

12/10/2020

## CN Lab 4

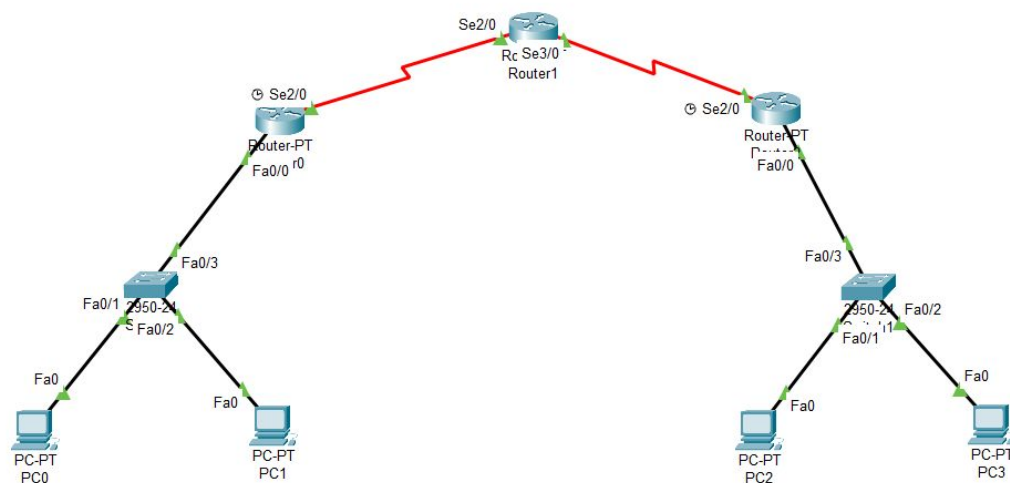
### Learnings and Observations:

A topology was created using three Router-PT, two Switch-PT and two PC's connected to each switch using copper straight-through connections and serial DCE connections. Default gateways and unique ip addresses were configured for each PC. CLI commands were used to configure the default gateway and IP addresses. Ping was sent from PC0 and PC1 to PC2 and PC3 and got an acknowledgement in return.

