



# Symantec Endpoint Management Technical Workshop 2017

## Business Analytics using IT Analytics Reporting

Description	IT Analytics has a diverse and powerful way of displaying data to your organization. In this lab, you will learn how to leverage it for everything from simple to more complex reporting structures and understand how to implement it so that the correct users see what they need in the way that is most meaningful to them.
At the end of this lab, you should be able to	<ul style="list-style-type: none"><li>▪ Understand the different types of reporting options in IT Analytics</li><li>▪ Achieve familiarity with Microsoft Report Builder</li><li>▪ Create custom reports and dashboards that can be added to the SMP console</li><li>▪ Combine data from multiple cubes into the same report</li><li>▪ Extend your Reports with Custom data classes you create</li><li>▪ Create and Utilize Key Performance Indicators</li></ul>
Notes	<ul style="list-style-type: none"><li>▪ Feel free to complete the lab using the instructions on the following pages.</li><li>▪ Be sure to ask your instructor any questions you may have.</li><li>▪ Thank you for coming to our lab session</li></ul>

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# Introduction

## Before You Begin

This exercise provides information and reporting examples for the IT Analytics Client & Server Management Content Pack. A general knowledge and understanding of the IT Analytics architecture and functionality is required.

It is assumed that you already have the Symantec Management Platform and IT Analytics installed. For additional information on IT Analytics installation, configuration and reporting pre-requisite software please see the [IT Analytics User guide](http://www.symantec.com/docs/DOC9690) at <http://www.symantec.com/docs/DOC9690>

## About IT Analytics

IT Analytics complements and expands upon the reporting and analytics offered by Symantec Endpoint Management. The capabilities provided within the IT Analytics Client, Asset and Server Management Content Pack allow customers to extract maximum value from the data contained within their Symantec CMDB database(s). By implementing the IT Analytics Client, Asset and Server Management Content Pack, you attain the following benefits:

- Unified view of data from multiple Symantec CMDB databases
- Powerful on-the-fly forensic analysis through ad-hoc reports and charts, with pivot tables
- Out-of-the-box visually informative KPI scorecards, dashboards, and reports
- Replace time-consuming & complex custom reporting

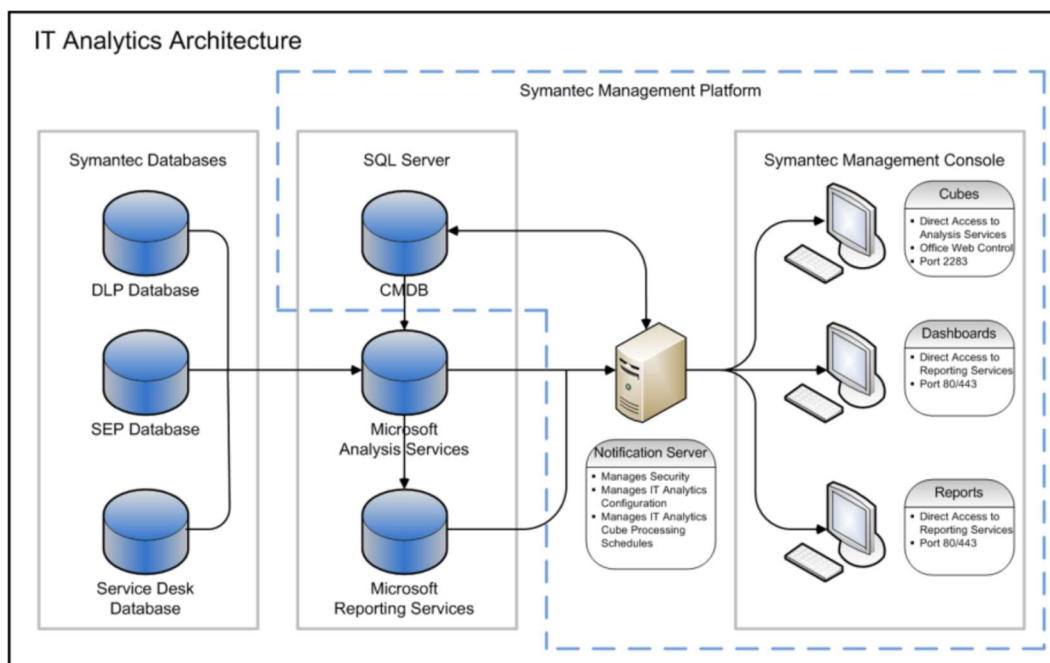
## How IT Analytics works

The IT Analytics platform is an ecosystem comprised of multiple architectural components that work together to provide robust reporting and analytics. These components are structured across two central foundational layers which encompass the core of the IT Analytics product:

- IT Analytics Server
- IT Analytics Content Packs

## IT Analytics Architecture

The architecture diagram below details how the different components of IT Analytics are arranged and interact with one another.



# Lab Exercise 1: Reporting Options in IT Analytics

## Method 1: Creating a Report using Cube Viewer

This exercise provides a hands-on overview of working with cubes through the pivot table view in IT Analytics. You will learn how to browse cubes and configure pivot tables this common usage scenario. Using the ad-hoc data mining capabilities of IT Analytics we will perform some forensic analysis of vulnerable computers in an environment managed by IT Management Suite.

### 1. Switch to the **SMP** Virtual Machine

- Open the **Symantec Management Console** (Icon on Desktop)
- In the Symantec Management Platform console, select: **Reports > All Reports**
- Open the **IT Analytics** folder and then expand the **Cubes** folder
- Select the **Patch Management Cube**. It may take a few seconds to display
- From the Field List on the right pane, expand **Measures > Patch Vulnerabilities**
- Drag and drop the **Vulnerable Computer Count** totals into the “**Add Measures from the Field List**” data pane on the left.

**TIP:** You can alternately drag and drop it on the Measures area of the View Configuration area at the bottom left side of the view.

- From the Field List on the right pane, expand **Software Update**
- Drag and drop the **Software Update - Reference** attribute into the “**Rows**” pane (Bottom pane)
- From the Field List on the right pane, expand **Computer**
- Drag and drop the **Computer - Name** attribute below the **Software Update - Reference** attribute into the “**Rows**” pane (Bottom pane)
- Drag **Software Update – Severity** attribute to the “**Filters**” pane
- Right click on the **Software Update – Severity** attribute in the Filters pane and select **Manage Filters**.
- Uncheck all severity levels except **Critical** in the Dimension Filter window. Then click **OK**. This will now reduce the results to only display counts with Critical patches.
- Drag **Computer – OS Name** attribute to the “**Filters**” pane below the **Software Update – Severity** attribute.
- Right click on the **Computer – OS Name** attribute in the **Filters** pane and select **Manage Filters**.
- Uncheck all Operating Systems except ones that contain **Windows Server 2012 R2 Standard** in their name (You may have to click Next on the bottom right side to find it).
- Click **OK**.
- Expand the first four Software Updates in the view to see the servers with the applicable critical vulnerabilities.
- The results of the report should look something like this:

