

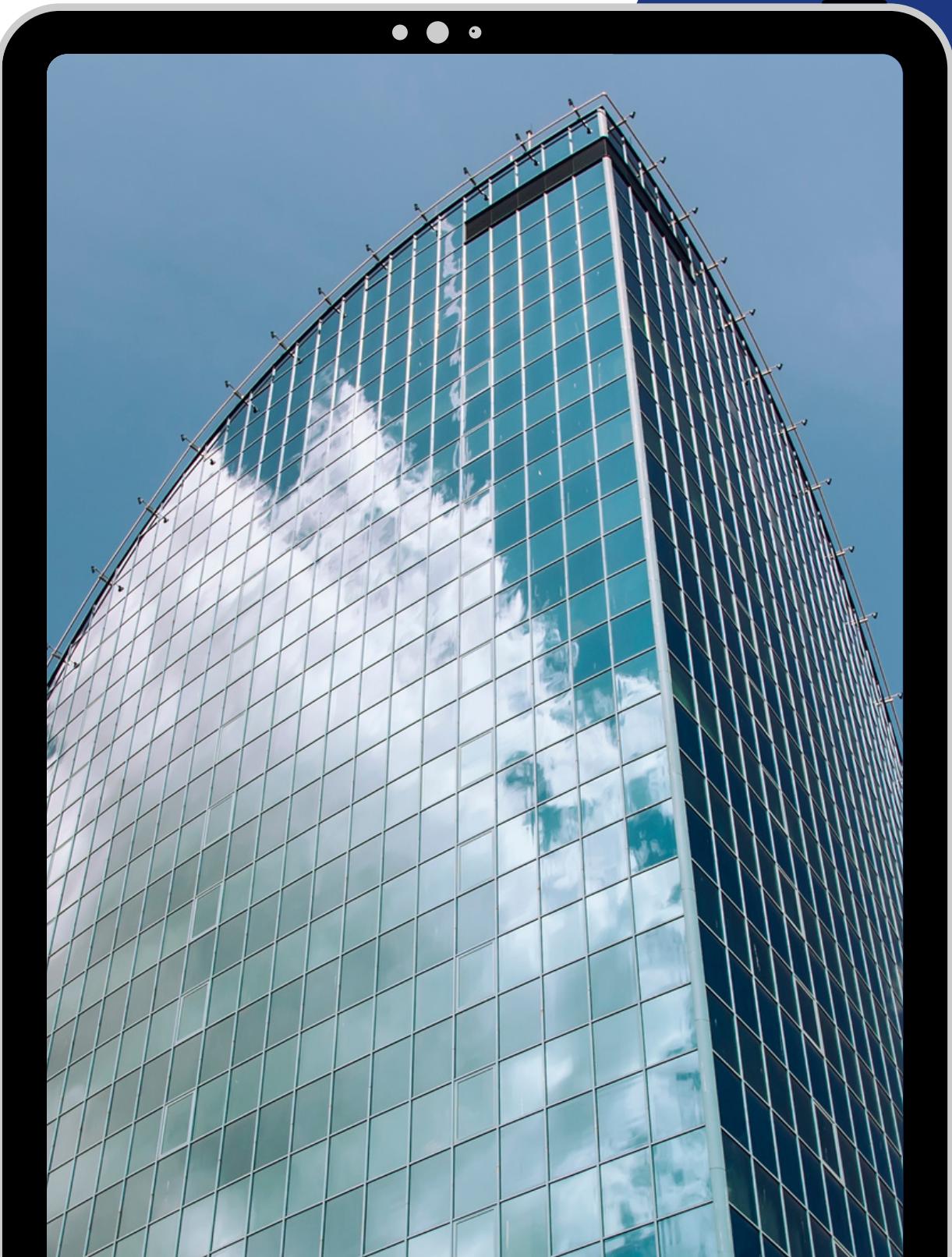


2021 / DMJK B /
Kelompok 7

Final Project DMJK

IT Consulting Company

Topologi Jaringan Perusahaan IT Konsultan





2021 / DMJK B /
Kelompok 7

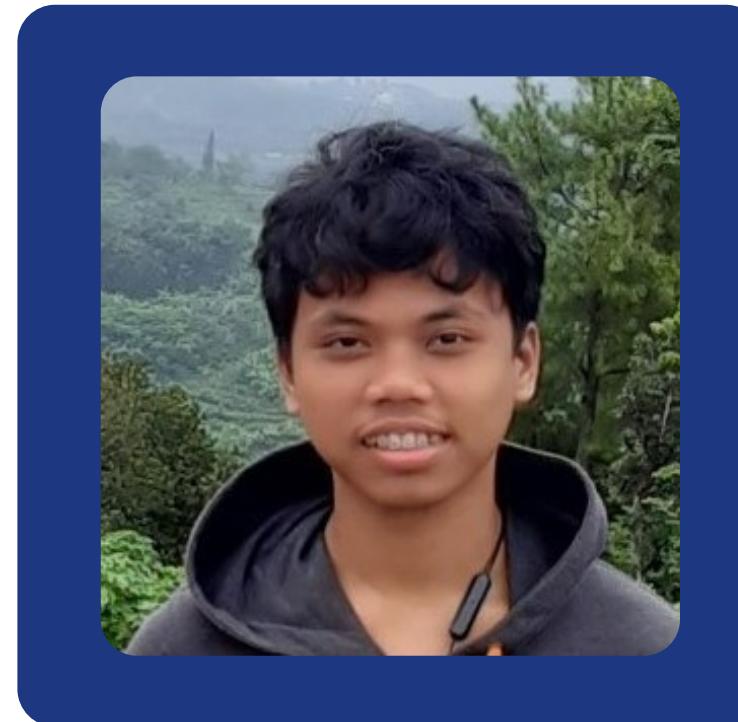
Anggota Kelompok

7

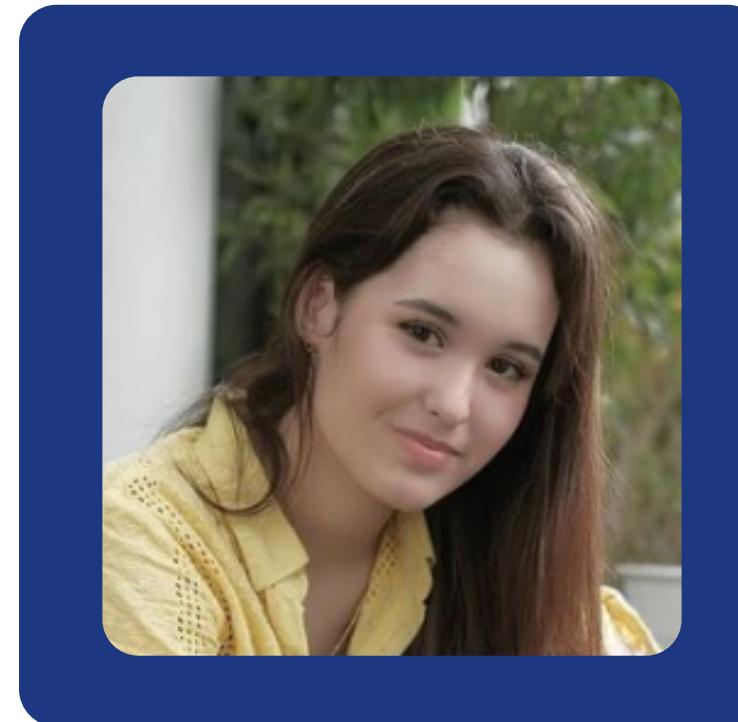


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Perusahaan IT konsultan merupakan perusahaan yang menyediakan layanan konsultasi teknologi informasi seperti saran teknis, metode implementasi, dan pemeliharaan yang dapat dipilih.

Perusahaan IT konsultan membantu pelanggan menemukan teknologi yang paling sesuai dengan keinginan dan kebutuhan bisnis pelanggan.

