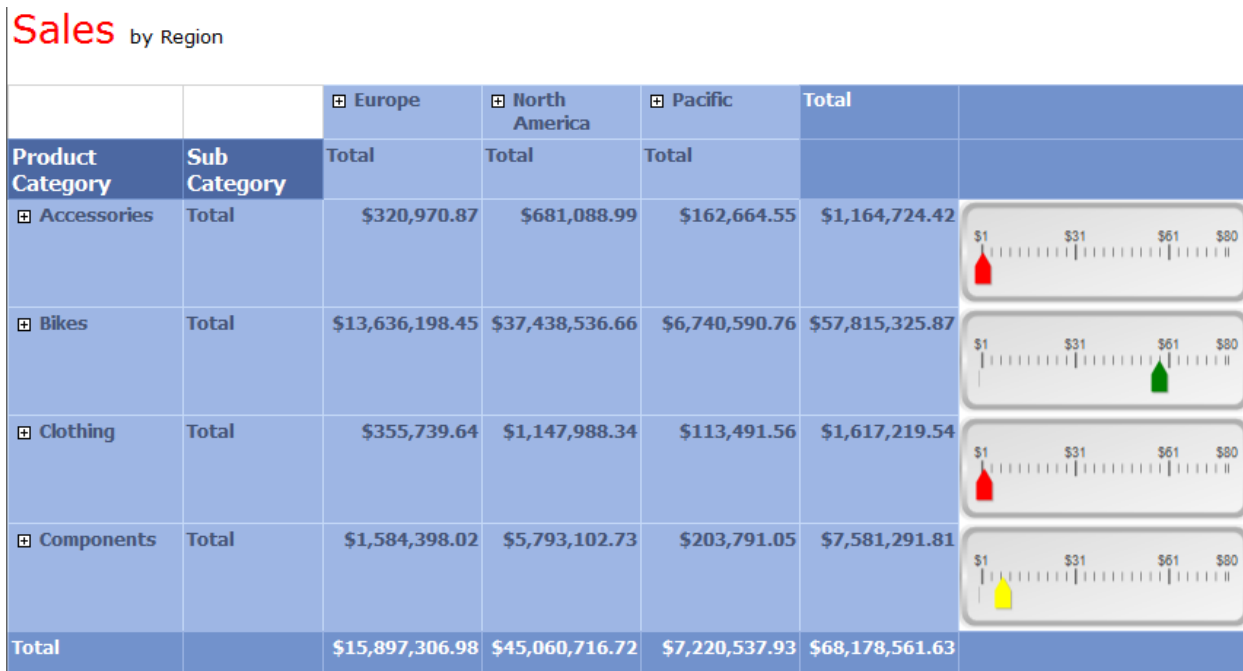


Figure 36: Previewing the Completed Gauge with Colored Pointers



Save your report to the server: To save your report on the server, perform the following steps:



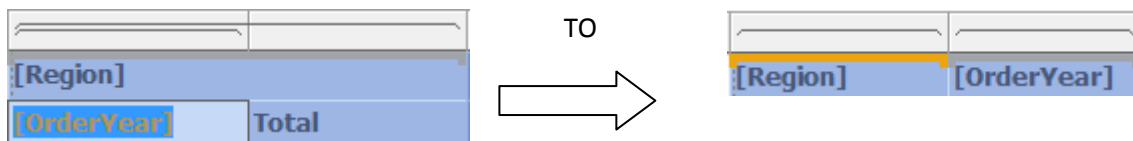
1. Click the Report Builder icon and then select **Save As**.
2. Select the **My Reports** folder, if present, on your local server.
3. Enter the file name '**SalesbyRegion_Ex7.rdl**'.

Exercise 8: Modify the Tablix to Show Two Parallel Dynamic Groups

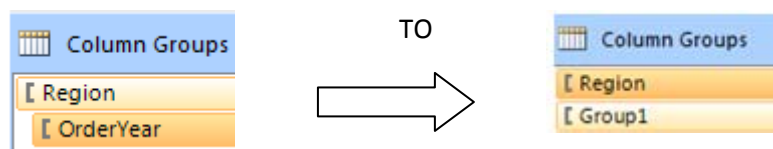
In this exercise, you will:

- Modify the Tablix report created in Exercise 3, and enhance its functionality.
- Enhance the functionality by moving the **OrderYear** sub-grouping to be displayed as a new adjacent column, thereby enabling a second independent dynamic group within a single report item—something new for SQL reporting Services 2008.

The group brace symbols are a visual indication of what we will be changing.



Another subtle hint is the spacing in the Grouping window, with Group1 no longer being indented.



- Remember you can 'Undo' actions using <CTRL>+<Z> or the Undo button in the Ribbon




This exercise assumes that you have completed Exercise 7. The images show the Gauge from Exercise 7 but is not required to complete this lesson—just the core Tablix.

Modifying the Tablix to Enhance Functionality

To modify the Tablix, perform the following steps:

1. Open the report **SalesbyRegion_Ex7.rdl** you previously created.
2. Delete the **OrderYear** sub group.

Delete this group to add it as a second grouping at the end of the matrix, and not as a sub-grouping within the matrix.

3. To do this, select the drop-down menu to the right of the **OrderYear** sub-group name  in the Grouping window, then select **Delete Group**.

