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System Monitor

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The **Real Time Charts > System Monitor** page provides a real-time, multi-functional display with information about hardware multi-core utilization, applications, bandwidth usage, packet rate, packet size, connection rate, and connection count.

() **NOTE:** A chart may be empty or blank if there are no recent data entries received within the viewing range.

There are five tabs displayed on the **System Monitor** page.

#### System Monitor



#### **Multicore**

Sys	stem Monitor	Multicore	Application Bandwidt	h Interface Us	age Connec	tion Usage					
MULTI-COR	Ublication: 0% Average: 12% Min: 1% Max. 20% Current 💌 🖻										<u>l</u>
100.0%											
50.0%											
25.0%											
0.0%	0.08	0.09	0.10 0	11 O	12 0	13 0.1-	4 0:1	15 0	16 0	17	

### Application Bandwidth



#### Application Bandwidth Current: 47.2Kbp Min: 2.7Kbs IPv4 and IPv6 🛛 💗 All inter d 🛃 ingres Ŧ 0.45 039 Current: 52.80 0 KET RATE urrent: 7ps Min: 3ps Al inter d 🛃 25.0Pps 20.0Pps 15.0Pps 30.0Pps 0Pps 0Pps 5.0Pps 10.0Pps 15.0Pps 20.0Pps 0.45 Legends ent Spe ACKET SIZE Current: 1205 Byter Min: 271 Bytes Alin -4.043 3.043 2.043 1.043 08 08 2.043 3048 040 0.44 043 042 Mir: 550 Bytes Max: 3000 Bytes Egnats 0.45 0.38 0:40 Current: 1921 Bytes now Legends

### Interface Usage

### Connection Usage



# Using the Toolbar

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The **Policy Monitor** toolbar contains features to specify the refresh rate, change the amount of data displayed, and pause or play the data flow. Changes made to the toolbar apply across all the data flows.

### PROTOCOL MONITOR TOOLBAR OPTIONS

O Refresh every: 3 sec.

Option	Widget	Description
Refresh Rate	Refresh every: 3 sec	Determines the frequency at which data is refreshed. A numerical integer between 1 to 10 seconds is required. The default is <b>3</b> seconds.
View Range	0 5 mins	O Displays data pertaining to a specific span of time. The <b>View Range</b> is configurable in 60 seconds, 2 minutes, 5 minutes, and 10 minutes. The default is <b>2</b> minutes.
Pause	(1)	Freezes the data flow. The <b>Pause</b> button appears black if the data flow has been frozen.
Play	$\odot$	Unfreezes the data flow. The time entries at the bottom of the tables will refresh as soon as the data flow is updated.
		The <b>Play</b> button appears black if the data flow is live.
Tips	Q	Mouse over a data point to see values at that instant.

## **Common Features**

**Topics:** 

- Legends
- Tooltips
- Changing Chart Format
- Selecting IPv6/IPv4
- Current, Minimum, Maximum Display

⊕ ⊙

## Legends

Most charts display a legend that shows the name and color used for the applications.

APPLICATI	ONS									
100.0Kbps								IPv4 and IPv6	▼ All Apps	▼ ₫ ₫
80.0Kbps									0	
60.0Kbps				~~~		n 1.1	~			
40.0Kbps				r v		<b>V Y</b>	×	×		
Obps										
Show Legen	is 🚺	3.13	3.14	3:15	3:16	31/	3.10	3:19	320	3.21
E General	HTTPS MGMT	🔳 General	HTTPS	<mark>=</mark> G	neral HTTP		General DNS			
Service	Mesh	Service	NetBios SSN TCP	🔳 Ge	neral FTP control		Service Version 2 Multi	cast Listener Re		
General	NETBIOS	Service	SMB	🔳 Se	rvice NTP		General HTTP MGMT			
Service	Tivo TCP Data	General	SNMP	🔳 Se	rvice Echo					

## Tooltips

Various elements of the charts have associated tool-tips:

• The name of each chart has two tool-tip icons (i) that briefly describe the ingress and egress information in the chart.



• Legend items display information about the item the legend represents.



• A small circle displays information about a precise moment on the chart.



To display a tool-tip, hover your mouse over the desired item or click on the chart. The information displayed varies by chart.

## **Changing Chart Format**

You are able to view individual charts in either bar chart format or stacked (area) chart format. Each chart

has Chart Format icons in the upper right corner of the chart 🛄 🖆 . The default is stack chart format.

### **Bar Chart**

The bar chart format displays applications individually, thus allowing you to compare applications. In this chart, the applications, interfaces, or core monitors are arranged along the x-axis, for applications and interfaces according to the color code shown in the Legend. The y-axis displays information appropriate to the chart, such as the amount of traffic for each application or interface. To display the data in bar chart

<u>.</u>11 format. click on the Bar Chart icon

The following example is a Bar Chart view.



### Stacked Chart

The stack chart format displays over-lapping data in a stacked format as it occurs. In this chart, the x-axis displays the current time and the y-axis displays information appropriate to the chart, such as the amount of traffic for each application or the rate or size of the packets. To display data in the stack chart format, click

the Stacked Chart icon

The following example is a Stacked Chart view.



## Selecting IPv6/IPv4

For complete information on the SonicOS implementation of IPv6, see the *IPv6* section of the *SonicOS System Setup* technical documentation.

(i) NOTE: This option applies only to the Applications and Ingress/Egress Bandwidth charts.

Live Monitor is configured the same in IPv6 and IPv4; select a radio button in the drop-down menu to change the view/configuration:



- IPv4 Only
- IPv6 Only
- IPv4 and IPv6

## Current, Minimum, Maximum Display

All charts, except **Applications**, display the current, minimum, and maximum values for the chart. The values vary by chart and can be in Mbps, Kbps, Pps (packets per second), Bytes, or Cps (connections per second).

Current: 37.9Kbps	Min: 2.5Kbps	Max: 684.2Kbps	Ingress

For the **Ingress/Egress** charts, the information is displayed for both halves, the Ingress on the top and the Egress on the bottom. For the other charts, the information is displayed on the top.

## **Multicore Monitor**

The **Multicore Monitor** displays dynamically updated statistics on utilization of the individual cores of the firewall. The information is shown either for combined data in flow chart format or for individual cores in bar chart format. Core 1 through core 8 handle the control plane. Core 1 through core 8 usage is displayed in green on the Multi-Core Monitor. The remaining cores handle the data plane. To maximize processor flexibility, functions are not dedicated to specific cores; instead all cores can process all data plane tasks. Memory is shared across all cores. Each core can process a separate flow simultaneously, allowing for up to 88 flows to be processed in parallel.

