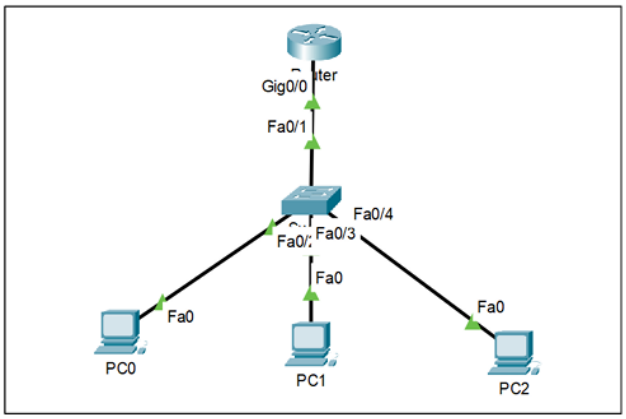
NAMA : CINDY RAMADHANI ANDELKE
NIM : 09010282327021
KELAS : MI3A

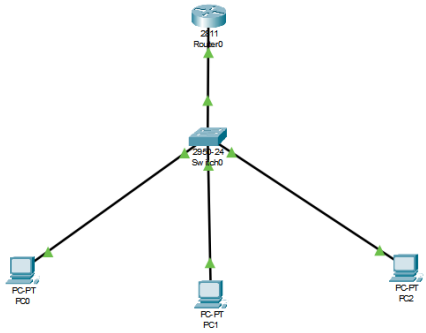
PRAKTIKUM JARINGAN KOMPUTER

A. PERCOBAAN



Gambar 6.1 Topologi jaringan DHCP

1. Buat Topologi Seperti Gambar diatas
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 looding router selesai, kita lanjutkan konfigurasinya.
   - Memberi nama router

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname 7021 dhcp
```

   - Setting IP Address pada router

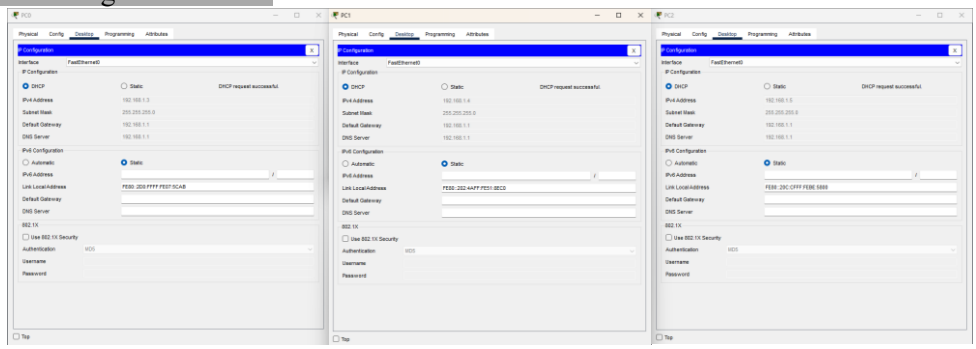
```
7021_dhcp(config)#int fa0/0
7021_dhcp(config-if)#ip add 192.168.1.1 255.255.255.0
7021_dhcp(config-if)#no shutdown

7021_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

7021_dhcp(config-if)#exit
```

   - Konfigurasi DHCP pada Router

```
7021_dhcp(config)#ip dhcp pool LAB
7021_dhcp(dhcp-config)#network 192.168.1.0 255.255.255.0
7021_dhcp(dhcp-config)#default-router 192.168.1.1
7021_dhcp(dhcp-config)#dns-server 192.168.1.1
7021_dhcp(dhcp-config)#ip dhcp excluded-address 192.168.1.1
7021_dhcp(config)#ip dhcp excluded-address 192.168.1.2 192.168.1.2
7021_dhcp(config)#exit
7021_dhcp#
%SYS-5-CONFIG_I: Configured from console by console
```

5. Setelah itu lakukan konfigurasi pada PC
   - Konfigurasi DHCP pada client

- Setting DHCP client



6. Setelah itu Melihat daftar IP dari Client

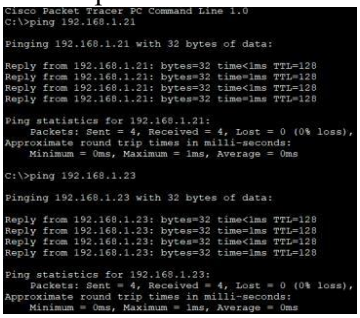
```
7021_dhcp#sh ip dhcp binding
IP address       Client-ID/              Lease expiration        Type
                 Hardware address
192.168.1.3      00D0.FF07.5CAB          --                      Automatic
192.168.1.4      0002.4A51.8EC0          --                      Automatic
192.168.1.5      000C.CFBE.5800          --                      Automatic
7021 dhcp#
```

NO	IP ADDRESS	MAC ADDRESS	LEASE EXPIRATION	TYPE
1	192.168.1.21	0060.5C83.C776	--	AUTOMATIC
2	192.168.1.22	0060.2F05.0780	--	AUTOMATIC
3	192.168.1.23	00DO.BA10.9254	--	AUTOMATIC

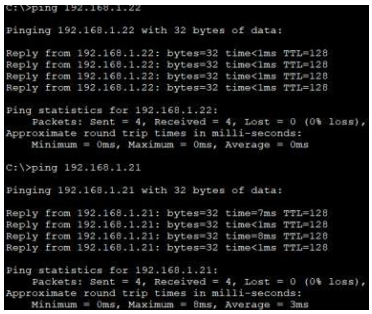
7. Pengalamatan Ip Pada Client/Pc

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

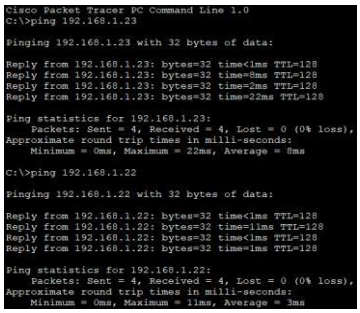
8. Daftar Ip Client