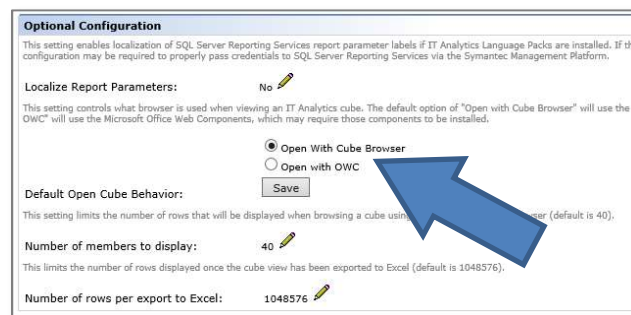
Software Update - Reference	Computer - Name	Vulnerable Computer Count
☐ JAVA8-111	SMP	1
	WIN2012	1
	Total	2
☐ MS09-062	SMP	1
	Total	1
☐ MS14-057	SMP	1
	Total	1
☐ MS14-068	SMP	1
	WIN2012	1
	DC2012	1
	Total	3

21. Select **View > Save** (At the top of the left pane)
22. Select the **Create New View** radio button and name it **LAB Windows Server 2012 Vulnerabilities**, and mark the “This view is accessible to all users (Public)” checkbox then Press **OK**
23. In the left pane of the console, Select the **Reports → IT Analytics → Cubes** folder
24. Select the **Patch Management Cube**. Notice how your report is no longer present.
25. Select View > **Open** button on the menu on the top left pane.
26. Select the **LAB Windows Server 2012 Vulnerabilities** report, and press the **Open** button
27. The report you created is now available for editing or running.

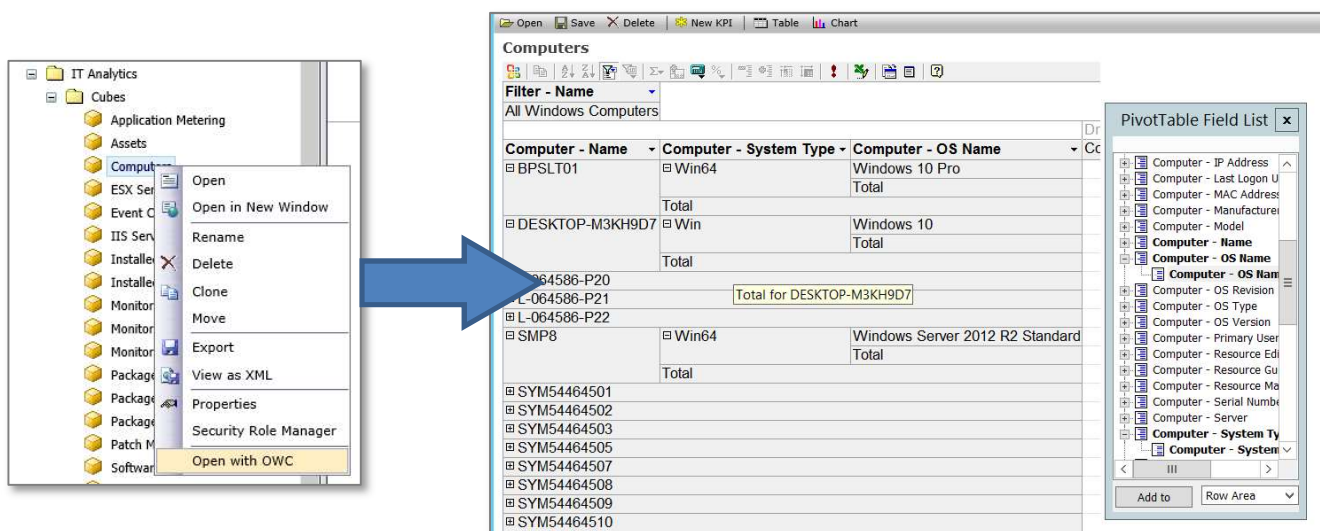
The above example illustrates the ease of use in creating a report in the IT Analytics in the Cube Browser, without previous knowledge of the Symantec CMDB schema or requiring any other programming skills. This very specific view can be saved for re-use or can be shared with other individuals in the organization.

## TIP: An Alternate Method for Cube Reporting

If you have specified **Open with OWC** in the **Default Open Cube Behavior** setting, it uses Microsoft Office Web Components that are embedded within Microsoft Office products or that are freely available to download.



The Default Open Cube Behavior is opened with Cube Browser. To switch to the OWC view, right-click a cube and select Open with OWC. This opens the cube in a new tab with the traditional OWC view. If any required components for this view are missing, you are prompted to install them.



If the Default Open Cube Behavior is opened with OWC, you may switch to the Cube Browser view. To switch, you can right-click a cube and select Open with Cube Browser. The cube opens in a new tab.

## Method 2: Creating a Report using the Microsoft Report Builder

This section will dive into advanced report creation in IT Analytics 8.1 using Microsoft Report Builder to create and publish a SQL Server Reporting Services report.

Report Builder is a component of SQL Server Reporting Services that allows ad-hoc reporting functionality, enabling end users to build their own reports and charts. Users can then publish these reports into Reporting Services where they can be accessed, viewed and incorporated back into IT Analytics alongside existing reporting.

**NOTE:** Although the output produced by Report Builder is integrated with IT Analytics, the tools and subsequent query language behind it are separate Microsoft entities and are thereby outside the default capabilities of the IT Analytics product itself.

This example includes building a report utilizing IT Analytics cubes in Microsoft Report Builder. Report Builder is a component included with SQL Server Reporting Services that allows ad-hoc reporting functionality, enabling end users to build their own reports and charts. Report Builder uses wizard driven steps to easily connect to data sources and locate the desired fields for creating a report. Users can then publish these reports back into the Symantec Management Platform console for viewing, as well as other venues like SharePoint and Reporting Services.

1. GO to the **SMP Virtual Machine**
2. Open the **Symantec Management Console** by clicking the Icon on the Desktop
3. In the main menu, select **Settings | Notification Server | IT Analytics Settings**
4. In the left menu tree, expand **IT Analytics Settings**
5. Select the **Reports** icon
6. Select the **Report Builder** tab and then press the **Launch Report Builder** button. If you get a security warning, Press **RUN**.  
*Allow a few seconds for the application to load.*
7. From the **Getting Started** screen, select **New Report > Table or Matrix Wizard**




8. Make sure the **Create a dataset** radio button is selected and click **Next**.

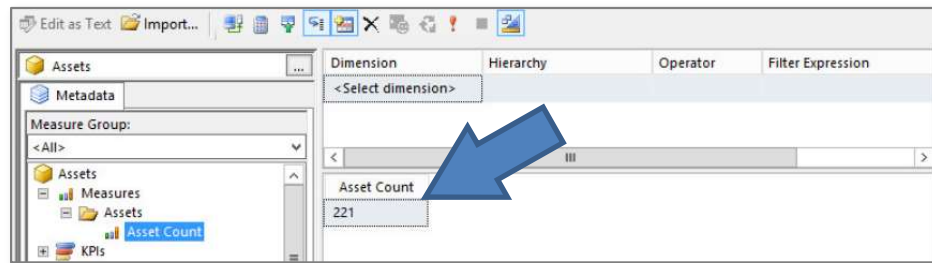
The next step will prompt you to choose a connection to a data source. A data source is the repository where the data for the report is stored. In the case of IT Analytics, the data is stored in the Microsoft Analysis Services Database specified when IT Analytics was installed. If you do not know the Analysis Services Database name, the server where it resides, or have the credentials necessary to connect to it please contact your Altiris Administrator.

