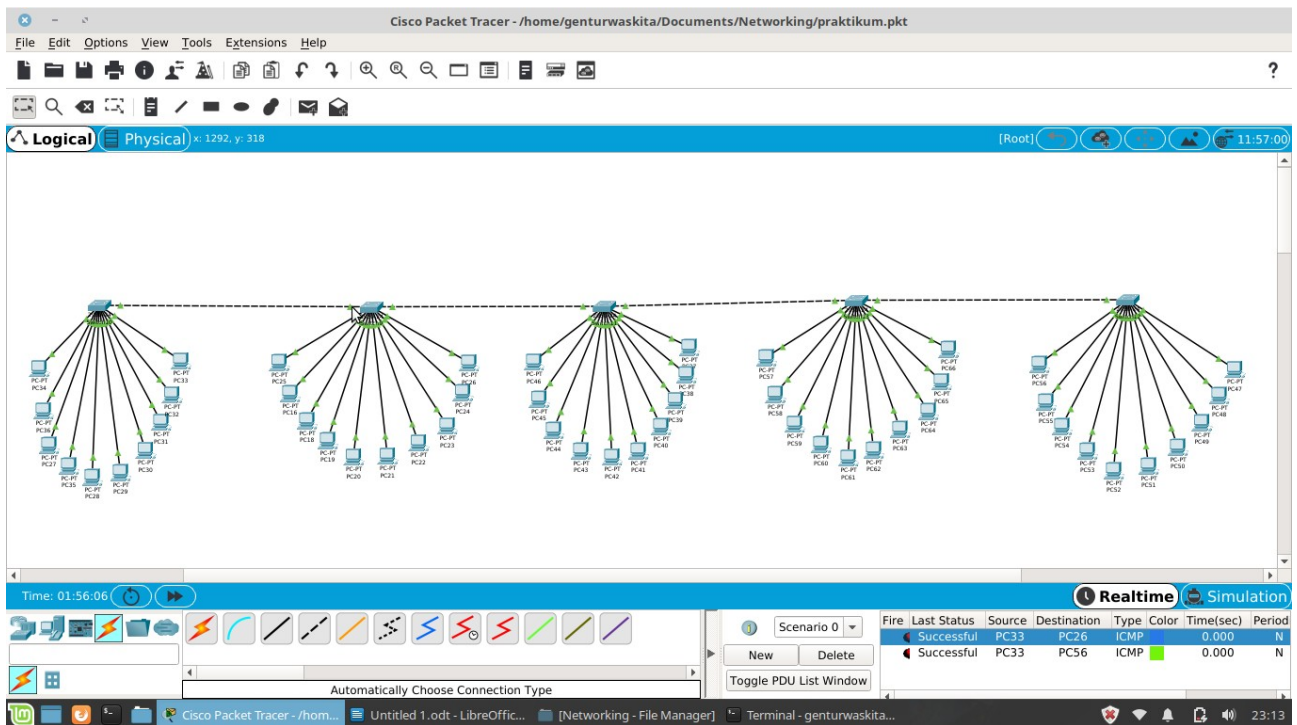


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Modul 2

1. Rancangan jaringan yang terdiri dari 5 switch yang saling terhubung dan setiap switch terdiri dari 10 PC.



Struktur Jaringan

- a. Konfigurasi untuk setiap PC di Switch 1, IP Address antara 192.168.10.10 sampai 192.168.10.19 secara terurut.

The screenshot shows the configuration window for PC25. The 'Desktop' tab is selected, and the 'Static' IP configuration is chosen. The IP Address is set to 192.168.10.10, the Subnet Mask is 255.255.255.0, the Default Gateway is 0.0.0.0, and the DNS Server is 0.0.0.0. The IPv6 Configuration section shows 'Static' selected, with an IPv6 Address field, a Link Local Address of FE80::202:4AFF:FE16:7C87, and empty fields for IPv6 Gateway and IPv6 DNS Server. The 802.1X section has 'Use 802.1X Security' unchecked, with 'MD5' selected for Authentication, and empty fields for Username and Password.

