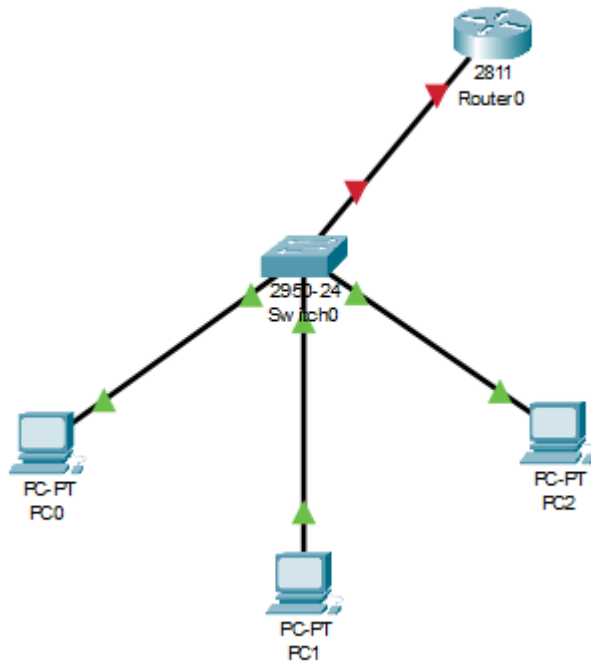


Nama : Shiffa Rahmadani  
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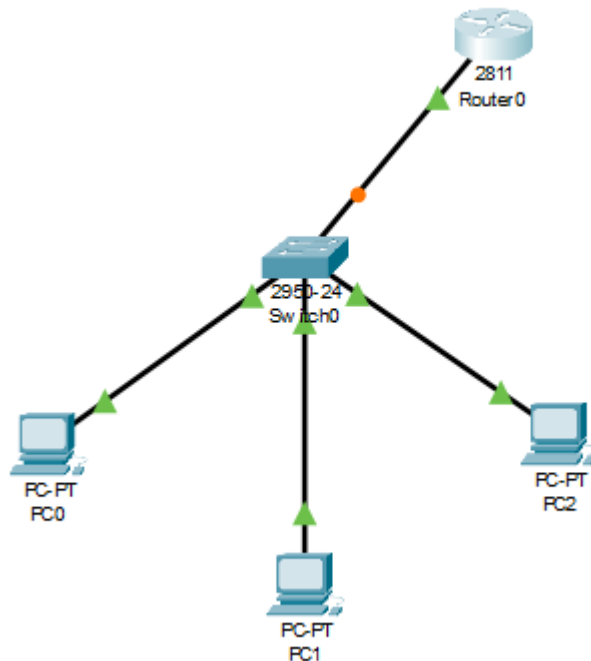
## PRATIUM JARINGAN KOMPUTER



```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname router002_dhcp
router002_dhcp(config)#int fa0/0
router002_dhcp(config-if)#ip add 192.168.1.1 255.255.255.0
router002_dhcp(config-if)#no shutdown

router002_dhcp(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
```



6. Setelah itu Melihat daftar IP dari Client

**Melihat Daftar IP dari Client**

ROUTER\_DHCP#sh ip dhcp binding

NO	IP Addres	MAC Addres	Lease Expiration	Type
1	192.168.1.21	00D0.BCC5.8876	--	Automatic
2	192.168.1.22	0030.A3BE.A819	--	Automatic
3	192.168.1.23	0001.9752.CAD4	--	Automatic

## 7. Setelah itu lakukan pengalamatan ip pada Client/PC

NO	Client	IP Addres	Netmask	Gateway	Dns
1	PC0	192.168.1.21	255.255.255.0	192.168.1.1	192.168.1.1
2	PC1	192.168.1.22	255.255.255.0	192.168.1.1	192.168.1.1
3	PC2	192.168.1.23	255.255.255.0	192.168.1.1	192.168.1.1

8. Lakukan pengujian PING pada setiap PC

**Daftar IP Client**

No	Sumber	Hasil Ya/Tidak	Tujuan	Hasil Ya/Tidak
1	PC0	YA	PC1	YA
		YA	PC2	YA
2	PC1	YA	PC0	YA
		YA	PC2	YA
3	PC2	YA	PC0	YA
		YA	PC1	YA

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.22

Pinging 192.168.1.22 with 32 bytes of data:

Reply from 192.168.1.22: bytes=32 time<1ms TTL=128
Reply from 192.168.1.22: bytes=32 time<1ms TTL=128
Reply from 192.168.1.22: bytes=32 time<1ms TTL=128
Reply from 192.168.1.22: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.22:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.1.23

