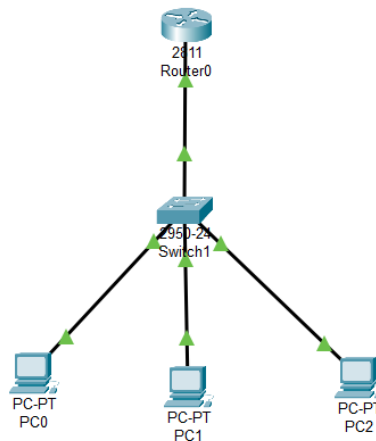


LAPORAN KONFIGURASI DHCP DAN WIRELESS

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A. PERCOBAAN DHCP

1. Buat Topologi.
2. Pasang Kabel Copper Straight dari PC ke Switch terhubung.



3. Setelah itu, kita menyalakan switch daya dan tunggu beberapa menit, router akan menyala.
4. Setelah loading router selesai, kita lanjutkan konfigurasi.

```
Router0
Physical Config Attributes
IOS Command Line Interface
Press RETURN to get started!

Router>en
Router#conf t
Enter configuration commands, one per line. End with CTRL/Z.
Router(config)#hostname 09010182327016_DHC
09010182327016_DHC(config)#int fa0/24
%Invalid interface type and number
09010182327016_DHC(config)#int fa0/0
09010182327016_DHC(config-if)#ip add 192.168.1.1 255.255.255.0
09010182327016_DHC(config-if)#no shutdown

09010182327016_DHC(config-if)#
ALINK-6-CHANGED: Interface FastEthernet0/0, changed state to up
ALINK-6-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

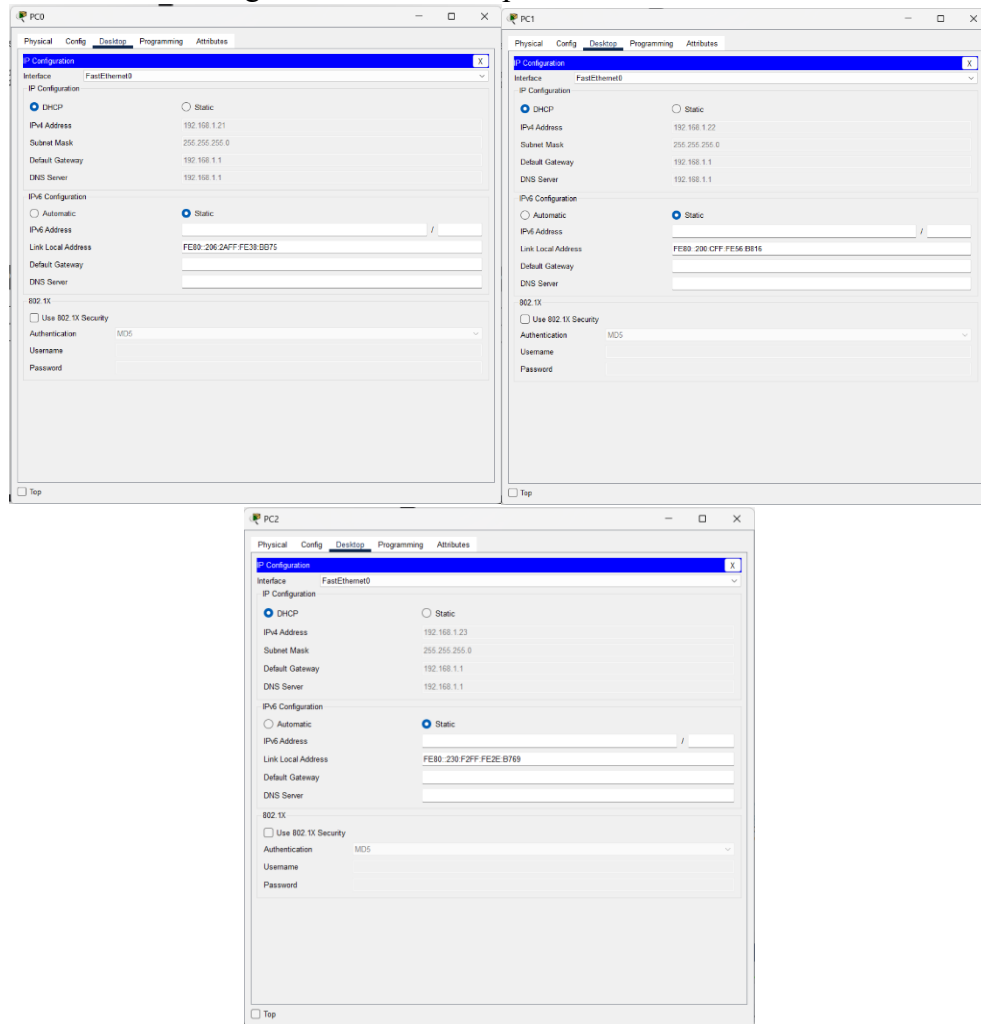
09010182327016_DHC(config-if)#ex
09010182327016_DHC(config-if)#ip dhcp pool LAN
09010182327016_DHC(dhcp-config)#network 192.168.1.0 255.255.255.0
09010182327016_DHC(dhcp-config)#default-router 192.168.1.1
09010182327016_DHC(dhcp-config)#dns-server 192.168.1.1
09010182327016_DHC(dhcp-config)#ip dhcp excluded-address 192.168.1.1
09010182327016_DHC(dhcp-config)#ip dhcp excluded-address 192.168.1.2 192.168.1.20
09010182327016_DHC(dhcp-config)#ex
09010182327016_DHC#
%SYS-5-CONFIG: I: Configured from console by console

09010182327016_DHC#ip dhcp binding

% Invalid input detected at '' marker.

09010182327016_DHC#sh ip dhcp binding
IP address      Client-ID      Hardware address  Lease expiration  Type
192.168.1.21    0006.2A39.8B75 --              Automatic
192.168.1.22    0000.0C34.8B16 --              Automatic
192.168.1.23    0030.F22E.B749 --              Automatic
09010182327016_DHC#
```