9. To create a new data source, click the **Browse** button and Double Click on the **IT Analytics** folder that is displayed – this should now show a data source called **ITAnalytics**. Select this as the data source for the report and click **Open**.
10. Verify that the data source you just browsed to is displayed on the next screen of the wizard.

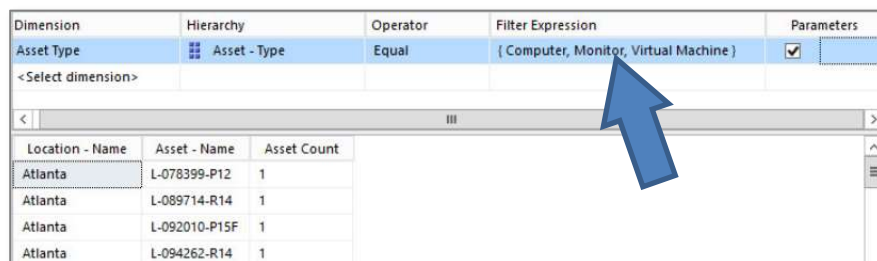


11. Ensure the connection to the data source is valid by clicking the **Test Connection** button in the lower right of the wizard. Assuming the test succeeded, you should see a message that says **"Connection Tested Successfully"**, then press **OK**
12. Click **Next**

13. If a Data Source Credentials windows opens, Select **Use Current Windows User** and press **OK**
14. You will be prompted to design a query, which will make up the data set for the report.
15. Click the  button toward the top of the window and select the **Assets** cube and press **OK**.
16. In the **Measure Group** area, expand **Measures > Assets**, then drag the **Asset Count** into the main query window.




17. In the **Measure Group** area, expand **Location**, then drag **Location – Name** into the main query window, just before **Asset Count**
18. In the **Measure Group** area, expand **Asset**, then drag the **Asset - Name** into the main query window, in between of **Location – City** and **Asset Count** columns
19. In the **Measure Group** area, expand **Asset Type**, and then drag **Asset - Type** to the **filter** section, which is directly above the main query window.
20. Check the **Parameter** check box at the very far left of the **Asset Type** filter – This will allow you to choose the parameters later.
21. Under the **Filter Expression** dropdown, only select **Computer, Monitor and Virtual Machine** and click **OK**. This will prompt the report to automatically filter by these Asset Types when executed.




22. Click **Next** to complete the creation of the data set.  
The next step will prompt you to arrange the fields to display properly in the table.
23. Drag **Location \_\_\_\_Name THEN Asset\_\_\_\_Name** to the Row Groups window
24. Drag **Asset\_Count** to the **Values** window.
25. Click **Next**.
26. The next step will prompt you to choose the layout of the report. Accept the default settings and click **Next**.
27. The next step will prompt you to select a style for the report. Choose a color scheme you prefer and click **Finish**.  
You should see a sample table on the report canvas. The data source and data set that display on the left navigation have already been created for you via the wizard.
28. Rename the title of the report from **“Click to Add Title”** to **LAB Asset Count by Location**.



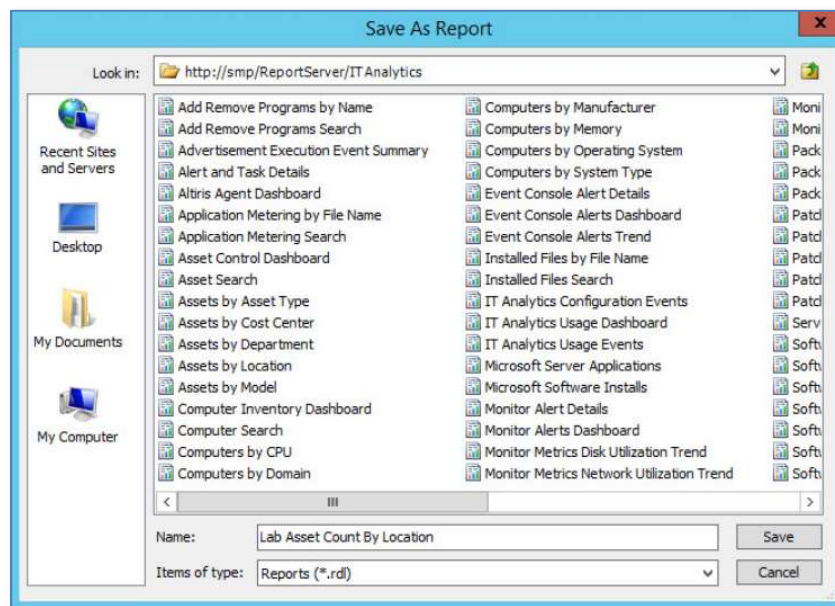
29. Resize the font of the title so that it fits within the given area. Also, widen the columns of the table so that you can read the column headers. You can do this in the same way you would with Excel, simply click on the line between the columns, and when a grey bar appears at the top of the table, and then expand by dragging the columns.
30. Preview the report by clicking the **Run** button on the top left side. (It may take a few seconds)
31. Expand the Atlanta Location in the report and notice that the Asset Names appear. Also notice that by checking the Parameter box, an Asset – Type selection filter can be applied to the results at the top of the report.



Location Name	Asset Name	Asset Count
Atlanta	L-078399-P12	1
	L-089714-R14	1
	L-092010-P15F	1
	L-094262-R14	1
	L-094704-P13	1
	L-094706-P14	1
	L-108061-P13	1
	L-110687-P12	1

32. Select the **Design** button to go back to the Design view.
33. Click the save  icon in the Report Builder toolbar;
34. Double Click the **IT Analytics** folder shown, then enter **LAB Asset Count by Location** in the Name field and Press the Save Button

**TIP:** Failure to save it in the IT Analytics Folder will prevent you from adding it to the SMP Console. It is also important to note that special characters in the name may cause display issues with the Symantec Management Console.



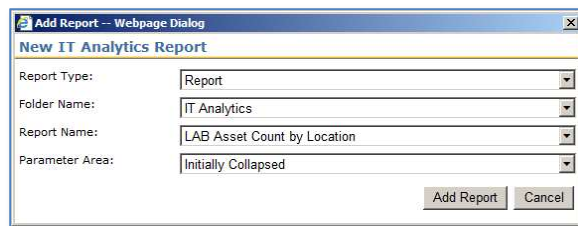
35. After saving the newly created report, close the Report Builder window and go back to the Symantec Management Console.



