LAPORAN RESMI

PRE UAS

Diajukan Guna Memenuhi Tugas Mata Kuliah
” Konsep Jaringan ”
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Oleh:

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KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
POLITEKNIK ELEKTRONIKA NEGERI SURABAYA
DEPARTEMEN TEKNIK INFORMATIKA DAN KOMPUTER
DIPLOMA EMPAT TEKNIK INFORMATIKA
SURABAYA
2022

CONFIGURATION CISCO

PACKET TRACER

TERMINAL

```
Router>en
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
```

Menyalakan interface fa0/0 :

```
Router(config)#int fa0/0
Router(config-if)#no sh
```

Membuat VLAN 100:

```
Router(config-if)#int fa0/0.100
Router(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.100, changed

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEth

Router(config-subif)#enc
Router(config-subif)#encapsulation dot
Router(config-subif)#encapsulation dot1Q 100
Router(config-subif)#ip add 192.168.1.1 255.255.255.0
Router(config-subif)#ex
```

Membuat VLAN 200:

```
Router(config)#int fa0/0.200
Router(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.200, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.200, changed state to up

Router(config-subif)#en
Router(config-subif)#encapsulation dot
Router(config-subif)#encapsulation dot1Q 200
Router(config-subif)#ip add 192.168.2.1 255.255.255.0
Router(config-subif)#ex
```

Membuat VLAN 300:

```
Router(config)#int fa0/0.300
Router(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.300, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.300, changed state to up

Router(config-subif)#enc
Router(config-subif)#encapsulation dot
Router(config-subif)#encapsulation dot1Q 300
Router(config-subif)#ip add 192.168.3.1 255.255.255.0
Router(config-subif)#ex
```

Membuat VLAN 400:

```
Router(config)#int fa0/0.400
Router(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.400, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.400, changed state to up

Router(config-subif)#enc
Router(config-subif)#encapsulation dot
Router(config-subif)#encapsulation dot1Q 400
Router(config-subif)#ip add 192.168.4.1 255.255.255.0
Router(config-subif)#ex
Router(config)#ex
```

Save konfigurasi:

```
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#write memory
Building configuration...
[OK]
```

VLAN Database DISTRIBUTIN SW 2:

VLAN Configuration

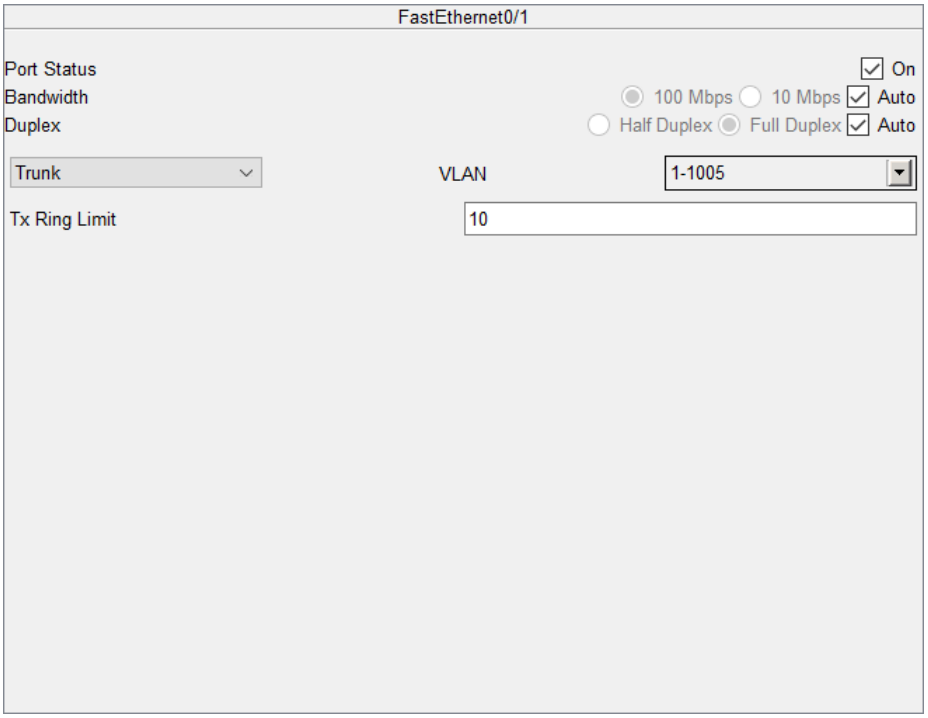
VLAN Number	100
VLAN Name	DTE

Add Remove

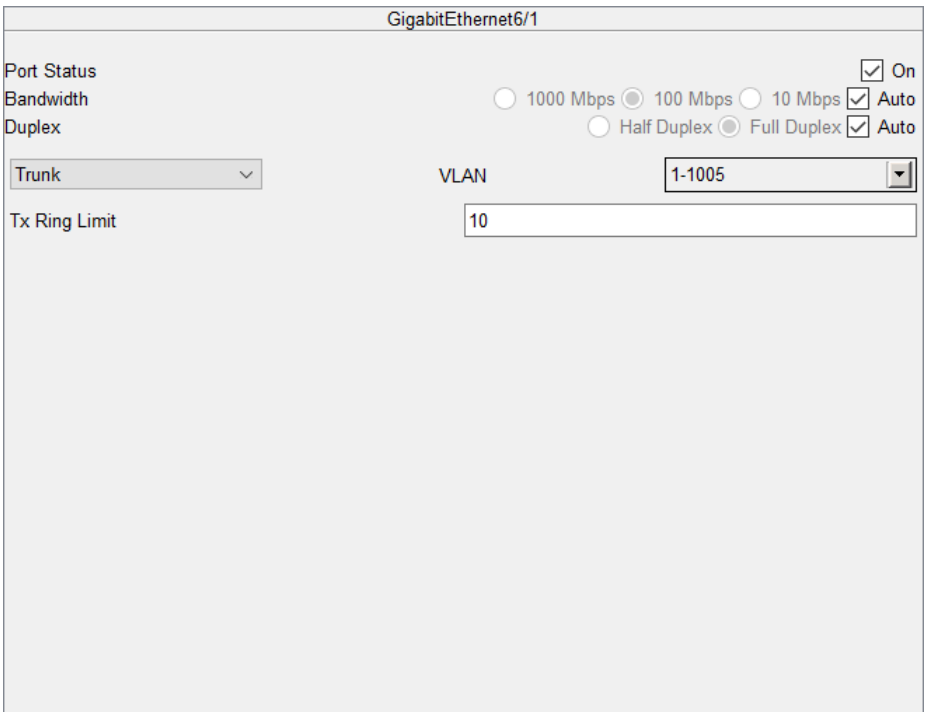
VLAN No	VLAN Name
1	default
100	DTE
200	DEPTIK
300	DMEKA
400	ADMIN
1002	fddi-default
1003	token-ring-default
1004	fddinet-default
1005	trnet-default

Interface Fastethernet0/1(hubungan ke router), GigabitEthernet6/1, GigabitEthernet7/1, GigabitEthernet8/1 (hubungan ke 3 switch) switchportnya di ganti dari access ke trunk agar dapat mengirimkan semua vlan database yang sudah kita buat:

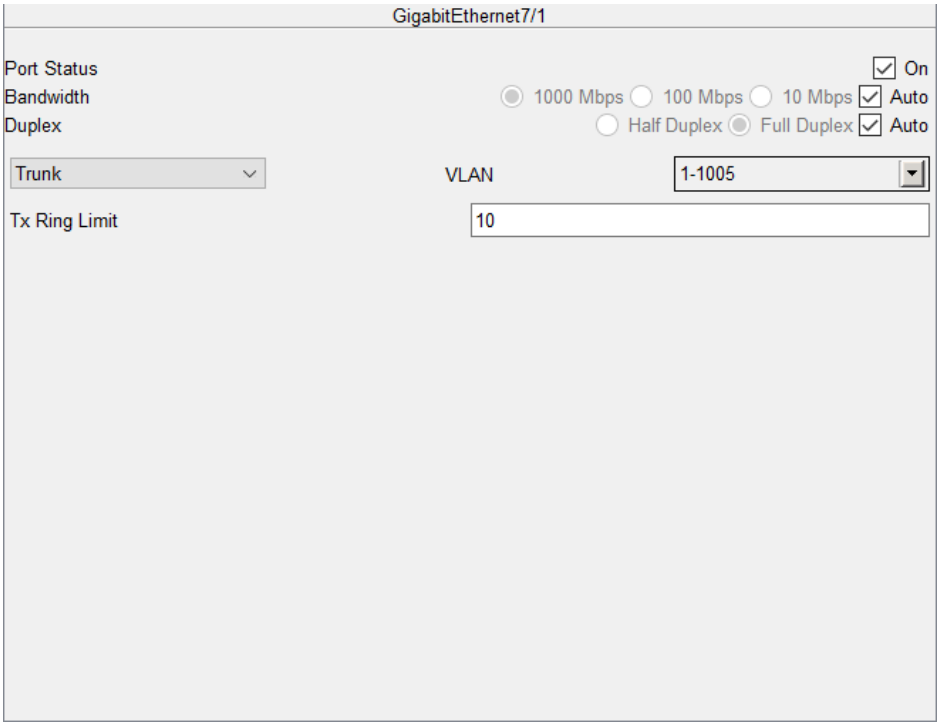
Fastethernet0/1:



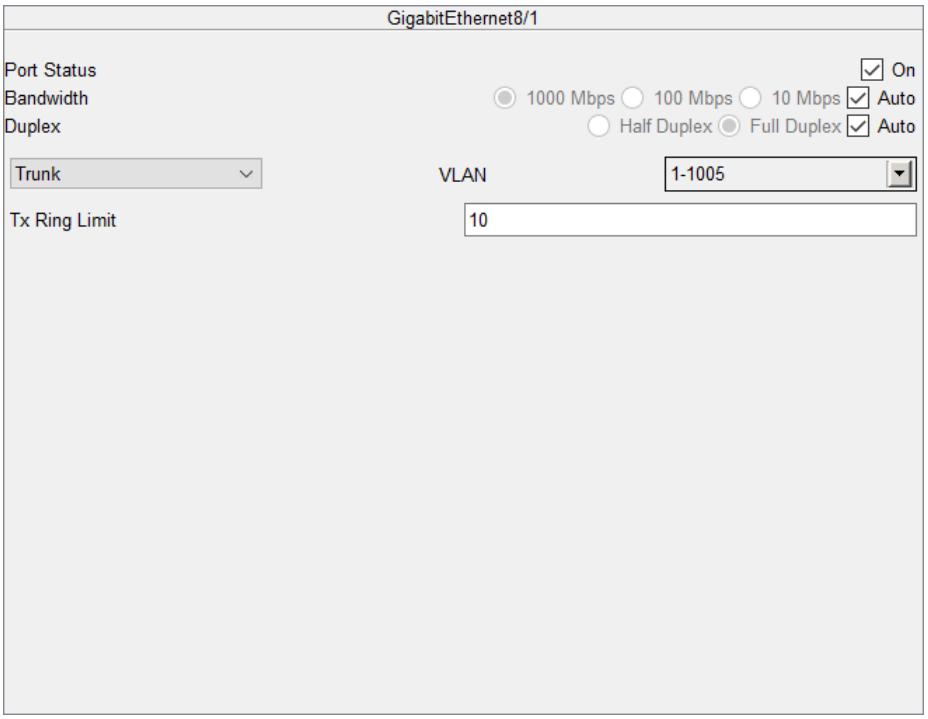
Gigabitethernet6/1:



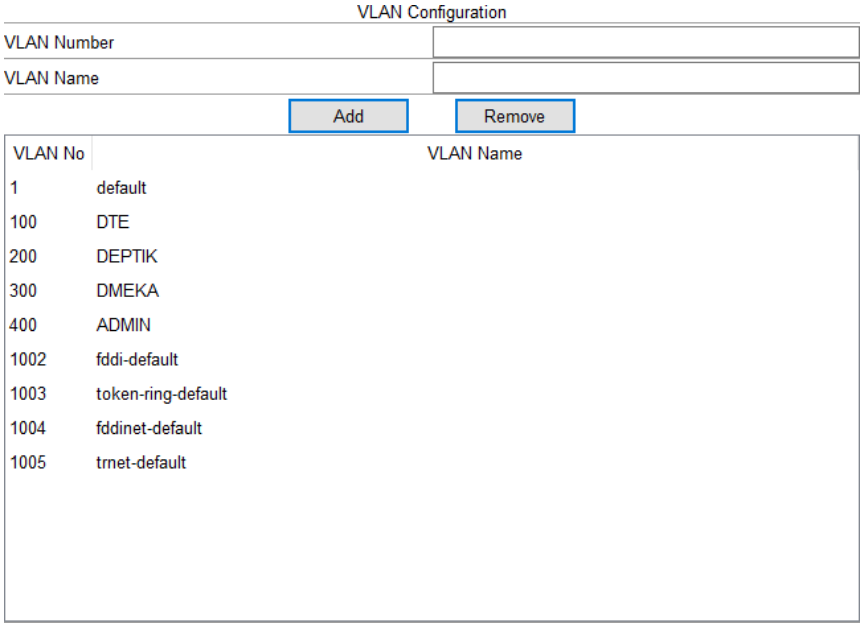
GigabitEthernet7/1:



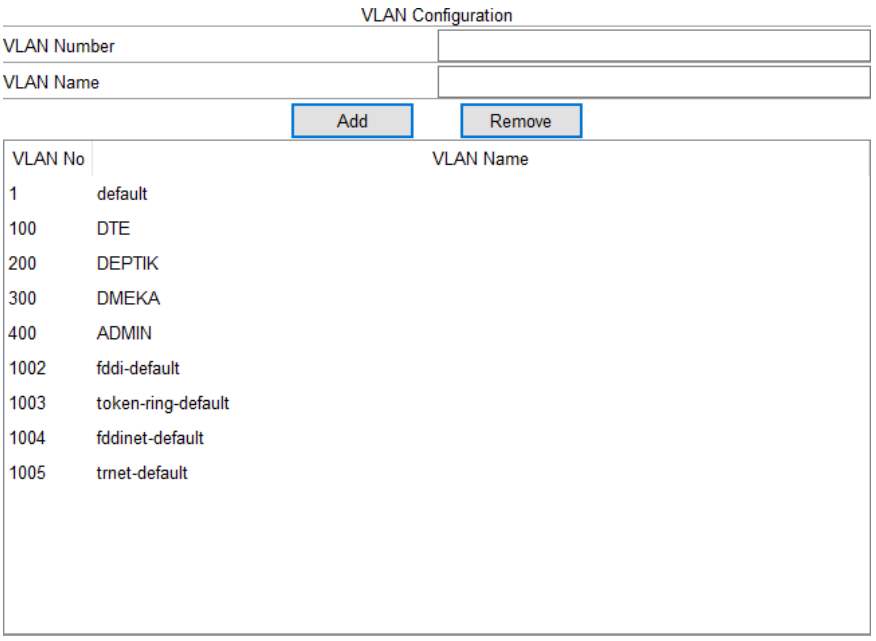
GigabitEthernet8/1:



VLAN Database Switch DTE:



VLAN Database Switch DEPTIK:



VLAN Database switch DMEKA:

VLAN Configuration

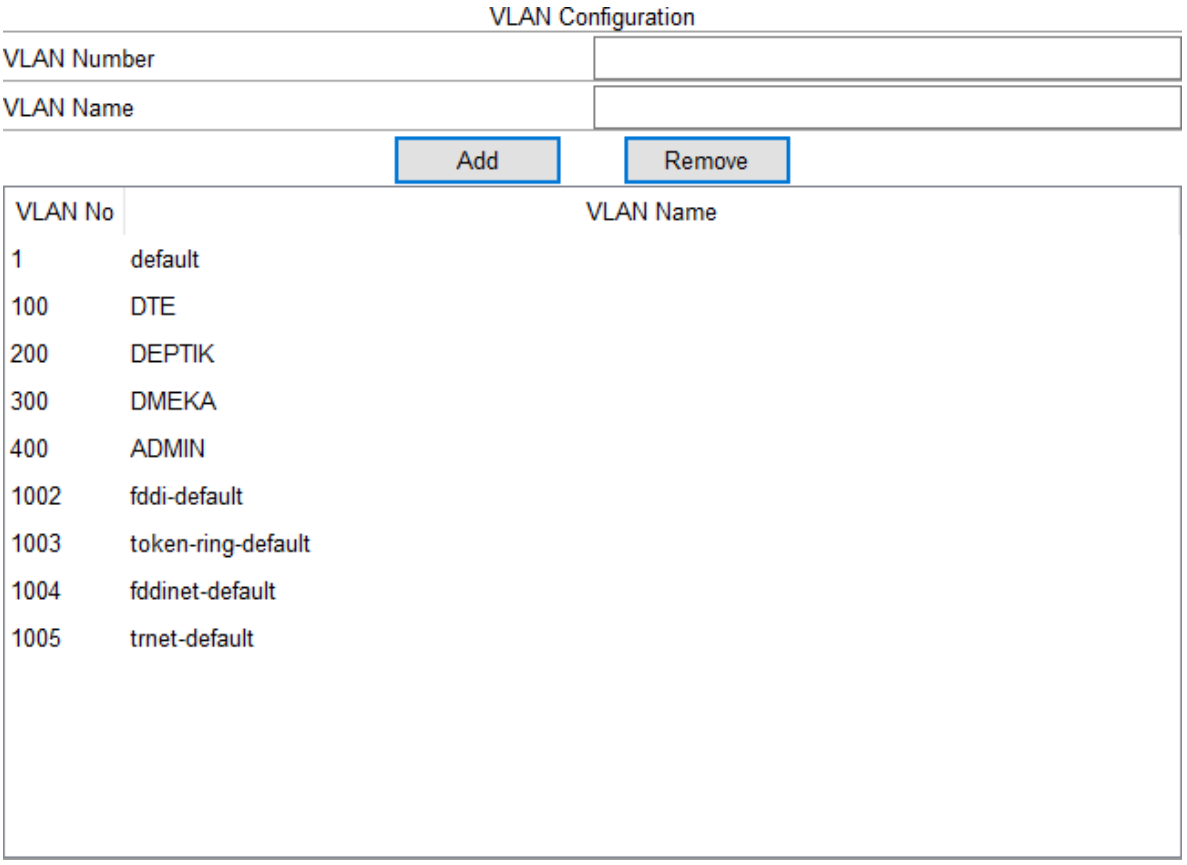
VLAN Number

VLAN Name

Add Remove

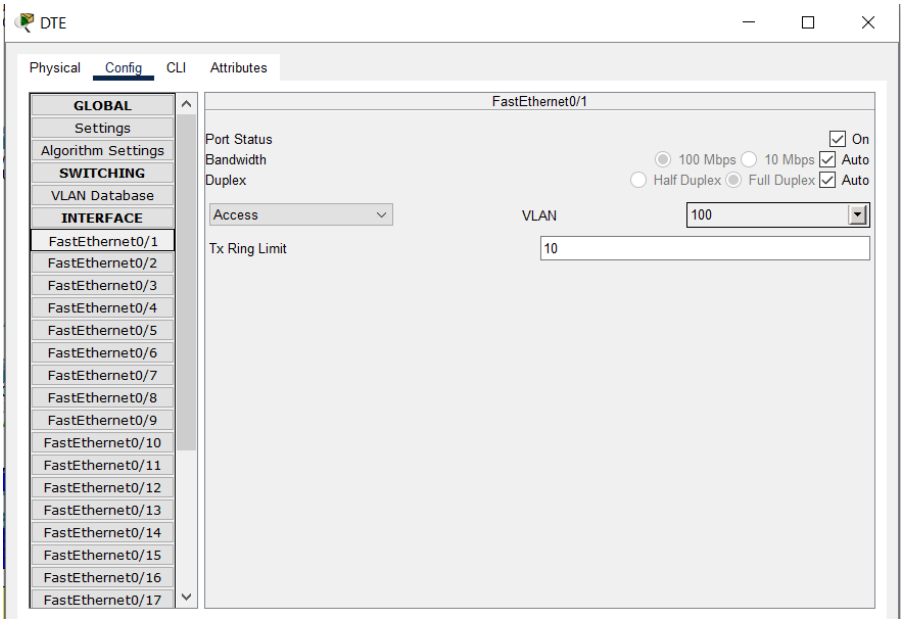
VLAN No	VLAN Name
1	default
100	DTE
200	DEPTIK
300	DMEKA
400	ADMIN
1002	fddi-default
1003	token-ring-default
1004	fddinet-default
1005	trnet-default

VLAN Database switch ADMIN:

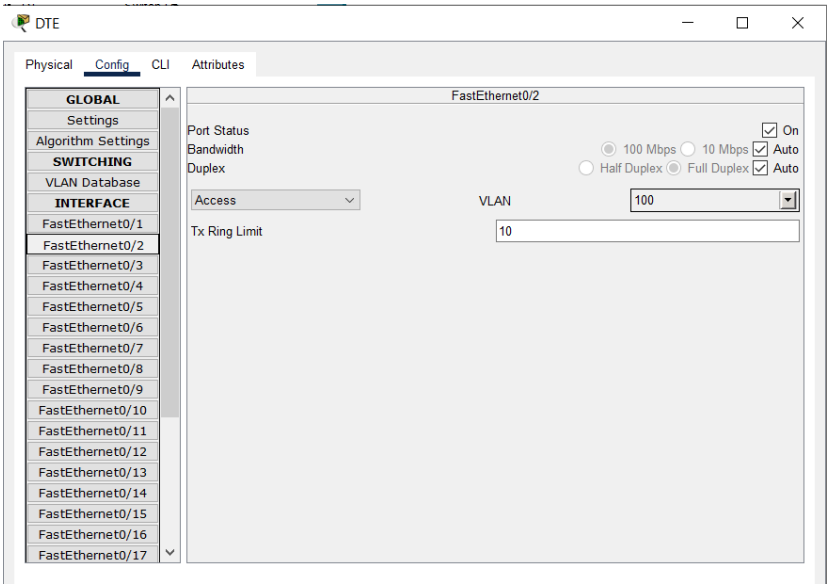


Setiap interface pada switch yang mengarah pc, switchport di ganti ke akses dan vlan di sesuaikan dengan vlannya kemudian untuk admin, vlan 400.

