# opCharts User Guide

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## Introduction

Opmantek's opCharts module is an industry leading custom dashboard tool designed specifically to enable users to generate targeted, custom single-pane of glass views into the network's performance - both current and over time. Drawing data from NMIS as well as 3rd party SQL databases, opCharts puts the power into the user's hands to build dynamic interfaces by combining Components into single or multilayer visual landscapes called Dashboards.

By abstracting data into Key Performance Metrics, and combining and sorting devices into dynamic groups through user-defined metadata, opCharts can easily support high-level abstracted user views at the 50,000 ft level while still allowing quick drill-down into detailed performance metrics for fast problem resolution.

Executive or technician - opCharts gives each user the power to easily organize and view their network's performance the way they want to see it.

### **Overview**

opCharts supports five primary views: Nodes, Interfaces, Monitored Services, Dashboards, and TopN.

### **Nodes View**

To open the Nodes View, select Views -> Nodes from the opCharts menu bar. By default, this displays a list of all nodes in your environment, but you can also select Panel View to abstract each nodes performance information into easy-to-understand panels. These panels include such information as the node name, node status, vendor, and key performance information regarding each node.

\*Note\* The Nodes view is the default view for opCharts unless a default Dashboard has been assigned to the user account.

🚣 opCharts 3.2.3 Views - Reports - Events -	Config -									System - M	odules - Hel	p - 🥝 EN - User:
Home Nodes			the View in map						Switc	h to Panel View	ilter Period -	8
Q Node Search	2	Nodes										Panel View
Enter the Node Name, Host Name or Group Name	View	Name -	Host	Links	Node Status	Group	Node Type	Role	Vendor	Location	Health	Last Update
		asgard	asgard.opmantek.com	<b>U</b> %	reachable	Open-AudIT	router	core	Cisco Systems	default	99.595	2017-11-14T06:15:09
Node Filter	2	bne-router1	bne-router1	U	reachable	Brisbane	router	distribution	Cisco Systems	default	99.813	2017-11-14T06:15:09
Current Filters	53	bne-server1	bne-server1	0%	reachable	Brisbane	server	access	net-snmp	On Eris	91.381	2017-11-14T06:15:09
Select a Filter		bne-switch1	bne-switch1	U	reachable	Brisbane	switch	access	Cisco Systems	gc.dc	99.931	2017-11-14T06:15:09
Node Status	1	bnelab-ce1	10.248.0.11	U	degraded	Branches	router	access	Cisco Systems	default	91.722	2017-11-14T06:15:09
degraded		bnelab-ce2	10.248.0.12	U	degraded	Branches	router	access	Cisco Systems	default	91.878	2017-11-14T06:15:09
unreachable	6	bnelab-ce3	10.248.0.13	U	degraded	Branches	router	access	Cisco Systems	default	92.288	2017-11-14T06:15:09
Sustamer		bnelab-ce4	10.248.0.14	U	degraded	Branches	router	access	Cisco Systems	default	91.796	2017-11-14T06:15:09
Location		bnelab-p1	10.248.0.3	U	reachable	Branches	router	access	Cisco Systems	default	93.805	2017-11-14T06:15:09
Business Service	1	bnelab-p2	10.248.0.4	U	reachable	Branches	router	access	Cisco Systems	default	93.753	2017-11-14T06:15:09
Group	:	bnelab-p3	10.248.0.5	U	reachable	Branches	router	access	Cisco Systems	default	93.457	2017-11-14T06:15:10
Node Role	:	bnelab-p4	10.248.0.6	U	reachable	Branches	router	access	Cisco Systems	default	93.754	2017-11-14T06:15:10
Node Type	1	bnelab-pe1	10.248.0.7	U	reachable	Branches	router	access	Cisco Systems	default	92.214	2017-11-14T06:15:10
Node Vendor	1	bnelab-pe2	10.248.0.8	U	reachable	Branches	router	access	Cisco Systems	default	92.764	2017-11-14T06:15:11
		bnelab-pe3	10.248.0.9	U	reachable	Branches	router	access	Cisco Systems	default	92.214	2017-11-14T06:15:12
		bnelab-pe4	10.248.0.10	U	reachable	Branches	router	access	Cisco Systems	default	93.024	2017-11-14T06:15:12
		bnelab-rr1	10.248.0.1	U	reachable	Branches	router	access	Cisco Systems	default	93.868	2017-11-14T06:15:12
		bnelab-rr2	10.248.0.2	U	reachable	Branches	router	access	Cisco Systems	default	93.743	2017-11-14T06:15:12
		char-router1	char-router1	U	reachable	Charlotte	router	distribution	Cisco Systems	default	99.812	2017-11-14T06:15:15
		char-server1	mani.opmantek.com	U	degraded	Charlotte	server	access	Microsoft	Opmantek GC data center	88.998	2017-11-14T06:15:15
		char-switch1	char-switch1	U	reachable	Charlotte	switch	access	Cisco Systems	gc.dc	99.931	2017-11-14T06:15:18
		claro_10	192.168.88.44	U	reachable	grupo_10	server	core	net-snmp	On Sif	100.000	2017-11-14T06:15:18
		claro_5	192.168.88.44	U	degraded	Grupo_5	server	access	net-snmp	On Sif	91.638	2017-11-14T06:15:18

