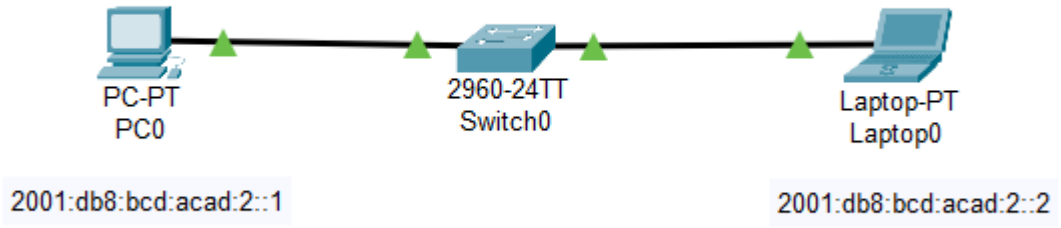
TUGAS STRUKTUR PERTEMUAN 8 E-LERNING
JARINGAN KOMPUTER

Nama: Muhammad Arif Syahrudin

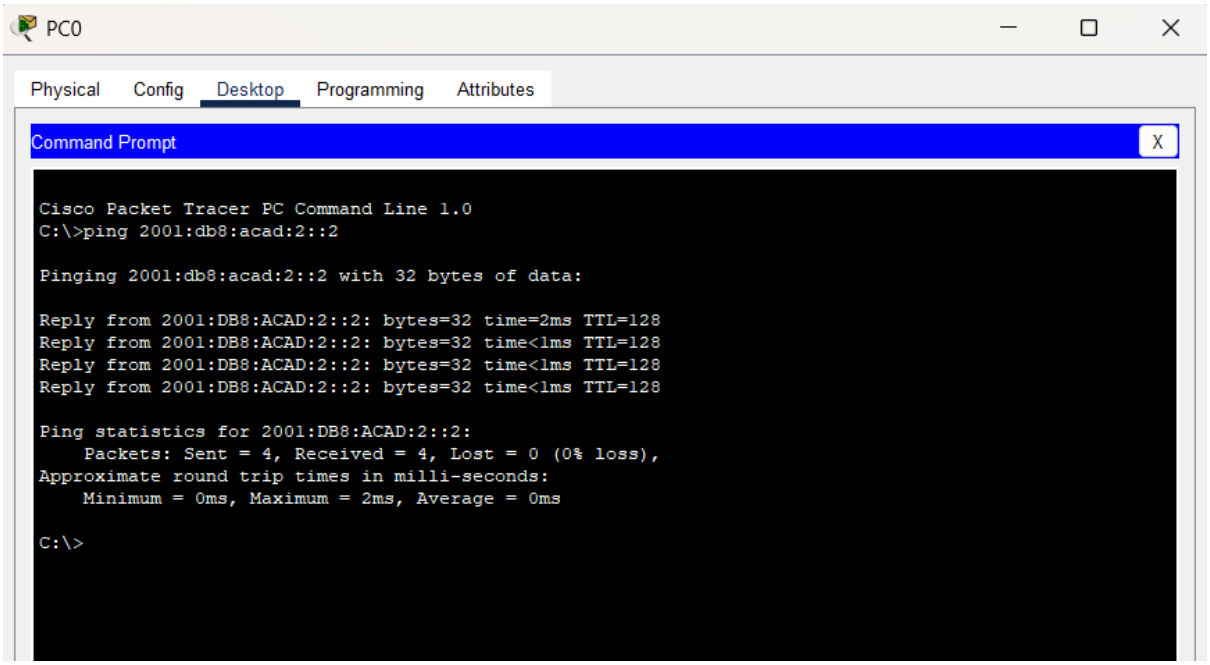
Kelas: 03TPLP016

NIM: 241011400651

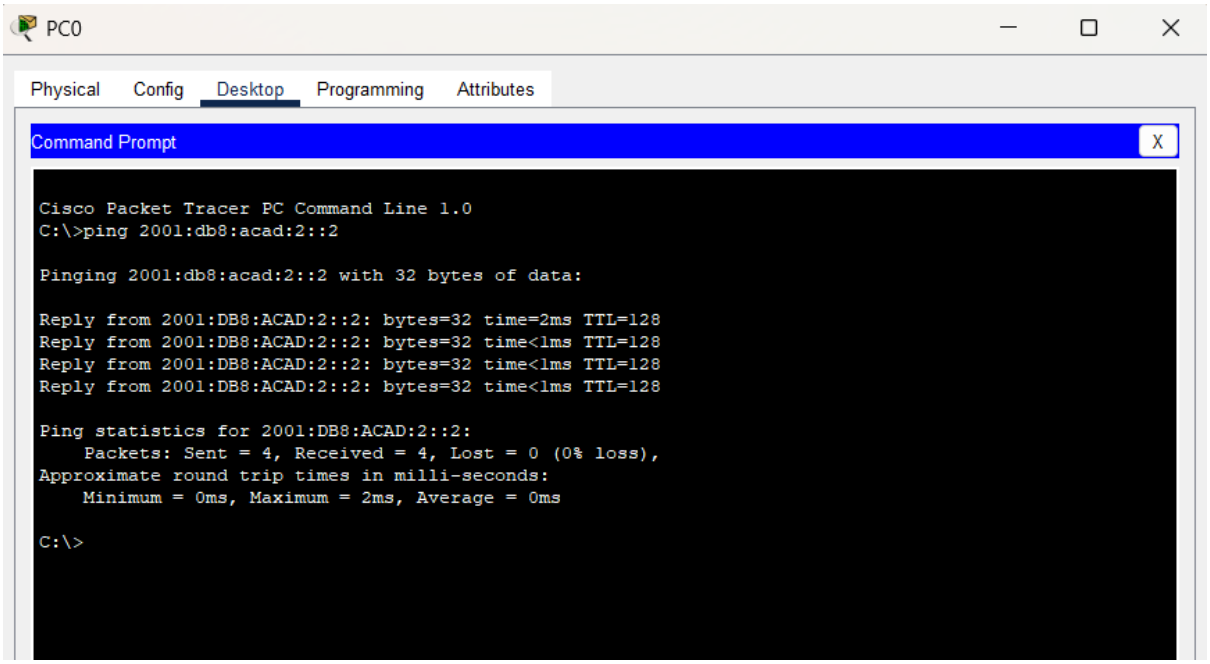
1. **Menentukan IP address versi 6**



