Configure Client QoS IPv6 Class Map on the WAP125

Objective

The Quality of Service (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 IPv6 Class Map on the WAP125 access point.

Applicable Devices

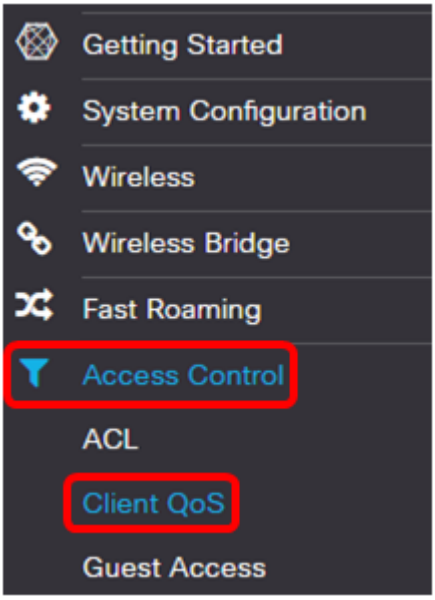
- WAP125

Software Version

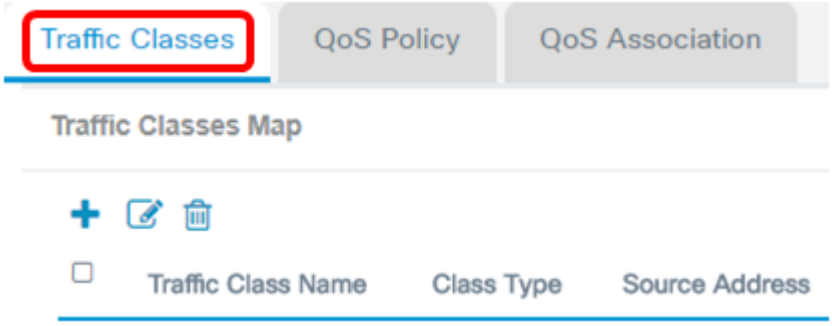
- 1.0.0.4

Configure IPv6 Class Map

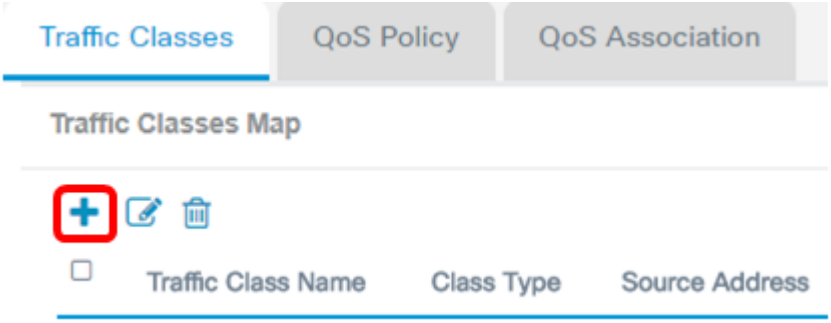
Step 1. Log in to the web-based utility of the WAP125 and choose **Access Control > Client QoS**.



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

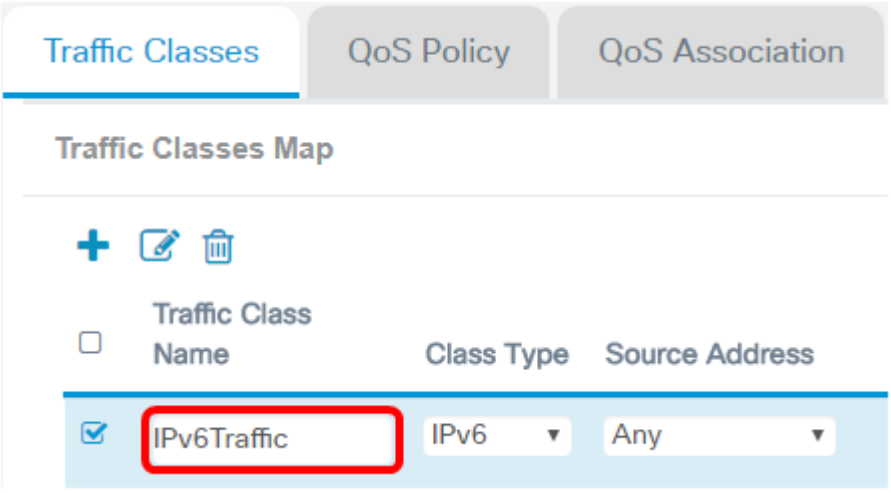


Step 3. Click the + button to add a traffic class.



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.

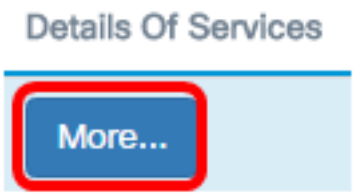


Note: In this example, IPv6Traffic is entered.

Step 5. Choose IPv6 from the Class Type drop-down list.