#### **Panel view**

In this view each node is represented by a panel versus a line in a table. Each panel provides important information for the represented node. Some of this information is conveyed via dials. There are two options to chose from in regard to how data is displayed in the 'node panel dials'. Please refer to the administration guide in order to switch between the two panel dial options.

#### Node Panel Dial Display Options:

- KPI based
- Resource based

#### KPI based

In this mode the dials represent the health of the KPI being measured, higher ratings are more desirable. In the example below with the CPU at 4.3% utilization the KPI score is 95.7%; a desirable condition. If a KPI value is below the desired standard the dial will turn red.



#### **Resource based**

In this mode the dial represents the amount of resource consumption. In the example below the CPU utilization for asgard is at 6%; a desirable and the dial is green. The memory usage of bne-server1 is at 94.1%; an undesirable condition and the dial is red.



### **Interfaces View**

To open the Interfaces View, select Views -> Interfaces from the opCharts menu bar (Views Inventory in opCharts 4). This view provides an easy-tosearch list of all interfaces in your environment. From here, the user can drill down into the details of individual nodes and interfaces.

	5							Search term	Node	÷
Node 🔺	Interface	Description	IP	Mask	Subnet	Speed	Туре	Index	AdminStatus	Colle
sgard	Tunnel99		192.168.89.1	255.255.255.0	192.168.89.0	9000	tunnel	9	down	false
sgard I	FastEthernet0/1	WAN/DSL	120.29.0.101	255.255.255.248	120.29.0.96	10000000	ethernetCsmacd	2	up	true
sgard	Tunnel42	Connection to other locations	192.168.90.18	255.255.255.252	192.168.90.16	9000	tunnel	8	up	true
sgard I	FastEthernet0/0	Opmantek LAN	192.168.88.254	255.255.255.0	192.168.88.0	10000000	ethernetCsmacd	1	up	true
sgard I	Null0					1000000000	other	4	up	false
sgard	Tunnel100	Connection to Oxford Lab	192.168.90.22	255.255.255.252	192.168.90.20	9000	tunnel	10	up	true
sgard	Tunnel0	Hurricane Electric IPv6 Tunnel Broker				9000	tunnel	7	up	true
sgard	Serial0/0/0					1544000	propPointToPointSerial	3	down	false
sgard I	Dialer1194					56000	propPointToPointSerial	11	down	false
sgard I	Loopback0	Peering LoopBack	192.168.90.2	255.255.255.255	192.168.90.2	800000000	softwareLoopback	6	up	false
ne-router1	FastEthernet0/1	OnTheNet WAN Link	121.50.209.30	255.255.255.252	121.50.209.28	10000000	ethernetCsmacd	2	up	true
ne-router1 I	Dialer1					56000	propPointToPointSerial	7	down	false
ne-router1	Serial0/0/0					1544000	propPointToPointSerial	3	down	false
ne-router1	FastEthernet0/0	DMZ towards office LAN	120.29.0.102	255.255.255.248	120.29.0.96	10000000	ethernetCsmacd	1	up	true
ne-router1	Null0					1000000000	other	4	up	false
