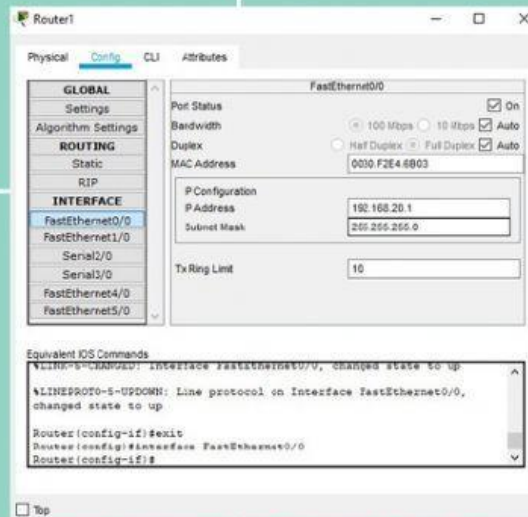
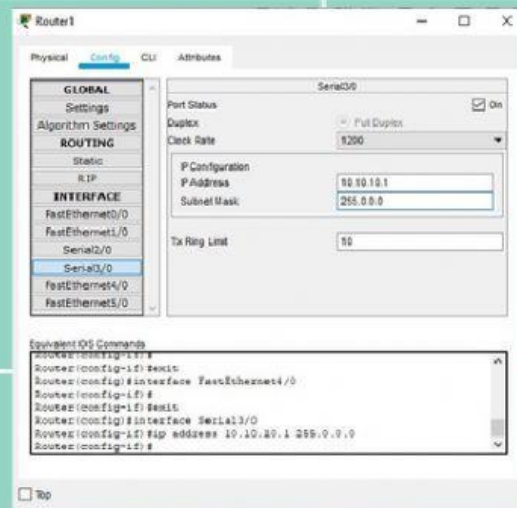
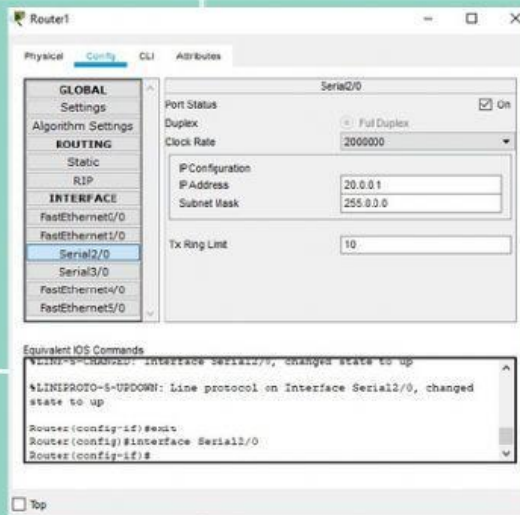
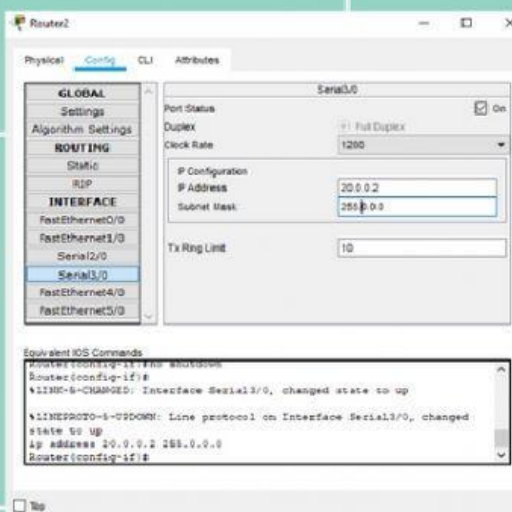
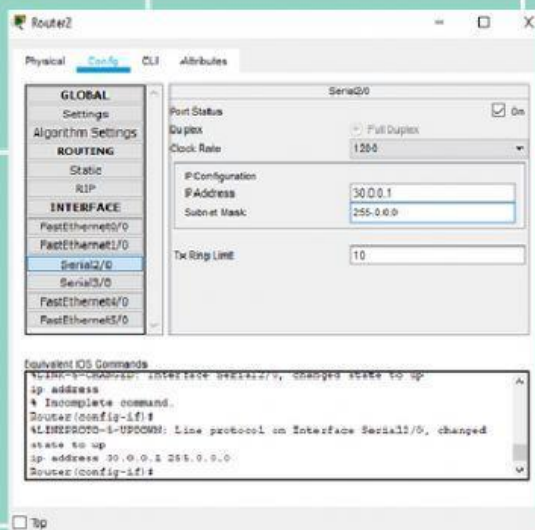




