

## **How to Assign the Default Bandwidth Policy and CBQ by Port Location**

### **Function:**

Nomadix 8.11 firmware provides a new feature to assign default group bandwidth limits and/or Class-Based Queuing within a Port Location entry. Requires knowledge of Port Location, Bandwidth Management and Class-Based Queuing features.

Default Group Bandwidth Management Policies provide a method for sharing a block of bandwidth between devices connecting through a VLAN.

Class-based Queuing provides the ability to assign users connected to a VLAN to a specific class. An example of using both would be for an instructor led seminar. The instructor would login with a class profile containing individual bandwidth caps and attendees with a default group bandwidth policy by connecting to the proper VLAN.

When a user authenticates and the authentication provides bandwidth settings, these will override the default group bandwidth policy. If the authentication method assigns the user to a specific Class, this will be assigned instead of the default Class.

Information on base features is available at

<https://nomadix.com/download/agdocs/how-to/admin/Port-Mapping-list.pdf>

<https://nomadix.com/download/agdocs/how-to/splash/How-To-Apply-Bandwidth-to-Free-Users.pdf>

<https://nomadix.com/download/agdocs/how-to/admin/Assign-WAN-Port-Using-Class-Based-Queuing.pdf>

**Configuration:**

- 1) Insure Global Bandwidth is properly entered on Configuration -> Ethernet ports/WAN within the properties of the WAN port.

**Ethernet Ports & WAN Interface Configuration and Status**

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Current Interface Settings

Name Label	*Role	Cfg Mode	IP Address	Mask	Gateway	Link	Inet Access	Up / Down Link Speed (Kbps)
<a href="#">WAN</a>	WAN	Static	67.130.149.163	255.255.255.224	67.130.149.190	Up	Available	15000 / 75000
<a href="#">Eth1</a>	SUB	n/a	n/a	n/a	n/a	Up	n/a	n/a
<a href="#">Eth2</a>	SUB	n/a	n/a	n/a	n/a	Up	n/a	n/a
<a href="#">Eth3</a>	OOS	n/a	n/a	n/a	n/a	Down	n/a	n/a
<a href="#">Eth4</a>	OOS	n/a	n/a	n/a	n/a	Down	n/a	n/a
<a href="#">Eth5</a>	OOS	n/a	n/a	n/a	n/a	Down	n/a	n/a
<a href="#">LAGG0</a>	OOS	n/a	n/a	n/a	n/a	Down	n/a	n/a
<a href="#">LAGG1</a>	OOS	n/a	n/a	n/a	n/a	Down	n/a	n/a

- 2) Configuration -> Bandwidth Management - enable Group Bandwidth Policies. Setting applies to Radius Group Bandwidth VSA and Default Group Bandwidth Policy assigned by Port Location.

Bandwidth Management	
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Bandwidth Management	<input checked="" type="checkbox"/> Enabled
Group Bandwidth Policies	<input checked="" type="checkbox"/> Enabled
Weighted Fair Queueing (WFQ)	<input type="checkbox"/> Enabled
	<input type="checkbox"/> Share Unused Bandwidth <span style="float: right;">i</span>
Default Valid Subscriber Max Up Bandwidth	<input type="text" value="5120"/> (Kbps) <span style="float: right;">i</span>
Default Valid Subscriber Max Down Bandwidth	<input type="text" value="5120"/> (Kbps) <span style="float: right;">i</span>
Default Pending Subscriber Max Up Bandwidth	<input type="text" value="5120"/> (Kbps) <span style="float: right;">i</span>
Default Pending Subscriber Max Down Bandwidth	<input type="text" value="5120"/> (Kbps) <span style="float: right;">i</span>
<input type="button" value="Save"/> <input type="button" value="Restore"/>	

Note: Group Bandwidth Policy setting in the Port Location table takes precedence over the Default Valid Subscriber settings on this page. Group BW Policy number if displayed in the Subscriber Administration page is generated by the Nomadix Access Gateway. The default group bandwidth policy id will be a number above 33554434. If Radius Group Bandwidth is also used please ensure the policy number is below 33554434 to avoid policy conflicts.

3) Within the Port Location List assign the default bandwidth limits and/or the CBQ assignment for that VLAN.

**List Port-Location Assignments**

Location  ⓘ

Port (e.g. VLAN ID)

Description  ⓘ

Provide DHCP Service ⓘ

Subnet

Default Group Bandwidth Management Policy ⓘ

Max Up Bandwidth  (Kbps) ⓘ

Max Down Bandwidth  (Kbps) ⓘ

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Max Down Bandwidth  (Kbps) ⓘ

Default QoS Policy  ▾

Default CBQ Class  ▾

State

- No Charge (Authorization not needed)
- Blocked
- Charge for Use (Authorization is required) ⓘ

Subscriber Administration -> Current table will reflect the Group BW Policy and Class if those categories are selected in Display Options. Group BW will show value in the Bandwidth Up/Down column, Class will not.

**Current Subscribers**

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Subscriber Idle Timeout:

Note: doesn't apply to Radius subscribers. Factory default: 1200 s

Subscriber Entries Used: 3 of 1080 licensed. Authorization Profiles: 4 of 16000

**Display options <<<**  IPv6 Addr?  Room  User Name  Group  Bandwidth  
 Throughput  AAA State  Expiration  Idle  Bytes  
 Total  Proxy  QoS  NAT IP  Class

Entries  to 3 of 3 Show 25 Entries ▾

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MAC	IP	Port	User Name	Group Bw Policy	Bandwidth Up / Down	Throughput In-Out Up / In-Out Down	AAA State	Bytes Sent	Bytes Received	Total	Proxy	NAT IP(S)	Class
<a href="#">Filter</a>													
<a href="#">3C:6A:A7:AA:5E:60</a>	10.0.0.27	0	test		0 / 0	851-851 / 27-27	Valid	22389246	5031845	27421091	OFF	WAN:10.20.1.116	byProfile
<a href="#">94:BF:C4:20:8C:AD</a>	10.0.0.28	0	Support Ruckus H510 AP		0 / 0	0-0 / 0-0	Valid	0	780	780	OFF	WAN:10.20.1.116	---
<a href="#">50:A7:33:07:B6:A0</a>	192.168.0.1	0			0 / 0	0-0 / 0-0	Valid	9468	26640	36108	OFF	WAN:10.20.1.116	---