

## show interfaces ge-

<b>Syntax</b>	show interfaces <i>ge-fpc/pic/port</i> <brief   detail   extensive   terse> <descriptions> <media> <snmp-index <i>snmp-index</i> > <statistics>
<b>Release Information</b>	Command introduced in JUNOS Release 9.0 for EX Series switches.
<b>Description</b>	Display status information about the specified Gigabit Ethernet interface.
<b>Options</b>	<i>ge-fpc/pic/port</i> —Display standard information about the specified Gigabit Ethernet interface.  brief   detail   extensive   terse—(Optional) Display the specified level of output.  descriptions—(Optional) Display interface description strings.  media—(Optional) Display media-specific information about network interfaces.  snmp-index <i>snmp-index</i> —(Optional) Display information for the specified SNMP index of the interface.  statistics—(Optional) Display static interface statistics.
<b>Required Privilege Level</b>	view
<b>Related Topics</b>	<ul style="list-style-type: none"><li>■ Monitoring Interface Status and Traffic</li><li>■ Troubleshooting Network Interfaces on EX3200 and EX4200 Switches</li><li>■ Troubleshooting an Aggregated Ethernet Interface</li><li>■ <i>JUNOS Software Network Interfaces Configuration Guide</i> at <a href="http://www.juniper.net/techpubs/software/junos/junos95/index.html">http://www.juniper.net/techpubs/software/junos/junos95/index.html</a></li></ul>
<b>List of Sample Output</b>	show interfaces ge-0/0/0 on page 7 show interfaces ge-0/0/0 brief on page 8 show interfaces ge-0/0/0 detail on page 8 show interfaces ge-0/0/4 extensive on page 9
<b>Output Fields</b>	Table 1 lists the output fields for the <b>show interfaces ge-</b> command. Output fields are listed in the approximate order in which they appear.

**Table 1: show interfaces ge- Output Fields**

Field Name	Field Description	Level of Output
<b>Physical Interface</b>		
Physical interface	Name of the physical interface.	All levels

**Table 1: show interfaces ge- Output Fields (continued)**

Field Name	Field Description	Level of Output
Enabled	State of the interface: <b>Enabled</b> or <b>Disabled</b> .	All levels
Interface index	Index number of the physical interface, which reflects its initialization sequence.	detail extensive none
SNMP ifIndex	SNMP index number for the physical interface.	detail extensive none
Generation	Unique number for use by Juniper Networks technical support only.	detail extensive
Description	Optional user-specified description.	brief detail extensive
Link-level type	Encapsulation being used on the physical interface.	All levels
MTU	Maximum transmission unit size on the physical interface. Default is 1514.	All levels
Speed	Speed at which the interface is running.	All levels
Loopback	Loopback status: <b>Enabled</b> or <b>Disabled</b> . If loopback is enabled, type of loopback: <b>Local</b> or <b>Remote</b> .	All levels
Source filtering	Source filtering status: <b>Enabled</b> or <b>Disabled</b> .	All levels
Flow control	Flow control status: <b>Enabled</b> or <b>Disabled</b> .	All levels
Auto-negotiation	Autonegotiation status: <b>Enabled</b> or <b>Disabled</b> .	All levels
Remote-fault	Remote fault status: <ul style="list-style-type: none"> <li>■ <b>Online</b>—Autonegotiation is manually configured as online.</li> <li>■ <b>Offline</b>—Autonegotiation is manually configured as offline.</li> </ul>	All levels
Device flags	Information about the physical device.	All levels
Interface flags	Information about the interface.	All levels
Link flags	Information about the link.	All levels
CoS queues	Number of CoS queues configured.	detail extensive none
Hold-times	Current interface hold-time up and hold-time down, in milliseconds.	detail extensive
Current address	Configured MAC address.	detail extensive none
Hardware address	MAC address of the hardware.	detail extensive none
Last flapped	Date, time, and how long ago the interface went from down to up. The format is <b>Last flapped: year-month-day hour:minute:second timezone (hour:minute:second ago)</b> . For example, <b>Last flapped: 2008-01-16 10:52:40 UTC (3d 22:58 ago)</b> .	detail extensive none
Statistics last cleared	Time when the statistics for the interface were last set to zero.	detail extensive

