Packet Tracer - Configure Router Interfaces-Brett Rainiel Espiritu

Addressing Table

Device	Interface	IP Address/Prefix	Default Gateway
R1	G0/0	172.16.20.1 /25	N/A
	G0/1	172.16.20.129 /25	N/A
	S0/0/0	209.165.200.225 /30	N/A
PC1	NIC	172.16.20.10 /25	172.16.20.1
PC2	NIC	172.16.20.138 /25	172.16.20.129
R2	G0/0	2001:db8:c0de:12::1/64	N/A
	G0/1	2001:db8:c0de:13::1/64	N/A
	S0/0/1	2001:db8:c0de:11::1/64	N/A
		fe80::2	N/A
PC3	NIC	2001:db8:c0de:12::a/64	fe80::2
PC4	NIC	2001:db8:c0de:13::a/64	fe80::2

Objectives

Part 1: Configure IPv4 Addressing and Verify Connectivity

Part 2: Configure IPv6 Addressing and Verify Connectivity

Background

Routers R1 and R2 each have two LANs. Your task is to configure the appropriate addressing on each device and verify connectivity between the LANs.

Note: The user EXEC password is **cisco**. The privileged EXEC password is **class**.

Instructions

Part 1: Configure IPv4 Addressing and Verify Connectivity

Step 1: Assign IPv4 addresses to R1 and LAN devices.

Referring to the **Addressing Table**, configure IP addressing for **R1** LAN interfaces, **PC1** and **PC2**. The serial interface has already configured.

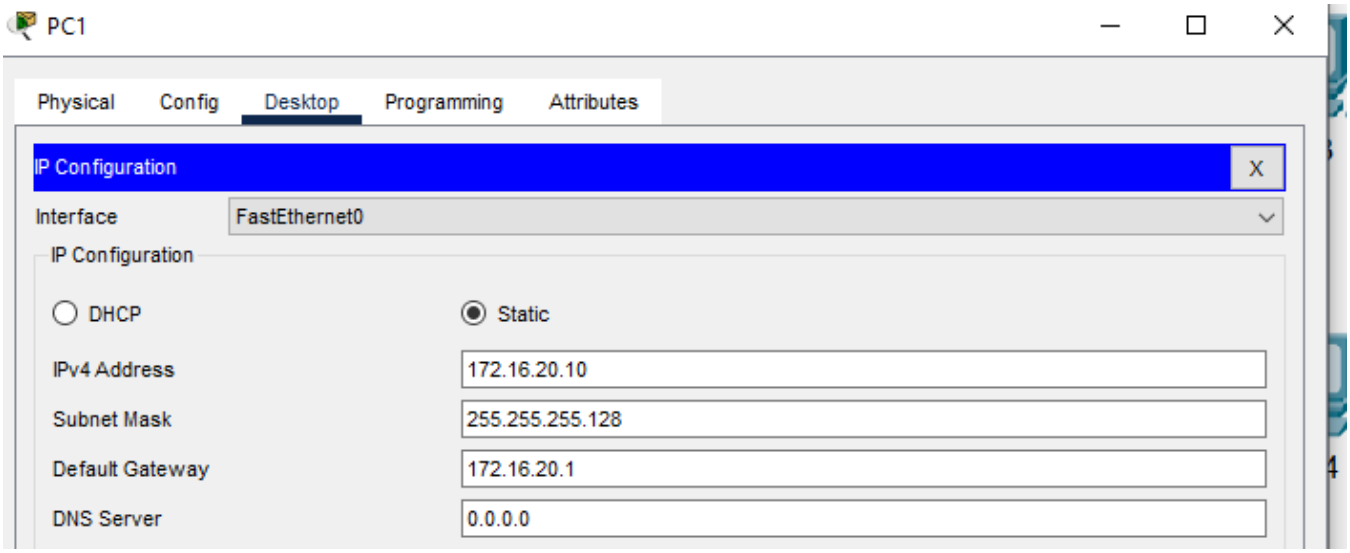
```
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#int
R1(config)#interface g0/0
R1(config-if)#ip ad
R1(config-if)#ip address 172.16.20.1 255.255.255.128
R1(config-if)#no shut
```

