Modul Praktikum Jaringan Komunikasi
Cisco VOIP (H.323)
Multi Interface

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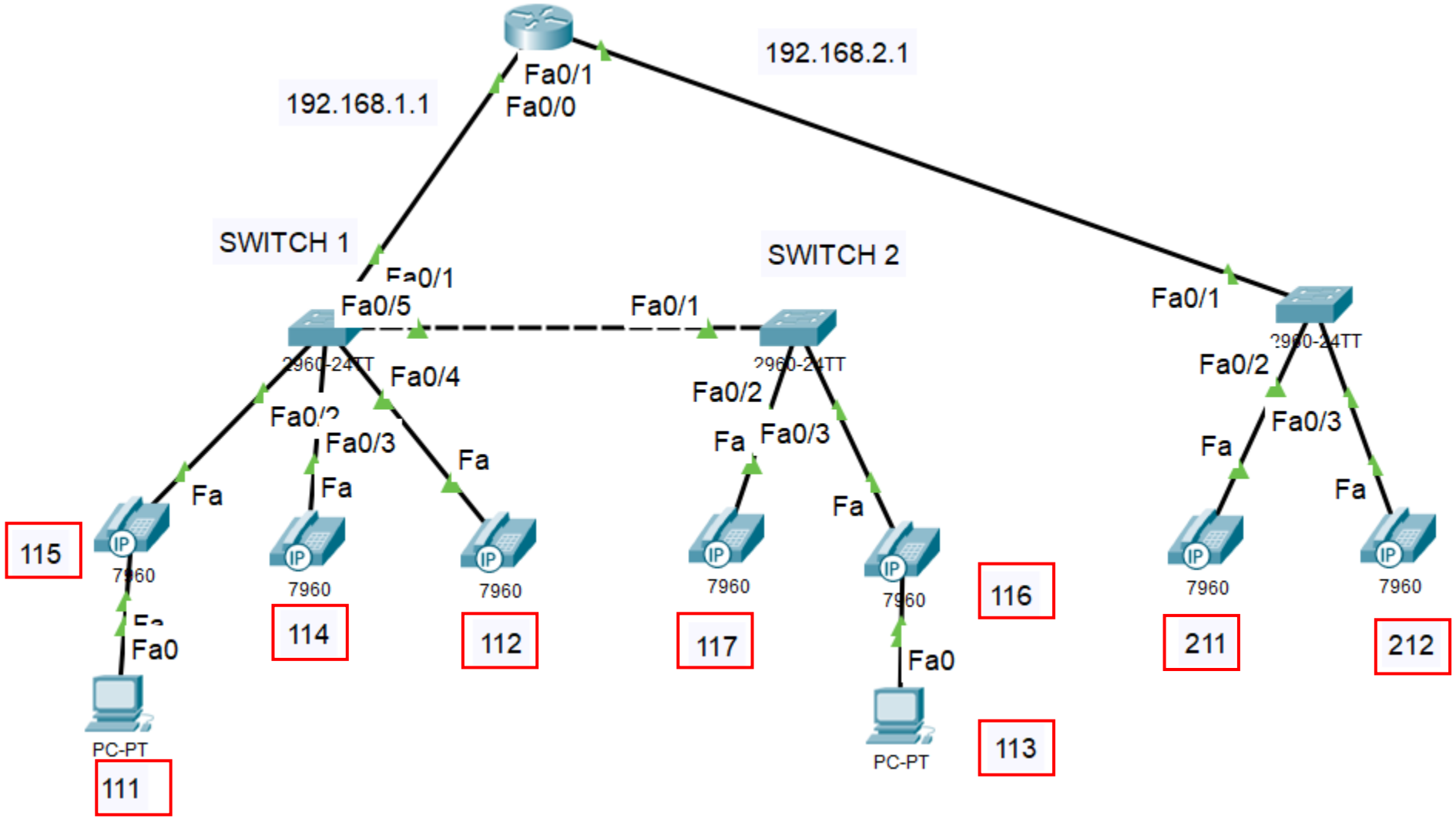
Topik Bahasan

- Integrasi IP Phone dan PC
- Multi Switch
- Multi interface pada 1 Router
- Fixed number pada IP Phone
- Real implementasi pada perusahaan

Topologi VoIP



Konfigurasi Router

IP address

```
Router>enable
Router#config terminal
Router(config)#interface fastethernet 0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip dhcp excluded-address 192.168.1.1

Router#config terminal
Router(config)#interface fastethernet 0/1
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip dhcp excluded-address 192.168.2.1
```