### Adding the Report to the Notification Server Reports Tree

**PLEASE NOTE:** Unfortunately, due to a change by Microsoft in the SSRS in SQL Server, discovered after these Virtual Lab kits were produced, you will not be unable to add the report you created to the Symantec Management

Console. We have provided the instructions below as a guide to show you how to add the report in your own environment. You may certainly try creating them, just choose F12 Developer Options in Internet Explorer and choose the document type “Edge”.

- To link a report into the Symantec Management Platform console, open the console then navigate to the **Reports > IT Analytics > Reports** folder.
- Right-click on the **Reports** folder and select **New > Folder**, name it **LAB Reports**, then press **OK**
- Right-click on the **LAB Reports** folder and select **New > IT Analytics Report**.
  - In the **Report Type** dropdown box, select **Report**
  - In the **Report Name** dropdown select the **LAB Asset Count by Location** report.
  - In the **Parameter Area** dropdown select **Initially Collapsed**.



- Click the **Add Report** button. You should see a message saying that the report was added successfully.
- Click the **Close** button.
- Refresh (  ) the Left Pane and expand the **LAB Reports** folder.
- Locate and select the **LAB Asset Count by Location** report you just added.
- If you get a security message at the bottom of the window, simply click the “**Show All Content**” button
- Expand the **Location** rows to expose the **Asset Names** under each city
- Expand the **Report view** by pressing the downward facing arrow at the top of the report (  )
- In the **Asset – Type** dropdown, select **Computer Only** then select the **View Report** button. Review the results and notice that Just Computer Assets appear in the results.

Location City	Asset Name	Asset Count
Atlanta	SYM54464501	1
	SYM54464503	1
	SYM54464531	1
	<b>Total</b>	<b>3</b>
Las Vegas	SYM54464505	1
	<b>Total</b>	<b>1</b>

- In the **Asset – Type** dropdown, select **All** and deselect the other asset types then select the **View Report** button. Review the results and notice that All Asset types appear in the results.

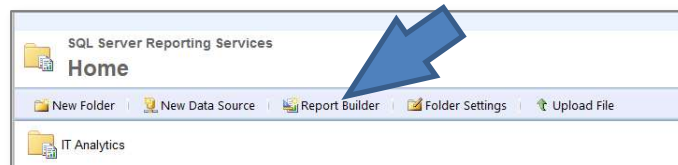


## Lab Exercise 2: Combining Data from Multiple Cubes

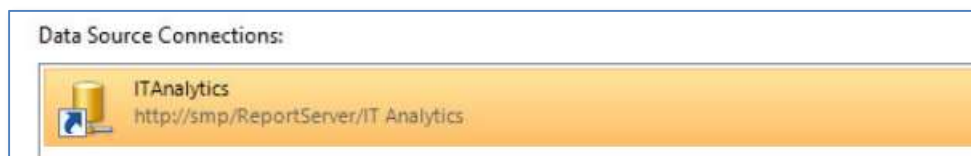
When authoring reports in IT Analytics, it may be beneficial to combine data from two different cubes to achieve the desired result set. For example, an administrator may want to combine Patch Management with Asset data to easily identify the location of machines that require critical updates within the same report.


Because IT Analytics is built on standard, proven technologies the process to combine data from two cubes into a single report is achievable with a consistent pattern through leveraging Microsoft Report Builder. The exercise below illustrates how to achieve this goal, without needing to understand the underlying schema or implement complex queries.

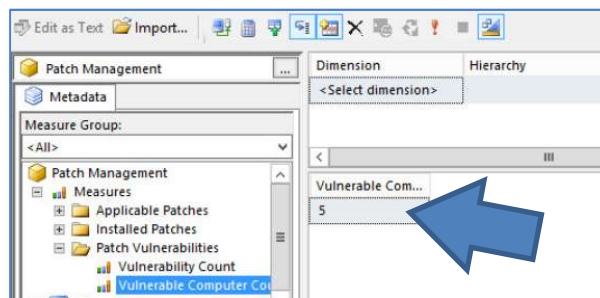
1. Another way of accessing the Report Builder is to access it through the Reporting Service web site
2. Open Internet Explorer and browse to <http://SMP/Reports>



36. Click the **Report Builder** Icon on the menu. If you get a security warning, Press **RUN**. Allow a few seconds for the application to load.
3. From the **Getting Started** screen, select **Table or Matrix Wizard**
4. Make sure the **Create a dataset** radio button is selected and click **Next**.
5. Verify that the data source is displayed on the next screen of the wizard.



6. Click **Next**
7. If an **Enter Data Source Credentials** window appears, Select **Use the current Windows user** and press **OK**
8. You will be prompted to design a query, which will make up the data set for the report. We will first build the report with patch management information and then add in the asset location information later.
9. Click the  button (top of the window) and select the **Patch Management** cube, then click **OK**.
10. Expand **Measures** → **Patch Vulnerabilities**, then drag the **Vulnerable Computer Count** into the main query window.



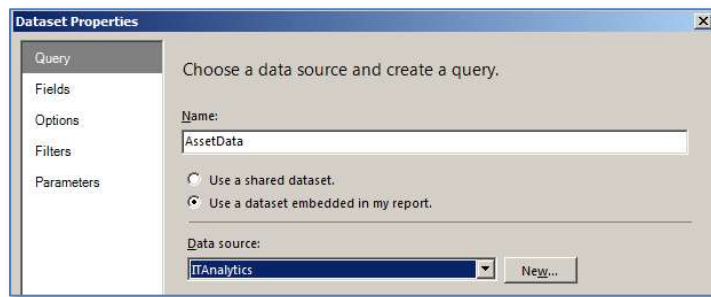
11. Expand the **Computer** dimension and drag **Computer – Name** into the query window, just before **Vulnerable Computer Count**.

12. Expand the **Software Update** dimension and drag **Software Update – Severity** into the query window, just before **Computer - Name**.
13. Expand the **Software Update** dimension and drag **Software Update – Reference** into the query window, just after **Vulnerable Computer Count**.