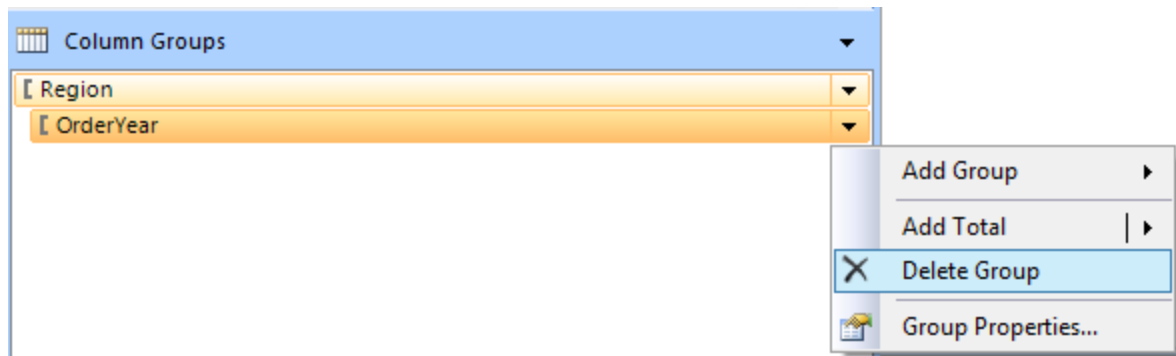
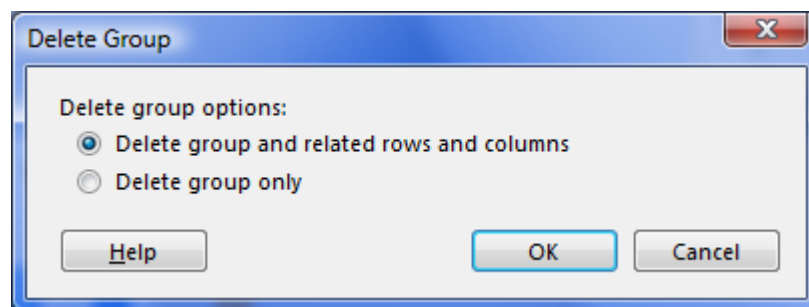


Figure 37: Delete OrderYear group

4. Select **Delete group and related rows and columns** in the Delete Group dialog box.



Your Tablix will now resemble the following figure.

		[Region]	Total	
[ProductCategory]	[SubCategory]	[\$12,345.00]	[\$12,345.00]	
	Total	[\$12,345.00]	[\$12,345.00]	
Total		[\$12,345.00]	[\$12,345.00]	

Figure 38: OrderYear Group Deleted

5. To add an adjacent group after **Region**, right-click the grouping window, select **Add Group**, then select **Adjacent After**.

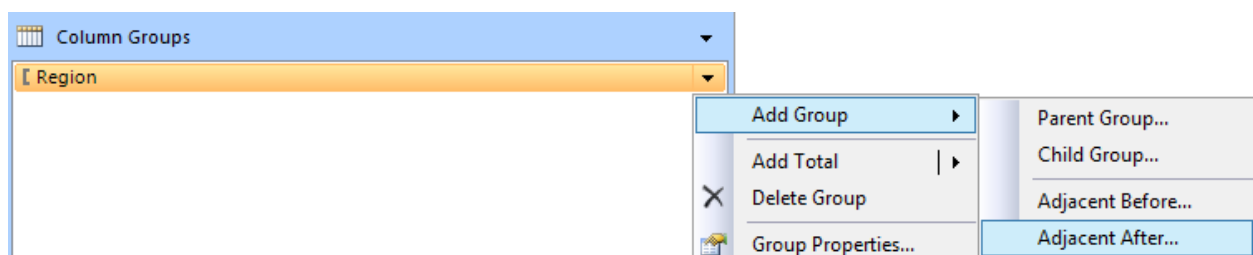
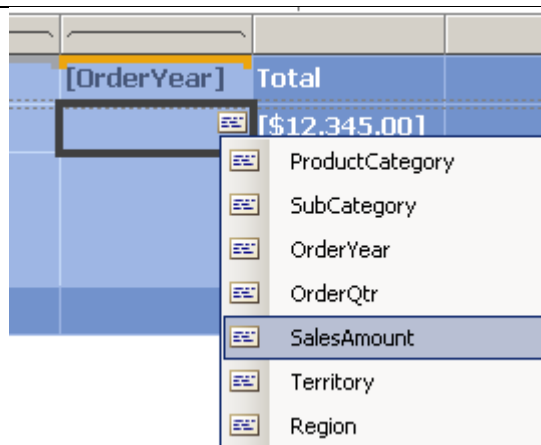


Figure 39: Add Adjacent Group

6. Click **OK**.
7. Select **Group By** [OrderYear] in the Tablix group dialog box.
8. Right-click in the new [OrderYear] column and add **SalesAmount**.

Note

SalesAmount is added to the whole column.



Your Tablix will now resemble the following figure.

		[Region]	[OrderYear]	Total	
[ProductCategory]	[SubCategory]	[\$12,345.00]	[Sum(SalesAn	[\$12,345.00]	
	Total	[\$12,345.00]	[Sum(SalesAn	[\$12,345.00]	
Total	Total	[\$12,345.00]	[Sum(SalesAn	[\$12,345.00]	

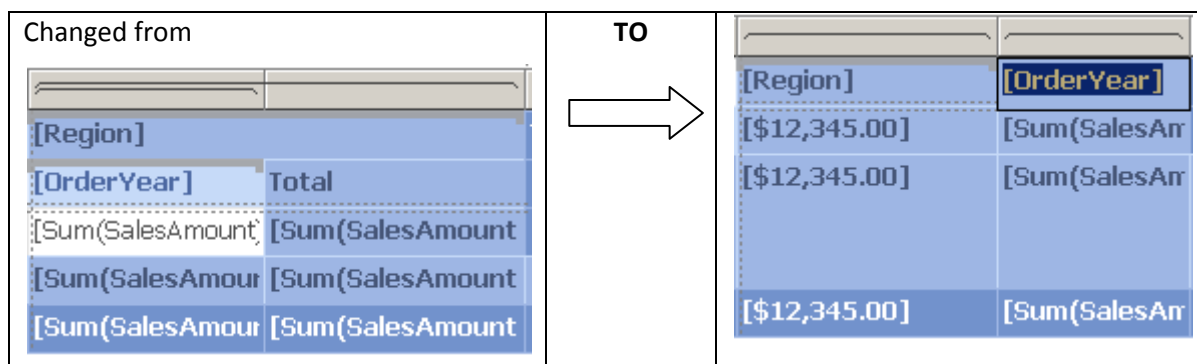
A gauge chart is visible on the right side of the table, showing a scale from \$1 to \$80 with a needle pointing to \$31.


