

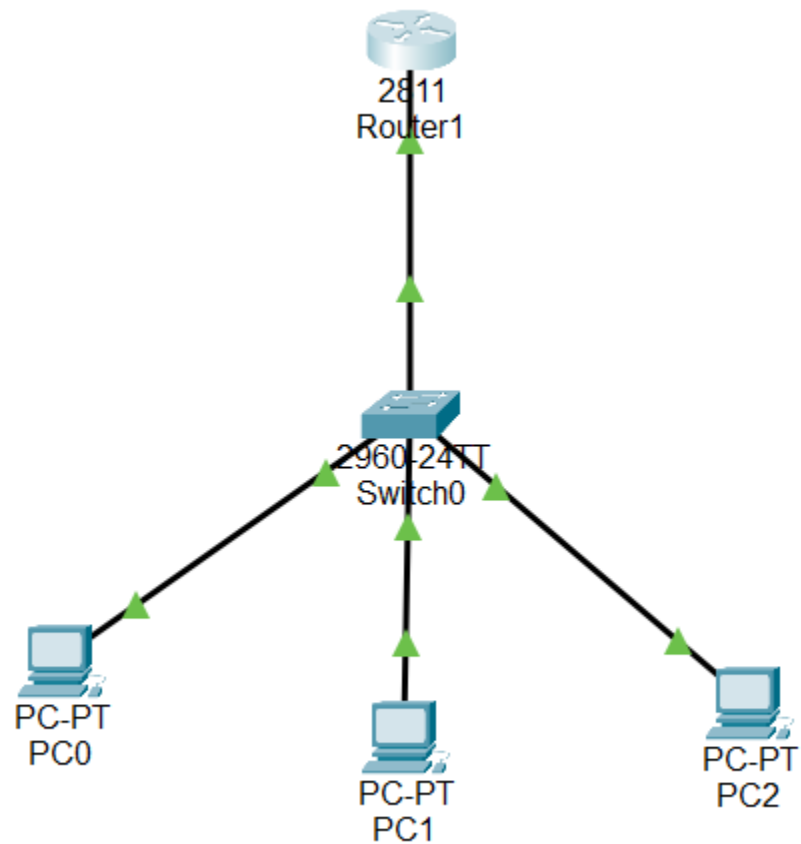
NAMA : RIDHO KURNIA HARLIZ

NIM : 09010182327019

KELAS : MI-3A

MK : PRAKTIKUM JARKOM

1. Topologi jaringan DHCP



1. Melihat Daftar IP dari Client

NO	IP ADDRESS	MAC ADDRESS	LEASE EXPIRATION	TYPE
1	192.168.1.21	00D0.FF27.2986	-	Automatic
2	192.168.1.22	0001.42AC.C622	-	Automatic
3	192.168.1.23	0060.2FGA.18AD	-	Automatic

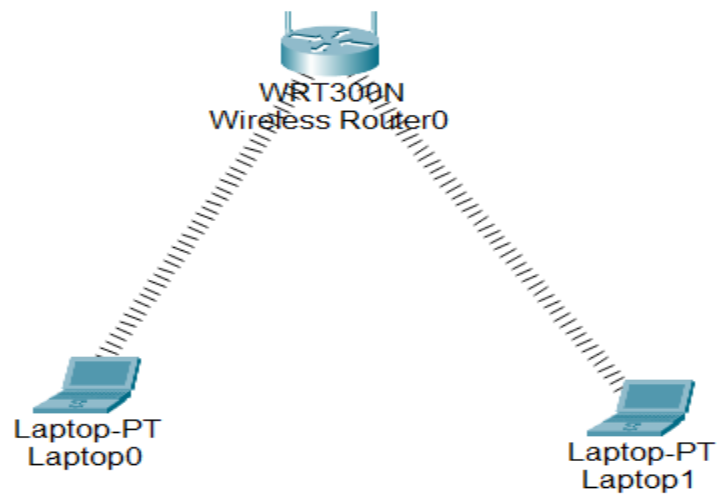
2. IP pada Client/PC

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

3. Daftar IP Client

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

1. Topologi jaringan 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

The screenshot shows the configuration interface of a Wireless-N Broadband Router. The top navigation bar includes tabs for Setup, Wireless, Security, Access Restrictions, Applications & Gaming, and Administration. The 'Setup' tab is active, and the 'Internet Setup' section is selected. The 'Internet Connection type' is set to 'Automatic Configuration - DHCP'. The 'Optional Settings' section includes fields for Host Name, Domain Name, and MTU (set to 1500). The 'Network Setup' section shows the Router IP configuration with IP Address 192.168.0.1 and Subnet Mask 255.255.255.0. A 'Help...' button is visible on the right side.

- 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. The 'DHCP Server' is set to 'Enabled'. The 'Start IP Address' is 192.168.0.100. The 'Maximum number of Users' is 50. The 'IP Address Range' is 192.168.0.100 - 149. The 'Client Lease Time' is 0 minutes (0 means one day). There are fields for Static DNS 1, Static DNS 2, Static DNS 3, and WINS, all set to 0.0.0.0.

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

The screenshot shows the 'Basic Wireless Settings' page of a 'Wireless-N Broadband Router'. The top navigation bar includes 'Wireless', 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications & Gaming', and 'Administration'. Below this, sub-tabs are visible: 'Basic Wireless Settings', 'Wireless Security', 'Guest Network', 'Wireless MAC Filter', and 'Advanced Wireless'. The left sidebar has 'Basic Wireless Settings' selected. The main content area contains the following settings:

- Network Mode: Mixed (dropdown)
- Network Name (SSID): LabJarkom (text input)
- Radio Band: Auto (dropdown)
- Wide Channel: Auto (dropdown)
- Standard Channel: 1 - 2.412GHz (dropdown)
- SSID Broadcast: ☒ Enabled ☐ Disabled (radio buttons)

A 'Help...' link is located on the right side of the page.

