

18CSS202J Computer Communications

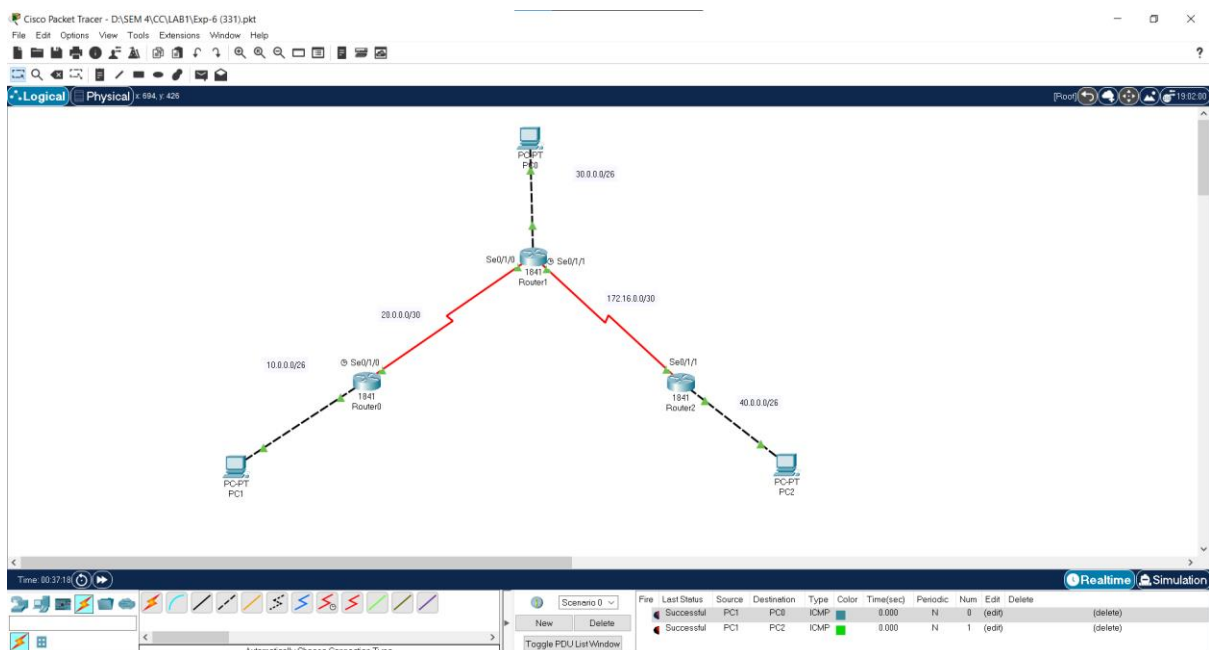
Ex 6: Dynamic Routing RIP v1

Name :- Puneet Sharma

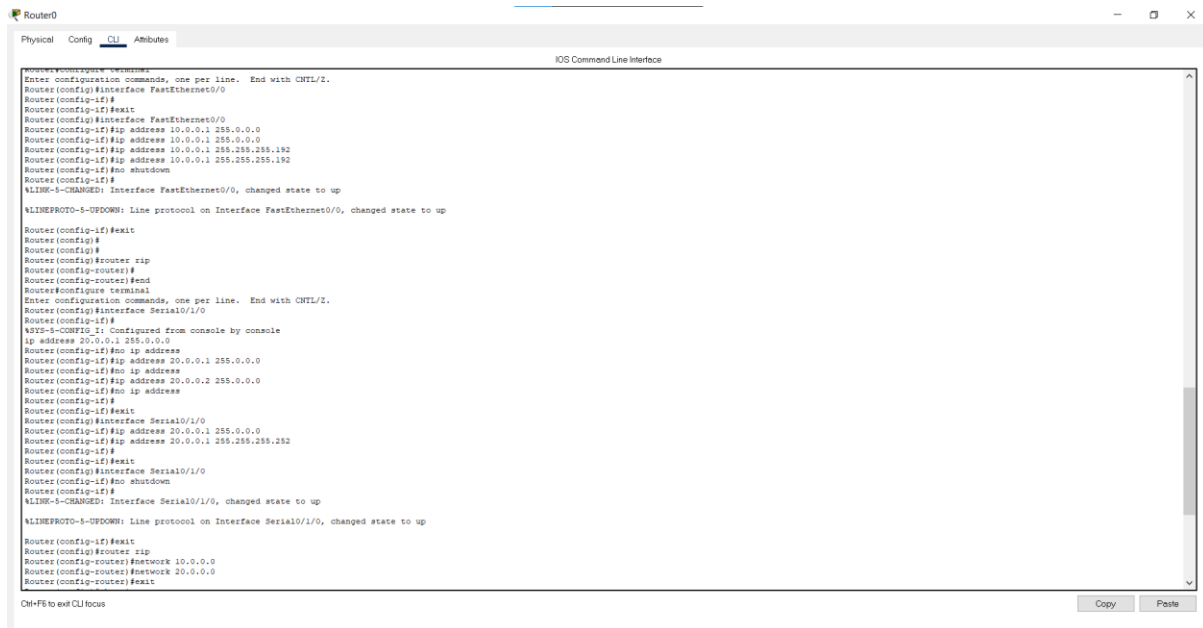
Reg. No. :- RA1911003010331

Class :-CSE F1

Output:-



CLI command for router 0:-



```
Router0
Physical Config CLI Attributes
IOS Command Line Interface

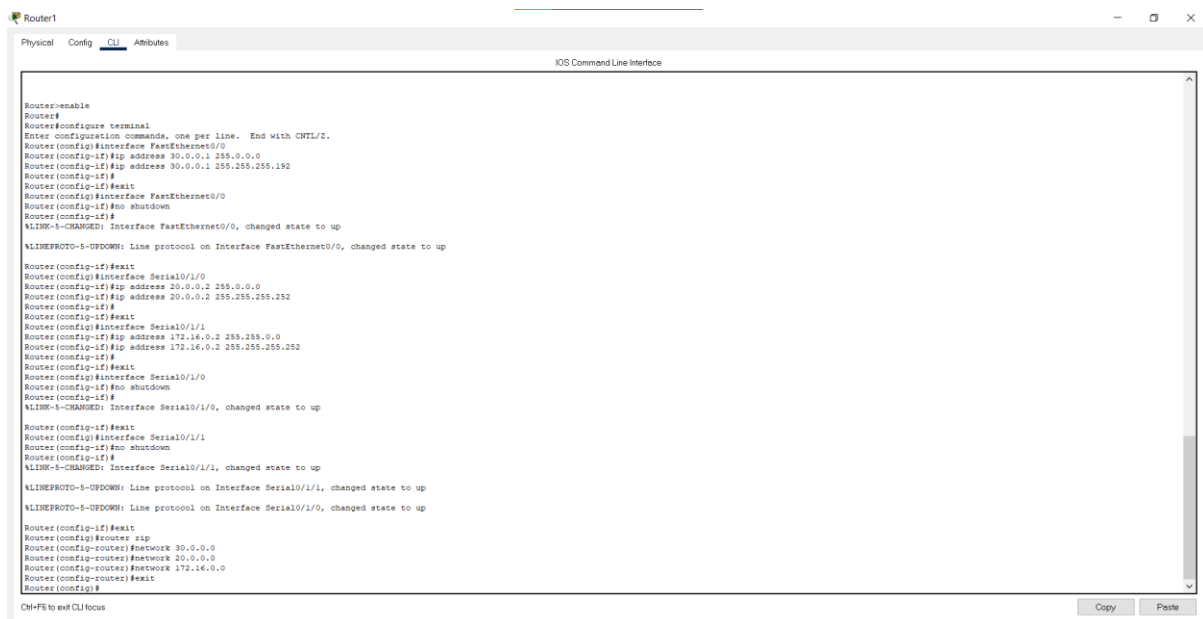
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#ip address 10.0.0.1 255.255.255.192
Router(config-if)#ip address 10.0.0.1 255.255.255.192
Router(config-if)#no shutdown
Router(config-if)#
%LINE-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#
Router(config)#
Router(config)#router rip
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Serial0/1/0
Router(config-if)#
%SYS-5-CONFIG_I: Configured from console by console
ip address 20.0.0.1 255.0.0.0
Router(config-if)#no ip address
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#no ip address
Router(config-if)#ip address 20.0.0.2 255.0.0.0
Router(config-if)#no ip address
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/1/0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#ip address 20.0.0.1 255.255.255.252
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/1/0
Router(config-if)#no shutdown
Router(config-if)#
%LINE-5-CHANGED: Interface Serial0/1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0
Router(config-router)#exit

CLI-F6 to exit CLI focus
```

