

Bandwidth Priority Configuration on the RV110W VPN Firewall

Objective

The bandwidth of the traffic that flows from the secure network (LAN) to the insecure network (WAN) can be shaped if Bandwidth Profiles are used. You can use a bandwidth profile to limit the outbound and inbound traffic. This prevents the consumption of all the bandwidth of the Internet link by the LAN users. To control bandwidth usage you can give priority to certain services. This ensures that important traffic is sent before less important traffic.

The article explains how to configure bandwidth profiles on the RV110W VPN Firewall.

Applicable Device

- RV110W

Software Version

- 1.2.0.9

Configure Bandwidth Priority

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

The screenshot shows the 'Bandwidth Management' configuration page. It includes a 'Setup' section with a checked 'Enable' checkbox. Below is a 'Bandwidth' section with a table for 'Bandwidth Table' showing upstream and downstream bandwidth for the WAN interface. At the bottom, there is a 'Bandwidth Priority Table' with columns for Enable, Service, Direction, and Priority, and buttons for 'Add Row', 'Edit', 'Delete', and 'Service Management'.

Bandwidth Table			
Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)	
WAN	10240	40960	

Bandwidth Priority Table				
<input type="checkbox"/>	Enable	Service	Direction	Priority
<input type="checkbox"/>	No data to display			

Buttons: Add Row, Edit, Delete, Service Management, Save, Cancel

Step 2. Check the **Enable** check box in the Bandwidth Management field to enable Bandwidth Management.

Step 3. Enter the desired upstream bandwidth in Kbit/Sec. Upstream is the bandwidth size used to send data to the Internet.

Step 4. Enter the desired downstream bandwidth in Kbit/Sec. Downstream is the bandwidth

size used to receive data from the Internet.

Bandwidth Management

Setup
Bandwidth Management: Enable

Bandwidth
The Maximum Bandwidth provided by ISP

Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)
WAN	10240	40960

Bandwidth Priority Table

<input type="checkbox"/>	Enable	Service	Direction	Priority
<input type="checkbox"/>	<input checked="" type="checkbox"/>	All Traffic[All]	Upstream	Low

Add Row **Edit** **Delete** **Service Management**

Save **Cancel**

Step 5. Click **Add row** to configure bandwidth priority.

Step 6. Check the **Enable** check box to enable the bandwidth priority.

Step 7. Choose a service to prioritize from the Service drop-down list.

Note: In order to add a new service definition, click **Service Management**. This is used to define a new service to utilize for the firewall and QoS definitions. Please refer to the [Service Management](#) section for more info.

Step 8. Choose the direction of traffic to prioritize from the Direction drop-down list. This option determines what traffic the bandwidth priority is applied to.

Step 9. Choose the priority for the service chosen from Priority drop-down list.

Bandwidth Management

Setup
Bandwidth Management: Enable

Bandwidth
The Maximum Bandwidth provided by ISP

Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)
WAN	10240	40960

Bandwidth Priority Table

<input type="checkbox"/>	Enable	Service	Direction	Priority
<input type="checkbox"/>	<input checked="" type="checkbox"/>	All Traffic[All]	Upstream	Low

Add Row **Edit** **Delete** **Service Management**

Save **Cancel**

Step 10. Click **Save** to apply the settings.

Step 11. (Optional) To edit a bandwidth priority, check the check box of the bandwidth priority, click **Edit**, edit the desired fields, and click **Save**.

Step 12. (Optional) To delete a bandwidth priority, check the check box of the bandwidth

priority, click **Delete** and click **Save**.

Service Management

The Service Management feature is used to create and customize the services for which firewall rules can be applied. Once the service gets defined, it appears in the Service Management Table.

Step 1. Click Add Row to add a new service.

Service Management

Service Management Table				
<input type="checkbox"/>	Service Name	Protocol	Start Port	End Port
<input type="checkbox"/>	All Traffic	All		
<input type="checkbox"/>	DNS	UDP	53	53
<input type="checkbox"/>	FTP	TCP	21	21
<input type="checkbox"/>	HTTP	TCP	80	80
<input type="checkbox"/>	HTTP Secondary	TCP	8080	8080
<input type="checkbox"/>	HTTPS	TCP	443	443
<input type="checkbox"/>	HTTPS Secondary	TCP	8443	8443
<input type="checkbox"/>	TFTP	UDP	69	69
<input type="checkbox"/>	IMAP	TCP	143	143
<input type="checkbox"/>	NNTP	TCP	119	119
<input type="checkbox"/>	POP3	TCP	110	110
<input type="checkbox"/>	SNMP	UDP	161	161
<input type="checkbox"/>	SMTP	TCP	25	25
<input type="checkbox"/>	TELNET	TCP	23	23
<input type="checkbox"/>	TELNET Secondary	TCP	8023	8023
<input type="checkbox"/>	TELNET SSL	TCP	992	992
<input type="checkbox"/>	Voice(SIP)	TCP & UDP	5060	5061

Step 2. In the Service Name field, enter the desired service name. This identifies the service.

Service Management Table

<input type="checkbox"/>	Service Name	Protocol	Start Port	End Port
<input type="checkbox"/>	All Traffic	All		
<input type="checkbox"/>	DNS	UDP	53	53
<input type="checkbox"/>	FTP	TCP	21	21
<input type="checkbox"/>	HTTP	TCP	80	80
<input type="checkbox"/>	HTTP Secondary	TCP	8080	8080
<input type="checkbox"/>	HTTPS	TCP	443	443
<input type="checkbox"/>	HTTPS Secondary	TCP	8443	8443
<input type="checkbox"/>	TFTP	UDP	69	69
<input type="checkbox"/>	IMAP	TCP	143	143
<input type="checkbox"/>	NNTP	TCP	119	119
<input type="checkbox"/>	POP3	TCP	110	110
<input type="checkbox"/>	SNMP	UDP	161	161
<input type="checkbox"/>	SMTP	TCP	25	25
<input type="checkbox"/>	TELNET	TCP	23	23
<input type="checkbox"/>	TELNET Secondary	TCP	8023	8023
<input type="checkbox"/>	TELNET SSL	TCP	992	992
<input type="checkbox"/>	Voice(SIP)	TCP & UDP	5060	5061

DHCP UDP 67 67

Step 3. In the Protocol field, choose the protocol from the drop-down list that the service utilizes.

- TCP — This mode allows error free transmission of data. Through the use of flow control, all data is ensured to be delivered and all unsend packets are resent.
- UDP — This mode is faster than TCP, but does not provide flow control. Primary uses of UDP include streaming of video, voice, gaming or other live applications where flow control is not practical.
- TCP & UDP — This mode allows for the use of both TCP and UDP.
- ICMP — This mode allows for control protocol. This protocol is not designed to carry application data; instead it relays information about the status of the network. The ping utility uses this protocol.

Step 4. In the Start Port field, enter the first TCP or UDP port that the service uses.

Step 5. In the End Port field, enter the last TCP or UDP port that the service uses.

Step 6. Click **Save** to apply the settings.

Step 7. (Optional) In order to edit a protocol, check the check box of the desired service, click **Edit**, edit the desired fields, and click **Save**.

Step 8. (Optional) In order to delete a protocol, check the check box of the desired service, click **Delete**, and click **Save**.