Purpose

This document describes what Sources and Source Groups are and how they work within Nagios Network Analyzer. You will learn how to create new Sources, start and stop Sources, and create new Source Groups.

Target Audience

This document is intended for use by network administrators who want to setup and use Nagios Network Analyzer.

Understanding Sources

A Source in Nagios Network Analyzer is the data collector. Whether it be sFlow or NetFlow, the Source is the same. Sources require a unique name and port to bind to. They create their own directory to store data and have what is called a **data lifetime** that determines the length of time the granular data is stored. The longer the data lifetime, the more disk space is going to be consumed.

Data Lifetime

Data lifetime was created to reduce the amount of disk space used by Sources. Granular flow data is stored for each Source you create in a directory and database files. These files can grow extremely large and fast. In order to combat the effects of requiring 10TB of disk space every month for a single Source in extreme conditions we created data lifetime.

What data lifetime does is, once data reaches the cutoff point (standard is set to 24 hours) the data is compressed and only minimal aggregated information (such as bandwidth) is saved for viewing in graphs and other areas of the web interface. If you want longer granular data you can set the data lifetime to longer, just be aware of the disk size requirements will vary depending on the amount of flows that are received.

Source Groups

A Source Group is a Group of one or more Sources. Grouping Sources allows you to see traffic trends on a larger scale. No extra disk space is used when you create a Source Group. These Groups do not collect any data but share the data collected by each individual Source. Because of how Source Groups work, a Source Group's data lifetime is only as long as the shortest data lifetime of a Source in the Group.

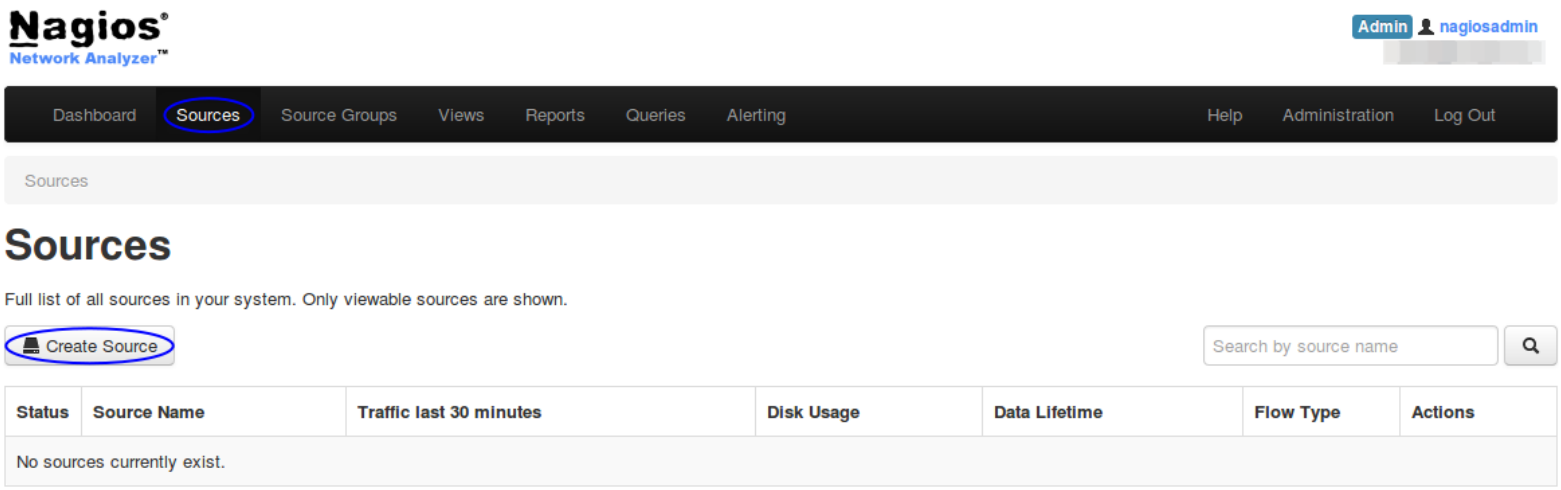
Creating A Source

In the following steps you will need to know the network **port** that your device will be sending flow data on. The following documentation provides steps on certain types of devices.