PC25

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address: 192.168.10.10

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::202:4AFF:FE16:7C87

IPv6 Gateway:

IPv6 DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

PC26

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 192.168.10.19

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::2D0:BAFF:FEA7:28C7

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

☐ Top

- b. Konfigurasi untuk setiap PC di Switch 2, IP Address antara 192.168.10.20 sampai 192.168.10.29 secara terurut.

PC27

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address

Subnet Mask

Default Gateway

DNS Server

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication

☐ Top

PC36

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address

Subnet Mask

Default Gateway

DNS Server

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication

☐ Top

- c. Konfigurasi untuk setiap PC di Switch 3, IP Address antara 192.168.10.30 sampai 192.168.10.39 secara terurut.

PC57

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 192.168.10.30

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::290:2BFF:FE94:7CE

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

☐ Top

PC66

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 192.168.10.39

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::2D0:FFFF:FED9:843B

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

☐ Top

- d. Konfigurasi untuk setiap PC di Switch 3, IP Address antara 192.168.10.40 sampai 192.168.10.49 secara terurut.

PC47

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 192.168.10.40

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::290:2BFF:FE55:6B55

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

☐ Top

PC56

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 192.168.10.49

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::201:C9FF:FEE2:8448

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

☐ Top

- e. Konfigurasi untuk setiap PC di Switch 3, IP Address antara 192.168.10.40 sampai 192.168.10.49 secara terurut.

PC37

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address

Subnet Mask

Default Gateway

DNS Server

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication

☐ Top

PC46

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address

Subnet Mask

Default Gateway

DNS Server

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address

IPv6 Gateway

IPv6 DNS Server

802.1X

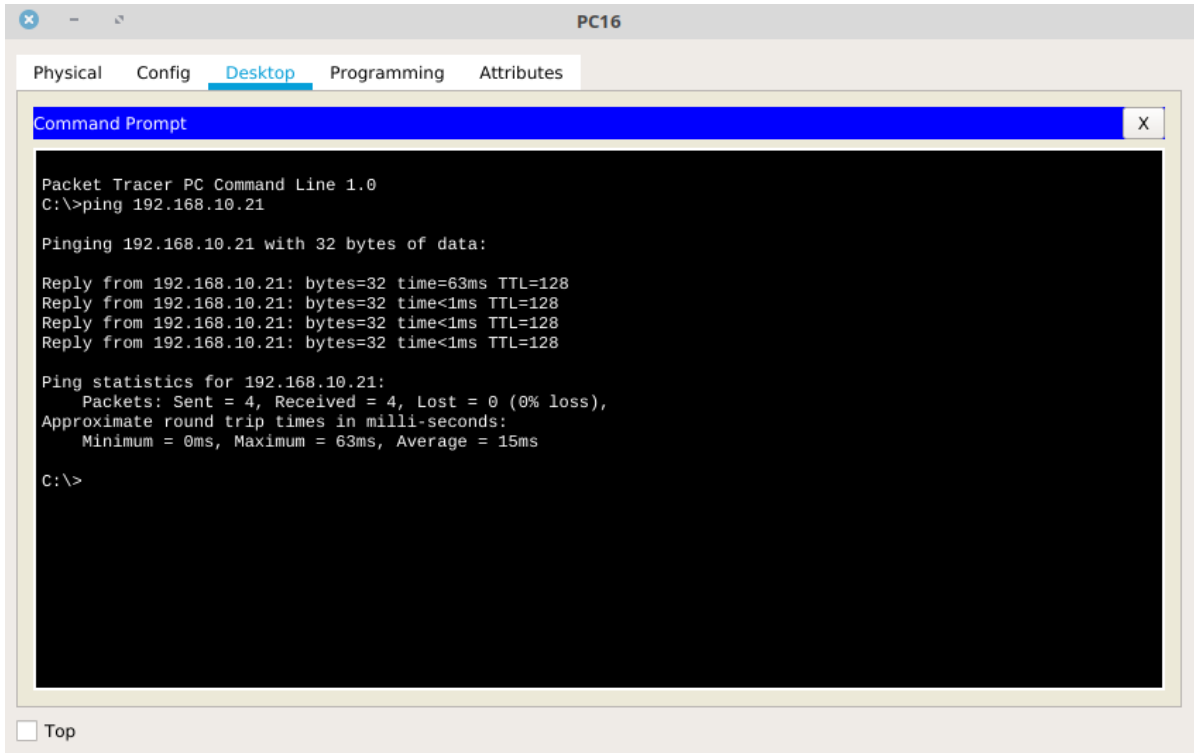
☐ Use 802.1X Security

Authentication

☐ Top

2. Setelah dilakukan konfigurasi IP Address untuk setiap PC langkah selanjutnya ialah menguji koneksi pada setiap PC. (mengambil beberapa contoh ping pada PC).

