

**LB01 - KELompok 3**

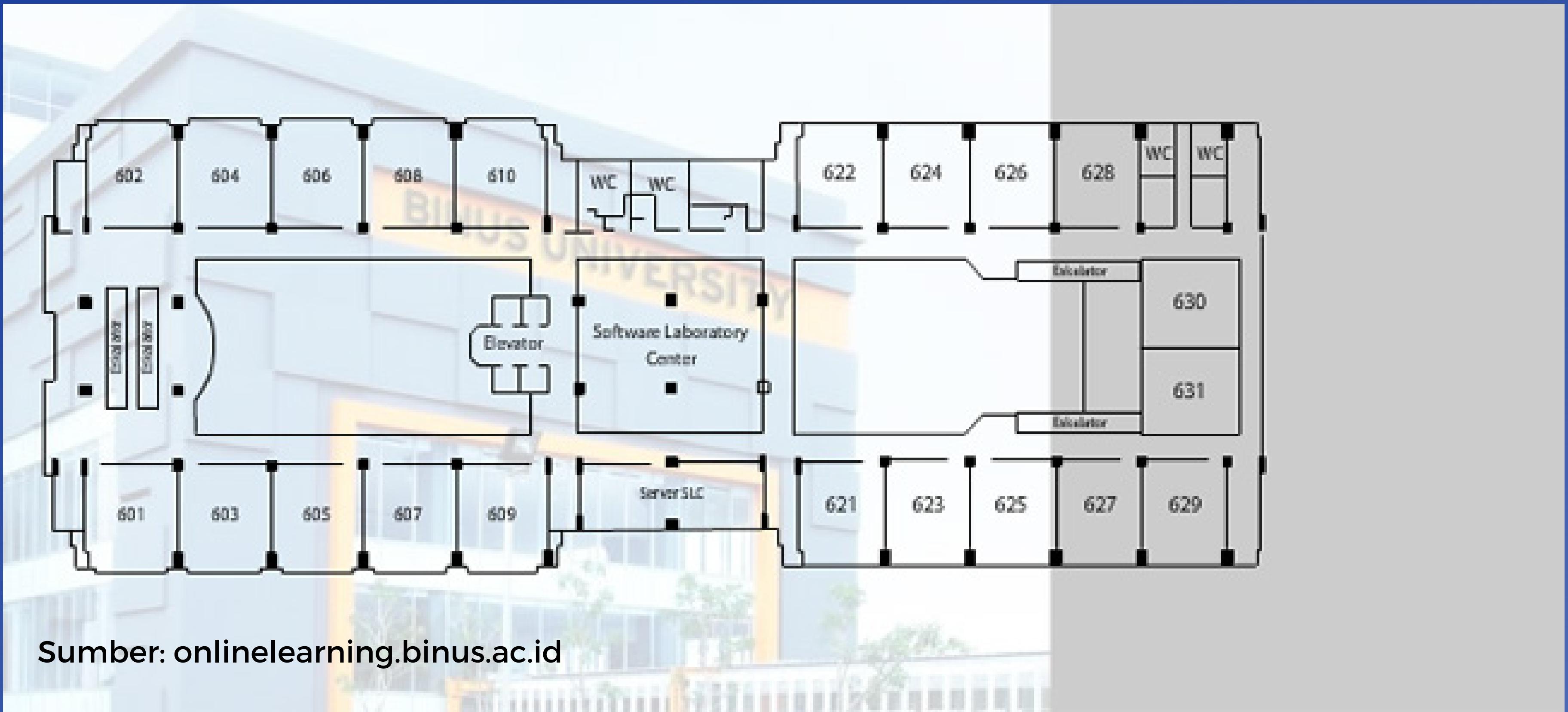
**COMPUTER  
NETWORKS**

**AoL - Group Case Study/Project**

# LB01 - KELOMPOK 3

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# PETA KAMPUS ANGGREK LANTAI 6



Sumber: [onlinelearning.binus.ac.id](http://onlinelearning.binus.ac.id)

# **UKURAN KAMPUS ANGGREK LANTAI 6**

**Ukuran lantai:** 116,5 m x 43 m x 3 m

- **Lab Komputer:** 9 m x 10,5 m
- **Software Laboratory Center (SLC):** 18 m x 16,5 m
- **Server SLC:** 18 m x 6,5 m
- **Toilet Tengah:** 10,5 m x 7 m
- **Toilet Ujung:** 7 m x 5 m

# DEVICE KAMPUS ANGGREK LANTAI 6

Ruang	Jumlah Device	Keterangan
Lab Komputer	$(21 \times 42) + 4 = 886$	40 PC + 1 PC Pengajar + 1 48-Port Switch + 4 Router
Software Laboratory Center (SLC)	32	30 PC + 1 48-Port Switch + 1 Router
Server SLC	28	26 PC + 1 48-Port Switch + 1 Router
<b>Total</b>	<b>947</b>	896 PC + 21 PC Pengajar + 23 48-Port Switch + 7 Router

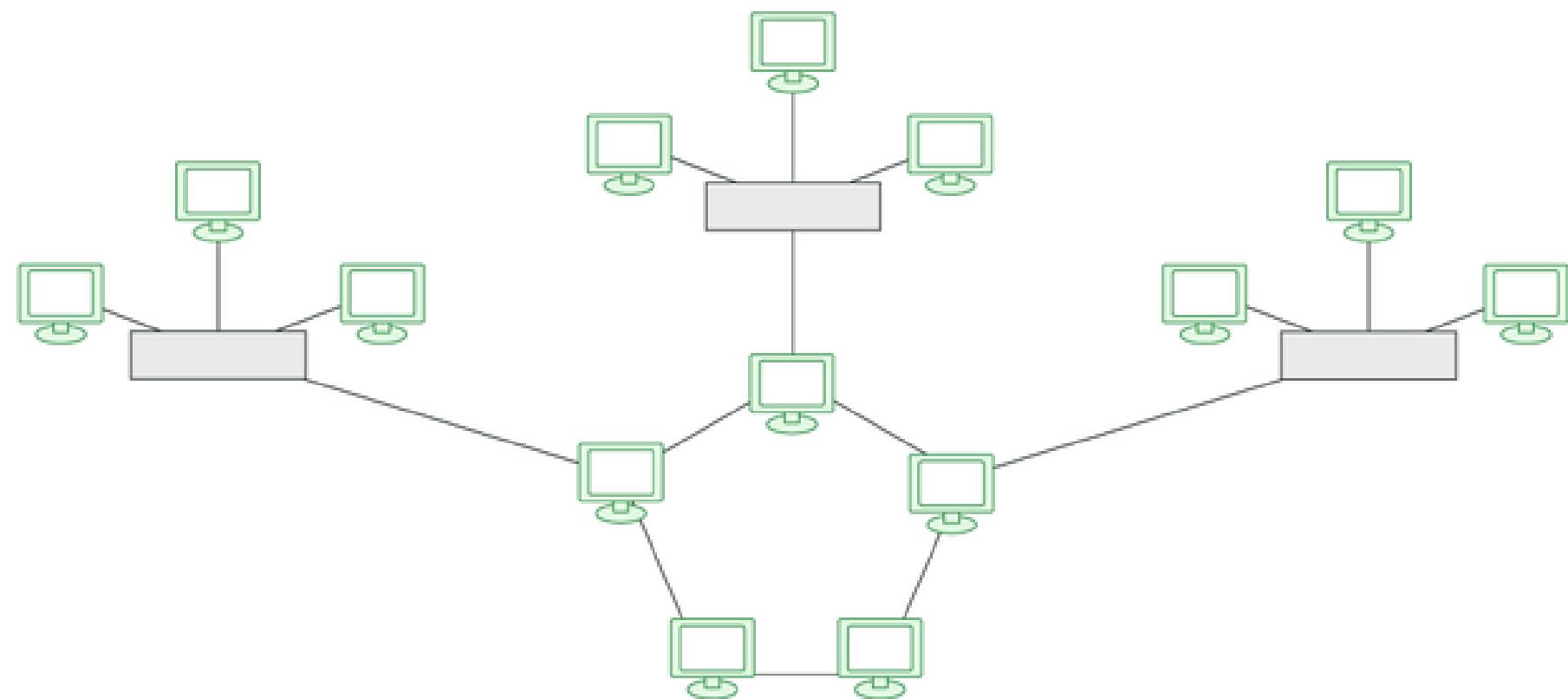
# HARGA NETWORK DEVICE

## KAMPUS ANGGREK LANTAI 6

Jenis	Jumlah	Harga
TL-SG1048D 48-Port Gigabit Rackmount Switch	23	23 x Rp8.999.000
ER7212PC Omada 3-in-1 Gigabit VPN Router	7	7 x Rp7.700.000
Belden Ethernet Cable 1583A Cat 5e UTP CMR 305 m	50	50 x Rp1.590.000
Vention RJ45 Cat 5e UTP Modular Network Head Connector 10 pcs	2.280	2.280 x Rp9.200
<b>Total</b>	<b>2.360</b>	<b>Rp361.353.000</b>

# STAR-RING HYBRID TOPOLOGY

## KAMPUS ANGGREK LANTAI 6



Sumber: [www.geeksforgeeks.org](http://www.geeksforgeeks.org)

**Star-Ring Hybrid Topology:**  
kombinasi beberapa Star Topology yang  
saling dihubungkan oleh Ring Topology.

**Alasan menggunakan:**

- Seluruh PC dapat dikontrol dari PC Pengajar & terkoneksi dengan Server SLC
- Fleksibilitas & skalabilitas tinggi
- Mudah mendekksi & troubleshoot error
- Mampu menangani traffic bervolume tinggi

# UTP CAT 5E CABLE & RJ45 CONNECTOR

## KAMPUS ANGGREK LANTAI 6



Sumber:  
[down-id.img.susercontent.com](http://down-id.img.susercontent.com), [www.vention.id](http://www.vention.id)

### Alasan menggunakan UTP Cat 5e Cable:

- Harga terjangkau
- Data transfer rate mencapai 1 Gbps & jangkauan mencapai 100 m
- Daya tahan yang baik
- Banyak tersedia di pasaran

### Alasan menggunakan RJ45 Connector:

- Bandwidth mencapai 10 Gbps
- Harga terjangkau
- Daya tahan tinggi
- Mudah dipasang

### Konfigurasi jaringan:

- PC ke Switch (Straight-through Cable)
- Switch ke Router (Straight-through Cable)
- Router ke Router (Crossover Cable)

# **FLSM SUBNETTING**

## **KAMPUS ANGGREK LANTAI 6**

**Fixed-Length Subnet Masking (FLSM):**

subnetting yang mewajibkan semua subnet & host ID berukuran sama.