Figure 40: New Adjacent group

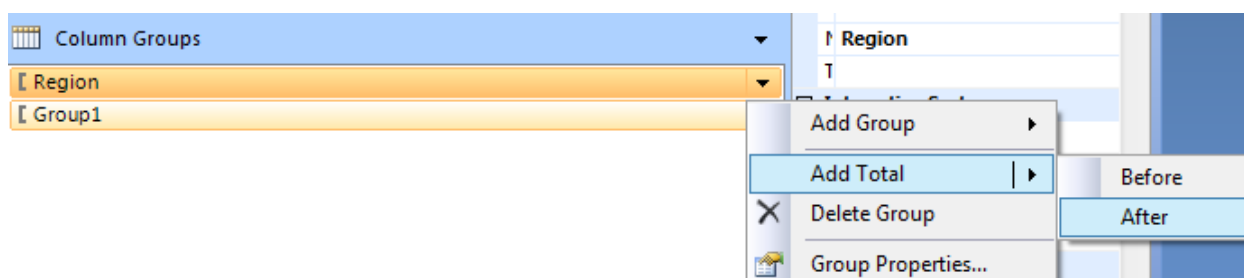
Note

The two group brace symbols are now alongside each other on the column headings.

Note.



9. Set all three **[Sum (SalesAmount)]** cells in the new **[OrderYear]** column to currency format by clicking each cell and using the currency button on the  Ribbon.
10. To add total columns for each of the two column groups using the grouping window, select **Add Total** in the drop-down for **Region**, then select **After**. Repeat this step for the new group.



Your Tablix will now resemble the following figure.


		[Region]	Total	[OrderYear]	Total	Total	
[ProductCategory]	[SubCategory]	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]	
	Total	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]	
Total	Total	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]	[\$12,345.00]	

Figure 41: Design View of the Completed Tablix, with Parallel Dynamic Groups

11. To run your report, click the **Home** tab and click **Run** or press **F5**.

		Europe	North America	Pacific	Total	2003	2004	Total	Total	
Accessories	Total	\$320,970.87	\$681,088.99	\$162,664.55	\$1,164,724.42	\$595,014.24	\$569,710.18	\$1,164,724.42	\$1,164,724.42	
Bikes	Total	\$13,636,198.45	\$37,438,536.66	\$6,740,590.76	\$57,815,325.87	\$35,199,346.23	\$22,615,979.64	\$57,815,325.87	\$57,815,325.87	
Clothing	Total	\$355,739.64	\$1,147,988.34	\$113,491.56	\$1,617,219.54	\$1,024,473.88	\$592,745.65	\$1,617,219.54	\$1,617,219.54	
Components	Total	\$1,584,398.02	\$5,793,102.73	\$203,791.05	\$7,581,291.81	\$5,489,740.88	\$2,091,550.93	\$7,581,291.81	\$7,581,291.81	
Total	Total	\$15,897,306.98	\$45,060,716.72	\$7,220,537.93	\$68,178,561.63	\$42,308,575.23	\$25,869,986.41	\$68,178,561.63	\$68,178,561.63	

Figure 42: Previewing the Completed Tablix with Parallel Dynamic Groups

 **Save your report to the server:** To save your report on the server, perform the following steps:



1. Click the Report Builder icon, then select **Save As**.
2. Select the **My Reports** folder, if present, on your local server.
3. Enter the file name **SalesbyRegion_Ex8.rdl**.

Exercise 9: Manual Creation of a Tablix to Match Exercise 3 (Wizard Tablix)

In this exercise, you will:

- Manually create a Tablix—similar to what you used the Matrix wizard for in Exercise 2.

This exercise assumes that you have completed Exercise 3. You can also build this on top of later exercises, though your images will look different (with more objects). Alternatively, you can create new report and repeat Exercise 3 again.

Manually Creating a Tablix Similar to Matrix Wizard

To manually create a Tablix similar to Tablix in Matrix wizard, we use the report created in Exercise 2, **SalesbyRegion_Ex3.rdl**. While this exercise creates a new report, using the report from Exercise 2 will enable you to compare the two versions. After opening the report, follow these steps:

1. Insert a new tablix below the existing one.
2. Create some blank space below the existing Tablix.
3. From the Insert tab of the Ribbon, select **Matrix**, then select **Insert Matrix**.
4. Resize the new matrix below the existing one.

Your report in design mode will look similar to the following figure.

Click to add title

		[Region]		Total
Product	Sub	[OrderYear]	Total	
[ProductCategory]	[SubCategory]	[Sum(SalesAmount)]	[Sum(SalesAmount)]	[Sum(SalesAmount)]
	Total	[Sum(SalesAmount)]	[Sum(SalesAmount)]	[Sum(SalesAmount)]
Total		[Sum(SalesAmount)]	[Sum(SalesAmount)]	[Sum(SalesAmount)]

	Columns
Rows	Data

[&ExecutionTime]

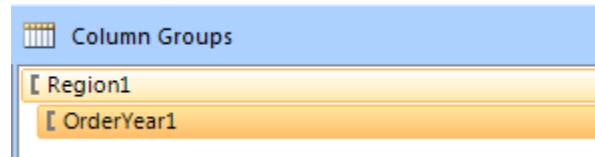
Figure 43: Empty New Tablix

5. From the Report Data window, do the following:
 - a. Drag the **Region** field to the **Column Groups** area of the Grouping window.

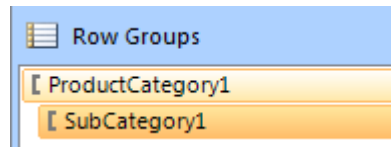
- b. Drag the **OrderYear** to the **Column Groups** area of the Grouping window below **Region**.

Note

[Orderyear] is automatically made a child of Region and is indented.



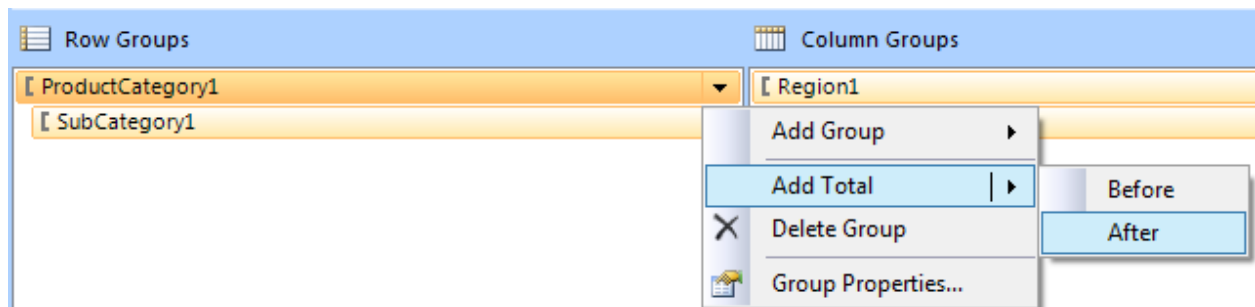
6. From the Report Data window, do the following:
- Drag the **ProductCategory** field to the **Row Groups** area of the Grouping window.
 - Drag the **SubCategory** field to the **Row Groups** area of the Grouping window, below ProductCategory.