**Table 1: show interfaces ge- Output Fields (continued)**

Field Name	Field Description	Level of Output
Traffic statistics	<p>Number and rate of bytes and packets received and transmitted on the physical interface.</p> <ul style="list-style-type: none"><li>■ <b>Input bytes</b>—Number of bytes received on the interface.</li><li>■ <b>Output bytes</b>—Number of bytes transmitted on the interface.</li><li>■ <b>Input packets</b>—Number of packets received on the interface</li><li>■ <b>Output packets</b>—Number of packets transmitted on the interface.</li></ul> <p><b>NOTE:</b> The bandwidth bps counter is not enabled on this platform.</p>	detail extensive
Input errors	<p>Input errors on the interface. The following paragraphs explain the counters whose meaning might not be obvious:</p> <ul style="list-style-type: none"><li>■ <b>Errors</b>—Sum of the incoming frame aborts and FCS errors.</li><li>■ <b>Drops</b>—Number of packets dropped by the input queue of the I/O Manager ASIC. If the interface is saturated, this number increments once for every packet that is dropped by the ASIC's RED mechanism.</li><li>■ <b>Framing errors</b>—Number of packets received with an invalid frame checksum (FCS).</li><li>■ <b>Runts</b>—Number of frames received that are smaller than the runt threshold.</li><li>■ <b>Policed discards</b>—Number of frames that the incoming packet match code discarded because they were not recognized or not of interest. Usually, this field reports protocols that the JUNOS Software does not handle.</li><li>■ <b>L3 incompletes</b>—Number of incoming packets discarded because they failed Layer 3 sanity checks of the headers. For example, a frame with less than 20 bytes of available IP header is discarded.</li><li>■ <b>L2 channel errors</b>—Number of times the software did not find a valid logical interface for an incoming frame.</li><li>■ <b>L2 mismatch timeouts</b>—Number of malformed or short packets that caused the incoming packet handler to discard the frame as unreadable.</li><li>■ <b>FIFO errors</b>—Number of FIFO errors in the receive direction that are reported by the ASIC on the PIC. If this value is ever nonzero, the PIC is probably malfunctioning.</li><li>■ <b>Resource errors</b>—Sum of transmit drops.</li></ul>	extensive

**Table 1: show interfaces ge- Output Fields (continued)**

Field Name	Field Description	Level of Output
Output errors	<p>Output errors on the interface. The following paragraphs explain the counters whose meaning might not be obvious:</p> <ul style="list-style-type: none"> <li>■ <b>Carrier transitions</b>—Number of times the interface has gone from <b>down</b> to <b>up</b>. This number does not normally increment quickly, increasing only when the cable is unplugged, the far-end system is powered down and then up, or another problem occurs. If the number of carrier transitions increments quickly (perhaps once every 10 seconds), the cable, the far-end system, or the PIC or PIM is malfunctioning.</li> <li>■ <b>Errors</b>—Sum of the outgoing frame aborts and FCS errors.</li> <li>■ <b>Drops</b>—Number of packets dropped by the output queue of the I/O Manager ASIC. If the interface is saturated, this number increments once for every packet that is dropped by the ASIC's RED mechanism.</li> <li>■ <b>Collisions</b>—Number of Ethernet collisions. The Gigabit Ethernet PIC supports only full-duplex operation, so for Gigabit Ethernet PICs, this number should always remain 0. If it is nonzero, there is a software bug.</li> <li>■ <b>Aged packets</b>—Number of packets that remained in shared packet SDRAM so long that the system automatically purged them. The value in this field should never increment. If it does, it is most likely a software bug or possibly malfunctioning hardware.</li> <li>■ <b>FIFO errors</b>—Number of FIFO errors in the send direction as reported by the ASIC on the PIC. If this value is ever nonzero, the PIC is probably malfunctioning.</li> <li>■ <b>HS link CRC errors</b>—Number of errors on the high-speed links between the ASICs responsible for handling the router interfaces.</li> <li>■ <b>MTU errors</b>—Number of packets whose size exceeded the MTU of the interface.</li> <li>■ <b>Resource errors</b>—Sum of transmit drops.</li> </ul>	extensive
Egress queues	Total number of egress queues supported on the specified interface.	detail extensive
Queue counters (Egress )	<p>CoS queue number and its associated user-configured forwarding class name.</p> <ul style="list-style-type: none"> <li>■ <b>Queued packets</b>—Number of queued packets.</li> <li>■ <b>Transmitted packets</b>—Number of transmitted packets.</li> <li>■ <b>Dropped packets</b>—Number of packets dropped by the ASIC's RED mechanism.</li> </ul>	detail extensive
Active alarms and Active defects	<p>Ethernet-specific defects that can prevent the interface from passing packets. When a defect persists for a certain amount of time, it is promoted to an alarm. Based on the switch configuration, an alarm can ring the red or yellow alarm bell on the switch, or turn on the red or yellow alarm LED on the craft interface. These fields can contain the value <b>None</b> or <b>Link</b>.</p> <ul style="list-style-type: none"> <li>■ <b>None</b>—There are no active defects or alarms.</li> <li>■ <b>Link</b>—Interface has lost its link state, which usually means that the cable is unplugged, the far-end system has been turned off, or the PIC is malfunctioning.</li> </ul>	detail extensive none

