

How to add a PacketShaper to NetQoS Reporter Analyzer

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This document outlines the steps necessary to have a PacketShaper sending Netflow-5 Data into Reporter Analyzer from NetQoS.

First, you have to have a Reporter Analyzer being set up in your environment. If Reporter Analyzer hasn't received any Flows yet, there will be no interface seen at Interfaces tab.

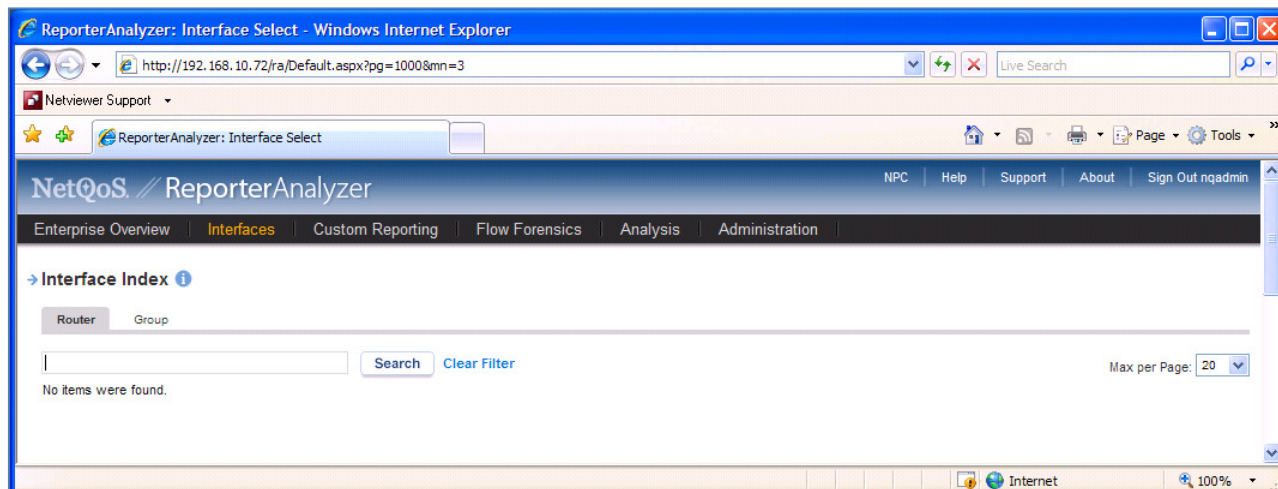
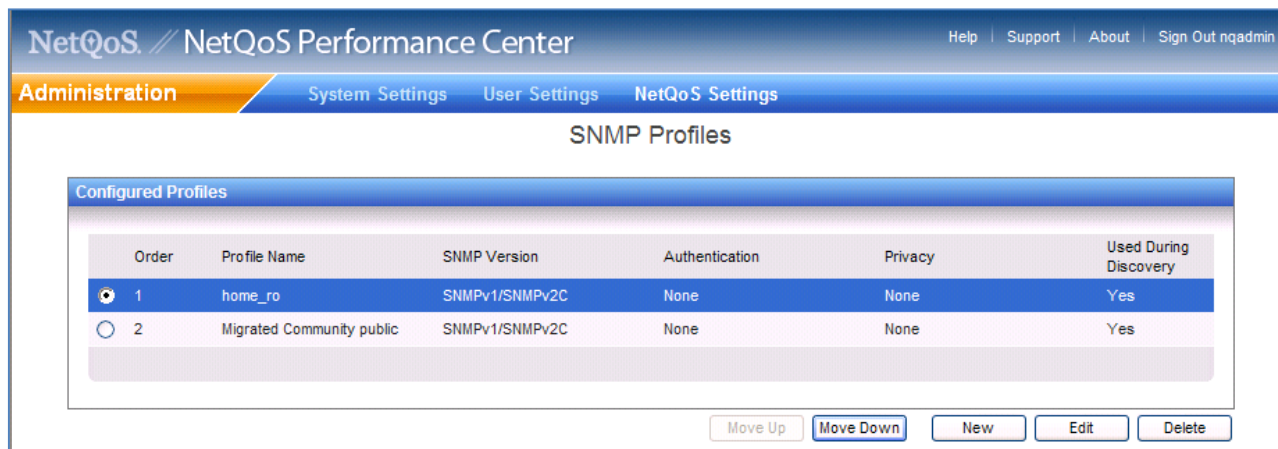


Figure 1 - No Interface reported

Next, you should have SNMP Profiles configured, where SNMP from a PacketShaper has been added correctly. This will be done through NPC Administration Tab - SNMP Profiles. This will make sure, you get correct ifIndex, Interface Description, Aliases and Speed Values.



