

Check if Specific Hotfix installed on a Collection – SCCM

Recently we got a request from our Platform Team whether we can fetch any report from System Center Configuration Manager to check if specific Hotfixes installed on all the servers managed by them.

After further discussion, we got to know that they wanted to check all the systems that miss the WannaCry related hotfixes.

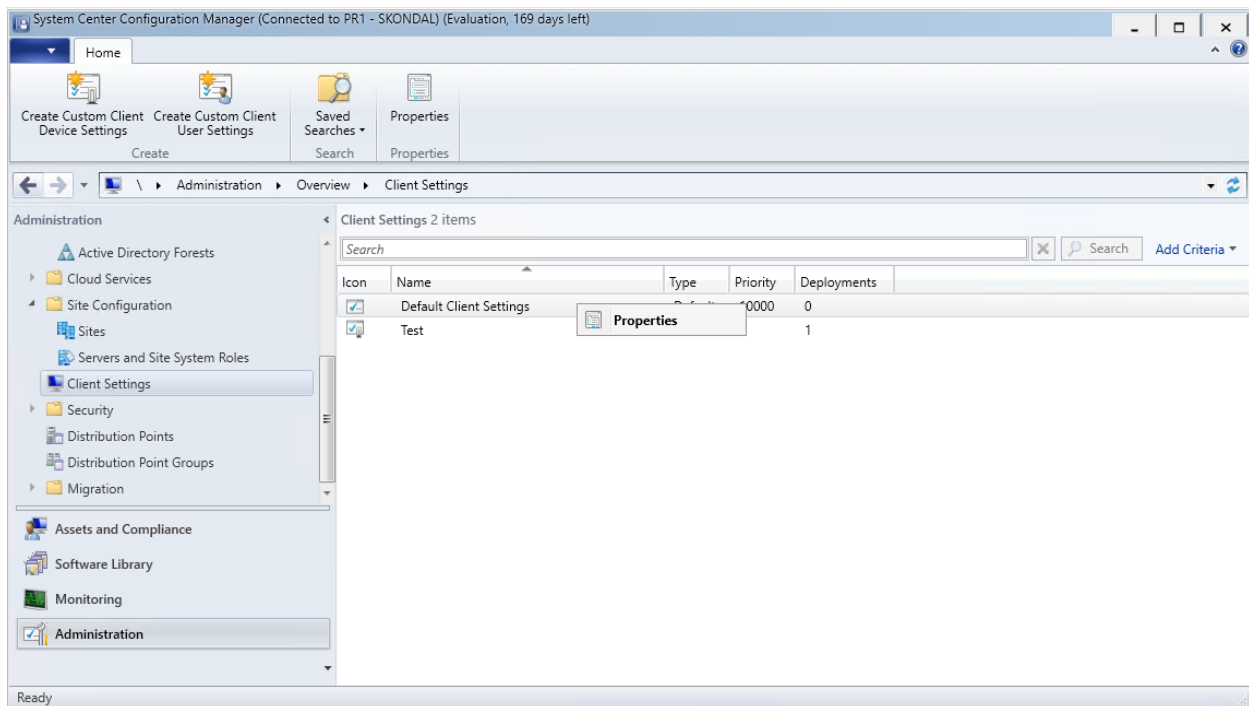
Let's create the report using Microsoft SQL Server Report Builder. Before that, we need to leverage the Win32_QuickFixEngineering WMI class otherwise we will not get the data in our report. This WMI class is specifically designed to reflect the presence of all system-wide updates deployed. We also have an added advantage that this class specifically excludes any update supplied by Windows Update - so the result set we get from this WMI class comes pre-filtered with just the supplemental data we want. You can read more about the Win32_QuickFixEngineering class [here](#).

Let's start...

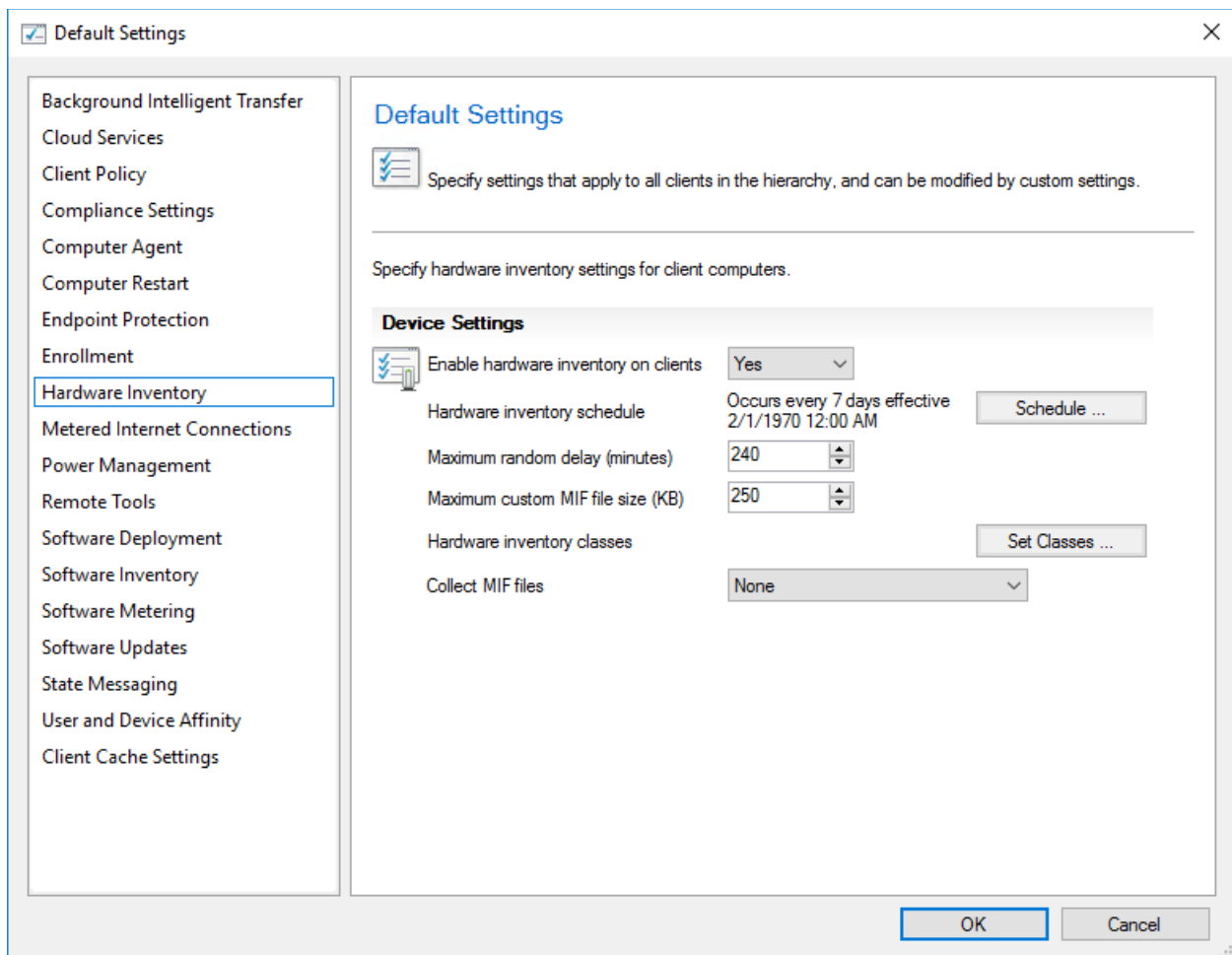
Enable Win32_QuickFixEngineering WMI class

1: Launch SCCM console and click on **Administration** tab.