ne-router1 I	Loopback0	CNOC: Local routing peer	192.168.90.1	255.255.255.255	192.168.90.1	800000000	softwareLoopback	6	up	true
ne-server1 I	lo		127.0.0.1	255.0.0.0	127.0.0.0	10000000	softwareLoopback	1	up	false
ne-server1	eth0		192.168.88.8	255.255.255.0	192.168.88.0	100000000	ethernetCsmacd	2	up	true
ne-switch1	GigabitEthernet1/0/7					1000000	ethernetCsmacd	10107	up	false
ne-switch1	GigabitEthernet1/0/20	OMK DMZ Subnet				10000000	ethernetCsmacd	10120	up	true
ne-switch1	GigabitEthernet1/0/15					1000000	ethernetCsmacd	10115	up	false
ne-switch1	GigabitEthernet1/0/8					1000000	ethernetCsmacd	10108	up	false
na avvitabil d	GigabitEthernet1/0/2	magni remote access card				10000000	ethernetCsmacd	10102	up	true
ne-switch1	CirchitEthermett /0/00	uplink router asgard				10000000	ethernetCsmacd	10123	up	true
ne-switch1	GigabitEthemet1/0/23									

### **Monitored Services View**

To open the Monitored Services View, select Views -> Monitored Services from the opCharts menu bar. Services can be filtered by groups such as node status and group and as of opCharts 3.2.2 you can do a search of the monitored services list.

ome / Monitored Services									Filt	er Period 🕶 🎗	
Q Node Filter	2	0			47			0	-		0
Select by Properties		17			I Z	Qj		U	Ψ,J		Down
Node Status		$\sim$			<b>U</b>	U		-og. adou	U		
degraded	23										
reachable	23								Search te	erm Servi	ce Name 👻 Go
unreachable	1	Service Name	Node Name	Status			Description			Response Time	Last Run
Node Role		flowd	demo	running						0.00	2018-01-05T23:54
Node Type		fping monitor	demo	running						0.00	2018-01-05T23:54
Node Vendor		google	demo	running	Loads google.com and repor	ts availability and latency	for page load			0.520894	2018-01-05T23:53
		http	demo	running						0.00	2018-01-05T23:53
		http	hel	running						0.00	2018-01-05T23:54
		http_server	demo	running						0.00	2018-01-05T23:54
		mongod	demo	running						0.00	2018-01-05T23:54
		ms-sqlserver	mani	running	Monitors the local sql-server cycle.	service to ensure it is up	and running. As this is snmp-base	l it can be check	ked only once each collect	0.00	2018-01-05T23:55
		mysqld_daemon	demo	running						0.00	2018-01-05T23:54
		omk check	demo	running	Loads the <server>/en/omk/</server>	test page and checks sta	tus of system databases			0.189588	2018-01-05T23:5
		opconfig	demo	running						0.00	2018-01-05T23:54
		opevents	demo	running						0.00	2018-01-05T23:54
		port22	eris	running						0.13	2018-01-05T23:5
		port80	eris	running						0.10	2018-01-05T23:5
		snmp_daemon	bne-server1	running						0.00	2018-01-05T23:54
		Showing 1 to 15 of 1	7 entries			4	< 1 2 > »				Show 15

### **Dashboards View**

To list all available Dashboards, select Views -> Dashboards from the opCharts menu bar. From there, the user can select to create a New Dashboard, and View/Edit/Delete an existing Dashboard.



