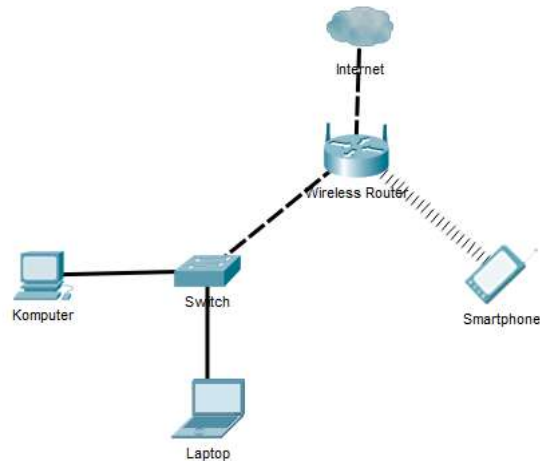


# DOKUMENTASI JAWABAN OBSERVASI (PRAKTEK)

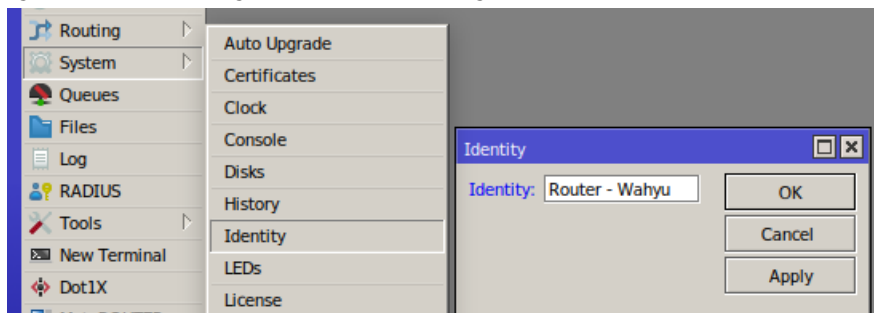
Nama : Wahyu Ahmad Yassin

Skema : Junior Network Administrator

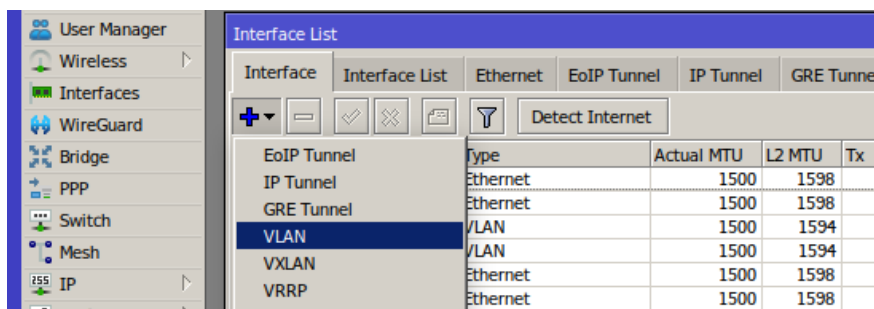


gambar topologi jaringan.

## 1. system -> identity -> Router - Wahyu

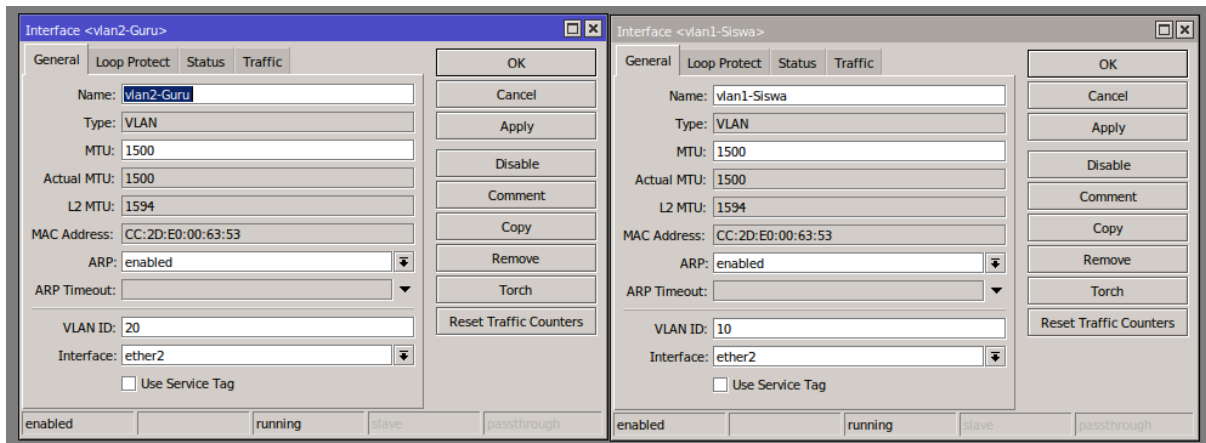


## 2. KONFIGURASI INTERFACE VLAN PADA ROUTER



### Interfaces -> VLAN -> add VLAN (+)

- Name : **VLAN 1 - Siswa**
- VLAN ID : 10
- Interfaces : ether2
- Name : **VLAN 2 - Guru**
- VLAN ID : 20
- Interfaces : ether2



Sekarang kita punya 2 interface baru yang tadi kita buat.