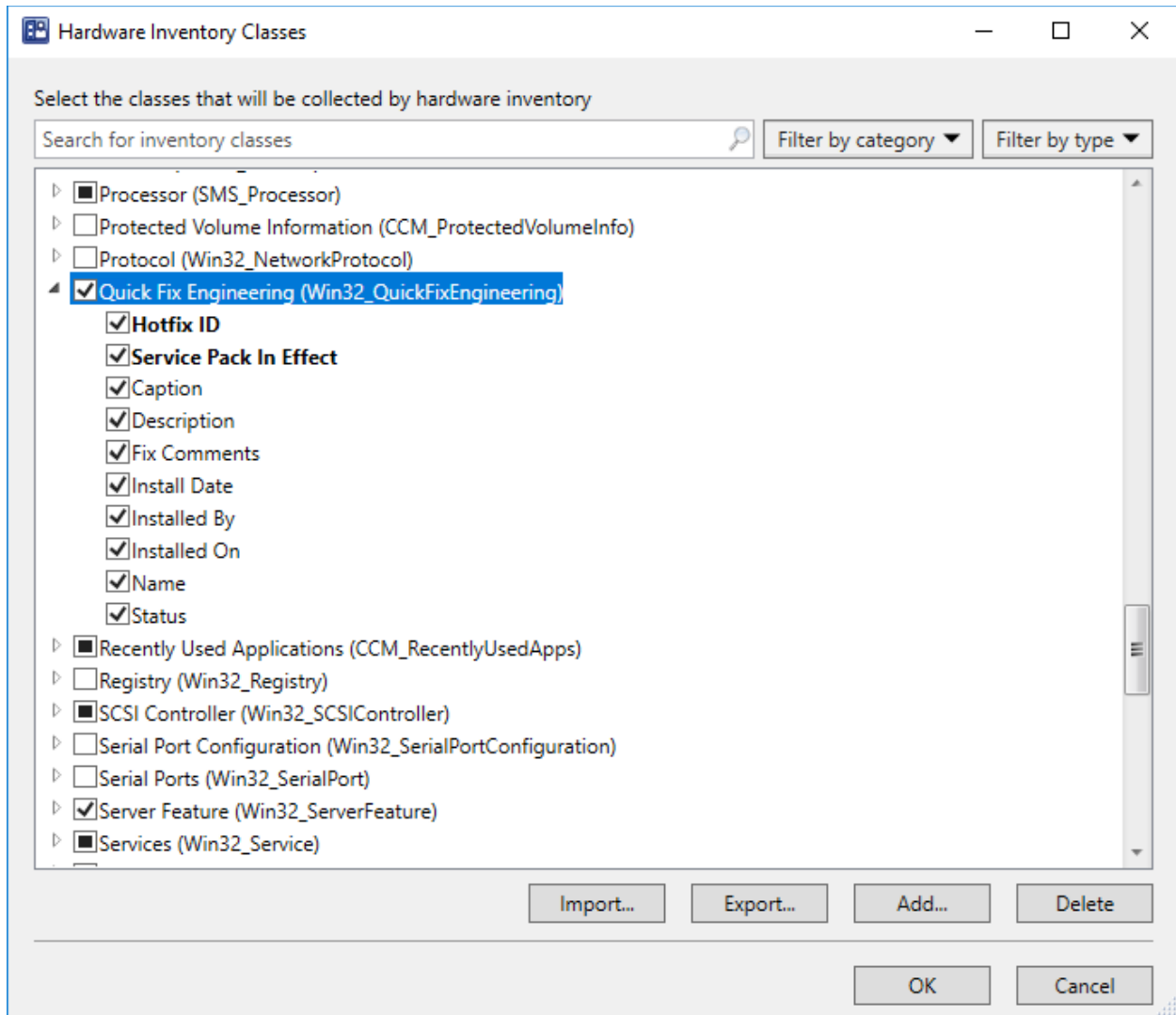
2: Click on **Client Settings**, right click **Default Client Settings** and click **Properties**.



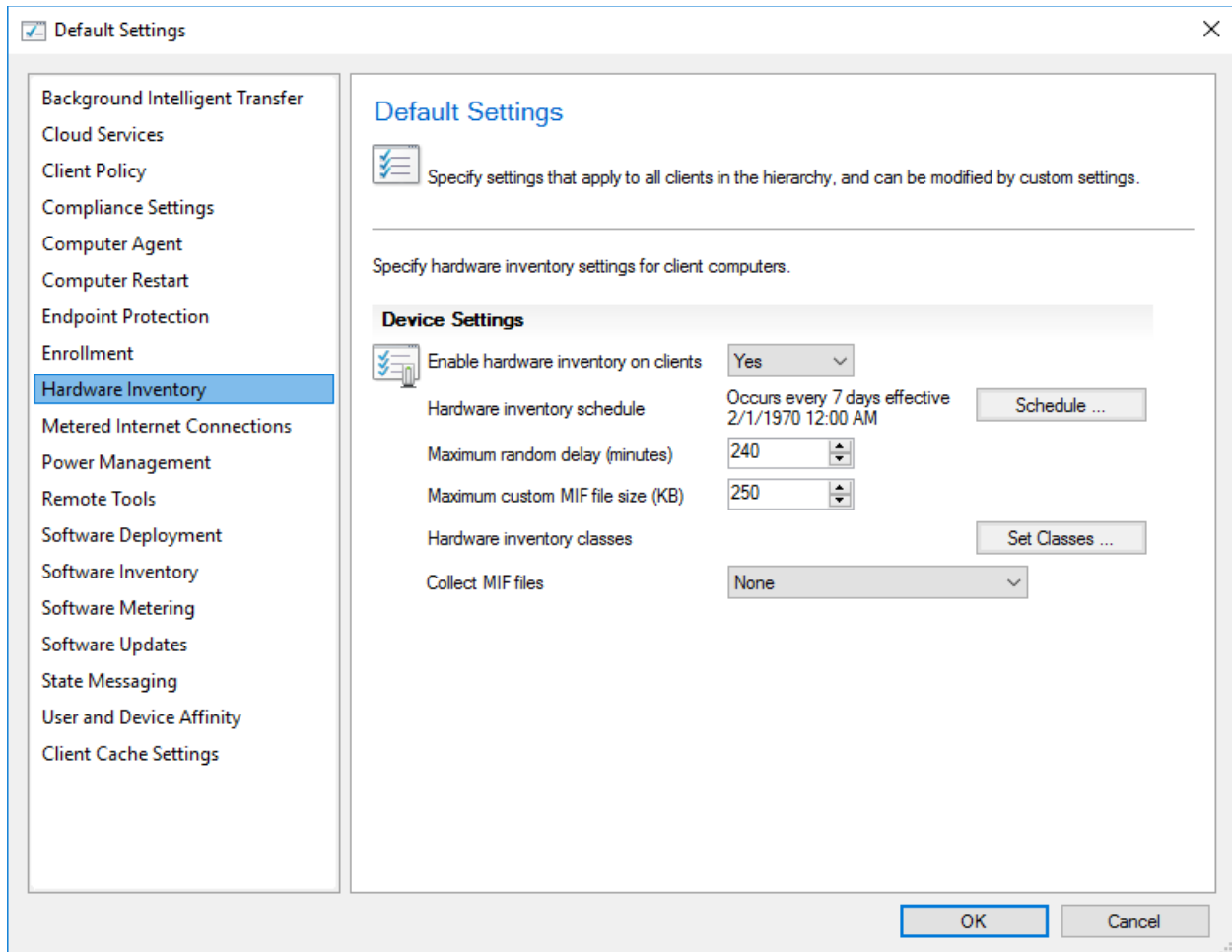
3: Click on **Hardware Inventory** and click on **Set Classes** button under **Device Settings** option.



4: Put check mark on **Quick Fix Engineering (Win32_QuickFixEngineering)** and click **OK**.