### **TopN View**

The open the TopN View, select Views -> TopN from the opCharts menu bar. The TopN view is actually a collection, or predefined dashboard, comprised of six opCharts Components. Any of these TopN charts can each be added to a new or existing Dashboard (see: Dashboards for more information) to create custom views. The small graphs for each TopN are called "sparklines", they give you an impression of the full graph which you can see by clicking on the TopN.

<b>6 9</b>	OCharts 2.4.5	Modules - Views -												Help -	
Home /	TopN														Auto Refresh
TopN	CPU Load		0	Top	N In Util				0	TopN	In Error I	Rates			0
	1h	Node	Last		1h	Node	Last	Element	_		1h	Node	Last	Element	-
1	m	thor	10.14	1	Am	testing1	2.76%	lo	_						
2	-	testing1	8.66	2	~	meatball	1.55%	Dialer1							
3	~~~~^^	demo	8.40	3	m	meatball	1.13%	ATM0.1-aal5 layer							
4	m	testing66	8.40	4	An	thor	0.72%	lo							
5		meatball	8.00%	5	~	asgard	0.22%	Tunnel42							
6		asgard	4.00%	6	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	gc-router1	0.22%	Tunnel42							
7		gc-router1	4.00%	7	~	asgard	0.18%	FastEthernet0/1							
8	m	odem	2.25	8		meatball	0.10%	Tunnel42							
9	-v-	bne-router1	1.00%	9		OxfordDSL	0.07%	br0	_						
10	-v-	char-router1	1.00%	10		OxfordDSL	0.07%	eth0.3	_						
11		mel-router1	1.00%	11	An	bne-switch1	0.03%	GigabitEtherne							
12		mex-router1	1.00%	12	m	char-switch1	0.03%	GigabitEtherne	_						
13		oor	1.00%	13	A	gc-router1	0.03%	FastEthernet0/1	_						
				14	m	gc-switch1	0.03%	GigabitEtherne							
				15	m	mel-switch1	0.03%	GigabitEtherne	_						
TopN	Memory Used		0	Тор	N Out Util				0	TopN	Out Disc	ard Rates			0
TopN #	Memory Used	Node	C	Top #	N Out Util	Node	Last	Element	0	TopN #	Out Disc	ard Rates	Last	Element	0
TopN # 1	Memory Used 1h	Node asgard	Last 46.80%	Тор # 1	N Out Util 1h λ	Node testing1	Last 2.76%	Element	0	TopN #	Out Disc 1h	ard Rates Node	Last	Element	0
TopN # 1 2	Memory Used 1h 	Node asgard go-router1	C Last 46.80% 46.80%	<b>Top</b> # 1 2	N Out Util	Node testing1 asgard	Last 2.76% 1.11%	Element Io Tunnel42	0	TopN #	Out Disc 1h	ard Rates Node	Lest	Element	0
TopN # 1 2 3	Memory Used 1h 	Node asgard gc-router1 bne-router1	C Last 46.80% 46.80% 42.20%	Top # 1 2 3	N Out Util	Node testing1 asgard gc-router1	Last 2.76% 1.11%	Element lo Tunnel42 Tunnel42	0	TopN #	Out Disc 1h	Node	Last	Element	0
TopN # 1 2 3 4	Memory Used 1h 	Node asgard gc-router1 bne-router1 char-router1	Last 46.80% 46.80% 42.20% 42.20%	Top # 1 2 3 4	N Out Util 1h 	Node testing1 asgard gc-router1 meatball	Last 2.76% 1.11% 1.11% 0.75%	Element lo Tunnel42 Tunnel42 ATM0.1-aal5 layer	0	TopN #	Out Disc 1h	Node	Last	Element	0