**Alasan menggunakan:**

- Kemudahan subnetting
- Efisiensi routing
- Manajemen yang mudah
- Keamanan yang lebih baik

# **IP ADDRESS**

# **KAMPUS ANGGREK LANTAI 6**

**IP Awal:** 10.22.100.0

**Host Terbesar:** 41 address

$$2^n - 2 \geq 41$$

$$n = 6$$

$$32 - 6 = /26$$

**Subnet Mask:** 255.255.255.192

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 6

### Server SLC

**Host:** 26  
**NA:** 10.22.100.0  
**Gateway:** 10.22.100.1  
**BA:** 10.22.100.63  
**IP Range:**  
10.22.100.1 - 10.22.100.62

### Software Laboratory Center (SLC)

**Host:** 30  
**NA:** 10.22.100.64  
**Gateway:** 10.22.100.65  
**BA:** 10.22.100.127  
**IP Range:**  
10.22.100.65 - 10.22.100.126

### Lab Komputer 601

**Host:** 41  
**NA:** 10.22.100.128  
**Gateway:** 10.22.100.129  
**BA:** 10.22.100.191  
**IP Range:**  
10.22.100.129 - 10.22.100.190

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 6

### Lab Komputer 602

**Host:** 41  
**NA:** 10.22.100.192  
**Gateway:** 10.22.100.193  
**BA:** 10.22.100.255  
**IP Range:**  
10.22.100.193 - 10.22.100.254

### Lab Komputer 603

**Host:** 41  
**NA:** 10.22.101.0  
**Gateway:** 10.22.101.1  
**BA:** 10.22.101.63  
**IP Range:**  
10.22.101.1 - 10.22.101.62

### Lab Komputer 604

**Host:** 41  
**NA:** 10.22.101.64  
**Gateway:** 10.22.101.65  
**BA:** 10.22.101.127  
**IP Range:**  
10.22.101.65 - 10.22.101.126

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 6

**Lab Komputer**  
**605**

**Host:** 41  
**NA:** 10.22.101.128  
**Gateway:** 10.22.101.129  
**BA:** 10.22.101.191  
**IP Range:**  
10.22.101.129 - 10.22.101.190

**Lab Komputer**  
**606**

**Host:** 41  
**NA:** 10.22.101.192  
**Gateway:** 10.22.101.193  
**BA:** 10.22.101.255  
**IP Range:**  
10.22.101.193 - 10.22.101.254

**Lab Komputer**  
**607**

**Host:** 41  
**NA:** 10.22.102.0  
**Gateway:** 10.22.102.1  
**BA:** 10.22.102.63  
**IP Range:**  
10.22.102.1 - 10.22.102.62

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 6

**Lab Komputer**  
**608**

**Host:** 41  
**NA:** 10.22.102.64  
**Gateway:** 10.22.102.65  
**BA:** 10.22.102.127  
**IP Range:**  
10.22.102.65 - 10.22.102.126

**Lab Komputer**  
**609**

**Host:** 41  
**NA:** 10.22.102.128  
**Gateway:** 10.22.102.129  
**BA:** 10.22.102.191  
**IP Range:**  
10.22.102.129 - 10.22.102.190

**Lab Komputer**  
**610**

**Host:** 41  
**NA:** 10.22.102.192  
**Gateway:** 10.22.102.193  
**BA:** 10.22.102.255  
**IP Range:**  
10.22.102.193 - 10.22.102.254

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 6

**Lab Komputer**  
**621**

**Host:** 41  
**NA:** 10.22.103.0  
**Gateway:** 10.22.103.1  
**BA:** 10.22.103.63  
**IP Range:**  
10.22.103.1 - 10.22.103.62

**Lab Komputer**  
**622**

**Host:** 41  
**NA:** 10.22.103.64  
**Gateway:** 10.22.103.65  
**BA:** 10.22.103.127  
**IP Range:**  
10.22.103.65 - 10.22.103.126

**Lab Komputer**  
**623**

**Host:** 41  
**NA:** 10.22.103.128  
**Gateway:** 10.22.103.129  
**BA:** 10.22.103.191  
**IP Range:**  
10.22.103.129 - 10.22.103.190

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 6

### Lab Komputer 624

**Host:** 41  
**NA:** 10.22.103.192  
**Gateway:** 10.22.103.193  
**BA:** 10.22.103.255  
**IP Range:**  
10.22.103.193 - 10.22.103.254

### Lab Komputer 625

**Host:** 41  
**NA:** 10.22.104.0  
**Gateway:** 10.22.104.1  
**BA:** 10.22.104.63  
**IP Range:**  
10.22.104.1 - 10.22.104.62

### Lab Komputer 626

**Host:** 41  
**NA:** 10.22.104.64  
**Gateway:** 10.22.104.65  
**BA:** 10.22.104.127  
**IP Range:**  
10.22.104.65 - 10.22.104.126

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 6

**Lab Komputer**  
**627**

**Host:** 41  
**NA:** 10.22.104.128  
**Gateway:** 10.22.104.129  
**BA:** 10.22.104.191  
**IP Range:**  
10.22.104.129 - 10.22.104.190

**Lab Komputer**  
**628**

**Host:** 41  
**NA:** 10.22.104.192  
**Gateway:** 10.22.104.193  
**BA:** 10.22.104.255  
**IP Range:**  
10.22.104.193 - 10.22.104.254

**Lab Komputer**  
**629**

**Host:** 41  
**NA:** 10.22.105.0  
**Gateway:** 10.22.105.1  
**BA:** 10.22.105.63  
**IP Range:**  
10.22.105.1 - 10.22.105.62

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 6

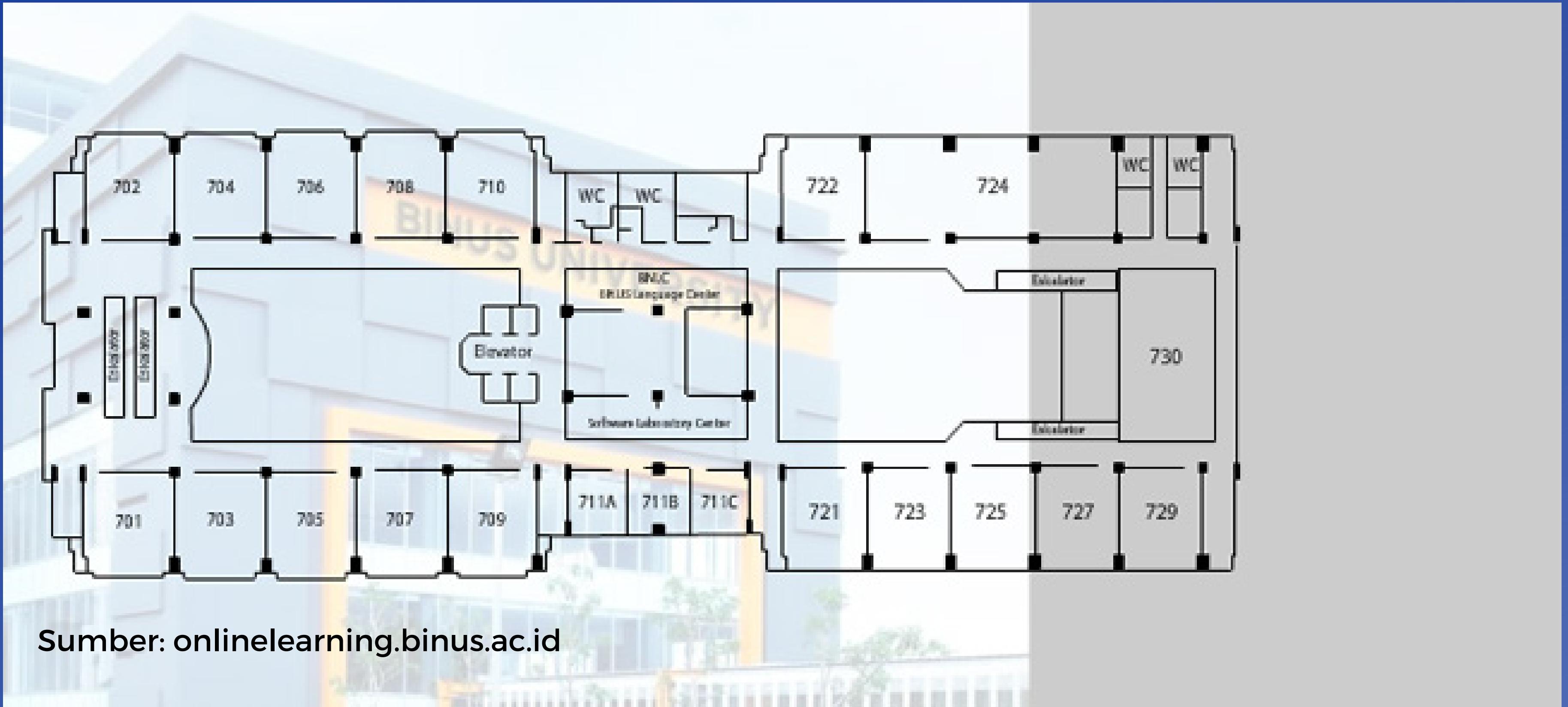
**Lab Komputer**  
**630**

**Host:** 41  
**NA:** 10.22.105.64  
**Gateway:** 10.22.105.65  
**BA:** 10.22.105.127  
**IP Range:**  
10.22.105.65 - 10.22.105.126

**Lab Komputer**  
**631**

**Host:** 41  
**NA:** 10.22.105.128  
**Gateway:** 10.22.105.129  
**BA:** 10.22.105.191  
**IP Range:**  
10.22.105.129 - 10.22.105.190

# PETA KAMPUS ANGGREK LANTAI 7



Sumber: [onlinelearning.binus.ac.id](http://onlinelearning.binus.ac.id)

# **UKURAN KAMPUS ANGGREK LANTAI 7**

**Ukuran lantai:** 114,5 m x 43 m x 3 m

- **Ruang Kelas:** 9 m x 10,5 m
- **Lab Komputer:** 8,5 m x 10 m
- **Lab Komputer 711A, 711B, 711C:** 6 m x 6,5 m
- **Lab Komputer 724:** 24,5 m x 10,5 m
- **Lab Komputer 730:** 9,5 m x 18 m
- **BINUS Language Center & SLC:** 18 m x 18 m
- **Toilet Tengah:** 11 m x 7 m
- **Toilet Ujung:** 7 m x 5,5 m

# DEVICE KAMPUS ANGGREK LANTAI 7

Ruang	Jumlah Device	Keterangan
Ruang Kelas	$(10 \times 2) + 3 = 23$	1 PC Pengajar + 1 5-Port Switch + 3 Router
Lab Komputer	$(6 \times 42) + 1 = 253$	40 PC + 1 PC Pengajar + 1 48-Port Switch + 1 Router
Lab Komputer 711A, 711B, 711C	$(3 \times 18) + 1 = 55$	16 PC + 1 PC Pengajar + 1 24-Port Switch + 1 Router
Lab Komputer 724	125	120 PC + 1 PC Pengajar + 3 48-Port Switch + 1 Router
Lab Komputer 730	55	50 PC + 1 PC Pengajar + 3 24-Port Switch + 1 Router
BINUS Language Center & SLC	32	30 PC + 1 48-Port Switch + 1 Router
<b>Total</b>	<b>544</b>	488 PC + 21 PC Pengajar + 10 5-Port Switch + 10 48-Port Switch + 6 24-Port Switch + 9 Router