a. Uji koneksi antara IP 192.168.10.11 dengan 192.168.10.21 .



The screenshot shows the Packet Tracer interface for PC16. The 'Desktop' tab is selected, and a Command Prompt window is open. The command prompt displays the output of a ping command to 192.168.10.21. The output shows four successful replies with a time of 63ms and TTL=128. The ping statistics indicate 0% loss and an average round trip time of 15ms.

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.21

Pinging 192.168.10.21 with 32 bytes of data:

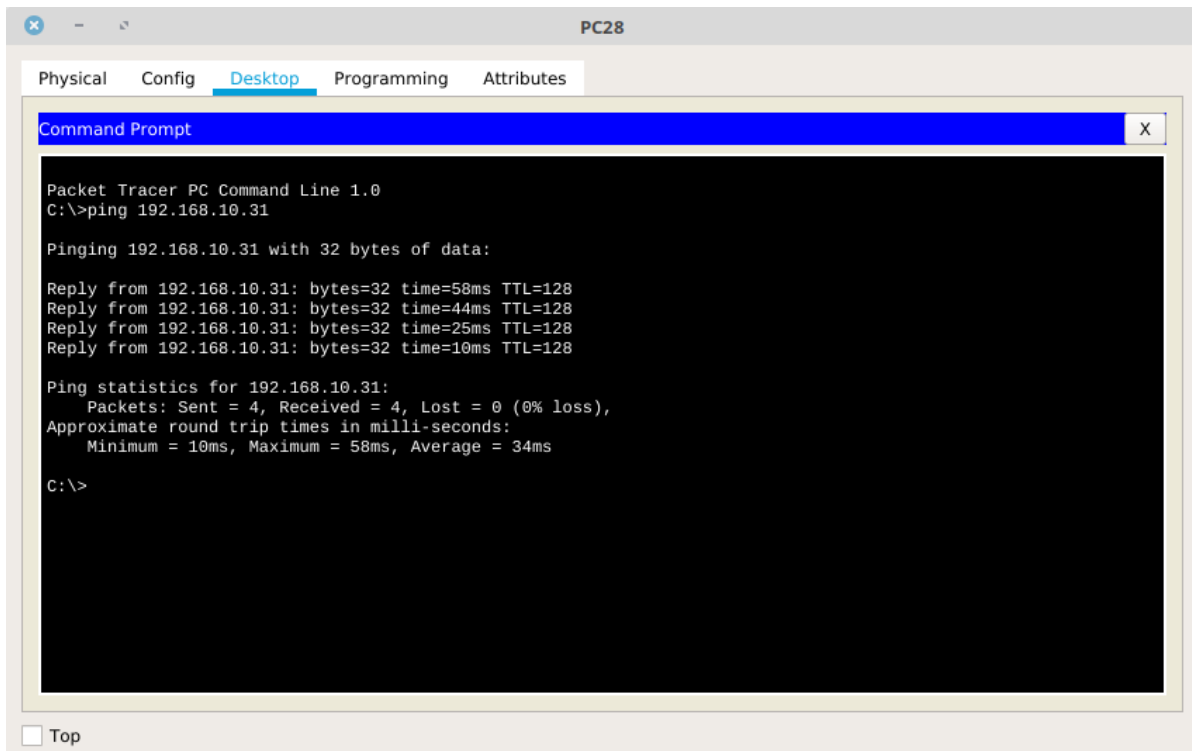
Reply from 192.168.10.21: bytes=32 time=63ms TTL=128
Reply from 192.168.10.21: bytes=32 time<1ms TTL=128
Reply from 192.168.10.21: bytes=32 time<1ms TTL=128
Reply from 192.168.10.21: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.21:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 63ms, Average = 15ms