Konfigurasi FastEthernet Router1



Konfigurasi Serial Router1



Konfigurasi Serial Router2

10. Lakukan konfigurasi *routing* dinamis menggunakan protocol RIP pada semua router

The screenshot shows the configuration window for Router0. The 'Config' tab is active, and the 'ROUTING' section is expanded, with 'RIP' selected. The 'RIP Routing' table lists three networks: 10.0.0.0, 20.0.0.0, and 192.168.1.0. The 'Equivalent IOS Commands' section shows the following commands:

```
Router(config)#interface Serial3/0
Router(config-if)#
!SYS-6-CONFIG_I: Configured from console by console

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
```

Konfigurasi *dynamic routing* Router0

The screenshot shows the configuration window for Router1. The 'Config' tab is active, and the 'ROUTING' section is expanded, with 'RIP' selected. The 'RIP Routing' table lists three networks: 20.0.0.0, 30.0.0.0, and 192.168.20.0. The 'Equivalent IOS Commands' section shows the following commands:

```
Router#enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
```

Konfigurasi *dynamic routing* Router1

The screenshot shows the configuration window for Router2. The 'Config' tab is active, and the 'ROUTING' section is expanded, with 'RIP' selected. The 'RIP Routing' table lists two networks: 10.0.0.0 and 30.0.0.0. The 'Equivalent IOS Commands' section shows the following commands:

```
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#
```

Konfigurasi *dynamic routing* Router2

11. Setelah konfigurasi pada semua *router* selesai lakukan pengecekan tabel routing pada semua *router*

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

C    10.0.0.0/8 is directly connected, Serial3/0
C    20.0.0.0/8 is directly connected, Serial2/0
R    30.0.0.0/8 [120/1] via 20.0.0.1, 00:00:04, Serial2/0
C    192.168.1.0/24 is directly connected, FastEthernet0/0
R    192.168.20.0/24 [120/1] via 20.0.0.1, 00:00:04, Serial2/0

Router#
```

Pengecekan Tabel Routing Router0

```
Router1
Physical Config CLI Attributes
IOS Command Line Interface
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 [120/1] via 20.0.0.2, 00:00:21, Serial2/0
C    20.0.0.0/8 is directly connected, Serial2/0
C    30.0.0.0/8 is directly connected, Serial3/0
R    192.168.1.0/24 [120/1] via 20.0.0.2, 00:00:21, Serial2/0
C    192.168.20.0/24 is directly connected, FastEthernet0/0

Router#
```

Pengecekan Tabel Routing Router1

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

C    10.0.0.0/8 is directly connected, Serial2/0
R    20.0.0.0/8 [120/1] via 30.0.0.1, 00:00:22, Serial3/0
C    30.0.0.0/8 is directly connected, Serial3/0
R    192.168.1.0/24 [120/1] via 30.0.0.1, 00:00:22, Serial3/0
R    192.168.20.0/24 [120/1] via 30.0.0.1, 00:00:22, Serial3/0

Router#
```

Pengecekan Tabel Routing Router2

12. Lakukan tes ping antar PC dan dari PC ke semua router, kemudian tampilkan hasil percobaan

Command Prompt

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=1ms TTL=255
Reply from 192.168.1.1: bytes=32 time=3ms TTL=255
Reply from 192.168.1.1: bytes=32 time=1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms
```

Hasil Tes Ping PC0 ke Router0

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=3ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 0ms
```

Hasil Tes Ping PC0 ke PC1

```
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time=1ms TTL=126
Reply from 192.168.20.2: bytes=32 time=13ms TTL=126
Reply from 192.168.20.2: bytes=32 time=10ms TTL=126
Reply from 192.168.20.2: bytes=32 time=11ms TTL=126

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 13ms, Average = 8ms
```

Hasil Tes Ping PC0 ke PC2

```
C:\>ping 192.168.20.3

Pinging 192.168.20.3 with 32 bytes of data:

Reply from 192.168.20.3: bytes=32 time=1ms TTL=126
Reply from 192.168.20.3: bytes=32 time=2ms TTL=126
Reply from 192.168.20.3: bytes=32 time=11ms TTL=126
Reply from 192.168.20.3: bytes=32 time=16ms TTL=126

Ping statistics for 192.168.20.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 16ms, Average = 7ms
```

Hasil Tes Ping PC0 ke PC3

```

C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=3ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 0ms

```

Hasil Tes Ping PC0 ke PC1

```

C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time=1ms TTL=126
Reply from 192.168.20.2: bytes=32 time=13ms TTL=126
Reply from 192.168.20.2: bytes=32 time=10ms TTL=126
Reply from 192.168.20.2: bytes=32 time=11ms TTL=126

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 13ms, Average = 8ms

