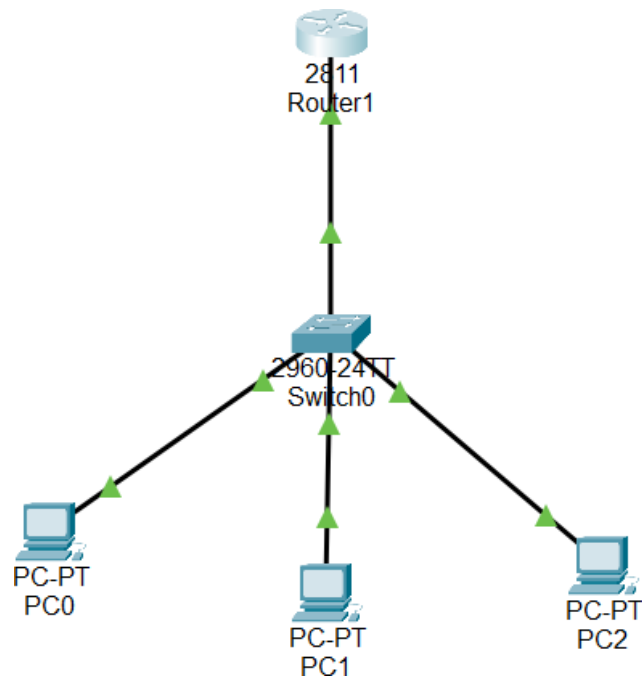


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**MK** : PRAKTIKUM JARKOM

### 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

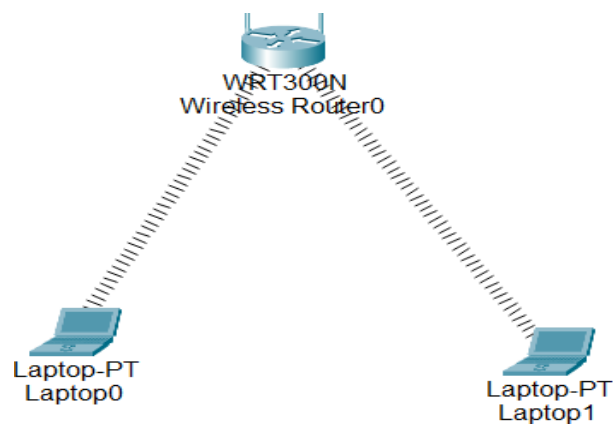
## 2. IP pada Client/PC

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 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

## 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, showing sub-tabs for Basic Setup, DDNS, MAC Address Clone, and Advanced Routing. The main content area is divided into two sections: Internet Setup and Network Setup. In the Internet Setup section, the Internet Connection type is set to Automatic Configuration - DHCP. Optional settings include Host Name, Domain Name, and MTU (set to 1500). The Network Setup section shows the Router IP address as 192.168.0.1 and the Subnet Mask as 255.255.255.0. A Help... button is visible on the right side of the interface.

- 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 enabled, indicated by a selected radio button. The Start IP Address is set to 192.168.0.100. The Maximum number of Users is set to 50. The IP Address Range is set to 192.168.0.100 - 149. The Client Lease Time is set to 0 minutes (0 means one day). There are three Static DNS fields, all set to 0.0.0.0. There are also three WINS fields, all set to 0.0.0.0. A DHCP Reservation button is visible on the right side of the interface.

- 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 interface has a top navigation bar with tabs: 'Wireless' (selected), 'Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications & Gaming', and 'Administration'. Below this, there's a sub-navigation bar with links: 'Basic Wireless Settings', 'Wireless Security', 'Guest Network', 'Wireless MAC Filter', and 'Advanced Wireless'. The main content area on the left is titled 'Basic Wireless Settings'. It contains the following fields:

- Network Mode:
- Network Name (SSID):
- Radio Band:
- Wide Channel:
- Standard Channel:
- SSID Broadcast: ☒ Enabled ☐ Disabled

A 'Help...' link is visible 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 is identical. The sub-navigation bar now highlights 'Wireless Security'. The main content area on the left is titled 'Wireless Security'. It contains the following fields:

- Security Mode:
- Encryption:
- Passphrase:
- Key Renewal:  seconds

### 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

<b>GLOBAL</b>	Wireless0	
Settings		
Algorithm Settings		
<b>INTERFACE</b>		
Wireless0		
3G/4G Cell1		
Bluetooth		

Port Status	<input checked="" type="checkbox"/> On	
Bandwidth	300 Mbps	
MAC Address	0030.F241.421B	
SSID	Default	
<b>Authentication</b>		
<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

- Physical

Config

Desktop

Programming

Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

**Wireless0**

3G/4G Cell1

Bluetooth

Wireless0

Port Status

Bandwidth

MAC Address

SSID

Authentication

Encryption Type

300 Mbps

000B.BE62.3E35

Default

☐ Disabled

☐ WEP

☐ WPA

☐ 802.1X

☒ WPA2-PSK

☐ WPA2

Method:

WEP Key

PSK Pass Phrase

User ID

Password

User Name

Password

12345678

AES

- |  |                          |
|--|--------------------------|
| 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:\>
```