C:\>
```

Hasil ping

b. Uji koneksi antara IP 192.168.10.21 dengan 192.168.10.31 .



The screenshot shows the Packet Tracer interface for PC28. The 'Desktop' tab is selected, and a Command Prompt window is open. The command prompt displays the output of a ping command to 192.168.10.31. The output shows four successful replies with times of 58ms, 44ms, 25ms, and 10ms, all with TTL=128. The ping statistics indicate 0% loss and an average round trip time of 34ms.

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.31

Pinging 192.168.10.31 with 32 bytes of data:

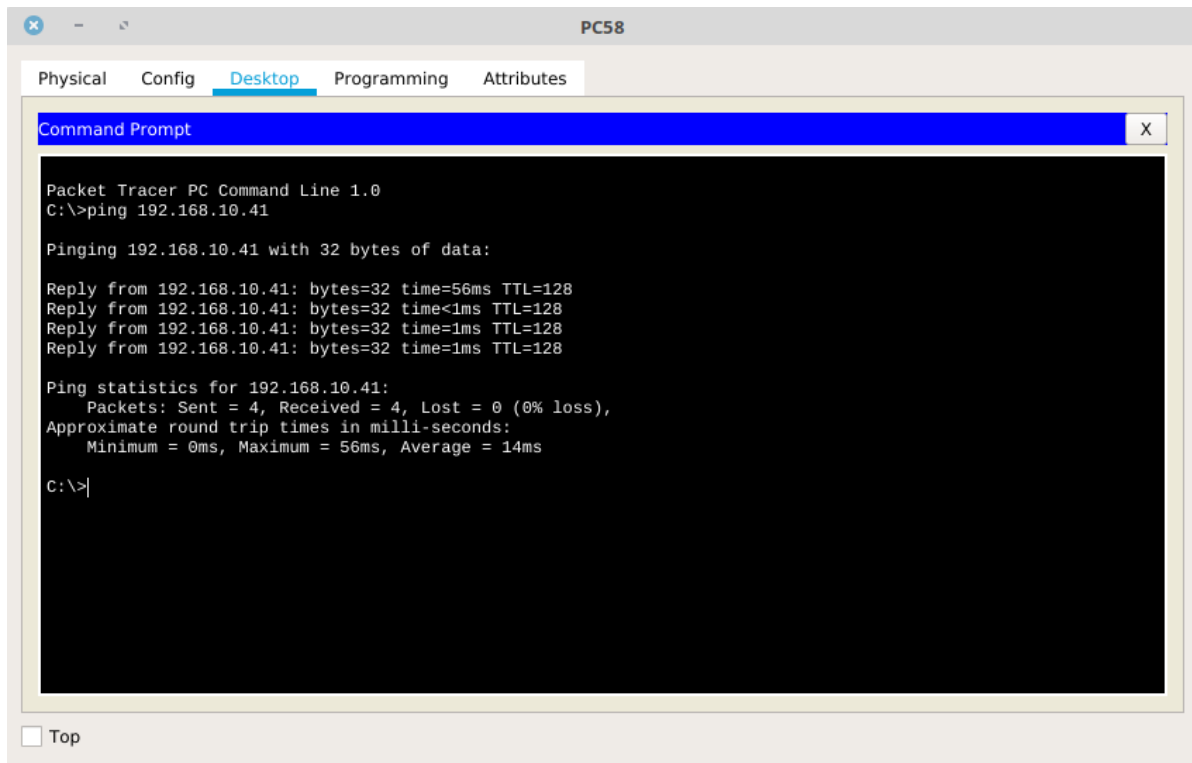
Reply from 192.168.10.31: bytes=32 time=58ms TTL=128
Reply from 192.168.10.31: bytes=32 time=44ms TTL=128
Reply from 192.168.10.31: bytes=32 time=25ms TTL=128
Reply from 192.168.10.31: bytes=32 time=10ms TTL=128

Ping statistics for 192.168.10.31:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 10ms, Maximum = 58ms, Average = 34ms

C:\>
```

Hasil ping

c. Uji koneksi antara IP 192.168.10.31 dengan 192.168.10.41 .



