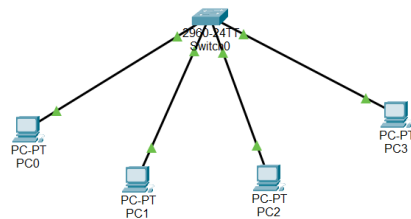Nama : M Rayhan Naufal Putra

NIM   : 09010282327037

Kelas   : MI 3A

LAPORAN PRAKTIKUM JARKOM

- Switch

Hasil:

```
SWITCH#show vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                Gig0/1, Gig0/2
2    humas                            active    Fa0/1
3    Keuangan                         active    Fa0/2
4    IT                               active    Fa0/3
5    Pimpinan                         active    Fa0/4
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
2    enet  100002     1500  -      -      -        -    -        0      0
 --More--
```
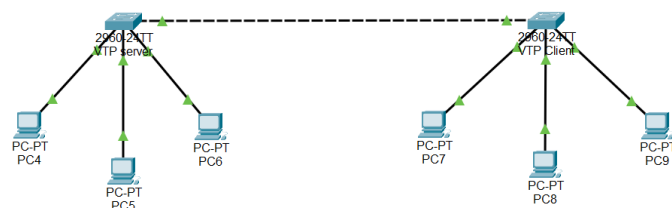
- VTP Server dan VTP client

- Server

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname "VTP Server"
% Spaces are not allowed in hostname
Switch(config)#
Switch(config)#hostname Swithc_VTP_Server
Swithc_VTP_Server(config)#Hostname 09010282327037-VTP_Server
09010282327037-VTP_Server(config)#banner motd #S-VTP-SERVER#
09010282327037-VTP_Server(config)#line console 0
09010282327037-VTP_Server(config-line)#password cisco
09010282327037-VTP_Server(config-line)#login
09010282327037-VTP_Server(config-line)#exit
09010282327037-VTP_Server(config)#line vty 0 4
09010282327037-VTP_Server(config-line)#password cisco
09010282327037-VTP_Server(config-line)#login
09010282327037-VTP_Server(config-line)#exit
09010282327037-VTP_Server(config)#enable password cisco
09010282327037-VTP_Server(config)#enable secret cisco
The enable secret you have chosen is the same as your enable password.
This is not recommended.  Re-enter the enable secret.
09010282327037-VTP_Server(config)#vlan 2
09010282327037-VTP_Server(config-vlan)#name Humas
09010282327037-VTP_Server(config-vlan)#exit
09010282327037-VTP_Server(config)#vlan 3
09010282327037-VTP_Server(config-vlan)#name Keuangan
09010282327037-VTP_Server(config-vlan)#exit
09010282327037-VTP_Server(config)#vlan 4
09010282327037-VTP_Server(config-vlan)#name IT
09010282327037-VTP_Server(config-vlan)#exit
09010282327037-VTP_Server(config)#internet fastEthernet 0/1
```

```
09010282327037-VTP_Server(config)#interface fastEthernet 0/1
09010282327037-VTP_Server(config-if)#switchport mode access
09010282327037-VTP_Server(config-if)#switchport access vlan 2
09010282327037-VTP_Server(config-if)#exit
09010282327037-VTP_Server(config)#interface fastEthernet 0/2
09010282327037-VTP_Server(config-if)#switchport mode access
09010282327037-VTP_Server(config-if)#switchport access vlan 3
09010282327037-VTP_Server(config-if)#exit
09010282327037-VTP_Server(config)#interface fastEthernet 0/3
09010282327037-VTP_Server(config-if)#switchport mode access
09010282327037-VTP_Server(config-if)#switchport access vlan 4
09010282327037-VTP_Server(config-if)#exit
09010282327037-VTP_Server(config)#vtp version 2
09010282327037-VTP_Server(config)#vtp mode server
Device mode already VTP SERVER.
09010282327037-VTP_Server(config)#vtp domain jarkom.ilkom.unsri.ac.id
Changing VTP domain name from NULL to jarkom.ilkom.unsri.ac.id
09010282327037-VTP_Server(config)#vtp password jarkom
Setting device VLAN database password to jarkom
09010282327037-VTP_Server(config)#interface fastEthernet 0/24
09010282327037-VTP_Server(config-if)#switchport mode trunk

