Configure DSCP Settings on RV110W

Objective

Differentiated Services Code Point (DSCP) is used to specify the traffic priorities over the IP header of the frame. Differentiated Services is a multiple service model that can satisfy differing QoS requirements. Here, the network tries to deliver a particular kind of service based on the QoS specified by each packet. This specification can occur in different ways, for example, using the 6-bit DSCP setting in IP packets or source and destination addresses. The network uses the QoS specification to classify, mark, shape, police traffic, and to perform intelligent queuing. It is also used for several mission-critical applications and for providing end-to-end QoS. Typically, Differentiated Services is appropriate for aggregate flows because it performs a relatively coarse level of traffic classification. Use the DSCP so that router can use the priority bits in the Type of Service (ToS) octet to prioritize traffic over QoS in layer 3.

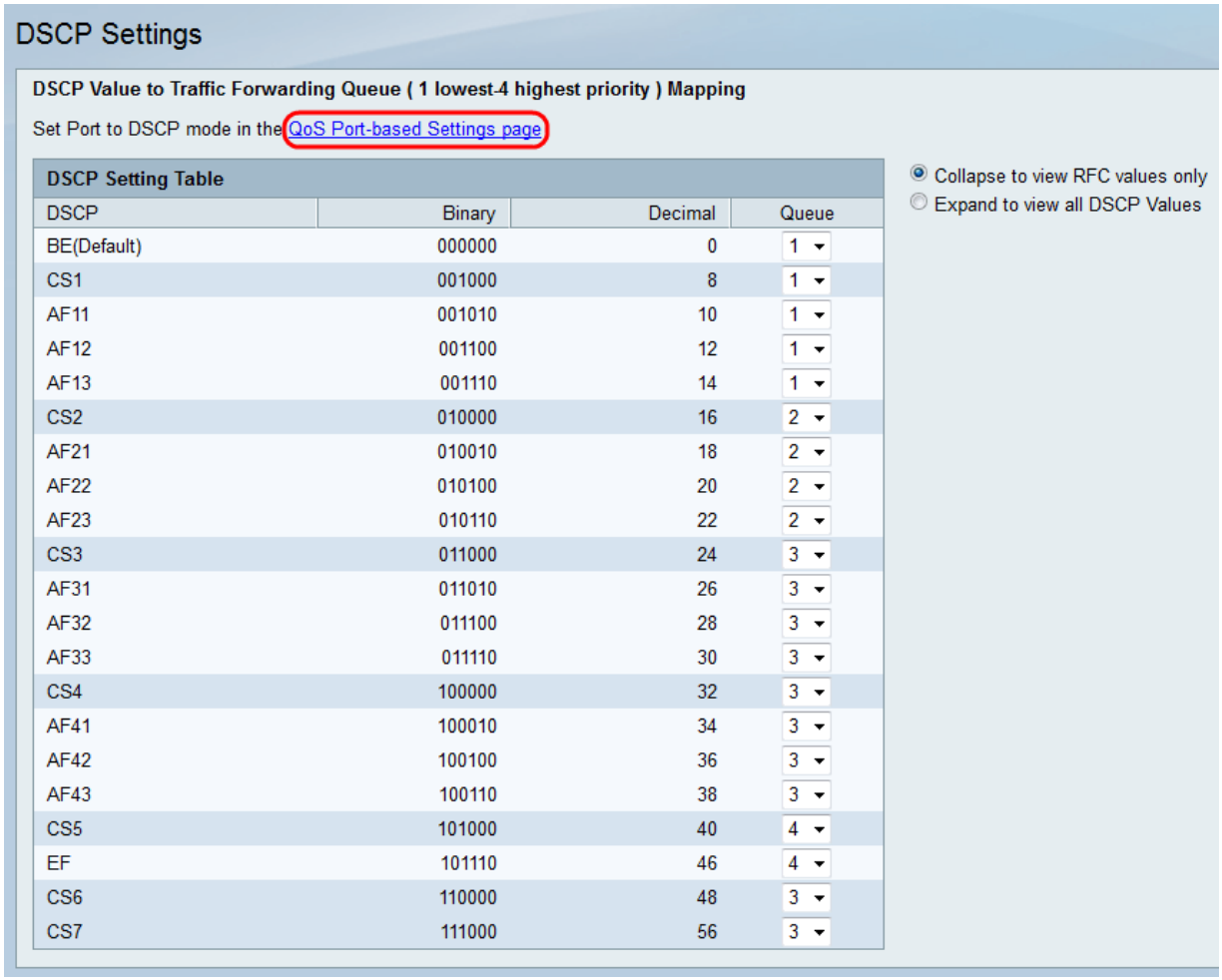
This document explains the configuration of DSCP settings on QoS Mapping in RV110W Wireless-N VPN firewall.