Desain simulasi testing ipv6 address



Tes Ping PC0 to Laptop

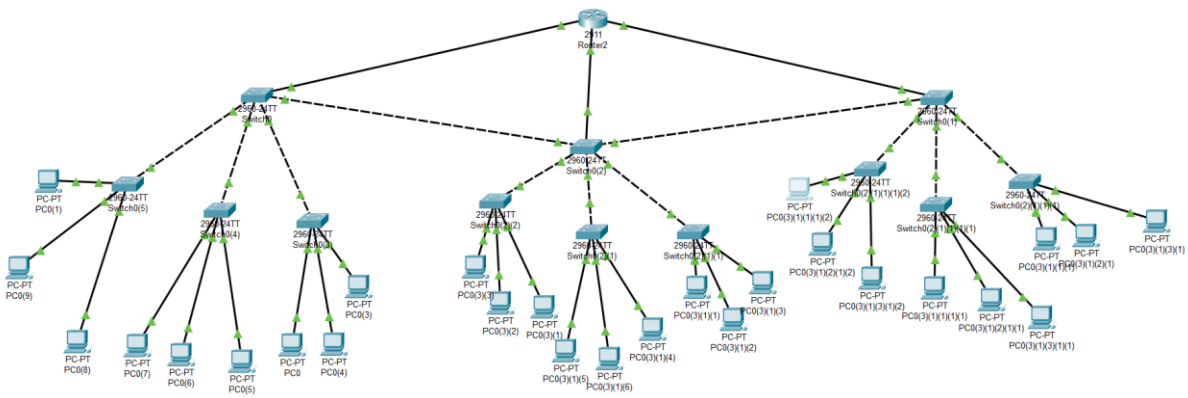


Tes ping Laptop to PC0

Analisis: kedua perangkat berada di satu jaringan IPv6 segment yang sama, jadi mereka bisa berkomunikasi langsung tanpa router.

