REPORT MANAGER

How to Create Custom Reports

Version 4.0

Contents

March 12, 2013

About this guide

This guide applies to the following version(s) of Report Manager:

- 4.0

How to Create Custom Reports

Report Manager Custom reports put you in charge. Within minutes of getting a question from sales or customers you can build and generate a report with the answers. It is our hope that this manual will help you accomplish all your reporting tasks through Report Builder and Report Manager with speed and grace.

How to use this manual

If you are new to custom reporting, follow the step-by-step instructions to help you get comfortable with the Report Builder and Report Manager features. Then use the information provided here as a reference.

If you have some reporting expertise, it is our hope that this helps you as a quick review and reference.

This manual takes you step by step through custom report creation. You will setting up an account to use to create reports and ultimately learn to configure UI controls. The table below, *Step by Step on page 4* provides the order of topics to follow as a start to custom report creation in Report Builder.

Step by Step

Step	Topics	What's in it?
Step 1	#1 Setting Up an Account for Working in Report Builder on page 5	This topic describes creating the account needed for report creation and configuring the Role it plays in SQL Server Reporting Services.
Step 2	#2 Accessing Report Builder on page 8	This topic describes accessing Report Builder.
Step3	#3 Exploring Key Features in Report Builder on page 10	This topic provides a walk through of key features in the Report Builder environment.
Step 4	Create reports and preview them in Report Builder: • Creating a Missing Patches Report on page 26 • Creating a CPU and Disk Utilization Report on page 49 • Creating an Executive Summary Report with Hardware Inventory on page 59	This topic gives you the tools to create ready-to-use reports using templates and report parts.
Step 5	#5 Previewing Custom Reports in Report Builder on page 73	This topic takes you through the steps to preview a custom report in Report Builder so that you can make adjustments to format and contents before uploading to Report Manager.
Step 6	#6 Configuring UI Controls in Report Manager on page 79	This topic shows you how to use the features in Report Manager's Custom Report Management.

Template and Report Parts topics are not in the PDF

Template and Report Parts topics (documentation about each individual Template and Report Part) are not included in the PDF version of this manual. For Template and Report topics, please refer to the online help within Report Manager.

The reason for this is that we update Report Parts and Templates frequently, and the latest will always be in the online help.

To view the online help, click the question mark icon in the top right corner of any screen in Report Manager.

Managing Custom Reports in Report Manager

This section provides you with an overview of the features of Custom Report Management in Report Manager, and how to upload custom reports.

Resources

This section includes:

- Previewing Templates in Report Manager on page 98—Use sample Templates to plan your reports. You can preview the information in the Template or Report Parts and make decisions about which ones to use.
- Tips and Tricks on page 99—Find answers to some questions users have had and some gotchas we've uncovered in our work with Report Builder. We are always looking for more suggestions for this section.
- Data Tables on page 110—Advanced users will find dimension and fact tables for Report Manager here to use in the creation of custom reports.
- About Report Builder and Report Manager on page 114—Which versions of SQL Server and Report Builder are compatible? What are the roles of Report Manager and Report Builder in custom report creation.
- More Reading on page 114—The details of some books we recommend to round out your reporting knowledge.

We'd love to hear from you about your experience with Report Manager and *especially* about the documentation.

#1 Setting Up an Account for Working in Report Builder

This topic shows you how to set up an account with restricted permissions for report creation.

This is important because Templates for custom report creation are located on the Report Manager server in SQL Server Reporting Services. If you clicked **Save** or **Save as** when using an Administrator account with rights to SQL Server Reporting Services, you could accidentally overwrite the Templates.

Set up an account

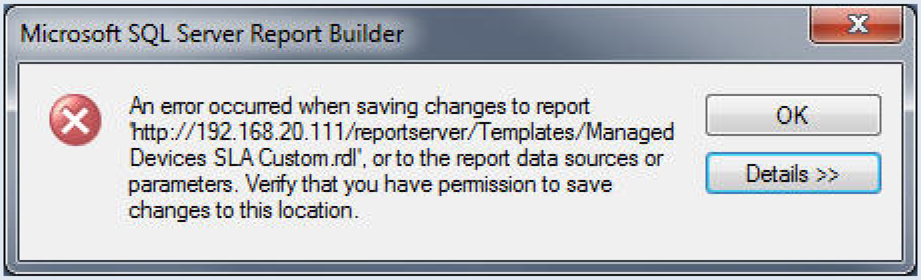
The account that you set up must meet the following conditions:

- Local to the Report Manager Server
- Not part of the Administrator group
- Not a user or part of a group that has been granted the Content Manager role within Reporting Services

Users with this account will only be able to save the modified Template locally or to a location to which they have write access.

What you will see if you try to Save or Save as with this account

This account will give you the following error:



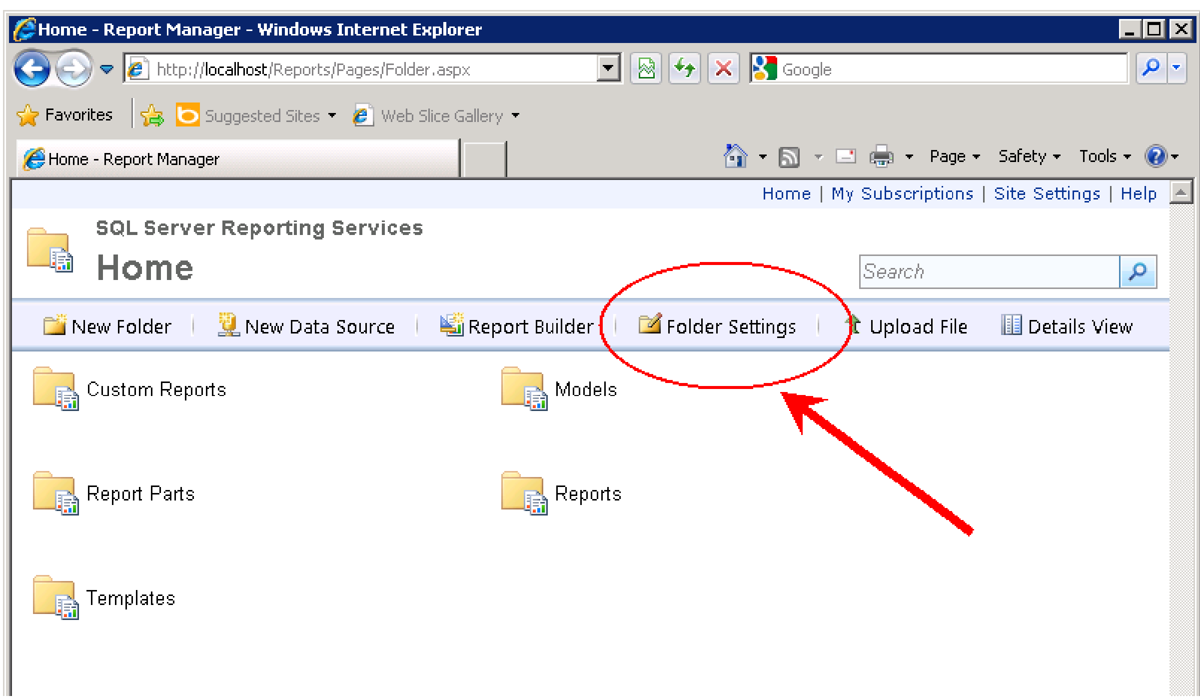
"The permissions granted to user 'WIN-NQFZC7D1CLI\ReportAuthor' are insufficient for performing this operation."

Assign the account the N-able Custom Report Author role

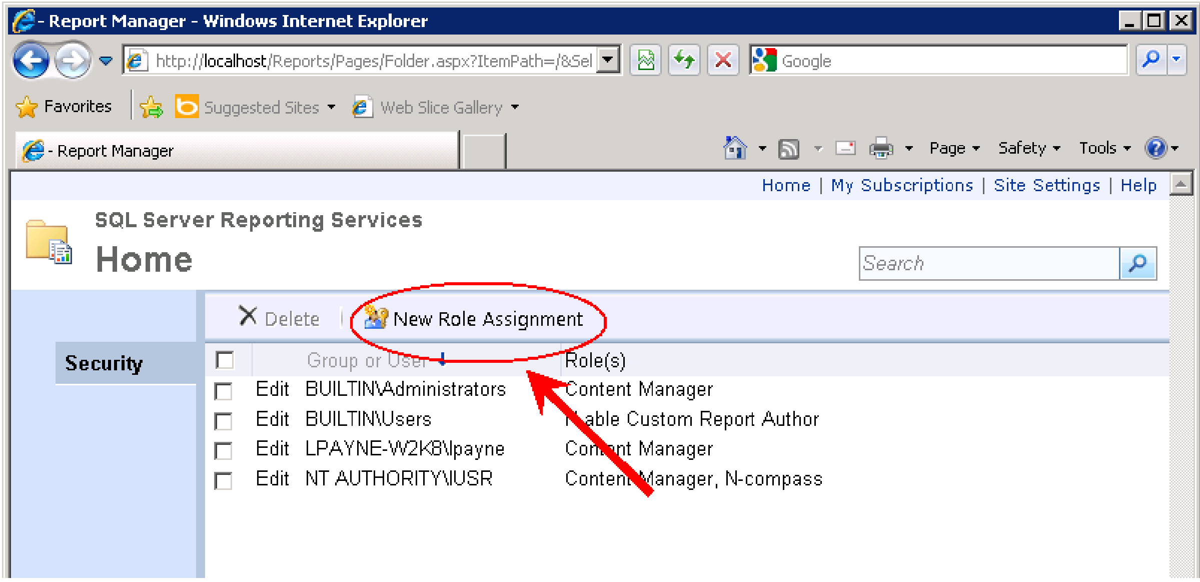
1. RDP to the Report Manager server using the **Administrator** account.
2. On the Report Manager server, open a browser.

   Warning! If you are using Internet Explorer as your browser, you need to run IE as an Administrator.

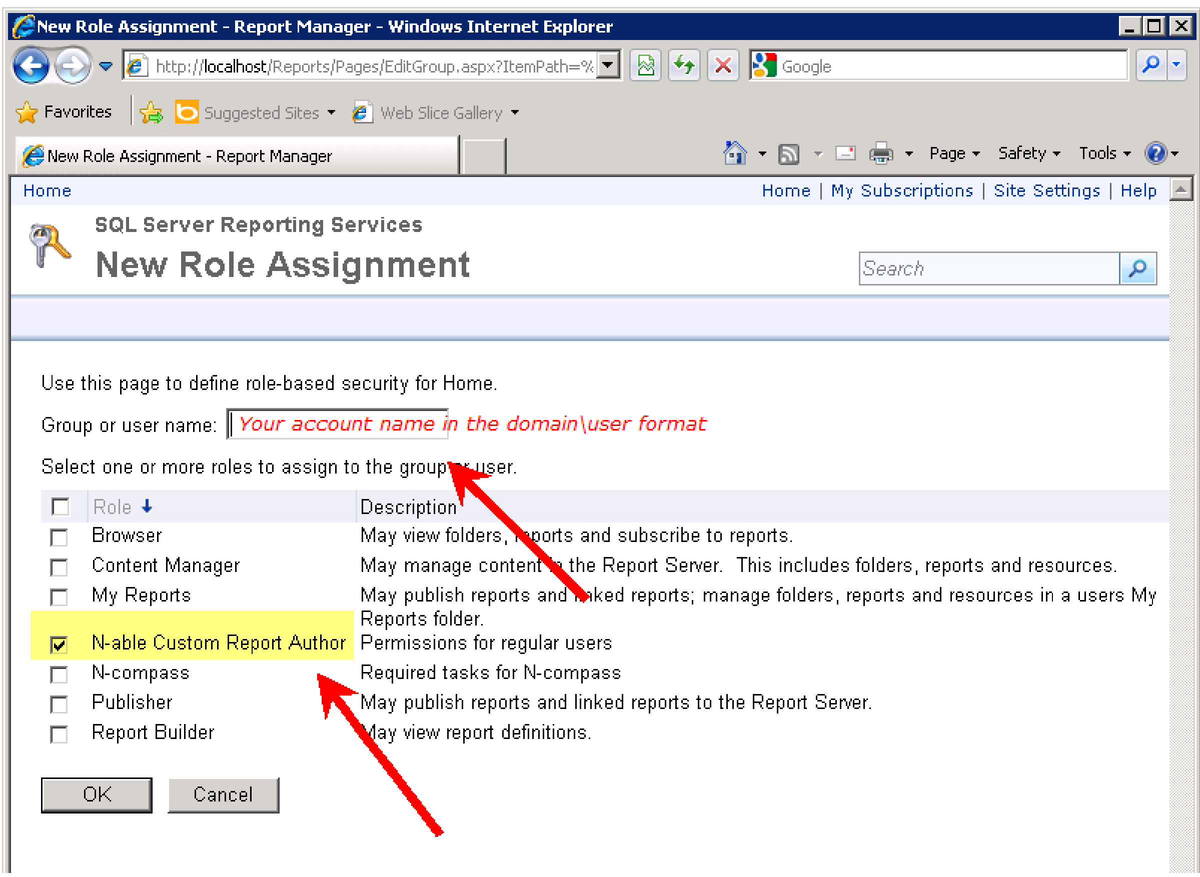
3. Browse to http://localhost/Reports.
4. Click **Folder Settings** in the menu bar.



5. Click **New Role Assignment**.



6. In the **Group or user name** field, specify your account name in the domain\user format.
7. Select the **N-able Custom Report Author** checkbox.



8. Click **OK**. This account is the one you should always use to create reports.

Note: If you ever do accidentally overwrite your Templates, don't despair, we have included a back-up resource for you. Refer to Restoring Templates on page 98.

Next step: Use the new account to open Report Builder and follow the next topics to learn about Report Builder and custom report creation.

#2 Accessing Report Builder

You can use Report Builder locally and remotely. You can access Report Builder through Report Manager or through a stand-alone you have installed on the Report Manager server.

Warning! If you have installed Service Pack 2 for SQL Server 2008 R2, and plan to use Report Parts, you cannot reliably use the version of Report Builder available through the SSRS interface or directly through Report Manager. You need to download and use a stand-alone Report Builder, version 10.50.1600.1, available here:

http://www.microsoft.com/en-us/download/details.aspx?id=6116

This is due to a Microsoft issue in the version of Report Builder installed with SQL Server 2008 R2 SP2, which causes errors when custom reports are created using Report Parts. The Report Manager team has opened an incident case with Microsoft regarding this issue.

Note: You need at least SQL Server 2008 ***R2***, as all Report Manager Templates and Report Parts are designed for use with Microsoft Report Builder 3.0, which only works with SQL Server 2008 R2 and greater.

- Credentials to use if you plan to work with Templates on page 8
- Using Report Manager to access Report Builder on page 9
- Using a Stand-alone to access Report Builder on page 8

Prerequisites for accessing Report Builder

The prerequisites for using Report Builder were given in the installation guide, but just in case you have trouble, here are a few things you absolutely need to have:

- An account that will prevent the overwriting of Templates. For more information, refer to #1 Setting Up an Account for Working in Report Builder on page 5.
- Microsoft .NET Framework 4.0 must be install on the machine on which you are going to use Report Builder.
- To use Firefox as your browser, you need to download the Microsoft .NET Framework Assistant add-on through **Tools** > **Add-ons**, which allows Firefox to run .NET ClickOnce applications, such as Report Builder.

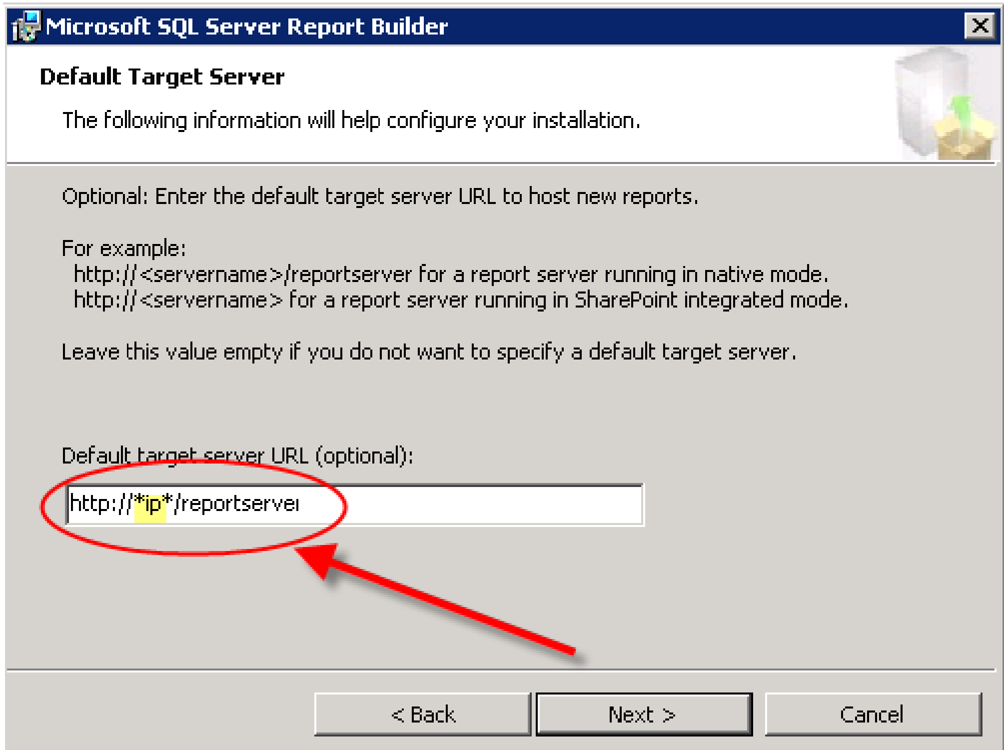
Credentials to use if you plan to work with Templates

- **Logged in remotely**. If you are logged in remotely, when you open Report Builder you will be prompted for credentials. Ensure that you use the credentials that will prevent the overwriting of Templates. For more information, refer to #1 Setting Up an Account for Working in Report Builder on page 5.
- **Logged in locally**. When you log in to the server, use the credentials that will prevent the overwriting of Templates. When prompted for credentials, use these same credentials. For more information, refer to #1 Setting Up an Account for Working in Report Builder on page 5.

Using a Stand-alone to access Report Builder

If you download and install the stand-alone on the Report Manager server, you can access Report Builder directly without going through Report Manager.

1. Download the stand-alone installer for Report Builder 3.0 from the Microsoft Download Center (http://www.microsoft.com/en-us/download/details.aspx?id=6116).
2. Follow the instructions in the installer, clicking **Next** for each screen, until the **Default Target Server** screen.



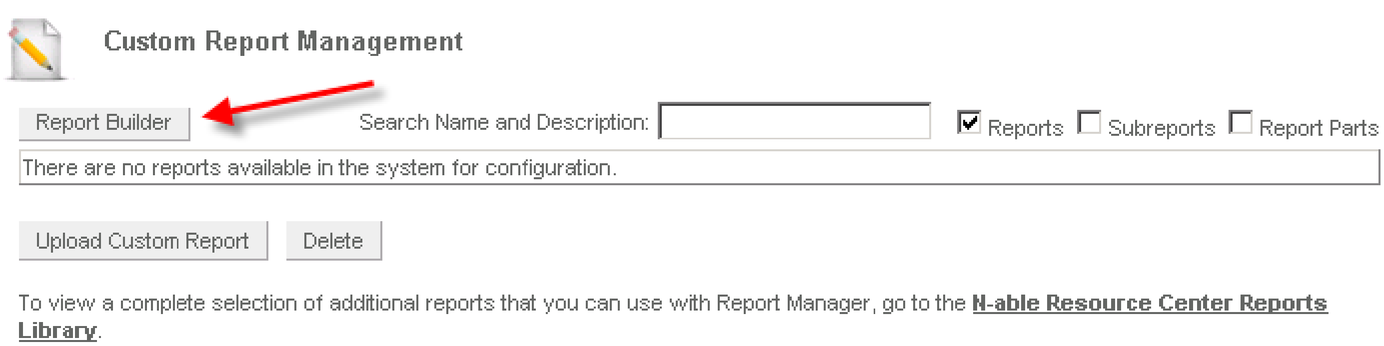
3. For Default target server URL, provide the following: http://*ip*/reportserver where *ip* is your local Report Manager server IP.
4. Click **Next**.
5. Open Report Builder from the Start Menu or pin it to the Taskbar before beginning your custom report work.

Using Report Manager to access Report Builder

Warning! This method is not recommended if you have installed Service Pack 2 for SQL Server 2008 R2. We recommend that you download the standalone Report Builder, version 10.50.1600.1 instead.

Report Builder is available through the Administration Console of Report Manager.

1. In the N-central navigation pane, click **Administration** > **Report Manager** > **Administration Console**.
2. Sign in using the appropriate credentials.
3. Click **Custom Report Management**.
4. Click **Report Builder**.



5. The first time prompted, use the credentials that you have been provided with for report creation. For more information, refer to #1 Setting Up an Account for Working in Report Builder on page 5.
6. If you are using Internet Explorer as your browser, ensure that you select **Remember my password** to allow the connection.
7. Click **OK**.

   Report Builder opens.

Troubleshooting access through Report Manager

If you are unable to run Report Builder when opened through Report Manager and there is no prompt for credentials, use the following procedure:

1. On the Report Manager server, click **Start** > **Run**.
2. Type `control userpasswords2`.
3. Click OK.
4. In the User Accounts dialog, select the **Advanced** tab.
5. Click **Manage Passwords**.
6. Click **Add**.
7. In the **Logon Information Properties** dialog, provide the Report Manager server name and its credentials using an appropriate format, for example: <`IP\username`> or <`domain\username`>.
8. Click **Close**.
9. Sign back into the Report Manager Administration Console and start the procedure again.

Next step: Explore the Report Builder 3.0 work environment in the next topic. Refer to #3 Exploring Key Features in Report Builder on page 10.

#3 Exploring Key Features in Report Builder

What is Report Builder?

Report Builder is a small report design tool that is installed on your report server as part of Microsoft SQL Server. Similar in look and feel to Microsoft Word, it is a comfortable environment for users of other Microsoft Office tools. You can create simple or complex reports very quickly through wizards and an intuitive interface. If you have SQL and scripting skills you can customize SQL queries within Report Builder, but it is often just as quick to follow the UI and use the wizards.

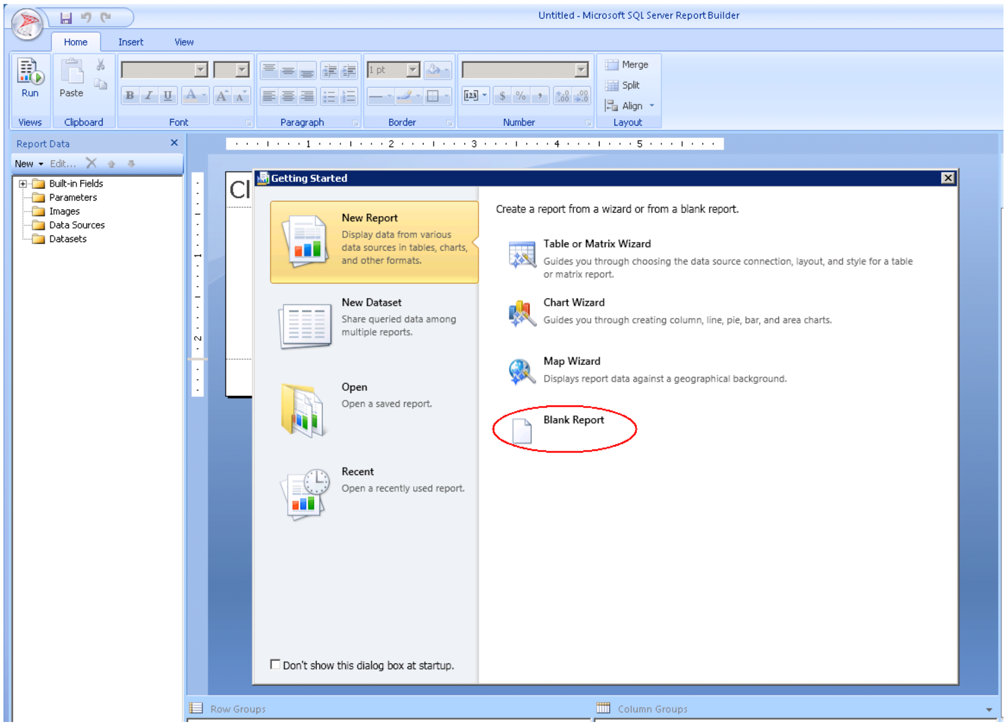
This topic walks you through the geography of the Report Builder landscape. It starts with a blank work surface in Report Builder. (To start with a Template, refer to Creating a Missing Patches Report on page 26.)

After reading this topic, you will have learned about:

- Key features in the Report Builder work surface on page 11
- Setting up the workspace and selecting page settings on page 14
- Adding elements and more formatting tips on page 15
- Adding a data source on page 16
- Adding a dataset on page 16

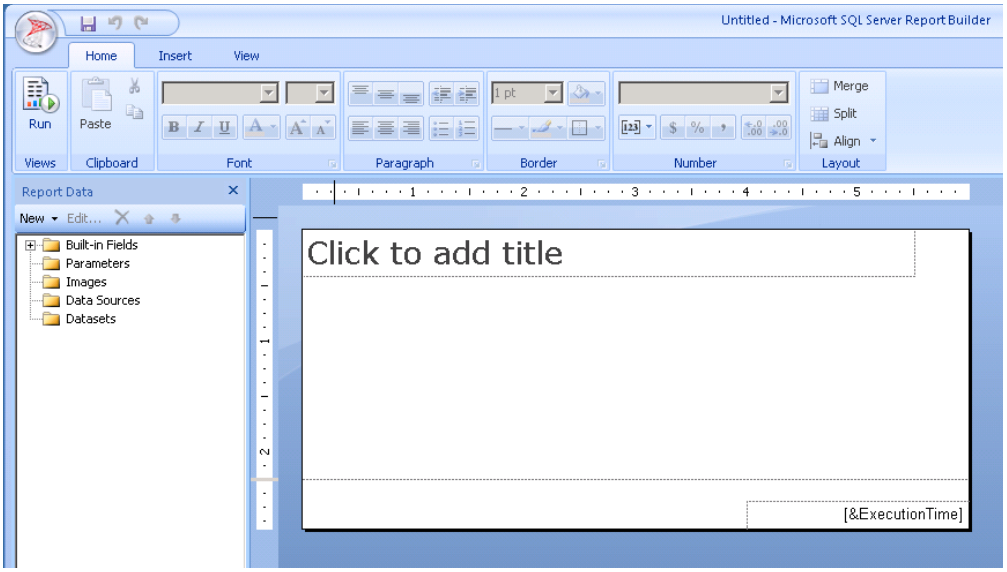
Key features in the Report Builder work surface

1. Open Report Builder 3.0. Refer to #2 Accessing Report Builder on page 8.



2. Click **Blank Report** in the **Getting Started** wizard.

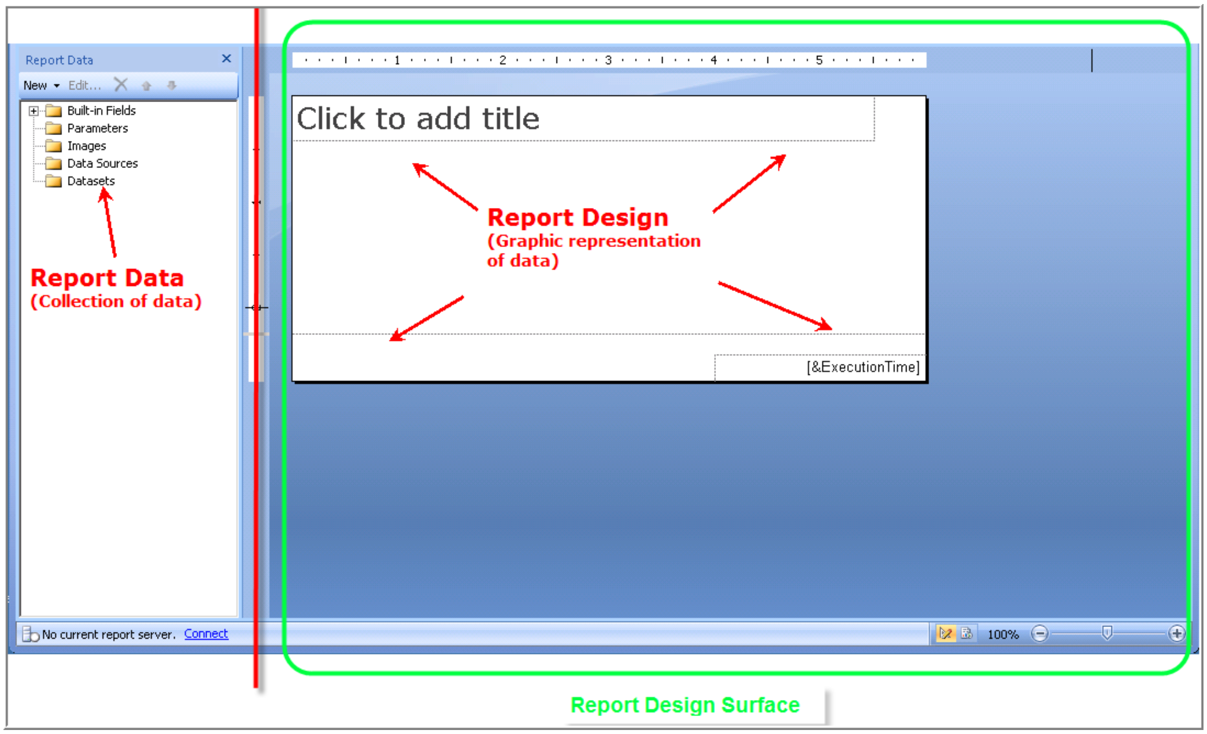
3. The work surface is displayed with a new blank report in the design area.



Report Data and Report Design

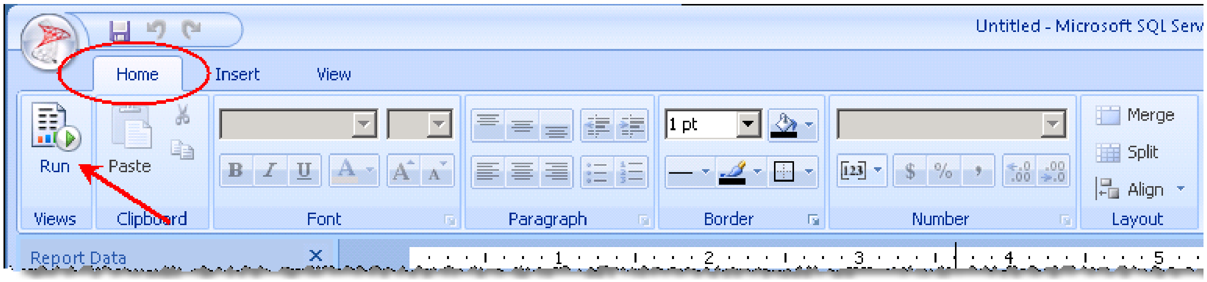
The Report Builder work surface is divided into two sections:

- **Report Data**. Report data is represented graphically in the left pane. This is where you can search the contents of the database, and collect the data to build datasets. Each report can have many datasets and each dataset can be used over and over within the same report.
- **Report Design**. Report Design is separate from data collection. The report design area is where you will place report items, such as Report Parts, Subreports, tables, charts, text boxes, images and so on.

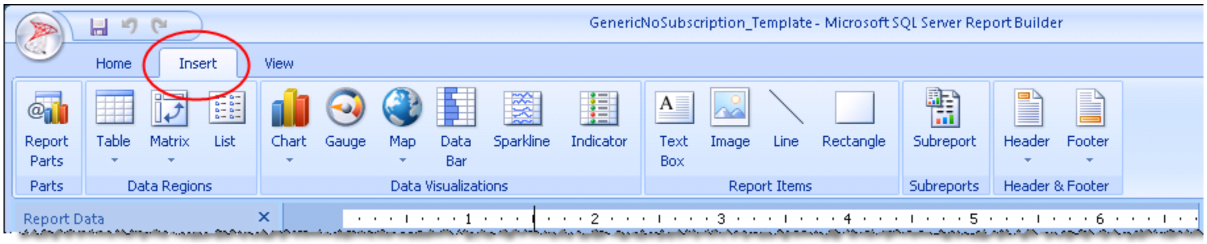


At the top of the Report Builder window is the ribbon menu with three tabs: **Home**, **Insert** and **View**.

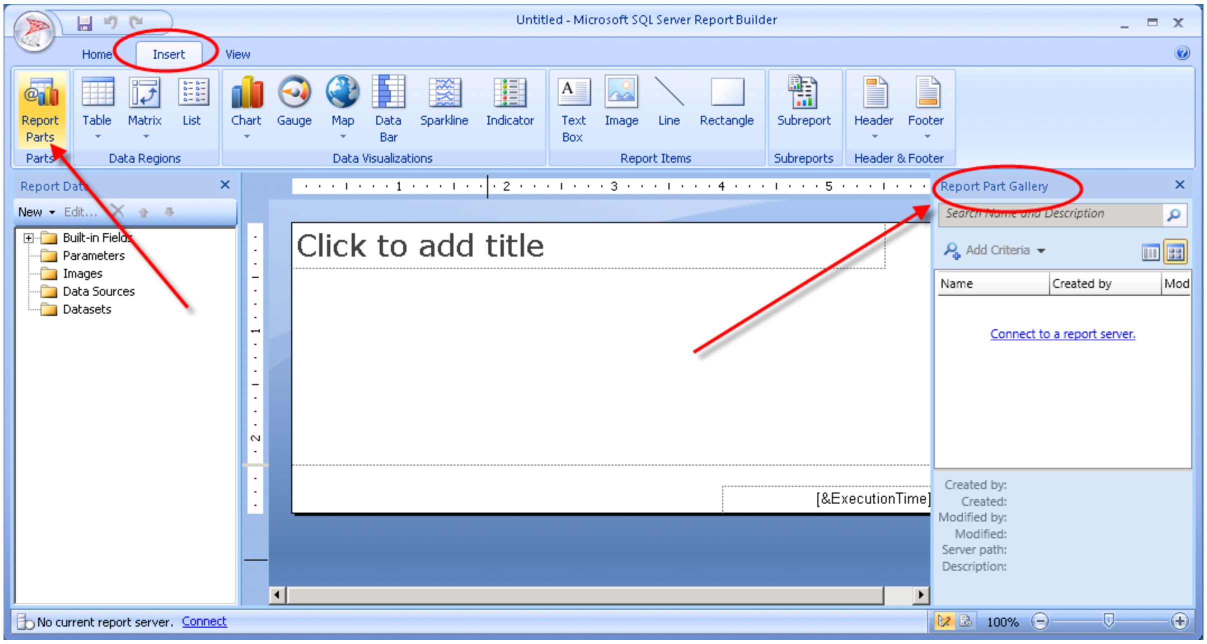
Home tab: text formatting and at the far left is the run button which allows you to preview the report.



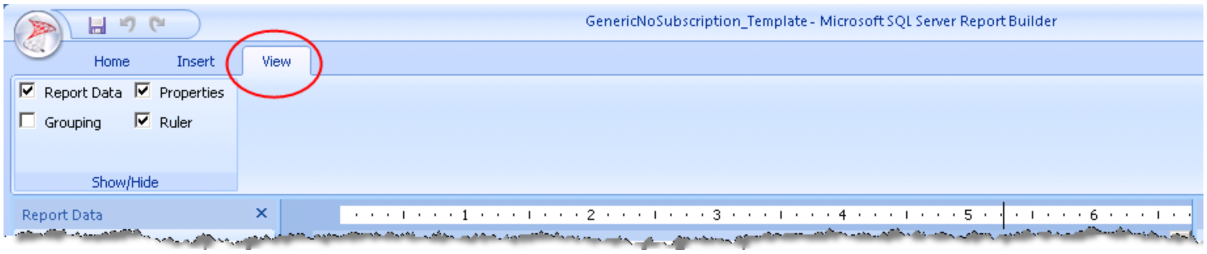
Insert tab: Here is where you will find all the items that you might want to insert into a report.



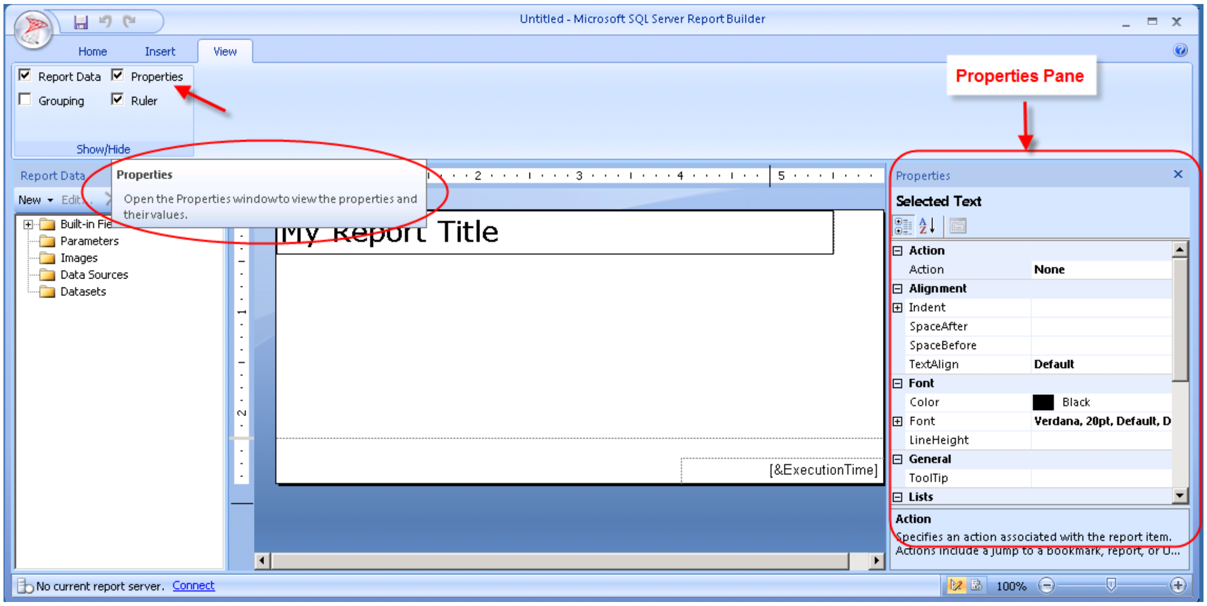
Insert tab tip: *Click* ***Insert*** > ***Report Parts*** *to view the Report Part Gallery:*



View Tab: This tab allows you to organize your workspace, to display the Report Data, Grouping, Report Properties and the Ruler.



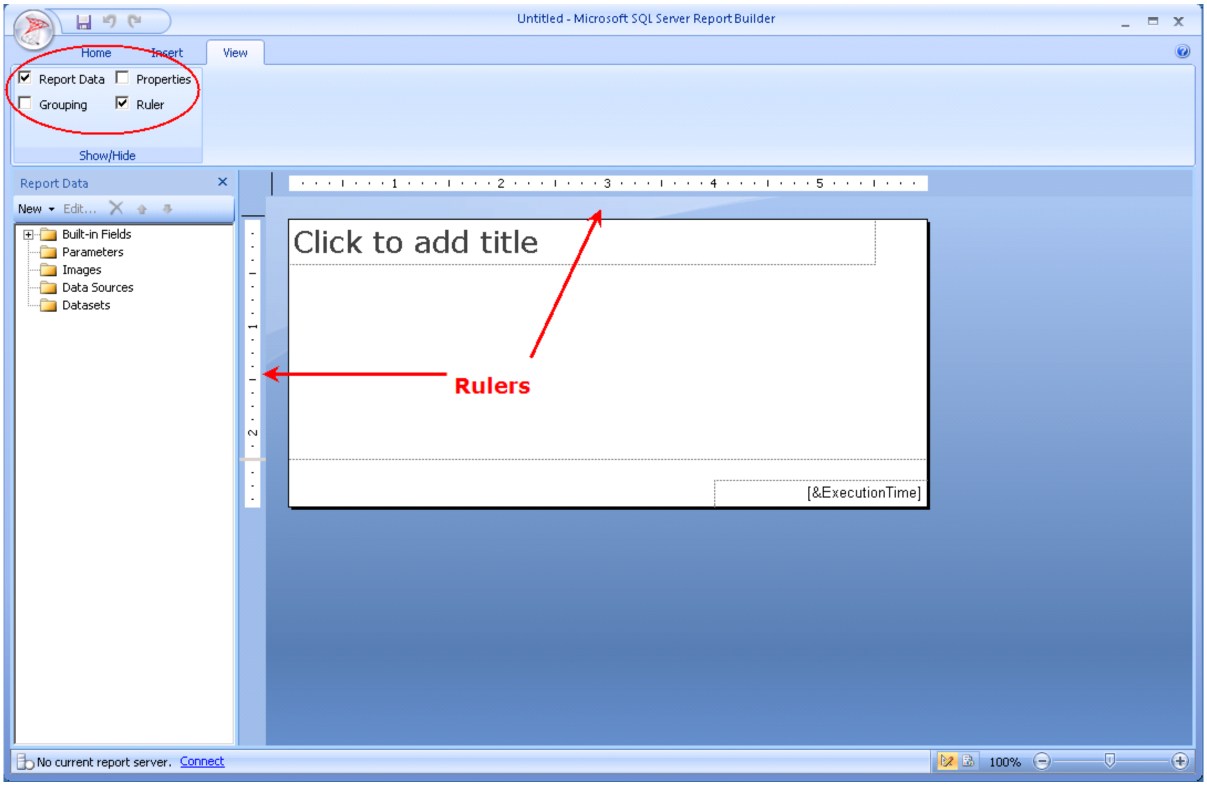
View tab tip: *Click* ***View*** > ***Properties*** *to view the Properties pane.*



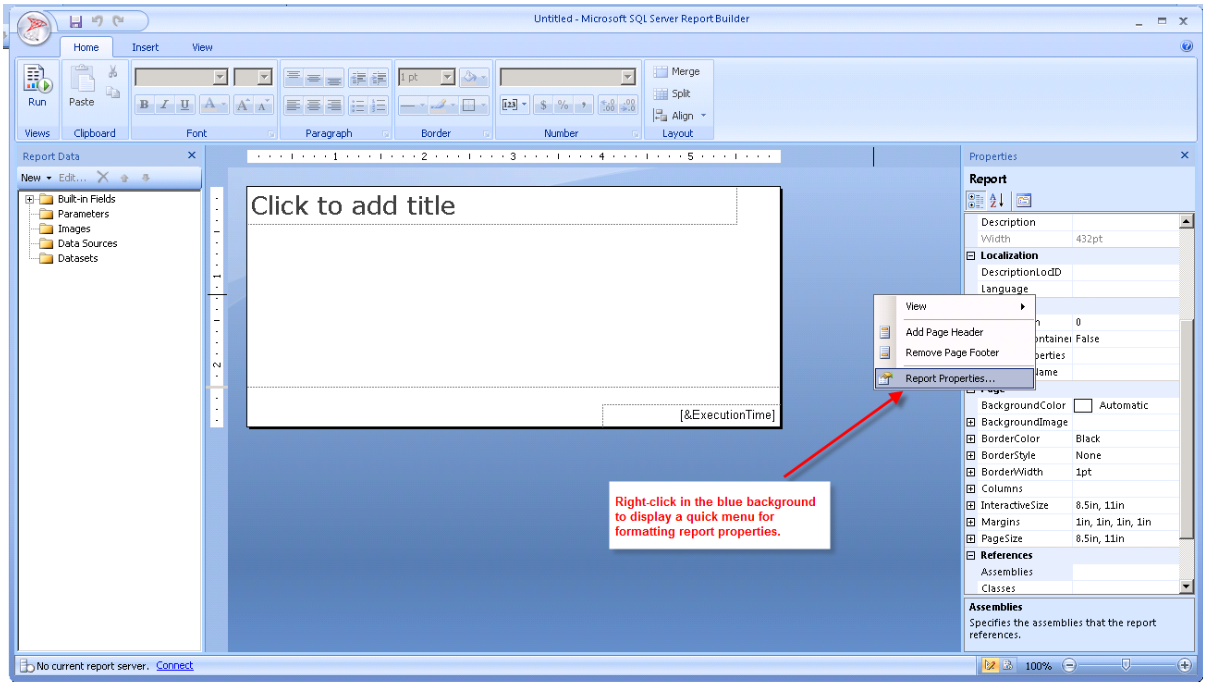
Setting up the workspace and selecting page settings

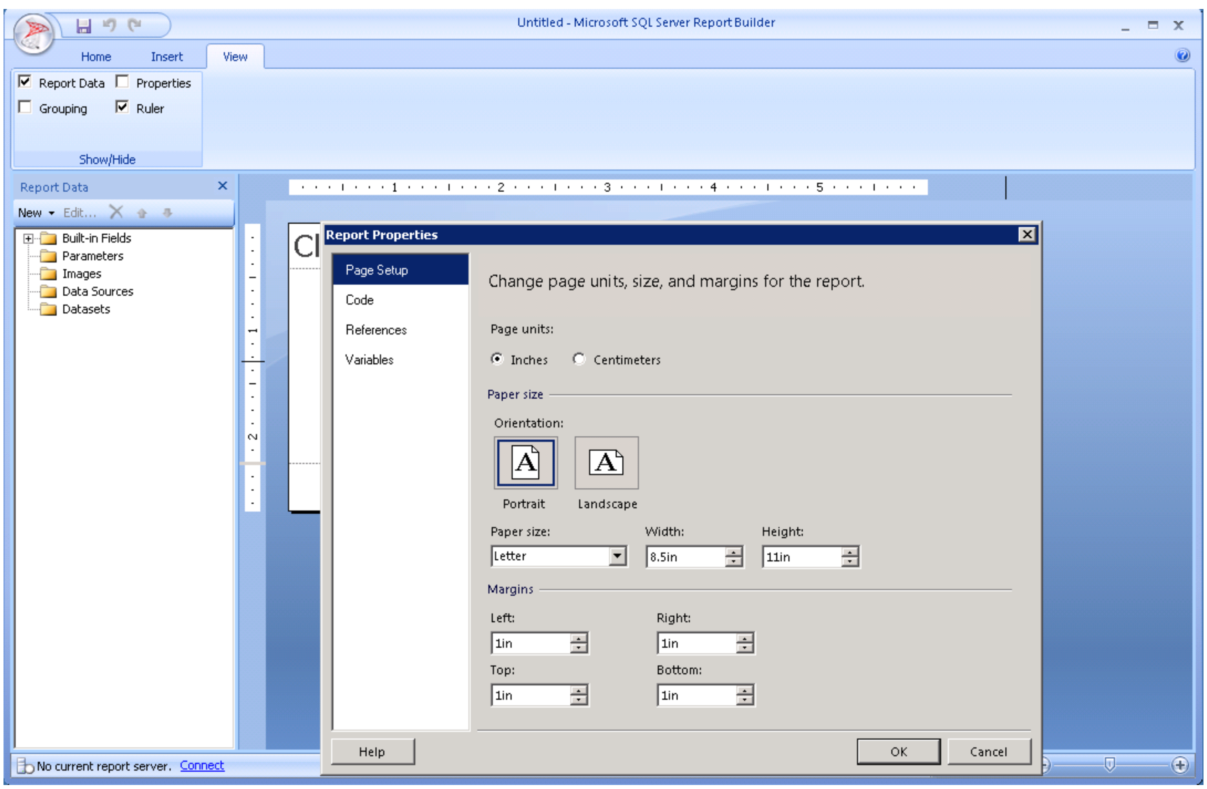
When you use a Template, the ruler and display settings are already set up. The purpose here is a quick walk through how you can change things up.

1. In the **View** tab, clear the check boxes for **Properties** and **Grouping**. (This opens up more real estate.)
2. Select **Ruler**.



3. Right-click on the blue screen beside the layout and select **Report Properties** from the quick menu.





4. Set the units and dimensions appropriately for your report.

Adding elements and more formatting tips

For more information on adding elements and formatting them, please refer to the Report Builder online help. In the **Search** tab, type "Tutorials" and select **List Topics** for a great selection of help for adding and editing items within the

Report Builder design surface.

Adding a data source

What is a data source?

A data source is a database and the credentials to access it.

The Report Manager server is preloaded with three data sources.

Models/warehouse—This is the main data source to use, this data source has an interface between you and the raw data, it allows for drag and drop creation of datasets in the Query Design Wizard within Report Builder.

Reports/config—Less often used, this data source contains templates, information used by branding and scheduling,

Reports/warehouse—This data source allows direct access to the data warehouse and to access data. You need to use SQL queries and cannot utilize the wizard features of Report Builder when using this data warehouse.

When you open a Template in Report Builder, the data source connection is automatically connected. In the case of a blank report, you will need to make that connection manually.

1. Right-click **Data Sources**, click **Add Data Source**.
2. Type in a new name for the data source, with no spaces in the name.
3. Select **Use a shared connection or report model**.
4. Select your <reportserver>/Models/Warehouse. This is the warehouse that provides graphical representation of the raw data and allows you to use the query designer in order to drag data from the database into the report designer.

Note: If Report Builder is not showing you a list of pre-loaded data sources, click **Browse**, type `http://localhost/reportserver/Models`. Select **Warehouse** and click **Open**.

The new data source with the name you created appears in the Report Data pane under Data Sources.

Adding a dataset

What is a dataset?

