MODUL 10

KONFIGURASI VTP (VLAN TRUNKING PROTOCOL)

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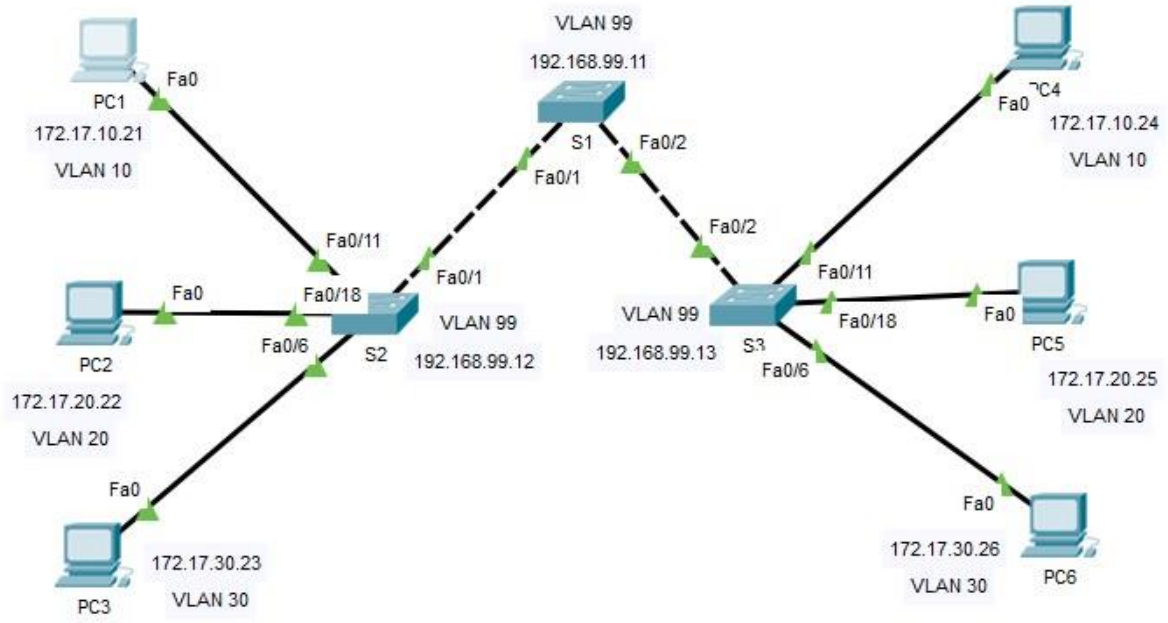

Daftar IP Address untuk semua perangkat

Device (Hostname)	Interface	IP Address	Subnet mask	Default Gateway
S1	VLAN 99	172.17.99.11	255.255.255.0	N/A
S2	VLAN 99	172.17.99.11	255.255.255.0	N/A
S3	NIC	172.17.99.11	255.255.255.0	N/A
PC1	NIC	172.17.10.21	255.255.255.0	172.17.10.1
PC2	NIC	172.17.20.22	255.255.255.0	172.17.20.1
PC3	NIC	172.17.30.23	255.255.255.0	172.17.30.1
PC4	NIC	172.17.10.24	255.255.255.0	172.17.10.1
PC5	NIC	172.17.20.25	255.255.255.0	172.17.20.1
PC6	NIC	172.17.30.26	255.255.255.0	172.17.30.1

Konfigurasi port pada switch

Port	Assigment	Network
Fa0/1-0/5	802.q Trunks (Native VLAN 99)	172.17.99.0/24
Fa0/6-0/10	VLAN 30 – Guest (Default)	172.17.99.0/24
Fa0/11-0/17	VLAN 10 – Faculty Staff	172.17.99.0/24
Fa0/18-0/24	VLAN 20 - Students	172.17.99.0/24