09010282327037-VTP_Server(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/24, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/24, changed state to up

09010282327037-VTP_Server(config-if)#exit
09010282327037-VTP_Server(config)#exit
09010282327037-VTP_Server#
%SYS-5-CONFIG_I: Configured from console by console

09010282327037-VTP_Server#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
09010282327037-VTP_Server#
```

Hasil:

```
09010282327037-VTP_Server#show vtp status
VTP Version capable             : 1 to 2
VTP version running             : 2
VTP Domain Name                 : jarkom.ilkom.unsri.ac.id
VTP Pruning Mode                : Disabled
VTP Traps Generation            : Disabled
Device ID                       : 0010.1178.9100
Configuration last modified by 0.0.0.0 at 3-1-93 00:05:07
Local updater ID is 0.0.0.0 (no valid interface found)

Feature VLAN :
--------------
VTP Operating Mode              : Server
Maximum VLANs supported locally : 255
Number of existing VLANs        : 8
Configuration Revision          : 0
MD5 digest                      : 0x71 0xEC 0x8A 0x5F 0x63 0x0B 0xAB 0x5B
                                  0x16 0x61 0x0A 0xAE 0x20 0xF5 0x2C 0xEE
```

- Client

```
Switch_VTP_Client>enable
Switch_VTP_Client#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch_VTP_Client(config)#Hostname 09010282327037-VTP_Client
09010282327037-VTP_Client(config)#banner motd #S-VTP-CLIENT#
09010282327037-VTP_Client(config)#line console 0
09010282327037-VTP_Client(config-line)#password cisco
09010282327037-VTP_Client(config-line)#login
09010282327037-VTP_Client(config-line)#exit
09010282327037-VTP_Client(config)#line vty 0 4
09010282327037-VTP_Client(config-line)#password cisco
09010282327037-VTP_Client(config-line)#login
09010282327037-VTP_Client(config-line)#exit
09010282327037-VTP_Client(config)#enable password cisco
09010282327037-VTP_Client(config)#enable secret cisco
The enable secret you have chosen is the same as your enable password.
This is not recommended.  Re-enter the enable secret.
09010282327037-VTP_Client(config)#vlan 2
09010282327037-VTP_Client(config-vlan)#name Humas
09010282327037-VTP_Client(config-vlan)#exit
09010282327037-VTP_Client(config)#vlan 3
09010282327037-VTP_Client(config-vlan)#name Keuangan
09010282327037-VTP_Client(config-vlan)#exit
09010282327037-VTP_Client(config)#vlan 4
09010282327037-VTP_Client(config-vlan)#name IT
09010282327037-VTP_Client(config-vlan)#exit
09010282327037-VTP_Client(config)#interface fastEthernet 0/1
09010282327037-VTP_Client(config-if)#swicthport mode access

