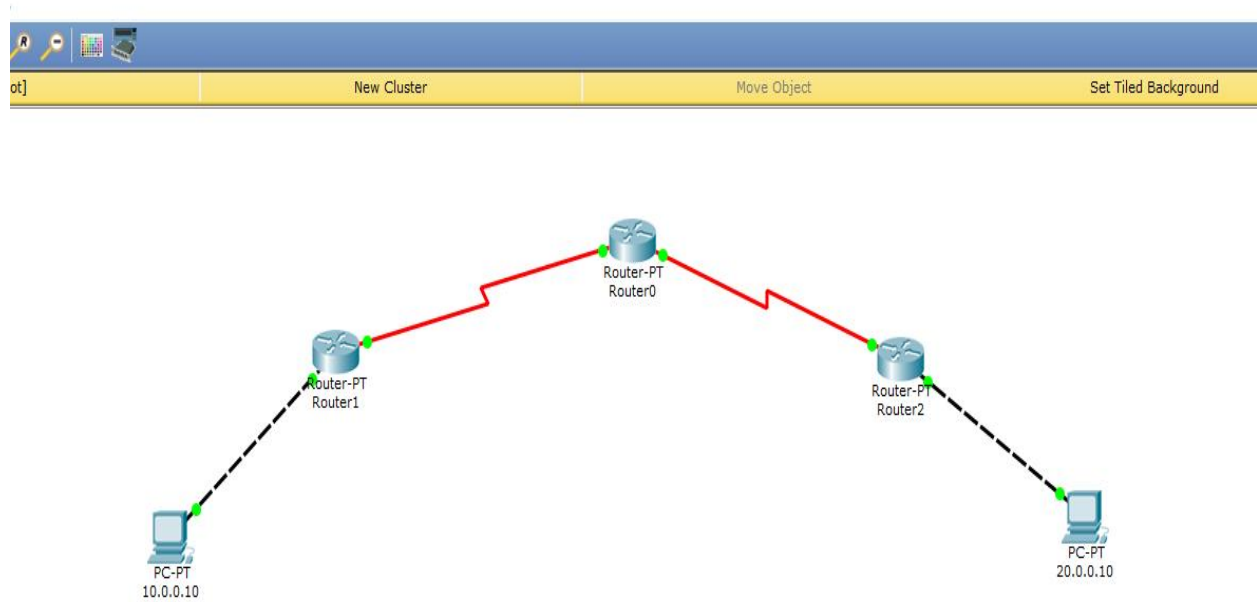


## CN LAB -02 (Continued) 30/06/2023

USN:1BM21CS172

Depict static connection between 2 routers in a topology of routers.

### TOPOLOGY:



# CLI COMMANDS:

Router!

Physical Config CLI

IOS Command Line Interface

```
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

Press RETURN to get started!

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

%LINK-5-CHANGED: Interface Serial12/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial12/0, changed state to up

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 not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    30.0.0.0/8 is directly connected, Serial12/0
Router#enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route
%LINK-5-CHANGED: Interface Serial12/0, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial12/0, changed state to down

%LINK-5-CHANGED: Interface Serial12/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial12/0, changed state to up

% Incomplete command.
Router(config)#interface Serial12/0
Router(config-if)#ip route 20.0.0.0 255.0.0.0 30.0.0.2
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

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 not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
S    20.0.0.0/8 [1/0] via 30.0.0.2
C    30.0.0.0/8 is directly connected, Serial12/0
Router#
```

Copy Paste

29°C  
Partly sunny

ENG  
IN 14:54  
30-06-2023

## IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial12/0, changed state to up
%LINK-3-CHANGED: Interface Serial12/0, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial12/0, changed state to down
%LINK-3-CHANGED: Interface Serial12/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial12/0, changed state to up
```

```
Router#enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Serial12/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial13/0
Router(config-if)#exit
Router(config)#
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

```
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 - OOR
        P - periodic downloaded static route
```

