

Quality of Service (QoS) Configuration on the CVR100W VPN Router

Objective

Quality of Service (QoS) is a group of features that is used to manage network traffic efficiently. [Priority queuing](#) is a QoS technique that places packets in queues based on the priority of the packet. The CVR100W supports four queues for each physical port on the device. Queue four has the highest priority, while queue one has the lowest. The router sends all traffic from the higher priority queue before it sends traffic from the lower priority queues. A packet can be forwarded to a queue based on a static default queue, a CoS value, or a DSCP value. [Class of Service \(CoS\)](#) and [Differentiated Services Code Point \(DSCP\)](#) are QoS tools used to classify a frame or packet respectively. This article explains how to configure QoS queue settings on the CVR100W.

Applicable Device

- CVR100W

Software Version

- 1.0.1.19

QoS Configuration

Port-Based Settings

Step 1. Log in to the web configuration utility and choose **QoS > QoS Port-Based Settings**. The *QoS Port-Based Settings* page opens:

LAN Port	Trust Mode	Default Traffic Forwarding Queue for Untrusted Devices. (Port Trust Mode)
1	Port	2
2	DSCP	0
3	CoS	0
4	Port	3

Save Restore Default Cancel

Step 2. Choose a trust mode for each LAN port from the Trust Mode drop-down list. The trust mode determines how network traffic is sent to queues.

- Port — The network traffic is forwarded to a static queue.


- CoS — The network traffic is prioritized across the LAN based on the Class of Service (CoS) values configured on the *CoS Settings* page. Click [here](#) to go to CoS Settings.
- DSCP — The network traffic is prioritized across the LAN based on the Differentiated Services Code Point (DSCP) queue mapping configured on the *DSCP Settings* page. Click [here](#) to go to DSCP Settings.

Step 3. If the trust mode is Port, choose a queue for outbound traffic for the LAN port from the Default Traffic Forwarding Queue for Untrusted Devices drop-down list. Queue 1 is the lowest priority, while queue 4 is the highest priority.

Step 4. Click **Save** to save the changes.

CoS Settings

Step 1. Log in to the web configuration utility and choose **QoS > CoS Settings**. The *CoS Settings* page opens:



CoS Settings

CoS to Traffic Forwarding Queue Mapping

Set Port to CoS mode in the [QoS Port-based Settings](#) page

CoS Priority	Traffic Forwarding Queue
7	4 (highest) ▼
6	3 ▼
5	3 ▼
4	2 ▼
3	2 ▼
2	1 (lowest) ▼
1	1 (lowest) ▼
0	2 ▼

Save Restore Default Cancel

CoS is a 3 bit field in an Ethernet header of a frame. This CoS value determines which queue the traffic is forwarded to based on the *CoS Settings* page. The following fields display information about the CoS configuration:

- CoS Priority — The CoS values that are assigned by QoS to frames. These values are based on the nature of the traffic. CoS 7 is the highest priority while CoS 0 is the lowest.
 - 7 — Network Control.
 - 6 — Internetwork Control.
 - 5 — Voice.
 - 4 — Video.

- 3 — Critical Application.
- 2 — Excellent Effort.
- 1 — Best Effort.
- 0 — Background.

Step 2. Choose a forwarding queue for each CoS priority from the Traffic Forwarding Queue drop-down list.

Step 3. Click **Save** to save the changes.

DSCP Settings

DSCP is a 6 bit field in an IP header of a packet that is used to classify a packet. The DSCP value determines which queue the packet is forwarded to, based on the *DSCP Settings* page.

Step 1. Log in to the web configuration utility and choose **QoS > DSCP Settings**. The *DSCP Settings* page opens:

DSCP Value to Traffic Forwarding Queue Mapping

Set Port to DSCP mode in the [QoS Port-based Settings](#) page

DSCP Settings Table

DSCP	Binary	Decimal	Queue
BE(Default)	000000	0	1 ▾
CS1	001000	8	1 ▾
AF11	001010	10	1 ▾
AF12	001100	12	1 ▾
AF13	001110	14	1 ▾
CS2	010000	16	2 ▾
AF21	010010	18	2 ▾
AF22	010100	20	2 ▾
AF23	010110	22	2 ▾
CS3	011000	24	3 ▾
AF31	011010	26	3 ▾
AF32	011100	28	3 ▾
AF33	011110	30	3 ▾
CS4	100000	32	3 ▾
AF41	100010	34	3 ▾
AF42	100100	36	3 ▾
AF43	100110	38	3 ▾
CS5	101000	40	4 ▾
EF	101110	46	4 ▾
CS6	110000	48	3 ▾
CS7	111000	56	3 ▾

☒ Collapse to view RFC values only
☐ Expand to view all DSCP values

Save

Restore Default

Cancel

Step 2. Click the radio button that corresponds to the desired display option.

- Collapse to view RFC values only — DSCP values that are defined in a Request for Comment (RFC) document are displayed.
- Expand to view all DSCP Values — All new DSCP values are displayed that are not defined previously.

Step 3. Choose a priority queue for each DSCP value from the Queue drop-down list.

Step 4. Click **Save** to save the changes.