#### **Stacked Chart**

In the stacked chart format the x-axis displays the current time, and the y-axis displays the percentage of CPU used.

	Sys	stem Monitor	Multicore	A	pplication Bandwidth	Interface U	Isage Conni	iction Usage					
ŀ	MULTI-COP	RE MONITOR											_
	100.00				Utilization: 2	% Average: 1.4%	Min: 196 Max: 20%				Current	•	₫ 4
	100.040												
	75.0%												
	50.0%												
	25.0%												
	0.0%		3.56		35	57		3:58	3	59	4.0	0	

#### **Bar Chart**

The bar chart format displays data pertaining to individual cores. The x-axis displays the cores while the yaxis displays the percentage of CPU used.

System Monitor	Multicore	Application Bandwidth Interface U	Isage Connection Usage	
MULTI-CORE MONITOR				
		Utilization: 1% Average: 1.1%	Min: 196 Max: 2696	- LL -
100.0%				
75.0%				
50.0%				
25.0%				
0.0%				

## Options

The following option is specific to the **Multicore** chart. For other options and display features, see Common Features.

Option	Widget	Description
Aggregate Display	Current Clarent O Current (Aggregate) A verage (Aggregate) Core 0 Core 1 Core 1 Core 2 Core 3	Specifies which Cores are displayed in the Multi- Core Monitor Flow Chart. A drop-down menu allows you to specify <b>Current</b> (Aggregate), Average (Aggregate), and individual Cores. The individual Cores vary, depending on the number of Cores available. Multiple Cores can be selected.

## **Applications Bandwidth Monitor**

The Applications data flow provides a visual representation of the current applications accessing the network.

### **Stacked Chart**



#### **Bar Chart**



## Options

The following option is specific to the **Applications** chart. For other options and display features, see Common Features.

Option	Widget	Description
Lock		Locks the Display for the Applications chart. The lock/unlock option is available when you select <b>Most Frequent Apps</b> . Most Frequent Apps displays the top 25 apps; you can use the lock or unlock option to keep the report from altering the top 25 apps.
Unlock	<b>1</b>	Unlocks the Display for the Applications chart.
Application Display	Most Frequent	Specifies the applications displayed in the Application Flow Chart.
	<ul> <li>All Apps</li> <li>General HTTPS MGMT</li> <li>General HTTPS</li> <li>General DNS</li> <li>General HTTP</li> <li>Service Version 2 Multicast Listener</li> </ul>	A drop-down menu allows you to specify <b>Most</b> <b>Frequent Apps</b> , <b>All Apps</b> , or individual applications. If desired, multiple applications can be selected by clicking more than one check box.

## Interface Usage

The Ingress / Egress Bandwidth data stacked chart provides a visual representation of incoming (Ingress) and outgoing (Egress) bandwidth traffic. The current percentage of total bandwidth used, and the minimum and maximum amount of traffic that has gone through each interface is available in the display.

(i) **NOTE:** The Bandwidth charts have no direct correlation to the Application charts.

### Stacked Chart

The stacked chart format allows you to view all of the Ingress and Egress Bandwidth traffic as it occurs. The x-axis displays the current time, and the y-axis displays the Ingress and Egress Bandwidth traffic.

System Monitor	Multicore	Application E	Bandwidth	Interface Usage	Connection Usage			
BANDWIDTH								
	Current: 48.2Kbps	Min: 4.0Kbps	Max 1.4Mbps	Ingress		IPv4 and IPv6	<ul> <li>All Interfaces</li> </ul>	💌 🖬 🛃
100.0Kbps								
75.0Kbps				•				•
25.0Kbps								
Obps					0			
25 Okbos					_			
50.0Kbps							$\sim$	$\sim$
75.0Kbps							-	
100.0Kbps 5:31	5:32		5:3	13	5:34		5:35	
Show Legends	Current: 46.5Kbps	Min: 3.5Kbps	Max: 23.4Mbps	Egress				
x0		X1		x2		X3		
= 10								

### Bar Chart

The bar chart format displays data pertaining to individual interfaces in a bar chart; allowing comparisons of individual Bandwidth Interfaces. In this chart, the x-axis denotes the Interfaces whereas the y-axis denotes the Ingress and Egress Bandwidth traffic.

System Monitor	Multicore	Application	Bandwidth	Interface Usage	Connection Usage					
BANDWIDTH										_
40.0Kbps 30.0Kbps 10.0Kbps 0bps	Current: 46.6Kbps	Min: 4.0Kbps	Max: 1.4Mbps	Ingress	0	IPv4 and IPv6	•	All Interfaces	•	<u>a</u>
0bps 20.0Kbps 40.0Kbps 60.0Kbps										
Show Legends	Current: 52.4Kbps	Min: 3.5Kbps X1	Max: <b>23.4Mbp</b>	s Egress		<b>X</b> 3				

### Options

The following option is specific to the **Interface Usage** chart. For other options and display features, see Common Features.

Option	Widget	Description
Interface Rate Display	All Interfaces	Specifies which Interfaces are displayed in the Bandwidth Flow Chart.
	X0 (%)     X1 Rate     X1 Rate     X2 Rate     X2 Rate     X2 Rate     X2 Rate     X2 Rate	A drop-down menu provides options to specify All Interfaces Rate, All Interfaces (%), or rate or percentage (%) for individual interfaces.
		The individual interfaces vary depending on the number of interfaces on the network. Multiple interfaces can be selected if desired.

### Packet Rate Monitor

The **Ingress / Egress Packet Rate** monitor provides information on the ingress and egress packet rate as packets per second (pps). This can be configured to show packet rate by network interface. The chart shows the current packet rate, minimum packet rate, and maximum packet rate for both ingress and egress network traffic.

