



FAKULTAS ILMU KOMPUTER

Worksheet Jaringan Komunikasi Data
(CSIM603154)– 2020-2021 Gasal

Week : 6

Topic : Network Layer

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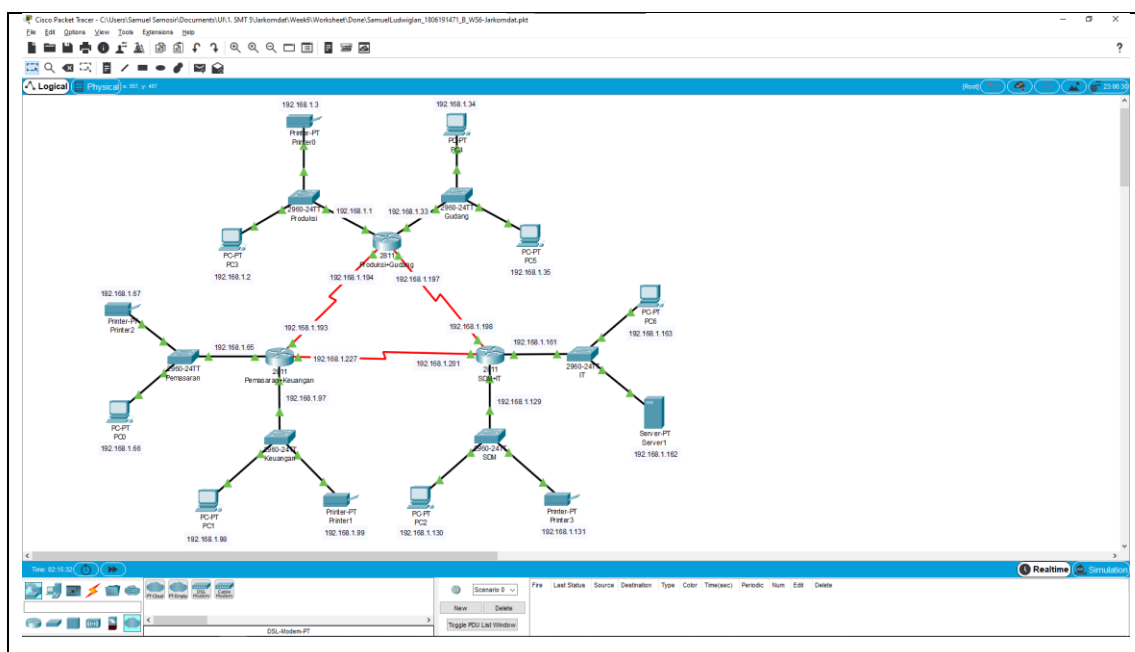
Name : Samuel Ludwig Ian
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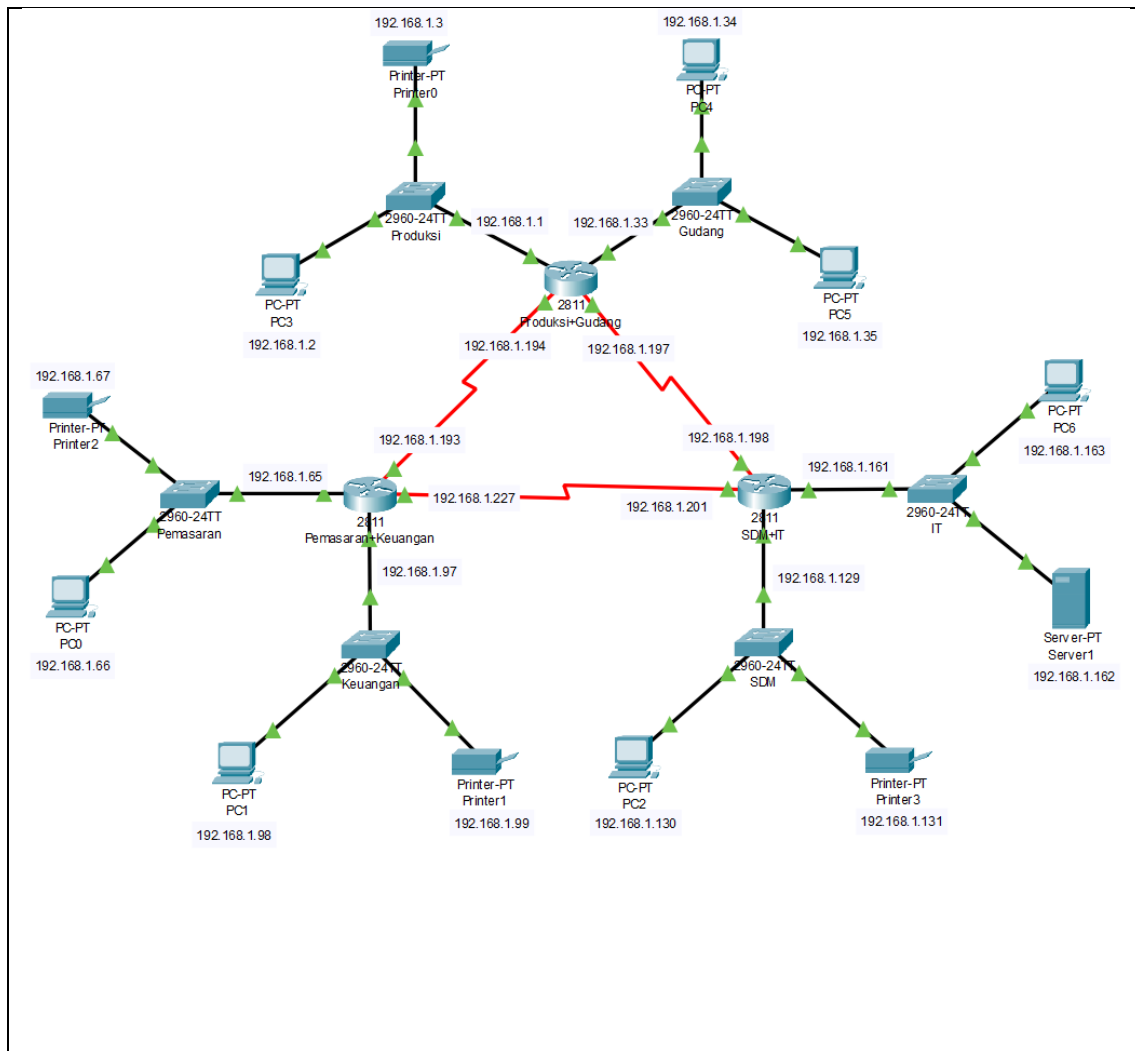
1. [Subnetting]

