

Quality of Service (QoS) with DSCP Trust Mode Configuration on the 200/300 Series Managed Switches

Objective

A common method to optimize a network performance is through the use of Quality of Service (QoS). You can prioritize traffic within your network with a customize QoS configuration. Lower priority traffic is slowed down to provide better throughput for higher priority traffic. The 200/300 Series Smart Switches supports four queues, where queue four has the highest priority. Also, there are two trusted modes of QoS: Class of Service (CoS / 802.1p) which allows the user to specify priority for data packets when traffic is buffered in the switch due to congestion and Differentiated Services Code Point (DSCP) which detects packets based on their DSCP values.

This article explains how to configure QoS with DSCP Trusted Mode on the 200/300 Series Managed Switches.

Applicable Devices

- SF/SG 200 and SF/SG 300 Series Managed Switches

Software Version

- 1.3.0.62

Enable DSCP Trust Mode

The first step you need to perform is to enable DSCP Trust Mode mode in your switch.

Step 1. Log in to the web configuration utility and choose **Quality of Service > QoS Basic Mode > Global Settings**. The *Global Settings* page opens:



Global Settings

Trust Mode: CoS/802.1p
 DSCP
 CoS/802.1p-DSCP

Override Ingress DSCP: Enable

DSCP Override Table Apply Cancel

Step 2. In the Trust Mode field, click **DSCP** to enable DSCP.

Step 3. In the Override Ingress DSCP field, check the **Enable** check box to override the original DSCP values in the incoming packets with the new values of the DSCP override table.

Step 4. Click **DSCP Override Table**. The *DSCP Override Table* window appears.

DSCP Override Table							
DSCP In	DSCP Out	DSCP In	DSCP Out	DSCP In	DSCP Out	DSCP In	DSCP Out
0	0 ▾	16	16 ▾	32	32 ▾	48	48 ▾
1	1 ▾	17	17 ▾	33	33 ▾	49	49 ▾
2	2 ▾	18	18 ▾	34	34 ▾	50	50 ▾
3	3 ▾	19	19 ▾	35	35 ▾	51	51 ▾
4	4 ▾	20	20 ▾	36	36 ▾	52	52 ▾
5	5 ▾	21	21 ▾	37	37 ▾	53	53 ▾
6	6 ▾	22	22 ▾	38	38 ▾	54	54 ▾
7	7 ▾	23	23 ▾	39	39 ▾	55	55 ▾
8	8 ▾	24	24 ▾	40	40 ▾	56	56 ▾
9	9 ▾	25	25 ▾	41	41 ▾	57	57 ▾
10	10 ▾	26	26 ▾	42	42 ▾	58	58 ▾
11	11 ▾	27	27 ▾	43	43 ▾	59	59 ▾
12	12 ▾	28	28 ▾	44	44 ▾	60	60 ▾
13	13 ▾	29	29 ▾	45	45 ▾	61	61 ▾
14	14 ▾	30	30 ▾	46	46 ▾	62	62 ▾
15	15 ▾	31	31 ▾	47	47 ▾	63	63 ▾

Apply Close Restore Defaults

Step 5. For each DSCP In value, choose from the appropriate drop-down list the DSCP Out value.

Step 6. Click **Apply**.

Global Settings	
Trust Mode:	<input type="radio"/> CoS/802.1p <input checked="" type="radio"/> DSCP <input type="radio"/> CoS/802.1p-DSCP
Override Ingress DSCP:	<input checked="" type="checkbox"/> Enable
DSCP Override Table Apply Cancel	

Step 7. Click **Apply** to save your configuration.

Enable/Disable QoS on an Interface

Once the DSCP trust mode has been properly configured, the next step is to choose the interfaces to which QoS is applied. This section explains how to enable/disable QoS on a interface.