5. Setelah itu lakukan konfigurasi DHCP client pada PC.



6. Setelah itu Melihat daftar IP dari Client

```
09010182327016_DHCP#sh ip dhcp binding
IP address      Client-ID/      Lease expiration    Type
                Hardware address
192.168.1.21    0006.2A38.BB75   --                  Automatic
192.168.1.22    0000.0C56.B816   --                  Automatic
192.168.1.23    0030.F22E.B769   --                  Automatic
09010182327016_DHCP#
```

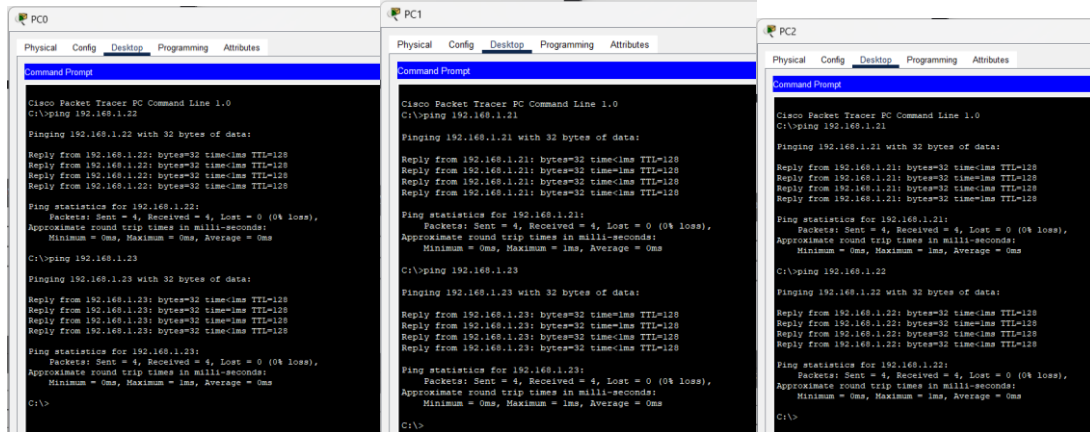
No	IP address	MAC Address	Lease Expiration	Type
1	192.168.1.21	0006.2A38.BB75	--	Automatic
2	192.168.1.22	0000.0C56.B816	--	Automatic
3	192.168.1.23	0030.F22E.B769	--	Automatic