A dataset includes a connection to a data source, the query to execute and a field list of the data types that will appear in the report. A report file can have multiple datasets.

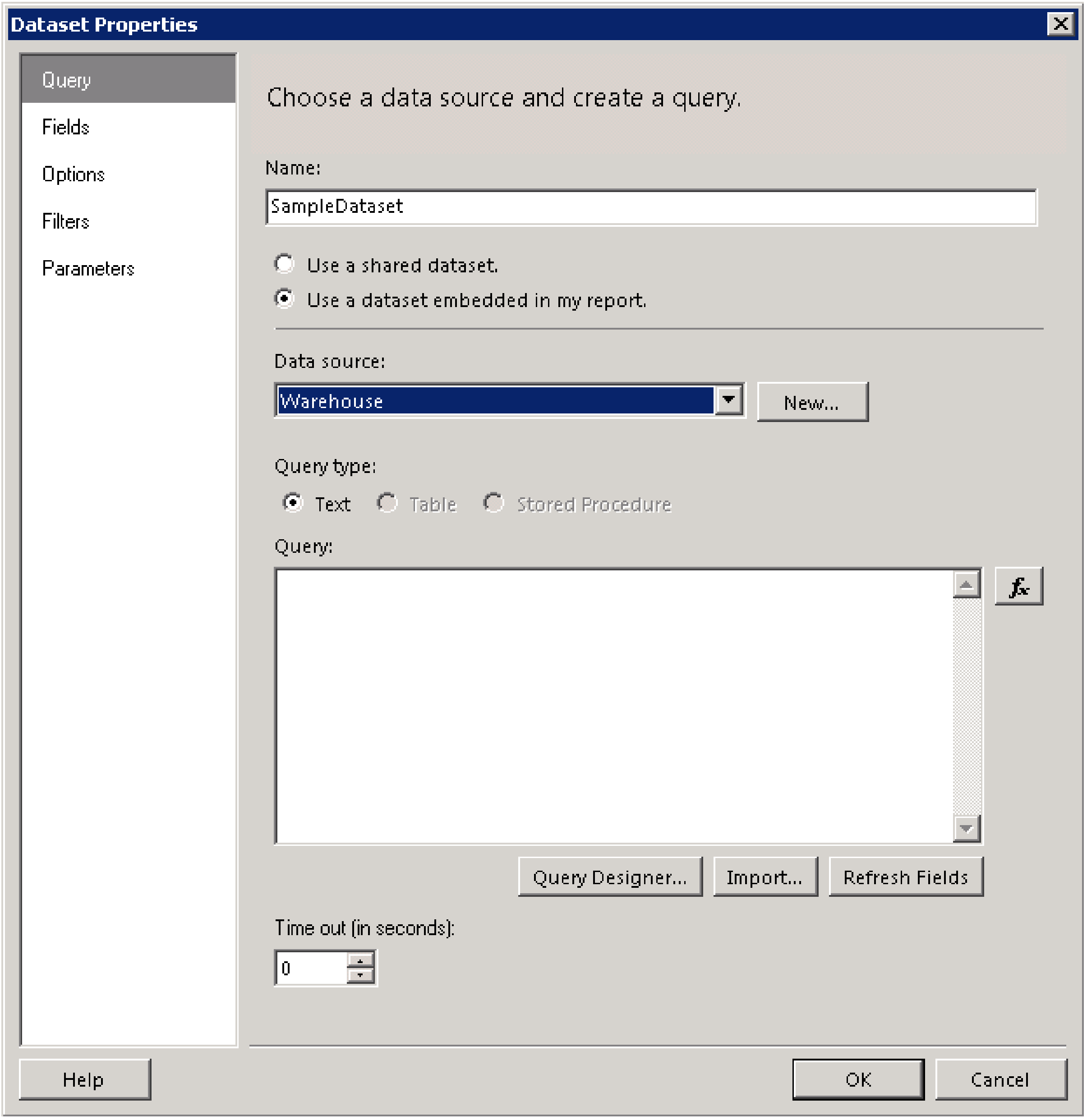
An embedded dataset means that it is only used within this report.

In general, when creating a custom report, add as many fields to a dataset as you think you might possibly use.

When you open a Template in Report Builder or pull a Report Part into a Template, the associated datasets appear in the Report Data pane, already set up. In the case of a blank report, you will need to set up each dataset from scratch.

1. Right-click **Datasets**, click **Add Dataset**.

2. Type in a new name for the dataset, with no spaces in the name.
3. Select **Use a dataset embedded in my report**. (An embedded dataset is one that you will create here and it will be used by this report only. A shared dataset is one that has been created and saved on the report server. You would have to browse to locate it.)
4. Select the a data source.



5. Click **OK**.

This has created a new dataset that is connected to the Warehouse data source. To set up a query that will specify the fields that will provide the data for the report, continue to the next section, **Using the Query Wizard**.

Using the Query Designer in Report Builder

The Query Designer for Report Models allows you to specify the data that you want to use in a report. For Report Builder

3.0 there are two ways you can create queries:

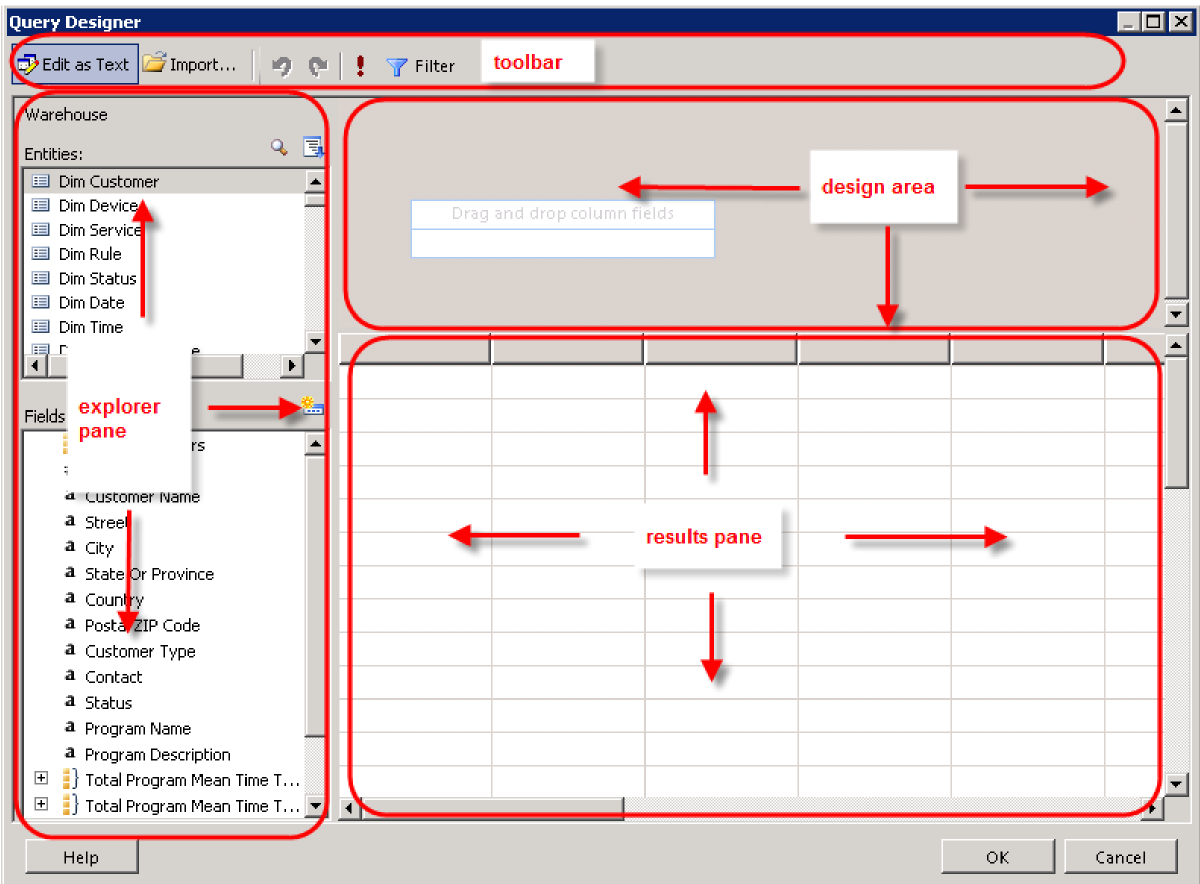
- A graphical query designer that works like a wizard, and
- A text-based query designer in which you can work directly in XML

You switch between the views. The graphical query designer is displayed by default when you create or edit a dataset. Report Manager instructions use the graphical query designer.

If you are in the graphical query designer, as shown, you can click **Edit as text** to switch to the text-based query designer.

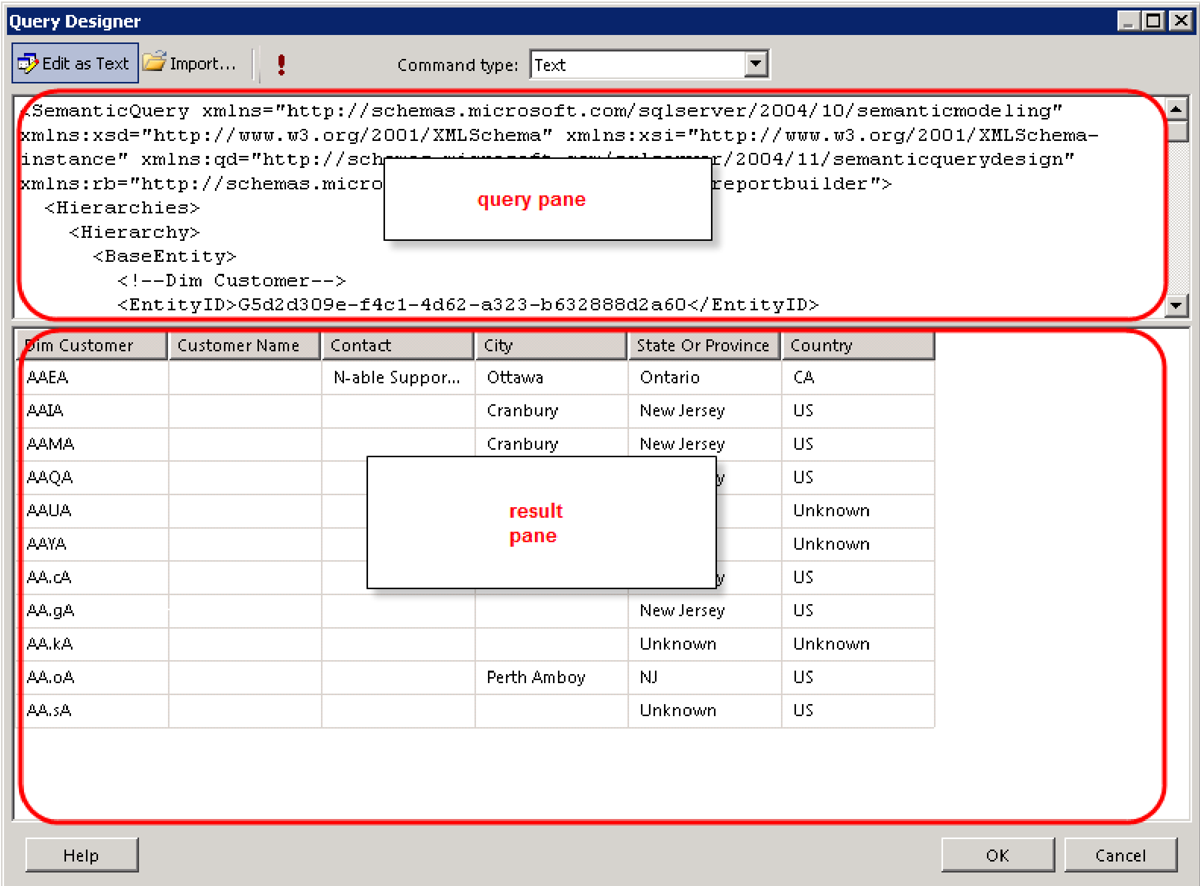
For more information about the Report Model Query Designer in Report Builder, refer to the following, Microsoft Technet article, Report Model Query Designer (Report Builder 3.0) at http://technet.microsoft.com/en-us/library/dd220456%28v=sql.105%29

Graphical Query Designer



Click **Edit as Text** to view the Text-based Query Designer.

Text-based Query Designer

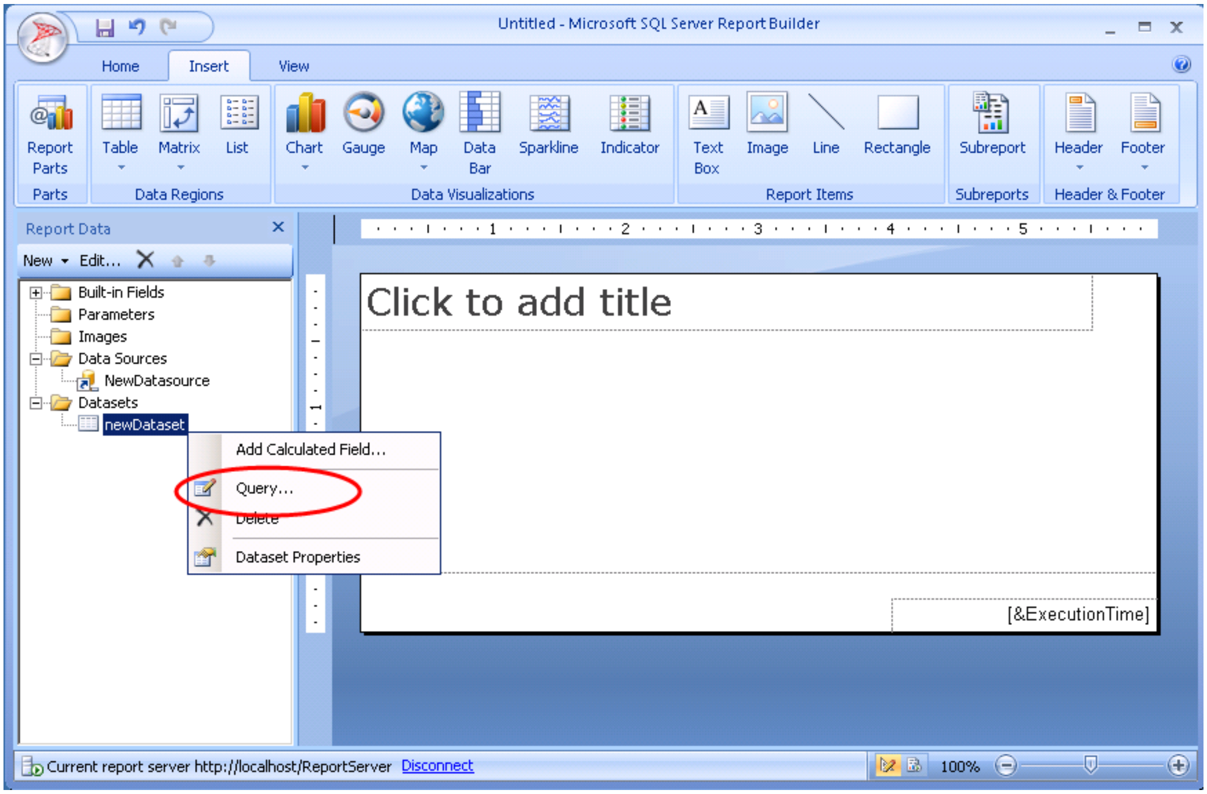


To create a new Dataset

1. In the Report Data pane, right-click **Datasets** .
2. Click **Add Dataset**.
3. Name the dataset, select **Use a dataset embedded in my report**.
4. Click **Query Designer**.

To edit a dataset

1. In the Report Data pane, right-click a dataset, for example, newDataset, as shown below.



2. Click **Query**.

To set up a filter on Customer

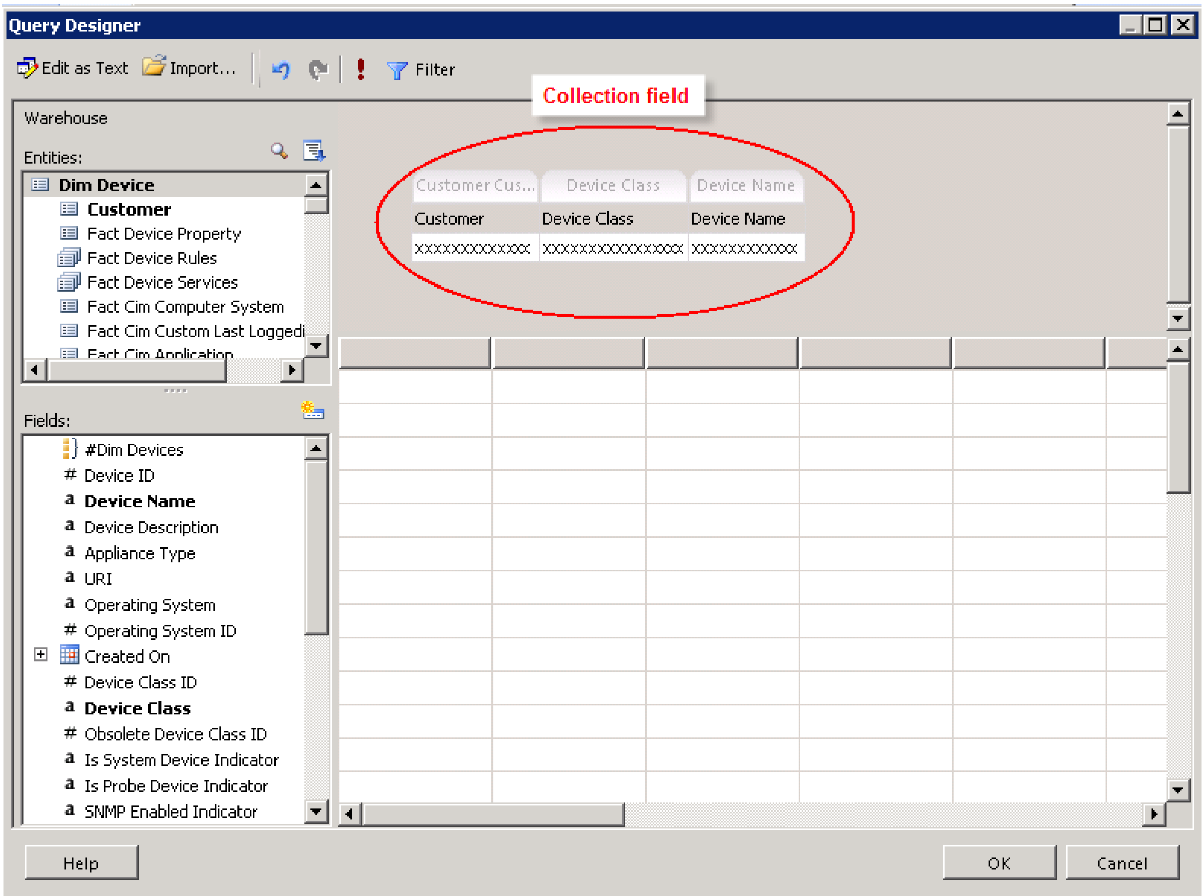
To filter the report information so that the customer for the report can be selected at run time, we need to set up a filter on Customer ID.

1. In the left pane, right-click the dataset, **newDataset**.
2. Click **Query**.

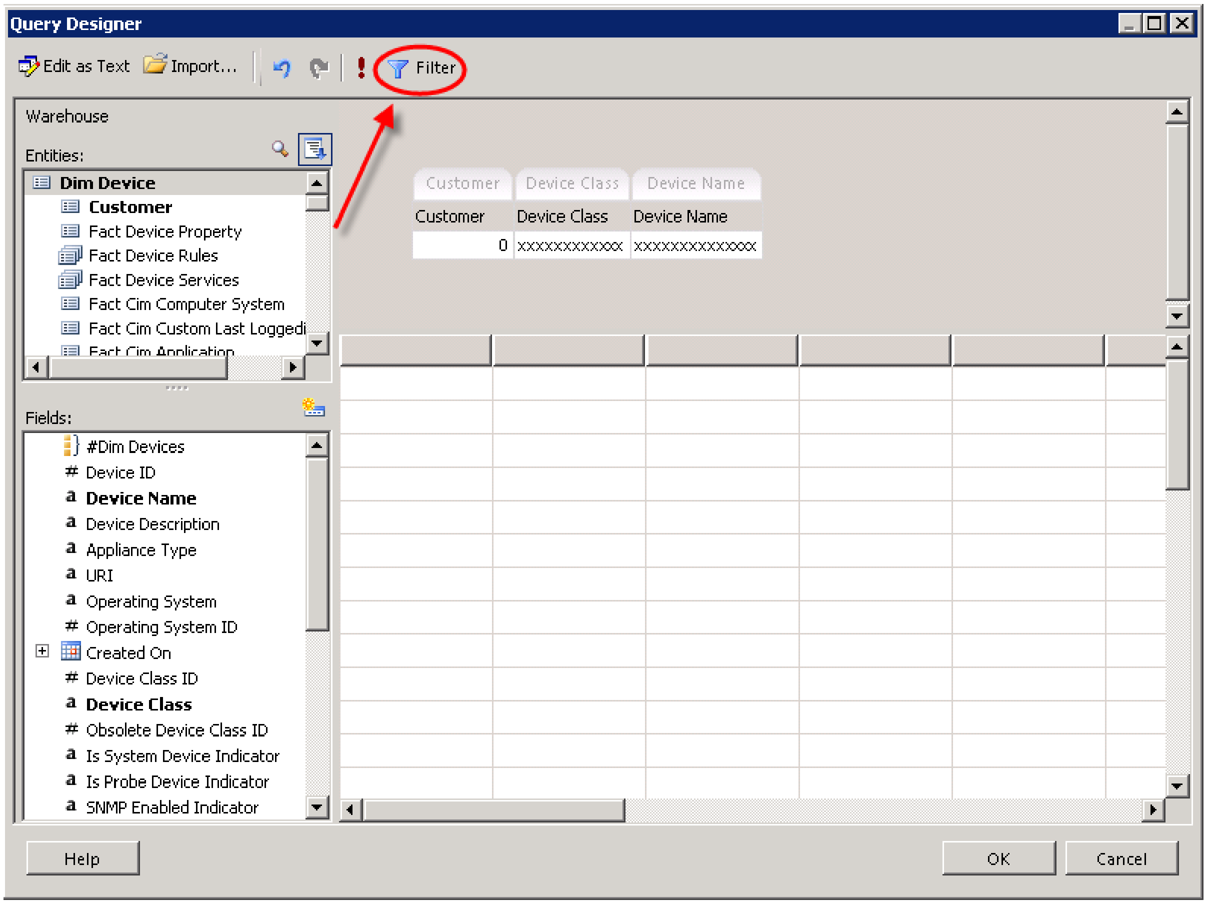
   To set up the dataset as shown:

   1. In **Entities**, click **Dim Customer**.
   2. In **Fields** double-click **Customer ID**.
   3. In **Entities**, click **Dim Device**.
   4. In **Fields**, double-click **Device Class** and **Device Name**.

Tip: *Widen the columns so you can see the names, by clicking a column and dragging the right column edge over.*

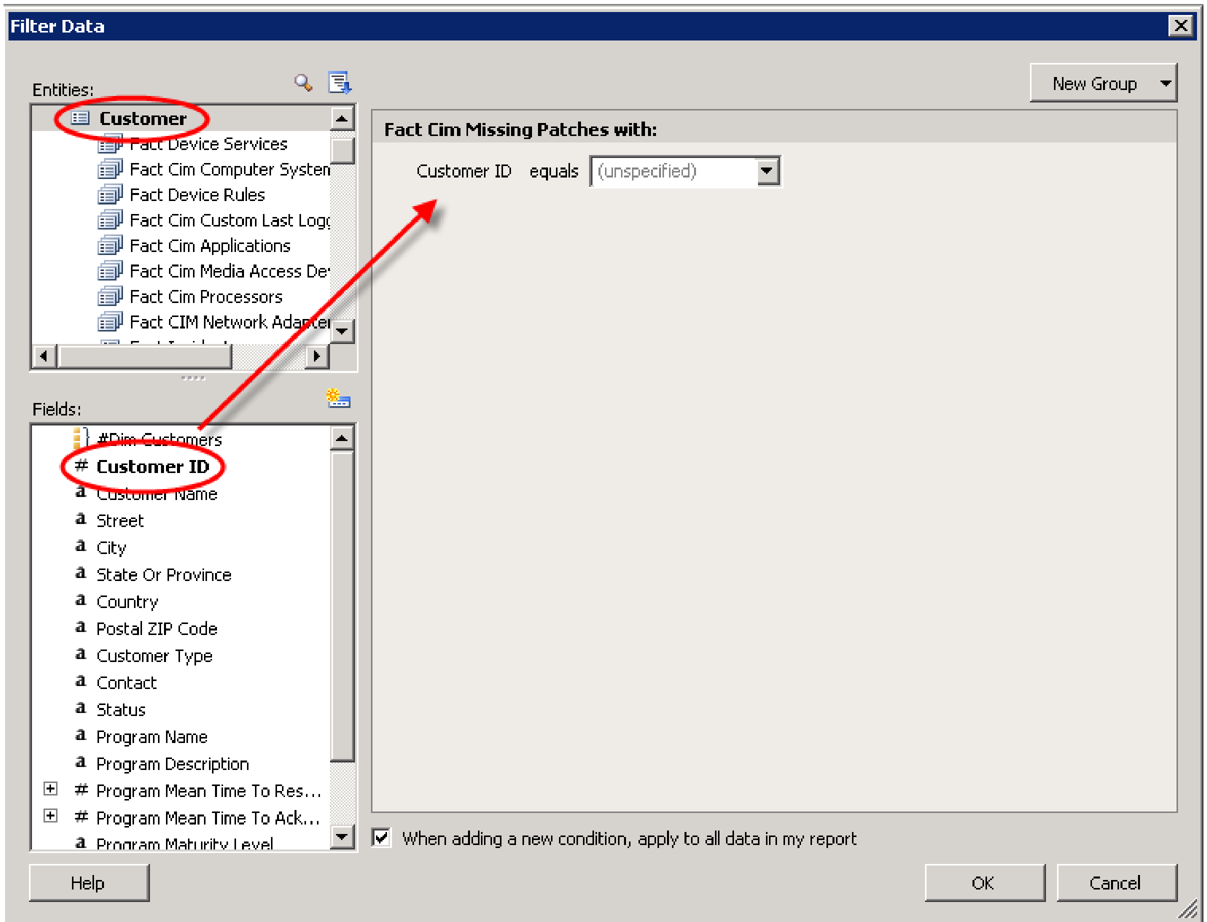


3. Click **Filter**.

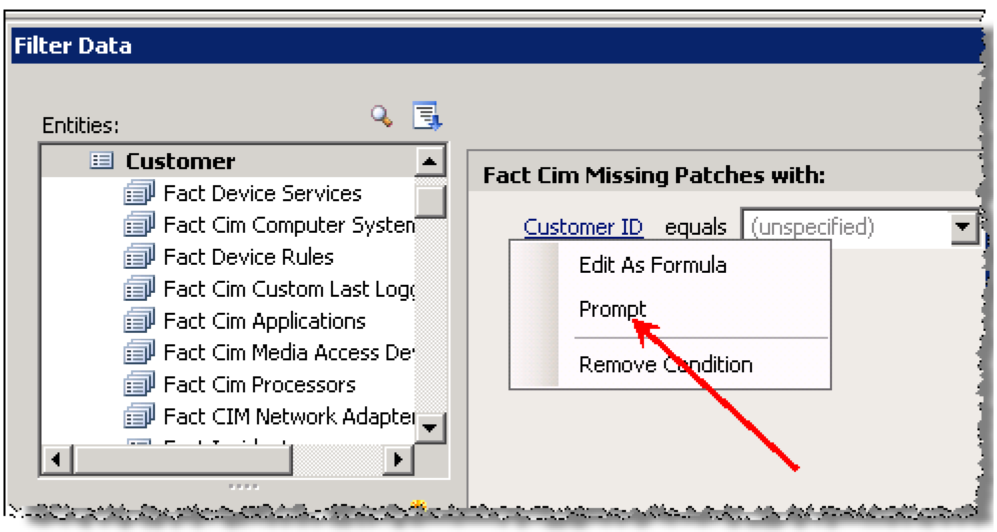


4. Select the **Customer** table in the **Entities** box.

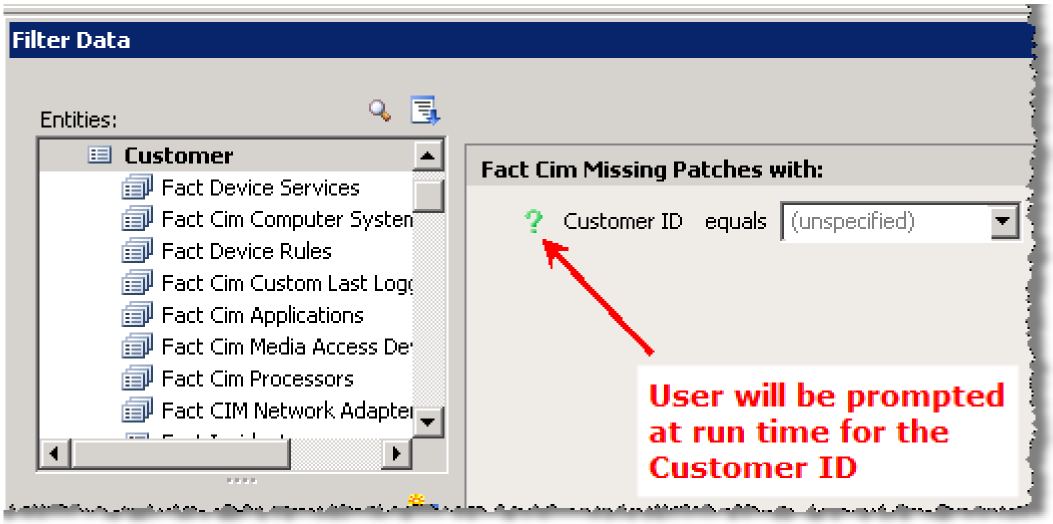
5. Select and drag (or double-click) **Customer ID** in the **Fields** list box.



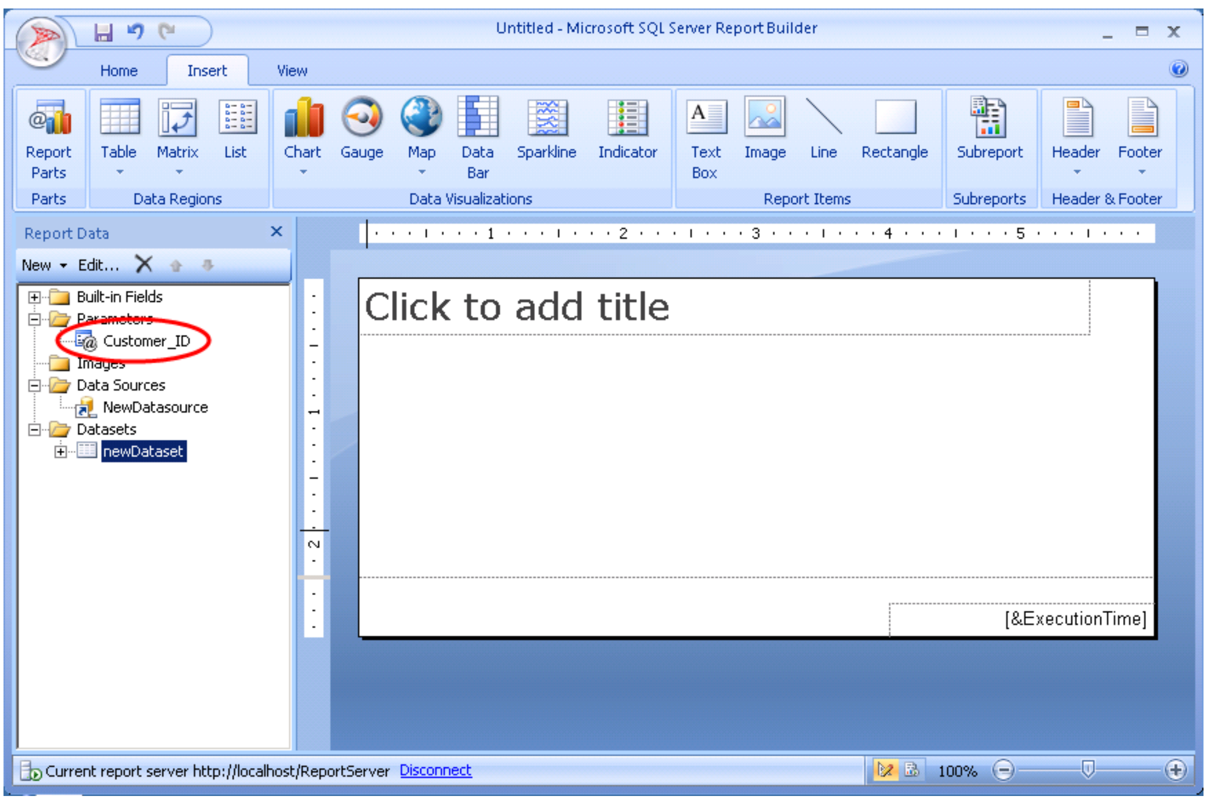
6. Right-click **Customer ID** and select **Prompt**.



By selecting **Prompt** for Customer ID, the user will be prompted to provide a Customer ID for the report at run-time.



7. Click **OK**.
8. Click **OK**.
9. Right-click **Parameters** in the left column to see that creating a filter with a prompt has added a new parameter to the report, **Customer_ID**.



Tip: To find parameter ID numbers

(To preview reports in Report Builder you will need ID numbers for many parameters.)

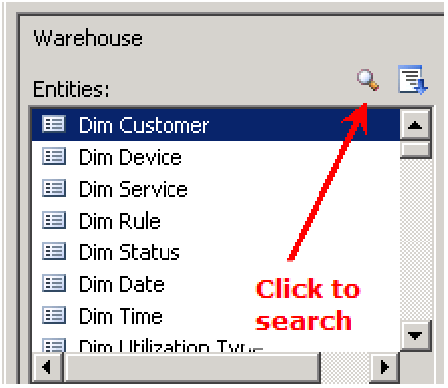
1. In the Administration Console, go to the Advanced settings page and enable the Real-time display of Report Values.

2. In the Reports Console, run any report with the parameters for which you require the ID numbers.

   The parameter values table appears at the bottom of the screen.

Query Designer Quick Tips

Tip: *Tables are not listed in alphabetical order, so you can use the search button or scroll.*



Tip: *Click and drag fields into the right collection field. Or you can double-click them to move them.*

Tip: *When you drag a field into the collection screen, look for the blue bar before dropping the field.*

Tip: *If you drag a field into the collection screen by mistake, right-click the column and click* ***Delete****.*

Next step: Create a Missing Patches report using a generic Template. Refer to Creating a Missing Patches Report on page 26.

#4 Create Reports

Creating a Missing Patches Report

This topic provides step by step instruction to create a Missing Patches report using the Generic Template with no subscription, creating a dataset, and setting up a filter through the Query Designer.

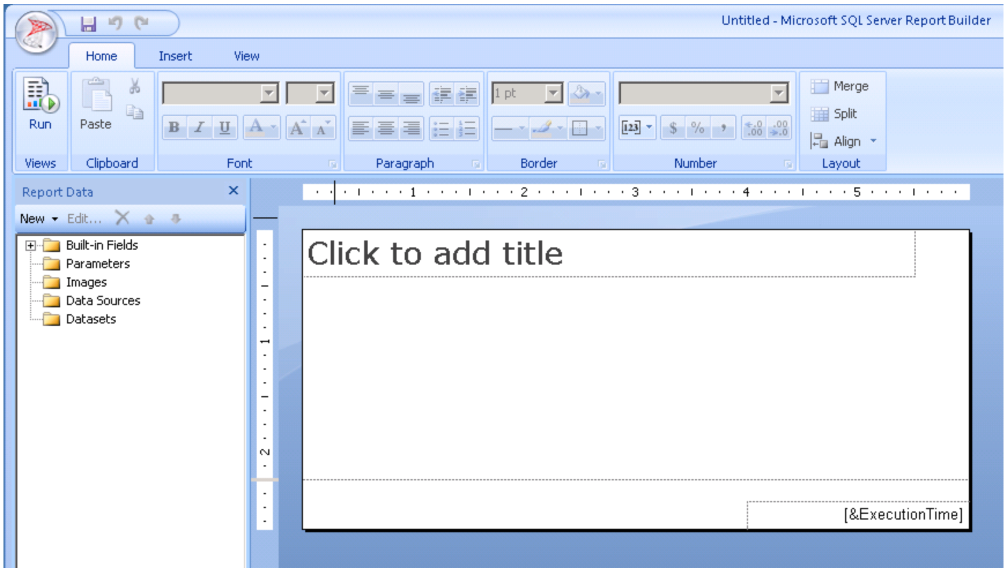
After completing this topic, you will have learned about:

- Opening the Template on page 26
- What's in a Template? on page 30
- Adding a new dataset on page 32
- Inserting a table on page 39
- Setting up a filter on a customer on page 46

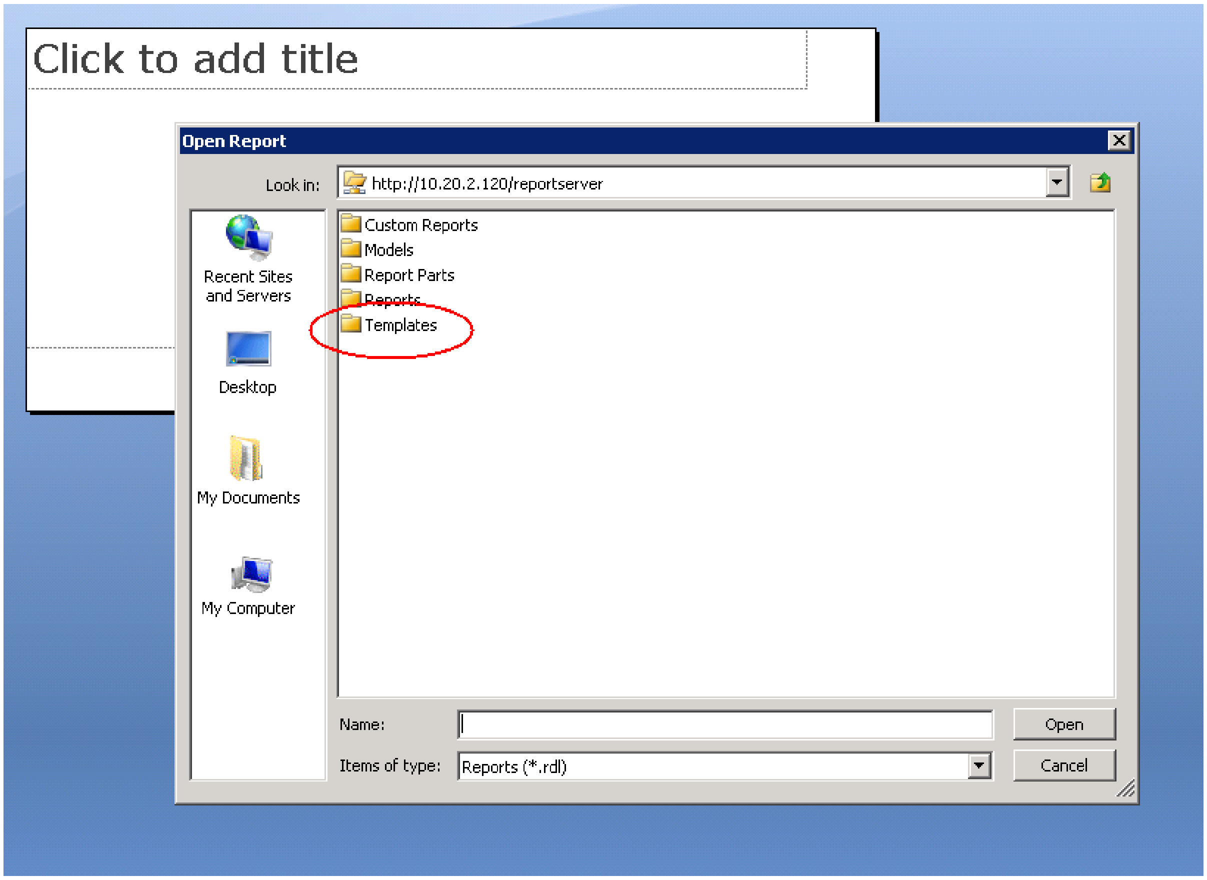
Opening the Template

1. Open Report Builder 3.0. Refer to #2 Accessing Report Builder on page 8.
2. Close the **Getting Started** page.

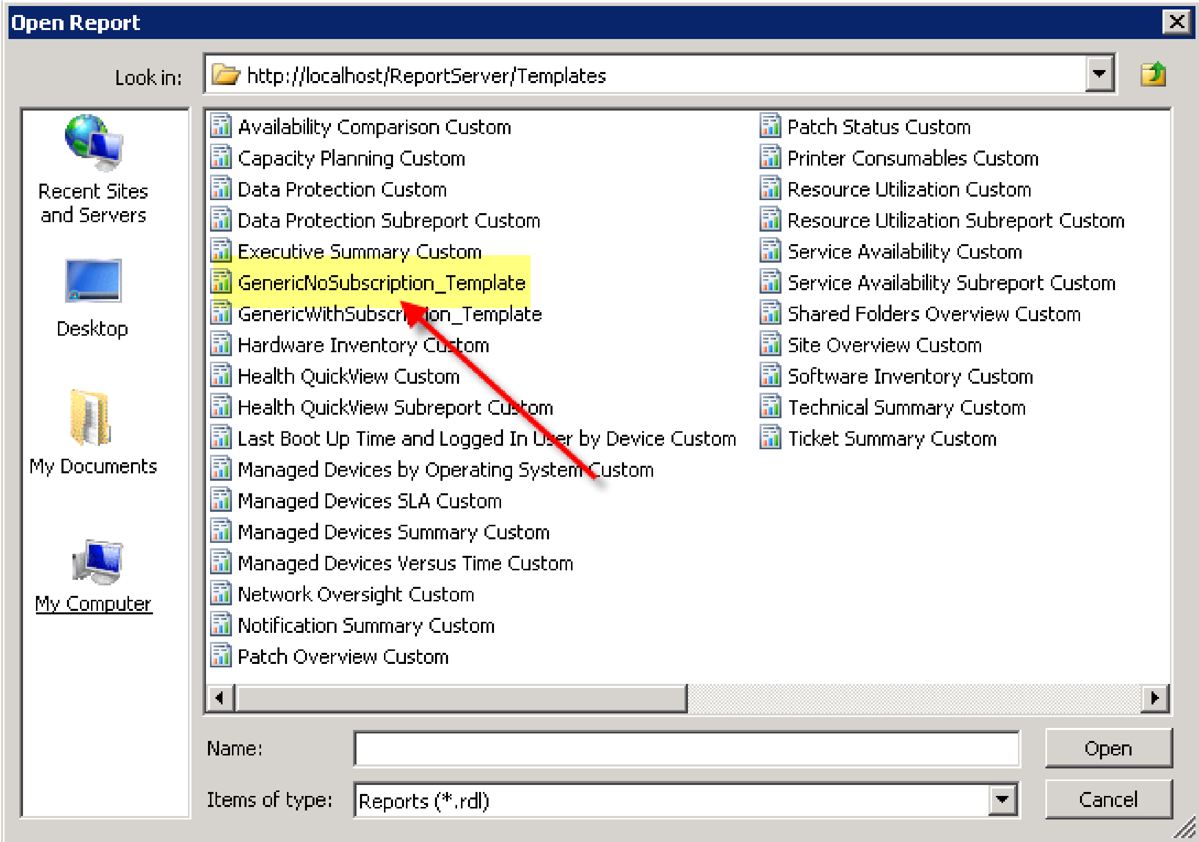
   The work surface is displayed with a blank report in the design area.



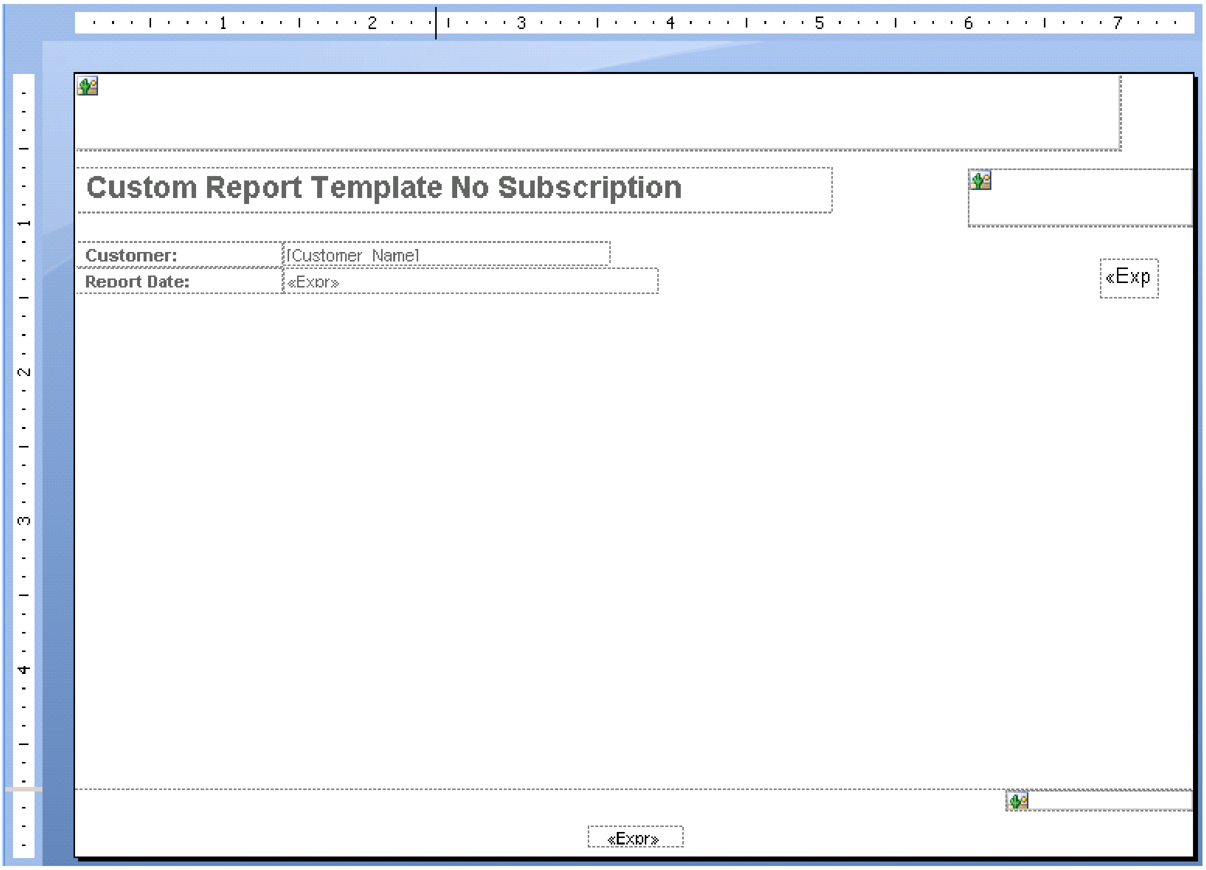
3. We are going to open a Template on the report server. In the upper left-hand corner of Report Builder, click the icon and click **Open**.
4. Navigate to your Report Manager server.
5. On the Report Manager server, click **Templates**.