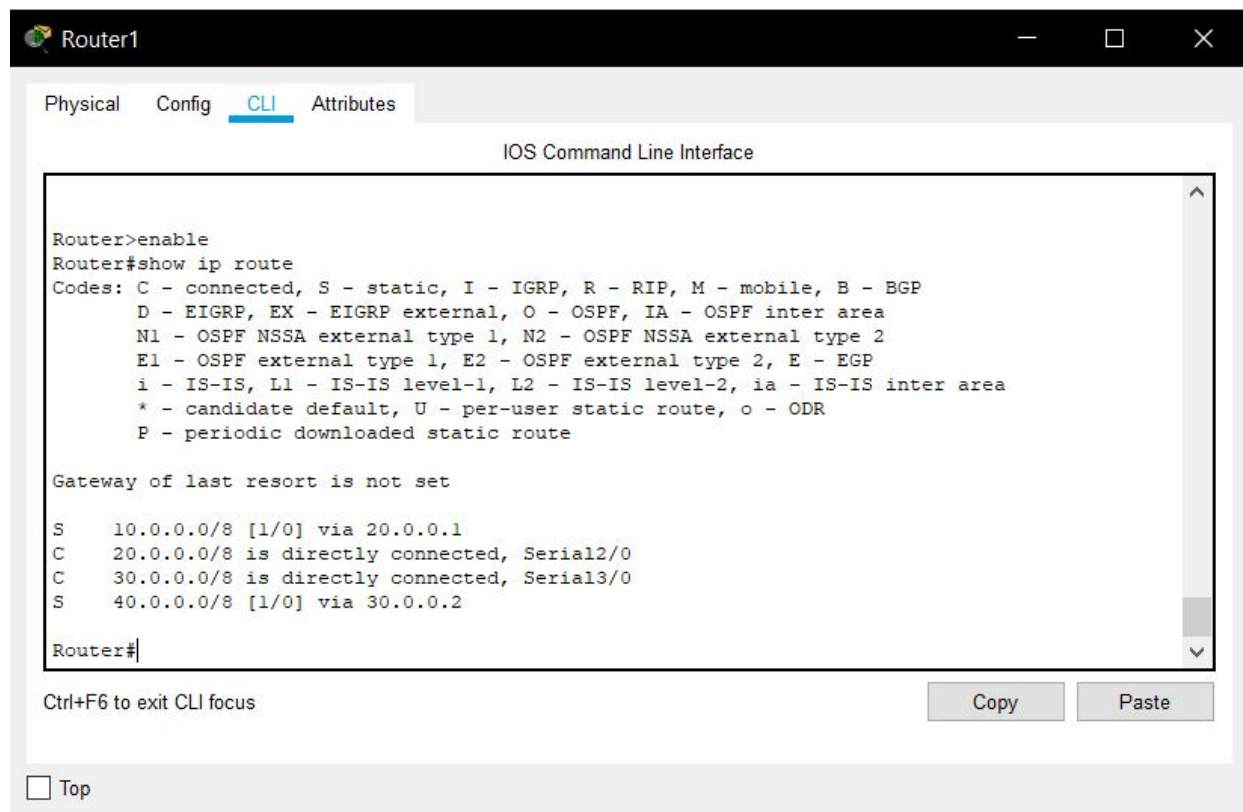
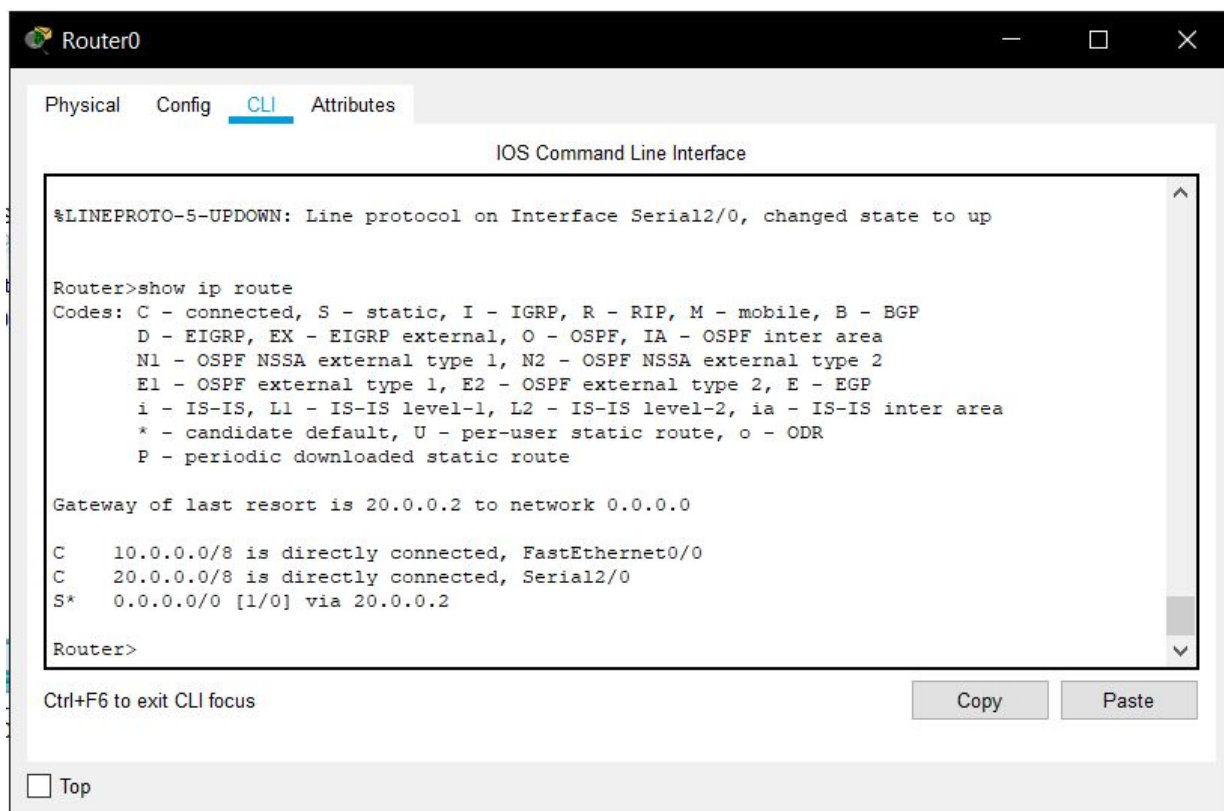
Created a topology with multiple routers and switches, configured them, pinged them and did not get a valid response. Configured default gateway and IP addresses and retried pinging which gave a valid response.

