

Configure Client QoS IPv4 Class Map on the WAP125 and WAP581

Objective

The QoS feature contains Differentiated Services (DiffServ) support that allows you to classify and manage network traffic. The configuration of DiffServ begins with the configuration of a class map. A Class Map identifies the traffic that need to be policed. It works as a component of a Policy Map. Class Maps contain conditions that traffic need to match in order to be forwarded or dropped. There can be many Class Maps in a Policy Map where either one Class Map can be matched, or all Class Maps should be matched for the action specified in the Policy Map to take place. A Class Map and a Policy Map are to be created to complete the QoS configuration of an access point.

This article aims to show you how to configure a Client QoS IPv4 Class Map on the WAP125 or WAP581 access point.

Applicable Devices

- WAP125
- WAP581

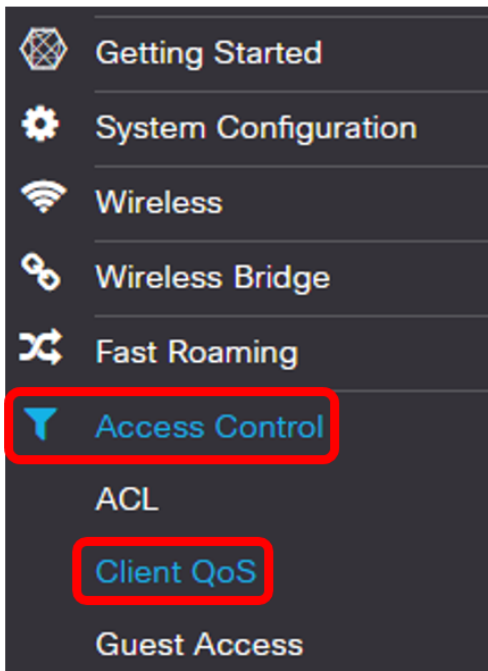
Software Version

- 1.0.0.5 — WAP125
- 1.0.0.4 — WAP581

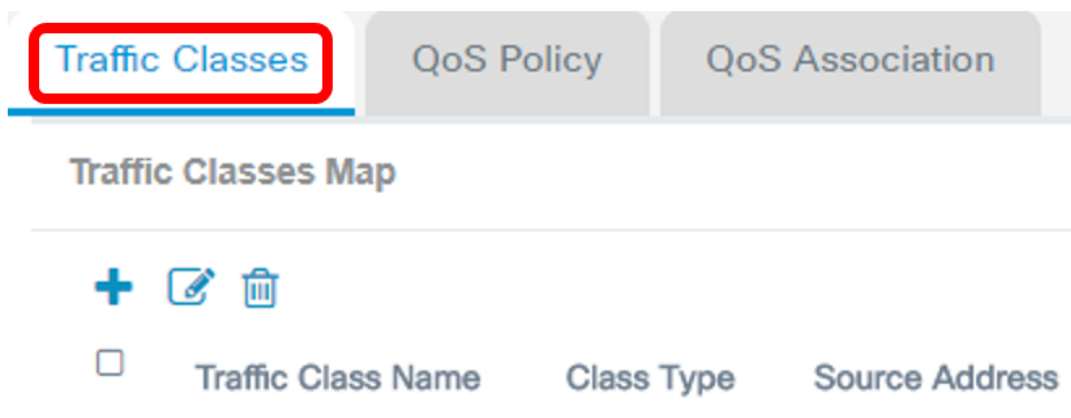
Configure IPv4 Class Map


Step 1. Log in to the web-based utility and choose **Access Control > Client QoS**.

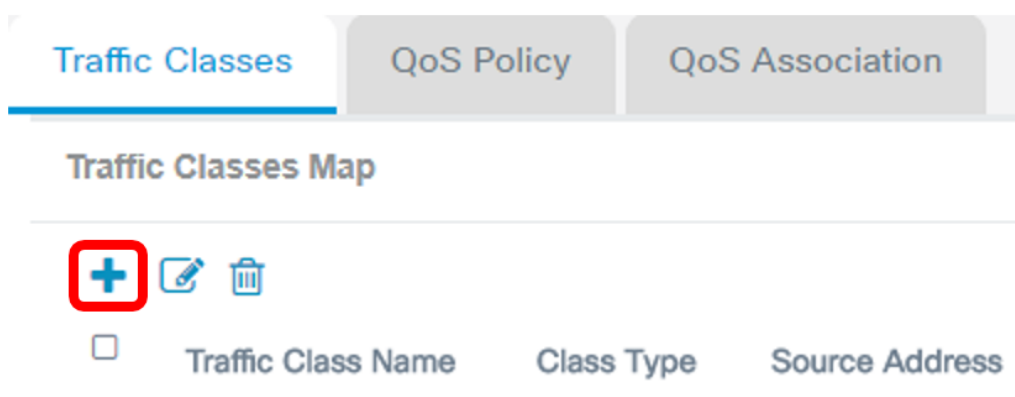
Note: The images on this article are taken from the WAP125. Options may vary depending on the model of your device.



