Nama   : **M.Mahbubbillah**

NIM   : **222011569**

No. Absen   : **16**

Kelas   : **3SI1**

Mata Kuliah : Sistem Jaringan Komunikasi dan Data

<u>Tugas Pertemuan 9</u>

<div align="center">

<u>KOMPUTER SEBAGAI DHCP SERVER</u>
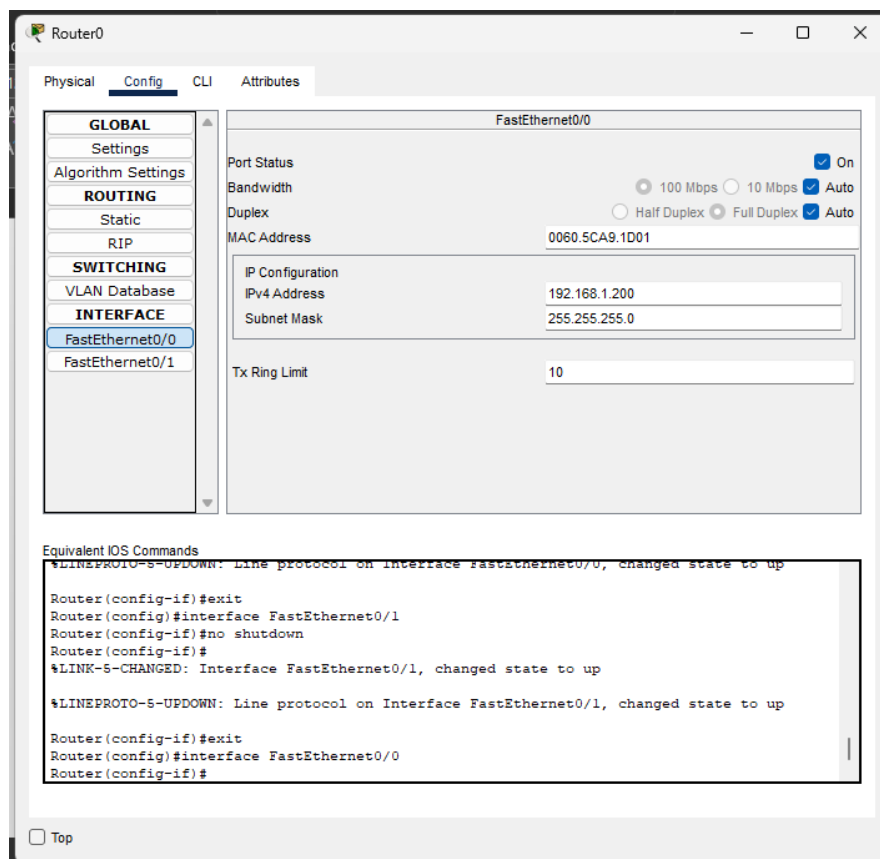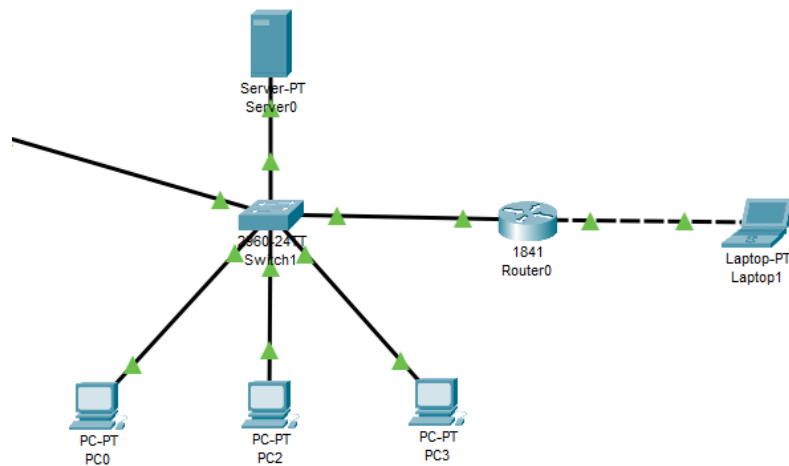
</div>

Router0

Physical | Config | CLI | Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1

FastEthernet0/1

Port Status	☑ On
Bandwidth	○ 100 Mbps ○ 10 Mbps ☑ Auto
Duplex	○ Half Duplex ○ Full Duplex ☑ Auto
MAC Address	0060.5CA9.1D02