### **Stacked Chart**



### Bar Chart

PACKET RATE								
		Current: 11ps	Min: 1ps	Max: 18ps	ingress		All Interface	s 👻 📶 🖻
10.0Pps								
7.5Pps								
5.0Pps								
2.5Pps						0		
0Pps							 	
0Pps					0			
2.0Pps								
4.0Pps								
6.0Pps								
8.0Pps								
Show Legends	C	Current 7ps	Min: 1ps	Macc 12ps	Egress			
<b>X</b> 0	<b>X</b> 1		-	X2		<b>X</b> 3		
U0								

### Packet Size Monitor

The **Ingress** / **Egress Packet Size** monitor provides information on the ingress and egress packet size in bytes (B). This can be configured to show packet size by network interface. The chart shows the current packet size, minimum packet size, and maximum packet size for both ingress and egress network traffic.

#### **Stacked Chart**



**Bar Chart** 



## **Connection Usage Monitor**

The **Connection Usage** Monitor is plotted by collecting the outgoing and incoming connection rates for each interface every refresh period. When looking at the combined connection rate of more than one interface at the same time, it may appear double than the actual connection rate. A single connection between a pair of interfaces is counted for both interfaces.

#### **Stacked Chart**



### **Bar Chart**



### **Connection Count Monitor**

The **Connection Count** Monitor provides a visual representation of the active total number of connections, peak number of connections, and maximum number of connections. The y-axis displays the total number of connections from 0C (zero connections) to 1KC (one kilo connections).

#### **Stacked Chart**



**Bar Chart** 



(i) NOTE: The Connection Count Monitor does not have legends.

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## **Protocol Monitor**

The **Real Time Charts > Protocol Monitor** page displays real-time charts showing ingress and egress traffic rates for the following protocols:

IPv4	Internet Protocol version 4
ARP	Address Resolution Protocol, used by IPv4 to map IP network addresses to link layer hardware addresses
IPv6	Internet Protocol version 6
UDP	User Datagram Protocol, a connection-less protocol used for example by DNS, SNMP, RIP, DHCP
ТСР	Transmission Control Protocol, a connection oriented protocol allowing bidirectional traffic once the connection is established, used for example by FTP, SSH, Telnet, and also by DNS
ICMP	Internet Control Message Protocol, used by network devices to send error messages and operational information; ping uses ICMP to send echo request packets to a host
IGMP	Internet Group Management Protocol, used by hosts and routers to establish multicast group memberships

The seven real-time charts displayed on the **Protocol Monitor** page are shown in the images below. The **Ingress** rate is displayed on the top half of each chart, and the **Egress** rate is displayed on the bottom.

(i) **NOTE:** A chart may be empty or blank if there are no recent data entries received within the viewing range.

### **PROTOCOL MONITOR - IPV4 CHART**



### **PROTOCOL MONITOR - ARP CHART**



**PROTOCOL MONITOR - IPV6 CHART** 



### **PROTOCOL MONITOR - UDP CHART**



### **PROTOCOL MONITOR - TCP CHART**



### **PROTOCOL MONITOR - ICMP CHART**



### **PROTOCOL MONITOR - IGMP CHART**



## **Enabling the Protocol Monitor**

The first time you access the Protocol Monitor, it is disabled.



To enable the Protocol Monitor and start displaying statistics in the different charts:

- Click on the Flow Reporting page link.
   You will be navigated to Device > App Flow > Flow Reporting page.
- 2. In the **Settings** tab, select **Interface protocols** option from the **Collect Real-Time Data For** dropdown and click **Accept**.

2CB8ED6D73D8 / Device / Ap	pFlow / Flow Reporting		Configuration 🚫 Non-Config
SETTINGS ()			
Report Connections	All 🕖	Enable Real-Time Data Collection [*]	0
	Interface-based		Top apps × Bits per sec ×
	Firewall/App Rules-based		Packets per sec ×
Enable Aggregate AppFlow Report Data Collection	0	Collect Real-Time Data For	Average packet size × 🗸 🗸 👔
	Arms Depart of Lines Depart of		Connections per sec × Core util ×
Collect Report Data For	IP Report × Threat Report ×	Ø	Memory util ×
concertaport batar of	Geo-IP Report × URL Report ×		V Top apps
			✓ Bits per sec
			<ul> <li>Packets per sec</li> </ul>
LOCAL SERVER SETTINGS ()			✓ Average packet size
Enable AppFlow To Local Collector	0		<ul> <li>Connections per sec</li> </ul>
			✓ Core util
OTHER REPORT SETTINGS ()			Interface protocols
Skip Reporting STACK Connections	0	Enable Geo-IP Resolution	✓ Memory util

The settings are enabled, and statistics are displayed in the **Protocol Monitor** page.

## Using the Toolbar

The Protocol Monitor toolbar contains features to specify the refresh rate, change the amount of data displayed, and pause or play the data flow. Changes made to the toolbar apply across all the data flows.

o <u> </u>	5 mins O Refresh every: 3 se	ес.

### **PROTOCOL MONITOR TOOLBAR OPTIONS**

Option	Widget	Description
Refresh Rate	Refresh every: 3 sec	Determines the frequency at which data is refreshed. A numerical integer between 1 to 10 seconds is required. The default is <b>3</b> seconds.
View Range	0 5 mins	Displays data pertaining to a specific span of time. The <b>View Range</b> is configurable in 60 seconds, 2 minutes, 5 minutes, and 10 minutes (default).
Pause	(1)	Freezes the data flow. The <b>Pause</b> button appears black if the data flow has been frozen.
Play	$\odot$	Unfreezes the data flow. The time entries at the bottom of the tables will refresh as soon as the data flow is updated.
		The <b>Play</b> button appears black if the data flow is live.
Tips	Q	Mouse over a data point to see values at that instant.

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# Using Per-Chart Viewing Options

### **Topics:**

- Legends
- Tooltips

### Legends

Each chart displays a legend that shows the name and color used for the interfaces selected in the chart's display options drop-down menu. To view the chart, select the interfaces from **All Interfaces** drop-down and toggle the **Show Legends** option.

IPV4 RATE						
	ngress (j)					All Interfaces 🛛 🔻
300Kbps						All Interfaces
200Kbps						■ x0
100Kbps	0					■ X1
Obps	0					■ x2
500Kbps 1Mbps						■ x3
2Mbps						■ X4
2Mbps	0	41	0:42	0:43	0:44	×5
E	gress (j)					×6
Show Legens	is					×2
<b>X</b> 0		<b>X</b> 1	<b>X</b> 2	<b>X</b> 3		
■ X4		x5	×6	×7		
💻 X8		🔲 X9	LIO LIO			

## Tooltips

Various elements of the charts have associated tool-tips:

• The name of each chart has two tool-tip icons that briefly describe the ingress and egress information in the chart.