DISCLAIMER

This Technical Tip or TechNote is provided as information only. I cannot make any guarantee, either explicit or implied, as to its accuracy to specific system installations / configurations. Readers should consult each Vendor for further information or support.

Although I believe the information provided in this document to be accurate at the time of writing, I reserve the right to modify, update, retract or otherwise change the information contained within for any reason and without notice. This technote has been created after studying the material and / or practical evaluation by myself. All liability for use of the information presented here remains with the user.

Make sure PacketShaper SNMP Settings does match with the value, you just had configured on the NetQoS Performance Center.

The screenshot shows the 'SNMPv1/v2c Configuration' page in the BlueCoat PacketShaper interface. The page title is 'BlueCoat PacketShaper' and the unit is 'home-shaper'. The 'Setup' tab is selected. The configuration includes:

- Look Community String: home_ro
- Touch Community String: schreiben
- SNMP Trap Destination(s): 192.168.10.72 (Up to eight dotted decimal addresses)

Buttons for 'apply changes ...' and 'reset form' are visible.

Next, you will have to configure the PacketShaper to deliver Netflow-5 Data to the reporter Analyzer.

The screenshot shows the 'NetFlow-5 Setup' page in the BlueCoat PacketShaper interface. The page title is 'BlueCoat PacketShaper' and the unit is 'home-shaper'. The 'Setup' tab is selected. The configuration includes:

- Choose Setup Page: flow detail records
- flow detail record settings
- Collector 1: 192.168.10.72, 9995, NetFlow-5, on
- Collector 2: (empty), (empty), (empty), off
- Collector 3: (empty), (empty), (empty), off
- Collector 4: (empty), (empty), (empty), off
- default: 9800
- NetFlow-5 only attributes: Engine Type 0, Engine ID 0

Buttons for 'apply changes ...' and 'reset form' are visible.

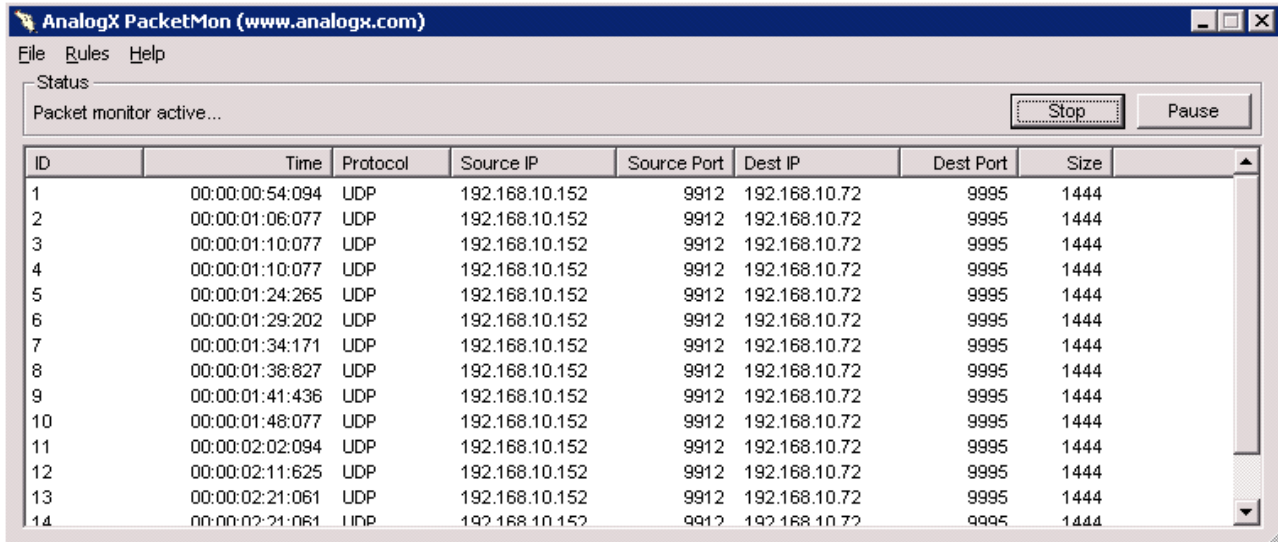
Engine Type and Engine ID is the equivalent of the Source ID field, which is a 32-bit value and is used to guarantee uniqueness for all flows exported from a particular device. The format of this field is Vendor specific. In Cisco's implementation, the first two bytes are reserved for future expansion, and will always be zero. Byte 3 provides the uniqueness with respect to the routing engine on the exporting device. Byte 4 provides uniqueness with respect to the particular line card or Versatile Interface Processor on the exporting device.