- Configuring Switch And Routers To Send Netflow Data To Network Analyzer
- Configuring A Linux Server To Send Netflow Data To Network Analyzer
- Installing And Configuring Windows Netflow Exporters For Network Analyzer

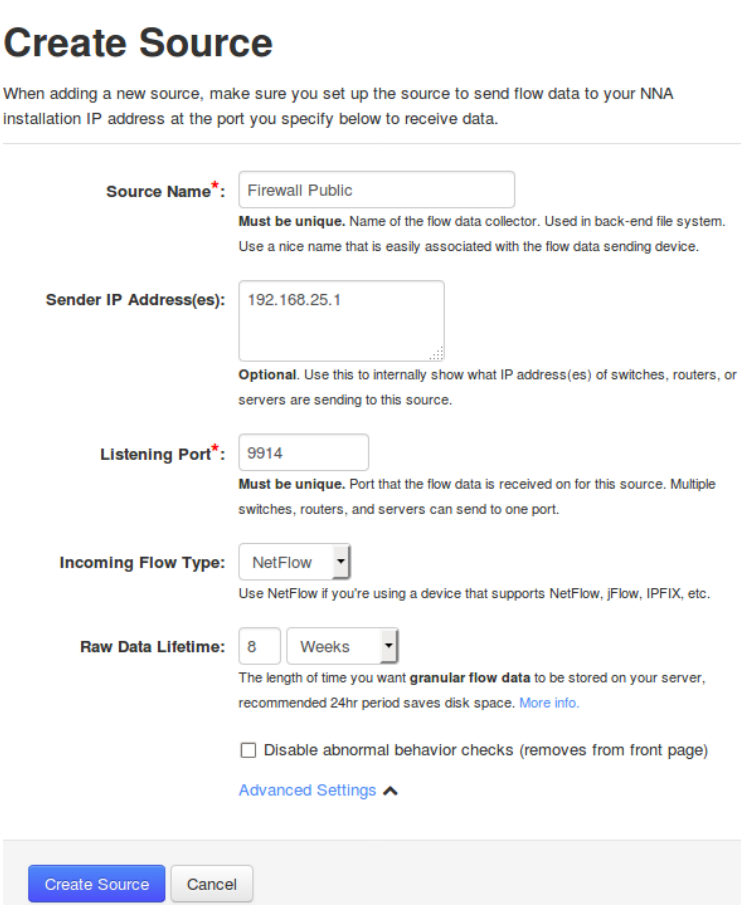
You can configure the devices before or after creating a Source, there is no specific requirement.

On the menu bar navigate to **Sources**.



Click the **Create Source** button.

Populate the following fields and selections.



Source Name - Must be unique and is not editable after creation.

Sender IP Address(es) - This is an optional list of the IP address(es) of the device(s) sending flow information.

Listening Port - Must be unique and over port `1024`. This is the network port that the device(s) sending flow information will be received on.

Incoming Flow Type - Select the flow type, either sFlow or NetFlow (including anything that is formatted as NetFlow).

Raw Data Lifetime - This is explained previously in this document, it is the data lifetime for granular data.

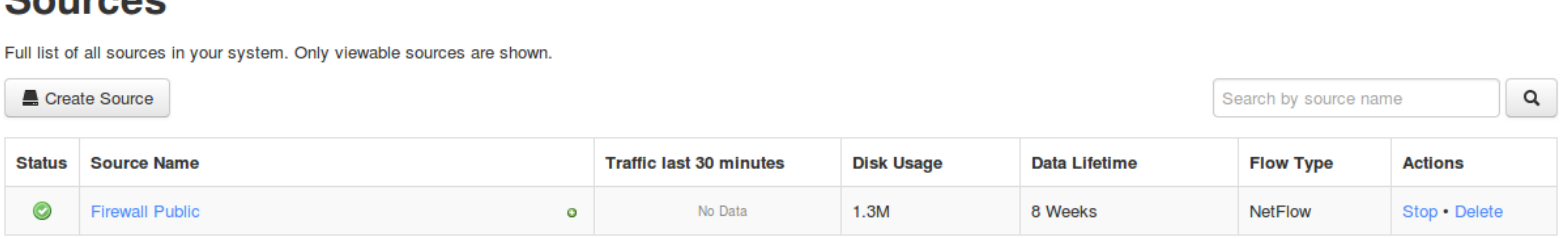
Disable abnormal behavior checks - Check the box if you want to disable the display of abnormal traffic on the Dashboard.

