

Sql Server Reporting Services

Lesson 6: Building Ad hoc Reports

June 14, 2015

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Lesson Objectives

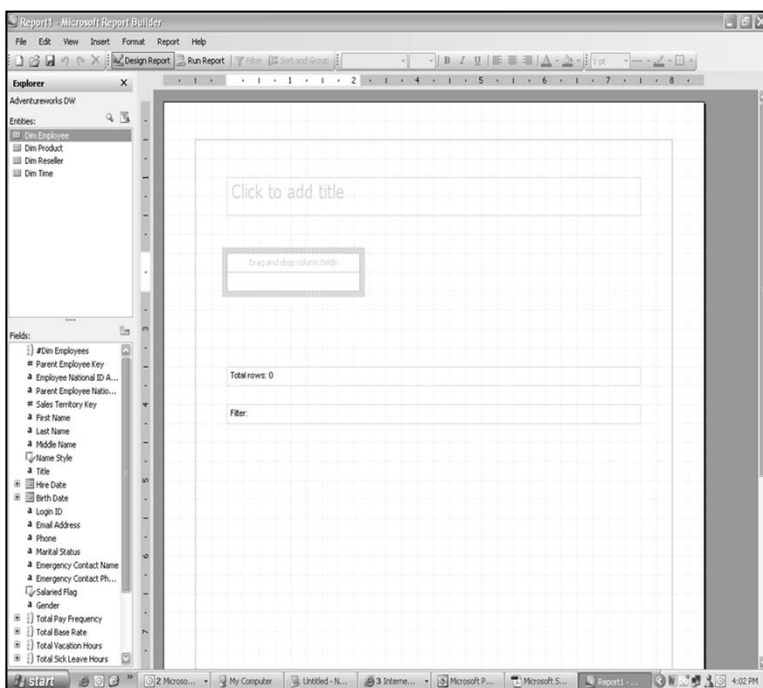
- Creating ad hoc reports using Report Builder
- Creating a table report
- Creating matrix report
- Creating chart reports
- Formatting a report
- Adding formulae
- Filter the report
- Sorting data



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6.1: SSRS

Creating ad hoc reports using Report Builder

- Report Builder is a tool for business users to create reports more easily.
- Non technical users can easily draw reports on model designed.
- Report can be previewed while designing it.

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6.1: SSRS
Creating a table report

The screenshot shows the Microsoft Report Builder interface. The report is titled 'Reseller Sales'. The data is presented in a table with the following structure:

| Sales Territory Group | Sales Territory Country | Sales Territory Region | Total Sales Amount |
|-----------------------|-------------------------|------------------------|--------------------|
| XXXXXXXXXXXX | | | 0.0 |
| Total | | | 0.0 |

The report is filtered by 'All Sales Territories'. The interface also shows the 'Entities' list on the left, which includes 'Fact Reseller Sales' and 'Dim Sales Territory'. The 'Fields' list on the right includes various fields such as 'Sales Order Number', 'Total Sales Order Line Number', 'Total Order Quantity', 'Total Order Price', 'Total Line Price', 'Total Line Price Discount Pct', 'Total Discount Amount', 'Total Product Standard Cost', 'Total Total Product Cost', 'Total Sales Amount', 'Total Tax Amt', 'Total Freight', 'Carrier Tracking Number', and 'Customer PO Number'.

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To create table report:

1. Select Report builder and choose for table report as the radio option button.
2. In the Entities list, select Reseller Sales.
3. Drag & drop Sales Territory Group, Sales Territory Country & Sales Region from the Fields list on report.
4. In the Fields list, expand Total Sales Amount to select related fields.
5. Drag Avg Sales Amount from Fields list & drop it on the report.
6. Add report title as 'Reseller Sales'.
7. Save & run the report.

6.1: SSRS

Creating a table report

The screenshot shows the Microsoft Report Builder application. On the left, the 'Explorer' pane displays a hierarchy of data sources and fields. The 'Fields' pane lists various data points such as 'Total Sales Order Line Number', 'Total Order Quantity', 'Total Line Price', 'Total Extended Amount', 'Total Line Price Discount Pct', 'Total Discount Amount', 'Total Product Standard Cost', 'Total Total Product Cost', 'Total Sales Amount', 'Total Tax Incl', 'Total Freight', 'Carrier Tracking Number', and 'Customer PO Number'. The main area is a large grid for designing the report layout. A 'Save As Report' dialog box is open in the foreground, showing the 'Look In' dropdown set to 'http://atn-gw-actg/ReportServer/Models'. The 'Name' field contains 'ModelReport1' and the 'Save' button is highlighted. The 'Save as type' is set to 'Report'.