If you use more than one PacketShaper, you may want to use those attributes in a unique fashion to associate incoming NetFlow export packets with a unique instance of NetFlow on a particular device.

Once you have NetFlow activated on the PacketShaper, go grab a coffee and be patient for 45 minutes

If you want to add manually a Router / PacketShaper to the Flow Manager before receiving Flows, you can use Flow Manager Utility. Normally, Routers will be added automatically, once Reporter Analyzer get Flows.

I like the Tool “PacketMonitor” – It’s a Freeware and can be downloaded from www.analogx.com

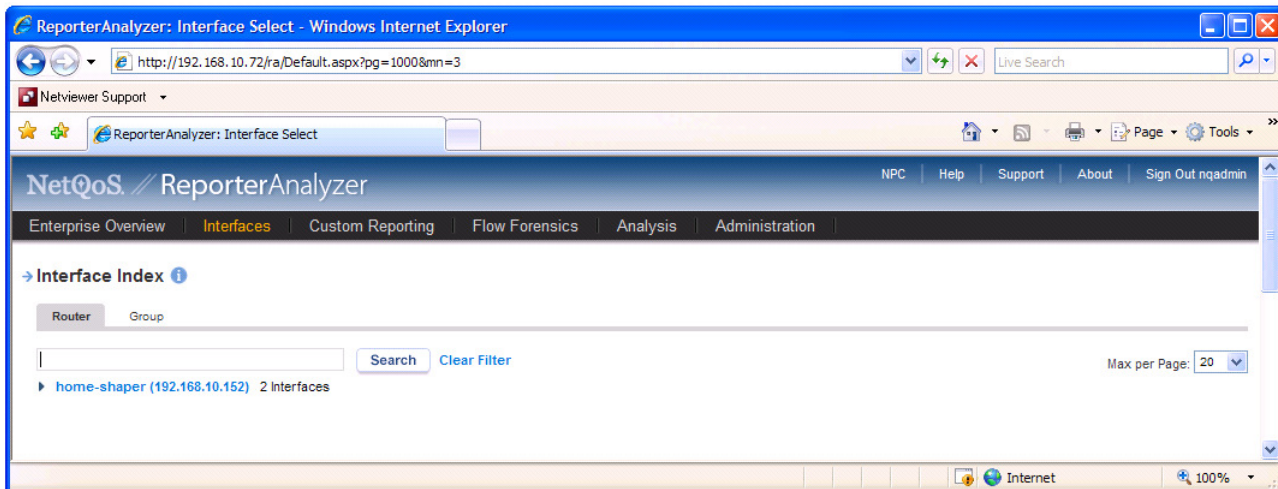


The screenshot shows the AnalogX PacketMon application window. The title bar reads "AnalogX PacketMon (www.analogx.com)". The status bar indicates "Packet monitor active...". Below the status bar is a table with the following columns: ID, Time, Protocol, Source IP, Source Port, Dest IP, Dest Port, and Size. The table contains 14 rows of data, all showing UDP traffic from source IP 192.168.10.152 to destination IP 192.168.10.72, with destination port 9995 and a size of 1444 bytes.

