

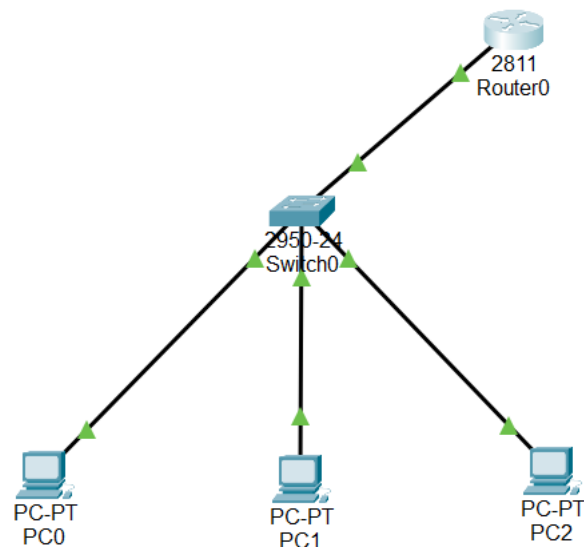
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## LAPORAN PRAKTIKUM JARKOM

### DHCP



```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname ROUTER_09010282327037
ROUTER_09010282327037(config)#int fa0/0
ROUTER_09010282327037(config-if)#ip add 192.168.1.1 255.255.255.0
ROUTER_09010282327037(config-if)#no shutdown

ROUTER_09010282327037(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

ROUTER_09010282327037(config-if)#exit
ROUTER_09010282327037(config)#ip dhcp pool LAB
ROUTER_09010282327037(dhcp-config)#network 192.168.1.0 255.255.255.0
ROUTER_09010282327037(dhcp-config)#default-router 192.168.1.1
ROUTER_09010282327037(dhcp-config)#dns-server 192.168.1.1
ROUTER_09010282327037(dhcp-config)#ip dhcp excluded-address 192.168.1.1
ROUTER_09010282327037(config)#ip dhcp excluded-address 192.168.1.2 192.168.1.20
ROUTER_09010282327037(config)#
```

1. Setelah itu Melihat daftar IP dari Client

```

ROUTER_09010282327037#sh ip dhcp binding
IP address      Client-ID/      Lease expiration      Type
Hardware address
192.168.1.23    00E0.F9B3.9DBB  --                    Automatic
192.168.1.21    00E0.8F79.7744  --                    Automatic
192.168.1.22    00D0.FF2E.7442  --                    Automatic

```

No.	IP address	MAC address	Lease expiration	Type
1.	192.168.1.21	00E0.8F79.7744	-	Automatic
2.	192.168.1.22	00D0.FF2E.7442	-	Automatic
3.	192.168.1.23	00E0.F9B3.9DBB	-	Automatic

## 2. Setelah itu lakukan pengalamatan ip pada Client/PC

The image shows three screenshots of the PC configuration interface in Cisco Packet Tracer. Each window is for a different PC (PC0, PC1, PC2) and shows the 'IP Configuration' tab. In all three, the 'DHCP' radio button is selected under 'IP Configuration'. For PC0, the IPv4 Address is 192.168.1.21. For PC1, it's 192.168.1.22. For PC2, it's 192.168.1.23. The Subnet Mask is 255.255.255.0, the Default Gateway is 192.168.1.1, and the DNS Server is 192.168.1.1. Under 'IPv6 Configuration', the 'Static' radio button is selected. The IPv6 Address is FE80:2E0:8FFF:FE79:7744 for PC0, FE80:2D0:FFFF:FE2E:7442 for PC1, and FE80:2E0:F9FF:FEB3:9DBB for PC2. The Link Local Address and Default Gateway fields are empty, and the DNS Server field is also empty.