5: Click **OK** button to save the settings.



We have enabled the *Win32_QuickFixEngineering* class, let's create our report.

Creating Report using Report Builder

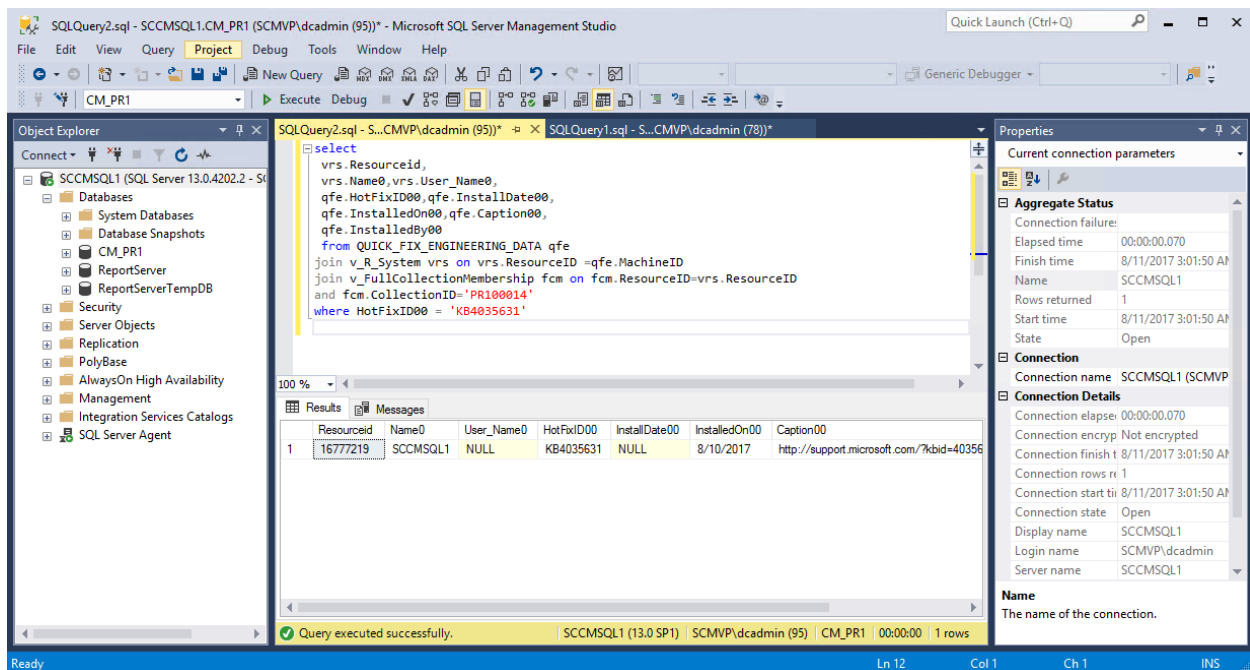
Below is the query we are going to use to check if specific HotFix installed on a collection of servers:

```

select
  vrs.Resourceid,
  vrs.Name0, vrs.User_Name0,
  qfe.HotFixID00, qfe.InstallDate00,
  qfe.InstalledOn00, qfe.Caption00,
  qfe.InstalledBy00
from QUICK_FIX_ENGINEERING_DATA qfe
join v_R_System vrs on vrs.ResourceID = qfe.MachineID
join v_FullCollectionMembership fcm on fcm.ResourceID=vrs.ResourceID
and fcm.CollectionID='Provide Collection ID'
where HotFixID00 = 'Provide HotFix ID'

```

After running the SQL query in SSMS, we are getting the desired results.



The screenshot displays the Microsoft SQL Server Management Studio (SSMS) interface. The central pane shows the execution of a SQL query that checks for a specific hotfix (KB4035631) on a collection of servers (SCCMSQL1). The query is as follows:

```

select
  vrs.Resourceid,
  vrs.Name0, vrs.User_Name0,
  qfe.HotFixID00, qfe.InstallDate00,
  qfe.InstalledOn00, qfe.Caption00,
  qfe.InstalledBy00
from QUICK_FIX_ENGINEERING_DATA qfe
join v_R_System vrs on vrs.ResourceID = qfe.MachineID
join v_FullCollectionMembership fcm on fcm.ResourceID=vrs.ResourceID
and fcm.CollectionID='PR100014'
where HotFixID00 = 'KB4035631'

```

The Results pane shows the output of the query, which is a single row of data:

Resourceid	Name0	User_Name0	HotFixID00	InstallDate00	InstalledOn00	Caption00
16777219	SCCMSQL1	NULL	KB4035631	NULL	8/10/2017	http://support.microsoft.com/?kbid=4035631

The Properties pane on the right shows the connection details for the current connection (SCCMSQL1 (SCMVP)).

Query executed successfully. SCCMSQL1 (13.0 SP1) SCMVP\dcadmin (95) CM_PR1 00:00:00 1 rows

I have created a Test collection for this demo, and using same in our query. Anyway, I will be giving an option in our report to choose the Collection from available list.

The screenshot displays the SCCM console interface. The left-hand navigation pane shows the 'Assets and Compliance' tree, with 'Device Collections' selected. The main pane shows a list of 5 device collections. Below the list, the details for the 'Test Collection QFE' are expanded, showing a summary of its properties.

Icon	Name	Collection ID	Limiting Collection	Member Count	Members Visible on Site	Referenced Collections
	All Desktop and Server Clients	SMSDM003	All Systems	1	1	0
	All Mobile Devices	SMSDM001	All Systems	0	0	0
	All Systems	SMS00001	All Systems	4	4	0
	All Unknown Computers	SMS0000US	All Systems	2	2	0
	Test Collection QFE	PR100014	All Systems	1	1	0

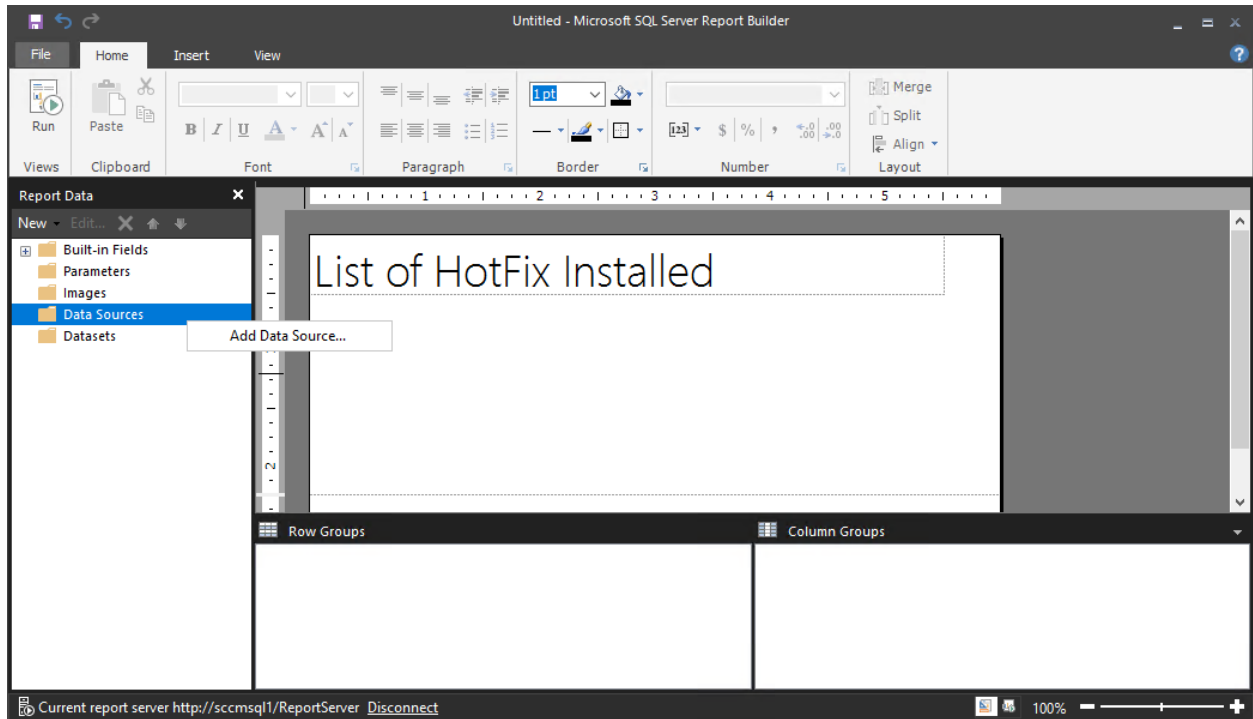
Test Collection QFE Summary

- Name: Test Collection QFE
- Update Time: 8/10/2017 3:33 AM
- Member Count: 1
- Members Visible on Site: 1
- Referenced Collections: 0
- Comment:

At the bottom of the details pane, there are tabs for 'Summary', 'Deployments', and 'Custom Client Settings'.

Let's create the report.

1: Open **SQL Server Report Builder**, right click **Data Sources** folder and click **Add Data Source**.



2: Select **Use a connection embedded in my report** option and click **Build** button.

The screenshot shows the 'Data Source Properties' dialog box with the 'General' tab selected. The 'Name' field is set to 'DataSource1'. The 'Use a connection embedded in my report' radio button is selected. The 'Select connection type' dropdown is set to 'Microsoft SQL Server'. The 'Connection string' field is empty, with a 'Build...' button and a function icon (fx) to its right. A 'Test Connection' button is located below the connection string field. The 'Use single transaction when processing the queries' checkbox is unchecked. The 'OK' button is highlighted with a blue border.

Data Source Properties

General
Credentials

Change name, type, and connection options.

Name:
DataSource1

☐ Use a shared connection or report model
☒ Use a connection embedded in my report

Select connection type:
Microsoft SQL Server

Connection string:
Click here to type or paste a connection string

Build...
fx

Test Connection

☐ Use single transaction when processing the queries

Help OK Cancel

3: Under **Server name** field, provide SQL Server / Cluster Name holding SCCM Database.

4: Select SCCM database name and click **OK**.

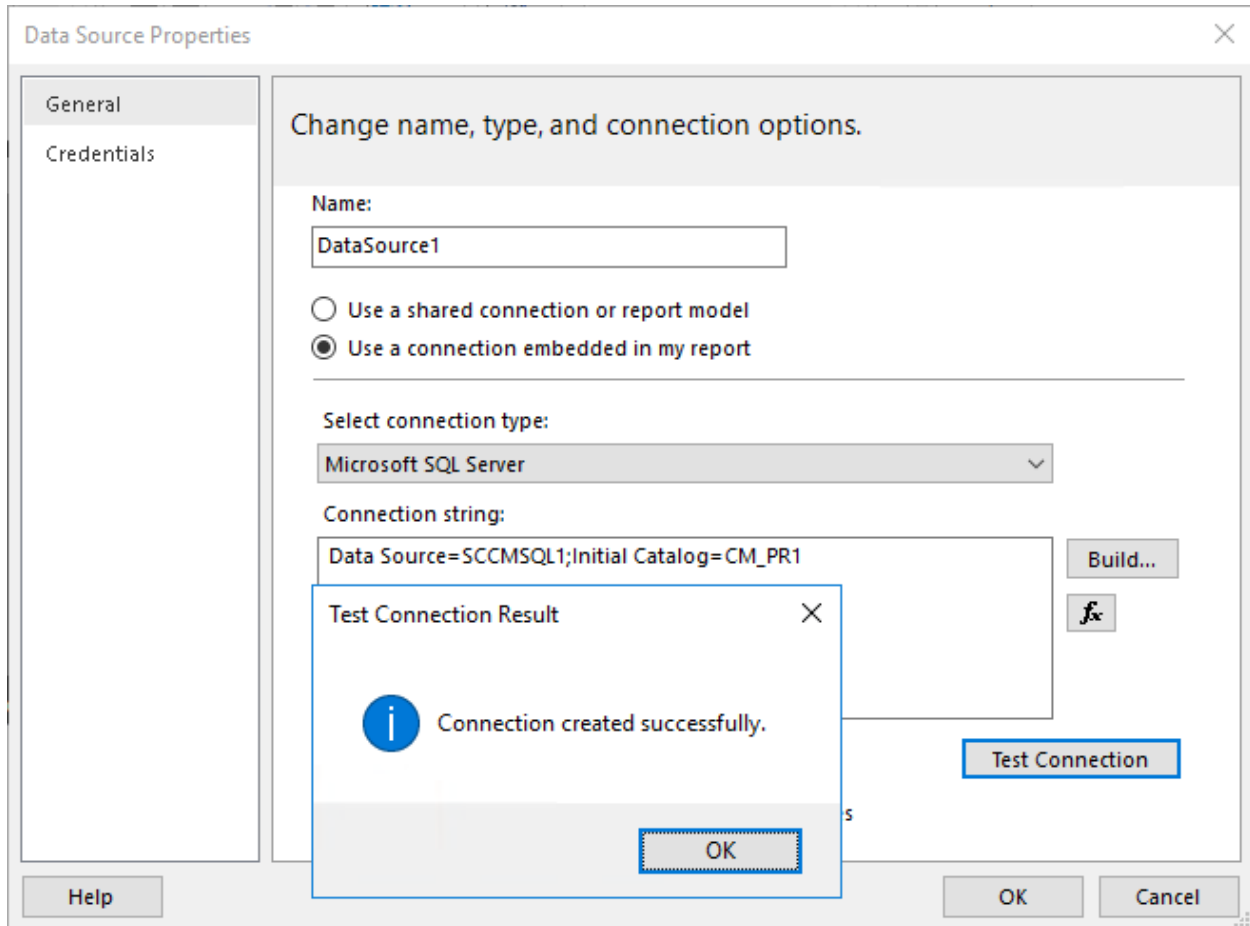
The screenshot shows the 'Connection Properties' dialog box with the following configuration:

- Data source:** Microsoft SQL Server (SqlClient) [Change...]
- Server name:** SCCMSQL1 [Refresh]
- Log on to the server:**
 - ☒ Use Windows Authentication
 - ☐ Use SQL Server Authentication
 - User name: []
 - Password: []
 - ☐ Save my password
- Connect to a database:**
 - ☒ Select or enter a database name: CM_PR1 [v]
 - ☐ Attach a database file: [] [Browse...]
 - Logical name: []

