Lab 6.3.5 Configure Ethernet/FastEthernet Interface

Estimated Time: 15 minutes

Number of Team Members: Students will work in teams of two.

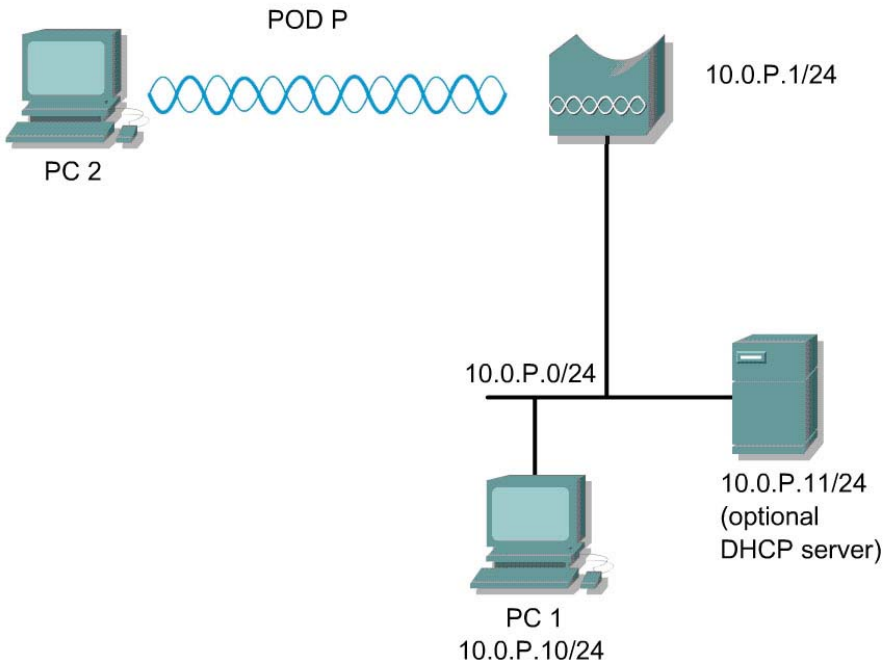
Objective

In this lab, the student will use the bridge setting pages to enter speed and duplex information for the bridge Ethernet interface.

Scenario

This section describes how to configure the bridge radio Ethernet and FastEthernet interfaces to lock in speed and duplex settings.

Topology



Preparation

Below are the basic settings to be applied to the bridge.

Team	bridge Name	SSID	Address
1	Pod1	bridge1	10.0.1.1/24
2	Pod2	bridge2	10.0.2.1/24

Tools and Resources

- Cisco 1310 bridge
- Bridge power injector
- PCs with properly installed Cisco wireless client adapters and utility.
- PCs on the wired network that can maintain connectivity to the configuration management pages on the bridge.

Step 1 Configuring the bridge IP Address

In order to access the web interface of the bridge for configuration, the IP address of the bridge BVI must be known. The default IP address for the bridge is 10.0.0.1/27. If this IP address has been changed from previous configurations, it will be necessary to connect to the bridge via a console cable to configure the bridge with a known IP address.

a. If needed, console into the bridge and configure the BVI IP address to 10.0.P.1/24. Set the hostname as well according to the Preparation table. Configure the wired PC with the correct TCP/IP settings as indicated by the lab Topology. A wireless connection to the bridge can also be used if the bridge configuration is known.

   1. Record the configuration commands below needed for Step1a.

      _____

      _____

      _____

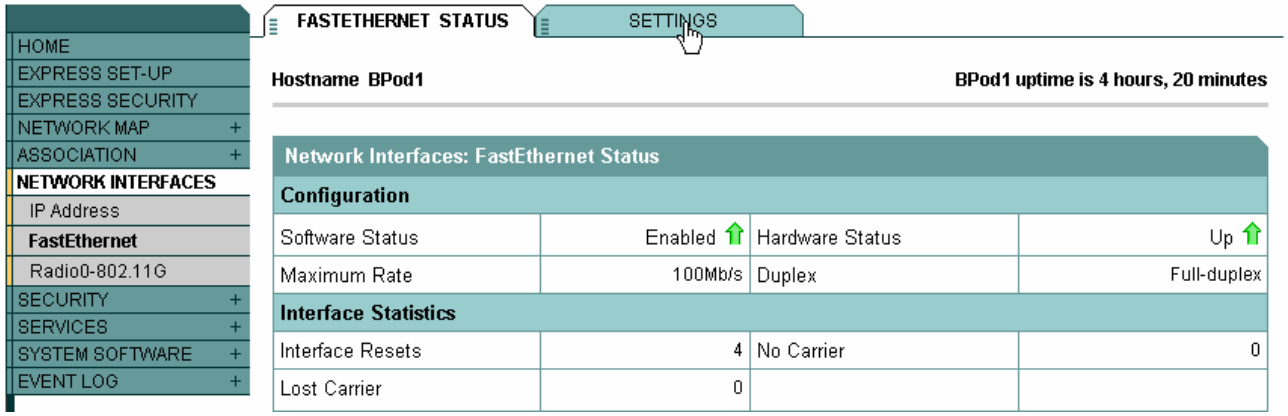
      _____

      _____

b. After the hostname and BVI interface have been configured, navigate to the bridge web interface using the wired or wireless PC. The default username is *Cisco*. The default password is also *Cisco*. Both username and password are case sensitive.