Divisi

- Technology
- Data Office
- Finance
- Sales Operations
- Manajer dan Direksi
- Humas
- Riset dan Pengembangan
- Personalia
- Pemasaran



KETERANGAN TOPOLOGI

Kantor Pusat

MEDAN PUSAT

Kantor cabang 1

MEDAN

Kantor cabang 2

GRESIK

Kantor Cabang 3

GRESIK

Kantor Cabang 4

BANGKOK, THAILAND

Router ISP

Internet Service Protocol

DRC

Disaster Recovery Center

KETERANGAN IP ADDRESS

192.168.0.0/30 = Router Kantor pusat dengan router NOC

Router pusat (Medan pusat) : Default gateway

192.168.10.0/27 = Dept Technology (lantai 1)

192.168.11.0/28 = Dept DataOffice (lantai 2)

192.168.12.0/28 = Dept Finance (lantai 3)

192.168.13.0/28 = Dept SalesOperations (lantai 4)

192.168.14.0/29 = Dept ManajemendanDireksi (lantai 5)

192.168.15.0/30 = Server ke Router NOC (lantai 6)

192.168.18.0/29 = Switch Telepon ke Router Kantor Pusat

KETERANGAN TOPOLOGI

Switch 1 (Lantai 1 Technology)
Access Point Lantai 1
PC 0 (IP Static, 192.168.10.2)
PC 1 (IP Static, 192.168.10.3)
Laptop 0 (IP Static, 192.168.10.4)

Switch 2 (Lantai 2 DataOffice)
Access Point Lantai 2
PC 2 (IP Static, 192.168.11.2)
Laptop 2 (IP Static, 192.168.11.4)
Laptop 3 (IP Static, 192.168.11.3)

Switch 3 (Lantai 3 Finance)
Access Point Lantai 3
PC 4 (IP Static, 192.168.12.2)
PC 5 (IP Static, 192.168.12.3)
Tablet PC2 (IP Static, 192.168.12.4)

Switch 4 (Lantai 4 SalesOperations)
Access Point Lantai 4
PC 6 (IP Static, 192.168.13.2)
Smartphone 0 (IP Static, 192.168.13.4)
Tablet PC3 (IP Static, 192.168.13.3)

Switch 5 (Lantai 5 ManajerdanDireksi)
Access Point Lantai 5
PC 7 (IP Static, 192.168.14.3)
Tablet PC4 (IP Static, 192.168.14.2)
Laptop 4 (IP Static, 192.168.14.4)

Switch 6	ROUTER NOC
IP Phone23	PC8(1) 192.168.15.4
IP Phone24	Server 10.11.22.33/15
IP Phone25	
IP Phone26	ROUTER DRC
IP Phone27	PC8(1) 192.168.65.4
	Server 10.11.55.33/15

KETERANGAN IP ADDRESS

192.168.1.0/30 = Router Kantor Cabang Medan dengan router NOC

192.168.20.0/27 = Dept Humas ke Router Kantor Cabang Medan

192.168.21.0/28 = Dept Riset dan Pengembangan ke Router Kantor Cabang Medan

192.168.22.0/28 = Dept Personalia ke Router Kantor Cabang Medan

192.168.23.0/28 = Dept Pemasaran ke Router Kantor Cabang Medan

192.168.24.0/29 = Switch Telepon ke Router Router Kantor Cabang Medan

KETERANGAN TOPOLOGI

Switch 1 (Lantai 1 Humas)

Access Point Lantai 1

PC 2 (IP Static, 192.168.20.2)

PC 10 (IP Static, 192.168.20.3)

Laptop 1 (IP Static, 192.168.20.4)

Switch 2

(Lantai 2 Riset dan Pengembangan)

Access Point Lantai 2

PC 11 (IP Static, 192.168.21.2)

PC 12 (IP Static, 192.168.21.4)

Laptop 6 (IP Static, 192.168.21.5)

Tablet PC 0 (IP Static, 192.168.21.3)

Switch 3

(Lantai 3 Personalia)

PC 13 (IP Static, 192.168.22.3)

PC 14 (IP Static, 192.168.22.2)

Switch 4

(Lantai 4 Pemasaran)

Access Point Lantai 4

PC 15 (IP Static, 192.168.23.3)

Smartphone 2 (IP Static, 192.168.23.2)

Tablet PC 1 (IP Static, 192.168.23.4)

Laptop 7 (IP Static, 192.168.23.5)

Switch 6

IP Phone 2

IP Phone 3

IP Phone 4

IP Phone 5

KETERANGAN IP ADDRESS

192.168.2.0/30 = Router Kantor Cab. 1 Gresik dengan router NOC

192.168.30.0/27 = Dept Technology Gresik ke Router Kantor Cab. 1 Gresik

192.168.31.0/28 = Dept Data Office Gresik ke Router Kantor Cab. 1 Gresik

192.168.32.0/28 = Dept Finance Gresol ke Router Kantor Cab. 1 Gresik

192.168.33.0/28 = Dept Sales Operations Router Gresik ke Kantor Cab. 1 Gresik

192.168.34.0/29 = Switch Telepon ke Router Kantor Cab. 1 Gresik

KETERANGAN TOPOLOGI

Switch 1 (Lantai 1 Technology Gresik)
Access Point Lantai 1
PC 9 (IP Static, 192.168.30.3)
PC 16 (IP Static, 192.168.30.2)
Laptop 5 (IP Static, 192.168.30.4)

Switch 2
(Lantai 2 Data Office Gresik)
PC 17 (IP Static, 192.168.31.4)
PC 18 (IP Static, 192.168.31.3)
PC 19 (IP Static, 192.168.31.2)

Switch 3
(Lantai 3 Finance Gresik)
Access Point Lantai 3
PC 20 (IP Static, 192.168.32.2)
Laptop 8 (IP Static, 192.168.32.3)
Laptop 9 (IP Static, 192.168.32.4)

Switch 4
(Lantai 4 Sales Operations Gresik)
Access Point Lantai 4
PC 21 (IP Static, 192.168.33.3)
Smartphone 3 (IP Static, 192.168.33.4)
Tablet PC5 (IP Static, 192.168.33.2)
Laptop 10 (IP Static, 192.168.33.5)

Switch 5
IP Phone6
IP Phone7
IP Phone8
IP Phone9

KETERANGAN IP ADDRESS

192.168.3.0/30 = Router Kantor Cab. 2 Gresik dengan router NOC

192.168.40.0/27 = Dept Technology Gresik 2 ke Router Kantor Cab.2 Gresik

192.168.41.0/28 = Dept Data Office Gresik 2 ke Router Kantor Cab.2 Gresik

192.168.42.0/28 = Dept Finance Gresik 2 ke Router Kantor Cab.2 Gresik

192.168.43.0/28 = Dept Sales Operations Gresik 2 ke Router Kantor Cab.2 Gresik

192.168.44.0/29 = Switch Telepon ke Router Kantor Cab.2 Gresik

KETERANGAN TOPOLOGI

Switch 1 (Lantai 1 Technology Gresik 2)

Access Point Lantai 1

PC 29 (IP Static, 192.168.40.3)

PC 37 (IP Static, 192.168.40.1)

Laptop 15 (IP Static, 192.168.40.4)

Smartphone 9 (IP Static, 192.168.40.5)

Switch 2

(Lantai 2 Data Office Gresik 2)

PC 38 (IP Static, 192.168.41.2)

PC 39 (IP Static, 192.168.41.4)

PC 40 (IP Static, 192.168.41.3)

Switch 3

(Lantai 3 Finance Gresik 2)

Access Point Lantai 3

PC 41 (IP Static, 192.168.42.3)

Tablet PC16 (IP Static, 192.168.42.4)

Tablet PC17 (IP Static, 192.168.42.2)

Switch 4

(Lantai 4 Sales Operations Gresik 2)

Access Point Lantai 4

PC 42 (IP Static, 192.168.43.2)

PC 43 (IP Static, 192.168.43.4)

Smartphone 12 (IP Static,
192.168.43.5)

