PRAKTIKUM
DESAIN DAN MANAJEMEN JARINGAN KOMPUTER

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Addressing Table

1. VTP.

```
Sheila(config)#vtp mode server
Device mode already VTP SERVER.
Sheila(config)#vtp domain netlab
Changing VTP domain name from NULL to netlab
Sheila(config)#vtp pass netlab
Setting device VLAN database password to netlab
Rachel(config)#vtp mode client
Setting device to VTP CLIENT mode.
Rachel(config)#vtp domain netlab
Changing VTP domain name from NULL to netlab
Rachel(config)#vtp pass netlab
Setting device VLAN database password to netlab
Scottie(config)#vtp mode client
Setting device to VTP CLIENT mode.
Scottie(config)#vtp domain netlab
Changing VTP domain name from NULL to netlab
Scottie(config)#vtp pass netlab
Setting device VLAN database password to netlab
```

2. VLAN.

```
Sheila(config)#vlan 10
Sheila(config-vlan)#name A
Sheila(config-vlan)#vlan 20
Sheila(config-vlan)#name B

Rachel(config)#int f0/24
Rachel(config-if)#sw mode access
Rachel(config-if)#sw access vlan 10

Scottie(config)#int f0/24
Scottie(config-if)#sw mode acc
Scottie(config-if)#sw acc vlan 20
```

3. Etherchannel.

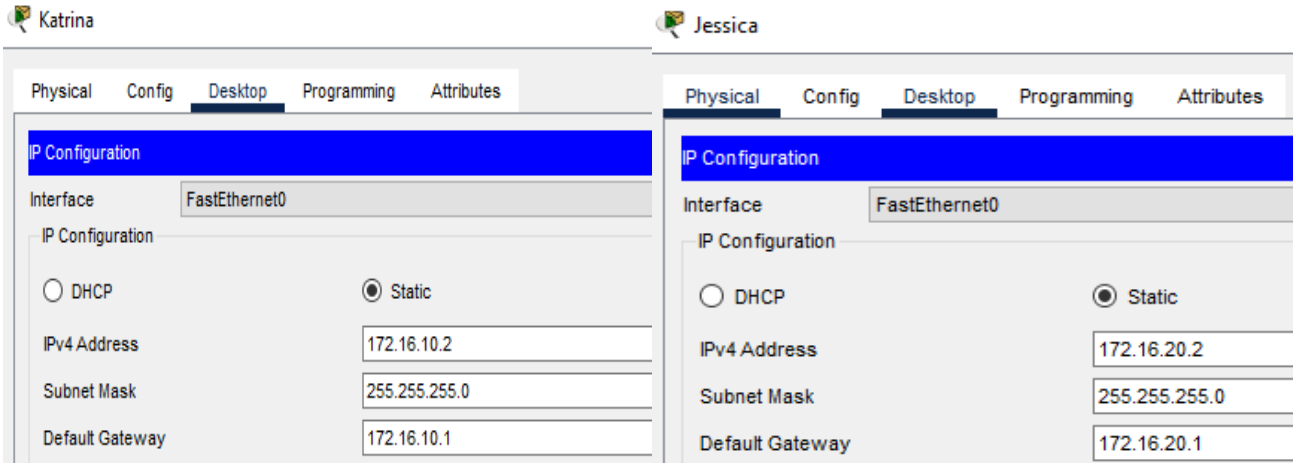
```
Sheila(config)#int r f0/1-4
Sheila(config-if-range)#channel-group 1 mode desirable
Sheila(config-if-range)#
Creating a port-channel interface Port-channel 1

Sheila(config-if-range)#int r f0/5-6
Sheila(config-if-range)#channel-group 2 mode desirable
Sheila(config-if-range)#
Creating a port-channel interface Port-channel 2
```

```
Sheila(config-if-range)#int port-chan 1
Sheila(config-if)#sw mode trunk
Sheila(config-if)#int port-chan 2
Sheila(config-if)#sw mode tr

Rachel(config)#int r f0/1-4
Rachel(config-if-range)#channel-group 1 mode auto

Rachel(config-if-range)#int r f0/7-8
Rachel(config-if-range)#channel-group 3 mode desirable

Rachel(config-if-range)#int port-chan 1
Rachel(config-if)#sw mode tr
Rachel(config-if)#int port-chan 3
Rachel(config-if)#sw mode tr

Scottie(config)#int r f0/5-6
Scottie(config-if-range)#channel-group 2 mode auto

Scottie(config-if-range)#int r f0/7-8
Scottie(config-if-range)#channel-group 3 mode auto

Scottie(config-if-range)#int port-chan 2
Scottie(config-if)#sw mode tr
Scottie(config-if)#int port-chan 3
Scottie(config-if)#sw mode tr
```

