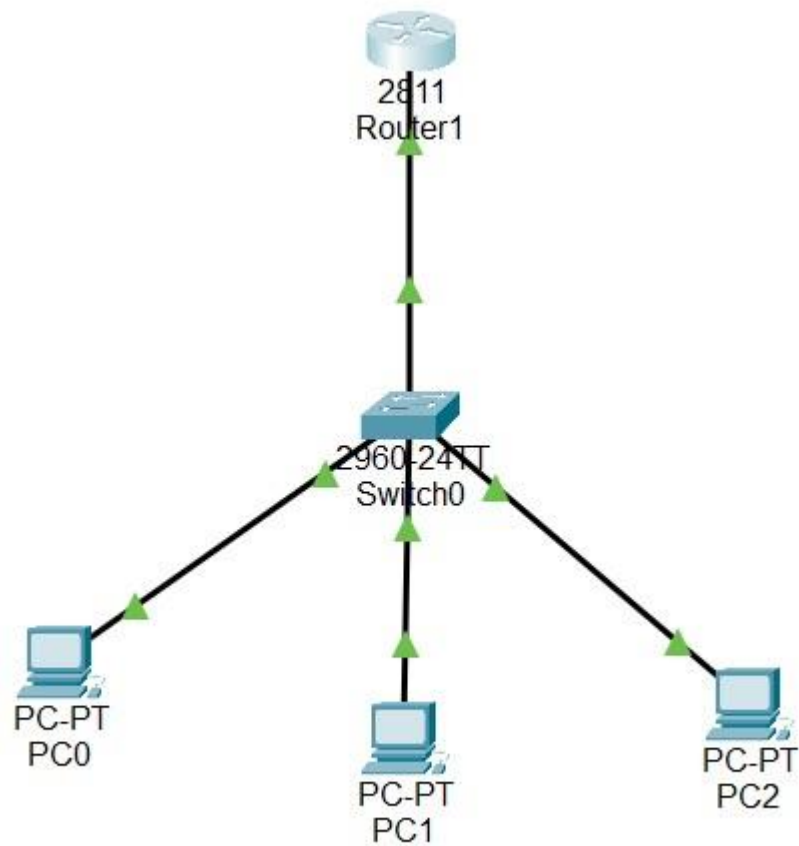


NAMA : M.FATIHUL RAHMAN
NIM : 09010282327035
KELAS : MI-3A
MK : PRAKTIKUM JARKOM

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

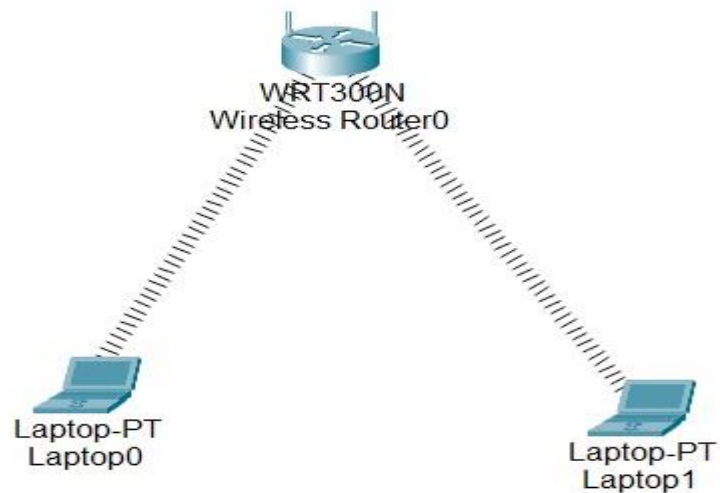
2. IP pada Client/PC

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 displays 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. The Internet Setup section includes a dropdown for Internet Connection type (set to Automatic Configuration - DHCP) and optional settings for Host Name, Domain Name, MTU, and Size. The Network Setup section includes a Router IP configuration area with fields for IP Address (192.168.0.1) and Subnet Mask (255.255.255.0). A Help... button is visible on the right side of the interface.

Setup		Wireless		Security		Access Restrictions		Applications & Gaming		Administration	
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: <input type="text"/> Domain Name: <input type="text"/> MTU: <input type="text"/> Size: 1500

Network Setup	
Router IP	IP Address: 192 . 168 . 0 . 1 Subnet Mask: 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)

DHCP Server Settings	DHCP Server:	<input checked="" type="radio"/> Enabled		<input type="radio"/> 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)

Wireless-N Broadband Router	
Wireless	Setup
Wireless	Security
Access Restrictions	Applications & Gaming
Administration	
Basic Wireless Settings	Wireless Security
Guest Network	Wireless MAC Filter
Advanced Wire	

Basic Wireless Settings	Network Mode:	Mixed
	Network Name (SSID):	LabJarkom
	Radio Band:	Auto
	Wide Channel:	Auto
	Standard Channel:	1 - 2.412GHz
	SSID Broadcast:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled

- 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)

Wireless		Setup	Wireless	Security	Access Restrictions	Applications & Gaming	Wireless-N Broadband
Wireless Security		Basic Wireless Settings	Wireless Security	Guest Network	Wireless MAC Filter		
Wireless Security		<div>Security Mode: WPA2 Personal</div> <div>Encryption: AES</div> <div>Passphrase: 12345678</div> <div>Key Renewal: 3600 seconds</div>					

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
<div> <div> GLOBAL Settings Algorithm Settings INTERFACE Wireless0 3G/4G Cell1 Bluetooth </div> <div> Wireless0 Port Status On Bandwidth 300 Mbps MAC Address 0030.F241.421B SSID Default <div> <div> Authentication <input type="radio"/> Disabled <input type="radio"/> WPA-PSK <input type="radio"/> WPA <input type="radio"/> 802.1X </div> <div> <input type="radio"/> WEP <input checked="" type="radio"/> WPA2-PSK <input type="radio"/> WPA2 Method: </div> <div> WEP Key PSK Pass Phrase 12345678 User ID Password MD5 User Name Password AES </div> </div> </div> </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		
<table border="1"> <tr> <td> GLOBAL Settings Algorithm Settings INTERFACE Wireless0 3G/4G Cell1 Bluetooth </td> <td> 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 WEP Key <input type="radio"/> WPA-PSK <input checked="" type="radio"/> WPA2-PSK PSK Pass Phrase 12345678 <input type="radio"/> WPA <input type="radio"/> WPA2 User ID <input type="radio"/> 802.1X Method: Password Encryption Type MD5 User Name Password AES </td> </tr> </table>					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 WEP Key <input type="radio"/> WPA-PSK <input checked="" type="radio"/> WPA2-PSK PSK Pass Phrase 12345678 <input type="radio"/> WPA <input type="radio"/> WPA2 User ID <input type="radio"/> 802.1X Method: Password Encryption Type MD5 User Name Password AES
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 WEP Key <input type="radio"/> WPA-PSK <input checked="" type="radio"/> WPA2-PSK PSK Pass Phrase 12345678 <input type="radio"/> WPA <input type="radio"/> WPA2 User ID <input type="radio"/> 802.1X Method: Password Encryption Type MD5 User Name Password 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:\>