- 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)

The screenshot shows the 'Wireless Security' page of the same router. The top navigation bar and sub-tabs are identical to the previous screenshot. The left sidebar now has 'Wireless Security' selected. The main content area contains the following settings:

- Security Mode: WPA2 Personal (dropdown)
- Encryption: AES (dropdown)
- Passphrase: 12345678 (text input)
- Key Renewal: 3600 seconds (text input)

3. Konfigurasi Client

Konfigurasi Laptop PC0

- Konfigurasi Laptop PC pada tab Config
- SSID = LabJarkom
- Authentication = WPA2-PSK
- Pass Phrase = 12345678

Physical Config Desktop Programming Attributes

GLOBAL	Wireless0	
Settings		
Algorithm Settings		
INTERFACE		
Wireless0		
3G/4G Cell1		
Bluetooth		

Port Status	<input checked="" type="checkbox"/> On	
Bandwidth	300 Mbps	
MAC Address	0030.F241.421B	
SSID	Default	
Authentication		
<input type="radio"/> Disabled	<input type="radio"/> WEP	WEP Key
<input type="radio"/> WPA-PSK	<input checked="" type="radio"/> WPA2-PSK	PSK Pass Phrase
<input type="radio"/> WPA	<input type="radio"/> WPA2	User ID
<input type="radio"/> 802.1X	Method:	Password
		MD5
		User Name
		Password
Encryption Type	AES	

- Pada IP Configuration memakai DHCP
- Nomor IP akan ditampilkan jika Laptop terhubung dan DHCP Server aktif

IP Configuration	
<input checked="" type="radio"/> DHCP	
<input type="radio"/> Static	
IPv4 Address	192.168.0.101
Subnet Mask	255.255.255.0

IPv6 Configuration	
<input checked="" type="radio"/> Automatic	
<input type="radio"/> Static	
IPv6 Address	
Link Local Address:	FE80::230:F2FF:FEA5:4281

Konfigurasi Laptop PC1

- Konfigurasi Laptop PC pada tab Config

- SSID = LabJarkom
- Authentication = WPA2-PSK
- Pass Phrase = 12345678

Physical **Config** Desktop Programming Attributes

GLOBAL	Wireless0	
Settings	Port Status	<input checked="" type="checkbox"/> On
Algorithm Settings	Bandwidth	300 Mbps
INTERFACE	MAC Address	000B.BE62.3E35
Wireless0	SSID	Default
3G/4G Cell1	Authentication	
Bluetooth	<input type="radio"/> Disabled <input type="radio"/> WEP <input checked="" type="radio"/> WPA2-PSK <input type="radio"/> WPA <input type="radio"/> 802.1X	WEP Key PSK Pass Phrase: 12345678 User ID Password Method: MD5 User Name Password Encryption Type: AES

- IP menggunakan DHCP
- Nomor IP akan ditampilkan jika Laptop terhubung dan DHCP Server aktif

IP Configuration	
<input checked="" type="radio"/> DHCP	
<input type="radio"/> Static	
IPv4 Address	192.168.0.102
Subnet Mask	255.255.255.0
IPv6 Configuration	
<input checked="" type="radio"/> Automatic	
<input type="radio"/> Static	
IPv6 Address	/
Link Local Address:	FE80::201:43FF:FEA5:ED0D

4. Pengujian PING

- Di Laptop, pilih tab/menu Desktop -> Command Prompt
- Jalankan perintah Ping ke IP Access Point 192.168.0.1
- Ping IP Laptop PC0 Ke Laptop PC1
- Lakukan juga pada Laptop PC1 ke LaptopPC0

```
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=92ms TTL=255
Reply from 192.168.0.1: bytes=32 time=46ms TTL=255
Reply from 192.168.0.1: bytes=32 time=31ms TTL=255
Reply from 192.168.0.1: bytes=32 time=63ms 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 = 31ms, Maximum = 92ms, Average = 58ms

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=2ms TTL=128
Reply from 192.168.0.101: bytes=32 time=42ms TTL=128
Reply from 192.168.0.101: bytes=32 time=4ms TTL=128
Reply from 192.168.0.101: bytes=32 time=43ms 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 = 2ms, Maximum = 43ms, Average = 22ms

C:\>
```

```
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=166ms TTL=255
```

```
Reply from 192.168.0.1: bytes=32 time=37ms TTL=255
```

```
Reply from 192.168.0.1: bytes=32 time=46ms TTL=255
```

```
Reply from 192.168.0.1: bytes=32 time=14ms 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 = 166ms, Average = 65ms
```

```
C:\>PING 192.168.0.100
```

```
Pinging 192.168.0.100 with 32 bytes of data:
```

```
Request timed out.
```

```
Request timed out.
```

```
Request timed out.
```

```
Request timed out.
```

```
Ping statistics for 192.168.0.100:
```

```
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:\>PING 192.168.0.100
```

```
Pinging 192.168.0.100 with 32 bytes of data:
```

```
Request timed out.
```

```
Request timed out.
```

```
Request timed out.
```

```
Request timed out.
```

```
Ping statistics for 192.168.0.100:
```

```
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
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<1ms TTL=128
```

```
Reply from 192.168.0.102: bytes=32 time<1ms TTL=128
```

```
Reply from 192.168.0.102: bytes=32 time=1ms TTL=128
```

```
Reply from 192.168.0.102: bytes=32 time<1ms TTL=128
```

```
Reply from 192.168.0.102: bytes=32 time<1ms 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 = 0ms, Maximum = 1ms, Average = 0ms
```

```
C:\>
```