Advanced Settings

Data Directory - Instead of using the default data directory (`/usr/local/nagiosna/var/`) to store the flow data, you can specify an alternate folder. The directory requires `nna:users` as the owner / group and the permissions of `775` granted to that folder. When the Source is created, it will create a sub-folder using the Source name inside the directory given.

Click the **Create Source** button when you have finished populating the fields and making selections.

The Source will be created and will be displayed on the Source page with the status of running.



Clicking on the Source Name will bring up the details page of the Source with the Summary tab selected by default. It will take at least 15 minutes before graph appears and 5 minutes before any data appears under the Top 5 Talkers. Here is the Source after it has been running for over a day:

Top 5 Talkers

Destination IP	% Bytes
150.101.126.93	21.0
2001:44b8:3132:25:10:25:2:1	11.0
192.168.25.254	10.1
192.231.203.132	4.6
192.168.25.80	3.6

Source IP	% Bytes
150.101.126.93	18.6
192.168.25.254	10.9
192.231.203.132	10.5
2001:44b8:1::1	7.4
192.231.203.3	6.6

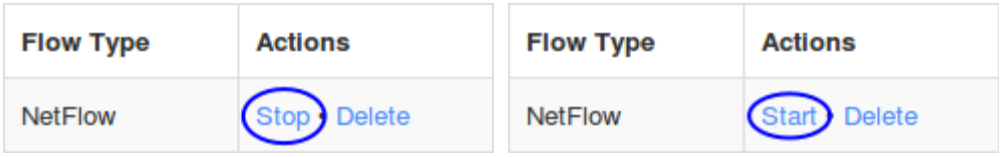
Dest. Port	% Bytes
53	14.9
80	11.1
443	10.8
123	3.0
5900	1.8

Src. Port	% Bytes
53	37.1
80	6.8
443	2.9
123	2.9
0	2.6

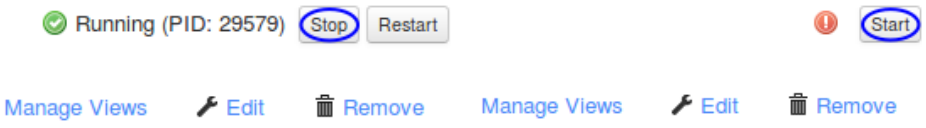
Stopping / Starting A Source

Stopping a Source will stop the Source from collecting data that is being sent to it from the sender. The sender will still be sending data, unless you do something to stop it. Starting and stopping a Source can be done:

On the main Source page using the links under the **Actions** column.

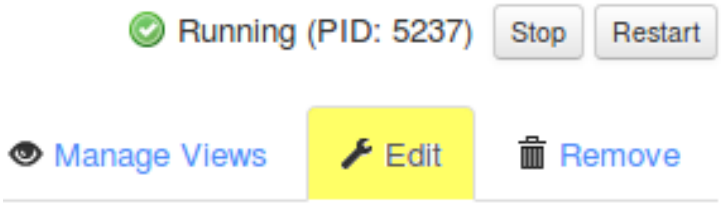


On the selected Source page using the buttons in the top right corner.



Editing A Source

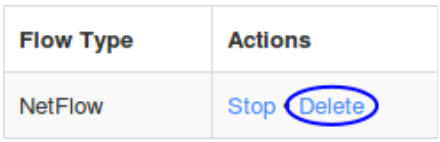
Editing a Source can be done when on the details page of the Source. Click the **Edit** link at the top right of the page and the options that can be updated will be presented. These options are identical to when creating the Source and hence will not be explained here.



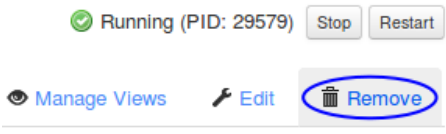
Deleting A Source

Deleting a Source is a destructive process and all data relating to the Source will be lost. Deleting a Source can be done:

On the main Source page using the links under the **Actions** column.