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6.1: SSRS

Creating a matrix report

The screenshot shows the Microsoft Report Builder interface. The main report area displays a matrix titled "Reseller Sales Matrix". The matrix has four columns: "Sales Territory Group", "Sales Territory Country", "Sales Territory Region", and "Calendar Year (Total Sales Amount)". The data rows show a total sales amount of 0.0 for each category. The left pane shows the "Entities" list with "Fact Reseller Sales" and the "Fields" list with various sales metrics.

| Sales Territory Group | Sales Territory Country | Sales Territory Region | Calendar Year (Total Sales Amount) |
|-----------------------|-------------------------|------------------------|------------------------------------|
| XXXXXXXXXXXXXX | XXXXXXXXXXXXXX | XXXXXXXXXXXXXX | 0.0 |
| Total | Total | Total | 0.0 |

Filter: All Fact Reseller Sales

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To create matrix report:

1. Create report as matrix layout.
2. Name the report as Matrix Report.
3. In Entities list, select Sales Territory, drag & drop Sales Territory Group, Sales Territory Country & Sales Region from the Fields list in Row Groups.
4. Select Order Date from Entities list, select Calendar Year from Fields list & drop it in Column Groups.
5. In the Fields list, expand Total Sales Amount to select related fields.
6. Select Total Sales Amount from Fact reseller sales entities list & drop it in values tab.
7. Save & Run the report.

6.1: SSRS

Creating a matrix report

Report1 - Microsoft Report Builder

File Edit View Report Help

Design Report Run Report Filter Sort and Group

100%

Print / Help

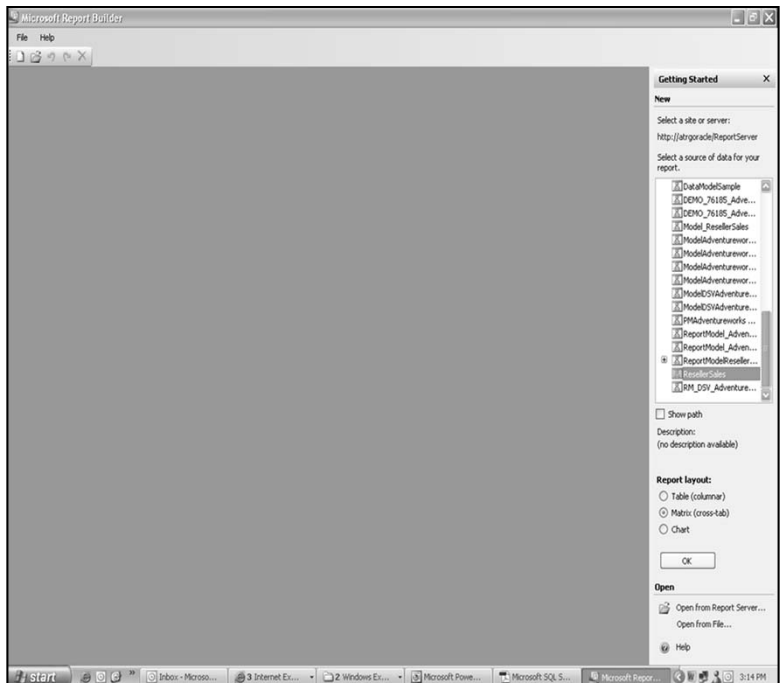
Reseller Sales Matrix

| Sales Territory Group | Sales Territory Country | Sales Territory Sales Region | Calendar Year (Total Sales Amount) | | | | |
|-----------------------|-------------------------|------------------------------|------------------------------------|--------------|---------------|---------------|---------------|
| | | | 2001 | 2002 | 2003 | 2004 | Total |
| Europe | France | Total | | 857123.1794 | 2373804.0594 | 1376610.7212 | 4607537.9590 |
| | | | | | 1098986.6849 | 885121.3524 | 1983988.0373 |
| | Germany | Germany | | | | | |
| | | Total | | | 1098986.6849 | 885121.3524 | 1983988.0373 |
| | United Kingdom | Total | | 841757.7607 | 2168145.8328 | 1277105.2331 | 4279808.8266 |
| | Total | | | 1698880.9391 | 5632816.5531 | 3538837.3067 | 10870534.7969 |
| North America | Total | | 8065435.3053 | 2249548.7149 | 25722421.9081 | 11762320.8794 | 67985726.8067 |
| | Pacific | Total | | 847430.9640 | 746904.4127 | 1594325.3747 | |
| Total | | | 8065435.3053 | 2414428.6540 | 32202669.4252 | 16003042.5978 | 80450596.9823 |