```

Hasil Tes Ping PC0 ke PC2

```

C:\>ping 192.168.20.3

Pinging 192.168.20.3 with 32 bytes of data:

Reply from 192.168.20.3: bytes=32 time=1ms TTL=126
Reply from 192.168.20.3: bytes=32 time=2ms TTL=126
Reply from 192.168.20.3: bytes=32 time=11ms TTL=126
Reply from 192.168.20.3: bytes=32 time=16ms TTL=126

Ping statistics for 192.168.20.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 16ms, Average = 7ms

```

Hasil Tes Ping PC0 ke PC3

```

C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

```

Hasil Tes Ping PC1 ke Router0

55

```

C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

```

Hasil Tes Ping PC1 ke PC0

```

C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time=1ms TTL=126
Reply from 192.168.20.2: bytes=32 time=1ms TTL=126
Reply from 192.168.20.2: bytes=32 time=1ms TTL=126
Reply from 192.168.20.2: bytes=32 time=2ms TTL=126

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 2ms, Average = 1ms

```

Hasil Tes Ping PC1 ke PC2

```

C:\>ping 192.168.20.3

Pinging 192.168.20.3 with 32 bytes of data:

Reply from 192.168.20.3: bytes=32 time=1ms TTL=126
Reply from 192.168.20.3: bytes=32 time=13ms TTL=126
Reply from 192.168.20.3: bytes=32 time=4ms TTL=126
Reply from 192.168.20.3: bytes=32 time=13ms TTL=126

Ping statistics for 192.168.20.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 13ms, Average = 7ms

```

Hasil Tes Ping PC1 ke PC3

```

C:\>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Reply from 192.168.20.1: bytes=32 time<1ms TTL=255
Reply from 192.168.20.1: bytes=32 time=3ms TTL=255
Reply from 192.168.20.1: bytes=32 time=1ms TTL=255
Reply from 192.168.20.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.20.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

```

Hasil Tes Ping PC2 ke Router1

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=5ms TTL=126
Reply from 192.168.1.2: bytes=32 time=10ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 10ms, Average = 4ms
```

Hasil Tes Ping PC2 ke PC0

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=2ms TTL=126
Reply from 192.168.1.3: bytes=32 time=1ms TTL=126
Reply from 192.168.1.3: bytes=32 time=1ms TTL=126
Reply from 192.168.1.3: bytes=32 time=2ms TTL=126

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 2ms, Average = 1ms
```

Hasil Tes Ping PC2 ke PC1

```
C:\>ping 192.168.20.3

Pinging 192.168.20.3 with 32 bytes of data:

Reply from 192.168.20.3: bytes=32 time<1ms TTL=128
Reply from 192.168.20.3: bytes=32 time=3ms TTL=128
Reply from 192.168.20.3: bytes=32 time<1ms TTL=128
Reply from 192.168.20.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.20.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 3ms, Average = 0ms
```

Hasil Tes Ping PC2 ke PC3

```
Command Prompt

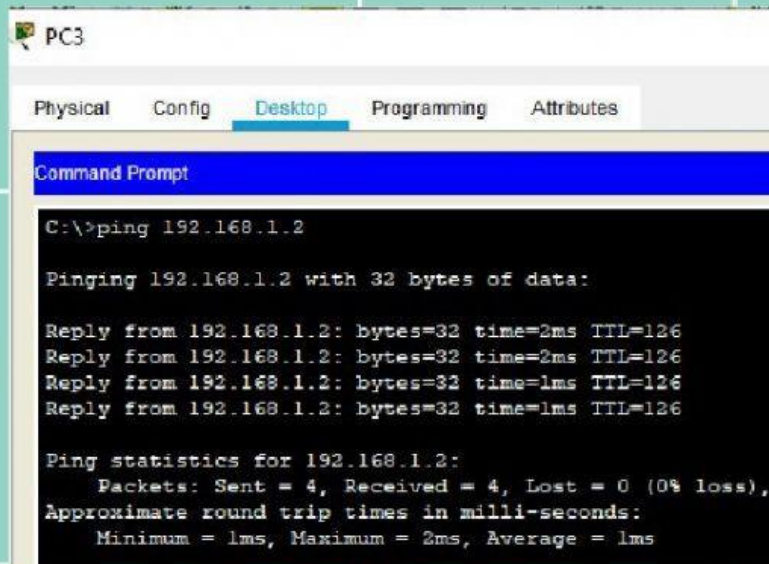
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=2ms TTL=126
Reply from 192.168.1.2: bytes=32 time=2ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 2ms, Average = 1ms
```