The screenshot shows the 'Patch Management' application window. On the left is a 'Metadata' pane with a tree view containing 'Measures', 'KPIs', 'Computer', 'CVE', 'Filter', 'Organizational Group', 'Software Update', and 'Software Update - Bulletin E'. The main area is divided into 'Dimension', 'Hierarchy', 'Operator', 'Filter Expression', and 'Param' sections. The 'Dimension' section shows a table with the following data:

Software Update - Severity	Computer - Name	Software Update - Reference	Vulnerable Computer Count
Critical	DC2012	MS14-068	1
Critical	DC2012	MS15-011	1
Critical	DC2012	MS15-020	1
Critical	DC2012	MS15-034	1

14. Click **Next** to complete the creation of the data set.
15. The next step will prompt you to arrange the fields to display properly in the table.
  - a. Drag **Vulnerable\_Computer\_Count** to the Values window
  - b. Drag **Software\_Update\_\_Severity** THEN **Computer\_\_Name** THEN **Software Update – Reference** to the Row Groups window.
  - c. Click **Next**.
16. The next step will prompt you to choose the layout of the report. Accept the default settings and click **Next**.
17. The next step will prompt you to select a style for the report. Choose a color scheme you prefer and click **Finish**.
18. You should see a sample table on the report canvas. The data source and data set that display on the left navigation have already been created for you via the wizard.
19. Rename the title of the report to **LAB Patch Severity by Location**.
20. Resize the font of the title so that it fits within the given area. Also, widen the columns of the table so that you can read the column headers. You can do this in the same way you would with Excel, simply click on the line between the columns, and when a grey bar appears at the top of the table, and then expand by dragging the columns.
21. In the **Report Data** section, expand the **Datasets** Folder
22. Right-click on **DataSet1** and select **Dataset Properties**.
23. Rename the dataset as **"PatchData"** by changing it in the **Name:** field, then press **OK**.  
This will help to differentiate it from the new data set we will create next to pull in the Asset Data. Also notice the query for the dataset which has been written entirely in the background by going through the wizard.
24. We will now create a new dataset to pull in Asset data specific to the computer's location.
25. Right-click on **Datasets** folder in the **Report Data** pane and select **Add Dataset**.
26. In the Dataset Properties window, name the dataset **"AssetData"** and select to **Use a dataset embedded in my report**, then select **ITAnalytics** in the Data source dropdown.



27. Click the **Query Designer** button and the query designer window will appear.

28. Click the  button toward the top of the window and select the **Assets** cube, then press **OK**

29. Expand the **Measures** group and then the **Assets** folder. Drag **Asset Count** to the main window.

30. Expand the **Asset** dimension and drag the **Asset – Name** field just before **Asset Count** in the main query window.

31. Expand the **Location** dimension and drag the **Location – Name** field into the query window, in between **Asset – Name** and **Asset Count**.

Asset - Name	Location - Name	Asset Count
(+44) 01184 ...	Reading	1
(+44) 01184 ...	Reading	1
(+44) 01184 ...	Reading	1
(+44) 01184 ...	Lindon	1
(+44) 01184 ...	Lindon	1
(+44) 01184 ...	Mountain View	1
(+49) 089 56...	Las Vegas	1
(+49) 089 56...	Las Vegas	1

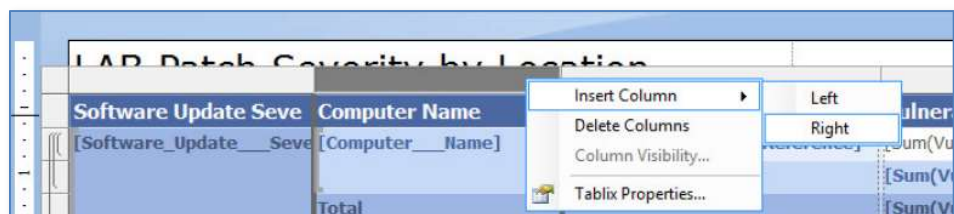
32. Click **OK** to close the Query Designer window

33. Click **OK** to close the Dataset Properties window. You should see both datasets listed in the **Report Data** pane.

Software Update Seve	Computer Name	Software Update Reference	Vulnerable
[Software_Update__Seve]	[Computer__Name]	[Software_Update__Reference]	[Sum(Vulnerabl
		Total	[Sum(Vulnerabl
Total	Total		[Sum(Vulnerabl

34. We now need to create an additional column in our table to display the location data for each computer.

35. To add a column, right-click the grey column header that appears when you click the **Computer Name** field, then select: **Insert Column > Right**.



36. Click into the new column header and type “**Location**” and widen the column
37. Right-click on the data cell just below the **Location** title and select **Expression**.

Software Update Seve	Computer Name	Location	Software Update Reference
[Software_Update__Seve]	[Comp]		[Software_Update__Reference]
			Total
Total			

Report Builder has several pre-defined functions built into it that can be leveraged to form an expression and extend report functionality. This works much the same way functions work in Excel, where users need to understand the format of specific functions and the arguments expected to be able to use them accordingly. For this example, we will utilize the **Lookup** function to tie data from the two datasets together.

38. In the **Category** column, expand **Common Functions** and click **Miscellaneous**
39. In the **Item** column that appears select **Lookup**.

Notice the description and example provided on the right-hand side for the Lookup function. To tie the datasets together we need a common identifier that resides in both sets. In this example, “**Computer - Name**” (from the Patch Management cube) and “**Asset – Name**” (from the Asset cube) will be used to signify the 1-to-1 relationship. Once that is established we can then add in the Location Name for each computer to display in the report.

40. To set the expression value for the Lookup function, type the exact text into the “**Set Expression For:**” field

**Note** that this text is continuous without an carriage return (enter), and the “ - ” is replaced by “\_\_\_” (three underscores) because spaces & dashes are not allowed. Type this in notepad first and copy it into the Set Expression field to prevent any errors.

```
=Lookup(Fields!Computer__Name.Value,Fields!Asset__Name.Value,Fields!Location__Name.Value, "AssetData")
```

41. The expression window should now look like with the screenshot below. If it does, click **OK** to close the expression window.

**Expression**

Set expression for: Value

=Lookup(Fields!Computer\_\_Name.Value,Fields!Asset\_\_Name.Value,Fields!Location\_\_Name.Value, "AssetData")

42. You should see an abbreviated place holder in that cell within the table (<<Expr>>), which represents the expression.
43. We are now ready to preview the report and ensure the data has been tied together correctly.
44. To preview the report, click the **Run** button at the top left.


**NOTE:** If you get an error that states “Failed to Run Preview”, you may have the wrong quotes for “AssetData” typing this in notepad should provide the proper quotes or you may have inadvertently put a space between Asset and Data in “AssetData”

45. Expand the **Software Update Severity** level for the first entry and verify that the computer names and their associated locations display correctly. (See picture on next page)

**NOTE:** If you receive values of “Unknown” when testing your report in production, you would have to verify that you associated a location to that specific asset in the Symantec Management Platform console. Also, you could also verify that the Assets cube has been processed in the IT Analytics settings.

LAB Patch Severity by Location				
Software Update Severity	Computer Name	Location	Software Update Reference	Vulnerable Computer Count
Critical	DC2012	Mountain View	MS14-068	1
			MS15-011	1
			MS15-020	1
			MS15-034	1
			MS15-068	1
			MS15-080	1
			MS16-040	1
			MS16-055	1
			MS16-071	1
			MS16-087	1
			SB16-001	1
			Total	11
	SMP	Las Vegas	Total	17
	WIN2012	Lindon	Total	14
	WIN7	Lindon	Total	37
	WIN8	Lindon	Total	18
	Total			97

46. Select the **Design** button to go back to the Design view.

47. Click the  icon in the Report Builder toolbar to save this report to the *Reporting Services\IT Analytics folder* and name it “LAB Patch Severity by Location”.