6. Click to open **GenericNoSubscription_Template**.


Open Report
Look in:
http://localhost/ReportServer/Templates
Recent Sites and Servers
Desktop
My Documents
My Computer
Availability Comparison Custom
Capacity Planning Custom
Data Protection Custom
Data Protection Subreport Custom
Executive Summary Custom
GenericNoSubscription_Template
GenericWithSubscription_Template
Hardware Inventory Custom
Health QuickView Custom
Health QuickView Subreport Custom
Last Boot Up Time and Logged In User by Device Custom
Managed Devices by Operating System Custom
Managed Devices SLA Custom
Managed Devices Summary Custom
Managed Devices Versus Time Custom
Network Oversight Custom
Notification Summary Custom
Patch Overview Custom
Patch Status Custom
Printer Consumables Custom
Resource Utilization Custom
Resource Utilization Subreport Custom
Service Availability Custom
Service Availability Subreport Custom
Shared Folders Overview Custom
Site Overview Custom
Software Inventory Custom
Technical Summary Custom
Ticket Summary Custom
Name:
Open
Items of type:
Reports (*.rdl)
Cancel

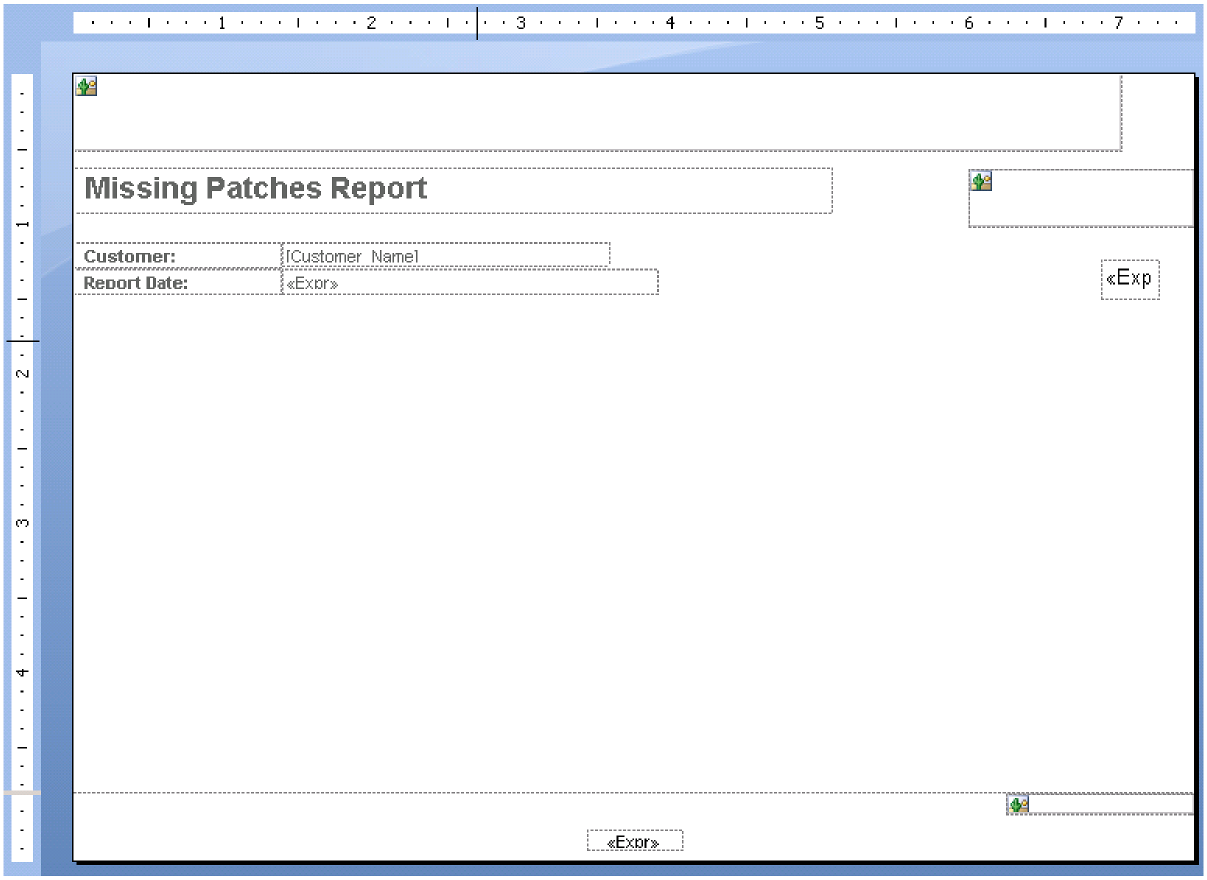
The GenericNoSubscription_Template displays in the Report Design area.



Renaming and saving the new report locally

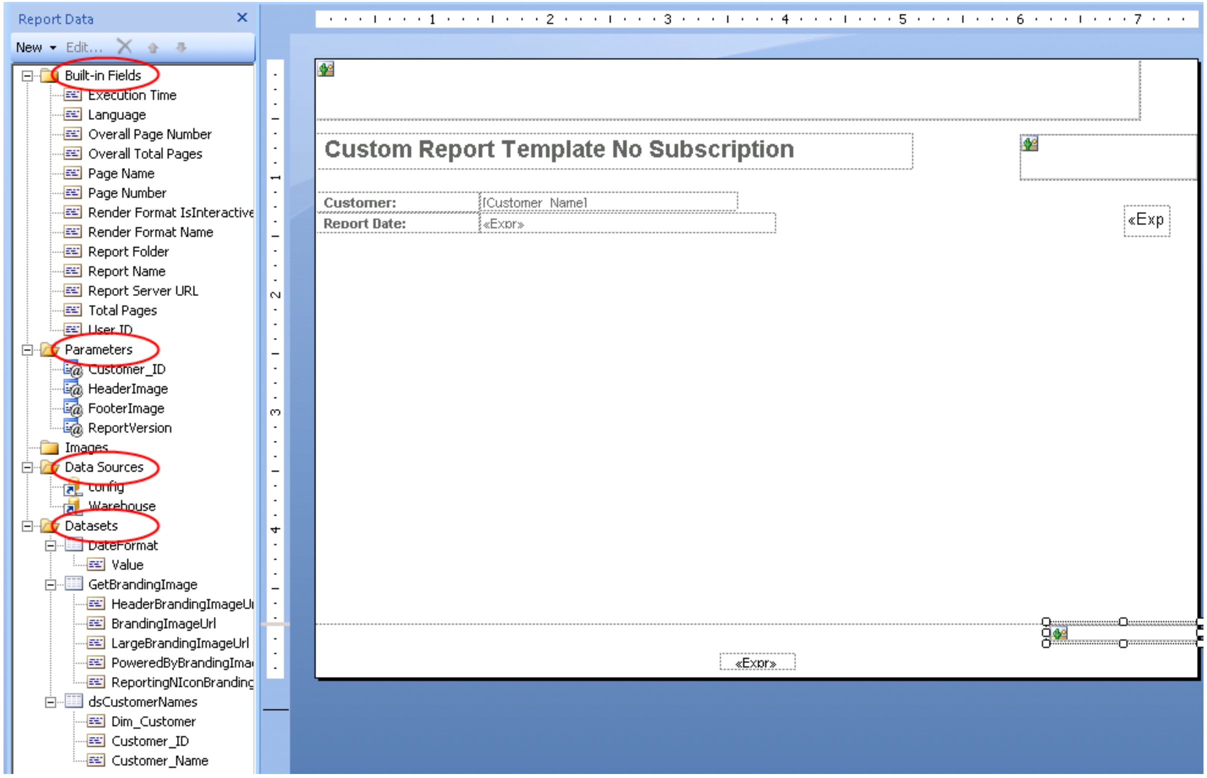
1. Rename the report in the Report Design Surface. Click into the report title text box (it currently displays **Custom Report Template No Subscriptions**) and type: `Missing Patches Report`.

2. Save the report locally to a new name: Missing Patches Report Custom. This is the name that will appear as the title of the report in the Reports Console and in the list of reports in the Administration Console. For more information about saving the report locally, refer to #1 Setting Up an Account for Working in Report Builder on page 5.

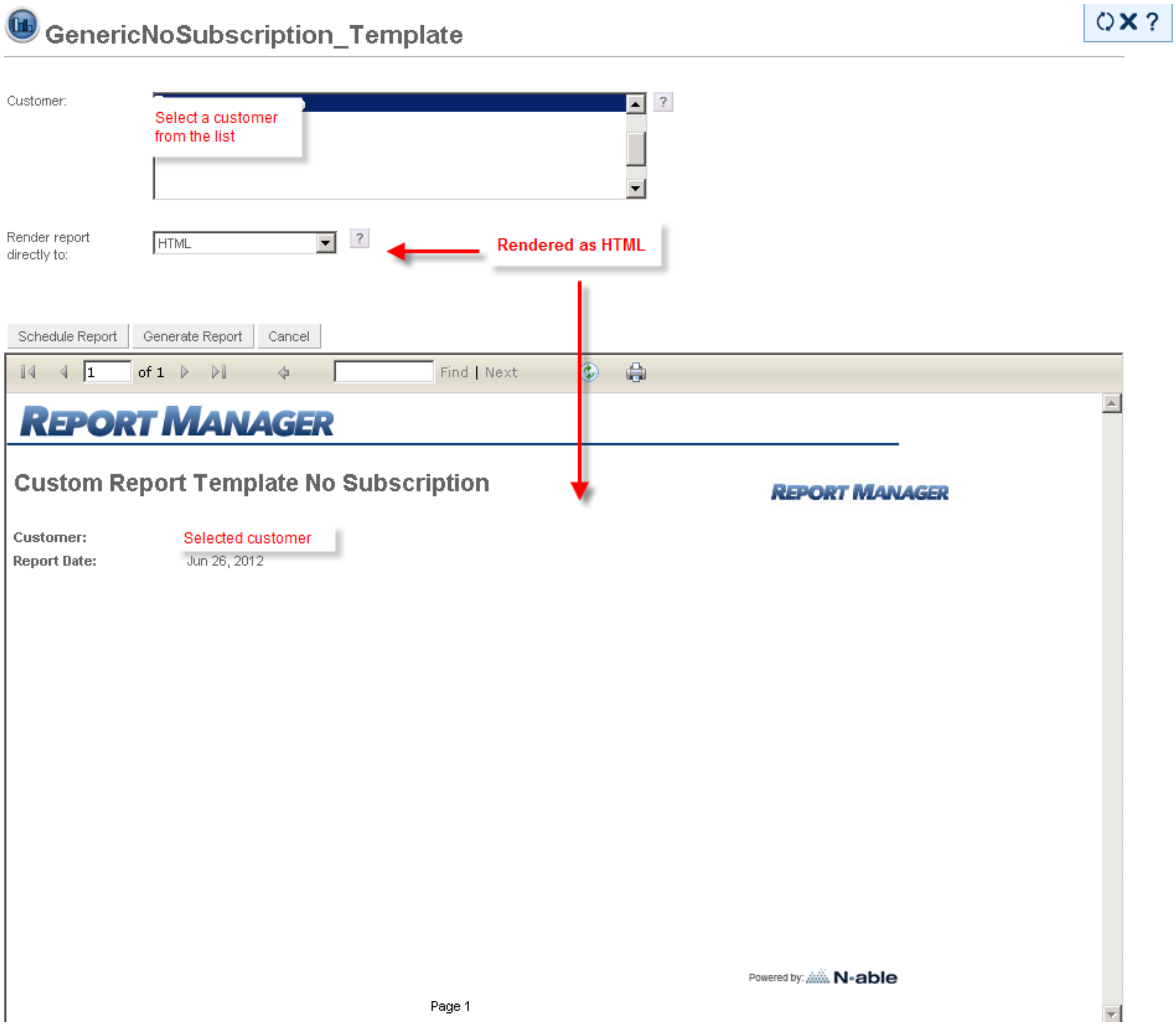


What's in a Template?

This Template includes the following Report Data: Built-in Fields, Parameters, connection to Data Sources (config and Warehouse), and three Datasets (DateFormat, GetBrandingImage, dsCustomerNames).



As shown below in the screen capture from the Reports Console, this generic Template is completely branded and configured before we modify it to become a Missing Patches report.



Adding a new dataset

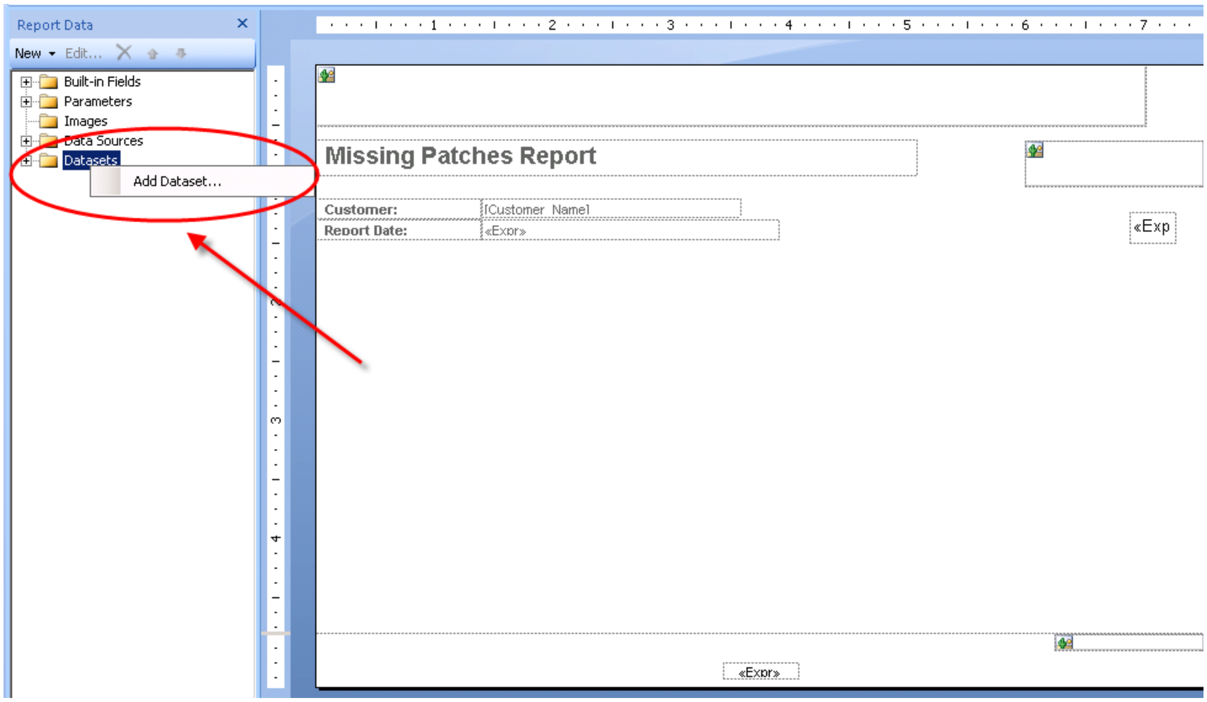
To create the Missing Patches report, we are going to add a new dataset, MissingPatches. Our new dataset will connect to the data source to retrieve the data we need for the report at run time.

What is a dataset?

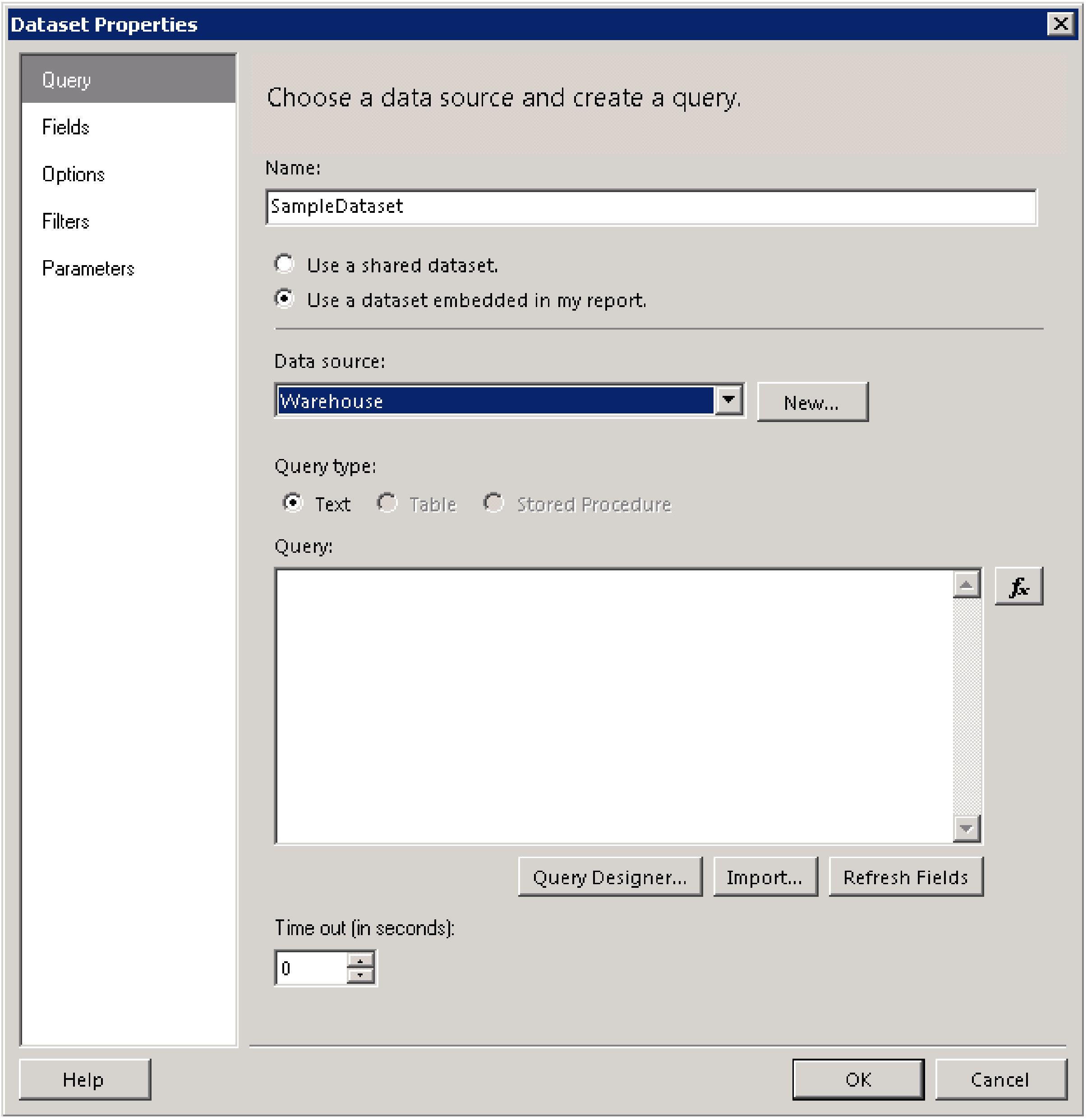
A dataset includes a connection to a data source, the query to execute and a field list of the data types that will appear in the report. A report file can have multiple datasets.

In general, when creating a custom report, add as many fields as you think you might possibly use to a dataset.

1. In the Report Data panel, click **Datasets.**
2. Click **Add Dataset**.

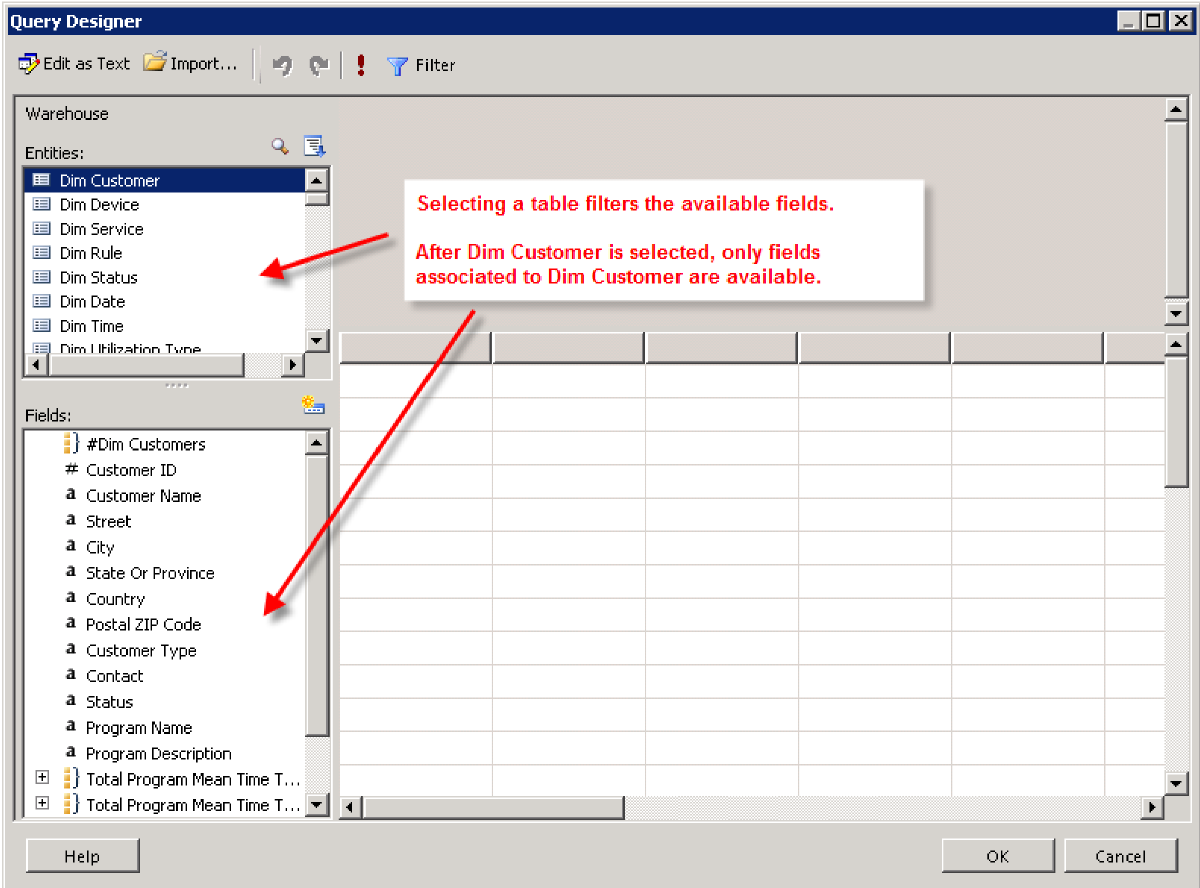


3. Type in a new name for the dataset: MissingPatches (no spaces in the name).
4. Select **Use a dataset embedded in my report**. (An embedded dataset is one that you will create here and it will be used by this report only. A shared dataset is one that has been created and saved on the report server. You would have to browse to locate it.)
5. Select the **Warehouse** data source.



6. Click **Query Designer**.

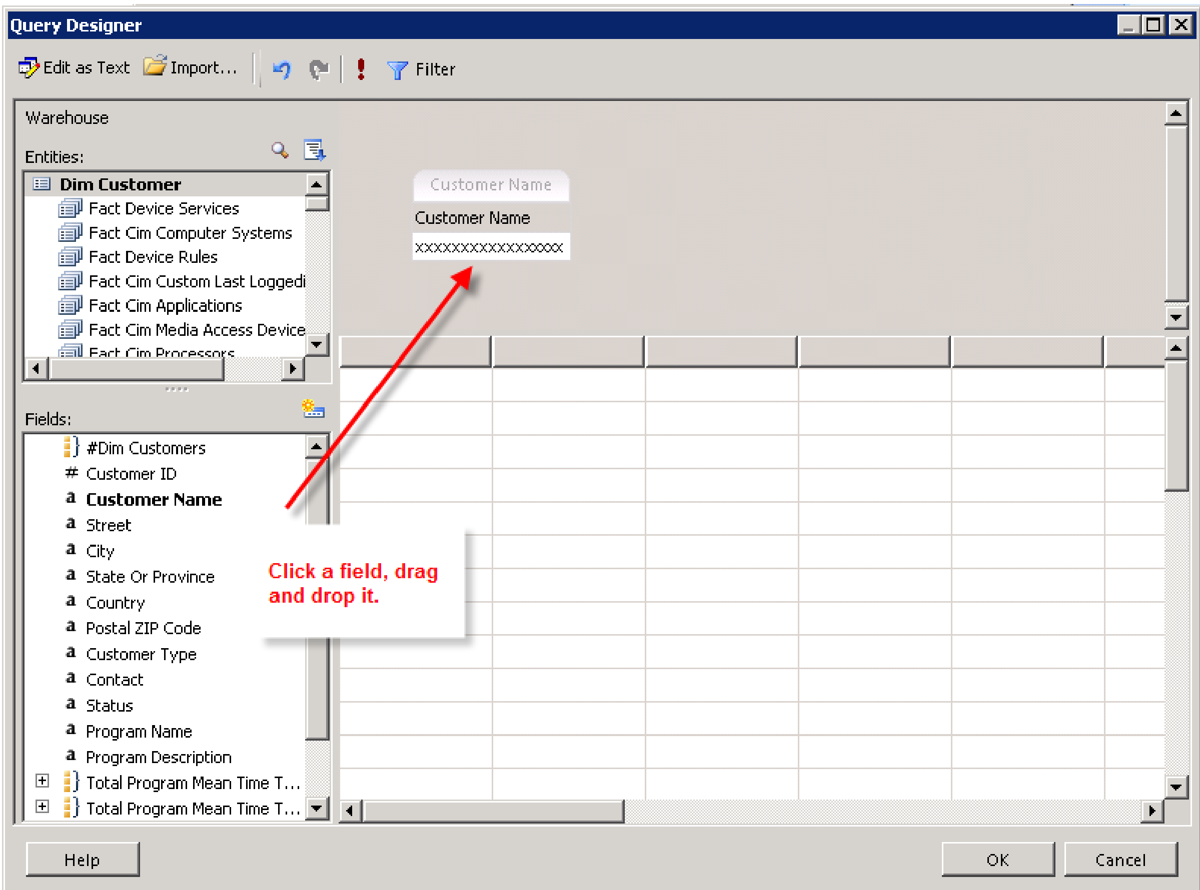
   The Query Designer allows you to pick the fields you want to include in the report. You can drag fields from the left pane of the Query Designer to the right pane to build an expression that will evaluate and pull data into the report at run time.



7. In the **Entities** list, select the **Dim Customer** table.

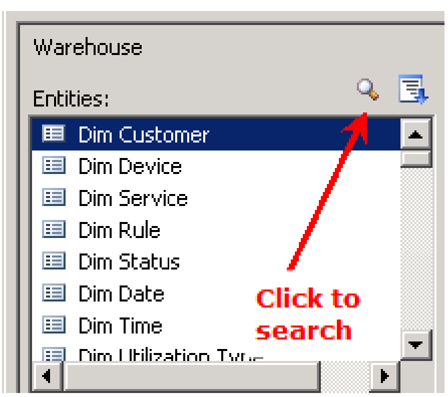
   When a table is selected, the fields are filtered and the those now available for selection are related to the selected table. In this case, the fields available are related to Dim Customer.

8. In the Fields list, select **Customer Name** and drag it to the right pane and drop it in the collection field.



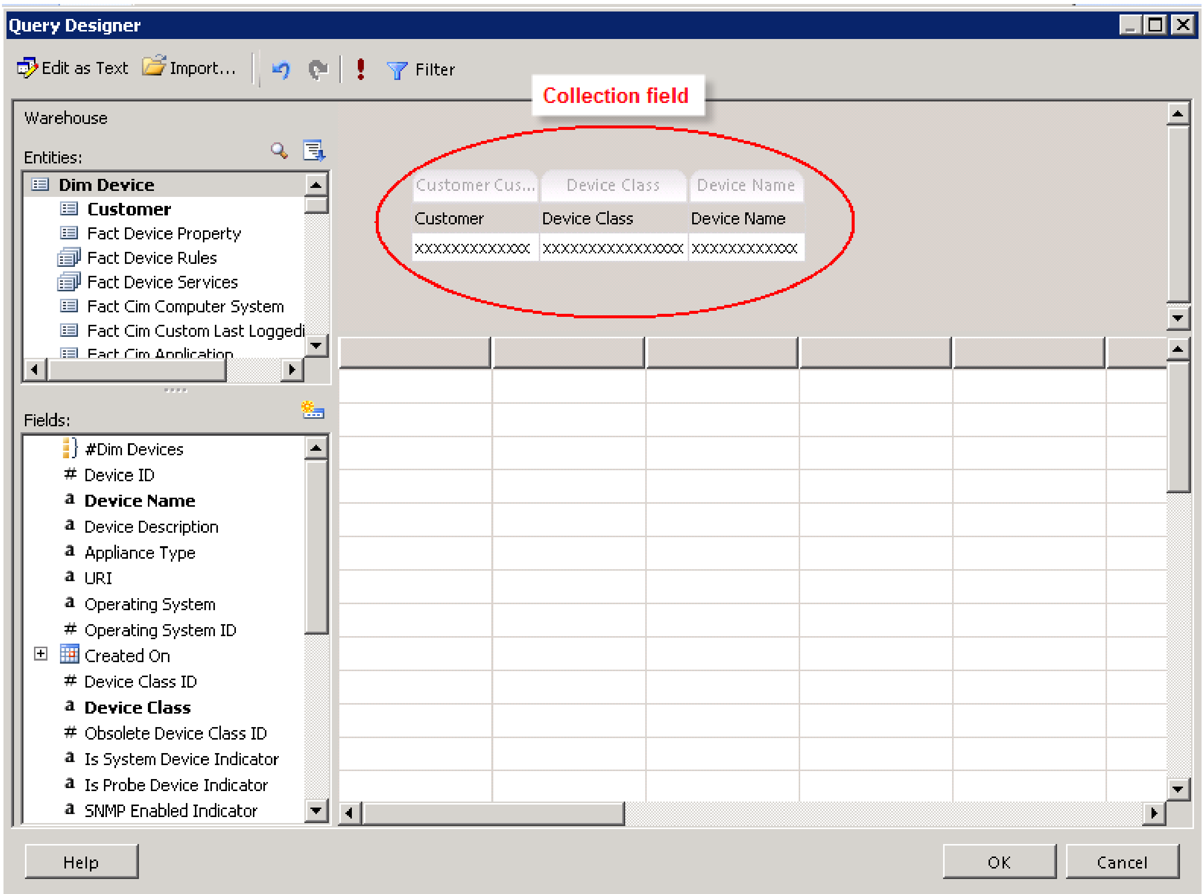
9. In the Entities list, click **Dim Devices**. The Dim Devices table has fields that will provide information about devices for our Missing Patches report, such as device class and device name.

Tip: *Tables are not in alphabetical order, so you can use the search button or scroll.*



10. In the Fields list, click **Device Class** and drag it into the collection field.

11. Do the same for **Device Name**.

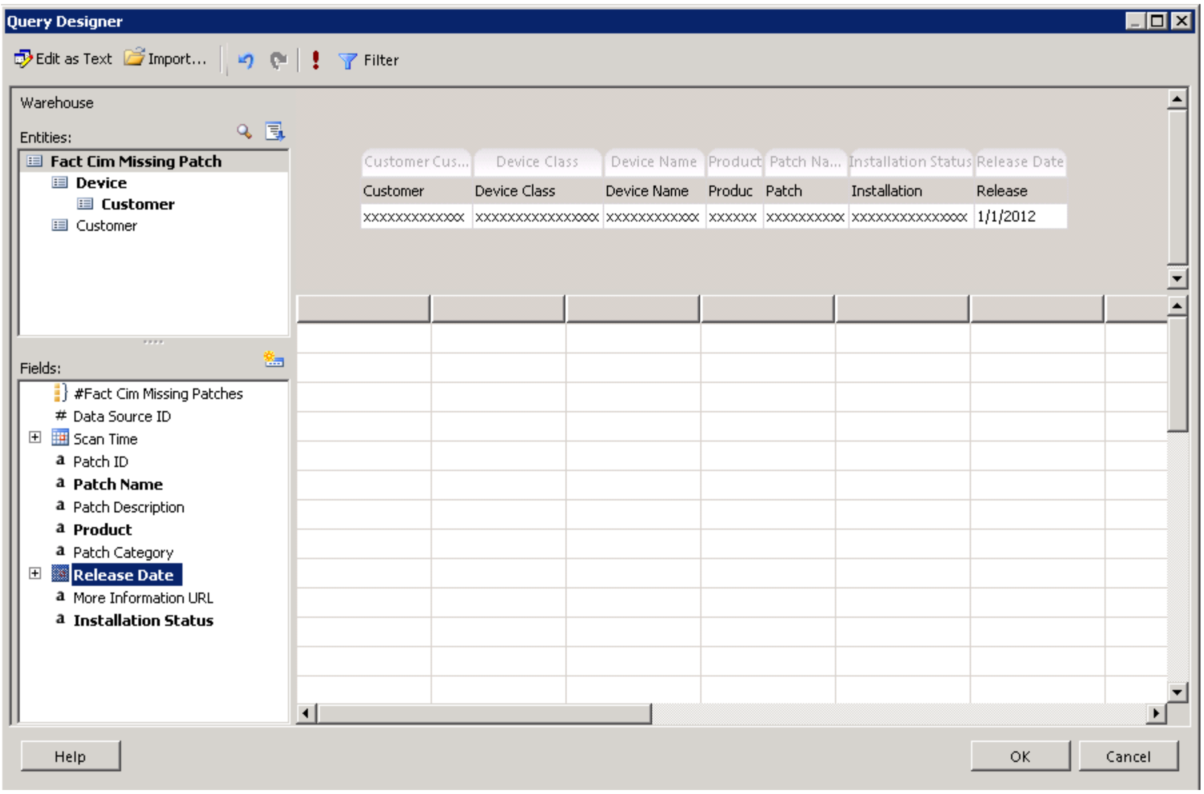


Tip: *When you drag a field into the collection screen, look for the blue bar before dropping the field.*

Tip: *If you drag a field into the collection screen by mistake, right-click the column and click* ***Delete****.*

Tip: *Widen the columns so you can see the names by clicking a column and dragging the right column edge over.*

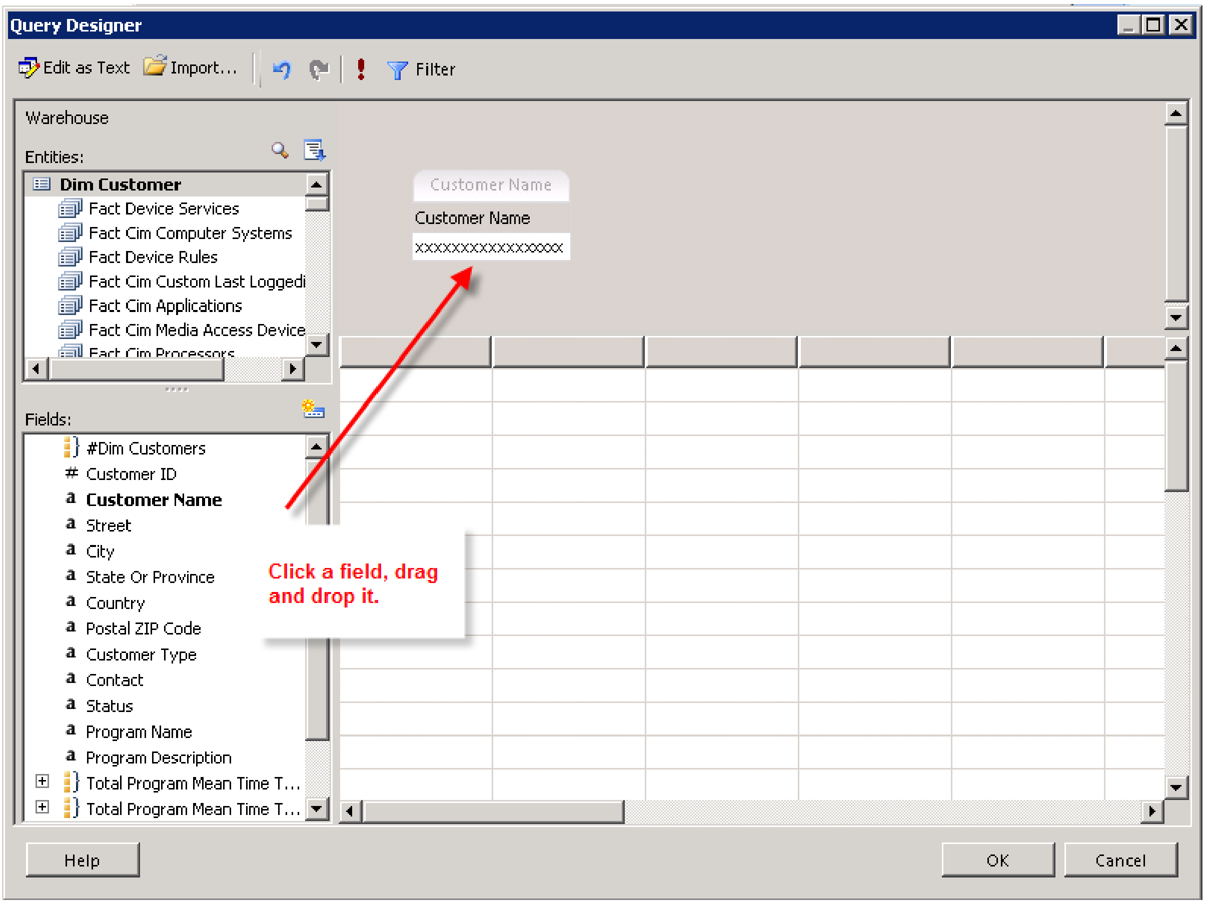
12. In the Entities list, click **Fact Cim Missing Patches** (it's near the bottom of the list of tables).This table has the information about the missing patches that we can provide in the report.
13. From the **Fields** list, select and drag the following into the collection pane: **Product**, **Patch Name**, **Installation Status**, **Release Date**.



14. Click **OK**.

15. Click **OK**.

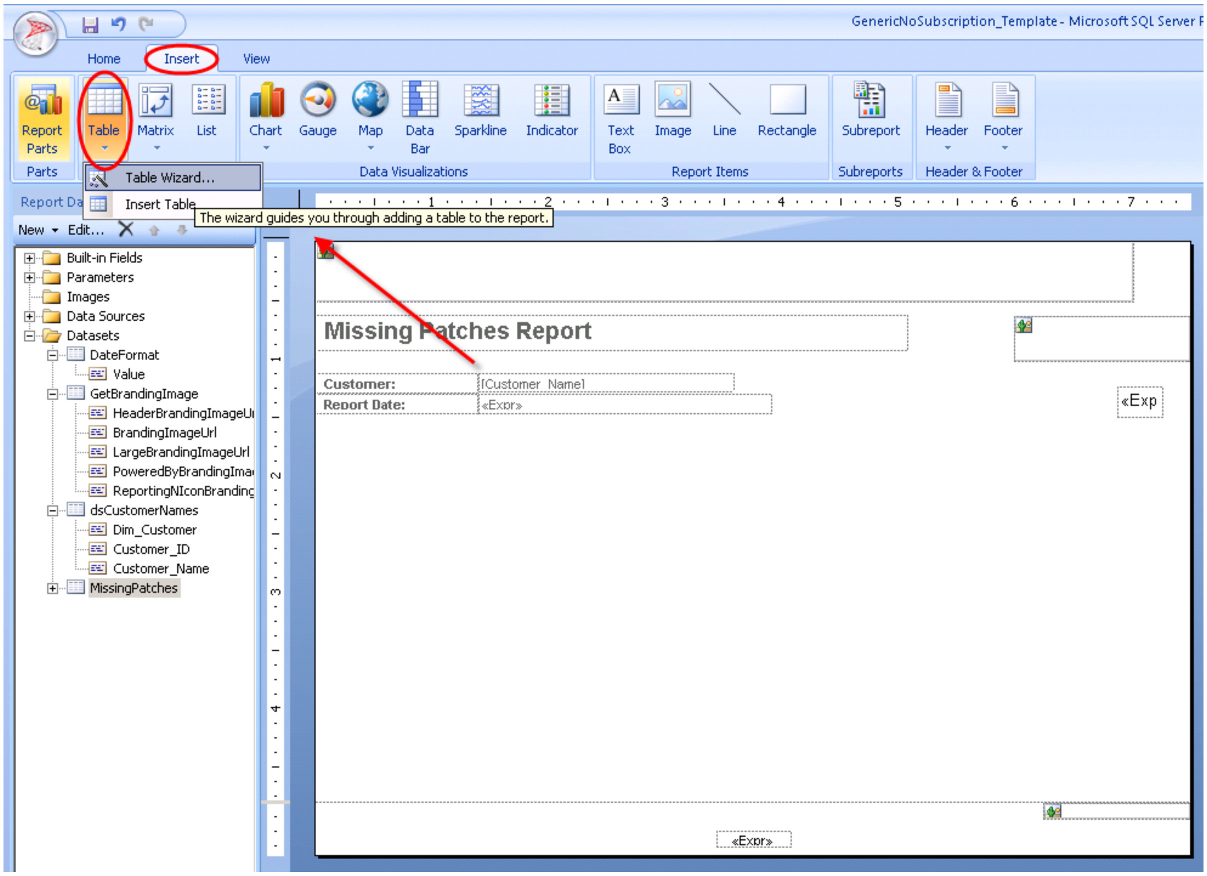
16. In the left hand pane, you can see the new dataset: MissingPatches.



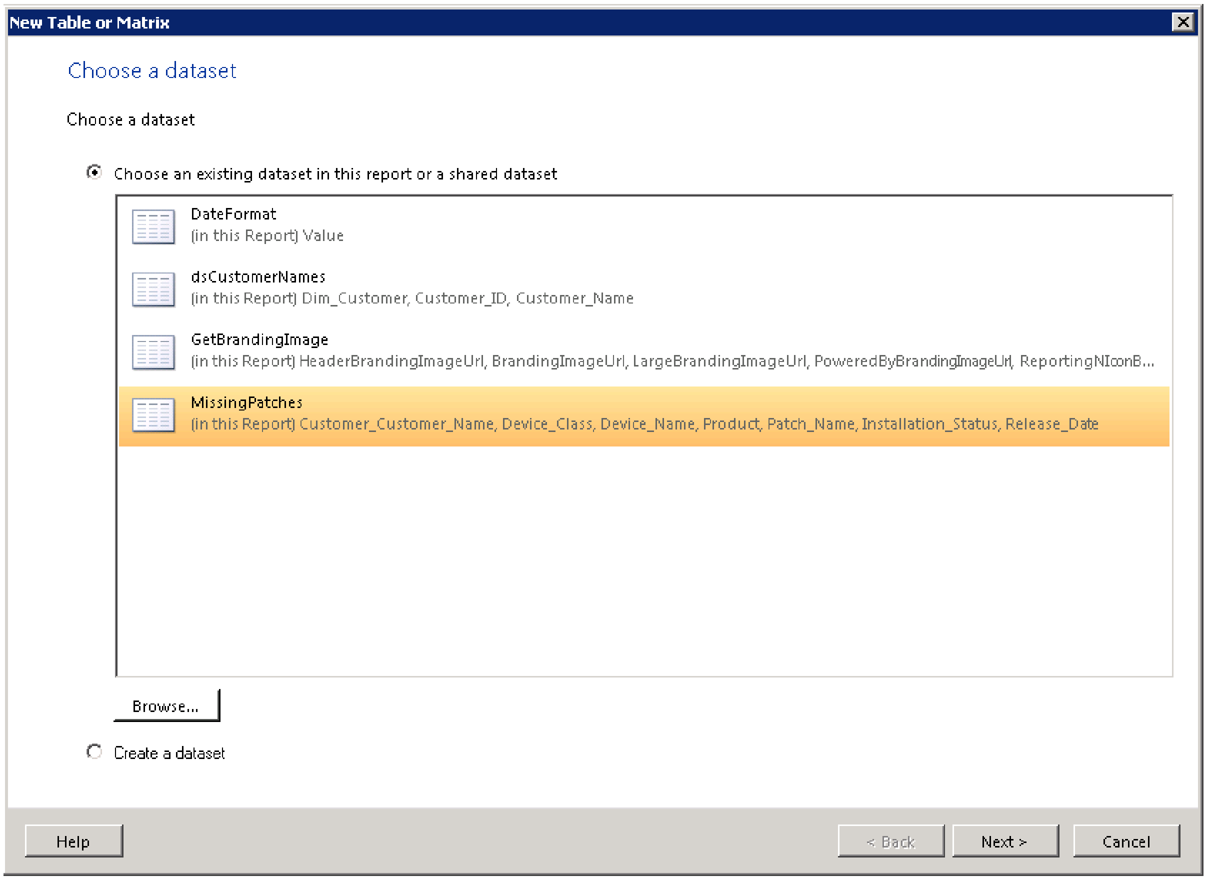
Inserting a table

Now that a dataset has been created with the fields specific to reporting on missing patches, we can go ahead and select a layout for the presentation of the data in the report.

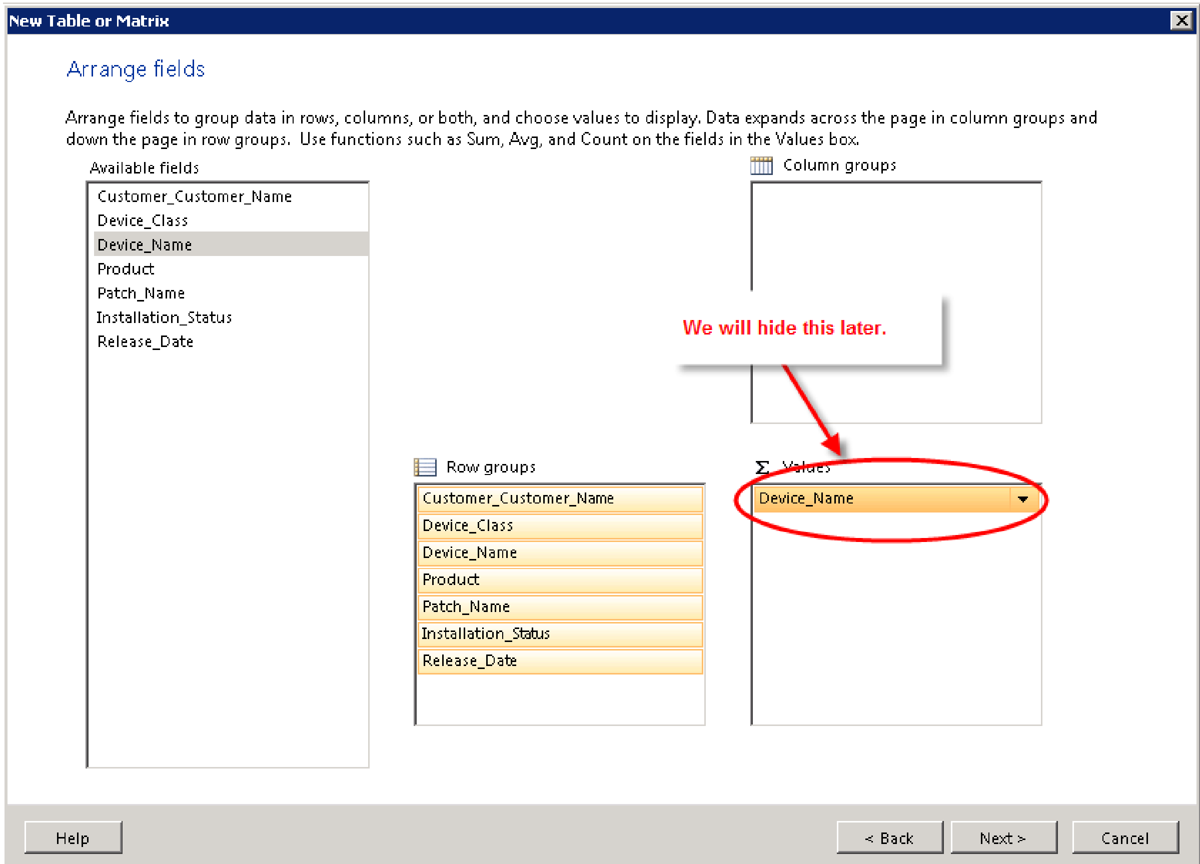
1. Insert a table using the Insert tab: Click **Insert** > **Table** >**Table Wizard**.



2. In the **New Table or Matrix** wizard, select **Choose an existing dataset in this report or a shared dataset**.
3. Select the existing dataset, **MissingPatches**.



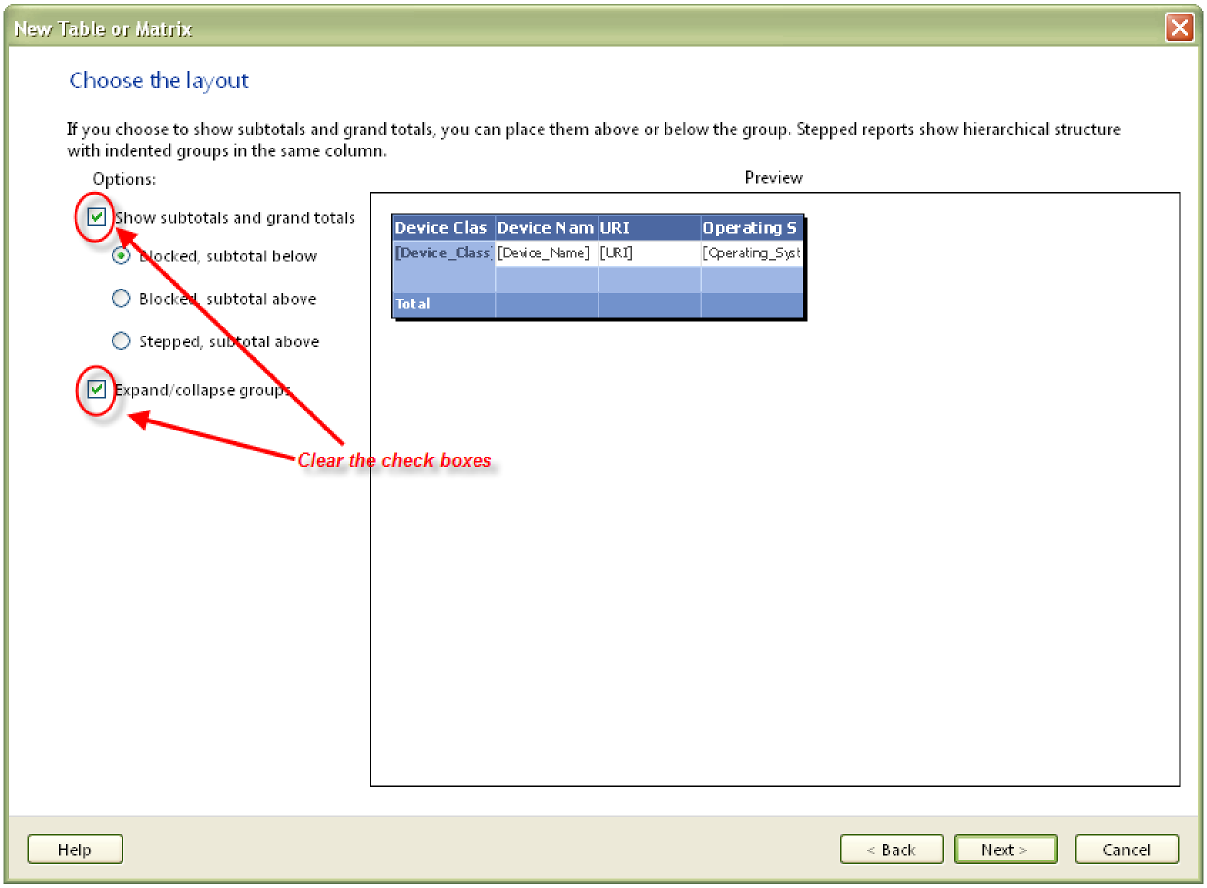
4. Click **Next**.
5. We are going to use all the Available fields to make up the rows in our report. Press **Shift** and click all the **Available fields** to the **Row groups** box.
6. Because this screen won't let you leave without placing something in the Values column, drag any field from **Available fields** into **Values**.