Step 2. Click the **Traffic Classes** tab.



Step 3. Click the  button to add a traffic class.

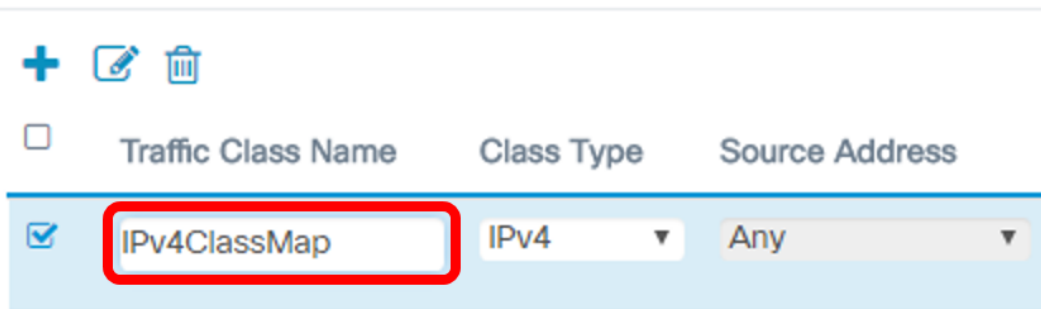


Note: You can add up to 50 class maps.

Step 4. Enter a name for the class map in the *Traffic Class Name* field. The name can be a

combination of letters, numbers, and special characters up to 31 characters, without spaces.

Traffic Classes Map



+

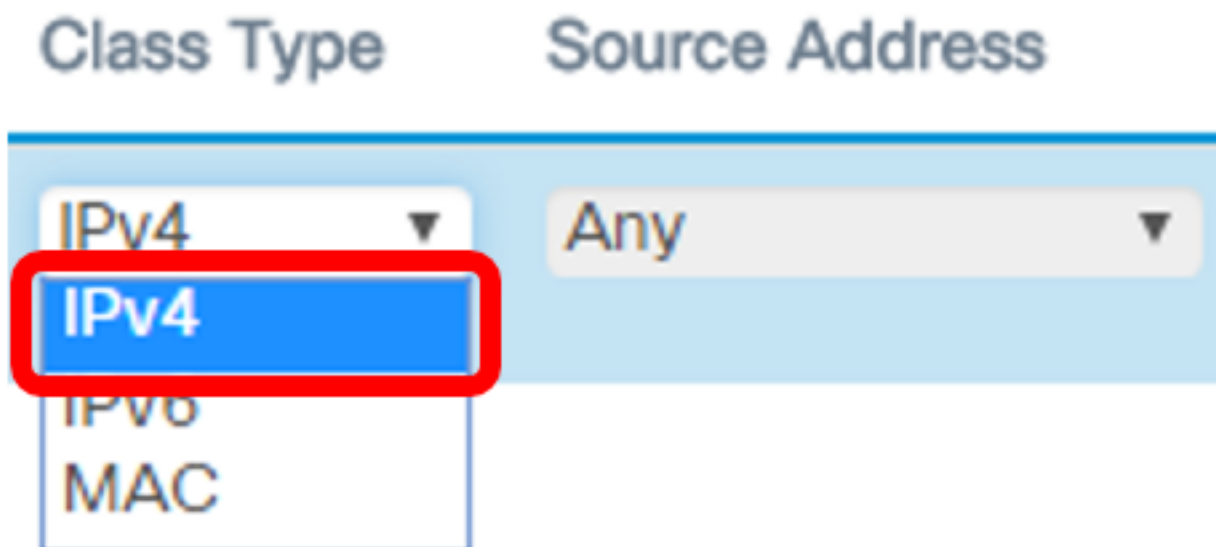
✎

🗑

<input type="checkbox"/>	Traffic Class Name	Class Type	Source Address
<input checked="" type="checkbox"/>	IPv4ClassMap	IPv4	Any

Note: In this example, IPv4ClassMap is entered.

Step 5. Choose IPv4 from the Class Type drop-down list.



Class Type

Source Address

IPv4

IPv4

IPv6

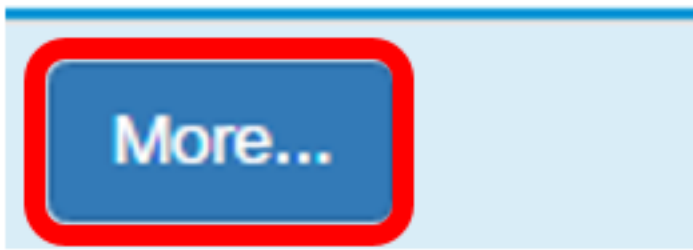
MAC

Any

Note: If you want to know how to configure an IPv6 Class Map, click [here](#). For MAC Class Map configuration, click [here](#).

