

Chapter 15

Configuring Ethernet Modules

This chapter describes how to configure the following Ethernet modules:

- FE-2
- FE-8
- GE
- GE-HDE

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Overview

The Fast Ethernet (FE) and Gigabit Ethernet (GE) modules support the routing of IP packets and quality of service (QoS) classification. These modules use Address Resolution Protocol (ARP) to obtain media access control (MAC) addresses for outgoing Ethernet frames. Ethernet line modules pair with I/O modules to provide particular capabilities and connections.

For complete module details, see Table 49 and the Module Guides.

Table 49: Ethernet Line Modules and I/O Modules

Line Module	I/O Module	Description	NMC-RX Software Reference Name
E-series modules (ERX-7xx models, ERX-14xx models, ERX-310)			
FE-2	FE-2	■ 2-port module that supports 10/100 Base-T operation	FE-2 port
GE/FE	FE-8	■ 8-port module that supports 10/100 Base-T operation	FE-8 port

Table 49: Ethernet Line Modules and I/O Modules (continued)

Line Module	I/O Module	Description	NMC-RX Software Reference Name
GE/FE	GE SFP	<ul style="list-style-type: none"> ■ 1-port module that supports 1000Base-SX, 1000Base-LH, and 1000Base-ZX operation ■ Uses a range of small form-factor pluggable transceivers (SFPs) to support different optical modes and cabling distances 	GE-1 port
GE/FE	GE	<ul style="list-style-type: none"> ■ 1-port module that supports 1000Base-LX and 1000Base-SX operation <p>NOTE: Assembly is superseded by a newer assembly; however, assembly is supported by current software.</p>	GE-1 port
GE-HDE	2XGE APS I/O or GE-2 APS I/O SFP	<ul style="list-style-type: none"> ■ 2-port module that supports 1000 Base-LX, and 1000 Base-LH operation ■ Uses a range of SFPs to support different optical modes and cabling distances 	GE-2 port
E320 modules			
LM-4	GE-4	<ul style="list-style-type: none"> ■ 4-port module that supports 1000Base-SX, 1000Base-LX, and 1000Base-ZX operation ■ Uses a range of SFPs to support different optical modes and cabling distances 	GE-4 port
LM-4	10GE	<ul style="list-style-type: none"> ■ 1-port module that supports 10Gb Base-SX/LX/EX operation ■ Uses a range of 10-gigabit small form-factor pluggable transceivers (XFPs) to support different optical modes and cabling distances 	10GE-1 port

References

For more information, see the *JUNOS Physical Layer Configuration Guide*.

Configuration Tasks

Typically, you configure Ethernet modules in the following order. Some steps may not apply for a particular module.

1. Set the parameters that provide basic identification and status information about the module.
2. Set the line interface parameters.
3. Create the interface stacking by choosing one of following options:
 - IP interface with IP addresses and/or PPPoE stacking
 - Fast Ethernet or Gigabit Ethernet subinterfaces with IP interfaces or PPPoE stacking
 - VLAN stacking

Configuring Ethernet Modules

You can configure the admin status of a module only by enabling or disabling it.

To change the admin status:

1. In the Instance Explorer list, select the module that you want to configure.
2. Right-click, and select Configure.

The Module Config tab appears in the work area.

3. Set the admin status (Table 50).

Table 50: Module Configuration Parameters (Ethernet)

Field	Description
Module Type	Module type (cannot edit)
Admin Status	<ul style="list-style-type: none"> ■ Enabled—Module is running ■ Disabled—Module is not in operation
Serial Number	<ul style="list-style-type: none"> ■ Ten-digit identification number (S/N) on the face plate of the module. This value is automatically retrieved from the device, and you cannot edit it.
IOA Serial Number	<ul style="list-style-type: none"> ■ Ten-digit identification number (S/N) on the face plate of the input/output adapter. This number is automatically retrieved from the device, and you cannot edit it; not applicable to E320 devices