ID	Time	Protocol	Source IP	Source Port	Dest IP	Dest Port	Size
1	00:00:00:54:094	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
2	00:00:01:06:077	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
3	00:00:01:10:077	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
4	00:00:01:10:077	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
5	00:00:01:24:265	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
6	00:00:01:29:202	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
7	00:00:01:34:171	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
8	00:00:01:38:827	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
9	00:00:01:41:436	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
10	00:00:01:48:077	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
11	00:00:02:02:094	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
12	00:00:02:11:625	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
13	00:00:02:21:061	UDP	192.168.10.152	9912	192.168.10.72	9995	1444
14	00:00:02:21:061	UDP	192.168.10.152	9912	192.168.10.72	9995	1444

This tool does a graphical display of incoming Packets on a certain IP Address on the local Reporter Analyzer. Just configure a filter and have all Packets displayed, which are destined for 9995. This is the default NetFlow Port for Reporter Analyzer.

As I said, the PacketShaper will be added automatically to the Interfaces.



Next, you should Test SNMP Profile.

The screenshot shows the NetQoS Flow Manager interface. The left sidebar contains navigation links for Flow Manager (Settings, Authentication, Interfaces), Flow Harvester (Administration, Routers, Ports), and About. The main content area is titled "Flow Manager Router Configuration" and "Router Communication Parameters". It displays the router IP as 192.168.10.152, last poll and discovery times as 2010-02-02 10:19:41, and configuration details: SNMP Profile (home_ro), Test Profile, Rediscover Profile, SNMP Version (2), and SNMP Port (161). A footer note states: "Looking for templates? Templates are now administered from the ReporterAnalyzer Master Console".

Click on Test Profile

This screenshot shows the same NetQoS Flow Manager interface, but with a green success message: "Router successfully contacted with configured profile!". The configuration details for the router at 192.168.10.152 are updated to include: Name (home-shaper), Description (Blue Coat PacketShaper 8.5.1), Uptime (0 days 0 hours 34 minutes), and Interface Count (4). The Test Profile link is now highlighted in blue.



Click on Interfaces and have only the required Interfaces selected.

The screenshot shows the 'Router Interfaces' configuration page in NetQoS Flow Manager. A router is selected with IP 192.168.10.152. The system name is 'home-shaper'. Below this, a table lists four interfaces with checkboxes to enable them for the reporter.

Enabled (for Reporter only)	ifIndex	Description	Alias	Speed In	Speed Out
<input type="checkbox"/>	1	Inside		100.00 Mbps	100.00 Mbps
<input checked="" type="checkbox"/>	2	Outside		100.00 Mbps	100.00 Mbps
<input type="checkbox"/>	3	Empty		0 bps	0 bps
<input type="checkbox"/>	4	Management		10.00 Mbps	10.00 Mbps

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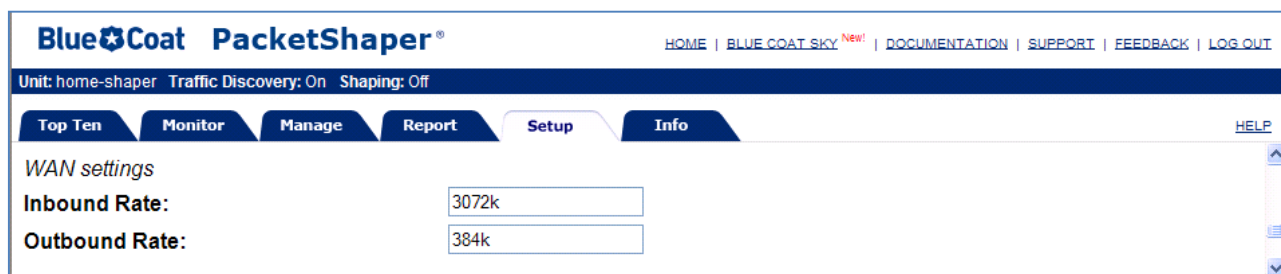
So, you may have already data received from other interfaces. To remove that Interface, highlight and click on Delete

The screenshot shows the 'ReporterAnalyzer Administration Tool' interface. A table displays two interfaces. The 'Delete' button is circled in red.