Subnet	Network Address	Subnet Mask	First Host	Last Host
Produksi	192.168.1.0	255.255.255.224	192.168.1.1	192.168.1.30
Gudang	192.168.1.32	255.255.255.224	192.168.1.33	192.168.1.62
Pemasaran	192.168.1.64	255.255.255.224	192.168.1.65	192.168.1.94
Keuangan	192.168.1.96	255.255.255.224	192.168.1.97	192.168.1.126
SDM	192.168.1.128	255.255.255.224	192.168.1.129	192.168.1.158
IT	192.168.1.160	255.255.255.224	192.168.1.161	192.168.1.190

2. [Implementasi Pada Packet Tracer]

a-c. Screenshot Topologi





d. Alokasi Alamat Device

Device	IPv4 Address	Subnet Mask	Default Gateway
PC0	192.168.1.66	255.255.255.224	192.168.1.65
PC1	192.168.1.98	255.255.255.224	192.168.1.97
PC2	192.168.1.130	255.255.255.224	192.168.1.129
PC3	192.168.1.2	255.255.255.224	192.168.1.1
PC4	192.168.1.34	255.255.255.224	192.168.1.33
PC5	192.168.1.35	255.255.255.224	192.168.1.33
PC6	192.168.1.163	255.255.255.224	192.168.1.161
Printer0	192.168.1.3	255.255.255.224	192.168.1.1
Printer1	192.168.1.99	255.255.255.224	192.168.1.97
Printer2	192.168.1.67	255.255.255.224	192.168.1.65

