



Answer Sheet
Hands On - H02

IP Addressing Methods

Name : Alden Luthfi

Student ID : 2206028932

[10 Poin] Analisis Metode Alokasi

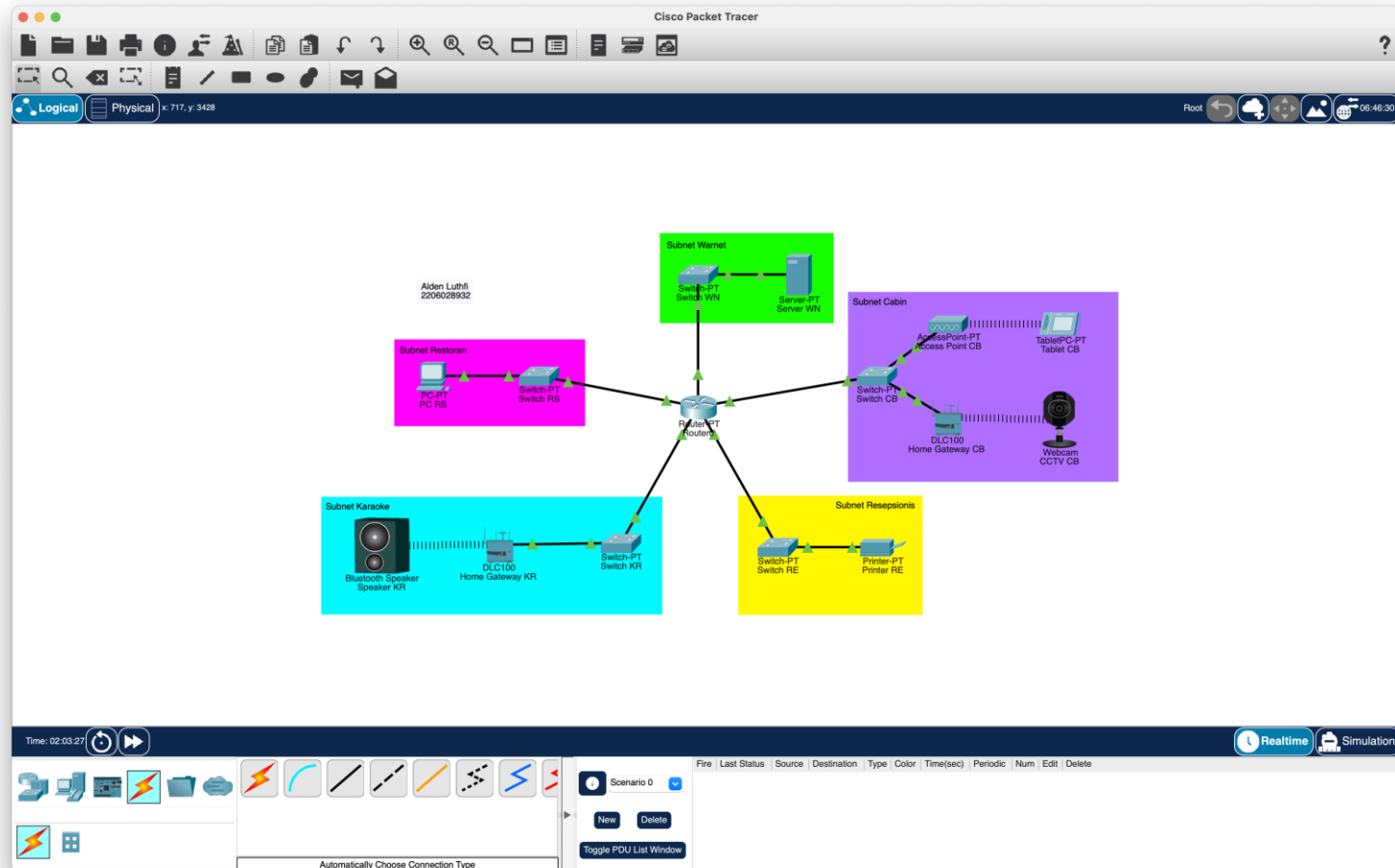
Alokasi IP dari sebuah jaringan perlu dianalisis kebutuhannya masing-masing. Pada alokasi IP statis, setiap alamat IP ditetapkan secara manual, alamat ini biasanya bersifat permanen. Hal ini membuat operator memiliki kontrol penuh terhadap jaringan. Jaringan yang terbentuk juga relatif lebih aman. Namun, Pada jaringan dengan banyak perangkat, alokasi IP statis memerlukan banyak waktu dan sumber daya, Alamat IP yang dialokasikan secara manual juga rentan terhadap kesalahan manusia. Selain itu, adanya perangkat bergerak seperti tablet mengakibatkan masalah bagi alokasi alamat IP yang statis. Oleh karena itu, Menggunakan alokasi statis sepenuhnya dalam kasus ini mungkin tidak optimal dari segi efisiensi dan fleksibilitas. Alokasi alamat IP dinamis seperti DHCP lebih cocok untuk memenuhi kebutuhan jaringan.