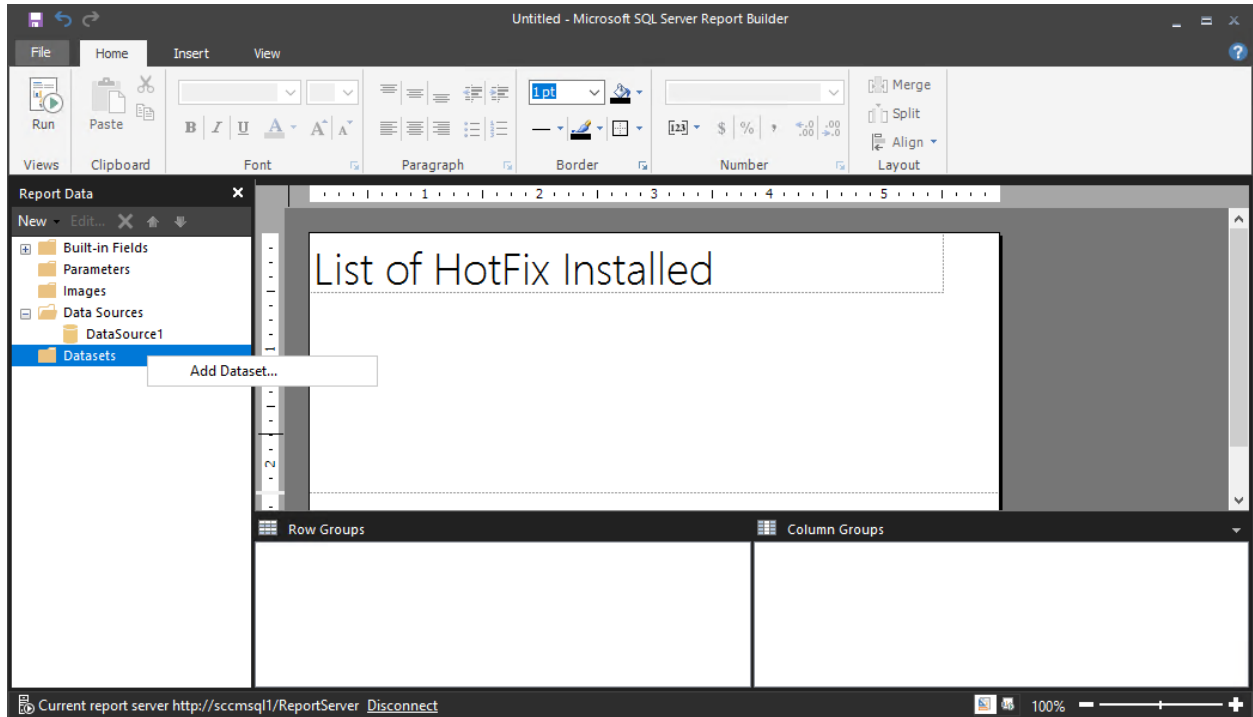
Buttons at the bottom: Test Connection, OK (highlighted), Cancel, and Advanced... (disabled).

5: Click on **Test Connection** button and make sure connection is created successfully.

6: Click **OK** to close **Data Source Properties** window.



7: Right click **Datasets** and click **Add Dataset** option.



<http://systemcentermvp.com/2017/08/11/check-specific-hotfix-installed-collection-sccm/>

8: Select option **Use a dataset embedded in my report.**

9: Select the **Data source** which we created.

10: Select **Text** as Query type and past below SQL query here.

```
select
vrs.Resourceid,
vrs.Name0,vrs.User_Name0,
qfe.HotFixID00,qfe.InstallDate00,
qfe.InstalledOn00,qfe.Caption00,
qfe.InstalledBy00
from QUICK_FIX_ENGINEERING_DATA qfe
join v_R_System vrs on vrs.ResourceID =qfe.MachineID
join v_FullCollectionMembership fcm on fcm.ResourceID=vrs.ResourceID
and fcm.CollectionID= @CollID
where HotFixID00 = @HotFixID
```

The SQL query will fetch data from SCCM Database and will show it in our report.

11: Click **OK** to close the **Dataset Properties**.

Dataset Properties

Query
Fields
Options
Filters
Parameters

Choose a data source and create a query.

Name:
DataSet1

☐ Use a shared dataset.
☒ Use a dataset embedded in my report.

Data source:
DataSource1 New...

Query type:
☒ Text ☐ Table ☐ Stored Procedure

Query:

```
select  
vrs.Resourceid,  
vrs.Name0,vrs.User_Name0,  
qfe.HotFixID00,qfe.InstallDate00,  
qfe.InstalledOn00,qfe.Caption00,  
qfe.InstalledBy00  
from QUICK_FIX_ENGINEERING_DATA qfe  
join v_R_System vrs on vrs.ResourceID = qfe.MachineID  
join v_FullCollectionMembership fcm on fcm.ResourceID=vrs.ResourceID  
and fcm.CollectionID= @CollID  
where HotFixID00 = @HotFixID  
|
```

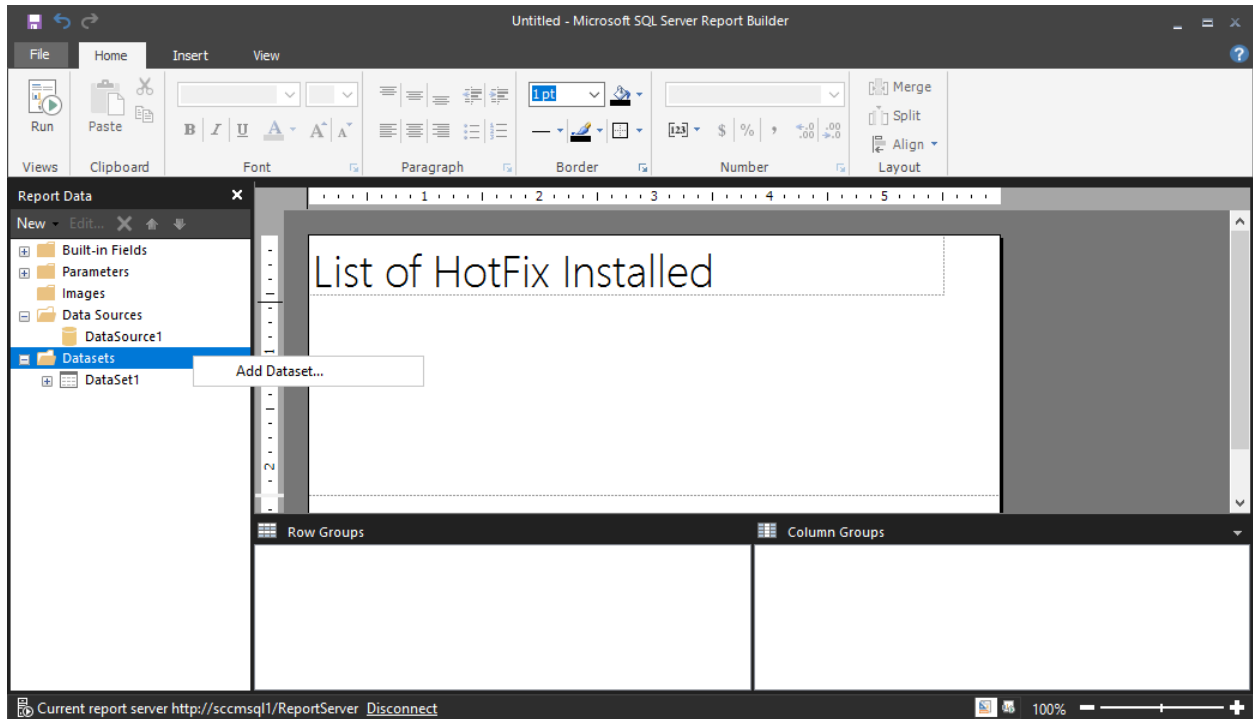
Query Designer... Import... Refresh Fields

Time out (in seconds):
0

Help OK Cancel

Now, since we want to select the Collection from list, we need to create one more Dataset for it.

12: Right click **Datasets** and click **Add Dataset** option.



13: Select option **Use a dataset embedded in my report.**

14: Select the **Data source** which we created.

15: Select **Text** as Query type and past below SQL query here.

select Distinct CollectionID,Name from v_collection order by Name

16: Click **OK** to close the **Dataset Properties**.

Dataset Properties

Query
Fields
Options
Filters
Parameters

Choose a data source and create a query.

Name:
DataSet2

☐ Use a shared dataset.
☒ Use a dataset embedded in my report.

Data source:
DataSource1 New...