IP Configuration
IPv4 Address: 10.0.0.200
Subnet Mask: 255.255.255.0

Tx Ring Limit: 10

Equivalent IOS Commands

```
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
```

☐ Top

Router0

Physical | Config | CLI | Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1

Static Routes

Network: 10.0.0.0
Mask: 255.255.255.0
Next Hop: 192.168.1.254

[Add]

Network Address
10.0.0.0/24 via 192.168.1.254

[Remove]

Equivalent IOS Commands

```
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.1.200 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 10.0.0.200 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#
Router(config)#ip route 10.0.0.0 255.255.255.0 192.168.1.254
Router(config)#
```

☐ Top

```
C:\>ipconfig

FastEthernet0 Connection:(default port)

    Connection-specific DNS Suffix..:
    Link-local IPv6 Address.........: FE80::201:42FF:FE27:B87B
    IPv6 Address.....................: ::
    IPv4 Address.....................: 192.168.1.1
    Subnet Mask......................: 255.255.255.0
    Default Gateway..................: ::
                                       192.168.1.200

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 10.0.0.1

Pinging 10.0.0.1 with 32 bytes of data:

Request timed out.
Reply from 10.0.0.1: bytes=32 time<1ms TTL=127
Reply from 10.0.0.1: bytes=32 time<1ms TTL=127
Reply from 10.0.0.1: bytes=32 time<1ms TTL=127

Ping statistics for 10.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

```
C:\>ipconfig

FastEthernet0 Connection:(default port)

    Connection-specific DNS Suffix..:
    Link-local IPv6 Address.........: FE80::260:2FFF:FE11:ADDD
    IPv6 Address.....................: ::
    IPv4 Address.....................: 10.0.0.1
    Subnet Mask......................: 255.255.255.0
    Default Gateway..................: ::
                                       10.0.0.200

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 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=127
Reply from 192.168.1.1: bytes=32 time<1ms TTL=127
Reply from 192.168.1.1: bytes=32 time<1ms TTL=127
Reply from 192.168.1.1: bytes=32 time<1ms TTL=127

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

C:\>
```
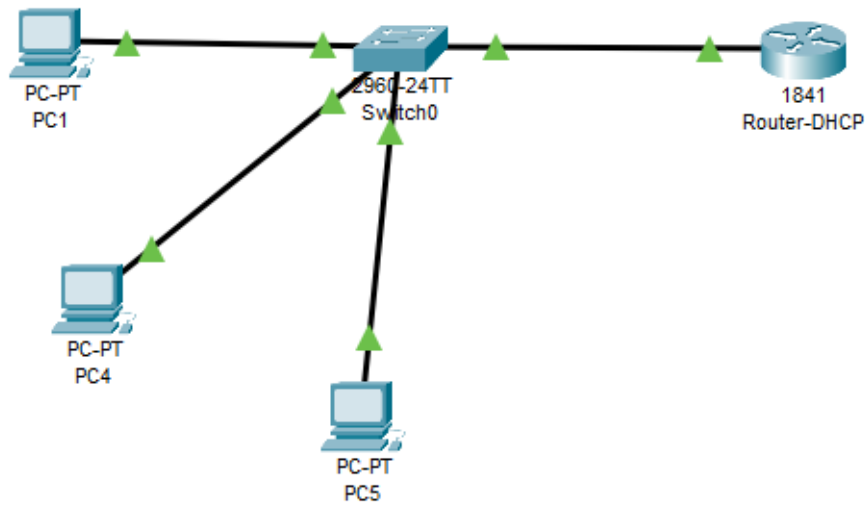
ROUTER SEBAGAI DHCP SERVER

Router-DHCP

Physical | Config | CLI | Attributes

FastEthernet0/0

Port Status		☑ On
Bandwidth	○ 100 Mbps ○ 10 Mbps	☑ Auto
Duplex	○ Half Duplex ○ Full Duplex	☑ Auto
MAC Address	0090.2B7E.0E01	

IP Configuration
IPv4 Address: 172.16.0.1
Subnet Mask: 255.255.255.0

Tx Ring Limit: 10

Equivalent IOS Commands