Printer3	192.168.1.131	255.255.255.224	192.168.1.129
Server1	192.168.1.162	255.255.255.224	192.168.1.161

Screenshot

Screenshot PC0

PC0

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.1.66

Subnet Mask 255.255.255.224

Default Gateway 192.168.1.65

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::20A:41FF:FE9B:B739

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

☐ Top

Screenshot PC1

PC1

PhysicalConfigDesktopProgrammingAttributes

IP ConfigurationX

InterfaceFastEthernet0

IP Configuration

☐ DHCP☒ Static

IPv4 Address192.168.1.98

Subnet Mask255.255.255.224

Default Gateway192.168.1.97

DNS Server0.0.0.0

IPv6 Configuration

☐ Automatic☒ Static

IPv6 Address /

Link Local AddressFE80::20A:41FF:FE62:6BE2

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

AuthenticationMD5

Username

☐ Top

Screenshot PC2

PC2

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

FastEthernet0

IP Configuration

☐ DHCP

☒ Static

IPv4 Address

192.168.1.130

Subnet Mask

255.255.255.224

Default Gateway

192.168.1.129

DNS Server

0.0.0.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

/

Link Local Address

FE80::2D0:97FF:FEAA:C37D

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication

MD5

Username

☐ Top

Screenshot PC3

PC3

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

FastEthernet0

IP Configuration

☐ DHCP

☒ Static

IPv4 Address

192.168.1.2

Subnet Mask

255.255.255.224

Default Gateway

192.168.1.1

DNS Server

0.0.0.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

/

Link Local Address

FE80::201:96FF:FE95:5801

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication

MD5

Username

☐ Top

Screenshot PC4

PC4

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

FastEthernet0

IP Configuration

DHCP

Static

IPv4 Address

192.168.1.34

Subnet Mask

255.255.255.224

Default Gateway

192.168.1.33

DNS Server

0.0.0.0

IPv6 Configuration

Automatic

Static

IPv6 Address

/

Link Local Address

FE80::20A:41FF:FEE1:2492

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

MD5

Username

Top

Screenshot PC5

PC5

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

FastEthernet0

IP Configuration

☐ DHCP

☒ Static

IPv4 Address

192.168.1.35

Subnet Mask

255.255.255.224

Default Gateway

192.168.1.33

DNS Server

0.0.0.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

/

Link Local Address

FE80::20C:CFFF:FEC2:5215

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication

MD5

Username

☐ Top

Screenshot PC6

PC6

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

FastEthernet0

IP Configuration

DHCP

Static

IPv4 Address

192.168.1.163

Subnet Mask

255.255.255.224

Default Gateway

192.168.1.161

DNS Server

0.0.0.0

IPv6 Configuration

Automatic

Static

IPv6 Address

/

Link Local Address

FE80::201:C7FF:FEC2:2861

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

MD5

Username

Top

Screenshot Printer0

Printer0

Physical

Config

Attributes

GLOBAL

Settings

INTERFACE

FastEthernet0

Global Settings

Display Name

Printer0

Gateway/DNS IPv4

DHCP

Static

Default Gateway

192.168.1.1

DNS Server

Gateway/DNS IPv6

Automatic

Static

Default Gateway

DNS Server

Top

Printer0