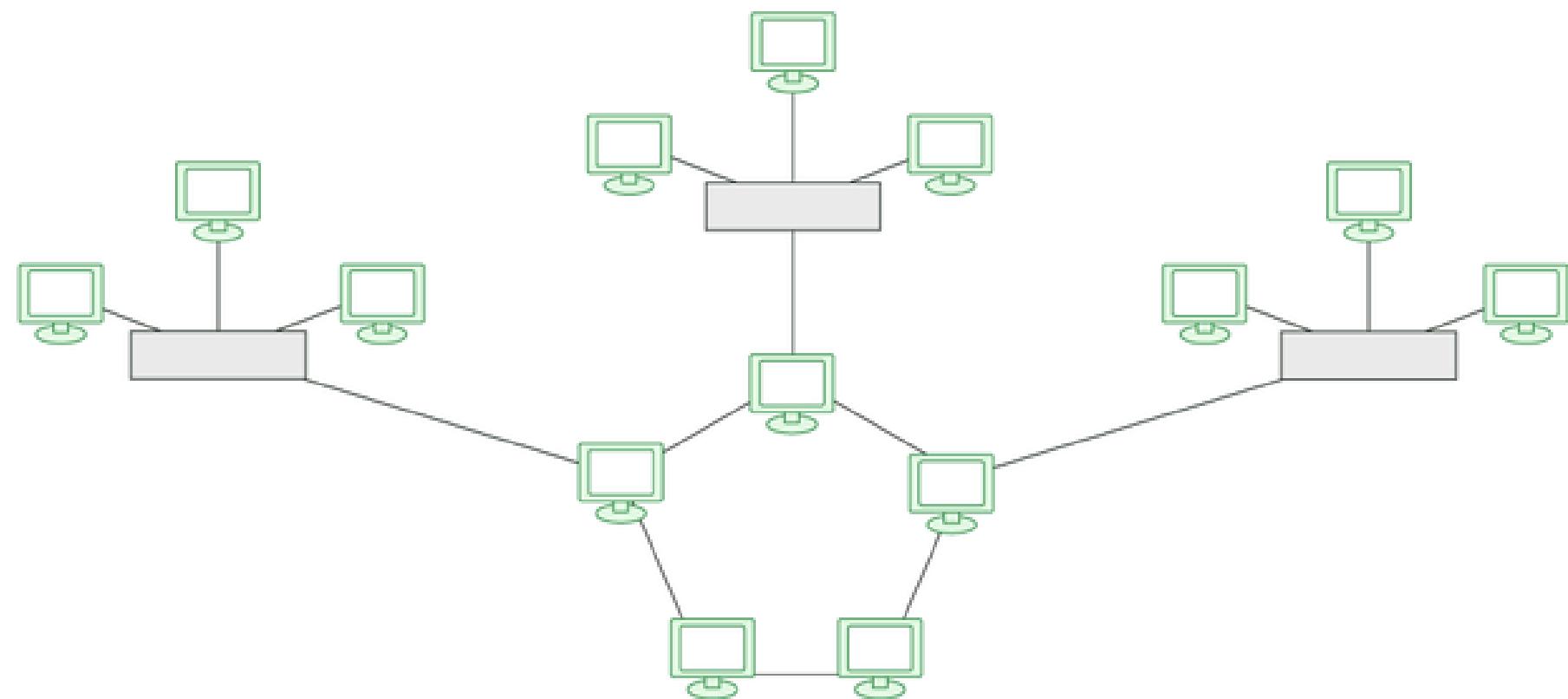
# HARGA NETWORK DEVICE

## KAMPUS ANGGREK LANTAI 7

Jenis	Jumlah	Harga
TL-SG1048 48-Port Gigabit Rackmount Switch	10	10 x Rp8.999.000
TL-SG1024 24-Port Gigabit Rackmount Switch	6	6 x Rp2.800.000
TL-SG105 5-Port 10/100/1000 Mbps Desktop Switch	10	10 x Rp620.000
ER7212PC Omada 3-in-1 Gigabit VPN Router	9	9 x Rp7.700.000
Belden Ethernet Cable 1583A Cat 5e UTP CMR 305 m	49	49 x Rp1.590.000
Vention RJ45 Cat 5e UTP Modular Network Head Connector 10 pcs	1.576	1.576 x Rp9.200
<b>Total</b>	<b>1.660</b>	<b>Rp274.699.200</b>

# STAR-RING HYBRID TOPOLOGY

## KAMPUS ANGGREK LANTAI 7



Sumber: [www.geeksforgeeks.org](http://www.geeksforgeeks.org)

**Star-Ring Hybrid Topology:**  
kombinasi beberapa Star Topology yang  
saling dihubungkan oleh Ring Topology.

**Alasan menggunakan:**

- Seluruh PC dapat dikontrol dari PC Pengajar & terkoneksi dengan Server SLC
- Fleksibilitas & skalabilitas tinggi
- Mudah mendekksi & troubleshoot error
- Mampu menangani traffic bervolume tinggi

# UTP CAT 5E CABLE & RJ45 CONNECTOR

## KAMPUS ANGGREK LANTAI 7



Sumber:  
[down-id.img.susercontent.com](http://down-id.img.susercontent.com), [www.vention.id](http://www.vention.id)

### Alasan menggunakan UTP Cat 5e:

- Harga terjangkau
- Data transfer rate mencapai 1 Gbps & jangkauan mencapai 100 m
- Daya tahan yang baik
- Banyak tersedia di pasaran

### Alasan menggunakan RJ45 Connector:

- Bandwidth mencapai 10 Gbps
- Harga terjangkau
- Daya tahan tinggi
- Mudah dipasang

### Konfigurasi jaringan:

- PC ke Switch (Straight-through Cable)
- Switch ke Router (Straight-through Cable)
- Router ke Router (Crossover Cable)

# **VLSM SUBNETTING**

## **KAMPUS ANGGREK LANTAI 7**

**Variable-Length Subnet Masking (VLSM):**

subnetting yang memungkinkan semua subnet & host ID berukuran variatif.

**Alasan menggunakan:**

- Efisiensi penggunaan IP Address
- Fleksibilitas tinggi
- Mengurangi network traffic
- Memudahkan perluasan network

# **IP ADDRESS**

# **KAMPUS ANGGREK LANTAI 7**

**IP Awal: 10.22.106.0**

**Urutan Host Terbanyak:**

1. Lab Komputer 724: 121 address
2. Lab Komputer 730: 51 address
3. Lab Komputer: 41 address
4. BINUS Language Center & SLC: 30 address
5. Lab Komputer 711A, 711B, 711C: 17 address
6. Ruang Kelas: 1 address

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 7

### Lab Komputer 724

**Host:** 121

$$2^n - 2 \geq 121$$

$$n = 7$$

$$32 - 7 = /25$$

**Subnet Mask:** 255.255.255.128

**NA:** 10.22.106.0

**Gateway:** 10.22.106.1

**BA:** 10.22.106.127

**IP Range:**

10.22.106.1 - 10.22.106.126

### Lab Komputer 730

**Host:** 51

$$2^n - 2 \geq 51$$

$$n = 6$$

$$32 - 6 = /26$$

**Subnet Mask:** 255.255.255.192

**NA:** 10.22.106.128

**Gateway:** 10.22.106.129

**BA:** 10.22.106.191

**IP Range:**

10.22.106.129 - 10.22.106.190

### Lab Komputer 721

**Host:** 41

$$2^n - 2 \geq 41$$

$$n = 6$$

$$32 - 6 = /26$$

**Subnet Mask:** 255.255.255.192

**NA:** 10.22.106.192

**Gateway:** 10.22.106.193

**BA:** 10.22.106.255

**IP Range:**

10.22.106.193 - 10.22.106.254

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 7

**Lab Komputer**  
**722**

**Host:** 41  
 $2^n - 2 \geq 41$   
 $n = 6$   
 $32 - 6 = /26$

**Subnet Mask:** 255.255.255.192  
**NA:** 10.22.107.0  
**Gateway:** 10.22.107.1  
**BA:** 10.22.107.63  
**IP Range:**  
10.22.107.1 - 10.22.107.62

**Lab Komputer**  
**723**

**Host:** 41  
 $2^n - 2 \geq 41$   
 $n = 6$   
 $32 - 6 = /26$   
**Subnet Mask:** 255.255.255.192

**NA:** 10.22.107.64  
**Gateway:** 10.22.107.65  
**BA:** 10.22.107.127  
**IP Range:**  
10.22.107.65 - 10.22.107.126

**Lab Komputer**  
**725**

**Host:** 41  
 $2^n - 2 \geq 41$   
 $n = 6$   
 $32 - 6 = /26$   
**Subnet Mask:** 255.255.255.192  
**NA:** 10.22.107.128  
**Gateway:** 10.22.107.129  
**BA:** 10.22.107.191  
**IP Range:**  
10.22.107.129 - 10.22.107.190

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 7

**Lab Komputer**  
**727**

**Host:** 41  
 $2^n - 2 \geq 41$   
 $n = 6$   
 $32 - 6 = /26$

**Subnet Mask:** 255.255.255.192  
**NA:** 10.22.107.192  
**Gateway:** 10.22.107.193  
**BA:** 10.22.107.255  
**IP Range:**  
10.22.107.193 - 10.22.107.254

**Lab Komputer**  
**729**

**Host:** 41  
 $2^n - 2 \geq 41$   
 $n = 6$   
 $32 - 6 = /26$

**Subnet Mask:** 255.255.255.192  
**NA:** 10.22.108.0  
**Gateway:** 10.22.108.1  
**BA:** 10.22.108.63  
**IP Range:**  
10.22.108.1 - 10.22.108.62

**BINUS Language**  
**Center & SLC**

**Host:** 30  
 $2^n - 2 \geq 30$   
 $n = 5$   
 $32 - 5 = /27$   
**Subnet Mask:** 255.255.255.224  
**NA:** 10.22.108.64  
**Gateway:** 10.22.108.65  
**BA:** 10.22.108.95  
**IP Range:**  
10.22.108.65 - 10.22.108.94

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 7

### Lab Komputer 711A

**Host:** 17

$$2^n - 2 \geq 17$$

$$n = 5$$

$$32 - 5 = /27$$

**Subnet Mask:** 255.255.255.224

**NA:** 10.22.108.96

**Gateway:** 10.22.108.97

**BA:** 10.22.108.127

**IP Range:**

10.22.108.97 - 10.22.108.126

### Lab Komputer 711B

**Host:** 17

$$2^n - 2 \geq 17$$

$$n = 5$$

$$32 - 5 = /27$$

**Subnet Mask:** 255.255.255.224

**NA:** 10.22.108.128

**Gateway:** 10.22.108.129

**BA:** 10.22.109.159

**IP Range:**

10.22.108.129 - 10.22.108.158

### Lab Komputer 711C

**Host:** 17

$$2^n - 2 \geq 17$$

$$n = 5$$

$$32 - 5 = /27$$

**Subnet Mask:** 255.255.255.224

**NA:** 10.22.108.160

**Gateway:** 10.22.108.161

**BA:** 10.22.108.191

**IP Range:**

10.22.108.161 - 10.22.109.190

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 7

Ruang Kelas  
**701**

**Host:** 1  
 $2^n - 2 \geq 1$   
 $n = 2$

$32 - 2 = /30$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.192

**Gateway:** 10.22.108.193

**BA:** 10.22.108.195

**IP Range:**

10.22.108.193 - 10.22.108.194

Ruang Kelas  
**702**

**Host:** 1  
 $2^n - 2 \geq 1$   
 $n = 2$

$32 - 2 = /30$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.196

**Gateway:** 10.22.108.197

**BA:** 10.22.108.199

**IP Range:**

10.22.108.197 - 10.22.108.198

Ruang Kelas  
**703**

**Host:** 1  
 $2^n - 2 \geq 1$   
 $n = 2$

$32 - 2 = /30$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.200

**Gateway:** 10.22.108.201

**BA:** 10.22.108.203

**IP Range:**

10.22.108.201 - 10.22.108.202

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 7

**Ruang Kelas**  
**704**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.204

**Gateway:** 10.22.108.205

**BA:** 10.22.108.207

**IP Range:**

10.22.108.205 - 10.22.108.206

**Ruang Kelas**  
**705**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.208

**Gateway:** 10.22.108.209

**BA:** 10.22.108.211

**IP Range:**

10.22.108.209 - 10.22.108.210

**Ruang Kelas**  
**706**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.212

**Gateway:** 10.22.108.213

**BA:** 10.22.108.215

**IP Range:**

10.22.108.213 - 10.22.108.214

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 7

**Ruang Kelas**  
**707**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.216

**Gateway:** 10.22.108.217

**BA:** 10.22.108.219

**IP Range:**

10.22.108.217 - 10.22.108.218

**Ruang Kelas**  
**708**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.220

**Gateway:** 10.22.108.221

**BA:** 10.22.108.223

**IP Range:**

10.22.108.221 - 10.22.108.222

**Ruang Kelas**  
**709**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.224

**Gateway:** 10.22.108.225

**BA:** 10.22.108.227

**IP Range:**

10.22.108.225 - 10.22.108.226

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 7

**Ruang Kelas**  
**710**

**Host:** 1

$$2^n - 2 \geq 1$$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.108.228

**Gateway:** 10.22.108.229

**BA:** 10.22.108.231

**IP Range:**

10.22.108.229 - 10.22.108.230

# PETA KAMPUS ANGGREK LANTAI 8



Sumber: [onlinelearning.binus.ac.id](http://onlinelearning.binus.ac.id)