10.4.1

Persiapan Network

a. Mendisable semua port pada switch

- Switch 1 (S1)

```
Switch>en
Switch#conf term
Enter configuration commands, one
Switch(config)#hostname S1
S1(config)#int r
S1(config)#int range fa0/1-24
S1(config-if-range)#shutdown

S1(config-if-range)#int range gi0/1-2
S1(config-if-range)#shutdown
```

- Switch 2 (S2)

```
S2(config)#interface range fa0/1-24
S2(config-if-range)#shutdown

S2(config-if-range)#interface range gi0/1-2
S2(config-if-range)#shutdown
```

- Switch 3 (S3)

```
S3(config)#int range fa0/1-24
S3(config-if-range)#shutdown

S3(config-if-range)#int range gi0/1-2
S3(config-if-range)#shutdown
```

b. Menghidupkan port yang terpakai pada S1 dan S2

- Switch 2 (S2)

```
S2(config)#int fa0/6
S2(config-if)#switchport mode access
S2(config-if)#no shutdown

S2(config-if)#int fa0/11
S2(config-if)#switchport mode access
S2(config-if)#no shutdown

S2(config-if)#int fa0/18
S2(config-if)#switchport mode access
S2(config-if)#no shutdown
```

- Switch 3 (S3)

```
S3(config)#int fa0/6
S3(config-if)#switchport mode access
S3(config-if)#no shutdown

S3(config)#int fa0/11
S3(config-if)#switchport mode access
S3(config-if)#no shutdown

S2(config-if)#int fa0/18
S2(config-if)#switchport mode access
S2(config-if)#no shutdown
```

10.4.2

Mengkonfigurasi Switch

a. Mengkonfigurasi Switch

- Switch 1 (S1)

```
S1>en
S1#conf term
Enter configuration commands, one per l
S1(config)#enable secret class
S1(config)#no ip domain-lookup
S1(config)#line console 0
S1(config-line)#password cisco
S1(config-line)#login
S1(config-line)#line vty 0 15
S1(config-line)#password cisco
S1(config-line)#login
S1(config-line)#end
S1#
%SYS-5-CONFIG_I: Configured from consol

S1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
```

- Switch 2 (S2)

```
S2>en
S2#conf term
Enter configuration commands, one per l
S2(config)#enable secret class
S2(config)#no ip domain-lookup
S2(config)#line console 0
S2(config-line)#password cisco
S2(config-line)#login
S2(config-line)#line vty 0 15
S2(config-line)#password cisco
S2(config-line)#login
S2(config-line)#end
S2#
%SYS-5-CONFIG_I: Configured from consol

S2#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
```

- Switch 3 (S3)

```
S3#conf term
Enter configuration commands, one pe
S3(config)#enable secret class
S3(config)#no ip domain-lookup
S3(config)#line console 0
S3(config-line)#password cisco
S3(config-line)#line vty 0 15
S3(config-line)#password cisco
S3(config-line)#login
S3(config-line)#end
S3#
```

10.4.3

Mengkonfigurasi Interface Ethernet pada PC

PC1, PC2, PC3, PC4, PC5, PC6 sesuai dengan IP Address, subnet mask dan default gateway sesuai dengan tabel di atas.

10.4.4 Mengkonfigurasi VTP pada Switch

a. Memeriksa konfigurasi vtp

- Switch 1 (S1)

```
S2#show vtp status
VTP Version                     : 2
Configuration Revision          : 0
Maximum VLANs supported locally : 255
Number of existing VLANs        : 5
VTP Operating Mode              : Server
VTP Domain Name                 :
VTP Pruning Mode                : Disabled
VTP V2 Mode                     : Disabled
VTP Traps Generation            : Disabled
MD5 digest                      : 0x7D 0x5A 0xA6 0x0E 0x9A
0x3A
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00
Local updater ID is 0.0.0.0 (no valid interface found)
```