IP static

IP static

Konfigurasi Router

```
Router(config)#ip dhcp pool voip1
Router(dhcp-config)#network 192.168.1.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.1.1
Router(dhcp-config)#option 150 ip 192.168.1.1
Router(dhcp-config)#exit

Router(config)#ip dhcp pool voip2
Router(dhcp-config)#network 192.168.2.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.2.1
Router(dhcp-config)#option 150 ip 192.168.2.1
Router(dhcp-config)#exit
```

DHCP server

TFTP server

Konfigurasi Router

```
Router(config)#telephony-service
Router(config-telephony)#ip source-address 192.168.1.1 port 2001
Router(config-telephony)#max-ephones 10
Router(config-telephony)#max-dn 10
Router(config-telephony)#auto assign 1 to 10
Router(config-telephony)#exit
```

sumber VoIP
maks ip_phone
maks dir number
dial otomatis

```
Router(config)#telephony-service
Router(config-telephony)#ephone-dn 1
Router(config-ephone-dn)#number 111
Router(config-ephone-dn)# ephone-dn 2
Router(config-ephone-dn)# number 112
Router(config-ephone-dn)# ephone-dn 3
Router(config-ephone-dn)# number 113
Router(config-ephone-dn)# ephone-dn 4
Router(config-ephone-dn)# number 114
Router(config-ephone-dn)# ephone-dn 5
Router(config-ephone-dn)# number 115
Router(config-ephone-dn)# ephone-dn 6
Router(config-ephone-dn)# number 116
```

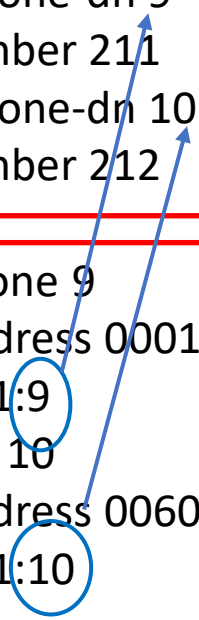
Konfigurasi Router

```
Router(config-ephone-dn)# ephone-dn 7
Router(config-ephone-dn)# number 117
Router(config-ephone-dn)# ephone-dn 8
Router(config-ephone-dn)# number 118
Router(config-ephone-dn)# ephone-dn 9
Router(config-ephone-dn)# number 211
Router(config-ephone-dn)# ephone-dn 10
Router(config-ephone-dn)# number 212
```

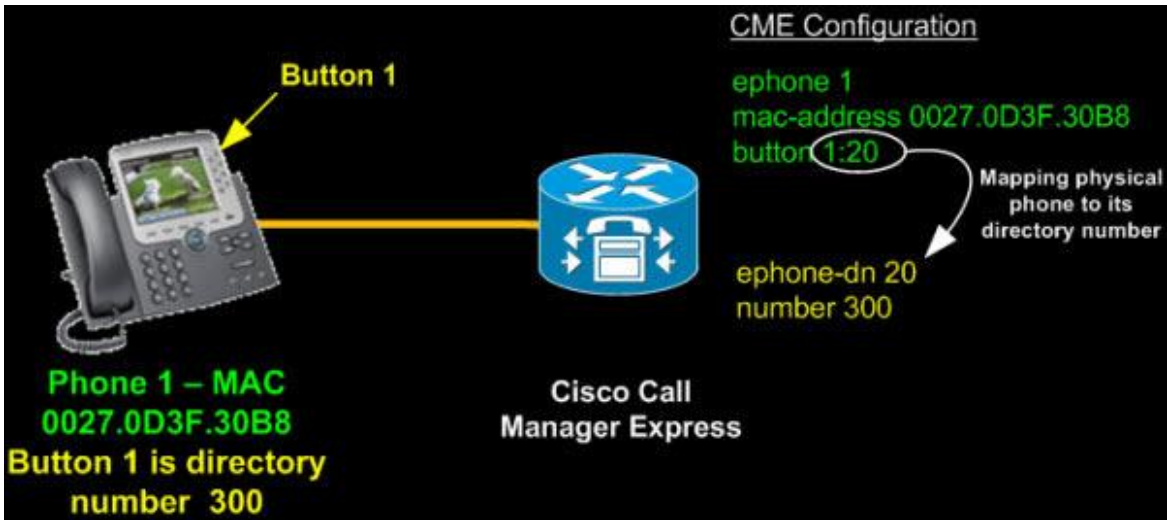
ephone 1-8: kode awalan 1xx

ephone 9-10: kode awalan 2xx

```
Router(config-ephone-dn)#ephone 9
Router(config-ephone)#mac-address 0001.9655.3686
Router(config-ephone)#button 1:9
Router(config-ephone)#ephone 10
Router(config-ephone)#mac-address 0060.474D.7E55
Router(config-ephone)#button 1:10
```