Step 2 Configure data rate speed and Duplex of the FastEthernet interface

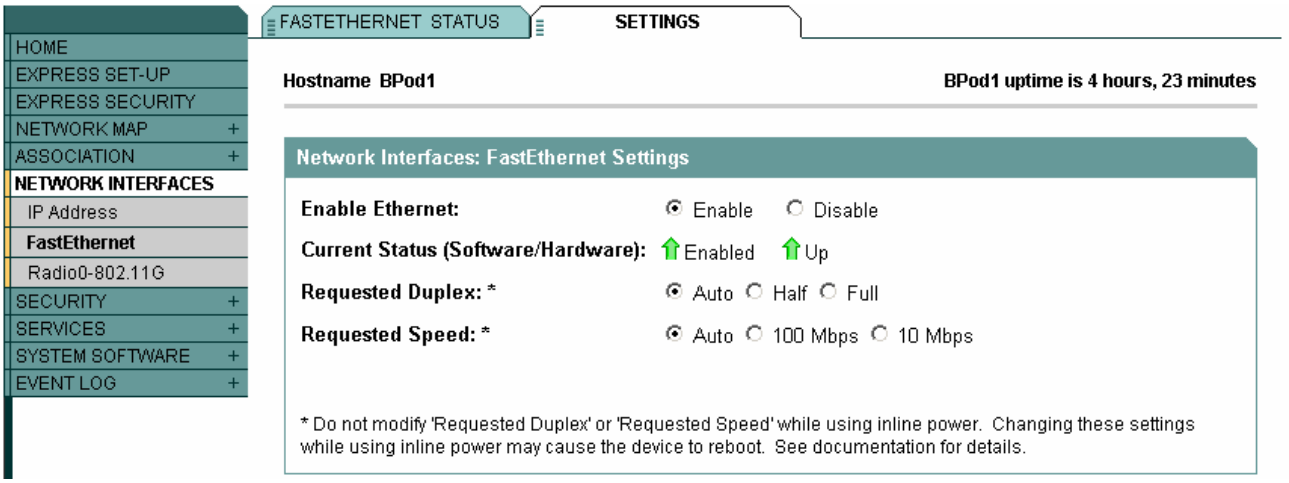
a. Go to the **NETWORK INTERFACES>FastEthernet** Page and click on the settings tab of the bridge.



b. The **Enable Ethernet:** setting should be set to **Enable**.

> **Note** If the FastEthernet settings are modified while connected through the wired network, the connection may be lost. These will actually be modified in Step 4 through the Console. The Requested Duplex Setting should be set to **Auto** by default.

c. The Requested Speed and Duplex settings should be set to **Auto** by default**.** In a production environment, the speed should be locked into the optimum setting of the connected switch.



Step 4 Configure Ethernet/FastEthernet Interfaces through IOS CLI

Parameters can be configured via the CLI if the web interface is inaccessible or if HTTP access has been disabled for security reasons.

Console into the bridge. Beginning in configuration mode. Follow these steps to set the bridge Ethernet/FastEthernet settings.

a. Enter interface configuration mode:

```
PodP(config)#interface fastEthernet 0
```


b. Now see what duplex settings are possible.

```
PodP(config-if)#duplex ?
  auto  Enable AUTO duplex configuration
  full  Force full duplex operation
  half  Force half-duplex operation
```

c. Set the duplex to full

```
PodP(config-if)#duplex full
```

d. View possible speed settings:

```
PodP(config-if)# speed ?
  10    Force 10 Mbps operation
  100   Force 100 Mbps operation
  auto  Enable AUTO speed configuration
```

e. Configure the speed to 100 Mbps.

```
PodP(config-if)#speed 100
PodP(config-if)#end
```

f. Check the running configuration.

```
PodP#show running-config
```

g. Display the FastEthernet interface status

```
PodP#show interfaces fastEthernet 0
FastEthernet0 is up, line protocol is up
  Hardware is PowerPC405GP Ethernet, address is 000b.46b8.ca90 (bia 000b.46b8.ca90)
  MTU 1500 bytes, BW 100000 Kbit, DLY 100 usec,
     reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, loopback not set
  Keepalive set (10 sec)
  Full-duplex, 100Mb/s, MII
  ARP type: ARPA, ARP Timeout 04:00:00
  Last input 00:23:18, output 00:01:54, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
  Queueing strategy: fifo
  Output queue :0/40 (size/max)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
     1783 packets input, 164809 bytes
     Received 29 broadcasts, 0 runts, 0 giants, 0 throttles
```



```
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 watchdog
0 input packets with dribble condition detected
1141 packets output, 449852 bytes, 0 underruns
0 output errors, 0 collisions, 4 interface resets
0 babbles, 0 late collision, 0 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
```

h. Quickly verify all the interfaces are up

PodP#**show ip interface brief**

```
PodP#show ip interface brief
Interface                  IP-Address      OK? Method Status
   Protocol
BVI1                       10.0.P.1        YES other  up             up
Dot11Radio0                unassigned      YES TFTP   up             up
Dot11Radio1                unassigned      YES TFTP   up             up
FastEthernet0              unassigned      YES other  up             up
Virtual-Dot11Radio0        unassigned      YES TFTP   down
   down
Virtual-Dot11Radio1        unassigned      YES TFTP   down
   down
```

PodP#

i. Now check the detailed status of all the interfaces

PodP#**show interfaces**

