



## IBM Tivoli Netcool Performance Manager for Wireless 9.1.2

### *Adding attribute filters to a report definition*

**Tivoli.** software



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IBM Tivoli Netcool® Performance Manager for Wireless 9.1.2

Adding attribute filters to a report definition

## Assumptions

- Before attempting this IEA, you should already be able to use Using IBM Tivoli Netcool Performance Manager for Wireless 9.1.2 software, know how to:
  - ▶ Create a basic report definition
  - ▶ Open a report result
  - ▶ Use the multiple sort option in the HTML report viewer
- If you can not perform the above tasks, you can learn how to do them by taking an IBM Tivoli Netcool Performance Manager for Wireless 9.1.2 User course:

[http://www.ibm.com/software/tivoli/education/edu\\_prd.html#X916845N81075L22](http://www.ibm.com/software/tivoli/education/edu_prd.html#X916845N81075L22)

Adding attribute filters to a report definition

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### Assumptions

You should already know the following before attempting this IEA:

Using IBM Tivoli Netcool Performance Manager for Wireless 9.1.2 software, know how to:

Create a basic report definition

Open a report result

Use the multiple sort option in the HTML report viewer

If you can not perform the above tasks, you can learn how to do them by taking the IBM Tivoli Netcool Performance Manager for Wireless 9.1.2 User course

## Objectives

Upon completion of this module, you should be able to:

- Modify an existing report definition with attribute filtering
- Filter report output data to focus on either a single network element or a group of network elements
- Use logical operators and the **Value Filter** to insert network elements into the **Add Filters** section

Adding attribute filters to a report definition

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Upon completion of this module, you should be able to:

Modify an existing report definition with attribute filtering.

Filter report output data to focus on either a single network element or a group of network elements.

Use logical operators and the **Value Filter** to insert network elements into the **Add Filters** section.

## Adding attribute filters to an existing report definition

**Table View**

show/hide Settings

☐ Show all key columns

☐ Subselect Entities:

Selected Entities:

- 1-1-1-1
- 1-1-1-2
- 1-1-1-3
- 1-1-2-1
- 1-1-2-2

☐ Sort by multiple:

Field 1: -none- Order 1: Asc

Field 2: -none- Order 2: Asc

Field 3: -none- Order 3: Asc

apply

page 1 of 2 go

CELL_CELL_ID	T_DAY	CELL_DROP_CALLS	CELL_FAIL_BSS	CELL_FAIL_LACK
1-1-1-1	3/26/08	46815.0	47145.0	47089.0
1-1-1-1	3/27/08			
1-1-1-2	3/26/08	50724.0	47089.0	45415.0
1-1-1-2	3/27/08			
1-1-1-3	3/26/08	51854.0	47081.0	50046.0
1-1-1-3	3/27/08			
1-1-2-1	3/26/08	50339.0	47201.0	49942.0
1-1-2-1	3/27/08			
1-1-2-2	3/26/08	44690.0	49266.0	53495.0
1-1-2-2	3/27/08			
1-1-2-3	3/26/08	42013.0	47234.0	43559.0
1-1-2-3	3/27/08			
1-2-1-1	3/26/08	45681.0	46050.0	48229.0
1-2-1-1	3/27/08			
1-2-1-2	3/26/08	46738.0	48055.0	42013.0
1-2-1-2	3/27/08			
1-2-1-3	3/26/08	53344.0	45572.0	48805.0
1-2-1-3	3/27/08			
1-2-2-1	3/26/08	48860.0	51447.0	47271.0
1-2-2-1	3/27/08			
1-2-2-2	3/26/08	48091.0	48093.0	50305.0
1-2-2-2	3/27/08			
1-2-2-3	3/26/08	47390.0	49842.0	47821.0
1-2-2-3	3/27/08			

**Chart View**

Adding attribute filters to a report definition

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Attributes filters allow PMW users to focus network report results on either a group of network elements or an individual network element. This example report provides data on all cells in a network. Adding attribute filters can exclude unwanted cells from the report output. Reports run with attribute filters provide output data only for the network elements listed in the attribute filter section.

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## Prerequisites to adding an attribute filter

Tivoli Netcool Performance Manager for Wireless

MyFavorites

Reporting

Alarm

Browse

Monitor

Preferences

Tools

define report

manage report

new schedule

manage schedule

reporting help

Report Name:

None Selected

Step 1: DataSource Selection

None Selected

Step 2: Focal Entity Type

None Selected

Step 3: Field Selections

None Selected

Step 4: Date-Time Selection

None Selected

Step 5: Filtering

None Selected

Optional: Extended Functions

None Selected

Please select a report

Type: Report Definition

Repository: personal documents

Folder: sysadm

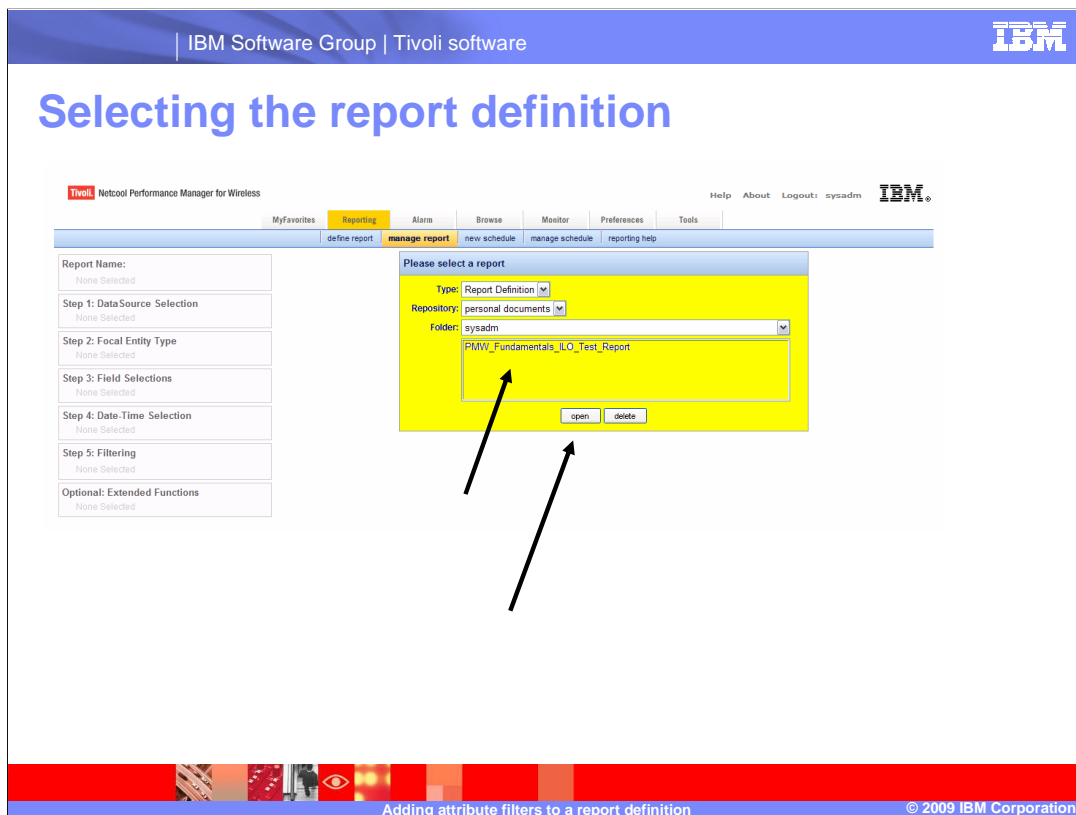
PMW\_Fundamentals\_ILQ\_Test\_Report

open delete

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To create an attribute filter for an existing report definition the desired original report must first be selected and loaded. To accomplish this prerequisite first left-click the **Reporting** heading and then left-click the **manage report** subheading.



Select the desired existing report definition from the drop-down menu options. Click onto the desired report name found within the lower box, then click the **open** button.

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## Modifying the report definition

Tivoli Netcool Performance Manager for Wireless

Help About Bookmark Logout: sysadm

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MyFavorites

Reporting

Alarm

Browse

Monitor

Preferences

Tools

define report

manage report

new schedule

manage schedule

reporting help

Report Name

PMW\_Fundamentals\_ILQ\_Test\_Report

Folder

Personal documents\j. Users\sysadm

Step 1: DataSource Selection

student138.ibm.com-rs

edit

Step 2: Focal Entity Type

Cell

edit

Step 3: Field Selections

Cell Nokia Handovers.msc\_o\_call\_err\_c, Cell Nokia Handovers.msc\_o\_adj\_cell\_id\_err\_c, Cell Nokia Handovers.msc\_i\_fai\_leak, Cell Nokia Handovers.msc\_i\_fai\_conn, Cell Nokia Handovers.msc\_i\_fai\_bss

edit

Step 4: Date-Time Selection

Selected Date-Times

3/26/08 12:27:08

00:00-24:00

Start Of Week: Default (Sunday)

edit

Step 5: Filtering

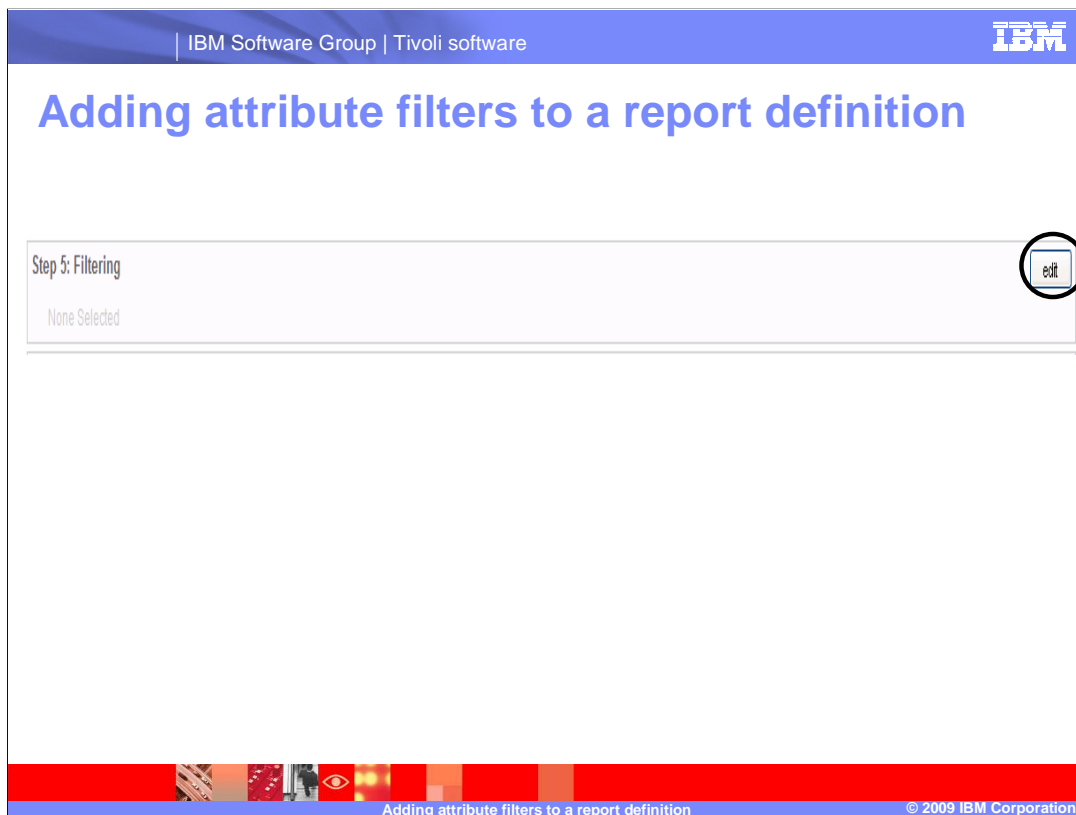
None Selected

edit

Adding attribute filters to a report definition

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At this point steps 1 through 4 will be filled with the report definition data from the existing report.



