

Computer Networks Lab 2 Router Configuration and ping

Observation

Lab-02

AM: To demonstrate configuration of IP Address to the router & explore ping command.

Steps: Command line interface (CLI)

1. enable
2. #
3. config-t
4. Click interface of Router fa0/0 or fa0/1
5. interface FastEthernet0/0
6. ip address 10.0.0.2 255.0.0.0
→ 10.0.0.2 is the network
7. no shutdown

Now, FastEthernet0/0 changed state to up
The line turns green

Similarly configure all devices

- * Now, to configure Gateway to send message from source to destination
- * Select the end device to config and in gateway enter the ip address of the router fa0/0
- * Similarly, follow same for all end devices.

Now, the message is sent using ping

- * Select end device → desktop → Command prompt
- Enter
ping destination ip address (end device)
- * ping 20.0.0.1

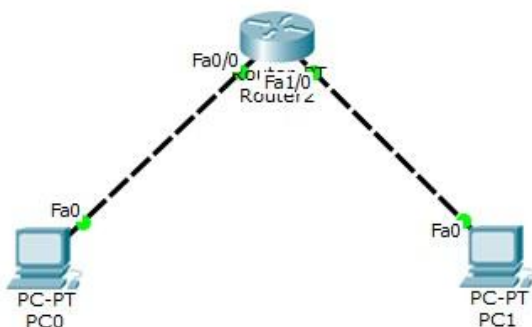
Bafna Gold
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Topology

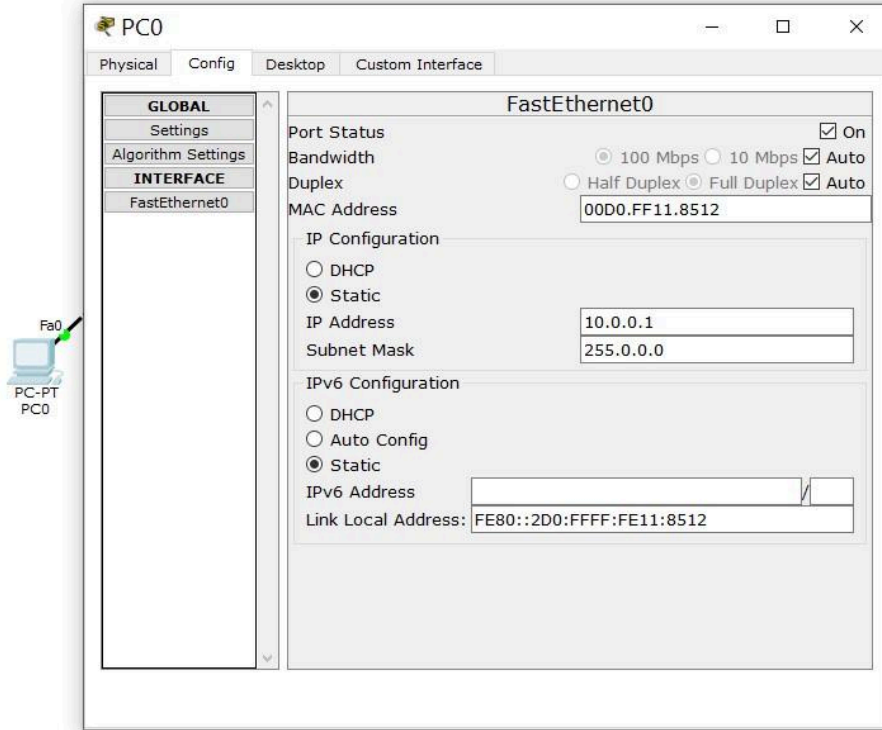
Observation

- * Router is connected to two different network with IP address 10.0.0.1 & 20.0.0.1.
- * The two different network are with connected PC device.
- * The gateway is set to each end device; the router address is the gateway.
- * When the message is ping and should receive to PC1 from PC0.
- * The packets are received successfully to the PC1 through the router.

