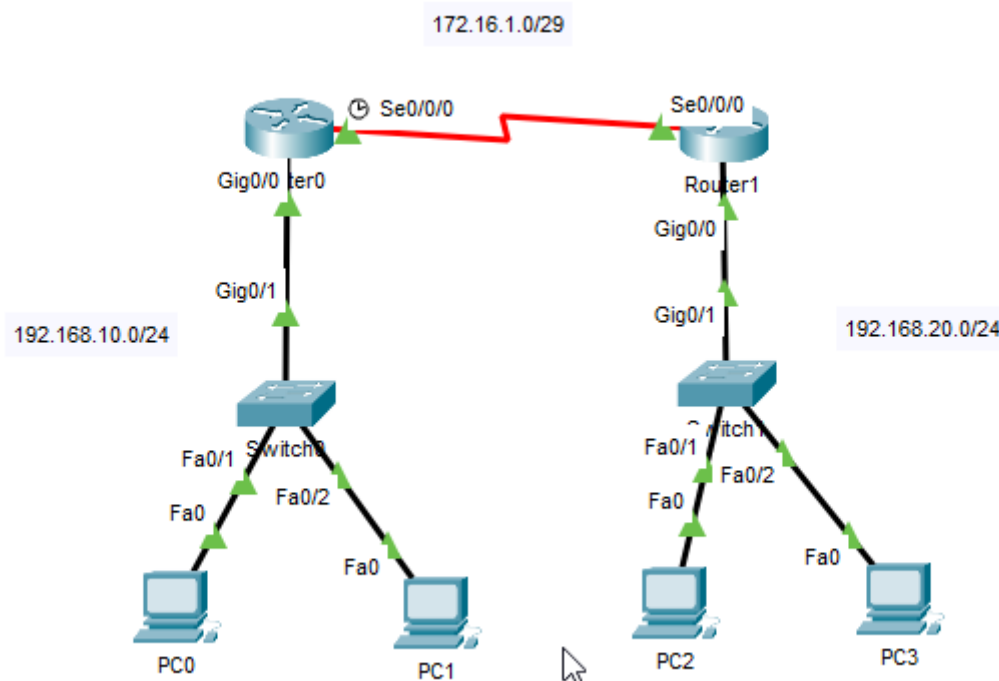# Cisco IOS RIPv2 Protocol

Network Topology

Router0 Configuration Commands

Router0>enable
Router0#configure terminal
Router0(config)#interface serial 0/0/0
Router0(config-if)#ip address 172.16.1.1 255.255.255.248
Router0(config-if)#no shutdown
Router0(config-if)#interface gigabitEthernet 0/0
Router0(config-if)#ip address 192.168.10.1 255.255.255.0
Router0(config-if)#no shutdown
Router0(config-if)#exit
Router0(config)#router rip
Router0(config-router)#version 2
Router0(config-router)#network 192.168.10.0
Router0(config-router)#network 172.16.1.0
Router1(config-router)#no auto-summary
Router0(config-router)#end

Router1 Configuration Commands

Router1>enable
Router1#configure terminal
Router1(config)#interface serial 0/0/0
Router1(config-if)#ip address 172.16.1.2 255.255.255.248
Router1(config-if)#no shutdown
Router1(config-if)#interface gigabitEthernet 0/0
Router1(config-if)#ip address 192.168.20.1 255.255.255.0
Router1(config-if)#no shutdown
Router1(config-if)#exit
Router1(config)#router rip
Router1(config-router)#version 2
Router1(config-router)#network 192.168.20.0
Router1(config-router)#network 172.16.1.0
Router1(config-router)#no auto-summary
Router1(config-router)#end

Verify RIPv2 Configuration

Router0#show ip route

```
Router0#show ip route
Codes: L - local, C - connected, S - static, 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

     172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.16.1.0/29 is directly connected, Serial0/0/0
L       172.16.1.1/32 is directly connected, Serial0/0/0
     192.168.10.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.10.0/24 is directly connected, GigabitEthernet0/0
L       192.168.10.1/32 is directly connected, GigabitEthernet0/0
R    192.168.20.0/24 [120/1] via 172.16.1.2, 00:00:21, Serial0/0/0
```