### Screenshots:

Connection/topology



CLI



Router2

Physical

Config

CLI

Attributes

IOS Command Line Interface

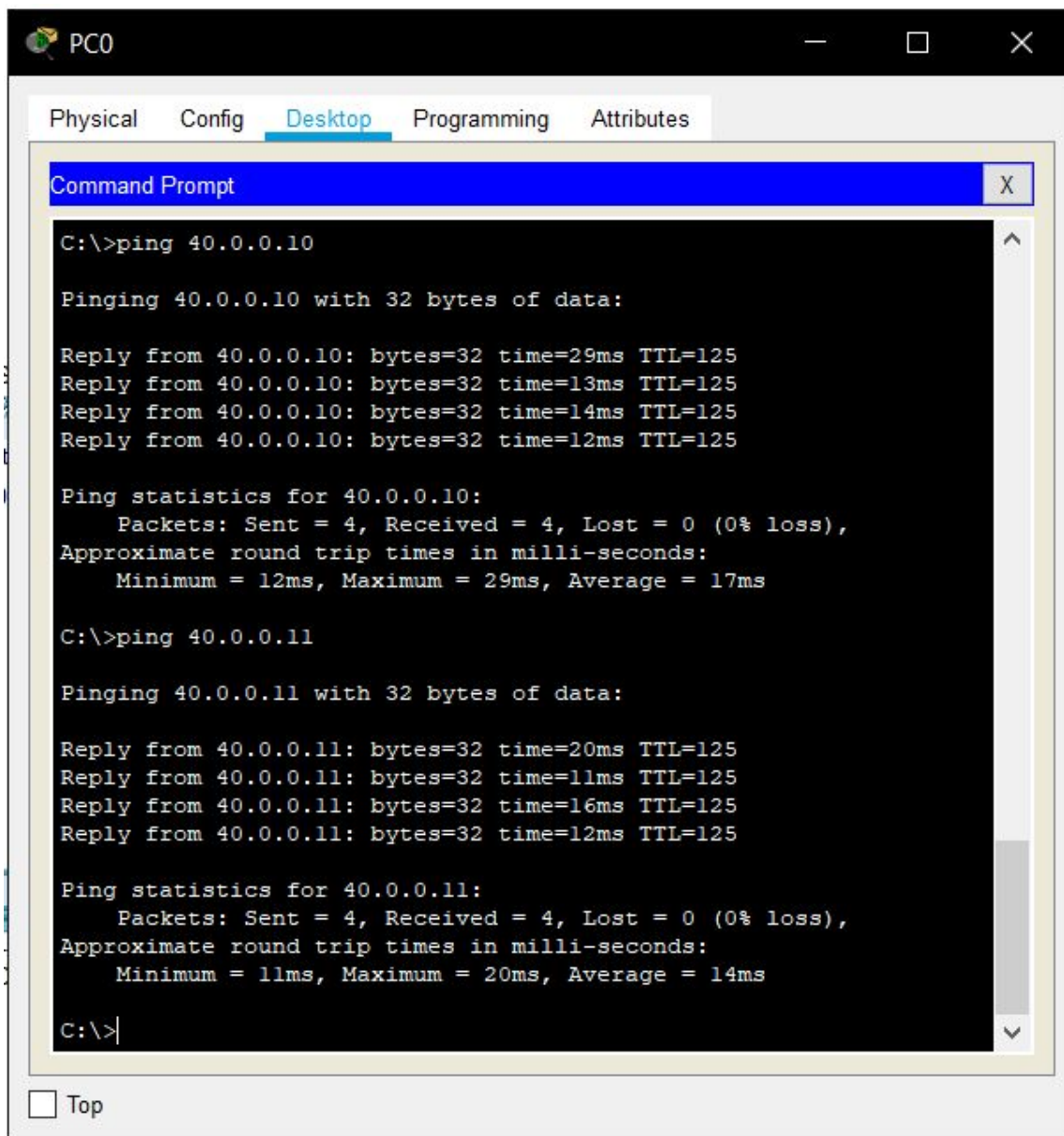
Destination filename [startup-config]?  
Building configuration...  
[OK]  
Router#  
Router#show ip route  
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP  
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area  
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2  
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP  
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area  
\* - candidate default, U - per-user static route, o - ODR  
P - periodic downloaded static route  
  