7. From the Report Data window, drag **SalesAmount** to the **Data** cell at lower right of the Tablix. The new Tablix will look similar to the following figure.

		[Region]
Product Category	Sub Category1	[OrderYear]
[ProductCategory]	[SubCategory]	[Sum(SalesAmount)]

8. To add the totals after all of the groups in the grouping window, click each of the four groups, select **Add total**, then select **After**.



The new Tablix will resemble the following figure.

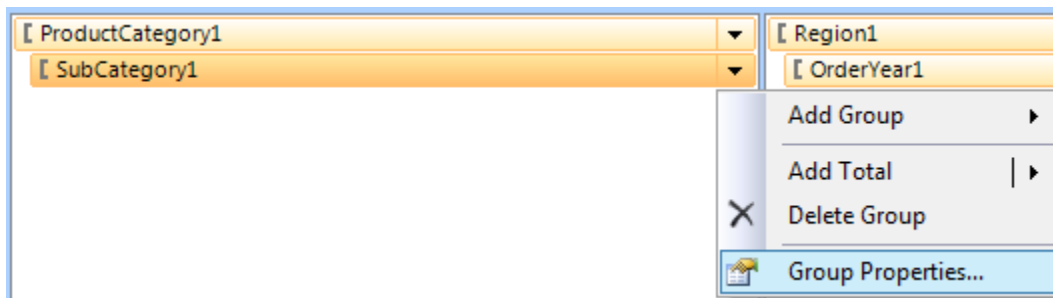
			[Region]		Total
	Product Category	Sub Category1	[OrderYear]	Total	
	[ProductCategory]	[SubCategory]	[Sum(SalesAmount)]	[Sum(SalesAmi	[Sum(SalesAmi
		Total	[Sum(SalesAmount)]	[Sum(SalesAmi	[Sum(SalesAmi
	Total		[Sum(SalesAmount)]	[Sum(SalesAmi	[Sum(SalesAmi

9. To run your report, click the **Home** tab and click **Run** or press **F5**.

Note

The data is grouped as desired, but it is difficult to initially view and understand it, as there is plenty of information. Hide the sub groups for the initial preview, just like the wizard did. Click the **Design** Tab or press F8 to switch back to Design mode.

10. To hide the subgroups but allow the user to toggle them on, select **Group Properties** for **Subcategory1** from the Grouping Window.



11. In the Group Properties dialog box, select the **Visibility** category.

- Set **When the report is initially run** to **Hide** option.
- Select the **Display can be toggled by this report item** check box, then select **ProductCategory1**.

Note

The **1** is important as in the list where ProductCategory1 AND ProductCategory both appear, and ProductCategory is the instance from the first Tablix.

- Click **OK**.

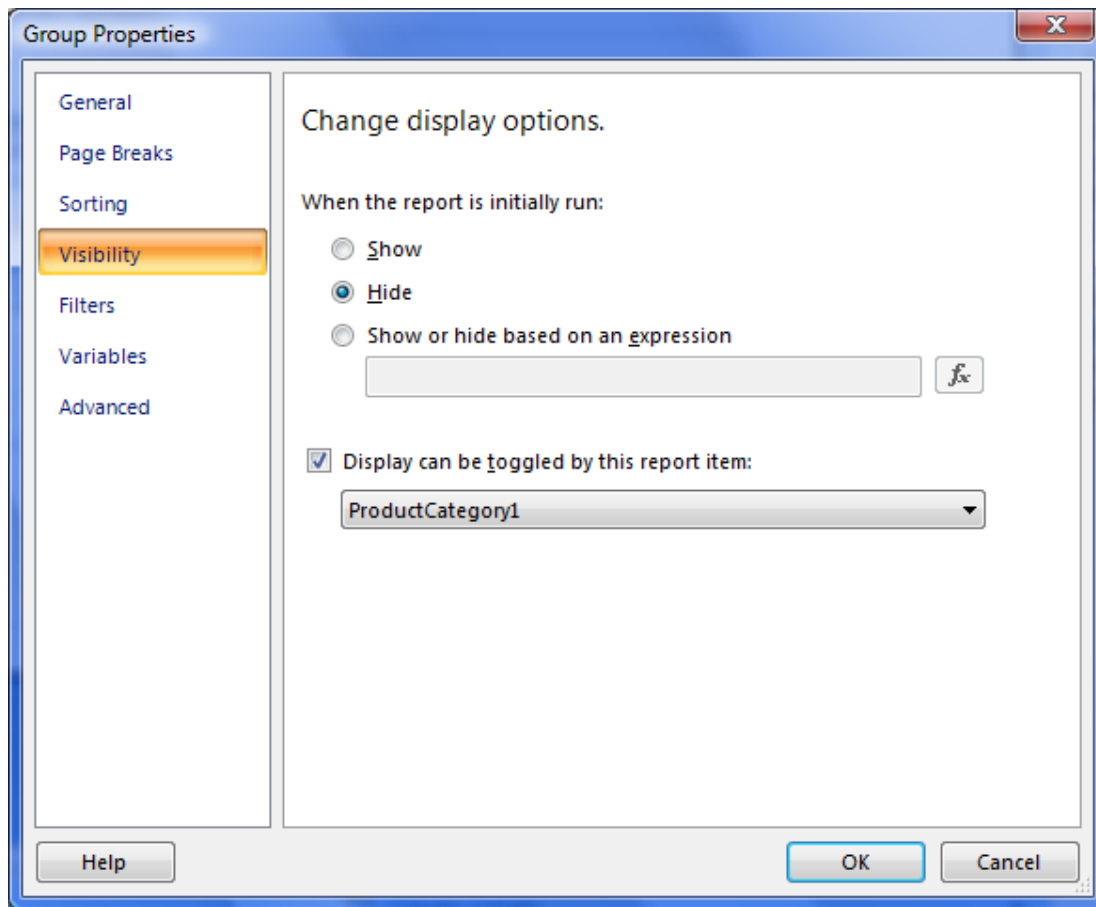


Figure 44: Group Properties setting the toggle item.