Step 1. Log in to the web configuration utility and choose **Quality of Service > QoS Basic Mode > Interface Settings**. The *Interface Settings* page opens:

Interface Settings

QoS Interface Setting Table Showing 1-20 of 20 All per page

Filter: *Interface Type* equals to Port Go

	Entry No.	Port	QoS State
<input type="radio"/>	1	GE1	Enabled
<input type="radio"/>	2	GE2	Enabled
<input type="radio"/>	3	GE3	Enabled
<input type="radio"/>	4	GE4	Enabled
<input type="radio"/>	5	GE5	Enabled
<input type="radio"/>	6	GE6	Enabled
<input checked="" type="radio"/>	7	GE7	Enabled
<input type="radio"/>	8	GE8	Enabled
<input type="radio"/>	9	GE9	Enabled
<input type="radio"/>	10	GE10	Enabled
<input type="radio"/>	11	GE11	Enabled
<input type="radio"/>	12	GE12	Enabled
<input type="radio"/>	13	GE13	Enabled
<input type="radio"/>	14	GE14	Enabled
<input type="radio"/>	15	GE15	Enabled
<input type="radio"/>	16	GE16	Enabled
<input type="radio"/>	17	GE17	Enabled
<input type="radio"/>	18	GE18	Enabled
<input type="radio"/>	19	GE19	Enabled
<input type="radio"/>	20	GE20	Enabled

Copy Settings... Edit...

Step 2. From the Interface Type equals to drop-down list, choose Port or LAG (Link Aggregation Group) as the interface type and click **Go**. A LAG combines individual interfaces into a single logical link, which provides an aggregate bandwidth of up to eight physical links.

Step 3. Click the radio button of the interface you want to Enable/Disable.

Step 4. Click **Edit**. The *Edit QoS Interface Settings* window appears.

Interface: Port GE7 LAG 1

QoS State: Enable

Apply Close

Step 5. In the QoS State field, check the **Enable** check box to enable QoS on the interface. To disable QoS on the interface, uncheck the **Enable** check box.

Step 6. Click **Apply**.

Apply a QoS Configuration to Multiple Interfaces

This section explains how to apply the QoS configuration to a single interface or to multiple interfaces.

Step 1. Log in to the web configuration utility and choose **Quality of Service > QoS Basic Mode > Interface Settings**. The *Interface Settings* page opens:

The screenshot shows the 'Interface Settings' page with a table titled 'QoS Interface Setting Table'. The table has columns for 'Entry No.', 'Port', and 'QoS State'. Entry 7 (GE7) is selected and highlighted in green. Below the table are buttons for 'Copy Settings...' and 'Edit...'. The page also shows a filter for 'Interface Type equals to Port' and a 'Go' button.

Entry No.	Port	QoS State	
<input type="radio"/>	1	GE1	Enabled
<input type="radio"/>	2	GE2	Enabled
<input type="radio"/>	3	GE3	Enabled
<input type="radio"/>	4	GE4	Enabled
<input type="radio"/>	5	GE5	Enabled
<input type="radio"/>	6	GE6	Enabled
<input checked="" type="radio"/>	7	GE7	Disabled
<input type="radio"/>	8	GE8	Enabled
<input type="radio"/>	9	GE9	Enabled
<input type="radio"/>	10	GE10	Enabled
<input type="radio"/>	11	GE11	Enabled
<input type="radio"/>	12	GE12	Enabled
<input type="radio"/>	13	GE13	Enabled
<input type="radio"/>	14	GE14	Enabled
<input type="radio"/>	15	GE15	Enabled
<input type="radio"/>	16	GE16	Enabled
<input type="radio"/>	17	GE17	Enabled
<input type="radio"/>	18	GE18	Enabled
<input type="radio"/>	19	GE19	Enabled
<input type="radio"/>	20	GE20	Enabled

Step 2. Click the radio button of the interface you want to apply its configuration to multiple interfaces.

Step 3. Click **Copy Settings**. The *Copy Settings* window appears.

The screenshot shows the 'Copy Settings' dialog box. The title is 'Copy configuration from entry 7 (GE7)'. The 'to:' field contains '8-15' and an example '(Example: 1,3,5-10 or: GE1,GE3-GE5)'. There are 'Apply' and 'Close' buttons.

Step 4. In the to field, enter the range of interfaces that you want to apply the configuration of the interface chosen in Step 2. You can use the interface numbers or the name of the interfaces as input. You can enter each interface separated by a comma such as 1, 3, 5 or GE1, GE3, GE5, or you can enter a range of interfaces such as 1-5 or GE1-GE5.

Step 5. Click **Apply** to save your configuration.