# **UKURAN KAMPUS ANGGREK LANTAI 8**

**Ukuran lantai:** 117,5 m x 44 m x 3 m

- **Ruang Kelas:** 9 m x 11 m
- **Hall:** 18 m x 18 m
- **Graduate Program:** 18 m x 7 m
- **Student Lounge:** 12 m x 33 m
- **Toilet Tengah:** 11 m x 7,5 m
- **Toilet Ujung:** 7 m x 5,5 m

# DEVICE KAMPUS ANGGREK LANTAI 8

Ruang	Jumlah Device	Keterangan
Ruang Kelas	$(18 \times 2) + 3 = 39$	1 PC Pengajar + 1 5-Port Switch + 3 Router
Hall	3	1 PC Presenter + 1 5-Port Switch + 1 Router
Graduate Program	5	3 PC + 1 5-Port Switch + 1 Router
Student Lounge	27	25 PC + 1 48-Port Switch + 1 Router
Total	75	28 PC + 18 PC Pengajar + 1 PC Presenter + 20 5-Port Switch + 1 48-Port Switch + 7 Router

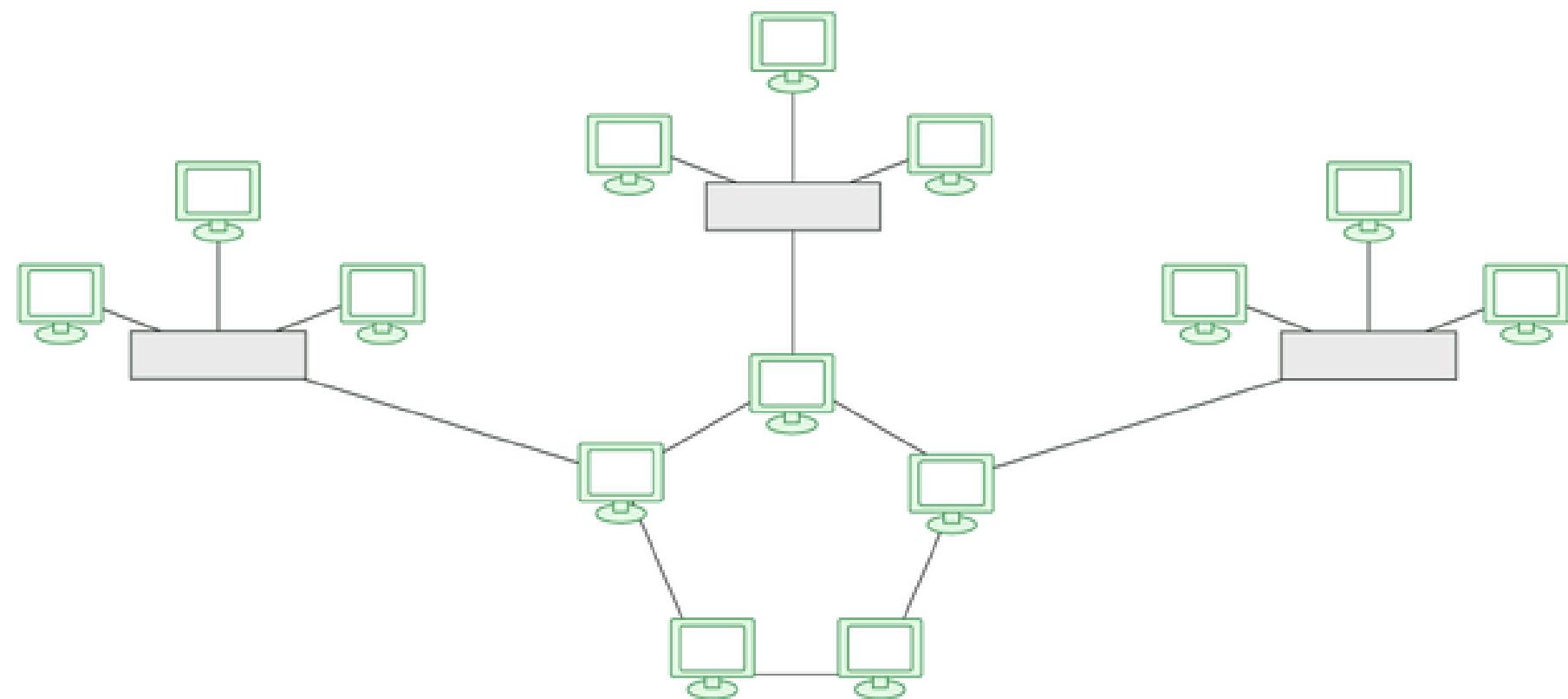
# HARGA NETWORK DEVICE

## KAMPUS ANGGREK LANTAI 8

Jenis	Jumlah	Harga
TL-SG1048 48-Port Gigabit Rackmount Switch	1	1 x Rp8.999.000
TL-SG105 5-Port 10/100/1000 Mbps Desktop Switch	20	20 x Rp620.000
ER7212PC Omada 3-in-1 Gigabit VPN Router	7	7 x Rp7.700.000
Belden Ethernet Cable 1583A Cat 5e UTP CMR 305 m	51	51 x Rp1.590.000
Vention RJ45 Cat 5e UTP Modular Network Head Connector 10 pcs	484	484 x Rp9.200
<b>Total</b>	<b>563</b>	<b>Rp160.841.800</b>

# STAR-RING HYBRID TOPOLOGY

## KAMPUS ANGGREK LANTAI 8



Sumber: [www.geeksforgeeks.org](http://www.geeksforgeeks.org)

**Star-Ring Hybrid Topology:**  
kombinasi beberapa Star Topology yang  
saling dihubungkan oleh Ring Topology.

**Alasan menggunakan:**

- Seluruh PC dapat dikontrol dari PC Pengajar & terkoneksi dengan Server SLC
- Fleksibilitas & skalabilitas tinggi
- Mudah mendekksi & troubleshoot error
- Mampu menangani traffic bervolume tinggi

# UTP CAT 5E CABLE & RJ45 CONNECTOR

## KAMPUS ANGGREK LANTAI 8



Sumber:  
[down-id.img.susercontent.com](http://down-id.img.susercontent.com), [www.vention.id](http://www.vention.id)

### Alasan menggunakan UTP Cat 5e:

- Harga terjangkau
- Data transfer rate mencapai 1 Gbps & jangkauan mencapai 100 m
- Daya tahan yang baik
- Banyak tersedia di pasaran

### Alasan menggunakan RJ45 Connector:

- Bandwidth mencapai 10 Gbps
- Harga terjangkau
- Daya tahan tinggi
- Mudah dipasang

### Konfigurasi jaringan:

- PC ke Switch (Straight-through Cable)
- Switch ke Router (Straight-through Cable)
- Router ke Router (Crossover Cable)

# **VLSM SUBNETTING**

## **KAMPUS ANGGREK LANTAI 8**

**Variable-Length Subnet Masking (VLSM):**

subnetting yang memungkinkan semua subnet & host ID berukuran variatif.

**Alasan menggunakan:**

- Efisiensi penggunaan IP Address
- Fleksibilitas tinggi
- Mengurangi network traffic
- Memudahkan perluasan network