**Table 1: show interfaces ge- Output Fields (continued)**

Field Name	Field Description	Level of Output
MAC statistics	<p>Receive and Transmit statistics reported by the PIC's MAC subsystem.</p> <ul style="list-style-type: none"> <li>■ <b>Total octets and total packets</b>—Total number of octets and packets. For Gigabit Ethernet IQ PICs, the received octets count varies by interface type.</li> <li>■ <b>Unicast packets, Broadcast packets, and Multicast packets</b>—Number of unicast, broadcast, and multicast packets.</li> <li>■ <b>CRC/Align errors</b>—Total number of packets received that had a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets, inclusive, and had either a bad FCS with an integral number of octets (FCS Error) or a bad FCS with a nonintegral number of octets (Alignment Error).</li> <li>■ <b>FIFO error</b>—Number of FIFO errors that are reported by the ASIC on the PIC. If this value is ever nonzero, the PIC is probably malfunctioning.</li> <li>■ <b>MAC control frames</b>—Number of MAC control frames.</li> <li>■ <b>MAC pause frames</b>—Number of MAC control frames with pause operational code.</li> <li>■ <b>Oversized frames</b>—Number of frames that exceed 1518 octets.</li> <li>■ <b>Jabber frames</b>—Number of frames that were longer than 1518 octets (excluding framing bits, but including FCS octets), and had either an FCS error or an alignment error. This definition of jabber is different from the definition in IEEE-802.3 section 8.2.1.5 (10BASE5) and section 10.3.1.4 (10BASE2). These documents define jabber as the condition in which any packet exceeds 20 ms. The allowed range to detect jabber is from 20 ms to 150 ms.</li> <li>■ <b>Fragment frames</b>—Total number of packets that were less than 64 octets in length (excluding framing bits, but including FCS octets), and had either an FCS error or an alignment error. Fragment frames normally increment because both runts (which are normal occurrences caused by collisions) and noise hits are counted.</li> <li>■ <b>Code violations</b>—Number of times an event caused the PHY to indicate “Data reception error” or “invalid data symbol error.”</li> </ul>	extensive
Filter Statistics	Receive and Transmit statistics reported by the PIC's MAC address filter subsystem.	extensive