Query type:
☒ Text ☐ Table ☐ Stored Procedure

Query:
select Distinct CollectionID,Name from v_collection order by Name

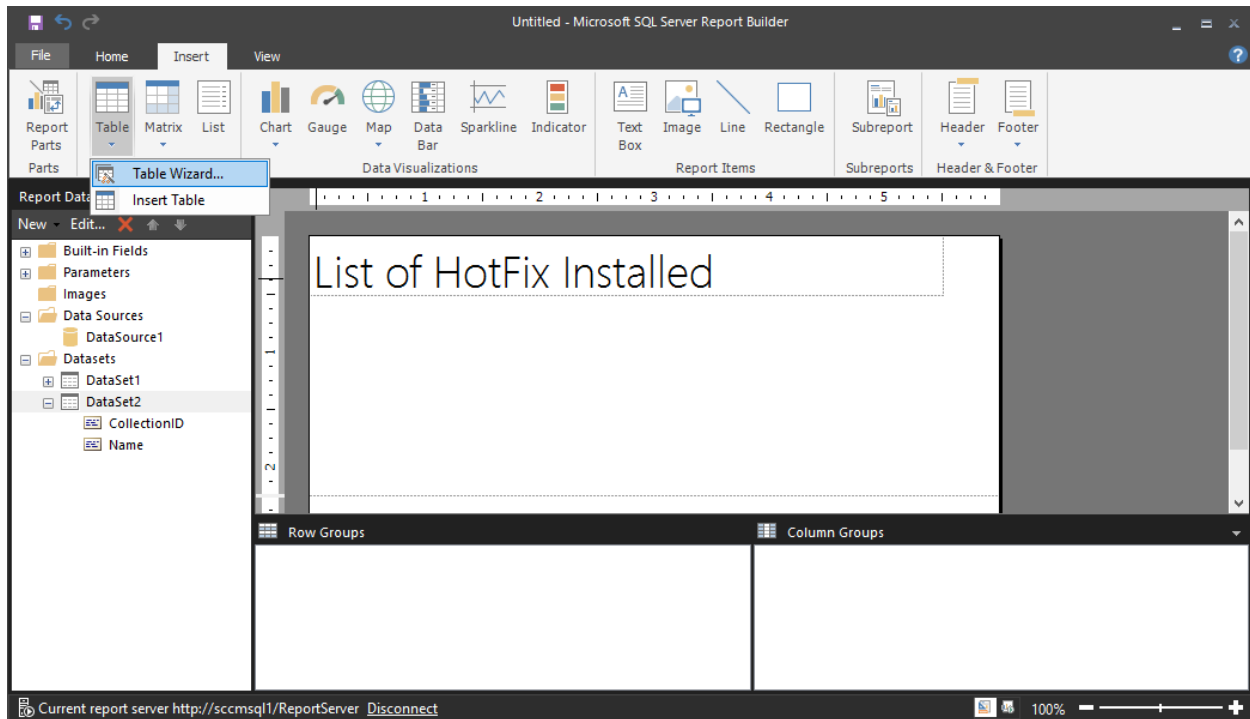
Query Designer... Import... Refresh Fields

Time out (in seconds):
0

Help OK Cancel

Now we need the fields which should be displayed in our report.

17: Click on **Insert** tab, click **Table** and select **Table Wizard** option.




18: Select **DataSet1** and click Next.

New Table or Matrix ✕


Choose a dataset

Choose a dataset

☒ Choose an existing dataset in this report or a shared dataset



DataSet1
(in this Report) Resourceid, NameQ, User_NameQ, HotFixIDQ, InstallDateQ, InstalledOnQ, CaptionQ, InstalledByQ



DataSet2
(in this Report) CollectionID, Name

Browse...

☐ Create a dataset

Help < Back Next > Cancel

19: Select the fields which you want to show in your report and drag it to **Values** box.

New Table or Matrix ✕

Arrange fields

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

Available fields

- Resourceid
- Name0
- User_Name0
- HotFixID00
- InstallDate00
- InstalledOn00
- Caption00
- InstalledBy00

Column groups

Row groups

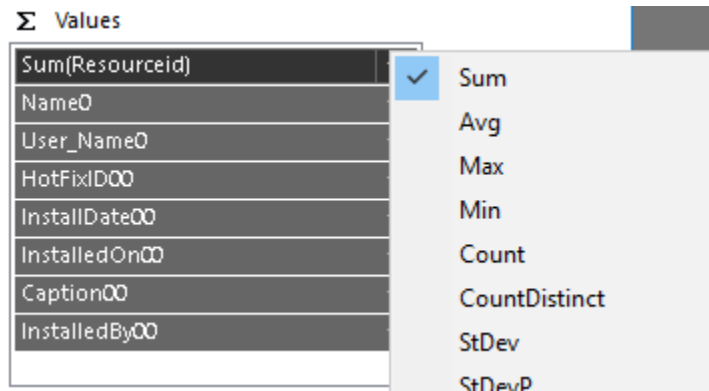
Σ Values

Sum(Resourceid)	▼
Name0	▼
User_Name0	▼
HotFixID00	▼
InstallDate00	▼
InstalledOn00	▼
Caption00	▼
InstalledBy00	▼

Help < Back Next > Cancel

After dragging the required fields under **Values** box, you may get few fields starting from **Sum**.

We don't need these fields, so remove all such fields by clicking dropdown option against those fields and unchecking the **Sum** option.



20: Layout preview will appear, click **Next** to continue.

New Table or Matrix

Choose the layout

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

Options:

☐ Show subtotals and grand totals

☐ Blocked, subtotal below

☐ Blocked, subtotal above

☐ Stepped, subtotal above

☒ Expand/collapse groups

Preview

Resourceid	Name0	User Name0	HotFix ID00	Install Date0	Installed On	Caption00	Installe
[Resourceid]	[Name0]	[User_Name0]	[HotFixID00]	[InstallDate00]	[InstalledOn00]	[Caption00]	[Installe

Help

< Back

Next >

Cancel

21: Click **Finish** button.

New Table or Matrix

Preview

Preview the report item being created. You can customize the fonts, color schemes and style after you finish the wizard.

Resourceid	Name0	User Name0	Hot Fix ID00	Install Date0	Installed On	Caption00	Installed By0
[Resourceid]	[Name0]	[User_Name0]	[HotFixID00]	[InstallDate00]	[InstalledOn00]	[Caption00]	[InstalledBy00]