Pinging 192.168.1.23 with 32 bytes of data:

Reply from 192.168.1.23: bytes=32 time<1ms TTL=128
Reply from 192.168.1.23: bytes=32 time<1ms TTL=128
Reply from 192.168.1.23: bytes=32 time<1ms TTL=128
Reply from 192.168.1.23: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.23:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 192.168.1.21

Pinging 192.168.1.21 with 32 bytes of data:

Reply from 192.168.1.21: bytes=32 time<1ms TTL=128
Reply from 192.168.1.21: bytes=32 time<1ms TTL=128
Reply from 192.168.1.21: bytes=32 time<1ms TTL=128
Reply from 192.168.1.21: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.1.21:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 3ms, Average = 0ms

C:\>ping 192.168.1.23

Pinging 192.168.1.23 with 32 bytes of data:

Reply from 192.168.1.23: bytes=32 time<1ms TTL=128
Reply from 192.168.1.23: bytes=32 time<1ms TTL=128
Reply from 192.168.1.23: bytes=32 time<1ms TTL=128
Reply from 192.168.1.23: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.23:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 192.168.1.21

Pinging 192.168.1.21 with 32 bytes of data:

Reply from 192.168.1.21: bytes=32 time<1ms TTL=128
Reply from 192.168.1.21: bytes=32 time<1ms TTL=128
Reply from 192.168.1.21: bytes=32 time<1ms TTL=128
Reply from 192.168.1.21: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.21:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

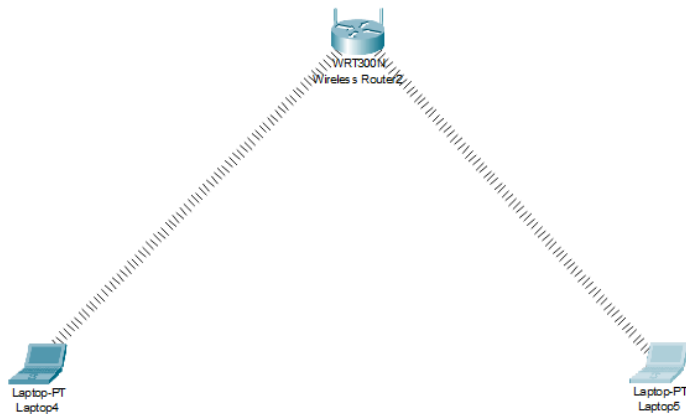
C:\>ping 192.168.1.22

Pinging 192.168.1.22 with 32 bytes of data:

Reply from 192.168.1.22: bytes=32 time<1ms TTL=128
Reply from 192.168.1.22: bytes=32 time=4ms TTL=128
Reply from 192.168.1.22: bytes=32 time<1ms TTL=128
Reply from 192.168.1.22: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.22:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 4ms, Average = 1ms
```

# LATIHAN



1. Buat Topologi Seperti Gambar diatas (note\*: Gantilah device tablet menjadi laptop pada topologi diatas dan harus terhubung secara wireless)

## 2. Konfigurasi Access Point

- Untuk mengkonfigurasi access point, klik Wireless Router yang sudah dipasang.
- Pilih tab/menu GUI
- Masukkan IP Address dengan 192.168.0.1
- Serta Subnet Mask dengan 255.255.255.0

**Setup** | Setup | **Wireless** | Security | Access Restrictions | Applications & Gaming | Admin

Basic Setup | DDNS | MAC Address Clone

**Internet Setup**

Internet Connection type: Automatic Configuration - DHCP

Optional Settings (required by some internet service providers):

Host Name:

Domain Name:

MTU:  Size: 1500

**Network Setup**

Router IP

IP Address: 192 . 168 . 0 . 1

Subnet Mask: 255.255.255.0

DHCP Server Settings

DHCP Server: ☒ Enabled ☐ Disabled

DHCP Reservation

Start IP Address: 192.168.0. 100

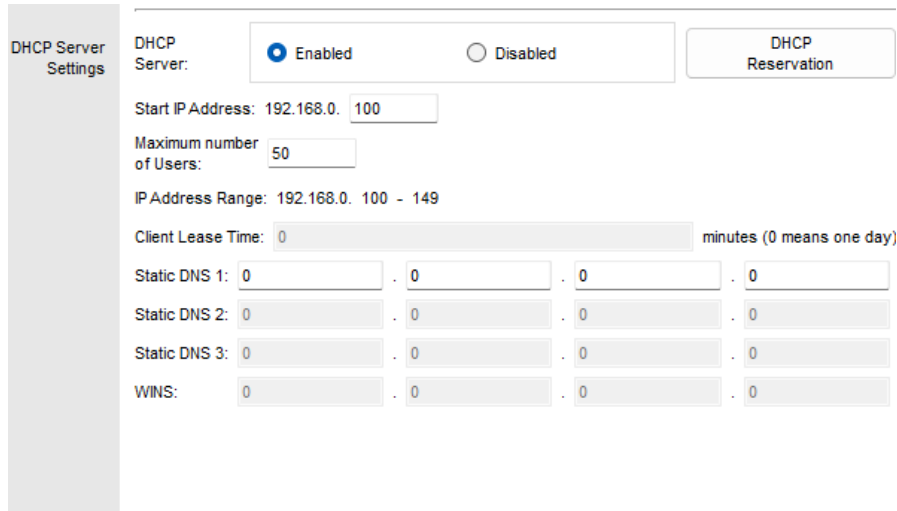
Maximum number of Users: 50

IP Address Range: 192.168.0. 100 - 149

Client Lease Time: 0 minutes (0 means one day)

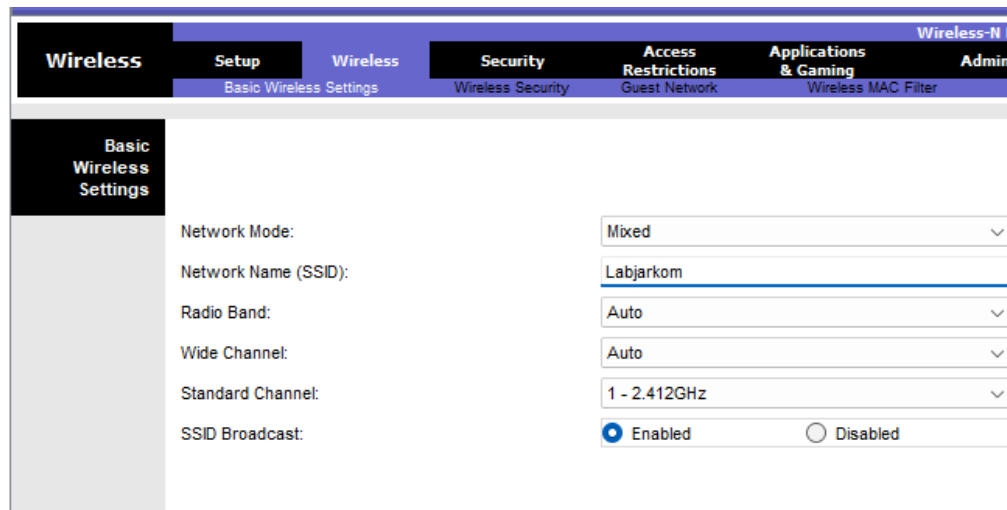
Static DNS: 1: n n n n

- Aktifkan DHCP Server, menjadi Enabled
- Mulai IP Address, dan IP DHCP dimulai dari 192.168.0.100
- Maximum number of Users (jumlah maksimum dari IP DHCP)
- Lalu simpan pengaturan (Save Settings)



The screenshot shows the 'DHCP Server Settings' page. On the left is a sidebar with 'DHCP Server Settings'. The main area has a 'DHCP Server' section with 'Enabled' selected (radio button). To the right is a 'DHCP Reservation' button. Below this, 'Start IP Address' is set to '192.168.0.100'. 'Maximum number of Users' is set to '50'. 'IP Address Range' is '192.168.0.100 - 149'. 'Client Lease Time' is '0 minutes (0 means one day)'. There are four rows for 'Static DNS' and 'WINS', each with four input fields, all containing '0'.