7. Setelah itu lakukan pengalamatan ip pada Client/PC

No	Client	IP address	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

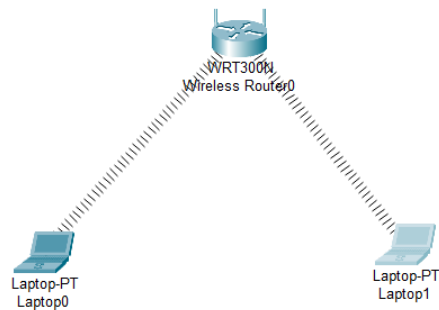
8. Lakukan pengujian PING pada setiap PC



No	Sumber	Hasil	Tujuan	Hasil
		Ya/Tidak		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

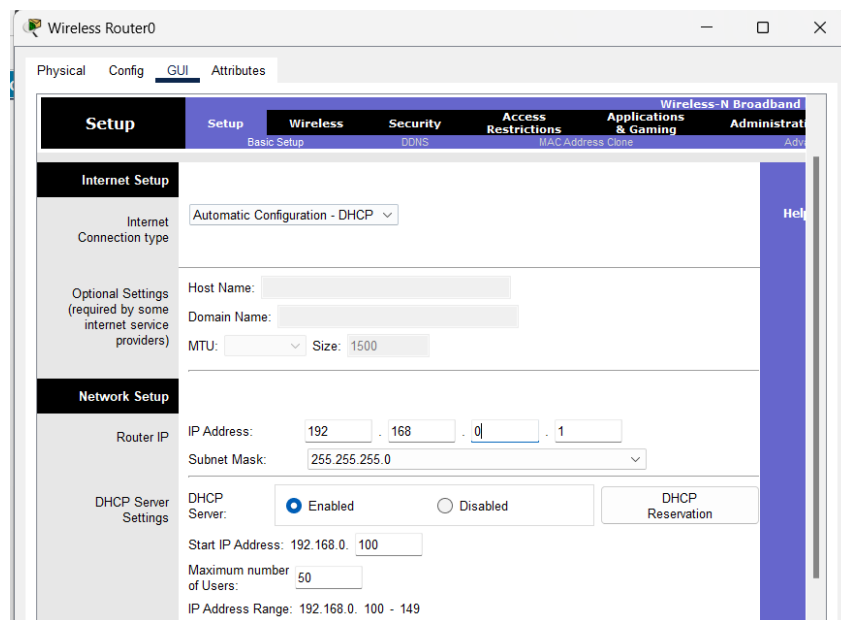
B. PERCOBAAN WIRELESS

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

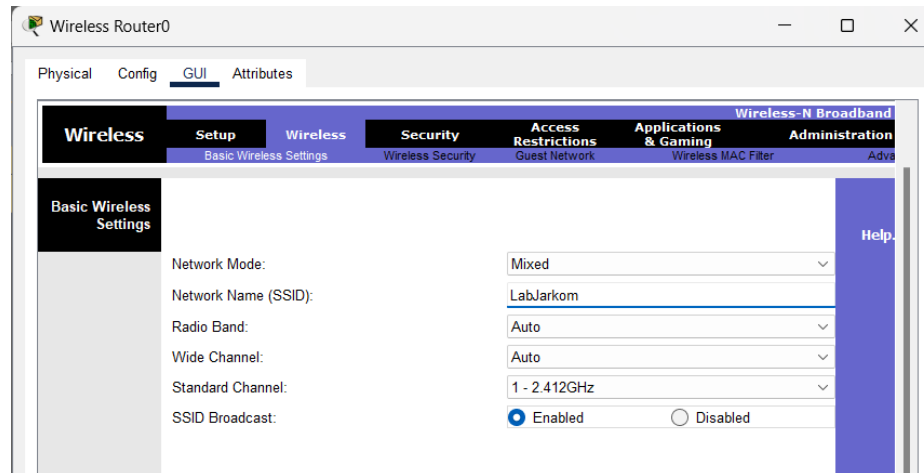


2. Konfigurasi Access Point