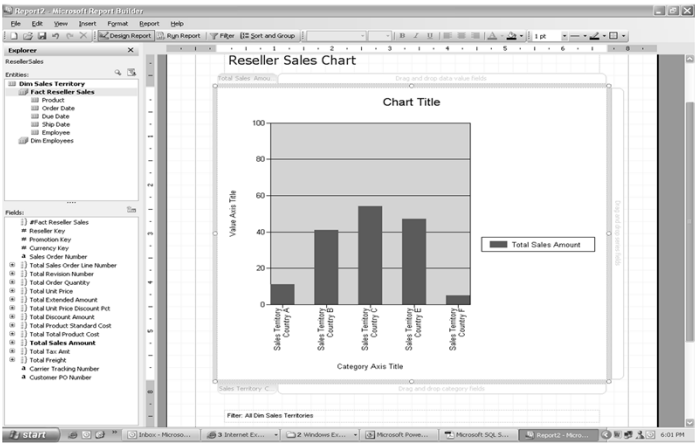
Filter: All Fact Reseller Sales

| | | |
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6.1: SSRS
Creating a chart report

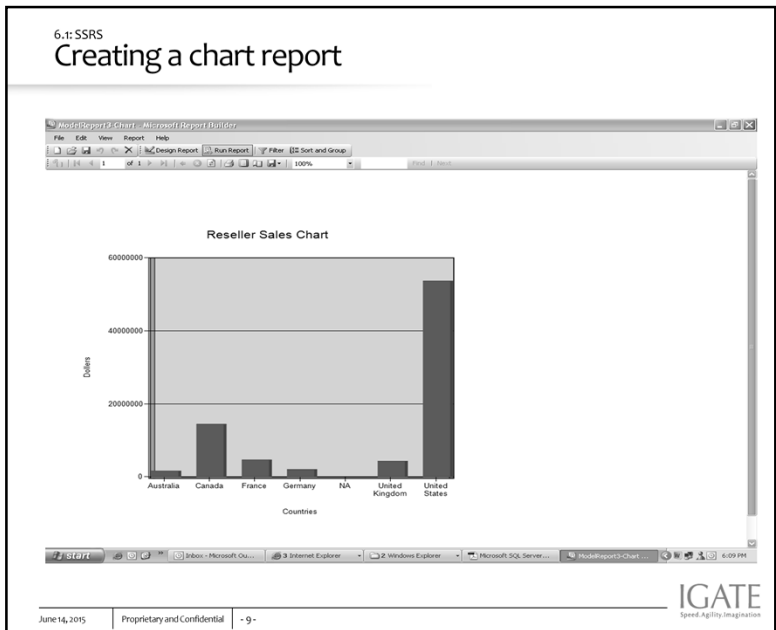


The screenshot shows the SSRS report designer interface. On the left, the 'Explorer' pane shows the 'ResellerSales' data source and the 'Fact Reseller Sales' table. The 'Fields' pane lists various fields, including 'Sales Territory Country', 'Total Sales Amount', and 'Total Sales Order Line Number'. The main area displays a bar chart titled 'Reseller Sales Chart'. The chart has a Y-axis labeled 'Value Axis Title' and an X-axis labeled 'Category Axis Title'. The chart shows five bars representing 'Total Sales Amount' for different 'Sales Territory Country' categories. The chart is titled 'Chart Title'.

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1. To create chart report:
2. Click on File, New. Select Report Layout as Chart & click OK.
3. Title the report as 'Reseller Sales Chart'.
4. Click on chart to display data regions to drop fields on it.
5. From Entities list, select Sales Territory, drag & drop Sales Territory Country to Category field.
6. Drag & drop Total Sales Amount from Fields list to Data Value Fields.
7. Save & Run the report.