Smartphone 13 (IP Static,
192.168.43.3)

Switch 5

IP Phone15

IP Phone16

IP Phone17

IP Phone18

KETERANGAN IP ADDRESS

192.168.4.0/30 = Router Kantor Cabang Bangkok Thailand dengan router NOC

192.168.50.0/27 = Dept Bangkok Technology ke Router Kantor Cabang Bangkok

192.168.51.0/28 = Dept Bangkok Data Office ke Router Kantor Cabang Bangkok

192.168.52.0/28 = Dept Bangkok Finance ke Router Kantor Cabang Bangkok

192.168.53.0/28= Dept Bangkok Sales ke Router Kantor Cabang Bangkok

192.168.54.0/29 = Switch Telepon ke Router Kantor Cabang Bangkok

KETERANGAN TOPOLOGI

Switch 1 (Lantai 1 Bangkok Technology)
Access Point Lantai 1
PC 22 (IP Static, 192.168.50.2)
PC 23 (IP Static, 192.168.50.4)
Laptop 14 (IP Static, 192.168.50.5)
Tablet PC14 (IP Static, 192.168.50.3)

Switch 2
(Lantai 2 Bangkok Data Office)
Access point Lantai 2
PC 24 (IP Static, 192.168.51.2)
PC 25 (IP Static, 192.168.51.3)
Laptop 12 (IP Static, 192.168.51.5)
Laptop 13 (IP Static, 192.168.51.4)

Switch 3
(Lantai 3 Bangkok Finance)
Access Point Lantai 3
PC 26 (IP Static, 192.168.52.2)
PC 27 (IP Static, 192.168.52.4)
Tablet PC15 (IP Static, 192.168.52.3)
Smartphone8 (IP Static, 192.168.52.5)

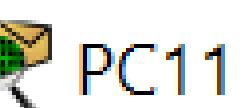
Switch 4
(Lantai 4 Bangkok Sales)
Access Point Lantai 4
PC 28 (IP DHCP, 192.168.53.4)
Tablet PC8 (IP DHCP, 192.168.53.3)
Tablet PC9 (IP DHCP, 192.168.53.2)

Switch 5
IP Phone19
IP Phone20
IP Phone21
IP Phone22



EMAIL

Percobaan Mengirim Email



Physical Config Desktop Programming Attributes

MAIL BROWSER

X

Mails

Compose

Reply

Receive

Delete

Configure Mail

	From	Subject	Received
1	souma@gmail.c...	email testing	Mon Dec 13 2021 22:16:41

email testing
souma@gmail.com
Sent : Mon Dec 13 2021 22:16:41

hai, ini adalah tes email



FTP

(File Transfer Protocol)
Tes Akses, Upload dan Download

Tes Akses FTP

Meminta direktori file yang diunggah
atau tersedia untuk diunduh.

PC1

Physical Config Desktop Programming Attributes

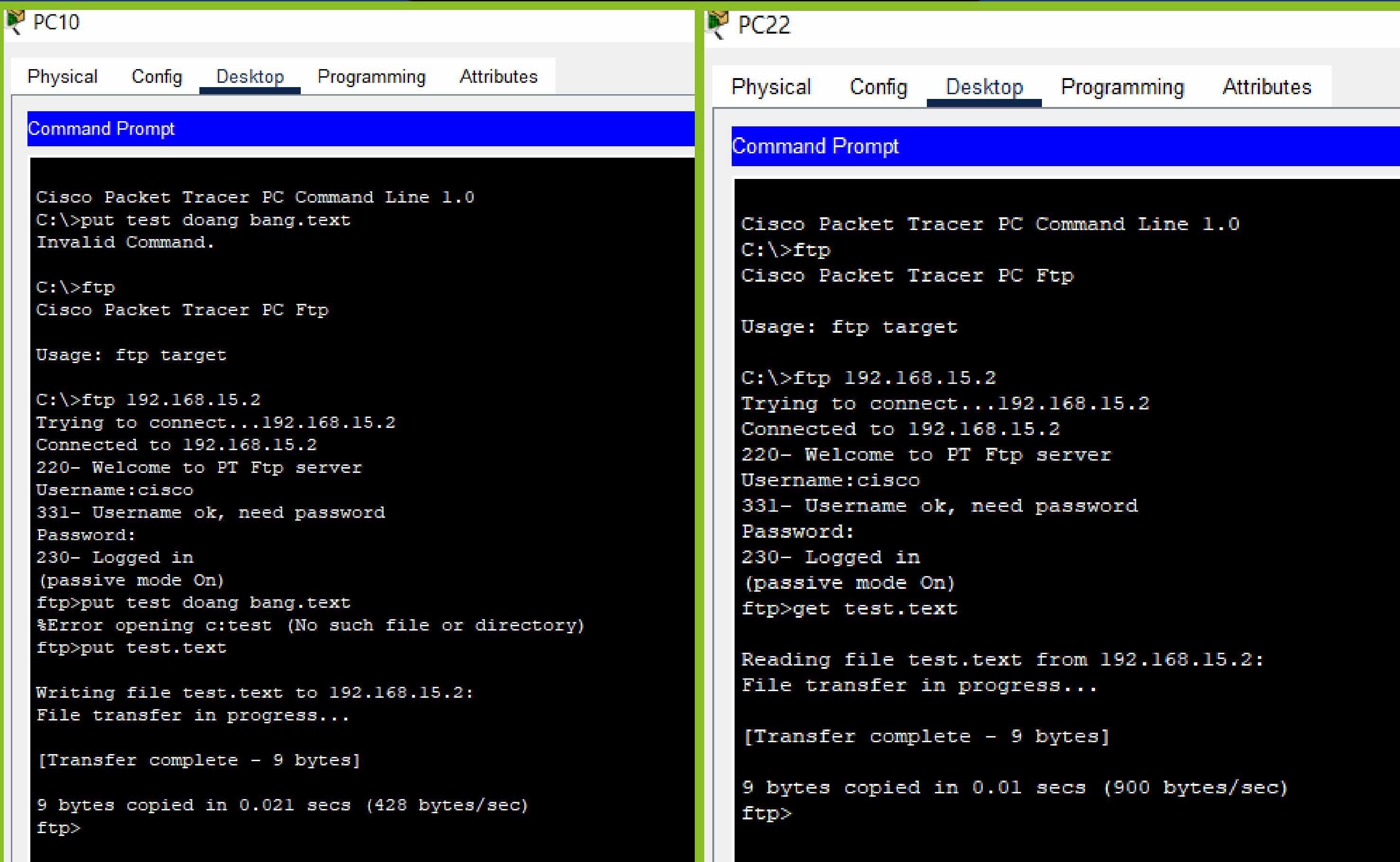
Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ftp dmjk.com
Trying to connect...dmjk.com
Connected to dmjk.com
220- Welcome to PT Ftp server
Username:cisco
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>dir