Gateway of last resort is not set

```
C 30.0.0.0/8 is directly connected, Serial12/0
C 40.0.0.0/8 is directly connected, Serial13/0
```

```
Router#
Router#enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 20.0.0.0 255.0.0.0 40.0.0.1
Router(config)#ip route 10.0.0.0 255.0.0.0 30.0.0.1
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

```
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 - OOR
        P - periodic downloaded static route
```

Gateway of last resort is not set

```
S 10.0.0.0/8 [1/0] via 30.0.0.1
S 20.0.0.0/8 [1/0] via 40.0.0.1
C 30.0.0.0/8 is directly connected, Serial12/0
C 40.0.0.0/8 is directly connected, Serial13/0
```

```
Router#
```

Copy

Paste

## IOS Command Line Interface

```
subject to restrictions as set forth in subparagraph
(c) of the Commercial Computer Software - Restricted
Rights clause at FAR sec. 51.227-19 and subparagraph
(c) (1) (ii) of the Rights in Technical Data and Computer
Software clause at DFARS sec. 252.227-7013.

        cisco Systems, Inc.
        170 West Tasman Drive
        San Jose, California 95134-1706

Cisco Internetwork Operating System Software
IOS (tm) PT1000 Software (PT1000-I-M), Version 12.2(28), RELEASE SOFTWARE (fc6)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Wed 27-Apr-04 15:01 by miwang

PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/6100K bytes of memory
.
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
60496K bytes of ATA CompactFlash (Read/Write)

Press RETURN to get started!

%LINK-5-CHANGED: Interface Serial3/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Serial3/0
Router(config-if)#ip route 10.0.0.0 255.0.0.0 40.0.0.2
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

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 - BGP
       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