09010282327037-VTP_Client(config-if)#switchport mode access
09010282327037-VTP_Client(config-if)#switchport access vlan 2
09010282327037-VTP_Client(config-if)#exit
09010282327037-VTP_Client(config)#interface fastEthernet 0/2
09010282327037-VTP_Client(config-if)#switchport mode access
09010282327037-VTP_Client(config-if)#switchport access vlan 3
09010282327037-VTP_Client(config-if)#exit
09010282327037-VTP_Client(config)#interface fastEthernet 0/3
09010282327037-VTP_Client(config-if)#switchport mode access
09010282327037-VTP_Client(config-if)#switchport access vlan 4
09010282327037-VTP_Client(config-if)#exit
09010282327037-VTP_Client(config)#vtp version 2
09010282327037-VTP_Client(config)#vtp mode client
Setting device to VTP CLIENT mode.
09010282327037-VTP_Client(config)#vtp domain jarkom.ilkom.unsri.ac.id
Domain name already set to jarkom.ilkom.unsri.ac.id.
09010282327037-VTP_Client(config)#vtp password jarkom
Setting device VLAN database password to jarkom
09010282327037-VTP_Client(config)#interface fastEthernet 0/24
09010282327037-VTP_Client(config-if)#switchport mode trunk
09010282327037-VTP_Client(config-if)#exit
09010282327037-VTP_Client(config)#exit
09010282327037-VTP_Client#
%SYS-5-CONFIG_I: Configured from console by console

09010282327037-VTP_Client#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

**Hasil:**

```
09010282327037-VTP_Client#show vtp status
VTP Version capable            : 1 to 2
VTP version running            : 2
VTP Domain Name                : jarkom.ilkom.unsri.ac.id
VTP Pruning Mode               : Disabled
VTP Traps Generation           : Disabled
Device ID                      : 0001.C90B.E700
Configuration last modified by 0.0.0.0 at 3-1-93 00:35:15

Feature VLAN :
--------------
VTP Operating Mode             : Client
Maximum VLANs supported locally : 255
Number of existing VLANs       : 8
Configuration Revision         : 7
MD5 digest                     : 0x3F 0xA6 0x1B 0x66 0x9B 0x09 0x69 0x9F
                                 0xB4 0x46 0x67 0x4B 0xCC 0x46 0x27 0x83
```

- **NAT**
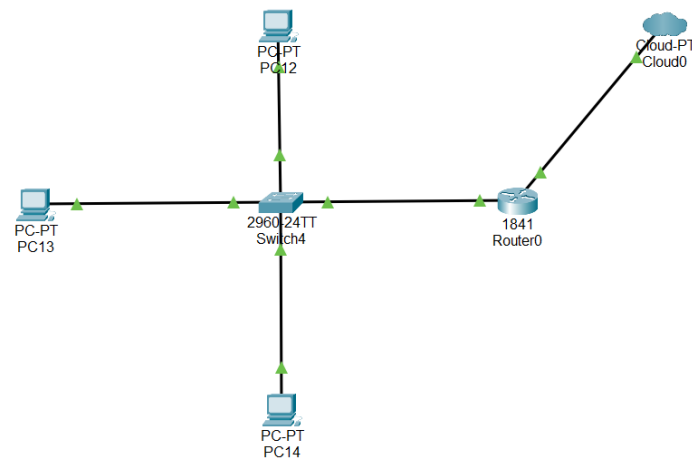
-   Switch configuration:

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname Switch_Distribusi
Switch_Distribusi(config)#banner motd #Selamat Datang di SWITCH_DISTRIBUSI #
Switch_Distribusi(config)#line console 0
Switch_Distribusi(config-line)#password cisco
Switch_Distribusi(config-line)#login
Switch_Distribusi(config-line)#exit
Switch_Distribusi(config)#line vty 0 4
Switch_Distribusi(config-line)#password cisco
Switch_Distribusi(config-line)#login
Switch_Distribusi(config-line)#exit
```