TopN # 1 2 3 4 5	Memory Used 1h 	Node asgard go-router1 bne-router1 char-router1 mei-router1	Lest     46.80%     46.80%     42.20%     42.20%     42.20%	Top # 1 2 3 4 5	Ih A A A A A A	Node testing1 asgard gc-router1 meatball thor	Last 2.76% 1.11% 1.11% 0.75% 0.72%	Element lo Tunnel42 Tunnel42 ATM0.1-aal5 layer lo	0	TopN #	Out Disc 1h	Node	Last	Element	0
TopN # 1 2 3 4 5 6	Memory Used	Node asgard go-router1 bne-router1 mel-router1 mel-router1	Lest 46.80% 46.80% 42.20% 42.20% 42.20% 42.20%	Top # 1 2 3 4 5 6	Ih In In In In In In In In In In	Node testing1 asgard go-router1 meatball thor asgard	Last 2.76% 1.11% 1.11% 0.75% 0.72% 0.15%	Element lo Tunnel42 Tunnel42 ATM0.1-aal5 layer lo FastEthernet0/1	0	TopN #	Out Disc 1h	Node	Last	Element	0
TopN # 1 2 3 4 5 6 7	Memory Used 1h 	Node asgard go-router1 bne-outer1 char-router1 mei-outer1 mex-router1 oor	Last 46.80% 46.80% 42.20% 42.20% 42.20% 42.20% 42.20% 42.20%	Top # 1 2 3 4 5 6 7	N Out Util 1h 	Node testing1 asgard gc-router1 meatball thor asgard OxfordDSL	Last 2.76% 1.11% 0.75% 0.72% 0.15% 0.11%	Element lo Tunnel42 Tunnel42 ATM0,1-aal5 layer lo FastEthernetD/1 bo	0	TopN #	Out Disc 1h	Node	Lest	Element	0
TopN # 1 2 3 4 5 6 7 8	Memory Used 1h 	Node asgard gc-router1 bne-router1 char-router1 mei-router1 mex-router1 oor mestball	■ Lest 46.80% 46.80% 42.20% 42.20% 42.20% 42.20% 42.20% 9.96%	Top # 1 2 3 4 5 6 7 8	N Out Util 1h A A A A A	Node testing1 asgard gc-router1 meatball thor asgard OxfordDSL OxfordDSL	Last 2.76% 1.11% 0.75% 0.72% 0.15% 0.11% 0.11%	Element lo Tunnel42 Tunnel42 ATM0.1-aal5 layer lo FastEthernet0/1 br0 db 3	0	TopN #	Out Disc 1h	node	Lest	Element	0
TopN # 1 2 3 4 5 6 7 8	Memory Used 1h A C C C C C C C C C C C C C	Node asgard go-touter1 bne-router1 char-router1 met-router1 mex-router1 oor meatball	<ul> <li>Lest</li> <li>46.80%</li> <li>46.80%</li> <li>42.20%</li> <li>42.20%</li> <li>42.20%</li> <li>42.20%</li> <li>42.20%</li> <li>39.66%</li> </ul>	Top # 1 2 3 4 5 6 7 8 9	Ih Ih Ih Ih Ih Ih Ih Ih Ih Ih	Node testing 1 asgard gc-router1 meaball thor asgard OxfordDSL OxfordDSL meaball	Last 2.76% 1.11% 1.11% 0.75% 0.75% 0.15% 0.15% 0.11% 0.11% 0.11%	Element lo Turnel42 Turnel42 ATMo.1-aa5 layer lo FastEthernet0/1 b/0 eth0.3 Dialer1	0	TopN #	Out Disc 1h	Node	Last	Element	0
TopN # 1 2 3 4 5 6 7 8	Memory Used 1h A C C C C C C C C C C C C C	Node asgard go-router1 bne-outer1 char-outer1 mei-outer1 mex-outer1 oor meetball	Last           46.80%           46.80%           42.20%           42.20%           42.20%           42.20%           42.20%           39.66%	Top # 1 2 3 4 5 6 7 8 9 10	N Out Util 1h 	Node testing 1 asgard gc-router1 mestball thor asgard OxfordDSL OxfordDSL mestball midgard	Last 2.76% 1.11% 0.75% 0.75% 0.15% 0.15% 0.11% 0.11% 0.10% 0.08%	Element lo Tunnel42 Tunnel42 ATM0.1-aal5 layer lo FastEthernet01 br0 eth0.3 Dialer1 GigablEtherne	0	TopN #	Out Disc 1h	Node	Lest	Element	0
