

Configure QoS (Quality of Service) Queue Mapping on the RV320 and RV325 VPN Router Series

Objective

In general, networks handle all traffic in the same manner, and all data has an equal chance to be delivered and/or dropped. With QoS (Quality of Service) you can prioritize specific network traffic while giving best-effort performance to lower priority services. This is a useful tool when network bandwidth needs to be utilized more effectively and to make network performance more predictable. It can be done through Differentiated Service Code Point (DSCP), which uses a 6 bit field in the IP packet header in order to classify the traffic (layer 3). This article explains how to change the queue priorities for the QoS values mentioned above on the RV320 and RV325.

Applicable Devices

- RV320 Dual WAN VPN Router
- RV325 Gigabit Dual WAN VPN Router

Software Version

- v1.1.0.09

QoS:CoS/DSCP Setting

Step 1. Log in to the Web Configuration Utility and choose **Port Management > QoS:CoS/DSCP Setting**. The *Qos:CoS/DSCP Setting* page opens:

QoS:CoS/DSCP Setting

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

Save Cancel

DSCP to Queue

Step 1. To change the priority of the service queues, navigate to the corresponding DSCP service and choose the desired priority level from the respective Queue priority drop-down list.

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

The DSCP to Queue Table displays the following information:

- **DSCP** — The DSCP values range from 0 to 63. A benefit of DSCP is that it has a wide range of values to map to different traffic, which allows for more specific and sophisticated mapping. DSCP works at layer 3 of the OSI (Open Systems Interconnection) model. It follows the same categorization as CoS/802.1p values but has a greater range inside each of those values.
 - 0 to 7 — The traffic that is treated as Best effort can be assigned in this range. Best effort. It is the default type of service and is recommended for traffic that is not real-time.
 - 8 to 23 — Background. All the traffic that runs in Background needs to be assigned in this range. This includes bulk transfers, games etc.
 - 24 to 31 — Best effort. The data which needs best-effort delivery on ordinary LAN priority. The network does not provide any guarantee on delivery, but the data obtains unspecified bit rate and delivery time based upon the traffic. Most applications will default to best effort.
 - 32 to 47 — All Video traffic can be assigned in this range
 - 48 to 63 — This range is mainly intended for Voice traffic.
- **Queue** — Displays the egress queue (the outbound queue) to which the DSCP is mapped. The queue uses priority queuing which ranges from 1 to 4, with 1 being the lowest priority and 4 the highest.

Step 2. Click **Save** to finish configuring the DSCP to Queue Table.