• Legend items display information about the item the legend represents.

IPV4 RATE			
lngress(i)			
150Kbps			
100Kbps			
50Kbps			
Obps			
Obps			
500Kbps			
1Mbps			
2Mbps			
2Mbps			
3N XO Name: Show Le Egress Ra	X0 tte:0 te:0	0:55	
💻 X0			🔲 X1

• A small circle displays information about a precise moment on the chart.

TOP PARE					
ingree ()					Alistariana 🖤
Max					
Plan					
1 Marc					
ingen			المالية المراجع		
No.			THE WORK	and and a second s	TT TT
1 Mar					V V V VI
140					1 1 1 1
100	1.14	140	1.18	100	140
form()					

To display a tool-tip, hover your mouse over the desired item or click on the chart. The information displayed varies by chart.

## **Policy Monitor**

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The **Real Time Charts > Policy Monitor** page provides a real-time, multi-functional display with information about security, NAT, Route, Decryption, and DoS policies.

(i) **NOTE:** A chart may be empty or blank if there are no recent data entries received within the viewing range.

There are five tabs displayed on the **Policy Monitor** page.

#### **Security Policy**

To view the Security Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > Security Policy**.



### **NAT Policy**

To view the NAT Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > NAT Policy**.

	10 mins O Refresh	every: 3 sec.							. 0
JS									
Ø							A	Il Connections 👻 🛛 A	uto Y-Scaling
						1.1			
Translated	<b></b> U	Intranslated							
22.08	22.09	22:10	22:11	22:12	22:13	22:14	22:15	22:16	22
WIDTH									
95									
<i>(</i> )							All Rules R	ate 🔻 Auto Y-Scal	ing 🔄
5									
						4 4			
16									
4									
22:08	22:09	22:10	22:11	22:12	22:13	22:14	22:15	22:16	22
22:08	22:09	22:10	22:11	22:12	22:13	22:14	2215	22:16	22
2209 Legends	22:09 E	22:10	22:11	22:12	22:13	22:14	22:15	22:16	22
22:08 Legends	22.09 E	22:10	22:11	22-12	22:13	22:14	22:15	22:16	caling _
2208 Legends	22.09 E	22:10	22:11	22:12	22:13	22:14	2215	22:16	caling _s
Legends	22.09 E	22:10	22:11	22:12	22:13	22:14	2215	22:16	caling _
2200 Legends	22.09 E	2210	22:11	2212	22:13	2214	2215	22:16	caing <u>s</u>
e connection RATE	22.09 E	2210	22:11	2212	22.13	22.14	2215	22:16	caling _s
2209 egends	22.09	22:10	22:11	22.12	22.3	2214	2215 All Rules 2216	22:16 Rate  Auto Y-St	caing _s
zzoe	22.09 E 22.10	2210	22:11	22:12	22.3	22.14	2235 Al Pales 2236	2216	caing _
a 2208 E CONNECTION RATI	22.09 E 22.10	2210	22:11	22:12	22.3	22:14	2215 Al Rules 2216	22.16	caing <u>s</u> caing <u>s</u> z218
2209 2209 2209 2209 2209 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 200 200	22.09 E 22.10	2210	2211	2212	22.13	22.14	2235 All Rules 2236	22:56	caing <u>s</u> 2218
2209 2209 2209 2209 2209 2209 2209 2209 2209 2209 200 200	22.09 E 22.10	2210	2211	2213	22.13	2214	2235	22.16 Refe	caing _
2009 2209 2209 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 2009 200 200	22.09 E 22.10 E	2210	22.13	223	2233	234	2235 All Rules 2236 All Rules	22.16 Rate	caling _d
2209 CONNECTION BATT	22.09 22.10 22.10	2210	22:13	22:3	2233	22.14	2235 All Rules 2236 All Rules	2236 Rave V Auto YSo 2217	caling _d

### **Route Policy**

To view the Route Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > Route Policy**.



### **Decryption Policy**

To view the Decryption Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > Decryption Policy**.



### **DoS Policy**

To view the DoS Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > DoS Policy**.



## Using the Toolbar

The **Policy Monitor** toolbar contains features to specify the refresh rate, change the amount of data displayed, and pause or play the data flow. Changes made to the toolbar apply across all the data flows.





### **PROTOCOL MONITOR TOOLBAR OPTIONS**

Option	Widget		Description
Refresh Rate	Refresh every: 3 sec		Determines the frequency at which data is refreshed. A numerical integer between 1 to 10 seconds is required. The default is <b>3</b> seconds.
View Range	05 min	s O	Displays data pertaining to a specific span of time. The <b>View Range</b> is configurable in 60 seconds, 2 minutes, 5 minutes, and 10 minutes. The default is <b>2</b> minutes.

Pause	(1)	Freezes the data flow. The <b>Pause</b> button appears black if the data flow has been
Disc	_	frozen.
Play	$\odot$	onfreezes the data flow. The time entries at the bottom of the tables will refresh as soon as the data flow is updated.
		The <b>Play</b> button appears black if the data flow is live.
Tips	Q	Mouse over a data point to see values at that instant.

## **Common Features**

### Topics:

- Legends
- Tooltips
- Changing Chart Format
- Scaling a Chart

## Legends

Most charts display a legend that shows the name and color used for the policies.

	BANDWIDT	н						
	10.0Kbps					All Pulor Parts and Autory Stations and Mar		
	8.0Kbps					Plate Focusing		
	6.0Kbps							
	4.0Kbps							
	2.0Kbps							
	Obps	1:14	1:15	1:16	1:17	1:18		
	Show Legend	s 🚺						
	Route Po	licy_5	Route Policy_7	Route Policy_3	Route Policy_10			
	Route Po	licy_2	Route Policy_1	Route Policy_11	Route Policy_4			
l	Route Po	licy_6	Route Policy_12	Route Policy_9	Route Policy_8			

## Tooltips

Various elements of the charts have associated tool-tips:

• The name of the chart has a tool-tip icon that briefly describe the chart.

Security Policy	NAT Policy Rou	e Policy Decryption Policy	DoS Policy		
° —	5 mins O Refresh every: 3	50C.			© ©
STATUS STATUS STATUS STATUS STATUS STATUS STATUS STATUS STATUS STATUS STATUS STATUS STATUS STATUS STATUS STATUS Translated	ove connections that are d entranslated by NAT rules.			At Come	ections
0	1:25	1:26	1:27	128	1:29

• Legend items display information about the item the legend represents.