Help

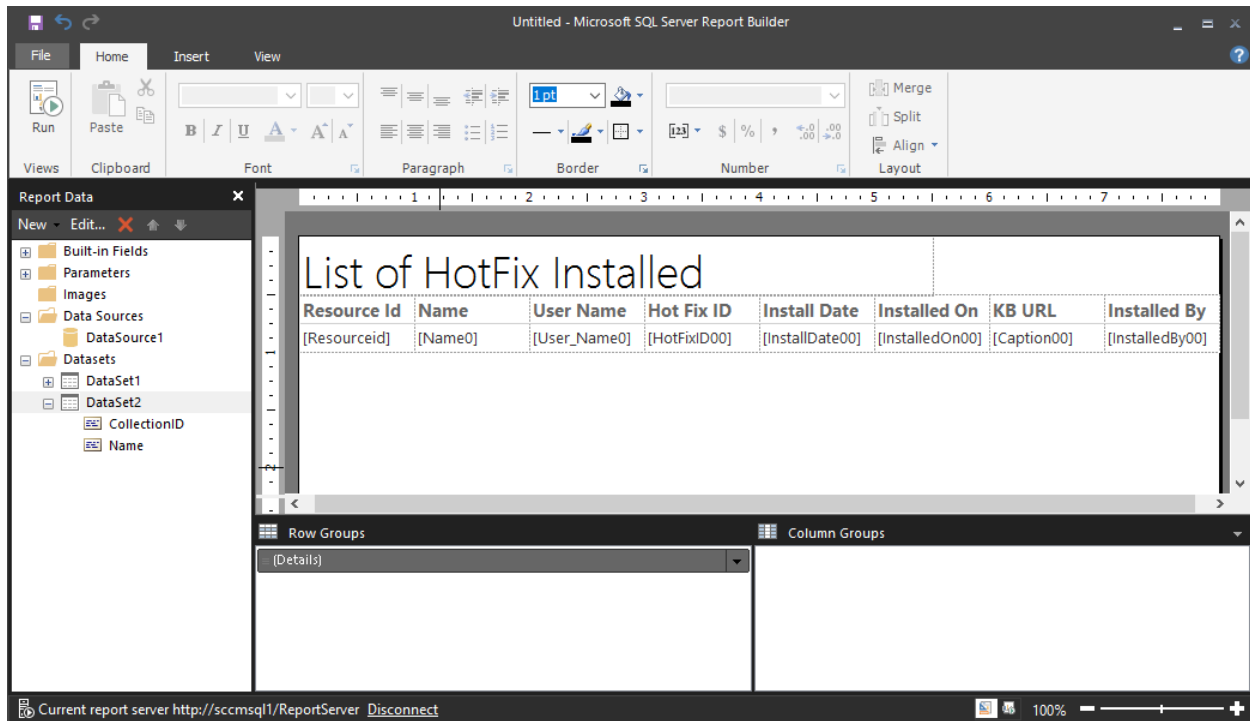
< Back

Finish >>

Cancel

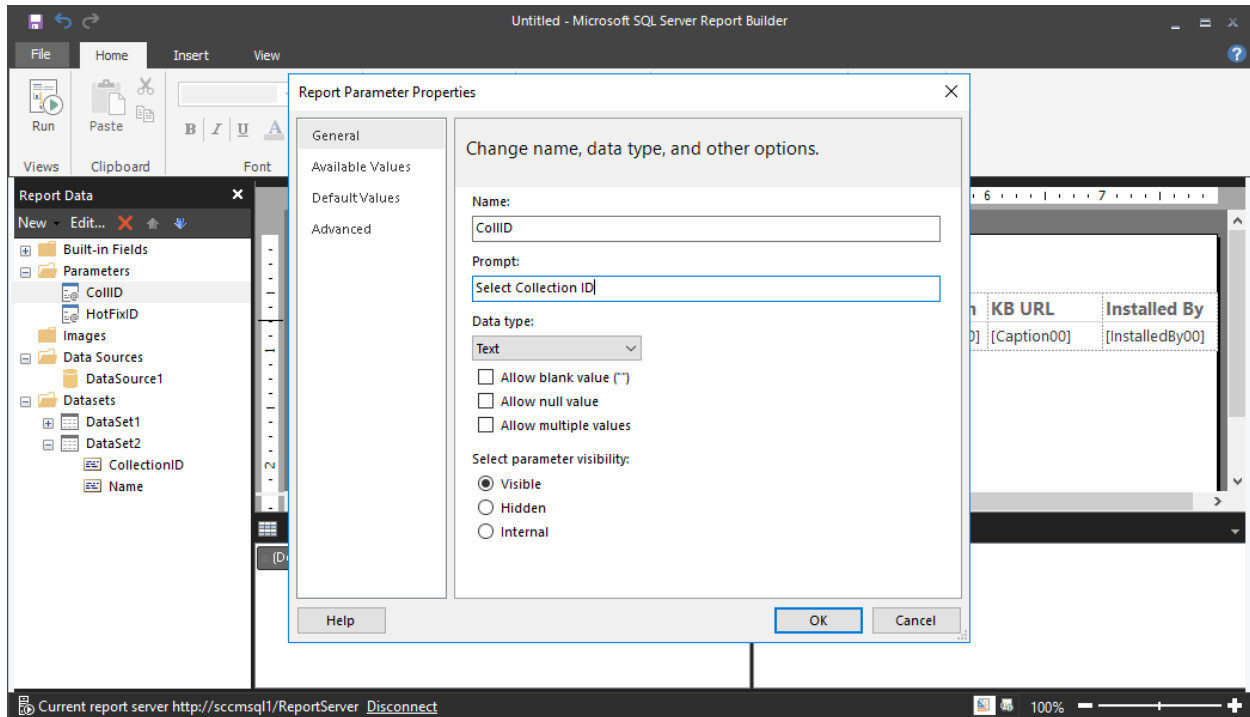
The Report Builder Interface will show you all the created Data Sources, Datasets, Parameters used and the Fields which we want to show in our report.

22: Modify the field names and expand the fields as per the requirement.



23: Expand **Parameters** folder and double click **@CollID** parameter.

24: Provide a suitable caption under **Prompt** field.



25: Click on **Available Values** tab and select **Get values from a query** option.

26: Select **DataSet2** under **Dataset** field.

27: Select **CollectionID** under **Value field** and **Name** under **Label field**.

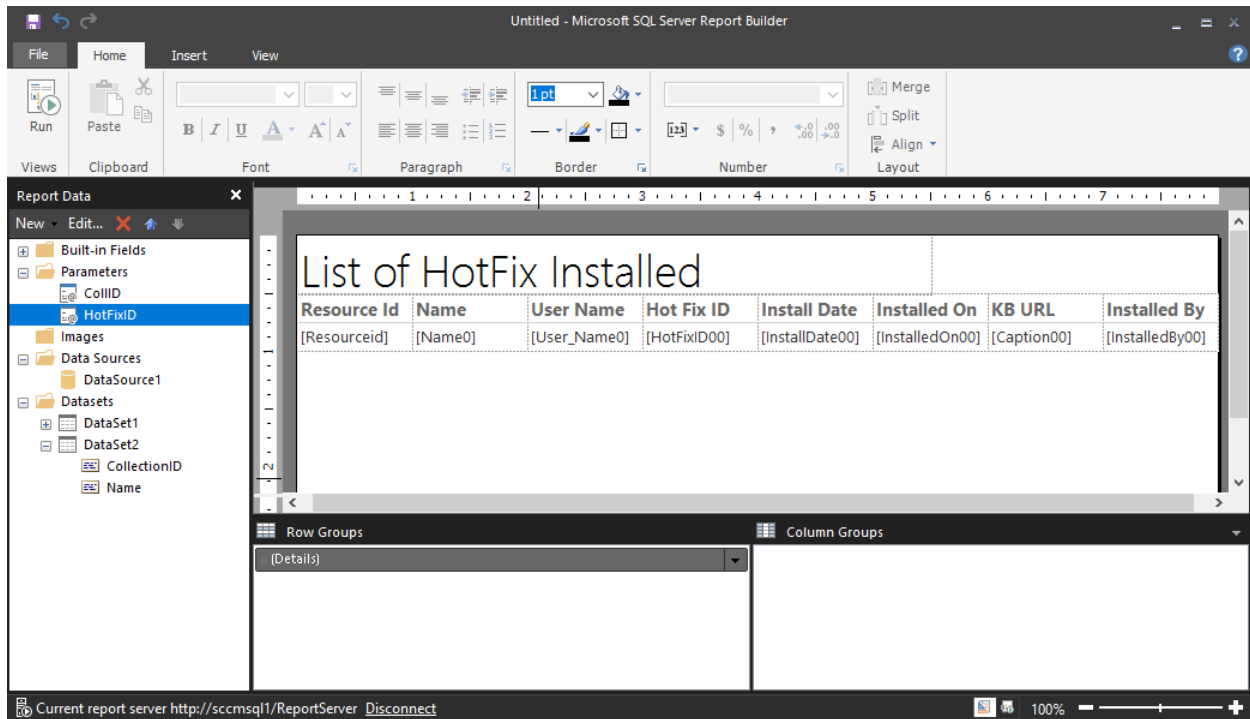
28: Click **OK** to continue.