# **IP ADDRESS**

# **KAMPUS ANGGREK LANTAI 8**

**IP Awal: 10.22.110.0**

**Urutan Host Terbanyak:**

1. Student Lounge: 25 address
2. Graduate Program: 3 address
3. Ruang Kelas: 1 address
4. Hall: 1 address

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 8

### Student Lounge

**Host:** 25

$$2^n - 2 \geq 25$$

$$n = 5$$

$$32 - 5 = /27$$

**Subnet Mask:** 255.255.255.224

**NA:** 10.22.109.0

**Gateway:** 10.22.109.1

**BA:** 10.22.109.31

**IP Range:**

10.22.109.1 - 10.22.109.30

### Graduate Program

**Host:** 3

$$2^n - 2 \geq 3$$

$$n = 3$$

$$32 - 3 = /29$$

**Subnet Mask:** 255.255.255.248

**NA:** 10.22.109.32

**Gateway:** 10.22.109.33

**BA:** 10.22.109.39

**IP Range:**

10.22.109.33 - 10.22.109.38

### Ruang Kelas 801

**Host:** 1

$$2^n - 2 \geq 1$$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.40

**Gateway:** 10.22.109.41

**BA:** 10.22.109.43

**IP Range:**

10.22.109.41 - 10.22.109.42

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 8

**Ruang Kelas**  
**802**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.44

**Gateway:** 10.22.109.45

**BA:** 10.22.109.47

**IP Range:**

10.22.109.45 - 10.22.109.46

**Ruang Kelas**  
**803**

**Host:** 3  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.48

**Gateway:** 10.22.109.49

**BA:** 10.22.109.51

**IP Range:**

10.22.109.49 - 10.22.109.50

**Ruang Kelas**  
**804**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.52

**Gateway:** 10.22.109.53

**BA:** 10.22.109.55

**IP Range:**

10.22.109.53 - 10.22.109.54

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 8

**Ruang Kelas**  
**805**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.56

**Gateway:** 10.22.109.57

**BA:** 10.22.109.59

**IP Range:**

10.22.109.57 - 10.22.109.58

**Ruang Kelas**  
**806**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.60

**Gateway:** 10.22.109.61

**BA:** 10.22.109.63

**IP Range:**

10.22.109.61 - 10.22.109.62

**Ruang Kelas**  
**807**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.64

**Gateway:** 10.22.109.65

**BA:** 10.22.109.67

**IP Range:**

10.22.109.65 - 10.22.109.66

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 8

**Ruang Kelas**  
**808**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.68

**Gateway:** 10.22.109.69

**BA:** 10.22.109.71

**IP Range:**

10.22.109.69 - 10.22.109.70

**Ruang Kelas**  
**809**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.72

**Gateway:** 10.22.109.73

**BA:** 10.22.109.75

**IP Range:**

10.22.109.73 - 10.22.109.74

**Ruang Kelas**  
**810**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.76

**Gateway:** 10.22.109.77

**BA:** 10.22.109.79

**IP Range:**

10.22.109.77 - 10.22.109.78

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 8

**Ruang Kelas**  
**821**

**Host:** 1  
 $2^n - 2 \geq 1$   
 $n = 2$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.80

**Gateway:** 10.22.109.81

**BA:** 10.22.109.83

**IP Range:**

10.22.109.81 - 10.22.109.82

**Ruang Kelas**  
**822**

**Host:** 1  
 $2^n - 2 \geq 1$   
 $n = 2$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.84

**Gateway:** 10.22.109.85

**BA:** 10.22.109.87

**IP Range:**

10.22.109.85 - 10.22.109.86

**Ruang Kelas**  
**823**

**Host:** 1  
 $2^n - 2 \geq 1$   
 $n = 2$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.88

**Gateway:** 10.22.109.89

**BA:** 10.22.109.91

**IP Range:**

10.22.109.89 - 10.22.109.90

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 8

**Ruang Kelas**  
**824**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.92

**Gateway:** 10.22.109.93

**BA:** 10.22.109.95

**IP Range:**

10.22.109.93 - 10.22.109.94

**Ruang Kelas**  
**825**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.96

**Gateway:** 10.22.109.97

**BA:** 10.22.109.99

**IP Range:**

10.22.109.97 - 10.22.109.98

**Ruang Kelas**  
**826**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.100

**Gateway:** 10.22.109.101

**BA:** 10.22.109.103

**IP Range:**

10.22.109.101 - 10.22.109.102

# IP ADDRESS

## KAMPUS ANGGREK LANTAI 8

**Ruang Kelas**  
**827**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.104

**Gateway:** 10.22.109.105

**BA:** 10.22.109.107

**IP Range:**

10.22.109.105 - 10.22.109.106

**Ruang Kelas**  
**828**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.108

**Gateway:** 10.22.109.109

**BA:** 10.22.109.111

**IP Range:**

10.22.109.109 - 10.22.109.110

**Hall**

**Host:** 1  
 $2^n - 2 \geq 1$

$$n = 2$$

$$32 - 2 = /30$$

**Subnet Mask:** 255.255.255.252

**NA:** 10.22.109.112

**Gateway:** 10.22.109.113

**BA:** 10.22.109.115

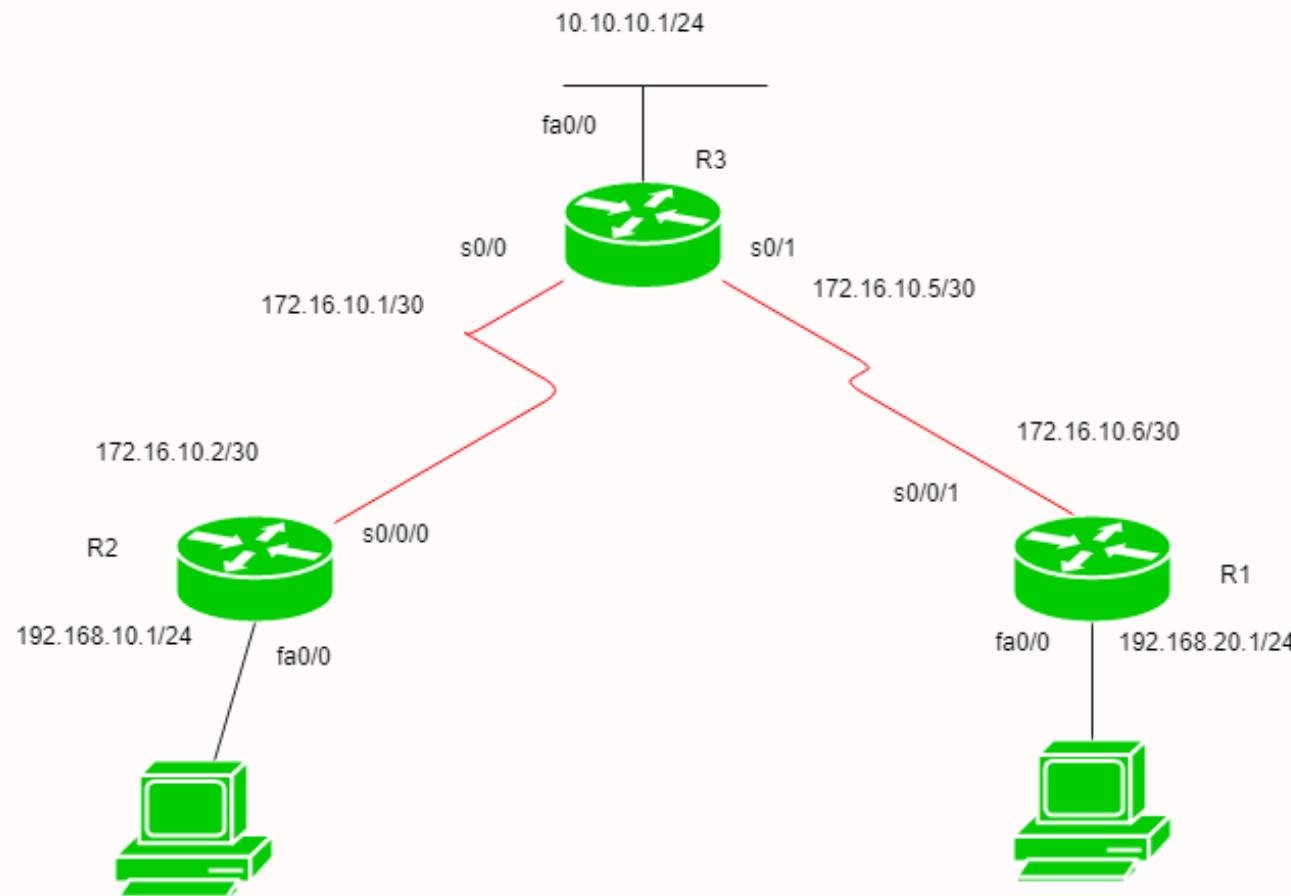
**IP Range:**

10.22.109.113 - 10.22.109.114

**ROUTING  
KAMPUS ANGGREK  
LANTAI 6 - 8**

# STATIC ROUTING

## KAMPUS ANGGREK LANTAI 6 - 8



**Static Routing:**  
penambahan route secara manual ke routing table.

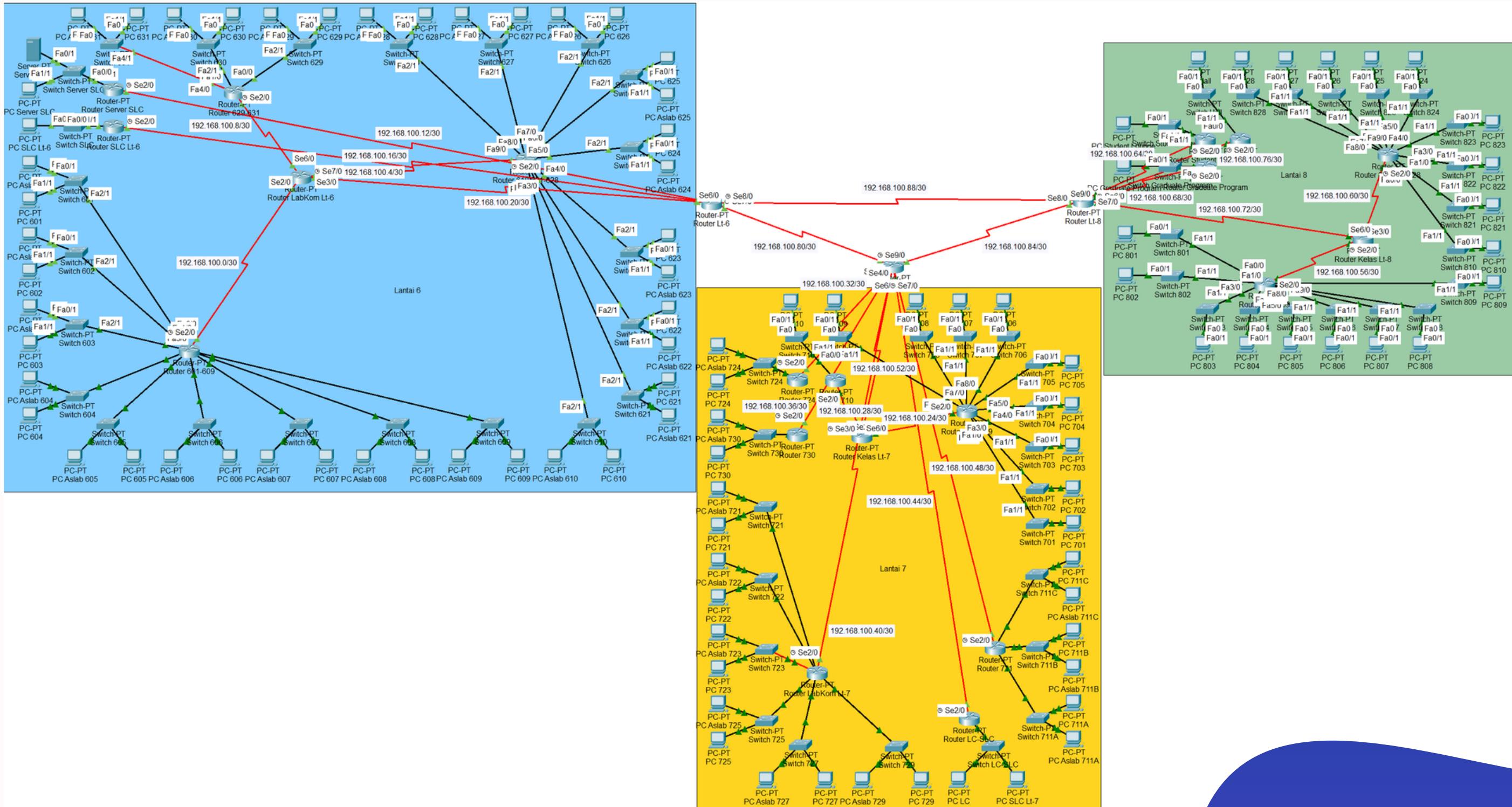
**Alasan menggunakan:**

- Mudah diimplementasi
- Tidak perlu resource tambahan
- Lebih aman
- Mudah diprediksi
- Mampu mengoptimalkan path

Sumber: [www.geeksforgeeks.org](http://www.geeksforgeeks.org)

# STATIC ROUTING

## KAMPUS ANGGREK LANTAI 6 - 8



**APPLICATION LAYER**  
**KAMPUS ANGGREK**  
**LANTAI 6 - 8**

# DHCP

# KAMPUS ANGGREK LANTAI 6 - 8

# DHCP

# KAMPUS ANGGREK LANTAI 6 - 8

The image displays two separate Cisco IOS CLI sessions, each showing the configuration for a different router. Both routers are configured with similar DHCP pool settings across various network ranges.

**Router 601-609 Configuration:**

```
!Current configuration : 3269 Bytes
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
ip dhcp pool Network601
network 10.22.100.128 255.255.255.192
default-router 10.22.100.129
ip dhcp pool Network602
network 10.22.100.192 255.255.255.192
default-router 10.22.100.193
ip dhcp pool Network603
network 10.22.101.0 255.255.255.192
default-router 10.22.101.1
ip dhcp pool Network604
network 10.22.101.64 255.255.255.192
default-router 10.22.101.65
ip dhcp pool Network605
network 10.22.101.128 255.255.255.192
default-router 10.22.101.129
ip dhcp pool Network606
network 10.22.101.192 255.255.255.192
default-router 10.22.101.193
ip dhcp pool Network607
network 10.22.102.0 255.255.255.192
default-router 10.22.102.1
ip dhcp pool Network608
network 10.22.102.64 255.255.255.192
default-router 10.22.102.65
ip dhcp pool Network609
network 10.22.102.128 255.255.255.192
default-router 10.22.102.129
ip dhcp pool Network601-609-LabKomLt6
network 192.168.100.0 255.255.255.252
default-router 192.168.100.1
!
--More--
```

**Router 610-621-628 Configuration:**

```
!Current configuration : 3106 Bytes
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
ip dhcp pool Network610
network 10.22.102.192 255.255.255.192
default-router 10.22.102.193
ip dhcp pool Network621
network 10.22.103.0 255.255.255.192
default-router 10.22.103.1
ip dhcp pool Network622
network 10.22.103.64 255.255.255.192
default-router 10.22.103.65
ip dhcp pool Network623
network 10.22.103.128 255.255.255.192
default-router 10.22.103.129
ip dhcp pool Network624
network 10.22.103.192 255.255.255.192
default-router 10.22.103.193
ip dhcp pool Network625
network 10.22.104.0 255.255.255.192
default-router 10.22.104.1
ip dhcp pool Network626
network 10.22.104.64 255.255.255.192
default-router 10.22.104.65
ip dhcp pool Network627
network 10.22.104.128 255.255.255.192
default-router 10.22.104.129
ip dhcp pool Network628
network 10.22.104.192 255.255.255.192
default-router 10.22.104.193
ip dhcp pool Network610-621-628-LabKomLt6
network 192.168.100.4 255.255.255.252
default-router 192.168.100.6
!
--More--
```

# DHCP

# KAMPUS ANGGREK LANTAI 6 - 8

The image displays two separate Cisco IOS CLI sessions side-by-side.