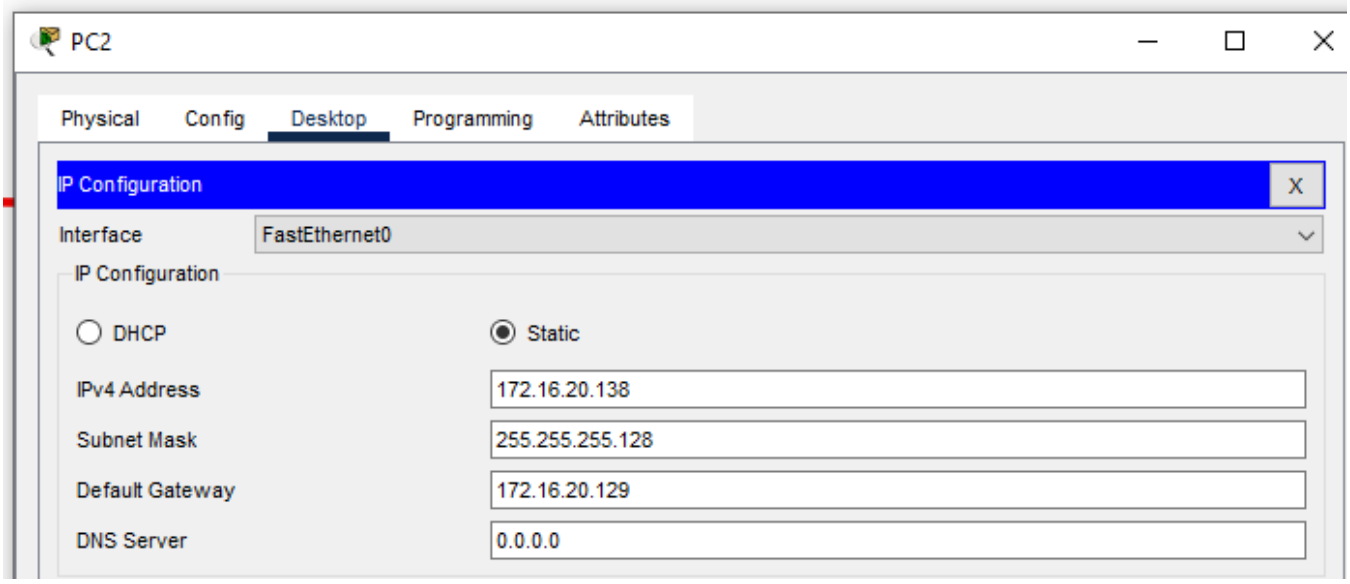
```
R1(config-if)#exit
R1(config)#int
R1(config)#interface g
R1(config)#interface gigabitEthernet 0/1
R1(config-if)#ip add 172.16.20.129 255.255.255.128
R1(config-if)#no shut
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

R1(config-if)#
```





Step 2: Verify connectivity.

PC1 and **PC2** should be able to ping each other and the **Dual Stack Server**.

```
Pinging 64.100.1.10 with 32 bytes of data:

Reply from 64.100.1.10: bytes=32 time=10ms TTL=126
Reply from 64.100.1.10: bytes=32 time=9ms TTL=126
Reply from 64.100.1.10: bytes=32 time=8ms TTL=126
Reply from 64.100.1.10: bytes=32 time=6ms TTL=126

Ping statistics for 64.100.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 6ms, Maximum = 10ms, Average = 8ms

C:\>
```

PC2

Physical | Config | Desktop | Programming | Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 64.100.1.10

Pinging 64.100.1.10 with 32 bytes of data:

Reply from 64.100.1.10: bytes=32 time=14ms TTL=126
Reply from 64.100.1.10: bytes=32 time=8ms TTL=126
Reply from 64.100.1.10: bytes=32 time=9ms TTL=126
Reply from 64.100.1.10: bytes=32 time=8ms TTL=126

Ping statistics for 64.100.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 8ms, Maximum = 14ms, Average = 9ms

C:\>
```

Part 2: Configure IPv6 Addressing and Verify Connectivity

Step 1: Assign IPv6 addresses to R2 and LAN devices.

Referring to the **Addressing Table**, configure IP addressing for **R2 LAN interfaces**, **PC3** and **PC4**. The serial interface is already configured.