7. Click **Next**.

8. On the **Choose the layout** (for the table) screen, clear the check boxes.

Tip: *For any asset report, disable both check boxes. If you are creating a CPU Utilization report, for example, keep the first one checked, however, always clear the last.*

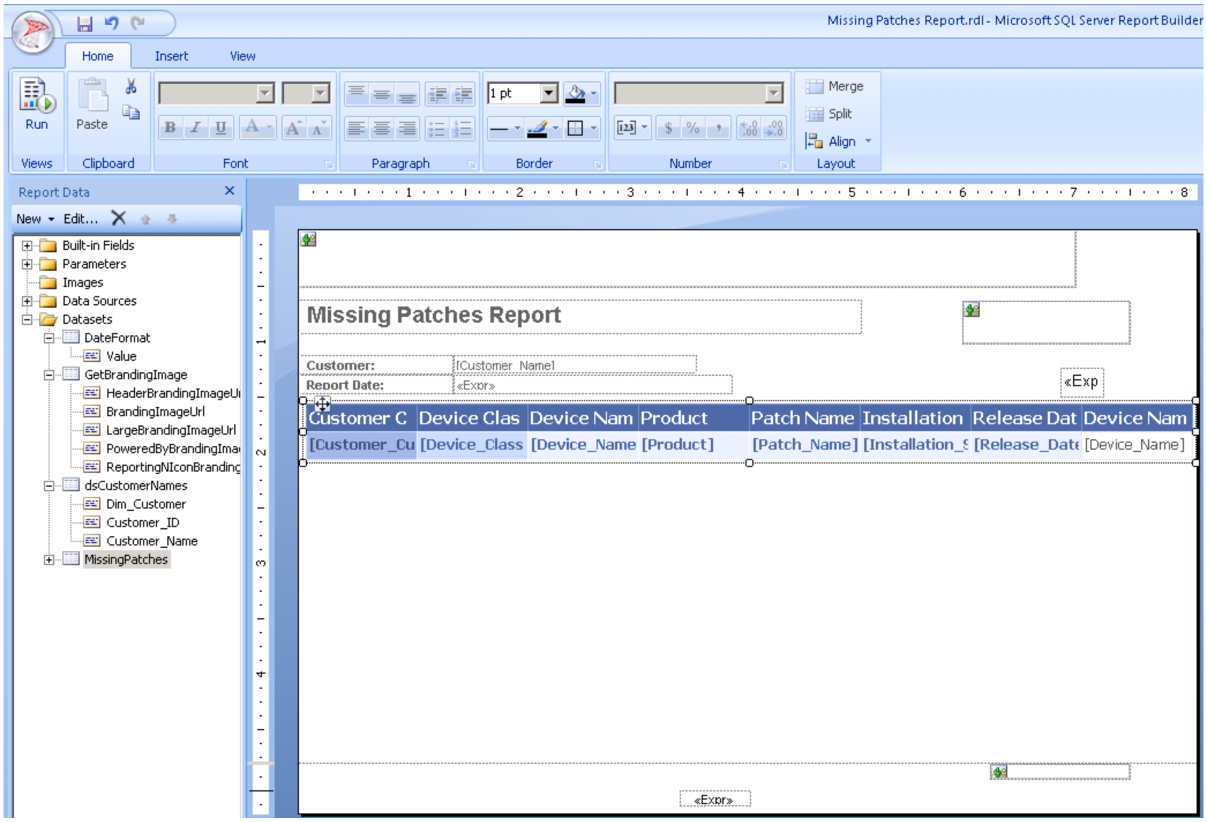


9. Click **Next**.

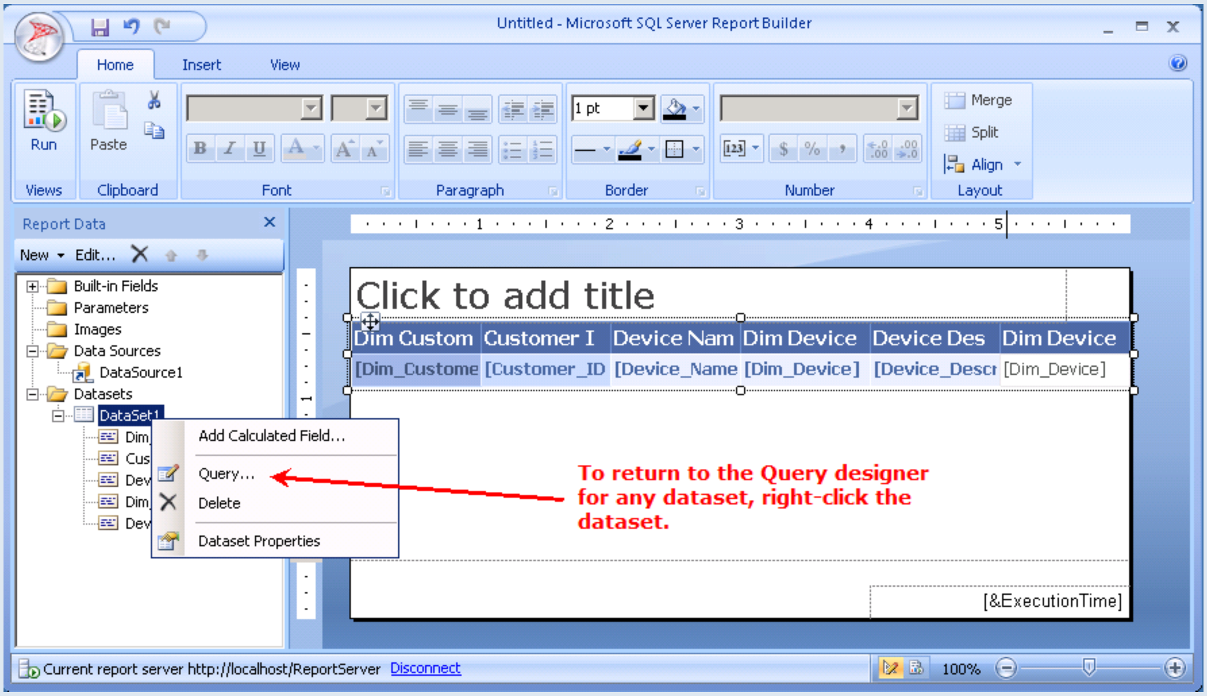
10. **Choose a style** for the report.

11. Click **Finish**.

The Report Design surface appears with the table.



Tip: *To edit a dataset, right-click the Dataset in the Report Data pane and select Query.*



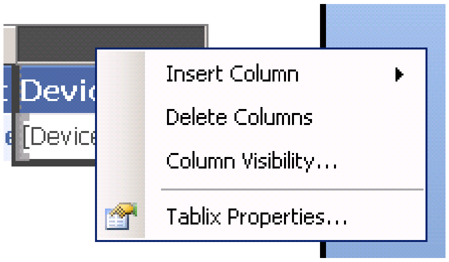
Removing the Values column

Why did we need a field in Values?

You must put a field in the Values box in order to leave the Arrange Fields screen. Report Builder has been designed to suit a wide audience and, in particular, business accounting. Values are useful when you need to create totals and subtotals. Report Manager users might need fields in the Values column, for example, if we were creating a CPU Utilization Report.

On the far right of the table will be the Values column that we were forced to add to the report just to leave the screen, **Arrange Fields**. We cannot remove it, but we can hide it from view. We also need to conserve real estate in our report layout.

1. Click in the table to select it.
2. Click the column itself to select it.
3. Right-click the column top border to display the menu:



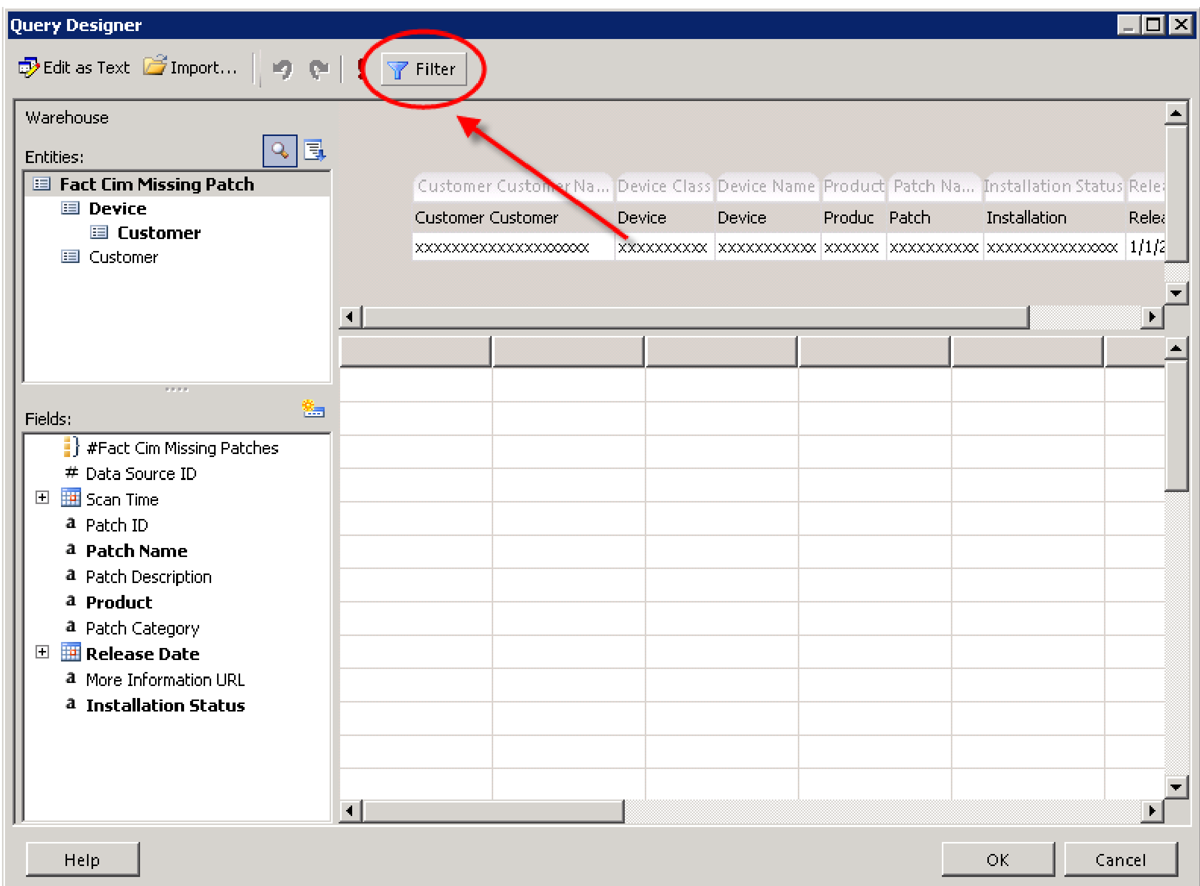
4. Click **Column Visibility**.
5. In the **Change display options** dialog, select **Hide**.

   When the report is run, this column will not be visible.

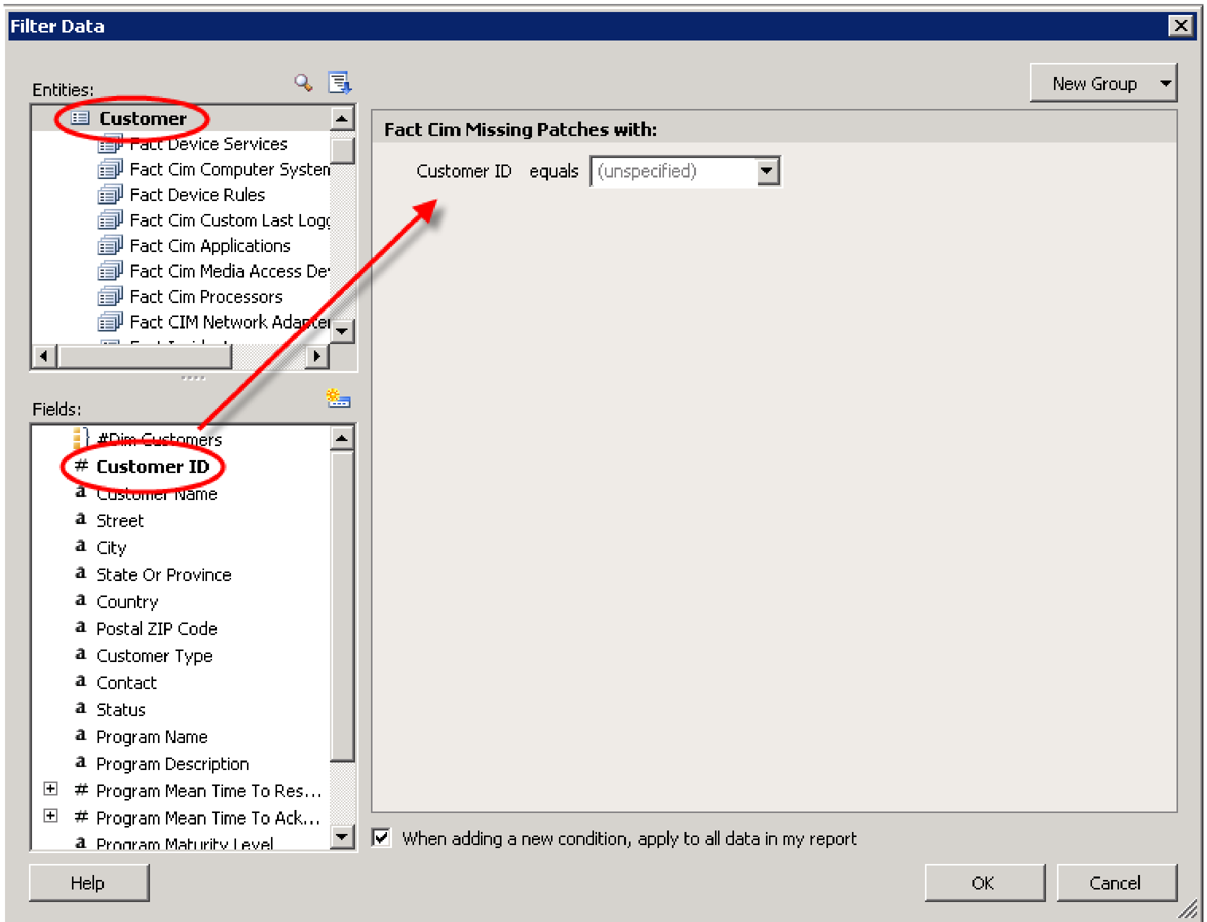
Setting up a filter on a customer

Unless we set up a filter on customer, the report will display information for every customer. We need to set up a filter so that the report will only display information for one selected customer at a time.

1. In the Report Data pane, right-click the dataset, **MissingPatches**.
2. Click **Query**.
3. Click **Filter**.



4. Select the **Customer** table in the **Entities** list box.
5. In the **Fields** list box, select and drag (or double click) **Customer ID** to move it to the query design pane.

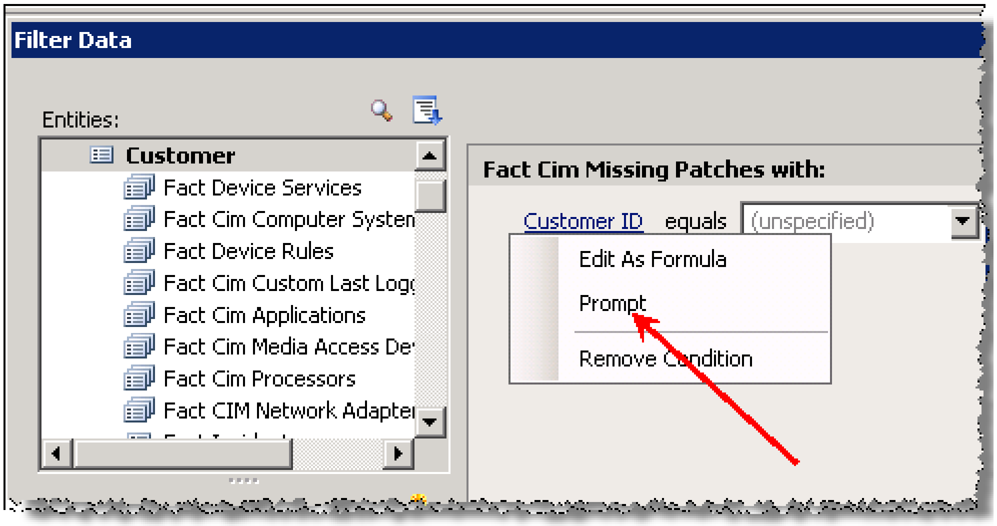


Why do we filter on Customer ID and not Customer Name?

Report Manager uses Customer ID to map to the Customer List UI control. IDs are always used for filters.

Using IDs instead of names to identify customers makes good sense, from a database perspective. It promotes scalability.Report Manager stores data for a long time and if a customer is removed from Report Manager and subsequently returns, the customer name may be the same, but the Customer ID will always be unique. In addition, if you have multiple servers, it avoids confusion of different customers with the same name.

6. In the Query design pane, right-click **Customer ID** and select **Prompt**.



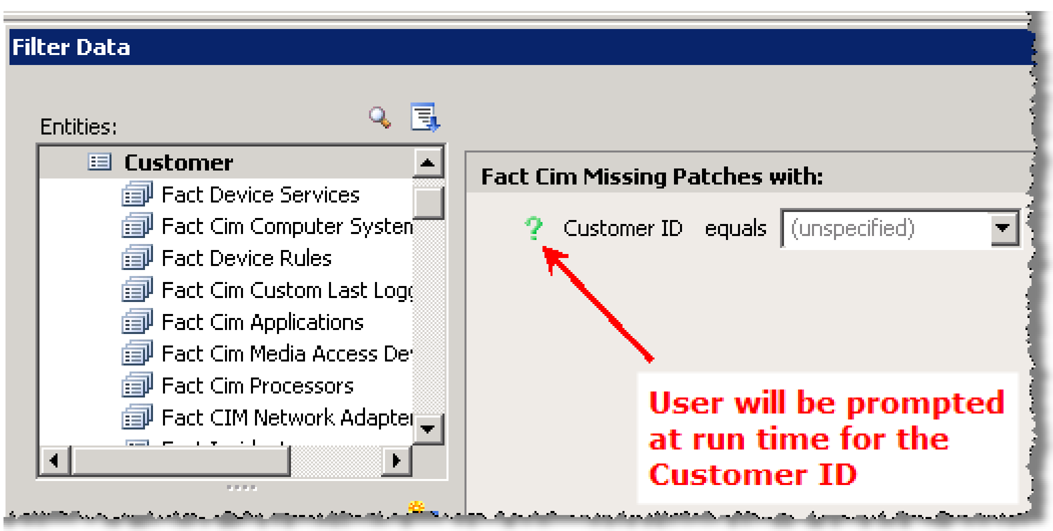
By selecting **Prompt** for Customer ID, the user will be prompted to provide a Customer ID for the report at run-time.

Tip: To find parameter ID numbers

(To preview reports in Report Builder you will need ID numbers for many parameters.)

1. In the Administration Console, go to the Advanced settings page and enable the Real-time display of Report Values.
2. In the Reports Console, run any report with the parameters for which you require the ID numbers.

   The parameter values table appears at the bottom of the screen.



3. Click **OK**.
4. Click **OK**.

5. Right-click **Parameters** in the left column to see that creating a filter with a prompt has added a new parameter to the report, **Customer_ID**.
6. Preview the report in Report Builder. For more information, refer to #5 Previewing Custom Reports in Report Builder on page 73.
7. Upload the report to Report Manager. Refer to Managing Custom Reports in Report Manager on page 93.

Next step: Create a report using a Template and Report Parts in the next topic.

Creating a CPU and Disk Utilization Report

In this topic, we will use a generic Template and add Report Parts to the Template to create a customized Technical Summary Report.

Before beginning here, ensure that you reviewed the following: #1 Setting Up an Account for Working in Report Builder on page 5, #2 Accessing Report Builder on page 8 and #3 Exploring Key Features in Report Builder on page 10.

After completing this topic, you will have learned about:

- Workflow to follow for all reports built using a Template and Report Parts
- Opening the Template and saving it locally on page 49
- What's in the Template? on page 52
- Adding Report Parts to the Template on page 53

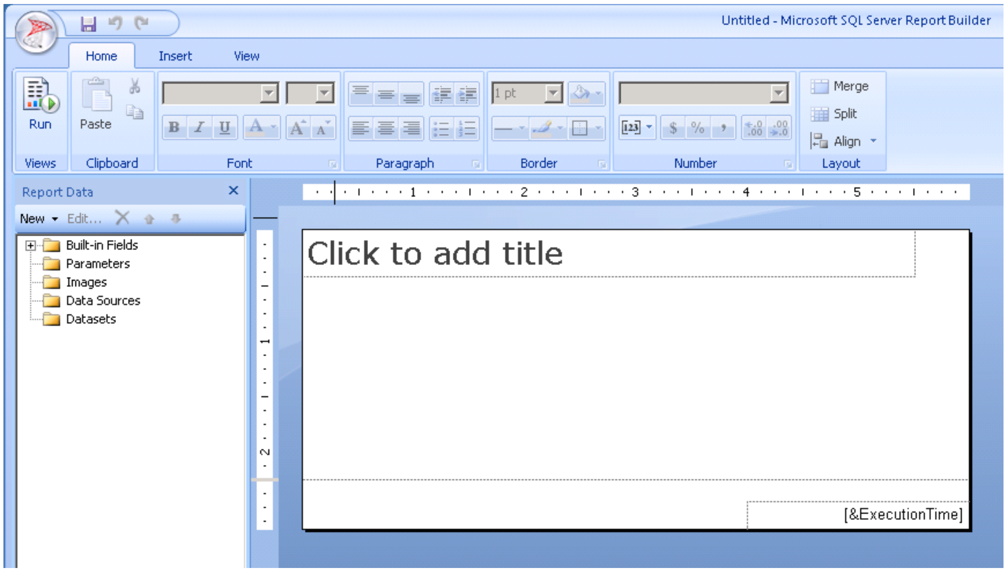
Workflow to follow for all reports using Report Parts

Tip: *Open the online documentation, as you will need the filename of the Report Part or Parts.*

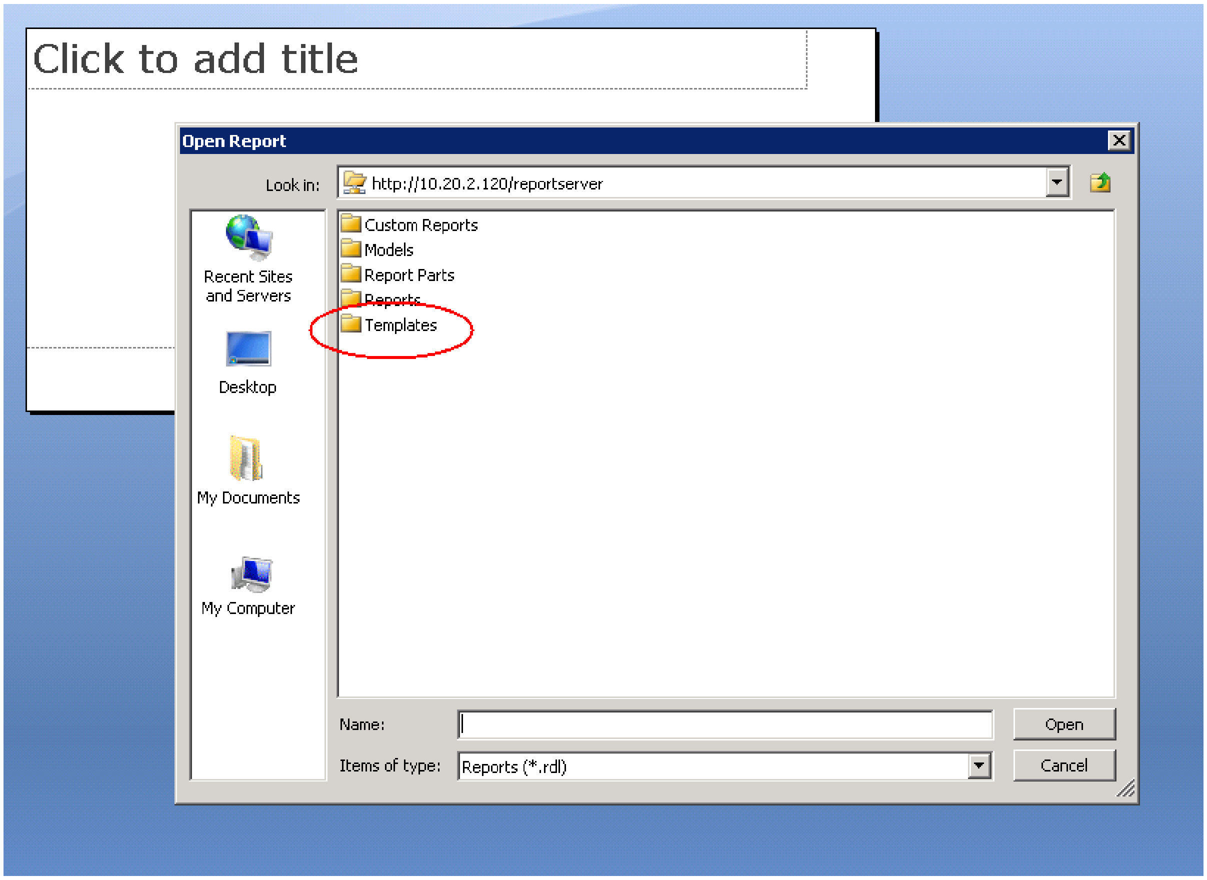
1. Open Report Builder.
2. Open the GenericWithSubscription_Template (for IT reports) or the GenericNoSubscription_Template (for Asset or other point-in-time reports).
3. Open the Report Manager documentation to get the Report Part name on which to search in Report Builder.
4. Locate Report Parts topics within the online help (**Creating Custom Reports** > **Report Parts**).
5. Locate each Report Part topic, for example, within Report Parts you will find Technical Summary Report Parts and pictures and configuration details for all Technical Summary Report Parts.
6. For each Report Part you would like to use:
    1. Locate the section, **Name to search on in the Report Part Gallery**.
    2. Record the name that you use in a list.
    3. Copy the name from the documentation and return to Report Builder.
    4. Paste the name into the search window of the Report Part Gallery.
    5. Click and drag report parts into the report layout and format them.
7. Save the report locally and upload the report to Report Manager.
8. Follow the list of Report Parts and use the documentation for each Report Part to configure the UI controls.

Opening the Template and saving it locally

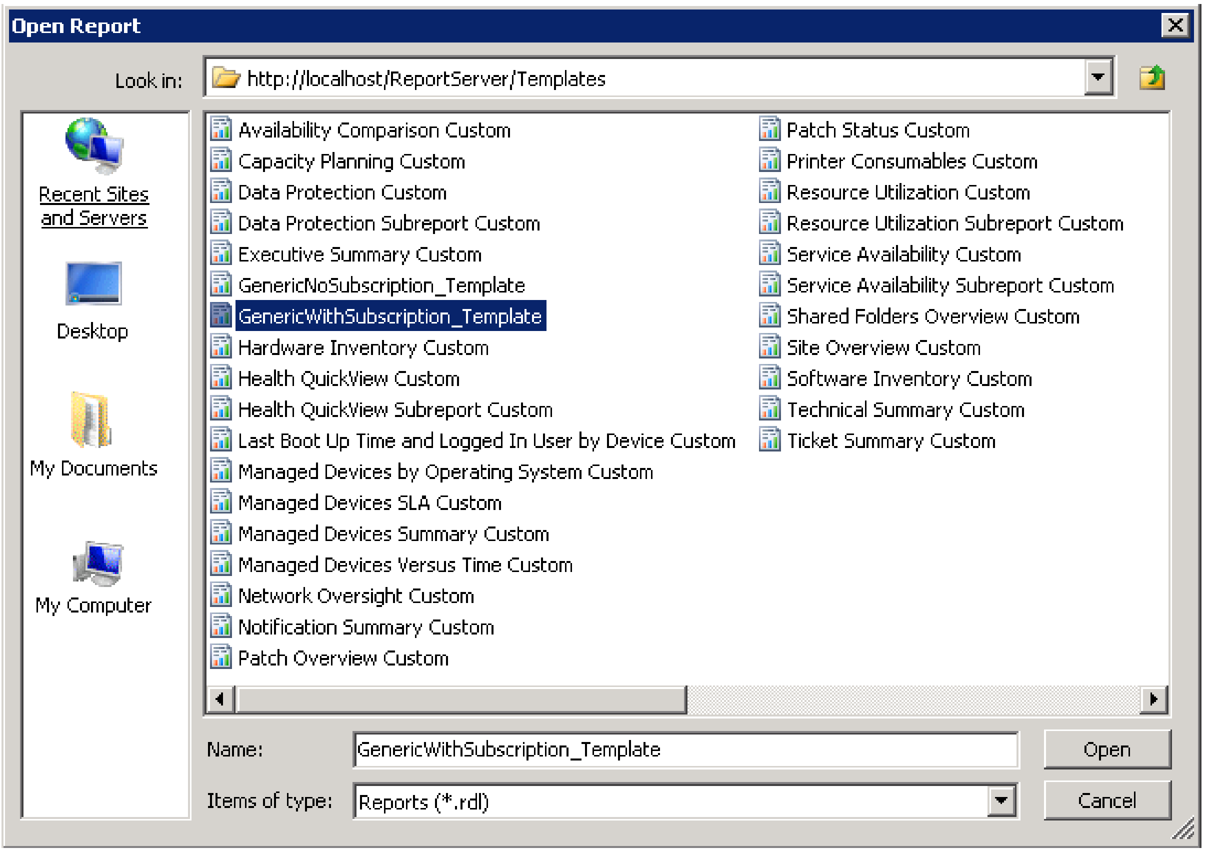
1. Open Report Builder 3.0. Refer to #2 Accessing Report Builder on page 8.
2. Close the **Getting Started** page.
3. The work surface is displayed with a blank report in the design area.



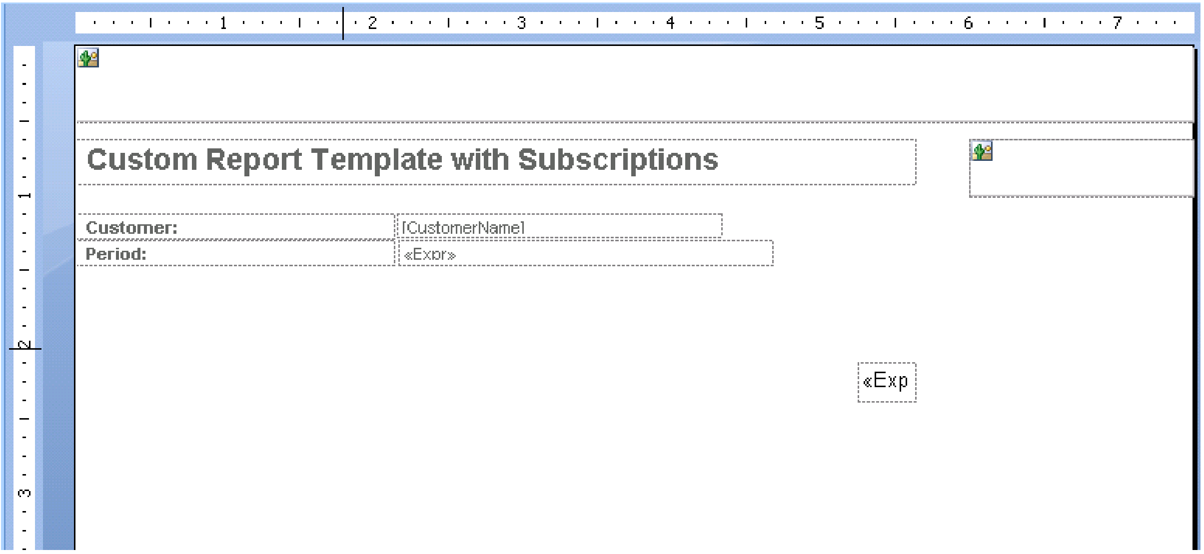
4. We are going to open a Template on the report server. In the upper left-hand corner of Report Builder, click the icon and click **Open**.
5. Navigate to your Report Manager server.
6. On the Report Manager server, click **Templates**.



7. Click to open **GenericWithSubscription_Template**.



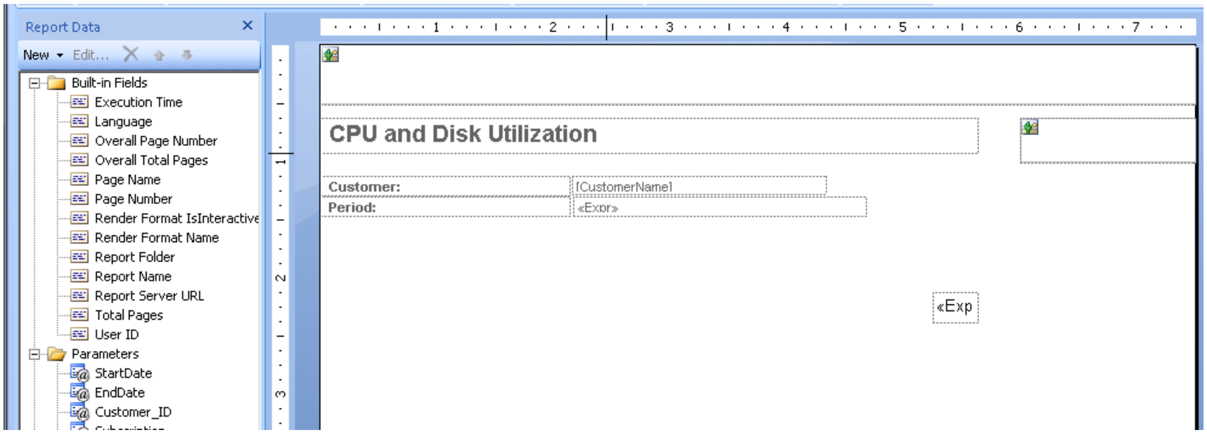
The GenericWithSubscription_Template displays in the Report Design area, titled Custom Report Template with Subscriptions.



Rename and save the report locally

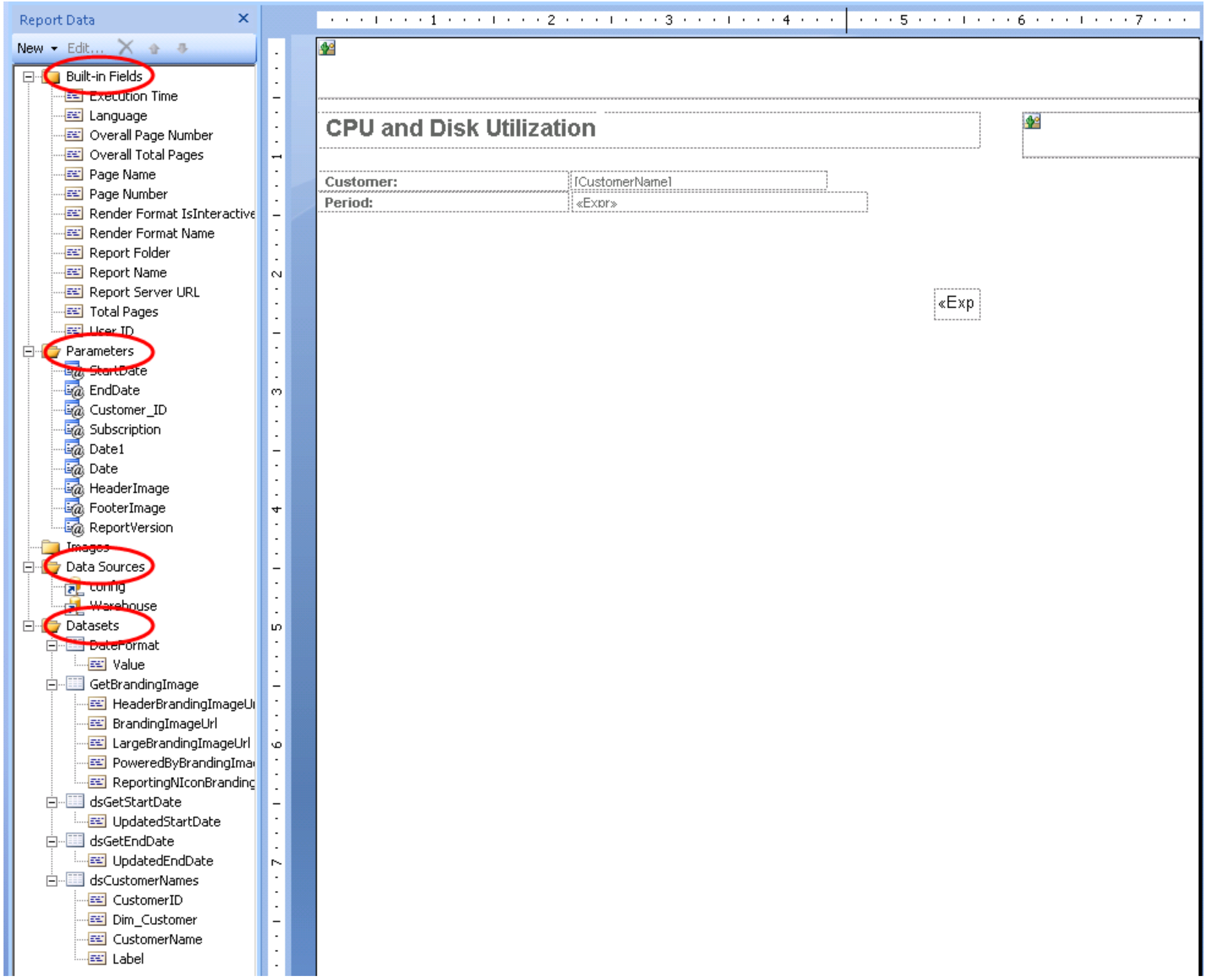
1. Rename the report in the Report Design Surface. Click into the report title text box (it currently displays **Custom Report Template No Subscriptions**) and type: `CPU and Disk Utilization`.

2. Save the report locally to a new name: `CPU and Disk Utilization`. This is the name that will appear as the title of the report in the Reports Console and in the list of reports in the Administration Console. For more information about saving the report locally, refer to #1 Setting Up an Account for Working in Report Builder on page 5.



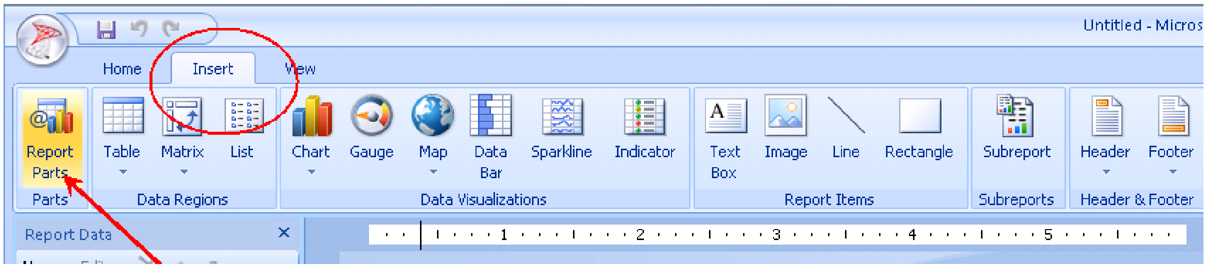
What's in the Template?

This Template is completely branded and includes the following: Built-in Fields, Parameters, connection to Data Sources (config and Warehouse), and three Datasets (DateFormat, GetBrandingImage, dsCustomerNames).

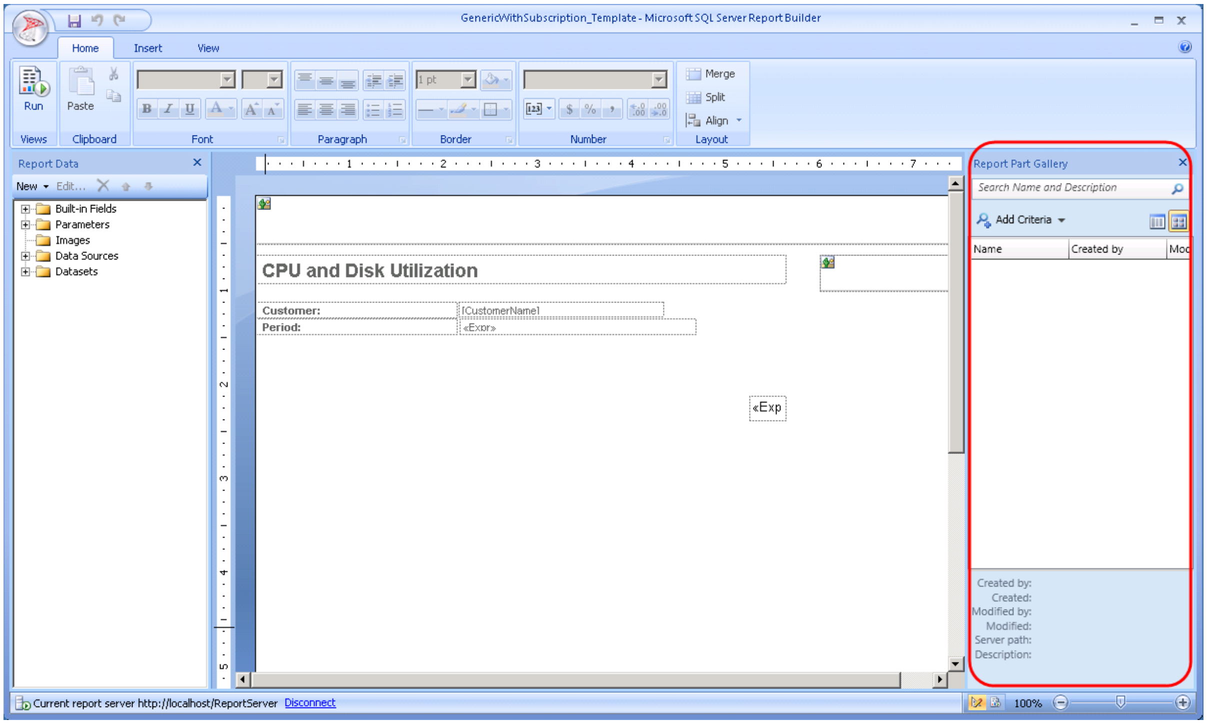


Adding Report Parts to the Template

1. After the Report is saved, we can add Report Parts to the Template. If the Report Part Gallery is not already displayed, on the menu bar, click **Insert** > **Report Parts** to display the Report Part Gallery.



The Report Part Gallery is displayed on the right-hand side of the report layout.



2. To add a first Report Part, open the online documentation.
3. Locate the Report Parts documentation: **Creating Custom Reports** > **Report Parts** > individual files contain names of all Report Parts.
4. Open the Technical Summary Report Parts topic and locate the CPU Utilization Report Part. Locate the **Name to search on in the Report Part Gallery**: TechnicalSummary_Chart_CPUUtilization_SQL.
5. Locate the next Report Part, CPU Utilization Report part, the **Name to search on in the Report Part Gallery**: TechnicalSummary_Chart_CPUUtilization_SQL.

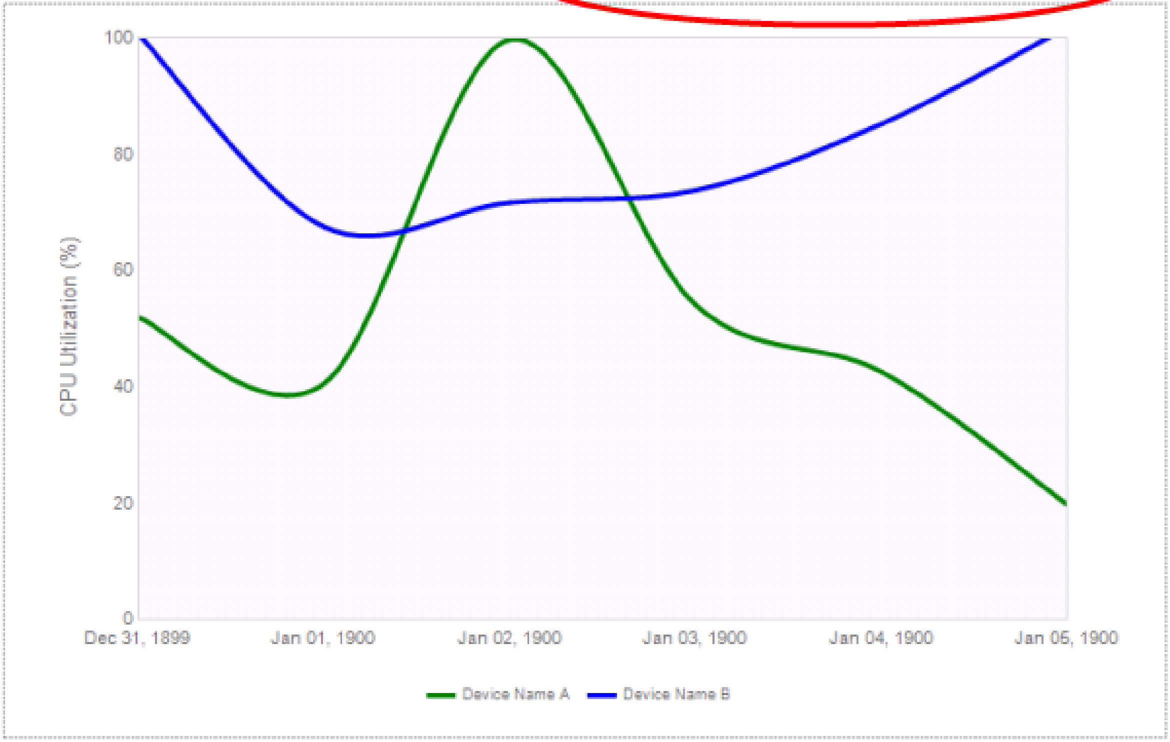
Technical Summary Report Parts

The Technical Summary Report Parts were created from the Technical Summary Template and share the same N-central dependencies and configuration details with the Template.

CPU Utilization

Type of Part: Chart

Name to Search on in Report Part Gallery: TechnicalSummary_Chart_CPUUtilization_SQL

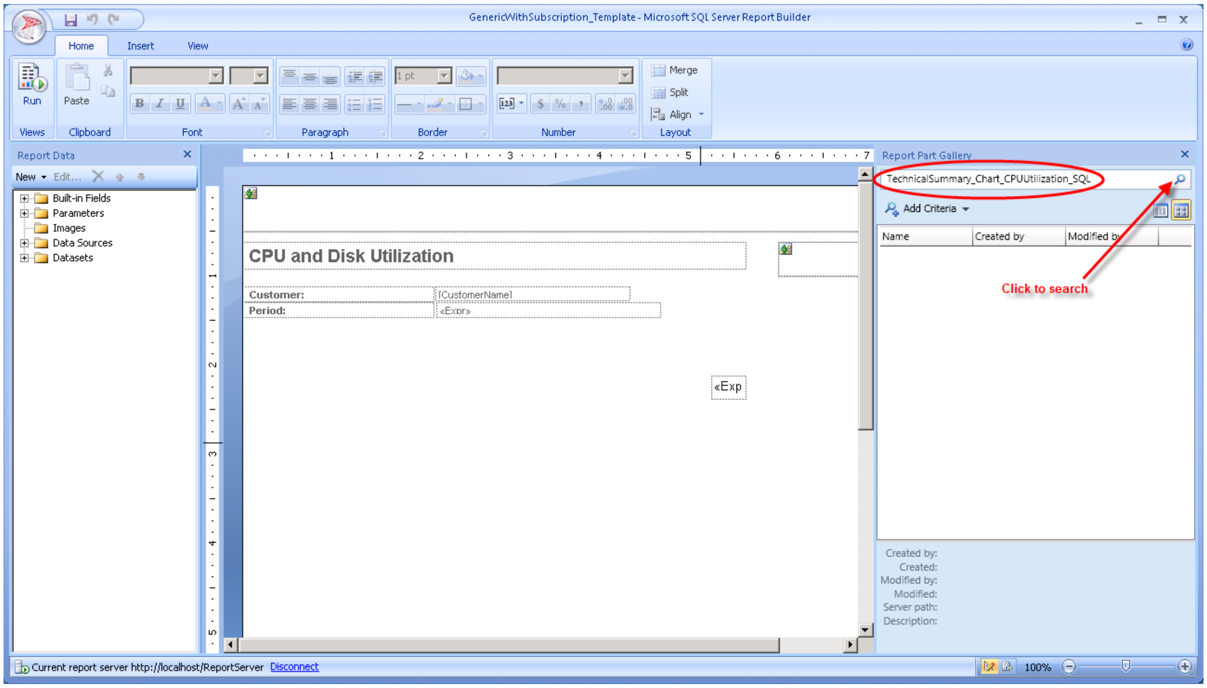


6. Copy the name from the documentation and paste it into the *Search Name and Description* window in the Report Part Gallery.