**Router 629-631 (Left Window):**

```
Router>
Router>
Router>
Router>
Router>
Router>
Router>
Router>
Router>enable
Router>show running-config
Building configuration...

Current configuration : 4697 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
ip dhcp pool Network629
network 10.22.105.0 255.255.255.192
default-router 10.22.105.1
ip dhcp pool Network630
network 10.22.105.64 255.255.255.192
default-router 10.22.105.65
ip dhcp pool Network631
network 10.22.105.128 255.255.255.192
default-router 10.22.105.129
ip dhcp pool Network629-631-LabKomLt6
network 192.168.100.8 255.255.255.252
default-router 192.168.100.10
!
!
--More--
```

**Router LabKom Lt-6 (Right Window):**

```
Router>
Router>
Router>
Router>
Router>
Router>
Router>
Router>
Router>enable
Router>show running-config
Building configuration...

Current configuration : 4841 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
ip dhcp pool NetworkLabKomLt6-601-609
network 192.168.100.0 255.255.255.252
default-router 192.168.100.2
ip dhcp pool NetworkLabKomLt6-610621-628
network 192.168.100.4 255.255.255.252
default-router 192.168.100.5
ip dhcp pool NetworkLabKomLt6-629-631
network 192.168.100.8 255.255.255.252
default-router 192.168.100.9
ip dhcp pool NetworkLabKomLt6-Lt6
network 192.168.100.20 255.255.255.252
default-router 192.168.100.21
!
!
--More--
```

# DHCP

# KAMPUS ANGGREK LANTAI 6 - 8

The image displays two windows of the Cisco Network Assistant software, each showing the IOS Command Line Interface (CLI) configuration of a router.

**Router Lt-6 Configuration:**

```
Router>
Router>
Router>
Router>
Router>
Router>
Router>
Router>enable
Router>show running-config
Building configuration...
Current configuration : 5029 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
ip dhcp pool NetworkLt6-ServerSLC
 network 192.168.100.12 255.255.255.252
 default-router 192.168.100.14
ip dhcp pool NetworkLt6-SLCLt6
 network 192.168.100.16 255.255.255.252
 default-router 192.168.100.18
ip dhcp pool NetworkLt6-LabKomLt6
 network 192.168.100.20 255.255.255.252
 default-router 192.168.100.22
ip dhcp pool NetworkLt6-Lt7
 network 192.168.100.80 255.255.255.252
 default-router 192.168.100.81
ip dhcp pool NetworkLt6-lt8
 network 192.168.100.88 255.255.255.252
 default-router 192.168.100.89
!
--More-- |
```

**Router 724 Configuration:**

```
Router>
Router>
Router>
Router>
Router>
Router>
Router>
Router>
Router>enable
Router>show running-config
Building configuration...
Current configuration : 4519 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
ip dhcp pool Network724
 network 10.22.106.0 255.255.255.128
 default-router 10.22.106.1
ip dhcp pool Network724-lt7
 network 192.168.100.32 255.255.255.252
 default-router 192.168.100.33
!
--More-- |
```

Both windows include standard Cisco CLI navigation buttons (Copy, Paste, Ctrl-F6 to exit CLI focus) and a toolbar at the bottom with icons for Top, PDU List Window, and Router-PT.

# DHCP

## KAMPUS ANGGREK LANTAI 6 - 8

The image shows two side-by-side Cisco IOS Command Line Interface (CLI) windows. Both windows have tabs for Physical, Config, CLI (which is selected), and Attributes. The left window is titled "Router 730" and the right window is titled "Router LabKom Lt-7". Both windows display the "IOS Command Line Interface".

**Router 730 Configuration:**

```
Router>
Router>enable
Router>show running-config
Building configuration...
Current configuration : 4470 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
ip dhcp pool Network730
network 10.22.106.128 255.255.255.192
default-router 10.22.106.129
ip dhcp pool Network730-Lt7
network 192.168.100.36 255.255.255.252
default-router 192.168.100.37
!
--More--
```

**Router LabKom Lt-7 Configuration:**

```
Router>
Router>
Router>
Router>enable
Router>show running-config
Building configuration...
Current configuration : 5109 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
ip dhcp pool Network721
network 10.22.106.192 255.255.255.192
default-router 10.22.106.193
ip dhcp pool Network722
network 10.22.107.0 255.255.255.192
default-router 10.22.107.1
ip dhcp pool Network723
network 10.22.107.64 255.255.255.192
default-router 10.22.107.65
ip dhcp pool Network725
network 10.22.107.128 255.255.255.192
default-router 10.22.107.129
ip dhcp pool Network727
network 10.22.107.192 255.255.255.192
default-router 10.22.107.193
ip dhcp pool Network729
network 10.22.108.0 255.255.255.192
default-router 10.22.108.1
ip dhcp pool NetworkLabKomLt7-Lt7
network 192.168.100.40 255.255.255.252
default-router 192.168.100.41
!
--More--
```

Both windows include "Copy" and "Paste" buttons at the bottom right and a "Ctrl-F6 to exit CLI focus" message at the bottom left. The bottom of each window shows a toolbar with icons for file operations and a "Router-PT" button.

# DHCP

## KAMPUS ANGGREK LANTAI 6 - 8

The image shows two separate Cisco IOS Command Line Interface (CLI) sessions running in windows. Both windows have tabs for Physical, Config, CLI (which is selected), and Attributes. The windows are titled "Router LC-SLC" and "Router 711".

**Router LC-SLC Configuration:**

```
Router>
Router>enable
Router>show running-config
Building configuration...
Current configuration : 4747 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
ip dhcp pool NetworkLC-SLC
network 10.22.108.64 255.255.255.224
default-router 10.22.108.65
ip dhcp pool NetworkLC-SLC-Lt7
network 192.168.100.44 255.255.255.252
default-router 192.168.100.46
!
--More--
```

**Router 711 Configuration:**

```
Router>
Router>enable
Router>show running-config
Building configuration...
Current configuration : 4715 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
ip dhcp pool Network711A
network 10.22.108.96 255.255.255.224
default-router 10.22.108.97
ip dhcp pool Network711B
network 10.22.108.128 255.255.255.224
default-router 10.22.108.129
ip dhcp pool Network711C
network 10.22.108.160 255.255.255.224
default-router 10.22.108.161
ip dhcp pool Network711-Lt7
network 192.168.100.48 255.255.255.252
default-router 192.168.100.50
!
--More--
```

Both windows include standard Cisco CLI navigation buttons (Copy, Paste, Top) and a "Router-PT" button at the bottom.

# DHCP

## KAMPUS ANGGREK LANTAI 6 - 8

Router 701-709

Physical Config **CLI** Attributes

IOS Command Line Interface

```
current configuration : 5526 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
ip dhcp pool Network701
network 10.22.108.192 255.255.255.252
default-router 10.22.108.193
ip dhcp pool Network702
network 10.22.108.196 255.255.255.252
default-router 10.22.108.197
ip dhcp pool Network703
network 10.22.108.200 255.255.255.252
default-router 10.22.108.201
ip dhcp pool Network704
network 10.22.108.204 255.255.255.252
default-router 10.22.108.205
ip dhcp pool Network705
network 10.22.108.208 255.255.255.252
default-router 10.22.108.209
ip dhcp pool Network706
network 10.22.108.212 255.255.255.252
default-router 10.22.108.213
ip dhcp pool Network707
network 10.22.108.216 255.255.255.252
default-router 10.22.108.217
ip dhcp pool Network708
network 10.22.108.220 255.255.255.252
default-router 10.22.108.221
ip dhcp pool Network709
network 10.22.108.224 255.255.255.252
default-router 10.22.108.225
ip dhcp pool Network701-709-KelasLt7
network 192.168.100.24 255.255.255.252
default-router 192.168.100.25
!
--More--
```

Ctrl+F6 to exit CLI focus

Top

**Copy** **Paste**

 < >

Toggle PDU List Window

# DHCP

## KAMPUS ANGGREK LANTAI 6 - 8

The image displays two separate Cisco IOS CLI sessions, each showing a configuration script. The left window is titled "Router Kelas Lt-7" and the right window is titled "Router Lt-7". Both windows have tabs for "Physical", "Config", "CLI" (which is selected), and "Attributes". The "CLI" tab shows the running configuration of the router. The configuration scripts include basic router setup, service timestamps, no service password-encryption, and multiple DHCP pool definitions. The left window's configuration is for a router with IP 192.168.100.24, and the right window's is for a router with IP 192.168.100.34.

```
Router>
Router>enable
Router#show running-config
Building configuration...
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
ip dhcp pool Lt7-724
network 192.168.100.32 255.255.255.252
default-router 192.168.100.34
ip dhcp pool Lt7-730
network 192.168.100.36 255.255.255.252
default-router 192.168.100.38
ip dhcp pool Lt7-LabKomLt7
network 192.168.100.40 255.255.255.252
default-router 192.168.100.42
ip dhcp pool Lt7-LC-LSC
network 192.168.100.44 255.255.255.252
default-router 192.168.100.45
ip dhcp pool Lt7-711
network 192.168.100.48 255.255.255.252
default-router 192.168.100.49
ip dhcp pool Lt7-KelasLt7
network 192.168.100.52 255.255.255.252
default-router 192.168.100.53
ip dhcp pool Lt7-Lt6
network 192.168.100.80 255.255.255.252
default-router 192.168.100.82
ip dhcp pool Lt7-Lt8
network 192.168.100.84 255.255.255.252
default-router 192.168.100.85
!
--More--
```

Ctrl+F6 to exit CLI focus      Copy      Paste

Top

Router-PT      Toggle PDU List Window

```
Router>
Router>enable
Router#show running-config
Building configuration...
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
ip dhcp pool NetworkKelasLt7-701-709
network 192.168.100.24 255.255.255.252
default-router 192.168.100.26
ip dhcp pool NetworkKelasLt7-710
network 192.168.100.28 255.255.255.252
default-router 192.168.100.29
ip dhcp pool NetworkKelasLt7-Lt7
network 192.168.100.52 255.255.255.252
default-router 192.168.100.54
!
!
--More--
```

Ctrl+F6 to exit CLI focus      Copy      Paste

Top

Router-PT      Toggle PDU List Window

# DHCP

# KAMPUS ANGGREK LANTAI 6 - 8

# DHCP

# KAMPUS ANGGREK LANTAI 6 - 8

The image displays two separate windows of a network management software, likely Cisco's Configuration Assistant, showing the configuration of two different routers.