```
Switch_Distribusi(config)#enable password cisco
Switch_Distribusi(config)#enable secret cisco
The enable secret you have chosen is the same as your enable password.
This is not recommended.  Re-enter the enable secret.
Switch_Distribusi(config)#vlan 2
Switch_Distribusi(config-vlan)#name Humas
Switch_Distribusi(config-vlan)#exit
Switch_Distribusi(config)#vlan 3
Switch_Distribusi(config-vlan)#name Keuangan
Switch_Distribusi(config-vlan)#exit
Switch_Distribusi(config)#vlan 4
Switch_Distribusi(config-vlan)#name IT
Switch_Distribusi(config-vlan)#exit
Switch_Distribusi(config)#interface fastEthernet 0/1
Switch_Distribusi(config-if)#switchport mode access
Switch_Distribusi(config-if)#switchport access vlan 2
Switch_Distribusi(config-if)#exit
Switch_Distribusi(config)#interface fastEthernet 0/2
Switch_Distribusi(config-if)#switchport mode access
Switch_Distribusi(config-if)#switchport access vlan 3
Switch_Distribusi(config-if)#exit
Switch_Distribusi(config)#interface fastEthernet 0/3
Switch_Distribusi(config-if)#switchport mode access
Switch_Distribusi(config-if)#switchport access vlan 4
Switch_Distribusi(config-if)#exit
Switch_Distribusi(config)#interface fastEthernet 0/24
Switch_Distribusi(config-if)#switchport mode trunk

Switch_Distribusi(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/24, changed state
to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/24, changed state
to up

Switch_Distribusi(config-if)#exit
Switch_Distribusi(config)#exit
Switch_Distribusi#
%SYS-5-CONFIG_I: Configured from console by console

Switch_Distribusi#copy run start
```

Hasil:

```
Switch_Distribusi#show vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/4, Fa0/5, Fa0/6, Fa0/7
                                                Fa0/8, Fa0/9, Fa0/10, Fa0/11
                                                Fa0/12, Fa0/13, Fa0/14, Fa0/15
                                                Fa0/16, Fa0/17, Fa0/18, Fa0/19
                                                Fa0/20, Fa0/21, Fa0/22, Fa0/23
                                                Gig0/1, Gig0/2
2    Humas                            active    Fa0/1
3    Keuangan                         active    Fa0/2
4    IT                               active    Fa0/3
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
2    enet  100002     1500  -      -      -        -    -        0      0
3    enet  100003     1500  -      -      -        -    -        0      0
 --More--
```

VLAN	Nama	Status	Port
Vlan 2	Humas	Active	Fa0/1
Vlan 3	Keuangan	Active	Fa0/2
Vlan 4	IT	Active	Fa0/3

- Router configuration:

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname Router_I
Router_I(config)#banner motd #Selamat Datang di Router I#
Router_I(config)#line console 0
Router_I(config-line)#password cisco
Router_I(config-line)#login
Router_I(config-line)#exit
Router_I(config)#enable password cisco
Router_I(config)#enable secret cisco
The enable secret you have chosen is the same as your enable password.
This is not recommended.  Re-enter the enable secret.
Router_I(config)#line vty 0 4
Router_I(config-line)#password cisco
Router_I(config-line)#login
Router_I(config-line)#exit
Router_I(config)#interface fastEthernet 0/0
Router_I(config-if)#ip address 10.100.112.10 255.255.255.0
Router_I(config-if)#ip nat inside
Router_I(config-if)#no shutdown
Router_I(config-if)#exit
Router_I(config)#interface fastEthernet 0/1
Router_I(config-if)#no ip address
Router_I(config-if)#no shutdown
Router_I(config-if)#exit
Router_I(config)#interface fastEthernet 0/1.1
Router_I(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/1.1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1.1, changed state to up

Router_I(config-subif)#encapsulation dot1Q 2
Router_I(config-subif)#ip address 192.168.200.1 255.255.255.0
Router_I(config-subif)#ip nat outside
Router_I(config-subif)#exit
Router_I(config)#interface fastEthernet 0/1.2
Router_I(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/1.2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1.2, changed state to up

Router_I(config-subif)#encapsulation dot1Q 3

Router_I(config-subif)#encapsulation dot1Q 3
Router_I(config-subif)#ip address 192.168.100.1 255.255.255.0
Router_I(config-subif)#ip nat outside
Router_I(config-subif)#exit
Router_I(config)#interface fastEthernet 0/1.3
Router_I(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/1.3, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1.3, changed state to up

Router_I(config-subif)#encapsulation dot1Q 4
Router_I(config-subif)#ip address 192.168.150.1 255.255.255.0
Router_I(config-subif)#ip nat outside
Router_I(config-subif)#exit
Router_I(config)#ip dhcp excluded 192.168.200.2 192.168.200.20
Router_I(config)#ip dhcp pool 192.168.200.0/24
Router_I(dhcp-config)#network 192.168.200.0 255.255.255.0
Router_I(dhcp-config)#default-router 192.168.200.1
Router_I(dhcp-config)#dns-server 222.124.194.11
Router_I(dhcp-config)#end
Router_I#
%SYS-5-CONFIG_I: Configured from console by console

Router_I#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router_I(config)#ip dhcp excluded 192.168.100.2 192.168.100.20
Router_I(config)#ip dhcp pool 192.168.100.0/24
Router_I(dhcp-config)#network 192.168.100.0 255.255.255.0
Router_I(dhcp-config)#default-router 192.168.100.1
Router_I(dhcp-config)#dns-server 222.124.194.11
Router_I(dhcp-config)#end
Router_I#
%SYS-5-CONFIG_I: Configured from console by console

Router_I#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router_I(config)#ip dhcp excluded 192.168.150.2 192.168.150.20
Router_I(config)#ip dhcp pool 192.168.150.0/24
Router_I(dhcp-config)#network 192.168.150.0 255.255.255.0
Router_I(dhcp-config)#default-router 192.168.150.1
Router_I(dhcp-config)#dns-server 222.124.194.11
Router_I(dhcp-config)#exit
Router_I(config)#ip nat pool konek 10.100.121.10 10.100.121.10 netmask 255.255.255.0

Router_I(config)#access-list 99 permit 192.168.200.0 0.0.0.255
Router_I(config)#access-list 99 permit 192.168.100.0 0.0.0.255
Router_I(config)#access-list 99 permit 192.168.150.0 0.0.0.255
Router_I(config)#ip nat inside source list 99 pool konek overload
```

```
Router_I(config)#ip  Route 0.0.0.0 0.0.0.0 10.100.121.1
Router_I(config)#ip name-server 222.124.194.11
Router_I(config)#ip name-server 222.124.194.18
Router_I(config)#ip domain-name unsri.ac.id
Router_I(config)#exit
Router_I#
%SYS-5-CONFIG_I: Configured from console by console

Router_I#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

Hasil:

```
Router_I#sh ip dhcp binding
IP address       Client-ID/             Lease expiration       Type
                 Hardware address
192.168.200.2    0000.0C22.A8D3         --                     Automatic
192.168.100.2    0000.0C9E.2256         --                     Automatic
192.168.150.2    00D0.BC89.C132         --                     Automatic
```

No.	IP address	MAC address	Lease expiration	Type
1.	192.168.200.2	0000.0c22.A8D3	--	Automatic
2.	192.168.100.2	0000.0c9E.2256	--	Automatic
3.	192.168.150.2	00D0.BC89.C132	--	Automatic

Daftar IP client

No.	Client	IP address	Netmask	Gateway	DNA
1.	PC1	192.168.200.2	255.255.255.0	192.168.200.1	222.124.194.11
2.	PC2	192.168.100.2	255.255.255.0	192.168.100.1	222.124.194.11
3.	PC3	192.168.150.2	255.255.255.0	192.168.150.1	222.124.194.11

Tes Koneksi Ke sebuah website (catat hasil yang anda dapat)

No.	Sumber	IP address	Hasil Ya/Tidak	Website	Hasil Ya/Tidak
1.	PC1	192.168.200.2	Ya	www.google.com	Tidak
2.	PC2	192.168.100.2	Ya	www.google.com	Tidak
3.	PC3	192.168.150.2	Ya	www.google.com	Tidak