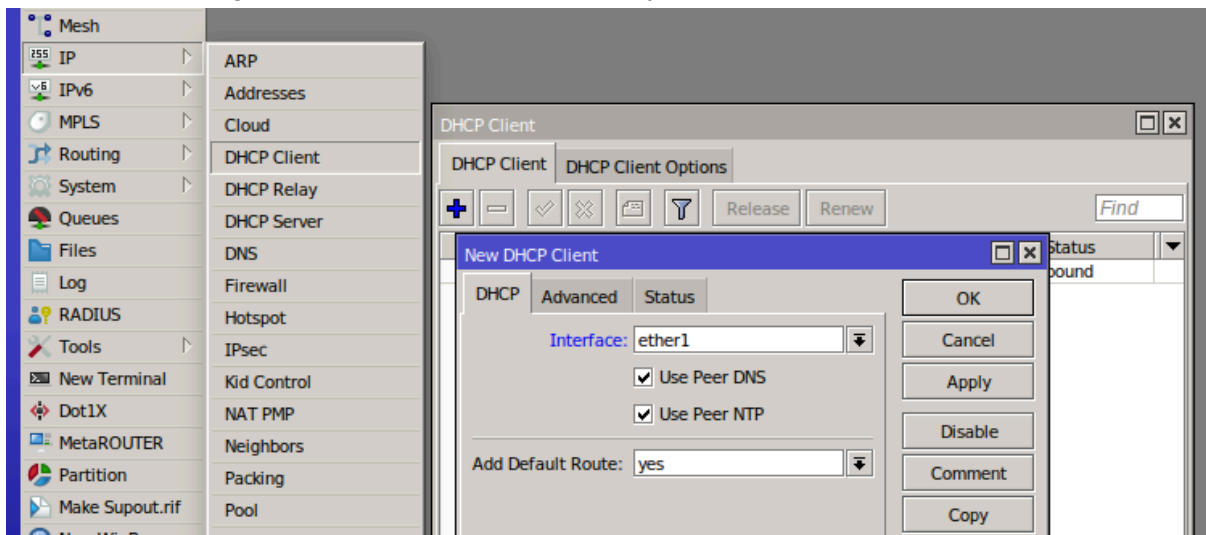
	Name	Type	Actual MTU	L2 MTU	Tx	Rx
R	ether1	Ethernet	1500	1598	5.2 kbps	
R	ether2	Ethernet	1500	1598	218.5 kbps	
R	vlan1-Siswa	VLAN	1500	1594	0 bps	
R	vlan2-Guru	VLAN	1500	1594	0 bps	
	ether3	Ethernet	1500	1598	0 bps	

### 3. KONFIGURASI IP ADDRESS PADA ROUTER

Setelah membuat interface VLAN, sekarang kita konfigurasi IP untuk interface ether1, wlan1, vlan1-siswa, vlan2-guru berdasarkan ketentuan pada soal.

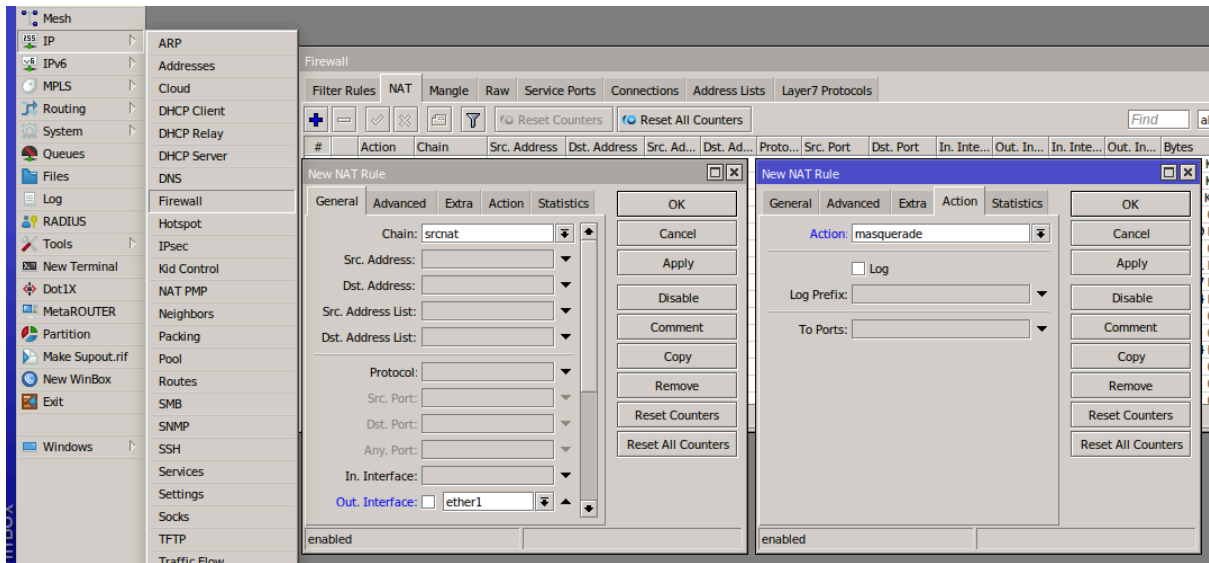
#### IP -> DHCP Client -> Add (+)

Kita mulai dengan request dhcp client untuk ether1. Buka menu IP > DHCP Client. Tambah baru dengan klik icon "+". Pilih interfacenya **ether1**.



#### IP -> Firewall -> Tab NAT -> Add (+) -> General

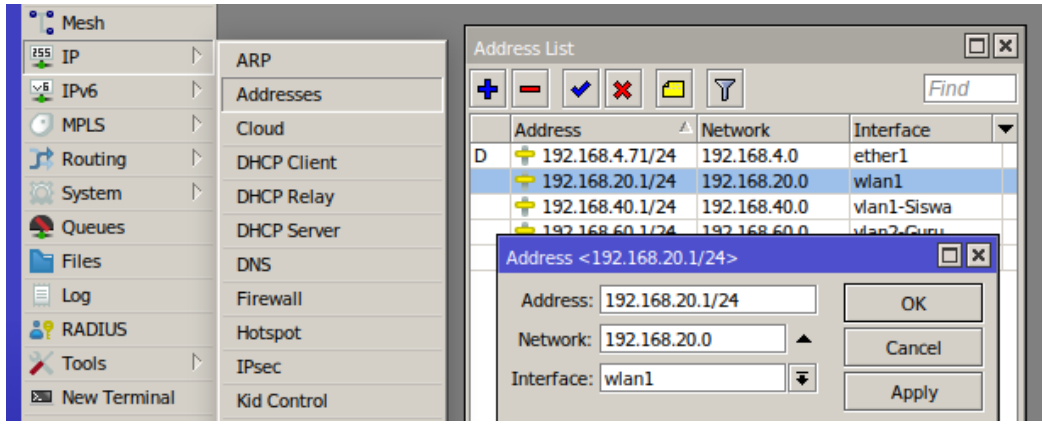
- Chain : srcnat
- Out Interface : ether1
- Action : Masquerade