48. Close the Report Builder

## Lab Exercise 3: Adding Custom Data Classes into Cubes

The **IT Analytics Cube Extension Utility** allows data classes defined in the Symantec CMDB to be added as custom dimensions to the cubes available from the IT Analytics Client Server Management pack. It is important to note that after a dimension has been added or removed it will be necessary to reprocess the cube for the changes to take effect.

### Requirements

This utility must be run on the machine hosting the Symantec Management Platform. Additionally, the user running the utility must meet the following requirements:

- Member of the local Administrators group on this machine
- db\_owner role membership to the Symantec CMDB database
- Administrator access to the IT Analytics Analysis Services database
- Member of the Symantec Administrators role in the Symantec Management Platform

**NOTE:** The IT Analytics Cube Extension utility can be downloaded from the following Connect article:

<http://www.symantec.com/connect/articles/adding-custom-data-class-it-analytics-cubes>

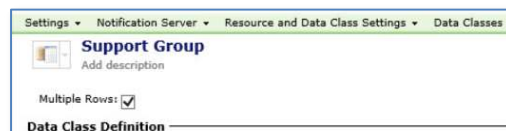
You would Download the **ITAnalyticsCubeExtensionUtility\_v76.zip** for SMP 8.1 Solutions

### LAB Exercise Scenario

In this exercise, the Administrator would like to create a custom data class called “Support Group” that will be used to assign Computers to a particular support group within their organization. They would also like to show this association in some IT Analytics reports. Since this attribute does not exist in the Computers cube, the dimension will have to be added.

### Creating the Support Group Data Class and Assigning Support Groups to Computers

1. Open the Symantec Management Console and select **Settings > All Settings**
2. Navigate to the **Settings > Notification Server > Resource and Data Class Settings > Data Classes**
3. Right-click on the **Data Classes** folder and select **New > Folder**, name it **LAB Data Classes**, then press **OK**
4. Right-click on the **LAB Data Classes** folder and select **New > Editable Data Class**.
5. Rename the **Data Class** to **Support Group** (At the top left side, on the right pane)



6. Uncheck the **Multiple Rows** checkbox (**Very Important!**)
7. Press the **Add New Attribute** button
  - a. Type **Group** in the **Name** field
  - b. Select **Static List** in the **Type:** field
  - c. Press the **Edit** button next to the static list drop down
  - d. Type **Group 1**, and press **Add**
  - e. Type **Group 2**, and press **Add**
  - f. Type **Group 3**, and press **Add**
  - g. Press **OK** to close the window
8. Press **OK** to close the data class window



9. Check again that the **Multiple Rows** checkbox is *not* checked!

Settings > Notification Server > Resource and Data Class Settings > Data Classes > TFE Data Classes > Support Group

• Changes have been saved.  
• Note: New class will need to be added manually to customized edit page filters, but not the default filter.

**Support Group**  
description

Multiple Rows: ☐

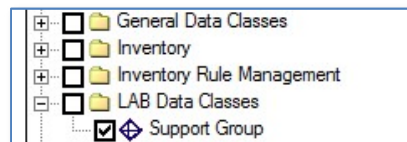
**Data Class Definition**

Name	Description	Type	Size	Key	Required	Auto-Generate	Prompt	Hidden	Order
Group		Static List	50	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-

Add new attribute...

Save changes Cancel

10. Press **Save Changes** to create the custom data class
11. We now need to associate the new data class to the Resource Type named Computer
12. Navigate to the **Settings > Notification Server > Resource and Data Class Settings > Resource Types > Asset Types > Generic Asset Types**
13. Select the **Asset** icon. Wait until the settings appear
14. Scroll down the page and Press the **Add Data Classes** link
15. Select the **Support Group** data class under the **LAB Data Classes** folder, and press **OK**



16. Scroll to the bottom of this window and press the **Save Changes** button
17. Before Assigning Computers to Support Groups, open a command prompt and reset IIS – This is not necessary in most cases, but was necessary for this lab to complete.
- Right Click on the Windows Start button
  - Choose **“Command Prompt (Admin)”**
  - Type `iisreset` and press enter
  - Close the window when it completes.
18. In the Main Menu of the Symantec Management Console and select **Manage | Computers**
19. On the Left Pane, under the Filters Section, Select **Favorites > Lab Computers**. A list of computers should appear.
20. Select the **SMP and DC2012** computers in the list and right click on them and select **CMDB Functions > Bulk Edit**
21. Select **Support Group** and choose **Group 1** from the dropdown box, Press **OK** then **Close**

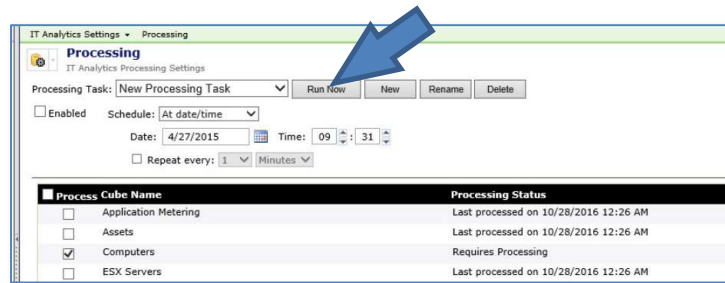
☒ Support Group

**Support Group**  
Group: Group 1

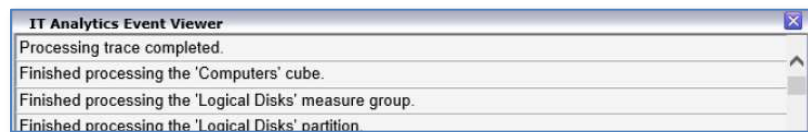
22. Select **WIN2012** and **WIN7** and right click on them and select **CMDB Functions > Bulk Edit**
23. Select **Support Group** and choose **Group 2** from the dropdown box, Press **OK** then **Close**
24. Select **Win7-1** and **Win8** and right click on them and select **CMDB Functions > Bulk Edit**
25. Select **Support Group** and choose **Group 3** from the dropdown box, Press **OK** then **Close**

## Using the IT Analytics Cube Extension Utility to Add Support Group to the Computer Cube

1. Go to the Desktop of the **SMP Virtual Machine**
2. Open the **ITA Cube Extension Utility** by double clicking the link on the desktop.
3. Wait for the Cube Extension Utility to initialize. *This may take a few seconds.*
4. Select **Add Dimension** on the left side of the window to launch the **Add Dimension Wizard**.
5. Select the **Computers Cube** from the **Cube Name** list and click **Next**.  
*Take notice of the items that are available in the **Data Class Name** dropdown – This list consists of all data classes that are associated to the Computer resource. In practice, if a particular data class does not appear in this utility, you may not have associated it to your resource type.*
6. Select **Support Group** from the **Data Class Name** list, and click **Next**.
7. Change the **Dimension Name** from “**Support Group**” to **Group**, and click **Next**.
8. Verify the information is correct on the **Summary** screen and click **Next**.
9. Wait for the dimension to be added.
10. Click **Finish**.
11. Close the **Cube Extension Utility** application.
12. After you have finished adding dimensions, you must reprocess the modified cubes for the changes to take effect.
13. From the Symantec Management Console, navigate to: **Settings > Notification Server > IT Analytics Settings**
14. Select **Processing** in the left pane.
15. Press the **New** button on the right pane.
16. Select the **Computers** box
17. Press the **Create Task** button at the bottom of the page
18. Make sure **New Processing Task** is selected in the **Processing Task:** dropdown List and press **Run Now**. *This may take a few minutes*



19. When the **IT Analytics Process Viewer** window shows “**Processing trace completed.**” At the top of the list, press **Close**



20. In the Main Console Menu, navigate to: **Reports > All Reports**
  28. Open the **IT Analytics** folder and then expand the **Cubes** folder
  29. Select the **Computers** cube. It may take a few seconds to display
  30. On the right pane, in the **Field List** you should see the **Group – Group** dimension that was just added.