- Pilih tab/menu Wireless -> Basic Wireless Settings
- Buatlah nama SSID dengan LabJarkom
- Lalu simpan pengaturan (Save Settings)



The screenshot shows the 'Wireless' settings page. The top navigation bar has tabs: 'Wireless', 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications & Gaming', and 'Admin'. Below this is a sub-navigation bar with 'Basic Wireless Settings', 'Wireless Security', 'Guest Network', and 'Wireless MAC Filter'. The 'Basic Wireless Settings' tab is selected. On the left is a sidebar with 'Basic Wireless Settings'. The main area shows settings for 'Network Mode' (Mixed), 'Network Name (SSID)' (Labjarkom), 'Radio Band' (Auto), 'Wide Channel' (Auto), 'Standard Channel' (1 - 2.412GHz), and 'SSID Broadcast' (Enabled).

- Tekan tab/menu Wireless -> Wireless Security
- Lalu pada Security Mode akan menggunakan WPA2 Personal
- Dengan Encryption AES
- Serta Passphrase 12345678
- Lalu simpan pengaturan (Save Settings)

Wireless		Setup	Wireless	Security	Access Restrictions	Applications & Gaming	Wireless-N E
		Basic Wireless Settings		Wireless Security	Guest Network	Wireless MAC Filter	Admin
<b>Wireless Security</b>							
Security Mode:	WPA2 Personal						
Encryption:	AES						
Passphrase:	12345678						
Key Renewal:	3600	seconds					

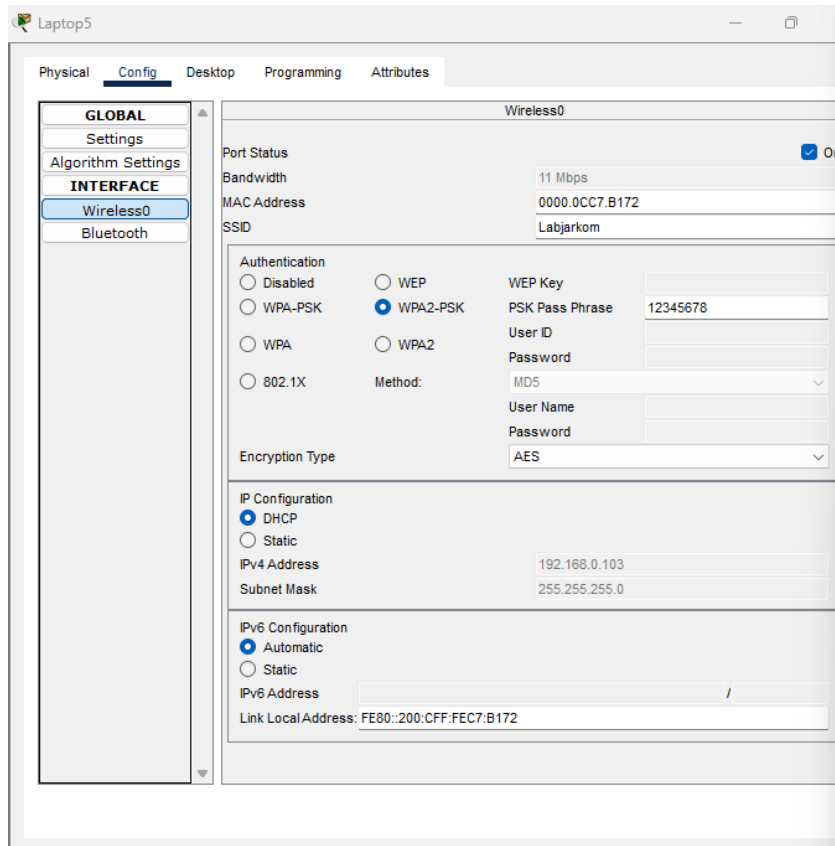
### 3. Konfigurasi Client Konfigurasi LAPTOP 4

- Konfigurasi Laptop4 pada tab Config
- SSID = LabJarkom
- Authentication = WPA2-PSK
- Pass Phrase = 12345678
- Pada IP Configuration memakai DHCP
- Nomor IP akan ditampilkan jika PC LAPTOP terhubung dan DCHP Server aktif

Physical	Config	Desktop	Programming	Attributes
<div> <div> <b>GLOBAL</b>            Settings            Algorithm Settings  <b>INTERFACE</b>            Wireless0            Bluetooth         </div> <div> <b>Wireless0</b> </div> </div>				