TopN # 1 2 3 4 5 6 7 8	Memory Used 1h A A A A A A A A A A A A A	Node asgard go-router1 bne-router1 char-router1 met-router1 or meatball	Last           46.80%         46.80%         42.20%         42.20%         42.20%         42.20%         42.20%         42.20%         30.86%	Top # 1 2 3 4 5 6 7 8 9 10 11	N Out Util 1h 	Node testing1 asgard ge-outer1 meaball thor asgard OxfordDSL OxfordDSL OxfordDSL meaball midgard asgard	Last 2.76% 1.11% 0.75% 0.75% 0.15% 0.11% 0.11% 0.11% 0.11% 0.10% 0.08% 0.03%	Element lo Tunnel42 Tunnel42 ATM0.1-ad5 layer lo FastEthernet0/1 br0 eth0.3 Dialert1 GigabtEhreno FastEthernet00	0	TopN #	Out Disc 1h	ard Rates Node	Last	Element	0
TopN # 1 2 3 4 5 6 7 8	Memory Used 1h A A A A A A A A A A A A A	Node asgard go-router1 bne-router1 char-router1 met-router1 mex-router1 cor mestball	■ Lest 46.80% 46.80% 42.20% 42.20% 42.20% 42.20% 42.20% 42.20% 39.66%	Top # 1 2 3 4 5 6 7 8 9 10 11 12	N Out Util Ih 	Node testing1 asgard gc-router1 mestball thor asgard OxfordDSL OxfordDSL OxfordDSL mestball midgard asgard gc-router1	Last 2.78% 1.11% 0.75% 0.72% 0.15% 0.11% 0.11% 0.10% 0.08% 0.03%	Element b Tunnel42 Tunnel42 ATM0.1-aals layer lo FaasEthermot01 b0 b1 b1 b1 b1 b1 b1 b1 b1 b1 b1	0	TopN #	Out Disc 1h	Node	Lest	Element	0
TopN # 1 2 3 4 5 6 7 8	Memory Used 1h 	Node asgard go-router1 bne-router1 char-router1 met-router1 oor meatball	Last           46.80%           46.90%           42.20%           42.20%           42.20%           42.20%           42.20%           39.66%	Top # 1 2 3 4 5 6 7 8 9 100 111 12 13	N Out Util 1h 	Node testing1 asgard ge-outer1 meaball thor asgard OxfordOSL OxfordOSL OxfordOSL OxfordOSL MicrofosL micigard asgard ge-outer1 be-ewtch1	Last 2.76% 1.11% 0.75% 0.72% 0.15% 0.15% 0.11% 0.10% 0.00% 0.00% 0.03%	Element Io Tunnel42 Tunnel42 ATV0.1-aa5 layer Io FastEthernet01 Dialer1 GigabitEtherne FastEthernet00 GigabitEtherne FastEthernet00 GigabitEtherne	0	TopN #	Out Disc 1h	Node	Last	Element	0
TopN # 1 2 3 4 5 6 7 8	Memory Used 1h	Node asgard go-router1 bne-router1 char-router1 mei-router1 mei-router1 or meatball	Last           46.80%           42.20%           42.20%           42.20%           42.20%           42.20%           39.68%	Top # 1 2 3 4 5 6 7 7 8 9 10 11 11 12 13 14	N Out Util In 	Node testing1 asgard gr-outer1 mesbaal thor asgard OxfordDSL OxfordDSL OxfordDSL midgard asgard gr-outer1 bne-witch1 cha-witch1	Last 2.76% 1.11% 1.11% 0.75% 0.75% 0.75% 0.11% 0.11% 0.11% 0.11% 0.11% 0.08% 0.08% 0.03% 0.02%	Element Io Tunnel42 Tunnel42 ATM0.1-ad5 layer Io FastEthernet01 DialehtEtherne FastEthernet00 FastEthernet00 FastEthernet00 GigabiEtherne GigabiEtherne	0	TopN ≇	Out Disc 1h	Node	Last	Element	0