**IP -> Addresses -> Add (+)**

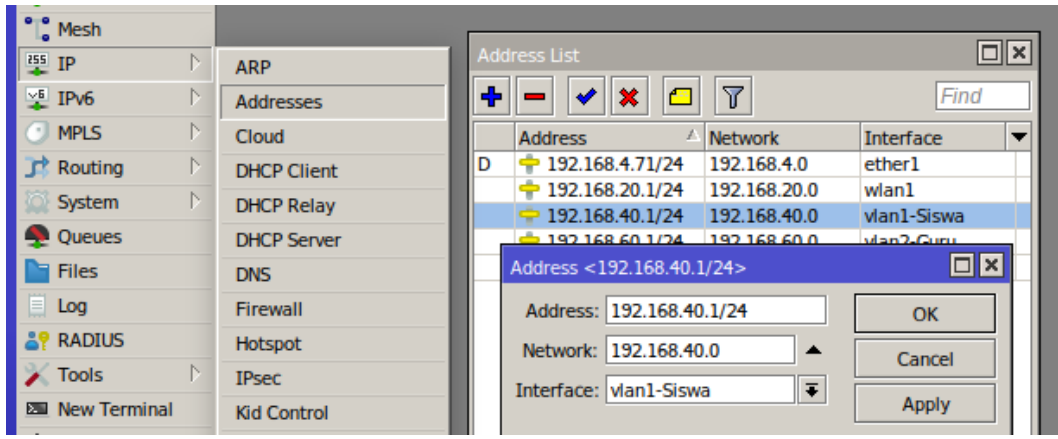
**WLAN 1**

- **Address : 192.168.20.1/24**
- **Network : otomatis setelah apply / OK (192.168.20.0)**
- **Interface : wlan1**



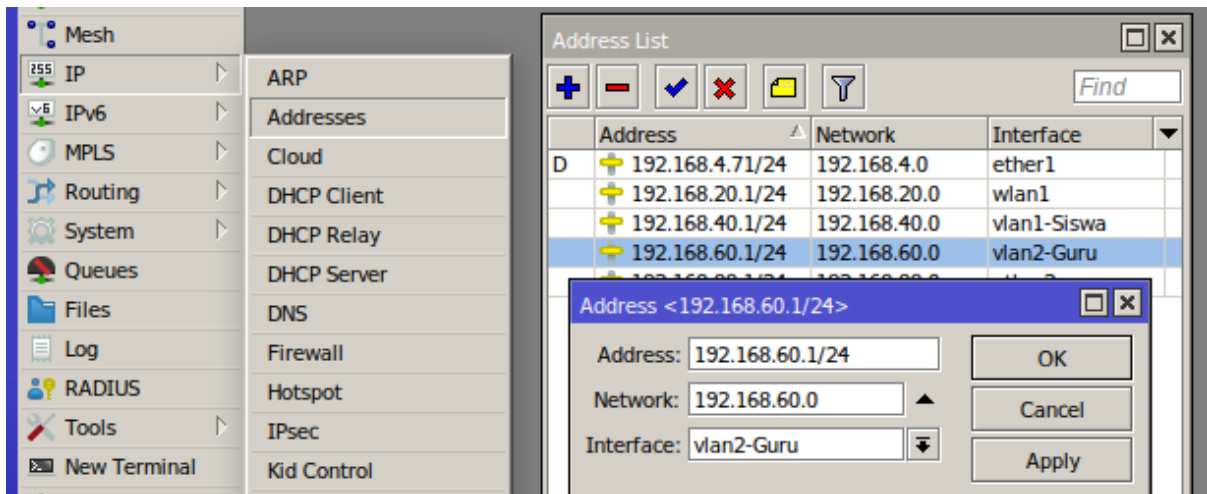
**VLAN 1 - Siswa**

- **Address : 192.168.40.1/24**
- **Network : otomatis setelah apply / OK (192.168.40.0)**
- **Interface : vlan1-Siswa**



### VLAN 20 - Guru

- Address : 192.168.60.1/24
- Network : otomatis setelah apply / OK (192.168.60.0)
- Interface : vlan2-Guru



### 4. Konfigurasi DHCP Server untuk VLAN dan Hotspot.

IP -> DHCP Server -> DHCP Setup -> Kemudian ikuti sesuai soal untuk pool nya, tinggal next next aja.