The screenshot shows the 'Report Parameter Properties' dialog box with the 'Available Values' tab selected. The dialog has a sidebar on the left with four tabs: 'General', 'Available Values', 'Default Values', and 'Advanced'. The main area is titled 'Choose the available values for this parameter.' and contains the following options:

- Select from one of the following options:**
 - ☐ None
 - ☐ Specify values
 - ☒ Get values from a query
- Dataset: (Warning: Possible performance impact)**
 - DataSet2
- Value field:**
 - CollectionID
- Label field:**
 - Name

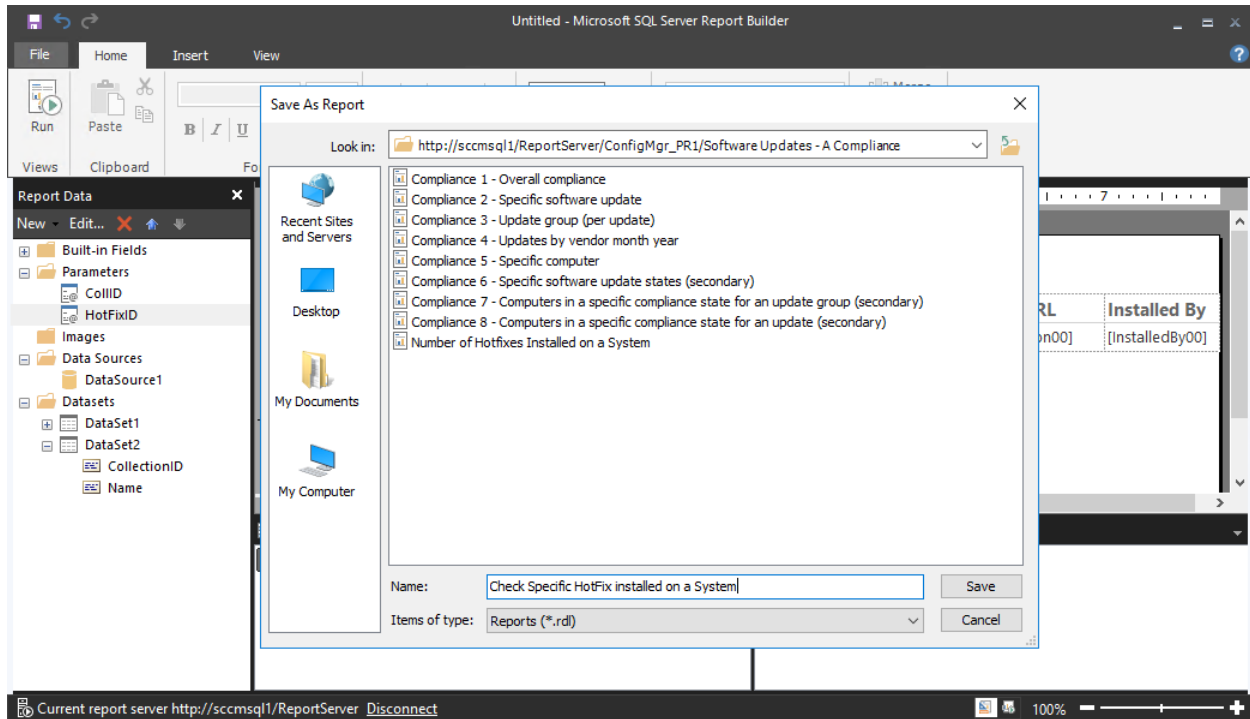
At the bottom of the dialog, there are three buttons: 'Help', 'OK', and 'Cancel'. The 'OK' button is highlighted with a blue border.

29: Perform **Step 24** for **HotFixID** parameter and click **OK** button.



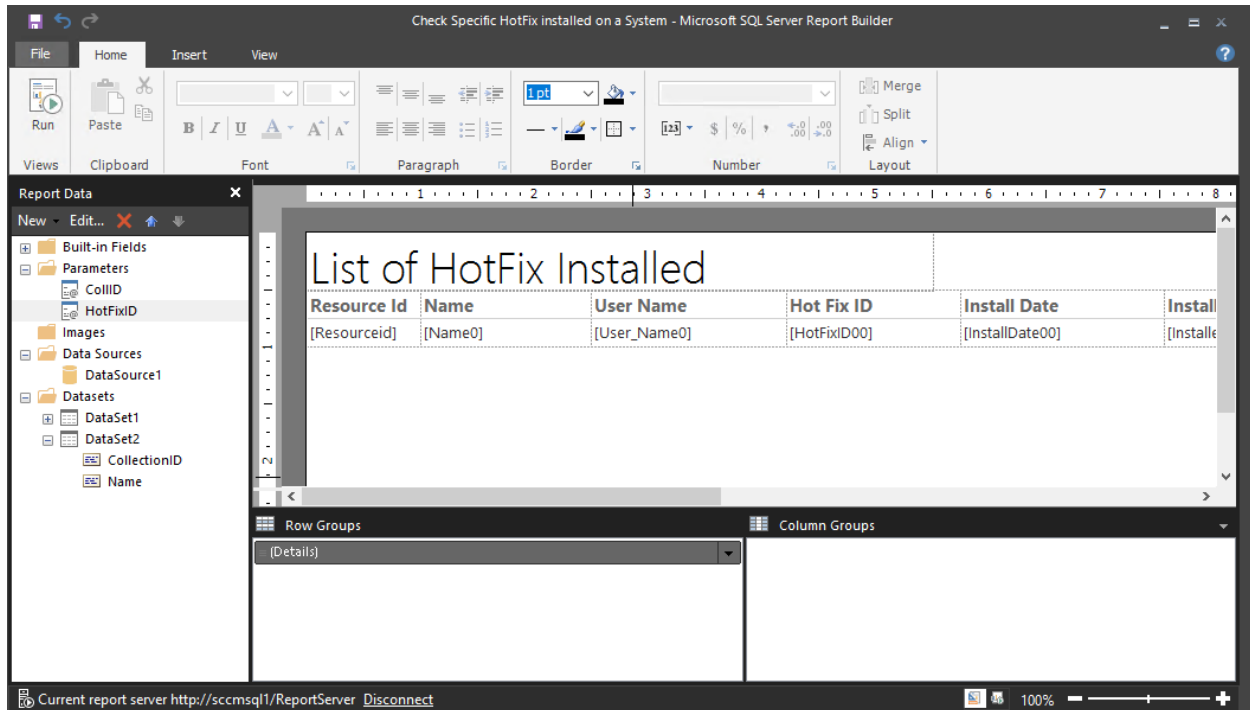
30: Click on **Save** button and select the folder under which report will be stored.

31: Provide suitable name to the report and click **Save** button.



Report is created, now let's run it through Report Builder itself.

32: Click on **Run** button.



<http://systemcentermvp.com/2017/08/11/check-specific-hotfix-installed-collection-sccm/>

33: Select the Collection ID from dropdown list and provide Hot Fix ID.

24: Click on **View Report** Button.

That's it, the report will show you the list of servers on which this specific Hot Fix is installed.

Check Specific HotFix installed on a System - Microsoft SQL Server Report Builder

Select Collection ID: **Test Collection QFE** Provide Hot Fix ID: **KB4035631** **View Report**

List of HotFix Installed

Resource Id	Name	Hot Fix ID	Installed On	KB URL	Installed By
16777219	SCCMSQL1	KB4035631	8/10/2017	http://support.microsoft.com/?kbid=4035631	NT AUTHORITY\SYSTEM

8/11/2017 4:50:47 AM

Current report server <http://sccmsql1/ReportServer> 100%

The report can be accessible through SCCM console as well.

Hope it helps.