12. Repeat the same changes to the OrderYear1 subgroup:
 - a. From the Grouping Window, select **Group Properties** for OrderYear1.
 - b. From the Group Properties dialog, select the '**Visibility**' page
 - c. Set **When the report is initially run** to **Hide**.
 - d. Select the **Display can be toggled by this report item** check box and select **Region1** from the drop-down list

Note

The **1** is important as in the list where Region1 AND Region both appear, and Region is the instance from the first Tablix.

- e. Click **OK**

13. To run your report, click the **Home** tab and click the **Run** or press **F5**.


Note

Other than a few formatting properties such as colors and size, the two Tablix report items are the same.

		⊕ Europe	⊕ North America	⊕ Pacific	Total
Product Category	Sub Category	Total	Total	Total	
⊕ Accessories	Total	320970.8725	681088.9944	162664.5486	1164724.4155
⊕ Bikes	Total	13636198.4470	37438536.6641	6740590.7604	57815325.8715
⊕ Clothing	Total	355739.6391	1147988.3374	113491.5624	1617219.5389
⊕ Components	Total	1584398.0247	5793102.7282	203791.0536	7581291.8065
Total		15897306.9833	45060716.7241	7220537.9250	68178561.6324

		⊕ Europe	⊕ North America	⊕ Pacific	Total
Product Category	Sub Category1	Total	Total	Total	
⊕ Accessories	Total	320970.8725	681088.9944	162664.5486	1164724.4155
⊕ Bikes	Total	13636198.4470	37438536.6641	6740590.7604	57815325.8715
⊕ Clothing	Total	355739.6391	1147988.3374	113491.5624	1617219.5389
⊕ Components	Total	1584398.0247	5793102.7282	203791.0536	7581291.8065
Total		15897306.9833	45060716.7241	7220537.9250	68178561.6324

Figure 45: Completed Tablix.

 **Save your report to the server:** To save your report on the server, perform the following steps:



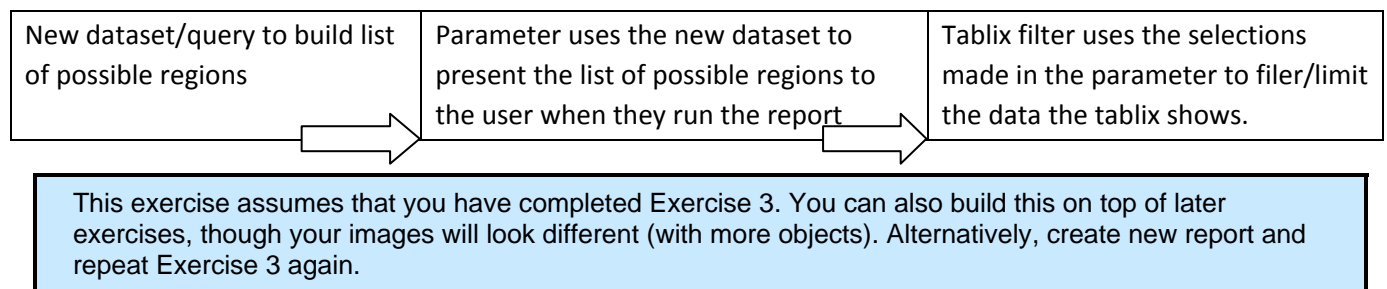
1. Click the Report Builder icon, then select **Save As**.
2. Select the **My Reports** folder, if present, on your local server.
3. Enter the file name **SalesbyRegion_ex8.rdl**.

Exercise 10: Use Query, Parameter, and Filter to Limit the Tablix Data

In this exercise, you will:

- Create a new dataset that will return a unique list of the sales regions.
- Create a parameter that will use the new dataset, and will present the user the values to select from when the report is run.
- Create a filter on the tablix, which will use the value(s) the user selects from the parameter to filter/limit the data that is actually shown in the tablix after running when the report.

Filters are very useful for many scenarios such as including a single dataset for the report, but you can also represent different subsets of the data using multiple data regions (e.g. chart or tablix).



Creating a New Data Set to Return a Unique List of Sales Regions

In these steps we will create a new data set, or query to a list of regions. We will then use this region list to enable users to select what regions to filter.

To complete this task, follow these steps:

1. Open the report “**SalesbyRegion_Ex3.rdl**” previously created in Exercise3. If you do not have it, rerun the wizard (Exercise3).

2. In the Report Data window, right-click the Data Source and select **Add Dataset**.

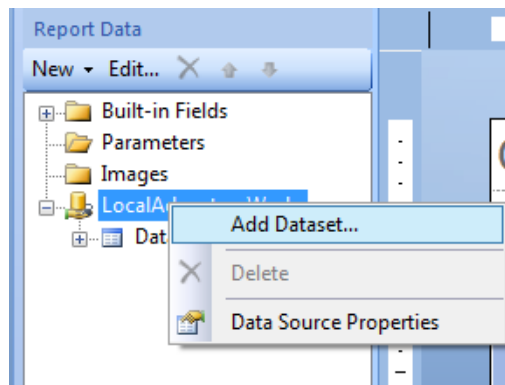


Figure 46: Adding a Dataset

3. In the Dataset Properties dialog box, select the Query category, and do the following:
 - a. Click **Add** to add a filter.
 - b. Enter **Name** as **regionlist**.
 - c. Set **Data Source** to **LocalAdventureWorks** (or whatever you have named your datasource)
 - d. Select the **Text** option for **Query Type** and enter the following query string in the **Query** field

```
Select Distinct Sales.SalesTerritory.Group AS Region from
sales.SalesTerritory
```