Listing /ftp directory from dmjk.com:
0 : asa842-k8.bin
5571584
1 : asa923-k8.bin
30468096
2 : c1841-advipservicesk9-mz.124-15.T1.bin
33591768
3 : c1841-ipbase-mz.123-14.T7.bin
13832032
4 : c1841-ipbasek9-mz.124-12.bin
16599160
5 : c1900-universalk9-mz.SPA.155-3.M4a.bin
33591768
6 : c2600-advipservicesk9-mz.124-15.T1.bin
33591768
```

Top

Upload dan Download File



The image shows two Cisco Packet Tracer windows, PC10 and PC22, illustrating the process of uploading and downloading files via FTP.

PC10 (Left Window):

- Desktop tab is selected.
- Command Prompt output:
 - Cisco Packet Tracer PC Command Line 1.0
 - C:\>put test doang bang.text
 - Invalid Command.
 - C:\>ftp
 - Cisco Packet Tracer PC Ftp
 - Usage: ftp target
 - C:\>ftp 192.168.15.2
 - Trying to connect...192.168.15.2
 - Connected to 192.168.15.2
 - 220- Welcome to PT Ftp server
 - Username:cisco
 - 331- Username ok, need password
 - Password:
 - 230- Logged in
(passive mode On)
 - ftp>put test doang bang.text
 - %Error opening c:test (No such file or directory)
 - ftp>put test.text