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

0001.C976.5084

IP Configuration

☐ DHCP

☒ Static

IPv4 Address

192.168.1.3

Subnet Mask

255.255.255.224

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local Address

FE80::201:C9FF:FE76:5084

☐ Top

Screenshot Printer1

Printer1

Physical

Config

Attributes

GLOBAL

Settings

INTERFACE

FastEthernet0

Global Settings

Display Name

Printer1

Gateway/DNS IPv4

DHCP

Static

Default Gateway

192.168.1.97

DNS Server

Gateway/DNS IPv6

Automatic

Static

Default Gateway

DNS Server

Top

Printer1

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

0060.5C4C.4D4C

IP Configuration

☐ DHCP

☒ Static

IPv4 Address

192.168.1.99

Subnet Mask

255.255.255.224

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local Address

FE80::260:5CFF:FE4C:4D4C

☐ Top

Screenshot Printer2

Printer2

Physical

Config

Attributes

GLOBAL

Settings

INTERFACE

FastEthernet0

Global Settings

Display Name

Printer2

Gateway/DNS IPv4

DHCP

Static

Default Gateway

192.168.1.65

DNS Server

Gateway/DNS IPv6

Automatic

Static

Default Gateway

DNS Server

Top

Printer2

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

0003.E498.A8B0

IP Configuration

☐ DHCP

☒ Static

IPv4 Address

192.168.1.67

Subnet Mask

255.255.255.224

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local Address

FE80::203:E4FF:FE98:A8B0

☐ Top

Screenshot Printer3

Printer3

Physical

Config

Attributes

GLOBAL

Settings

INTERFACE

FastEthernet0

Global Settings

Display Name

Printer3

Gateway/DNS IPv4

DHCP

Static

Default Gateway

192.168.1.129

DNS Server

Gateway/DNS IPv6

Automatic

Static

Default Gateway

DNS Server

Top

Printer3

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

0004.9A53.0184

IP Configuration

☐ DHCP

☒ Static

IPv4 Address

192.168.1.131

Subnet Mask

255.255.255.224

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local Address

FE80::204:9AFF:FE53:184

☐ Top

Screenshot Server1

Server1

Physical

Config

Services

Desktop

Programming

Attributes

IP Configuration

IP Configuration

DHCP

Static

IPv4 Address

192.168.1.162

Subnet Mask

255.255.255.224

Default Gateway

192.168.1.161

DNS Server

0.0.0.0

IPv6 Configuration

Automatic

Static

IPv6 Address

Link Local Address

FE80::206:2AFF:FE31:D3D5

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

MD5

Username

Password

Top

3. [Konfigurasi Router]

a. Screenshot konfigurasi router

Router Produksi + Gudang

- MODULES
- NM-1E
 - NM-1E2W
 - NM-1FE-FX
 - NM-1FE-TX
 - NM-1FE2W
 - NM-2E2W
 - NM-2FE2W
 - NM-2W
 - NM-4A/S
 - NM-4E
 - NM-8A/S
 - NM-8AM
 - NM-Cover
 - NM-ESW-161
 - HWIC-1GE-SFP
 - HWIC-2T
 - HWIC-4ESW
 - HWIC-8A
 - HWIC-AP-AG-B
 - WIC-1AM
 - WIC-1ENET

Physical Device View

Zoom In

Original Size

Zoom Out



Customize
Icon in
Physical View



Customize
Icon in
Logical View



The NM-1E features a single Ethernet port that can connect a LAN backbone which can also support either six PRI connections to aggregate ISDN lines, or 24 synchronous/asynchronous ports.



☐ Top

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

FastEthernet0/0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0060.70BE.CC01