4. Router on a stick.

```
Darby(config-if)#int g0/1.10
Darby(config-subif)#encapsulation dot1Q 10
Darby(config-subif)#ip add 172.16.10.1 255.255.255.0
Darby(config-subif)#int g0/1.20
Darby(config-subif)#encapsulation dot1Q 20
Darby(config-subif)#ip add 172.16.20.1 255.255.255.0

Darby(config)#int g0/1
Darby(config-if)#no sh
```

5. Static addressing.



6. Tes konektivitas.

Last Status	Source	Destination
Successful	Katrina	Jessica
Successful	Jessica	Katrina

PDU yang dilakukan antara Katrina dan Jessica berhasil dilakukan, hal ini karena telah dilakukan konfigurasi inter-vlan antar vlan yang berbeda. Sehingga perangkat yang berada di vlan yang berbeda tetap dapat berkomunikasi. Inter-vlan diterapkan dengan router on stick

7. Konfigurasi EIGRP.

```
Pearson(config)#router eigrp 1
Pearson(config-router)#eigrp router-id 10.86.64.1
Pearson(config-router)#net 10.8.6.0 0.0.0.3
Pearson(config-router)#net 10.86.64.0 0.0.0.255
Pearson(config-router)#net 128.86.64.0 0.0.0.3
Pearson(config-router)#passive-int g0/1
Pearson(config-router)#no auto-sum

Hardman(config)#router eigrp 1
Hardman(config-router)#eigrp router-id 192.168.86.1
Hardman(config-router)#net 10.8.6.0 0.0.0.3
Hardman(config-router)#net 192.168.86.0 0.0.0.255
Hardman(config-router)#net 10.8.6.5 0.0.0.3
Hardman(config-router)#passive-int g0/1
Hardman(config-router)#no auto-summary

Darby(config)#router eigrp 1
Darby(config-router)#eigrp router-id 172.16.10.1
Darby(config-router)#net 10.8.6.4 0.0.0.3
Darby(config-router)#net 172.16.10.0 0.0.0.255
Darby(config-router)#net 172.16.29.0 0.0.0.255
Darby(config-router)#passive-int g0/1
Darby(config-router)#no auto-sum
```

8. Hasil konfigurasi.

- Show ip route eigrp.

```
Pearson#sh ip route eigrp
     10.0.0.0/8 is variably subnetted, 5 subnets, 3 masks
D       10.8.6.4/30 [90/3072] via 10.8.6.2, 00:15:11, GigabitEthernet0/0
     172.16.0.0/24 is subnetted, 1 subnets
D       172.16.10.0 [90/28672] via 10.8.6.2, 00:03:03, GigabitEthernet0/0
D    192.168.86.0/24 [90/3072] via 10.8.6.2, 00:11:15, GigabitEthernet0/0

Hardman#sh ip route eigrp
     10.0.0.0/8 is variably subnetted, 5 subnets, 3 masks
D       10.86.64.0/24 [90/3072] via 10.8.6.1, 00:14:59, GigabitEthernet0/0
     172.16.0.0/24 is subnetted, 1 subnets
D       172.16.10.0 [90/28416] via 10.8.6.6, 00:02:49, GigabitEthernet0/2

Darby#Sh ip route eigrp
     10.0.0.0/8 is variably subnetted, 4 subnets, 3 masks
D       10.8.6.0/30 [90/3072] via 10.8.6.5, 00:14:32, GigabitEthernet0/2
D       10.86.64.0/24 [90/3328] via 10.8.6.5, 00:14:32, GigabitEthernet0/2
     172.16.0.0/16 is variably subnetted, 4 subnets, 2 masks
D    192.168.86.0/24 [90/3072] via 10.8.6.5, 00:10:37, GigabitEthernet0/2
```

- Show ip eigrp neighbors

```
Pearson#sh ip eigrp neig
IP-EIGRP neighbors for process 1
H   Address         Interface       Hold Uptime    SRTT   RTO   Q   Seq
                                    (sec)          (ms)       Cnt Num
0   10.8.6.2        Gig0/0          13   00:00:43  40     1000  0   4
```