**Table 1: show interfaces ge- Output Fields (continued)**

Field Name	Field Description	Level of Output
Autonegotiation information	<p>Information about link autonegotiation.</p> <ul style="list-style-type: none"> <li>■ <b>Negotiation status:</b> <ul style="list-style-type: none"> <li>■ <b>Incomplete</b>—Ethernet interface has the speed or link mode configured.</li> <li>■ <b>No autonegotiation</b>—Remote Ethernet interface has the speed or link mode configured, or does not perform autonegotiation.</li> <li>■ <b>Complete</b>—Ethernet interface is connected to a device that performs autonegotiation and the autonegotiation process is successful.</li> </ul> </li> <li>■ <b>Link partner status</b>—OK when Ethernet interface is connected to a device that performs autonegotiation and the autonegotiation process is successful.</li> <li>■ <b>Link partner:</b> <ul style="list-style-type: none"> <li>■ <b>Link mode</b>—Depending on the capability of the attached Ethernet device, either <b>Full-duplex</b> or <b>Half-duplex</b>.</li> <li>■ <b>Flow control</b>—Types of flow control supported by the remote Ethernet device. For Gigabit Ethernet interfaces, types are <b>Symmetric</b> (link partner supports PAUSE on receive and transmit), <b>Asymmetric</b> (link partner supports PAUSE on transmit), and <b>Symmetric/Asymmetric</b> (link partner supports both PAUSE on receive and transmit or only PAUSE receive).</li> <li>■ <b>Remote fault</b>—Remote fault information from the link partner—<b>Failure</b> indicates a receive link error. <b>OK</b> indicates that the link partner is receiving. <b>Negotiation error</b> indicates a negotiation error. <b>Offline</b> indicates that the link partner is going offline.</li> <li>■ <b>Link partner speed</b>—Speed of the link partner.</li> </ul> </li> <li>■ <b>Local resolution</b>—Information from the link partner: <ul style="list-style-type: none"> <li>■ <b>Flow control</b>—Types of flow control supported by the remote Ethernet device. For Gigabit Ethernet interfaces, types are <b>Symmetric</b> (link partner supports PAUSE on receive and transmit), <b>Asymmetric</b> (link partner supports PAUSE on transmit), and <b>Symmetric/Asymmetric</b> (link partner supports both PAUSE on receive and transmit or only PAUSE receive).</li> <li>■ <b>Remote fault</b>—Remote fault information. <b>Link OK</b> (no error detected on receive), <b>Offline</b> (local interface is offline), and <b>Link Failure</b> (link error detected on receive).</li> </ul> </li> </ul>	extensive
Packet Forwarding Engine configuration	<p>Information about the configuration of the Packet Forwarding Engine:</p> <ul style="list-style-type: none"> <li>■ <b>Destination slot</b>—FPC slot number.</li> </ul>	extensive
<b>Logical Interface</b>		
Logical interface	Name of the logical interface.	All levels
Index	Index number of the logical interface, which reflects its initialization sequence.	detail extensive none
SNMP ifIndex	SNMP interface index number for the logical interface.	detail extensive none
Generation	Unique number for use by Juniper Networks technical support only.	detail extensive
Flags	Information about the logical interface.	All levels

**Table 1: show interfaces ge- Output Fields (continued)**

Field Name	Field Description	Level of Output
Encapsulation	Encapsulation on the logical interface.	All levels
Protocol	Protocol family.	detail extensive none
Traffic statistics	Number and rate of bytes and packets received (input) and transmitted (output) on the specified interface.	detail extensive
IPv6 transit statistics	If IPv6 statics tracking is enabled, number of IPv6 bytes and packets received and transmitted on the logical interface.	extensive
Local statistics	Number and rate of bytes and packets destined to and from the switch.	extensive
Transit statistics	Number and rate of bytes and packets transiting the switch.	extensive
Generation	Unique number for use by Juniper Networks technical support only.	detail extensive
Route Table	Route table in which the logical interface address is located. For example, 0 refers to the routing table inet.0.	detail extensive none
Input Filters	Names of any input filters applied to this interface.	detail extensive
Output Filters	Names of any output filters applied to this interface.	detail extensive
Flags	Information about protocol family flags.  If unicast Reverse Path Forwarding (uRPF) is explicitly configured on the specified interface, the uRPF flag displays. If uRPF was configured on a different interface (and therefore is enabled on all switch interfaces) but was not explicitly configured on the specified interface, the uRPF flag does not display even though uRPF is enabled.	detail extensive
<i>protocol-family</i>	Protocol family configured on the logical interface. If the protocol is inet, the IP address of the interface is also displayed.	brief
Flags	Information about address flag.	detail extensive none
Destination	IP address of the remote side of the connection.	detail extensive none
Local	IP address of the logical interface.	detail extensive none
Broadcast	Broadcast address of the logical interlace.	detail extensive none
Generation	Unique number for use by Juniper Networks technical support only.	detail extensive

```

show interfaces user@switch> show interfaces ge-0/0/0
ge-0/0/0 Physical interface: ge-0/0/0, Enabled, Physical link is Down
Interface index: 129, SNMP ifIndex: 21
Link-level type: Ethernet, MTU: 1514, Speed: Unspecified, Loopback: Disabled,
Source filtering: Disabled, Flow control: Enabled, Auto-negotiation: Enabled
Remote fault: Online
Device flags : Present Running Down
Interface flags: Hardware-Down SNMP-Traps Internal: 0x0