 - Writing file test.text to 192.168.15.2:
 - File transfer in progress...
 - [Transfer complete - 9 bytes]
 - 9 bytes copied in 0.021 secs (428 bytes/sec)
 - ftp>

PC22 (Right Window):

- Desktop tab is selected.
- Command Prompt output:
 - Cisco Packet Tracer PC Command Line 1.0
 - C:\>ftp
 - Cisco Packet Tracer PC Ftp
 - Usage: ftp target
 - C:\>ftp 192.168.15.2
 - Trying to connect...192.168.15.2
 - Connected to 192.168.15.2
 - 220- Welcome to PT Ftp server
 - Username:cisco
 - 331- Username ok, need password
 - Password:
 - 230- Logged in
(passive mode On)
 - ftp>get test.text
 - Reading file test.text from 192.168.15.2:
 - File transfer in progress...
 - [Transfer complete - 9 bytes]
 - 9 bytes copied in 0.01 secs (900 bytes/sec)
 - ftp>



VPN

(Virtual Private Network)

Connect VPN

PC7

Physical Config Desktop Programming Attributes

VPN Configuration

VPN

GroupName:	cisco
Group Key:	cisco123
Host IP (Server IP):	192.168.5.2
Username:	admin
Password:	*****

Cisco Packet Trac... X

VPN is connected.

OK



DNS

(Domain Name System)

DNS