1. To format a graph with 3-D effect:
2. Open the existing chart report.
3. Select chart area, right click, select Chart Options.
4. Select Title tab, provide the chart title. Change Category title of X axis to Countries & Value title of Y axis to Dollars.
5. Select Legend tab, uncheck show legend check box.
6. For 3-D effects, go to 3-D effect tab, check the check box for Display chart with 3-D effect.
7. Assign following values to respective properties viz, Horizontal – 5 degree, Vertical – 0, Perspective – 0%, Wall thickness – 10%.
8. Click OK.

6.1: SSRS
Formatting a report

| Sales Territory Group | Sales Territory Country | Sales Territory Region | Total Sales Amount | Avg Sales Amount |
|-----------------------|-------------------------|------------------------|--------------------|------------------|
| Europe | France | France | 4607537.9350 | 1305 |
| | | Total | 4607537.9350 | 1305 |
| | Germany | Germany | 1903988.0373 | 1079 |
| | | Total | 1903988.0373 | 1079 |
| NA | United Kingdom | United Kingdom | 4279008.8266 | 1216 |
| | | Total | 4279008.8266 | 1216 |
| | Total | | 10870534.7989 | 1223 |
| North America | Canada | Canada | 14377905.5965 | 1256 |
| | | Total | 14377905.5965 | 1256 |
| | United States | Central | 7966009.1777 | 1360 |
| | | Northwest | 6932842.0148 | 1193 |
| | | Northwest | 12435076.0001 | 1580 |
| | | Southeast | 7867416.2251 | 1325 |
| | | Southwest | 10466450.7025 | 1380 |
| | | Total | 53607801.2102 | 1361 |
| Pacific | Australia | Australia | 67085726.8967 | 1353 |
| | | Total | 1594335.3767 | 931 |
| | Total | | 1594335.3767 | 931 |
| Total | | | 80495596.9823 | 1322 |

Filter: All Sales Territories

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1. To format a chart:
2. Open the existing tabular report.
3. Add Avg Sales Amount to the report.
4. Select Total cell & select format.
5. Change text alignment property for Horizontal to Center & Vertical to Middle.
6. Change font size to 12 & font type to Bold.
7. Select Border tab, for presets, choose outline option.
8. For Fill tab, select option as 'Light ocean'.
9. Select Avg Sales Amount, right click & select format, select Number tab.
10. Select Defined Format as 1234.56 & change Decimal Places to 0.
11. Click OK.
12. Save & Run the report.

6.1: SSRS
Adding formulae

The screenshot shows a web browser window displaying an SSRS report titled "Reseller Sales". The report is a table with the following columns: Sales Territory Group, Sales Territory Country, Sales Territory Region, Total Sales Amount, Avg Sales Amount, and Profit Margin. The data is organized by Sales Territory Group (Europe, NA, North America, Pacific) and further subdivided by Country and Region. The Profit Margin column shows values ranging from -0.81% to 1.24%.

| Sales Territory Group | Sales Territory Country | Sales Territory Region | Total Sales Amount | Avg Sales Amount | Profit Margin |
|-----------------------|-------------------------|------------------------|--------------------|------------------|---------------|
| Europe | France | France | 460757.9390 | 1305 | -0.81 % |
| | | Total | 460757.9390 | 1305 | -0.81 % |
| | Germany | Germany | 190108.0373 | 1079 | -5.41 % |
| | | Total | 190108.0373 | 1079 | -5.41 % |
| United Kingdom | United Kingdom | 427900.8266 | 1216 | 0.15 % | |
| | Total | 427900.8266 | 1216 | 0.15 % | |
| | Total | 1307034.7989 | 1223 | -1.31 % | |
| NA | NA | NA | | | NaN |
| | Total | Total | | | NaN |
| North America | Canada | Canada | 14377925.5965 | 1256 | 1.24 % |
| | | Total | 14377925.5965 | 1256 | 1.24 % |
| | United States | Central | 790608.1777 | 1360 | 1.79 % |
| | | Northeast | 693282.8148 | 1193 | 1.11 % |
| Southwest | Southwest | 1245505.0001 | 1560 | 1.79 % | |
| | | Southwest | 786716.2251 | 1325 | 1.53 % |
| | | Southwest | 1846458.7925 | 1380 | -0.08 % |
| | | Total | 5306701.2102 | 1381 | 1.01 % |
| | Total | 6788726.8067 | 1353 | 1.06 % | |
| Pacific | Australia | Australia | 159425.3767 | 931 | -6.82 % |
| | Total | Total | 159425.3767 | 931 | -6.82 % |
| | Total | 8045536.9623 | 1322 | 0.58 % | |