To add an attribute filter to the existing report definition make sure that all of the mandatory report parameters are properly completed in steps 1 through 4 of your report definition. Next, click the **edit** button found to the far right within the **Step 5: Filtering** section.



## Setting up attribute filter options

### Step 5: Filtering

Attribute Filters

Cell Browse Entities Cell\_Id equals more and

add

Added Filters

Adding attribute filters to a report definition

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Under **Attribute Filters** select the report definitions focal entity. In this report the focal entity is Cell. To filter report output to exclude all but a single cell you use the cell's identifier attribute entity, Cell\_Id, from the second drop-down menu. Next, click the **more** button found over to the far right. To create a similar filter for multiple cells that report to the same base station you can use the base station identifier, BS\_Id.

## Adding the attribute filter

### Step 5: Filtering

Attribute Filters

Cell  Browse Entities Cell\_Id  equals  less  and

Value Filter:  apply

1-1-1-1  
1-1-1-2  
1-1-1-3  
1-1-2-1

add delete

add

Added Filters

Adding attribute filters to a report definition

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As the cell IDs appear in the **add|delete** section highlight the cell you are interested in and click the **add** button. In the example the cell 1-1-1-1 is selected.

## Adding the attribute filter

Step 5: Filtering

Attribute Filters

Cell  Browse Entities Cell\_Id  equals  less  and

Value Filter:  apply

1-1-1-1  
1-1-1-2  
1-1-1-3  
1-1-2-1

add delete

1-1-1-1

add

Added Filters

Adding attribute filters to a report definition © 2009 IBM Corporation

Cell\_Id 1-1-1-1 is now in the lower box. Highlighting Cell\_Id 1-1-1-1 again and clicking the lowest **add** button completes modifying the report definition to focus on presenting only Cell\_Id 1-1-1-1 output data.

## Added filters

### Step 5: Filtering

Attribute Filters

Cell  Cell\_Id equals less and

Value Filter:  apply

1-1-1-1  
1-1-1-2  
1-1-1-3  
1-1-2-1

add delete

1-1-1-1

add

Added Filters

<input type="checkbox"/> Cell.Cell_Id	=	1-1-1-1	AND
---------------------------------------	---	---------	-----

delete and/or

Adding attribute filters to a report definition

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Cell.Cell\_Id 1-1-1-1 has been added to the **Added Filters** list. Checking the box is required only if it is desired to delete the added filter. Reports focus output results on any items listed in the **Added Filters** section. Once the **Added Filters** section is filled the resulting report will only show data for the listed network elements. In the example the report output will only present data for the cell with an ID of 1-1-1-1.

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## Running the revised report

Busy Hour

None Selected

Group by

Attribute And Time: Cell\_Cell\_Id, Day

Ranking

None selected

FILTERED H-HIGH

None selected

REHOMING

true


CONFIDENCE FACTOR:


☐ Confidence Factor

save

run

cancel





Adding attribute filters to a report definition

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Now scroll to the bottom of the PMW screen and click **run**.

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# Report setup

MyFavorites

Reporting

Alarm

Browse

Monitor

Preferences

Tools

define report

manage report

new schedule

manage schedule

reporting help

Report Name

PMW\_Fundamentals\_LO\_Test\_Report

Folder

(personal documents) /Users/sysadm

Step 1: DataSource Selection

student130.ibm.com-ra

Step 2: Focal Entity Type

Cell

Step 3: Field Selections

Cell.Nokia.Handovers.mec\_o\_cell\_ch, Cell.Nokia.Handovers.mec\_o\_adj\_cell\_id\_err\_c, Cell.Nokia.Handovers.mec\_i\_fall\_ack, Cell.Nokia.Handovers.mec\_i\_fall\_conn, Cell.Nokia.Handovers.mec\_i\_fall\_bss

Step 4: Date-Time Selection

Selected Date-Times

3/26/08-3/27/08

00:00-24:00

Start Of Week: Default (Sunday)

Step 5: Filtering

Attribute Filters

Cell.Cell\_Id = 1-1-1-1

Traffic Filters

Vendor Filters

None Selected

Name: PMW\_Fundamentals\_LO\_Test\_Report

Report results stored in:

(personal documents) /Users/sysadm

edit

Auto-organize report output:

not set

edit

run report & wait

run report in background

cancel

Adding attribute filters to a report definition

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At this point the entire report setup can be seen on the left which includes the **Step 5: Filtering** for Cell.Cell\_Id 1-1-1-1. Press the **run report & wait** button located in the right column to get the report output data.

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## Filtered report output

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Rollup level: CELL\_CELL\_ID.T\_DAY

apply settings to report

save as a new c

PMW\_Fundamentals\_ILO\_Test\_Report-sysadm-2009-Mar-12-08:32:00

Table View

Show/Hide Settings

☐ Show all key columns
 ☐ Subselect Entity:
 

Selected Entity:

1-1-1-1

☐ Sort by multiple:
 

Field 1: -none- Order 1: Asc

Field 2: -none- Order 2: Asc

Field 3: -none- Order 3: Asc

apply

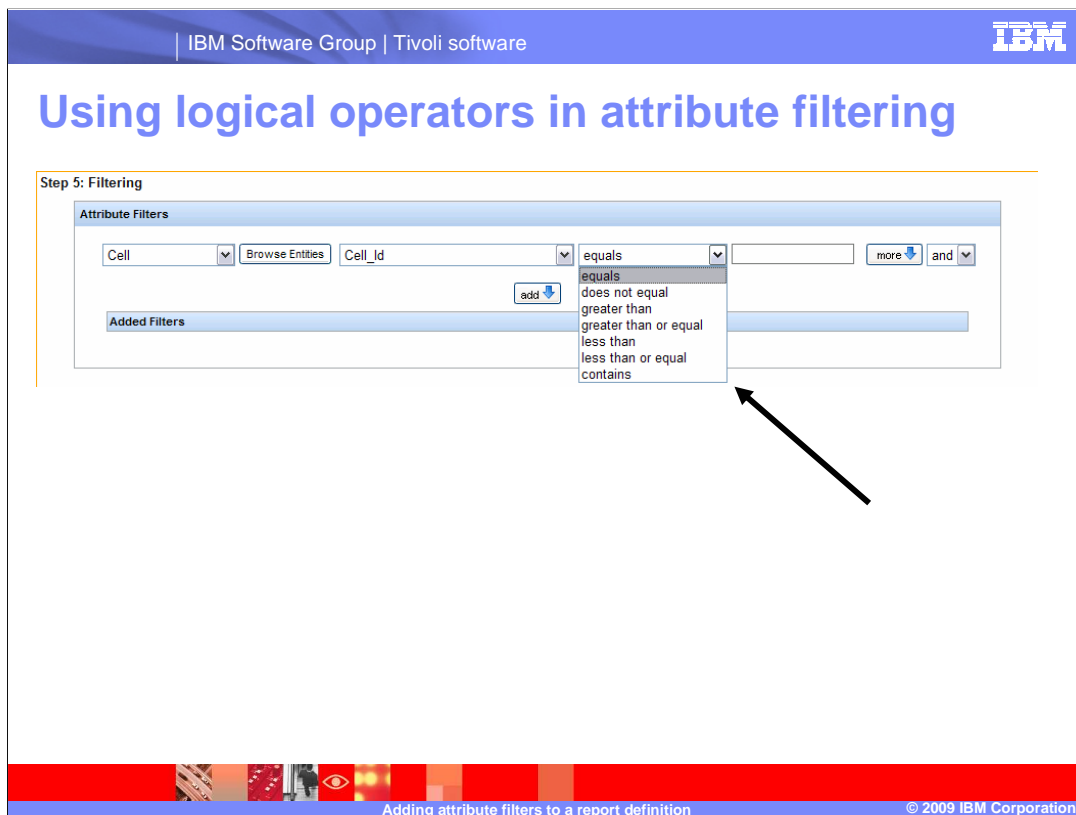
page 1 of 1 go

CELL_CELL_ID	T_DAY	MSC_O_CALL_CLR	MSC_O_ADJ_CELL_ID_ERR_C	MSC_I_FAIL_LACK	MSC_I_FAIL_CONI	MSC_I_FAIL_BSS
1-1-1-1	3/20/08	43101.0	47893.0	45205.0	46077.0	46771.0
1-1-1-1	3/27/08					

Adding attribute filters to a report definition

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After running the revised report with the selected attribute filter the report displays the data for Cell.Cell\_Id 1-1-1-1.



The PMW client GUI screen offers seven types of logical operators: **equals**, **does not equal**, **greater than**, **greater than or equal**, **less than**, **less than or equal**, and **contains**. These logical operators are used to filter report data output to exclude all but either a single network element or a specific group of network elements.



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## Using logical operators in attribute filtering

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Help About Log

My Favorites

Reporting

Form

Browse

Monitor

Preferences

Tools

new schedule

manage schedule

reporting help

Report Name

PMW\_Fundamentals\_ILQ\_Test\_Report

Folder

[personal documents]: /Users/sysadm

Step 1: DataSource Selection

student138.ibm.com-rs

Step 2: Focal Entity Type

Cell

Step 3: Field Selections

Cell.Nokia.Handovers.msc\_o\_call\_clr, Cell.Nokia.Handovers.msc\_o\_call\_clr, Cell.Nokia.Handovers.msc\_i\_fail\_bss, Cell.Nokia.Handovers.msc\_i\_fail\_bss, Cell.Nokia.Handovers.msc\_i\_fail\_conn, Cell.Nokia.Handovers.msc\_i\_fail\_conn,

Step 4: Date-Time Selection

Selected Date-Times

3/26/08-3/27/08 00:00-23:00

Start Of Week: Default (Sunday)

Step 5: Filtering

Attribute Filters

Cell

Browse Entities

Cell\_Id

Cell\_Name

Cell\_Type

Cell\_Version

Dedicated\_PDCH

Defined\_CCH

Defined\_PDCH

Defined\_TCH

Defined\_TRX

GPRS\_Cell\_Id

LAC\_Id

Max\_Power

MSC\_Id

Network\_Id

NSVC\_CN\_Id

NSVC\_Id

PCU\_Id

Primary\_Common\_Pilot\_Ch\_Power

Primary\_Scrambling\_Code

Primary\_Sync\_Ch\_Power

Region\_Id

Registration\_Area\_Id

Routing\_Area\_Id

Secondary\_Sync\_Ch\_Power

Segment\_Id

SGSN\_Id

Technology

UMTS\_Cell\_Id

UTRAN\_Absolute\_Radio\_Freq\_DL

UTRAN\_Absolute\_Radio\_Freq\_UL

Cell\_Id

equals

more

and

Added Filters

Adding attribute filters to a report definition

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The specific network element types that logical operations are performed on is selected by the PMW user from choices revealed within the attribute entities drop-down menu.

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## Using the equals logical operator

Step 5: Filtering

Attribute Filters

Cell

Browse Entities

Cell\_id

equals

more

and

add

Added Filters

Adding attribute filters to a report definition

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Equals is used when the PMW user wants to focus report output on presenting data pertaining to a single network element as opposed to a group of network elements.

## Using the equals logical operator: Selecting the attribute entity

Step 5: Filtering

Attribute Filters

Cell  Cell\_Id equals 1-1-1-1  and

Added Filters

Adding attribute filters to a report definition

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In this example we filter for attribute entity Cell\_Id 1-1-1-1 with the **equals** logical operator. This will program the report definition to exclude data pertaining to all other network elements types. We further filter for output data presentation only related to network element Cell\_Id 1-1-1-1.

## Using the equals logical operator: Adding the filter

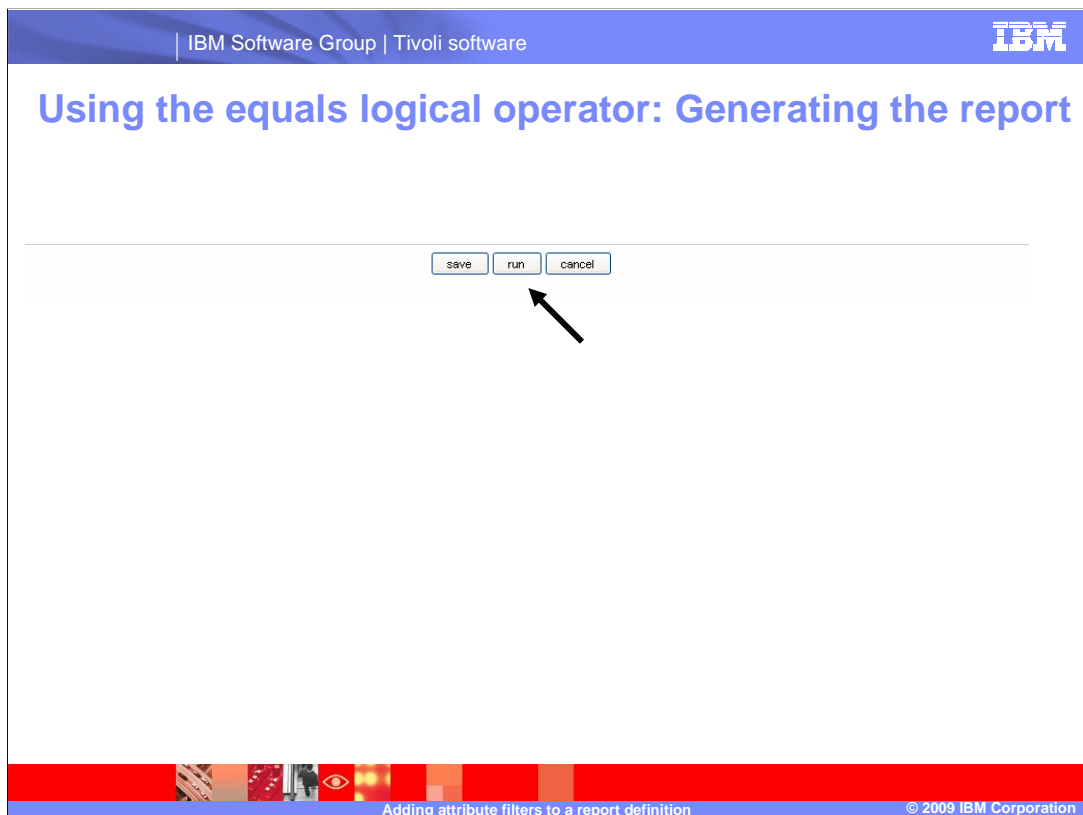
### Step 5: Filtering

The screenshot shows the 'Attribute Filters' section of a software interface. At the top, there is a search bar with 'Cell' selected and a 'Browse Entities' button. Below this, a filter is being constructed: 'Cell\_Id' is selected from a dropdown, followed by 'equals' from another dropdown, and '1-1-1-1' in a text field. To the right of the text field are 'more' and 'and' buttons. Below the search bar is an 'add' button with a downward arrow. Below the 'add' button is a section titled 'Added Filters'. This section contains a list of filters, with 'Cell.Cell\_Id = 1-1-1-1' highlighted by a black oval. To the right of this filter is an 'AND' button. Below the 'Added Filters' section are 'delete' and 'and/or' buttons.

Adding attribute filters to a report definition

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Upon clicking the **add** button Cell\_Id 1-1-1-1 is moved to the **Added Filters** box.



With the report definition attribute filtering set for Cell\_Id 1-1-1-1 we scroll to the bottom of the PMW client GUI screen and click the **run** button to start report generation.

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## Using the equals logical operator: Run choices

Tivoli Netcool Performance Manager for Wireless

Help About Logout: sysadm

MyFavorites

Reporting

Alarm

Browse

Monitor

Preferences

Tools

define report

manage report

new schedule

manage schedule

reporting help

Report Name

PMW\_Fundamentals\_ILQ\_Test\_Report

Folder

[personal documents]: /Users/sysadm

Step 1: DataSource Selection

student138.ibm.com.rs

Step 2: Focal Entity Type

Cell

Step 3: Field Selections

Cell Nokia Handovers.msc\_o\_cal\_clr, Cell Nokia Handovers.msc\_o\_adj\_cell\_id\_err\_c, Cell Nokia Handovers.msc\_l\_fall\_jack, Cell Nokia Handovers.msc\_l\_fall\_conn, Cell Nokia Handovers.msc\_l\_fall\_bss

Step 4: Date-Time Selection

Selected Date-Times

3/26/08-3/27/08 00:00-24:00

Start Of Week: Default (Sunday)

Step 5: Filtering

Attribute Filters

Cell Cell\_Id = 1-1-1-1

Traffic Filters

None Selected

Vendor Filters

None Selected

Name: PMW\_Fundamentals\_ILQ\_Test\_Report

Report results stored in:

[personal documents]: /Users/sysadm

Auto-organize report output:

not set

run report & wait

run report in background

cancel

Adding attribute filters to a report definition

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After pressing the **run** button on the previous screen we see that **Step 5: Filtering** in the lower left column has Cell\_Id 1-1-1-1 listed as an **Attribute Filter**. This instructs PMW to run the report and to only output data for network element Cell\_Id 1-1-1-1. In the lower part of the right column we can either click to **run report & wait**, **run report in background**, or **cancel** the report run.

