

Configuring Gigabit Ethernet Interfaces (J-Web Procedure)

An Ethernet interface must be configured for optimal performance in a high-traffic network.

To configure properties on a Gigabit Ethernet interface or a 10-Gigabit Ethernet interface on an EX Series switch:

1. From the Configure menu, select **Interfaces > Ports**.

The page lists Gigabit Ethernet and 10-Gigabit Ethernet interfaces and their link status.

2. Select the interface you want to configure. If the interface you want to configure is not listed under **Ports** in the top table on the page, select the FPC (the FPC is the line card on an EX8200 switch or the member switch in a Virtual Chassis configuration) that includes that interface from the **List Ports for FPC** list.

Details for the selected interface such as administrative status, link status, speed, duplex, and flow control are displayed in the bottom table on the page.



NOTE: You can select multiple interfaces and modify their settings at the same time. When you do this, you cannot modify the IP address or enable or disable the administrative status of the selected interface.

3. Click **Edit** and select the set of options you want to configure first:
 - Port Role—Enables you to assign a profile for the selected interface.
 - VLAN Options—Enables you to configure VLAN options for the selected interface.
 - Link Options—Enables you to modify the following link options for the selected interface:
 - Speed
 - MTU
 - Autonegotiation
 - Flow Control
 - Duplex
 - IP Options—Enables you to configure an IP address for the interface.
4. Configure the interface by configuring options in the selected option set. See Table 1 for details on options.
5. Repeat steps 3 and 4 for the remaining option sets that you want to configure for the interface.



NOTE: To enable or disable the administrative status for a selected interface, click **Enable Port** or **Disable Port**.

Table 1: Port Edit Options

Field	Function	Your Action
Port Role	<p>Specifies a profile (role) to assign to the interface.</p> <p>NOTE: Once a port role is configured on the interface, you cannot specify VLAN options or IP options.</p> <p>NOTE: Only the following port roles can be applied on EX8200 switch interfaces:</p> <ul style="list-style-type: none">■ Default■ Layer 2 uplink■ Routed uplink	
Default	<p>Applies the default role.</p> <p>The interface family is set to ethernet-switching, port mode is set to access, and RSTP is enabled.</p>	<ol style="list-style-type: none">1. Click Details to view CLI commands for this role.2. Click OK.
Desktop	<p>Applies the desktop role.</p> <p>The interface family is set to ethernet-switching, port mode is set to access, RSTP is enabled with the edge and point-to-point options, and port security parameters (MAC limit = 1; dynamic ARP inspection and DHCP snooping enabled) are set.</p>	<ol style="list-style-type: none">1. Select an existing VLAN configuration or type the name of a new VLAN configuration to be associated with the interface.2. Click Details to view CLI commands for this role.3. Click OK.
Desktop and Phone	<p>Applies the desktop and phone role.</p> <p>The interface family is set to ethernet-switching, port mode is set to access, port security parameters (MAC limit = 1; dynamic ARP Inspection and DHCP snooping enabled) are set, and recommended CoS parameters are specified for forwarding classes, schedulers, and classifiers. See Table 2 for more CoS information.</p>	<ol style="list-style-type: none">1. Select an existing VLAN configuration or type the name of a new VLAN configuration to be associated with the interface. You can also select an existing VoIP VLAN configuration or a new VoIP VLAN configuration to be associated with the interface.2. Click Details to view CLI commands for this role.3. Click OK.

Table 1: Port Edit Options *(continued)*

Field	Function	Your Action
Wireless Access Point	<p>Applies the wireless access point role.</p> <p>The interface family is set to ethernet-switching, port mode is set to access, and RSTP is enabled with the edge and point-to-point options.</p>	<ol style="list-style-type: none"> 1. Select an existing VLAN configuration or type the name of a new VLAN configuration to be associated with the interface. Type the VLAN ID for a new VLAN. 2. Click Details to view CLI commands for this role. 3. Click OK.
Routed Uplink	<p>Applies the routed uplink role.</p> <p>The interface family is set to inet, and recommended CoS parameters are set for schedulers and classifiers. See Table 2 for more CoS information.</p>	<p>To specify an IPv4 address:</p> <ol style="list-style-type: none"> 1. Select the check box IPv4 address. 2. Type an IP address — for example: 10.10.10.10. 3. Enter the subnet mask or address prefix. For example, 24 bits represents 255.255.255.0. 4. Click OK. <p>To specify an IPv6 address:</p> <ol style="list-style-type: none"> 1. Select the check box IPv6 address. 2. Type an IP address—for example: 2001:ab8:85a3::8a2e:370:7334. 3. Enter the subnet mask or address prefix. 4. Click OK.
Layer 2 Uplink	<p>Applies the Layer 2 uplink role.</p> <p>The interface family is set to ethernet-switching, port mode is set to trunk, RSTP is enabled with the point-to-point option, and port security is set to dhcp-trusted.</p>	<ol style="list-style-type: none"> 1. For this port role you can select a VLAN member and associate a native VLAN with the interface. 2. Click Details to view CLI commands for this role. 3. Click OK.
None	Specifies that no port role is configured for the selected interface.	
<p>NOTE: See Port Role Configuration with the J-Web Interface (with CLI References) for details on the CLI commands that are associated with each port role.</p> <p>NOTE: For an EX8200 switch, dynamic ARP inspection and DHCP snooping parameters are not configured.</p>		
VLAN Options		