IP Configuration

IPv4 Address 192.168.1.1

Subnet Mask 255.255.255.224

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

FastEthernet0/1

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0060.70BE.CC02

IP Configuration

IPv4 Address 192.168.1.33

Subnet Mask 255.255.255.224

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
```

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

Serial0/3/0

Port Status ☒ On

Duplex ☐ Full Duplex

Clock Rate 2000000

IP Configuration

IPv4 Address 192.168.1.197

Subnet Mask 255.255.255.252

Tx Ring Limit 10

Equivalent IOS Commands

Router(config)#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface FastEthernet0/0

Router(config-if)#

Router(config-if)#exit

Router(config)#interface FastEthernet0/1

Router(config-if)#

Router(config-if)#exit

Router(config)#interface Serial0/3/0

Router(config-if)#

Produksi+Gudang

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

Serial0/3/1

Port Status

☒ On

Duplex

☐ Full Duplex

Clock Rate

2000000

IP Configuration

IPv4 Address

192.168.1.194

Subnet Mask

255.255.255.252

Tx Ring Limit

10

Equivalent IOS Commands

Router(config-if)#exit

Router(config)#interface FastEthernet0/1

Router(config-if)#

Router(config-if)#exit

Router(config)#interface Serial0/3/0

Router(config-if)#

Router(config-if)#exit

Router(config)#interface Serial0/3/1

Router(config-if)#

☐ Top

Produksi+Gudang

PhysicalConfigCLIAttributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

Static Routes

Network

Mask

Next Hop

Add

Network Address

192.168.1.160/27 via 192.168.1.198

192.168.1.128/27 via 192.168.1.198

192.168.1.64/27 via 192.168.1.193

192.168.1.96/27 via 192.168.1.193

Remove

Equivalent IOS Commands

Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#

☐ Top

Router Pemasaran & Keuangan

Pemasaran+Keuangan

Physical

Config

CLI

Attributes

MODULES

NM-1E

NM-1E2W

NM-1FE-FX

NM-1FE-TX

NM-1FE2W

NM-2E2W

NM-2FE2W

NM-2W

NM-4A/S

NM-4E

NM-8A/S

NM-8AM

NM-Cover

NM-ESW-161


HWIC-1GE-SFP

Physical Device View

Zoom In

Original Size


Zoom Out



Customize Icon in Physical View

Customize Icon in Logical View

The NM-1E features a single Ethernet port that can connect a LAN backbone which can also support either six PRI connections to aggregate ISDN lines, or 24 synchronous/asynchronous ports.



☐ Top

Pemasaran+Keuangan

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

Global Settings

Display Name

Pemasaran+Keuangan

Hostname

Router

NVRAM

Erase

Save

Startup Config

Load...

Export...

Running Config

Export...

Merge...

Equivalent IOS Commands

☐ Top

Physical **Config** CLI Attributes**GLOBAL**

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

FastEthernet0/0

Port Status ☒ OnBandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ AutoDuplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00E0.F704.E401

IP Configuration

IPv4 Address 192.168.1.97

Subnet Mask 255.255.255.224

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

☐ Top

Physical **Config** CLI Attributes**GLOBAL**

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

FastEthernet0/1Port Status ☒ OnBandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ AutoDuplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00E0.F704.E402

IP Configuration

IPv4 Address 192.168.1.65

Subnet Mask 255.255.255.224

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
```

☐ Top

Physical **Config** CLI Attributes

GLOBAL	Serial0/3/0	
Settings	Port Status <input checked="" type="checkbox"/> On	
Algorithm Settings	Duplex <input type="radio"/> Full Duplex	
ROUTING	Clock Rate	2000000
Static	IP Configuration	
RIP	IPv4 Address	192.168.1.193
SWITCHING	Subnet Mask	255.255.255.252
VLAN Database	Tx Ring Limit	
INTERFACE	10	
FastEthernet0/0		
FastEthernet0/1		
Serial0/3/0		
Serial0/3/1		

Equivalent IOS Commands

```
Router(config)#interface Serial0/3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#
```

