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Bandwidth Management on RV130 and RV130W

Objective

Bandwidth is the amount of data that can be transferred across a network over a given unit of time. Bandwidth Management is a Quality of Service (QoS) feature that prioritizes network services and modifies rate controls. The Bandwidth Management settings allow you to control traffic, communications, and the rate of data transfers on a network link to enhance network performance.

The objective of this document is to show you how to configure Bandwidth Management settings on the RV130 and RV130W.

Applicable Devices

- RV130
- RV130W

Bandwidth Management

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

Bandwidth Management

Setup

Bandwidth Management: Enable

Bandwidth

The Maximum Bandwidth provided by ISP

Bandwidth Table		
Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)
Ethernet	10240	40960
3G		

Bandwidth Priority Table										
<input type="checkbox"/> Enable	Direction	Category	Services	VLAN/SSID	IP Address	Subnet Mask	Priority	Remarking	DSCP	
<input type="checkbox"/> No data to display										
Add Row		Edit		Delete		Service Management				

Save Cancel

Step 2. In the *Bandwidth Management* field under the *Setup* section, check the **Enable** check box to allow the device to manage the bandwidth of traffic flowing from the LAN to the WAN.

Bandwidth Management

Setup

Bandwidth Management: Enable

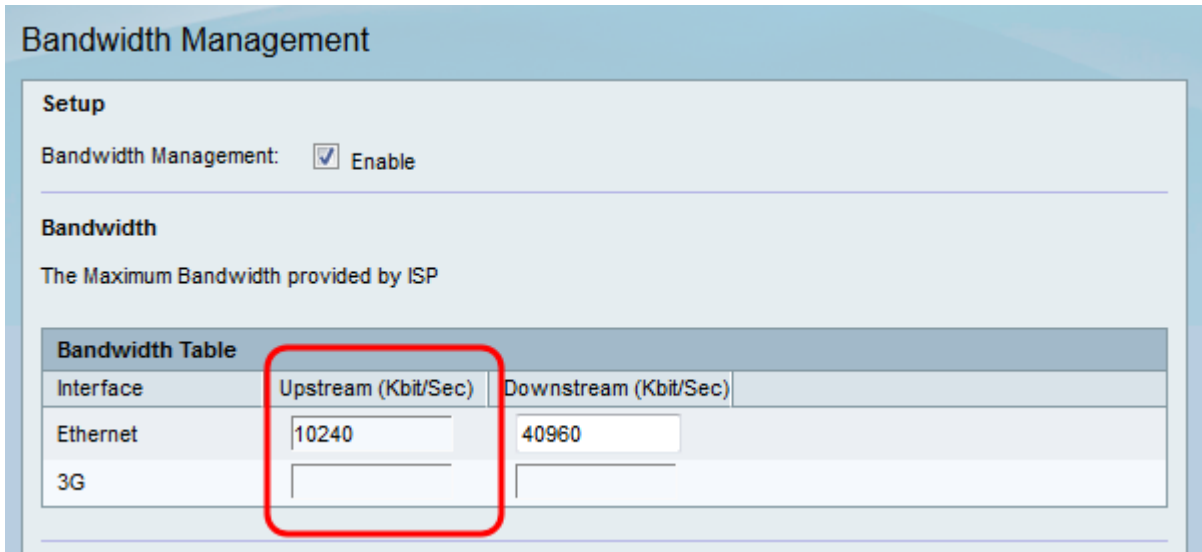
Bandwidth

The Maximum Bandwidth provided by ISP

Bandwidth Table		
Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)
Ethernet	10240	40960
3G		

Note: The Bandwidth Table shows available WAN interfaces for which you can modify the rate that the device sends and receives data.

Step 3. In the *Upstream (Kbit/Sec)* column, enter the rate at which the router sends data for each of the available interfaces listed.