```
Cisco Packet Tracer PC Command Line 1.0
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 = 1ms, 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 = 1ms, 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<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 192.168.1.21

Pinging 192.168.1.21 with 32 bytes of data:

Reply from 192.168.1.21: bytes=32 time=7ms TTL=128
Reply from 192.168.1.21: bytes=32 time<1ms TTL=128
Reply from 192.168.1.21: bytes=32 time=8ms 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 = 8ms, Average = 3ms
```

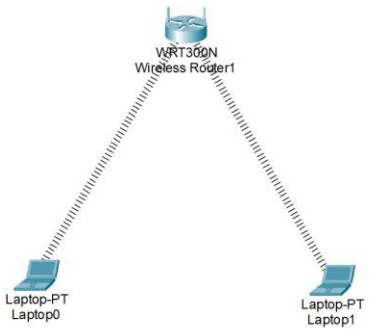


```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.23

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=8ms TTL=128
Reply from 192.168.1.23: bytes=32 time=2ms TTL=128
Reply from 192.168.1.23: bytes=32 time=22ms 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 = 22ms, Average = 8ms

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=11ms 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 = 11ms, Average = 3ms
```

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

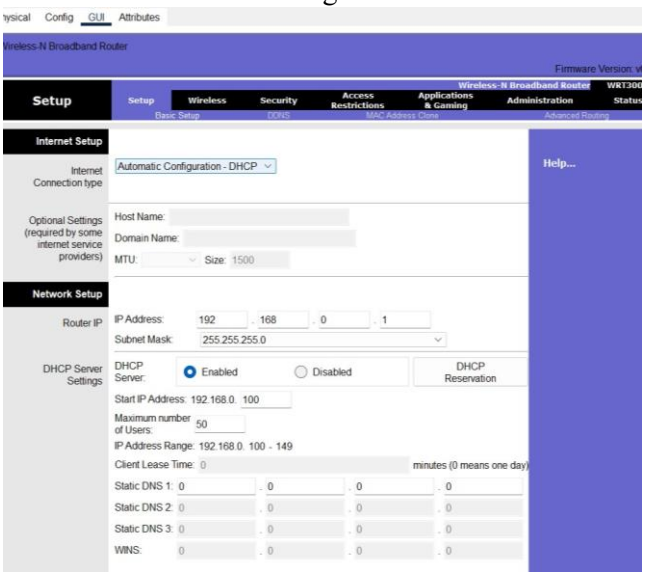
LATIHAN PERCOBAAN

1. BUAT TOPOLOGI



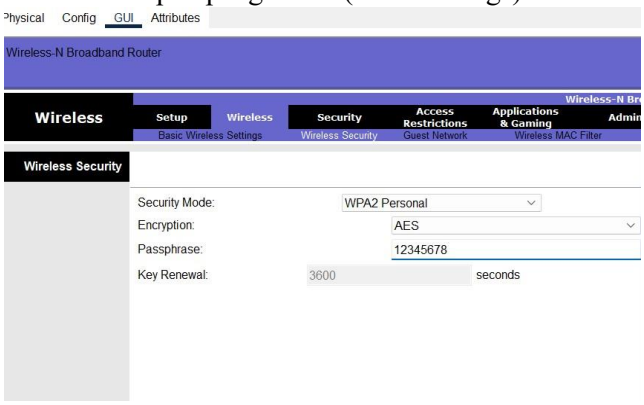