Table 1: Port Edit Options *(continued)*

Field	Function	Your Action
Port Mode	Specifies the mode of operation for the interface: trunk or access.	<p>If you select Trunk, you can:</p> <ol style="list-style-type: none"> 1. Click Add to add a VLAN member. 2. Select the VLAN and click OK. 3. (Optional) Associate a native VLAN with the interface. <p>If you select Access, you can:</p> <ol style="list-style-type: none"> 1. Select the VLAN member to be associated with the interface. 2. (Optional) Associate a VoIP VLAN with the interface. Only a VLAN with a VLAN ID can be associated as a VoIP VLAN. <p>Click OK.</p>
Link Options		
MTU (bytes)	Specifies the maximum transmission unit size for the interface.	Type a value from 256 through 9216 . The default MTU for Gigabit Ethernet interfaces is 1514 .
Speed	Specifies the speed for the mode.	Select one of the following values: 10 Mbps, 100 Mbps, or 1000 Mbps.
Duplex	Specifies the link mode.	Select one: automatic , half-duplex , or full-duplex .
Description	<p>Describes the link.</p> <p>NOTE: If the interface is part of a link aggregation group (LAG), only the option Description is enabled.</p>	Enter a brief description for the link.
Enable Auto Negotiation	Enables or disables autonegotiation.	Select the check box to enable autonegotiation, or clear the check box to disable it. By default, autonegotiation is enabled.
Enable Flow Control	Enables or disables flow control.	Select the check box to enable flow control to regulate the amount of traffic sent out of the interface, or clear the check box to disable flow control and permit unrestricted traffic. Flow control is enabled by default.
IP Options		

Table 1: Port Edit Options *(continued)*

Field	Function	Your Action
IPv4 Address	Specifies an IPv4 address for the interface. NOTE: If the IP address is cleared, the interface still belongs to the <code>inet</code> family.	<ol style="list-style-type: none"> To specify an IPv4 address, select the check box IPv4 address. Type an IP address — for example: 10.10.10.10. Enter the subnet mask or address prefix. For example, 24 bits represents 255.255.255.0. Click OK.
IPv6 Address	Specifies an IPv6 address for the interface. NOTE: If the IP address is cleared, the interface still belongs to the <code>inet</code> family.	<ol style="list-style-type: none"> To specify an IPv6 address, select the check box IPv6 address. Type an IP address—for example: 2001:ab8:85a3::8a2e:370:7334. Enter the subnet mask or address prefix. Click OK.

Table 2: Recommended CoS Settings for Port Roles

CoS Parameter	Recommended Settings
Forwarding Classes	<p>There are four forwarding classes:</p> <ul style="list-style-type: none"> ■ voice—Queue number is set to 7. ■ expedited-forwarding—Queue number is set to 5. ■ assured-forwarding—Queue number is set to 1. ■ best-effort—Queue number is set to 0.
Schedulers	<p>The schedulers and their settings are:</p> <ul style="list-style-type: none"> ■ Strict-priority—Transmission rate is set to 10 percent and buffer size to 5 percent. ■ Expedited-scheduler—Transmission rate is set to 30 percent, buffer size to 30 percent, and priority to low. ■ Assured-scheduler—Transmission rate is set to 25 percent, buffer size to 25 percent, and priority to low. ■ Best-effort scheduler—Transmission rate is set to 35 percent, buffer size to 40 percent, and priority to low.
Scheduler maps	When a desktop and phone, routed uplink, or layer 2 uplink role is applied on an interface, the forwarding classes and schedulers are mapped using the scheduler map.
ieee-802.1 classifier	Imports the default ieee-802.1 classifier configuration and sets the loss priority to low for the code point 101 for the voice forwarding class.
dscp classifier	Imports the default dscp classifier configuration and sets the loss priority to low for the code point 101110 for the voice forwarding class.

- Related Topics**
- [Configuring Gigabit Ethernet Interfaces \(CLI Procedure\)](#)
 - [Monitoring Interface Status and Traffic](#)
 - [EX Series Switches Interfaces Overview](#)
 - [JUNOS CoS for EX Series Switches Overview](#)
 - [Understanding Interface Naming Conventions on EX Series Switches](#)

Published: 2009-07-22