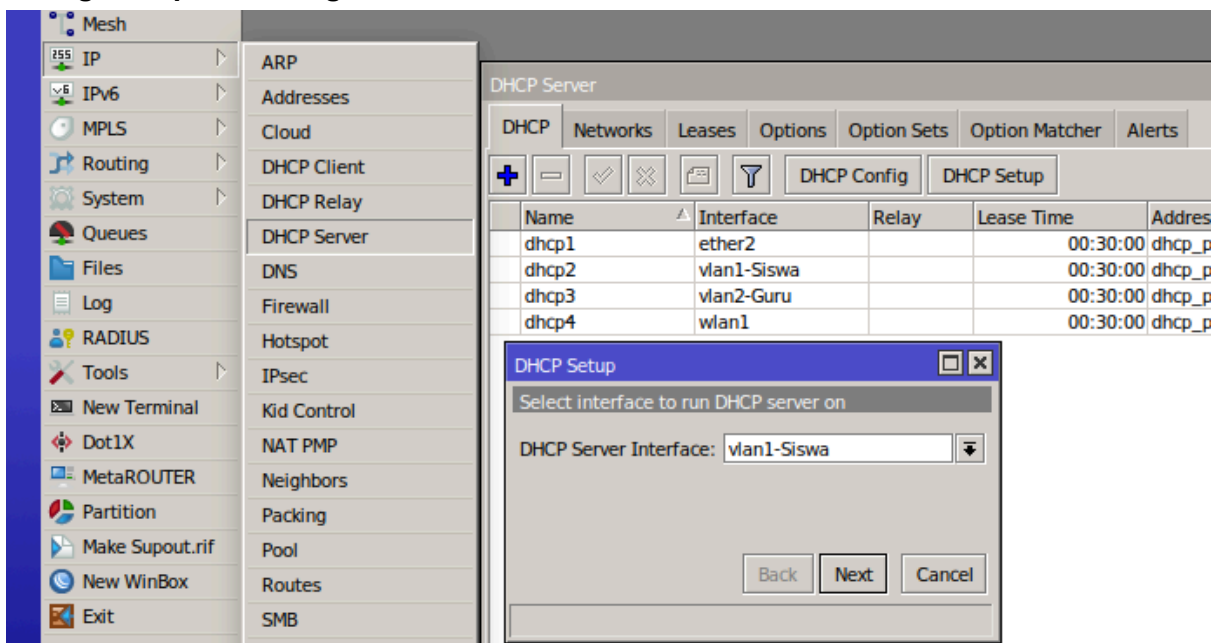
#### a) VLAN 1

- IP VLAN 1 : 192.168.40.1/24
- DHCP Pool : 192.168.40.10 – 192.168.40.50

#### b) VLAN 2

- IP VLAN 2 : 192.168.60.1/24
- DHCP Pool : 192.168.60.10 – 192.168.60.50

### Konfigurasi pada Konfigurasi IP DHCP Server VLAN 1-Siswa



## Konfigurasi pada Konfigurasi IP DHCP Server VLAN 2-Guru

The screenshot shows the Mikrotik WinBox interface for configuring a DHCP server. The left sidebar contains a tree view with categories like Mesh, IP, IPv6, MPLS, Routing, System, Queues, Files, Log, RADIUS, Tools, New Terminal, Dot1X, MetaROUTER, Partition, Make Supout.rif, New WinBox, and Exit. The main window displays the DHCP Server configuration page, with tabs for DHCP, Networks, Leases, Options, Option Sets, Option Matcher, and Alerts. A table lists DHCP pools:

Name	Interface	Relay	Lease Time	Address
dhcp1	ether2		00:30:00	dhcp_p
dhcp2	vlan1-Siswa		00:30:00	dhcp_p
dhcp3	vlan2-Guru		00:30:00	dhcp_p
dhcp4	wlan1		00:30:00	dhcp_p

The DHCP Setup dialog box is open, showing the 'Select interface to run DHCP server on' dropdown menu with 'vlan2-Guru' selected. Buttons for 'Back', 'Next', and 'Cancel' are visible at the bottom.

## Konfigurasi pada Konfigurasi IP DHCP Server WLAN 1

The screenshot shows the Mikrotik WinBox interface for configuring a DHCP server. The left sidebar contains a tree view with categories like Mesh, IP, IPv6, MPLS, Routing, System, Queues, Files, Log, RADIUS, Tools, New Terminal, Dot1X, MetaROUTER, Partition, Make Supout.rif, New WinBox, and Exit. The main window displays the DHCP Server configuration page, with tabs for DHCP, Networks, Leases, Options, Option Sets, Option Matcher, and Alerts. A table lists DHCP pools:

Name	Interface	Relay	Lease Time	Address
dhcp1	ether2		00:30:00	dhcp_p
dhcp2	vlan1-Siswa		00:30:00	dhcp_p
dhcp3	vlan2-Guru		00:30:00	dhcp_p
dhcp4	wlan1		00:30:00	dhcp_p

The DHCP Setup dialog box is open, showing the 'Select interface to run DHCP server on' dropdown menu with 'wlan1' selected. Buttons for 'Back', 'Next', and 'Cancel' are visible at the bottom.

## IP POOL

The screenshot shows the Mikrotik WinBox interface for configuring IP Pools. The left sidebar contains a tree view with categories like Mesh, IP, IPv6, MPLS, Routing, System, Queues, Files, Log, RADIUS, Tools, New Terminal, Dot1X, MetaROUTER, Partition, Make Supout.rif, New WinBox, and Exit. The main window displays the IP Pool configuration page, with tabs for Pools and Used Addresses. A table lists the configured IP pools:

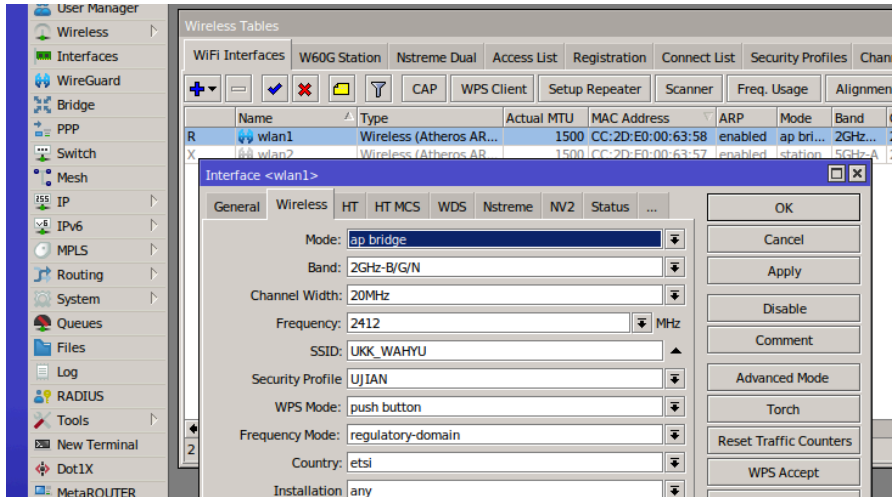
Name	Addresses	Next Pool
dhcp_pool0	192.168.88.2-192.168.88.254	none
dhcp_pool1	192.168.40.10-192.168.40.50	none
dhcp_pool2	192.168.60.10-192.168.60.50	none
dhcp_pool3	192.168.20.10-192.168.20.50	none

The IP Pool dialog box is open, showing the 'Pools' tab. Buttons for '+', '-', and a search icon are visible at the top left. A 'Find' input field is present at the top right.