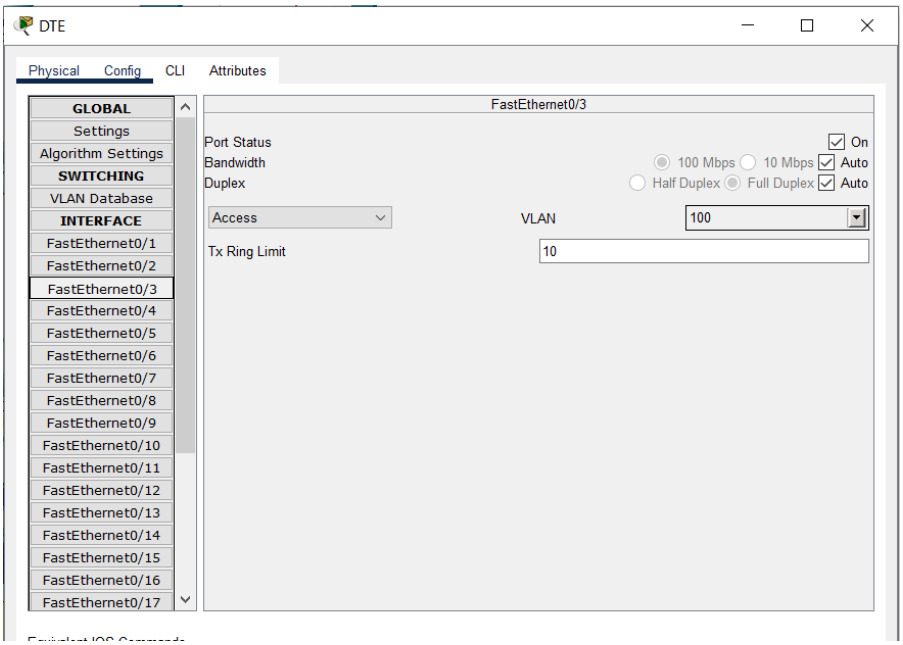
Fastethernet0/1 (pc dalam network 192.168.1.0 atau VLAN 100)



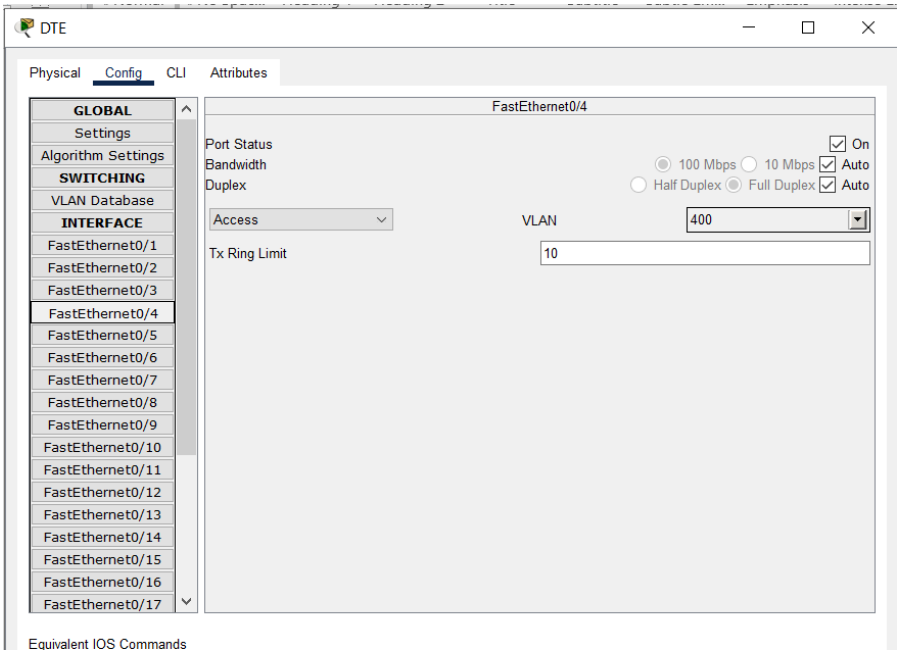
Fastethernet0/2 (pc dalam network 192.168.1.0 atau VLAN 100)



Fastethernet0/3 (pc dalam network 192.168.1.0 atau VLAN 100)



Fastethernet0/4 (pc dalam network 192.168.4.0 atau VLAN 400)



Begitu juga dengan switch DEPTIK dan DMEKA.