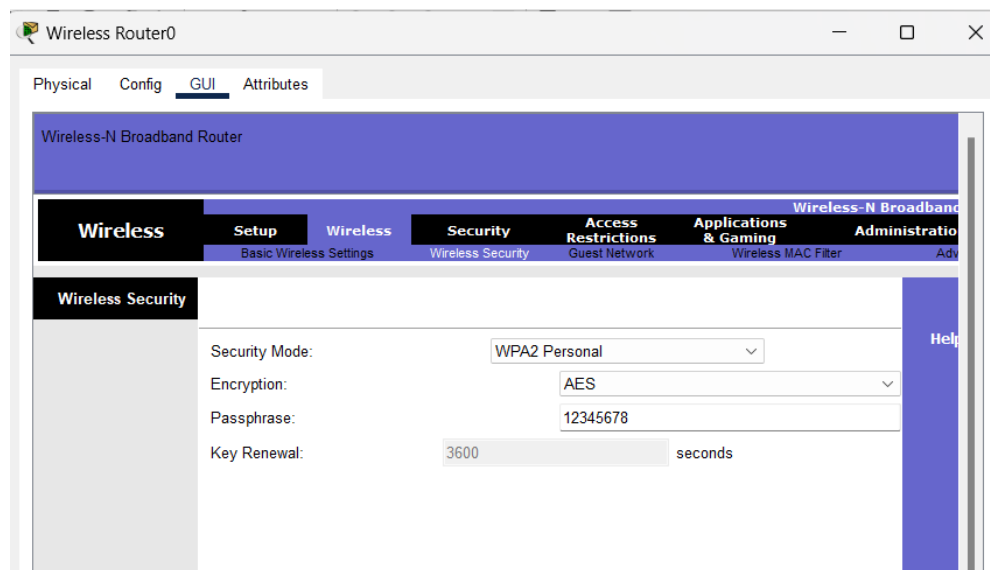
- Klik **Wireless Router** pada topologi.
- Buka tab **GUI**.
- Masukkan **IP Address**: 192.168.0.1 dan **Subnet Mask**: 255.255.255.0.
- Aktifkan **DHCP Server** dengan mengaturnya ke **Enabled**.
- Setel **Start IP Address** ke 192.168.0.100.
- Tentukan jumlah maksimum pengguna IP DHCP sesuai kebutuhan.
- Simpan pengaturan dengan mengklik **Save Settings**.



- Buka tab **Wireless** -> **Basic Wireless Settings**.
- Setel **SSID** ke LabJarkom.
- Klik **Save Settings** untuk menyimpan.