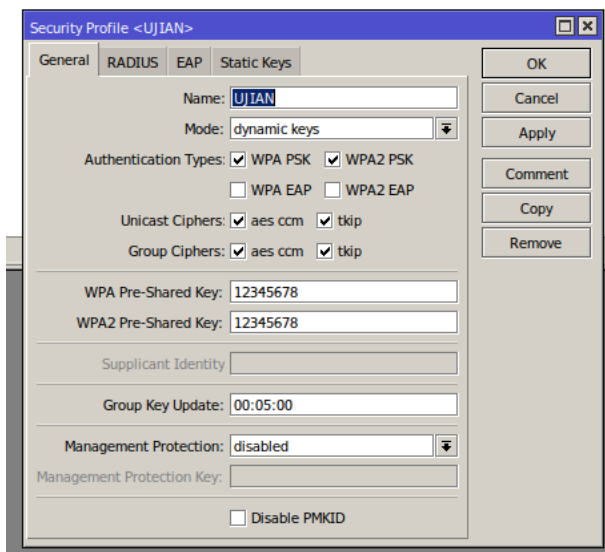
## 5. Konfigurasi Wireless dan Hotspot

### - WLAN :

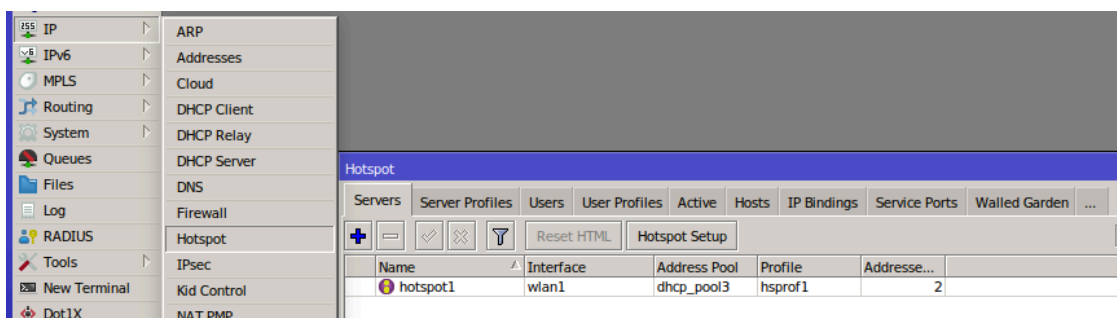
- IP WLAN : 192.168.20.1/24
- SSID : UKK\_Nama
- Hotspot : alamat login hotspot = portalsmk.sch.id
- Ubah tampilan halaman login hotspot sehingga minimal terdapat tampilan tulisan : “Selamat Datang di Hotspot PeTIK”



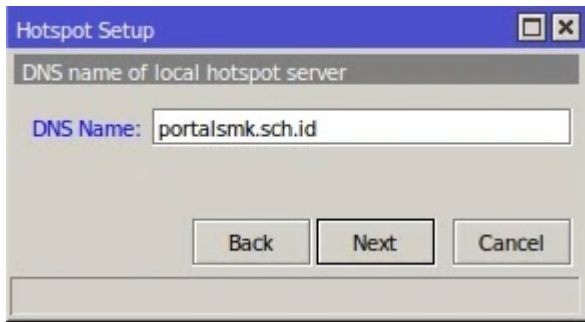
- Password : 12345678



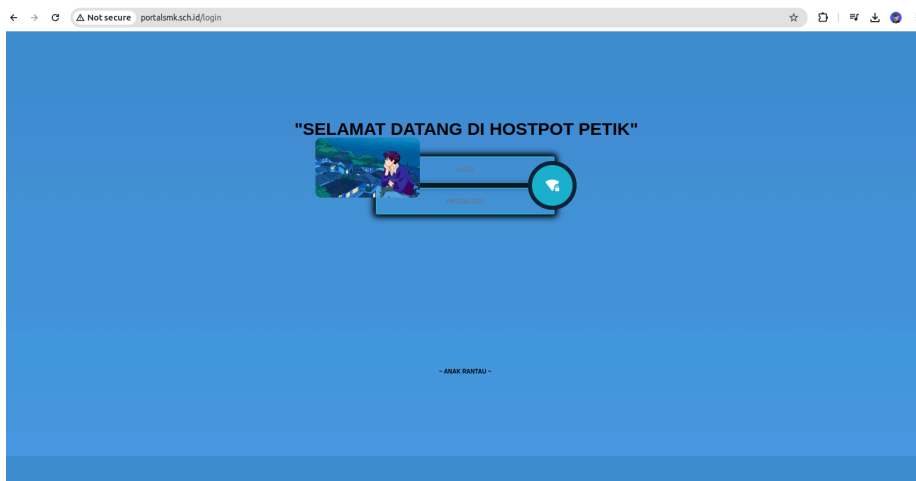
Cara konfigurasi hotspot, buka menu IP > Hotspot, klik hotspot setup. Pilih interface yang akan menjalankan hotspot, yakni wlan1.



untuk alamatnya sesuai soal :