Pada server NOC, DNS (Domain Name System) telah diaktifkan, sehingga semua enddevices yang ada pada kantor pusat dan cabang dapat mengakses web perusahaan secara langsung melalui domain dmjk.com

Server

Physical Config Services Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS**
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DNS

DNS Service On Off

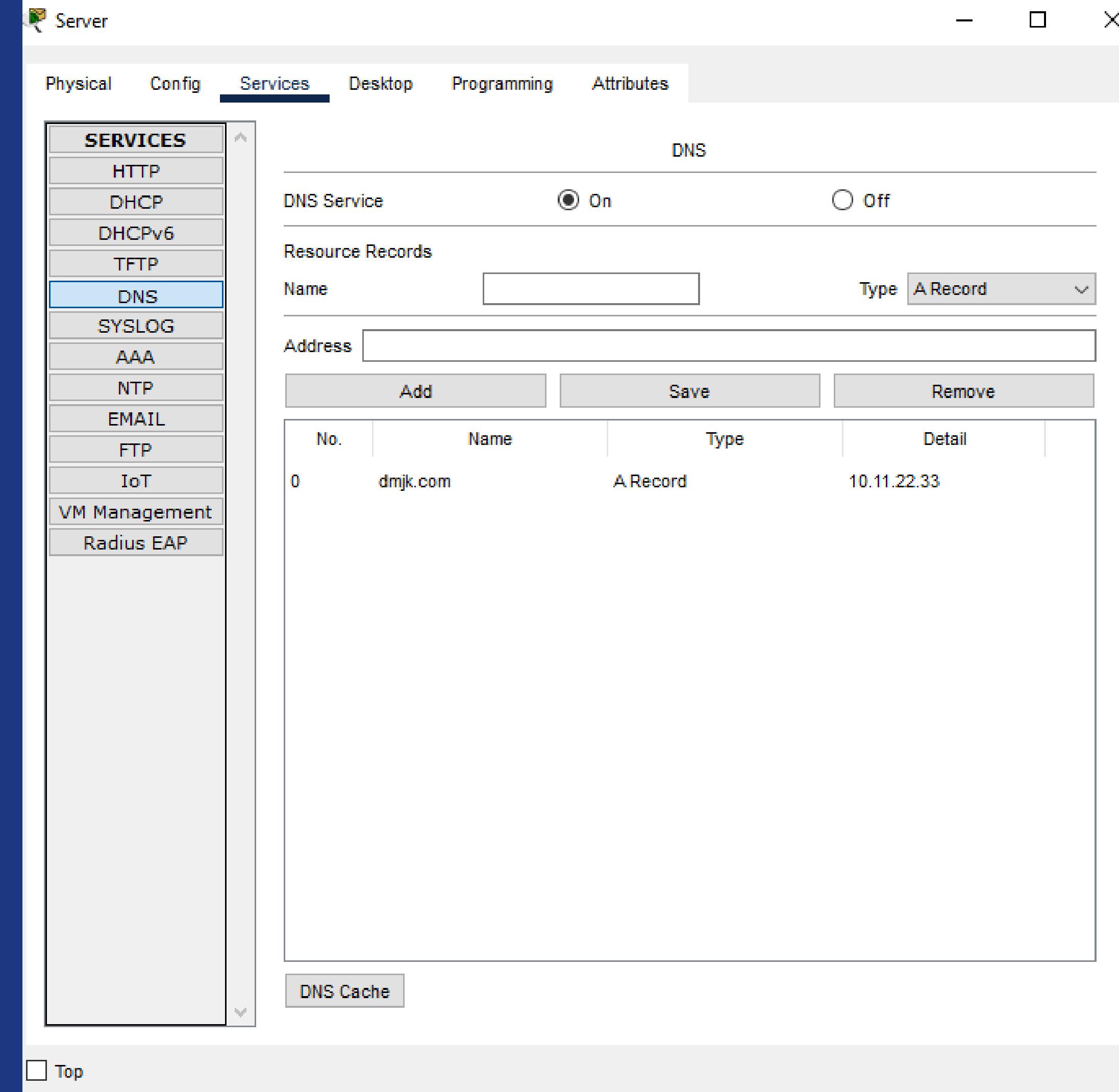
Resource Records

Name Type **A Record**

No.	Name	Type	Detail
0	dmjk.com	A Record	10.11.22.33

DNS Cache

Top





WEBSITE

Tes masuk ke website melalui PC
Perusahaan



PC9



Physical Config Desktop Programming Attributes

Web Browser



URL

<http://192.168.15.2>

Go

Stop

Cisco Packet Tracer

Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.

Quick Links:

[A small page](#)

[Copyrights](#)

[Image page](#)

[Image](#)



DRC

(Disaster Recovery Center)

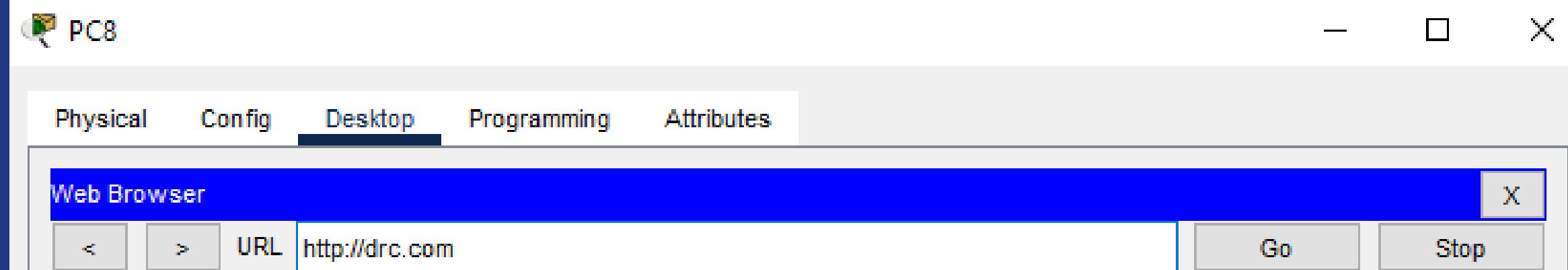
DRC

Keterangan :

NETWORK ADDRESS
192.168.65.0
192.168.66.0

SERVER

10.11.55.33



WEB DRC

Welcome to WEB DRC. Opening doors to new opportunities. Mind Wide Open.