TopN # 1 2 3 4 5 6 7 8	Memory Used Ih A A A A A A A A A A A A A	Node asgard gc-router1 bne-router1 char-router1 mei-router1 cor meetball	■ Lest 46.80% 46.80% 42.20% 42.20% 42.20% 42.20% 42.20% 42.20% 39.69%	Top # 1 2 3 4 5 6 7 8 8 9 100 111 122 133 14	N Out Util 1h 	Node testing1 asgard g-router1 mesball thor asgard OxfordDSL OxfordDSL OxfordDSL mesball midgard asgard g-router1 bne-switch1 char-switch1	Last 2.76% 1.11% 0.75% 0.75% 0.75% 0.11% 0.11% 0.11% 0.11% 0.08% 0.03% 0.03% 0.02%	Element b Tunnel42 Tunnel42 ATM0.1-abl layer b FastEthernet0/1 b/0 plaier1 GigabiEthernet FastEthernet00 FastEthernet01	0	TopN ₹	Out Disc 1h	Node Node	Lest	Element	O
TopN           #           1           2           3           4           5           6           7           8	Memory Used th 	Node asgard go-router1 bne-outer1 char-outer1 mol-outer1 mex-outer1 oor meatball	Last           46.80%         46.90%           42.20%         42.20%           42.20%         42.20%           42.20%         39.66%	<b>Top</b> # 1 2 3 4 5 6 7 8 9 10 11 11 12 13 14 15	N Out Util Ih 	Node testing1 asgard ge-outer1 meatball thor asgard OxfordDSL OxfordDSL OxfordDSL OxfordDSL Micigard asgard ge-outer1 bne-switch1 char-switch1	Last 2.78% 1.11% 1.11% 0.75% 0.15% 0.15% 0.15% 0.10% 0.00% 0.00% 0.02% 0.02%	Element b Tunnel42 Tunnel42 ATM0.1-aa5 layer b FastEtharnet0/1 Dialer1 GigabitEthernet0.0 GigabitEthernet0.0 GigabitEthernet0.0 GigabitEthernet0.1	0	TopN #	Out Disc 1h	ard Rates Node	Last	Element	O
TopN # 1 2 2 3 4 4 5 6 7 8	Memory Used th 	Node asgard ge-router1 bne-router1 met-router1 mex-router1 oor meatball	Last           46.80%         46.80%           42.20%         42.20%           42.20%         42.20%           42.20%         39.88%	<b>Top</b> # 1 2 3 4 5 6 7 8 9 10 11 11 12 13 14 15	N Out Util Ih 	Node testing1 asgard gerouter1 meaball thor asgard OxfordDSL OxfordDSL OxfordDSL OxfordDSL OxfordDSL asgard gerouter1 charswitch1 charswitch1 gerouter1	Last 2.76% 1.11% 0.75% 0.72% 0.15% 0.11% 0.11% 0.05% 0.03% 0.03% 0.03%	Element Io Tunnel42 Tunnel42 ATM0.1-ad5 layer Io FastEthernet01 Dialer1 GlabetEherne FastEthernet00 FastEthernet00 FastEthernet00 FastEthernet01	0	TopN #	Out Disc 1h	node Node	Last	Element	0

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