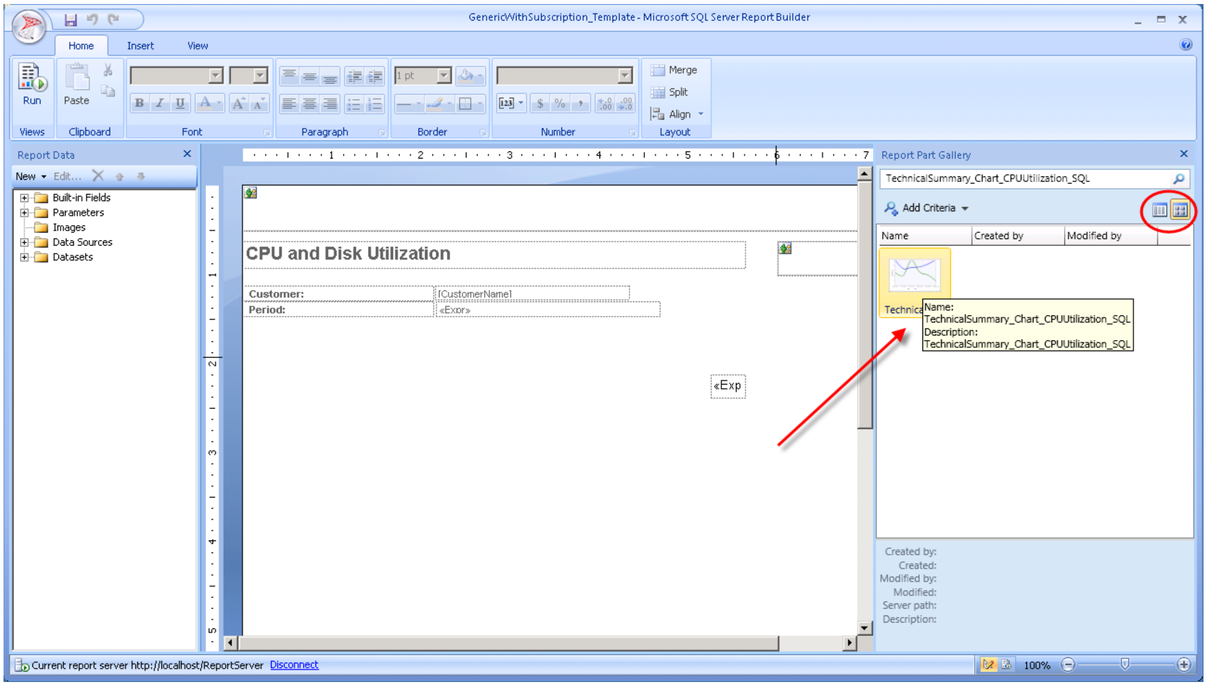
7. Make a note (copy to a file or jot down on paper) of the names of Report Parts that you use in the creation of a report. Then, when you go to configure the UI controls, you will know which Report Part topics in the online help to refer to for the order and configuration of UI controls.

   Tip: *You can use partial names to search and then select the Report Part from the search results.*

8. Click the search icon in the window.



9. The Report Part Gallery refreshes to display the link to the report part.

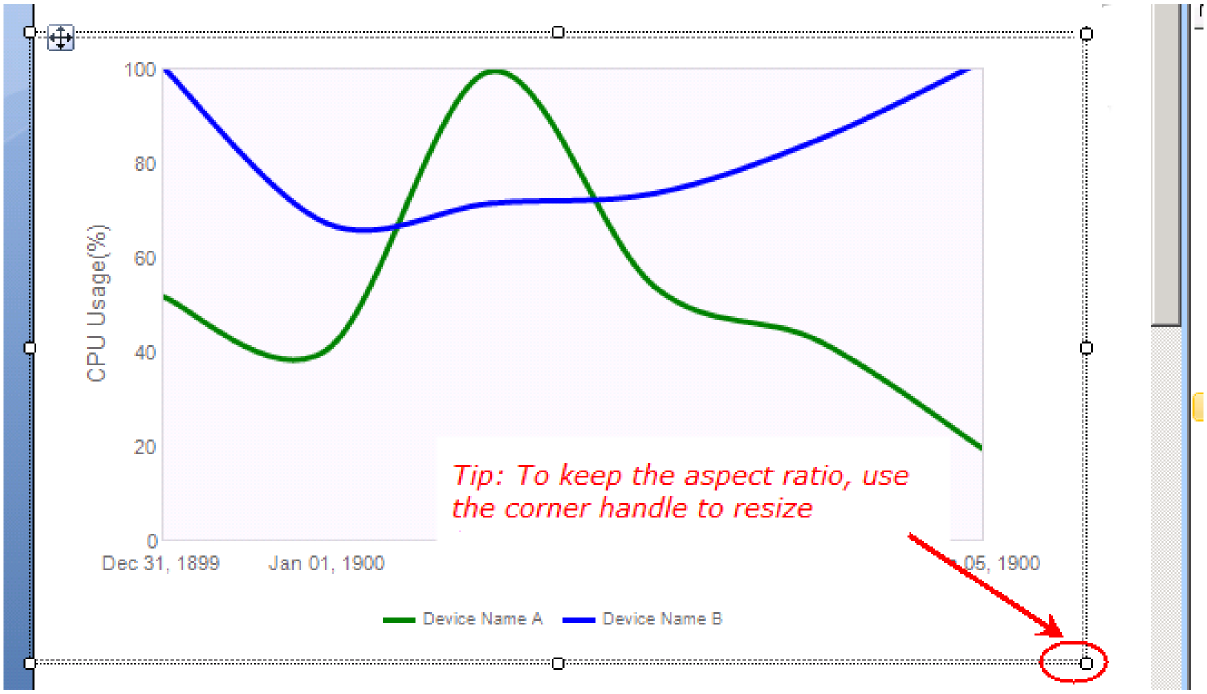


Tip: *You can toggle between viewing the link to the Report Part as Details or Thumbnail.*

10. Click and drag the Report Part link into the design surface of the report. This pulls the Report Part and the associated datasets into the report.

11. Use the handles to drag it to the far left of the design pane so that it lines up with the edge and drop it.

Tip: *Display the ruler (in the main menu, click **View** > **Ruler**), if you wish to adjust the size any report element, report part, table. To keep the aspect ratio, use the corner handle to resize an element. This is not necessary, as the Template takes care of all formatting when a Report Part is drawn in, but it's a good thing to know.*



How do I remove a Report Part inserted by mistake?

- If you make a mistake and insert the wrong report part, click **Undo** and the report part and associated datasets will be removed.
- If you realize that you have made a mistake and after many changes (or a save) you would like to remove a Report Part, you will need to move all associated datasets and parameters by hand (locating them in the Reports Data pane and deleting them by right-click > **Delete**).

Warning! Using Delete to remove a Report Part will leave the associated datasets behind and you will end up with extra datasets and unused parameters in your report.

12. To add a second Report Part, go back to the Technical Summary Report Parts topic and locate the Disk Utilization Report Part section. The **Name to search on in the Report Part Gallery** is TechnicalSummary_Chart_Dis-kUtilization_SQL.
13. Copy the name from the documentation and paste it into the *Search Name and Description* window in the Report Part Gallery.
14. Make a note (copy to a file or jot down on paper) of the names of Report Parts that you use in the creation of a report. Then, when you go to configure the UI controls, you will know which Report Part topics in the online help to refer to for the order and configuration of UI controls.

Tip: *You can use partial names to search and then select the Report Part from the search results.*

15. Click the search icon in the window.

16. The Report Part Gallery refreshes to display the link to the report part.

17. Drag it to the report under the CPU Utilization chart.

18. Add titles to the sections:

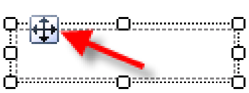
   a. Click **Insert** > **Text Box** and click in the layout, under the title.

   b. Type `CPU Utilization` in the text box and drag it into place.

   c. Select `CPU Usage` and make it bold.

   d. Move the second chart down to make room for a title.

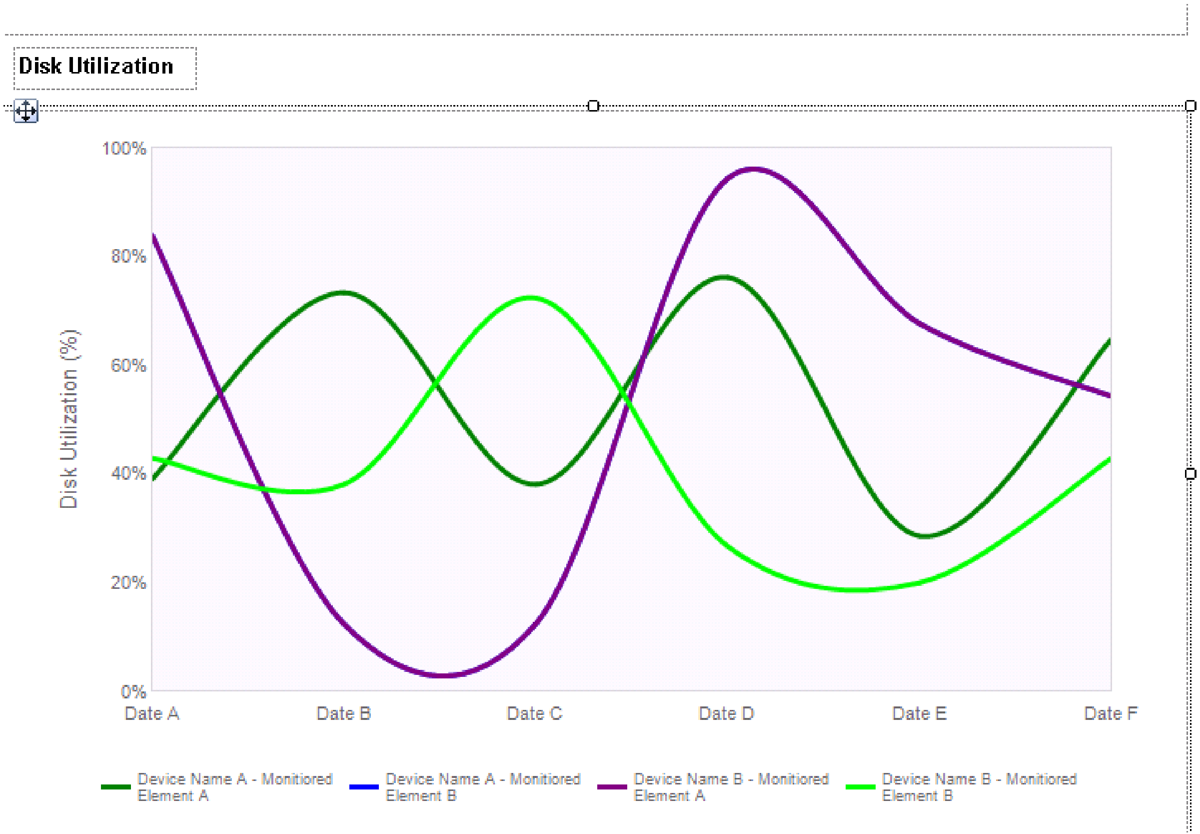
   Tip: Use the handle with the 4 bi-directional arrows to drag the report part around so that you don't lose the aspect ratio.



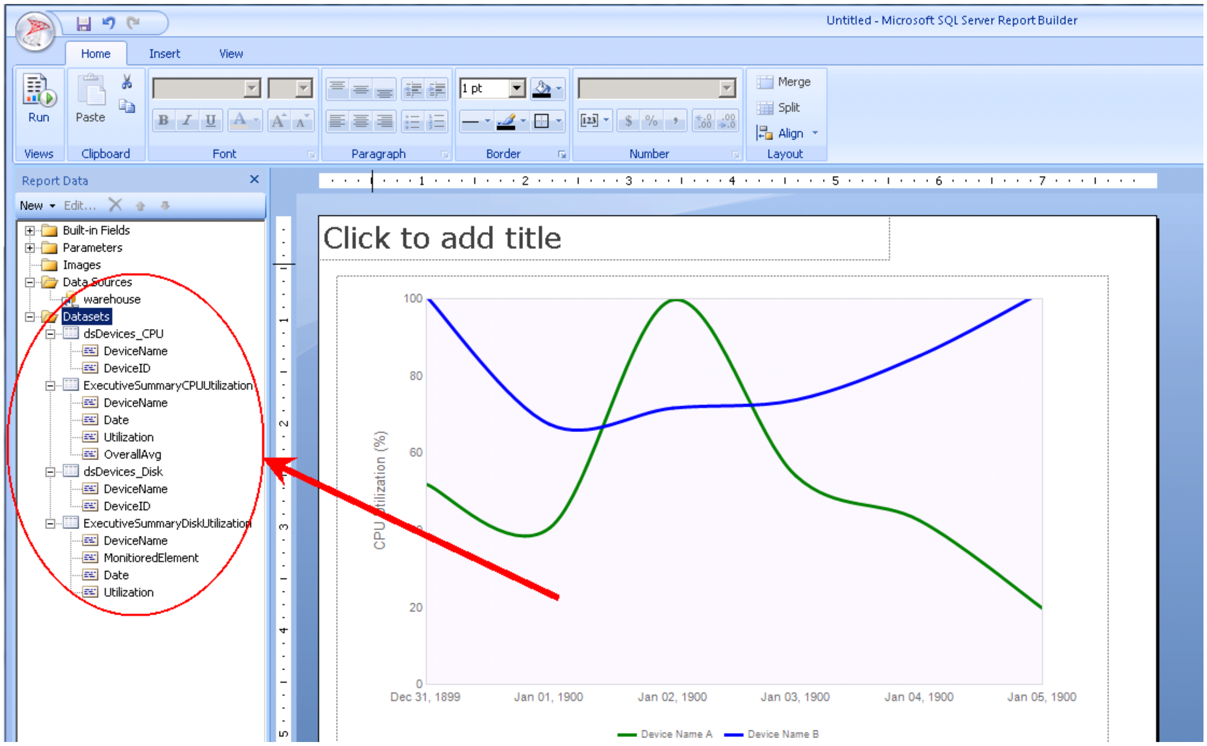
   e. Click **Insert** > **Text Box** and click in the layout, above the second report part.

   Tip: Alternatively, you could copy the box you just created and paste it.

f. Type `Disk Utilization` in the text box and drag it into place.



19. To this point, we have concerned ourselves with the presentation of the report. To view the data that is now associated with this report, find the **Report Data** pane on the left of the Report Builder screen and click to expand **Parameters** and **Datasets**. All the data necessary for the generation of the report has been pulled into the report file by the Report Parts.



20. Save the report.

21. Preview the report in Report Builder. For more information, refer to #5 Previewing Custom Reports in Report Builder on page 73.

22. Upload the report to Report Manager. Refer to Managing Custom Reports in Report Manager on page 93.

Next step: Use the Executive Summary Template and the Hardware Inventory Report Part to create a report in Creating an Executive Summary Report with Hardware Inventory on page 59.

Creating an Executive Summary Report with Hardware Inventory

In this topic, we are going to take the Executive Summary Template and add the Hardware Inventory Report Part to create a useful new report. This also gives us the opportunity to illustrate more of the fundamentals of custom report creation.

Before beginning here, ensure that you reviewed the following: #1 Setting Up an Account for Working in Report Builder on page 5, #2 Accessing Report Builder on page 8 and at least skimmed Creating a CPU and Disk Utilization Report on page 49.

For this topic we are going to take the Executive Summary Template and add the Hardware Inventory Report Part to create a useful new report at the same time as we illustrate more fundamentals of custom report creation. This is the result of a few customer requests to be shown how, and we are happy to oblige.

After completing this topic, you will have learned about:

- The workflow to follow for all reports using Templates and Report Parts on page 59
- Opening the Template and save it locally on page 60
- Inserting a Report Part into a Template on page 63

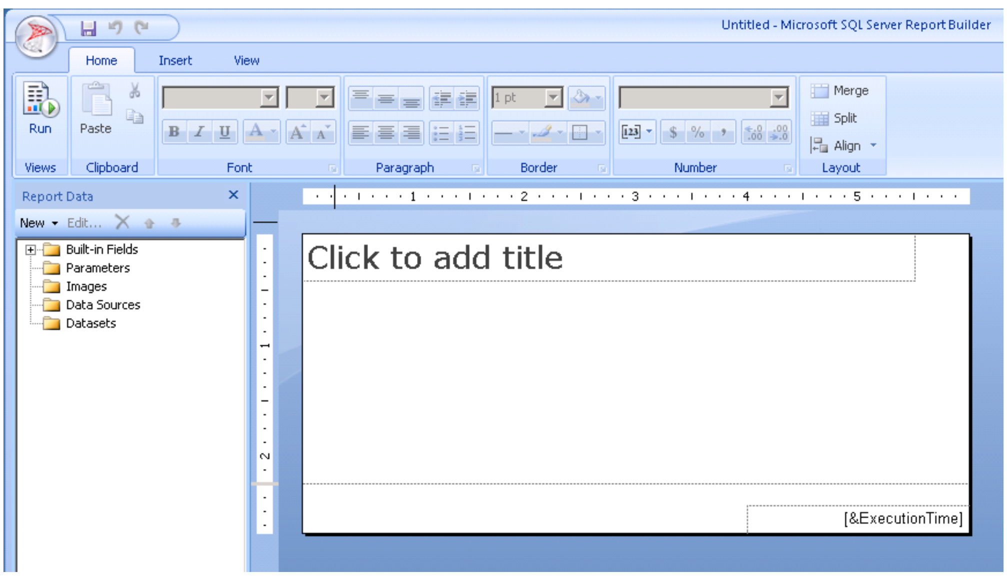
The workflow to follow for all reports using Templates and Report Parts

1. Open Report Builder.

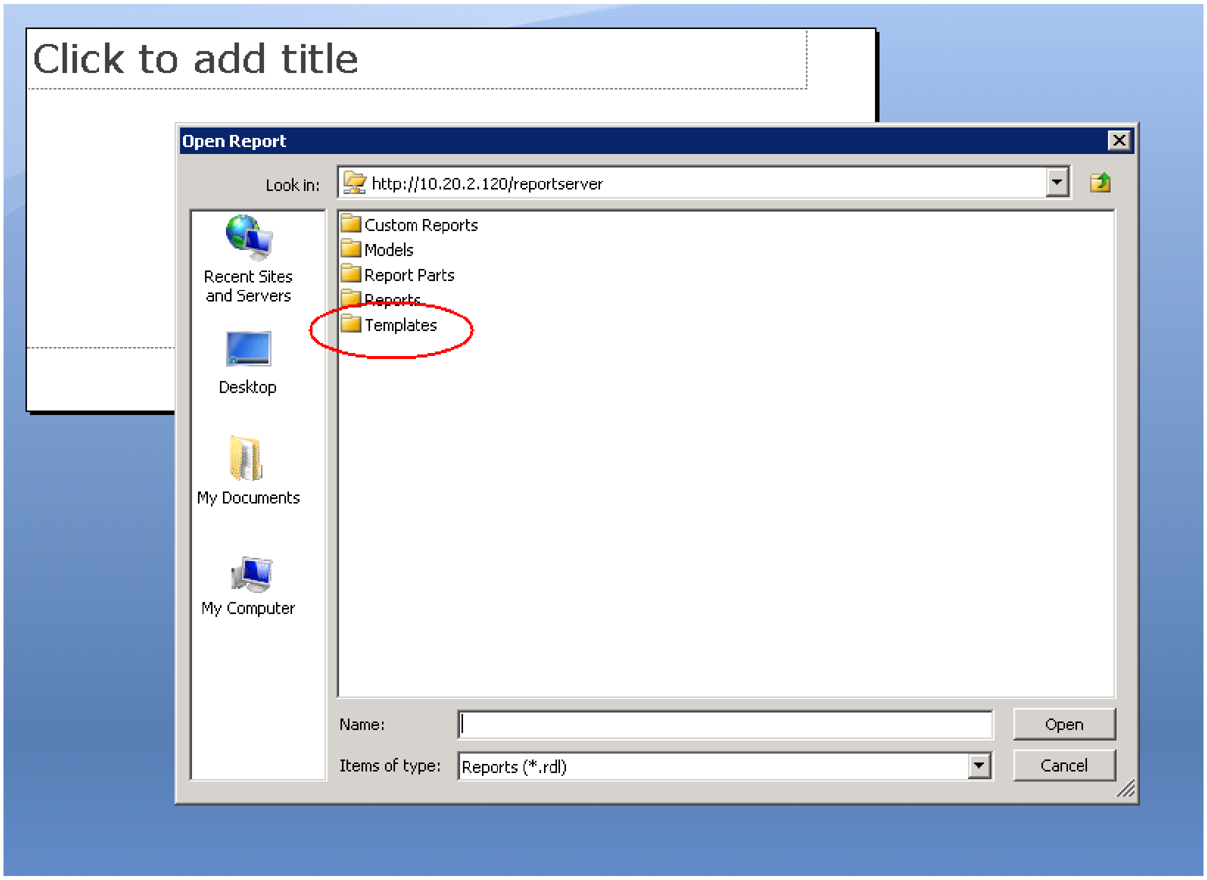
2. Open a Template.
3. Open the Report Manager documentation.
4. For the Template you would like to use, locate the Templates topic in the online help. These topics contain all the configuration details for the UI controls.
5. For Report Parts, locate the Report Parts topics in the online help. These topics have pictures of all Report Parts, names to search on and configuration details for the UI controls.
6. For each Report Part that you would like to add to the report layout:
    1. Locate the section, **Name to search on in the Report Part Gallery**.
    2. Record the name that you use in a list.
    3. Copy the name into the search window of the Report Part Gallery.
    4. Click and drag report parts into the report layout and format them.
7. Save the report locally, record the name of the report for your records and a few details to describe it.
8. Upload the report to Report Manager.
9. Use the documentation for the Template to configure the UI controls for it.
10. Follow the list of Report Parts that you have kept and use the documentation for each Report Part to configure the UI controls.

Opening the Template and save it locally

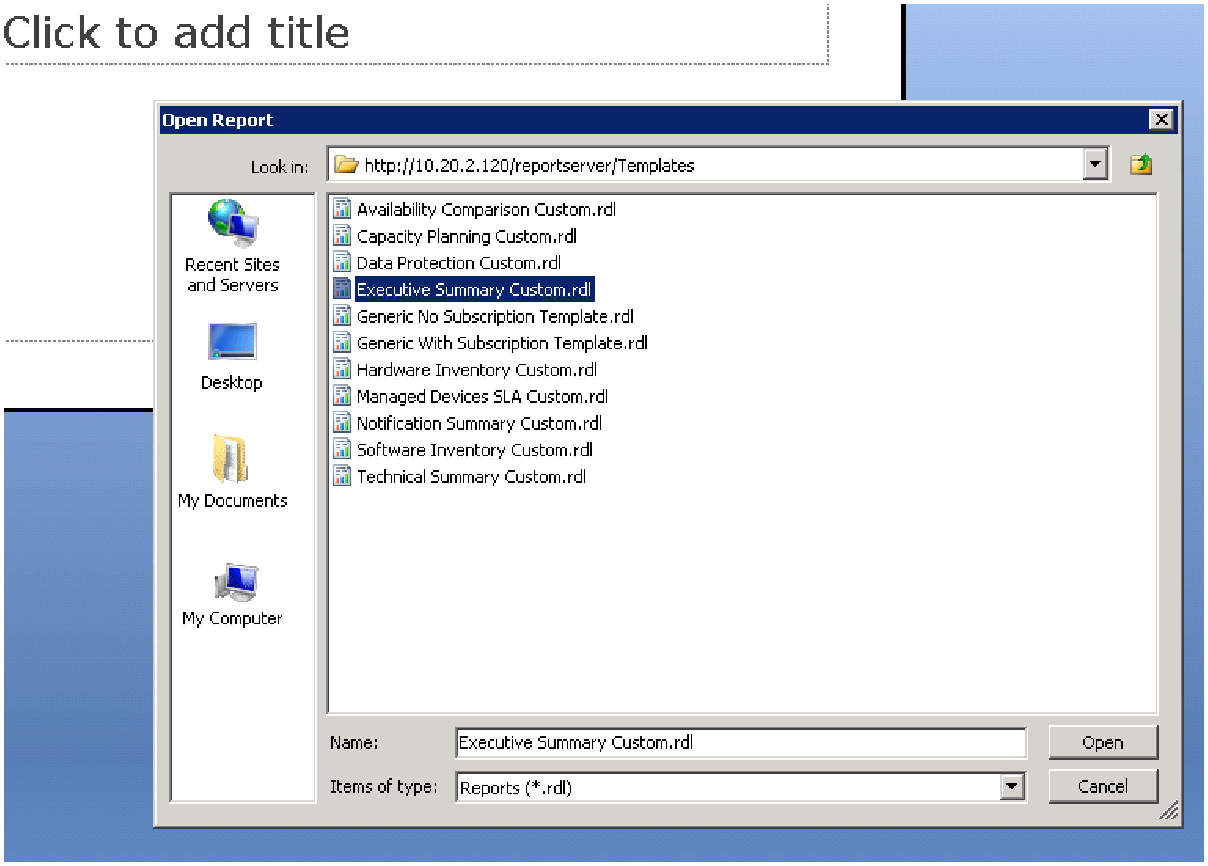
1. Open Report Builder 3.0. Refer to #2 Accessing Report Builder on page 8.
2. Close the **Getting Started** page.
3. The work surface is displayed with a blank report in the design area.



4. In the upper left-hand corner of Report Builder, click the icon and click **Open**.
5. Navigate to your Report Manager server.
6. On the Report Manager server, click **Templates**.



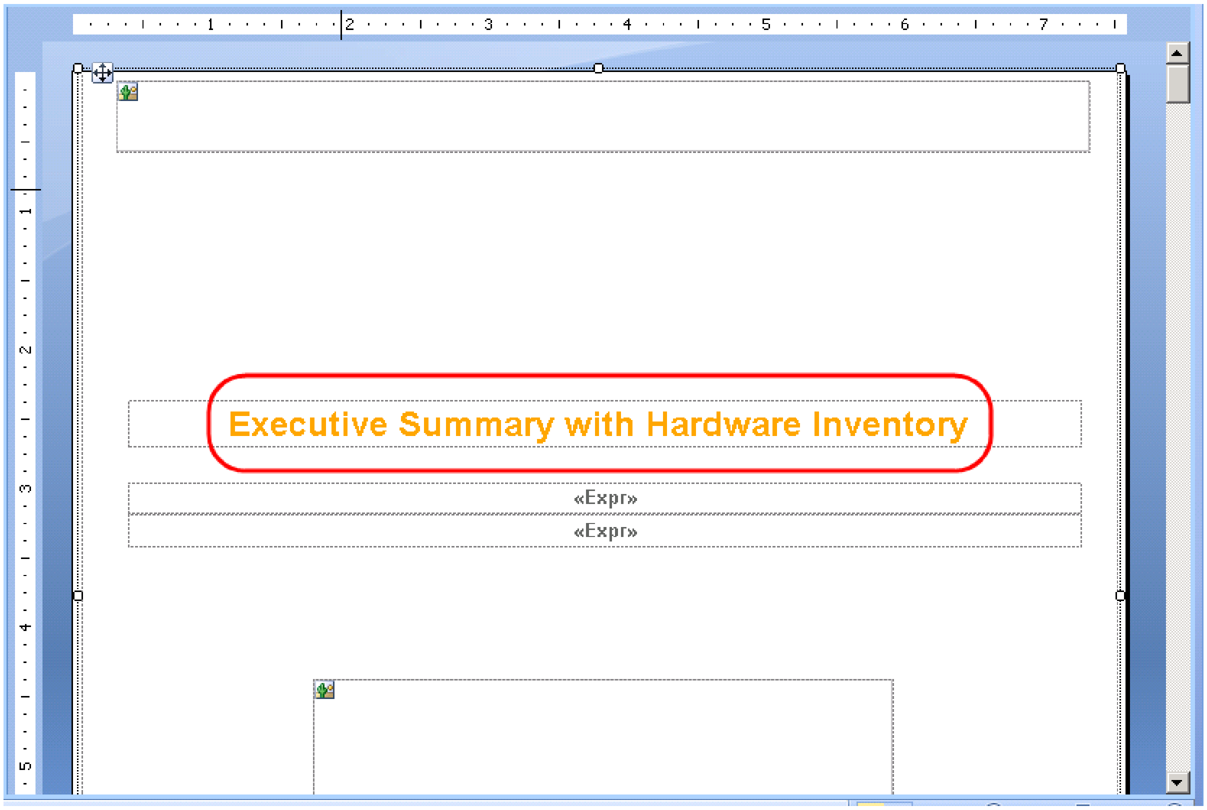
7. From the list of **Template** files, select the **Executive Summary Custom.rdl**



8. **Open** the Template.

   The Executive Summary Report Template opens.

9. Re-title the report.



10. Save the new report locally or to a location to which you have write access (for more information about saving locally, refer to #1 Setting Up an Account for Working in Report Builder on page 5), renaming the report as you do this. This is the name that will appear as the title of the report throughout Report Manager.

    Example: *ExecutiveSummHardwareInv*

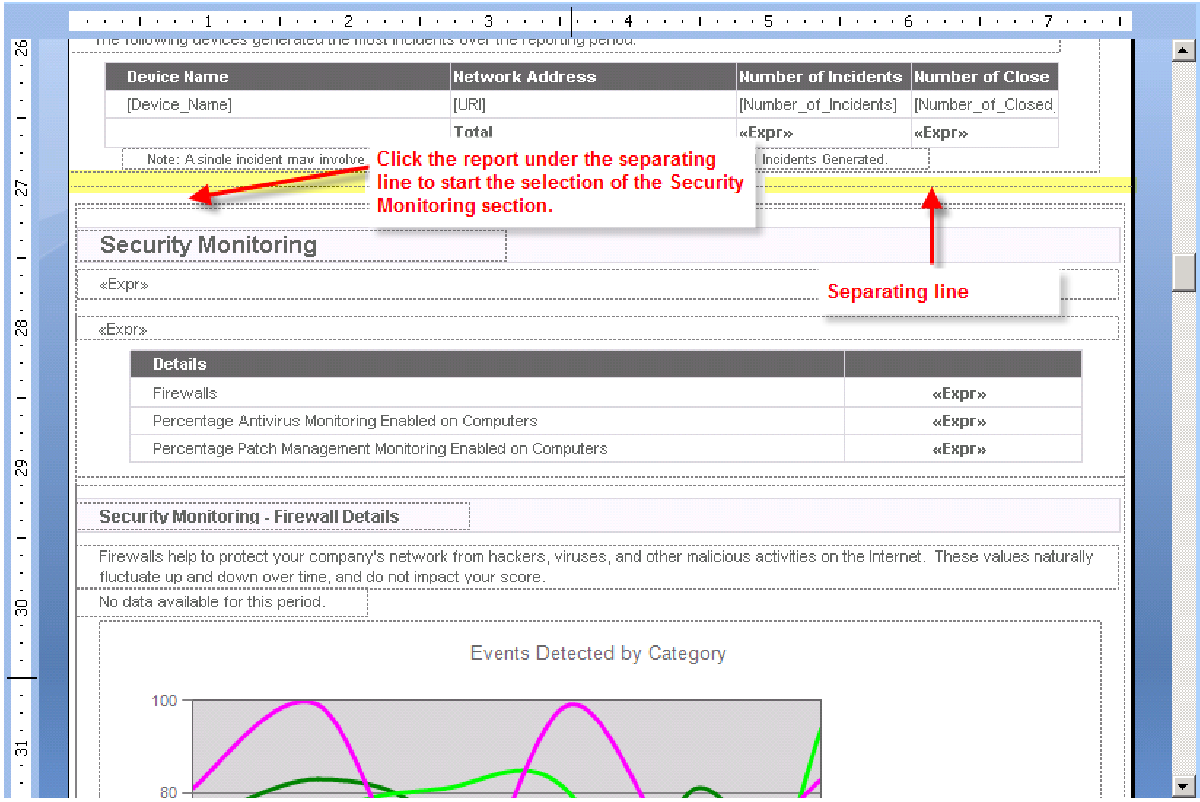
Inserting a Report Part into a Template

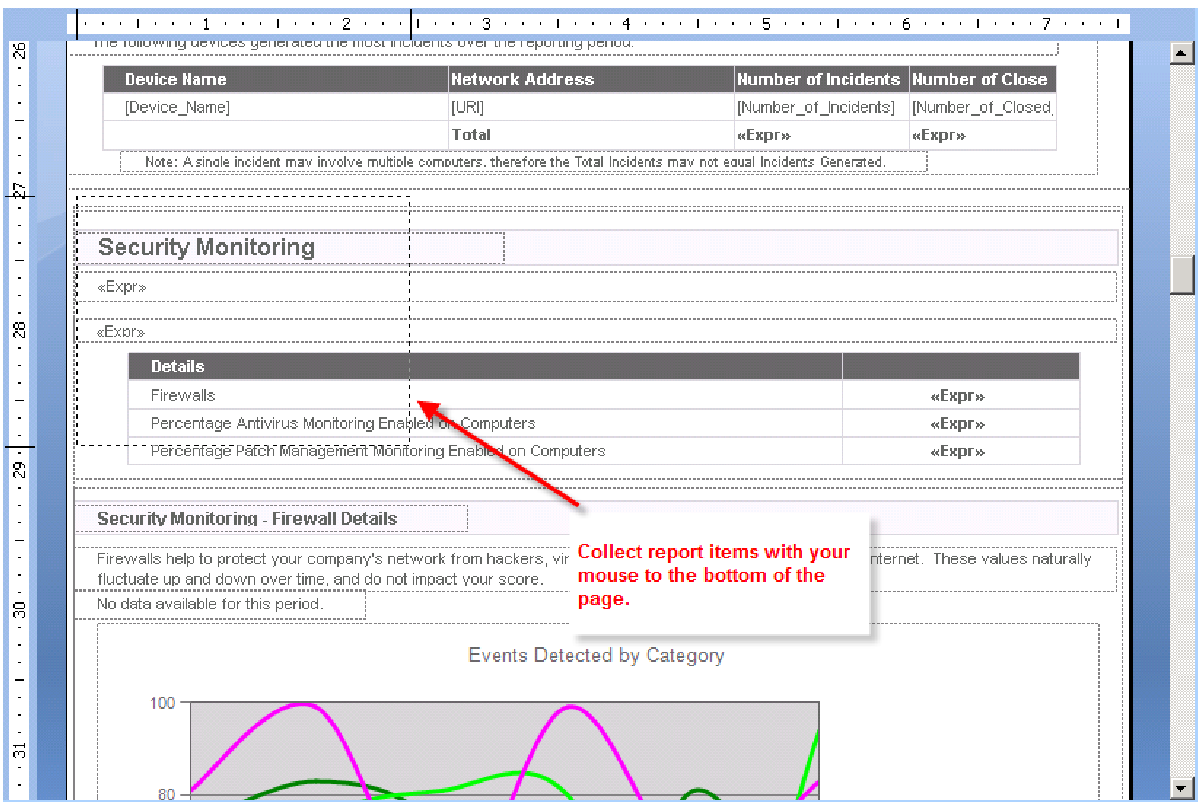
1. Scroll to the end of the Managed Devices section, until **Security Monitoring** appears.

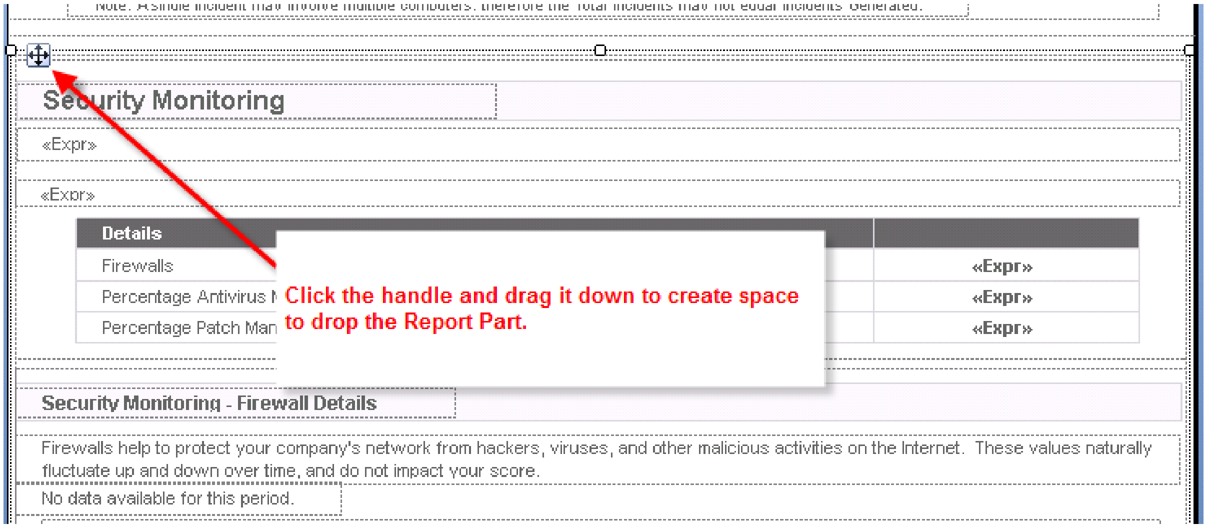
    Warning! Do not click in the report before you scroll. This may select items and move them with the scroll.

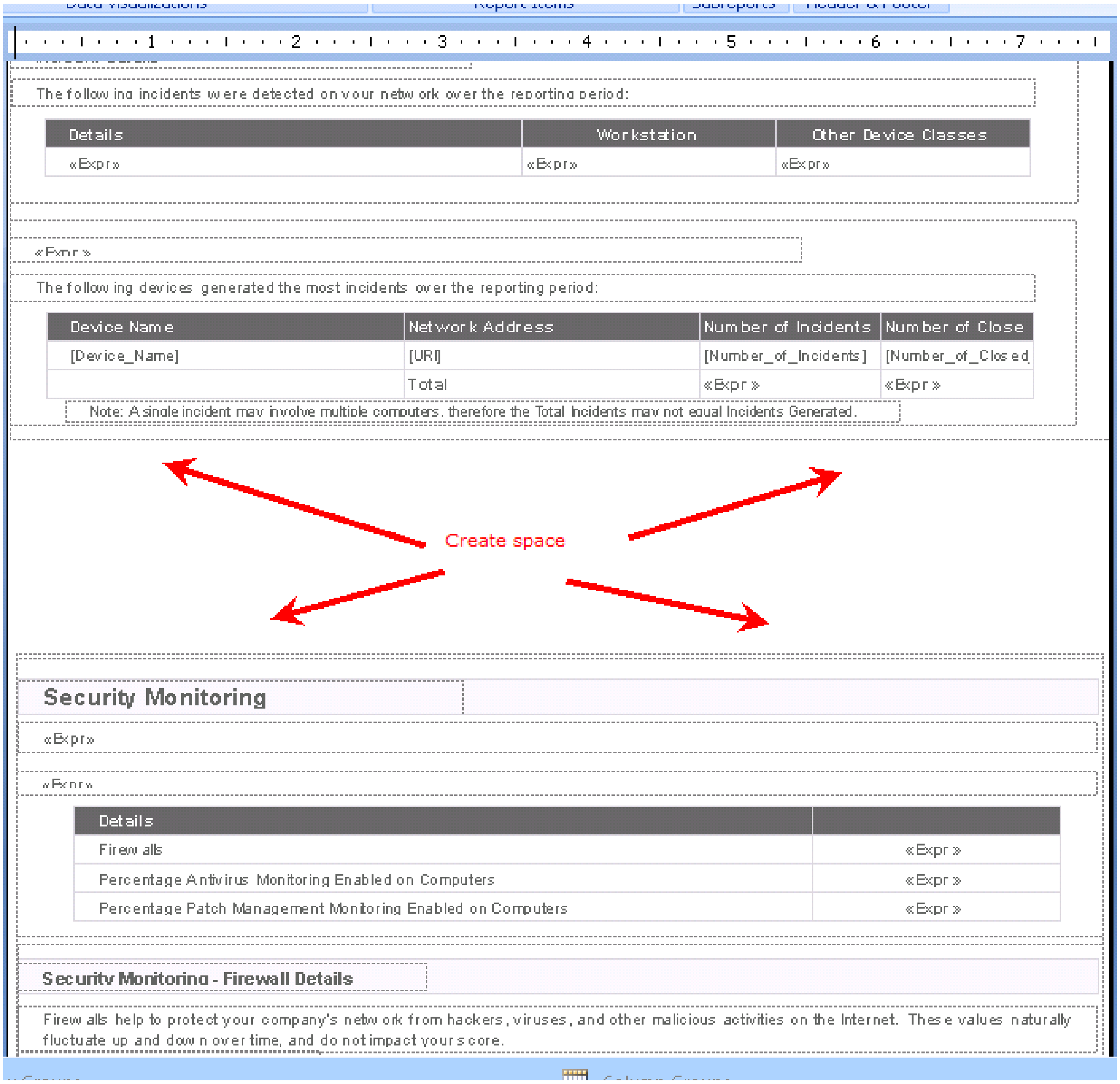
2. Using your mouse, select report items starting with **Security Monitoring** to the bottom of the report. Use the anchor in the left corner to drag the that section of the report down and make room for the report part we are going to insert into this spot.

    Tip: *Before you can select items on the page, you have to be able to place your mouse between items.*

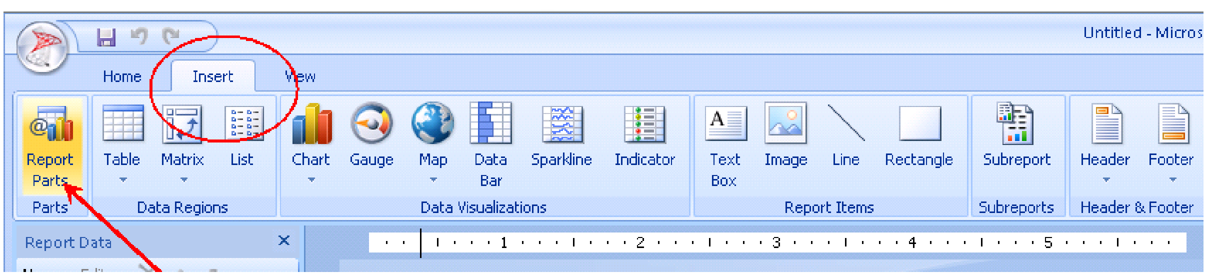

Click the report under the separating line to start the selection of the Security Monitoring section.
Separating line
Security Monitoring
Security Monitoring - Firewall Details
Firewalls help to protect your company's network from hackers, viruses, and other malicious activities on the Internet. These values naturally fluctuate up and down over time, and do not impact your score.
No data available for this period.
Events Detected by Category


Collect report items with your mouse to the bottom of the page.
Security Monitoring
Security Monitoring - Firewall Details
Events Detected by Category


Security Monitoring
«Expr»
«Expr»
Details
Firewalls
Percentage Antivirus M
Percentage Patch Man
«Expr»
«Expr»
«Expr»
Click the handle and drag it down to create space to drop the Report Part.
Security Monitoring - Firewall Details
Firewalls help to protect your company's network from hackers, viruses, and other malicious activities on the Internet. These values naturally fluctuate up and down over time, and do not impact your score.
No data available for this period.



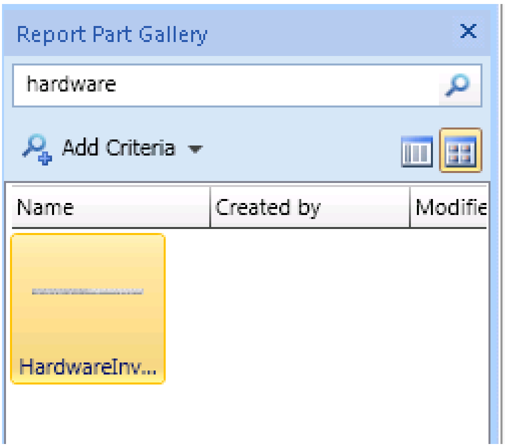
3. Open the Report Part Gallery. Click **Insert** > **Report Parts**.



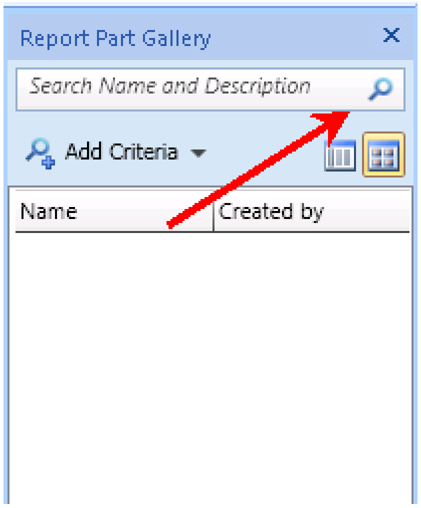
4. Locate the Report Parts documentation. **Creating Custom Reports** > **Report Parts** > individual files contain names of all Report Parts.

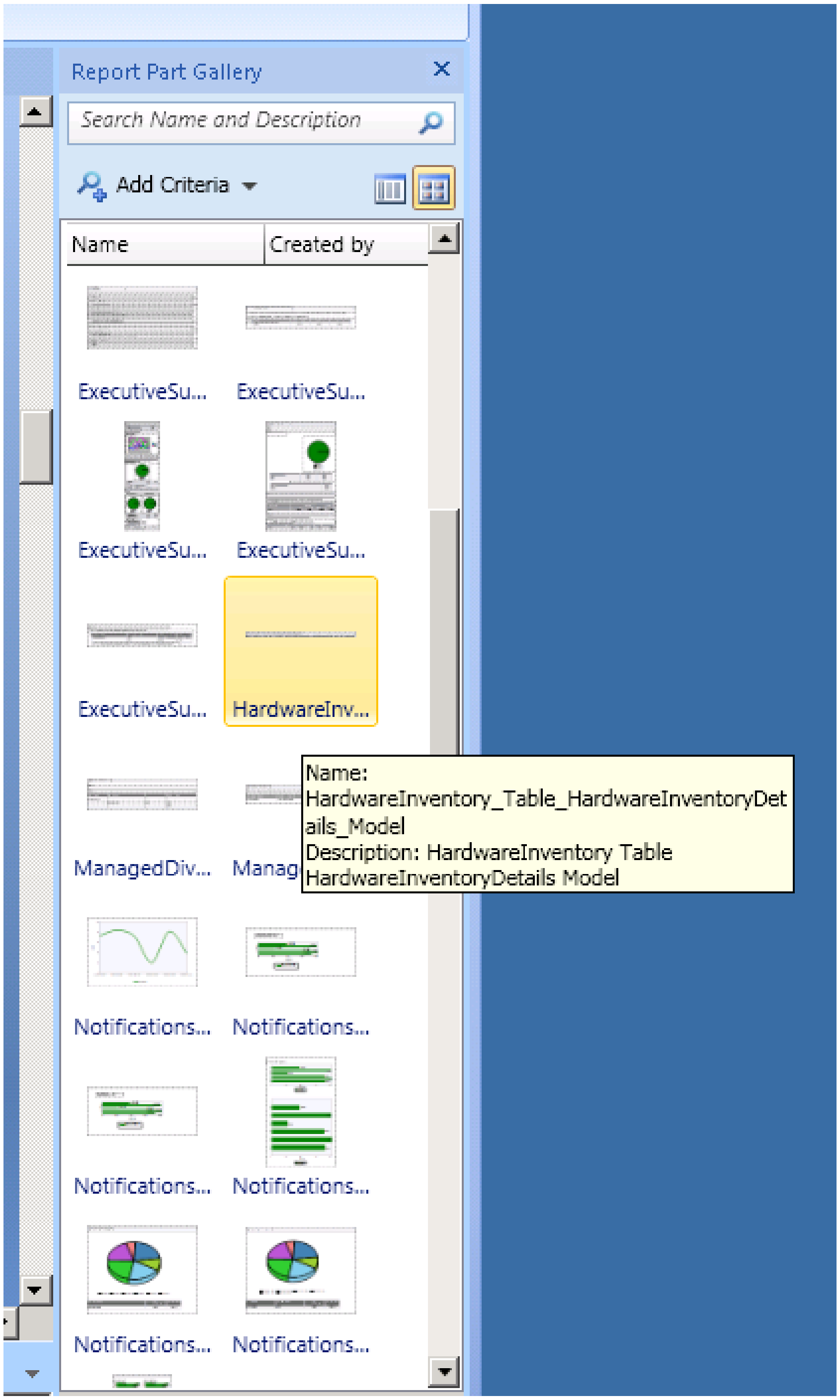
5. Open the Hardware Inventory Report Parts topic and locate the **Name to search on in the Report Part Gallery**: HardwareInventory_Table_HardwareInventoryDetails_Model.