☐ Top

Physical **Config** CLI Attributes**GLOBAL**

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

Serial0/3/1

Port Status ☒ OnDuplex ☐ Full Duplex

Clock Rate 2000000

IP Configuration

IPv4 Address 192.168.1.202

Subnet Mask 255.255.255.252

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/1
Router(config-if)#
```

☐ Top

Pemasaran+Keuangan

PhysicalConfigCLIAttributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

Static Routes

Network

Mask

Next Hop

Add

Network Address

192.168.1.160/27 via 192.168.1.201

192.168.1.128/27 via 192.168.1.201

192.168.1.0/27 via 192.168.1.194

192.168.1.32/27 via 192.168.1.194

Remove

Equivalent IOS Commands

Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/1
Router(config-if)#
Router(config-if)#exit
Router(config)#
Router(config)#
Router(config)#

☐ Top

Router SDM & IT

SDM+IT

Physical

Config

CLI

Attributes

MODULES

NM-1E

NM-1E2W

NM-1FE-FX

NM-1FE-TX

NM-1FE2W

NM-2E2W

NM-2FE2W

NM-2W

NM-4A/S

NM-4E

NM-8A/S

NM-8AM

NM-Cover

NM-ESW-161


HWIC-1GE-SFP

Physical Device View


Zoom In

Original Size


Zoom Out




Customize Icon in Physical View



Customize Icon in Logical View



The NM-1E features a single Ethernet port that can connect a LAN backbone which can also support either six PRI connections to aggregate ISDN lines, or 24 synchronous/asynchronous ports.



☐ Top

SDM+IT

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

Global Settings

Display Name

SDM+IT

Hostname

Router

NVRAM

Erase

Save

Startup Config

Load...

Export...

Running Config

Export...

Merge...

Equivalent IOS Commands

☐ Top

FastEthernet0/0	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
MAC Address	0040.0BD6.2701
IP Configuration	
IPv4 Address	192.168.1.161
Subnet Mask	255.255.255.224
Tx Ring Limit	10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

Physical **Config** CLI Attributes**GLOBAL**

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

FastEthernet0/1Port Status ☒ OnBandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ AutoDuplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0040.0BD6.2702

IP Configuration

IPv4 Address 192.168.1.129

Subnet Mask 255.255.255.224

Tx Ring Limit 10

Equivalent IOS Commands

```
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
```

☐ Top

Serial0/3/0	
Port Status	<input checked="" type="checkbox"/> On
Duplex	<input type="radio"/> Full Duplex
Clock Rate	2000000
IP Configuration	
IPv4 Address	192.168.1.201
Subnet Mask	255.255.255.252
Tx Ring Limit	10

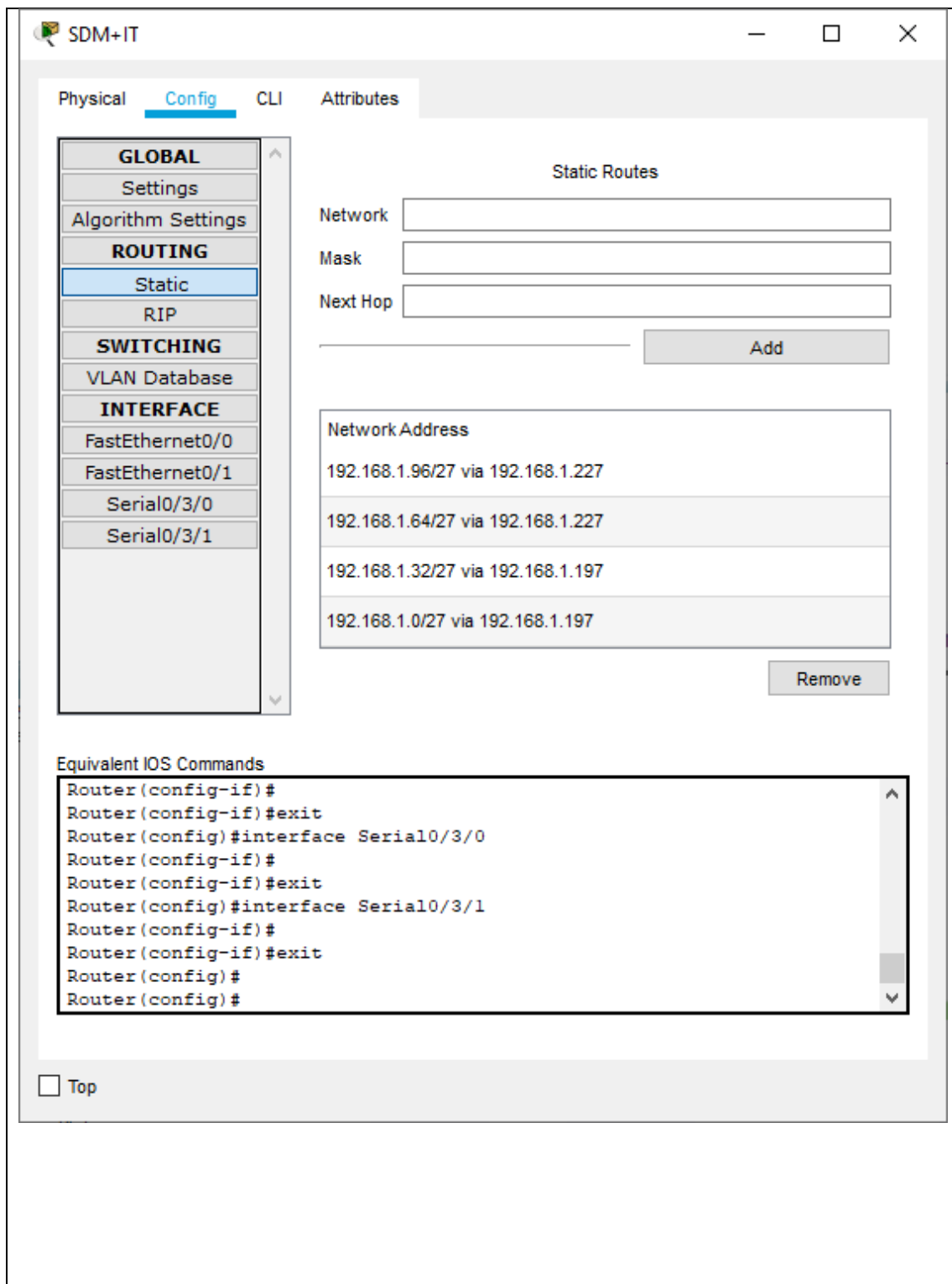
Equivalent IOS Commands