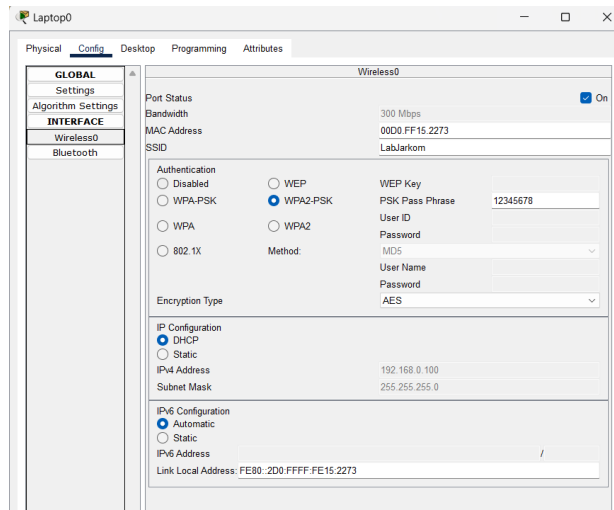
- Buka tab **Wireless** -> **Wireless Security**.
- Setel **Security Mode** ke **WPA2 Personal**.
- Pilih **Encryption**: **AES**.
- Masukkan **Passphrase**: 12345678.
- Simpan pengaturan dengan mengklik **Save Settings**.



3. Konfigurasi Client

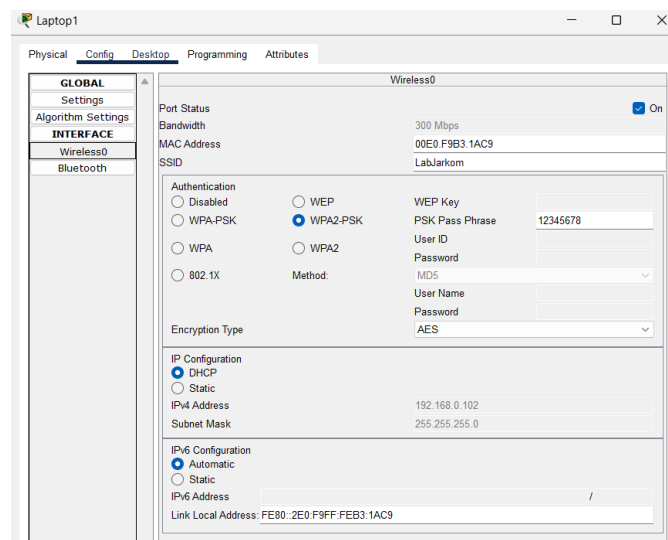
Konfigurasi Laptop0

1. Buka tab **Config** pada Laptop0.
2. Setel **SSID** ke LabJarkom.
3. Pilih **Authentication: WPA2-PSK**.
4. Masukkan **Pass Phrase: 12345678**.
5. Pilih **IP Configuration: DHCP** (IP akan otomatis diberikan jika DHCP server aktif).



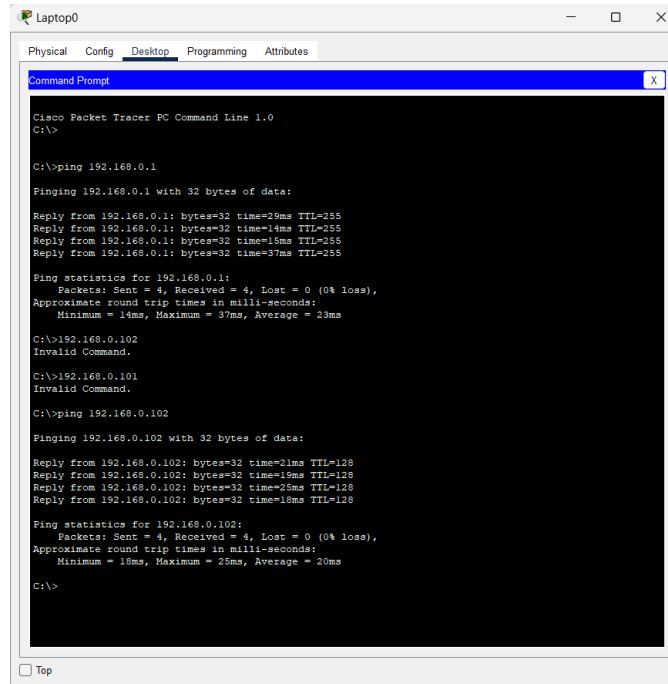
Konfigurasi Laptop1

1. Buka tab **Config** pada Laptop1.
2. Setel **SSID** ke LabJarkom.
3. Pilih **Authentication: WPA2-PSK**.
4. Masukkan **Pass Phrase: 12345678**.
5. Pilih **IP Configuration: DHCP** (IP akan otomatis diberikan jika DHCP server aktif).