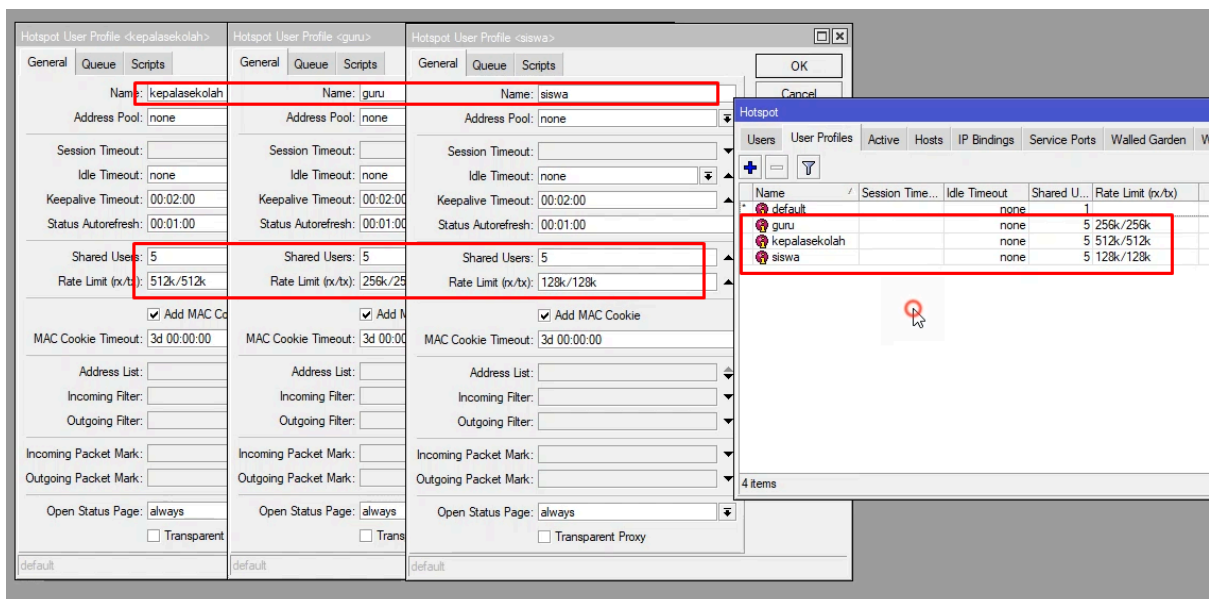
## 6. Tampilan Login Hotspot “Selamat datang di hotspot petik”



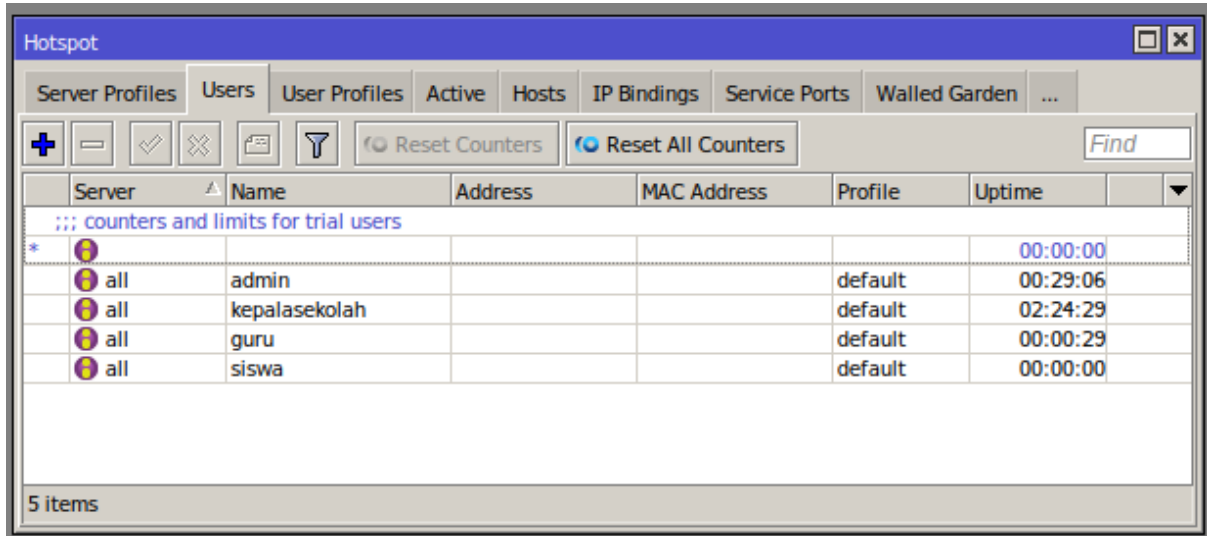
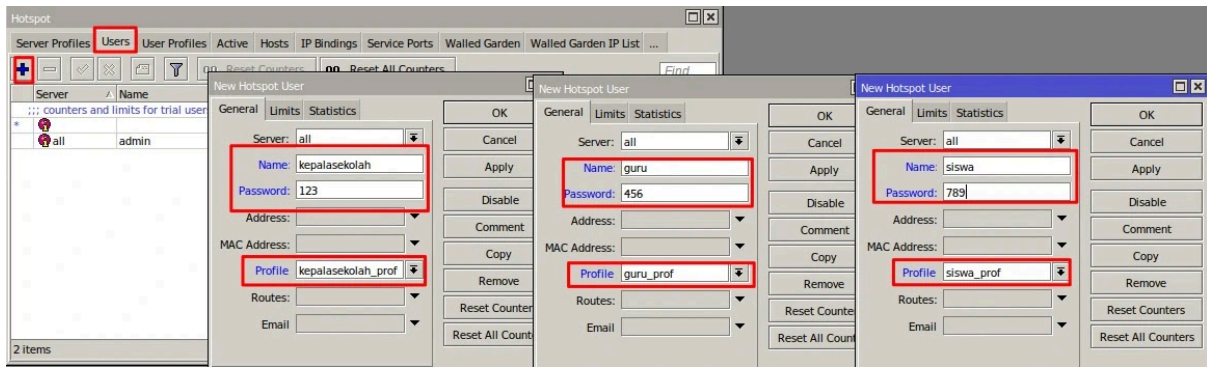
## 7. Membuat User Profile dan User Di Hotspot

Buatlah user dengan ketentuan seperti berikut:

username	password	bandwidth
kepalasekolah	123	512k
guru	456	256k
siswa	789	128k



Setelah membuat user profile, sekarang kita buat user account-nya. Masih di menu **IP > Hotspot, pilih tab Users**. Tambahkan user sesuai nama dan password yang ada di soal, arahkan setiap user ke user profilnya masing-masing.