4. Click Save.

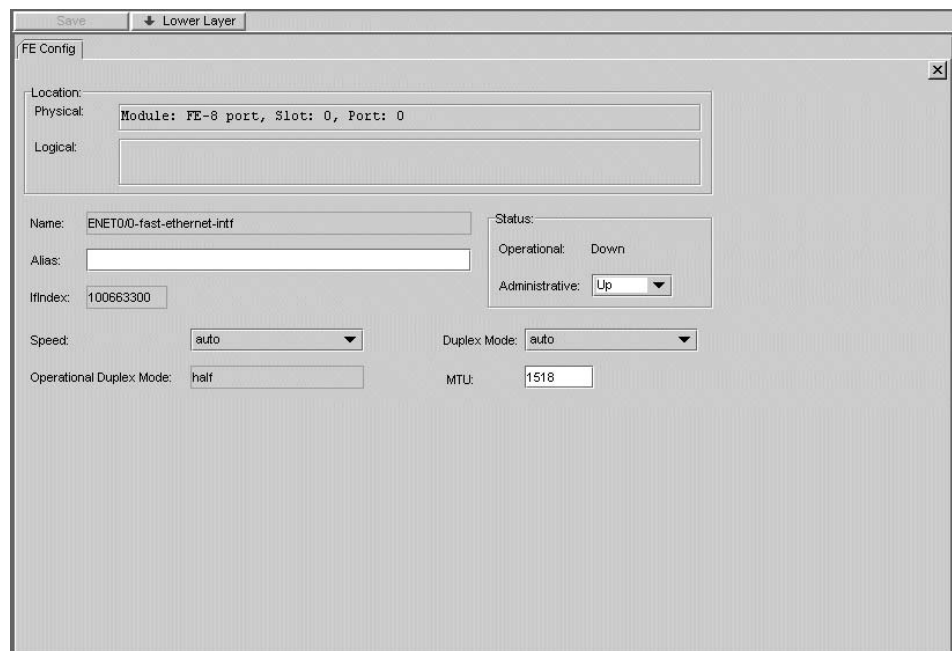
Configuring a Line Interface

There are two line interfaces (0, 1) for the FE-2 module and GE-HDE module, eight line interfaces (0-7) for the FE-8 module, and one line interface (0) for the GE module.

To configure a line interface:

1. In the Instance Explorer, select the line interface that you want to configure.
2. Right-click, and select Configure.

The Config tab appears in the work area.



3. Set the parameters (Table 51).

Table 51: Line Interface Parameters (Ethernet)

Field	Description
Name	Identifies the interface; generated automatically
Alias	Description of the interface; 0–15 characters; default: blank
IfIndex	Identifies the interface on the particular line interface; generated automatically
Operational	Current operational status of the interface
Administrative	Desired status of the interface: Up/Down; default: Up

Table 51: Line Interface Parameters (Ethernet) (continued)

Field	Description
Speed	<p>Specifies the line speed for a Fast Ethernet or Gigabit Ethernet interface:</p> <ul style="list-style-type: none"> ■ auto—Automatically specifies that the system negotiates the line speed with the remote device ■ 10—Specifies that the device uses a line speed of 10 Mbps (FE only) ■ 100—Specifies that the device uses a line speed of 100 Mbps (FE only) ■ 1000—Specifies that the device uses a line speed of 1000 Mbps (GE only)
Operational Duplex Mode	Specifies the current operational duplex mode for the Ethernet interface
Duplex Mode	<p>Specifies the duplex mode for a Fast Ethernet or Gigabit Ethernet interface:</p> <ul style="list-style-type: none"> ■ auto—Automatically specifies that the system negotiates duplex mode with the remote device ■ half—Specifies that the device uses half-duplex (FE only) ■ full—Specifies that the device uses full-duplex on the interface
MTU	Maximum transmission unit; range 64–9188; default 1518

4. Click Save.



NOTE: When you set the duplex mode to a value other than “auto,” you must simultaneously set the corresponding speed parameter to a value other than “auto.” Therefore, the operational duplex mode can be different from the administrative duplex mode.