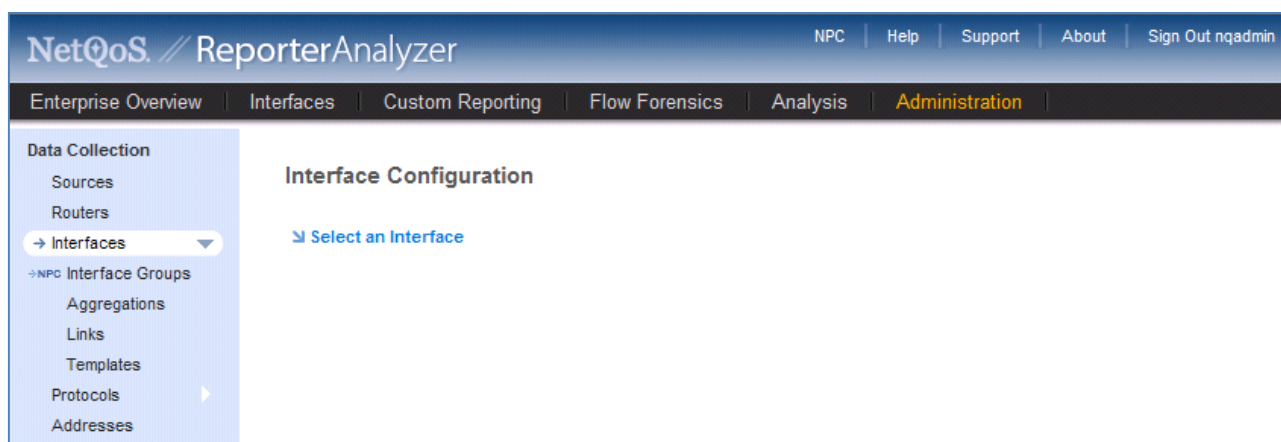
Showing all 2 interfaces					
	Data Source	Router Name	Name	Description	Last Update
<input type="checkbox"/>	fm	home-shaper	Inside		2010-02-02 10:45:00 CET
<input type="checkbox"/>	fm	home-shaper	Outside		2010-02-02 10:45:00 CET

Only show interfaces where Data Source contains

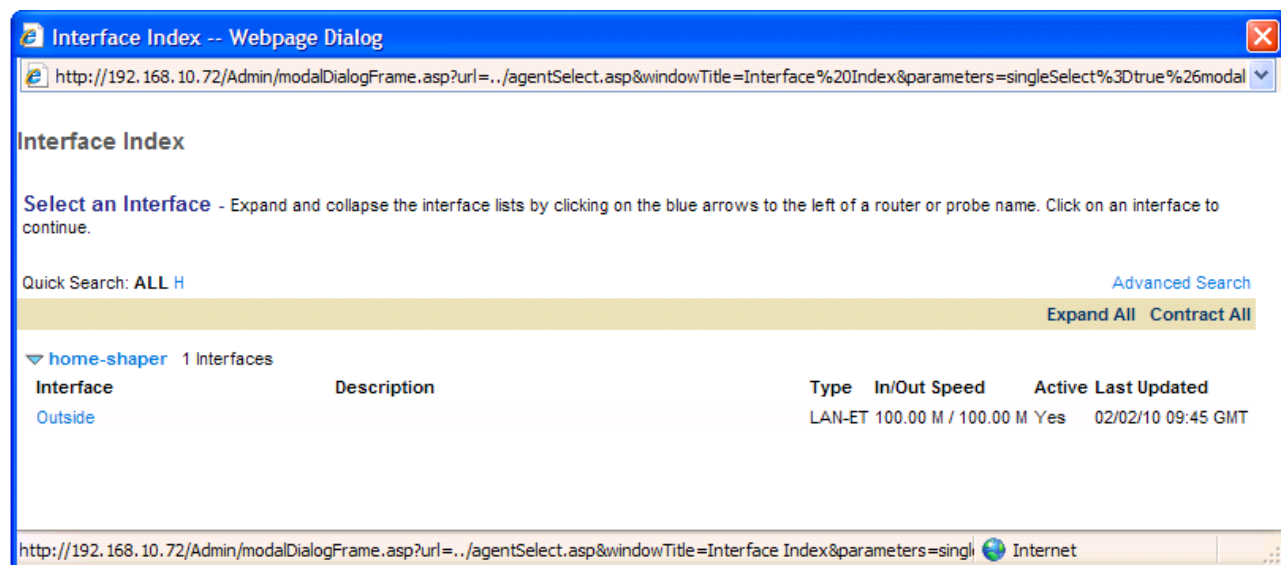
Next, verify Interface Speeds. My PacketShaper is connected to the T-DSL with 3072K downstream and 384k upstream, so I change those values.