[50 Poin] Alokasi Alamat IP

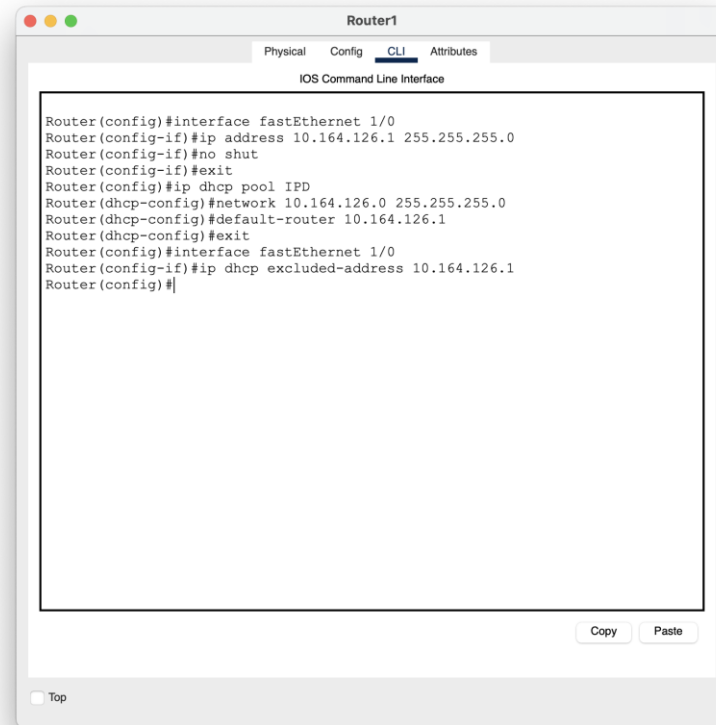
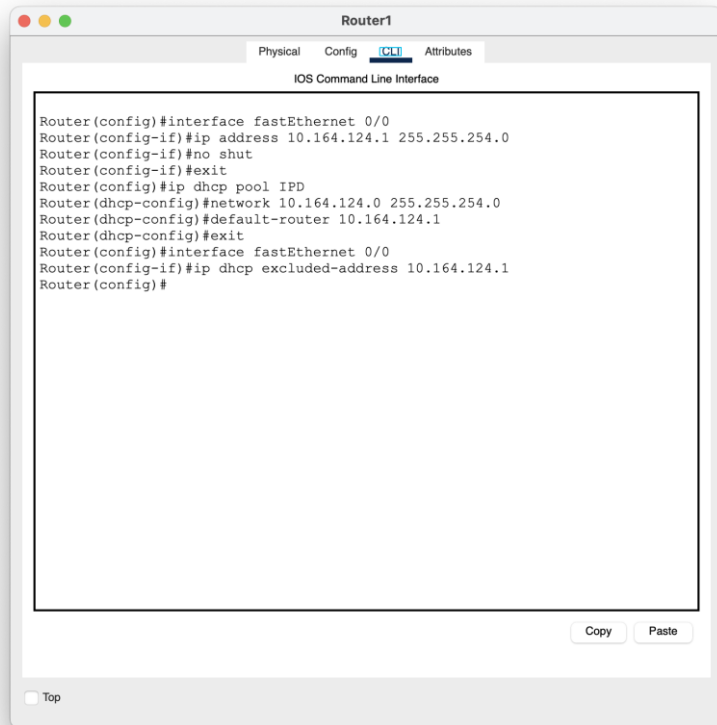
Subnet	Network Address	Broadcast Address	Subnet Mask	Jumlah Edge Device Maksimum	Jumlah Host Maksimum	IP Address Host Pertama	IP Address Host Terakhir	Default Gateway
WN	10.164.124.0	10.164.125.255	255.255.254.0 (/23)	509	510	10.164.124.1	10.164.125.254	10.164.124.1
CB	10.164.126.0	10.164.126.255	255.255.255.0 (/24)	253	254	10.164.126.1	10.164.126.254	10.164.126.1
RE	10.164.127.0	10.164.127.63	255.255.255.192 (/26)	61	62	10.164.127.1	10.164.127.62	10.164.127.1
KR	10.164.127.64	10.164.127.127	255.255.255.192 (/26)	61	62	10.164.127.65	10.164.127.126	10.164.127.65
RS	10.164.127.128	10.164.127.143	255.255.255.240 (/28)	13	14	10.164.127.129	10.164.127.142	10.164.127.129