The image below shows the changes in the configured interfaces

Entry No.	Port	QoS State
<input type="radio"/>	1 GE1	Enabled
<input type="radio"/>	2 GE2	Enabled
<input type="radio"/>	3 GE3	Enabled
<input type="radio"/>	4 GE4	Enabled
<input type="radio"/>	5 GE5	Enabled
<input type="radio"/>	6 GE6	Enabled
<input type="radio"/>	7 GE7	Disabled
<input type="radio"/>	8 GE8	Disabled
<input type="radio"/>	9 GE9	Disabled
<input type="radio"/>	10 GE10	Disabled
<input type="radio"/>	11 GE11	Disabled
<input type="radio"/>	12 GE12	Disabled
<input type="radio"/>	13 GE13	Disabled
<input type="radio"/>	14 GE14	Disabled
<input type="radio"/>	15 GE15	Disabled
<input type="radio"/>	16 GE16	Enabled
<input type="radio"/>	17 GE17	Enabled
<input type="radio"/>	18 GE18	Enabled
<input type="radio"/>	19 GE19	Enabled
<input type="radio"/>	20 GE20	Enabled

QoS Queue Configuration

Once you configured QoS on the interfaces, the next step is to configured the QoS Queue to prioritize traffic properly. This section explains how to configure QoS Queue.

Step 1. Log in to the web configuration utility and choose **Quality of Service > General > Queue**. The *Queue* page opens:

Queue

Queue Table				
Queue	Scheduling Method			
	Strict Priority	WRR	WRR Weight	% of WRR Bandwidth
1	<input type="radio"/>	<input checked="" type="radio"/>	1	33.33
2	<input type="radio"/>	<input checked="" type="radio"/>	2	66.67
3	<input checked="" type="radio"/>	<input type="radio"/>	4	
4	<input checked="" type="radio"/>	<input type="radio"/>	8	

Queue 1 has the lowest priority, queue 4 has the highest priority.

Step 2. There are four priority queues, with 1 as the lowest priority and 4 as the highest priority. Also, there are two scheduling methods to assign these priorities. These are Strict Priority and WRR (Weighted Round Robin). With Strict Priority, outgoing traffic with the highest priority queue is transmitted first, whereas traffic with lower priority queue is transmitted only after the traffic with highest priority queue is transmitted. On the other hand, with WRR, the number of packets sent from the queue is proportional to the weight of the queue. The higher the weight, the more frames are sent. To assign a priority queue to one of the available scheduling methods, for each priority, click the appropriate radio button of the available scheduling methods.

Step 3. If in Step 2, you assigned a priority queue to WRR, then you need to specify the weight for each priority. To do this, enter the weight in the WRR Weight field.

Step 4. Click **Apply** to save your configuration.

Map DSCP to Queue

This section explains how to map DSCP to egress queues.

Step 1. Log in to the web configuration utility and choose **Quality of Service > General > DSCP to Queue**. The *DSCP to Queue* page opens:

DSCP to Queue

DSCP to Queue Table

Ingress DSCP	Output Queue						
0 (BE)	1	16 (CS2)	2	32 (CS4)	3	48 (CS6)	3
1	1	17	2	33	3	49	3
2	1	18 (AF21)	2	34 (AF41)	3	50	3
3	1	19	2	35	3	51	3
4	1	20 (AF22)	2	36 (AF42)	3	52	3
5	1	21	2	37	3	53	3
6	1	22 (AF23)	2	38 (AF43)	3	54	3
7	1	23	2	39	3	55	3
8 (CS1)	1	24 (CS3)	3	40 (CS5)	4	56 (CS7)	3
9	1	25	3	41	4	57	3
10 (AF11)	1	26 (AF31)	3	42	4	58	3
11	1	27	3	43	4	59	3
12 (AF12)	1	28 (AF32)	3	44	4	60	3
13	1	29	3	45	4	61	3
14 (AF13)	1	30 (AF33)	3	46 (EF)	4	62	3
15	1	31	3	47	4	63	3

Queue 1 has the lowest priority, queue 4 has the highest priority.

Step 2. For each Ingress DSCP value, choose from its Output Queue drop-down list the output queue to be mapped with.

Step 3. Click **Apply** to save your configuration.

Step 4. (Optional) To restore the Output Queue values to their default, click **Restore Defaults**.