31. Expand **Measures** in the Field List, expand **Computers** and drag and drop **Computer Count** into the “**Add Measures from the Field List**” area.
  32. Drag and drop the **Group – Group** attribute into the Rows pane on the bottom of the page
  33. Drag and drop the **Computer – Name** attribute into the Rows pane on the bottom of the page
21. You can now use this added dimension when creating Cube Browser or MS Report Builder Reports, the same way you use any other default dimension. The Report should look similar to this:

Views ▾ Filter ▾ Sort ▾ KPIs ▾ Details ▾ Charts ▾		
Group - Group	Computer - Name	Computer Count
Group 1	DC2012	1
	SMP	1
	Total	2
Group 2	WIN2012	1
	WIN7	1
	Total	2
Group 3	WIN7-1	1
	WIN8	1
	Total	2
Unassigned		141
Total		147

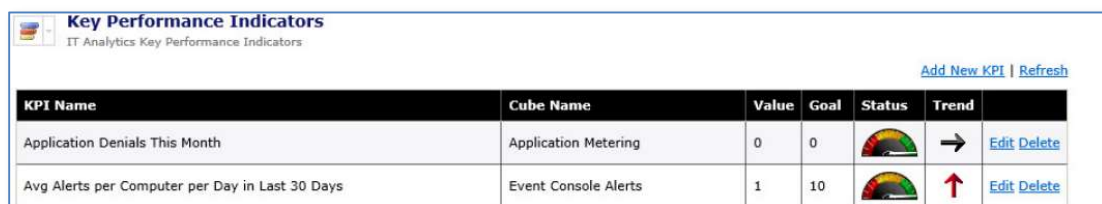
## Lab Exercise 4: Key Performance Indicators

One of the advantages of using IT Analytics is the ability to use an intuitive reporting framework that lets you quickly translate large data volumes with the goal of making informed business decisions. Microsoft SQL Analysis Services leverages this capability through Key Performance Indicators (KPIs).

KPIs are defined as quantifiable measures that represent a critical success factor in an organization. The emphasis is on the action of quantifying something in the environment. For example, the KPIs must be measurable to successfully be monitored and compared against a given objective.

### Viewing a Key Performance Indicator

1. In the Symantec Management Console, select **Reports | All Reports**.
2. In the left pane, expand the **Reports > IT Analytics** folder
3. Select **Key Performance Indicators**.
4. All Key Performance Indicators will be listed from this page. Depending on the cubes you have installed, there will be different KPIs available for viewing.

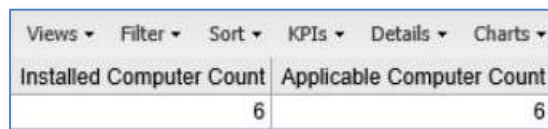


KPI Name	Cube Name	Value	Goal	Status	Trend	
Application Denials This Month	Application Metering	0	0		→	<a href="#">Edit</a> <a href="#">Delete</a>
Avg Alerts per Computer per Day in Last 30 Days	Event Console Alerts	1	10		↑	<a href="#">Edit</a> <a href="#">Delete</a>

### Creating a KPI from a Cube Viewer

Using the Patch Management Cube in IT Analytics, we will create a custom Key Performance Indicator (KPI) that will allow for the monitoring of Patch Installations versus Patch Applicability for a specific software vendor bulletin.

1. Within the Symantec Management Console, navigate to **Reports > All Reports**
2. Expand the **IT Analytics > Cubes** folder and select the **Patch Management** Cube.
3. From the Field List, under Measures, drag both the **Installed Computer Count** THEN **Applicable Computer Count** then into the data pane.



Views ▾	Filter ▾	Sort ▾	KPIs ▾	Details ▾	Charts ▾
Installed Computer Count		Applicable Computer Count			
6		6			

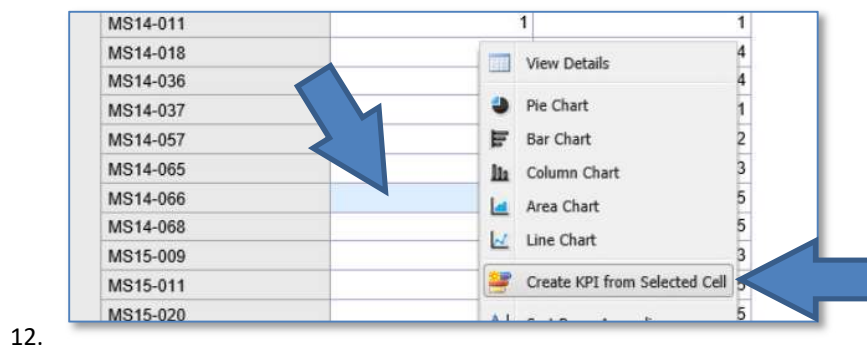
4. Drag and drop the **Software Update - Provider** attribute into the Rows pane on the bottom of the page
5. Drag and drop the **Software Update – Reference** attribute into the Rows pane on the bottom of the page below **Software Update - Provider**
6. Drag and drop the **Software Update – Severity** attribute into the **Filter** pane on the bottom of the page
7. Right click on the **Software Update – Severity** attribute in the Filters pane and select **Manage Filters**.
8. Uncheck all Severity items except **Critical**, then Click **OK**.