2. KONFIGURASI ACCESS POINT

- 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

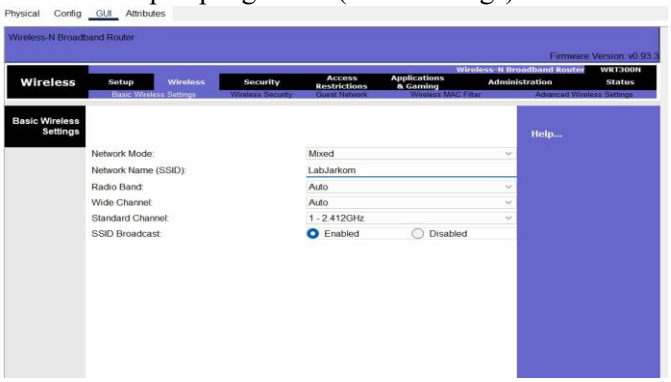


- Aktifkan DHCP Server, menjadi Enabled
- Mulai IP Address, dan IP DHCP dimulai dari 192.168.0.100
- Maximum number of Users (jumlah maksimum dari IP DHCP)
- Lalu simpan pengaturan (Save Settings)

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



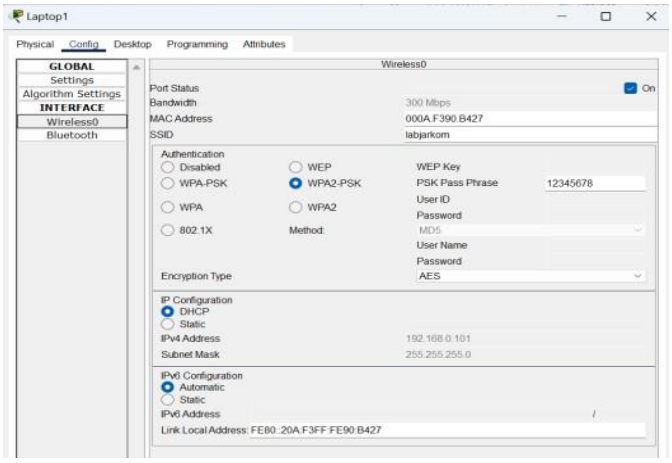
- ***Wireless Security***
  - Tekan tab/menu Wireless -> Wireless Security
  - Lalu pada Security Mode akan menggunakan WPA2 Personal
  - Dengan Encryption AES
  - Serta Passphrase 12345678
  - Lalu simpan pengaturan (Save Settings)



3. KONFIGURASI CLIENT

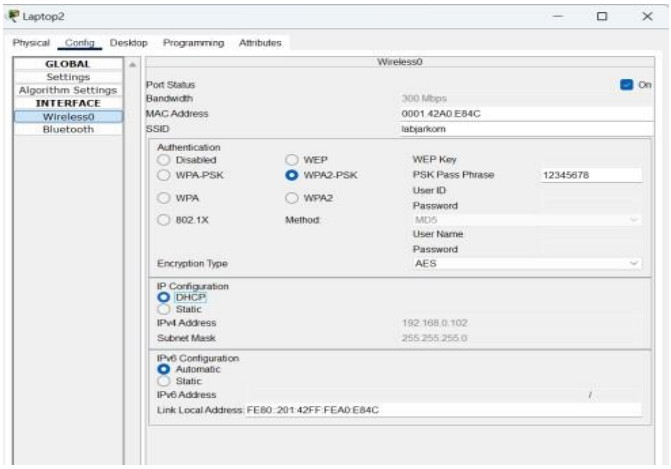
Konfigurasi Laptop1

- Konfigurasi Laptop 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



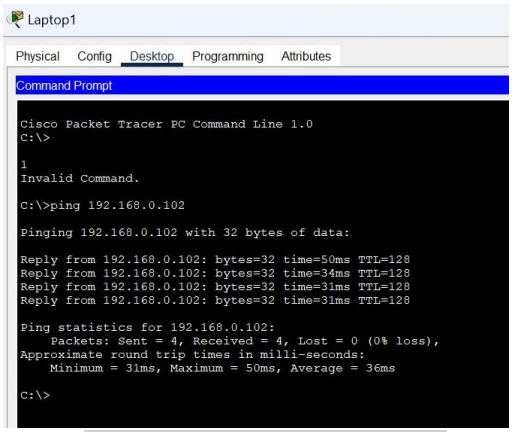
Konfigurasi Laptop2

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

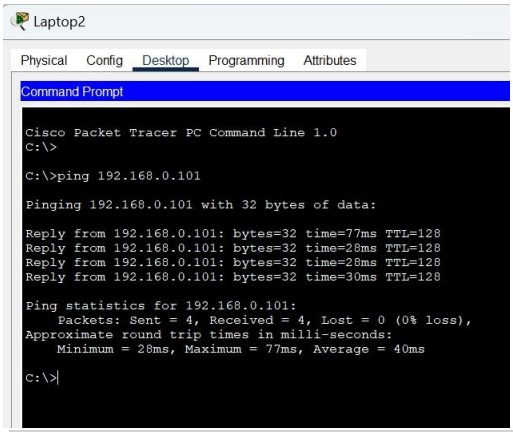


4. Pengujian PING

- DiLaptop, pilih tab/menu Desktop -> Command Prompt
- Jalankan perintah Ping ke IP Access Point 192.168.0.1



Ping IP Laptop1 Ke Laptop2



Lakukan juga pada Laptop2 Ke Laptop1