## 8. Mencoba login dengan user yang sudah di bikin

- kepalasekolah



Welcome kepalasekolah!

IP address:	192.168.20.50
bytes up/down:	1111 B / 2017 B
connected:	19s
status refresh:	1m

log off

- guru



Welcome guru!

IP address:	192.168.20.50
bytes up/down:	1161 B / 1891 B
connected:	10s
status refresh:	1m

log off

- siswa



Welcome siswa!

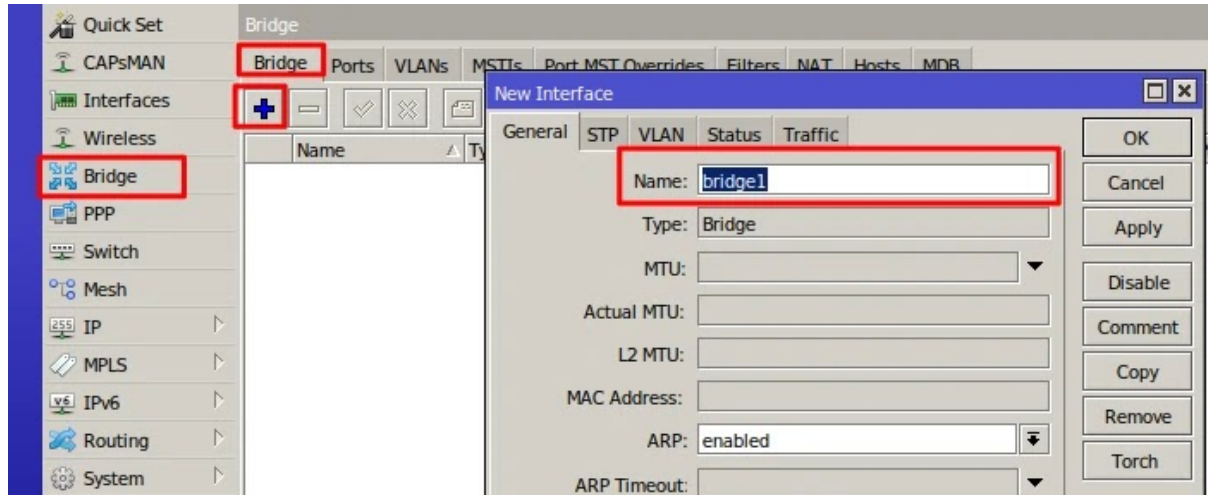
IP address:	192.168.20.50
bytes up/down:	757 B / 1241 B
connected:	46s
status refresh:	1m

log off

## Konfigurasi Switch :

1. Konfigurasi VLAN pada Routerboard dengan ketentuan seperti berikut:
  - 1) Port 1 terhubung ke Wifi Routerboard dan difungsikan sebagai port trunk
  - 2) Port 2 dan 3 terhubung ke VLAN 1
  - 3) Port 4 terhubung ke VLAN 2
  - 4) Gunakan mode VLAN secure dan logika “always-strip”

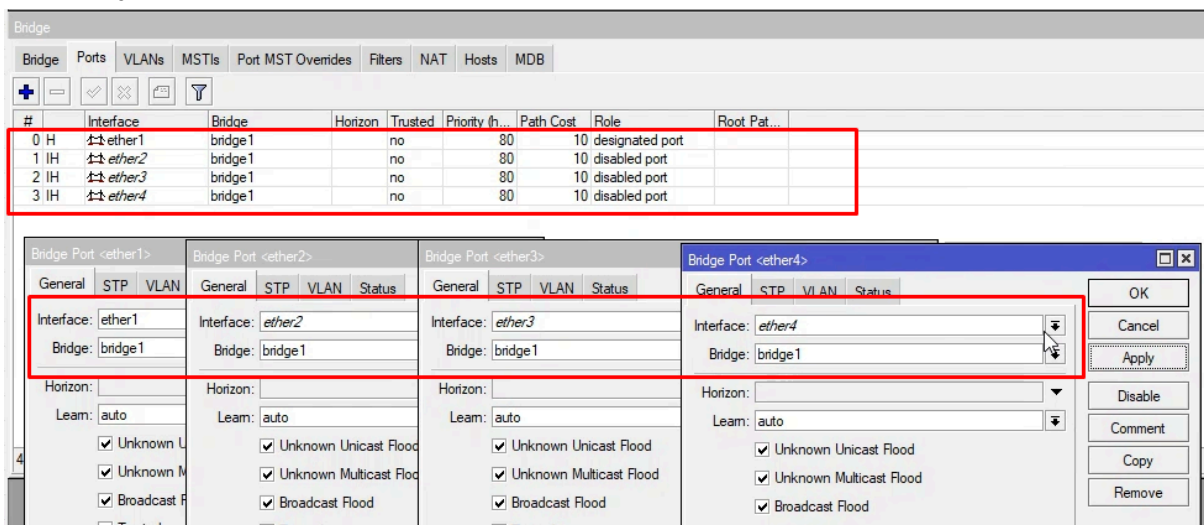
Bridge -> Tab Bridge -> Add (+) -> OK



Bridge -> tab Ports -> Add (+)

- Interface : ether1  
Bridge : bridge1
- Interface : ether2  
Bridge : bridge1
- Interface : ether3  
Bridge : bridge1
- Interface : ether4  
Bridge : bridge1