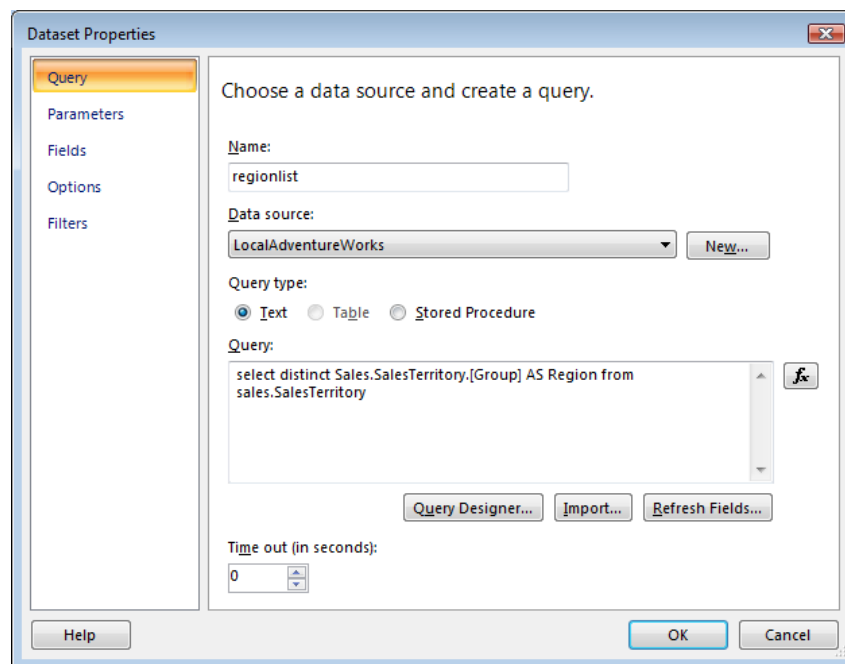


Figure 47: Create New Query To Use Source The Parameter List

4. Click **OK**

Creating a Parameter

1. In the Report Data window, right-click Parameter, then select **Add Parameter**.

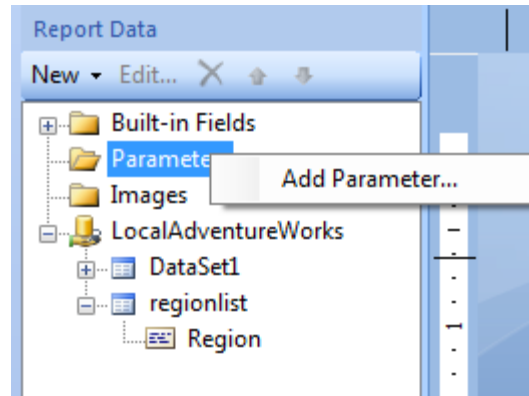


Figure 48: Create a New Parameter

2. In the Report Parameters dialog box, select the **General** category, then do the following:
 - a. Click **Add** to add a filter.
 - b. Enter **Name** as **whatregions**.
 - c. Enter **Prompt** as **whatregions**.
 - d. Select **Data type** as Text, then select the **Allow Multiple Values** check box.
 - e. Select the **Visible** option for **Select parameter visibility**.

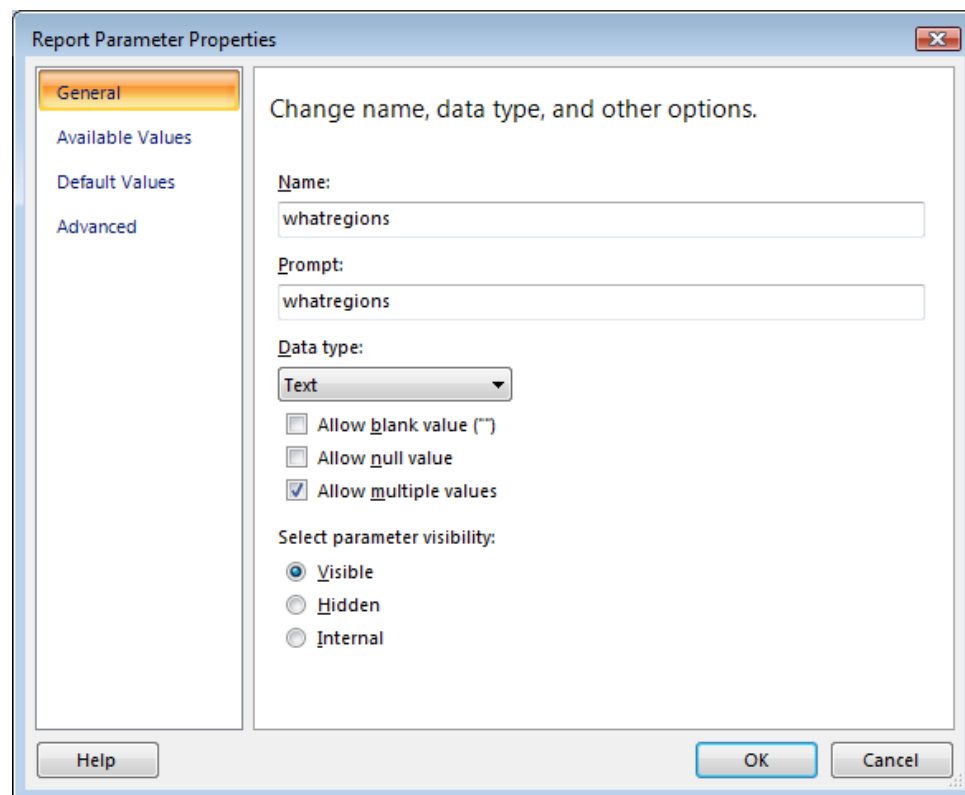
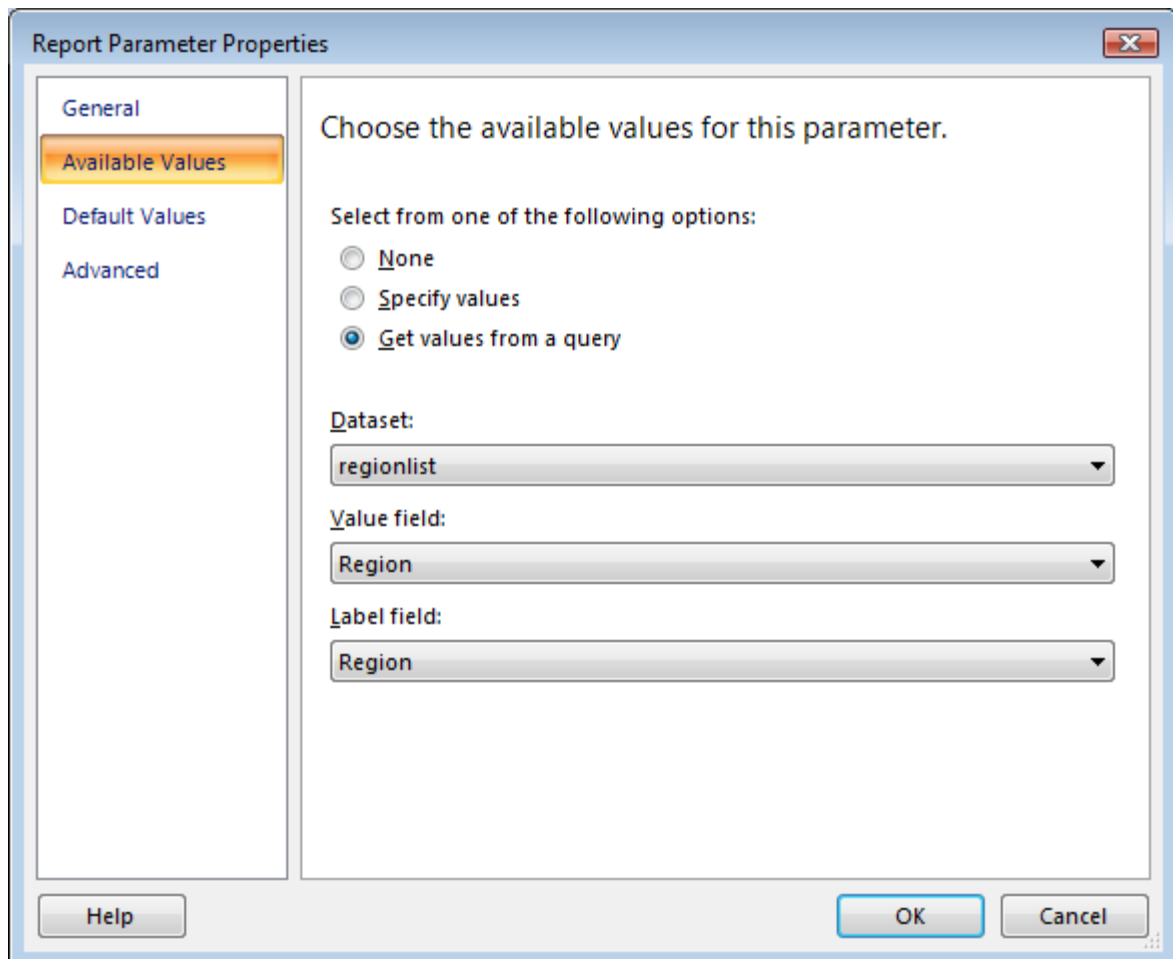