Kesimpulan: Dengan menggunakan IPv6 address dalam satu segmen (2001:db8:acad:2::/64), kedua perangkat PC0 dan Laptop0 dapat saling berkomunikasi melalui switch tanpa perlu router. Hasil ping menunjukkan komunikasi dua arah berjalan sukses tanpa packet loss.

2. Subnetting F/V-LSM

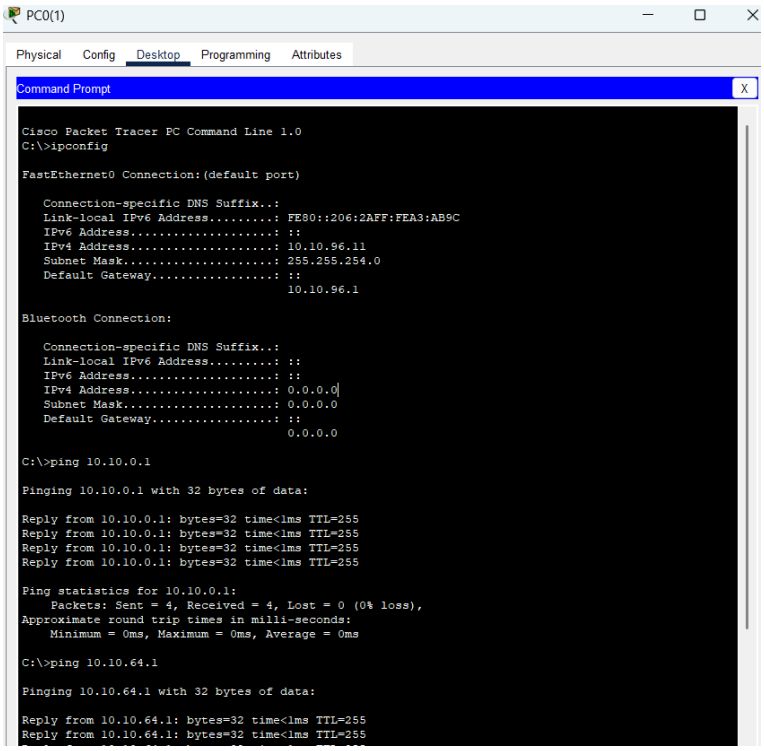


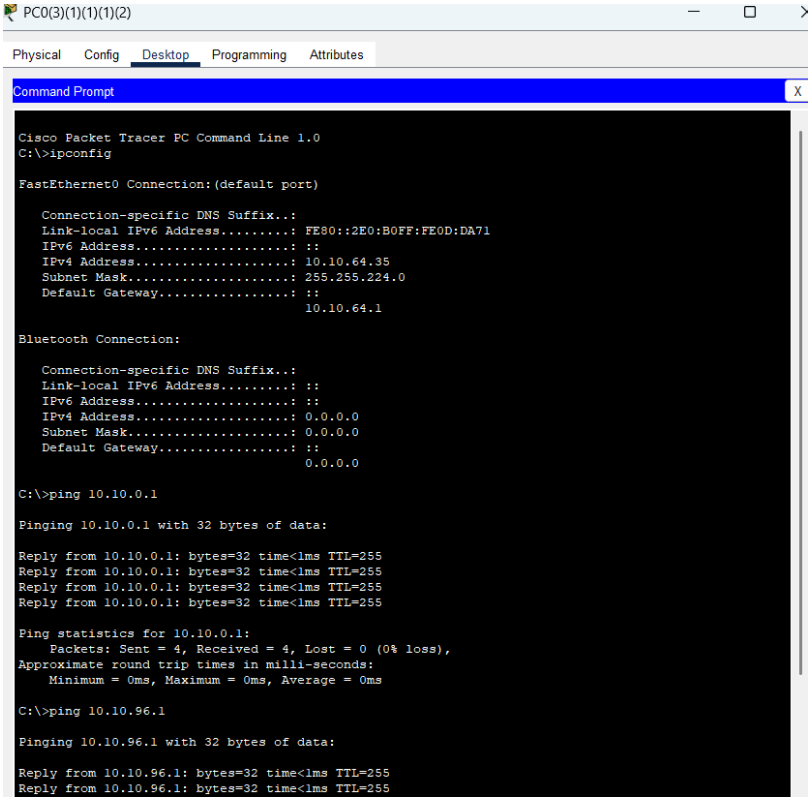
1. Konfigurasi

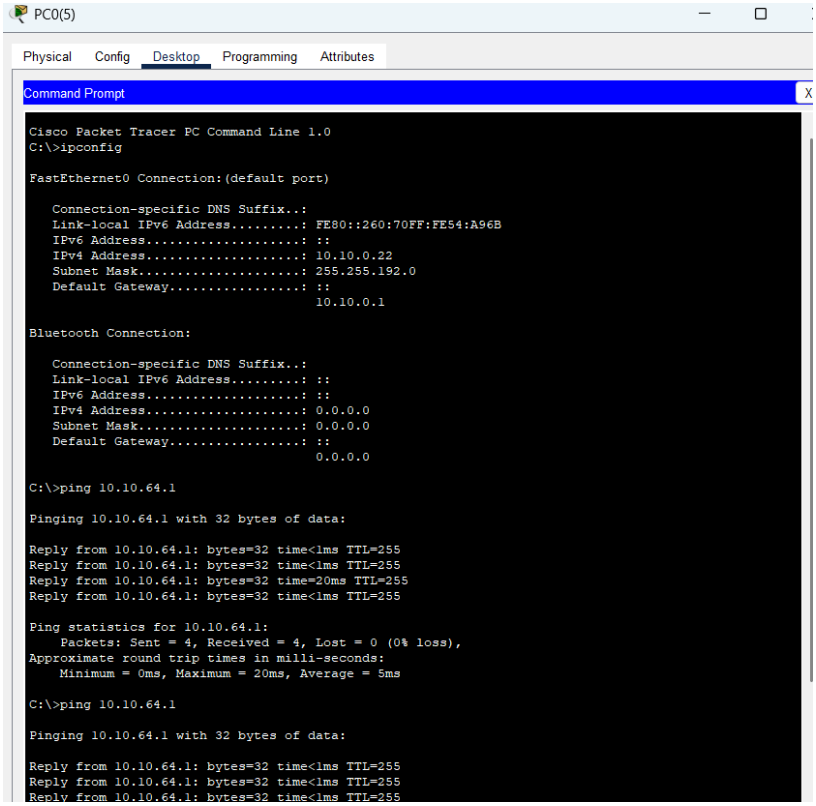
Router DHCP Server untuk semua subnet
Subnet 1 (N3S1) 10.10.0.0 /18 – Gateway: 10.10.0.1
Subnet 2 (N3S2) 10.10.64.0 /19 – Gateway: 10.10.64.1
Subnet 3 (N3S3) 10.10.96.0 /23 – Gateway: 10.10.96.1
Total PC 27 unit (semua DHCP)

```
Router#show running-config | section ip dhcp
ip dhcp excluded-address 10.10.0.1 10.10.0.10
ip dhcp excluded-address 10.10.64.1 10.10.64.10
ip dhcp excluded-address 10.10.96.1 10.10.96.10
ip dhcp pool N3S1
 network 10.10.0.0 255.255.192.0
 default-router 10.10.0.1
 dns-server 8.8.8.8
ip dhcp pool N3S2
 network 10.10.64.0 255.255.224.0
 default-router 10.10.64.1
 dns-server 8.8.8.8
ip dhcp pool N3S3
 network 10.10.96.0 255.255.254.0
 default-router 10.10.96.1
 dns-server 8.8.8.8
Router#%DHCPD-4-PING_CONFLICT: DHCP address conflict:  server pinged 10.10.96.13.
%DHCPD-4-PING_CONFLICT: DHCP address conflict:  server pinged 10.10.96.28.
%DHCPD-4-PING_CONFLICT: DHCP address conflict:  server pinged 10.10.64.30.
%DHCPD-4-PING_CONFLICT: DHCP address conflict:  server pinged 10.10.96.32.
```