Configure Bandwidth

This section describes how to configure the bandwidth of an interface.

Step 1. Log in to the web configuration utility and choose **Quality of Service > General > Bandwidth**. The *Bandwidth* page opens:

Bandwidth								
Bandwidth Table						Showing 1-20 of 20 All per page		
Filter: Interface Type equals to Port Go								
	Entry No.	Interface	Ingress Rate Limit			Egress Shaping Rates		
			Status	Rate Limit (KBits/sec)	%	Status	CIR (KBits/sec)	CBS (Bytes)
<input type="radio"/>	1	GE1	Disabled			Disabled		
<input type="radio"/>	2	GE2	Disabled			Disabled		
<input type="radio"/>	3	GE3	Disabled			Disabled		
<input checked="" type="radio"/>	4	GE4	Disabled			Disabled		
<input type="radio"/>	5	GE5	Disabled			Disabled		
<input type="radio"/>	6	GE6	Disabled			Disabled		
<input type="radio"/>	7	GE7	Disabled			Disabled		
<input type="radio"/>	8	GE8	Disabled			Disabled		
<input type="radio"/>	9	GE9	Disabled			Disabled		
<input type="radio"/>	10	GE10	Disabled			Disabled		
<input type="radio"/>	11	GE11	Disabled			Disabled		
<input type="radio"/>	12	GE12	Disabled			Disabled		
<input type="radio"/>	13	GE13	Disabled			Disabled		
<input type="radio"/>	14	GE14	Disabled			Disabled		
<input type="radio"/>	15	GE15	Disabled			Disabled		
<input type="radio"/>	16	GE16	Disabled			Disabled		
<input type="radio"/>	17	GE17	Disabled			Disabled		
<input type="radio"/>	18	GE18	Disabled			Disabled		
<input type="radio"/>	19	GE19	Disabled			Disabled		
<input type="radio"/>	20	GE20	Disabled			Disabled		

Copy Settings... Edit...

Step 2. In the Filter: Interface Type equals to field, choose from the drop-down list either Port or LAG as the interface type.

Step 3. Click **Go**. The page shows the interface type chosen in step 2.

Step 4. Click the radio button of the interface for which you wish to edit its bandwidth properties.

Step 5. Click **Edit**. The *Edit Bandwidth* window appears.

Interface:	<input checked="" type="radio"/> Port GE4 <input type="radio"/> LAG 1
Ingress Rate Limit:	<input checked="" type="checkbox"/> Enable
<input checked="" type="checkbox"/> Ingress Rate Limit:	<input type="text" value="1000"/> KBits/sec. (Range: 100 - 1000000, Default: 100)
Egress Shaping Rate:	<input checked="" type="checkbox"/> Enable
<input checked="" type="checkbox"/> Committed Information Rate (CIR):	<input type="text" value="74"/> KBits/sec. (Range: 64 - 1000000, Default: 64)
<input checked="" type="checkbox"/> Committed Burst Size (CBS):	<input type="text" value="5000"/> Bytes (Range: 4096 - 16762902, Default: 128000)

Apply Close

Step 6. To enable ingress rate limit, check the **Ingress Rate Limit** check box. This field is only available if the interface is set to port.

Step 7. In the Ingress Rate Limit field, enter the maximum amount of bandwidth allowed on the interface. This field is only available if the interface is set to port.

Step 8. To enable egress shaping rate, check the **Egress Shaping Rate** check box.

Step 9. In the Committed Information Rate (CIR) field, enter the maximum bandwidth allowed to egress on the interface.

Step 10. In the Committed Burst Size (CBS) field, enter the maximum burst size of data for each egress interface.

Step 11. Click **Apply** to save your configuration.

Step 12. For the some applicable devices, the Edit Bandwidth window appears with Ingress Committed Burst Size option. This field is only available if the interface is set to port.