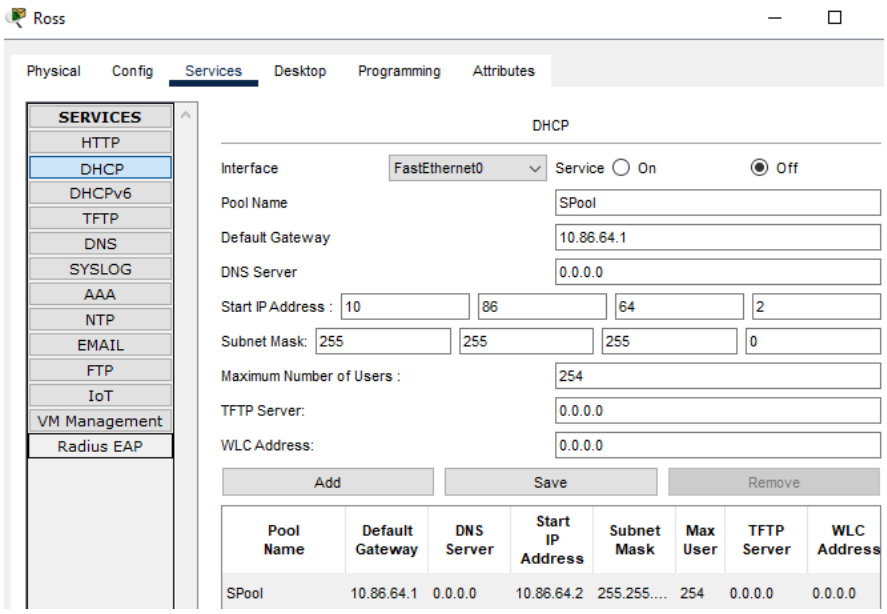
```
Hardman#sh ip eigrp neig
IP-EIGRP neighbors for process 1
H   Address         Interface       Hold Uptime    SRTT   RTO   Q   Seq
                                    (sec)          (ms)       Cnt Num
0   10.8.6.1        Gig0/0          13   00:01:19  40     1000  0   3
1   10.8.6.6        Gig0/2          13   00:01:16  40     1000  0   5

Darby#sh ip eigrp neig
IP-EIGRP neighbors for process 1
H   Address         Interface       Hold Uptime    SRTT   RTO   Q   Seq
                                    (sec)          (ms)       Cnt Num
0   10.8.6.5        Gig0/2          10   00:01:28  40     1000  0   6
```

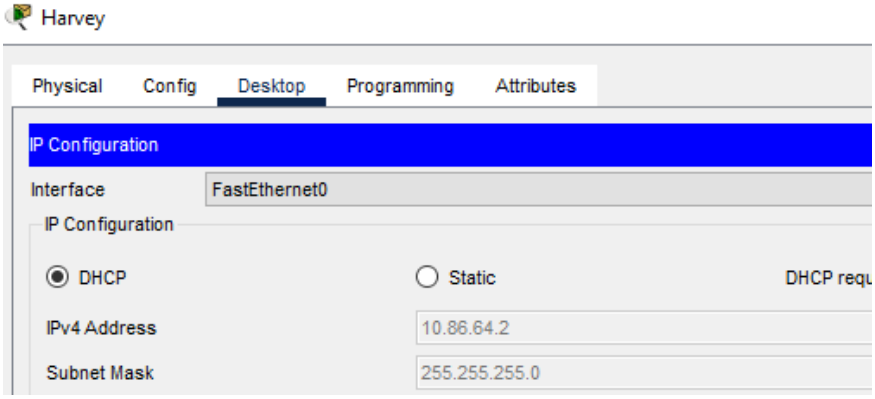
9. Topologi di Darby.

```
P 10.8.6.0/30, 1 successors, FD is 3072
         via 10.8.6.5 (3072/2816), GigabitEthernet0/2
P 10.8.6.4/30, 1 successors, FD is 2816
         via Connected, GigabitEthernet0/2
P 10.86.64.0/24, 1 successors, FD is 3328
         via 10.8.6.5 (3328/3072), GigabitEthernet0/2
P 172.16.10.0/24, 1 successors, FD is 28160
         via Connected, GigabitEthernet0/1.10
P 192.168.86.0/24, 1 successors, FD is 3072
         via 10.8.6.5 (3072/2816), GigabitEthernet0/2
```

Perintah diatas berguna untuk menampilkan topologi dari jaringan EIGRP. P berarti rute tersebut didapat dari konfigurasi EIGRP dan bersifat pasif, artinya tidak menginisiasi hello packet. Terdapat alamat ip jaringan tujuan. 1 successor berarti ada 1 jalur utam yang digunakan untuk mengirimkan paket ke tujuan. FD adalah feasible distance. Via berarti alamat next hop router. (FD/AD) feasible distance dan advertised distance (dari router tetangga). Dan terakhir interface tempat keluarnya paket.