Setelah melakukan konfigurasi router dan switch, kita melakukan konfigurasi pc hingga dapat ping antar network.

VLAN 100:

PC 0:
IP: 192.168.1.2
Gateway: 192.168.1.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

PC 1:
IP: 192.168.1.3
Gateway: 192.168.1.1

DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

PC 2:
IP: 192.168.1.4
Gateway: 192.168.1.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

VLAN 200:
PC 0:
IP: 192.168.2.2
Gateway:192.168.2.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

PC 1:
IP: 192.168.2.3
Gateway:192.168.2.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser) PC 2:
IP: 192.168.2.4
Gateway:192.168.2.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

VLAN 300:
PC 0:
IP: 192.168.3.2
Gateway:192.168.3.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

PC 1:
IP: 192.168.3.3
Gateway:192.168.3.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

PC 2:
IP: 192.168.3.4
Gateway:192.168.3.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

VLAN 400:
ADMIN-DTE:
IP: 192.168.4.2
Gateway:192.168.4.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

ADMIN-DEPTIK:
IP: 192.168.4.3
Gateway:192.168.4.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

ADMIN-DMEKA:
IP: 192.168.4.4
Gateway:192.168.4.1
DNS:172.16.1.2 (Merujuk pada server yang akan di akses nanti pada web browser)

Setelah semua terkonfigurasi, kita uji ping untuk memastikan bahwa semua pc sudah terhubung.

VLAN 100 ke VLAN 200:

```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Request timed out.
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127
Reply from 192.168.2.2: bytes=32 time<1ms TTL=127
```

VLAN 100 ke VLAN 300:

```
C:\>ping 192.168.3.3

Pinging 192.168.3.3 with 32 bytes of data:

Request timed out.
Reply from 192.168.3.3: bytes=32 time=1ms TTL=127
Reply from 192.168.3.3: bytes=32 time<1ms TTL=127
Reply from 192.168.3.3: bytes=32 time<1ms TTL=127
```

VLAN 100 ke VLAN 400:

```
C:\>ping 192.168.4.3

Pinging 192.168.4.3 with 32 bytes of data:

Request timed out.
Reply from 192.168.4.3: bytes=32 time=313ms TTL=127
Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
```

VLAN 200 ke VLAN 300:

```
C:\>ping 192.168.3.3

Pinging 192.168.3.3 with 32 bytes of data:

Reply from 192.168.3.3: bytes=32 time<1ms TTL=127
Reply from 192.168.3.3: bytes=32 time<1ms TTL=127
Reply from 192.168.3.3: bytes=32 time<1ms TTL=127
Reply from 192.168.3.3: bytes=32 time<1ms TTL=127
```

VLAN 200 ke VLAN 400:

```
C:\>ping 192.168.4.3

Pinging 192.168.4.3 with 32 bytes of data:

Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
```

VLAN 300 ke VLAN 400:

```
C:\>ping 192.168.4.3

Pinging 192.168.4.3 with 32 bytes of data:

Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
Reply from 192.168.4.3: bytes=32 time<1ms TTL=127
```

Setelah itu lakukan konfigurasi pada router untuk route ke server dan router atas (103.24.56.240/24 & 202.9.85.0/24)

DISTRIBUTION ROUTER 2:

GigabitEthernet6/0 :

IP:172.16.1.1 (Gateway server)

Fastethernet4/0:

IP:202.9.85.1 (Hubungan ke router GW ROUTER ISP 2)

Fastethernet5/0:

IP:103.24.56.240 (Hubungan ke router GW ROUTER ISP 1)

GW ROUTER ISP 1:

Fastethernet5/0:

IP:103.24.56.240 (Hubungan ke DISTRIBUTION ROUTER 2)

GW ROUTER ISP 2:

Fastethernet4/0:

IP: 202.9.85.1 (Hubungan ke DISTRIBUTION ROUTER 2)

Setelah melakukan konfigurasi uji ping pc ke GW ROUTER ISP 1 dan GW ROUTER ISP 2 untuk mengecek pc pada tiap VLAN sudah terhubung.