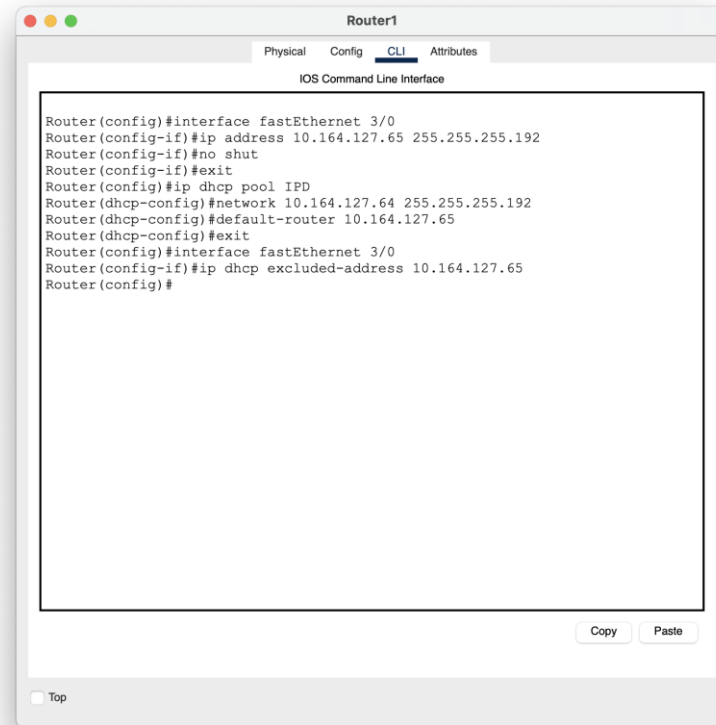
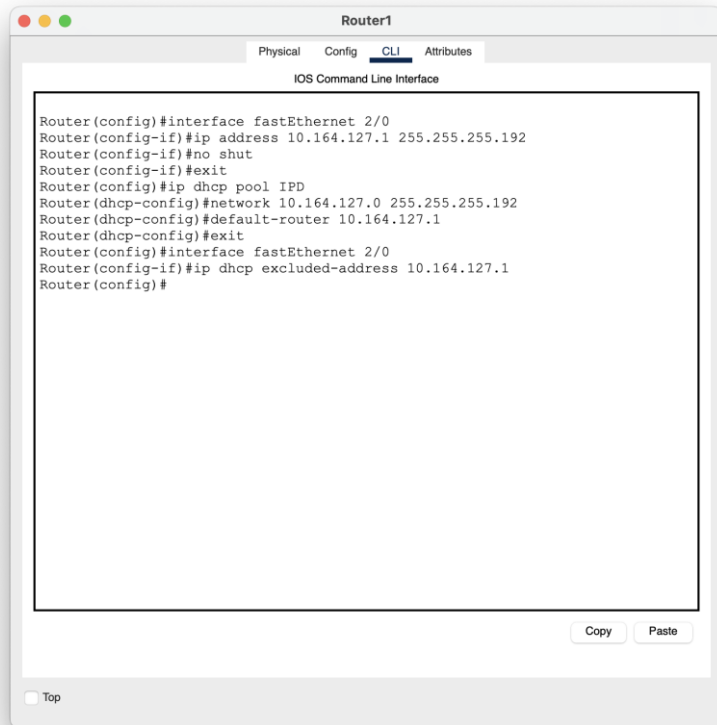
[40 Poin] Implementasi Alokasi Alamat IP dan DHCP Packet Tracer