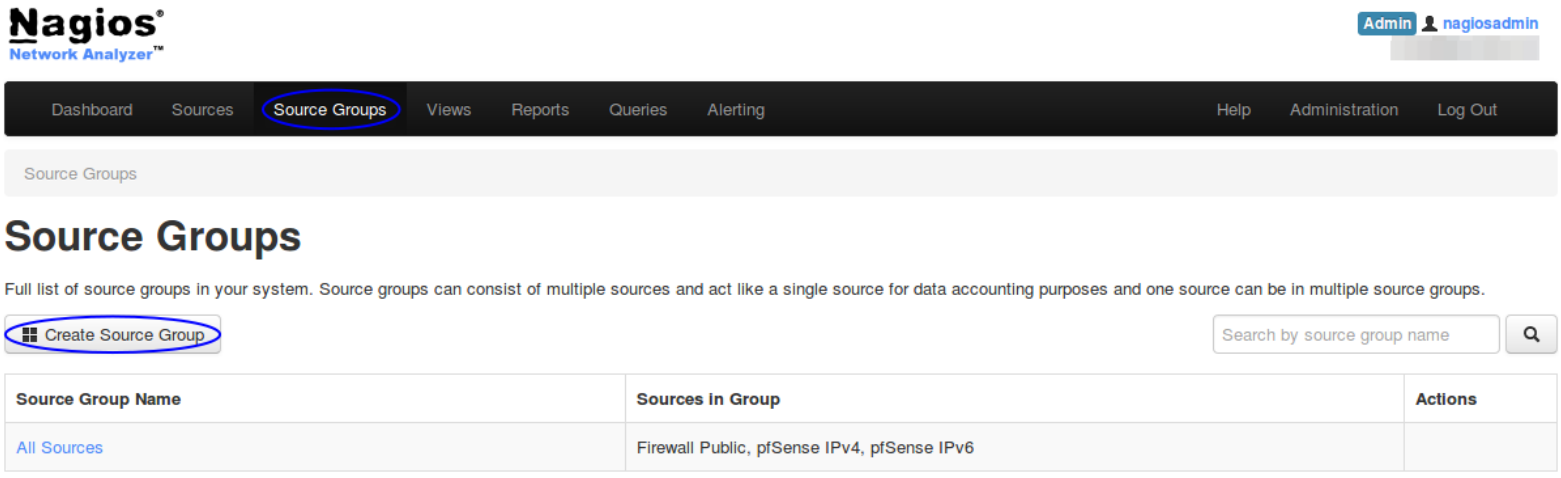


On the selected Source page using the **Remove** link in the top right corner.



Creating A Source Group

On the menu bar navigate to **Source Groups**.



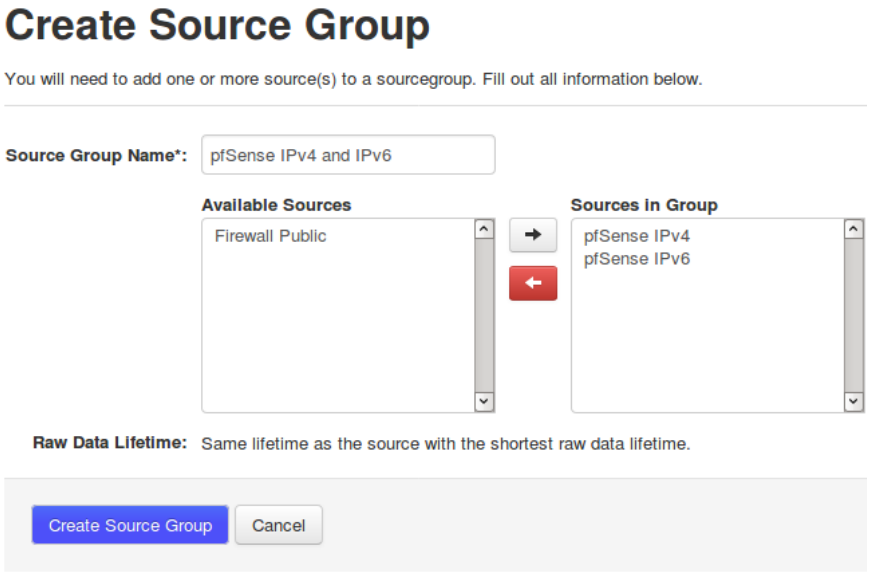
Click the **Create Source Group** button.