**Router 801-809 Configuration:**

```
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
ip dhcp pool Network801-809
network 10.22.109.40 255.255.255.252
default-router 10.22.109.41
ip dhcp pool Network801
network 10.22.109.40 255.255.255.252
default-router 10.22.109.41
ip dhcp pool Network802
network 10.22.109.44 255.255.255.252
default-router 10.22.109.45
ip dhcp pool Network803
network 10.22.109.48 255.255.255.252
default-router 10.22.109.49
ip dhcp pool Network804
network 10.22.109.52 255.255.255.252
default-router 10.22.109.53
ip dhcp pool Network805
network 10.22.109.56 255.255.255.252
default-router 10.22.109.57
ip dhcp pool Network806
network 10.22.109.60 255.255.255.252
default-router 10.22.109.61
ip dhcp pool Network807
network 10.22.109.64 255.255.255.252
default-router 10.22.109.65
ip dhcp pool Network808
network 10.22.109.68 255.255.255.252
default-router 10.22.109.69
ip dhcp pool Network809
network 10.22.109.72 255.255.255.252
default-router 10.22.109.73
ip dhcp pool Network801-809-KelasLt8
network 192.168.100.56 255.255.255.252
default-router 192.168.100.57
!
--More--
```

**Router 810 821-828 Configuration:**

```
current configuration : 3555 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
ip dhcp pool Network810
network 10.22.109.76 255.255.255.252
default-router 10.22.109.77
ip dhcp pool Network821
network 10.22.109.80 255.255.255.252
default-router 10.22.109.81
ip dhcp pool Network822
network 10.22.109.84 255.255.255.252
default-router 10.22.109.85
ip dhcp pool Network823
network 10.22.109.88 255.255.255.252
default-router 10.22.109.89
ip dhcp pool Network824
network 10.22.109.92 255.255.255.252
default-router 10.22.109.93
ip dhcp pool Network825
network 10.22.109.96 255.255.255.252
default-router 10.22.109.97
ip dhcp pool Network826
network 10.22.109.100 255.255.255.252
default-router 10.22.109.101
ip dhcp pool Network827
network 10.22.109.104 255.255.255.252
default-router 10.22.109.105
ip dhcp pool Network828
network 10.22.109.108 255.255.255.252
default-router 10.22.109.109
ip dhcp pool Network810821-828-KelasLt8
network 192.168.100.60 255.255.255.252
default-router 192.168.100.62
!
--More--
```

Both windows show the "IOS Command Line Interface" and include tabs for "Physical", "Config", "CLI" (which is selected), and "Attributes". The bottom of each window includes standard CLI navigation keys like Ctrl-F6 to exit CLI focus, and buttons for "Copy" and "Paste".

# DHCP

## KAMPUS ANGGREK LANTAI 6 - 8

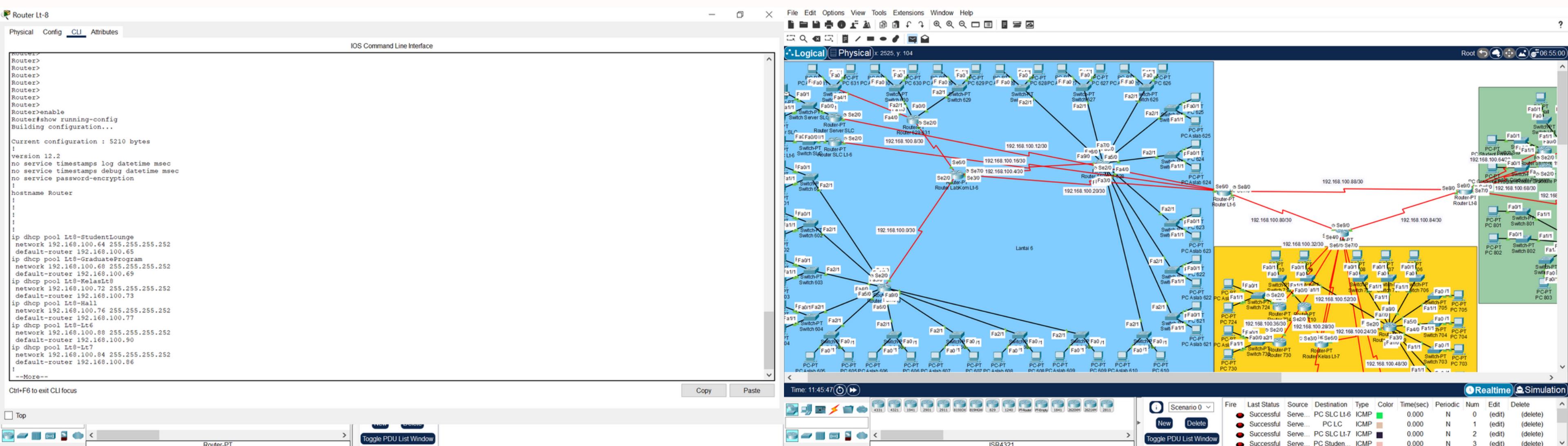
The image shows two side-by-side Cisco IOS Command Line Interface (CLI) windows. Both windows have a title bar with the device name and a tab labeled "CLI". The left window is titled "Router Kelas Lt-8" and the right window is titled "Router Hall". Both windows display the same configuration command, which is as follows:

```
Router>
Router>enable
Router#show running-config
Building configuration...
Current configuration : 4270 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
ip dhcp pool NetworkKelasLt8-801-809
network 192.168.100.66 255.255.255.252
default-router 192.168.100.58
ip dhcp pool NetworkKelasLt8-810821-828
network 192.168.100.60 255.255.255.252
default-router 192.168.100.61
ip dhcp pool NetworkLt8-KelasLt8
network 192.168.100.72 255.255.255.252
default-router 192.168.100.74
!
--More-- |
```

At the bottom of each window, there are "Copy" and "Paste" buttons. Below the windows, there is a toolbar with icons for file operations and a "Router-PT" button.