Figure 49: Parameter General Settings

3. Select the **Available Values** category, then do the following:
 - a. Select **Get Values from query** option.
 - b. Select the **Dataset** as **regionlist**.
 - c. Select **Value field** as **Region**.
 - d. Select **Label Field** to **Regionv**
4. Select **Allow Multiple Values** category.

**Figure 50: Parameter Available Values Settings.**

You should now see your parameter, as well as the new dataset listed in the Report Data window.

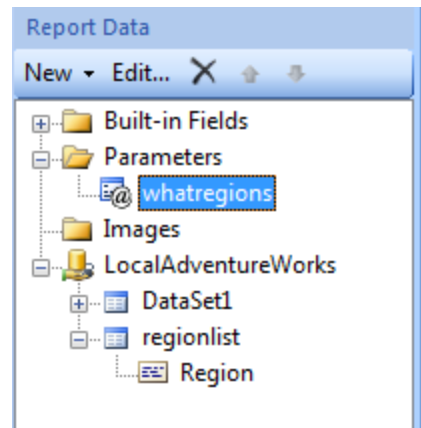


Figure 51: New Parameter and Data Set Listed in Report Data Window

Create the Tablix FilterThe filter in Tablix enables the user to dynamically select different region(s) to filter on each time they run the report. The user can then export the different views and, in effect, create a form of ad hoc query functionality.

To create a filter in Tablix, perform the following steps:

1. Select the top edge of the Tablix, right-click it, and select **Tablix Properties**.

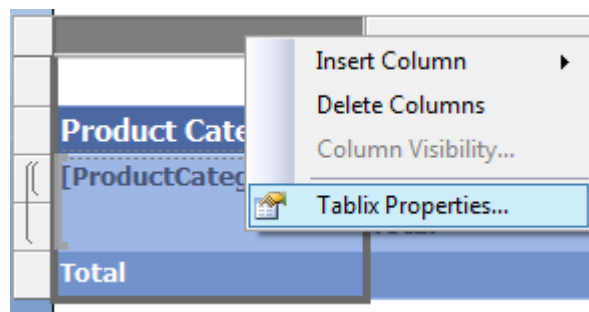


Figure 52: Open Tablix Properties

2. In the Tablix Properties dialog box, select the **Filters** category, then do the following:
 - a. Click **Add** to add a filter.
 - b. Set **Expression** to **[Region]** .
 - c. Set **Operator** to **IN**.
 - d. Set **Value** to **[@whatregions]** .