Provide a name for the Source Group.

Select the Sources you'd like to place into the Group by selecting them from the left and use the arrow button to move them to right.

You can add as many Sources as you want to a single Source Group.

Once you have selected all of the Sources, click the **Create Source Group** button.



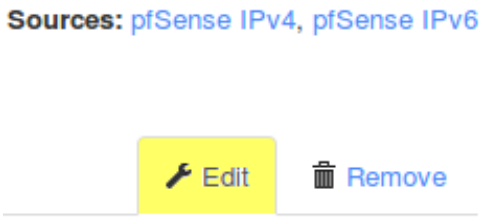
Once created, the new Source Group will show up in the Source Groups list. All of the Sources associated to the Source Group are listed in the Source Groups table.

Source Group Name	Sources in Group	Actions
All Sources	Firewall Public, pfSense IPv4, pfSense IPv6	
pfSense IPv4 and IPv6	pfSense IPv4, pfSense IPv6 (Change)	Delete

A Source Group does not "start" or "run" like a Source. The Source Group only display data collected by the Sources associated with that Source Group.

Editing A Source Group

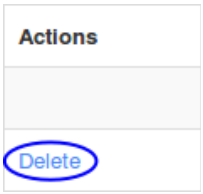
Editing a Source Group can be done when on the details page of the Source Group. Click the **Edit** link at the top right of the page and the options that can be updated will be presented. These options are identical to when creating the Source Group and hence will not be explained here.



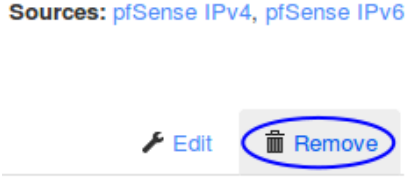
Deleting A Source Group

Deleting a Source Group only removes the Group itself, it does not do anything destructive to the Sources that are in the Source Group. Deleting a Source Group can be done:

On the main Source Group page using the links under the **Actions** column.



On the selected Source Group page using the **Remove** link in the top right corner.