## Using the contains logical operator

### Step 5: Filtering

Attribute Filters

Cell  Cell\_Id

Added Filters

Adding attribute filters to a report definition

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In this example we will demonstrate using the contains logical operator. The contains logical operator is always utilized when the PMW user wants to add more than one network element to the report definition.

## Using the contains logical operator: Selecting network elements

### Step 5: Filtering

Attribute Filters

Cell  Cell\_Id contains 1-1-1-1, 1-1-1-2  and

Added Filters

Adding attribute filters to a report definition

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In this example we filter for Cell\_Id names 1-1-1-1 and 1-1-1-2. We use a comma and a space to separate the two network element entries.



## Using the contains logical operator: moving IDs to add filters box

### Step 5: Filtering

Attribute Filters

Cell  Cell\_Id contains 1-1-1-1, 1-1-1-2 more and

add

Added Filters

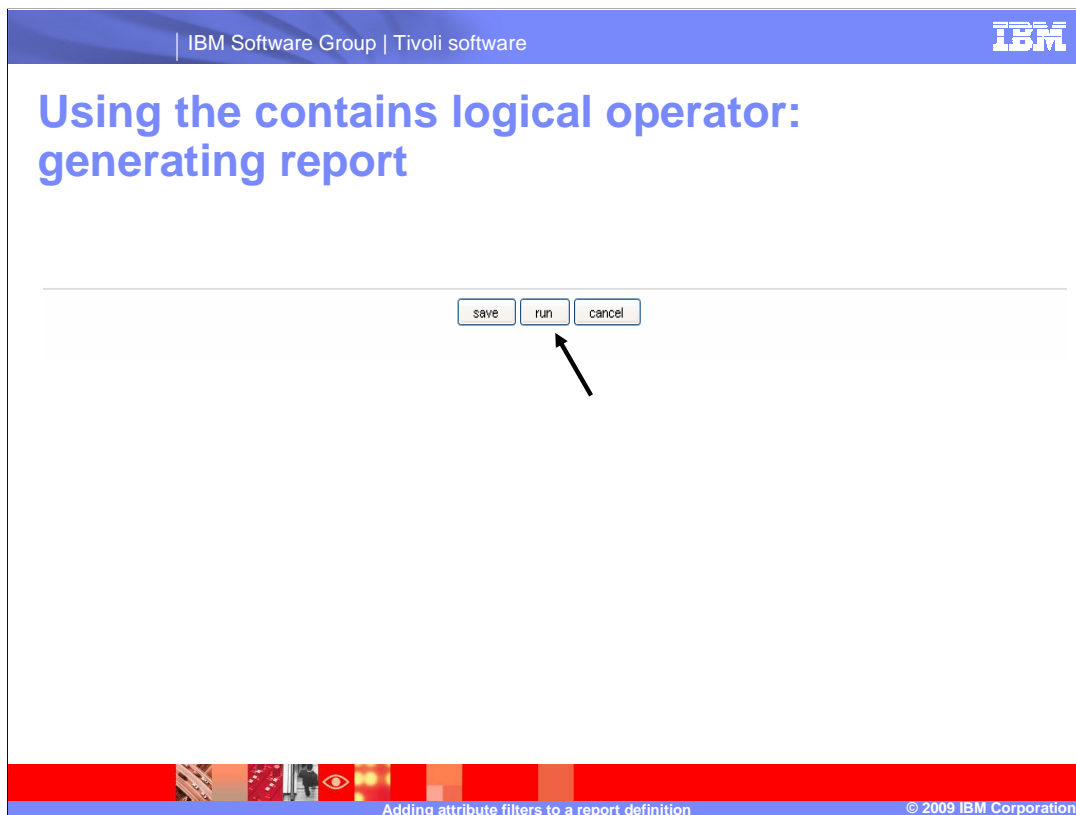
<input type="checkbox"/> Cell.Cell_Id	IN	1-1-1-1, 1-1-1-2	AND
---------------------------------------	----	------------------	-----

delete and/or

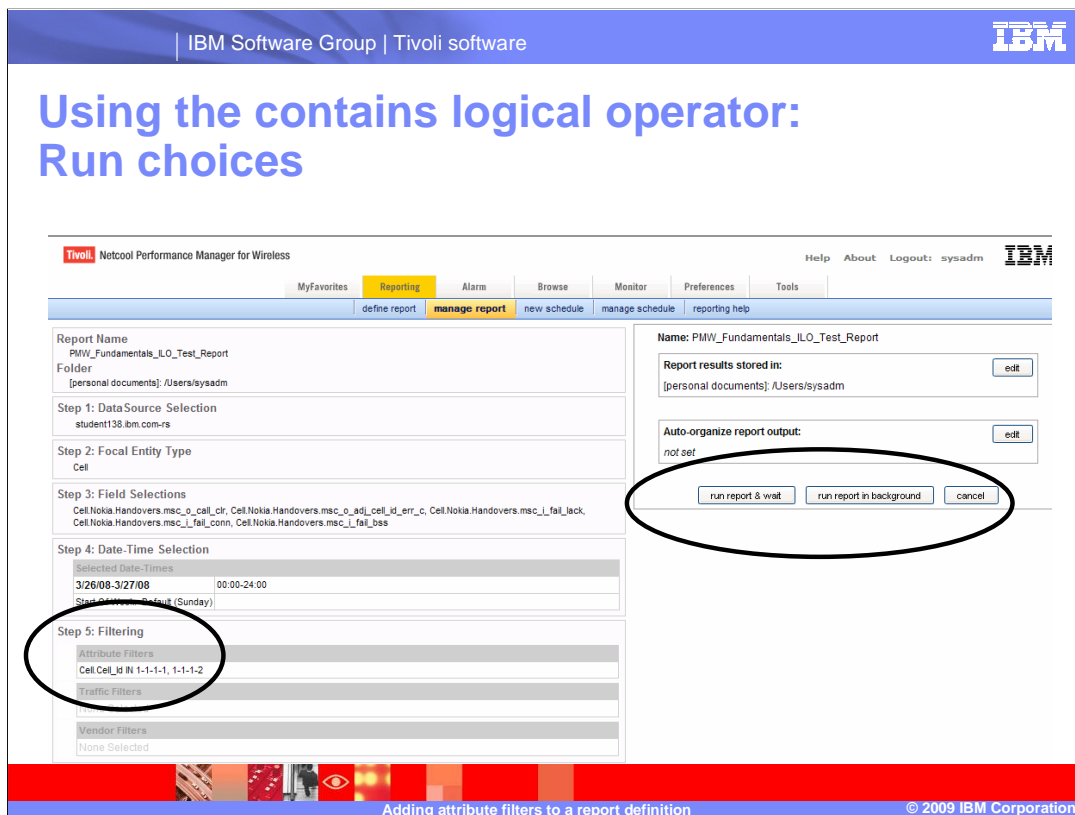
Adding attribute filters to a report definition