CLI command for router 1:-



```
Router1
Physical Config CLI Attributes
IOS Command Line Interface

Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 30.0.0.1 255.0.0.0
Router(config-if)#ip address 30.0.0.1 255.255.255.192
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINE-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial0/1/0
Router(config-if)#ip address 20.0.0.2 255.0.0.0
Router(config-if)#ip address 20.0.0.2 255.255.255.252
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/1/1
Router(config-if)#ip address 172.16.0.2 255.255.0.0
Router(config-if)#ip address 172.16.0.2 255.255.255.252
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/1/0
Router(config-if)#no shutdown
Router(config-if)#
%LINE-5-CHANGED: Interface Serial0/1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial0/1/1
Router(config-if)#no shutdown
Router(config-if)#
%LINE-5-CHANGED: Interface Serial0/1/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/1, changed state to up

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 30.0.0.0
Router(config-router)#network 20.0.0.0
Router(config-router)#network 172.16.0.0
Router(config-router)#exit
Router(config)#

CLI-F6 to exit CLI focus
```

CLI command for router 2:-

```
Router2
Physical Config CLI Attributes
IOS Command Line Interface

Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 40.0.0.1 255.0.0.0
Router(config-if)#ip address 40.0.0.1 255.255.255.192
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINE-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#interface Serial0/1/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/1/1
Router(config-if)#ip address 172.16.0.1 255.255.0.0
Router(config-if)#no ip address
Router(config-if)#ip address 172.16.0.1 255.255.0.0
Router(config-if)#ip address 172.16.0.1 255.255.255.252
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/1/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/1/1
Router(config-if)#no shutdown
Router(config-if)#
%LINE-5-CHANGED: Interface Serial0/1/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/1, changed state to up

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 172.16.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#exit
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

R    10.0.0.0/8 [120/2] via 172.16.0.2, 00:00:01, Serial0/1/1
R    20.0.0.0/8 [120/1] via 172.16.0.2, 00:00:01, Serial0/1/1
R    30.0.0.0/8 [120/1] via 172.16.0.2, 00:00:01, Serial0/1/1
    40.0.0.0/26 is subnetted, 1 subnets
C      40.0.0.0 is directly connected, FastEthernet0/0
    172.16.0.0/30 is subnetted, 1 subnets
C      172.16.0.0 is directly connected, Serial0/1/1

Router#
```

Ctrl+F5 to exit CLI focus

Copy Paste

```
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

R    10.0.0.0/8 [120/2] via 172.16.0.2, 00:00:01, Serial0/1/1
R    20.0.0.0/8 [120/1] via 172.16.0.2, 00:00:01, Serial0/1/1
R    30.0.0.0/8 [120/1] via 172.16.0.2, 00:00:01, Serial0/1/1
    40.0.0.0/26 is subnetted, 1 subnets
C      40.0.0.0 is directly connected, FastEthernet0/0
    172.16.0.0/30 is subnetted, 1 subnets
C      172.16.0.0 is directly connected, Serial0/1/1

Router#
```

Ctrl+F5 to exit CLI focus

Connection check by ping command:-