BANDWIDTH				
400.0Kbps				All Rules Rate 👻 Auto Y-Scaling 🔐 🜌
300.0Kbps				
200.0Kbps				
100.0Kbps				
Otops Default NA	AT Policy_9			
Show Legends O Rate: 17918	1/28 bps	1:29	1:30	131
Default NAT Policy_9	Default NAT Policy_14	Default NAT Policy_20	Default NAT Policy_11	
Default NAT Policy_2	Default NAT Policy_10	Default NAT Policy_8	Default NAT Policy_1	
Default NAT Policy_3	Default NAT Policy_4	Default NAT Policy_5	Default NAT Policy_6	
Default NAT Policy_7	Default NAT Policy_12	Default NAT Policy_13	Default NAT Policy_15	
Default NAT Policy_16	Default NAT Policy_17	Custom NAT Policy_18	Default NAT Policy_19	
Default NAT Policy_21	Default NAT Policy_22	Default NAT Policy_23	Default NAT Policy_24	
Default NAT Policy.25	Default NAT Policy 26			

• A small circle displays information about a precise moment on the chart.

	Security Policy	NAT Policy	/ Route	e Policy Deci	yption Policy	DoS Policy						
0		10 mins	D Refresh every: 3	50C.							• •	Q
STA	TUS											
10												
	Ø								All Connect	ions 🔻	Auto Y-Scaling	
										1		
1												
2	Allowed		E Discarded		Dropped							
	R	30 5	31 5	1.32 5.33		34 5	:35 5	:36 5:	37	5.38	Discarded - 0 5	:39

To display a tool-tip, hover your mouse over the desired item or click on the chart. The information displayed varies by chart.

## **Changing Chart Format**

You are able to view individual charts in either bar chart format or stacked (area) chart format. Each chart

has Chart Format icons in the upper right corner of the chart ______. The default is stack chart format.

### Bar Chart

The bar chart format displays applications individually, thus allowing you to compare policies. In this chart, the policies or rules arranged along the x-axis according to the color code shown in the Legend. The y-axis displays information appropriate to the chart, such as the amount of traffic for each policy.

To display the data in bar chart format, click on the **Bar Chart** icon

The following example is a Bar Chart view.

BANDV	VIDTH								
Z.UKBps	۵.						All Rules Rate	Auto Y-Scaling	<u>ام</u> الد
1.5Kbps									
1.0Kbps									
500.0bps									
Obps									
Show Le	gends 🛑								
Cus Cus	tom Security Policy_3 tom Security Policy_5	Custom Secur	ity Policy_1 ity Policy_4	Custom Security Policy	_2	Custom Security Policy_6			

### Stacked Chart

The stack chart format displays over-lapping data in a stacked format as it occurs. In this chart, the x-axis displays the current time and the y-axis displays information appropriate to the chart, such as the amount of

traffic for each policy. To display data in the stack chart format, click the **Stacked Chart** icon . The following example is a Stacked Chart view.

BANDWIDTH					
30.0Kbps 25.0Kbps				All Rules Rate	Auto Y-Scaling
20.0Kbps 15.0Kbps					
5.0Kbps 0bps					
Show Legends	5.47	5:48	5:49	5.50	5.51
Custom Securi	ty Policy_3 Custom Sec ty Policy_5 Custom Sec	urity Policy_1 Custom S urity Policy_4	iecurity Policy_2	Custom Security Policy_6	

## Scaling a Chart

The Scale box, , to the upper right of each chart, allows for automatic y-axis scaling or custom scaling of a chart.

- Auto (default) Auto Y-Scaling, where the y-axis is scaled so it is just large enough to show the maximum data in the chart.
- <num>[<unit>] The values for customized scaling must be a numeric integer. Specifying a unit is optional. If a unit is desired, four options are available:
  - K for Kilo
  - M for Mega
  - G for Giga
  - % for Percentage

For example, if a custom scale of 100Kbps is desired, then 100K should be entered: The numeric integer 100 followed by the unit K.

(i) **NOTE:** An invalid entry results in the default, Auto Y-Scaling, being used.

# **Security Policy**

To view the Security Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > Security Policy**.

### Status

The Status chart displays connections that are allowed, discarded, and dropped by the rules configured. The x-axis displays the current time and the y-axis displays the number of policies that are allowed, discarded, and dropped.

ST/	πus					
,	Ø				All Connection	is 🔻 Auto Y-Scaling
	6					
	4					
	2 Allowed	Discarded	E Dropped			
	2	58 2	59 3	100	3.01	3:02

(i) | NOTE: The Status chart is displayed in stacked format and does not have legends.

### Bandwidth

Bandwidth chart is plotted by collecting number of bytes per rule traversing through the firewall every refresh period.

### Stacked Chart

In the stacked chart, the x-axis displays the current time and the y-axis displays the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).



#### **Bar Chart**

The bar chart format displays policies individually along the x-axis according to the color code shown in the legend. The y-axis displays information appropriate to the chart, such as the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).

BANDV	VIDTH										
2.0Kbps	0								All Rules Rate	e 🔻 Auto Y-	Scaling 📶 📶
1.5Kbps											
1.0Kbps											
500.0bps											
Obps											
Show Le	gends 🚺										
Cus	tom Security Policy_3	Custom Secu	rity Policy_1	-	Custom Security Polic	/_2	Custom 5	Security Policy_6			
Cus	tom Security Policy_5	Custom Secu	rity Policy_4								

### Active Connection Rate

The Active Connection Rate chart provides a visual representation of the current total number of outgoing and incoming connection rate for each rule in Cps (Connections per second).

#### **Stacked Chart**



**Bar Chart** 

ACTIVE CONNECTION R	ATE						
1.2Cps 1.0Cps					All Rules Ra	te 💌 Auto Y-Scaling	al 4
0.8Cps							
0.6Cps							
0.2Cps				0	>		
Show Legends							
Custom Security Policy_3 Custom Security Policy_5	Custom Se	curity Policy_1 curity Policy_4	Custom Security Policy_2	2 Custom	Security Policy_6		

### **Total Connection Usage**

The Connection Usage chart provides a visual representation of the total number of connections per rule.

### **Stacked Chart**



**Bar Chart** 



# NAT Policy

To view the NAT Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > NAT Policy**.