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Then click on the **add** button to move the desired Cell\_Ids to the **Add Filters** box.



With the report definition attribute filtering set for Cell\_Id 1-1-1-1 and Cell\_Id 1-1-1-2 we scroll to the bottom of the PMW client GUI screen and click on **run** to start report generation.



Now we can see that **Step 5: Filtering** in the lower left column has Cell\_Id 1-1-1-1 and 1-1-1-2 listed as **Attribute Filters**. In the lower box of the right column we can either click to **run report & wait**, **run report in background**, or **cancel** the report run.

## Using the value filter

### Step 5: Filtering

The screenshot shows the 'Attribute Filters' dialog box. At the top, there are dropdown menus for 'Cell' and 'Cell\_Id', and a 'Browse Entities' button. Below these are dropdowns for 'equals', 'less', and 'and'. The 'Value Filter' box contains an asterisk (\*). Below the 'Value Filter' box is a list of values: 1-1-1-1, 1-1-1-2, 1-1-1-3, and 1-1-2-1. The 'add' button is highlighted with a red circle, and the 'apply' button is also highlighted with a red circle. Below the list of values are 'add' and 'delete' buttons. At the bottom of the dialog is an 'Added Filters' section with an 'add' button.

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The Value Filter is used to limit the number of elements displayed. First the asterisk (\*) wildcard value is entered in the **Value Filter** box. Next the **apply** button is clicked. The combination of settings produces a list of all Cell\_Id network elements.

## Using the value filter: Modifications

Step 5: Filtering

Attribute Filters

Cell  Browse Entities Cell\_Id  equals  less  and

Value Filter: 1-1-1-3

1-1-1-3

Added Filters

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In this example modification is made. First entry of Cell\_Id 1-1-1-3 is made into the **Value Filter** box. Next click the **apply** button. We then see that all Cell\_Id names are eliminated except for Cell\_Id 1-1-1-3. Now we can use the **add** buttons to drop Cell\_Id 1-1-1-3 to the **Added Filters** area.

## Using the value filter: Add process

### Step 5: Filtering

The screenshot shows the 'Attribute Filters' dialog box. At the top, there are dropdowns for 'Cell' and 'Cell\_Id', and buttons for 'Browse Entries', 'equals', 'less', and 'and'. Below these is a 'Value Filter' field containing '1-1-1-3', which is circled. To the right of the field is an 'apply' button. Below the field is a list of filters, with '1-1-1-3' highlighted. Below the list are 'add' and 'delete' buttons. An arrow points to the 'add' button. At the bottom, there is an 'Added Filters' section with an 'add' button.

Adding attribute filters to a report definition

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Highlight Cell\_Id 1-1-1-3 and click the **add** button.

## Using the value filter: Added filters

Step 5: Filtering

**Attribute Filters**

Cell  Browse Entities Cell\_Id  equals  less  and

Value Filter: 1-1-1-3

1-1-1-3

1-1-1-3

**Added Filters**

Adding attribute filters to a report definition

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Cell\_Id 1-1-1-3 is now dropped to the lower box.

## Using the value filter: Confirming addition

### Step 5: Filtering

The screenshot shows the 'Attribute Filters' dialog box. At the top, there are dropdown menus for 'Cell' and 'Cell\_Id', a 'Browse Entities' button, and operators 'equals', 'less', and 'and'. Below this is a 'Value Filter' section with a text input containing '1-1-1-3' and an 'apply' button. A list box below the input contains the value '1-1-1-3', which is highlighted with a black circle. To the right of the list box are 'add' and 'delete' buttons. Below the list box is an 'add' button with a blue arrow. At the bottom of the dialog is an 'Added Filters' section, which is currently empty. An arrow points from the 'add' button in the list box to the 'add' button at the bottom of the dialog.

Adding attribute filters to a report definition

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First, highlight Cell\_Id 1-1-1-3 in the lower box. Next, click the lower **add** button.



## Using the value filter: Summary

### Step 5: Filtering

The screenshot shows the 'Attribute Filters' dialog box. At the top, there are dropdowns for 'Cell' and 'Cell\_Id', and buttons for 'Browse Entities', 'equals', 'less', and 'and'. Below this is a 'Value Filter' section with a text input field containing '1-1-1-3' and an 'apply' button. Below the input field are two more '1-1-1-3' entries, each with 'add' and 'delete' buttons. At the bottom, there is an 'Added Filters' section. A filter entry 'Cell\_Cell\_Id = 1-1-1-3' is added and circled in black. To the right of this entry is an 'AND' button. Below the 'Added Filters' section are 'delete' and 'and/or' buttons.