From the ReporterAnalyzer Page, click on Administration and Interfaces and "Select an Interface"



Click on the Interface you have chosen (in my case Outside) and you will get into the Edit Option



Interface Configuration

[Select an Interface](#)

[Edit Interface](#)

Name: home-shaper::Outside
Description:
Type: LAN-ET
Speed: 100.00 Mbps / 100.00 Mbps / 100.00 Mbps
Status: Active - Last updated on 2/2/2010 9:45:00 AM GMT

Click on Edit

Interface Configuration

Edit an Interface

Interface Name:
Description:
Interface Speed:
In Speed:
Out Speed:
Type:
Status: Active - Last updated on 2/2/2010 10:00:00 AM GMT

Make your Changes and Submit

Interface Configuration

[Select an Interface](#)

[Edit Interface](#)

Name: home-shaper::Outside
Description: PacketShaper connected to DSL-Router
Type: LAN-ET
Speed: 3.07 Mbps / 384.00 Kbps / 100.00 Mbps
Status: Active - Last updated on 2/2/2010 10:00:00 AM GMT

home-shaper::Outside - PacketShaper connected to DSL-Router [\[change\]](#)



1. For this interface, show me:

Overview

Presentation

◀ 1 Feb 2010 20:28:00 - 2 Feb 2010 20:28:00 CET ▶

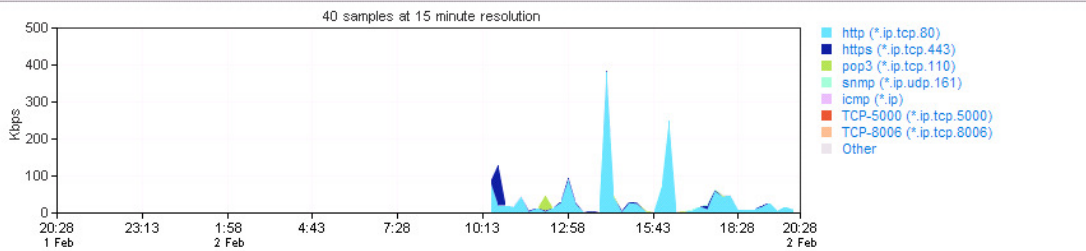
➤ Flow Forensics

▾ Stacked Protocol Trend - In

1 Feb 2010 20:28:00 - 2 Feb 2010 20:28:00 CET

home-shaper::Outside - PacketShaper connected to DSL-Router

3.07 Mbps

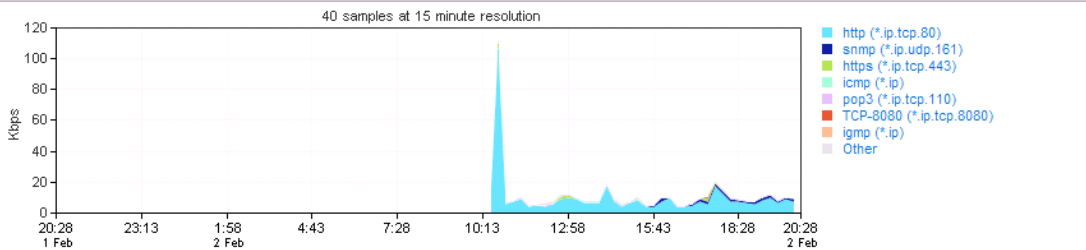


▾ Stacked Protocol Trend - Out

1 Feb 2010 20:28:00 - 2 Feb 2010 20:28:00 CET

home-shaper::Outside - PacketShaper connected to DSL-Router

384.00 Kbps



▾ Host Summary - Volume - From

1 Feb 2010 20:29:00 - 2 Feb 2010 20:29:00 CET

home-shaper::Outside - PacketShaper connected to DSL-Router

3.07 Mbps



192.168.16.102	35.10 MBytes	15.37 %
174.125.206.165	27.75 MBytes	12.15 %
80.80.1.102 (192.168.16.224)	24.57 MBytes	10.76 %
174.125.206.164	20.06 MBytes	8.78 %
1.198.168.1 (192.168.16.22)	16.23 MBytes	7.11 %
80.1.1.224	12.16 MBytes	5.32 %
174.125.166.20	8.85 MBytes	3.87 %
174.125.166.20	7.51 MBytes	3.29 %

