Jaringan Point to Point menggunakan Wireless LAN Bridge

- 1. Instlasi Jaringan
  - Pasang 2 Router Mikrotik R951Ui-2HND,
  - 2 kabel straight UTP
  - Hubungkan ether1 Router 1, ke ether1 Router2
  - Hubungkan masing-masing **ethernet2** ke jaringan lokal atau ke PC, seperti pada gambar berikut:



## 2. Konfigurasi BRIDG1

### Lakukakun reset sistem

• New Terminal

/system reset-configuration no-default=yes

#### **Membuat Bridge**

- Klik Interface
- Klik Bridge
- New Interface
  - General Name bridge1
  - Type : Bridge
- Klik OK
- Seperti pada gambar berikut:

interfaces	IP Tunnel	New Interface		
🗓 Wireless 🔪	GPE Turnel	General STP VLAN Status Traffic		ОК
Bridge	VIAN	Name: Name:		Cancel
ei PPP	VLAN	Type: Bridge		Apply
😤 Switch	VRRP	MTU:	-	Disable
TS Mesh	Bonding	Actual MTU:		Comment
∰ IP ト	Bridge	L2 MTU:		Com
MPLS N	Mesh	MAC Address:		Сору
		ARP: enabled	Ŧ	Hemove
		ARP Timeout:	-	Torch
		Admin. MAC Address:	⊒•	
		Ageing Time: 00:05:00		
		GMP Snooping		
		DHCP Snooping		
		Fast Forward		

- 3. Masukkan ether1 ke dalam interface bridge
  - Pilih Bridge
  - Bridge
    - Pilih tab **Ports**
    - Klik Add (+)
  - New Bridge Port
    - o General
    - o Interface : ether1
    - Bridge : bridge1
    - o Klik OK



- 4. Masukkan IP Address pada interface bridge1
  - Pilih Menu IP
  - Klik Addresses
  - Addresess List
    - Klik Add (+)
    - New Address
      - Address : 192.168.0.2/24
      - Interface : bridge
      - Klik OK
  - Seperti pada gambar berikut:

⊘ MF Sys Sys Qu Image: File File Loce	uting N stem N seues es g	DHCP Relay DHCP Server DNS Firewall Hotspot	Ad + 4 * 4 * 4	New Addre Address: Network: Interface:	ss 192.168.0.2/24 bridge	▼ 	Cancel Apply Disable Comment Copy Remove
				enabled			

- 5. Setting wireless interface.
- Klik pada menu Wireless
  - Interface List
    - pilihlah tab Interface
    - double click pada nama Interface Wireless yang akan digunakan wlan1
  - Interface <wlan1>
    - Pilihlah Mode ap-bridge
    - tentukanlah SSID : R1
    - Band : **2.4GHz-B/G/N**
    - dan Frekuensi yang akan digunakan
    - Jangan lupa mengaktifkan Default authenticated dan Default Forward
    - Lalu aktifkankanlah Interface Wireless Apply
    - dan klik OK
- Seperti pada gambar berkut:

All GUICK Set	Interfaces 1 int	the discussion of the second sec		10
🗐 CAPsMAN	Acceleration of the	interrace owan (>		
Interfaces	interface List	General Wireless HT HT MCS WDS Nstreme Status Tr	affic	ОК
L Wreless	+- = 🖌 🗶	Mode: ap bridge	Ŧ	
Bridge	Name /	Band: 2GHz-B/G/N	Ŧ	Cancel
PPP	∷ defconf R ±thridge	Channel Width: 20/40MHz XX	*	Apply
2 Switch	R 4tbridge1	Frequency: 2412	¥ MHz	🚽 Enable
8 Mesh	S sether2	SSID: B1		Comment
∦ IP I*	S sether3			1
MPLS 1	S stether4	Frequency Mode: manual opower	•	Advanced Mode
Routing	XS Mart	Country: no_country_set	Ŧ	Torch
🕽 System 🗈		Installation: indoor	Ŧ	WPS Accept
Queues	• 9 Rame (1 selected)	Antenna Gain: 0	dBi	WPS Client
Files	o nema (i selected)		1	Cotor December
Log		Default AP Tx Limit:		Setup hepeater
RADIUS		Default Client Tx Limit:	▼ bpt	Scan
🕻 Tools 👘	MMM MMM	Default Authenticate		Freq. Usage
New Terminal	10001 10001	Default Forward		Align
Dot 1X	HMM MMMM MMM III			

# 6. Berikutnya adalah konfigurasi WDS pada Wireless Interface yang digunakan.

- Klik Wireless seperti langkah di atas, pilihlah tab WDS
- Isikan/pilih WDS Mode : dynamic

- WDS default Bridge pilihlah : bridge1
- Lalu tekan tombol **OK**.
- Seperti gambar berikut:

Interface <wlan1></wlan1>	
HT MCS WDS Nstreme Tx Power Current Tx Power Status	
WDS Mode: dynamic F	UK
WDS Default Bridge: bridge1	Cancel
	Apply
WDS Default Cost: 100	Enable
WDS Cost Range: 50-150	Comment
WDS Ignore SSID	Simple Mode
	Torch
	WPS Accept
	WPS Client
-	Setup Repeater
	Scan
	Freq Usage

- 7. Langkah selanjutnya adalah menambahkan virtual interface WDS.
  - Klik Wireless
  - Klik WDS
  - New Interface tab WDS
    - Master Interface : wlan1
  - Klik OK
  - Sperti gambar berkut:

	New Interface		
	General WDS	Status Traffic	ОК
	Master Interface.	wlan1	Cancel
· Minuter	WDS Address	00:00:00:00:00:00	Apply
Bridge	Wireless Tables		Disable
PPP	WiFi Interfaces W60G Station No		Comment
🛫 Switch	+		Сору
ିଞ୍ଚ Mesh	Virtual		Remove
型 IP 下	WDS S		Torch
Ø MPLS	Nstreme Dual		
2 Routing			100

### 8. Konfigurasi BRIDG2

Lakukan konfigurasi pada BRIDGE2, seperti pada konfigurasi BRIDGE1 pada langkah no. 2,

3

- 9. Masukkan IP Address pada interface bridge2
  - Pilih Menu IP
  - Klik Addresses
  - Addresess List
    - Klik Add (+)
    - New Address
      - Address : 192.168.0.3/24
      - Interface : bridge
      - Klik OK
  - Seperti pada gambar berikut:

Address List					1
+ - ~	2 🛛 🖻	-		Find	ŀ
Address	/ N	letwork	Interface		Ļ
::: defconf	New Addre	SS			
T 192.16	Address:	192.168.0.3/24		ОК	
	Network:		-	Cancel	
	Interface:	bridge1	₹	Apply	
				Disable	

#### **10. Setting wireless interface.**

- Klik pada menu Wireless
  - o Interface List
    - pilihlah tab Interface
    - double click pada nama Interface Wireless yang akan digunakan wlan1
  - Interface <wlan1>
    - Pilihlah Mode ap-bridge
    - tentukanlah SSID : R1
    - Band : 2.4GHz-B/G/N
    - dan Frekuensi yang akan digunakan
    - Jangan lupa mengaktifkan Default authenticated dan Default Forward
    - Lalu aktifkankanlah Interface Wireless Apply
    - dan klik **OK**
- Seperti pada gambar berkut:

G Guick Set	Interface List	Interface <wian1></wian1>			
L CAPEMAN	Interface Interface List	General Wreless H	T HT MCS WDS Natreme Status	Traffic	
Workers	+ *	Mode	bridge station	12	OK
Ridoe	Name	Band	20H-R/G/N	(1)	Cancel
PPP	::: defconf B dthodne	Channel Width:	20/40MHz XX		Apply
Switch	R \$1bridge1	Frequency:	2412	¥ MHz	🖌 Enable
Mesh	S Dether2	SSID:	R1	-	Comment
MPLS	S opether3	Frequency Mode:	manual opower		Advanced Mode
Routing 11	RS @ether5	Country:	no_country_set		Torch
System It		Installation:	indoor	Ŧ	WPS Accept
Queues	Sitems (1 selected)	Artenna Gain:	0	dB	WPS Client
Files		Default AP Tx Limit:	í.	- bps	Setup Repeater
RADIUS		Default Client Tx Limit:			Scan
Tools 11	1001 1001		Default Authenticate		Freq. Usage
New Terminal	10001 10001		Default Forward		Align
Dot1X	100 ADDA 100 111				0.4

## 11. Berikutnya adalah konfigurasi WDS pada Wireless Interface yang digunakan.

- Klik Wireless seperti langkah di atas, pilihlah tab WDS
- Isikan/pilih WDS Mode : dynamic

- WDS default Bridge pilihlah : bridge1
- Lalu tekan tombol **OK**.
- Seperti gambar berikut:

-	Interface <wlan1></wlan1>	
ł	HT MCS WDS Nstreme Tx Power Current Tx Power Status	
	WDS Mode: dynamic	OK
q		Cancel
	WDS Default Bridge: bridge1	Apply
-	WDS Default Cost: 100	
-	WDC Cast Dances F0 150	Enable
	WDS Cost Range: 50-150	Comment
-	WDS Ignore SSID	
		Simple Mode
		Torch
		WPS Accept
		WPS Client
		Setup Repeater
		Scan
		Freq Usage

12. Langkah selanjutnya adalah menambahkan virtual interface WDS.

- Klik Wireless
- Klik WDS
- New Interface tab WDS
  - Master Interface : wlan1
- Klik **OK**
- Sperti gambar berkut:

	New Interface		
	General WDS	Status Traffic	ОК
	Master Interface:	wlan1 ¥	Cancel
© 105-1 m	VIDS Address;	00:00:00:00:00	Apply
Bridge	Wireless Tables		Disable
PPP	WiFi Interfaces W60G Station Ns		Comment
🛫 Switch	+		Сору
°ଞ୍ଚ Mesh	Virtual		Remove
IP ►	WDS S		Torch
MPLS 1	Nstreme Dual		
Routing			

Hasil Pengujian

100 Select Command Prompt			×
			*
C:\Users\Badi>ping 192.168.0.4			
Pinging 192,168.0.4 with 32 bytes of data:			
Reply from 192.168.0.4: bytes=32 time=1ms TTL=128			
Reply from 192.168.0.4: bytes=32 time=2ms TTL=128			
Reply from 192.168.0.4: bytes=32 time=2ms TTL=128			
Reply from 192.168.0.4: bytes=32 time=1ms TTL=128			
Ping statistics for 192.168.0.4:			
Packets: Sent = 4, Received = 4, Lost = 0 (0%	loss)	8	
Approximate round trip times in milli-seconds:			
Minimum = 1ms, Maximum = 2ms, Average = 1ms			
C:\Users\Badi>			

Melihat Wireless tables

Wireless Tables										
WiFi Interfaces W60	G Station	Nstreme Dual	Access List	Registration	Connect	t List	Security Prof	iles Channels		
- 🝸 00 Rese	*t									
Radio Name	A MAC	Address	∧ Interface	Uptime	AP	W	Last Activit	Tx/Rx Signal	Tx Rate	Rx Rate
744D28ED23E9	74:4	D:28:ED:23:E9	wlan1	00:07:57	yes	no	0.000	-19/-24	54Mbps	1Mbps
4.0										
l item										