

Enhanced Wireless Point to Point

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PH16-MUM



Profile:

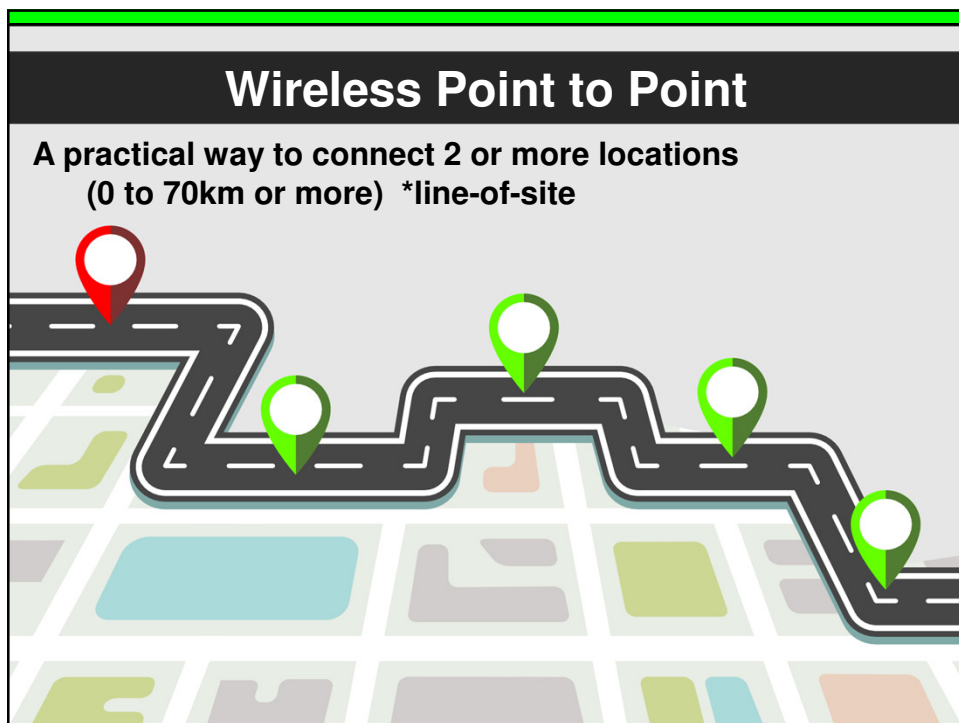
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MTCNA - 1403NA231
MTCRE - 1403RE066
MTCWE - 1403WE045
MTCTCE- 1504TCE023
MTCINE - 1504INE021
MTCUME-1511UME014

What do we have for today?

- Basic Wireless Point to Point.
- Wireless Point to Point plus:
 - A. VLAN & Dual WAN.
 - B. VRRP.
 - C. POE-out Router & Netwatch.





Application of Wireless Point to Point

- Office to Office connection.



Application of Wireless Point to Point

- Office to Home connection.



Wireless Point to Point

Access Point



Client



Configuration on AP Side

- Configure Wireless as (AP-Bridge or Bridge)

Interface <wlan1>

General **Wireless** HT HT MCS WDS Nstreme ...

Mode: **ap bridge**

Band: 2GHz-B/G/N

Channel Width: 20/40MHz HT Below

Frequency: 2462 MHz

SSID: (put your Pair SSID here)

Scan List: default

Wireless Protocol: any

Security Profile: Pass

Bridge Mode: enabled

OK
Cancel
Apply
Disable
Comment
Torch
Scan...
Freq. Usage...
Align...

Configuration on AP Side

- Bridge ports (Ether1, Wlan1)

Bridge	
Bridge	Ports
+	-
✓	✗
📄	🔍
Interface	Bridge
ether1	brdae1
wlan1	brdae1

Wireless Point to Point (AP)



Configuration on Client Side

- Configure Wireless as (Station Bridge)
call password profile, Scan & Connect.

Interface <wlan1>

General Wireless HT HT MCS WDS Nstreme ...

Mode: station bridge

Band: 2GHz-B/G/N

Channel Width: 20/40MHz HT Below

Frequency: 2462 MHz

SSID: Mikrotik

Scan List: default

Wireless Protocol: any

Security Profile: Pass

Bridge Mode: enabled

OK Cancel Apply Disable Comment Torch Scan... Freq. Usage... Align... Sniff

Configuration on Client Side

- Bridge ports (Ether1, Wlan1)

Bridge

Bridge Ports Filters NAT Ho

+ - ✓ ✗ [icon] [icon]

Interface	Bridge
ether1	bridge1
wlan1	bridge1

Wireless Point to Point (AP-Client)



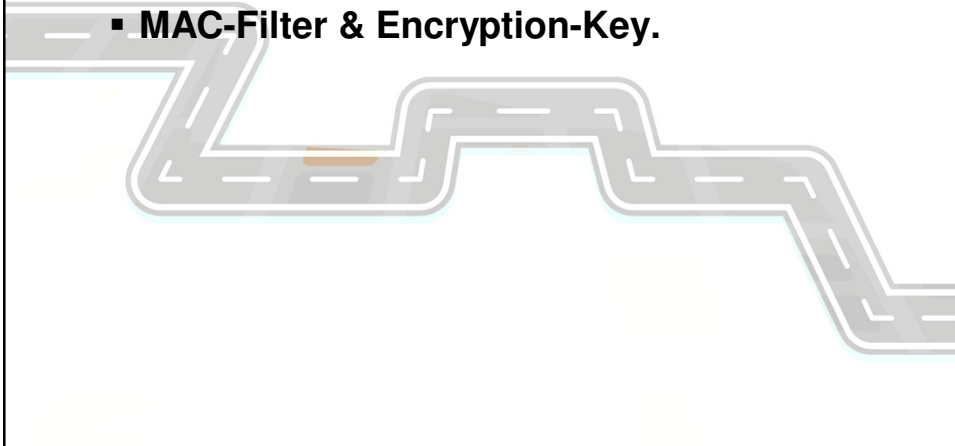
Configuration benefits?

- Have 2 or more sites running on a single Network segment.
- Easy resources sharing between sites.

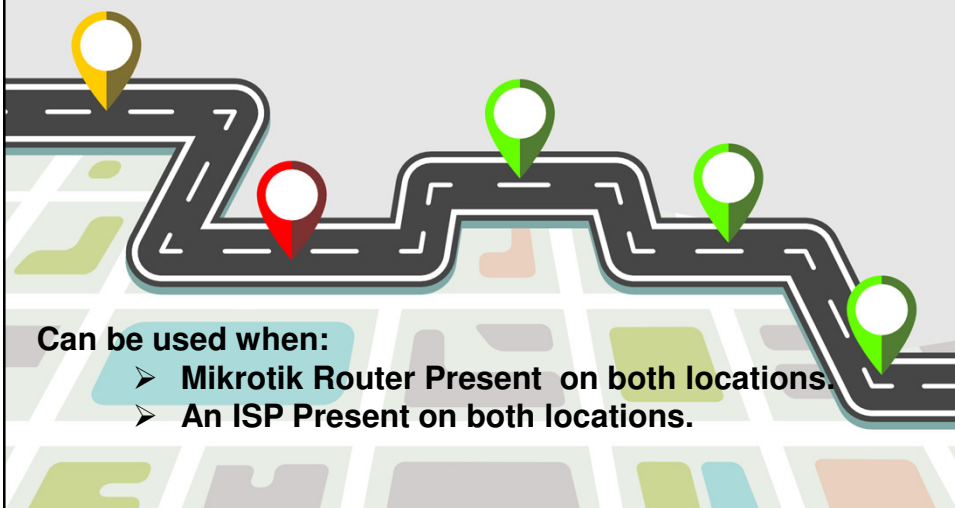


Improvements & Security

- HT, TX-power, Wireless chain & Alignment.
- MAC-Filter & Encryption-Key.



Wireless Point to Point setup with VLAN & Dual WAN

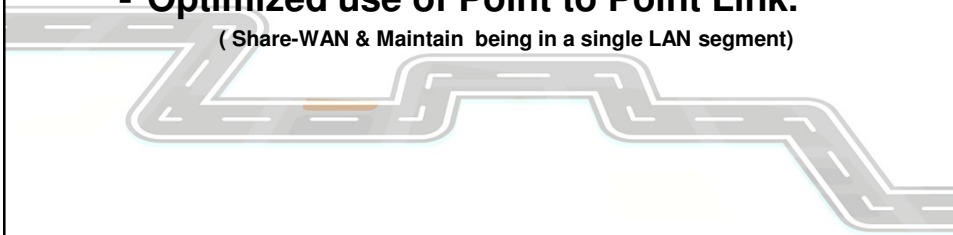


Can be used when:

- Mikrotik Router Present on both locations.
- An ISP Present on both locations.

Configuration benefits?

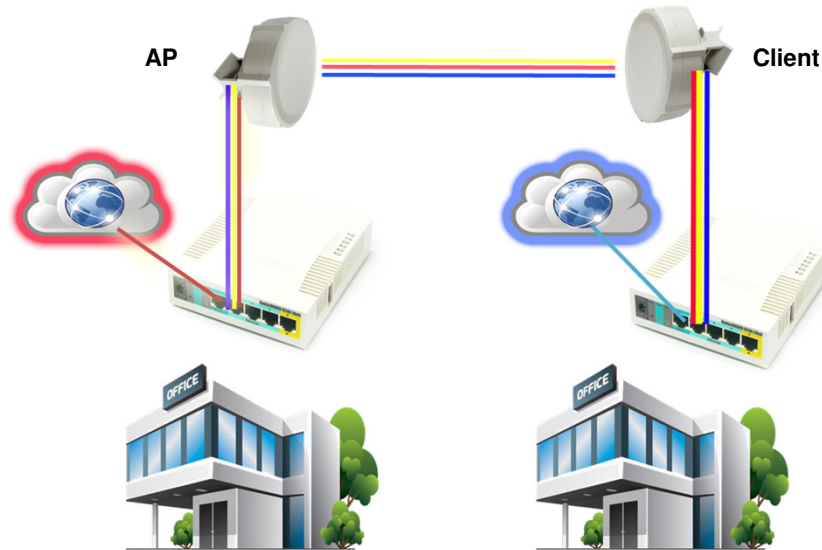
- Maximize usage of both ISP.
- Avoid possible internet down time.
(Multi-WAN & Multi-Site Internet Source)
- Optimized use of Point to Point Link.
(Share-WAN & Maintain being in a single LAN segment)



ISP available on both site



Set-up Suggested



**Configuration
of RB
on AP.
(RB951)**

Configuration of RB on AP. (RB951)

■ VLAN's

admin@192.168.100.1 (AP-site-gateway) - WinBox v6.30.4 on RB951G-2HnD (mipsbe)

Interface List

Interface	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE
S	ether1-WAN1							
R	ether2-Wireless-Tap-Port							
RS	vlan100-WAN1							
R	vlan200-WAN2							
R	vlan210-EoIP							

Name	Type	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)
ether1-WAN1	Ethernet	1598	0 bps	0 bps	0	0
ether2-Wireless-Tap-Port	Ethernet	1598	824 bps	3.3 kbps	1	1
vlan100-WAN1	VLAN	1594	424 bps	0 bps	1	1
vlan200-WAN2	VLAN	1594	0 bps	0 bps	0	0
vlan210-EoIP	VLAN	1594	0 bps	0 bps	0	0

Interface <vlan100-WAN1>

General Status Traffic

Name: vlan100-WAN1

Type: VLAN

MTU: 1500

L2 MTU: 1594

MAC Address: E4:8D:8C:46:D1:2F

ARP: enabled

VLAN ID: 100

Interface: ether2-Wireless-Tap-Port

☐ Use Service Tag

Interface <vlan200-WAN2>

General Status Traffic

Name: vlan200-WAN2

Type: VLAN

MTU: 1500

L2 MTU: 1594

MAC Address: E4:8D:8C:46:D1:2F

ARP: enabled

VLAN ID: 200

Interface: ether2-Wireless-Tap-Port

☐ Use Service Tag

Interface <vlan210-EoIP>

General Status Traffic

Name: vlan210-EoIP

Type: VLAN

MTU: 1500

L2 MTU: 1594

MAC Address: E4:8D:8C:46:D1:2F

ARP: enabled

VLAN ID: 210

Interface: ether2-Wireless-Tap-Port

☐ Use Service Tag

Configuration of RB on AP. (RB951)

■ EoIP Tunnel

admin@192.168.100.1 (AP-site-gateway) - WinBox v6.30.4 on RB951G-2HnD (mipsbe)

Interface List

Interface	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE

EoIP Tunnel

IP Tunnel

GRE Tunnel

VLAN

VRRP

Bonding

Bridge

Mesh

Virtual Ethernet

VPLS

Traffic Eng Interface

PPP Server

PPP Client

PPTP Server Binding

Interface <eoip-tunnel-to-branch>

General Status Traffic

Name: eoip-tunnel-to-branch

Type: EoIP Tunnel

MTU:

Actual MTU: 1458

L2 MTU: 65535

MAC Address: 02:4B:EA:DF:37:15

ARP: enabled

Local Address: 10.10.10.10

Remote Address: 11.11.11.11

Tunnel ID: 5

Configuration of RB on AP. (RB951)

Bridge

admin@192.168.100.1 (AP-site-gateway) - WinBox v6.30.4 on RB951G-2HnD (mipsbe)

Bridge					
Bridge Ports Filters NAT Hosts					
+ - ✓ ✗ [icon] [icon] Settings					
	Name	Type	L2 MTU	Tx	Rx
R	LOCAL	Bridge	1598	78.9 kbps	
R	bridge-vlan100	Bridge	1594	0 bps	

Bridge-Ports

admin@192.168.100.1 (AP-site-gateway) - WinBox v6.30.4 on RB951G-2HnD (mipsbe)

Bridge Ports Filters NAT Hosts						
+ - ✓ ✗ [icon] [icon]						
	Interface	Bridge	Priority (h...)	Path Cost	Horizon	Role
	loip-tunnel-to-branch	LOCAL	80	10		designated port
I	ether3-Local	LOCAL	80	10		disabled port
I	ether4-Local	LOCAL	80	10		disabled port
	ether5-Local	LOCAL	80	10		designated port
I	wlan1-Local	LOCAL	80	10		disabled port
I	ether1-WAN1	bridge-vlan100	80	10		disabled port
	vlan100-WAN1	bridge-vlan100	80	10		designated port

Configuration of RB on AP. (RB951)

IP's (for Static)

Address List

Address	Network	Interface
10.10.10.10	11.11.11.11	vlan210-EoIP
100.100.100.98/29	100.100.100.96	bridge-vlan100
192.168.100.1/24	192.168.100.0	LOCAL
200.200.200.98/29	200.200.200.96	vlan200-WAN2

Address <100.100.100.98/29>

Address: 100.100.100.98/29 OK

Network: 100.100.100.96 Cancel

Interface: bridge-vlan100 Apply

Disable

Address <200.200.200.98/29>

Address: 200.200.200.98/29 OK

Network: 200.200.200.96 Cancel

Interface: vlan200-WAN2 Apply

Disable

Address <192.168.100.1/24>

Address: 192.168.100.1/24 OK

Network: 192.168.100.0 Cancel

Interface: LOCAL Apply

Address <10.10.10.10>

Address: 10.10.10.10 OK

Network: 11.11.11.11 Cancel

Interface: vlan210-EoIP Apply

Configuration of RB on AP. (RB951)

- IP's (for DHCP supplied)

Address	Network	Interface
10.10.10.10	11.11.11.11	vlan210-EoIP
192.168.100.1/24	192.168.100.0	LOCAL

Address <192.168.100.1/24>

Address: 192.168.100.1/24
Network: 192.168.100.0
Interface: LOCAL

Address <10.10.10.10>

Address: 10.10.10.10
Network: 11.11.11.11
Interface: vlan210-EoIP

OK
Cancel
Apply

Configuration of RB on AP. (RB951)

- IP's (for DHCP supplied)

DHCP Client

DHCP Client Options

Release Renew Find

Interface	Use P...	Add D...	IP Address	Expires After
bridge-vlan100	yes	no		
vlan200-WAN2	yes	no		

DHCP Client <bridge-vlan100>

DHCP Status

Interface: bridge-vlan100
Use Peer DNS: ☒
Use Peer NTP: ☒
DHCP Options: hostname
clientid
Add Default Route: no
Default Route Distance: 0

DHCP Client <vlan200-WAN2>

DHCP Status

Interface: vlan200-WAN2
Use Peer DNS: ☒
Use Peer NTP: ☒
DHCP Options: hostname
clientid
Add Default Route: no
Default Route Distance: 0

2 items

Configuration of RB on AP. (RB951)

■ DNS

DNS Settings

Servers: 8.8.8.8
8.8.4.4

Dynamic Servers:

☒ Allow Remote Requests

Max UDP Packet Size: 4096

■ DHCP; DHCP-Pool

DHCP Server <dhcp1>

Name: dhcp1

Interface: LOCAL

Relay:

Lease Time: 3d 00:00:00

Bootp Lease Time: forever

Address Pool: dhcp_pool1

IP Pool <dhcp_pool1>

Name: dhcp_pool1

Addresses: 192.168.100.2 - 192.168.100.50

Next Pool: none

Configuration of RB on AP. (RB951)

■ Firewall-NAT

Firewall					
Filter Rules		NAT	Mangle	Service Ports	Connections
+ - ✓ ✗ 📄 🔍 00 Reset Counters 00 Reset					
#	Action	Chain	Out. Interface	B.	
0	masquerade	srcnat	bridge-vlan100		
1	masquerade	srcnat	vlan200-WAN2		

■ Firewall-Mangle

Firewall						
Filter Rules		NAT	Mangle	Service Ports	Connections	Address Lists
+ - ✓ ✗ 📄 🔍 00 Reset Counters 00 Reset All Counters						
#	Action	Chain	In. Interface	Connection Mark	New Connection Mark	New Routing Mark
0	mark connection	input	bridge-vlan100		wan1_conn	
1	mark connection	input	vlan200-WAN2		wan2_conn	
2	mark routing	output		wan1_conn		to_WAN1
3	mark routing	output		wan2_conn		to_WAN2

Configuration of RB on AP. (RB951)

Routes (ECMP Load Balance & Fail-over)

Route List

Routes	Nexthops	Rules	VRF
Dist. Address	/	Gateway	Distance Routing Mark
... ECMP (Load Balancing)			
AS	0.0.0.0/0	200.200.200.97 reachable vlan200-WAN2, 100.100.100.97 reachable bridge-vlan100	1
AS	0.0.0.0/0	200.200.200.97 reachable vlan200-WAN2	10 to_WAN2
AS	0.0.0.0/0	100.100.100.97 reachable bridge-vlan100	10 to_WAN1

Route <0.0.0.0/0>

General Attributes

Dist. Address: 0.0.0.0/0

Gateway: 200.200.200.97 reachable vlan200-WAN2

100.100.100.97 reachable bridge-vlan100

Configuration of RB on AP. (RB951)

Routes (Fail-over)

Route List

Routes	Nexthops	Rules	VRF
Dist. Address	/	Gateway	Distance Routing Mark
... Fail-Over			
AS	0.0.0.0/0	100.100.100.97 reachable bridge-vlan100	1
S	0.0.0.0/0	200.200.200.97 reachable vlan200-WAN2	10
AS	0.0.0.0/0	200.200.200.97 reachable vlan200-WAN2	10 to_WAN2
AS	0.0.0.0/0	100.100.100.97 reachable bridge-vlan100	10 to_WAN1

Gateway: 200.200.200.97 reachable vlan200-WAN2

100.100.100.97 reachable bridge-vlan100

Configuration of RB on Client. (RB951)

Configuration of RB on Client. (RB951)

■ VLAN's

Interface List

Interface	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE
S	ether1-WAN1							
R	ether2-Wireless-Tap-Port							
RS	vlan200-WAN1							
R	vlan100-WAN2							
R	vlan210-EoIP							

Interface <vlan100-WAN1>	Interface <vlan200-WAN2>	Interface <vlan210-EoIP>
General Status Traffic	General Status Traffic	General Status Traffic
Name: vlan200-WAN1	Name: vlan100-WAN2	Name: vlan210-EoIP
Type: VLAN	Type: VLAN	Type: VLAN
MTU: 1500	MTU: 1500	MTU: 1500
L2 MTU: 1594	L2 MTU: 1594	L2 MTU: 1594
MAC Address: E4:8D:8C:46:D1:2F	MAC Address: E4:8D:8C:46:D1:2F	MAC Address: E4:8D:8C:46:D1:2F
ARP: enabled	ARP: enabled	ARP: enabled
VLAN ID: 200	VLAN ID: 100	VLAN ID: 210
Interface: ether2-Wireless-Tap-Port	Interface: ether2-Wireless-Tap-Port	Interface: ether2-Wireless-Tap-Port
☐ Use Service Tag	☐ Use Service Tag	☐ Use Service Tag

Configuration of RB on Client. (RB951)

▪ EoIP Tunnel

Interface List

Interface: EoIP Tunnel

Interface <eip-tunnel-to-branch>

General Status Traffic

Name: eip-tunnel-to-branch

Type: EoIP Tunnel

MTU:

Actual MTU: 1458

L2 MTU: 65535

MAC Address: 02:4B:EA:DF:37:15

ARP: enabled

Local Address: 11.11.11.11

Remote Address: 10.10.10.10

Tunnel ID: 5

Configuration of RB on Client. (RB951)

▪ Bridge

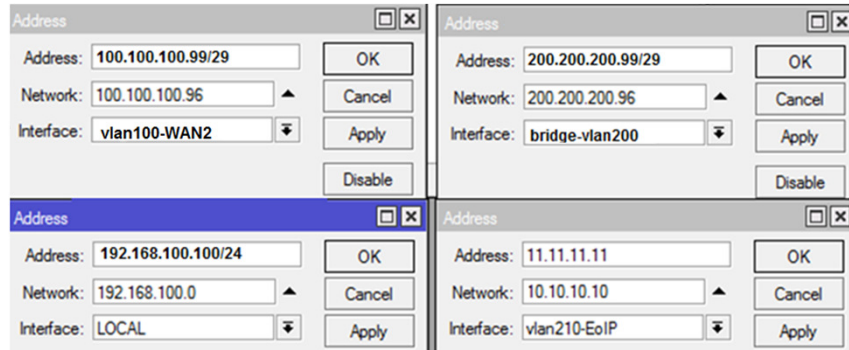
Bridge					
Bridge Ports Filters NAT Hosts					
+ - ✓ ✗ 📄 🔍 Settings					
	Name	Type	L2 MTU	Tx	
R	LOCAL	Bridge	1598	78.9 kbps	
R	bridge-vlan200	Bridge	1594	0 bps	

▪ Bridge-Ports

Bridge Ports Filters NAT Hosts						
+ - ✓ ✗ 📄 🔍						
	Interface	Bridge	Priority (h...)	Path Cost	Horizon	Role
	eip-tunnel-to-branch	LOCAL	80	10		designated port
I	ether3-Local	LOCAL	80	10		disabled port
I	ether4-Local	LOCAL	80	10		disabled port
	ether5-Local	LOCAL	80	10		designated port
I	wlan1-Local	LOCAL	80	10		disabled port
I	ether1-WAN1	bridge-vlan200	80	10		disabled port
	vlan200-WAN1	bridge-vlan200	80	10		designated port

Configuration of RB on Client. (RB951)

- IP's (for Static)

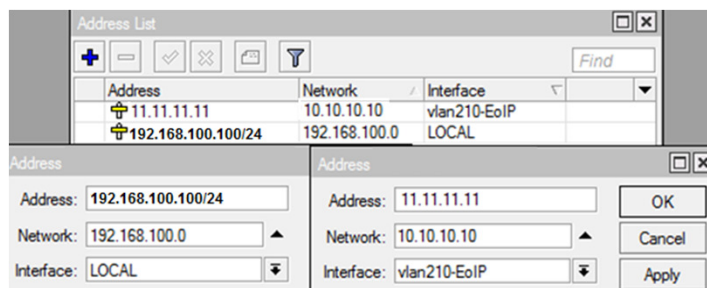


The image displays four separate windows for configuring static IP addresses on the RB951 client. Each window has a title bar with a close button (X) and a maximize button (square). The windows are arranged in a 2x2 grid. Each window contains three input fields: 'Address', 'Network', and 'Interface', followed by three buttons: 'OK', 'Cancel', and 'Apply'. A 'Disable' button is also present at the bottom of each window.

Window	Address	Network	Interface
Top Left	100.100.100.99/29	100.100.100.96	vlan100-WAN2
Top Right	200.200.200.99/29	200.200.200.96	bridge-vlan200
Bottom Left	192.168.100.100/24	192.168.100.0	LOCAL
Bottom Right	11.11.11.11	10.10.10.10	vlan210-EoIP

Configuration of RB on Client. (RB951)

- IP's (for DHCP supplied)



The image displays a screenshot of the 'Address List' window and two static IP configuration windows. The 'Address List' window has a title bar with a close button (X) and a maximize button (square). It contains a toolbar with icons for adding (+), deleting (-), checking (checkmark), unchecking (X), saving (floppy), and filtering (funnel). Below the toolbar is a table with columns for 'Address', 'Network', and 'Interface'. The table contains two entries: one with a yellow icon and another with a blue icon. Below the table are two input fields: 'Address' and 'Network', followed by three buttons: 'OK', 'Cancel', and 'Apply'. A 'Disable' button is also present at the bottom of the window.

Address	Network	Interface
11.11.11.11	10.10.10.10	vlan210-EoIP
192.168.100.100/24	192.168.100.0	LOCAL

Below the 'Address List' window are two static IP configuration windows, each with 'Address', 'Network', and 'Interface' fields, and 'OK', 'Cancel', and 'Apply' buttons.

Window	Address	Network	Interface
Bottom Left	192.168.100.100/24	192.168.100.0	LOCAL
Bottom Right	11.11.11.11	10.10.10.10	vlan210-EoIP

Configuration of RB on Client. (RB951)

- IP's (for DHCP supplied)

The screenshot displays the Mikrotik WinBox DHCP Client configuration window. It shows two DHCP client configurations. The first configuration is for the interface 'bridge-vlan200' and 'vlan100-WAN1', both with 'Use Peer DNS' and 'Use Peer NTP' checked. The 'Add Default Route' is set to 'no'. The second configuration is for the interface 'vlan100-WAN2', also with 'Use Peer DNS' and 'Use Peer NTP' checked, and 'Add Default Route' set to 'no'.

Configuration of RB on Client. (RB951)

- DNS

The screenshot displays the Mikrotik WinBox DNS Settings configuration window. The 'Servers' field is set to '8.8.8.8' and '8.8.4.4'. The 'Dynamic Servers' field is empty. The 'Allow Remote Requests' checkbox is checked. The 'Max UDP Packet Size' is set to '4096'.

- DHCP; DHCP-Pool

The screenshot displays the Mikrotik WinBox DHCP Server configuration window. The 'Name' is 'dhcp1', 'Interface' is 'LOCAL', 'Relay' is empty, 'Lease Time' is '3d 00:00:00', 'Bootp Lease Time' is 'forever', and 'Address Pool' is 'dhcp_pool1'. Below, the 'IP Pool <dhcp_pool1>' configuration shows 'Name' as 'dhcp_pool1', 'Addresses' as '192.168.100.101 - 192.168.100.150', and 'Next Pool' as 'none'.

Configuration of RB on Client. (RB951)

Firewall-NAT

Firewall			
Filter Rules NAT Mangle Service Ports Connections Address			
+ - ✓ ✗ 📄 🔍 00 Reset Counters 00 Res			
#	Action	Chain	Out. Interface
0	masquerade	srcnat	bridge-vlan 200
1	masquerade	srcnat	vlan100-WAN2

Firewall-Mangle

Firewall							
Filter Rules NAT Mangle Service Ports Connections Address Lists Layer7 Protocols							
+ - ✓ ✗ 📄 🔍 00 Reset Counters 00 Reset All Counters							
#	Action	Chain	In. Interface	Connection Mark	New Connection Mark	New Routing Mark	
0	mark connection	input	bridge-vlan200		wan1_conn		
1	mark connection	input	vlan100-WAN2		wan2_conn		
2	mark routing	output		wan1_conn		to_WAN1	
3	mark routing	output		wan2_conn		to_WAN2	

Configuration of RB on Client. (RB951)

Routes (ECMP Load Balance & Fail-over)

Route List				
Routes	Next hops	Rules	VRF	
Dst. Address		Gateway		Distance Routing Mark
ECMP (Load Balancing)				
AS	0.0.0.0/0	100.100.100.97 reachable vlan100-WAN2, 200.200.200.97 reachable bridge-vlan200		1
AS	0.0.0.0/0	100.100.100.97 reachable vlan100-WAN2		10 to_WAN2
AS	0.0.0.0/0	200.200.200.97 reachable bridge-vlan 200		10 to_WAN1
Route <0.0.0.0/0>				
General Attributes				
Dst. Address: 0.0.0.0/0				
Gateway:		100.100.100.97	reachable vlan100-WAN2	
		200.200.200.97	reachable bridge-vlan 200	

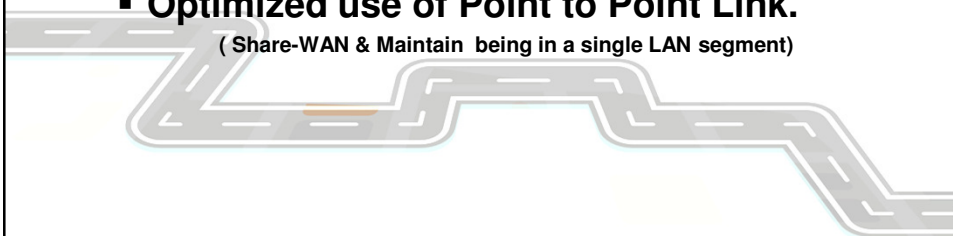
Configuration of RB on Client. (RB951)

- **Routes (Fail-over)**

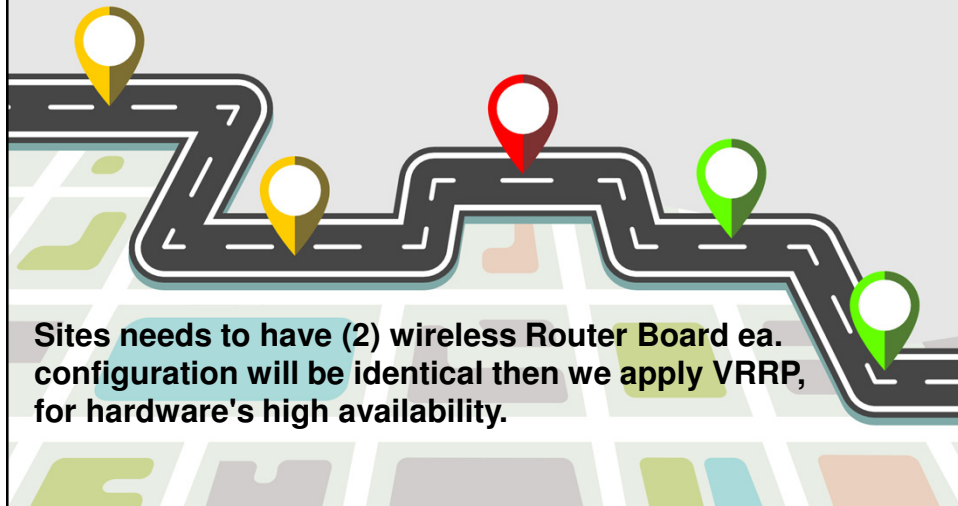
Route List				
Routes	Nexthops	Rules	VRF	
	Dst. Address	/	Gateway	Distance Routing Mark
... Fail-Over				
AS	▶ 0.0.0.0/0		200.200.200.97 reachable bridge-vlan200	1
S	▶ 0.0.0.0/0		100.100.100.97 reachable vlan100-WAN2	10
AS	▶ 0.0.0.0/0		100.100.100.97 reachable vlan100-WAN2	10 to_WAN2
AS	▶ 0.0.0.0/0		200.200.200.97 reachable bridge-vlan200	10 to_WAN1

Configuration benefits?

- **Maximize usage of both ISP.**
- **Avoid possible internet down time.**
(Multi-WAN & Multi-Site Internet Source)
- **Optimized use of Point to Point Link.**
(Share-WAN & Maintain being in a single LAN segment)

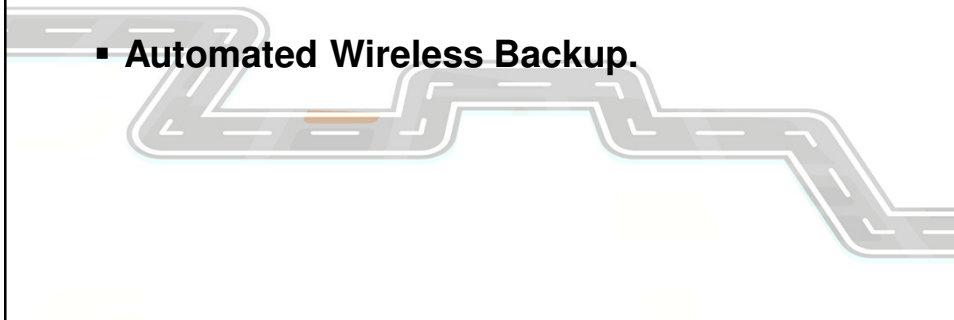


Wireless Point to Point setup with Hardware Redundancy

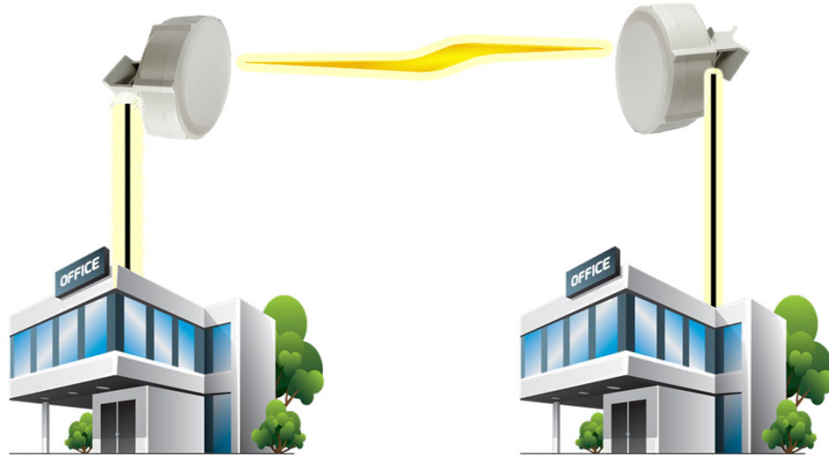


Configuration benefits?

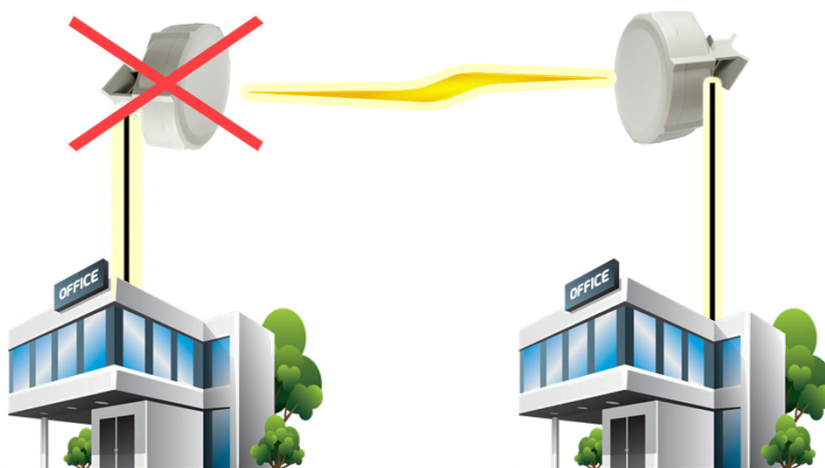
- Having available backup without having wireless interference.
- Avoid wireless down time.
- Automated Wireless Backup.



Initial Point to Point



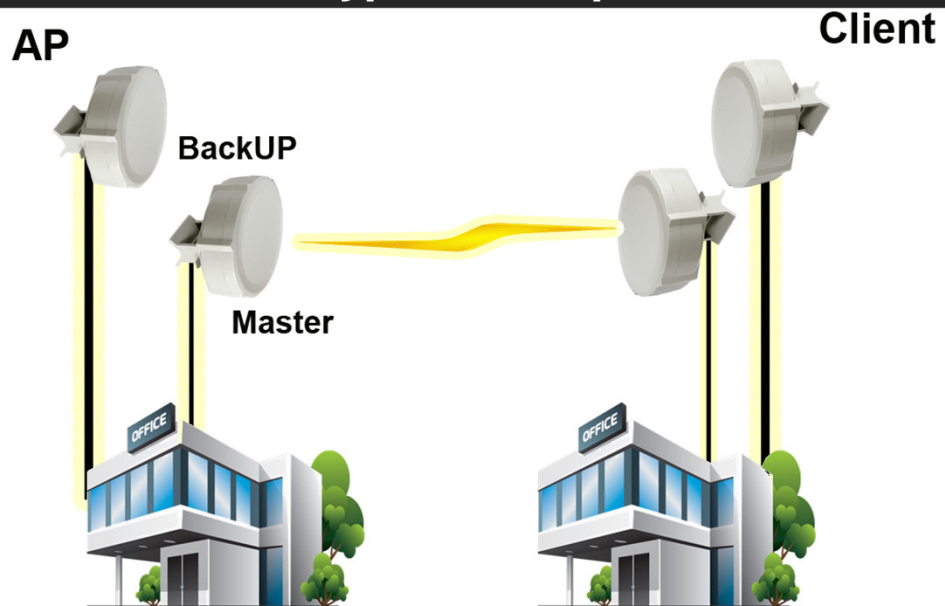
Busted Router =



Link Disconnection



Typical Setup



Configuration on AP Side

- Configure Wireless as (AP-Bridge or Bridge)

The screenshot shows the 'Interface <wlan1>' configuration window with the 'Wireless' tab selected. The 'Mode' is set to 'ap bridge'. Other settings include Band: 2GHz-B/G/N, Channel Width: 20/40MHz HT Below, Frequency: 2462 MHz, SSID: (put your Pair SSID here), Scan List: default, Wireless Protocol: any, Security Profile: Pass, and Bridge Mode: enabled. Buttons on the right include OK, Cancel, Apply, Disable, Comment, Torch, Scan..., Freq. Usage..., and Align...

General	Wireless	HT	HT MCS	WDS	Nstreme	...
Mode: ap bridge						
Band: 2GHz-B/G/N						
Channel Width: 20/40MHz HT Below						
Frequency: 2462 MHz						
SSID: (put your Pair SSID here)						
Scan List: default						
Wireless Protocol: any						
Security Profile: Pass						
Bridge Mode: enabled						

Configuration on AP Side

- Bridge ports (Ether1, Wlan1)

The screenshot shows the 'Bridge' configuration window with the 'Ports' tab selected. A table lists the bridge ports, with 'ether1' and 'wlan1' both mapped to 'bridge1'. The table is circled in red.

Interface	Bridge
ether1	bridge1
wlan1	bridge1

Additional configuration on AP SXT's

VRRP role: Master

- VRRP Configuration

Interface <vmp-onAP> Note: Priority closer to 255 will to be the master

General	VRRP	Scripts
Name: vmp-onAP	Interface: LOCAL	On Master: interface enable wlan1
Type: VRRP	VRID: 10	On Backup: interface disable wlan1
MTU: 1500	Priority: 200	
L2 MTU: 1598	Interval: 1.00 s	
MAC Address: 00:00:5E:00:01:0A	☒ Preemption Mode	
ARP: enabled	Authentication: -	

Additional configuration on AP SXT's

VRRP role: Master

- Router IP & VRRP IP

Address List

Address	Network	Interface
50.50.50.50/24	50.50.50.0	vmp-onAP
192.168.100.5/24	192.168.100.0	LOCAL

Address <192.168.100.5/24>

Address: 192.168.100.5/24

Network: 192.168.100.0

Interface: LOCAL

Address <50.50.50.50/24>

Address: 50.50.50.50/24

Network: 50.50.50.0

Interface: vmp-onAP

Additional configuration on AP SXT's

VRRP role: Backup

▪ VRRP Configuration

Interface <vmp-onAP> Note: Priority closer to 255 will to be the master

General	VRRP	Scripts
Name: vmp-onAP Type: VRRP MTU: 1500 L2 MTU: 1598 MAC Address: 00:00:5E:00:01:0A ARP: enabled	Interface: LOCAL VRID: 10 Priority: 100 Interval: 1.00 s ☒ Preemption Mode Authentication	On Master: interface enable wlan1 On Backup: interface disable wlan1

Additional configuration on AP SXT's

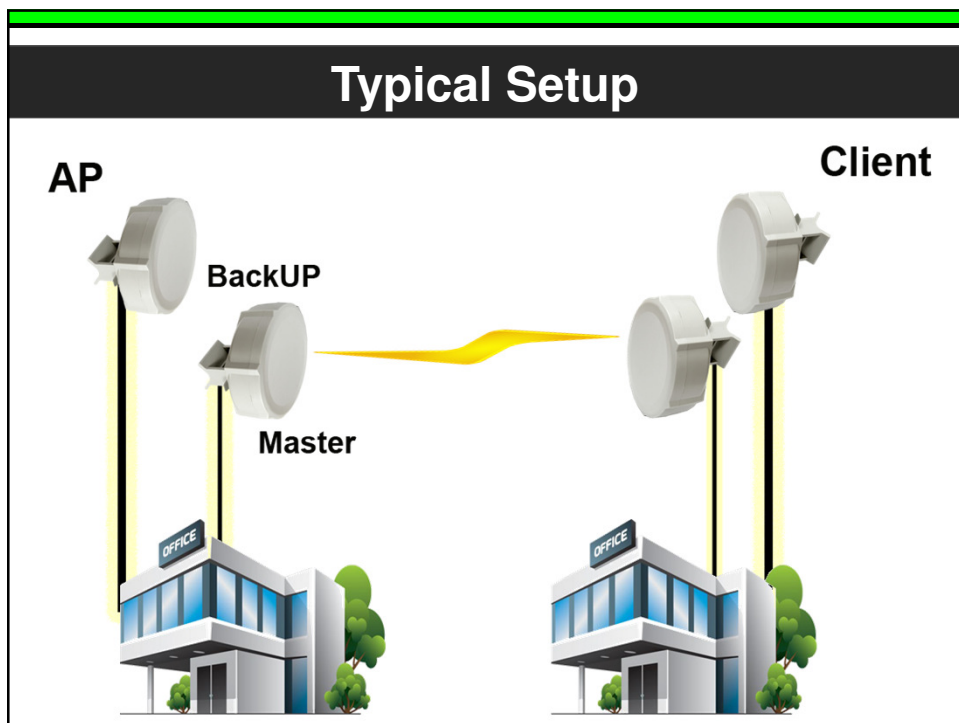
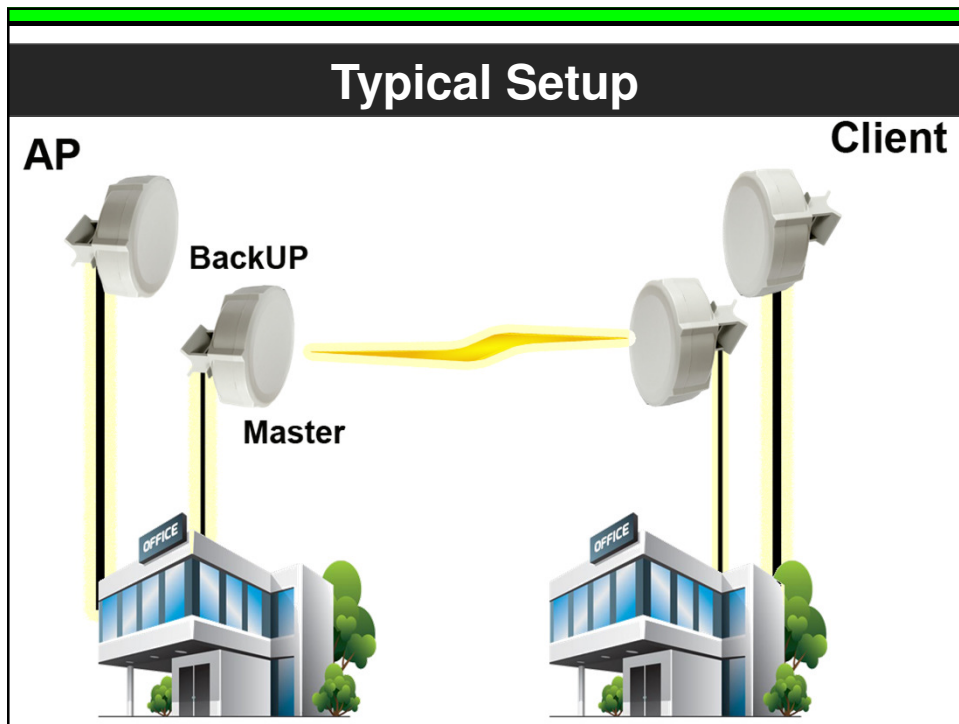
VRRP role: Backup

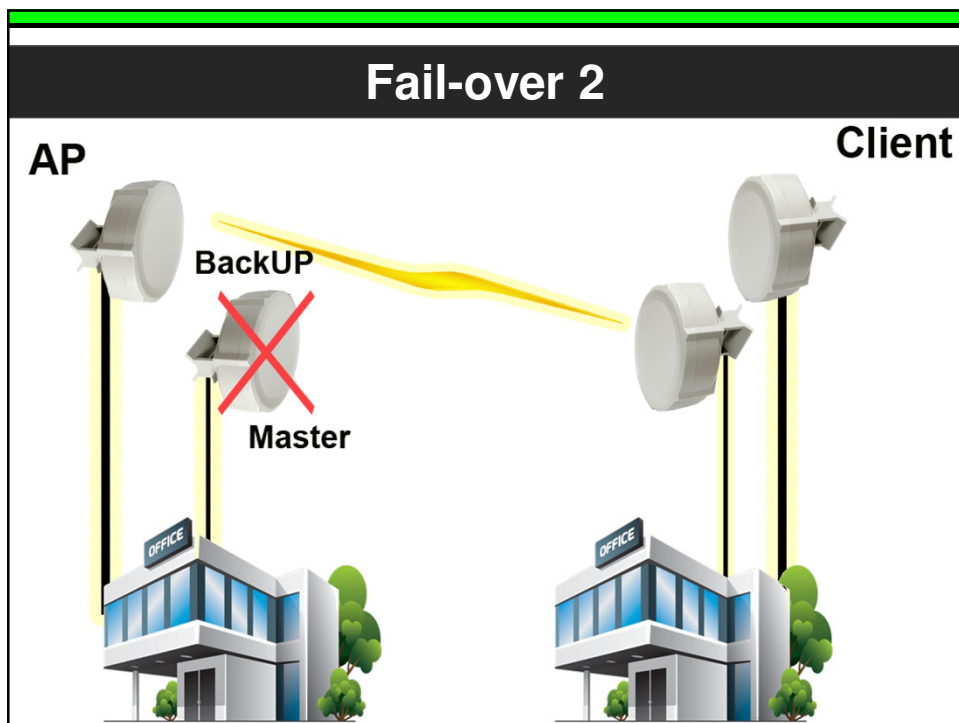
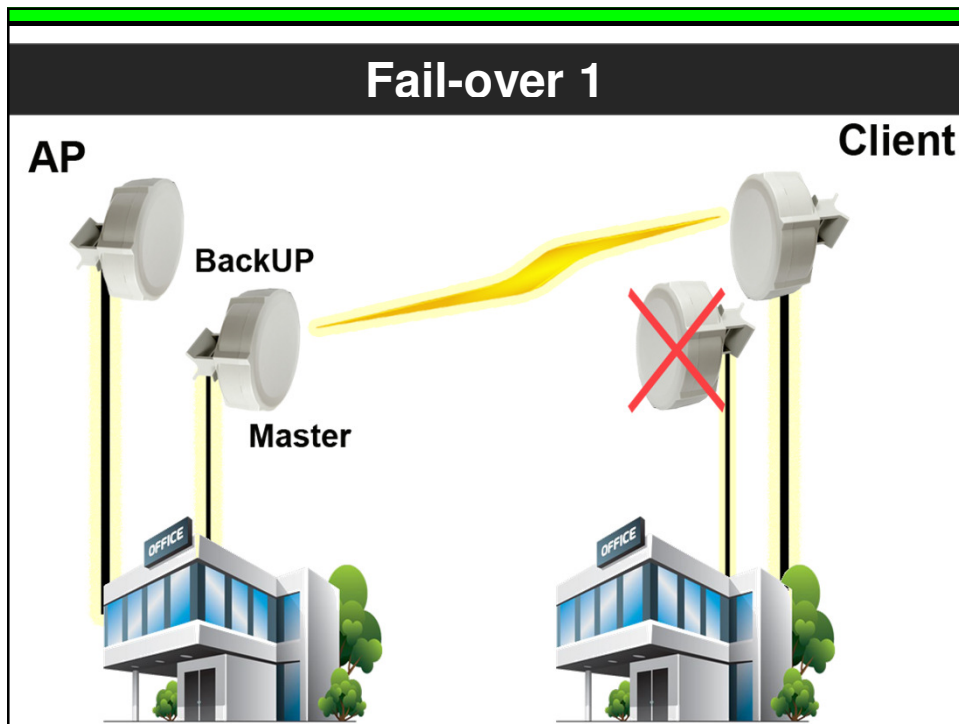
▪ Router IP & VRRP IP

Address List

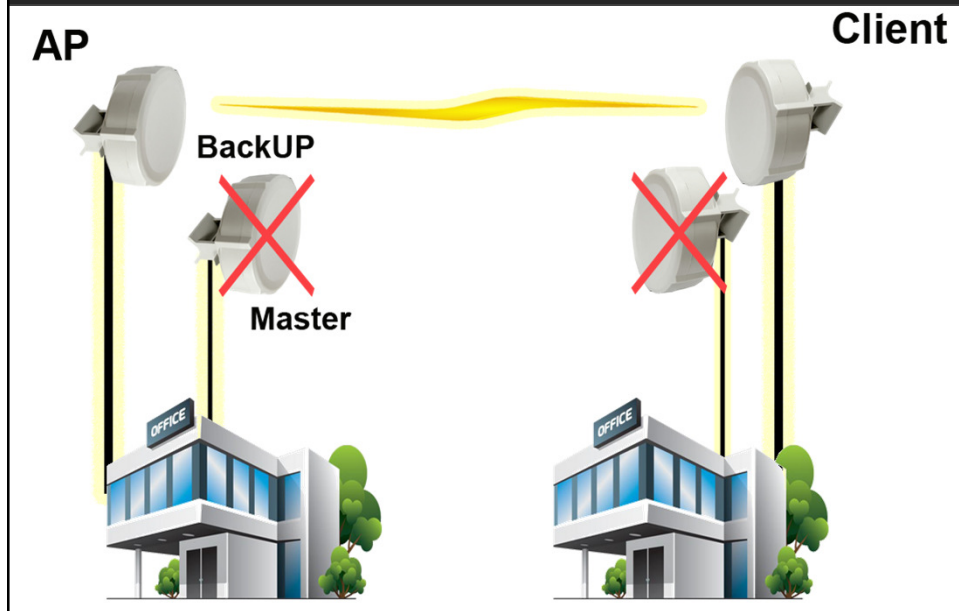
Address	Network	Interface
50.50.50.50/24	50.50.50.0	vmp-onAP
192.168.100.10/24	192.168.100.0	LOCAL

Address <192.168.100.10/24>	Address <50.50.50.50/24>
Address: 192.168.100.10/24	Address: 50.50.50.50/24
Network: 192.168.100.0	Network: 50.50.50.0
Interface: LOCAL	Interface: vmp-onAP





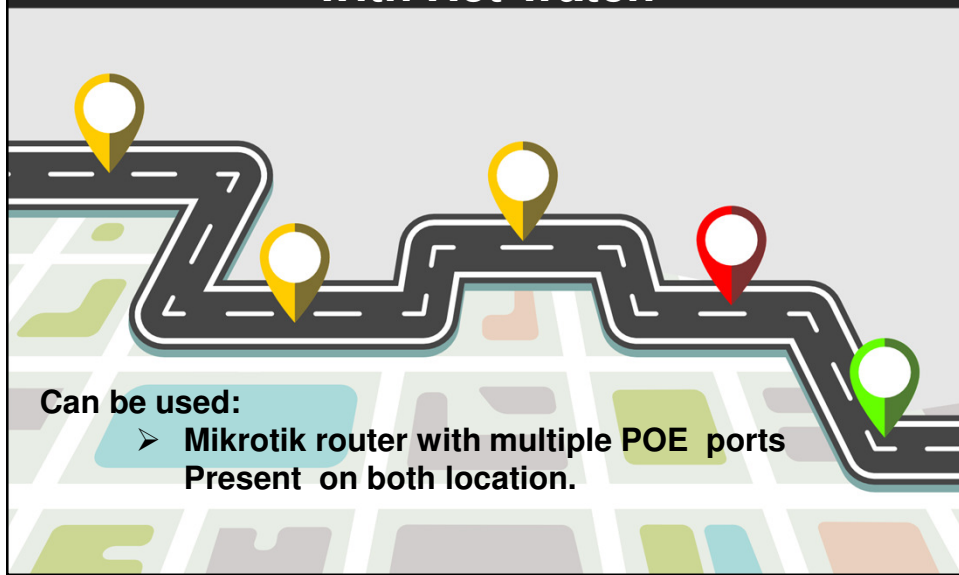
Fail-over 3



Configuration benefits?

- Having available backup without having wireless interference.
- Avoid wireless down time.
- Automated Wireless Backup.

Wireless Point to Point setup with Net-watch



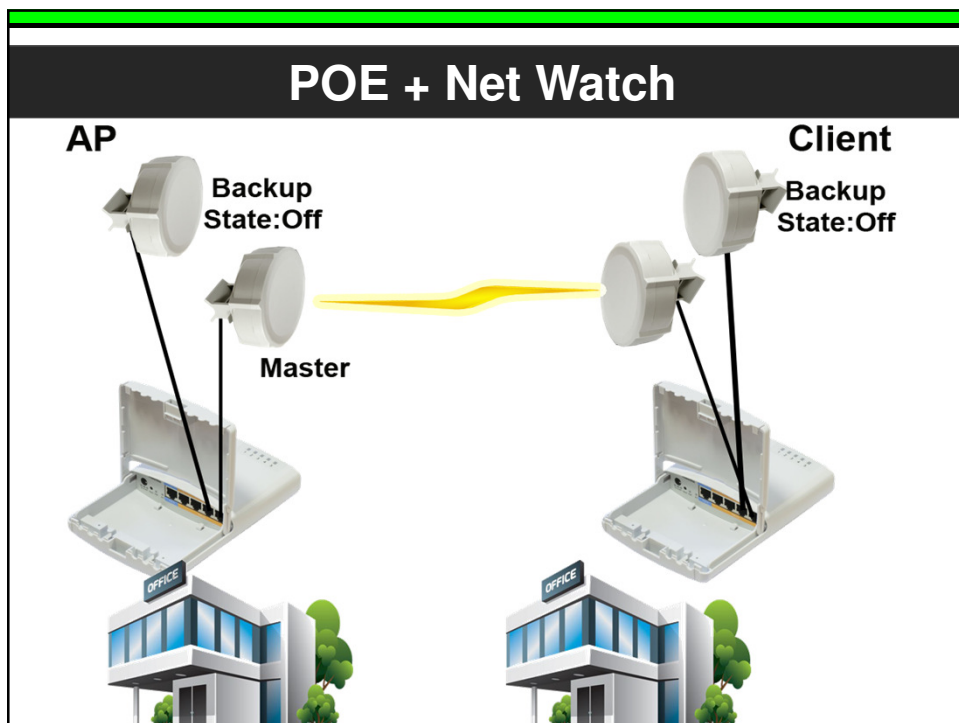
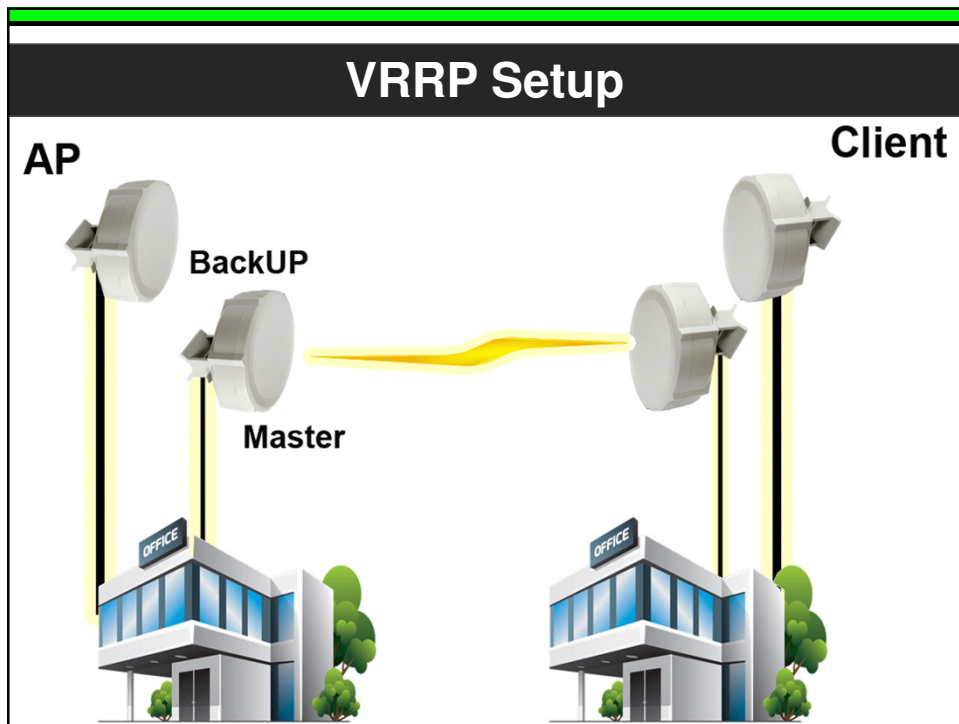
Can be used:

- Mikrotik router with multiple POE ports Present on both location.

Configuration benefits?

- Having available backup without having wireless interference.
- Avoid wireless down time.
- Automated Wireless Backup.
- Save the backup router from wear and tear of circuit components.
- Power saving for the backup on off state.





Configuration on AP Side

- Configure Wireless as (AP-Bridge or Bridge)

The screenshot shows the 'Interface <wlan1>' configuration window with the 'Wireless' tab selected. The 'Mode' is set to 'ap bridge'. Other settings include Band: 2GHz-B/G/N, Channel Width: 20/40MHz HT Below, Frequency: 2462 MHz, SSID: (put your Pair SSID here), Scan List: default, Wireless Protocol: any, Security Profile: Pass, and Bridge Mode: enabled. The 'Wireless' tab is highlighted with a red box.

General	Wireless	HT	HT MCS	WDS	Nstreme	...
Mode: ap bridge						
Band: 2GHz-B/G/N						
Channel Width: 20/40MHz HT Below						
Frequency: 2462 MHz						
SSID: (put your Pair SSID here)						
Scan List: default						
Wireless Protocol: any						
Security Profile: Pass						
Bridge Mode: enabled						

Configuration on AP Side

- Bridge ports (Ether1, Wlan1)

The screenshot shows the 'Bridge' configuration window with the 'Ports' tab selected. The table lists the interfaces connected to the bridge 'brdae1'. The 'ether1' and 'wlan1' entries are highlighted with a red box.

Bridge	
Interface	Bridge
ether1	brdae1
wlan1	brdae1

Additional configuration on AP SXT's

Master

- Router IP

Address List

+ - ✓ ✗ [icon] [icon] Find

Address	Network	Interface
192.168.100.5/24	192.168.100.0	LOCAL

Address <192.168.100.5/24>

Address: 192.168.100.5/24

Network: 192.168.100.0 ▲

Interface: LOCAL ▼

Additional configuration on AP SXT's

Backup

- Router IP

Address List

+ - ✓ ✗ [icon] [icon] Fin

Address	Network	Interface
192.168.100.10/24	192.168.100.0	LOCAL

Address <192.168.100.10/24>

Address: 192.168.100.10/24

Network: 192.168.100.0 ▲

Interface: LOCAL ▼

POE-Router (RB750P) Config

Bridge

Bridge		
Bridge Ports Filters NAT Hosts		
+	-	✓
+	-	✓
Interface	Bridge	
ether1	LOCAL	
ether2	LOCAL	
ether3	LOCAL	
ether4-Backup	LOCAL	
ether5-Main	LOCAL	

Router IP

Address List

Address	Network	Interface
192.168.100.15/24	192.168.100.0	LOCAL

Address <192.168.100.15/24>

Address: 192.168.100.15/24

Network: 192.168.100.0

Interface: LOCAL

POE-Router (RB750P) Config

Netwatch

Tools

Netwatch

Host	Interval	Timeout	Status	Since
192.168.100.5	00:00:15	1000	up	Jan/02/1970 00:02:30

Netwatch Host <192.168.100.5>

Host: 192.168.100.5 (AP-Main's IP)

Interval: 00:00:15

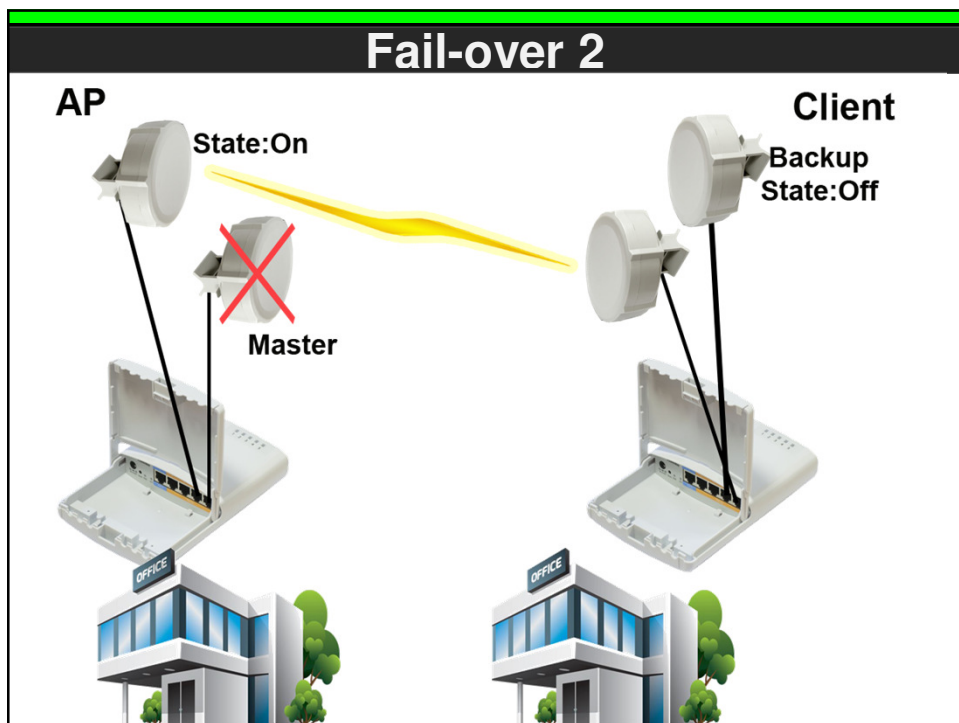
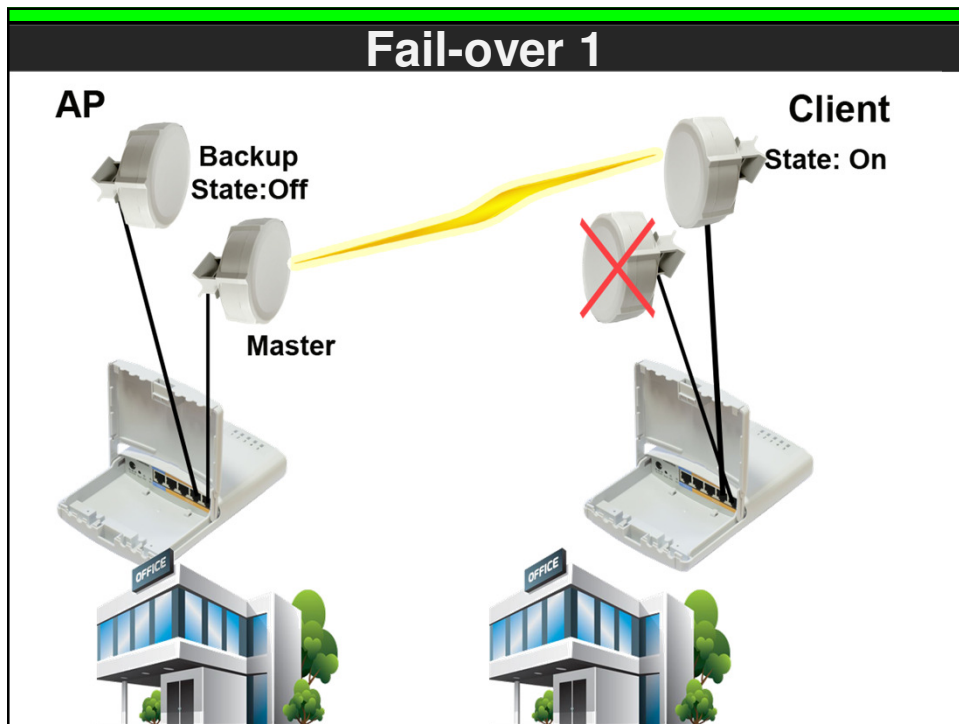
Timeout: 1000 ms

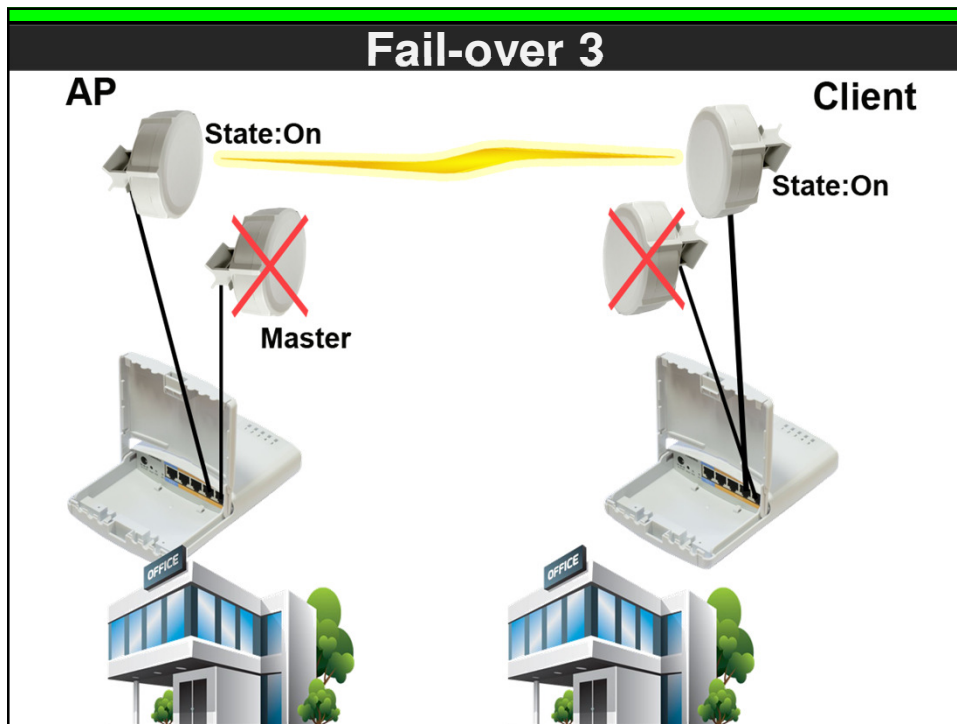
Status: up

Since: Jan/02/1970 00:02:30

On Up: interface ethernet poe set ether4-Backup poe-out=off

On Down: interface ethernet poe set ether4-Backup poe-out=forced-on





Configuration benefits?

- Having available backup without having wireless interference.
- Avoid wireless down time.
- Automated Wireless Backup.
- Save the backup router from wear and tear of circuit components.
- Power saving for the backup on off state.



Conclusions

- MikroTik's Wireless can be combined with different feature's
- MikroTik's multiple features compact in a single router board is a great advantage.
- As long as you doesn't violate any networking rule, your creativity to can create new solutions using combined MikroTik features.



Thank You



The End

- Questions and Answers

To get in touch with me:

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