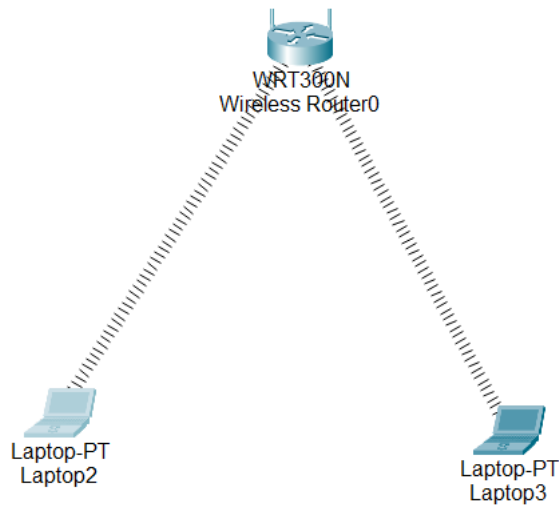
No.	Client	IP address	Netmask	Gateway	DNS
1.	PC0	192.168.1.21	255.255.255.0	192.168.1.1	192.168.1.1
2.	PC1	192.168.1.22	255.255.255.0	192.168.1.1	192.168.1.1
3.	PC2	192.168.1.23	255.255.255.0	192.168.1.1	192.168.1.1

## 3. Lakukan pengujian PING pada setiap PC

The image shows three screenshots of the Command Prompt window on PC0, PC1, and PC2. Each window shows the output of the 'ping' command. For PC0, the command is 'ping 192.168.1.22' and 'ping 192.168.1.23'. For PC1, the command is 'ping 192.168.1.21' and 'ping 192.168.1.23'. For PC2, the command is 'ping 192.168.1.21' and 'ping 192.168.1.22'. In all cases, the output shows 'Pinging 192.168.1.22 with 32 bytes of data:' followed by four successful replies from the target IP address, each with 'bytes=32 time<1ms TTL=128'. The ping statistics show 'Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 0ms, Maximum = 0ms, Average = 0ms'.

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

## WIRELESS (LATIHAN)



1. Buat Topologi Seperti Gambar diatas (note\*: Gantilah device tablet menjadi laptop pada topologi diatas dan harus terhubung secara 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

Wireless Router0

Physical Config **GUI** Attributes

Wireless-N Broadband Router

Setup	Setup	Wireless	Security	Access Restrictions	Applications & Gaming	Adm
	Basic Setup		DDNS		MAC Address Clone	

**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

- 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 Security	Guest Network	Wireless MAC Filter		
<b>Basic Wireless Settings</b>						
	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)

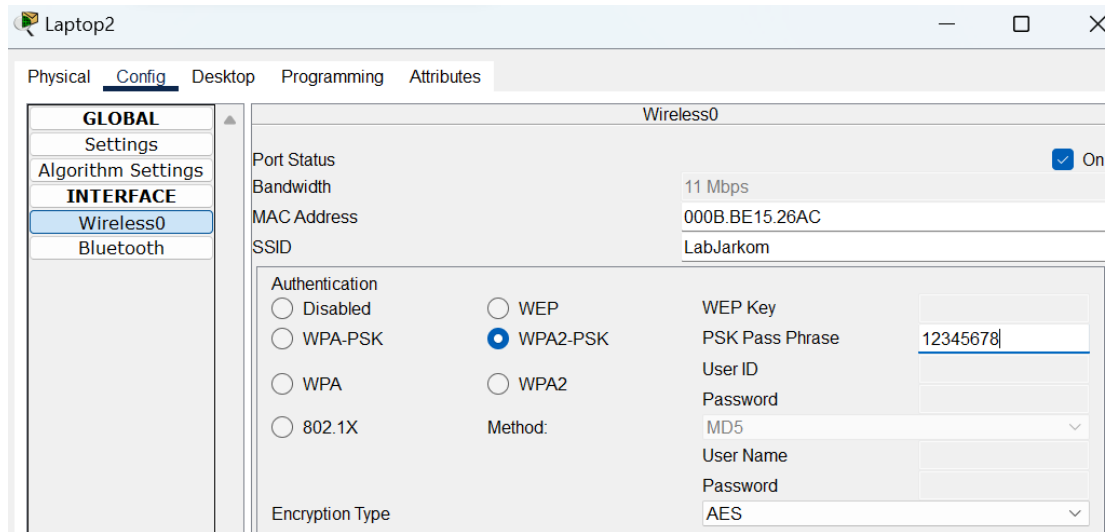
Setup	Wireless	Security	Access Restrictions	Applications & Gaming	Administration
Basic Wireless Settings	Wireless Security	Guest Network	Wireless MAC Filter		
<b>Wireless Security</b>					
	Security Mode:	WPA2 Personal			
	Encryption:	AES			
	Passphrase:	12345678			
	Key Renewal:	3600	seconds		