Gateway of last resort is 30.0.0.1 to network 0.0.0.0  
  
C 30.0.0.0/8 is directly connected, Serial2/0  
C 40.0.0.0/8 is directly connected, FastEthernet0/0  
S\* 0.0.0.0/0 [1/0] via 30.0.0.1  
  
Router#S

Ctrl+F6 to exit CLI focus

Copy

Paste

☐ Top



The screenshot shows a window titled "PC0" with a dark theme. It contains a "Command Prompt" window with a blue title bar. The Command Prompt displays the results of two ping commands. The first command is "ping 40.0.0.10", which shows four successful replies with varying round-trip times (29ms, 13ms, 14ms, 12ms) and a TTL of 125. The statistics for 40.0.0.10 show 4 packets sent, 4 received, 0% loss, and an average round-trip time of 17ms. The second command is "ping 40.0.0.11", which also shows four successful replies with round-trip times of 20ms, 11ms, 16ms, and 12ms, all with a TTL of 125. The statistics for 40.0.0.11 show 4 packets sent, 4 received, 0% loss, and an average round-trip time of 14ms. The Command Prompt window has a scrollbar on the right and a "Top" button at the bottom left.

```
C:\>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 40.0.0.10: bytes=32 time=29ms TTL=125
Reply from 40.0.0.10: bytes=32 time=13ms TTL=125
Reply from 40.0.0.10: bytes=32 time=14ms TTL=125
Reply from 40.0.0.10: bytes=32 time=12ms TTL=125

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 12ms, Maximum = 29ms, Average = 17ms

C:\>ping 40.0.0.11

Pinging 40.0.0.11 with 32 bytes of data:

Reply from 40.0.0.11: bytes=32 time=20ms TTL=125
Reply from 40.0.0.11: bytes=32 time=11ms TTL=125
Reply from 40.0.0.11: bytes=32 time=16ms TTL=125
Reply from 40.0.0.11: bytes=32 time=12ms TTL=125

Ping statistics for 40.0.0.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 11ms, Maximum = 20ms, Average = 14ms

C:\>
```

☐ Top



PC1



Physical

Config

Desktop

Programming

Attributes

Command Prompt



```
C:\>ping 40.0.0.10
```

```
Pinging 40.0.0.10 with 32 bytes of data:
```

```
Reply from 40.0.0.10: bytes=32 time=253ms TTL=125
```

```
Reply from 40.0.0.10: bytes=32 time=22ms TTL=125
```

```
Reply from 40.0.0.10: bytes=32 time=11ms TTL=125
```

```
Reply from 40.0.0.10: bytes=32 time=25ms TTL=125
```

```
Ping statistics for 40.0.0.10:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 11ms, Maximum = 253ms, Average = 77ms
```

```
C:\>ping 40.0.0.11
```

```
Pinging 40.0.0.11 with 32 bytes of data:
```

```
Reply from 40.0.0.11: bytes=32 time=13ms TTL=125
```

```
Reply from 40.0.0.11: bytes=32 time=12ms TTL=125
```

```
Reply from 40.0.0.11: bytes=32 time=2ms TTL=125
```

```
Reply from 40.0.0.11: bytes=32 time=11ms TTL=125
```

```
Ping statistics for 40.0.0.11:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 2ms, Maximum = 13ms, Average = 9ms
```

```
C:\>
```



Top