Step 6. Click the **More...** button.

Details Of Services



Step 7. Choose a Protocol to match by keyword or enter a protocol ID. The options are:

- All Traffic — This option allows all traffic from any protocol. If this option is chosen, all fields will be unavailable. Proceed to [Step 12](#).
- Select From List — This option lets you choose IP, ICMP, IGMP, TCP, or UDP. If this option is chosen, skip to [Step 8](#).
- Custom — This option allows you to enter a protocol ID. The protocol ID is a standard assigned by the Internet Assigned Numbers Authority (IANA). If this is chosen, proceed to [Step 9](#).

Services

Protocol:	<input type="text" value="All Traffic"/>
Source Port:	<input type="text" value="Select From List"/>
Destination Port:	<input type="text" value="Any"/>
Service Type:	<input type="text" value="Any"/>

Note: In this example, Select From List is chosen.

[Step 8](#). (Optional) Define the protocol that needs to be matched.

- IP — This option lets you enter the IP address that needs to be matched.
- ICMP — This option filters Internet Control Message Protocol (ICMP) packets.

- IGMP — This option filters Internet Group Management Protocol (IGMP) packets.
- TCP — This option filters Transmission Control Protocol (TCP) packets.
- UDP — This option filters User Datagram Protocol (UDP) packets.

Services

Protocol:	Select From List	IP
Source Port:	Any	IP
Destination Port:	Any	ICMP
Service Type:	Any	IGMP
		TCP
		UDP

OK cancel

Note: In this example, IP is chosen.

[Step 9](#). Enter the custom protocol number in the *Protocol* field.

Services

Protocol:	Custom	3
Source Port:	Any	
Destination Port:	Any	
Service Type:	Any	

OK cancel

Note: In this example, 3 is entered.

Step 10. Choose a source port from the drop down list. The options are:

- Any — This option considers any origin port a match. If this option is chosen, proceed to [Step 13](#).
- Select From List — This option lets you match a keyword associated with the source port which becomes translated into its equivalent port number. These keywords are File Transfer

Protocol (FTP), File Transfer Protocol Data (FTPDATA), http, smtp, snmp, telnet, tftp and www.

- Custom — This option lets you specify a source port number which will be matched in the datagram header to an IANA port number. It can be from 0 to 65535.

Services

Protocol:	Select From List ▼	IP ▼
Source Port:	Any ▼	
Destination Port:	Any	
	Select From List	
	Custom	
Service Type:	Any ▼	

Note: In this example, Any is chosen.

Step 11. Choose a destination port from the Destination Port drop-down list. The options are:

- Any — This option considers any destination port a match. If this option is chosen, proceed to [Step 13](#).
- Select From List — This option lets you match a keyword associated with the source port which becomes translated into its equivalent port number. These keywords are ftp, ftpdata, http, smtp, snmp, telnet, tftp and www.
- Custom — This option lets you specify a destination port number which will be matched in the datagram header to an IANA port number. It can be from 0 to 65535.

Note: In this example, FTP is chosen as the destination port.

Services

Protocol:	Select From List ▼	IP ▼
Source Port:	Any ▼	
Destination Port:	Select From List ▼	ftp ▼
Service Type:	IP DSCP Match to Value ▼	ftp ftpdata http smtp snmp telnet tftp www

[Step 12](#). Choose a Service Type from the drop-down list. The options are:

- Any — This option treats any type of service as a match.
- IP DSCP Select from List — This option lets you choose between ftp, ftpdata, http, snmp, smtp, telnet, tftp, and www as a filter. If this option is chosen, proceed to [Step 13](#).
- IP DSCP Match to Value — This option lets you enter a custom DSCP value from 0 to 63.
- IP Precedence — This option matches the IP Precedence value of the packet to the IP Precedence value defined in this field. The IP Precedence range is from 0 to 7.
- IP TOS Bits/IP TOS Mask — This option uses the Type of Service (TOS) bits of the packet in the IP header as the match criteria. The IP TOS bit value is a hex value from 00 to FF. The IP TOS Mask allows you to enter a Mask value to identify the bit positions in the IP TOS Bits value that are used for comparison against the IP TOS field in a packet. The IP TOS Mask value is a two-digit hexadecimal number from 00 to FF, representing an inverted mask. The zero-valued bits in the IP TOS Mask denote the bit positions in the IP TOS bits value that are used for comparison against the IP TOS field of a packet.