Tip: *You can use partial names to search and then select the Report Part from the search results. In this case, you could type "hardware" and click the search icon to display any report parts with hardware in the name.*

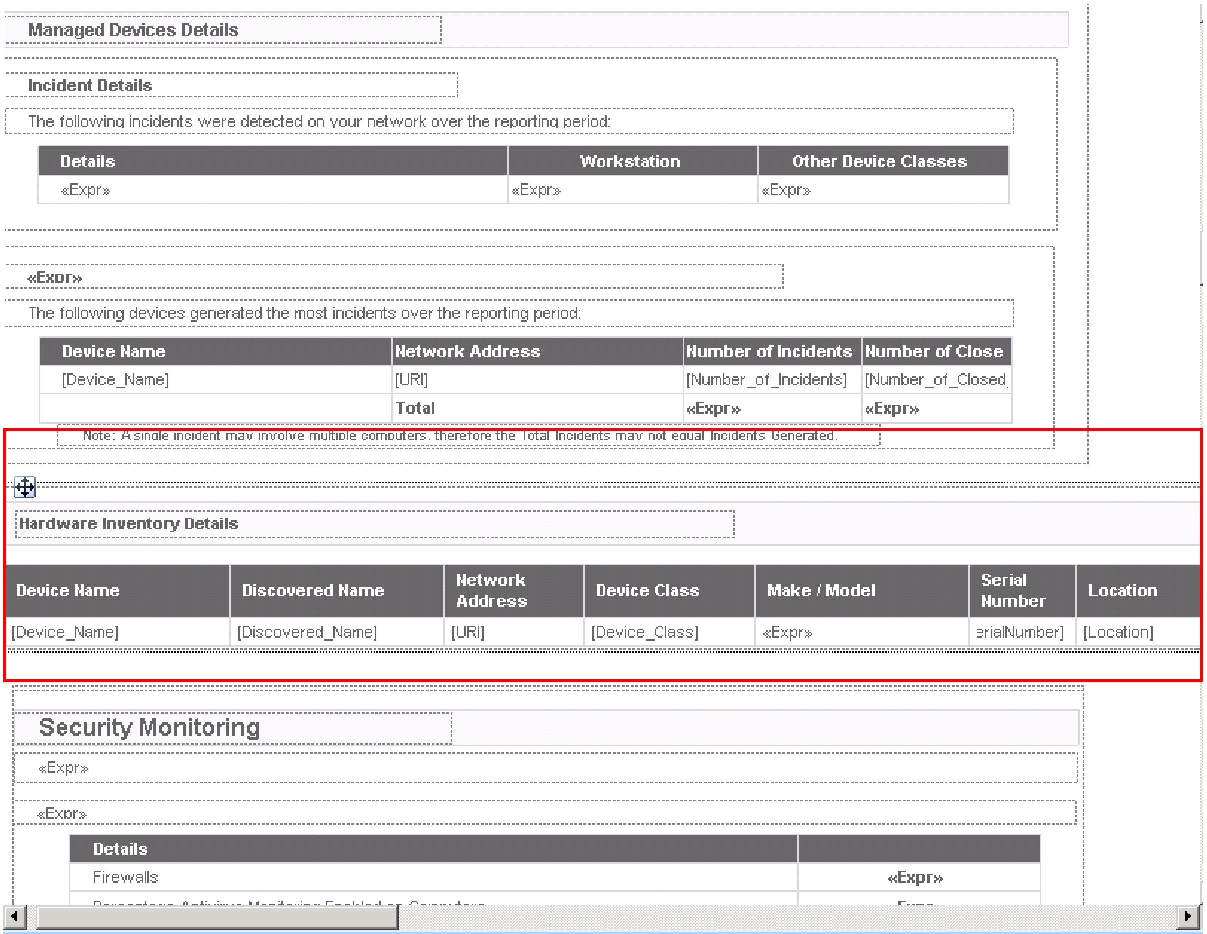


Tip: *To view all Report Parts in the Gallery, clicking the search icon will populate the* ***Report Part Gallery****.*



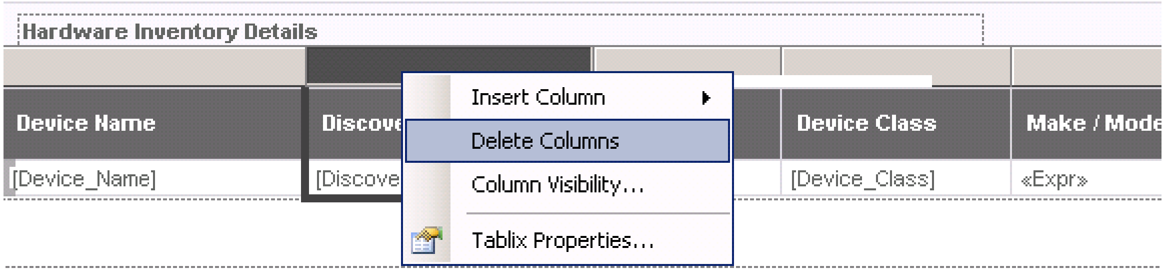


6. Select the Hardware Inventory Report Part and drag it into the space you've just created.



Tip: *In the left-hand Report Data pane, expand **Datasets** and observe that the Hardware Inventory dataset "dsHardware" has been added to the report.*

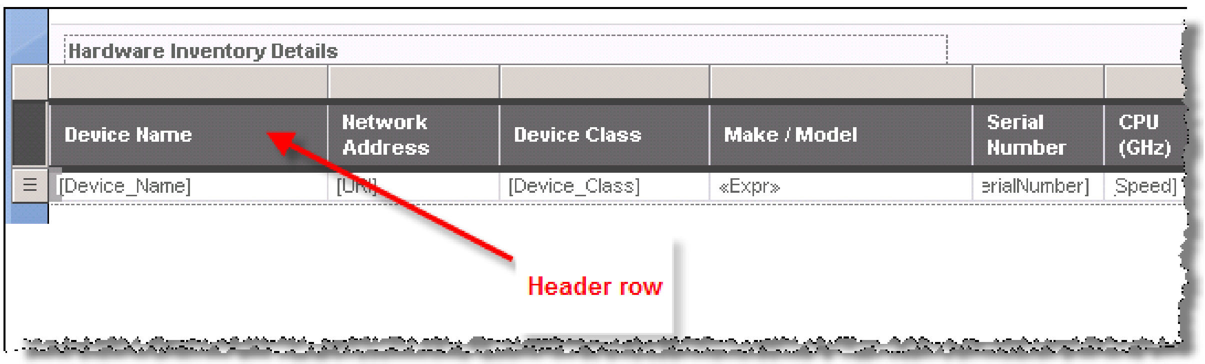
7. In the Design Pane, trim the Hardware Inventory table. Click into the table to display the table handles, and right-click to delete one column at a time. Delete the following columns:
   - Discovered Name
   - Location
   - Asset Tag
   - OS Installation
   - Expected Replacement
   - Warranty Expiry
   - Lease Expiry
   - Purchase Date
   - Cost
   - First Discovery
   - Last Discovery



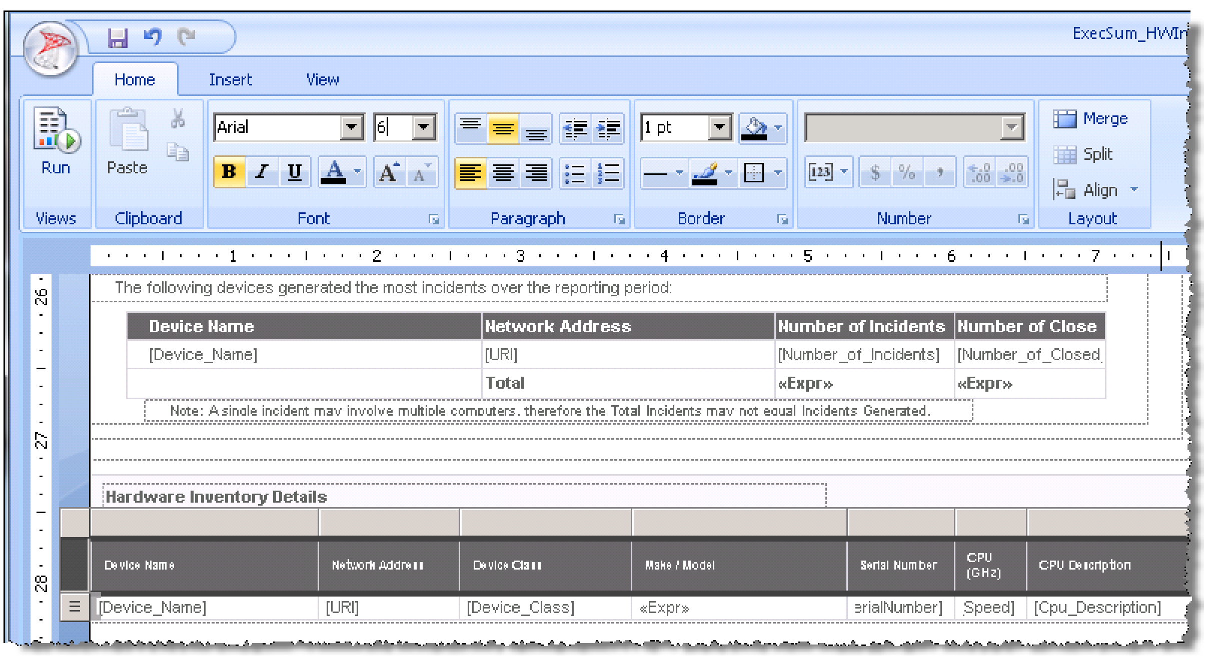
8. Fix your view. Scroll horizontally to the right margin of the rectangle containing the Report Part and drag it in to fit the newly reduced table.

9. Adjust the column widths and the fonts so that the table fits within the report width of 7.5 inches.

10. Select the header row.

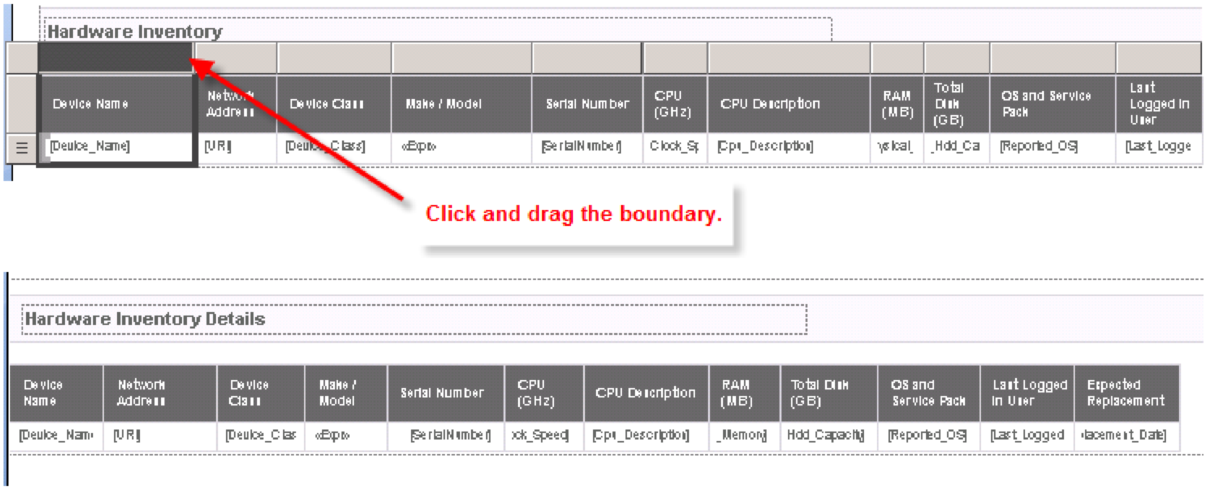


11. With the header row highlighted, select the Home tab in the main menu bar at the top, and adjust the font to 6.



12. Do the same for the body row.

13. Reduce the table size to 7.5 inches width. Adjust the columns by clicking and dragging from the right of each column.



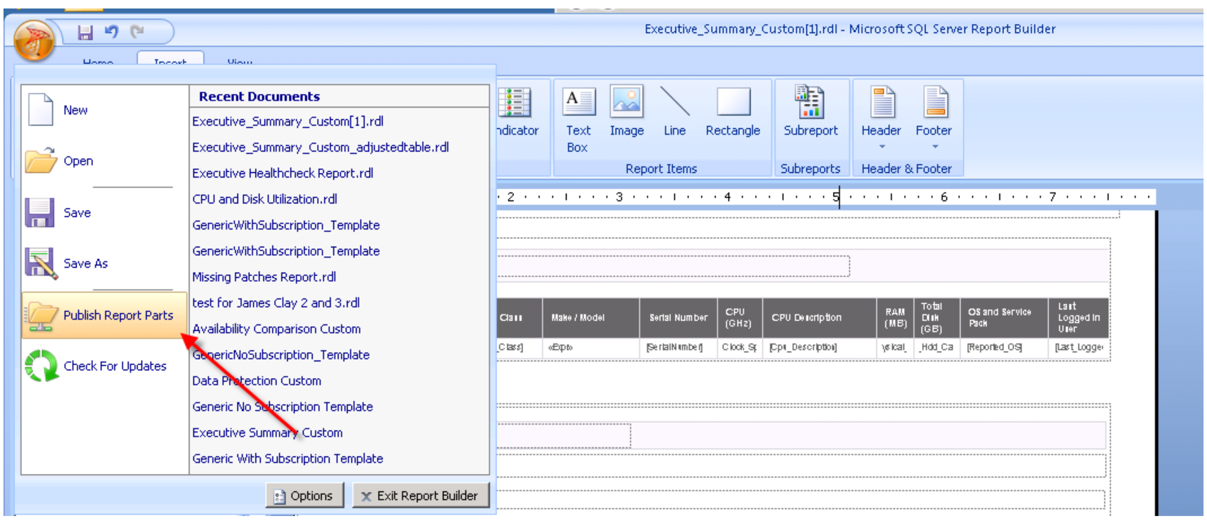
14. Adjust the width of the rectangles around the title (Hardware Inventory Details) and the tablix by selecting the rectangles and dragging them in to 7.5 inches.

15. Adjust your view of the report page by scrolling to the far right, clicking and dragging it back to 7.5 inches. (The insertion of the report part expanded the report design view.)

16. Optionally, after reformatting the Hardware Inventory Report Part,you can publish it to the server for reuse.

To publish a Report Part:

a. Click the icon in the top left of the ribbon menu and select **Publish Report Parts**.



b. Select **Review and modify report parts before publishing**.

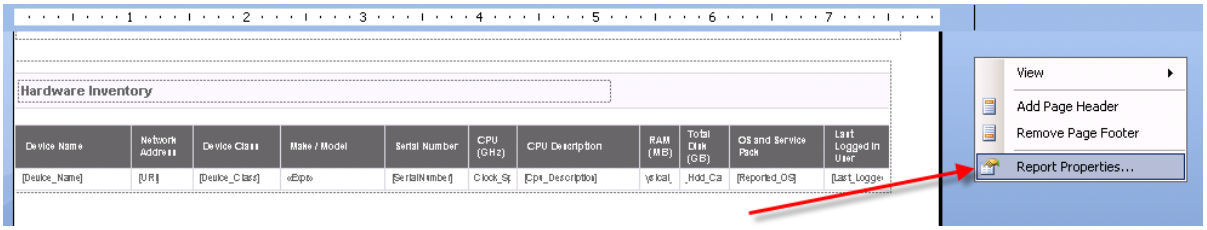
c. Select the check box next to Report parts to clear all check boxes.

d. Select the check box next to the Hardware Inventory report part (HardwareInventory_Table_HardwareInventoryDetails_Model).

e. Click the report part name and rename the report part to something meaningful.

f. Click **Publish**.

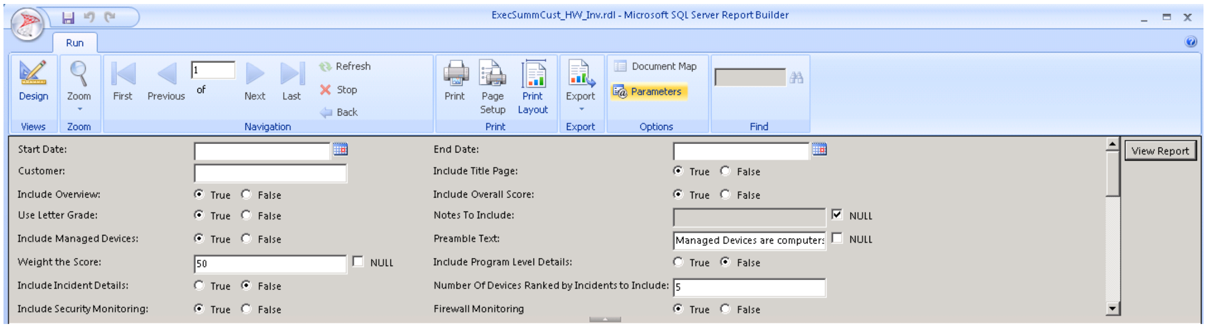
Tip: *To change report properties, such as the orientation of a report right-click the blue background of the report design surface and select Report Properties from the quick menu that appears.*



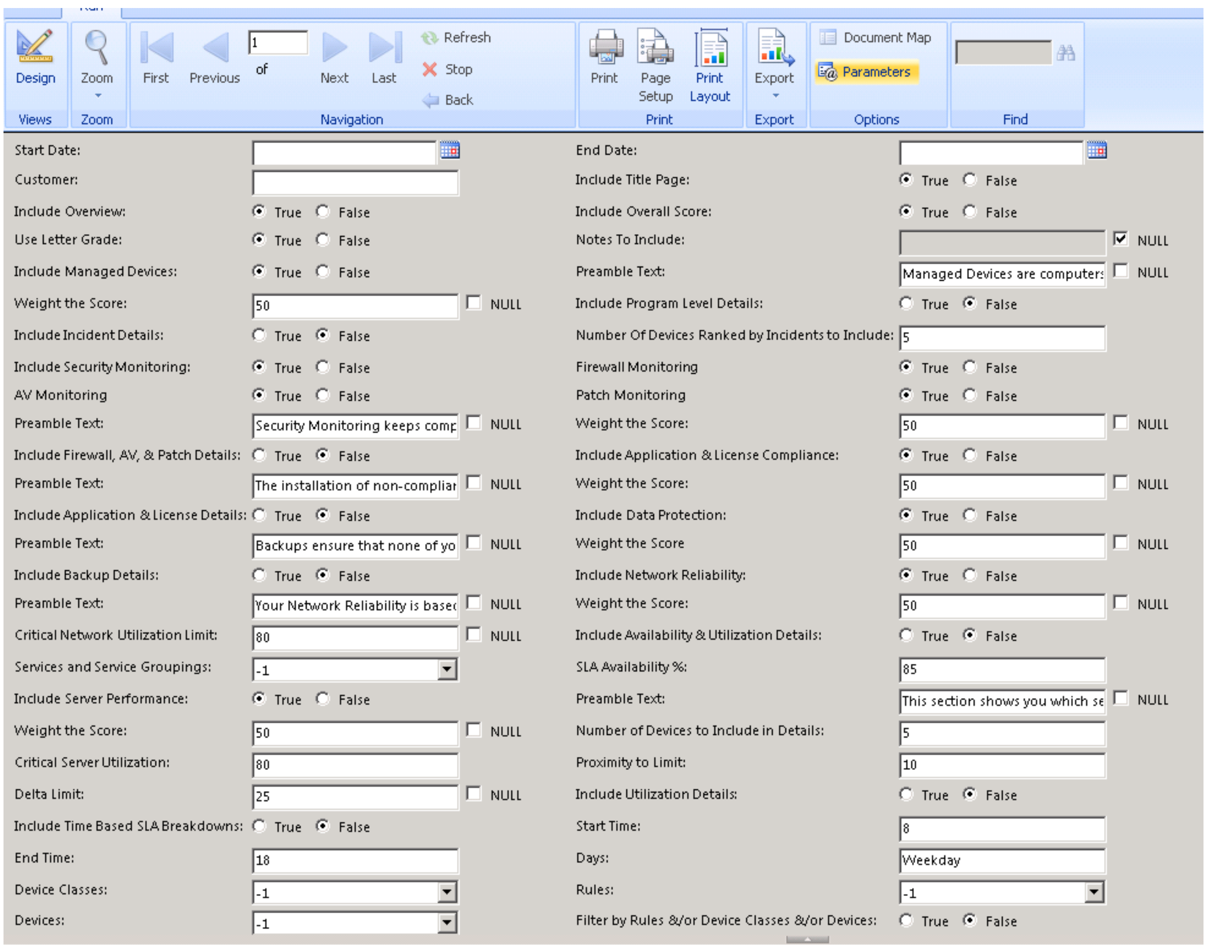
Previewing a report in Report Builder

1. Click **Run** in the far left of the ribbon menu.

   The report appears in the Run mode.



2. Drag the bottom edge of the portion of the screen with the UI control parameters until all the UI control parameters are displayed.



3. For the purposes of previewing the new custom report before uploading it to Report Manager, provide a Start Date, an End Date and a Customer (use the Customer ID #).
4. Preview the report in Report Builder. For more information, refer to #5 Previewing Custom Reports in Report Builder on page 73.
5. Upload the report to Report Manager. Refer to Managing Custom Reports in Report Manager on page 93.

#5 Previewing Custom Reports in Report Builder

After creating a report in Report Builder you can preview it by using the Run feature in the ribbon menu. In order to preview the report, you will need to supply values for some of the parameters and ID numbers for others. The following parameters need ID numbers: Device Classes, Folders (Rules), Devices, Services (Services and Service Grouping).

You can obtain the ID numbers to run reports by generating stock reports with the same parameters in Report Manager.

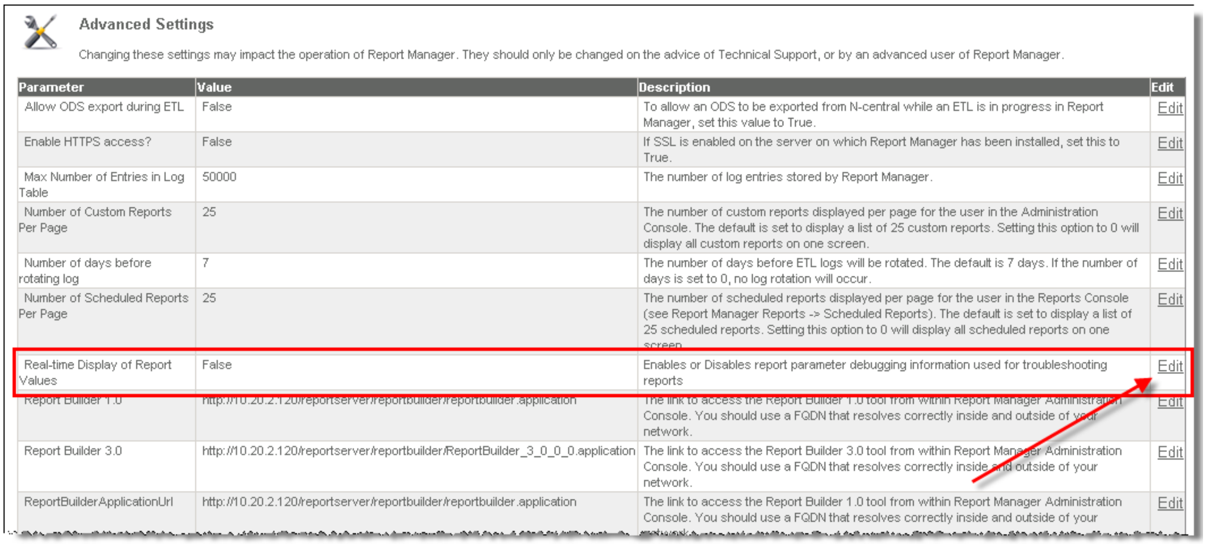
Workflow:

- In the Administration Console, enable Real-time display of Report Values on page 74
- In the Reports Console, run a stock report with the parameters for which you need ID numbers on page 74
- In Report Builder, preview a custom report, using parameter values from stock report. on page 77

Tip: *Open Report Manager and Report Builder at the same time and switch between windows.*

In the Administration Console, enable Real-time display of Report Values

1. Sign in to the Administration Console.
2. Navigate to **Advanced Settings** (click **System Setup and Logs** > **Advanced Settings**).
3. Locate **Real-time Display of Report Values**.



Advanced Settings

Changing these settings may impact the operation of Report Manager. They should only be changed on the advice of Technical Support, or by an advanced user of Report Manager.

Parameter	Value	Description	Edit
Allow ODS export during ETL	False	To allow an ODS to be exported from N-central while an ETL is in progress in Report Manager, set this value to True.	Edit
Enable HTTPS access?	False	If SSL is enabled on the server on which Report Manager has been installed, set this to True.	Edit
Max Number of Entries in Log Table	50000	The number of log entries stored by Report Manager.	Edit
Number of Custom Reports Per Page	25	The number of custom reports displayed per page for the user in the Administration Console. The default is set to display a list of 25 custom reports. Setting this option to 0 will display all custom reports on one screen.	Edit
Number of days before rotating log	7	The number of days before ETL logs will be rotated. The default is 7 days. If the number of days is set to 0, no log rotation will occur.	Edit
Number of Scheduled Reports Per Page	25	The number of scheduled reports displayed per page for the user in the Reports Console (see Report Manager Reports -> Scheduled Reports). The default is set to display a list of 25 scheduled reports. Setting this option to 0 will display all scheduled reports on one screen.	Edit
Real-time Display of Report Values	False	Enables or Disables report parameter debugging information used for troubleshooting reports	Edit
Report Builder 1.0	http://10.20.2.120/reportserver/reportbuilder/reportbuilder.application	The link to access the Report Builder 1.0 tool from within Report Manager Administration Console. You should use a FQDN that resolves correctly inside and outside of your network.	Edit
Report Builder 3.0	http://10.20.2.120/reportserver/reportbuilder/ReportBuilder_3_0_0_0.application	The link to access the Report Builder 3.0 tool from within Report Manager Administration Console. You should use a FQDN that resolves correctly inside and outside of your network.	Edit
ReportBuilderApplicationUrl	http://10.20.2.120/reportserver/reportbuilder/reportbuilder.application	The link to access the Report Builder 1.0 tool from within Report Manager Administration Console. You should use a FQDN that resolves correctly inside and outside of your	Edit

4. Click **Edit**.
5. Replace **False** with **True** by typing it in and click **Update**.

Real-time Display of Report Values	True	Enables or Disables report parameter debugging information used for troubleshooting reports	Update Cancel

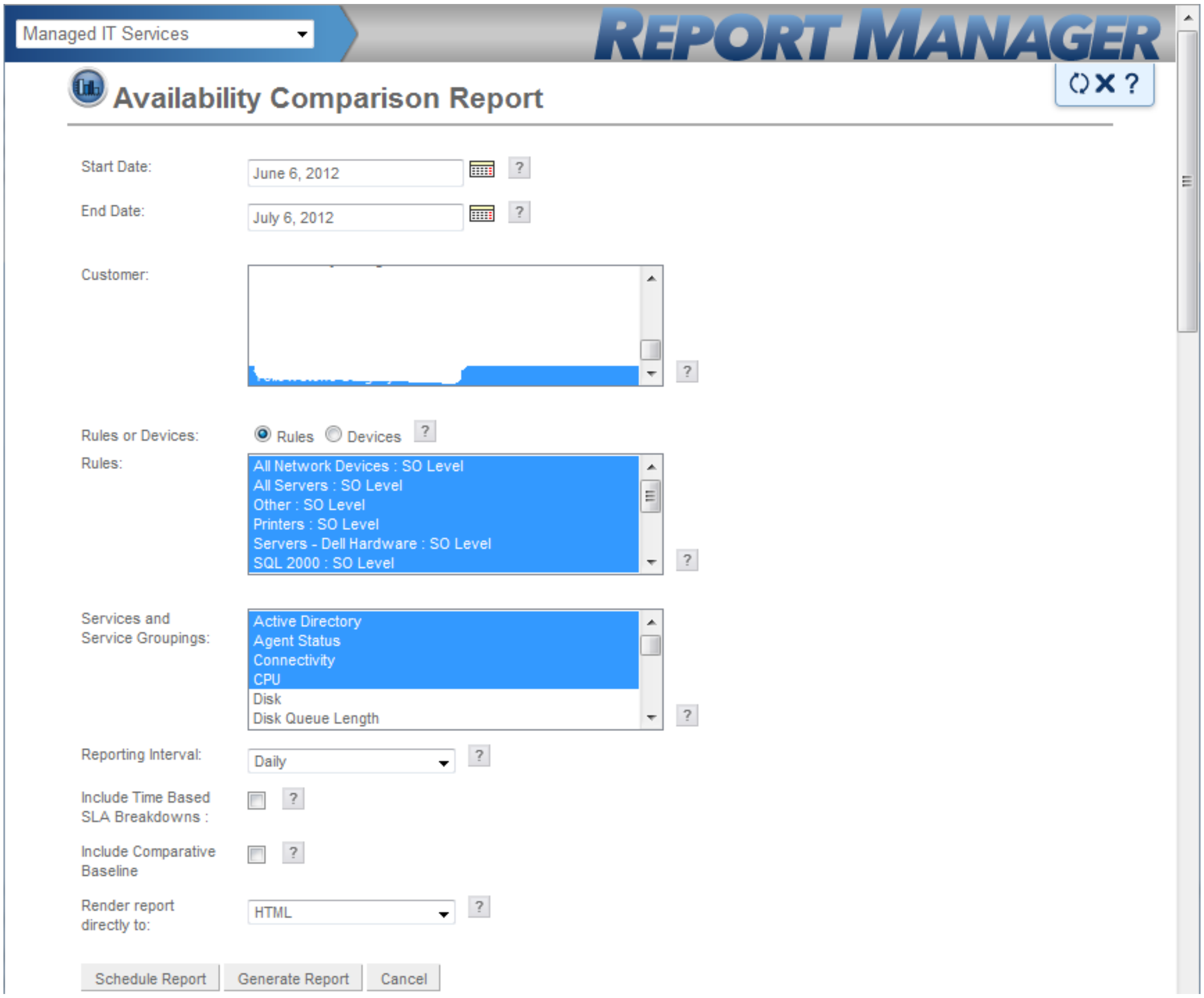
This will provide a table with parameter values each time a report is run in the Reports Console. It appears below the generated report in the screen. You can use the parameter values from this table when you run a Template report in Report Builder to preview it.

In the Reports Console, run a stock report with the parameters for which you need ID numbers

For this example, use the Availability Comparison report, as it has Customer, Rules (Folders), Devices, and Services parameters.

1. Open the Reports Console and navigate to the Availability Comparison Report (click **Managed IT Services** > **Availability Comparison Report**).
2. Select any start and end dates, select a **Customer** and **Rules or Devices**, one or more **Service and Service Groupings** and click **Generate Report**.

   Tip: *You don't have to wait for the report to generate to get this table. The minute you see the report values table, you can click the* ***Cancel Report Generation*** *button and your selections—the customer, rules or devices,and services will be displayed in the parameter values table.*



The report generated in HTML:

The parameter values table, with the following IDs displayed:

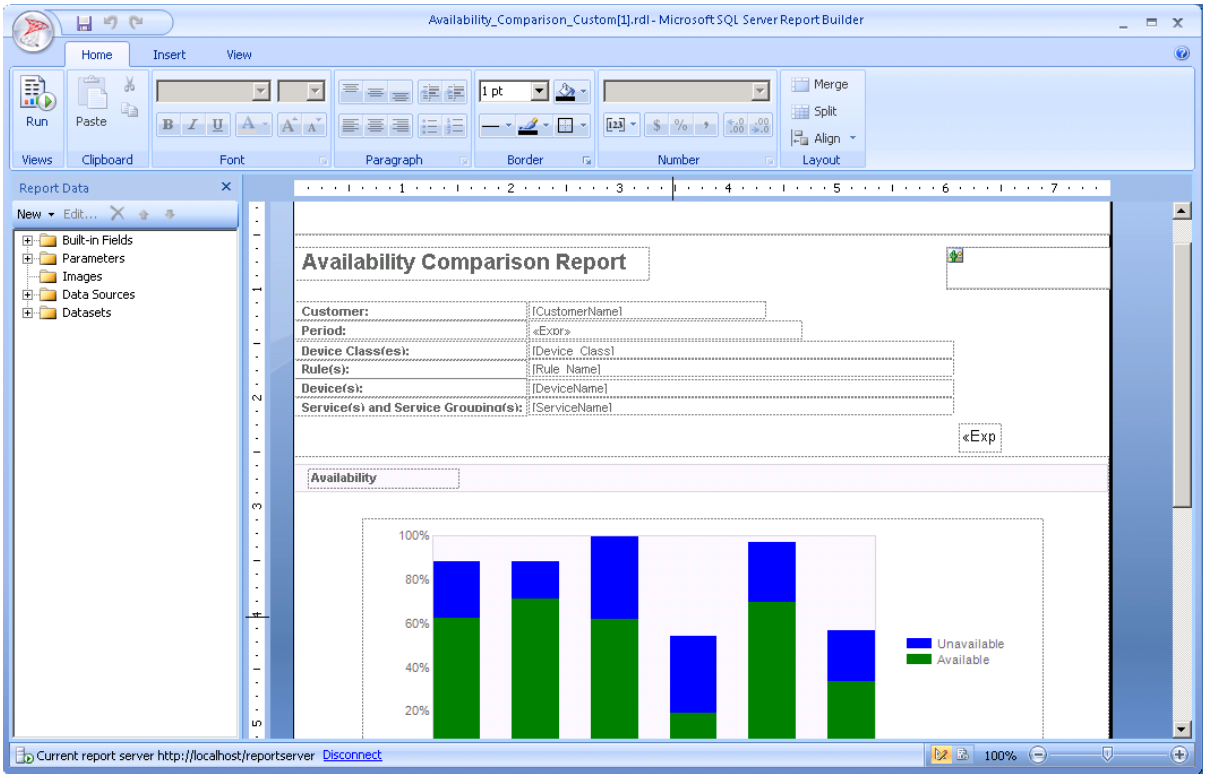
- Customer ID
- Rules (Folders) IDs
- Services and Service Groupings IDs

Parameter Name	Parameter Value	Data Type
StartDate	June 6, 2012	DateTime
EndDate	July 6, 2012	DateTime
IsFolder	True	Boolean
CustomerID	106	String
Devices	[BLANK]	String
Folders	79,158,2357,2600,2681,2978	String
Services	221,121,8,18	String
Interval	Daily	String
IncludeBreakdown	False	Boolean
StartHour	1	Integer
EndHour	1	Integer
WeekType	Weekday	String
IncludeBaseline	False	Boolean
BaselineType	[BLANK]	String
BaselineProgramLevel	[BLANK]	String
rs:Format	HTML	string
rs:ReportName	Availability Comparison Report	string
Subscription	none	string

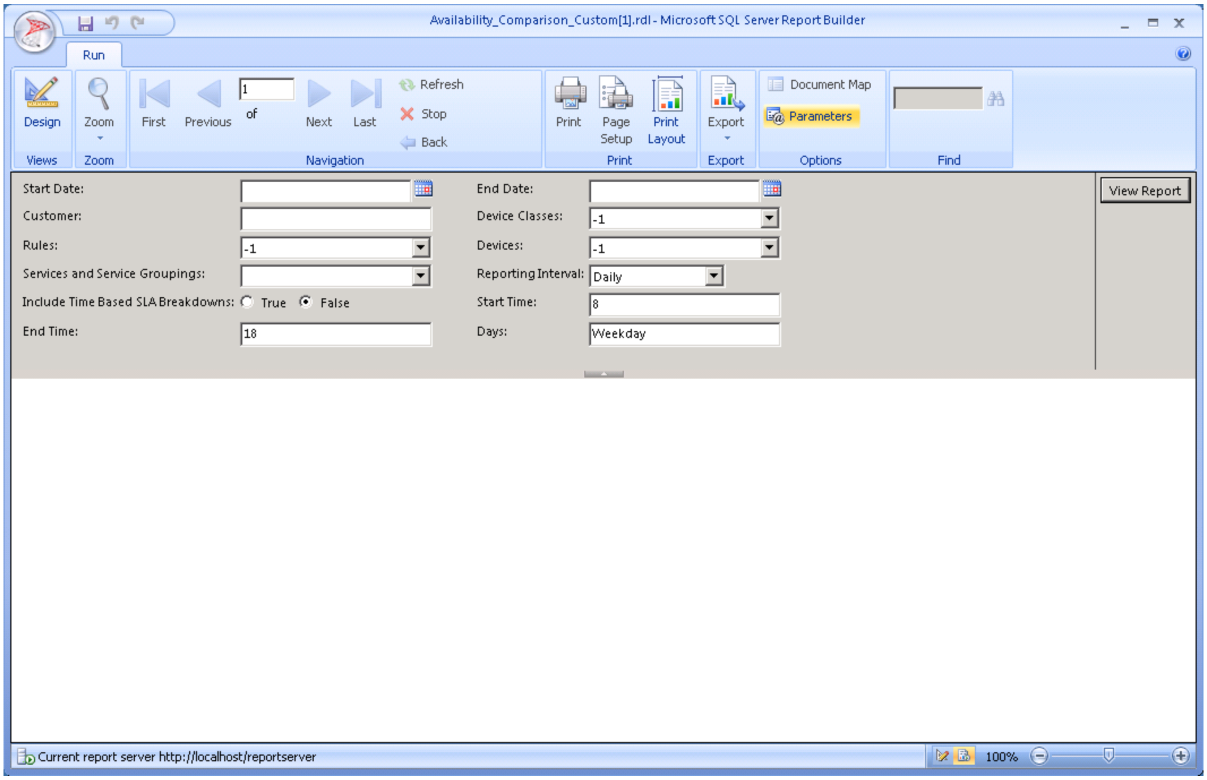
In Report Builder, preview a custom report, using parameter values from stock report.

1. Open Report Builder. For more information, refer to #2 Accessing Report Builder on page 8.

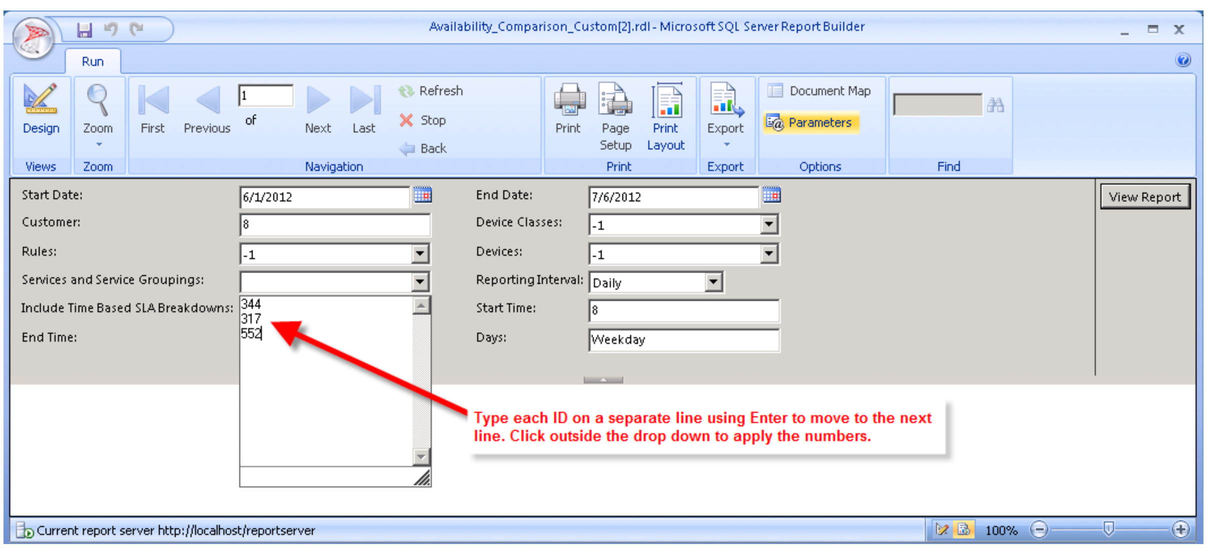
2. Open a Template. For this example, open the Availability Comparison Custom. (Click the icon in the top left > **Open** and navigate to the Templates folder on your report server. Refer to Templates.)



3. Click **Run** in the ribbon menu to run the report for preview.



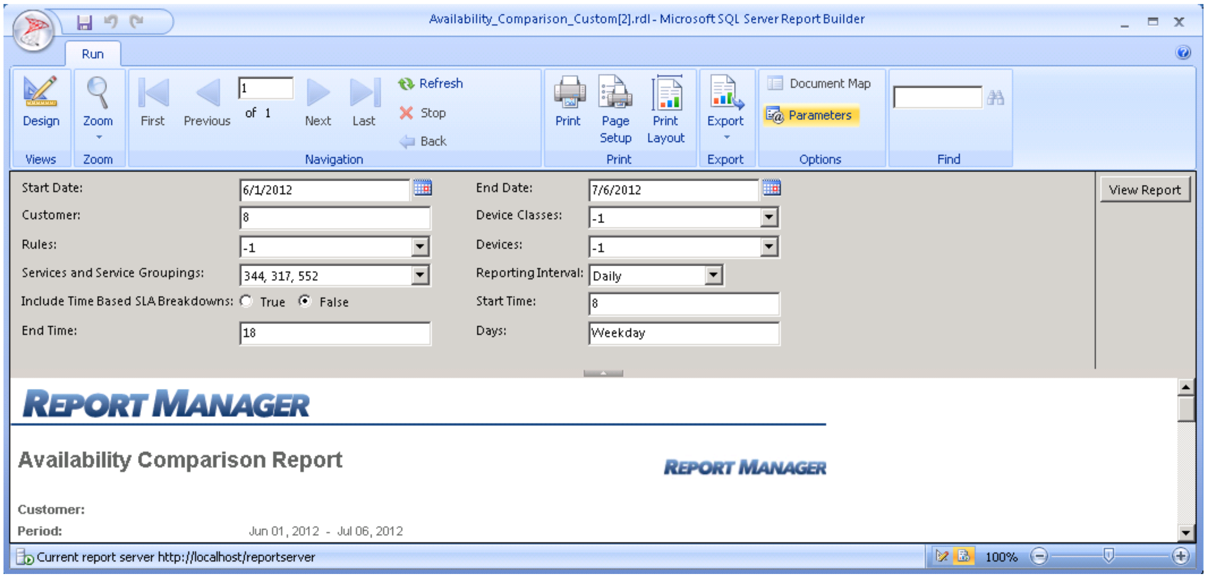
4. Provide start and end dates and the required parameter IDs: Customer ID, Services and Service Groupings. Click the drop-down beside the parameter name, and type the ID in the middle box. For multiple ID numbers, place them on separate lines. They will appear in the text box with commas after the next click.



Tip: *You only need to provide one ID for parameters with multiple IDs listed to preview the report.*

5. Click **View Report**.

   The report renders below the parameters.



6. Return to the design view (click **Design**) to make any changes to the report.

#6 Configuring UI Controls in Report Manager

What are Parameters? UI Controls?

Parameters specify the data to use in a report. They allow you to filter data, vary appearance, and connect to related reports. When you create a report parameter and run a report, you enable the user to choose values for the report parameter. In your report, you can write expressions that refer to the value of the parameter at run time and change the data or appearance of the report. Parameters are also used when you include a link to another report or to a subreport from your main report.

The UI control or Parameter Type determines how the user selects input for the parameter at run time. Examples of UI controls: pick lists, check boxes, text boxes, date fields. The Parameter Type for user input must be matched to Data Type.

Before reading this topic, you may want to review How to Create Custom Reports on page 4, if you have not already.

After completing this topic, you will have learned about:

- The two Modes: Simple and Advanced
- What it means to edit the UI controls: Side-by-side editing and runtime
- How to upload a Template and configure UI controls
- How to set up a Validation Group
- How to set up Data Dependency
- How to set up Visibility Dependency
- About Required Field and Default Value
- UI control features: Definition and Description

The two Modes: Simple and Advanced

There are two modes in which to view the UI control configuration screen in Custom Report Management: Simple and Advanced.

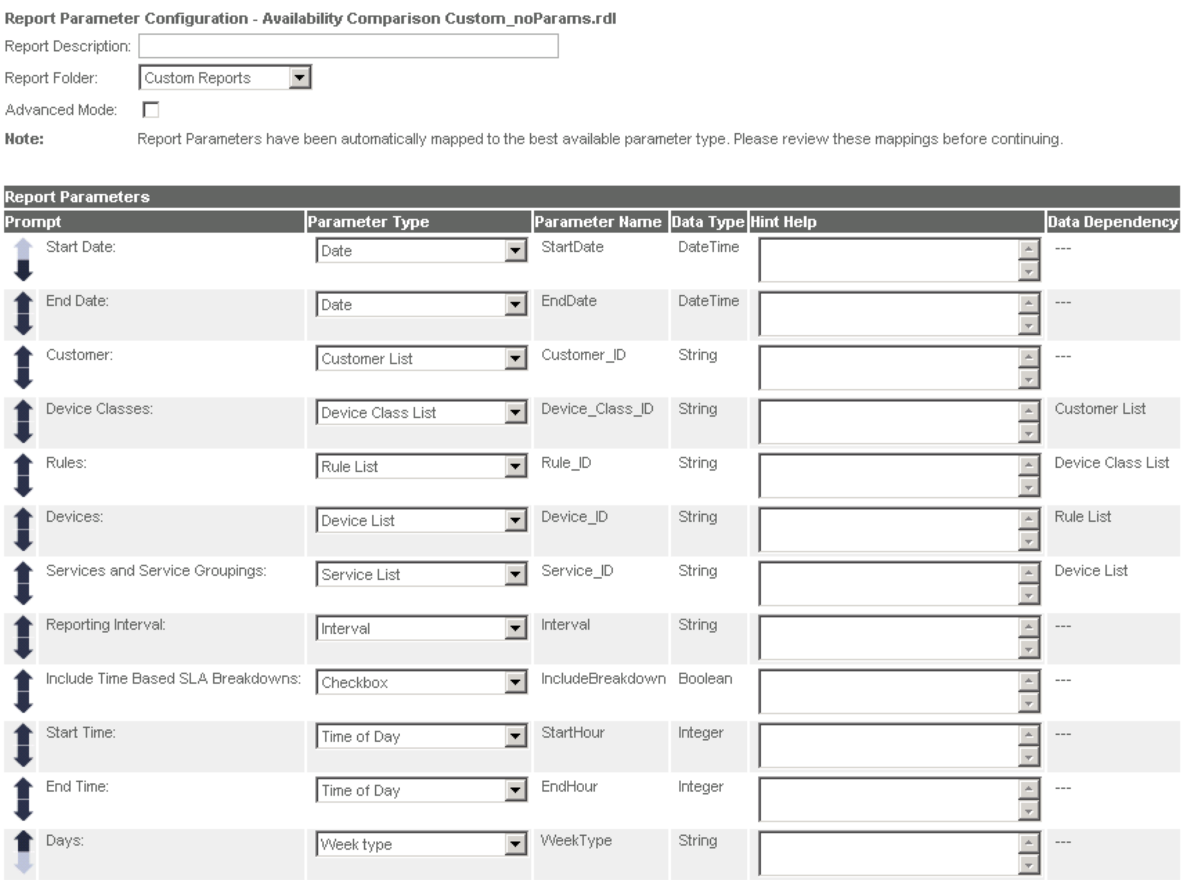
Simple Mode

Simple Mode is visible when:

- A custom report is uploaded, and UI configuration is required
- A custom report is edited through the Custom Report Management screen

In **Simple Mode** you can:

- Reorder the prompts as they appear in the UI for the user at run time
- Edit the hint help if required
- View and edit Parameter Type if required



Report Parameter Configuration - Availability Comparison Custom_noParams.rdl

Report Description:

Report Folder: Custom Reports

Advanced Mode:

Note: Report Parameters have been automatically mapped to the best available parameter type. Please review these mappings before continuing.