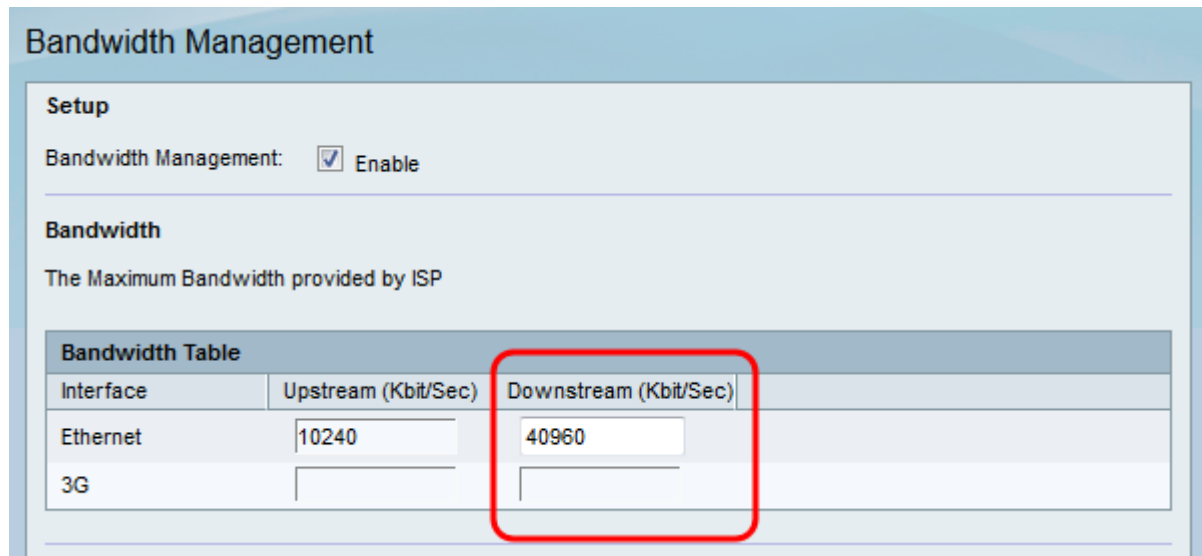


The screenshot shows the 'Bandwidth Management' configuration page. Under the 'Setup' section, 'Bandwidth Management' is checked and set to 'Enable'. Under the 'Bandwidth' section, there is a label 'The Maximum Bandwidth provided by ISP'. Below this is a 'Bandwidth Table' with the following structure:

Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)
Ethernet	10240	40960
3G		

The 'Upstream (Kbit/Sec)' column for the 'Ethernet' row is highlighted with a red box.

Step 4. In the *Downstream (Kbit/Sec)* column, enter the rate at which the router receives data for each of the available interfaces listed.



This screenshot is identical to the previous one, showing the 'Bandwidth Management' configuration page. The 'Bandwidth Table' is the same, but now the 'Downstream (Kbit/Sec)' column for the 'Ethernet' row is highlighted with a red box.

Step 5. Click **Save** to save changes.

Add a Service Priority

The *Bandwidth Priority* Table is used to assign specific priorities to services to manage their bandwidth usage.

Step 1. Click **Add Row** to add a new service priority in the *Bandwidth Priority Table*.

Bandwidth Table

Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)
Ethernet	10240	40960
3G		

Bandwidth Priority Table

<input type="checkbox"/> Enable	Direction	Category	Services	VLAN/SSID	IP Address	Subnet Mask	Priority	Remarking	DSCP
<input type="checkbox"/>									

No data to display

Add Row Edit Delete Service Management

Save Cancel

Step 2. Check the **Enable** check box to enable bandwidth management for the service.

Bandwidth Table

Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)
Ethernet	10240	40960
3G		

You must save before you can edit or delete.

Bandwidth Priority Table

<input checked="" type="checkbox"/> Enable	Direction	Category	Services	VLAN/SSID	IP Address	Subnet Mask	Priority	Remarking	DSCP
<input type="checkbox"/>	Outbound	Service	All Traffic [All]	vlan1			Low		

Add Row Edit Delete Service Management

Save Cancel

Step 3. From the *Direction* drop-down list, choose whether the service sends data outbound or receives data inbound.

Bandwidth Table	
Interface	Upstream (Kbit/Sec)
Ethernet	10240
3G	

You must save before you can edit or delete.

Bandwidth Priority Table			
<input type="checkbox"/>	Enable	Direction	Category
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outbound	Service

Add Row Edit Service Management

Save Cancel

Step 4. From the *Category* drop-down list, choose what you would like to set the bandwidth priority for.

Bandwidth Table		
Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)
Ethernet	10240	40960
3G		

You must save before you can edit or delete.

<input type="checkbox"/>	Enable	Direction	Category	Services	VLAN/SSID
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outbound	Service	All Traffic [All]	vlan1

Add Row Edit Service Management

Save Cancel

The available options are defined as follows:

- Service — Used to set bandwidth priority for a specific type of traffic (i.e. HTTP, DNS, FTP).
- VLAN/SSID — Used to set bandwidth priority for all traffic on a specific VLAN/SSID. This option is only available if you select **Outbound** for *Direction* in Step 3. Skip to Step 6 if you choose this option.

- Source IP — Used to set bandwidth priority for all traffic on a specific Source IP address. This option is only available if you select **Inbound** for *Direction* in Step 3. Skip to Step 7 if you choose this option.
- Destination IP — Used to set bandwidth priority for all traffic on a specific Destination IP address. This option is only available if you select **Outbound** for *Direction* in Step 3. Skip to Step 7 if you choose this option.