9. The Report should look something like this:

Views ▾	Filter ▾	Sort ▾	KPIs ▾	Details ▾	Charts ▾
Software Update - Provider		Software Update - Reference		Installed Computer Count	Applicable Computer Count
Adobe Systems	APSB16-32				2
	Total				2
Microsoft	MS09-062				3
	MS11-015				2
	MS11-019				2
	MS11-028			2	2
	MS11-030				2
	MS11-053				2
	MS11-092				2
	MS11-100			2	2

10. Expand the Microsoft table and select the **MS14-066** Bulletin only

11. Right click on the **Installed Computer Count** value for **MS14-066** and select Use as KPI Value.



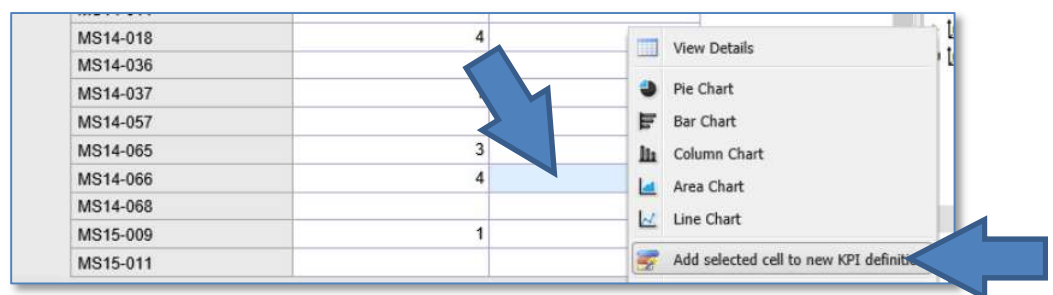
12.

In the New KPI dialog box appears. Change the **Goal** radio button to “Percentage of Selected Value with a goal of 100%”

13. Press **Next**

14. Click the **Select Second Cell** button

15. Right click on the **Applicable Computer Count** value for **MS14-066** and select “Add Selected Cell to KPI...”



16. Press **Next** on the New KPI dialog box that appears.

17. In the **Graphic** dropdown box select “Gauge - Ascending”

18. Click **Next**

19. In the next dialog, select **Compare Current Period to Previous Period** from the Click **Type:** dropdown and accept the defaults that appear.

20. Click **Next**

21. In the **KPI Name** field, Enter **Computers with MS16-066 Patch Installed**

22. Confirm that your settings are correct:

New KPI

The following settings will be used to create the KPI:

Type:

Percentage of a selected value with a goal of 100%

KPI Name:

Computers with MS16-066 Patch Installed

Status Threshold 1:

33

Status Threshold 2:

66

Status Graphic:

Gauge - Ascending

Trend Type:

Compare Current Period To Previous Period

Date Dimension:

Software Update Release Date

Number of Days in Period of Comparison:

30

Previous

Next

Cancel

23. Click **Next**

24. When the screen refreshes, you should receive a message that it was successful – Click **Finish**.

25. Return to the KPI View by selecting In the Symantec Management Console, **Reports | All Reports**.

26. In the left pane, expand the **Reports > IT Analytics** folder

27. Select **Key Performance Indicators**.

28. Find the **“Computers with MS16-066 Patch Installed”** KPI. Your KPI has been successfully created and displayed in the Key Performance Indicator view.

Notice that it has a value of 66.67% out of 100%, that it indicates Green in the gauge (because it is over 66% compliant) for the Status, and there is no Trend Arrow, as there is no previous month data in this CMDB (The SMP Virtual Machine was just created in the last few weeks.)

Computers with MS16-066 Patch Installed	Patch Management	66.67	100			<a href="#">Edit</a> <a href="#">Delete</a>
Computers with Unsuccessful Software Downloads in Last 30 Days	Software Delivery Package Events	0	100			<a href="#">Edit</a> <a href="#">Delete</a>
Computers with Unsuccessful Software Execution Events in Last 30 Days	Software Delivery Execution Events	0	100			<a href="#">Edit</a> <a href="#">Delete</a>



## APPENDIX A: IT Analytics Glossary

Term	Definition
<b>Measure</b>	Measures are the aggregate count, or how you quantify results when creating a pivot table view. These typically make up the columns in your report. Every view you create must contain at least one measure. (For example: Computer Count)
<b>Dimension</b>	Dimensions are a grouping of specific data types you are quantifying when you create a pivot table view. These typically make up the rows in your report, but dimensions can be used across columns or as filters. Every view you create must contain at least one dimension. If you have more than one dimension, you can drill in and out or change the order of dimensions to arrange the report the way you want it. Please see the Connect article for a list of all dimensions in IT Analytics.
<b>Attribute</b>	An attribute is a sub-grouping of data types for a specific dimension. A dimension may have one or more attributes and these can be used like any other dimension. (For example: Task - Name, Task - Return Code, Task - Success). Please see the Connect article for a list of all dimension attributes in IT Analytics.
<b>Key Performance Indicator (KPI)</b>	Quantifiable measures that represent a critical success factor in an organization. The emphasis is on the action of quantifying something in the environment. The KPIs must be measurable to successfully be monitored and compared against a given objective. (For example: New Computers in the Last 30 Days). Please see the Connect article for creating a key performance indicator in IT Analytics.
<b>Cube</b>	Multidimensional data structures (as opposed to a relational database) that store precompiled information from the Symantec CMDB. Cubes contain measures and dimensions that are arranged in a specific way for common reporting purposes. These are the underlying source for all reporting in IT Analytics and are stored in the Analysis Services of SQL Server. Please see the Connect article for a list of all cubes in IT Analytics.
<b>Report or Dashboard</b>	Pre-developed reports that are hosted by the Reporting Services component of SQL Server. Several out-of-the-box reports and dashboards are available upon install and you have the flexibility to create your own through Report Builder.
<b>SQL Analysis Services</b>	The free component of SQL Server that hosts and processes all cubes within IT Analytics. This component is required to install IT Analytics. Please see the Connect article for configuring Analysis Services and installing IT Analytics.
<b>SQL Reporting Services</b>	The free component of SQL Server that hosts all reports and dashboards within IT Analytics. This component is required to install IT Analytics. Please see the Connect article for configuring Reporting Services and installing IT Analytics.

<b>Report Builder</b>	Report Builder is a client-side application (developed by Microsoft and free with Reporting Services) that you can use to create and design reports. Using Report Builder, you can design reports that are based on your data from within IT Analytics, without having to understand the underlying schema or complex programming languages. Please see the Connect article on creating custom reports in Report Builder.
<b>Content Pack</b>	A software component that bundles cubes, reports and dashboards specific to a particular Symantec solution suite. IT Analytics content packs are currently available for:
	- IT Management Suite (Altiris)
	- Symantec Endpoint Protection
	- Data Loss Prevention
	- Critical System Protection
	- ServiceDesk
<b>Parameter</b>	Typically, a dimension attribute used to filter data within an IT Analytics report or dashboard. This technique is used within Report Builder when creating reports.
<b>Processing Schedule</b>	The given frequency that data will be purged and then recompiled within the IT Analytics cubes. Typically, this is done once a day, but depending on environment, server resources and business requirements, this can be set to process more frequently. This schedule is set within the configuration page of IT Analytics, but the processing itself occurs within SQL Analysis Services.
<b>Symantec Management Platform</b>	This application hosts the IT Analytics configuration and reporting interface. It is required to install IT Analytics. Please see the Connect article on installing the Symantec Management Platform.
<b>Symantec Installation Manager</b>	This application allows you to download, install and update software hosted by the Symantec Management Platform, including IT Analytics. To install the Symantec Installation Manager, please download the IT Management Suite trialware from Symantec's trialware site.