```
Router(config)#  
Router(config)#interface FastEthernet0/0  
Router(config-if)#  
Router(config-if)#exit  
Router(config)#interface FastEthernet0/1  
Router(config-if)#  
Router(config-if)#exit  
Router(config)#interface Serial0/3/0  
Router(config-if)#
```

Serial0/3/1	
Port Status	<input checked="" type="checkbox"/> On
Duplex	<input type="radio"/> Full Duplex
Clock Rate	2000000
IP Configuration	
IPv4 Address	192.168.1.198
Subnet Mask	255.255.255.252
Tx Ring Limit	10

Equivalent IOS Commands

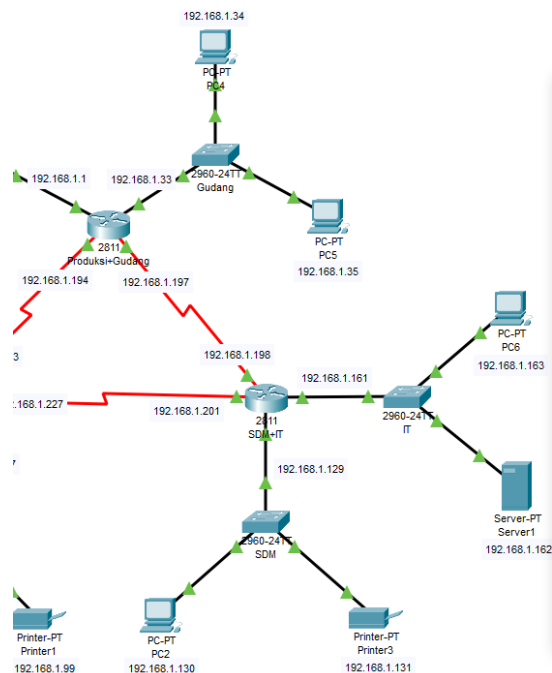
```
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/1
Router(config-if)#
```



b. Apakah anda menggunakan konfigurasi routing protocol pada router-router tersebut? Jika Ya, jelaskan disertai dengan screenshot!

Ya, pada ketiga router, saya menggunakan konfigurasi untuk routing switch sehingga dapat diakses antar subnet. Hal ini saya lakukan agar setiap switch dapat diakses melalui semua router. Untuk melakukan hal tersebut, saya membuat subnet pada network antar router dengan mask 255.255.255.252 karena jaringan antar router membutuhkan 3 subnet sedangkan yang tersisa

pada subnet dengan mask 255.255.255.224 hanyalah 2 subnet. Kemudian, saya melakukan routing melalui server tersebut dengan cara mengakses menu static routing dan mengisi form tersebut



Produksi+Gudang

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

Static Routes

Network <IP Network>

Mask <Mask Network>

Next Hop <IP Router (receiving side)>

Add

Network Address

192.168.1.160/27 via 192.168.1.198

192.168.1.128/27 via 192.168.1.198

192.168.1.64/27 via 192.168.1.193

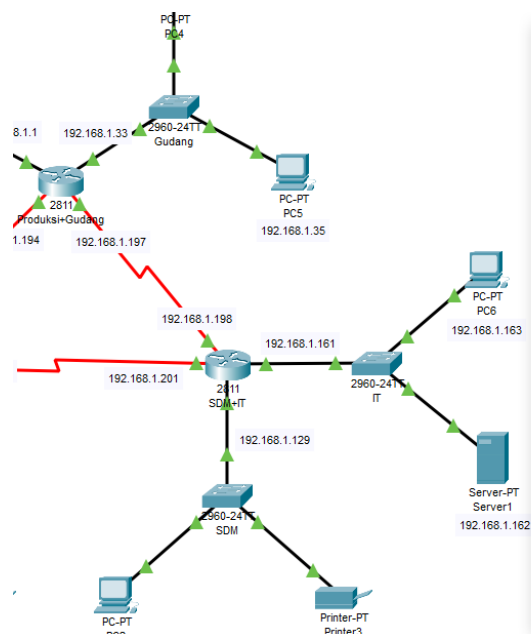
Remove

Equivalent IOS Commands

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

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Misal, ingin dilakukan routing dari router Produksi+Gudang ke IT network, maka pengisian seperti berikut:



Produksi+Gudang

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/3/0

Serial0/3/1

Static Routes

Network 192.168.1.160

Mask 255.255.255.224

Next Hop 192.168.1.198

Add

Network Address

192.168.1.160/27 via 192.168.1.198

192.168.1.128/27 via 192.168.1.198

192.168.1.64/27 via 192.168.1.193

Remove

Equivalent IOS Commands

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



☐ Top

Kemudian klik add maka network akan masuk ke dalam tabel "Network Address" yang terdapat di bawah form yang menandakan network sudah terhubung.



4. [Uji Coba Konektivitas]

a-c. Uji Coba Konektivitas



Source=PC3, Destination=Printer0: **Successful**

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC3	Printer0	ICMP		0.000	N	0	(edit)	(delete)



Source=PC3, Destination=PC4: **Successful**

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC3	PC4	ICMP		0.000	N	0	(edit)	(delete)



Source=PC3, Destination=PC0: **Successful**

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC3	PC0	ICMP		0.000	N	0	(edit)	(delete)



Source=PC3, Destination=PC1: **Successful**

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC3	PC1	ICMP		0.000	N	0	(edit)	(delete)

Source=PC3, Destination=Printer3: **Successful**

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC3	Printer3	ICMP		0.000	N	0	(edit)	(delete)

Source=PC3, Destination=Server1: **Successful**

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC3	Server1	ICMP		0.000	N	0	(edit)	(delete)

d. Kesimpulan anda berdasarkan hasil uji coba konektivitas

Uji coba konektivitas dilakukan dari PC3 kepada setiap network termasuk network dimana PC3 berada. Hal ini dilakukan untuk menguji apakah PC3 memiliki koneksi terhadap setiap network; yaitu network Produksi, Gudang, Pemasaran, Keuangan, IT, dan SDM. Dengan adanya koneksi yang sukses, hal tersebut menandakan bahwa terdapat koneksi antara network produksi dan setiap network lainnya