The screenshot shows a Packet Tracer window for PC58. The 'Desktop' tab is active, displaying a 'Command Prompt' window. The command prompt shows the execution of the 'ping 192.168.10.41' command. The output indicates that the ping was successful, with 4 packets sent and received, 0% loss, and an average round trip time of 14ms.

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.41

Pinging 192.168.10.41 with 32 bytes of data:

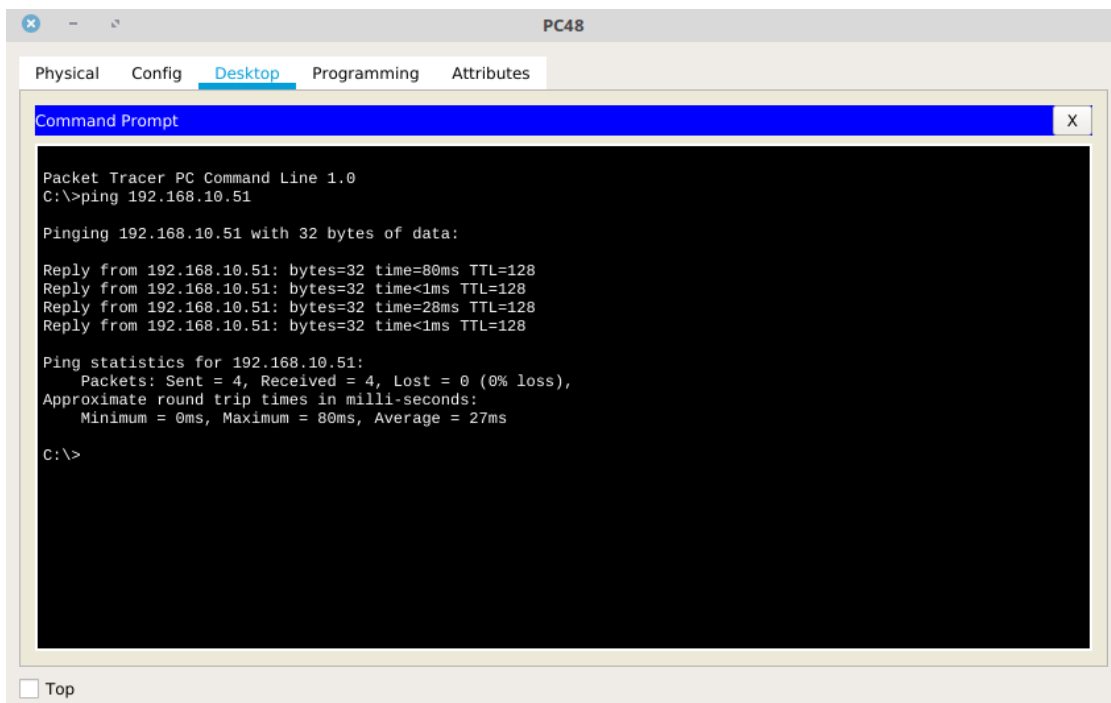
Reply from 192.168.10.41: bytes=32 time=56ms TTL=128
Reply from 192.168.10.41: bytes=32 time<1ms TTL=128
Reply from 192.168.10.41: bytes=32 time=1ms TTL=128
Reply from 192.168.10.41: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.10.41:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 56ms, Average = 14ms

C:\>|
```

Hasil ping

d. Uji koneksi antara IP 192.168.10.41 dengan 192.168.10.51 .



The screenshot shows a Packet Tracer window for PC48. The 'Desktop' tab is active, displaying a 'Command Prompt' window. The command prompt shows the execution of the 'ping 192.168.10.51' command. The output indicates that the ping was successful, with 4 packets sent and received, 0% loss, and an average round trip time of 27ms.

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.51

Pinging 192.168.10.51 with 32 bytes of data:

Reply from 192.168.10.51: bytes=32 time=80ms TTL=128
Reply from 192.168.10.51: bytes=32 time<1ms TTL=128
Reply from 192.168.10.51: bytes=32 time=28ms TTL=128
Reply from 192.168.10.51: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.51:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 80ms, Average = 27ms

C:\>
```

Hasil ping