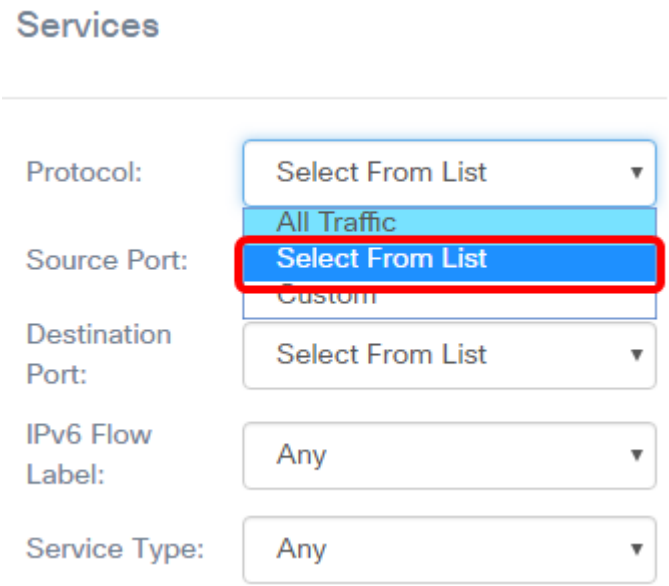
Note: If you want to know how to configure an IPv4 Class Map, click here. For MAC Class Map configuration, click here.

Step 6. Click the **More…** button.



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

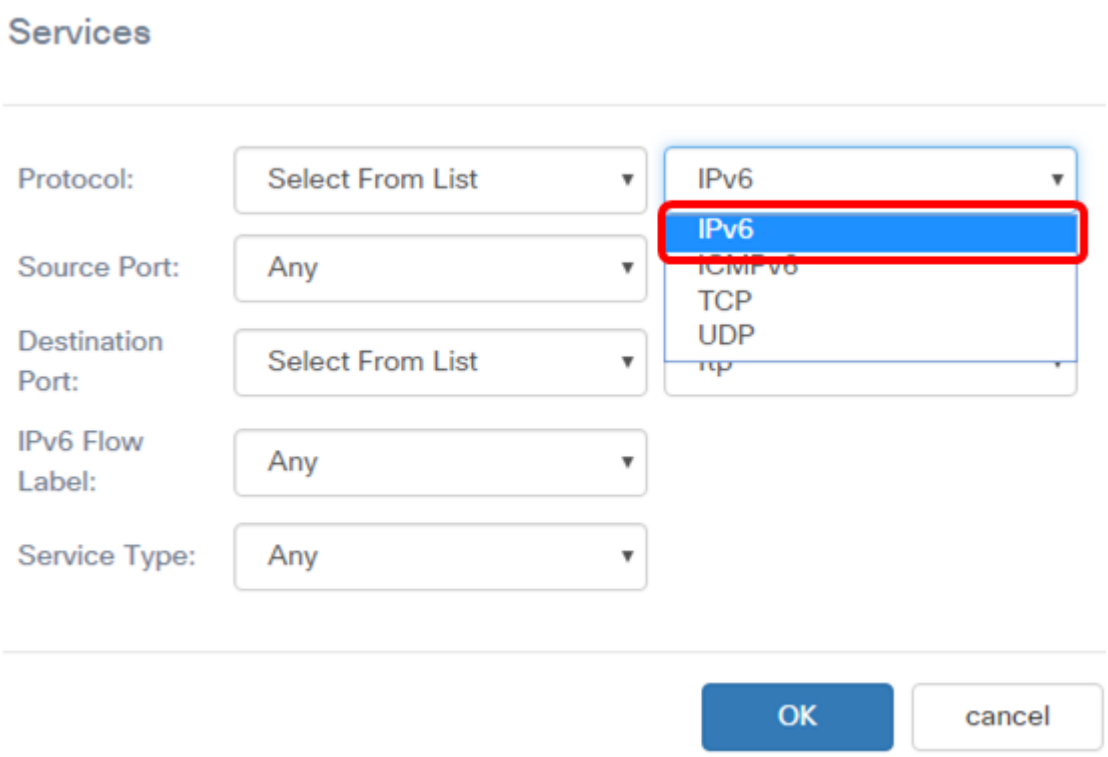
- All Traffic — This option allows all traffic from any protocol. If this option is chosen, all fields will be unavailable. Proceed to Step 16.
- Select From List — This option lets you choose from IP, ICMP, TCP, or UDP. If this option is chosen, skip to Step 8.
- Custom — This option allows you to enter 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.