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1. To add formula fields:
2. Open existing report.
3. Click Design Report.
4. Click on New Field Button.
5. In Define Formula dialog box, name the text box as 'Profit Margin'.
6. Select the formula for fields as $\text{sum}(\text{SalesAmount} - \text{TotalProductCost}) / \text{Sum}(\text{SalesAmount})$
7. Click on OK.
8. Drag Total Product Cost, Avg Sales Amount & Profit margin to the report.
9. Change the format of Profit Margin to 1,234.56% & click OK.
10. Save & Run the report.

6.1: SSRS
Filter the report

The screenshot displays the Microsoft Report Builder interface. The main report, titled 'Reseller Sales', shows a table with columns: Sales Territory Group, Sales Territory Country, Sales Territory Region, Total Sales Amount, Avg Sales Amount, and Profit Margin. The table data is as follows:

| Sales Territory Group | Sales Territory Country | Sales Territory Region | Total Sales Amount | Avg Sales Amount | Profit Margin |
|-----------------------|-------------------------|------------------------|--------------------|------------------|---------------|
| xxxxxxxxxxxxxxxx | xxxxxxxxxxxxxxxx | xxxxxxxxxxxxxxxx | 0.0 | 0 | 0.00 % |
| Total | | | 0.0 | 0 | 0.00 % |
| Total | | | 0.0 | 0 | 0.00 % |

Below the table, it states 'Total rows: 0' and 'Filter: Fact Reseller Sales with Category in "Accessories", "Bikes", "Clothing"'. A 'Filter Data' dialog box is open, showing the 'Fact Reseller Sales' entity selected. The 'Fields' list includes: Currency Key, Sales Order Number, Order Date, Revision Number, Order Quantity, Unit Price, Total Discount Amount, Total Product Standard Cost, Total Total Product Cost, Total Sales Amount, Total Freight, Carrier Tracking Number, and Customer PO Number. The 'Category' field is selected in the 'Fields' list. The 'Filter criteria' section shows 'Category' with the operator 'In List' and a list of values: 'Accessories', 'Bikes', 'Clothing'. The 'In List' operator is selected in the 'Operator' list.

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1. To add filter on report:
2. Open the report.
3. Click on Design Report.
4. Select Filter option on toolbar.
5. Filter dialog box appears. Select Fact Reseller Sales from Entities.
6. Select Product from Entities & select Category from Fields list.
7. Dialog box appears for Filter criteria. Select operator as 'In List' and choose values from available list of Category.
8. Click OK.
9. Save & Run the report.

6.1: SSRS
Sorting data

The screenshot shows the SSRS Design view of a report titled 'Reseller Sales'. The report is a table with the following data:

| Sales Territory Group | Sales Territory Country | Sales Territory Region | Total Sales Amount | Avg Sales Amount | Profit Margin |
|-----------------------|-------------------------|------------------------|--------------------|------------------|---------------|
| xxxxxxxxxxxxxxxx | xxxxxxxxxxxxxxxx | xxxxxxxxxxxxxxxx | 0.0 | 0 | 0.00 % |
| | | Total | 0.0 | 0 | 0.00 % |
| Total | | | 0.0 | 0 | 0.00 % |

The 'Sort and Group' dialog box is open, showing the following settings:

- Select group:** Sales Territory Group
- Sort by:** Sales Territory Group
- Order:** Ascending
- Then by:** (Empty)
- Order:** (Empty)
- Page breaks:** between groups and

The footer of the report includes the date 'June 14, 2015', the text 'Proprietary and Confidential', and the page number '13'. The IGate logo is also present in the bottom right corner.

1. To sort data on report:
2. Open an existing report.
3. In Design report, click on Sort and Group tab.
4. In Sort dialog box, select Group as Sales Territory Group, select Ascending order in radio button.
5. Multiple sorts can be applied using next options for Then by & select the sorting column from the list.
6. Click OK.
7. Save & Run the report.

Summary

- Business users can easily create ad hoc reports using Report Builder.
- Ad hoc reports are available in table, matrix and chart layout.
- Filtering, Sorting, formula can be applied on reports.
- Default drill through option is available with report builder.