```
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 172.16.0.1 255.255.0.0
Router(config-if)#ip address 172.16.0.1 255.255.255.0
Router(config-if)#
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
```

☐ Top

Router-DHCP

Physical | Config | CLI | Attributes

IOS Command Line Interface

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 172.16.0.1 255.255.0.0
Router(config-if)#ip address 172.16.0.1 255.255.255.0
Router(config-if)#
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 172.16.0.1 255.255.255.0
Router(config-if)#shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to administratively down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to down
no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ip address 172.16.0.1 255.255.255.0
Router(config-if)#ip address 172.16.0.1 255.255.255.0
Router(config-if)#
```

Copy | Paste

☐ Top

```
ip address 172.16.0.1 255.255.255.0
Router(config-if)#ip address 172.16.0.1 255.255.255.0
Router(config-if)#EXIT
Router(config)#ip dhcp pool network172.16
Router(dhcp-config)#network 172.16.0.0 255.255.255.0
Router(dhcp-config)#default-router 172.16.0.1
Router(dhcp-config)#EXIT
Router(config)#ip route 0.0.0.0 0.0.0.0 Se0/0/0
%Invalid interface type and number
Router(config)#
```


PC1 — IP Configuration window (Desktop tab). DHCP selected. IPv4 Address 172.16.0.2, Subnet Mask 255.255.255.0, Default Gateway 172.16.0.1, DNS Server 0.0.0.0. DHCP request successful. IPv6 Static, Link Local Address FE80::201:97FF:FEA9:BE10.

```
C:\>ipconfig

FastEthernet0 Connection:(default port)

    Connection-specific DNS Suffix..:
    Link-local IPv6 Address.........: FE80::201:97FF:FEA9:BE10
    IPv6 Address....................: ::
    IPv4 Address....................: 172.16.0.2
    Subnet Mask.....................: 255.255.255.0
    Default Gateway.................: ::
                                      172.16.0.1

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 172.16.0.1

Pinging 172.16.0.1 with 32 bytes of data:

Reply from 172.16.0.1: bytes=32 time<1ms TTL=255
Reply from 172.16.0.1: bytes=32 time<1ms TTL=255
Reply from 172.16.0.1: bytes=32 time<1ms TTL=255
Reply from 172.16.0.1: bytes=32 time<1ms TTL=255

Ping statistics for 172.16.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```
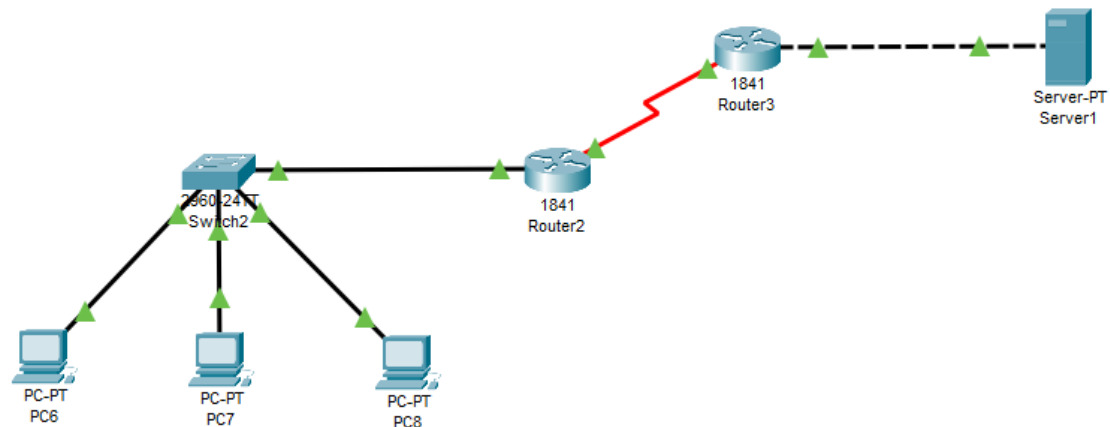
ROUTER SEBAGAI DHCP SERVER DAN NAT SERVER

Router2

Physical   Config   CLI   Attributes

IOS Command Line Interface

```
Press RETURN to get started!


Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#conf t
%Invalid hex value
Router(config)#conf
% Incomplete command.
Router(config)#interface fa0/0
Router(config-if)#ip address 172.16.0.1 255.255.255.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
ip dhcp pool network172.16
Router(dhcp-config)#network 172.16.0.1 255.255.255.0
Router(dhcp-config)#default-router 172.16.0.1
Router(dhcp-config)#network 172.16.0.0
% Incomplete command.
Router(dhcp-config)#network 172.16.0.0 255.255.255.0
Router(dhcp-config)#default-router 172.16.0.1
Router(dhcp-config)#exit
Router(config)#ip router 0.0.0.0 0.0.0.0 Se0/0/0
                         ^
% Invalid input detected at '^' marker.