Services

Protocol:	Select From List ▼	IP ▼
Source Port:	Any ▼	
Destination Port:	Select From List ▼	ftp ▼
Service Type:	IP DSCP Match to Value ▼	63
	Any IP DSCP Select from List IP DSCP Match to Value IP Precedence IP TOS Bits/IP TOS Mask	
	<input type="button" value="OK"/>	<input type="button" value="cancel"/>

Note: In this example, IP DSCP Match to Value is chosen.

[Step 13](#). Click **OK**.

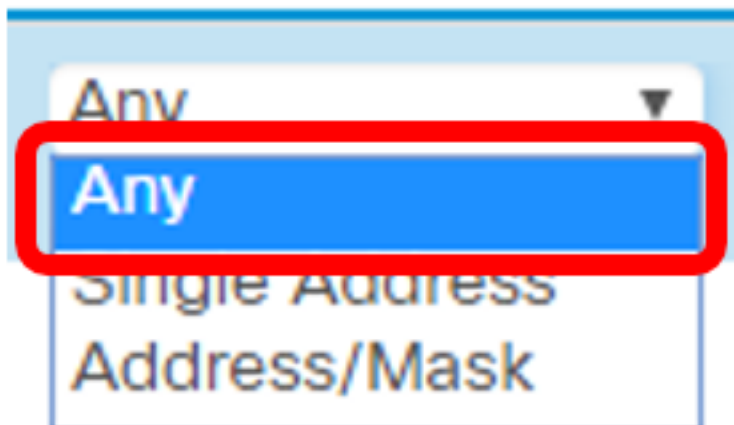
Services

Protocol:	Select From List ▼	IP ▼
Source Port:	Any ▼	
Destination Port:	Select From List ▼	ftp ▼
Service Type:	IP DSCP Match to Value ▼	63
	<input type="button" value="OK"/>	<input type="button" value="cancel"/>

Step 14. Choose the Source Address. The source address of a packet requires a source IPv4 address of a packet to match the defined IPv4 address. The options are:

- Any — This option allows any source IP address to be a match.
- Single Address — This option lets you specify the source IPv4 address in the *source IPv4 address* field.
- Address/Mask — This option lets you specify an IP range as the source IPv4 address. If this option is chosen, enter the IP address and the corresponding subnet mask of the IP address.

Source Address



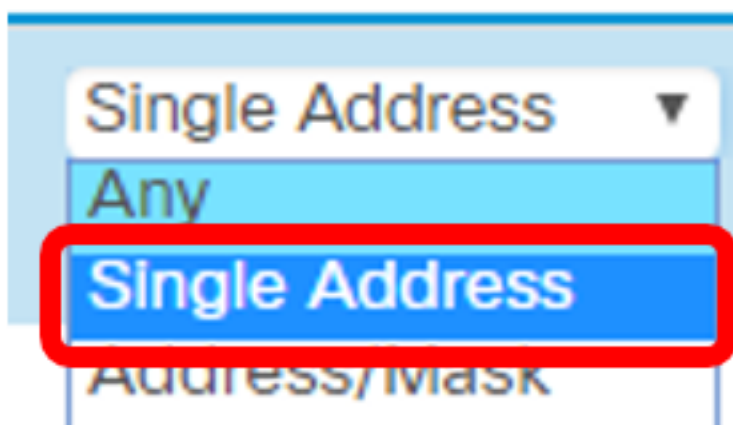
A screenshot of a dropdown menu titled "Source Address". The menu is open, showing three options: "Any", "Single Address", and "Address/Mask". The "Any" option is highlighted in blue and is enclosed in a red rounded rectangle.

Note: In this example, Any is chosen.

Step 15. From the Destination Address drop-down list, choose the destination address that a packet needs to be considered a match. The options are:

- Any — This option treats any destination IP address as a match. If this is chosen, skip to [Step 16](#).
- Single Address — This option lets you specify an IP address in the Destination Address field.
- Address/Mask. — This option lets you specify an IP address and subnet mask in the Destination Address and Destination Mask fields.

Destination Address



A screenshot of a dropdown menu titled "Destination Address". The menu is open, showing three options: "Single Address", "Any", and "Address/Mask". The "Single Address" option is highlighted in blue and is enclosed in a red rounded rectangle.

Note: In this example, Single Address is chosen.

[Step 16](#). (Optional) Enter the IP address in the *Destination Address* field.

Destination Address

Single Address ▼

192.168.100.125

Step 17. Click **Save**.

WAP125-wap5e0940

Client QoS Save

Traffic Classes QoS Policy QoS Association

Traffic Classes Map

<input type="checkbox"/>	Traffic Class Name	Class Type	Source Address	Destination Address	Details Of Services
<input checked="" type="checkbox"/>	IPv4ClassMap	IPv4	Any	Single Address 192.168.100.125	More...

You now have configured a Class Map on the WAP125 or WAP581 access point.