Interface:	<input checked="" type="radio"/> Port GE4	<input type="radio"/> LAG 1
Ingress Rate Limit:	<input checked="" type="checkbox"/> Enable	
Ingress Rate Limit:	<input type="text" value="1000"/>	KBits/sec (Range: 100 - 1000000, Default: 100)
Ingress Committed Burst Size (CBS):	<input type="text" value="10000"/>	Bytes (Range: 3000 - 19173960, Default: 128000)
Egress Shaping Rate:	<input checked="" type="checkbox"/> Enable	
Committed Information Rate (CIR):	<input type="text" value="74"/>	KBits/sec (Range: 64 - 1000000, Default: 64)
Egress Committed Burst Size (CBS):	<input type="text" value="5000"/>	Bytes (Range: 4096 - 16762902, Default: 128000)
<input type="button" value="Apply"/> <input type="button" value="Close"/>		

Step 13. To enable ingress rate limit and Ingress Committed Burst Size (CBS), check the Ingress Rate Limit check box. This field is only available if the interface is set to port.

Step 14. In the Ingress Committed Burst Size option, enter the maximum amount of bandwidth allowed on the interface. This option works when there is temporarily increase in the amount of data which is beyond the allowed limit. This field is only available if the interface is a port.

Step 15. Repeat step 6 to 11.

Apply a Bandwidth Configuration to Multiple Interfaces

This section describes how to apply the bandwidth configuration of a single interface to multiple interfaces.

Step 1. Log in to the web configuration utility and choose **Quality of Service > General > Bandwidth**. The *Bandwidth* page opens:

Bandwidth

Bandwidth Table Showing 1-20 of 20 All per page

Filter: *Interface Type* equals to Port Go

Entry No.	Interface	Ingress Rate Limit			Egress Shaping Rates		
		Status	Rate Limit (KBits/sec)	%	Status	CIR (KBits/sec)	CBS (Bytes)
<input type="radio"/>	1	GE1	Disabled			Disabled	
<input type="radio"/>	2	GE2	Disabled			Disabled	
<input type="radio"/>	3	GE3	Disabled			Disabled	
<input checked="" type="radio"/>	4	GE4	Enabled	100	0.01	Enabled	64 128000
<input type="radio"/>	5	GE5	Disabled			Disabled	
<input type="radio"/>	6	GE6	Disabled			Disabled	
<input type="radio"/>	7	GE7	Disabled			Disabled	
<input type="radio"/>	8	GE8	Disabled			Disabled	
<input type="radio"/>	9	GE9	Disabled			Disabled	
<input type="radio"/>	10	GE10	Disabled			Disabled	
<input type="radio"/>	11	GE11	Disabled			Disabled	
<input type="radio"/>	12	GE12	Disabled			Disabled	
<input type="radio"/>	13	GE13	Disabled			Disabled	
<input type="radio"/>	14	GE14	Disabled			Disabled	
<input type="radio"/>	15	GE15	Disabled			Disabled	
<input type="radio"/>	16	GE16	Disabled			Disabled	
<input type="radio"/>	17	GE17	Disabled			Disabled	
<input type="radio"/>	18	GE18	Disabled			Disabled	
<input type="radio"/>	19	GE19	Disabled			Disabled	
<input type="radio"/>	20	GE20	Disabled			Disabled	

Copy Settings... Edit...

Step 2. Click the radio button of the interface you want to apply its configuration to multiple interfaces.

Step 3. Click **Copy Settings**. The *Copy Settings* window appears.

Copy configuration from entry 4 (GE4)

to: (Example: 1,3,5-10 or GE1,GE3-GE5)

Apply Close

Step 4. In the to field, enter the range of interfaces that you want to apply the configuration of the interface chosen in Step 2. You can use the interface numbers or the name of the interfaces as input. You can enter each interface separated by a comma such as 1, 3, 5 or GE1, GE3, GE5, or you can enter a range of interfaces such as 1-5 or GE1-GE5.

Step 5. Click **Apply** to save your configuration.

The image below depicts the changes after the configuration.