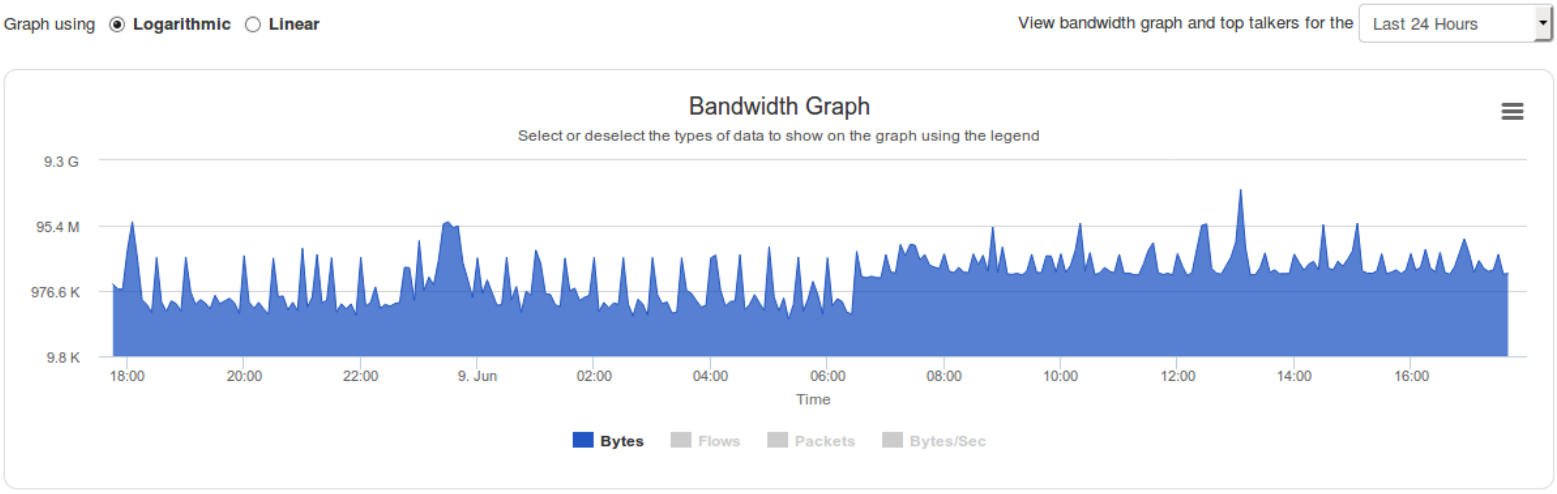


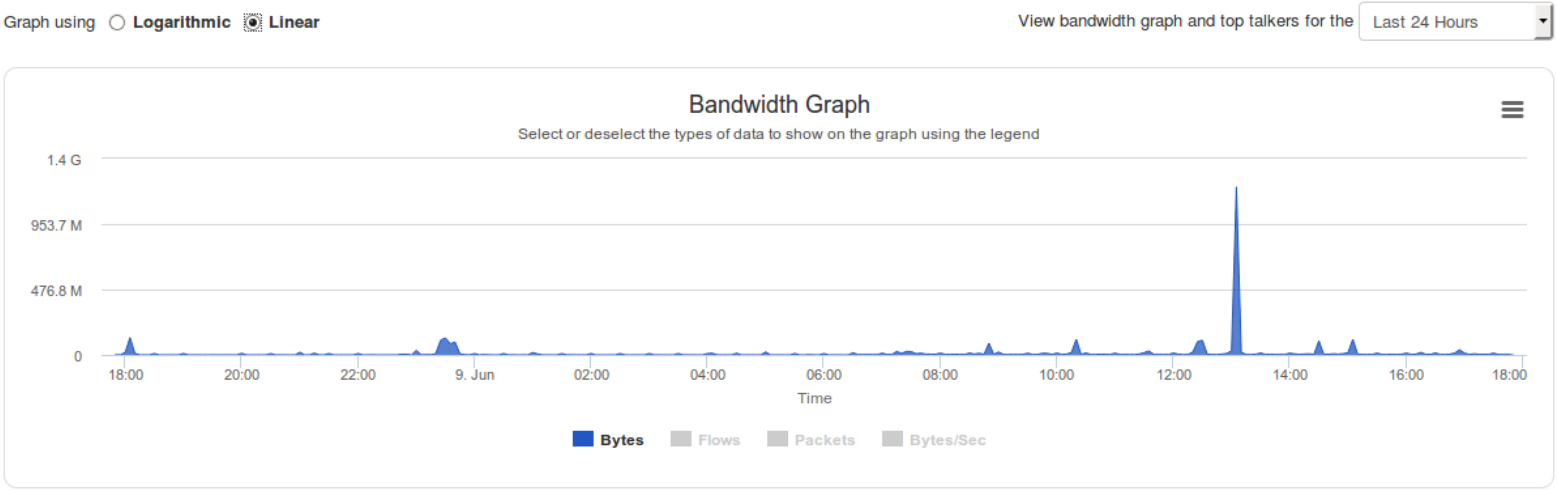
Sources / Source Groups Details

When viewing a Source or a Source Group, many of the features available are common to both. This section will explore what is available on these pages.