### 3. Konfigurasi Client

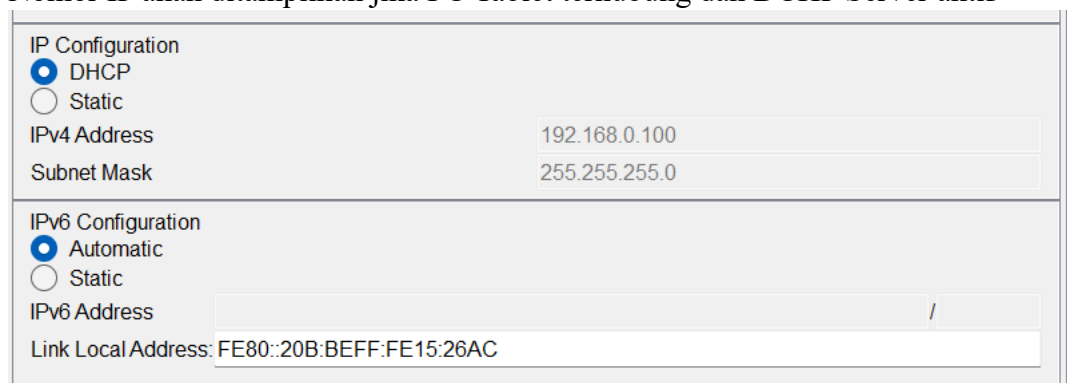
#### Konfigurasi Tablet PC0

- Konfigurasi Tablet PC pada tab Config

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

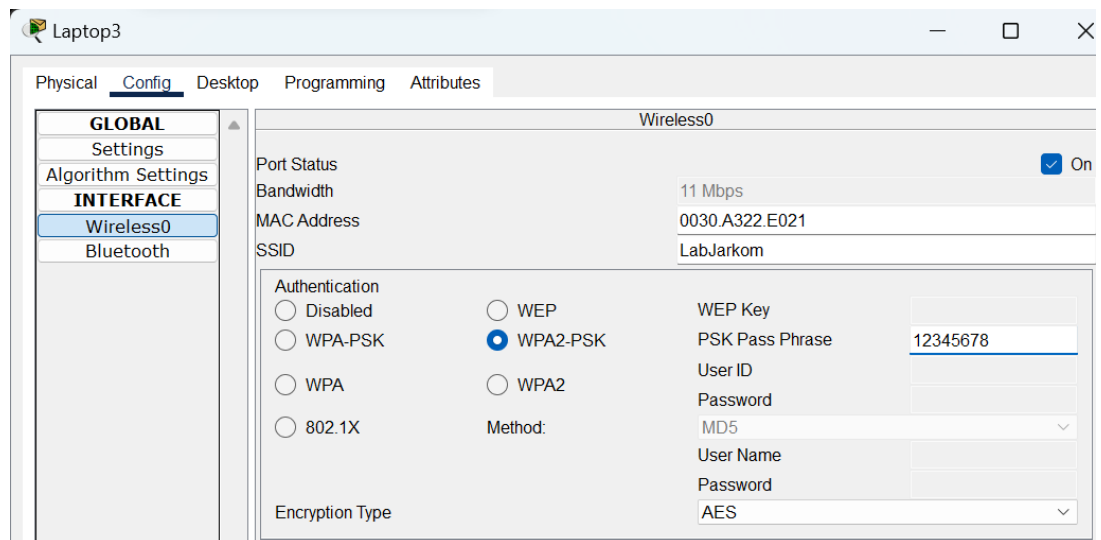


- Pada IP Configuration memakai DHCP
- Nomor IP akan ditampilkan jika PC Tablet terhubung dan DHCP Server aktif



### Konfigurasi Tablet PC1

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



- IP menggunakan DHCP
- Nomor IP akan ditampilkan jika PC Tablet terhubung dan DCHP Server aktif



#### 4. Pengujian PING

- Di PC Tablet, pilih tab/menu Desktop -> Command Prompt
- Jalankan perintah Ping ke IP Access Point 192.168.0.1
- Ping IP PC TabletPC0 Ke PC TabletPC1
- Lakukan juga pada PC TabletPC1 ke PC TabletPC0