1. Network Topology



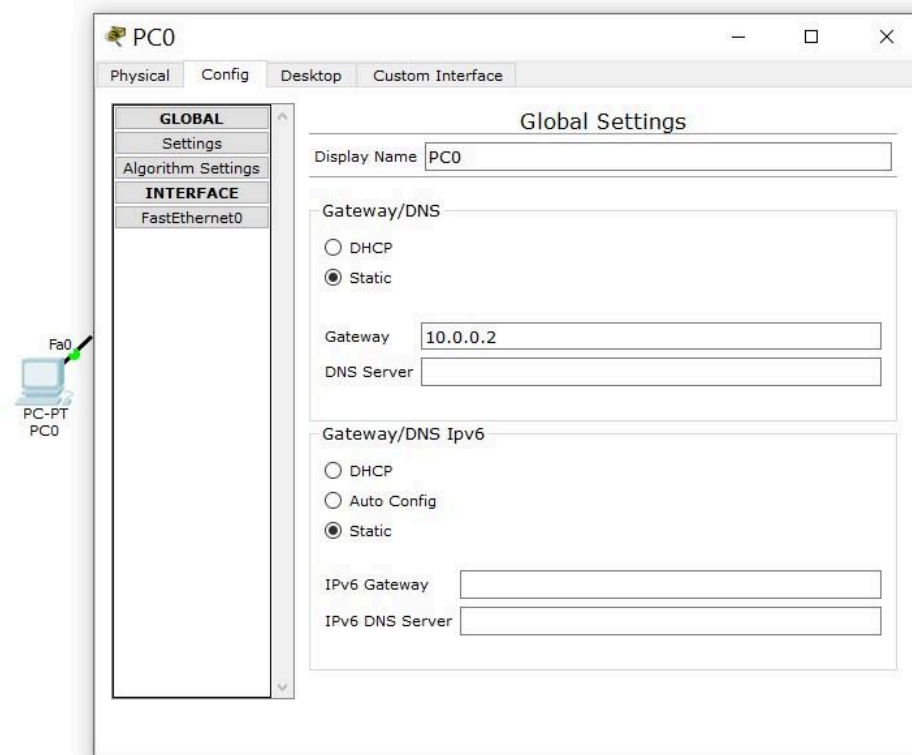
2. PC0 Configuration



The image shows the 'PC0' configuration window in a network simulator. The 'Config' tab is selected, and the 'FastEthernet0' interface is chosen from the left sidebar. The interface settings are as follows:

Setting	Value
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
MAC Address	00D0.FF11.8512
IP Configuration	
<input type="radio"/> DHCP	
<input checked="" type="radio"/> Static	
IP Address	10.0.0.1
Subnet Mask	255.0.0.0
IPv6 Configuration	
<input type="radio"/> DHCP	
<input type="radio"/> Auto Config	
<input checked="" type="radio"/> Static	
IPv6 Address	
Link Local Address	FE80::2D0:FFFF:FE11:8512

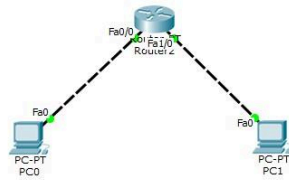
3. PC0 Gateway



The image shows the 'PC0' configuration window in a network simulator, specifically the 'Global Settings' tab. The settings are as follows:

Setting	Value
Display Name	PC0
Gateway/DNS	
<input type="radio"/> DHCP	
<input checked="" type="radio"/> Static	
Gateway	10.0.0.2
DNS Server	
Gateway/DNS Ipv6	
<input type="radio"/> DHCP	
<input type="radio"/> Auto Config	
<input checked="" type="radio"/> Static	
IPv6 Gateway	
IPv6 DNS Server	

4. PC0 Ping PC1



The screenshot shows a PC0 desktop environment with a Command Prompt window open. The window title is "Command Prompt". The output of the ping command is as follows:

```
PC>ping 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data:

Request timed out.
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=3ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127

Ping statistics for 20.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

PC>ping 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data:

Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127

Ping statistics for 20.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>
```