Adding attribute filters to a report definition

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To summarize we used **Value Filter** to select Cell\_Id 1-1-1-3 from a list of available Cell\_Id network elements. Then we dropped Cell\_Id 1-1-1-3 to the **Added Filters** section.

## Using the value filter: Wildcard example

### Step 5: Filtering

The screenshot shows the 'Attribute Filters' dialog box. At the top, there are dropdown menus for 'Cell' and 'Cell\_Id', followed by a 'Browse Entities' button and a comparison operator dropdown set to 'equals'. Below this, the 'Value Filter' field contains the text '2-\*', which is circled in black. To the right of this field is an 'apply' button, indicated by a black arrow. Below the 'Value Filter' field are two empty text boxes, each with an 'add' button (downward arrow) and a 'delete' button (upward arrow). At the bottom of the dialog, there is an 'Added Filters' section with an 'add' button (downward arrow).

Adding attribute filters to a report definition

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This example shows another use of **Value Filter**. The Value Filter has a wildcard asterisk (\*) option that allows the PMW user to make multiple network elements available for selection. Here we enter the character string 2- with the asterisk. Next, click the **apply** button.

## Using the value filter: Elements displayed

Step 5: Filtering

The screenshot shows the 'Attribute Filters' dialog box. At the top, there are dropdowns for 'Cell' and 'Cell\_Id', and a 'Browse Entities' button. Below these, there are dropdowns for 'equals', 'less', and 'and'. The 'Value Filter' field contains '2-\*'. To the right of this field is an 'apply' button, which is circled in red. Below the 'Value Filter' field, there is a list of filtered elements: '2-3-1-1', '2-3-1-2', '2-3-1-3', and '2-3-2-1'. Below this list are 'add' and 'delete' buttons. At the bottom of the dialog, there is an 'Added Filters' section with an 'add' button.

After clicking on the **apply** button the lower box reveals all of the Cell Id network elements that start with 2.

## Using the value filter: Selecting multiple elements

### Step 5: Filtering

The screenshot shows the 'Attribute Filters' dialog box. At the top, there are dropdowns for 'Cell' and 'Cell\_Id', followed by 'Browse Entities', 'equals', 'less', and 'and'. Below this is a 'Value Filter' section with a text input containing '2-\*' and an 'apply' button. A list of network elements is shown: '2-3-1-1', '2-3-1-2', '2-3-1-3', and '2-3-2-1'. The first two are selected. Below the list are 'add' and 'delete' buttons. At the bottom, there is an 'Added Filters' section with an 'add' button.

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Now you can select two of the listed Cell Id network elements by holding down the Ctrl key while clicking to select them.

## Using value filter: Moving selected IDs

Step 5: Filtering

The screenshot shows the 'Attribute Filters' dialog box. At the top, there are dropdown menus for 'Cell' (set to 'Cell\_Id') and 'Browse Entities'. Below these are buttons for 'equals', 'less', and 'and'. A 'Value Filter' field contains '2-\*' with an 'apply' button. Below the 'Value Filter' field is a list of IDs: 2-3-1-1, 2-3-1-2, 2-3-1-3, and 2-3-2-1. An arrow points to the 'add' button (a blue square with a downward arrow) located between the two lists. Below the 'add' button is a list containing 2-3-1-1 and 2-3-1-2, which are circled in red. To the right of this list is an 'add dimension' button. At the bottom of the dialog is an 'Added Filters' section with an 'add' button (a blue square with a downward arrow).

After clicking on the upper **add** button Cell\_Id 2-3-1-1 and Cell\_Id 2-3-1-2 are moved to the lower box.

## Using the value filter: Setting logical operator

### Step 5: Filtering

Attribute Filters

Cell  Browse Entities Cell\_Id  equals less and

Value Filter: 2-\*

2-3-1-1  
2-3-1-2  
2-3-1-3  
2-3-2-1

2-3-1-1  
2-3-1-2

Added Filters

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If more than one network element is desired for report output we must change the logical operator to **contains**.

## Using the value filter: Using contains

### Step 5: Filtering

Attribute Filters

Cell ▾ Browse Entities Cell\_Id ▾ contains ▾ less ▾ and ▾

Value Filter: 2-\* apply

2-3-1-1  
2-3-1-2  
2-3-1-3  
2-3-2-1

add ▾ delete ▾

2-3-1-1  
2-3-1-2

add ▾

Added Filters

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Here we have changed the logical operator from **equals** to **contains**. In order to select more than one network element for report output filtering the logical operator box must be set to **contains**

## Using the value filter: Confirmation

### Step 5: Filtering

Attribute Filters

Cell  Cell\_Id contains less and

Value Filter: 2-\*

2-3-1-1  
2-3-1-2  
2-3-1-3  
2-3-2-1

2-3-1-1  
2-3-1-2

Added Filters

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Again hold down the **Ctrl** key and click to highlight the two desired Cell\_Id network elements. Next click the lower **add** button.



## Using the value filter: Moving to added filters

### Step 5: Filtering

Attribute Filters

Cell  Cell\_Id contains less and

Value Filter: 2-\*

2-3-1-1  
2-3-1-2  
2-3-1-3  
2-3-2-1

2-3-1-1  
2-3-1-2

Added Filters

☐ Cell.Cell\_Id IN 2-3-1-1, 2-3-1-2 AND

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After clicking the lower **add** button the two desired Cell\_Id's are moved to the **Added Filters** section. When the report is run it will only give output data pertaining to Cell\_Id 2-3-1-1 and Cell\_Id 2-3-1-2.

## Summary

You should now be able to:

- Modify an existing report definition with attribute filtering
- Filter report output data to focus on either a single network element or a small group of network elements
- Use logical operators and the Value Filter to insert the network elements into the **Add Filters** section

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You should now be able to:

Modify an existing report definition with attribute filtering.

Filter report output data to focus on either a single network element or a small group of network elements.

Use logical operators and the Value Filter to insert the network elements into the **Add Filters** section

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