10. DHCP di server ross.





11. DHCP relay.

```
Pearson(config)#int g0/1
Pearson(config-if)#ip help
Pearson(config-if)#ip helper-address 10.86.64.254
```

12. Tes konektivitas.

Last Status	Source	Destination
Failed	Daniel	Jessica
Failed	Harvey	Katrina
Successful	Ross	Daniel

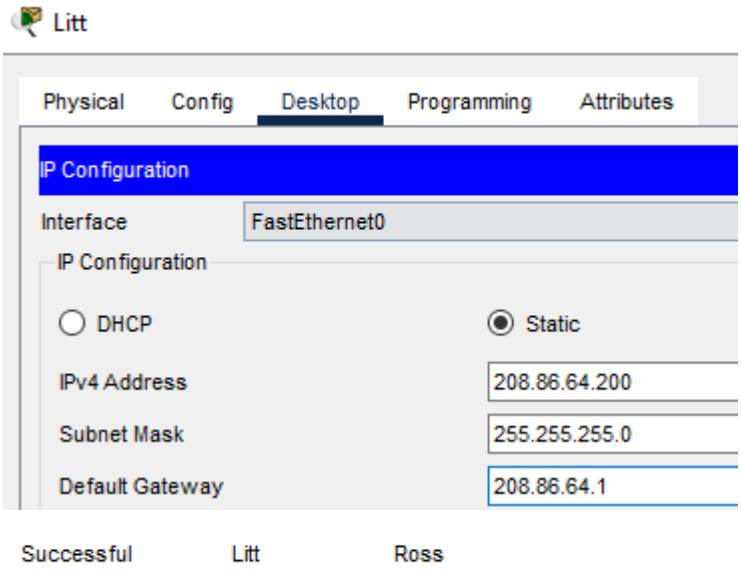
13. Static routing.

```
Specter(config)#ip route 0.0.0.0 0.0.0.0 g0/2

Specter(config)#ip route 10.86.64.0 255.255.255.0 g0/2

Pearson(config)#ip route 208.86.64.0 255.255.255.0 128.86.64.2
```

14. Show ip route.

```
Specter#sh ip route

S*   0.0.0.0/0 is directly connected, GigabitEthernet0/2

S    208.86.64.0/24 [1/0] via 128.86.64.2

Pearson#sh ip route

S    208.86.64.0/24 [1/0] via 128.86.64.2
```

15. Tes konektivitas.



Successful	Litt	Ross

PDU berhasil ini karena propagasi antara static routing dengan EIGRP berhasil dilakukan pada router Pearson.

Namun seharusnya gagal karena propagasi belum dilakukan. Namun tadi tidak sempat screenshot. Screenshot diatas saat propagasi telah dilakukan.

16. Lit ke Daniel

    Gagal karena propagasi belum dilakukan. Namun tadi tidak sempat screenshot.

17. Propagasi.

```
Pearson(config)#router eigrp 1
Pearson(config-router)#redi
Pearson(config-router)#redistribute static
```

Last Status	Source	Destination
Successful	Litt	Daniel

Berhasil karena propagasi juga telah dilakukan.

18. Hardman

```
Hardman#sh ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external t
       E1 - OSPF external type 1, E2 - OSPF external type 2, E -
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - I
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     10.0.0.0/8 is variably subnetted, 5 subnets, 3 masks
C       10.8.6.0/30 is directly connected, GigabitEthernet0/0
L       10.8.6.2/32 is directly connected, GigabitEthernet0/0
C       10.8.6.4/30 is directly connected, GigabitEthernet0/2
L       10.8.6.5/32 is directly connected, GigabitEthernet0/2
D       10.86.64.0/24 [90/3072] via 10.8.6.1, 00:48:04, GigabitE
     128.86.0.0/30 is subnetted, 1 subnets
D       128.86.64.0/30 [90/3072] via 10.8.6.1, 00:19:49, Gigabit
     172.16.0.0/24 is subnetted, 1 subnets
D       172.16.10.0/24 [90/28416] via 10.8.6.6, 00:35:54, Gigabi
     192.168.86.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.86.0/24 is directly connected, GigabitEthernet0/
L       192.168.86.1/32 is directly connected, GigabitEthernet0/
D EX 208.86.64.0/24 [170/5376] via 10.8.6.1, 00:06:11, GigabitEt
```