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

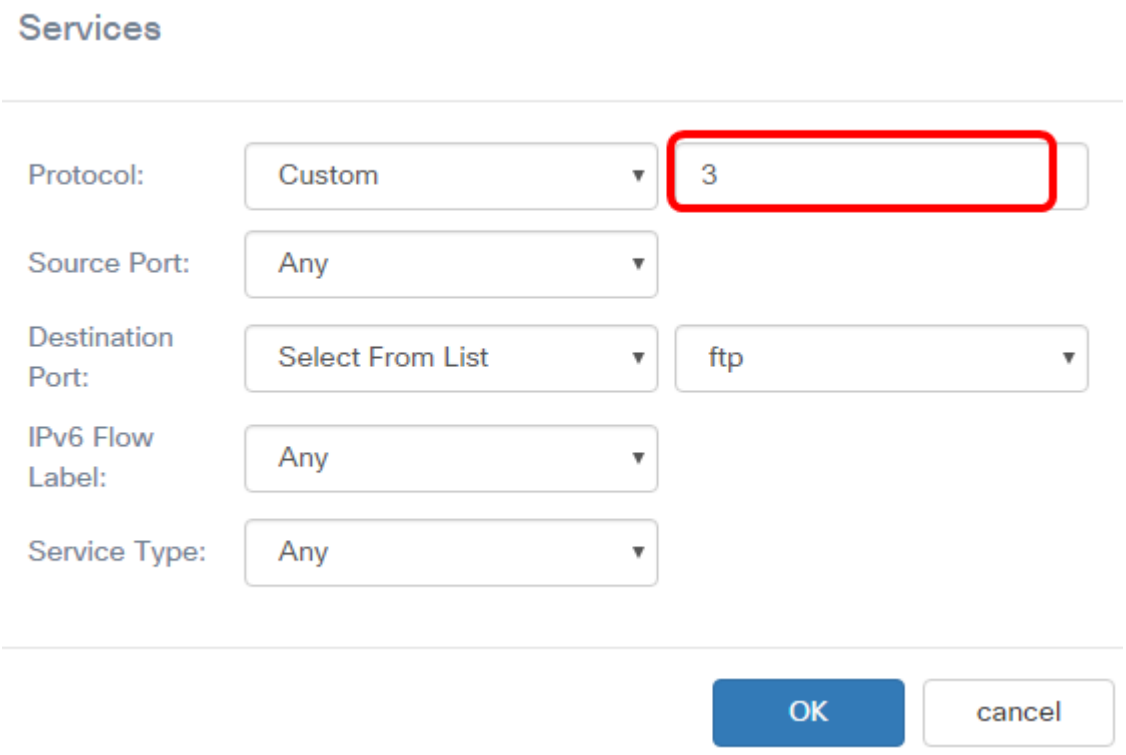
Step 8. (Optional) Define the protocol that needs to be matched.

- IPv6 — This option lets you enter the IPv6 address that needs to be matched.
- ICMPv6 — This option filters Internet Control Message Protocol version 6 (ICMPv6) packets.
- TCP — This option filters Transmission Control Protocol (TCP) packets.
- UDP — This option filters User Datagram Protocol (UDP) packets.



Note: In this example, IPv6 is chosen.

Step 9. Enter the custom protocol number in the *Protocol* field.



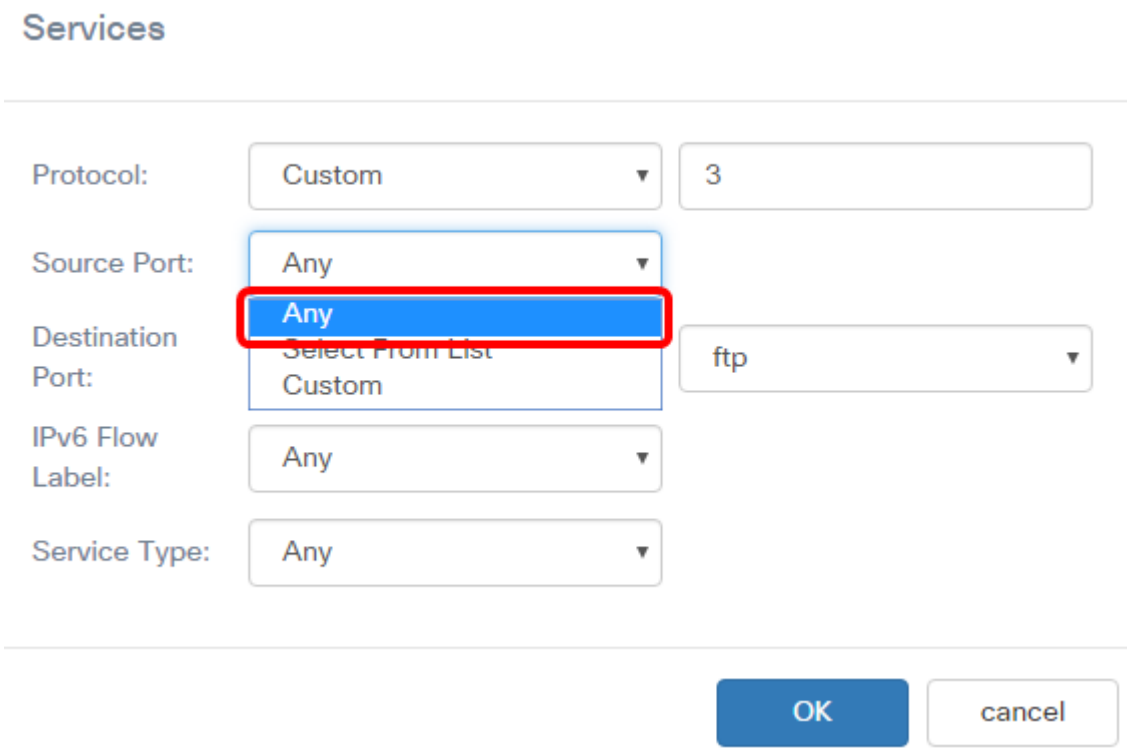
Note: In this example, 3 is entered.

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 16.
- 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.

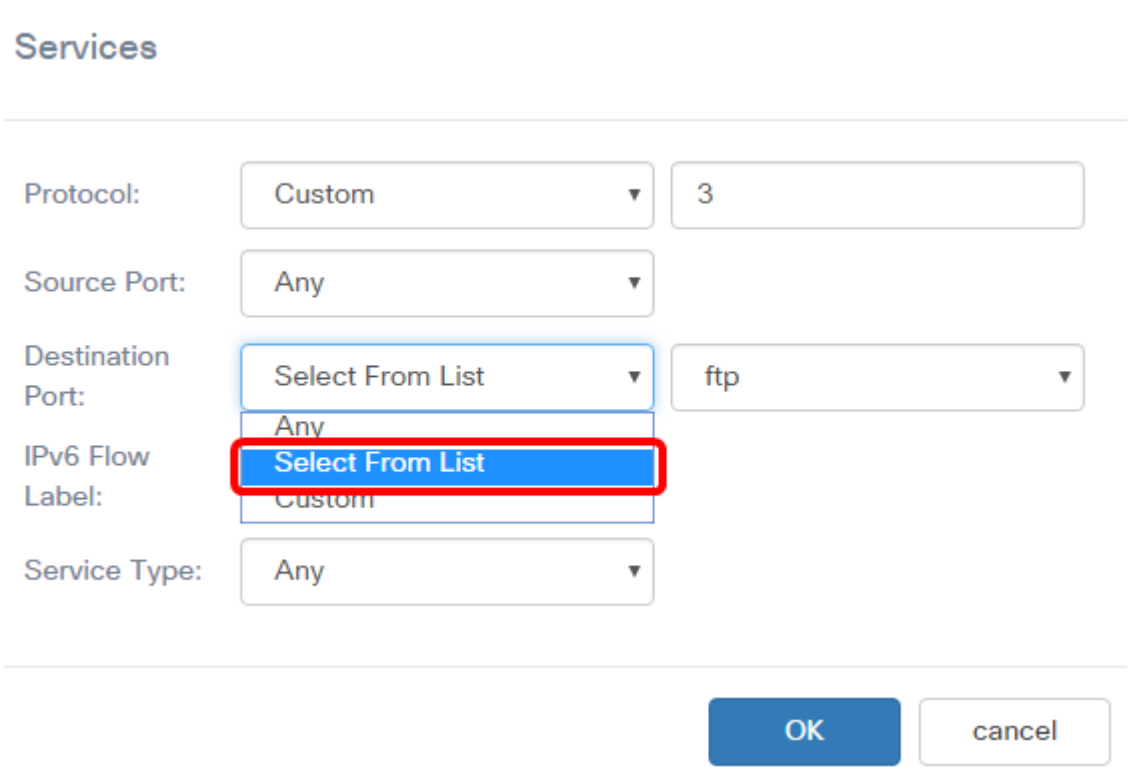
- Custom — This option lets you specify a destination port number which will be matched in the datagram header to an IANA port number. It can be from 0 to 65535.



Note: In this example, Any is chosen.

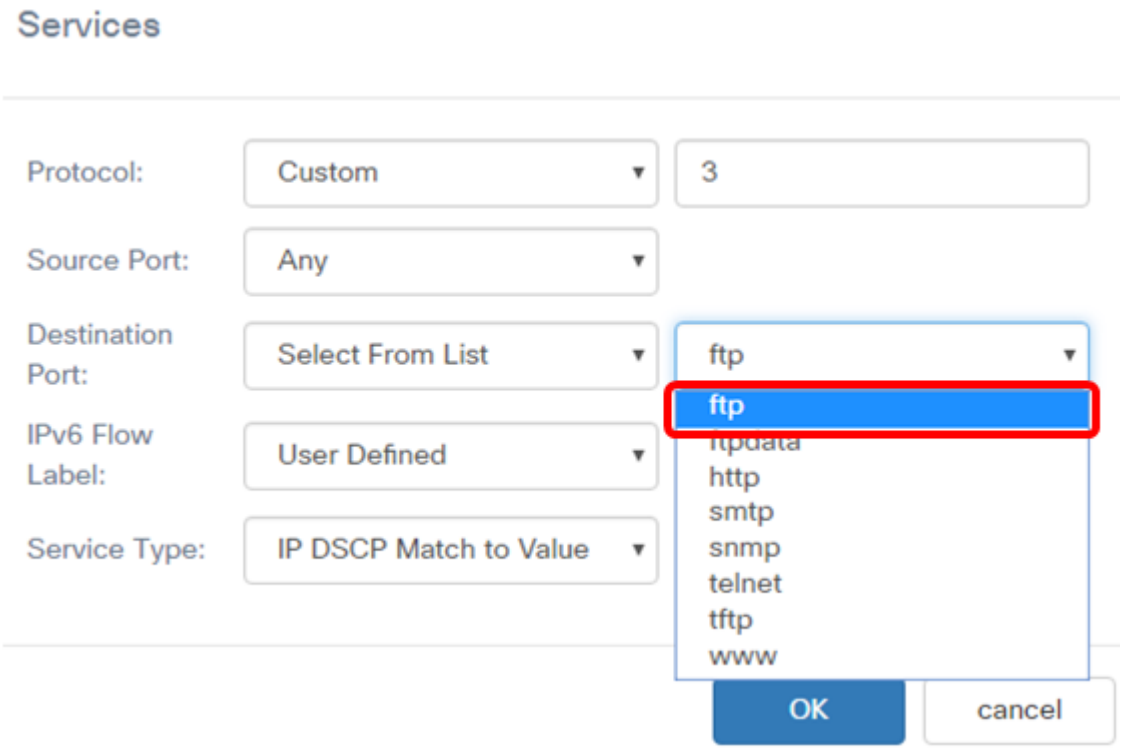
Step 11. Choose a destination port from the Destination Port drop-down list. The options are:

- Any — This option considers any destination port a match. If this option is chosen, proceed to Step 16.
- Select From List — This option lets you match a keyword associated with the destination 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, Select From List is chosen.

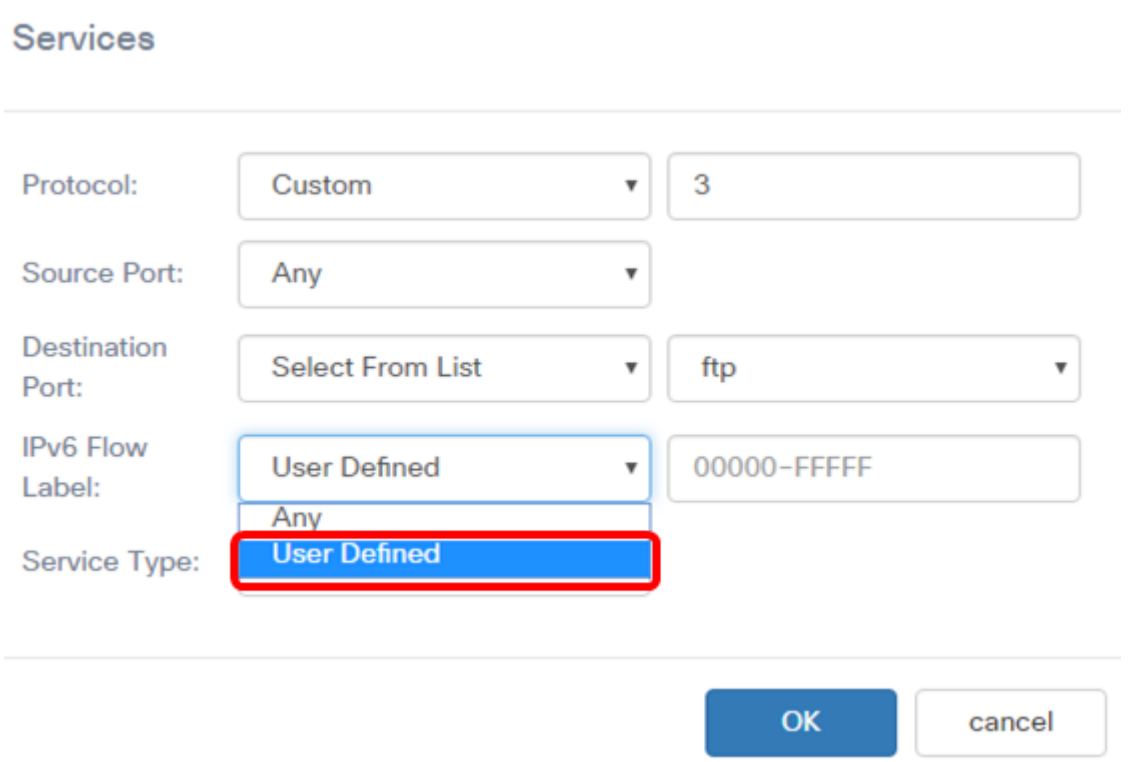
Step 12. (Optional) Define the destination port from the drop-down list. The options are ftp, ftpdata, http, smtp, snmp, telnet, tftp, and www.



Note: In this example, ftp is chosen.

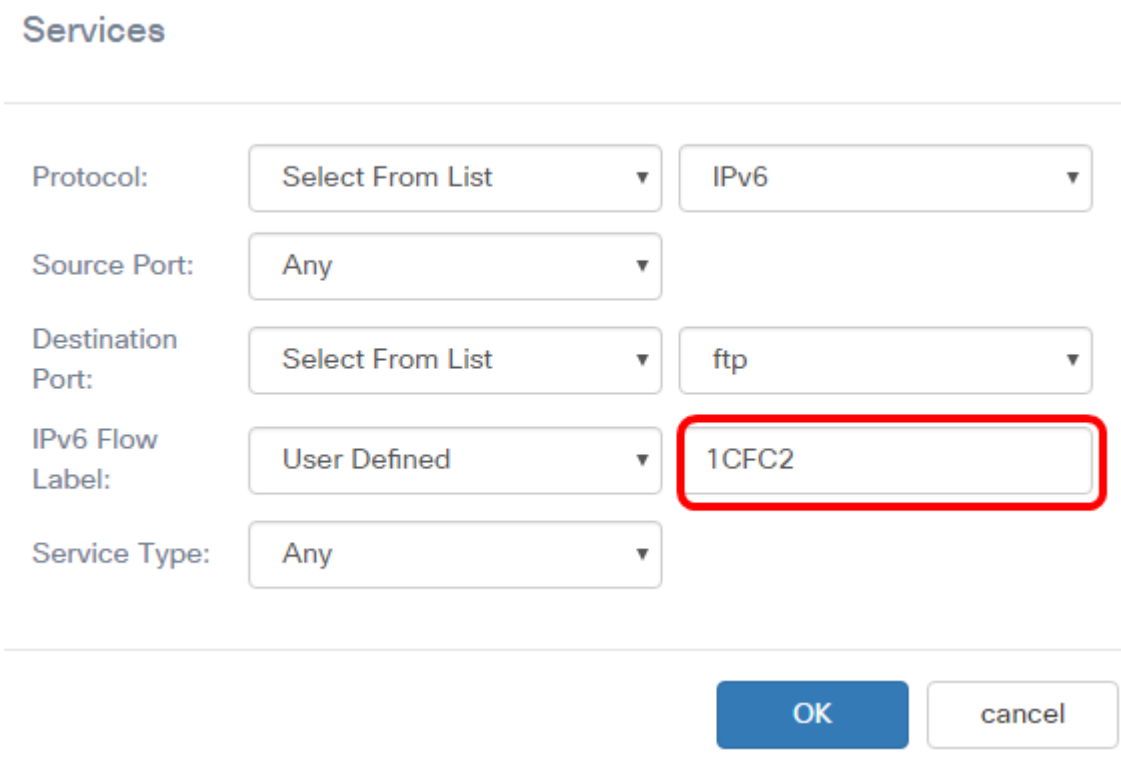
Step 13. Choose a flow label from the IPv6 Flow Label drop-down list. The options are:

- Any — This option uses any 20-bit number that is unique to an IPv6 packet.
- User Defined — This option allows you to enter a 20-bit number from 0 to FFFF. The flow label is unique to an IPv6 packet. It is used by clients to signify QoS handling in routers.



Note: In this example, User Defined is chosen.

Step 14. (Optional) Enter the flow label in the *IPv6 Flow Label* field.

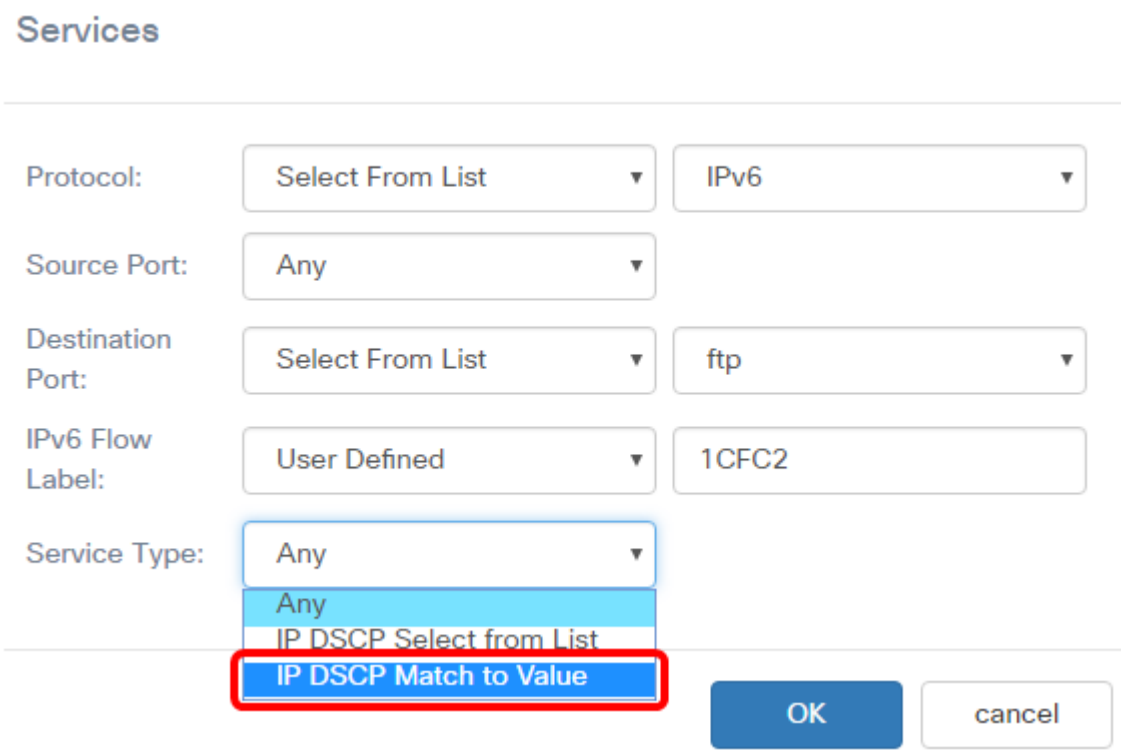


Note: In this example, 1CFC2 is entered.

Step 15. Choose a Service Type from the drop-down list. The options are:

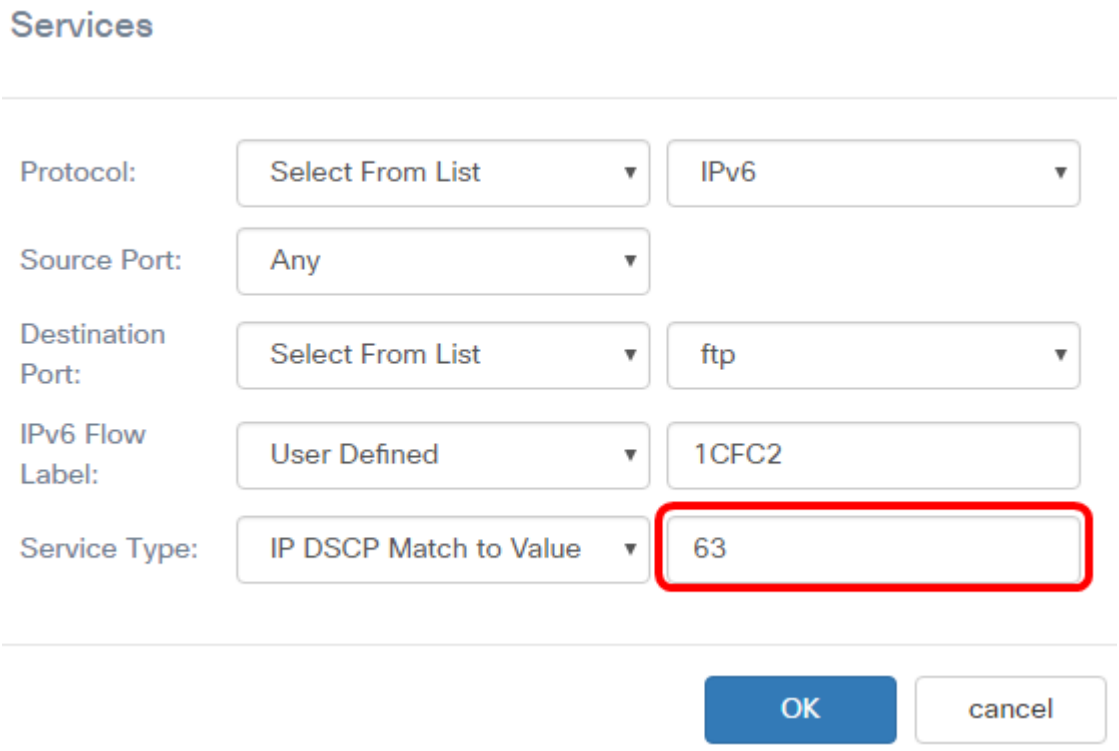
- Any — This option treats any type of service as a match. If this option is chosen, proceed to Step 16.
- IP DSCP Select from List — This option lets you choose between ftp, ftpdata, http, snmp, smtp, telnet, tftp, and www as a filter.

- IP DSCP Match to Value — This option lets you enter a custom DSCP value from 0 to 63.



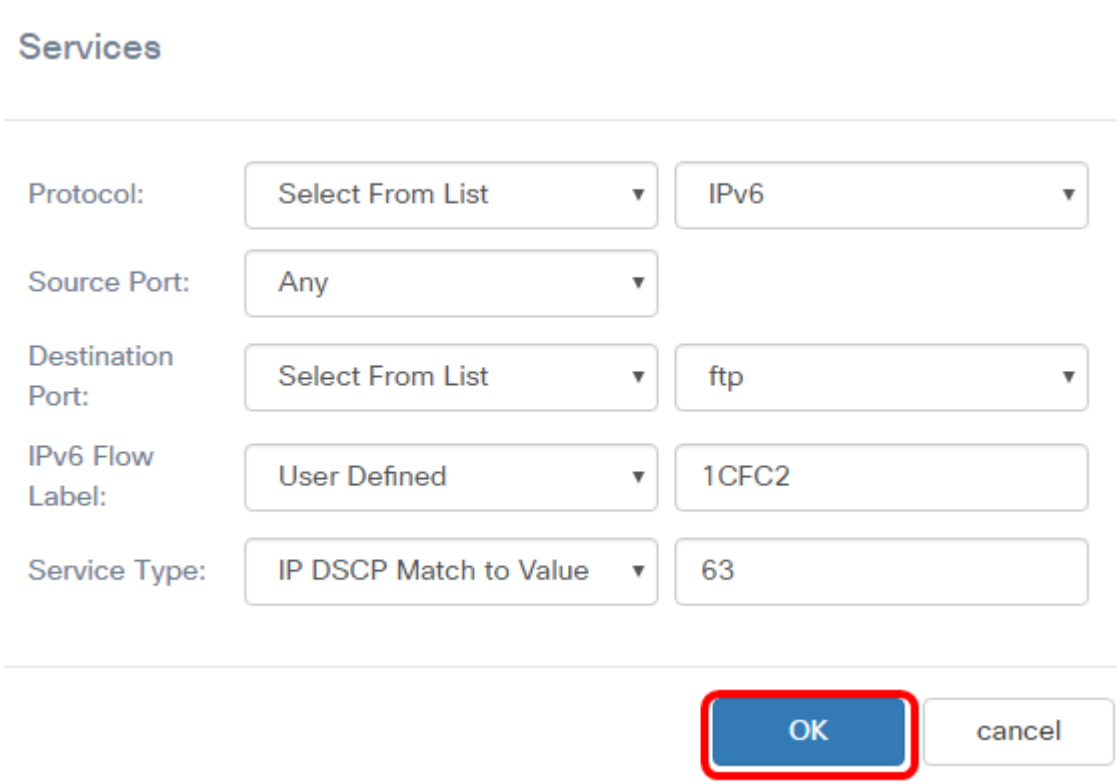
Note: In this example, IP DSCP Match to Value is chosen.

Step 16 . (Optional) Enter the DSCP value to be matched in the IP DSCP Match to Value area.



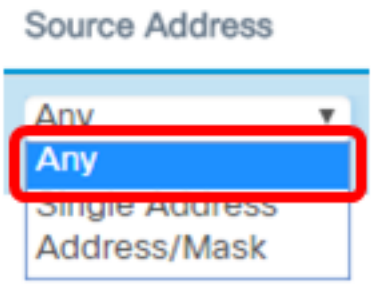
Note: In this example, 63 is entered.

Step 17. Click **OK**.



Step 18. Choose the Source Address. The source address of a packet requires a source IPv6 address of a packet to match the defined IPv6 address. The options are:

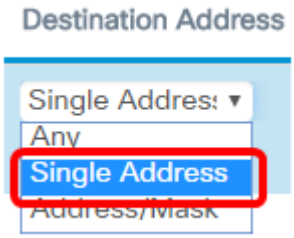
- Any — This option allows any source IP address to be a match.
- Single Address — This option lets you specify the source IPv6 address in the *Source Address* field.
- Address/Mask — This option lets you specify an IP range as the source IPv6 address. If this option is chosen, enter the IPv6 address and the corresponding subnet mask of the IP address.



Note: In this example, Any is chosen.

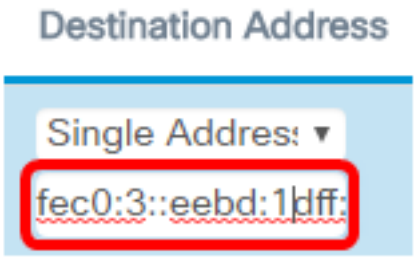
Step 19. From the Destination Address drop-down list, choose the destination address that a packet needs to be considered a match. The options are:

- Any — This option treats any destination IPv6 address as a match. If this is chosen, skip to Step 20.
- Single Address — This option lets you specify a single IPv6 destination address.
- Address/Mask. — This option lets you specify an IP address and the prefix length in the Destination Address and Destination Mask fields.



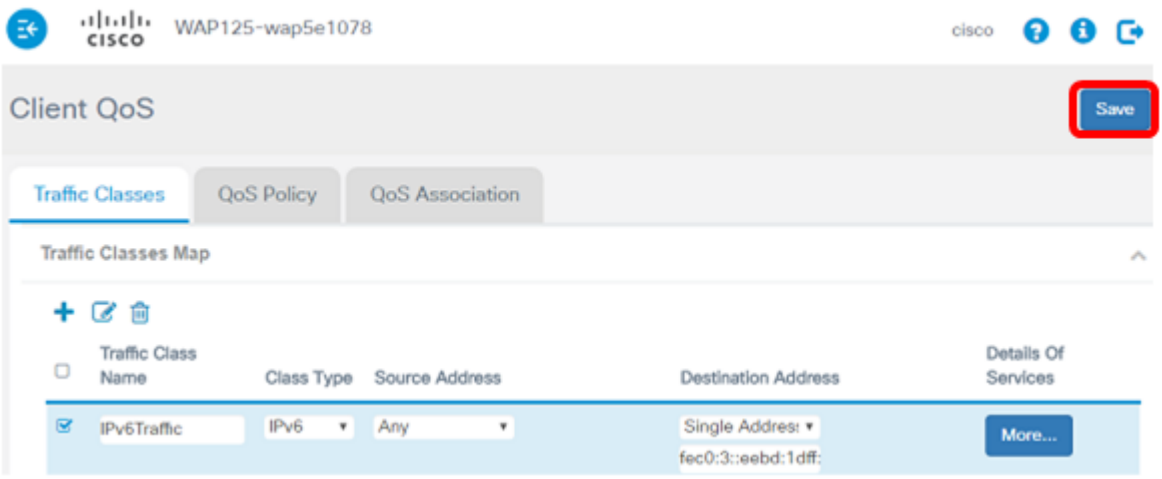
Note: In this example, Single Address is chosen.

Step 20. (Optional) Enter the IPv6 address in the *Destination Address* field.



Note: In this example, fec0:3::eebd:1dff:fe44:5719 is entered.

Step 21. Click **Save**.



You now have configured an IPv6 Class Map on the WAP125 access point.