Router0#show ip rip database

```
Router0#show ip rip database
172.16.1.0/29     auto-summary
172.16.1.0/29     directly connected, Serial0/0/0
192.168.10.0/24    auto-summary
192.168.10.0/24    directly connected, GigabitEthernet0/0
192.168.20.0/24    auto-summary
192.168.20.0/24
   [1] via 172.16.1.2, 00:00:01, Serial0/0/0
```
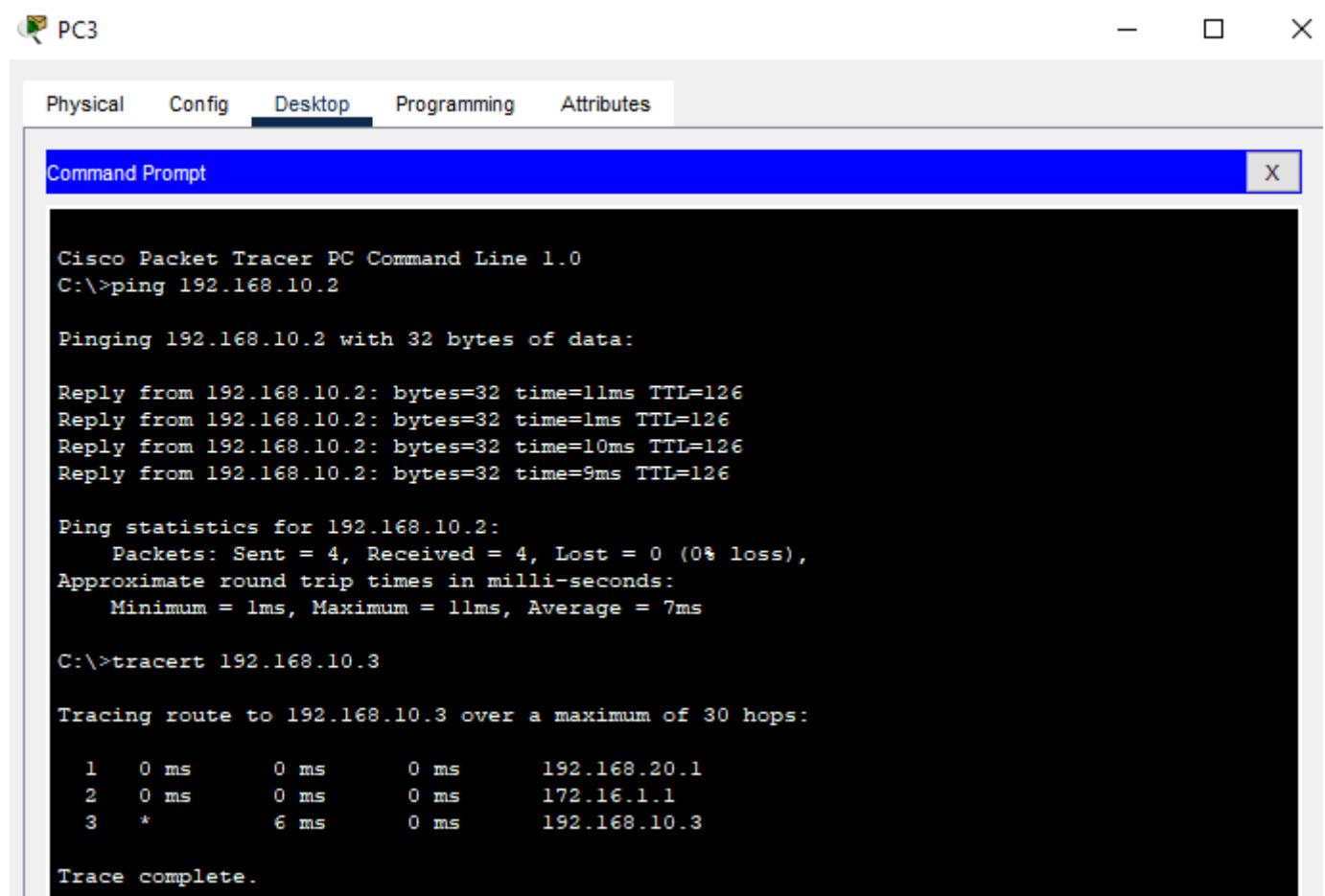
Router0#show ip protocols

```
Router0#show ip protocols
Routing Protocol is "rip"
Sending updates every 30 seconds, next due in 18 seconds
Invalid after 180 seconds, hold down 180, flushed after 240
Outgoing update filter list for all interfaces is not set
Incoming update filter list for all interfaces is not set
Redistributing: rip
Default version control: send version 2, receive 2
  Interface            Send  Recv  Triggered RIP  Key-chain
  GigabitEthernet0/0    22
  Serial0/0/0           22
Automatic network summarization is not in effect
Maximum path: 4
Routing for Networks:
         172.16.0.0
         192.168.10.0
Passive Interface(s):
Routing Information Sources:
         Gateway         Distance      Last Update
         172.16.1.2         120        00:00:13
Distance: (default is 120)
```

Ping and Tracert Check


```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:

Reply from 192.168.10.2: bytes=32 time=11ms TTL=126
Reply from 192.168.10.2: bytes=32 time=1ms TTL=126
Reply from 192.168.10.2: bytes=32 time=10ms TTL=126
Reply from 192.168.10.2: bytes=32 time=9ms TTL=126

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 11ms, Average = 7ms

C:\>tracert 192.168.10.3

Tracing route to 192.168.10.3 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      192.168.20.1
  2    0 ms      0 ms      0 ms      172.16.1.1
  3    *         6 ms      0 ms      192.168.10.3

Trace complete.
```

Cisco Packet Tracer File

net18 ripv2.pkt

Revision #1
Created 9 January 2023 03:51:10 by Glen Taylor
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