- Switch 2 (S2)

```
S2#show vtp status
VTP Version                     : 2
Configuration Revision          : 0
Maximum VLANs supported locally : 255
Number of existing VLANs        : 5
VTP Operating Mode              : Server
VTP Domain Name                 :
VTP Pruning Mode                : Disabled
VTP V2 Mode                     : Disabled
VTP Traps Generation            : Disabled
MD5 digest                      : 0x7D 0x5A 0xA6 0x0E 0x9A
0x3A
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:00
Local updater ID is 0.0.0.0 (no valid interface found)
```

- Switch 3 (S3)

```
S3#show vtp status
VTP Version                     : 2
Configuration Revision          : 0
Maximum VLANs supported locally : 255
Number of existing VLANs        : 5
VTP Operating Mode              : Server
VTP Domain Name                 :
VTP Pruning Mode                : Disabled
VTP V2 Mode                     : Disabled
VTP Traps Generation            : Disabled
MD5 digest                      : 0x7D 0x5A 0xA6 0x0E 0
0x3A
Configuration last modified by 0.0.0.0 at 0-0-00 00:00:
Local updater ID is 0.0.0.0 (no valid interface found)
```

b. Mengkonfigurasi mode operasi, nama domain, dan password vtp

Switch 1 (S1)

10.4.4

```
S1(config)#vtp mode server
Device mode already VTP SERVER.
S1(config)#vtp domain lab9
Changing VTP domain name from lab99 to lab9
```

- Switch 2 (S2)

```
S2(config)#vtp mode client
Setting device to VTP CLIENT mode.
S2(config)#vtp domain lab9
Changing VTP domain name from NULL to lab9
```

- Switch 3 (S3)

```
S3(config)#vtp mode transparent
Setting device to VTP TRANSPARENT mode.
S3(config)#vtp domain lab9
Changing VTP domain name from NULL to lab9
```

c. Mengkonfigurasi Trunking native VLAN untuk port trunking

- Switch 1 (S1)

```
S1(config)#int range fa0/1-5
S1(config-if-range)#switchport mode trunk
S1(config-if-range)#switchport trunk native vlan 99
S1(config-if-range)#no shutdown
```

- Switch 2 (S2)

```
S2(config)#int range fa0/1-5
S2(config-if-range)#switchport mode trunk
S2(config-if-range)#switchport trunk native vlan 99
S2(config-if-range)#no shutdown
```

- Switch 3 (S3)

```
S3(config)#int range fa0/1-5
S3(config-if-range)#switchport mode trunk
S3(config-if-range)#switchport trunk native vlan 99
S3(config-if-range)#no shutdown
```

d. Mengkonfigurasi security pada layer access

- Switch 2 (S2)

```
S2#conf ter
Enter configuration commands, one per line.  End with CNTI
S2(config)#int fa0/6
S2(config-if)#switchport port-security
S2(config-if)#switchport port-security maximum 1
S2(config-if)#switchport port-security mac-address sticky
S2(config-if)#int fa0/11
S2(config-if)#switchport port-security
S2(config-if)#switchport port-security maximum 1
S2(config-if)#switchport port-security mac-address sticky
S2(config-if)#int fa0/18
S2(config-if)#switchport port-security
S2(config-if)#switchport port-security maximum 1
S2(config-if)#switchport port-security mac-address sticky
```

- Switch 3 (S3)

```
S3#conf ter
Enter configuration commands, one per line.  End with CNTL/
S3(config)#int fa0/6
S3(config-if)#switchport port-security
S3(config-if)#switchport port-security maximum 1
S3(config-if)#switchport port-security mac-address sticky
S3(config-if)#int fa0/11
S3(config-if)#switchport port-security
S3(config-if)#switchport port-security maximum 1
S3(config-if)#switchport port-security mac-address sticky
S3(config-if)#int fa0/18
S3(config-if)#switchport port-security
S3(config-if)#switchport port-security maximum 1
S3(config-if)#switchport port-security mac-address sticky
```