```

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CoS queues      : 8 supported, 8 maximum usable queues
Hold-times      : Up 0 ms, Down 0 ms
Current address: 00:19:e2:50:3f:41, Hardware address: 00:19:e2:50:3f:41
Last flapped    : 2008-01-16 11:40:53 UTC (4d 02:30 ago)
Input rate      : 0 bps (0 pps)
Output rate     : 0 bps (0 pps)
Ingress rate at Packet Forwarding Engine : 0 bps (0 pps)
Ingress drop rate at Packet Forwarding Engine : 0 bps (0 pps)
Active alarms   : None
Active defects  : None

```

```

Logical interface ge-0/0/0.0 (Index 65) (SNMP ifIndex 22)
Flags: SNMP-Traps
Encapsulation: ENET2
Input packets : 0
Output packets: 0
Protocol eth-switch
Flags: None

```

#### show interfaces ge-0/0/0 brief

```

user@switch> show interfaces ge-0/0/0 brief
Physical interface: ge-0/0/0, Enabled, Physical link is Down
Description: voice priority and tcp and icmp traffic rate-limiting filter at i
ngress port
Link-level type: Ethernet, MTU: 1514, Speed: Unspecified, Loopback: Disabled,
Source filtering: Disabled, Flow control: Enabled, Auto-negotiation: Enabled,
Remote fault: Online
Device flags   : Present Running Down
Interface flags: Hardware-Down SNMP-Traps Internal: 0x0
Link flags     : None

Logical interface ge-0/0/0.0
Flags: Device-Down SNMP-Traps Encapsulation: ENET2
eth-switch

```

#### show interfaces ge-0/0/0 detail

```

user@switch> show interfaces ge-0/0/0 detail
Physical interface: ge-0/0/0, Enabled, Physical link is Up
Interface index: 193, SNMP ifIndex: 206, Generation: 196
Link-level type: Ethernet, MTU: 1514, Speed: Auto, Duplex: Auto,
BPDU Error: None, MAC-REWRITE Error: None, Loopback: Disabled,
Source filtering: Disabled, Flow control: Enabled, Auto-negotiation: Enabled,
Remote fault: Online
Device flags   : Present Running
Interface flags: SNMP-Traps Internal: 0x0
Link flags     : None
CoS queues     : 8 supported, 8 maximum usable queues
Hold-times     : Up 0 ms, Down 0 ms
Current address: 00:1f:12:30:ff:40, Hardware address: 00:1f:12:30:ff:40
Last flapped   : 2009-05-05 06:03:05 UTC (00:22:13 ago)
Statistics last cleared: Never
Traffic statistics:
Input bytes    : 0                      0 bps
Output bytes   : 0                      0 bps
Input packets  : 0                      0 pps
Output packets : 0                      0 pps
IPv6 transit statistics:
Input bytes    : 0
Output bytes   : 0
Input packets  : 0
Output packets : 0
Egress queues: 8 supported, 4 in use
Queue counters:      Queued packets  Transmitted packets  Dropped packets

```



0 best-effort	0	0	0
1 assured-forw	0	0	0
5 expedited-fo	0	0	0
7 network-cont	0	0	0

Active alarms : None  
Active defects : None

Logical interface ge-0/0/0.0 (Index 65) (SNMP ifIndex 235) (Generation 130)  
Flags: SNMP-Traps Encapsulation: ENET2  
Bandwidth: 0  
Traffic statistics:  
Input bytes : 0  
Output bytes : 0  
Input packets: 0  
Output packets: 0  
Local statistics:  
Input bytes : 0  
Output bytes : 0  
Input packets: 0  
Output packets: 0  
Transit statistics:  
Input bytes : 0 0 bps  
Output bytes : 0 0 bps  
Input packets: 0 0 pps  
Output packets: 0 0 pps  
Protocol eth-switch, Generation: 146, Route table: 0  
Flags: Is-Primary  
Input Filters: f1,  
Output Filters: f2,,,,

**show interfaces  
ge-0/0/4 extensive**