Quick Links:

[A small page](#)

[Copyrights](#)

[Image page](#)

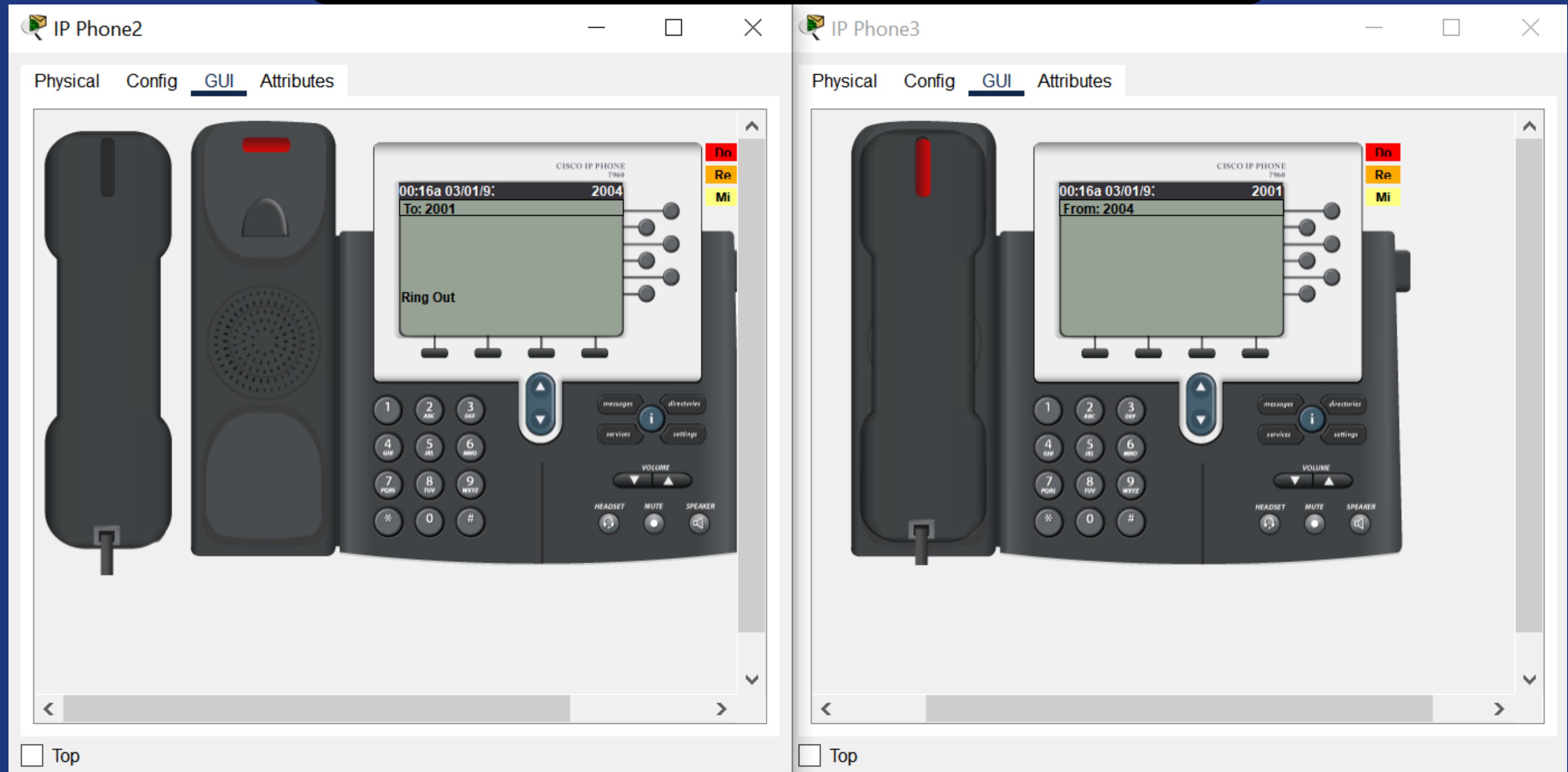
[Image](#)



VoIP

(Voice over Internet Protocol)

VoIP dapat digunakan (Ring out)



Kedua VoIP Terhubung (Connected)

IP Phone2

Physical Config **GUI** Attributes

The screenshot shows the Cisco IP Phone2 interface. The main display shows "00:16a 03/01/9: 2004" and "To: 2001". Below this, it says "Connected". The right side of the screen displays a vertical stack of five small circular icons. At the bottom, there is a numeric keypad from 1 to 9, 0, *, #, and function keys for messages, directories, service, and settings, along with volume and mute controls.

Top

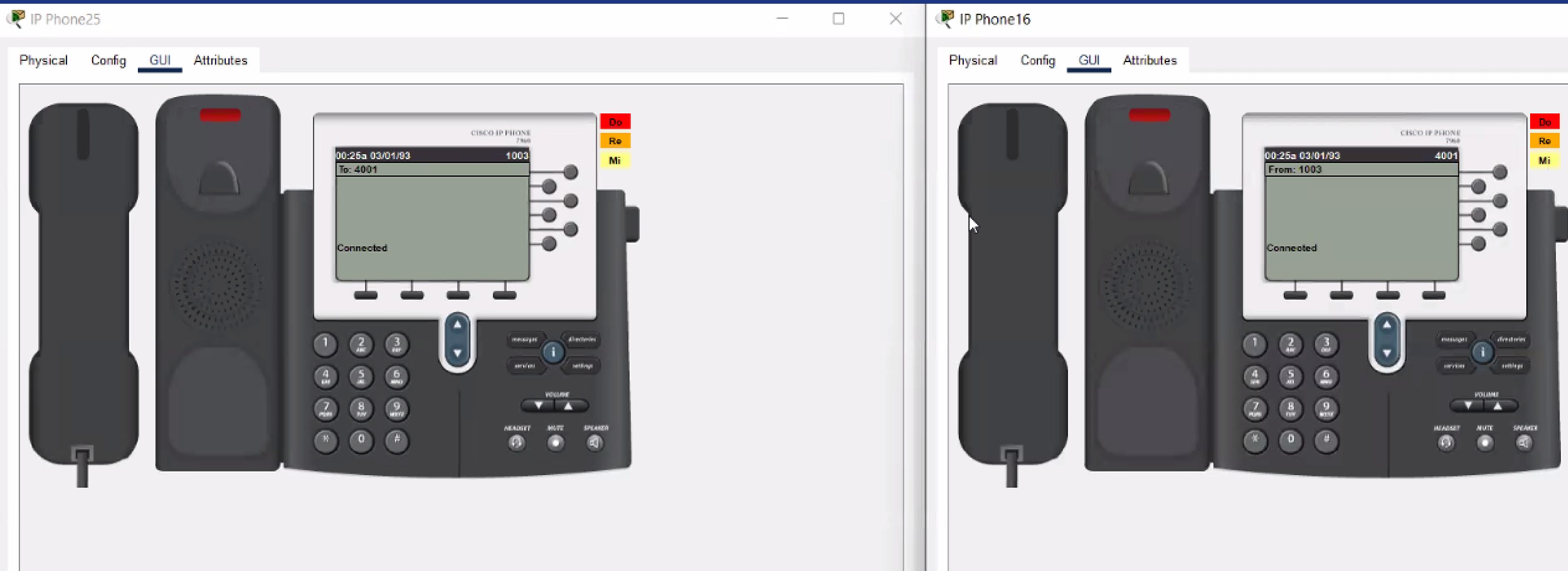
IP Phone3

Physical Config **GUI** Attributes

The screenshot shows the Cisco IP Phone3 interface. The main display shows "00:16a 03/01/9: 2001" and "From: 2004". Below this, it says "Connected". The right side of the screen displays a vertical stack of five small circular icons. At the bottom, there is a numeric keypad from 1 to 9, 0, *, #, and function keys for messages, directories, service, and settings, along with volume and mute controls.