Step 5. If you selected **Service** in Step 4, choose a service to prioritize from the *Services* drop-down list. When you are finished, skip to Step 8.

You must save before you can edit or delete.

Bandwidth Priority Table				
<input type="checkbox"/>	Enable	Direction	Category	Services
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outbound	Service	All Traffic [All]

Services

- All Traffic [All]
- DNS [UDP/53~53]
- FTP [TCP/21~21]
- HTTP [TCP/80~80]
- HTTP Secondary [TCP/8080~8080]
- HTTPS [TCP/443~443]
- HTTPS Secondary [TCP/8443~8443]
- TFTP [UDP/69~69]
- IMAP [TCP/143~143]
- NNTP [TCP/119~119]
- POP3 [TCP/110~110]
- SNMP [UDP/161~161]
- SMTP [TCP/25~25]
- TELNET [TCP/23~23]
- TELNET Secondary [TCP/8023~8023]
- TELNET SSL [TCP/992~992]
- Voice(SIP) [TCP & UDP/5060~5061]

Step 6. If you choose **VLAN/SSID** in Step 4, choose the VLAN or SSID you would like to set the priority of from the *VLAN/SSID* drop-down list and skip to Step 8. Otherwise skip this step.

Bandwidth Table		
Interface	Upstream (Kbit/Sec)	Downstream (Kbit/Sec)
Ethernet	10240	40960
3G		

You must save before you can edit or delete.

Bandwidth Priority Table					
<input type="checkbox"/>	Enable	Direction	Category	Services	VLAN/SSID
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outbound	VLAN/SSID	All Traffic [All]	vlan1

VLAN/SSID

- vlan1
- vlan1

Step 7. If you choose **Source IP** or **Destination IP** in Step 4, enter the IP address and Subnet Mask of the address you would like to set the priority of into the *IP Address* and *Subnet Mask* fields respectively. Otherwise, skip this step.

The screenshot shows the 'Bandwidth Priority Table' configuration interface. At the top, there is a 'Bandwidth Table' with columns for Interface, Upstream (Kbit/Sec), and Downstream (Kbit/Sec). Below it, a red warning message states: 'You must save before you can edit or delete.' The main section is the 'Bandwidth Priority Table' with columns: Enable, Direction, Category, Services, VLAN/SSID, IP Address, and Subnet Mask. A row is configured with 'Outbound' direction, 'Destination IP' category, 'All Traffic [All]' services, 'vlan1' VLAN/SSID, '192.0.2.0' IP Address, and '255.255.255.0' Subnet Mask. The 'IP Address' and 'Subnet Mask' fields are highlighted with a red rectangle. At the bottom, there are 'Add Row', 'Edit', 'Delete', and 'Service Management' buttons, and 'Save' and 'Cancel' buttons.

Step 8. From the *Priority* drop-down list, choose the level of bandwidth priority you would like to allocate to the specific service or IP. Higher priority will allot more bandwidth to the service or address.

This screenshot is similar to the previous one, but the 'Priority' dropdown menu is open. The dropdown list shows four options: 'Low', 'Low', 'Medium', and 'High'. The 'Medium' option is currently selected and highlighted with a blue background. The entire dropdown menu is enclosed in a red rectangle. The rest of the configuration remains the same as in Step 7.

Step 9. If you chose **Outbound** in Step 3, check the check box in the *Remarking* field to enable remarking on Differentiated Services Code Point (DSCP). Otherwise skip to step 11. Enabling remarking puts priority on network traffic across the LAN based on the DSCP queue mapping of the device. For more information, refer to [DSCP Settings on RV130 and RV130W](#).

This screenshot shows the 'Bandwidth Priority Table' configuration page with an additional column, 'Remarking', which has a checked checkbox. There is also a 'DSCP' column which is currently empty. The 'Remarking' checkbox is highlighted with a red rectangle. The rest of the configuration, including the IP address and priority, remains the same as in the previous steps.

Step 10. If you chose to enable remarking in Step 9, enter the remarking value for the packets in the *DSCP* field. Otherwise skip this step.

Bandwidth Table									
Interface	Upstream (Kbit/Sec)		Downstream (Kbit/Sec)						
Ethernet	10240		40960						
3G									

You must save before you can edit or delete.

Bandwidth Priority Table										
<input type="checkbox"/>	Enable	Direction	Category	Services	VLAN/SSID	IP Address	Subnet Mask	Priority	Remark	DSCP
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Outbound	Destination IP	All Traffic [All]	vlan1	192.0.2.0	255.255.255.0	Low	<input checked="" type="checkbox"/>	

Step 11. Click **Save** to save your changes.