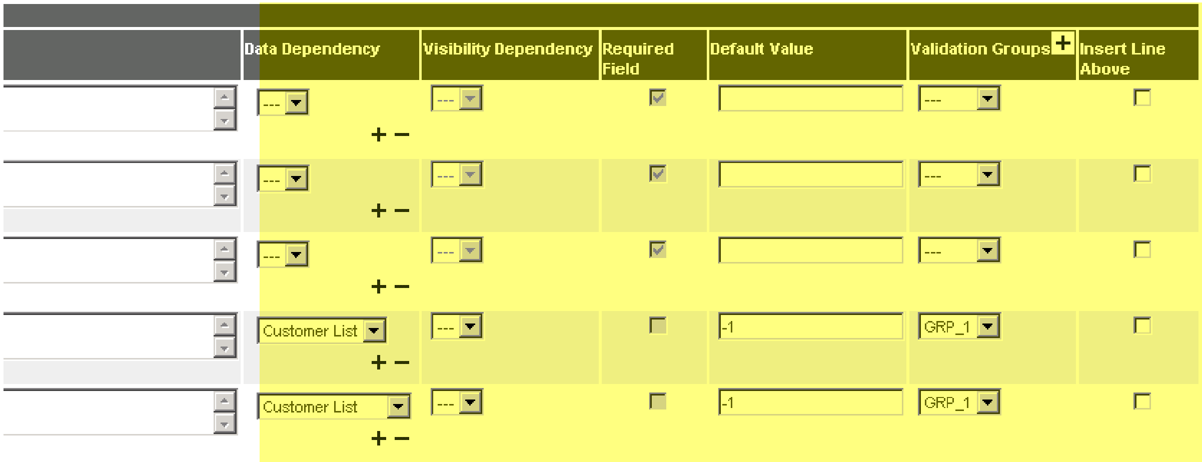
Report Parameters

Prompt	Parameter Type	Parameter Name	Data Type	Hint Help	Data Dependency
Start Date:	Date	StartDate	DateTime		---
End Date:	Date	EndDate	DateTime		---
Customer:	Customer List	Customer_ID	String		---
Device Classes:	Device Class List	Device_Class_ID	String		Customer List
Rules:	Rule List	Rule_ID	String		Device Class List
Devices:	Device List	Device_ID	String		Rule List
Services and Service Groupings:	Service List	Service_ID	String		Device List
Reporting Interval:	Interval	Interval	String		---
Include Time Based SLA Breakdowns:	Checkbox	IncludeBreakdown	Boolean		---
Start Time:	Time of Day	StartHour	Integer		---
End Time:	Time of Day	EndHour	Integer		---
Days:	Week type	WeekType	String		---

Advanced Mode

After the **Advanced Mode** check box is selected, the following additional UI control properties appear:

- Validation Groups
- Data Dependency
- Visibility Dependency
- Required Field
- Default Value
- Insert Line Above



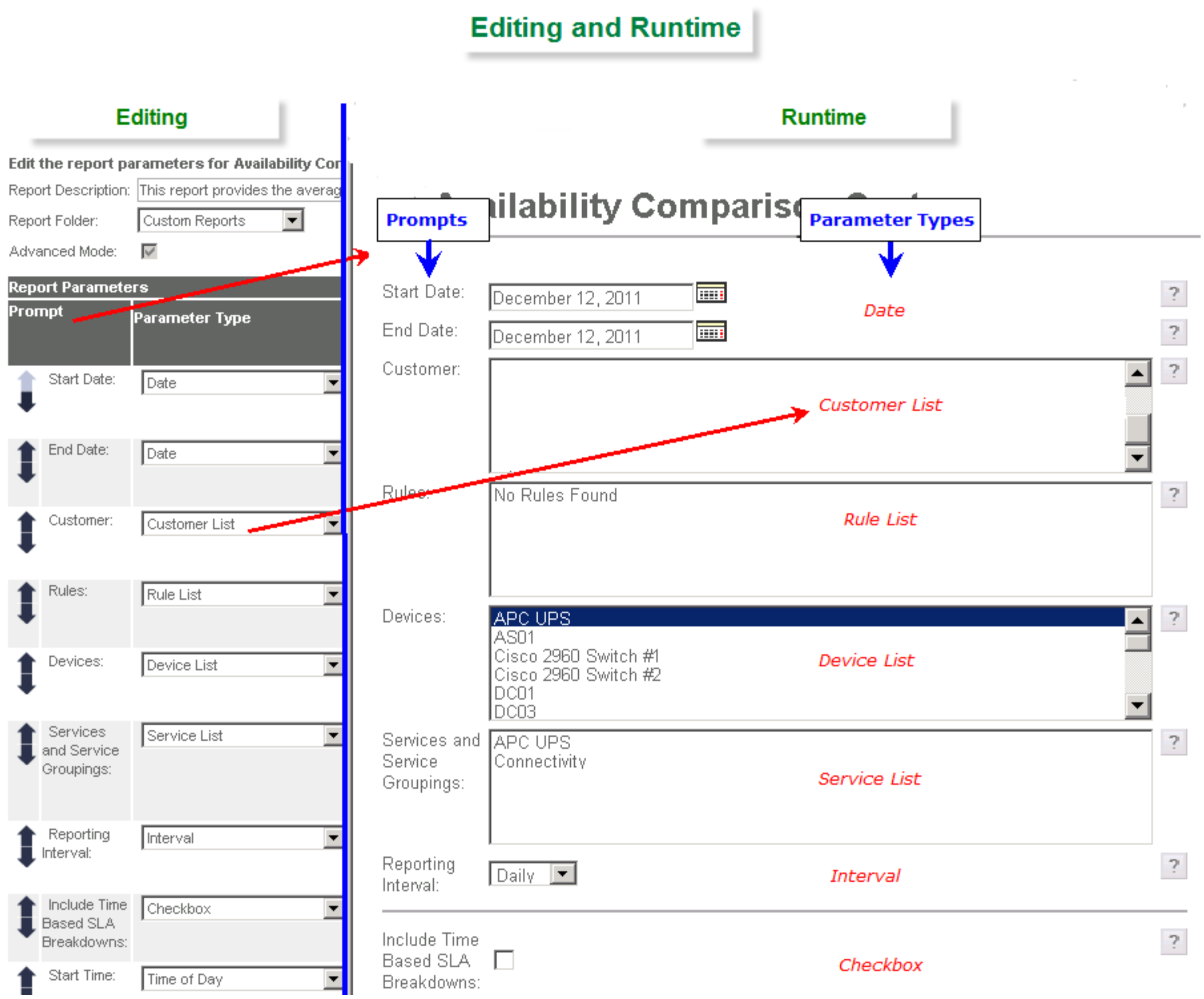
What happens when I edit the UI controls?

You can edit the properties of UI controls which determines what the user will see at runtime.

The screen shot, "**Editing and Runtime**", below shows two views of the Availability Comparison Template. On the left is the **Editing** view. This is what you see when editing UI control parameters in the Custom Report Management (CRM) screen in the Administration Console. On the right is the **Runtime** view. This is what the user sees at runtime when they are setting up the report to run.

When you are in Custom Report Management:

- You can reorder the prompts to determine how they will display at runtime.
- You can provide the hints that will display for the user.
- You can set up data dependency on UI controls, so that the selection of one UI control parameter populates another. For more information, refer to How to set up Data Dependency on page 84.
- You can hide some items and make their visibility dependent on the selection of another item. For more information, refer to How to set up Visibility Dependency on page 87.
- You can parameters. This allows a user to select one item from any of the group to populate a list, or forces the user to make a selection from one of a group. For more information, refer to How to set up a Validation Group on page 83.
- You can provide visual separation of the UI at runtime by inserting a line across the UI screen.

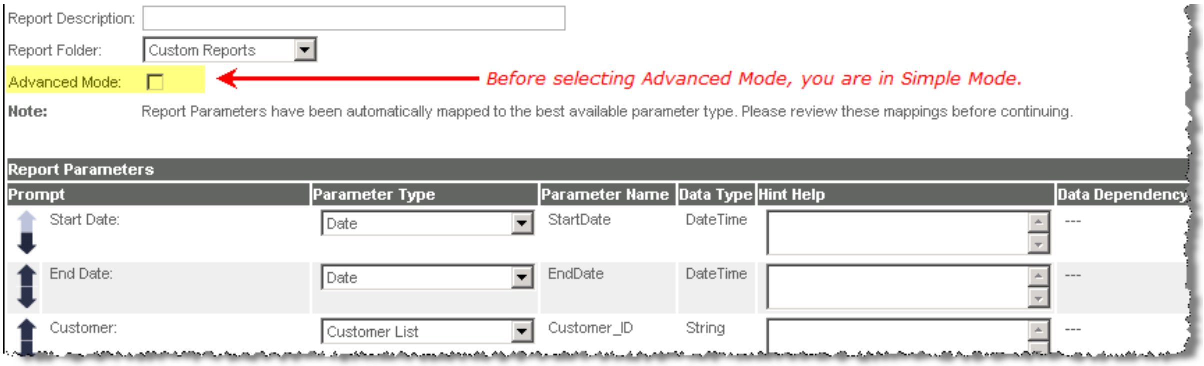


How to upload a Template and configure UI controls

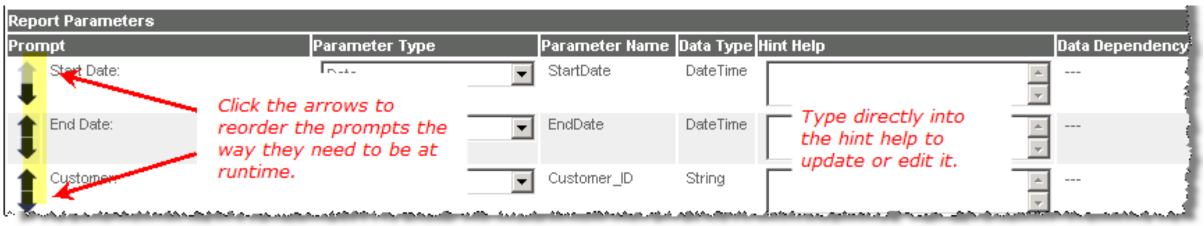
You can upload the same version we are using by going directly to a version of the Availability Compliance Template that was provided in your installation directory. We are going to talk about each column in the Custom Report Management screen in order of appearance, left to right.

1. Sign in to the Administration Console.
2. Click **Custom Report Management**.
3. Click **Upload Custom Report**.
4. Click **Browse** and navigate to your local installation directory, **N-able Technologies** > **Report Manager** > **reports** > **Templates** > **Availability Comparison Custom.rdl**.
5. Click **Open**.
6. Click **Next**.

   The report opens in the "Simple Mode".



7. In Simple Mode, you can do the following:
   - Reorder the prompts as they appear in the UI for the user at run time
   - Edit the hint help if required
   - View and edit Parameter Type if required



8. Select the **Advanced Mode** check box.

How to set up a Validation Group

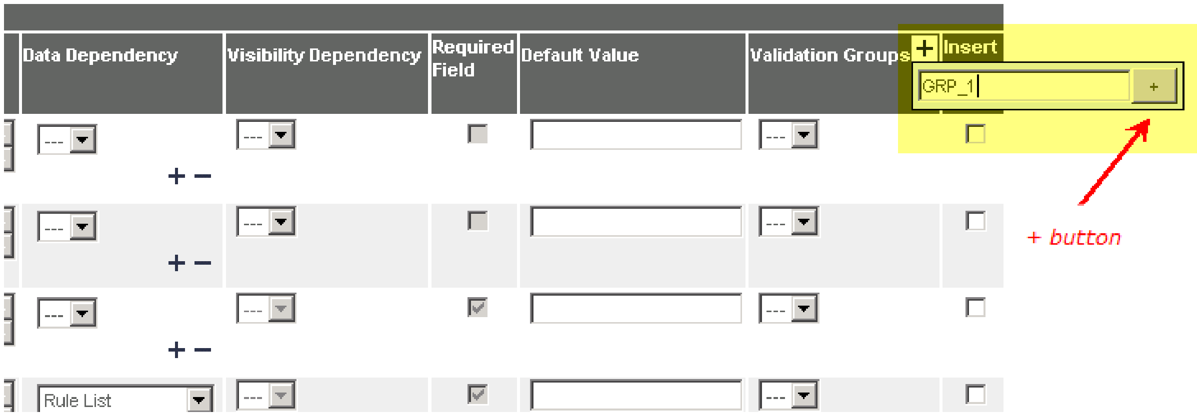
What is a Validation Group?

Validation Groups are created when two or more parameters are assigned to a validation group through Custom Report Management in Report Manager. You might like to group UI controls for the following reasons:To allow a user to pick any of the contents of the grouped UI control types to filter the contents of a dependent UI control. To force a user to pick at least one of a group of UI controls, for example, one of a group of check boxes.

We are going to create a Validation Group and include the following parameters: Device_Class_ID, Rule_ID, and Device_ID.

1. Locate the **Validation Groups** column
2. Select the + icon in the top right of the Validation Groups column header and type "GRP_1".

   Note: You can name a Validation Group anything you like, the suggestion is to start with 1, and then 2, and so on.

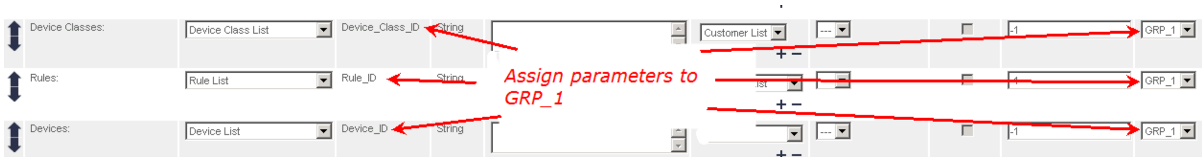


3. Click the + button.

4. In the **Validation Groups** column, assign the following to GRP_1

- Device_Class_ID
- Rule_ID
- Device_ID.

At run time, the Service List UI control will be populated when the user selects a Device Class, or a Rule, or a Device.

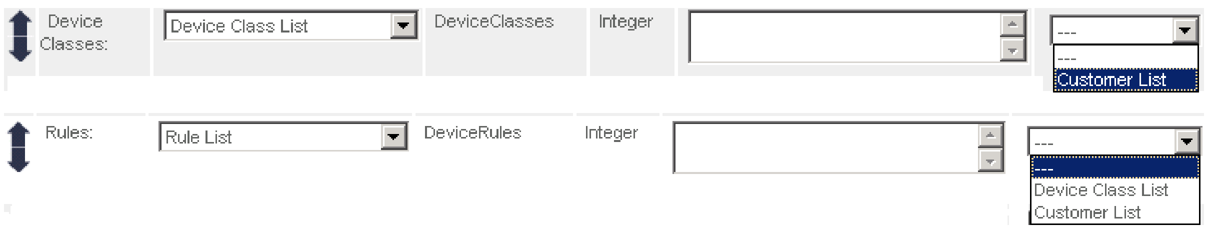


How to set up Data Dependency

> **What is Data Dependency?**
>
> Data Dependency allows filtering of the contents of one parameter type based on the selection of another.

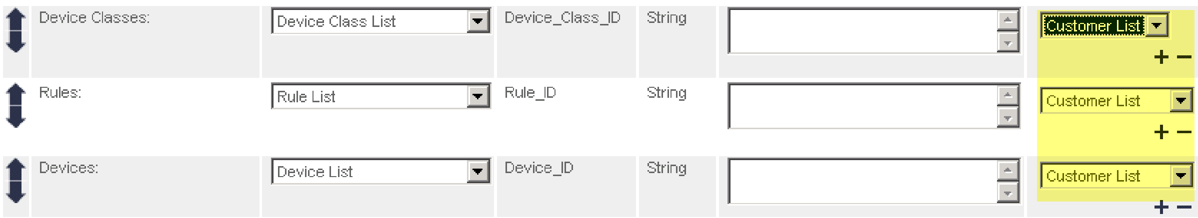
Data dependency is editable in **Advanced Mode**.

1. Click the drop-downs to view the dependencies available for each of the following UI controls: Device Class List, Rule List, Device List, and Service List. The number of parents for a UI control grows as the UI control descends the hierarchy in the database. Device Class List has only one parent to be dependent upon; Service List has a possibility of four parent UI controls.



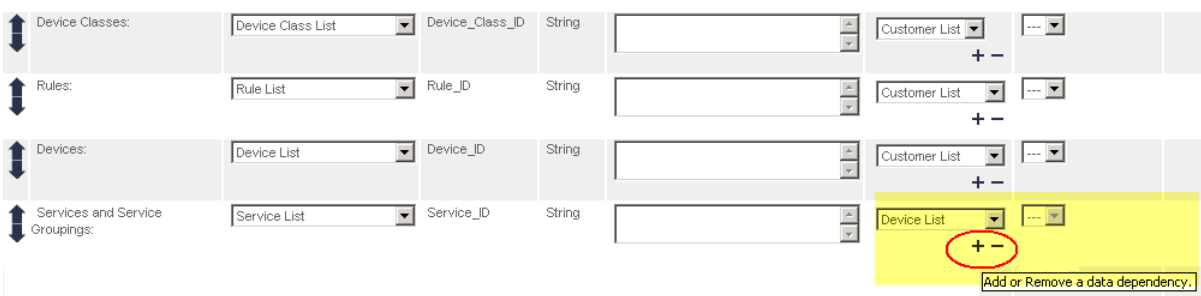
2. When a user selects a Customer, we want Device Class List, Rule List and Device List populated for that customer, without any filtering, other than on Customer (no water fall effect).

   For each of the these UI controls, select Customer List from the Data Dependency drop-down.



   Device Class List, Rule List and Devices List are populated (and filtered on Customer) when a Customer is selected from the Customer List box.

3. You may have noticed that there are **+** and **-** toggles under each of the drop-down lists in the **Data Dependency** column.

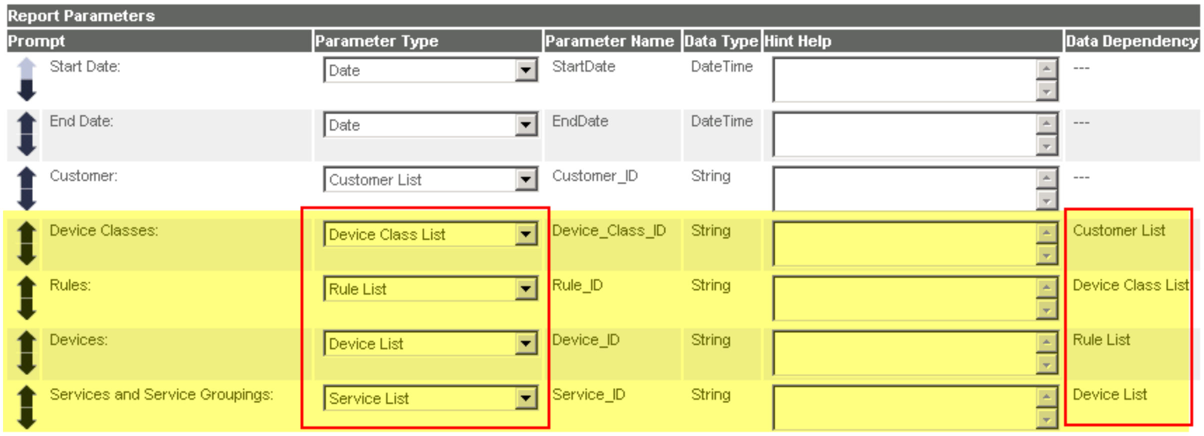


4. For Services List, click the **+** under the **Data Dependency** drop-down twice to add two more UI controls as parent controls.
5. Click the first drop-down and select **Rule List**.
6. Click the second drop-down and select **Device Class List**.
7. As these UI controls have already been grouped (GRP_1) this means that when any of these controls are selected, the Service List control will be populated.

Learn more

Review the screen in Simple Mode. Parameter types have been matched to Data Types and Data Dependency for the following Parameter Types (UI controls that user will work with at run time) has been filled in:

Parameter Type/UI Control	Data Dependency
Device Class List	Customer List
Rule List	Device Class List
Device List	Rule List
Service List	Device List



These dependencies are a direct reflect of the hierarchy of UI controls that exists in the database, listed in the following table:

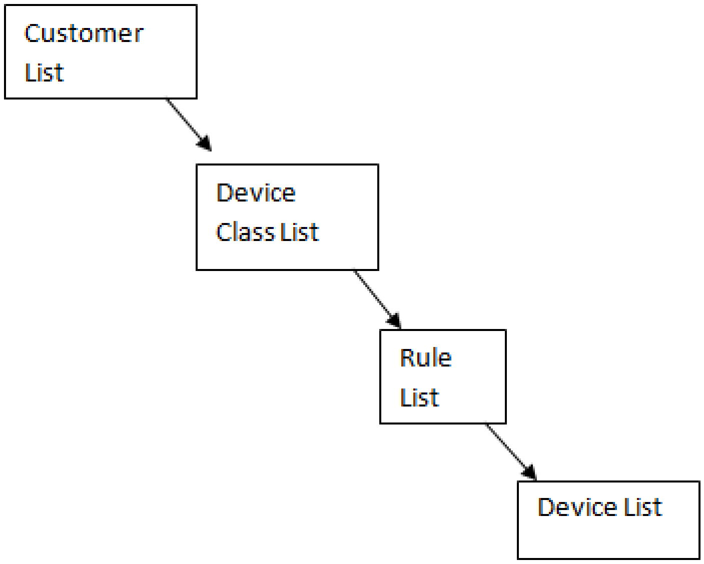
Hierarchy of UI Controls

Child Parameter Type	Parent Parameter Type
Customer List	SO Customer List
Service List	Device List
Device Class List	Customer List
OS List	Device List
Device List	Rule List
Rules List	Device Class List
Event Category List	Device List

At run time all Lists except Customer are empty and they will populate (and be filtered) according to the user's selection.

- Device Class List populates when a Customer is selected.
- Rules List populates when a Device Class is selected.
- Device List populates when a Rule is selected.
- Service List populates when a Device is selected.

This kind of dependency hierarchy is called a waterfall with each subsequent parameter being filtered by the previous selection within the established hierarchy.



We are looking at the underlying dependencies and the hierarchy only as a starting point to explain this screen and to explain the underlying logic of the database.

Custom Report Management uses the underlying logic of the database to allow you to group dependencies in a logic suitable to the report.

To reassign dependencies, and to provide for grouping of UI controls, we need to view the report parameter configuration in the **Advanced Mode**.

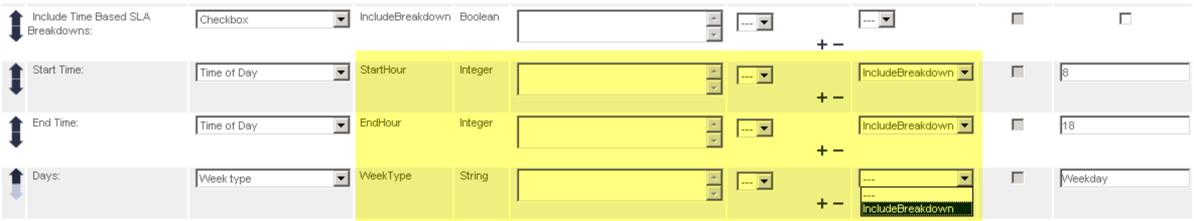
How to set up Visibility Dependency

What is Visibility Dependency?

Visibility Dependency allows one UI control to be visible based on the selection of a check box at run time. This helps to keep the UI organized and easy to read. An example of visibility dependency in the stock reports is the UI Control "Include Time Based SLA Breakdowns". If this check box is selected, the UI controls for the following appear: All Day, Start Time, End Time and Days. Each of these UI controls has a visibility dependency based on the selection of the UI control "Include Time Based SLA Breakdowns".

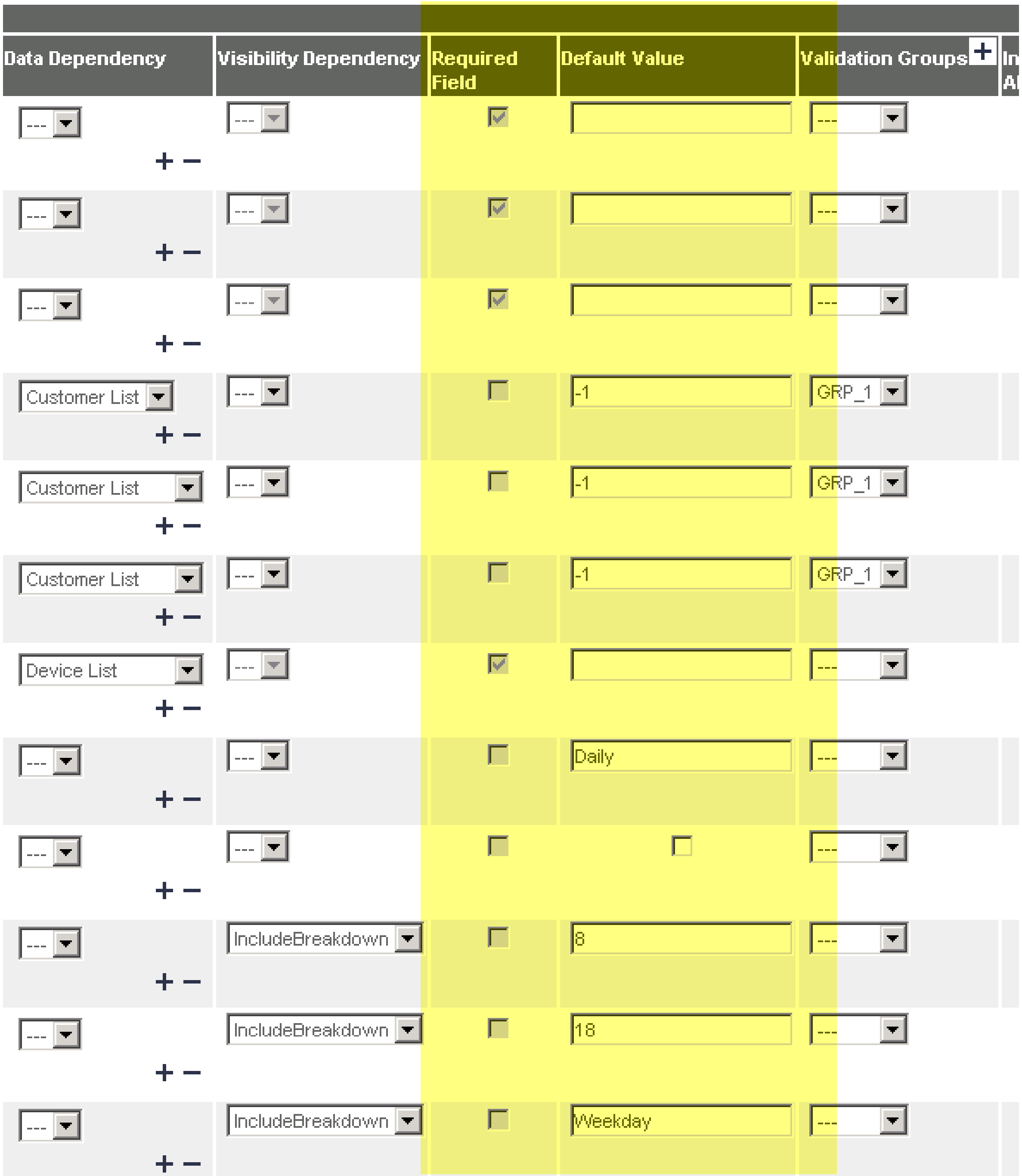
For the Availability Comparison Custom we are going to configure a visibility dependency on the Included Time Based SLA Breakdowns check box for the other UI controls: Start Time, End Time, Days, exactly the same as the example in the definition, above.

1. For parameter names: **Start_Hour**, **End_Hour** and **WeekType**, select **IncludeBreakdown** from the **Visibility Dependency** drop-down.



About Required Field and Default Value

In Report Manager, assigning a default value for a UI control that is a required field will make the field optional. The Required Field property is not editable in Report Manager. Required fields will force user input at run time. If you would like to make a field a required field, you can do so through Report Builder.



How to configure Hint Help

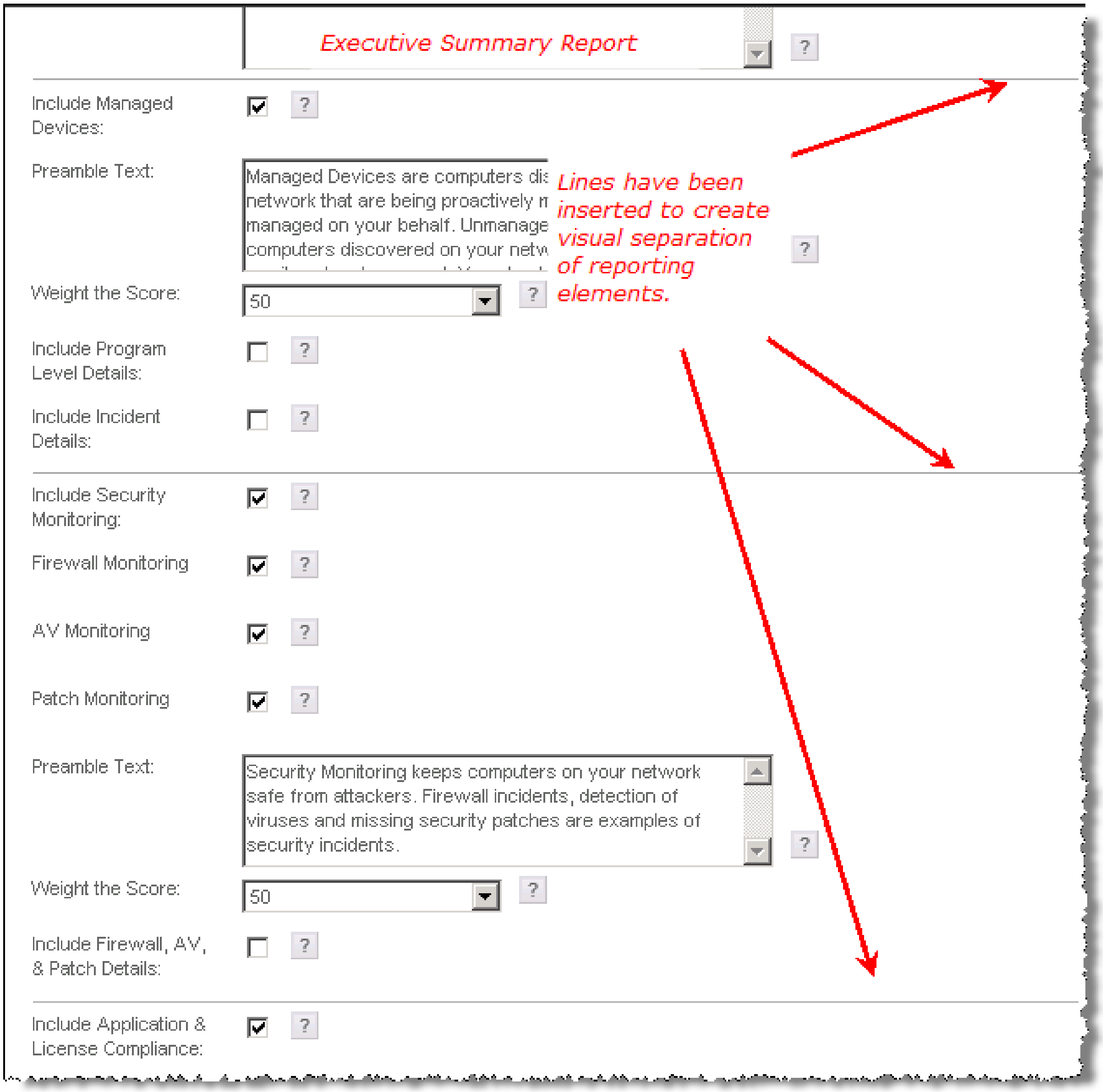
Hint help is easily configured through Report Manager. Limit on hint help: 500 characters.

- Click in the Hint Help field and type a hint.

Refer to the Template and Report Parts topics for specific Hint Help.

How to Insert Line Above

The last column in the Custom Reports Management screen allows you to divide up the interface at run time using lines. An example of the usefulness of this is in the Executive Summary Report, where lines separate sections.


Executive Summary Report
Include Managed Devices:
Preamble Text:
Managed Devices are computers dis network that are being proactively m managed on your behalf. Unmanage computers discovered on your netw
Lines have been inserted to create visual separation of reporting elements.
Weight the Score:
50
Include Program Level Details:
Include Incident Details:
Include Security Monitoring:
Firewall Monitoring
AV Monitoring
Patch Monitoring
Preamble Text:
Security Monitoring keeps computers on your network safe from attackers. Firewall incidents, detection of viruses and missing security patches are examples of security incidents.
Weight the Score:
50
Include Firewall, AV, & Patch Details:
Include Application & License Compliance:

UI control features: Definition and Description

Custom Report Management Editing Screen Described

Property	Description	About
Prompt	The Prompt is the label the user will see next to the input field for the parameter in the UI at run time. You can use the up and down arrows on the left of the prompts to reorder the user prompts as they will appear in the Reports Console UI.	You can reorder prompts, but not rename them.
Parameter Type (UI control)	The Parameter Type, or UI control determines how the user selects input for the parameter. Examples of UI contosl: pick lists, check boxes, text boxes, date fields. The Parameter Type for user input must be matched to Data Type.	You can select from a list of types.
Parameter Name	The Parameter Name is the name associated to the parameter. It is assigned when the parameter is created, either manually or during dataset creation. When reports are being created, careful thought should be given to the parameter name that will identify it so that it is clear to the user what input is required. This field is not editable in Report Manager but can be edited in Report Builder. The name is case-sensitive, begins with a letter and has letters, numbers, an underscore (_), and no spaces, for example, ReportParameter_1. For automatically-generated parameters, the name matches the query parameter in the dataset query.	Not editable, you can change the name in Report Builder.
Data Type	The Data Type is a property of the parameter that determines the Parameter Type or UI Control that can be used for user input. The following data types are available in Report Manager: Text, Integer, DateTime, Boolean, String, Float	Not editable
Hint Help	The Hint Help will appear when a user rolls their mouse over the hint icon.	Editable
Data Dependency	Data Dependency allows filtering of the contents of one parameter type based on the selection of another. In Simple Mode, this is informational. In Advanced Mode, this becomes editable.	Editable in Advanced Mode
Visibility Dependency	Visibility Dependency allows one UI control to be visible based on the selection of another UI control (always a check box) at run time. This helps to keep the UI organized and easy to read. An example of visibility dependency in the stock reports is the UI Control "Include Time Based SLA Breakdowns". If this check box is selected, the UI controls for the following appear: All Day, Start Time, End Time and Days. Each of these UI controls has a visibility dependency based on the selection of the UI control "Include Time Based SLA Breakdowns".	Advanced Mode only

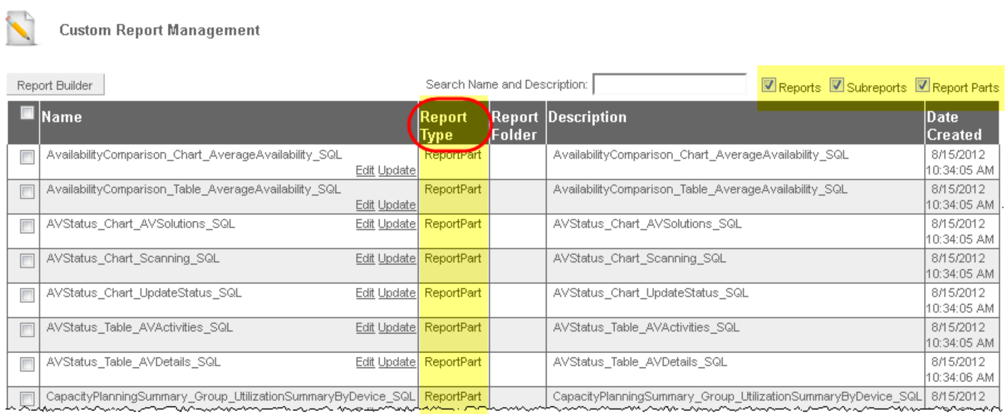
Property	Description	About
Required Field	A Required Field forces user input before the report can be generated.	Advanced Mode only Not editable
Default Value	Applies to a required field. When a Default Value can be provided for a required field, user input becomes optional for the field.	Advanced Mode only Editable
Validation Groups	Validation Groups are created when two or more UI control types for parameters are assigned to a validation group. A Validation Group allows users to pick any of the contents of the grouped UI control types to filter the contents of a dependent UI control type.	Advanced Mode only Editable
Insert Line Above	When selected, Insert Line Above places a line in the UI above the associated UI control. This creates a visual separation between sections of the report for user input. Good examples for its use are the Executive Summary Custom report which has many sections, or above a check box on which other UI controls have a visibility dependency and above the last item with visibility dependency.	Advanced Mode only Editable

Managing Custom Reports in Report Manager

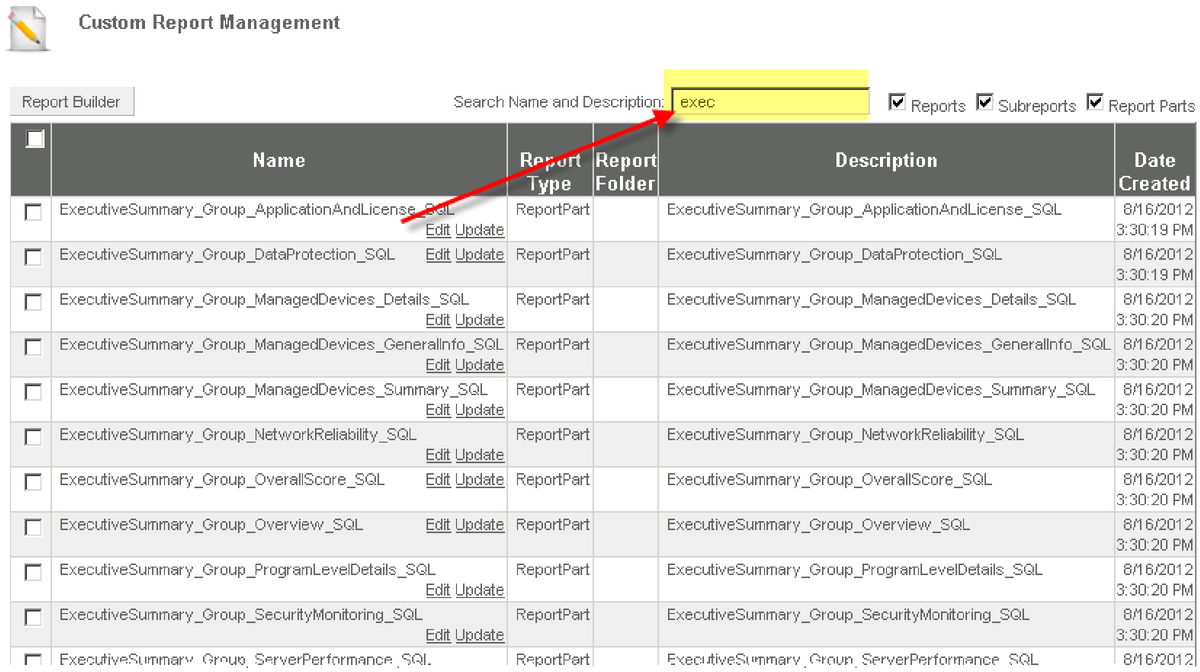
The Custom Report Management screen in Report Manager your portal to custom reporting. Through this screen, you can do the following:

- Filter your view or search for custom reports, subreports and report parts within the system
- Upload custom reports, report parts, subreports
- Open Report Builder
- Connect directly to the Reports Library in the NRC
- Update an RDL file by uploading it again
- Edit the UI controls for custom reports

1. In the N-central navigation pane, click **Administration** > **Report Manager** > **Administration Console**.
2. Click **Custom Report Management**.
3. To keep your view more manageable, use the check boxes to filter your view to only the report type you are interested in: custom reports, subreports or report parts that you have uploaded to your server.



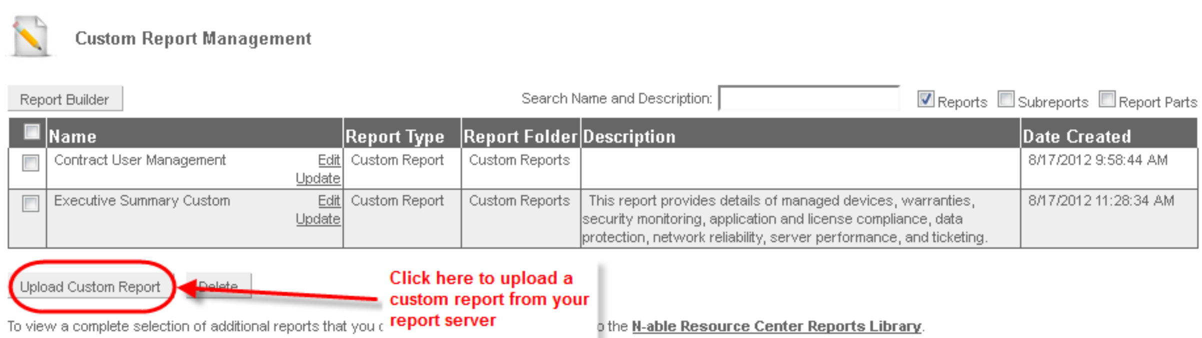
4. You can also search on partial names of custom report items. This is a new feature in Report Manager 4.0. For example, type "exec" in the Search Name and Description window and press Enter to view all executive summary report items that have been uploaded to your server.

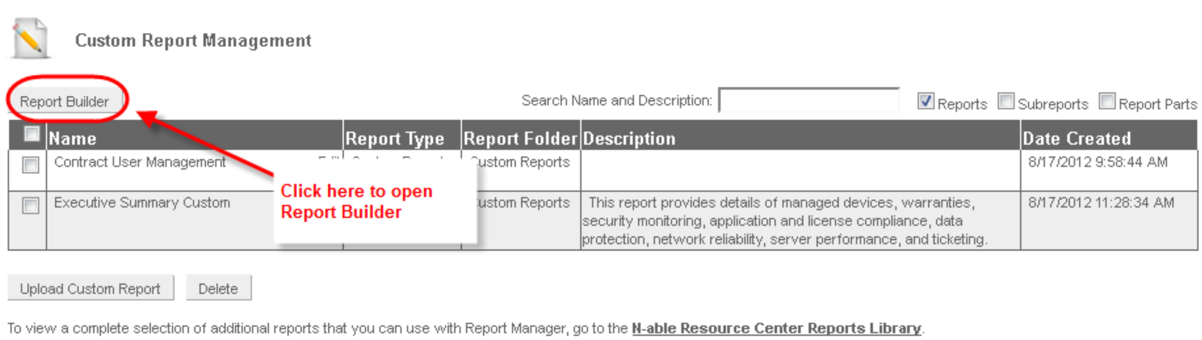


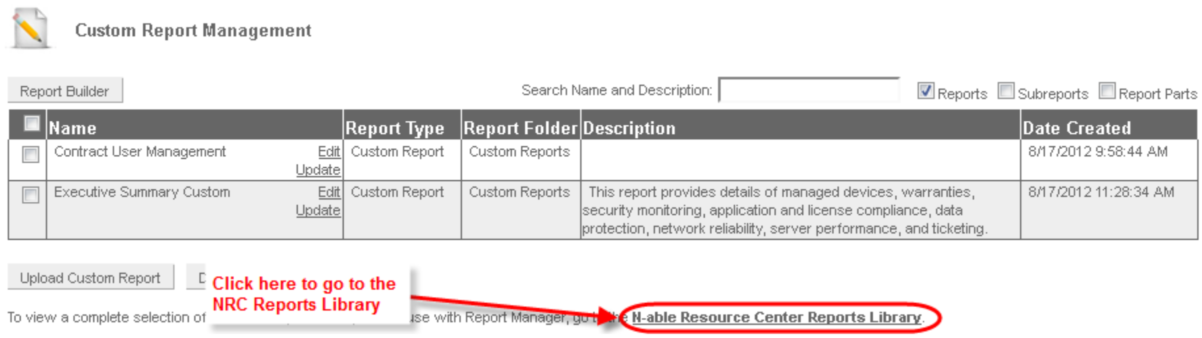
Tip: *The search will only be performed on the Report Type selected. For example, if only Report Parts is selected, the search will only return report parts matching the search string.*

5. Through this screen, you can do all of the following:

- Upload a custom report to the Report Manager server
- Open Report Builder (**Note:** If you have installed Service Pack 2 for SQL Server 2008 R2, you need to use a stand-alone Report Builder, version 10.50.1600.1. For more information, refer to #2 Accessing Report Builder on page 8.)
- Connect directly to the Custom Reports Library

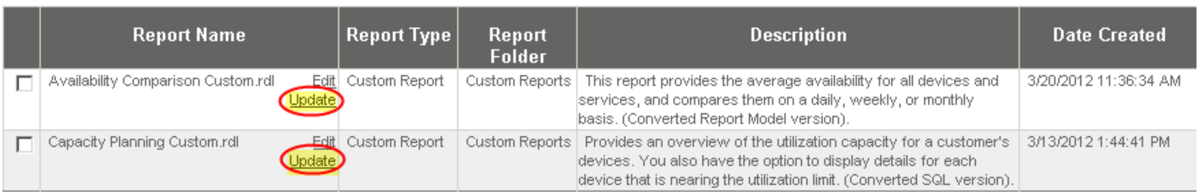






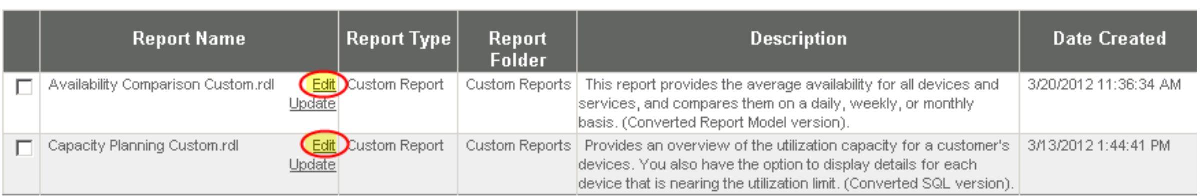
For more information, refer to Uploading a Custom Report File on page 95 and#2 Accessing Report Builder on page 8.

6. You can **Update** the RDL file of the same name. For more information, refer to Uploading a Custom Report File on page 95.



7. You can **Edit** the UI controls, which determine how the user provides input at run time. For more information, refer to #6 Configuring UI Controls in Report Manager on page 79.

   Note: UI controls for Subreports and Report Parts cannot be edited.



Uploading a Custom Report File

You can upload the following to the Report Manager server:

- Custom reports
- Report Parts
- Subreports
- Updated RDL files

To upload a custom report

1. Sign in to N-central.
2. In the N-central navigation pane, click **Administration** > **Report Manager** > **Administration Console**.
3. Click **Custom Report Management**.
4. Click **Upload Custom Report**.
5. Click **Browse** to navigate to the report (.rdl) you would like to upload.
6. Select a file and click **Open**.

The Report Parameter Configuration page for this report file appears. For more information on configuring UI controls, refer to *#6 Configuring UI Controls in Report Manager on page 79**.*

To upload a Report Part

1. Sign in to N-central.
2. In the N-central navigation pane, click **Administration** > **Report Manager** > **Administration Console**.
3. Click **Custom Report Management**.
4. Click **Upload Custom Report**.
5. Click **Browse** to navigate to the report part (.rsc).
6. Select a file and click **Open.**

   Report Manager detects the file extension and prompts you for a description of the report part.
7. In the **Report Description** field, type a description for the report part.

   The screen displays a success page and redirects you to the Custom Report Management screen.

To upload a Subreport

1. Sign in to N-central.
2. In the N-central navigation pane, click **Administration** > **Report Manager** > **Administration Console**.
3. Click **Custom Report Management**.
4. Click **Upload Custom Report**.
5. Click **Browse** to navigate to the file you need to upload as a subreport (.rdl).
6. Select the file and click **Open**.
7. Select **Upload as a Subreport**.
8. Click **Next**.

   The screen displays a success page and redirects you to the Custom Report Management screen.

To update an RDL file

You can make changes to an RDL file and upload it again to the Report Manager server using the same RDL file name. This will overwrite the original file and keep scheduled reports and any UI control parameter configuration you have already made.

Examples of changes that you can make to an RDL: Formatting changes, UI prompt labels, or corrections to a calculation error.

Warning! If you change the number of parameters, parameter name, parameter data type, or the name of the RDL file, the file cannot be updated.

1. In the N-central navigation pane, click **Administration** > **Report Manager** > **Administration Console**.
2. Click **Custom Report Management**.
3. Next to the report file that you would like to replace, click **Update**.
4. Click **Browse** and navigate to the updated file on the server.

5. Select the file and click **Open**.

6. Click **Next**.

   The screen displays a success page and redirects you to the Custom Report Management screen.

Deleting a Custom Report File

You can remove a custom report from the Report Manager server through the Administration Console.

To delete a custom report file

1. In the N-central navigation pane, click **Administration** > **Report Manager** > **Administration Console**.

2. Click **Custom Report Management**.

   The Custom Report Management screen appears.

3. Select the check box next to the **Report Name** of the custom report you want to delete.

4. On the confirmation screen, click **Delete**.

   The report is removed from the server.

Resources for Custom Report Creation

This section includes:

- Tips and Tricks on page 99—Find answers to some questions users have had and some gotchas we've uncovered in our work with Report Builder. We are always looking for more suggestions for this section.
- Restoring Templates on page 98—If you accidentally overwrite a Template, you can restore the original using these instructions.
- Previewing Templates in Report Manager on page 98—Use sample Templates to plan your reports. You can preview the information in the Template or Report Parts and make decisions about which ones to use.
- Data Tables on page 110—Advanced users will find dimension and fact tables for Report Manager here to use in the creation of custom reports.
- About Report Builder and Report Manager on page 114—Which versions of SQL Server and Report Builder are compatible? What are the roles of Report Manager and Report Builder in custom report creation.
- More Reading on page 114—The details of some books we recommend to round out your reporting knowledge.

Restoring Templates

You can replace a Template on the Report Manager server if it gets accidentally overwritten. Template files have been stored in your installation directory for just such a situation.

(No one is perfect. Review the topic #1 Setting Up an Account for Working in Report Builder. This topic outlines the best practice of designating a specific account for report creation that won't allow report creators to overwrite the Templates.)

1. On the Report Manager server, open a browser and type: http://localhost/reports to open the SQL Server Reporting Services Home page.
2. Click the **Templates** folder to open it.
3. Locate the template that you need to replace and hover over it to display a drop-down.
4. Click the drop-down to open the menu.
5. From the menu, click **Manage**.
6. On the next screen, in the menu bar, click 

.
7. On the next screen, click **Browse** to locate to the same named report in your installation directory (**N-able Technologies** > **Report Manager** > **reports** > **Templates**).
8. Select the Template.
9. Click **Open**.
10. Click **OK**.

The Template from your installation directory has now replaced the copy on the Report Manager server.

Previewing Templates in Report Manager

You can preview Templates before going ahead and making any changes to them in Report Manager to make decisions about which ones you would like to use.

When Report Manager was installed, an extra set of Templates was copied to your installation directory. This set was intended as a back up if the Templates stored on the Report Manager server got accidentally overwritten. This folder also contains configuration files (.xml) for the Templates. These configuration files provide parameter properties such as the parameter type, dependencies, validation groups and also fill in hint help for you.

1. In the N-central navigation pane, click **Administration** > **Report Manager** > **Administration Console**.
2. Click **Report Manager**.
3. Click **Upload Custom Report**.
4. Click **Browse** and locate the installation directory on your Report Manager server.
5. Navigate to **N-able Technologies** > **Report Manager** > **reports** > **Templates**.