```
!
interface GigabitEthernet0/0
 no ip address
 duplex auto
 speed auto
 ipv6 address FE80::2 link-local
 ipv6 address 2001:DB8:C0DE:12::1/64
 ipv6 enable
!
interface GigabitEthernet0/1
 no ip address
 duplex auto
 speed auto
 ipv6 address FE80::2 link-local
 ipv6 address 2001:DB8:C0DE:13::1/64
 ipv6 enable
!
interface Serial0/0/0
 no ip address
 clock rate 128000
 shutdown
!
interface Serial0/0/1
 no ip address
 ipv6 address 2001:DB8:C0DE:11::1/64
 ipv6 enable
 --More--
```

Copy Paste

Top

PC3

Physical Config Desktop Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

DHCP Static

IPv4 Address

Subnet Mask

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

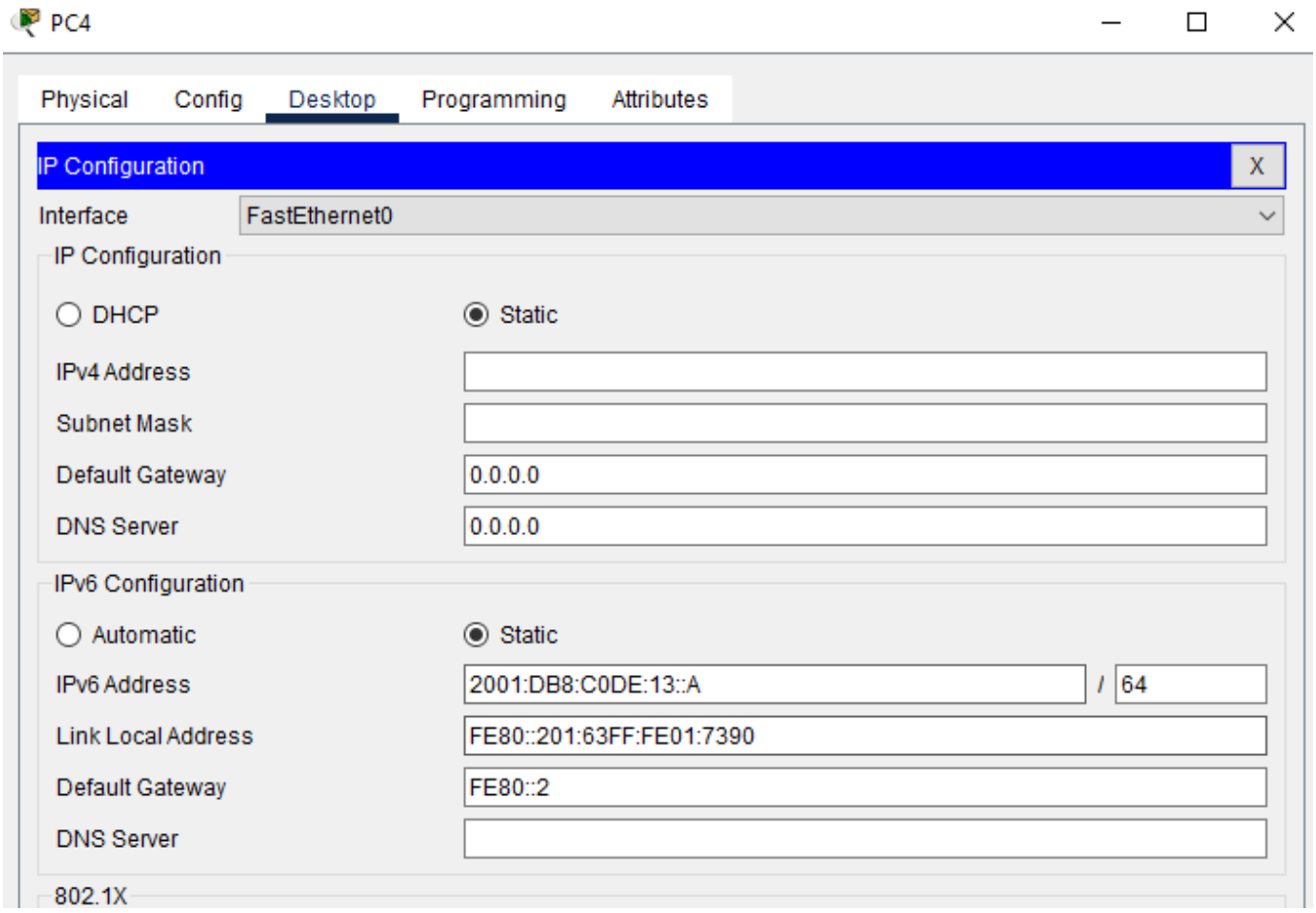
Automatic Static

IPv6 Address 2001:DB8:C0DE:12::A / 64

Link Local Address FE80::2E0:B0FF:FE66:2D40

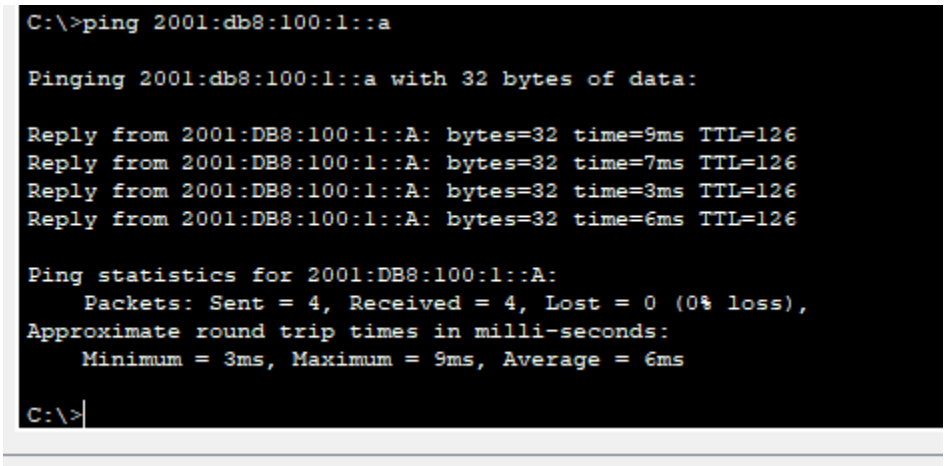
Default Gateway FE80::2

DNS Server



Step 2: Verify connectivity.

PC3 and **PC4** should be able to ping each other and the **Dual Stack Server**.



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