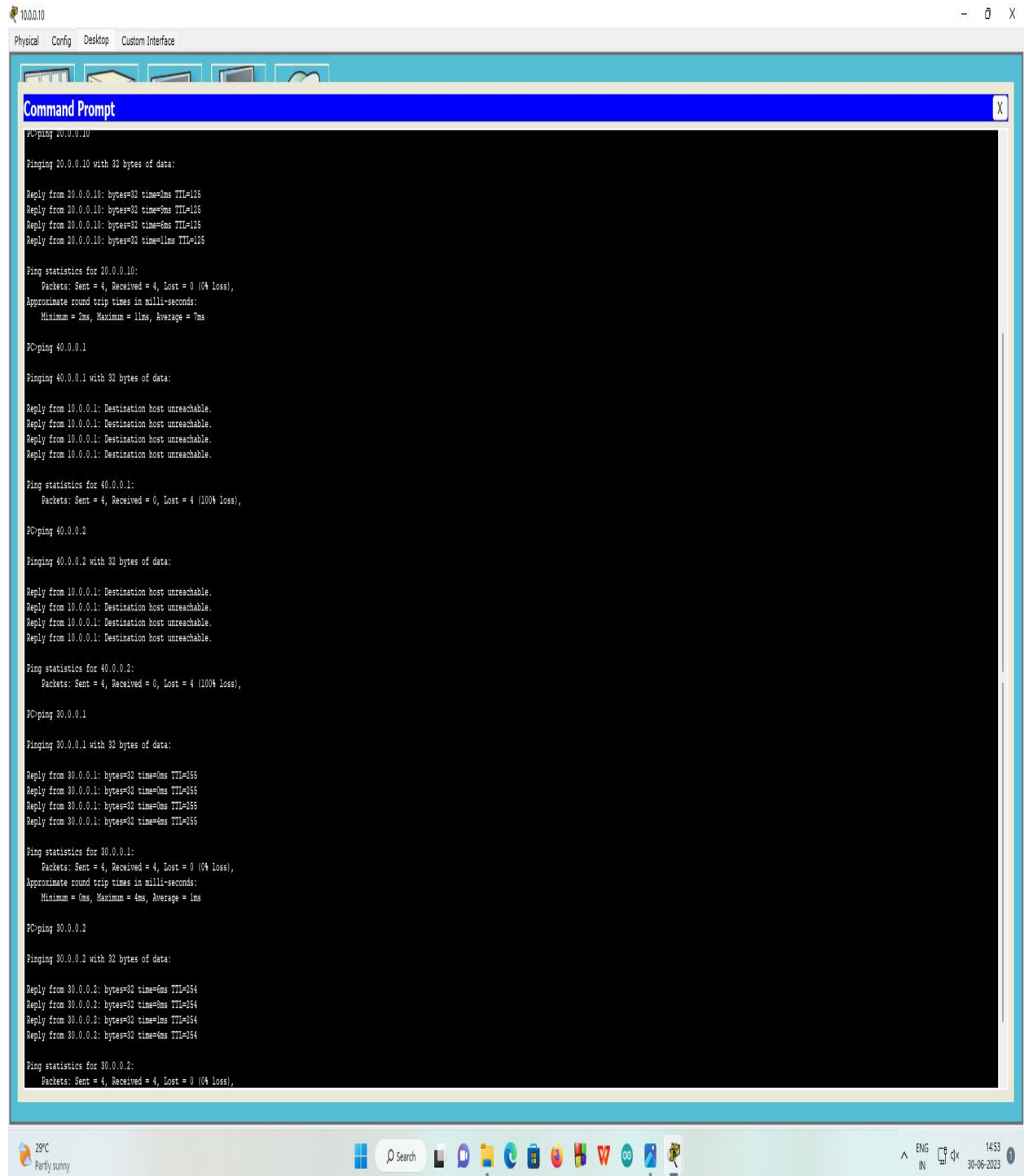
Gateway of last resort is not set

S    10.0.0.0/8 [1/0] via 40.0.0.2
C    20.0.0.0/8 is directly connected, FastEthernet0/0
C    40.0.0.0/8 is directly connected, Serial3/0
Router#
```

Copy

Paste

# PING COMMANDS:



The screenshot shows a Windows 10 desktop environment. At the top, there's a taskbar with icons for Physical, Config, Desktop, and Custom Interface. Below the taskbar is a Command Prompt window titled "Command Prompt". The window contains the following text:

```
P>ping 20.0.0.10

Pinging 20.0.0.10 with 32 bytes of data:

Reply from 20.0.0.10: bytes=32 time=2ms TTL=125
Reply from 20.0.0.10: bytes=32 time=9ms TTL=125
Reply from 20.0.0.10: bytes=32 time=9ms TTL=125
Reply from 20.0.0.10: bytes=32 time=11ms TTL=125

Ping statistics for 20.0.0.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 11ms, Average = 7ms

PC>ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.

Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>ping 40.0.0.2

Pinging 40.0.0.2 with 32 bytes of data:

Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.

Ping statistics for 40.0.0.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>ping 30.0.0.1

Pinging 30.0.0.1 with 32 bytes of data:

Reply from 30.0.0.1: bytes=32 time=3ms TTL=655
Reply from 30.0.0.1: bytes=32 time=3ms TTL=655
Reply from 30.0.0.1: bytes=32 time=3ms TTL=655
Reply from 30.0.0.1: bytes=32 time=4ms TTL=655

Ping statistics for 30.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 4ms, Average = 3ms

PC>ping 30.0.0.2

Pinging 30.0.0.2 with 32 bytes of data:

Reply from 30.0.0.2: bytes=32 time=3ms TTL=654
Reply from 30.0.0.2: bytes=32 time=3ms TTL=654
Reply from 30.0.0.2: bytes=32 time=3ms TTL=654
Reply from 30.0.0.2: bytes=32 time=4ms TTL=654

Ping statistics for 30.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

The desktop background is a light blue gradient. The taskbar at the bottom shows the Windows logo, a search bar, and several application icons. The system tray on the right shows the date and time as 14:53 on 30-06-2023, along with language and network icons.