

Configuring the Interfaces

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

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Configuring Gigabit Ethernet Interfaces

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **interface GigabitEthernet** *slot/subslot/port*
4. **ip address** *ip-address mask* [**secondary**] **dhcp pool**
5. **negotiation auto**
6. **end**

DETAILED STEPS

Procedure

	Command or Action	Purpose
Step 1	**enable** **Example:**	Enables privileged EXEC mode. Enter your password if prompted.

	Command or Action	Purpose
	`Router> enable`	
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.

Configuring the Interfaces: Example

The following 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 3.

```
Router# show running-config interface gigabitEthernet 0/0/0
Building configuration...
Current configuration : 71 bytes
!
interface gigabitEthernet0/0/0
no ip address
negotiation auto
end

Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# interface gigabitEthernet 0/0/0
```

Viewing a List of All Interfaces: Example

In this example, the **show platform software interface summary** and **show interfaces summary** commands are used to display all the interfaces:

```
Router# show platform software interface summary
  Interface                 IHQ  IQD  OHQ  OQD  RXBS  RXPS  TXBS  TXPS  TRTL
------------------------------------------------------------------------------
* 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
* GigabitEthernet0            0    0    0    0     0     0     0     0     0


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    TXPS    TRTL
------------------------------------------------------------------------------------

* 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
* GigabitEthernet      0    0      0      0      0       0       0       0       0
```

Viewing Information About an Interface: Example

The following 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    10.0.0.1       YES  manual  down                  down
GigabitEthernet0/0/1    unassigned     YES  NVRAM   administratively down  down
GigabitEthernet0/0/2    10.10.10.1     YES  NVRAM   up                    up
GigabitEthernet0/0/3    8.8.8.1        YES  NVRAM   up                    up
GigabitEthernet0        172.18.42.33   YES  NVRAM   up                    up
```