Bandwidth								
Bandwidth Table						Showing 1-20 of 20 All per page		
Filter: <i>Interface Type</i> equals to <input type="text" value="Port"/> <input type="button" value="Go"/>								
	Entry No.	Interface	Ingress Rate Limit			Egress Shaping Rates		
			Status	Rate Limit (KBits/sec)	%	Status	CIR (KBits/sec)	CBS (Bytes)
<input type="radio"/>	1	GE1	Disabled			Disabled		
<input type="radio"/>	2	GE2	Disabled			Disabled		
<input type="radio"/>	3	GE3	Disabled			Disabled		
<input type="radio"/>	4	GE4	Enabled	100	0.01	Enabled	64	128000
<input type="radio"/>	5	GE5	Enabled	100	0.01	Enabled	64	128000
<input type="radio"/>	6	GE6	Enabled	100	0.01	Enabled	64	128000
<input type="radio"/>	7	GE7	Enabled	100	0.01	Enabled	64	128000
<input type="radio"/>	8	GE8	Enabled	100	0.01	Enabled	64	128000
<input type="radio"/>	9	GE9	Enabled	100	0.01	Enabled	64	128000
<input type="radio"/>	10	GE10	Enabled	100	0.01	Enabled	64	128000
<input type="radio"/>	11	GE11	Disabled			Disabled		
<input type="radio"/>	12	GE12	Disabled			Disabled		
<input type="radio"/>	13	GE13	Disabled			Disabled		
<input type="radio"/>	14	GE14	Disabled			Disabled		
<input type="radio"/>	15	GE15	Disabled			Disabled		
<input type="radio"/>	16	GE16	Disabled			Disabled		
<input type="radio"/>	17	GE17	Disabled			Disabled		
<input type="radio"/>	18	GE18	Disabled			Disabled		
<input type="radio"/>	19	GE19	Disabled			Disabled		
<input type="radio"/>	20	GE20	Disabled			Disabled		

Copy Settings... Edit...

Egress shaping per queue

This section describes how to configure egress shaping per queue. Egress shaping per queue limits the transmission rate of egressed frames of a single interface, in a per queue basis.

Step 1. Log in to the web configuration utility and choose **Quality of Service > General > Egress shaping per Queue**. The *Egress Shaping Per Queue* page opens:

Egress Shaping Per Queue																
Egress Shaping Per Queue Table														Showing 1-20 of 20	All	per page
Filter: Interface Type equals to																
														Port	Go	
	Entry No.	Interface	Queue 1 Egress Shaping			Queue 2 Egress Shaping			Queue 3 Egress Shaping			Queue 4 Egress Shaping				
			Status	CIR	CBS											
<input type="radio"/>	1	GE1	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	2	GE2	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	3	GE3	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	4	GE4	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	5	GE5	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	6	GE6	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	7	GE7	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	8	GE8	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	9	GE9	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	10	GE10	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	11	GE11	Disabled			Disabled			Disabled			Disabled				
<input checked="" type="radio"/>	12	GE12	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	13	GE13	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	14	GE14	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	15	GE15	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	16	GE16	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	17	GE17	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	18	GE18	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	19	GE19	Disabled			Disabled			Disabled			Disabled				
<input type="radio"/>	20	GE20	Disabled			Disabled			Disabled			Disabled				

Copy Settings... Edit...

Step 2. In the the Filter: Interface Type equals to field, choose from the drop-down list either Port or LAG as the interface type.

Step 3. Click **Go**. The page shows the interface type chosen in step 2.

Step 4. Click the radio button of the interface you want to edit.

Step 5. Click **Edit**. The Edit *Egress Shaping Per Queue* window appears.

Interface: Port **GE12** LAG **1**

Queue 1: Enable

 Committed Information Rate (CIR): (Range: 64 - 1000000)

 Committed Burst Size (CBS): (Range: 4096 - 16762902)

Queue 2: Enable

 Committed Information Rate (CIR): (Range: 64 - 1000000)

 Committed Burst Size (CBS): (Range: 4096 - 16762902)

Queue 3: Enable

 Committed Information Rate (CIR): (Range: 64 - 1000000)

 Committed Burst Size (CBS): (Range: 4096 - 16762902)

Queue 4: Enable

 Committed Information Rate (CIR): (Range: 64 - 1000000)

 Committed Burst Size (CBS): (Range: 4096 - 16762902)

Step 6. In the Queue 1 field, check the **Enable** check box to enable egress shaping for queue 1.

Step 7. In the Committed Information Rate (CIR), enter the maximum rate. CIR is the average maximum amount of data that can be sent on an interface.

Step 8. In the Committed Burst Size (CBS), enter the maximum burst size. CBS is the maximum burst of data allowed to be sent.

Step 9. Apply Steps 6-8 for the rest of the queues 2, 3, and 4.

Step 10. Click **Apply** to save your configuration.