   Within the Templates folder you will find all the available Template RDL files. In addition, you will find a configuration file for each RDL, which you can upload at the same time as you upload the report. The configuration file provides each parameter with values and UI controls.

   For example: If the RDL file is Technical Summary Custom.rdl, the Configuration file will be Technical Summary Custom Parameters.xml
6. Select the Template file (.rdl) and click **Open**.
7. Select the **Upload a Config File** check box.
8. Click **Browse** to navigate to the configuration file (.xml) for the Template.
9. Select the file and click **Open**.
10. Click **Next**.

    The Custom Report Management screen appears and the selected Template is listed.
11. To view the UI control parameters, click **Edit** next to the **Report Name**.

    The Template is now available to be previewed through the Reports Console.

Tips and Tricks

This topic catalogues some nice to know and frequently needed tidbits for custom reporting. We encourage you to contact us and provide us with your favorites so we can include them here.

- What is the fastest way to open and use Report Builder?
- How do I find Customer ID?
- How do I find parameter ID numbers? on page 101
- Why don't we filter on Customer Name?
- How do I locate Report Parts in Report Builder?
- How do I find a data source if Report Builder isn't showing one? on page 104
- How do I remove the Values column?
- How do I edit a dataset (return to the Query Designer)? on page 101

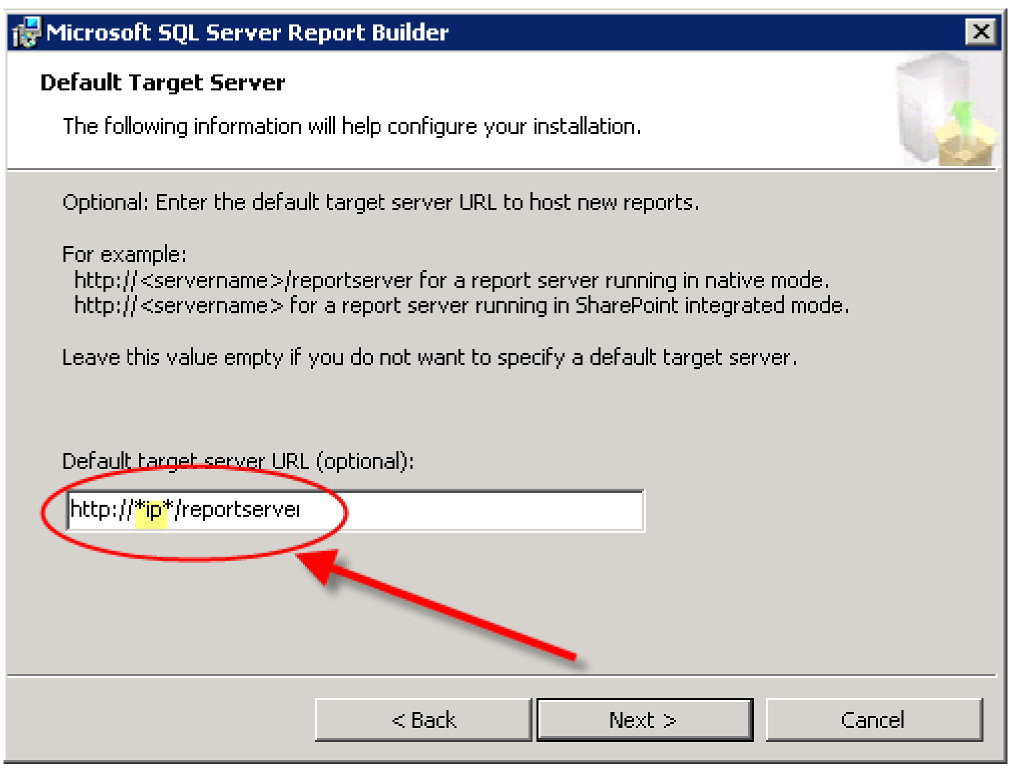
What is the fastest way to open and use Report Builder?

Answer

You can download and install the stand-alone on the Report Manager server and open Report Builder 3.0 directly. (Reminder: Report Builder 3.0 is only available through SQL Server 2008 ***R2***.)

Warning! Ensure that you use the credentials for an account that prevents overwriting of Templates. For more information refer to #1 Setting Up an Account for Working in Report Builder on page 5.

1. Download the stand-alone installer for Report Builder 3.0 from the Microsoft Download Center (http://www.microsoft.com/en-us/download/details.aspx?id=6116).
2. Follow the instructions in the installer, clicking **Next** for each screen, until the **Default Target Server** screen.



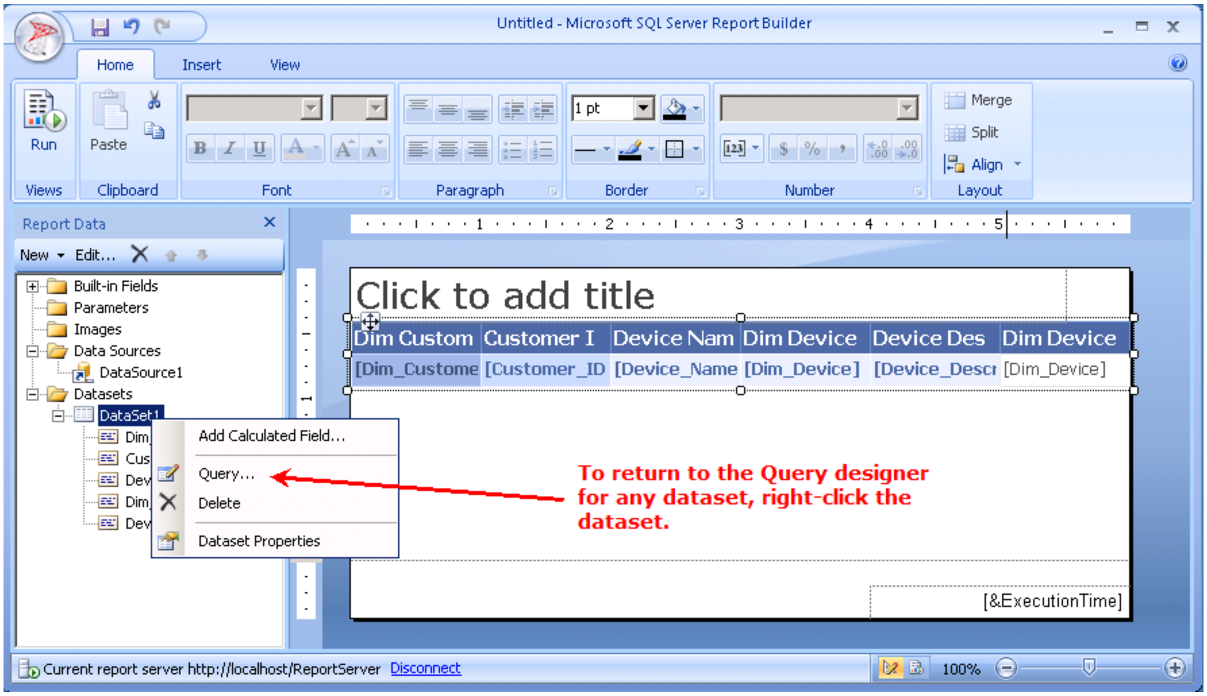
3. For Default target server URL, provide the following: http://*ip*/reportserver where *ip* is your local Report Manager server IP.
4. Click **Next**.

5. Open Report Builder from the Start Menu or pin it to the Taskbar before beginning your custom report work.

How do I edit a dataset (return to the Query Designer)?

Answer

In the **Report Data** pane, right-click the dataset and click **Query**.



How do I find Customer ID?

Answer #1

1. Open Microsoft SQL Server Management Studio on your Report Manager Server.
2. In the left pane, expand **Databases** > **Warehouse** > **Tables**.
3. In the right pane, right-click **dim_Customer**.
4. Click **Select Top 1000 Rows**.
5. In the **Results** tab at the bottom, details for customers are displayed, including the **Customer ID** for each **Customer**.

Answer #2

- To find all parameter ID numbers, refer to #5 Previewing Custom Reports in Report Builder on page 73.

How do I find parameter ID numbers?

To preview reports in Report Builder you will need ID numbers for many parameters.

- To find all parameter ID numbers, refer to #5 Previewing Custom Reports in Report Builder on page 73.

Why do we filter on Customer ID and not Customer Name?

Answer

IDs are always used for filters. Report Manager uses Customer ID to map to the Customer List UI control.

Using IDs instead of names to identify customers makes good sense, from a database perspective. It promotes scalability.Report Manager stores data for a long time and if a customer is removed from Report Manager and subsequently returns, the customer name may be the same, but the Customer ID will always be unique. In addition, if you have multiple servers, it avoids confusion of different customers with the same name.

How do I remove the Values column?

Arrange fields Values issue

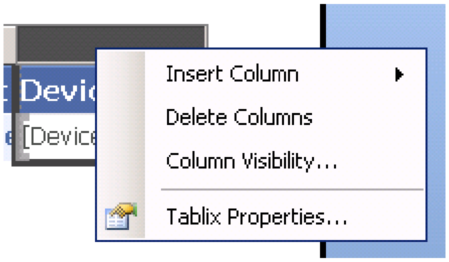
You must put a field in the Values box in order to leave the Arrange Fields page. This is because Report Builder has been designed to suit a wide audience and, in particular, it's been designed to suit reports meant for accounting purposes. Values are useful when you need to create totals and subtotals, for example, if you were creating a CPU Utilization Report.

On the far right of the table will be the Values column that you were forced to add to the report just to leave the screen, **Arrange Fields**.

Answer

You can hide it from view. It helps to conserve real estate in the report layout.

1. Click in the table to select it.
2. Click the column itself to select it.
3. Right-click the column top border to display the menu:



4. Click **Column Visibility**.
5. In the **Change display options** dialog, select **Hide**.

   When the report is run, this column will not be visible.

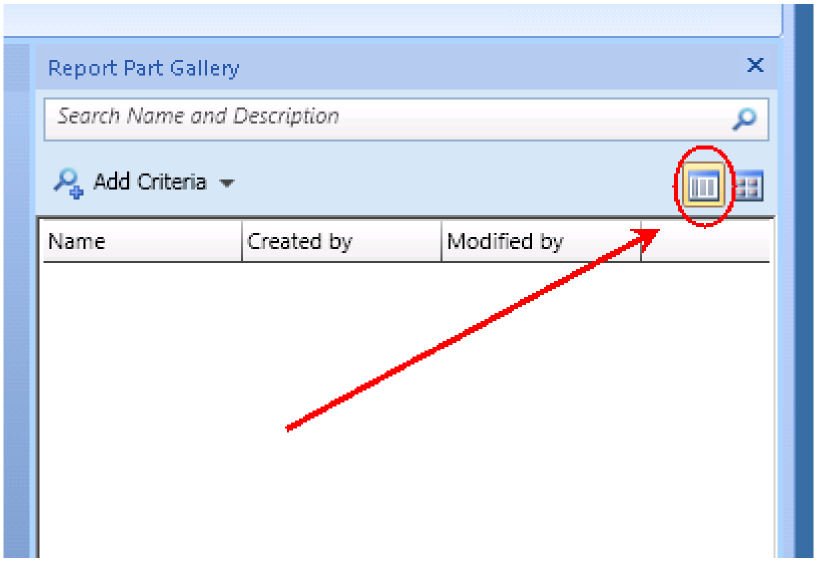
How do I locate Report Parts in Report Builder?

Answer

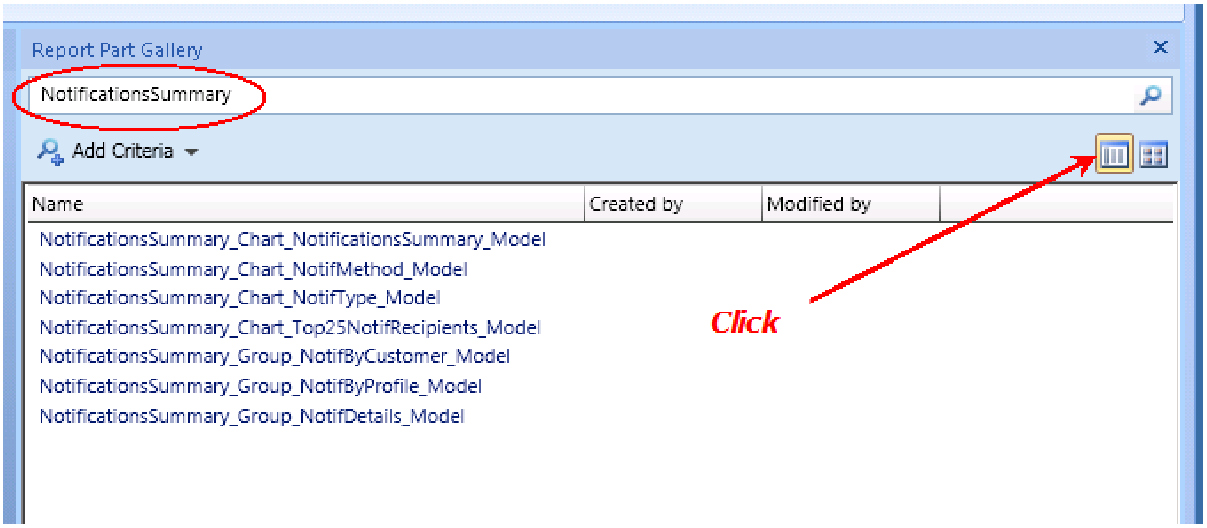
If you know which Report Parts you would like to use, you can locate a Report Part in the Report Part Gallery by searching on the name or part of the name.

1. In Report Builder, open the Report Part Gallery (**Insert** > **Report Part**).

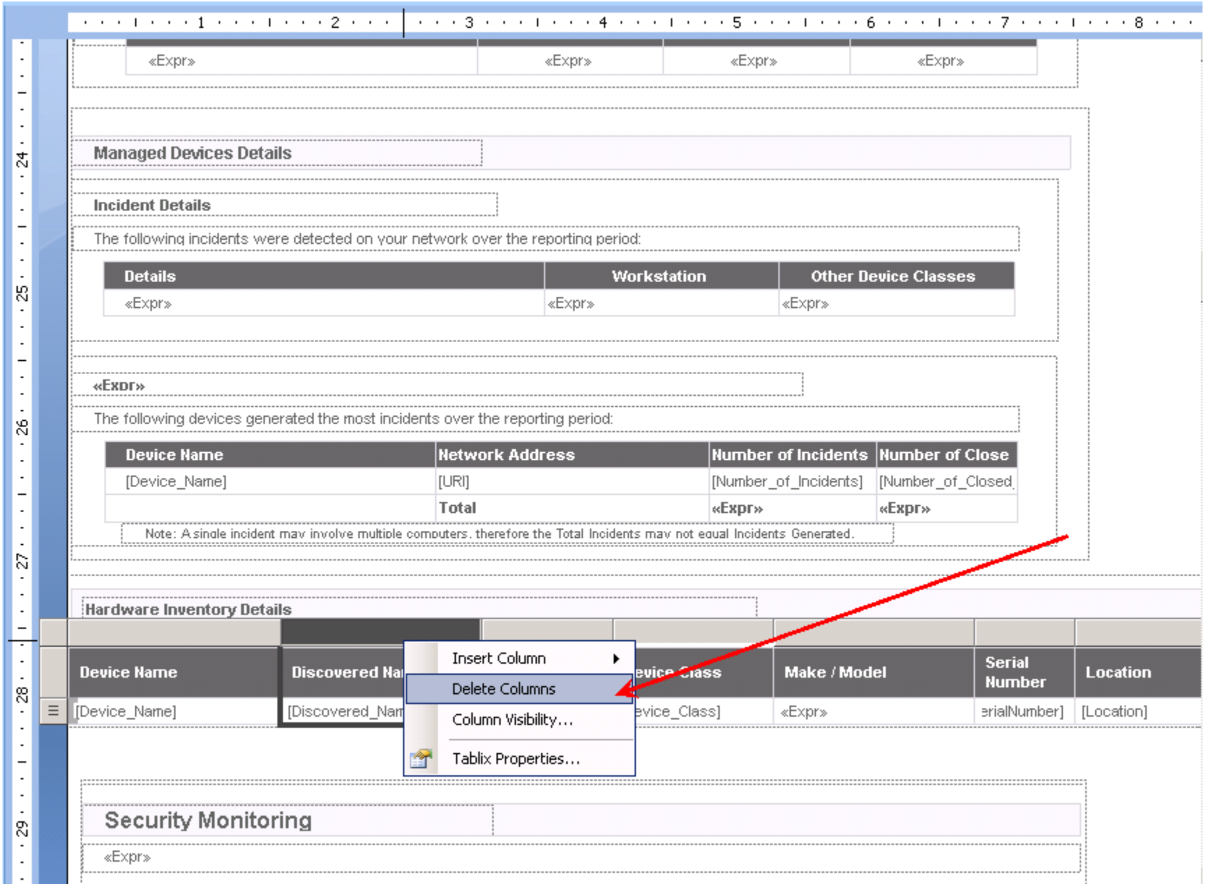
2. Select the Details icon.



3. Copy and paste the name of the Report Part you are interested in, or a part of the name in the Search window, to display a filtered list of Report Parts.



Tip: *If you would like to hide or delete some of the columns in the Hardware Inventory Details table, click in the table and right-click the column to display the menu for each column. Hide or delete as you prefer.*



How do I remove a Report Part inserted by mistake?

- If you make a mistake and insert the wrong report part, click **Undo** and the report part and associated datasets will be removed.
- If you realize that you have made a mistake and after many changes you would like to remove a Report Part, you will need to move all associated datasets and parameters by hand (locating them in the Reports Data pane and deleting them by right-click > **Delete**).

Warning! Using delete to remove a Report Part will leave the associated datasets behind and you will end up with extra datasets and unused parameters in your report.

How do I find a data source if Report Builder isn't showing one?

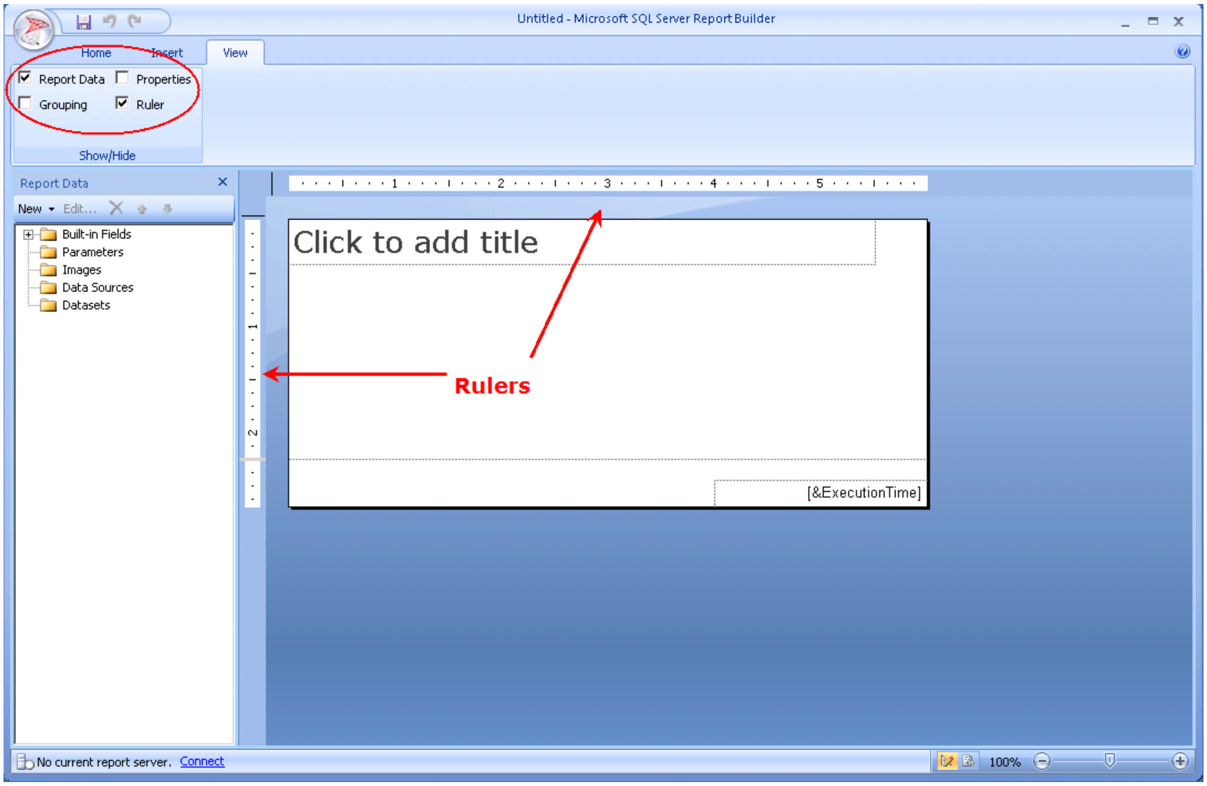
If Report Builder is not showing you a list of pre-loaded data sources:

1. Click **Browse**,
2. Type `http://localhost/reportserver/Models`.
3. Select **Warehouse** and click **Open**.

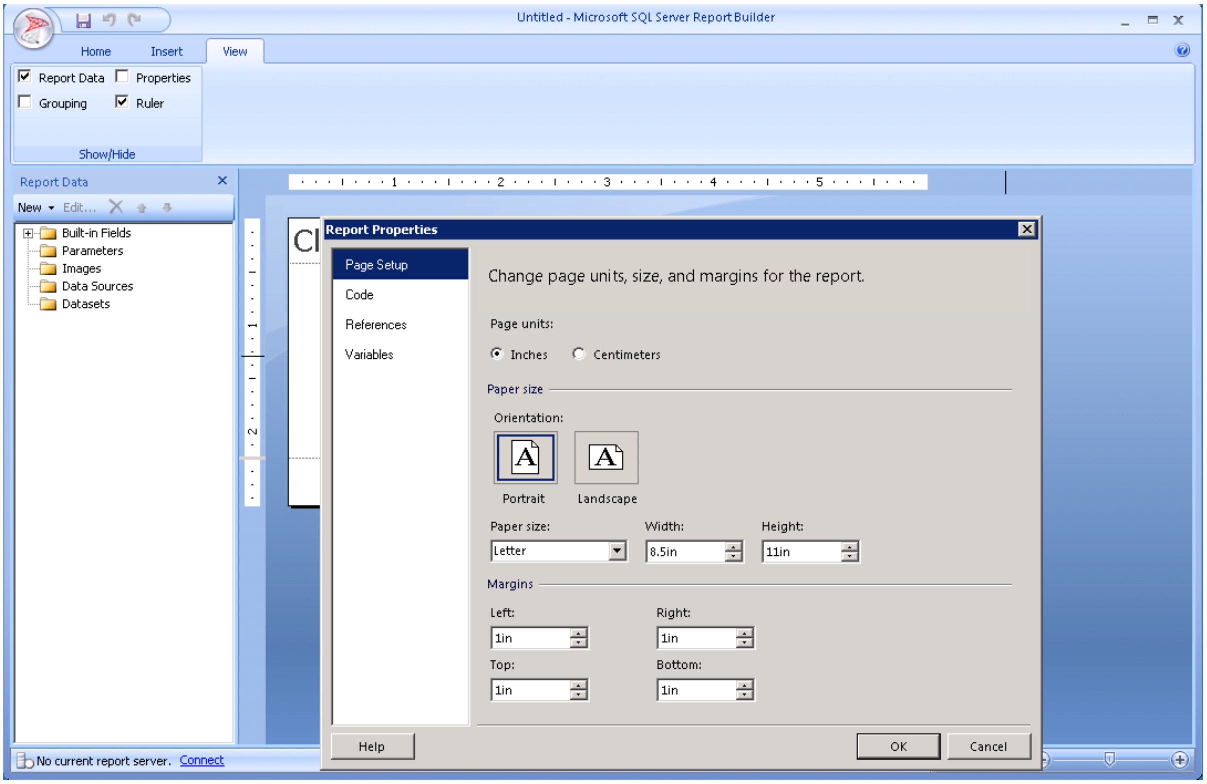
How to set up the workspace and select page settings

If you used a blank report to create a custom report, you can set up the ruler units within Report Builder in order for your report to display and print correctly.

1. In the **View** tab, clear the check boxes for **Properties** and **Grouping**. This opens up more real estate for us.
2. Select **Ruler**.



3. Right-click on the blue screen beside the layout and select **Report Properties**.

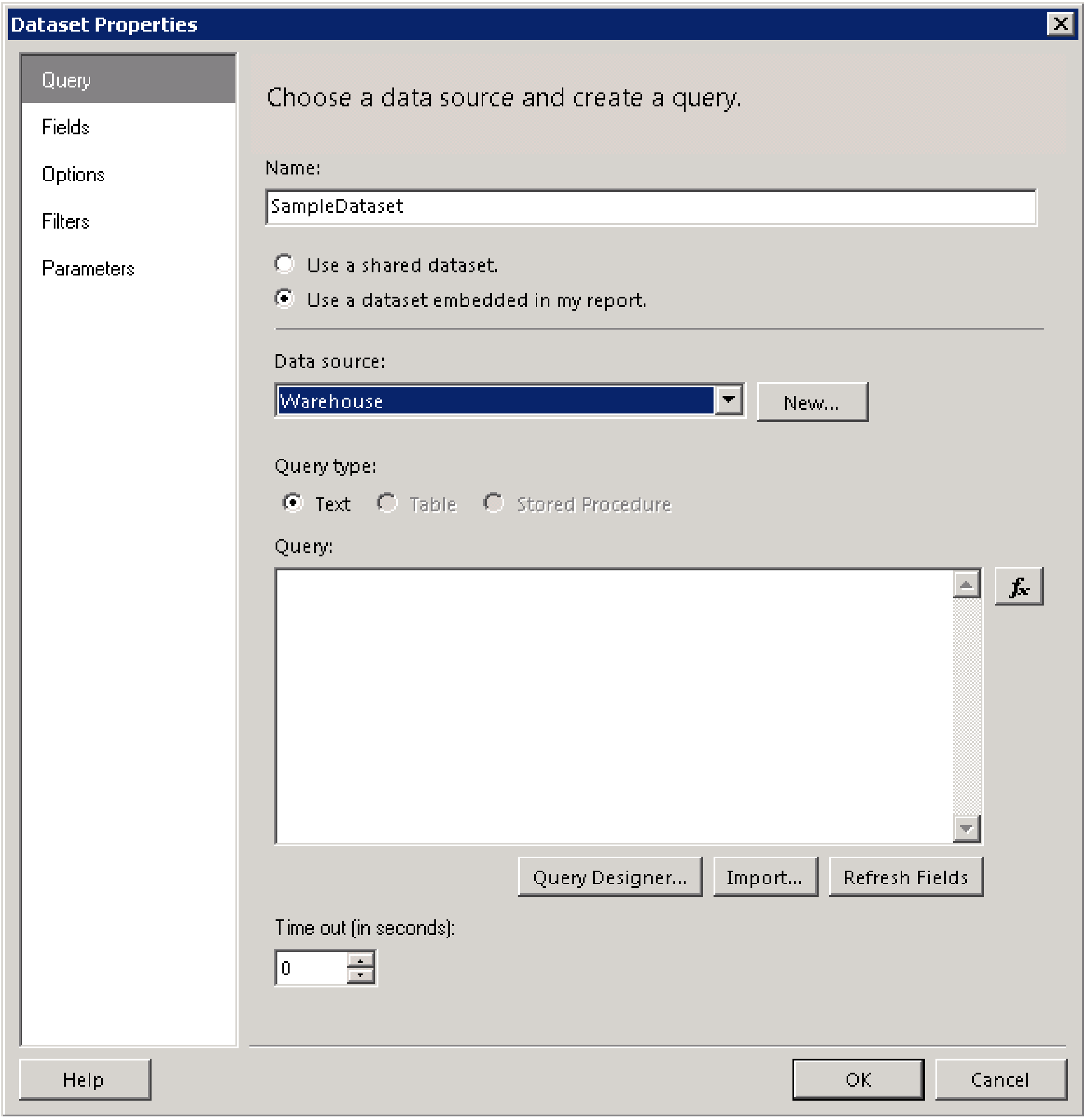


4. Set the units and dimensions appropriately for your report. For a standard portrait sized report, set ruler to 7.5 inches. Report Builder has a default border of .5 inches all the way around.

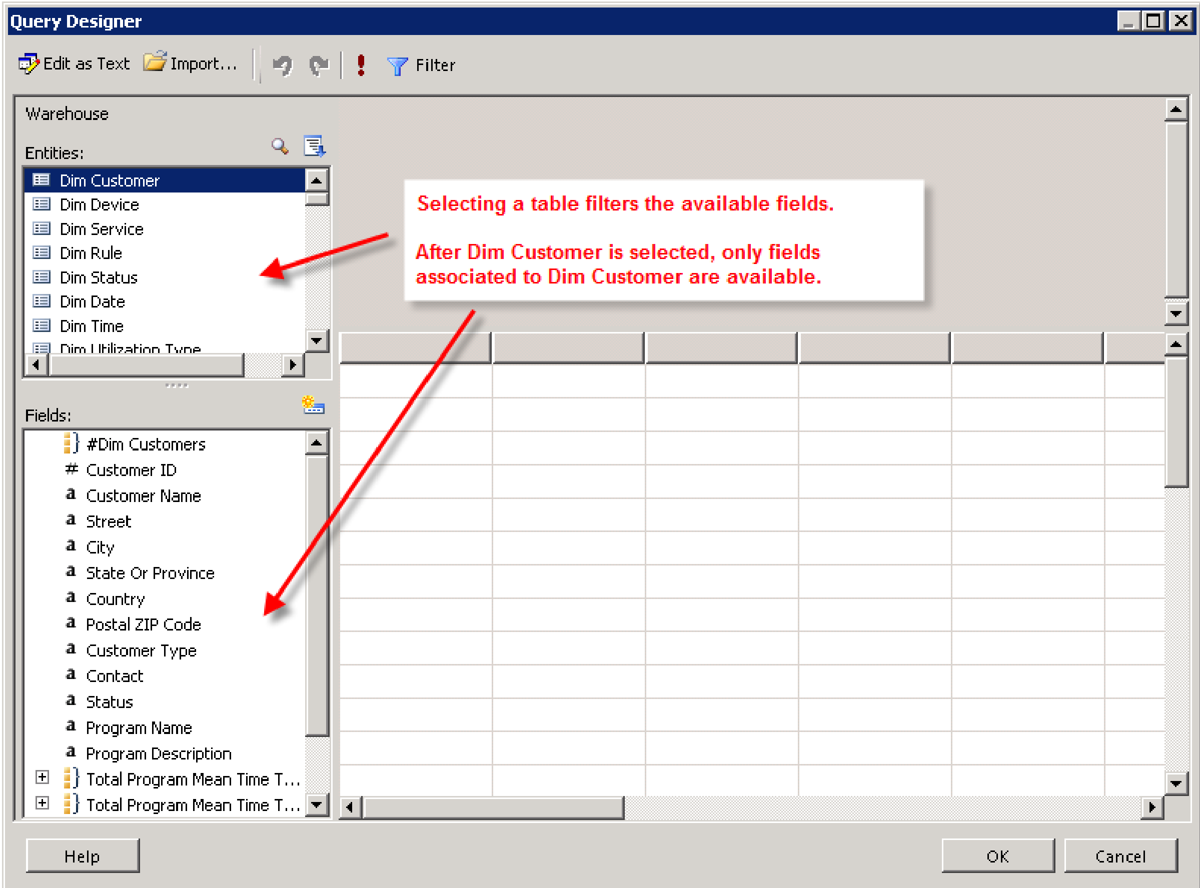
How do I add a dataset?

This information comes from the topic, Creating a Missing Patches Report on page 26

1. Right-click **Datasets**, click **Add Dataset**.
2. Type in a new name for the dataset: with no spaces in the name).
3. Select **Use a dataset embedded in my report**.
4. Select the data source.



5. Click **Query Designer**.



6. In the **Entities** list, select the table, for the example we selected **Dim Customer**.

   The following things change:

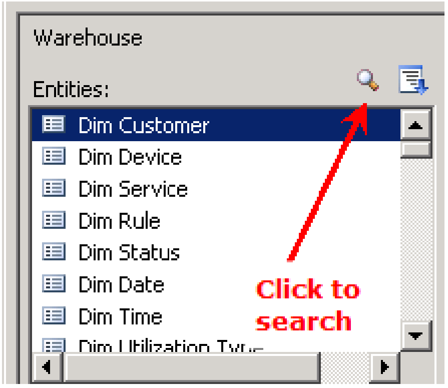
   - The selection of **Dim Customer** filters the available **Fields** to those that are related to **Dim Customer**.
   - Customer is now bolded because it's been used.

   Note: Remember, this is data collection, not the report design. In general, when designing future reports, add as much information here as you think you could possibly use. Locate tables of interest either by scrolling or clicking the search icon.

7. In the fields list, select a field, in this example, **Customer Name**a, and drag it to the right pane and drop it in the collection field.

8. In the Entities list, click **Dim Devices**.

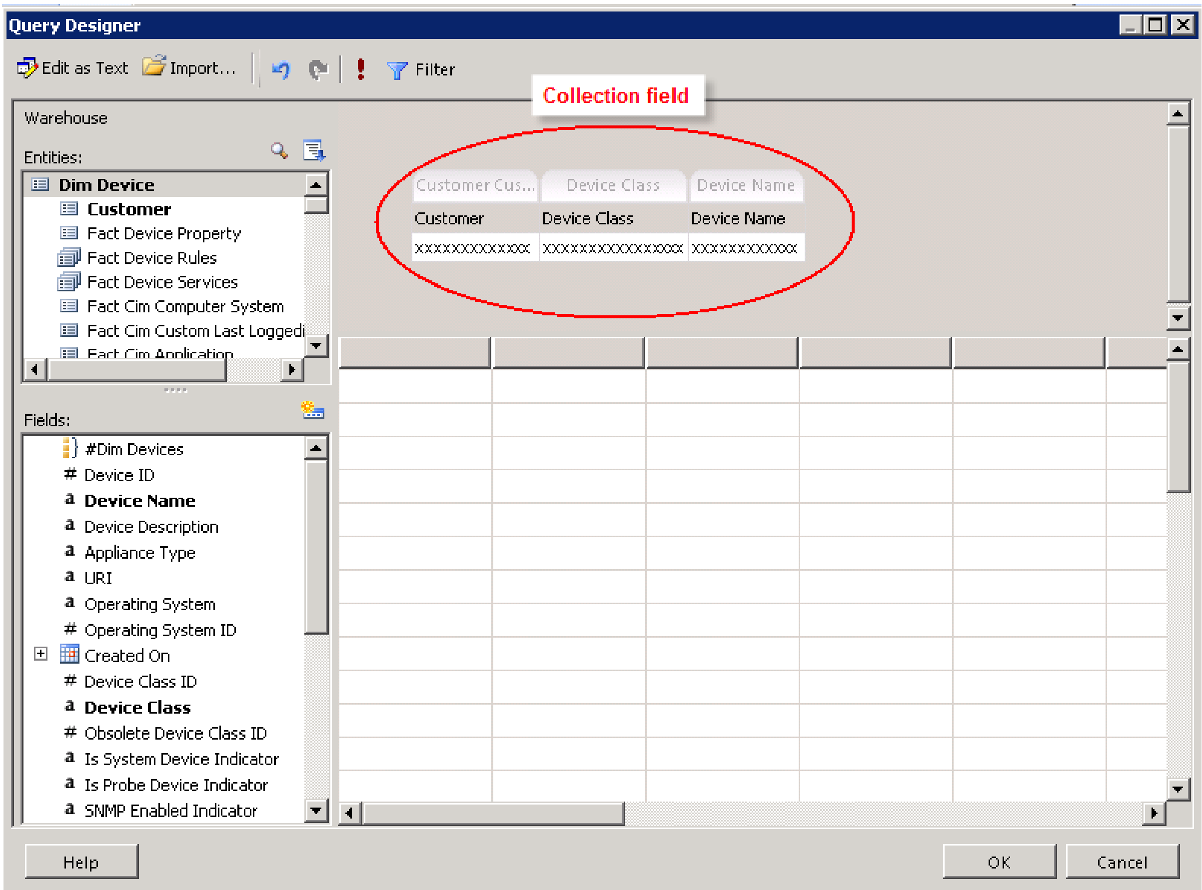
   Tip: *Fields are not in alphabetical order, so you can use the search button or scroll.*



9. Click and drag **Device Class** into the right collection field.

10. Click and drag **Device Name** into the right collection field.

11. Widen the columns so you can see the names, by clicking a column and dragging the right column edge over.



Tip: *When you drag a field into the collection screen, look for the blue bar before dropping the field.*

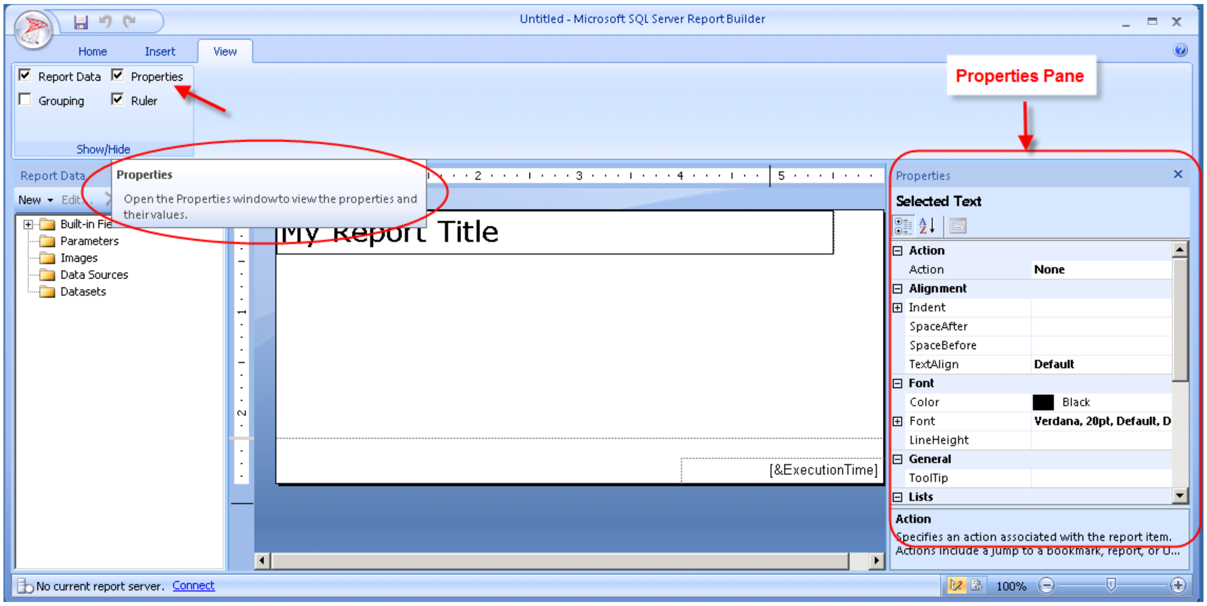
Tip: *If you drag a field into the collection screen by mistake, right-click the column and click* ***Delete****.*

How do I insert and format a table?

- For detailed information on inserting and formatting a table through the Table Wizard, refer to Creating a Missing Patches Report on page 26.

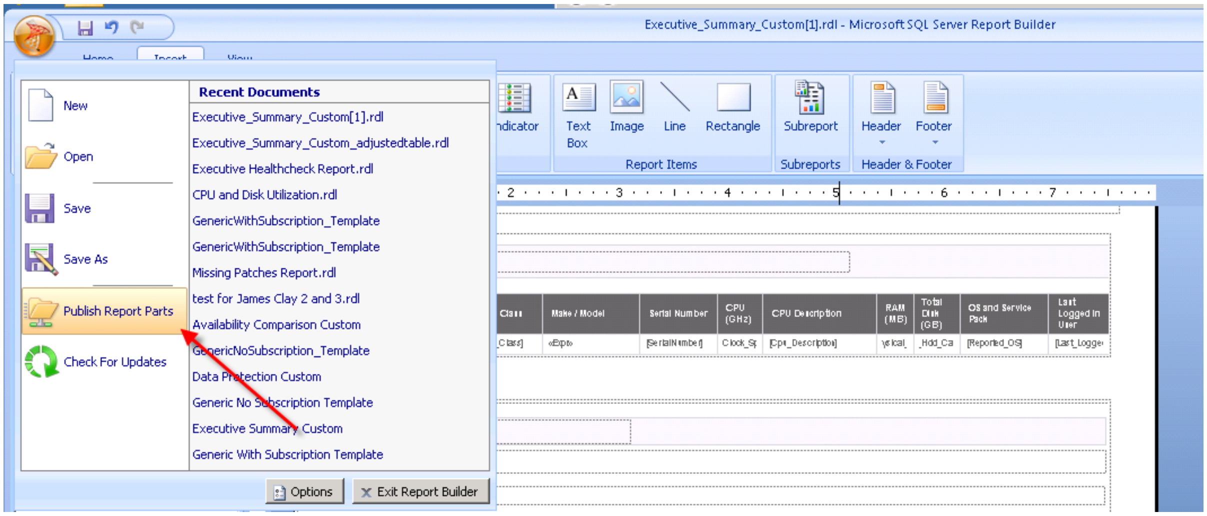
How do I edit... text boxes, images, data regions?

- In the **View** tab, selecting **Properties** will display the Properties Pane on the right of the page where you can edit the properties of every item in a report, the body, images, text boxes, data regions and so on. When you select or edit an item in the Report Design area, the Properties Pane refreshes to display the properties associated to the item, as shown.



How do I publish a Report Part?

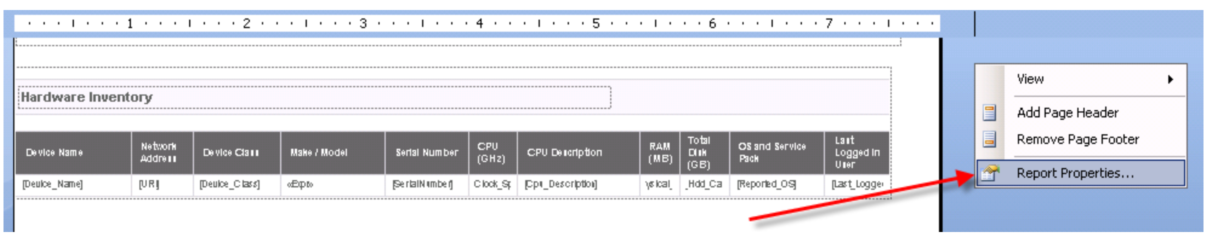
1. Click the icon in the top left of the ribbon menu and select **Publish Report Parts**.



2. Select **Review and modify report parts before publishing**.
3. Select the check box next to Report parts to clear all check boxes.
4. Select the check box next to the Hardware Inventory report part (HardwareInventory_Table_Hard-wareInventoryDetails_Model).
5. Click the report part name and rename the report part to something meaningful.
6. Click **Publish**.

How do I change report properties?

To change report properties, such as the orientation of a report right-click the blue background of the report design surface and select Report Properties from the quick menu that appears.



Data Tables

The data warehouse schema consists of dimension and fact tables. A dimension is a structure that categorizes data in order to enable users to answer business questions. Fact tables contain the measurements or metrics or facts of business processes.

We have provided you with the dimension and fact tables for Report Manager to use in the creation of custom reports.

Dimension Fact Tables

Fact Table	Granularity	Description
dim_Customer	one row per customer	list of customers
dim_Datasource	one row per datasource	list of datasources
dim_Date	one row per date	simple representation of dates

dim_Device	one row per device	list of devices
dim_Folder	one row per folder	list of folders
dim_Interface	one row per interface	list of traffic interfaces
dim_Service	one row per service/service item	list of services
dim_Status	one row per status	list of statuses
dim_Time	one row per minute	simple representation of times
dim_Utilization Type	one row per utilization type	used to join utilization tables
dim_VoIP Resources	one row per VoIP resource type	used to join VoIP tables

Fact Tables

Fact Table	**Granularity**	**Description**
fact_Application License Compliance	1 row per hour, span each scan hourly	Details which applications are not in compliance.
fact_Availability	1 row per state transition per task	Details the availability of a device for all of the availability services or service groupings.
fact_AvailabilityHourly		
fact_BackupServices	1 row per scan	Details about all monitored Backup Exec services. Includes backup, config, and restore options.
fact_Bandwidth	1 row per hour, span each scan hourly	Details about traffic services on ethernet devices, such as switches or routers.
fact_cim_application		
fact_cim_computer system		
fact_cim_custom last loggedin user		
fact_cim_Folder For Share		
fact_cim_Logical Device		
fact_cim_Mapped Drive		
fact_cim_MissingPatch	1 row per data-source/customer/device/patch combination.	Table stores missing patch information such as when patch was released, patch category, whether or not patch was installed or if there was a failure installing it.
fact_cim_media access device		

Fact Table	Granularity	Description
fact_cim_Network Adapter Configuration		
fact_CIM_NetworkAdapter	1 row per network adapter	Detected network adapters for all discovered devices.
fact_cim_OpenPorts		
fact_cim_operating system		
fact_cim_Page File		
fact_cim_Patch		
fact_cim_processor		
fact_cim_Service		
fact_cim_Video Controller		
fact_Cost of Downtime	1 row per day	Tracks the assigned cost of downtime for all service groupings over time.
fact_Device Folder	1 row per device/folder combination	Tracks which devices associated to which folder over time.
fact_Device License Compliance	1 row per hour, span each scan hourly	Details which devices have applications that are not in compliance.
fact_Device License Compliance Details	1 row for each application out of compliance on a device	Contains the details of the application causing the devices to be out of compliance.
fact_Device Management History	1 row per device discovered	Lists the start and, if applicable, end date of management of a device.
fact_Device Note		
fact_Device Property		
fact_Device Service Parameters	1 row per task parameter	Describes the parameters for tasks.
fact_Device Services	1 row per device/service combination	Tracks which service is being monitored on devices over time.
fact_Disk_QueueLength		
fact_EventLog	1 row per unique event per hour	Detected events for all monitored devices.
Fact_EventLog_Categories		
fact_Incident	1 row for each incident (device/service)	Details notifications sent per incident from the central server.

Fact Table	Granularity	Description
fact_IncidentDevice		
fact_IncidentService		
fact_IncidentTicket	1 row per data-source/customer/ticketid combination	Table stores id for an incident ticket, if it was resolved and when the ticket was opened.
fact_ManualTicket	1 row per data-source/customer/ticketid combination	Table stores id for an manual ticket, if it was resolved and when the ticket was opened.
fact_Notification	1 row per notification detected by the central server	All notifications sent by the central server.
fact_PacketLoss		
fact_PrinterPaper		
fact_PrinterToner		
fact_Remote Control Usage	1 row per remote control attempt	Decribes the details of a remote control connection.
fact_SEM Anti-virus Activity	1 row per status for each scan hour	Status of all anti-virus activity services for all monitored devices.
fact_SEM Anti-virus Definition	1 row per status for each scan hour	Status of the anti-virus definition services, for all monitored devices.
fact_SEM_Firewall Incidents	1 row per status for each scan hour	All firewall incidents detected for all monitored devices.
fact_SEM_Patch Level	1 row per status for each scan hour	Patch level status for all monitored devices.
fact_SEM_Patch Level Count	1 row per scan	Counts the total number of missing patches per scan.
fact_SEM_Patch Level Daily Status	1 row per task per day	Final daily patch level status.
fact_Utilization	1 row per hour, span each scan hourly	Shows utilization of CPU, disk, physical memory, and virtual memory on devices.
fact_VoIP Call Activity	1 row per hour, span each scan hourly	Call activity statistics for all monitored CCM devices.

Fact Table	Granularity	Description
fact_VoIP Device Registration	1 row per hour, span each scan hourly	Device registrations for all CCM devices.
fact_VoIP Incidents	1 row per hour, span each scan hourly	All incidents detected for all monitored CCM devices.
fact_VoIP Information	1 row per hour, span each scan hourly	VoIP device information for all CCM devices.
fact_VoIP Resource Utilization	1 row per hour, span each scan hourly	VoIP resource utilization for all monitored CCM devices.

About Report Builder and Report Manager

Report Builder is a small report design tool that is installed on your report server as part of Microsoft SQL Server. Similar in look and feel to Microsoft Word, it is a comfortable environment for users of other Microsoft Office tools. You can create simple or complex reports very quickly through wizards and an intuitive interface. If you have SQL and scripting skills you can customize SQL queries within Report Builder, but it is often just as quick to follow the UI and use the wizards.

Roles of Report Builder and Report Manager

Report Builder is where you have access to Templates and Report Parts provided by Report Manager (created from existing stock reports), tools to create custom reports varying from simple to complex and preview the reports.

Report Manager is where you upload the custom reports, configure UI controls, update an RDL, and ultimately, custom report users run the reports.

About Microsoft SQL Server and Report Builder Versions

SQL Server 2008 R2 supports Report Builder 3.0, which allows for creation of reusable and editable reports, including the creation and use of Report Parts.

More Reading

We recommend the following:

- *Microsoft SQL Server 2008 Reporting Services*, by Brian Larson, ISBN-10: 0071548084, ISBN-13: 9780071548083
- *Microsoft® SQL Server® 2008 Reporting Services Step by Step*, by Stacia Misner, ISBN-10: 0-7356-2647-2, ISBN-13: 9780735626478

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