## Status

The Status chart displays connections that are translated and untranslated by NAT rules. The x-axis displays the current time and the y-axis displays the number of policies that are translated and untranslated by NAT rules.

							_
	Security Polic	y NAT Policy	Route Policy Decry	tion Policy DoS Policy			
0		- O Refre	sh every: 3 sec.			@ <b>O</b>	õ
ST	ATUS						
	10						
	<i>i</i>					All Connections 💌 Auto Y-Scaling	
	30						
1	20						
	10						_
	Translated		Untranslated				1
1	-	3:44	3:45	3:4 Untranslat	ea - 2 3x	7 2:48	

(i) | NOTE: The Status chart is displayed in stacked format and does not have legends.

## Bandwidth

Bandwidth chart is plotted by collecting number of bytes per rule traversing through the firewall every refresh period.

### Stacked Chart

In the stacked chart, the x-axis displays the current time and the y-axis displays the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).

BANDWIDTH									
70.0Kbps									
60.0Kbps							All Rules Rate	<ul> <li>Auto Y-Scaling</li> </ul>	₫ ₫
50.0Kbps									
40.0Kbps									
30.0Kbps									
20.0Kbps						and the second s			
10.0Kbps									
Obps	754	74	8	7	14 14	7.57		7.58	
Show Legends									
Default NAT Policy.	9	Default NAT Policy_14		Default NAT Policy_20		Default NAT Policy_1:	1		
Default NAT Policy.	10	Default NAT Policy_2		Default NAT Policy_1		Default NAT Policy_8			
<ul> <li>Default NAT Policy,</li> </ul>	3	Default NAT Policy_4		Default NAT Policy_5		Default NAT Policy_6			
<ul> <li>Default NAT Policy.</li> </ul>	7	Default NAT Policy_12		Default NAT Policy_13		Default NAT Policy_1	5		
Default NAT Policy.	16	Default NAT Policy_17		Custom NAT Policy_18		Default NAT Policy_19	9		
Default NAT Policy.	21	Default NAT Policy_22		Default NAT Policy_23		Default NAT Policy_24	4		
Default NAT Policy.	25	Default NAT Policy_26							

#### **Bar Chart**

The bar chart format displays policies individually along the x-axis according to the color code shown in the legend. The y-axis displays information appropriate to the chart, such as the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).

BANDWIDTH	BANDWIDTH										
20.0Kbps				All Rules Rate 🔻 Auto Y-Scaling 📶 🚿							
15.0Kbps											
10.0Kbps											
5.0Kbps			0								
Obps											
Default NAT Policy_9	Default NAT Policy_14	Default NAT Policy_20	Default NAT Policy_11								
Default NAT Policy_10	Default NAT Policy_2	Default NAT Policy_1	Default NAT Policy_8								
Default NAT Policy_3	Default NAT Policy_4	Default NAT Policy_5	Default NAT Policy_6								
Default NAT Policy_7	Default NAT Policy_12	Default NAT Policy_13	Default NAT Policy_15								
Default NAT Policy_16	Default NAT Policy_17	Custom NAT Policy_18	Default NAT Policy_19								
Default NAT Policy_21	Default NAT Policy_22	Default NAT Policy_23	Default NAT Policy_24								
Default NAT Policy_25	Default NAT Policy_26										

### Active Connection Rate

The Active Connection Rate chart provides a visual representation of the current total number of outgoing and incoming connection rate for each rule in Cps (Connections per second).

#### **Stacked Chart**



#### **Bar Chart**



## Total Connection Usage

The Connection Usage chart provides a visual representation of the total number of connections per rule.

### Stacked Chart

TOTAL CONNECTION USAGE					
30.0				All Dutes Henry	1.1.X0.K
25.0				All Roles Usage 🖤	Auto T-Scaling
20.0					
15.0					
10.0					
5.0					
0	8:24	8.25	8:26	8.27	8.28
Show Laganda					
Default NAT Policy_9	Default NAT Policy_14	Default NAT Policy_	20 Default	NAT Policy_11	
Default NAT Policy_10	Default NAT Policy_2	Default NAT Policy_	.1 Default !	NAT Policy_8	
Default NAT Policy_3	Default NAT Policy_4	Default NAT Policy_	.5 Default 1	NAT Policy_6	
Default NAT Policy_7	Default NAT Policy_12	Default NAT Policy_	.13 Default I	NAT Policy_15	
Default NAT Policy_16	Default NAT Policy_17	<ul> <li>Custom NAT Policy.</li> </ul>	_18 Default	NAT Policy_19	
Default NAT Policy_21	Default NAT Policy_22	Default NAT Policy_	23 Default	NAT Policy_24	
Default NAT Policy_25	Default NAT Policy_26				

### Bar Chart

TOTAL CONNECTION USAGE				
TO THE CONTRECTION ODAGE				
10.0				
0				All Rules Usage 👻 Auto Y-Scaling 🚮
8.0				
6.0				
4.0				
20				
1.5				
Show Legends				
Default NAT Policy_9	Default NAT Policy_14	Default NAT Policy_20	Default NAT Policy_11	
Default NAT Policy_10	Default NAT Policy_2	Default NAT Policy_1	Default NAT Policy_8	
Default NAT Policy_3	Default NAT Policy_4	Default NAT Policy_5	Default NAT Policy_6	
Default NAT Policy 7	Default NAT Policy 12	Default NAT Policy 13	Default NAT Policy 15	
Default NAI Policy_16	Default NAT Policy_17	<ul> <li>Custom NAT Policy_18</li> </ul>	Detault NAT Policy_19	
Default NAT Policy_21	Default NAT Policy_22	Default NAT Policy_23	Default NAT Policy_24	
Default NAT Policy_25	Default NAT Policy_26			
1				

# **Route Policy**

To view the Route Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > Route Policy**.

## Bandwidth

Bandwidth chart is plotted by collecting number of bytes per rule traversing through the firewall every refresh period.

#### **Stacked Chart**

In the stacked chart, the x-axis displays the current time and the y-axis displays the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).



#### **Bar Chart**

The bar chart format displays policies individually along the x-axis according to the color code shown in the legend. The y-axis displays information appropriate to the chart, such as the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).