Egress Shaping Per Queue																		
Egress Shaping Per Queue Table															Showing 1-20 of 20	All	per page	
Filter: Interface Type equals to																		
															Port	Go		
Entry No.	Interface	Queue 1 Egress Shaping			Queue 2 Egress Shaping			Queue 3 Egress Shaping			Queue 4 Egress Shaping							
		Status	CIR	CBS														
<input type="radio"/>	1	GE1	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	2	GE2	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	3	GE3	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	4	GE4	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	5	GE5	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	6	GE6	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	7	GE7	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	8	GE8	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	9	GE9	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	10	GE10	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	11	GE11	Disabled			Disabled			Disabled			Disabled						
<input checked="" type="radio"/>	12	GE12	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000				
<input type="radio"/>	13	GE13	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	14	GE14	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	15	GE15	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	16	GE16	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	17	GE17	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	18	GE18	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	19	GE19	Disabled			Disabled			Disabled			Disabled						
<input type="radio"/>	20	GE20	Disabled			Disabled			Disabled			Disabled						

Apply Egress Shaping per Queue to Multiple Interfaces

This section describes how to apply an egress shaping configuration of a single interface to multiple interfaces.

Step 1. Log in tot the web configuration utility and choose **Quality of Service > General > Egress shaping per Queue**. The *Egress Shaping Per Queue* page opens.

Egress Shaping Per Queue															
Egress Shaping Per Queue Table															
Showing 1-20 of 20 All per page															
Filter: Interface Type equals to Port Go															
Entry No.	Interface	Queue 1 Egress Shaping			Queue 2 Egress Shaping			Queue 3 Egress Shaping			Queue 4 Egress Shaping				
		Status	CIR	CBS											
<input type="radio"/>	1	GE1	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	2	GE2	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	3	GE3	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	4	GE4	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	5	GE5	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	6	GE6	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	7	GE7	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	8	GE8	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	9	GE9	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	10	GE10	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	11	GE11	Disabled			Disabled			Disabled			Disabled			
<input checked="" type="radio"/>	12	GE12	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000	
<input type="radio"/>	13	GE13	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	14	GE14	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	15	GE15	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	16	GE16	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	17	GE17	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	18	GE18	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	19	GE19	Disabled			Disabled			Disabled			Disabled			
<input type="radio"/>	20	GE20	Disabled			Disabled			Disabled			Disabled			

Step 2. Click the radio button of the interface you want to apply its configuration to multiple interfaces.

Step 3. Click **Copy Settings**. The *Copy Settings* window appears.

Copy configuration from entry 12 (GE12)

to: (Example: 1,3,5-10 or: GE1,GE3-GE5)

Step 4. In the to field, enter the range of interfaces that you want to apply the configuration of the interface chosen in Step 2. You can use the interface numbers or the name of the interfaces as input. You can enter each interface separated by a comma such as 1, 3, 5 or GE1, GE3, GE5 or you can enter a range of interfaces such as 1-5 or GE1-GE5.

Step 5. Click **Apply** to save your configuration.

The image below depicts the changes after the configuration.

Egress Shaping Per Queue

Egress Shaping Per Queue Table

Showing 1-20 of 20 All per page

Filter: Interface Type equals to Port

	Entry No.	Interface	Queue 1 Egress Shaping			Queue 2 Egress Shaping			Queue 3 Egress Shaping			Queue 4 Egress Shaping		
			Status	CIR	CBS									
<input type="radio"/>	1	GE1	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	2	GE2	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	3	GE3	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	4	GE4	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	5	GE5	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	6	GE6	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	7	GE7	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	8	GE8	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	9	GE9	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	10	GE10	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	11	GE11	Disabled			Disabled			Disabled			Disabled		
<input type="radio"/>	12	GE12	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000
<input type="radio"/>	13	GE13	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000
<input type="radio"/>	14	GE14	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000
<input type="radio"/>	15	GE15	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000
<input type="radio"/>	16	GE16	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000
<input type="radio"/>	17	GE17	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000
<input type="radio"/>	18	GE18	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000
<input type="radio"/>	19	GE19	Enabled	128	4096	Enabled	256	8092	Enabled	64	4096	Enabled	512	16000
<input type="radio"/>	20	GE20	Disabled			Disabled			Disabled			Disabled		