4. Pengujian PING

- Di PC Tablet, pilih tab/menu Desktop -> Command Prompt
- Jalankan perintah Ping ke IP Access Point 192.168.0.1
- Ping IP Laptop0 ke Laptop1



```
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=29ms TTL=255
Reply from 192.168.0.1: bytes=32 time=14ms TTL=255
Reply from 192.168.0.1: bytes=32 time=15ms TTL=255
Reply from 192.168.0.1: bytes=32 time=37ms 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 = 14ms, Maximum = 37ms, Average = 23ms

C:\>ping 192.168.0.102
Invalid Command.

C:\>ping 192.168.0.101
Invalid Command.

C:\>ping 192.168.0.102

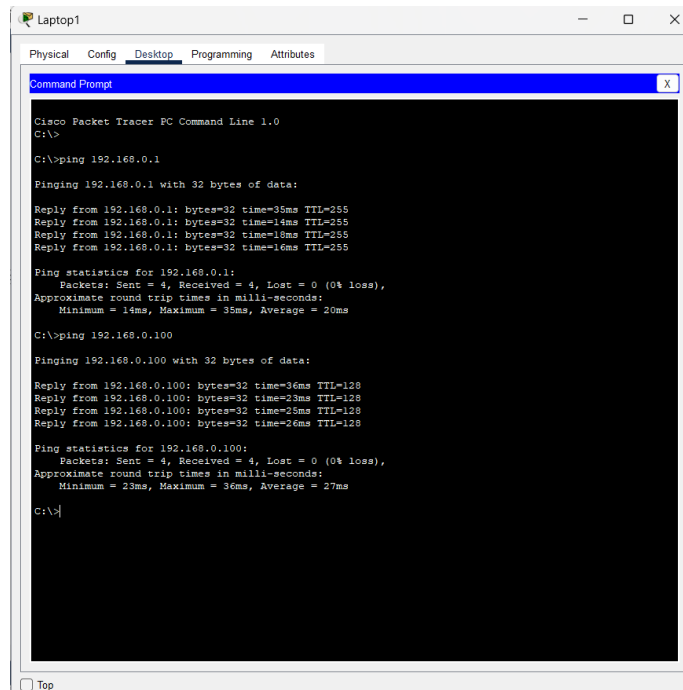
Pinging 192.168.0.102 with 32 bytes of data:

Reply from 192.168.0.102: bytes=32 time=21ms TTL=128
Reply from 192.168.0.102: bytes=32 time=19ms TTL=128
Reply from 192.168.0.102: bytes=32 time=25ms TTL=128
Reply from 192.168.0.102: bytes=32 time=18ms TTL=128

Ping statistics for 192.168.0.102:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 18ms, Maximum = 25ms, Average = 20ms

C:\>
```

- Ping Laptop1 ke Laptop0



```
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=35ms TTL=255
Reply from 192.168.0.1: bytes=32 time=18ms TTL=255
Reply from 192.168.0.1: bytes=32 time=16ms 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 = 14ms, Maximum = 35ms, Average = 20ms

C:\>ping 192.168.0.100

Pinging 192.168.0.100 with 32 bytes of data:

Reply from 192.168.0.100: bytes=32 time=36ms TTL=128
Reply from 192.168.0.100: bytes=32 time=23ms TTL=128
Reply from 192.168.0.100: bytes=32 time=25ms TTL=128
Reply from 192.168.0.100: bytes=32 time=26ms TTL=128

Ping statistics for 192.168.0.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 23ms, Maximum = 36ms, Average = 27ms

C:\>
```