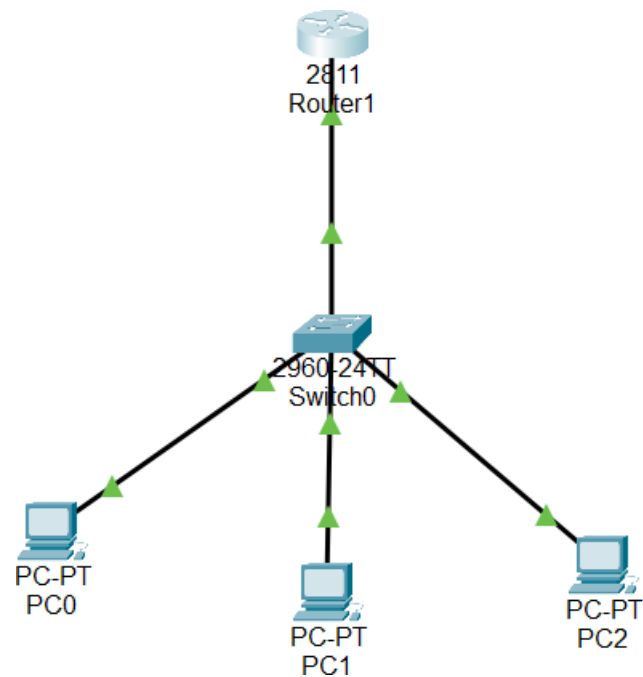


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MK : PRAKTIKUM JARKOM

1. Topologi jaringan DHCP



1. Melihat Daftar IP dari Client

NO	IP ADDRESS	MAC ADDRESS	LEASE EXPIRATIC N	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

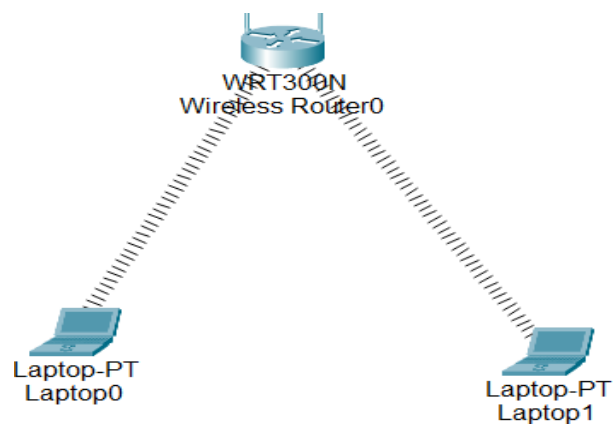
2. IP pada Client/PC

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

Setup | Setup | Wireless | Security | Access Restrictions | Applications & Gaming | Administration | S

Basic Setup | DDNS | MAC Address Clone | Advanced Routing

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

Help...

- 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)

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: 0 . 0 . 0 . 0

Static DNS 2: 0 . 0 . 0 . 0

Static DNS 3: 0 . 0 . 0 . 0

WINS: 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, a sub-menu bar highlights 'Basic Wireless Settings' and includes 'Wireless Security', 'Guest Network', 'Wireless MAC Filter', and 'Advanced Wire'. On the left, a sidebar lists 'Basic Wireless Settings' and 'Help...'. 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)

- 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-menu bar are identical to the previous screenshot. The sidebar now highlights 'Wireless Security'. 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	Port Status	<input checked="" type="checkbox"/> On
Algorithm Settings	Bandwidth	300 Mbps
INTERFACE	MAC Address	0030.F241.421B
Wireless0	SSID	Default
3G/4G Cell1	<div>Authentication</div> <div><div><div><input type="radio"/> Disabled</div><div><input type="radio"/> WPA-PSK</div><div><input type="radio"/> WPA</div><div><input type="radio"/> 802.1X</div></div><div><div><input type="radio"/> WEP</div><div><input checked="" type="radio"/> WPA2-PSK</div><div><input type="radio"/> WPA2</div><div>Method:</div></div></div> <div>WEP Key</div> <div>PSK Pass Phrase</div> <div>User ID</div> <div>Password</div> <div>MD5</div> <div>User Name</div> <div>Password</div> <div>AES</div>	

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

- 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:\>
```