Top

Tes VoIP antar cabang (Connected)



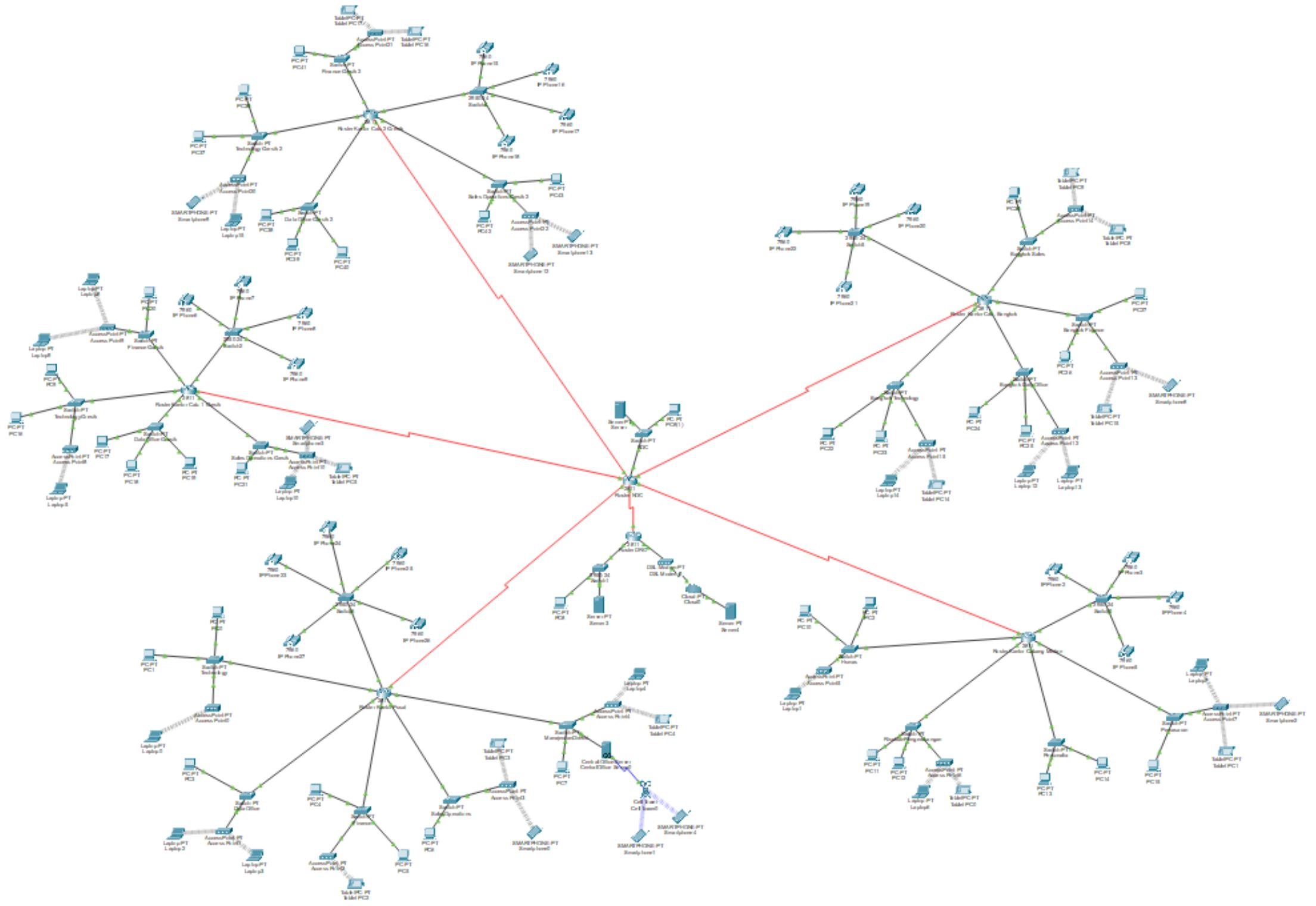
Kantor Pusat (Medan)

Kantor Cabang Gresik

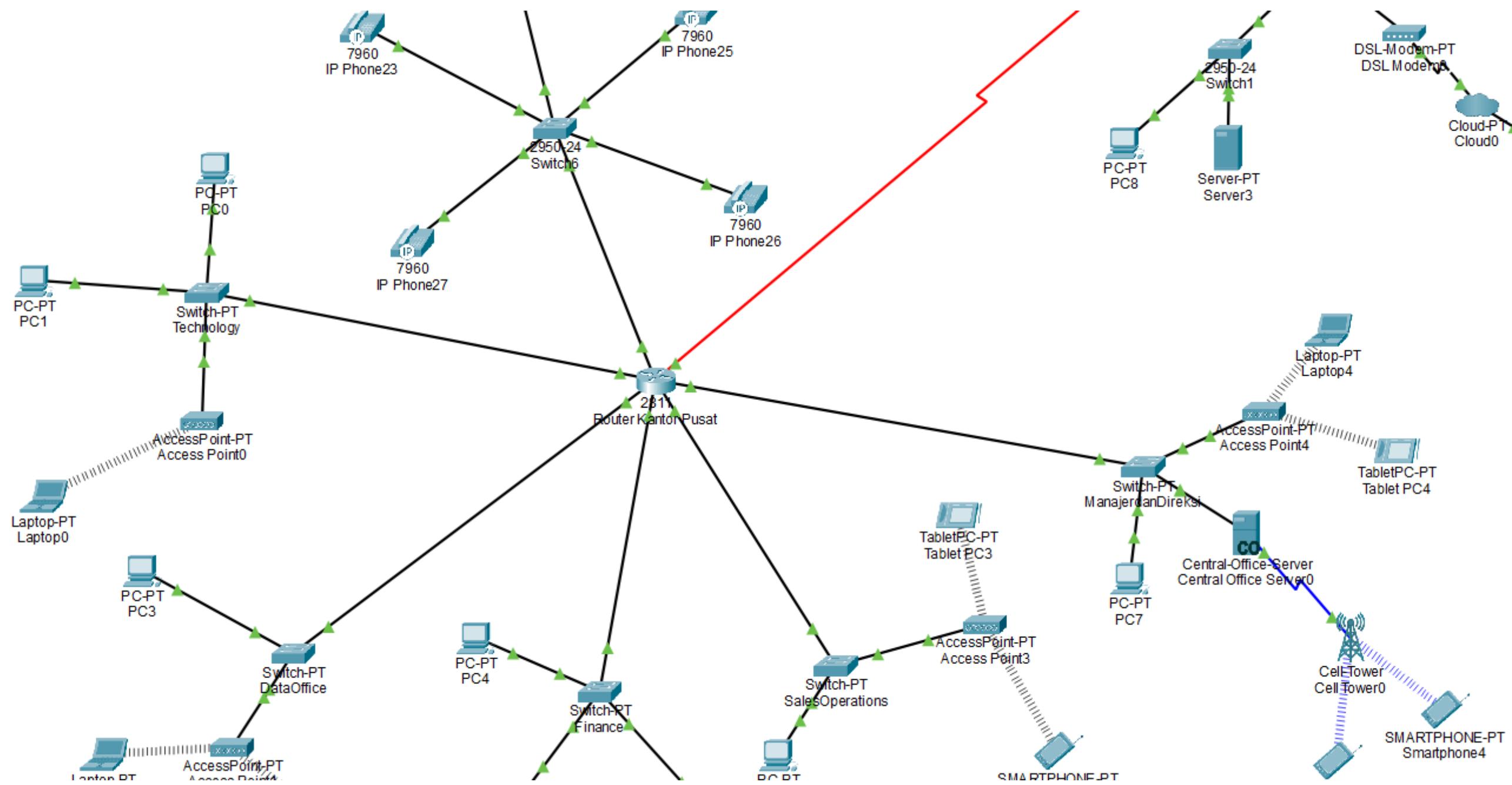


Topologi Jaringan

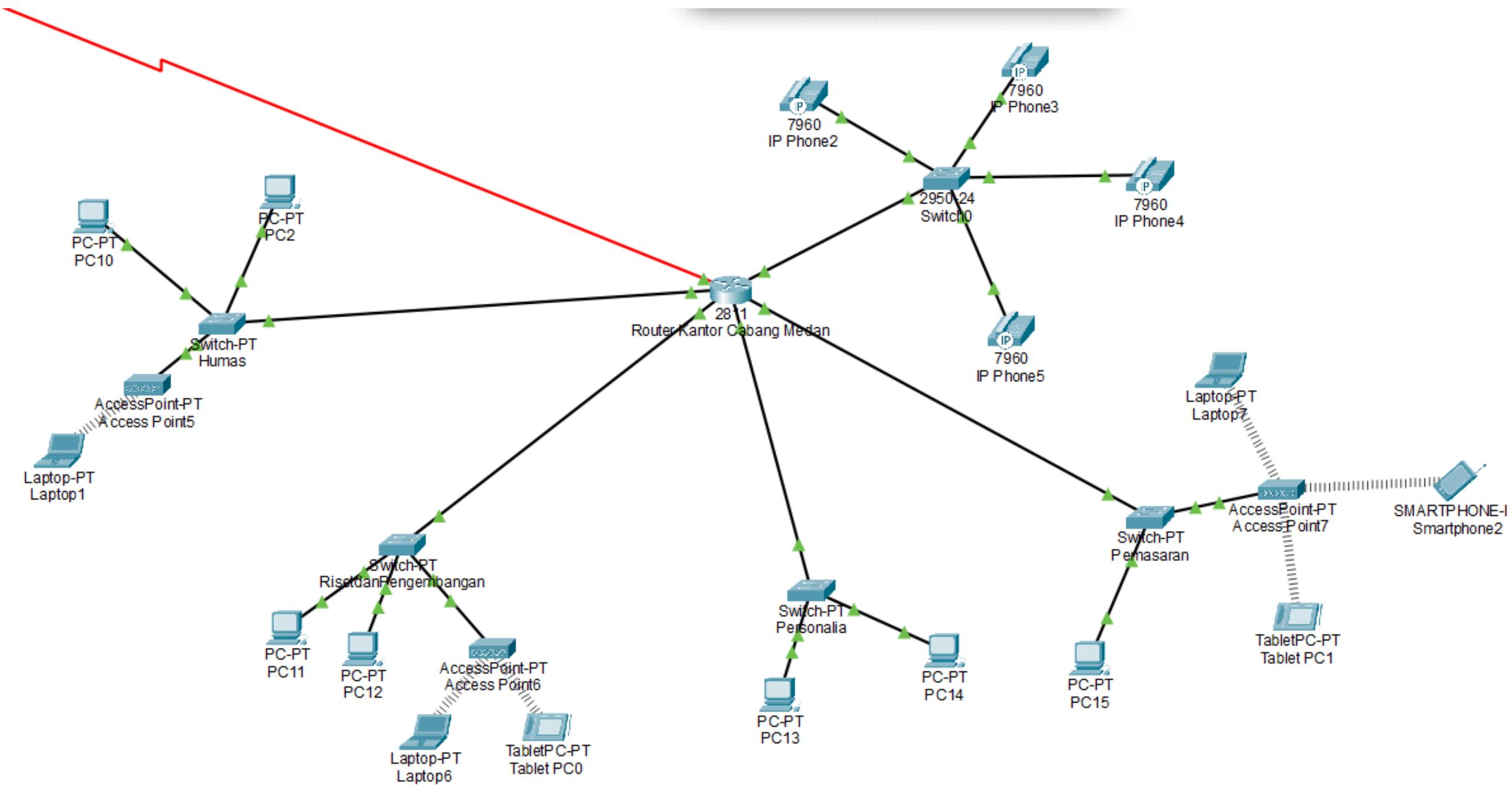
Desain Topologi Jaringan



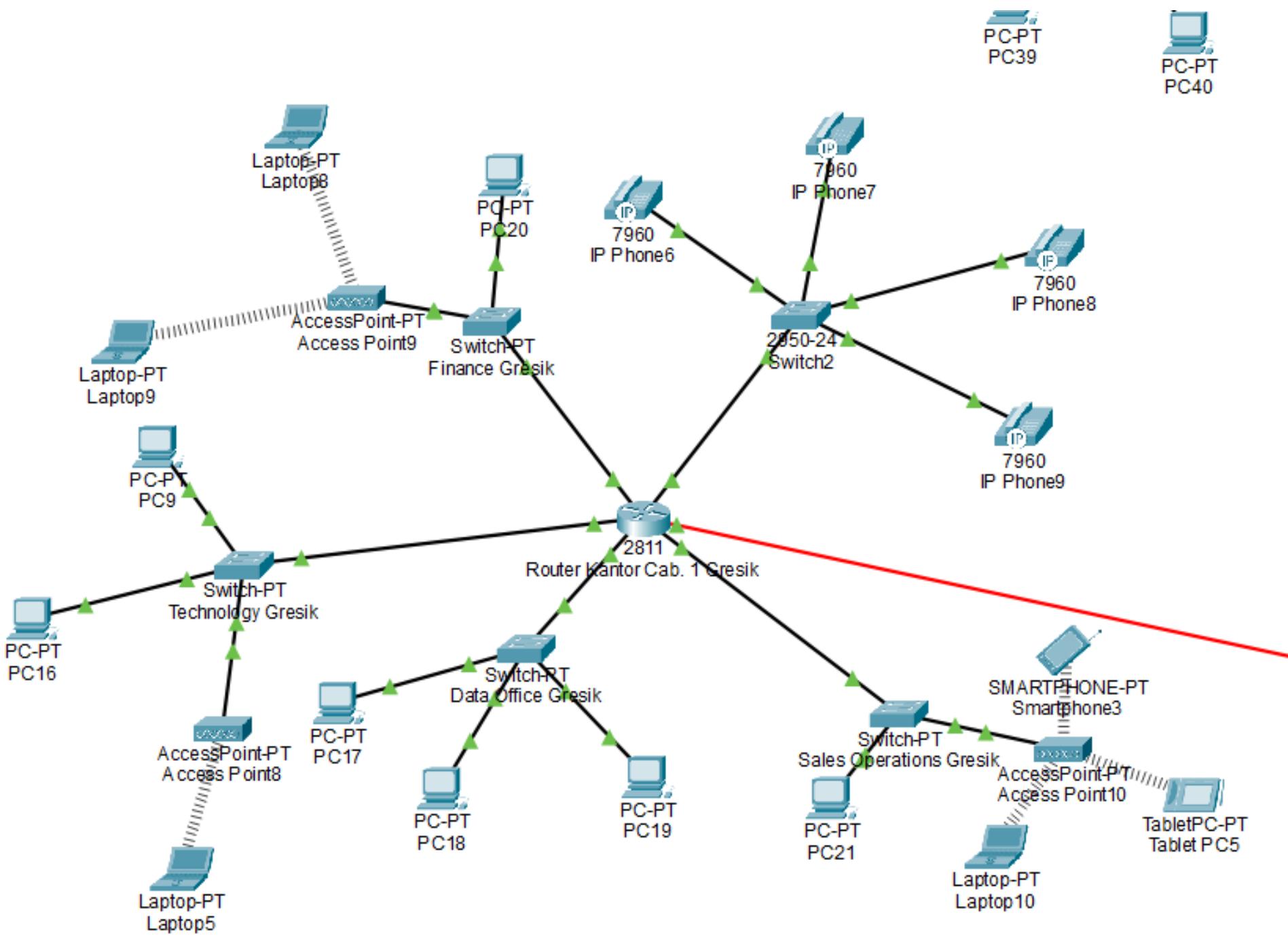
Desain Topologi Kantor Pusat



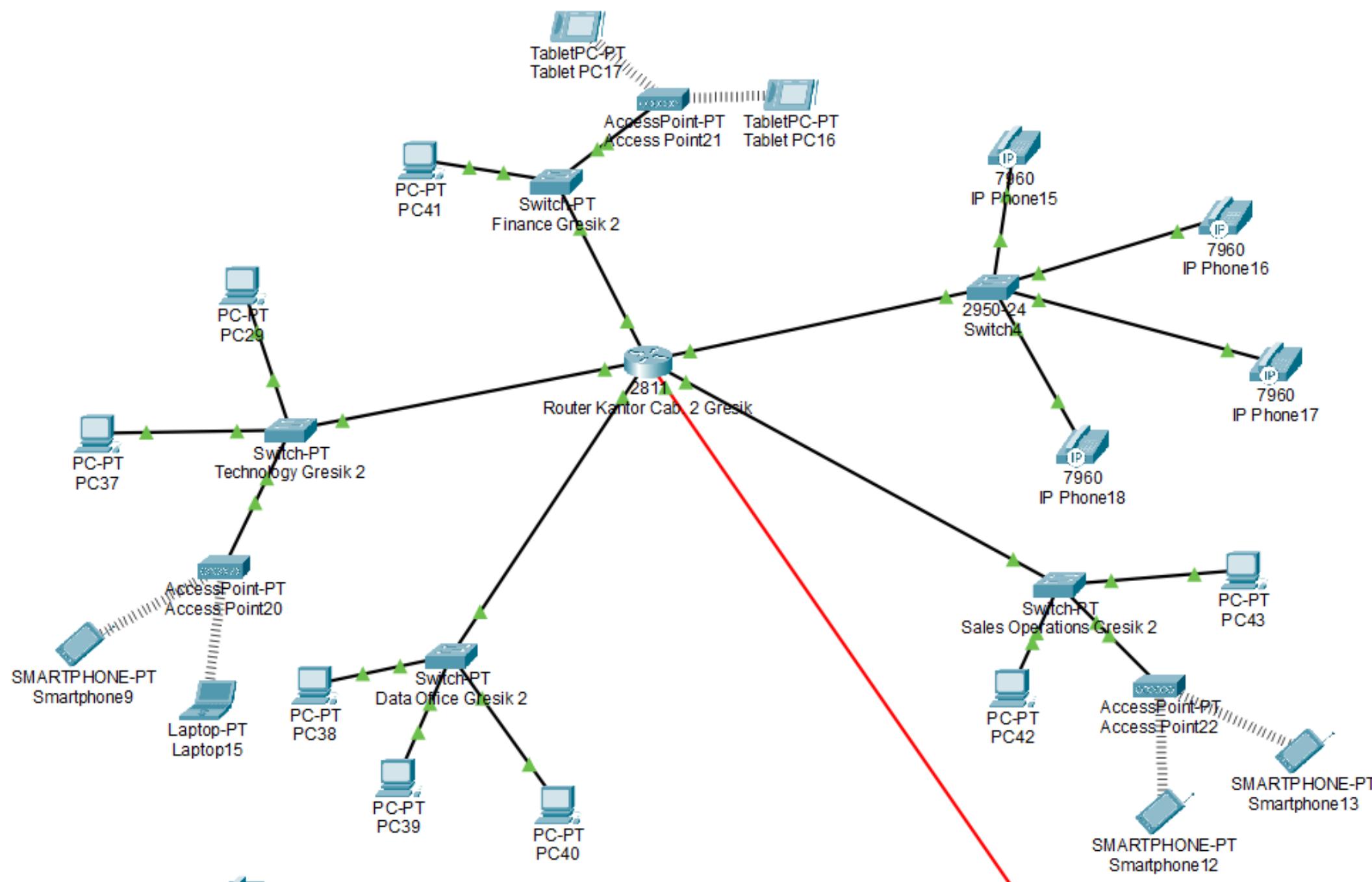
Desain Topologi Cabang I (Medan)



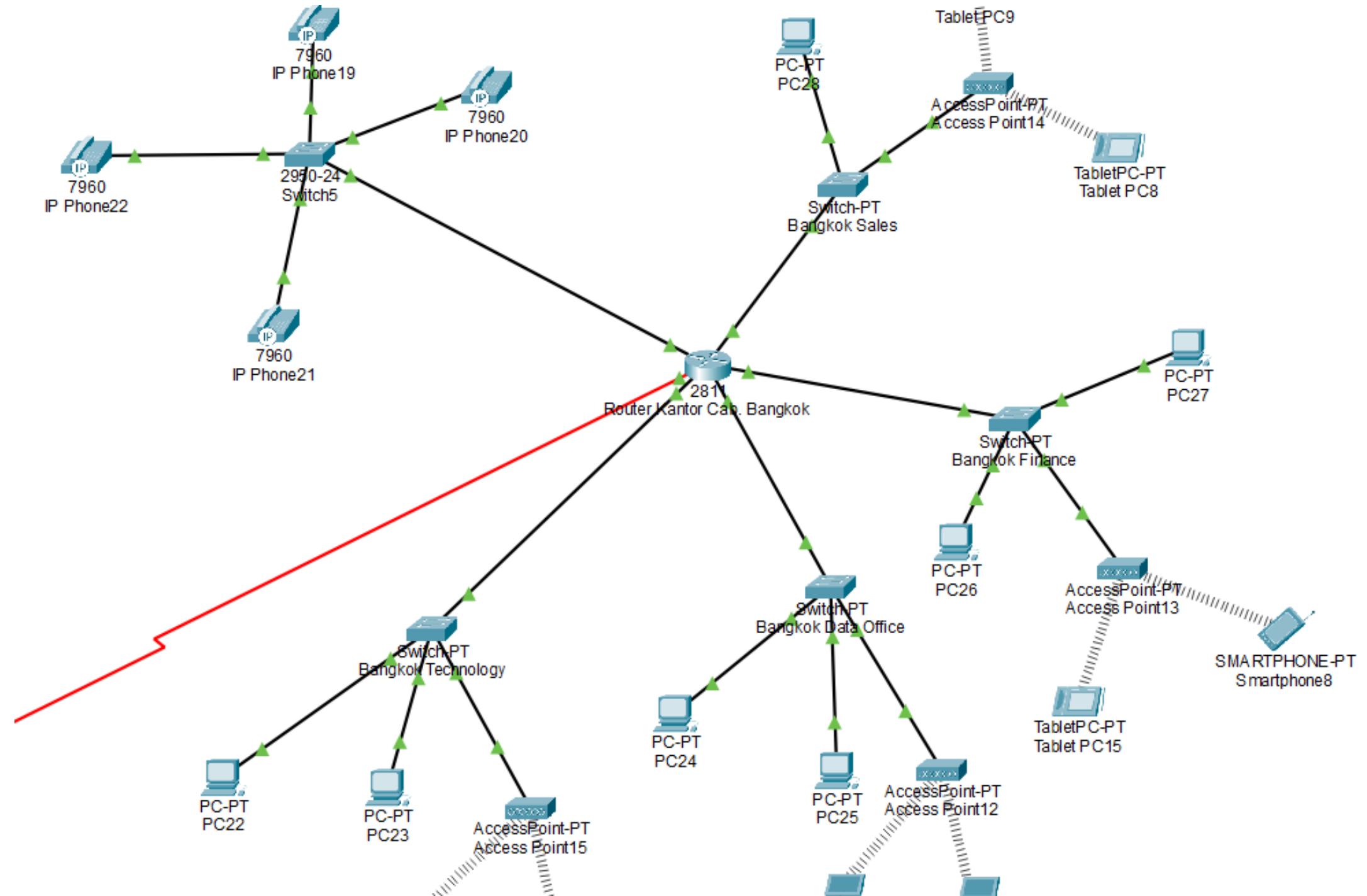
Desain Topologi Cabang 2 (Gresik)



Desain Topologi Cabang 3 (Gresik)



Desain Topologi Cabang 4 (Bangkok)



A wide-angle photograph of a modern architectural complex. The buildings feature a distinctive curved, undulating facade composed of numerous rectangular panels, likely glass or metal, which create a rhythmic, wave-like pattern across the entire structure. The perspective is from a low vantage point, looking up at the building's height. The sky above is a clear, pale blue.

Thank You!