

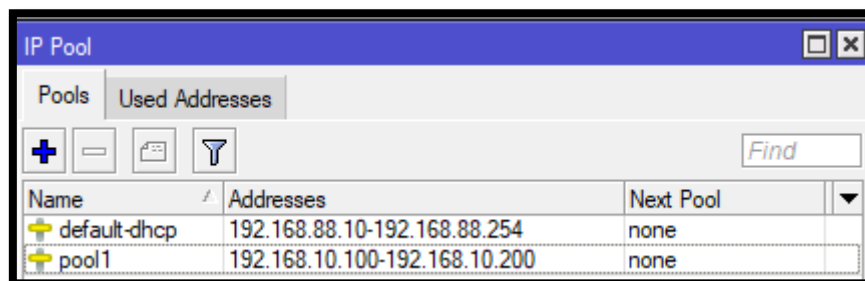
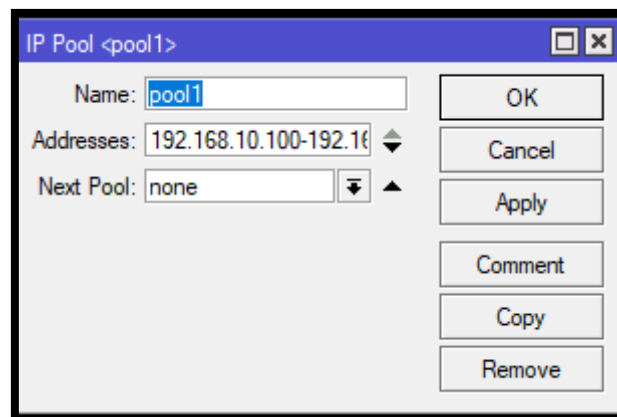
# CREAR UNA VLAN EN MIKROTIK CON UNA RED ADICIONAL

P.A.R

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## 1. Crear 'pool' de direcciones.



2. Se crea como la VLAN como una subinterfaz. En este caso de ETH4. En la ventana "Interfaces" se pulsa "+" y se elige VLAN. La ID de VLAN es el número de marcado de las tramas 802.1Q en este caso es 6.

Interface <vlan6>

General

Loop Protect

Status

Traffic

Name:

Type:

MTU:

Actual MTU:

L2 MTU:

MAC Address:

ARP:

ARP Timeout:

VLAN ID:

Interface:

☐ Use Service Tag

OK

Cancel

Apply

Disable

Comment

Copy

Remove

Torch

Reset Traffic Counters

enabled

running

slave

passthrough

2.1 Lista de interfaces.

Interface List													
Interface													
Interface List   Ethernet   EoIP Tunnel   IP Tunnel   GRE Tunnel   VLAN   VXLAN   VRRP   VETH   MACVLAN   Bonding   LTE													
+ - [ ] [x] [a] [Y] Detect Internet													
	Name	Type	Actual MTU	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx	FP Rx	FP Tx Packet (p/s)	FP Rx Packet (p/s)	
R	...	defconf											
R	bridge	Bridge	1500	1598	0 bps	400 bps	0	1	0 bps	0 bps	0	0	
R	ether1	Ethernet	1500	1598	0 bps	8.1 kbps	0	10	0 bps	11.5 kbps	0	6	
RS	ether2	Ethernet	1500	1598	86.8 kbps	5.8 kbps	9	9	0 bps	512 bps	0	1	
S	ether3	Ethernet	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	0	0	
RS	ether4	Ethernet	1500	1598	7.3 kbps	0 bps	11	0	0 bps	0 bps	0	0	
R	vlan6	VLAN	1500	1594	7.1 kbps	0 bps	2	0	0 bps	0 bps	0	0	
R	lo	Loopback	65536		0 bps	0 bps	0	0	0 bps	0 bps	0	0	
S	pwr-line1	PWR	1500	1598	0 bps	0 bps	0	0	0 bps	0 bps	0	0	
S	wlan1	Wireless (Atheros AR9...	1500	1600	0 bps	0 bps	0	0	0 bps	0 bps	0	0	

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::: defconf		
R	bridge	Bridge
R	ether1	Ethernet
RS	ether2	Ethernet
S	ether3	Ethernet
RS	ether4	Ethernet
R	vlan6	VLAN
R	lo	Loopback
S	pwr-line1	PWR
S	wlan1	Wireless (Atheros AR9...

### 3. Asignación de IP a la nueva interfaz.

Address <192.168.10.1/24>

Address: 192.168.10.1/24

Network: 192.168.10.0

Interface: vlan6

enabled

OK

Cancel

Apply

Disable

Comment

Copy

Remove

Address List			
<div> <div>+</div> <div>-</div> <div>✓</div> <div>✗</div> <div>📄</div> <div>🔍</div> <div>Find</div> </div>			
	Address	Network	Interface
D	172.30.3.9/17	172.30.0.0	ether1
	192.168.10.1/24	192.168.10.0	vlan6
::: defconf			
	192.168.88.1/24	192.168.88.0	bridge

#### 4. Creación de RED para el servidor DHCP (IP-> DHCP Server).

DHCP Network <192.168.10.0/24>

Address: 192.168.10.0/24

Gateway: 192.168.10.1

Netmask:

☐ No DNS

DNS Servers: 8.8.8.8

Domain:

WINS Servers:

NTP Servers:

CAPS Managers:

Next Server:

Boot File Name:

DHCP Options:

DHCP Option Set:

OK  
Cancel  
Apply  
Comment  
Copy  
Remove

DHCP Server

DHCP Networks Leases Options Option Sets Option Matcher Alerts

+ - [icon] [icon]

Address	Gateway	DNS Servers	Domain
192.168.10.0/24	192.168.10.1	8.8.8.8	
... defconf			
192.168.88.0/24	192.168.88.1	192.168.88.1	

#### 5. Creación del servidor DHCP en la interfaz “vlan6”.

- El nuevo servidor estará en rojo hasta que haya un cable conectado e ETH4.

DHCP Server <server1>

General Queues Script

Name: server1

Interface: vlan6

Relay:

Lease Time: 00:30:00

Bootp Lease Time: forever

Address Pool: pool1

DHCP Option Set:

Server Address:

Delay Threshold:

Authoritative: yes

Bootp Support: static

Client MAC Limit:

Use RADIUS: no

☐ Always Broadcast

☐ Add ARP For Leases

☒ Use Framed As Classless

☒ Conflict Detection

enabled

OK Cancel Apply Disable Comment Copy Remove

DHCP Server						
DHCP Networks Leases Options Option Sets Option Matcher Alerts						
<div> <div>+</div> <div>-</div> <div>✓</div> <div>✗</div> <div>📁</div> <div>🔍</div> <div>DHCP Config</div> <div>DHCP Setup</div> </div>						
	Name	Interface	Relay	Lease Time	Address Pool	Add AR...
X	defconf	bridge		00:10:00	default-dhcp	no
	server1	vlan6		00:30:00	pool1	no

6. CONFIGURACIÓN DEL ROUTER CLIENTE.

6.1 Añadir VLAN.

- En este caso se añade al puerto ETH1, CON EL MISMO NÚMERO DE VLAN QUE EL SERVIDOR.

Interface <vlan6>

General

Loop Protect

Status

Traffic

Name:

Type:

MTU:

Actual MTU:

L2 MTU:

MAC Address:

ARP:

ARP Timeout:

VLAN ID:

Interface:

☐ Use Service Tag

OK

Cancel

Apply

Disable

Comment

Copy

Remove

Torch

enabled

running

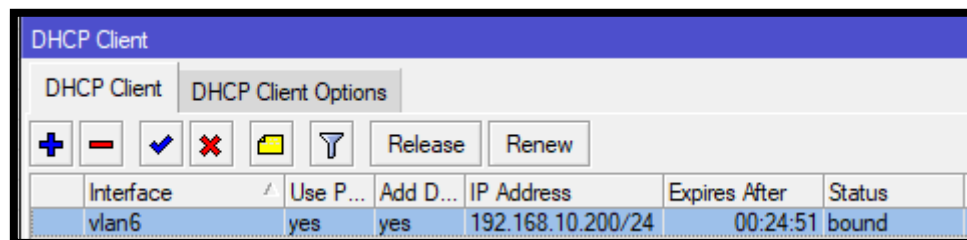
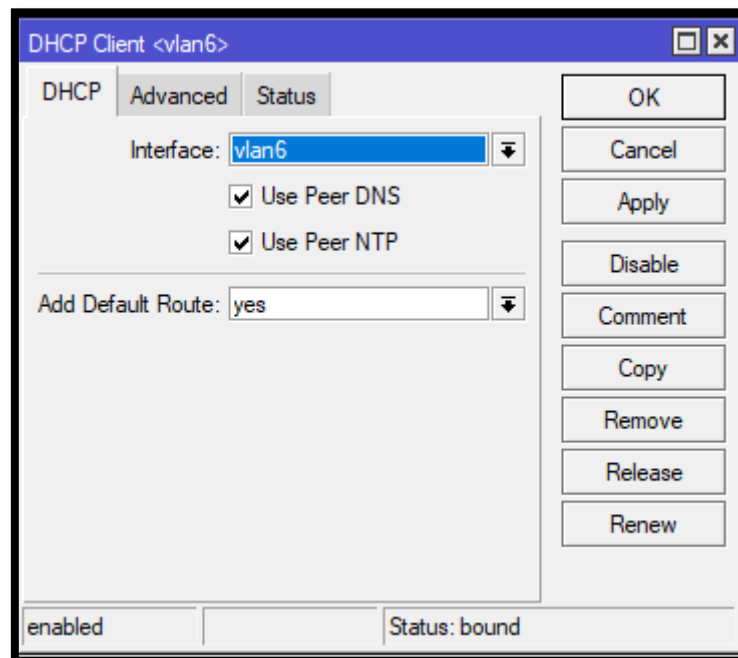
slave

Interface List													
Interface		Interface List	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE			
		Name	Type	Actual MTU	L2 MTU	FP Rx	FP Tx Packet (p/s)	FP Rx Packet (p/s)	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)	FP Tx
R	...	default	Bridge	1500	1598	11.1 kbps	0	14	114.2 kbps	11.1 kbps	12	14	0 bps
R	+	ether1	Ethernet	1500	1598	1536 bps	4	2	592 bps	4.0 kbps	1	3	3.5 kbps
R	+	vlan6	VLAN	1500	1594	1024 bps	0	1	3.4 kbps	1024 bps	4	1	0 bps
RS	+	ether2	Ethernet	1500	1598	11.1 kbps	13	14	122.9 kbps	9.4 kbps	12	11	114.7 kbps
S	+	ether3	Ethernet	1500	1598	0 bps	0	0	0 bps	0 bps	0	0	0 bps
S	+	ether4	Ethernet	1500	1598	0 bps	0	0	0 bps	0 bps	0	0	0 bps
S	+	pwir-line 1	PWR	1500	1598	0 bps	0	0	0 bps	0 bps	0	0	0 bps
S	+	wlan1	Wireless (Atheros AR9...	1500	1600	0 bps	0	0	0 bps	0 bps	0	0	0 bps



## 6.2 Añadir en el menú IP-> DHCP Client. Pulsar “+”.

- Se ha deshabilitado el de ether1 para evitar que tengamos otra dirección IP (podemos tener las dos direcciones).



## 6.3 Cortafuegos (IP-&gt; Firewall-&gt; NAT-&gt; "+").

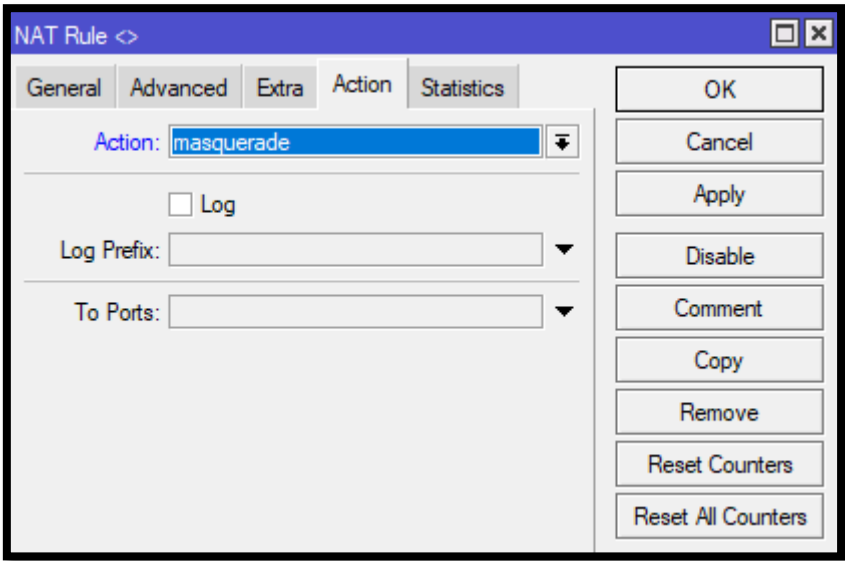
- Debe tener la regla NAT activada para VLAN 6.

The screenshot shows the 'NAT Rule' configuration window with the following settings:

- Chain:** srcnat
- Src. Address:** (empty)
- Dst. Address:** (empty)
- Protocol:** (empty)
- Src. Port:** (empty)
- Dst. Port:** (empty)
- Any. Port:** (empty)
- In. Interface:** (empty)
- Out. Interface:** ☐ vlan6
- In. Interface List:** (empty)
- Out. Interface List:** (empty)
- Packet Mark:** (empty)
- Connection Mark:** (empty)
- Routing Mark:** (empty)
- Routing Table:** (empty)
- Connection Type:** (empty)
- enabled:** ☒

Buttons on the right: OK, Cancel, Apply, Disable, Comment, Copy, Remove, Reset Counters, Reset All Counters.

6.3.1 Acción “masquerade”.



6.4 Debe constar la dirección que ha dado el servidor DHCP en la VLAN 6.

The screenshot shows the 'Address List' configuration window. It contains a table with columns: Address, Network, and Interface. There are three entries: 192.168.10.100/24 (Network: 192.168.10.0, Interface: vlan6), 192.168.10.200/24 (Network: 192.168.10.0, Interface: vlan6), and 192.168.88.1/24 (Network: 192.168.88.0, Interface: bridge). The first two entries are marked with an 'X' and the third with a 'D'.

	Address	Network	Interface
X	192.168.10.100/24	192.168.10.0	vlan6
D	192.168.10.200/24	192.168.10.0	vlan6
...	defconf		
	192.168.88.1/24	192.168.88.0	bridge

6.5 Debe estar la ruta por defecto en el la vlan6 del cliente.

The screenshot shows the 'Route List' configuration window. It contains a table with columns: Dst. Address, Gateway, Distance, Routing Mark, and Pref. Source. There are three entries: 0.0.0.0/0 (Gateway: 192.168.10.1 reachable vlan6, Distance: 1), 192.168.10.0/... (Gateway: vlan6 reachable, Distance: 0, Pref. Source: 192.168.10.200), and 192.168.88.0/... (Gateway: bridge reachable, Distance: 0, Pref. Source: 192.168.88.1).

	Dst. Address	Gateway	Distance	Routing Mark	Pref. Source
AS	0.0.0.0/0	192.168.10.1 reachable vlan6	1		
DAC	192.168.10.0/...	vlan6 reachable	0		192.168.10.200
DAC	192.168.88.0/...	bridge reachable	0		192.168.88.1

## 6.6 Uso de DNS externo.

The image shows a screenshot of a DHCP Network configuration window titled "DHCP Network <192.168.88.0/24>". The window contains several input fields and a list of buttons on the right side.

Field	Value	Control
Address:	192.168.88.0/24	
Gateway:	192.168.88.1	Up/Down Arrow
Netmask:		Down Arrow
<input type="checkbox"/> No DNS		
DNS Servers:	8.8.8.8	Up/Down Arrow
Domain:		Down Arrow
WINS Servers:		Up/Down Arrow
NTP Servers:		Up/Down Arrow
CAPS Managers:		Up/Down Arrow
Next Server:		Down Arrow
Boot File Name:		Down Arrow
DHCP Options:		Up/Down Arrow
DHCP Option Set:		Down Arrow

Buttons on the right side of the window:

- OK
- Cancel
- Apply
- Comment
- Copy
- Remove