BANDV	/IDTH											
600.0bps												
500.0bps	0								All Rules Rate	e 🔻 🖉 Auto Y-S	icaling 🛃	1.1
400.0bps												
300.0bos												
200.0bos												
100.0box												
Ohor												
Show Le	nends											
_				-	_							
Rou	# Policy_5		Route Policy	<i></i>		Houte Policy_3	Route Po	ecy_10				
Rou	e Poscy_2	Route Policy_11				Houte Policy_1	Route Po	xy_4				
Rou	.e Policy_6	Route Policy_12			Route Policy_9	Route Po	e Policy_8					

### Active Connection Rate

The Active Connection Rate chart provides a visual representation of the current total number of outgoing and incoming connection rate for each rule in Cps (Connections per second).

#### **Stacked Chart**



#### **Bar Chart**



## Total Connection Usage

The Connection Usage chart provides a visual representation of the total number of connections per rule.

### Stacked Chart



#### **Bar Chart**

тот	AL CONNECTION	I USAGE														
7.1 6.1	0											All Rules Us	age 🔻	Auto Y-Scal	ing	ه اه
4.1																
2/			0													
Sho	v Legends															
	Route Policy_5			Route	Policy_7		R	oute Policy_3		Rout	e Policy_10					
12	Route Policy_6			Route	Policy_11 Policy_12		R	oute Policy_9		Rout	e Policy_4					

## **Decryption Policy**

To view the Decryption Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > Decryption Policy**.

### Status

The Status chart displays connections that are bypassed and decrypted by decryption rules. The x-axis displays the current time and the y-axis displays the number of policies that are bypassed and decrypted by decryption rules.

				_
STA	TUS			
14				
12	0		All Connections 👻 Auto Y-Scaling 🔤 🛃	
10				-
6				
6				
4				
3	Bypass	Decrypt		
0		9:47	9.48	_

(i) NOTE: The Status chart is displayed in stacked format and does not have legends.

## Bandwidth

Bandwidth chart is plotted by collecting number of bytes per rule traversing through the firewall every refresh period.

### **Stacked Chart**

In the stacked chart, the x-axis displays the current time and the y-axis displays the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).



### Bar Chart

The bar chart format displays policies individually along the x-axis according to the color code shown in the legend. The y-axis displays information appropriate to the chart, such as the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).

BANDV	VIDTH						
60.0Kbps	Ø						
50.0Kbps					All Rules Rate	Auto 1-Scaling	<u>a</u> =
40.0Kbps							
30.0Kbps							
20.0Kbps							
10.0Kbps							
Obps							
Show Le	igends 🚺						
My	Rule_1						

### Active Connection Rate

The Active Connection Rate chart provides a visual representation of the current total number of outgoing and incoming connection rate for each rule in Cps (Connections per second).

### **Stacked Chart**



### **Bar Chart**

ACTIVE CONNECTION RATE											
3.0Cps	-										
2.5Cps	(j)								All Rules Rate 🔻 Au	to Y-Scaling 📶	<u></u>
2.0Cps											
1.5Cps 1.0Cps											
0.5Cps											
0Cps											
Show Legends 🔍											
DF	Pl Rule Basic_1										

### **Total Connection Usage**

The Connection Usage chart provides a visual representation of the total number of connections per rule.

#### **Stacked Chart**



#### **Bar Chart**

тоти	L CONNECTION US#	AGE						
12.1	Ø					All Rules Usage 🔻	Auto Y-Scaling	<u>al</u> =
7.1								
5.0								
2.5								
snov	DPI Rule Basic_1							

## **DoS Policy**

To view the DoS Policy chart, you must configure and enable a policy under **Policy > Rules and Policies > DoS Policy**.

### Status

The Status chart displays connections that are protected and bypassed by DoS rules. The x-axis displays the current time and the y-axis displays the number of policies that are protected and bypassed by DoS rules.



(i) NOTE: The Status chart is displayed in stacked format and does not have legends.

## Bandwidth

Bandwidth chart is plotted by collecting number of bytes per rule traversing through the firewall every refresh period.

### **Stacked Chart**

In the stacked chart, the x-axis displays the current time and the y-axis displays the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).



### Bar Chart

The bar chart format displays policies individually along the x-axis according to the color code shown in the legend. The y-axis displays information appropriate to the chart, such as the amount of traffic for each policy in Kbps or bps (kilobits or bits per second).

BANDV	VIDTH						
60.0Kbps	Ø						
50.0Kbps					All Rules Rate	Auto 1-Scaling	<u>a</u> =
40.0Kbps							
30.0Kbps							
20.0Kbps							
10.0Kbps							
Obps							
Show Le	igends 🚺						
My	Rule_1						

### Active Connection Rate

The Active Connection Rate chart provides a visual representation of the current total number of outgoing and incoming connection rate for each rule in Cps (Connections per second).

### **Stacked Chart**



### **Bar Chart**

ACTIV	E CONNECTION RAT	E											
5.0Cps	0												
4.0Cps									All Ru	les Rate 🛛 🖤	Auto	Y-Scaling	레 섹
3.0Cps													
2.0Cps													
1.0Cps													
0Cps													
Show L	Show Legends 🔴												
My	Rule_1												

### **Total Connection Usage**

The Connection Usage chart provides a visual representation of the total number of connections per rule.

### **Stacked Chart**



### **Bar Chart**



## **User Monitor**

4

The **Real Time Charts > User Monitor** page provides a quick and easy method to monitor the number of active users on the SonicWall security appliance.

2CB8ED827DF0	/ Moni	itor / I	Real-Tir	ne Cha	arts / I	Jser Mi	onitor																		Con	nfiguratio	in 💽
View Style: Las	it 30 Min	utes	<b>~</b> \	/ertical	Axis:	4000 U	Jsers	~																			Q
IUMBER OF U	SERS L	OGGE	D IN -	LAST	30 M	INUTE	S														SO users		'lient use	rs 📕	- Web users		nactive use
4000																									- 1100 03013		
2800 2400 2600																											
1600																											
0 4 29	4 28	4 27	4 26	4 25	4 24	4 23	4 22	4	4 20	5 19	5	5	5 16	5 15	5 14	5 13	5 12	5	5 10	5 9	5	5 5	5 5 6 5		5 <u>5</u> 4 3	5	5 5 1 Nov

The **User Monitor** page provides these options to customize the display of recent user activity in the User Monitor table:

- View Style: Sets the scale of the X-axis, which displays the duration of time. The available options are:
  - Last 30 Minutes
  - Last 24 Hours
  - Last 30 Days
- Vertical Axis: Sets the scale of the Y-axis, which displays the number of users. The available options reflect the number of users. For example, two different systems would have different options.

