Interface configuration

This chapter contains information on interface configuration. The slots specify the chassis slot number in your device and subslots specify the slot where the service modules are installed.

For further information on the slots and subslots, see the “About Slots and Interfaces” sections:

- Hardware Installation Guide for Cisco 8200 Series Secure Routers

These section is included in this chapter:

Configure the interfaces

These sections describe how to configure Gigabit interfaces and also provide examples of configuring the router interfaces:

Configure Gigabit Ethernet interfaces

Procedure

Step 1 **enable**

Example:

```
Router> enable
```

Enables privileged EXEC mode.

Enter your password if prompted.

Step 2 **configure terminal**

Example:

```
Router# configure terminal
```

Enters global configuration mode.

Step 3 **interface GigabitEthernet** *slot/subslot/port*

Example:

```
Router(config)# interface GigabitEthernet 0/0/1
```

Configures a GigabitEthernet interface.

- **GigabitEthernet**—Type of interface.
- *slot*—Chassis slot number.
- */subslot*—Secondary slot number. The slash (/) is required.
- /port—Port or interface number. The slash (/) is required.

Step 4 **ip address** *ip-address mask* [**secondary**] **dhcp pool**

Example:

```
Router(config-if)# ip address 10.0.0.1 255.255.255.0 dhcp pool
```

Assigns an IP address to the GigabitEthernet

- **ip address** *ip-address*—IP address for the interface.
- *mask*—Mask for the associated IP subnet.
- **secondary** (optional)—Specifies that the configured address is a secondary IP address. If this keyword is omitted, the configured address is the primary IP address.
- **dhcp**—IP address negotiated via DHCP.
- **pool**—IP address autoconfigured from a local DHCP pool.

Step 5 **negotiation auto**

Example:

```
Router(config-if)# negotiation auto
```

Selects the negotiation mode.

- **auto**—Performs link autonegotiation.

Step 6 **end**

Example:

```
Router(config-if)# end
```

Ends the current configuration session and returns to privileged EXEC mode.

Configure the interfaces: Example

This example shows the **interface gigabitEthernet** command being used to add the interface and set the IP address. **0/0/0** is the slot/subslot/port. The ports are numbered 0 to 5.

```
Router# show running-config interface gigabitEthernet 0/0/0
Building configuration...
Current configuration : 38 bytes
!
interface GigabitEthernet0/0/0
end
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# interface gigabitEthernet 0/0/0
```

Note Several Cisco platforms, NIMs, and SM cards support configuring multiple-rate SFPs on same interface, e.g., 1G SFP or 10G SFP+ on a 10G port.

In a port-channel bundle, all member interfaces should be of same speed, and duplex. It is recommended to use duplex interfaces of the same speed as member interfaces for configuring a port-channel.

For more information about interfaces that support multiple-rate SFPs, see the corresponding datasheets.

View a list of all interfaces: Example

In this example, the **show interfaces summary**, and **show platform software status control-process brief** commands are used to display all the interfaces.

```
Router# show interfaces summary
   *: interface is up

IHQ: pkts in input hold queue     IQD: pkts dropped from input queue

OHQ: pkts in output hold queue    OQD: pkts dropped from output queue

RXBS: rx rate (bits/sec)          RXPS: rx rate (pkts/sec)

TXBS: tx rate (bits/sec)          TXPS: tx rate (pkts/sec)

TRTL: throttle count

Interface                   IHQ       IQD       OHQ       OQD      RXBS      RXPS      TXBS
      TRTL TXPS
------------------------------------------------------------------------------------------------


GigabitEthernet0/0/0          0         0         0         0         0         0
0         0         0
GigabitEthernet0/0/1          0         0         0         0         0         0
0         0         0
GigabitEthernet0/0/2          0         0         0         0         0         0
0         0         0
```

```
* GigabitEthernet0/0/3        0         0         0         0         0         0
0         0         0
Tw0/0/4                       0         0         0         0         0         0
0         0         0
Tw0/0/5                       0         0         0         0         0         0
0         0         0
* Tw0/0/6                     0         0         0         0         0         0
0         0         0
* Tw0/0/7                     0         0         0         0         0         0
0         0         0
* Te0/0/8                    0         0         0         0 1294556000   2528447 1054401000
   2059772       0
* Te0/0/8.28                  -         -         -         -         -         -
-         -         -
* Te0/0/9                    0         0         0         0 1051214000   2053136 1294557000
   2528449       0
* Te0/0/9.14                  -         -         -         -         -         -
-         -         -
* Te0/0/9.17                  -         -         -         -         -         -
-         -         -
* GigabitEthernet0            0         0         0         0      8000         6
0         0         0
* vmanage_system              0         0         0         0         0         0
0         0         0
* Loopback65528               0         0         0         0         0         0
0         0         0
* Loopback65529               0         0         0         0         0         0
0         0         0
* Vlan1                       0         0         0         0         0         0
0         0         0
NOTE:No separate counters are maintained for subinterfaces
Hence Details of subinterface are not shown
```

```
Router#show platform software status control-process brief
Load Average

Slot  Status  1-Min  5-Min 15-Min

RP0 Healthy   7.20   7.33   7.49

Memory (kB)

Slot  Status    Total     Used (Pct)     Free (Pct) Committed (Pct)

RP0 Healthy  7937336  4028804 (51%)  3908532 (49%)   5463844 (69%)

CPU Utilization

Slot  CPU   User System   Nice   Idle    IRQ   SIRQ IOwait

RP0    0   2.90   5.10   0.00  90.90   0.90   0.20   0.00

1  99.90   0.00   0.00   0.00   0.10   0.00   0.00

2  99.90   0.00   0.00   0.00   0.10   0.00   0.00

3  99.90   0.00   0.00   0.00   0.10   0.00   0.00

4  99.90   0.00   0.00   0.00   0.09   0.00   0.00

5  99.80   0.00   0.00   0.00   0.09   0.09   0.00

6  99.90   0.00   0.00   0.00   0.10   0.00   0.00

7  99.90   0.00   0.00   0.00   0.10   0.00   0.00
```

View information about an interface

This example shows how to display a brief summary of an interface's IP information and status, including the virtual interface bundle information, by using the **show ip interface brief** command.

```
Router# show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol

GigabitEthernet0/0/0   unassigned      YES unset  down                  down

GigabitEthernet0/0/1   unassigned      YES unset  down                  down

GigabitEthernet0/0/2   unassigned      YES unset  down                  down

GigabitEthernet0/0/3   unassigned      YES unset  up                    up

Tw0/0/4                unassigned      YES unset  down                  down

Tw0/0/5                unassigned      YES unset  down                  down

Tw0/0/6                unassigned      YES unset  up                    up

Tw0/0/7                unassigned      YES unset  up                    up

Te0/0/8                unassigned      YES unset  up                    up

Te0/0/8.28             28.1.1.1        YES other  up                    up

Te0/0/9                unassigned      YES unset  up                    up

Te0/0/9.14             14.1.1.2        YES other  up                    up

Te0/0/9.17             17.1.1.2        YES other  up                    up

GigabitEthernet0       10.124.24.214   YES other  up                    up

vmanage_system         unassigned      YES unset  up                    up

Loopback65528          192.168.1.1     YES other  up                    up

Loopback65529          unassigned      YES unset  up                    up

Vlan1                  192.168.1.1     YES other  up                    up
```