```

user@switch> show interfaces ge-0/0/4 extensive
Physical interface: ge-0/0/4, Enabled, Physical link is Up
Interface index: 165, SNMP ifIndex: 152, Generation: 168
Link-level type: Ethernet, MTU: 1514, Speed: Auto, Duplex: Auto,
MAC-REWRITE Error: None, Loopback: Disabled, Source filtering: Disabled,
Flow control: Enabled, Auto-negotiation: Enabled, Remote fault: Online
Device flags : Present Running
Interface flags: SNMP-Traps Internal: 0x0
Link flags : None
CoS queues : 8 supported, 8 maximum usable queues
Hold-times : Up 0 ms, Down 0 ms
Current address: 00:1f:12:33:65:44, Hardware address: 00:1f:12:33:65:44
Last flapped : 2008-09-17 11:02:25 UTC (16:32:54 ago)
Statistics last cleared: Never
Traffic statistics:
Input bytes : 0 0 bps
Output bytes : 2989761 984 bps
Input packets: 0 0 pps
Output packets: 24307 1 pps
IPv6 transit statistics:
Input bytes : 0
Output bytes : 0
Input packets: 0
Output packets: 0
Input errors:
Errors: 0, Drops: 0, Framing errors: 0, Runts: 0, Policed discards: 0,

```

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L3 incompletes: 0, L2 channel errors: 0, L2 mismatch timeouts: 0,
FIFO errors: 0, Resource errors: 0
Output errors:
Carrier transitions: 1, Errors: 0, Drops: 0, Collisions: 0, Aged packets: 0,

FIFO errors: 0, HS link CRC errors: 0, MTU errors: 0, Resource errors: 0
Egress queues: 8 supported, 4 in use
Queue counters:      Queued packets  Transmitted packets      Dropped packets

0 best-effort          0                0                0

1 assured-forw         0                0                0

5 expedited-fo        0                0                0

7 network-cont         0               24307            0

Active alarms : None
Active defects : None
MAC statistics:
Total octets           Receive          Transmit
Total packets          0               2989761
Unicast packets        0                0
Broadcast packets      0                0
Multicast packets      0               24307
CRC/Align errors       0                0
FIFO errors            0                0
MAC control frames     0                0
MAC pause frames       0                0
Oversized frames       0
Jabber frames          0
Fragment frames        0
Code violations         0
Autonegotiation information:
Negotiation status: Complete
Link partner:
Link mode: Full-duplex, Flow control: None, Remote fault: OK,
Link partner Speed: 1000 Mbps
Local resolution:
Flow control: None, Remote fault: Link OK
Packet Forwarding Engine configuration:
Destination slot: 0
Direction : Output
CoS transmit queue      Bandwidth      Buffer Priority
Limit
%      bps      %      usec
0 best-effort          95      950000000    95      NA      low
none
7 network-control      5       50000000     5       NA      low
none

Logical interface ge-0/0/4.0 (Index 82) (SNMP ifIndex 184) (Generation 147)
Flags: SNMP-Traps Encapsulation: ENET2
Traffic statistics:
Input bytes :          0
Output bytes :        4107883
Input packets:          0
Output packets:       24307
IPv6 transit statistics:
Input bytes :          0
Output bytes :          0

```

```

      Input packets:          0
      Output packets:        0
Local statistics:
  Input bytes  :              0
  Output bytes :          4107883
  Input packets:              0
  Output packets:          24307
Transit statistics:
  Input bytes  :              0          0 bps
  Output bytes :              0          0 bps
  Input packets:              0          0 pps
  Output packets:              0          0 pps
IPv6 transit statistics:
  Input bytes  :              0
  Output bytes :              0
  Input packets:              0
  Output packets:              0
Protocol eth-switch, Generation: 159, Route table: 0
Flags: None
Input Filters: f2,
Output Filters: f1,,,

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