### **EXAMPLE OF OPTIONS FOR Y-AXIS BASED ON NUMBER OF USERS**

Few Users	Many Users
10	800
100	8000
1000	80000

• Select User Types icon : Displays a pop-up window, where you can select the types of users to be displayed, indicated by the associated color.

SELECT THE USER TYPES TO DISPLAY	
Remote Users with GVC/L2TP Client	
ОК	CANCEL

By default, the above two options are displayed. If you wish to display inactive users and users authenticated by Single-Sign-On method, navigate to **Device > Users > Settings** and enable **SSO Agent** option and click **Accept**.

S	onic <b>wall</b> '	🗲 NSA 2700 🥥 HOME 🚮 MONITOR 📜 DEVICE 🧏 NETWORK 🎒 OBJECT 💒 POLICY
		CB8ED827DF0 / Device / Users / Settings
FIREW	VALL	Authentication Web Login Authentication Bypass User Sessions Accounting
<b>.</b>	Settings Licenses	USER AUTHENTICATION SETTINGS ①
_	Administration Time	User authentication method Local Users
-	Certificates	Configure RADIUS Configure
-	SNMP Firmware and Settings	Configure LDAP Configure
_	Storage Restart	Configure TACACS+ Configure
- 11	High Availability	SINGLE-SIGN-ON METHOD(S)
2	Users	Configure SS0 Configure
-	Status	
-	Settings	SSU Agent
_	Partitions Local Users & Groups	Terminal Services Agent

When **SSO Agent** is enabled, the options **Inactive Users** and **Users Authenticated by Single-Sign-on** are displayed, indicated by the associated color.

SONICWALL	E NSA 2700 🐼 HOME 🎆 MONTOR 🗰 DEVICE 🔆 NETWORK 📦 OBJECT 🔏 POLICY	🖂 🤻 🖯 🗘 Q 🗛
	2CB8ED827DF0 / Monitor / Real-Time Charts / User Monitor	Configuration 🔵 Non-Config
Real-Time Charts		
	View Style: Last 30 Minutes 🗸 Vertical Axia: 40000 Users 🗸	0. <i>0</i>
- User Moritor		
<ul> <li>BWM Monitor</li> </ul>	NUMBER OF USERS LOGGED IN	
	SELECT THE USER TYPES TO DISPLAY	= SSO users - Client users - Web users - Inactive users
	Users Authenticated by Single-Sign-On	
	SEEDO Remote Users with GVC/L2TP Client	
	02000 Users Authenticated by Web Login	
	2000	
	2000	
	1000 CANCEL	
	400	
		<u><u><u></u></u> <u></u> <u></u></u>

- Users Authenticated by Single-Sign-On (blue)
- Remote Users with GVC/L2TP Client (green)
- Users Authenticated by Web Login (orange)
- Inactive Users (grey)
- **Refresh** icon : Refreshes the User Monitor chart.

**Bandwidth Monitor** 

5

The **Real Time Charts > BWM Monitor** page displays policy-based bandwidth usage for ingress and egress network traffic, and a second chart with the top 10 for policy-based bandwidth usage.



The Bandwidth Monitor charts are available for All Policies or for selected policies in the drop-down policies list next to the chart. The refresh interval rate is configurable from 3 to 30 seconds. The bandwidth management priority is depicted by guaranteed, maximum, and dropped. The following display settings and configurable controls are available on this page:

Option	Widget	Description
Refresh every	Refresh every: 3 sec	Determines the frequency at which data is refreshed. A numerical integer between 1 to 10 seconds is required. The default is <b>3</b> seconds.
View Range	0 5 mins	Displays data pertaining to a specific span of time. The <b>View Range</b> is configurable in 60 seconds, 2 minutes, 5 minutes, and 10 minutes (default).

Pause		Freezes the data flow. The time and date will also freeze.
		The <b>Pause</b> button appears black if the data flow has been frozen.
Play	$\odot$	Unfreezes the data flow. The time and date will refresh as soon as the data flow is updated.
		The <b>Play</b> button appears black if the data flow is live.
Stacked Chart		Click the <b>Stacked Chart</b> icon to display the chart in flow (area) chart format. The x-axis displays the current time and the y-axis displays the amount of ingress and egress traffic in Mbps.
Bar Chart	<u>.11</u>	Click the <b>Bar Chart</b> icon to display the chart in bar chart format. The x-axis displays Rules in the Policy-Based Ingress/Egress chart and the names of the top 10 policies for bandwidth usage in the Policy-Based Top 10 chart. The y-axis displays the amount of ingress and egress traffic in Mbps. The Policy-Based Top 10 chart is always displayed as a bar chart with one bar for each policy.

Policies display



Specifies which Policies are displayed in the Policy-Based Ingress/Egress chart.

A drop-down menu allows you to specify All Policies or select individual policies.

The individual policies vary depending on the configured policies available. Multiple policies can be selected.

## **Enabling BWM Monitor**

Bandwidth Management policies are configured from the **Policy > Rules and Policies > Access Rules** page.

To view the BWM chart, edit the access rule for which you want to view the BWM chart and under **Traffic Shaping** tab, select the **Egress BWM**, **Ingress BWM**, and enable **Track Bandwidth Usage** options.

6

# SonicWall Support

Technical support is available to customers who have purchased SonicWall products with a valid maintenance contract.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. To access the Support Portal, go to https://www.sonicwall.com/support.

The Support Portal enables you to:

- View knowledge base articles and technical documentation
- View and participate in the Community forum discussions at https://community.sonicwall.com/technology-and-support.
- View video tutorials
- Access https://mysonicwall.com
- Learn about SonicWall professional services
- Review SonicWall Support services and warranty information
- Register for training and certification
- Request technical support or customer service

To contact SonicWall Support, visit https://www.sonicwall.com/support/contact-support.

## About This Document

- (i) NOTE: A NOTE icon indicates supporting information.
- () | IMPORTANT: An IMPORTANT icon indicates supporting information.
- (i) **TIP:** A TIP icon indicates helpful information.
- CAUTION: A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.
- WARNING: A WARNING icon indicates a potential for property damage, personal injury, or death.

SonicOS Real Time Charts Administration Guide Updated - April 2021 Software Version - 7 232-005652-10 Rev A

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