e. Mengkonfigurasi VLAN pada switch

- Switch 1 (S1)

```
S1>en
S1#conf ter
Enter configuration commands, one p
S1(config)#vlan 99
S1(config-vlan)#name management
S1(config-vlan)#exit
S1(config)#vlan 10
S1(config-vlan)#name faculty/staff
S1(config-vlan)#exit
S1(config)#vlan 20
S1(config-vlan)#name students
S1(config-vlan)#exit
S1(config)#vlan 30
S1(config-vlan)#name guest
S1(config-vlan)#exit
```

f. Memeriksa bahwa VLAN yang telah dibuat pada S1 telah didistribusikan Switch 2 (S2)

```
S2#show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/2, Fa0/3, 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, Fa0/24, Gig0/1
                                                Gig0/2
10   faculty/staff                    active
20   students                         active
30   guest                            active
99   management                       active
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
```

- Switch 3 (S3)

```
S3#show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/2, Fa0/3, 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, Fa0/24, Gig0/1
                                                Gig0/2
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
```

Apakah VLAN pasa S1 sama dengan VLAN pada switch yang lain? Iya,
sama

Jelaskan mengapa S2 dan S3 mempunyai konfigurasi VLAN yang berbeda?
Karna S1 sebagai switch server

g. Membuat VLAN baru pada Switch S2 dan S3

- Switch 2 (S2)

```
S2(config)#vlan 88
VTP VLAN configuration not allowed when device is in CLIENT mode.
```

- Switch 3 (S3)

```
S3(config)#vlan 88
S3(config-vlan)#name test
S3(config-vlan)#
```

Mengapa VLAN pada S2 ditolak sedangkan S3 tidak?

Karna S2 modenya client sedangkan S3 modenya transparent

- Hapus VLAN 88 pada S3

```
S3(config-vlan)#ex
S3(config)#no vlan 88
```

h. Mengkonfigurasi VLAN pada S3 seperti pada S1

```
S3#conf term
Enter configuration commands, one
S3(config)#vlan 88
S3(config-vlan)#name test
S3(config-vlan)#ex
S3(config)#no vlan 88
S3(config)#vlan 99
S3(config-vlan)#name management
S3(config-vlan)#exit
S3(config)#vlan 10
S3(config-vlan)#name faculty/staff
S3(config-vlan)#exit
S3(config)#vlan 20
S3(config-vlan)#name students
S3(config-vlan)#exit
S3(config)#vlan 30
S3(config-vlan)#name guest
S3(config-vlan)#exit
```

i. Mengkonfigurasi IP Address interface management pada semua switch

```
S1(config)#int vlan 99
S1(config-if)#ip address 172.17.99.11 255.255.255.0
S1(config-if)#no shutdown

S2(config)#int vlan 99
S2(config-if)#ip address 172.17.99.11 255.255.255.0
S2(config-if)#no shutdown

S3(config)#int vlan 99
S3(config-if)#ip address 172.17.99.11 255.255.255.0
S3(config-if)#no shutdown
```

j. Memasukkan (assignment) port pada VLAN

```
S1(config)#int range fa0/6-10
S1(config-if-range)#switchport access vlan 30
S1(config-if-range)#int range fa0/11-17
S1(config-if-range)#switchport access vlan 10
S1(config-if-range)#int range fa0/18-24
S1(config-if-range)#switchport access vlan 20

S2(config)#int range fa0/6-10
S2(config-if-range)#switchport access vlan 30
S2(config-if-range)#int range fa0/11-17
S2(config-if-range)#switchport access vlan 10
S2(config-if-range)#int range fa0/18-24
S2(config-if-range)#switchport access vlan 20
```

```
S3#conf term
Enter configuration commands, one per line.  E
S3(config)#int range fa0/6-10
S3(config-if-range)#switchport access vlan 30
S3(config-if-range)#int range fa0/11-17
S3(config-if-range)#switchport access vlan 10
S3(config-if-range)#int range fa0/18-24
S3(config-if-range)#switchport access vlan 20
S3(config-if-range)#end
```