Applicable Devices

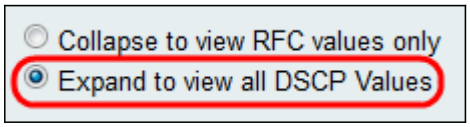
- RV110W

Configure DSCP Value to Traffic Forwarding Queue Mapping

Step 1. Use the Firewall Configuration Utility to choose **QoS > DSCP Settings**. The *DSCP Settings* page opens.



Note: Click **QoS Port-based Settings page**and make sure the Trust Mode is selected as DSCP in order to proceed further. Refer to article, Configure QoS Port Based Settings on the RV110W, RV120W, and RV220W for more details.



Step 2. Choose whether to only list RFC values or to list all DSCP values in the *DSCP Settings Table* by clicking the relevant radio button. In this article, Expand to view all DSCP Values is clicked to view all values of DSCP.

DSCP Setting Table

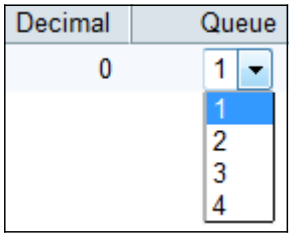
DSCP	Binary	Decimal	Queue
BE(Default)	000000	0	1
	000001	1	1
	000010	2	1
	000011	3	1
	000100	4	1
	000101	5	1
	000110	6	1
	000111	7	1
CS1	001000	8	1
	001001	9	1
AF11	001010	10	1
	001011	11	1
AF12	001100	12	1
	001101	13	1
AF13	001110	14	1
	001111	15	1
CS2	010000	16	2
	010001	17	2
AF21	010010	18	2
	010011	19	2
AF22	010100	20	2
	010101	21	2

AF23	010110	22	2
	010111	23	2
CS3	011000	24	3
	011001	25	3
AF31	011010	26	3
	011011	27	3
AF32	011100	28	3
	011101	29	3
AF33	011110	30	3
	011111	31	3
CS4	100000	32	3
	100001	33	3
AF41	100010	34	3
	100011	35	3
AF42	100100	36	3
	100101	37	3
AF43	100110	38	3
	100111	39	3
CS5	101000	40	4
	101001	41	4
	101010	42	4

	101011	43	4
	101100	44	4
	101101	45	4
EF	101110	46	4
	101111	47	4
CS6	110000	48	3
	110001	49	3
	110010	50	3
	110011	51	3
	110100	52	3
	110101	53	3
	110110	54	3
	110111	55	3
CS7	111000	56	3
	111001	57	3
	111010	58	3
	111011	59	3
	111100	60	3
	111101	61	3
	111110	62	3
	111111	63	3

Save | Restore Default | Cancel

Step 3. For each DSCP value in the *DSCP Settings Table*, choose a priority level from the *Queue* drop-down list. This maps the DSCP value to the selected QoS queue.



Generally there are 4 value available to set the priority. The default values for the queue number w.r.t decimal numbers are specified below:

- 0-15 — Default DSCP value is 1. This value is the lowest priority.
- 16-23 — Default DSCP value is 2.
- 24-39 and 48-63 — Default DSCP value is 3.
- 40-47 — Default DSCP value is 4. This value is the highest priority.

Step 4. Click **Save** in order to apply changes or click **Restore Default** to revert back to the old values.