<div> <div>           Port Status <span>On</span>            Bandwidth 11 Mbps            MAC Address 00E0.B085.BA4A            SSID Labjarkom         </div> <div> <b>Authentication</b>  <input type="radio"/> Disabled <input type="radio"/> WEP <input checked="" type="radio"/> WPA2-PSK <input type="radio"/> WPA <input type="radio"/> WPA2 <input type="radio"/> 802.1X            WEP Key            PSK Pass Phrase 12345678            User ID            Password            Method: MD5            User Name            Password            Encryption Type AES         </div> </div>				
<div> <b>IP Configuration</b>  <input checked="" type="radio"/> DHCP <input type="radio"/> Static            IPv4 Address 169.254.186.75            Subnet Mask 255.255.0.0         </div>				
<div> <b>IPv6 Configuration</b>  <input checked="" type="radio"/> Automatic <input type="radio"/> Static            IPv6 Address /            Link Local Address: FE80::2E0:B0FF:FE85:BA4A         </div>				

## Konfigurasi LAPTOP5

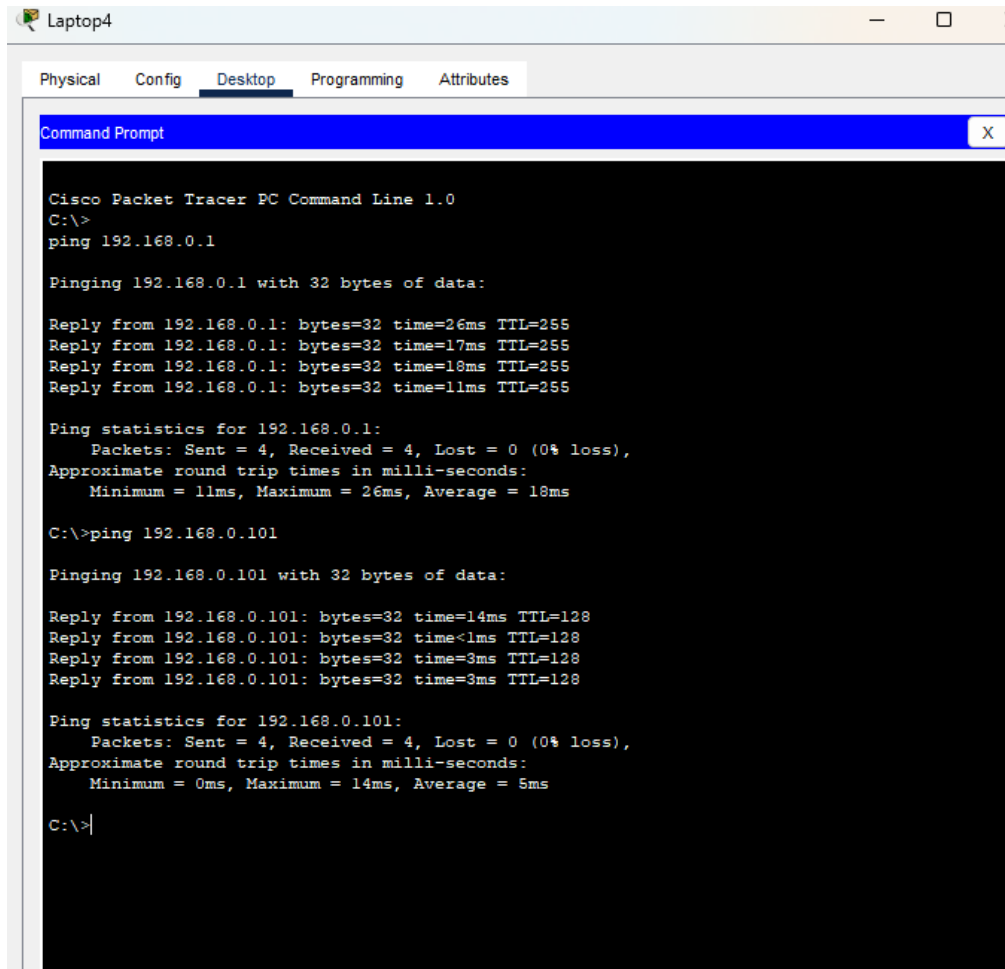
- Konfigurasi Laptop5 pada tab Config
- SSID = LabJarkom
- Authentication = WPA2-PSK
- Pass Phrase = 12345678
- IP menggunakan DHCP
- Nomor IP akan ditampilkan jika Laptop5 terhubung dan DHCP Server aktif





#### 4. Pengujian PING

- Di Laptop, pilih tab/menu Desktop -> Command Prompt
- Jalankan perintah Ping ke IP Access Point 192.168.0.1
- Ping IP Laptop4 Ke Laptop5
- Lakukan juga pada Laptop5 ke Laptop4



```
Cisco Packet Tracer PC Command Line 1.0
C:\>
ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time=26ms TTL=255
Reply from 192.168.0.1: bytes=32 time=17ms TTL=255
Reply from 192.168.0.1: bytes=32 time=18ms TTL=255
Reply from 192.168.0.1: bytes=32 time=11ms TTL=255

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 11ms, Maximum = 26ms, Average = 18ms

C:\>ping 192.168.0.101

Pinging 192.168.0.101 with 32 bytes of data:

Reply from 192.168.0.101: bytes=32 time=14ms TTL=128
Reply from 192.168.0.101: bytes=32 time<1ms TTL=128
Reply from 192.168.0.101: bytes=32 time=3ms TTL=128
Reply from 192.168.0.101: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.0.101:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 14ms, Average = 5ms

C:\>|
```