Router(config)#ip route 0.0.0.0 0.0.0.0 Se0/0/0
Router(config)#
```

Copy   Paste

☐ Top

Router3

Physical Config **CLI** Attributes

IOS Command Line Interface

```
If you require further assistance please contact us by sending email to
export@cisco.com.


Cisco 1841 (revision 5.0) with 114688K/16384K bytes of memory.
Processor board ID FTX0947Z18E
M860 processor: part number 0, mask 49
2 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
191K bytes of NVRAM.
63488K bytes of ATA CompactFlash (Read/Write)
Cisco IOS Software, 1841 Software (C1841-ADVIPSERVICESK9-M), Version 12.4(15)T1, RELEASE
SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Wed 18-Jul-07 04:52 by pt_team


        --- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: n


Press RETURN to get started!



Router>enable
Router#conf
Configuring from terminal, memory, or network [terminal]? y
?Must be "terminal", "memory" or "network"
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 0.0.0.0 0.0.0.0 Se0/0/0
Router(config)#
```

Copy   Paste

☐ Top

Router3

Physical | Config | CLI | Attributes

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/0/0
Serial0/0/1

FastEthernet0/0

Port Status	☐ On
Bandwidth	◉ 100 Mbps ○ 10 Mbps ☑ Auto
Duplex	◉ Half Duplex ○ Full Duplex ☑ Auto
MAC Address	0030.F2BD.A101

IP Configuration

IPv4 Address	10.0.0.254
Subnet Mask	255.255.0.0

Tx Ring Limit	10

Equivalent IOS Commands

```
Router#conf
Configuring from terminal, memory, or network [terminal]? y
?Must be "terminal", "memory" or "network"
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 0.0.0.0 0.0.0.0 Se0/0/0
Router(config)#Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.0.0.254 255.0.0.0
Router(config-if)#ip address 10.0.0.254 255.255.0.0
Router(config-if)#
```

☐ Top

Router2

Physical | Config | CLI | Attributes

GLOBAL
- Settings
- Algorithm Settings

ROUTING
- Static
- RIP

SWITCHING
- VLAN Database

INTERFACE
- FastEthernet0/0
- FastEthernet0/1
- Serial0/0/0
- Serial0/0/1

Serial0/0/0

Port Status	☐ On
Duplex	○ Full Duplex
Clock Rate	2000000 ⌄

IP Configuration

IPv4 Address	27.28.29.30
Subnet Mask	255.255.0.0

Tx Ring Limit	10

Equivalent IOS Commands

```
% Invalid input detected at '^' marker.

Router(config)#ip route 0.0.0.0 0.0.0.0 Se0/0/0
Router(config)#
Router(config)#
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/0/0
Router(config-if)#ip address 27.28.29.30 255.0.0.0
Router(config-if)#ip address 27.28.29.30 255.255.0.0
Router(config-if)#
```

☐ Top

Router3 — □ ×

GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
Serial0/0/0
Serial0/0/1

Serial0/0/0

Port Status   ☐ On

Duplex   ⦿ Full Duplex

Clock Rate   2000000   ⌄

IP Configuration	
IPv4 Address	27.28.29.31
Subnet Mask	255.255.0.0

Tx Ring Limit   10

Equivalent IOS Commands

```
Router(config)#ip route 0.0.0.0 0.0.0.0 Se0/0/0
Router(config)#Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.0.0.254 255.0.0.0
Router(config-if)#ip address 10.0.0.254 255.255.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/0/0
Router(config-if)#ip address 27.28.29.31 255.0.0.0
Router(config-if)#ip address 27.28.29.31 255.255.0.0
Router(config-if)#
```

☐ Top

PC6 — □ ✕

Command Prompt   X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ipconfig

FastEthernet0 Connection:(default port)

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.........: FE80::260:2FFF:FE81:45A
   IPv6 Address....................: ::
   IPv4 Address....................: 0.0.0.0
   Subnet Mask.....................: 0.0.0.0
   Default Gateway.................: ::
                                     0.0.0.0

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 10.0.0.13

Pinging 10.0.0.13 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.0.0.13:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

☐ Top