



# Buenas Practicas y Balanceo con Rutas Dinámicas

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# Objetivos

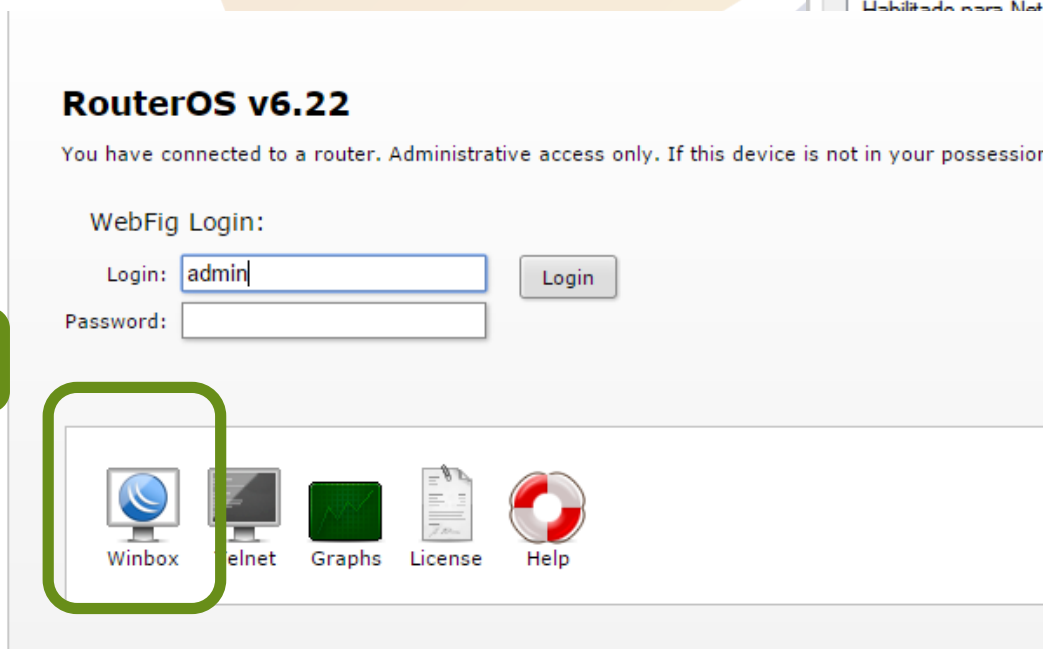
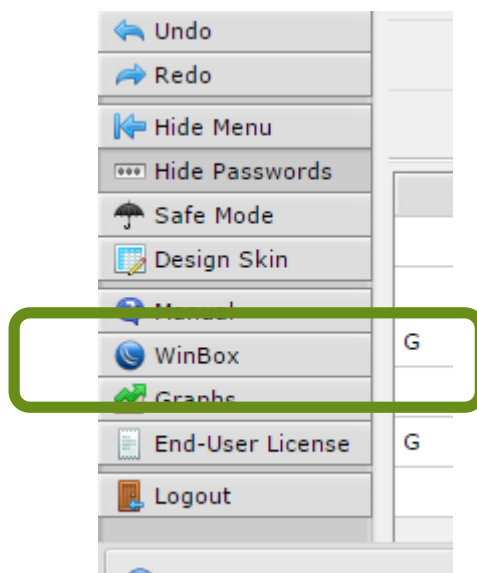
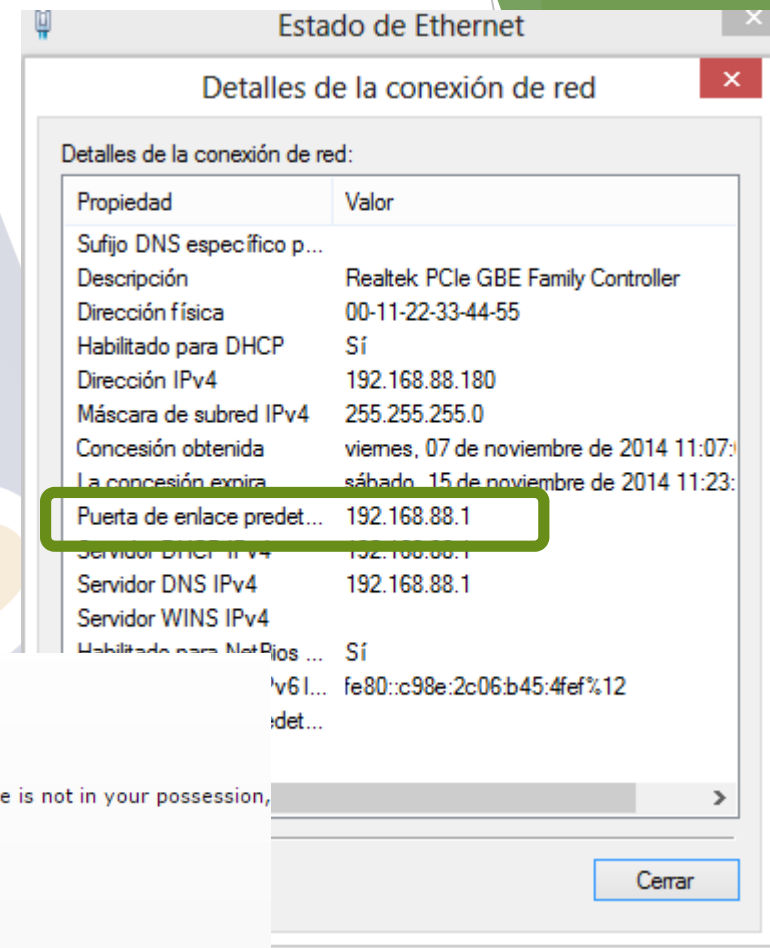
- ▶ Revisar lo básico a tener cuidado en los primeros pasos de una configuración de un router Mikrotik
- ▶ Evitar algunos errores típicos que vemos muy a menudo con clientes
- ▶ Intercambiar ideas de nuevos trucos y soluciones