Konfigurasi Fixed ephone



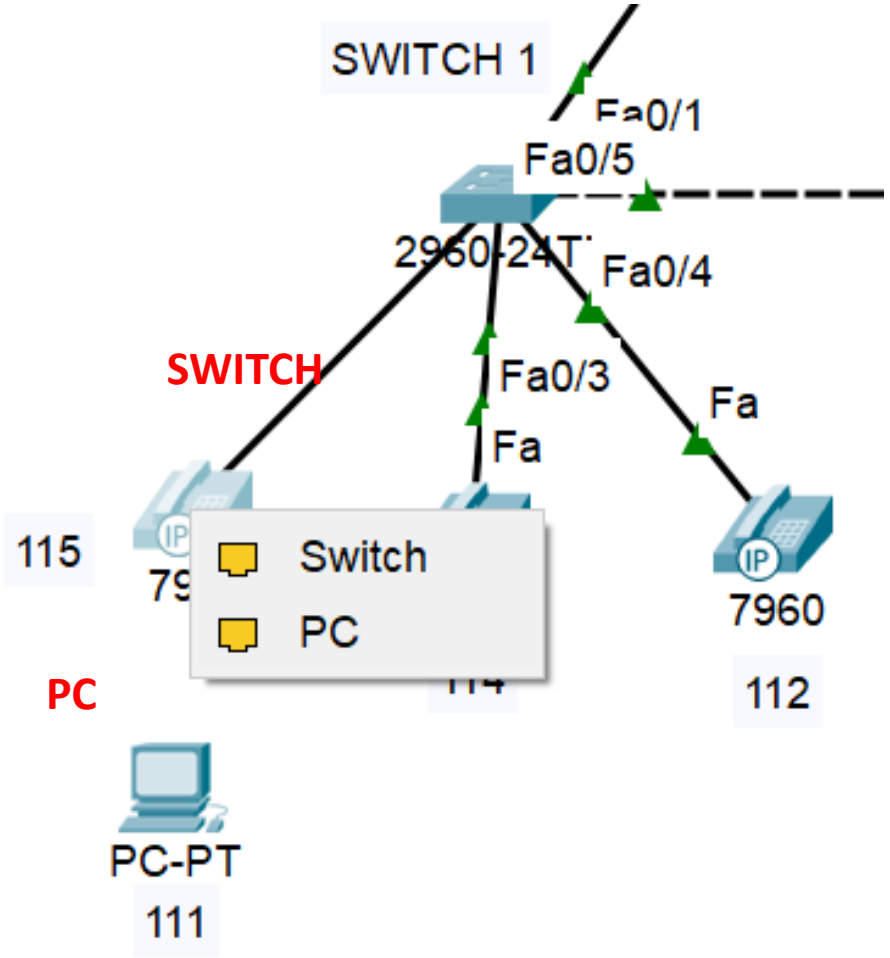
Cara mengetahui mac-address IP Phone

```
Port      Link    IP Address          MAC Address
Vlan1     Up      192.168.2.3/24      0060.474D.7E55
Switch    Up      <not set>           0030.A37C.E301
PC        Down    <not set>           0030.A37C.E302

Gateway: 192.168.2.1
Line Number: 212

Physical Location: Intercity, Home City, Corporate Office
```

Konfigurasi 3 Switch (VLAN)

```
Switch>enable
Switch#conf t
Switch(config)#interface range f0/1-24
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport voice vlan 1
Switch(config-if-range)#exit
Switch(config)#
```

Konfigurasi IP Phone dan PC



PERCOBAAN

- Lakukan percobaan pada topologi di contoh
- Lakukan interkoneksi semuanya, dan buatlah laporan resminya (topologi, konfigurasi, hasil, analisa dan kesimpulan)

TUGAS

- Designlah jaringan Cisco VoIP seperti berikut.
- Lakukan interkoneksi semuanya dan buat laporannya (topologi, setting masing-masing perangkat, tes koneksi, analisa dan kesimpulan)