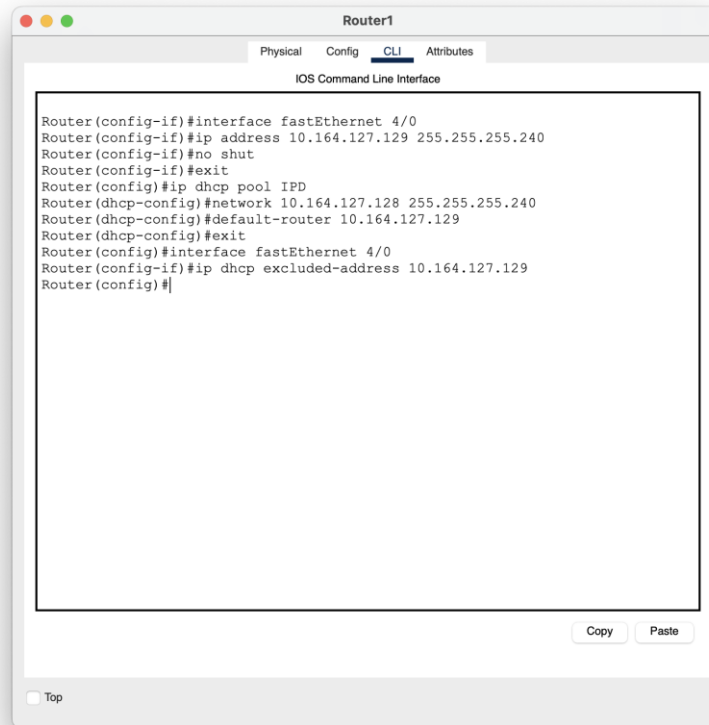
Tangkapan Layar Topologi Jaringan



Tangkapan Layar Konfigurasi Router CLI







Tangkapan Layar Konfigurasi IP End Devices Sub-Jaringan Resepsionis

Server WN

The screenshot shows the 'Server WN' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section has 'DHCP' selected, with fields for IPv4 Address (10.164.124.2), Subnet Mask (255.255.254.0), Default Gateway (10.164.124.1), and DNS Server (0.0.0.0). The 'IPv6 Configuration' section has 'Automatic' selected, with fields for IPv6 Address, Link Local Address (FE80::204:9AFF:FE90:601B), Default Gateway, and DNS Server. The '802.1X' section has 'Use 802.1X Security' unchecked, and the 'Authentication' dropdown is set to 'MD5'. There are fields for Username and Password. A 'Top' button is at the bottom left.

Server WN

Physical Config Services **Desktop** Programming Attributes

IP Configuration

IP Configuration

☒ DHCP ☐ Static

IPv4 Address: 10.164.124.2

Subnet Mask: 255.255.254.0

Default Gateway: 10.164.124.1

DNS Server: 0.0.0.0

IPv6 Configuration

☒ Automatic ☐ Static

IPv6 Address: /

Link Local Address: FE80::204:9AFF:FE90:601B

Default Gateway: /

DNS Server: /

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username: /

Password: /

☐ Top

Printer RE

The screenshot shows the 'Printer RE' configuration window with the 'Config' tab selected. The 'FastEthernet0' interface is configured. The 'Port Status' is 'On'. The 'Bandwidth' is 'Auto'. The 'Duplex' is 'Auto'. The 'MAC Address' is '0090.21E9.D5BE'. The 'IP Configuration' section has 'DHCP' selected, with fields for IPv4 Address (10.164.127.2) and Subnet Mask (255.255.255.192). The 'IPv6 Configuration' section has 'Automatic' selected, with fields for IPv6 Address and Link Local Address (FE80::290:21FF:FEE9:D5BE). A 'Top' button is at the bottom left.

Printer RE

Physical **Config** Attributes

GLOBAL

Settings

INTERFACE

FastEthernet0

FastEthernet0

Port Status: ☒ On

Bandwidth: ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address: 0090.21E9.D5BE

IP Configuration

☒ DHCP ☐ Static

IPv4 Address: 10.164.127.2

Subnet Mask: 255.255.255.192

IPv6 Configuration

☒ Automatic ☐ Static

IPv6 Address: /

Link Local Address: FE80::290:21FF:FEE9:D5BE

☐ Top

Tangkapan Layar Konfigurasi IP End Devices Sub-Jaringan Cabin	
Tablet CB	Home Gateway CB

Tablet CB

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: Wireless0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address: 10.164.126.2

Subnet Mask: 255.255.255.0

Default Gateway: 10.164.126.1

DNS Server: 0.0.0.0

IPv6 Configuration

☒ Automatic ☐ Static

IPv6 Address: /

Link Local Address: FE80::201:64FF:FE42:14BA

Default Gateway:

DNS Server:

Top

Tangkapan Layar Konfigurasi IP End Devices Sub-Jaringan Karaoke

Home Gateway CB

Physical **Config** GUI Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

Internet

LAN

Wireless

Internet Settings

IP Configuration

☒ DHCP ☐ Static

IPv4 Address: 10.164.126.3

Subnet Mask: 255.255.255.0

Default Gateway: 10.164.126.1

DNS Server:

Top

Tangkapan Layar Konfigurasi IP End Devices Sub-Jaringan Restoran

Home Gateway KR

Home Gateway KR

PhysicalConfigGUIAttributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

Internet

LAN

Wireless

Internet Settings

IP Configuration

☒ DHCP

☐ Static

IPv4 Address

10.164.127.66

Subnet Mask

255.255.255.192

Default Gateway

10.164.127.65

DNS Server

Top

PC RS

PC RS

PhysicalConfigDesktopProgrammingAttributes

IP Configuration

InterfaceFastEthernet0

IP Configuration

☒ DHCP

☐ Static

IPv4 Address

10.164.127.130

Subnet Mask

255.255.255.240

Default Gateway

10.164.127.129

DNS Server

0.0.0.0

IPv6 Configuration

☒ Automatic

☐ Static

IPv6 Address

Link Local Address

FE80::206:2AFF:FEEC:11EE

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication

MDS

Username

Password

Top