# Error Típico

- ▶ Por defecto el Puerto Eth1 o Puerto 1 No acepta Conexiones MAC
- ▶ También es el POE pero es para WAN
- ▶ Solución Conectarse por otro puerto

# WinBox Como entrar?

- Donde? Abrimos la pagina web con la ip del Router  
Normalmente el Gateway o  
Puerta de Enlace asignado por DHCP



Wireless

Network Name: CasaLucas

Frequency: auto MHz

Band: 2GHz-B/G/N

Country: no\_country\_set

MAC Address: 4C:5E:0C:32:7C:F7

☐ Use Access List (ACL)

WiFi Password: LucasCasa2519 ☐ Hide

Guest Wireless Network

Guest Network: invitados

Guest WiFi Password: resistencia ☐ Hide

Limit Download Speed:

Wireless Clients

MAC Address	In ACL	Last IP	Uptime	Signal Strength
00:0B:82:3C:DB:D8	no	192.168.88.246	00:31:06	-62
6C:AD:F8:83:39:AB	no	192.168.88.234	00:31:11	-47
84:38:38:B4:9E:54	no	192.168.88.225	00:31:00	-53
A8:96:8A:88:83:47	no	192.168.88.251	00:30:53	-67
E8:2A:EA:65:23:0E	no	192.168.88.194	00:30:36	-62
F0:27:65:1C:1A:82	no	192.168.88.249	00:31:13	-80

Signal Strength:

Copy To ACL Remove From ACL

Internet

Port: Eth1

Address Acquisition: ☒ Automatic ☐ PPPoE ☐ Static

IP Address: Renew Release

Netmask:

Gateway:

MAC Address: 4C:5E:0C:32:7C:ED

☒ Firewall Router

Local Network

IP Address: 192.168.88.1

Netmask: 255.255.255.0 (/24)

☒ DHCP Server

DHCP Server Range: 192.168.88.10-192.168.88.254

☒ NAT

☒ UPnP

VPN

☐ VPN Access

VPN Address: 467404ab7e7a.sn.mynetname.net

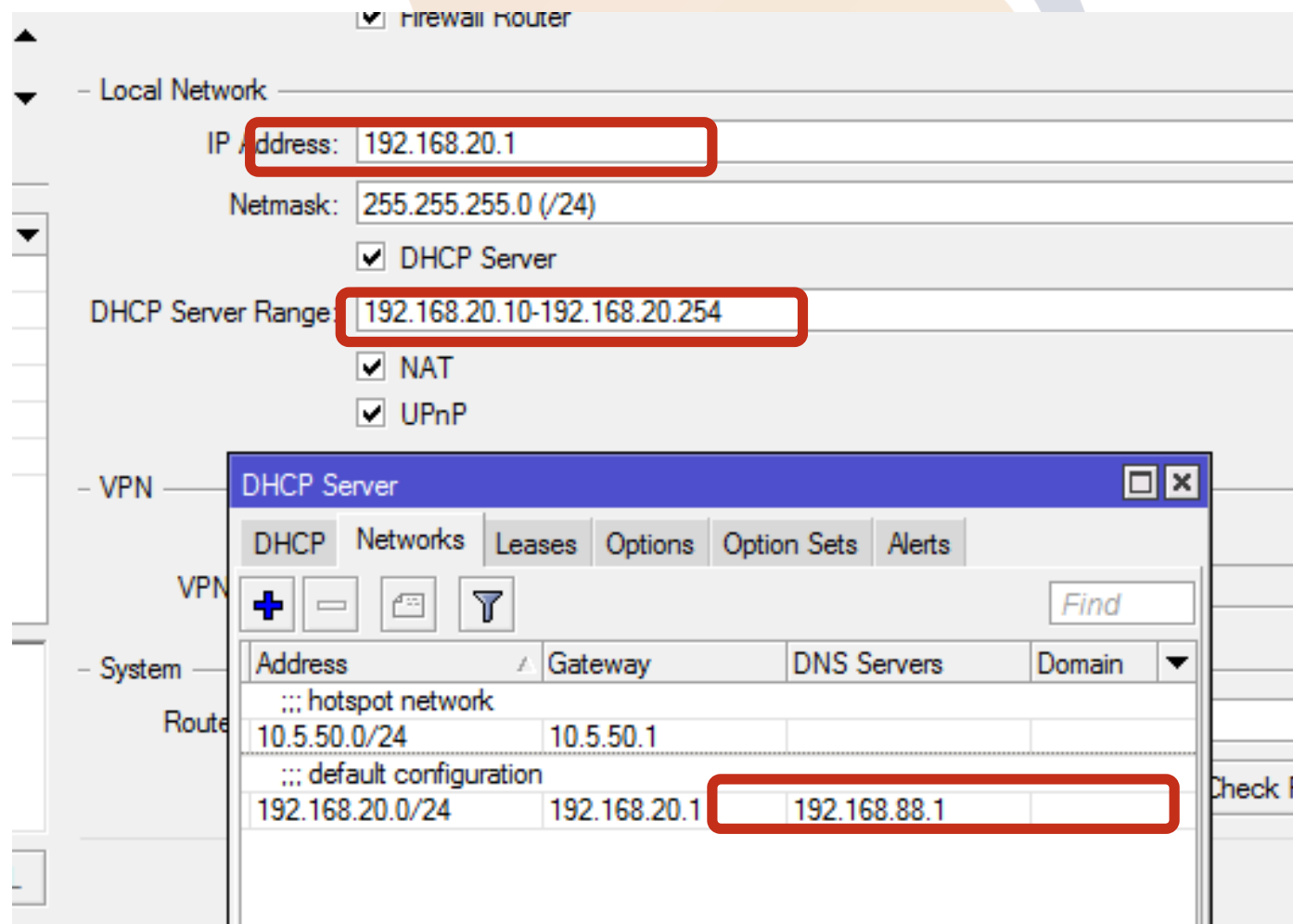
System

Router Identity: CasaLucas

Check For Updates Reset Configuration

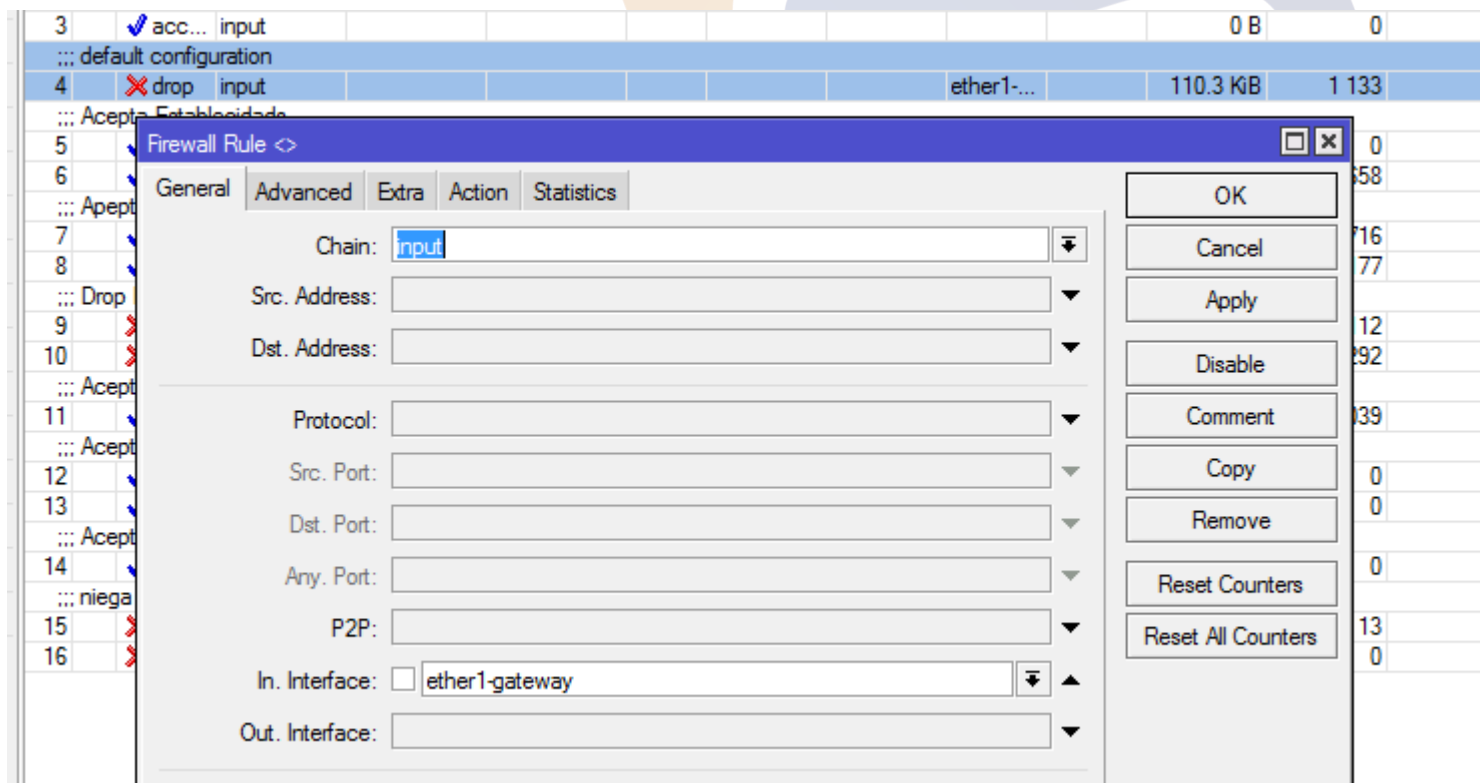
Password...

# DNS corrigir



# Cuidado Con los Puertos Abiertos

- MANTENER SIEMPRE la regla de bloqueo desde los WAN al Router  
add action=drop chain=input comment="default configuration" in-interface=\ether1-gateway



Open DNS  
OPEN PROXY

# Wireless con protocolo ANY

- Problema común de dejar sin especificar correctamente el protocolo Wireless
- Ahora mas difícil con el nuevo quickset

Podemos aprovechar para  
limitar conexiones lentas

Interface <wlan1>

General Wireless Data Rates Advanced HT HT MCS WDS Nstreme Tx Power Current Tx Power Status Traffic

- Rate  
☐ default ☒ configured

- Supported Rates B

<input type="checkbox"/> 1Mbps	<input type="checkbox"/> 2Mbps	<input type="checkbox"/> 5.5Mbps	<input checked="" type="checkbox"/> 11Mbps
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- Supported Rates A/G

<input checked="" type="checkbox"/> 6Mbps	<input checked="" type="checkbox"/> 9Mbps	<input checked="" type="checkbox"/> 12Mbps	<input checked="" type="checkbox"/> 18Mbps
<input checked="" type="checkbox"/> 24Mbps	<input checked="" type="checkbox"/> 36Mbps	<input checked="" type="checkbox"/> 48Mbps	<input checked="" type="checkbox"/> 54Mbps

- Basic Rates B

<input type="checkbox"/> 1Mbps	<input type="checkbox"/> 2Mbps	<input type="checkbox"/> 5.5Mbps	<input checked="" type="checkbox"/> 11Mbps
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- Basic Rates A/G

<input checked="" type="checkbox"/> 6Mbps	<input type="checkbox"/> 9Mbps	<input type="checkbox"/> 12Mbps	<input type="checkbox"/> 18Mbps
<input type="checkbox"/> 24Mbps	<input type="checkbox"/> 36Mbps	<input type="checkbox"/> 48Mbps	<input type="checkbox"/> 54Mbps

OK  
Cancel  
Apply  
Disable  
Comment  
Torch  
Scan...  
Freq. Usage...  
Align...  
Sniff...  
Snooper...  
Reset Configuration  
Simple Mode

# Algo mas Complejo

## Rutas Dinamicas con NETWACH

### Objetivos:

- ▶ Poder detectar la perdida de servicio en un canal WAN
- ▶ Aun cuando el Gateway siga en línea
- ▶ Modificar las rutas acorde a estos eventos

# Algo mas Complejo

## Rutas Dinamicas con NETWACH

- Pasos Basicos:
- Poner Comentarios a las rutas a Modificar

Route List				
Routes				
Nexthops Rules VRF				
+ - ✓ ✗ 📁 🏠				
	Dst. Address	Gateway	Distance	Route
:: ISP1				
S	0.0.0.0/0	10.20.1.1 reachable lvLinks	3	
:: ISP3				
S	0.0.0.0/0	192.168.10.1 reachable Eth8AdsILV	4	
:: ISP2				
AS	0.0.0.0/0	10.20.1.3 reachable lvLinks	2	

# Ruta Dinámicas con NetWach

- Crear Ruta estática para servers a monitorear

DAC	▶ 192.168.10...	Eth8AdslLV reachable	U
:: NETWACH3			
AS	▶ 198.153.192.1	192.168.10.1 reachable Eth8AdslLV	1
AS	▶ 208.67.220...	192.168.10.1 reachable Eth8AdslLV	1
XS	▶ 208.67.222...	192.168.10.1	1
:: NETWACH1			
AS	▶ 209.244.0.3	10.20.1.1 reachable lvLinks	1
:: NETWACH2			
AS	▶ 209.244.0.4	10.20.1.3 reachable lvLinks	1

# Ruta Dinámicas con NetWach

- Crear NetWach a esos server y Acciones Acorde

The screenshot displays the NetWach configuration interface. The top-left pane shows the 'Route List' with tabs for Routes, Nexthops, Rules, and VRF. The 'Routes' tab is active, showing a list of routes with columns for Dst Address, Gateway, Distance, and Reachability. The top-right pane shows the 'Netwatch' table with columns for Host, Interval, Timeou..., Status, and Since. The bottom-left pane shows the configuration for 'Netwatch Host <209.244.0.3>' with a text area for 'On Up' actions and a status of 'enabled'. The bottom-right pane shows the configuration for 'Netwatch Host <208.67.220.220>' with a text area for 'On Up' actions and a status of 'enabled'.

Host	Interval	Timeou...	Status	Since
10.20.1.1	00:01:00	60000	up	Nov/12/2014 20:38:...
10.20.1.3	00:01:00	60000	up	Nov/12/2014 20:33:...
192.168.10.1	00:01:00	60000	up	Nov/11/2014 12:51:...
208.67.220.220	00:01:00	60000	up	Nov/12/2014 20:37:...
209.244.0.3	00:01:05	6000	up	Nov/12/2014 17:23:...
209.244.0.4	00:01:15	60000	up	Nov/12/2014 20:15:...

**Netwatch Host <209.244.0.3>**

Host Up Down

On Up:

```
ip route set [find comment="ISP1"]  
distance=3  
log info "Volvio servicio ISP1"
```

enabled

**Netwatch Host <208.67.220.220>**

Host Up Down

On Up:

```
ip route set [find comment="ISP3"]  
distance=4  
log info "Volvio servicio Adsl Bolivia"
```

enabled

# Soluciones

Distribuidores de:  
Grandstream

Partner de:  
Cisco, TrendNet, Microsoft

Certificaciones  
MIKROTIK  
Microsoft  
Voip

Telefonía IP

Reseller de:  
Mikrotik, Ubnt

## SERVIDORES

## VIRTUALIZACION

Soluciones  
Integrales  
Productivas

WIFI Corp

Routers

## Redes Estructuradas

Managed Switches

Switches POE

CCTV IP

Cámaras IP y Video análisis



## ROUTERS

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