Summary Tab

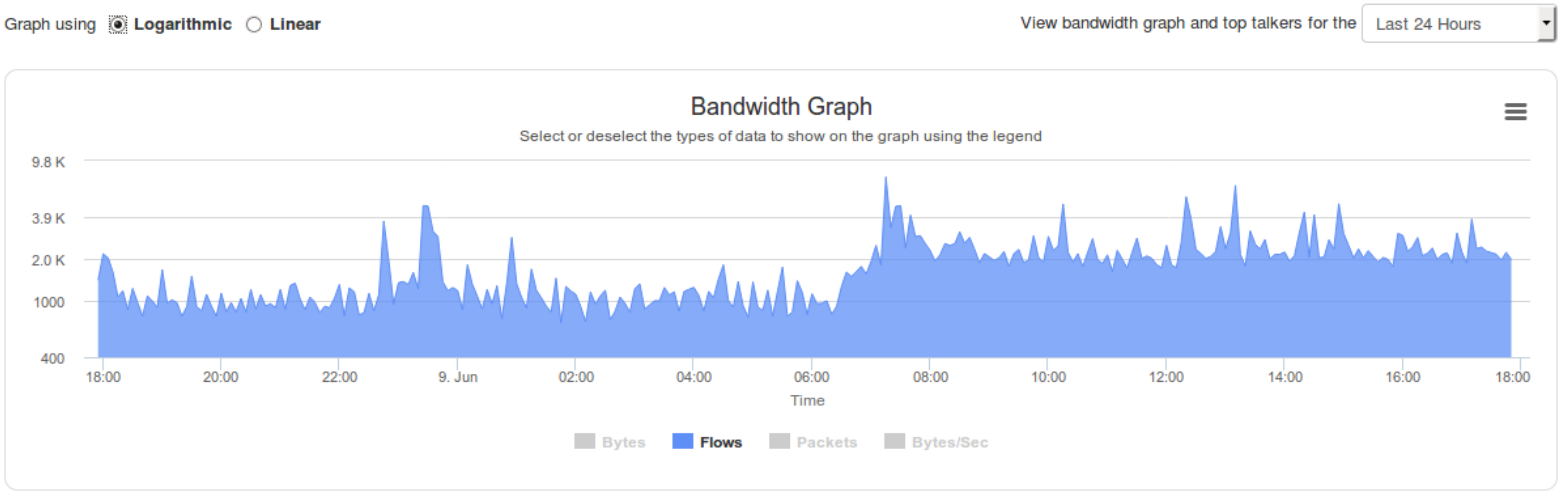
The Summary tab provides a Bandwidth Graph and a Top 5 Talkers table. The Bandwidth Graph has two views that can be selected; **Logarithmic** and **Linear**:

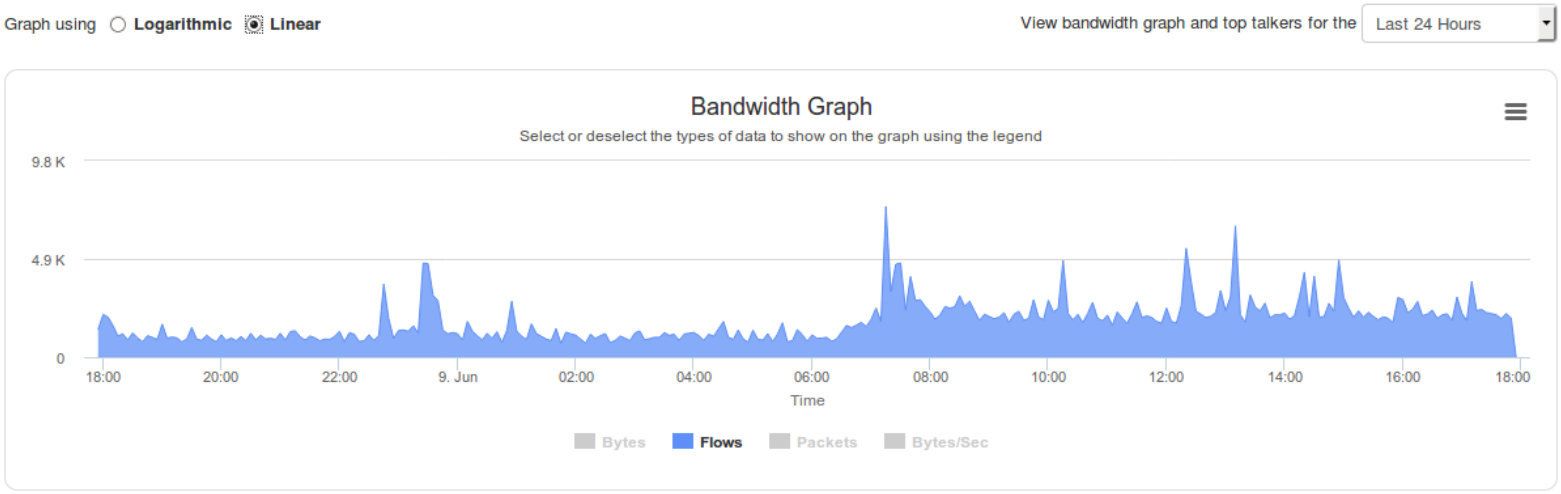




The two screenshots were taken one after the other, so the data they are generated from is identical. As you can see, the Linear view is a more realistic view of the traffic flow (when looking at bytes) however a large peak can prevent you from seeing the overall trend of the traffic.