2. Test ping




PC0(3)(1)(1)(1)(2)
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ipconfig
FastEthernet0 Connection:(default port)
Connection-specific DNS Suffix..:
Link-local IPv6 Address.....: FE80::2E0:B0FF:FE0D:DA71
IPv6 Address.....: ::
IPv4 Address.....: 10.10.64.35
Subnet Mask.....: 255.255.224.0
Default Gateway.....: ::
10.10.64.1
Bluetooth Connection:
Connection-specific DNS Suffix..:
Link-local IPv6 Address.....: ::
IPv6 Address.....: ::
IPv4 Address.....: 0.0.0.0
Subnet Mask.....: 0.0.0.0
Default Gateway.....: ::
0.0.0.0
C:\>ping 10.10.0.1
Pinging 10.10.0.1 with 32 bytes of data:
Reply from 10.10.0.1: bytes=32 time<1ms TTL=255
Reply from 10.10.0.1: bytes=32 time<1ms TTL=255
Reply from 10.10.0.1: bytes=32 time<1ms TTL=255
Reply from 10.10.0.1: bytes=32 time<1ms TTL=255
Ping statistics for 10.10.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping 10.10.96.1
Pinging 10.10.96.1 with 32 bytes of data:
Reply from 10.10.96.1: bytes=32 time<1ms TTL=255
Reply from 10.10.96.1: bytes=32 time<1ms TTL=255


PC0(5)
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ipconfig
FastEthernet0 Connection:(default port)
Connection-specific DNS Suffix..:
Link-local IPv6 Address.....: FE80::260:70FF:FE54:A96B
IPv6 Address.....: ::
IPv4 Address.....: 10.10.0.22
Subnet Mask.....: 255.255.192.0
Default Gateway.....: ::
10.10.0.1
Bluetooth Connection:
Connection-specific DNS Suffix..:
Link-local IPv6 Address.....: ::
IPv6 Address.....: ::
IPv4 Address.....: 0.0.0.0
Subnet Mask.....: 0.0.0.0
Default Gateway.....: ::
0.0.0.0
C:\>ping 10.10.64.1
Pinging 10.10.64.1 with 32 bytes of data:
Reply from 10.10.64.1: bytes=32 time<1ms TTL=255
Reply from 10.10.64.1: bytes=32 time<1ms TTL=255
Reply from 10.10.64.1: bytes=32 time=20ms TTL=255
Reply from 10.10.64.1: bytes=32 time<1ms TTL=255
Ping statistics for 10.10.64.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 20ms, Average = 5ms
C:\>ping 10.10.64.1
Pinging 10.10.64.1 with 32 bytes of data:
Reply from 10.10.64.1: bytes=32 time<1ms TTL=255
Reply from 10.10.64.1: bytes=32 time<1ms TTL=255
Reply from 10.10.64.1: bytes=32 time<1ms TTL=255

Kesimpulan

Konfigurasi DHCP pada router berhasil memberikan alamat IP secara otomatis ke seluruh PC di tiga subnet berbeda. Pengujian ping menunjukkan konektivitas yang stabil antar perangkat, menandakan bahwa proses routing antar subnet telah berfungsi dengan baik.