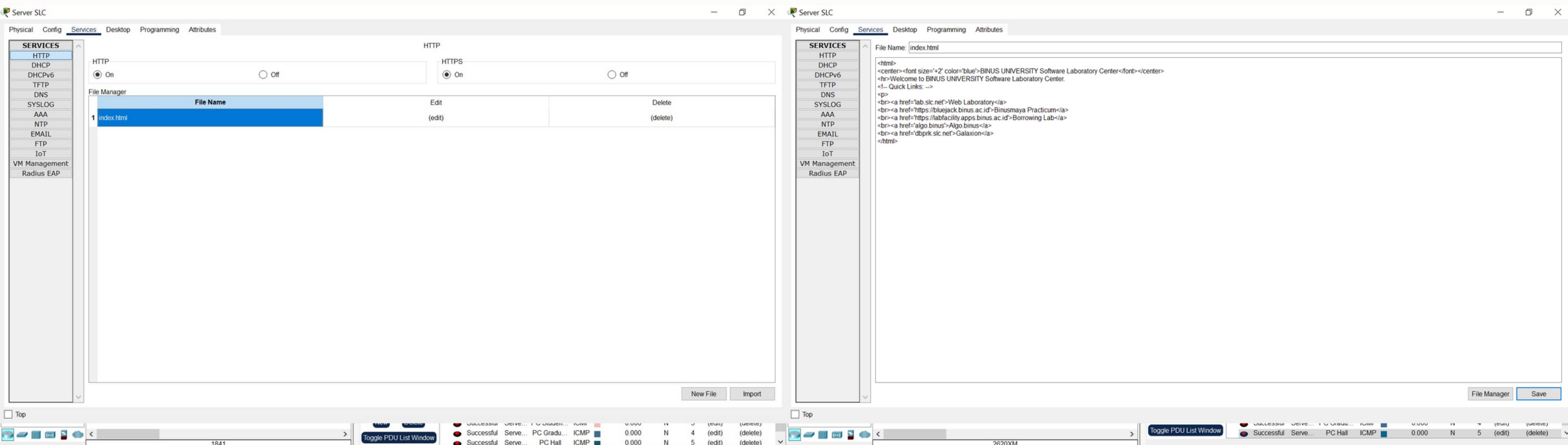
# DHCP

# KAMPUS ANGGREK LANTAI 6 - 8



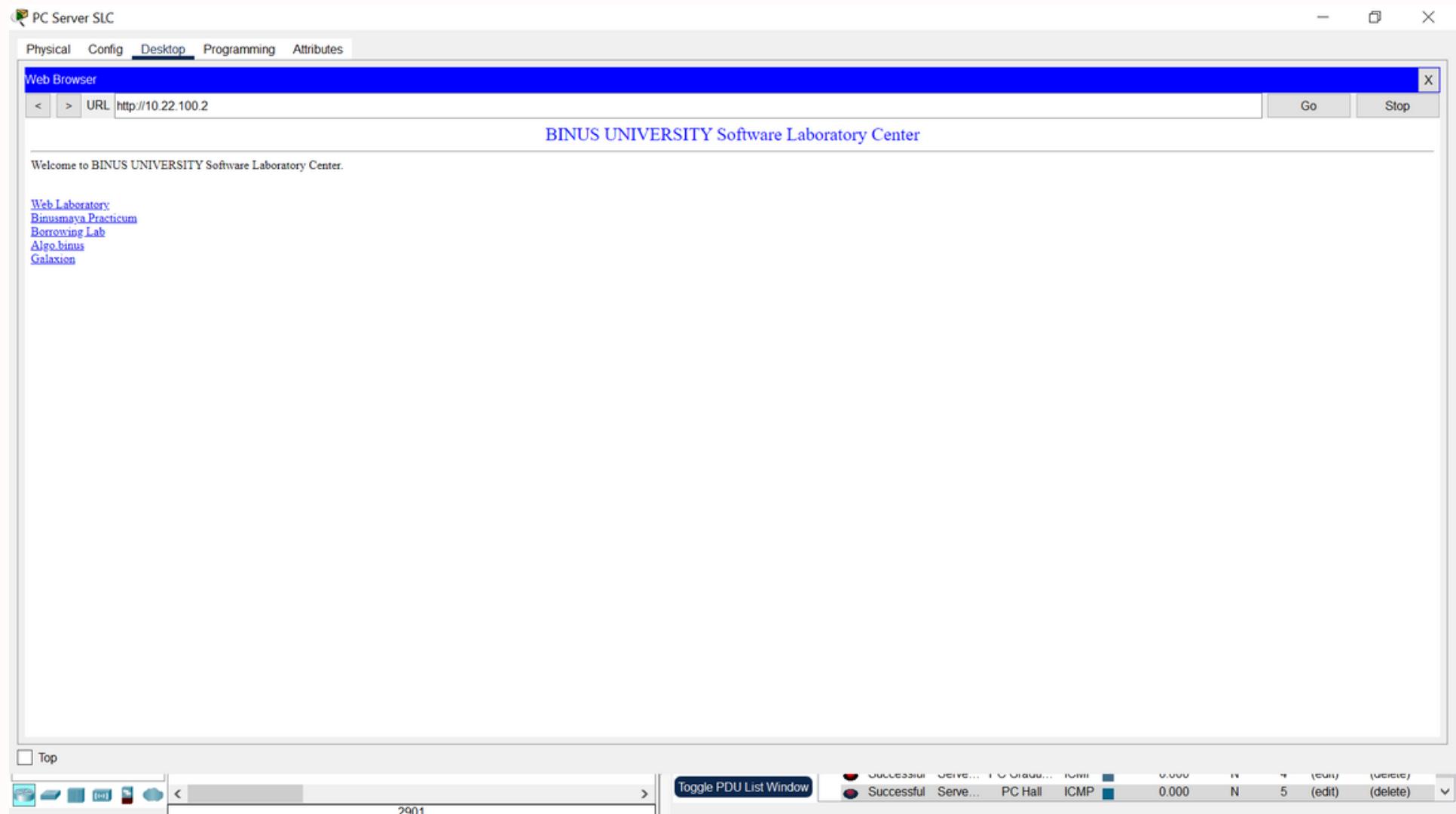
# HTTP

# KAMPUS ANGGREK LANTAI 6 - 8



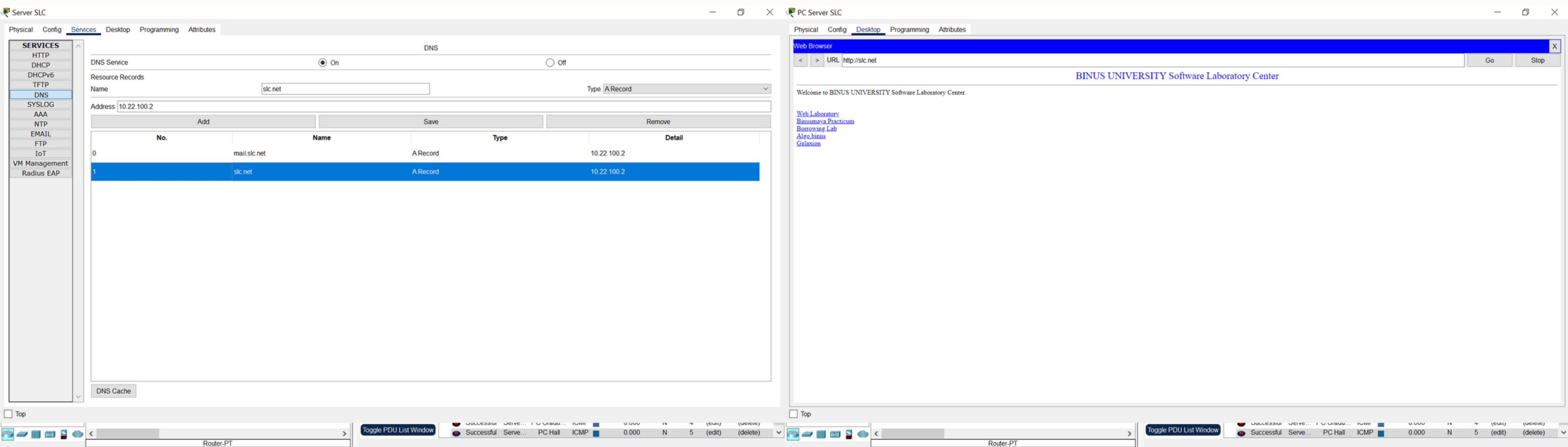
# HTTP

# KAMPUS ANGGREK LANTAI 6 - 8



# DNS

# KAMPUS ANGGREK LANTAI 6 - 8



# EMAIL

# KAMPUS ANGGREK LANTAI 6 - 8

The image displays two side-by-side screenshots of network management software interfaces.

**Left Interface (Server SLC):** This interface is for managing DNS services. It shows a table of resource records. One record for "mail.slc.net" is selected, showing it is an A Record pointing to the IP address 10.22.100.2. Other records listed include "slc.net" (A Record, 10.22.100.2).

No.	Name	Type	Detail
0	mail.slc.net	A Record	10.22.100.2
1	slc.net	A Record	10.22.100.2

**Right Interface (Server SLC):** This interface is for managing EMAIL services. It shows configuration for the SMTP and POP3 services. The SMTP service is set to ON, and the POP3 service is set to OFF. The domain name is set to binus.edu. Under User Setup, there is a list of users starting with "server.slc" followed by a series of user IDs from 601 to 625. There are also buttons for "Change" and "Password".

User
server.slc
slc.6
aslab.601
601
aslab.602
602
aslab.603
603
aslab.604
604
aslab.605
605
aslab.606
606
aslab.607
607
aslab.608
608
aslab.609
609
aslab.610
610
aslab.621
621
aslab.622
622
aslab.623
623
aslab.624
624
aslab.625
625

**Bottom Navigation:** At the bottom of each interface, there are tabs for "Physical", "Config", "Services", "Desktop", "Programming", and "Attributes". Below these are "Toggle PDU List Window" buttons and status indicators for "Successful", "Service", "PC Hall", "ICMP", and "Power" levels (0.000, N, 2, 3). There are also icons for "Top" and "Bottom" navigation.

# EMAIL

# KAMPUS ANGGREK LANTAI 6 - 8

The image shows two side-by-side screenshots of a software interface for managing network services, specifically focusing on the EMAIL section.

**Left Window (Server SLC):**

- Top Bar:** Physical, Config, **Services**, Desktop, Programming, Attributes.
- Left Sidebar (SERVICES):** HTTP, DHCP, DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP, **EMAIL** (selected), FTP, IoT, VM Management, Radius EAP.
- Central Area:**
  - EMAIL Section:** SMTP Service (radio button ON), POP3 Service (radio button ON).
  - User Setup:** Domain Name: binus.edu, User: server.slc, Password: bINu\$serverSLC.
  - User List:** A scrollable list of user accounts:
    - 625, aslab.626, 626, aslab.627, 627, aslab.628, 628, aslab.629, 629, aslab.630, 630, aslab.631, 631, aslab.724, 724, aslab.720, 720, aslab.721, 721, aslab.722, 722, aslab.723, 723, aslab.725, 725, aslab.727, 727, aslab.729, 729, lc, slc.7.
  - Action Buttons:** +, -, Change, Password.

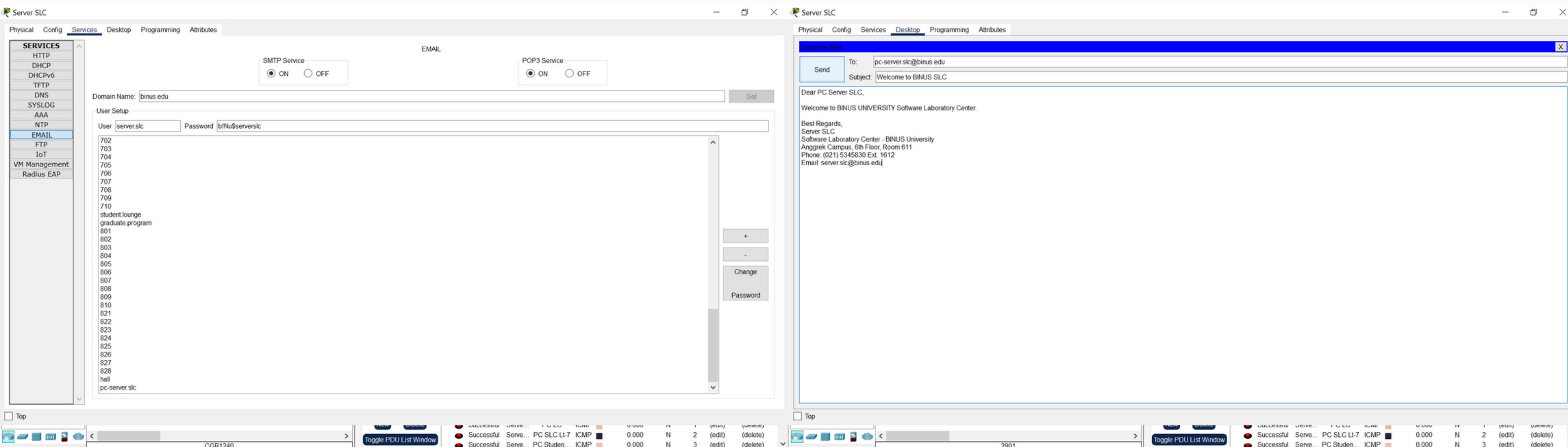
**Right Window (Server SLC):**

- Top Bar:** Physical, Config, **Services**, Desktop, Programming, Attributes.
- Left Sidebar (SERVICES):** HTTP, DHCP, DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP, **EMAIL** (selected), FTP, IoT, VM Management, Radius EAP.
- Central Area:**
  - EMAIL Section:** SMTP Service (radio button ON), POP3 Service (radio button ON).
  - User Setup:** Domain Name: binus.edu, User: server.slc, Password: bINu\$serverSLC.
  - User List:** A scrollable list of user accounts:
    - aslab.711a, 711a, aslab.711b, 711b, aslab.711c, 711c, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, student.lounge, graduate.program, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 821, 822, 823.
  - Action Buttons:** +, -, Change, Password.

**Bottom Navigation:** Top, PDU List Window, CGR1240, CGR1240, CGR1240.

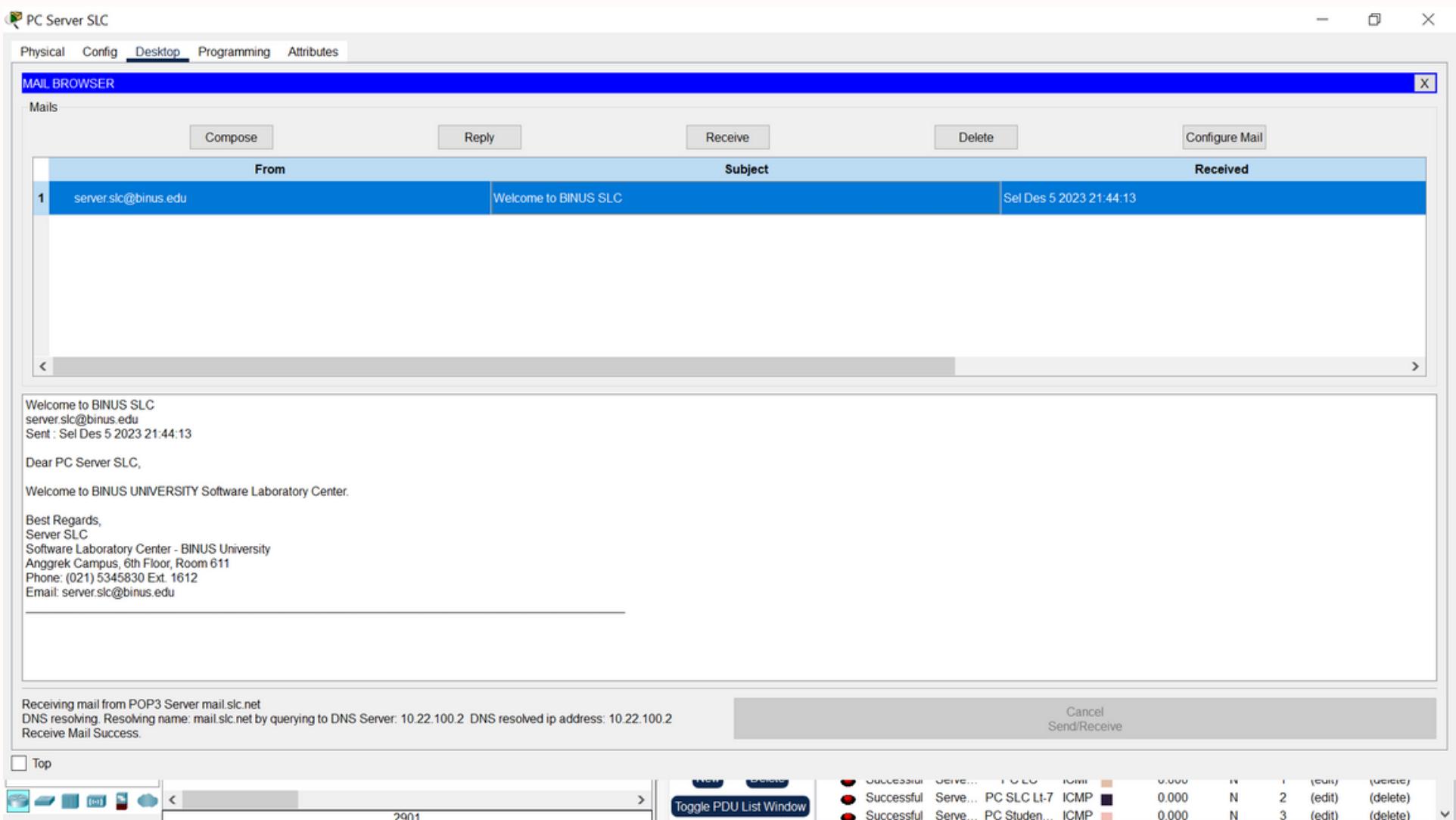
# EMAIL

# KAMPUS ANGGREK LANTAI 6 - 8



# EMAIL

# KAMPUS ANGGREK LANTAI 6 - 8



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**TERIMA KASIH**

**LB01 - KELOMPOK 3**