You can also enable / disable **Bytes**, **Flows**, **Packets** and **Bytes/Sec** on the graph by clicking on the legend. Here are the Logarithmic and Linear graphs but this time Flows was selected:

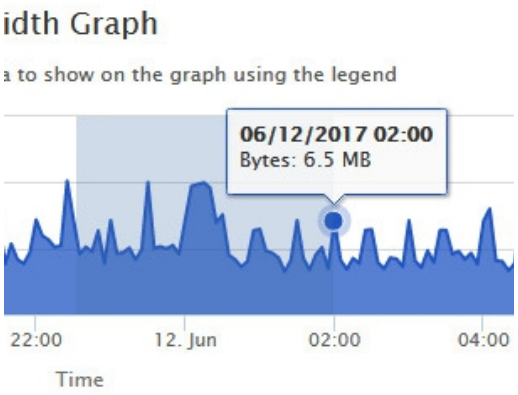




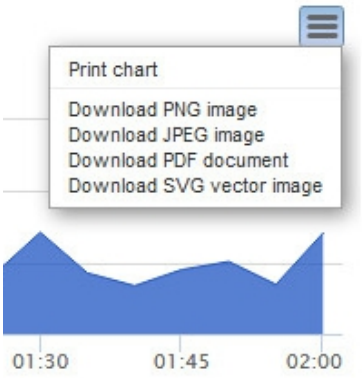
You can see that with these examples the overall trend on each graph is very similar.

You can change the time period of the bandwidth graph by making a selection from the drop down list at the top right of the graph.

You can also zoom in on a specific time period by dragging the mouse cursor over the time period that you want to focus on.



A graph can be exported by clicking the icon of three horizontal lines at the top right of the graph.



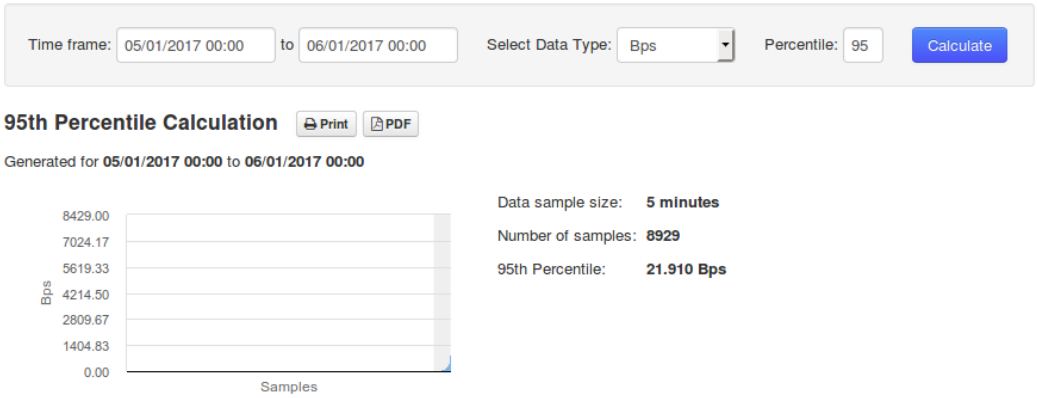
Reports and **Queries** Tabs

The Reports and Queries tabs are explained in more detail in the following documentation:

- Understanding And Using Network Analyzer Reports
- Understanding And Using Custom Queries In Network Analyzer

Percentile Calculator Tab

The Percentile Calculator is used to calculate the bandwidth usage based on the flow data collected. Please refer to the "How is this calculated" link on the screen for a detailed explanation. Here is an example for a month time period.



Views

You will also notice that there are selections for **Views** on the screens you have been navigating. Views are used to define specific data retention settings which are different to the source they are applied to. More detailed information on this topic is located in the Understanding And Using Views In Network Analyzer documentation.

Finishing Up

This completes the documentation on Sources and Source Groups in Nagios Network Analyzer.

If you have additional questions or other support related questions, please visit us at our Nagios Support Forums:

https://support.nagios.com/forum

The Nagios Support Knowledgebase is also a great support resource:

https://support.nagios.com/kb