Hasil Tes Ping PC3 ke PC0



PC3

Physical Config Desktop Programming Attributes

Command Prompt

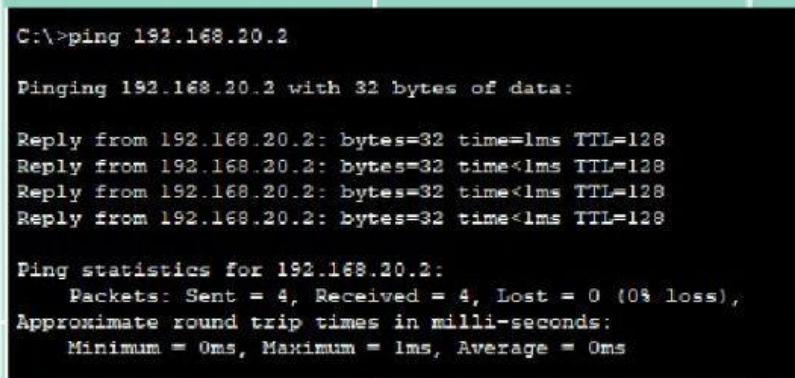
```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=2ms TTL=126
Reply from 192.168.1.2: bytes=32 time=2ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126
Reply from 192.168.1.2: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 2ms, Average = 1ms
```

Hasil Tes Ping PC3 ke PC1



```
C:\>ping 192.168.20.2

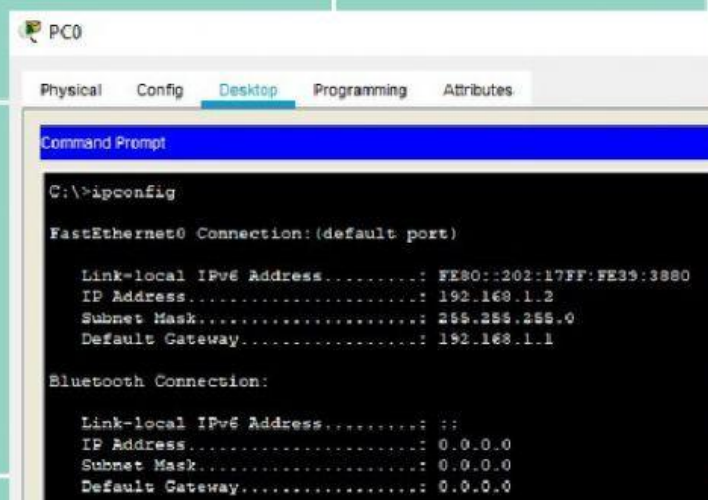
Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time=1ms TTL=128
Reply from 192.168.20.2: bytes=32 time<1ms TTL=128
Reply from 192.168.20.2: bytes=32 time<1ms TTL=128
Reply from 192.168.20.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Hasil Tes Ping PC3 ke PC2

13. Gunakan perintah tracert untuk menganalisa pengiriman paket data dari pengirim hingga penerima pada semua PC.



PC0

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>ipconfig

FastEthernet0 Connection: (default port)

    Link-local IPv6 Address . . . . . : FE80::202:17FF:FE39:3860
    IP Address. . . . . : 192.168.1.2
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

Bluetooth Connection:

    Link-local IPv6 Address . . . . . : ::
    IP Address. . . . . : 0.0.0.0
    Subnet Mask . . . . . : 0.0.0.0
    Default Gateway . . . . . : 0.0.0.0
```

Konfigurasi PC0

PC1

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>ipconfig

FastEthernet0 Connection:(default port)

    Link-local IPv6 Address . . . . . : FE80::260:5CFF:FE8D:E5E2
    IP Address . . . . . : 192.168.1.3
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.1

Bluetooth Connection:

    Link-local IPv6 Address . . . . . : ::
    IP Address . . . . . : 0.0.0.0
    Subnet Mask . . . . . : 0.0.0.0
    Default Gateway . . . . . : 0.0.0.0
```

Konfigurasi PC1

PC2

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>ipconfig

FastEthernet0 Connection:(default port)

    Link-local IPv6 Address . . . . . : FE80::260:47FF:FE58:1C45
    IP Address . . . . . : 192.168.20.2
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.20.1

Bluetooth Connection:

    Link-local IPv6 Address . . . . . : ::
    IP Address . . . . . : 0.0.0.0
    Subnet Mask . . . . . : 0.0.0.0
    Default Gateway . . . . . : 0.0.0.0
```

Konfigurasi PC2

PC3

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>ipconfig

FastEthernet0 Connection:(default port)

    Link-local IPv6 Address . . . . . : FE80::290:21FF:FEA9:C6C9
    IP Address . . . . . : 192.168.20.3
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.20.1

Bluetooth Connection:

    Link-local IPv6 Address . . . . . : ::
    IP Address . . . . . : 0.0.0.0
    Subnet Mask . . . . . : 0.0.0.0
    Default Gateway . . . . . : 0.0.0.0
```

Konfigurasi PC3