

# **TUGAS LAPORAN PRAKTIKUM**



## **MATA KULIAH PRAKTIKUM JARINGAN KOMPUTER DOSEN PENGAMPU**

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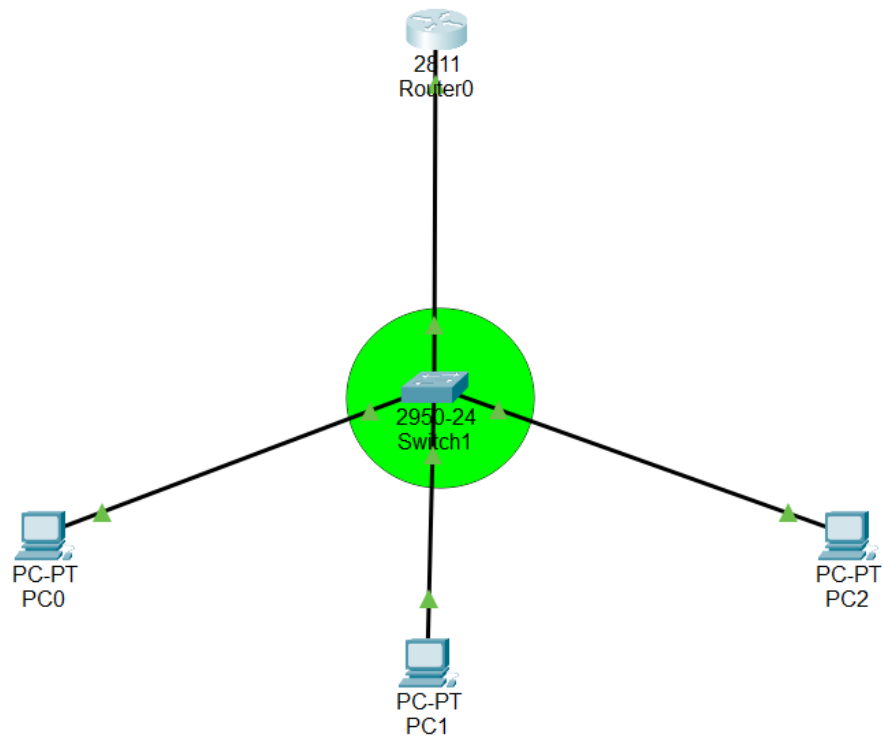
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**UNIVERSITAS SRIWIJAYA  
ILMU KOMPUTER  
MANAJEMEN INFORMATIKA**

- **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

## 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 page of a Wireless-N Broadband Router. The 'Setup' tab is active, with sub-tabs for 'Basic Setup', 'Wireless', 'Security', 'Access Restrictions', 'Applications & Gaming', and 'Administration'. The 'Internet Setup' section is expanded, showing 'Automatic Configuration - DHCP' selected. Below this, there are fields for 'Host Name', 'Domain Name', and 'MTU' (set to 1500). The 'Network Setup' section is also expanded, showing the 'Router IP' configuration. The IP Address is set to 192.168.0.1 and the Subnet Mask is set to 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)

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
	Static DNS 2:	0	0	0
	Static DNS 3:	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		Setup	Wireless	Security	Access Restrictions	Applications & Gaming	Administration
Basic Wireless Settings		Wireless-N Broadband Router					
Basic Wireless Settings		Wireless Security Guest Network Wireless MAC Filter Advanced Wire					
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	Admin
		Basic Wireless Settings	Wireless Security	Guest Network	Wireless MAC Filter		
<b>Wireless Security</b>							
Security Mode:		WPA2 Personal					
Encryption:		AES					
Passphrase:		12345678					
Key Renewal:		3600		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														
<table border="1"> <thead> <tr> <th colspan="2">GLOBAL</th> </tr> <tr> <td>Settings</td> <td></td> </tr> <tr> <td>Algorithm Settings</td> <td></td> </tr> <tr> <th colspan="2">INTERFACE</th> </tr> <tr> <td>Wireless0</td> <td></td> </tr> <tr> <td>3G/4G Cell1</td> <td></td> </tr> <tr> <td>Bluetooth</td> <td></td> </tr> </thead></table>					GLOBAL		Settings		Algorithm Settings		INTERFACE		Wireless0		3G/4G Cell1		Bluetooth	
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- 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	<b>Config</b>	Desktop	Programming	Attributes
----------	---------------	---------	-------------	------------

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

- IP menggunakan DHCP
- Nomor IP akan ditampilkan jika Laptop terhubung dan DCHP 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:\>
```