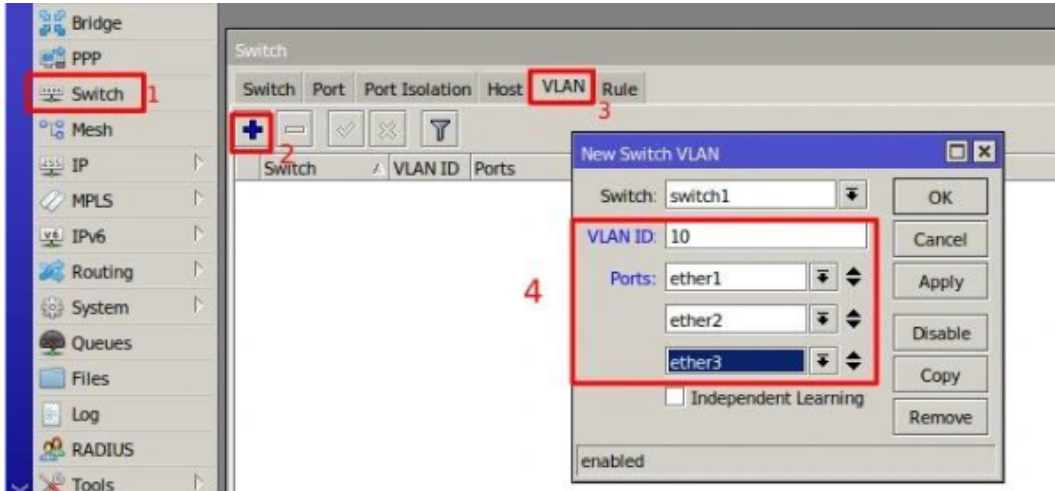
Pastikan jika sudah klik OK.



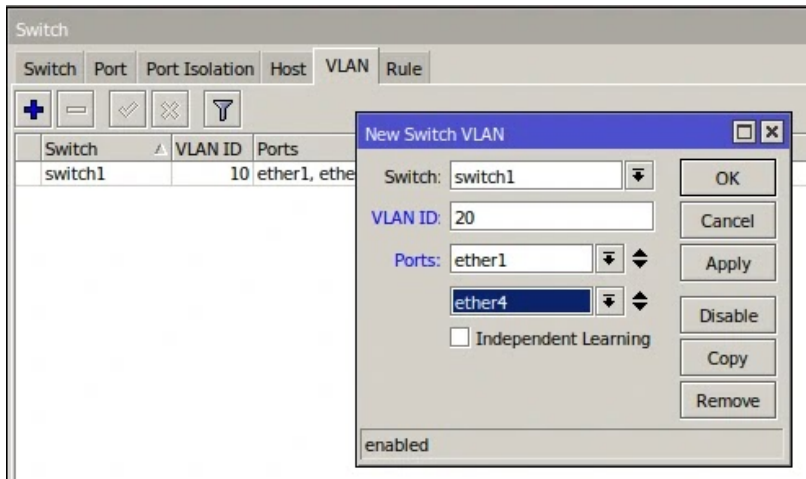
Switch -> Tab VLAN -> Add (+)

- Switch : switch1  
VLAN ID : 10  
Ports : ether1, ether2, ether3

Jangan Lupa Klik OK atau Apply.



- Switch : switch1  
VLAN ID : 20  
Ports : ether1, ether4



Sekarang di mikrotik switch kita sudah ada 2 vlan.

Switch	VLAN ID	Ports
switch1	10	ether1, ether2, ether3
switch1	20	ether1, ether4

Jika sudah pada menu VLAN berikutnya kita akan ke Tab Port pada Switch

Switch -> Tab Port-> Konfigurasi pada ether1, ether2, ether3 dan ether4

#### Ether1

- VLAN Mode : Secure
- VLAN Header : add if missing
- VLAN ID : 0

#### Ether2

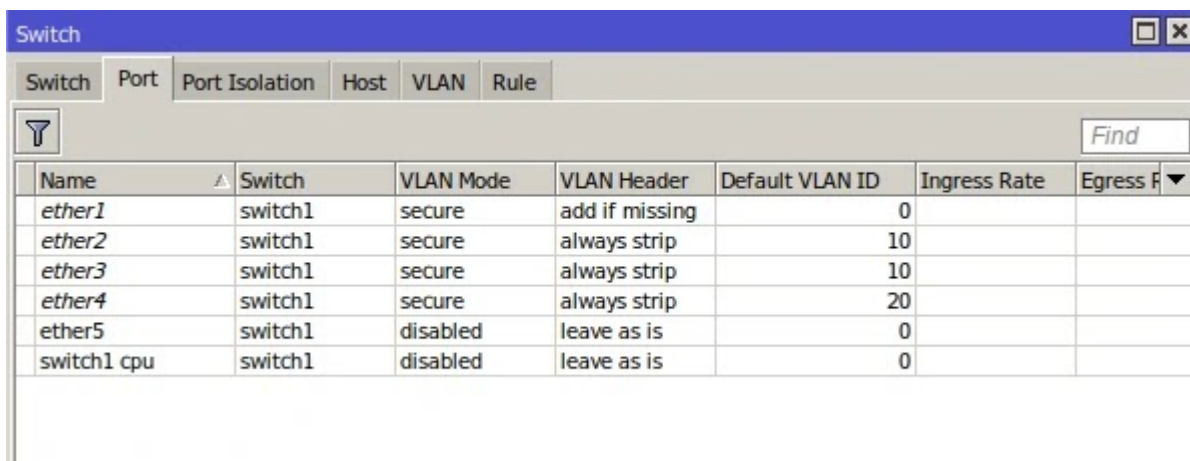
- VLAN Mode : Secure
- VLAN Header : always strip
- VLAN ID : 10

#### Ether3

- VLAN Mode : Secure
- VLAN Header : always strip
- VLAN ID : 10

#### Ether4

- VLAN Mode : Secure
- VLAN Header : always strip
- VLAN ID : 20



The screenshot shows a window titled "Switch" with a tabbed interface. The "Port" tab is selected. Below the tabs is a search bar with a filter icon and a "Find" button. The main area contains a table with the following data:

Name	Switch	VLAN Mode	VLAN Header	Default VLAN ID	Ingress Rate	Egress F
ether1	switch1	secure	add if missing	0		
ether2	switch1	secure	always strip	10		
ether3	switch1	secure	always strip	10		
ether4	switch1	secure	always strip	20		
ether5	switch1	disabled	leave as is	0		
switch1 cpu	switch1	disabled	leave as is	0		