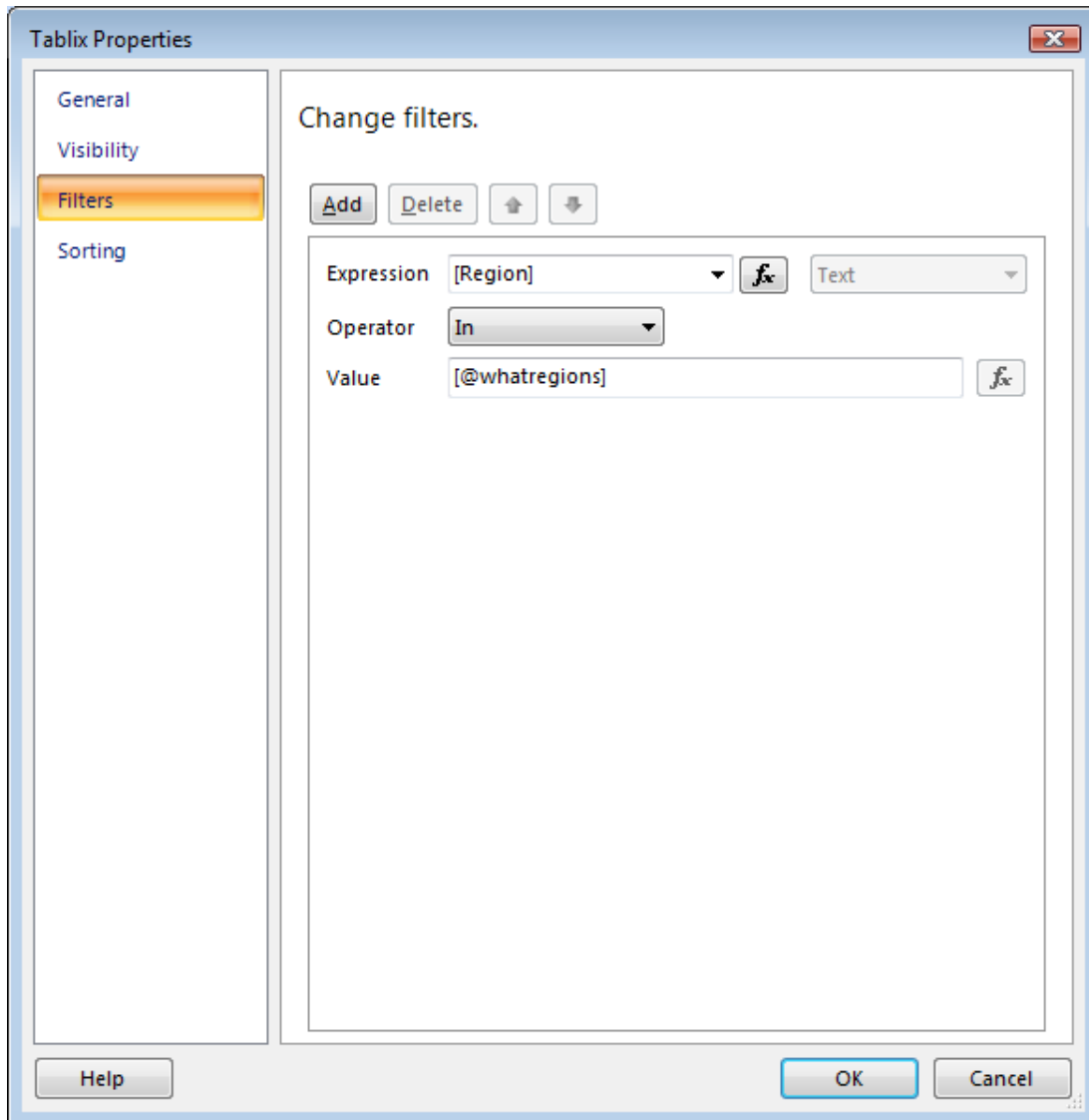


Figure 53: Tablix Filter Settings

3. Click **OK**.

You are now ready to run your report, and select the region from the parameter area.

1. To run the report, click the **Home** tab, then click the **Run** button or press **F5**.
2. Select **Europe**, then click the **View Report** on the right.

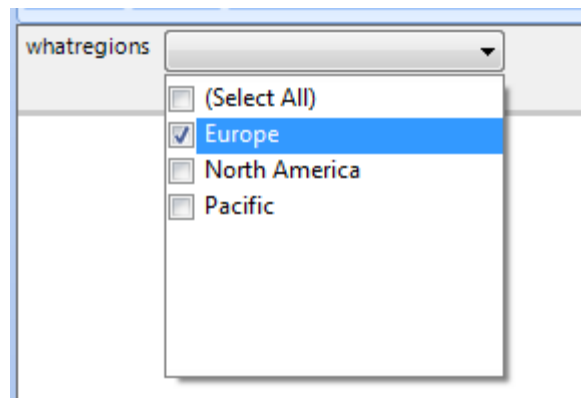


Figure 54: Selecting Parameter Values


Your report will look similar to the following figure, which only shows the Europe group.

3. Switch back to the Design view.


		⊕ Europe	Total
Product Category	Sub Category	Total	
⊕ Accessories	Total	\$320,970.87	\$320,970.87
⊕ Bikes	Total	\$13,636,198.45	\$13,636,198.45
⊕ Clothing	Total	\$355,739.64	\$355,739.64
⊕ Components	Total	\$1,584,398.02	\$1,584,398.02
Total		\$15,897,306.98	\$15,897,306.98

Figure 55: Tablix with the Filter Applied

4. Change your filtering by simply selecting different parameters and clicking **View Report**. Repeat this a few times and view the results.

 **Save your report to the server:** To save your report on the server, perform the following steps:



1. Click the Report Builder icon , then select **Save As**.
2. Select the **My Reports** folder, if present, on your local server.
3. Enter the file name **SalesbyRegion_ex9.rdl**.

For more information, reference the following SQL Server 2008 Online topics:

[Filter Equation Examples \(Reporting Services\)](#)

References and Where to Get Help

SQL Server Reporting Services home page:

<http://msdn.microsoft.com/en-us/sqlserver/default.aspx>

SQL Server 2008 Reporting Services on Microsoft TechNet:

<http://technet.microsoft.com/en-us/library/ms166352.aspx>

SQL Server Reporting Services Forum:

A great place to ask questions to the larger community, as well as see what others are asking and answering.

<http://forums.microsoft.com/Forums/ShowForum.aspx?ForumID=82&SiteID=1>

SQL Server 2008 Reporting Services Books Online (Help):

[http://msdn.microsoft.com/en-us/library/ms159106\(SQL.100\).aspx](http://msdn.microsoft.com/en-us/library/ms159106(SQL.100).aspx)

www.codeplex.com for Adventureworks sample database and report downloads:

<http://www.codeplex.com/MSFTDBProdSamples/Release/ProjectReleases.aspx?Released=18407>

Main SQL Server samples page:

<http://codeplex.com/SqlServerSamples>

Microsoft Connect Feedback site:

<http://connect.microsoft.com>

A connection point between you and Microsoft, and ultimately the larger user community. Your feedback enables Microsoft to make software and services the best that they can be, and you can learn about and contribute to exciting projects.