VLAN 100 ke GW ROUTER ISP 1:

```
C:\>ping 103.24.56.240

Pinging 103.24.56.240 with 32 bytes of data:

Reply from 103.24.56.240: bytes=32 time=24ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
```

VLAN 100 ke GW ROUTER ISP 2:

```
C:\>ping 202.9.85.1

Pinging 202.9.85.1 with 32 bytes of data:

Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
```

VLAN 200 ke GW ROUTER ISP 1:

```
C:\>ping 103.24.56.240

Pinging 103.24.56.240 with 32 bytes of data:

Reply from 103.24.56.240: bytes=32 time=3ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
```

VLAN 200 ke GW ROUTER ISP 2:

```
C:\>ping 202.9.85.1

Pinging 202.9.85.1 with 32 bytes of data:

Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
```

VLAN 300 ke GW ROUTER ISP 1:

```
C:\>ping 103.24.56.240

Pinging 103.24.56.240 with 32 bytes of data:

Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
```

VLAN 300 ke GW ROUTER ISP 2:

```
C:\>ping 202.9.85.1

Pinging 202.9.85.1 with 32 bytes of data:

Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time=12ms TTL=255
```

VLAN 400 ke GW ROUTER ISP 1:

```
C:\>ping 103.24.56.240

Pinging 103.24.56.240 with 32 bytes of data:

Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
Reply from 103.24.56.240: bytes=32 time<1ms TTL=255
```

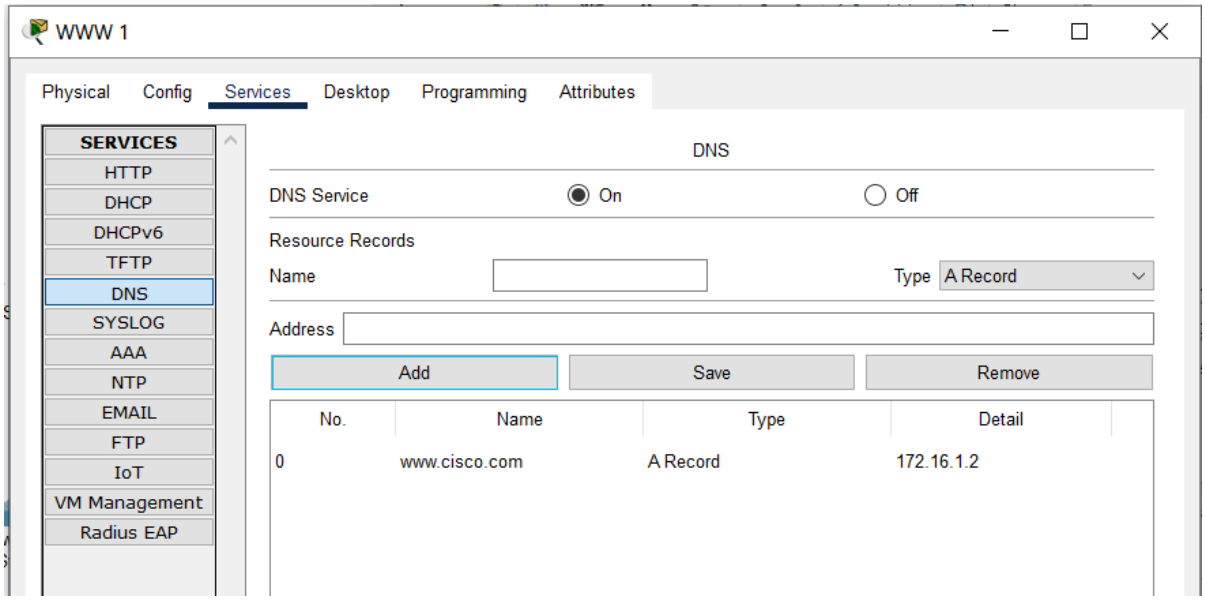
VLAN 400 ke GW ROUTER ISP 2:

```
C:\>ping 202.9.85.1

Pinging 202.9.85.1 with 32 bytes of data:

Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
Reply from 202.9.85.1: bytes=32 time<1ms TTL=255
```

Setelah itu lanjut ke DNS, karena saat melakukan konfigurasi pada pc kita memasukkan 172.16.1.2 (server sebagai penampil www) maka dari itu kita harus membuat website dengan ip address 172.16.1.2, contoh saya membuat www.cisco.com dengan ip address 172.16.1.2 lalu klik on pada dns service kemudian klik add



Setelah dns sudah tertambah kita dapat akses website www.cisco.com pada pc di semua vlan dengan cara desktop->web browser-> masukkan www.cisco.com-> go

Jika berhasil maka akan muncul tampilan seperti ini: