



Pongpipat Thunyawiraphap

Mikrotik Certified Trainer

<https://mikrotiktutorial.com/>



Supadej Suthiphongkanasai

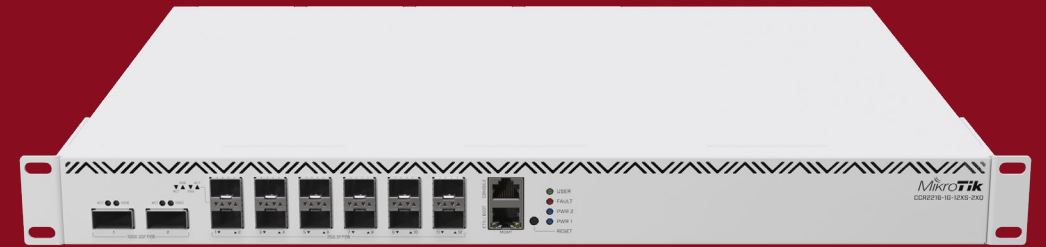
Mikrotik Certified Trainer

<https://packethunter.net/>

What is Mikrotik RouterOS?



UP TO



Price : \$24.95

L3 Throughput : 394.7Mbps

WIFI : Yes

Interface : Fast Ethernet (100Mbps)

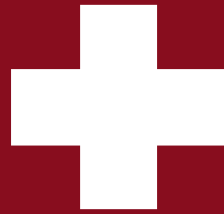
Price : \$2,795

L3 Throughput : 69,336Mbps

Interface : SFP28 (25Gbps)

QSFP28 (100Gbps)

What is Mikrotik RouterOS?



**Cloud Hosted
Router
(Virtual Machine)**

What is Mikrotik RouterOS?

- **How Mikrotik RouterOS Work**
 - **As Switch**
 - **As Access Point / WIFI Repeater / Extender / WISP Mode**
 - **As Router**
 - **As Multi-WAN Router**
 - **As Local ISP Device**
- **Mikrotik as a Business Gateway**

What is Mikrotik RouterOS?



MIKROTIK

=

~~ROUTER + Firewall Stateful~~

Swiss Army Knives

How Mikrotik Work – Components

PHYSICAL INTERFACE

Ether1

Ether2

Ether3

WLAN1
2.4GHz

WLAN
5GHz

WLAN
60GHz

SFP+

SFP28

QSFP28

VIRTUAL INTERFACE

Bridge (Switch)

PPPoE Client

VLAN

Ethernet over IP
(EOIP)

Open VPN

ZeroTier

SERVICE / CONDITION & ACTION

DHCP Server

Firewall NAT

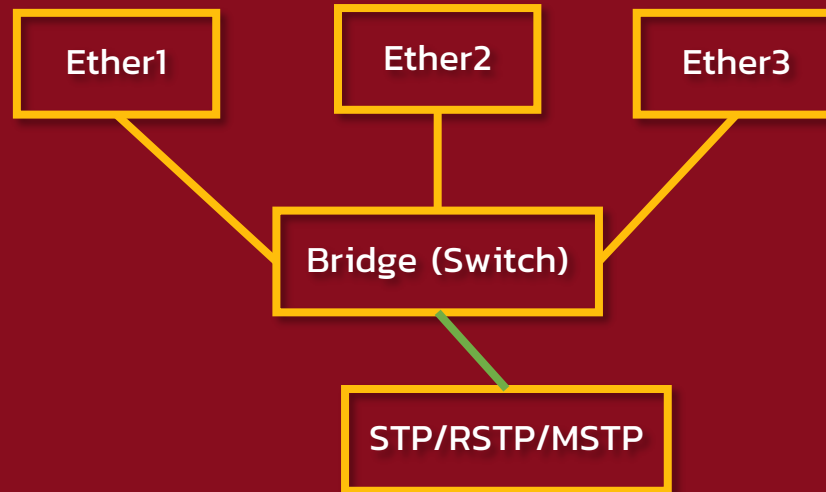
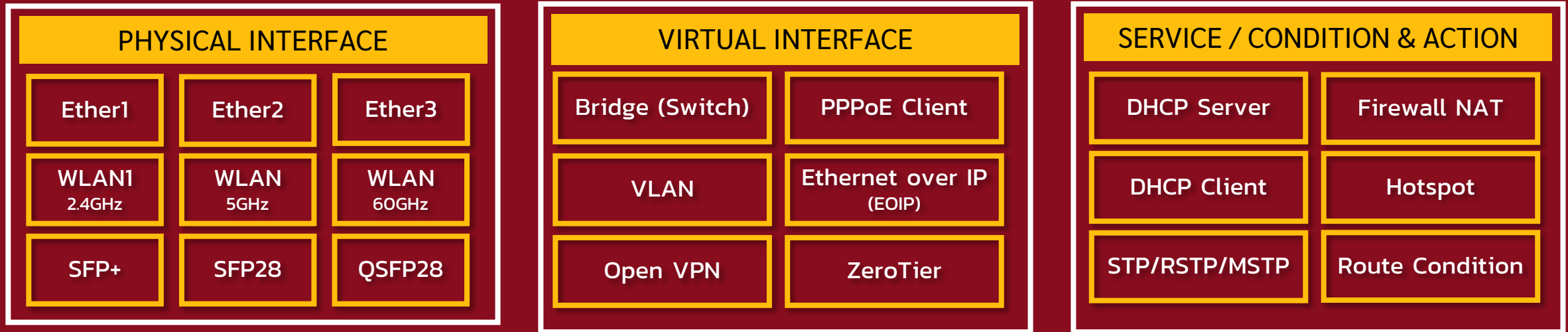
DHCP Client

Hotspot

STP/RSTP/MSTP

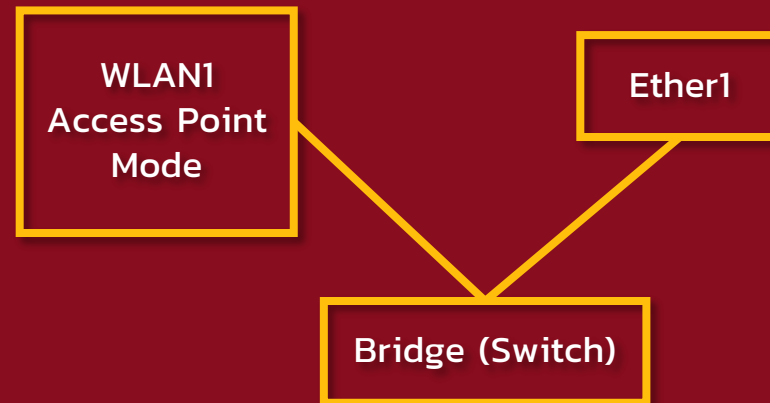
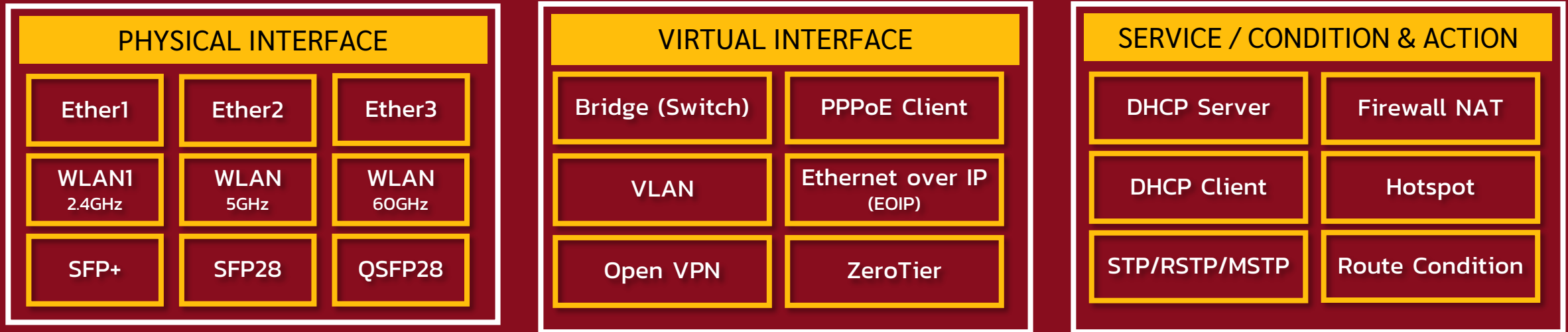
Route Condition

How Mikrotik Work – Switch



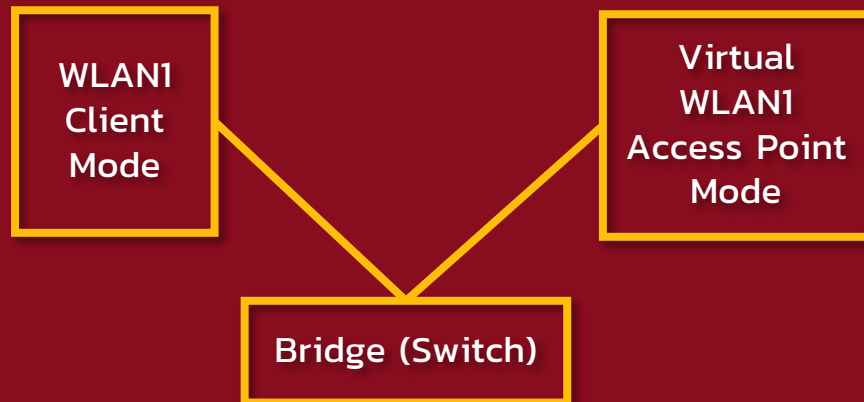
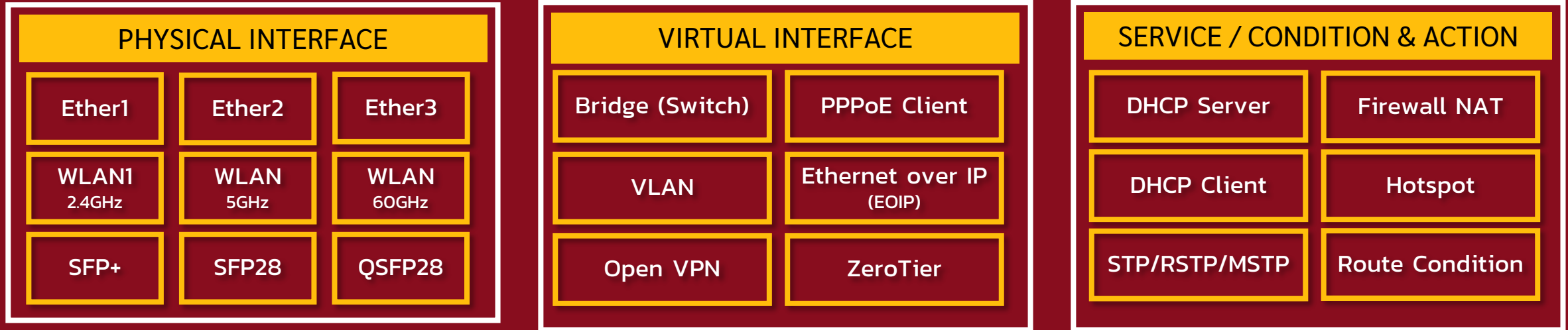
SWITCH

How Mikrotik Work – Access Point



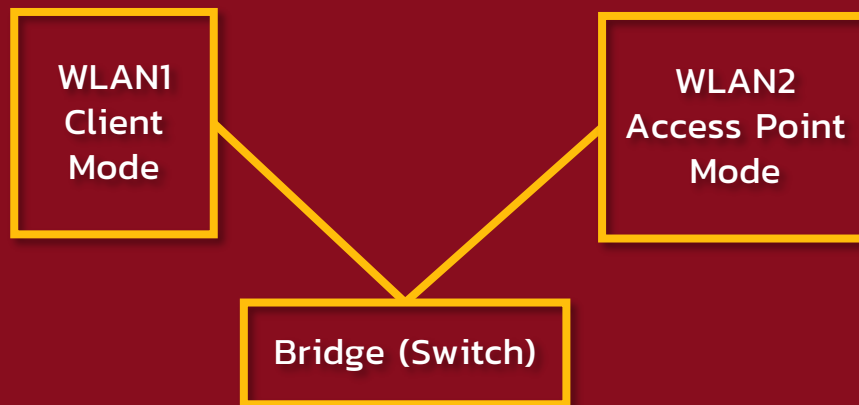
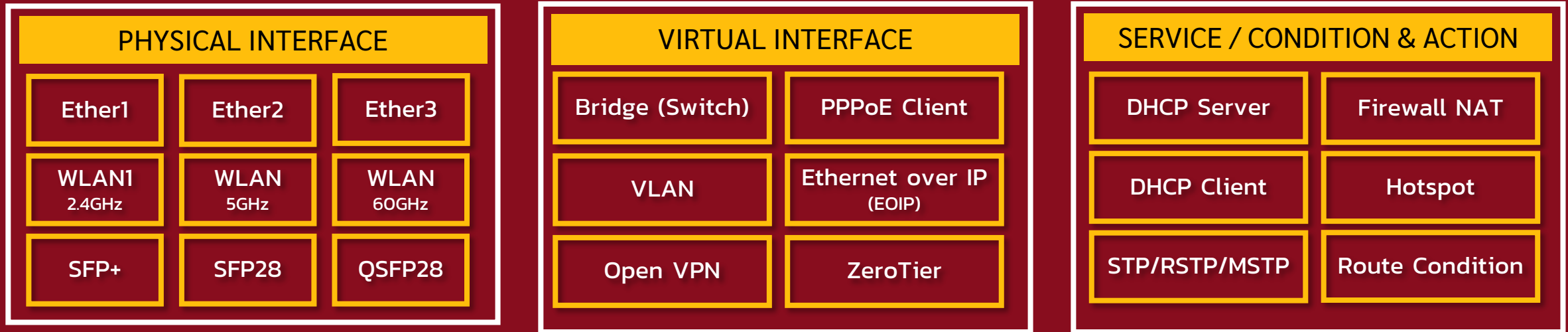
Access Point

How Mikrotik Work – Sing band WIFI Repeater



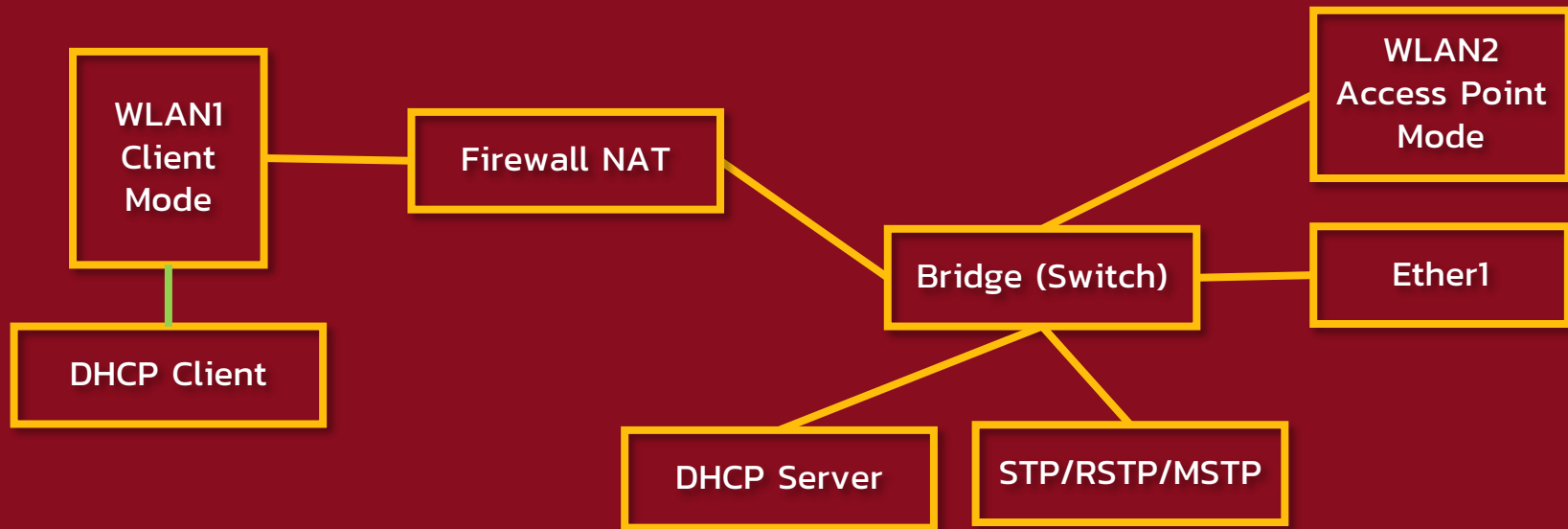
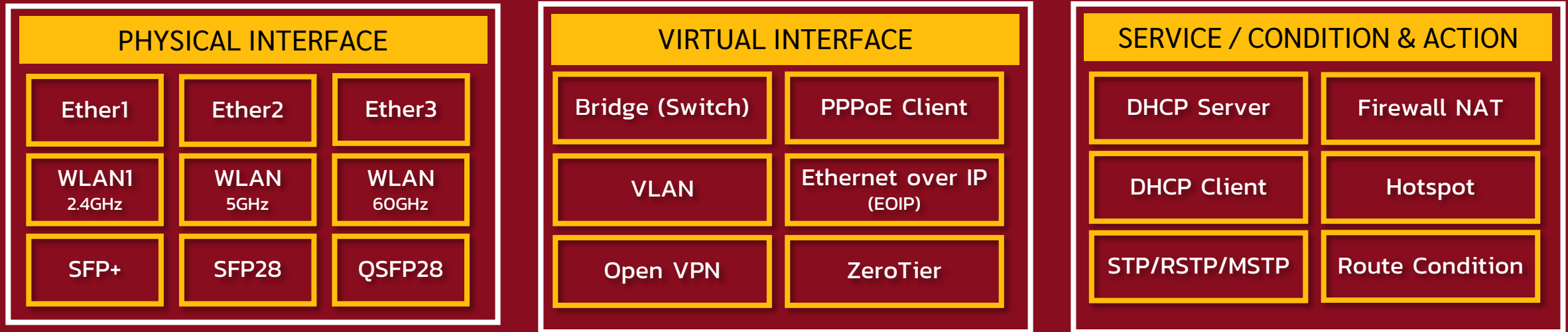
**Single Band
WIFI Repeater**

How Mikrotik Work – Dual Band WIFI Extender



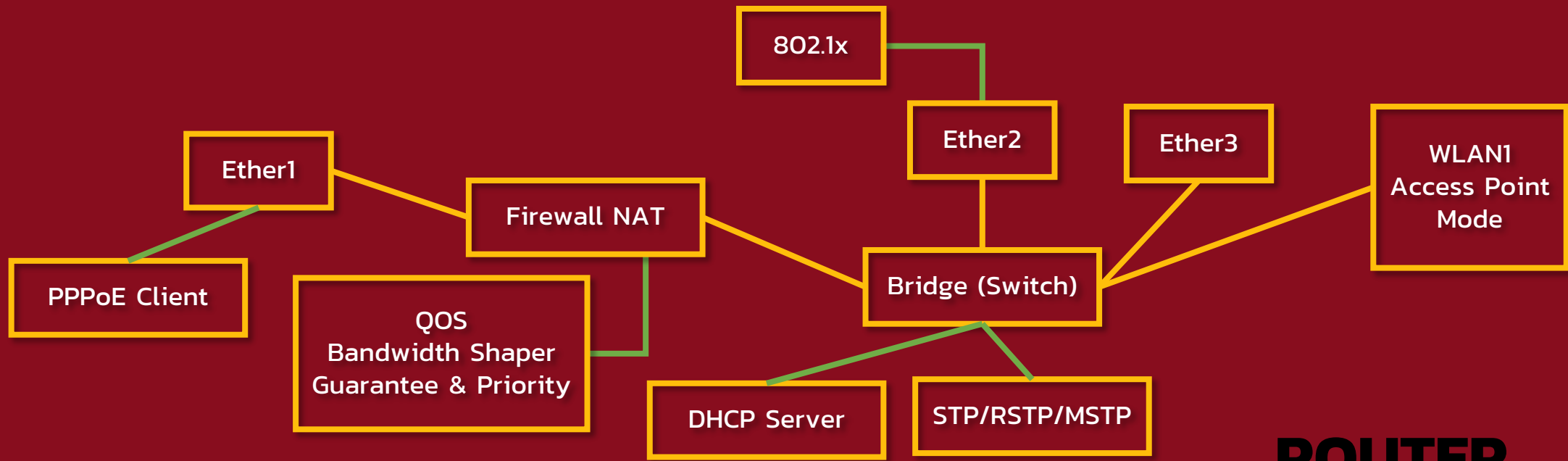
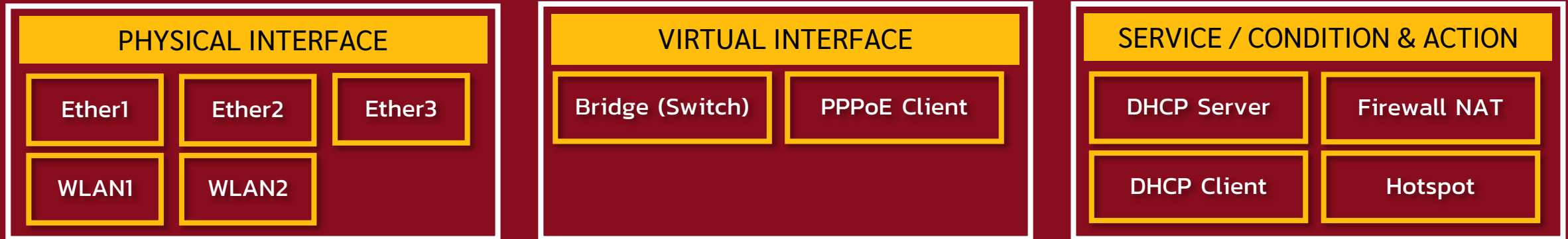
**Dual band
WIFI Extender**

How Mikrotik Work – WISP Mode Access Point

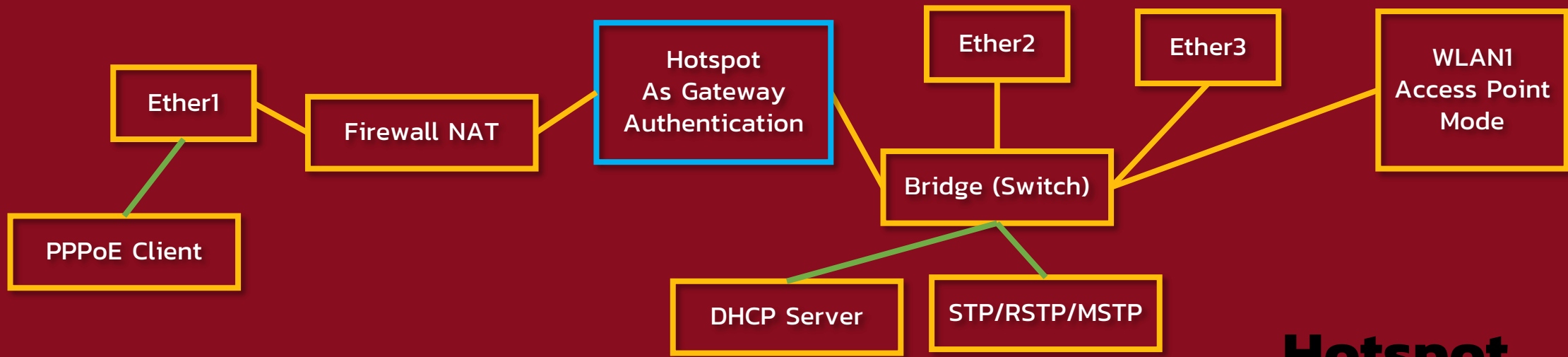
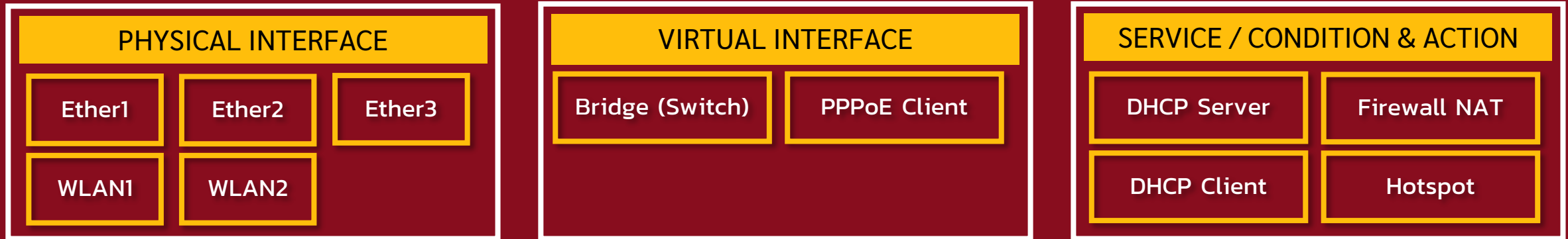


**WISP Mode
Access Point**

How Mikrotik Work – Router

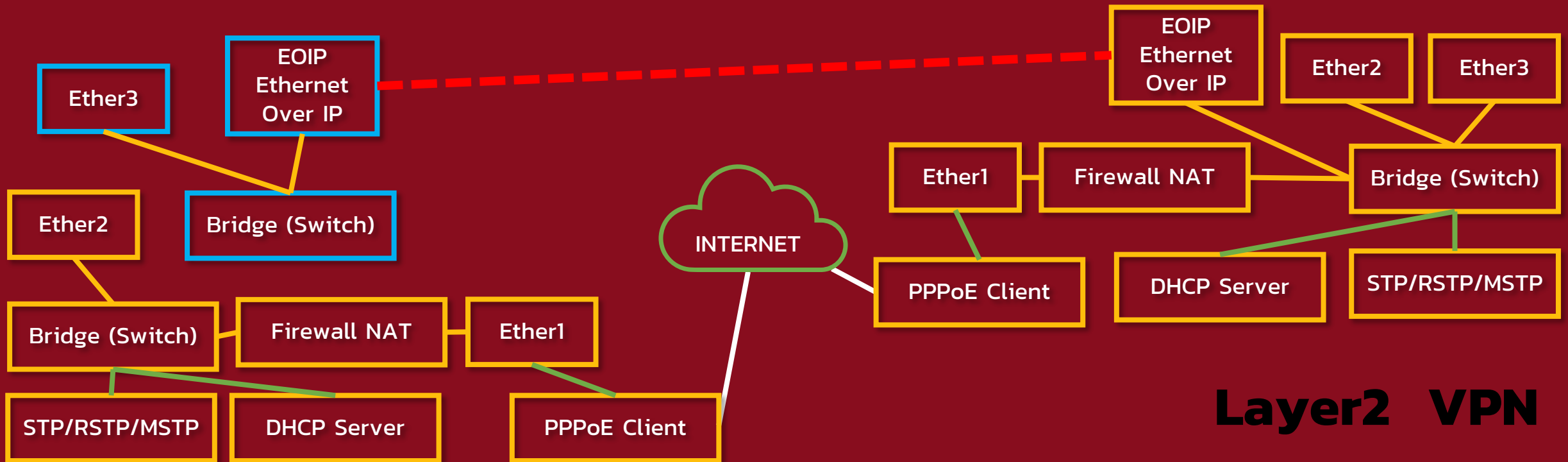
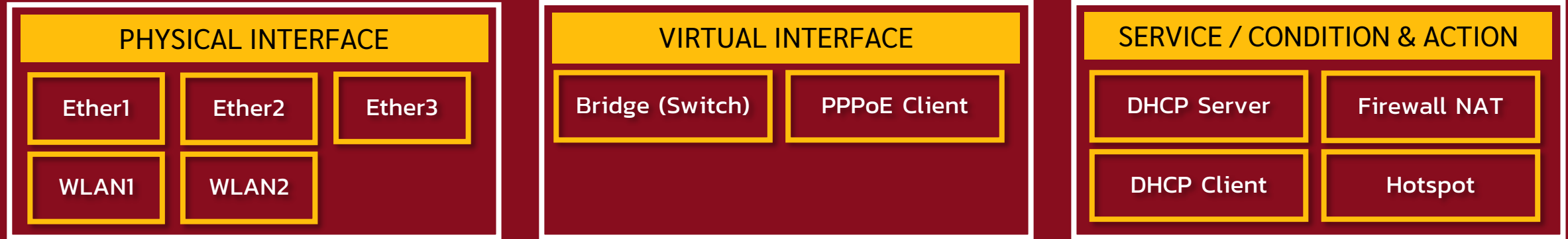


How Mikrotik Work – Hotspot

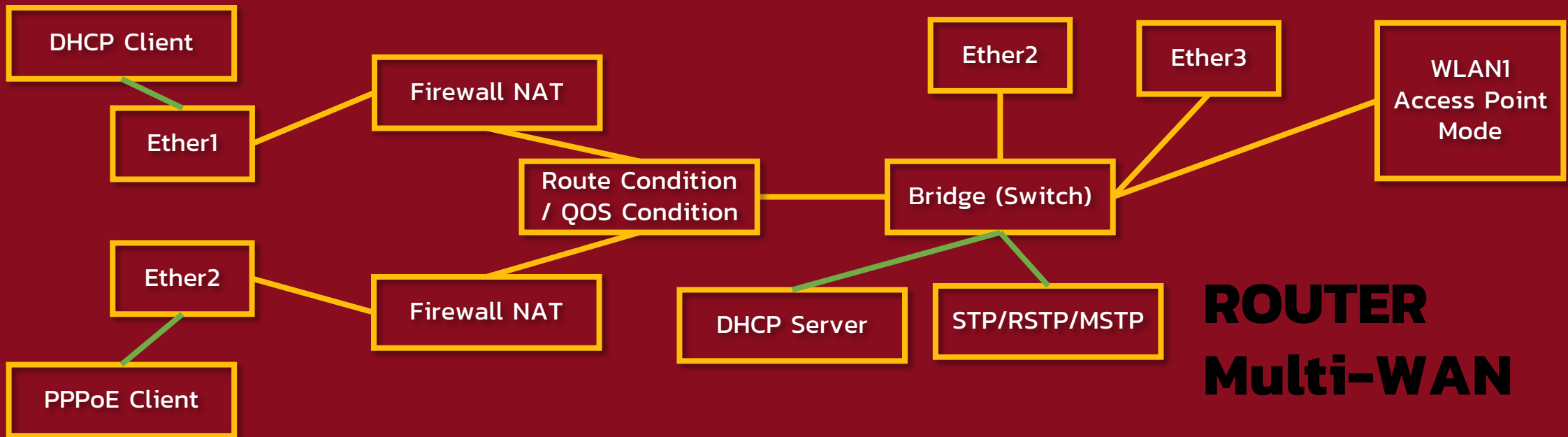
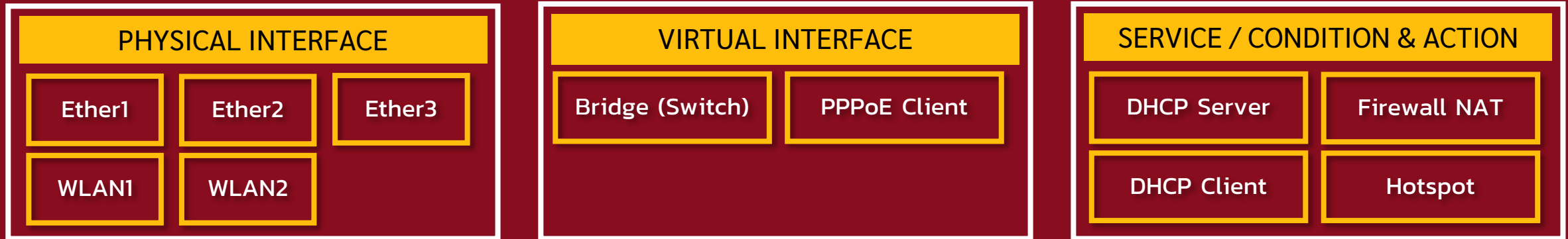


Hotspot

How Mikrotik Work – Layer 2 VPN



How Mikrotik Work – Multi WAN Router



How Mikrotik Work – Over 100 Route Condition

New Mangle Rule

General Advanced Extra Action Statistics

Chain: prerouting

Src. Address:

Dst. Address:

Protocol:

Src. Port:

Dst. Port:

Any. Port:

In. Interface:

Out. Interface:

In. Interface List:

Out. Interface List:

Packet Mark:

Connection Mark:

Routing Mark:

Routing Table:

Connection Type:

Connection State:

Connection NAT State:

New Mangle Rule

General Advanced Extra Action Statistics

Src. Address List:

Dst. Address List:

Layer7 Protocol:

Content:

Connection Bytes:

Connection Rate:

Per Connection Classifier:

Src. MAC Address:

Out. Bridge Port:

In. Bridge Port:

In. Bridge Port List:

Out. Bridge Port List:

IPsec Policy:

TLS Host:

Ingress Priority:

Priority:

DSCP (TOS):

TCP MSS:

Packet Size:

Random:

TCP Flags:

ICMP Options:

IPv4 Options:

TTL:

OK

Cancel

Apply

Disable

Comment

Copy

Remove

Reset Counters

Reset All Counters

enabled

New Mangle Rule

General Advanced Extra Action Statistics

Nth:

Connection Limit

Src. Address Type:

Dst. Address Type:

Hotspot:

IP Fragment:

Limit

Dst. Limit

Time

PSD

OK

Cancel

Apply

Disable

Comment

Copy

Remove

Reset Counters

Reset All Counters

enabled

New Traffic Monitor

Name: tmon1

Interface: Wan1

Traffic: transmitted

Trigger: above

Threshold: 1M bits/s

On Event:

enabled

OK

Cancel

Apply

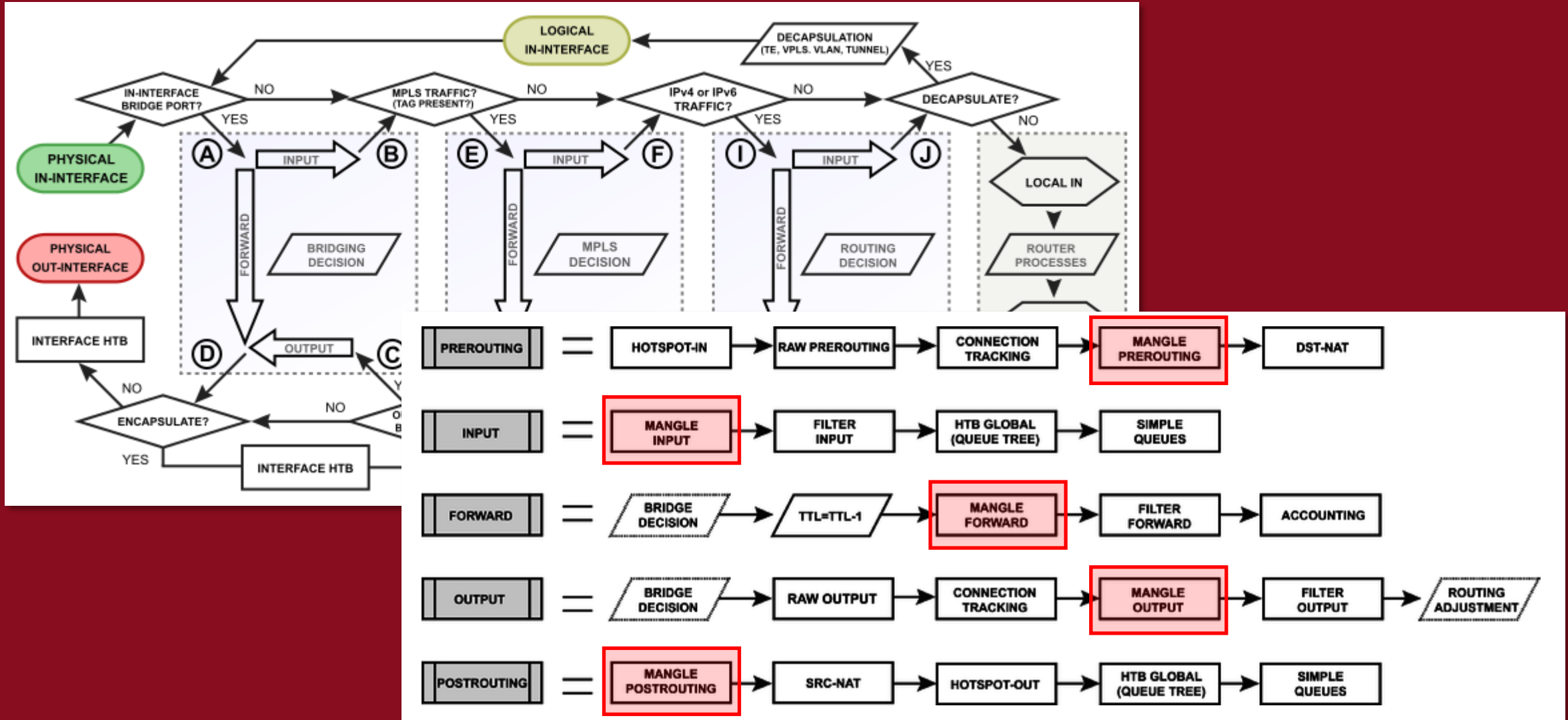
Disable

Comment

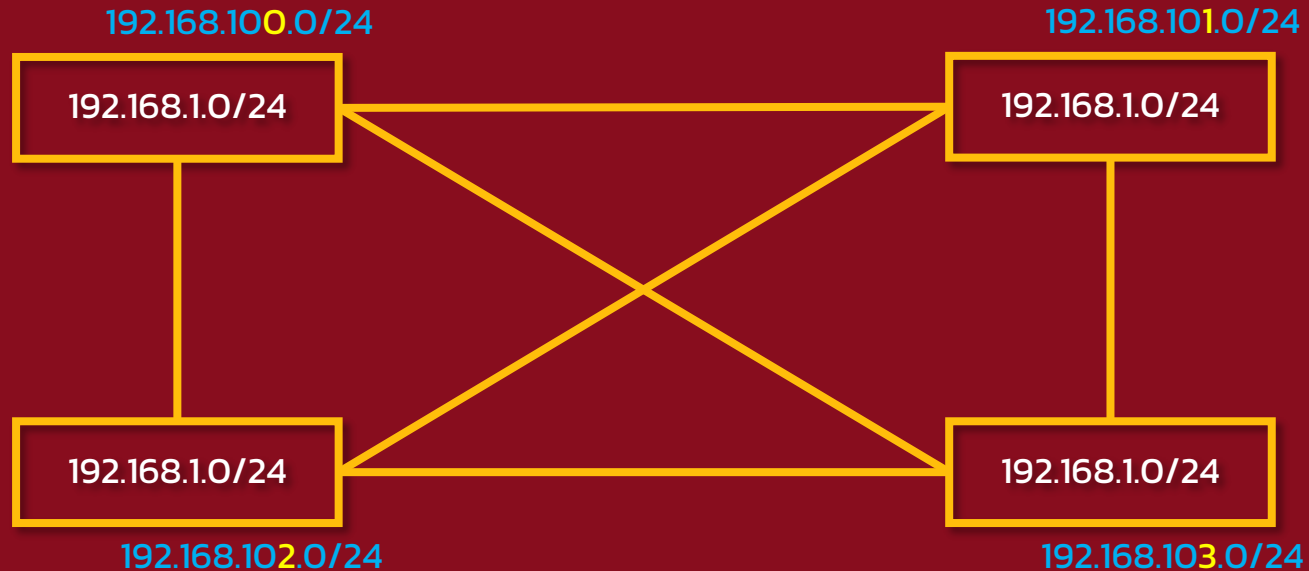
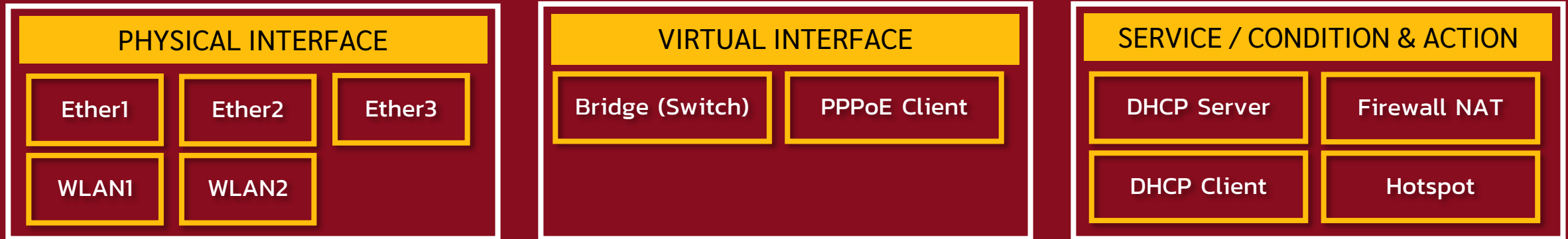
Copy

Remove

How Mikrotik Work – Everywhere in workflow



How Mikrotik Work – Same IP VPN



How Mikrotik Work – Flexible by Variable

The image shows the Mikrotik WinBox Firewall configuration interface. The main window is titled "Firewall" and has tabs for "Filter Rules", "NAT", "Mangle", "Raw", "Service Ports", "Connections", "Address Lists", and "Layer7 Protocols". The "NAT" tab is selected. Below the tabs are several icons for adding, deleting, and filtering rules. A table lists existing NAT rules:

Name	Address	Time
LAN	192.168.28.0/24	
PPPoE	172.16.1.0/24	
VPN	192.168.17.0/24	
VPN	172.16.177.0/24	

Overlaid on the main window is the "New NAT Rule" dialog box. It has tabs for "General", "Advanced", "Extra", "Action", and "Statistics". The "General" tab is active, showing "Src. Address List:" with two dropdown menus, both set to "LAN". On the right side of the dialog are buttons for "OK", "Cancel", "Apply", "Disable", "Comment", and "Copy".

Another dialog box, "Interface List", is also overlaid. It has tabs for "Interface", "Interface List", "Ethernets", "EoIP Tunnel", and "IP Tunnel". The "Interface List" tab is active, showing a table of interface lists:

List	Interface
NATInterface	Wan1
WANInterface	Wan1

How Mikrotik Work – Components

PHYSICAL INTERFACE

Ethernet	SFP+	QSFP+	USB
WLAN 2.4/5GHz	LTE	GPS	SERIAL
WLAN 60GHz	SFP28	QSFP28	PoE

VIRTUAL INTERFACE

Bridge (Switch)	PPPoE Client	WireGuard	Layer 3 Switch
VLAN	Ethernet over IP (EOIP)	VXLAN	PPPoE Server
Open VPN	ZeroTier	VRRP	WIFI Mesh

SERVICE / CONDITION & ACTION

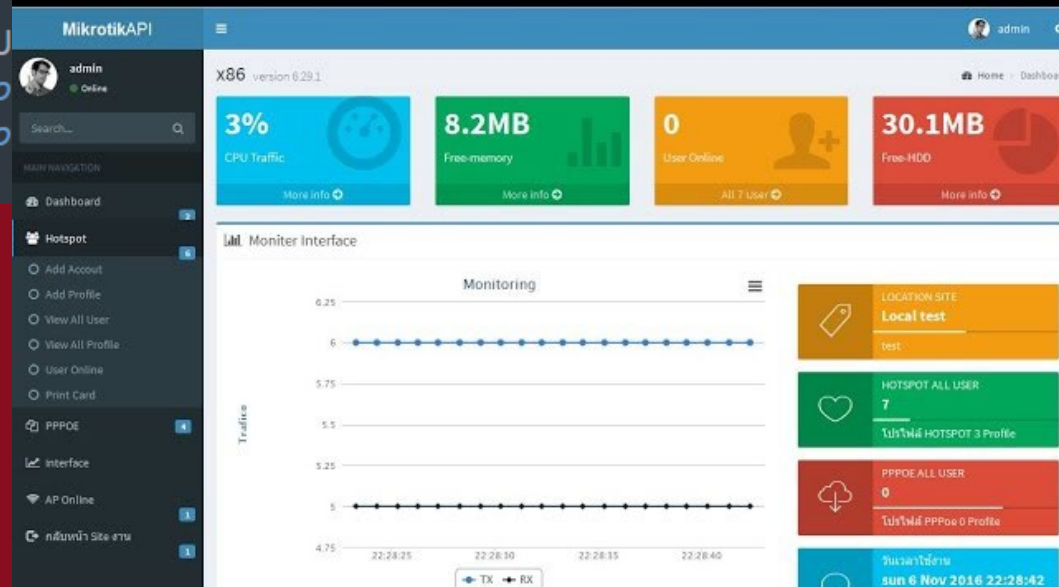
DHCP Server/Client	Firewall NAT	QOS	BGP	OSPF	RIP	Monitoring (SNMP)
Logs	Hotspot	RADIUS	MPLS	VPLS	Traffic Eng.	Traffic Generator
STP/RSTP/MSTP	Route Condition	AP Controller	IPv4	IPv6	UPS	NTP Client/Server

How Mikrotik Work – More

```
:local InterfaceName "wan_interface"  
:local DDNSusername "ddnsusername"  
:local DDNSpassword "ddnspassword"  
:local DDNShostname "host.dyndns.org"
```

```
# Looking  
:local Wan  
:lo  
:se
```

```
# U  
/to  
:lo
```



- เพิ่มศักยภาพ
- ตัดสินใจอย่าง Dynamic

ในการ Config ในจำนวนมากๆ เช่น port ของ
tch / VLAN



```
KKK  
KKK  
II KKK KKK  
II KKKKK  
II KKK KKK  
II KKK KKK
```

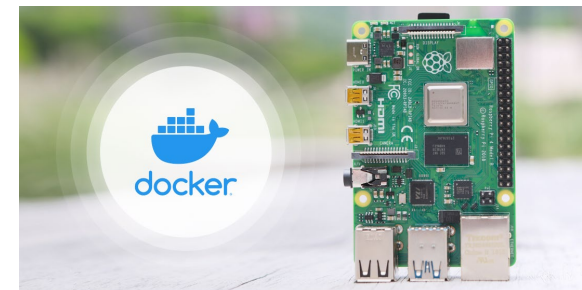
tik.com/

- Billing
- External Authentication (Social Check-in)
- ฯลฯ

FORTINET®



 **MIKROTIK**



Small Business with less than 100 Users

Fortigate Application Control + DNS Filter

The screenshot displays the FortiGate 401E management console interface. The top navigation bar shows the device name 'FortiGate 401E FGT_A' and the user 'admin'. The left sidebar contains various system management options, with 'Log & Report' selected. The main area shows a table of logs for Application Control, with one entry highlighted in yellow. A 'Log Details' panel is open on the right, providing a breakdown of the selected log entry.

Date/Time	Source	Destination	Application Name	Action	Application User	Application Details
2019/06/20 16:02:25	10.1.100.58	172.217.14.238 (sb-ssl.google.com)	YouTube	pass		
2019/06/20 16:02:25	10.1.100.58	172.217.14.238 (sb-ssl.google.com)	YouTube	pass		
2019/06/20 16:02:14	10.1.100.58	172.217.14.238 (sb-ssl.google.com)	YouTube	pass		
2019/06/20 16:02:14	10.1.100.58	172.217.14.238 (sb-ssl.google.com)	YouTube	pass		
2019/06/20 16:02:12	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass	fsajenkins@gmail.com	Video Play: Everlasting God (Chris Tomlin)
2019/06/20 16:02:12	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass		Video Play
2019/06/20 16:02:12	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube	pass		
2019/06/20 16:01:56	10.1.100.58	172.217.14.238 (sb-ssl.google.com)	YouTube	pass		
2019/06/20 16:01:56	10.1.100.58	172.217.14.238 (sb-ssl.google.com)	YouTube	pass		
2019/06/20 16:01:54	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass	fsajenkins@gmail.com	Video Play: Everlasting God (Chris Tomlin)
2019/06/20 16:01:54	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass		Video Play
2019/06/20 16:01:54	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube	pass		
2019/06/20 16:01:50	10.1.100.58	172.217.14.238 (sb-ssl.google.com)	YouTube	pass		
2019/06/20 16:01:50	10.1.100.58	172.217.14.238 (sb-ssl.google.com)	YouTube	pass		
2019/06/20 16:01:48	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass	fsajenkins@gmail.com	Video Play: Everlasting God (Chris Tomlin)
2019/06/20 16:01:48	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass		Video Play
2019/06/20 16:01:39	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass	fsajenkins@gmail.com	Video Play: Everlasting God (Chris Tomlin)
2019/06/20 16:01:39	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass		Video Play
2019/06/20 16:01:39	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube	pass		
2019/06/20 16:01:34	10.1.100.58	172.217.3.206 (music.youtube.com)	YouTube	pass		
2019/06/20 16:01:34	10.1.100.58	172.217.3.206 (music.youtube.com)	YouTube	pass		
2019/06/20 16:01:34	10.1.100.58	172.217.3.206 (music.youtube.com)	HTTPS.BROWSER	pass		
2019/06/20 16:01:26	10.1.100.58	162.125.1.1 (www.dropbox.com)	Dropbox	pass		
2019/06/20 16:01:26	10.1.100.58	172.217.3.206 (music.youtube.com)	YouTube	pass		
2019/06/20 16:01:26	10.1.100.58	172.217.3.206 (music.youtube.com)	YouTube	pass		
2019/06/20 16:01:26	10.1.100.58	172.217.3.206 (music.youtube.com)	HTTPS.BROWSER	pass		
2019/06/20 16:01:25	10.1.100.90	208.91.114.149 (cbbs2.fortiguard.com)	SSL_SSLV3	pass		SSLV3
2019/06/20 16:01:25	10.1.100.90	208.91.114.149 (cbbs2.fortiguard.com)	SSL	pass		
2019/06/20 16:01:25	10.1.100.90	208.91.114.149 (cbbs2.fortiguard.com)	HTTPS.BROWSER	pass		
2019/06/20 16:01:23	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass	fsajenkins@gmail.com	Video Play: Everlasting God (Chris Tomlin)
2019/06/20 16:01:23	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube_Video.Play	pass		Video Play
2019/06/20 16:01:23	10.1.100.58	209.52.146.236 (r1---sn-uxa0n-t8gr.googlevideo.com)	YouTube	pass		

Log Details

- General**
 - Date: 2019/06/20
 - Time: 16:02:12
 - Session ID: 1871
 - Virtual Domain: root
- Source**
 - IP: 10.1.100.58
 - Source Port: 59786
 - Source Interface: To_Vlan20 (port2)
 - User:
- Destination**
 - IP: 209.52.146.236
 - Port: 443
 - Destination Interface: To_Vlan30 (port1)
 - Hostname: r1---sn-uxa0n-t8gr.googlevideo.com
 - URL: r1---sn-uxa0n-t8gr.googlevideo.com/videoplayback?expire=1561093219&ei=AxAMXciAllGb...AFWxtiaisdX05lxMa-GfPPwFRE9-rzXaDrzrs-yybjY6;itag=251&source=youtube&requi...uxa0n-t8gr%2Csn-qxoedn7z&ms=au%2Cconr&mv=m&pl=2...
- Application Control**
 - Sensor: g-Clone of g-default
 - Application Name: YouTube_Video.Play
 - ID: 38569
 - Category: Video/Audio
 - Risk: [Progress bar]
 - Protocol: 6
 - Service: HTTPS
 - Application User: fsajenkins@gmail.com
 - Cloud Action: others
 - Message Action: Video/Audio: YouTube_Video.Play,
- Data**
 - File Name: Everlasting God (Chris Tomlin)
 - File Size: 527439
- Action**
 - Action: pass
 - Policy: 2
- Security**
 - Level: [Progress bar]
- Cellular**
 - Service: HTTPS
- Other**

Mikrotik + Raspberry Pi + Adguard + Blocklist



← DNS Reply

Allow-List

→ DNS Query



Block-List

Reply as 0.0.0.0

Manual DNS Blocklist

DNS blocklists

AdGuard Home will block domains matching the blocklists.

AdGuard Home understands basic adblock rules and hosts files syntax.

Enabled	Name	List URL	Rules count	Last time updated	Actions
<input checked="" type="checkbox"/>	AdGuard DNS filter	https://adguardteam.github.io/Ad...	45,854	May 21, 2022, 21:46	✎ 🗑
<input checked="" type="checkbox"/>	AdAway Default Blocklist	https://adaway.org/hosts.txt	7,040	May 21, 2022, 21:46	✎ 🗑
<input checked="" type="checkbox"/>	Dan Pollock's List	https://someonewhocares.org/ho...	10,379	May 21, 2022, 21:46	✎ 🗑
<input checked="" type="checkbox"/>	Game Console Adblock List	https://raw.githubusercontent.co...	11	May 21, 2022, 21:46	✎ 🗑
<input checked="" type="checkbox"/>	Perflyst and Dandelion Sprout's ...	https://raw.githubusercontent.co...	154	May 21, 2022, 21:46	✎ 🗑
<input checked="" type="checkbox"/>	OISD Blocklist Basic	https://abp.oisd.nl/basic/	55,971	May 21, 2022, 21:46	✎ 🗑
<input checked="" type="checkbox"/>	Peter Lowe's List	https://pgl.yoyo.org/adserver/se...	3,672	May 21, 2022, 21:46	✎ 🗑

Adguard Blocked Service

Blocked services

Allows to quickly block popular sites and services.

Block all

Unblock all

 9GAG



 Amazon



 CloudFlare



 Dailymotion



 Discord



 Disney+



 EBay



 Epic Games



 Facebook



 Hulu



 Imgur



 Instagram



 Mail.ru



 Netflix



 OK.ru



 Origin



 Pinterest



 QQ



Mikrotik + Raspberry Pi + Adguard + Blocklist

Block domains using filters and hosts files

You can setup blocking rules in the [Filters](#) settings.

Filters update interval

24 hours

Use AdGuard browsing security web service

AdGuard Home will check if the domain is blocked by the browsing security web service. It will use privacy-friendly lookup API to perform the check: only a short prefix of the domain name SHA256 hash is sent to the server.






Use AdGuard parental control web service































AdGuard Home will check if domain contains adult materials. It uses the same privacy-friendly API as the browsing security web service.

Use Safe Search

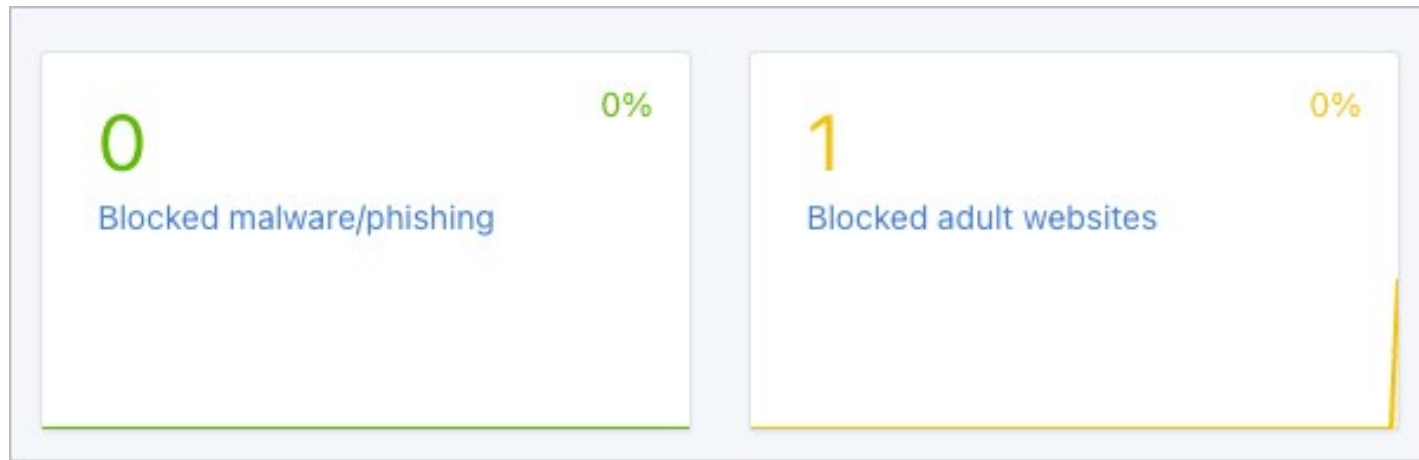
AdGuard Home will enforce safe search in the following search engines:
Google, YouTube, Bing, DuckDuckGo, Yandex, Pixabay.

Mikrotik + Raspberry Pi + Adguard + Blocklist

 Reddit	<input type="checkbox"/>
 Spotify	<input type="checkbox"/>
 TikTok	<input checked="" type="checkbox"/>
 Twitter	<input type="checkbox"/>
 VK.com	<input type="checkbox"/>

09:40:21 5/22/2022	 push-rtmp-l1-gcp01.tiktokcdn.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.
09:40:21 5/22/2022	 pull-hls-f77-gcp01.tiktokcdn.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.
09:40:21 5/22/2022	 pull-cmaf-l16-va01.tiktokcdn.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.
09:40:21 5/22/2022	 pull-f5-tt01.fcdn.us.tiktokv.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.
09:40:21 5/22/2022	 pull-hls-f58-sg01.tiktokcdn.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.
09:40:21 5/22/2022	 pull-lls-l11-sg01.tiktokcdn.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.
09:40:21 5/22/2022	 pull-w5-gcp01.tiktokcdn.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.
09:40:20 5/22/2022	 pull-flv-l1-va01.tiktokcdn.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.
09:40:20 5/22/2022	 pull-a16-tt01.fcdn.us.tiktokv.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.
09:40:20 5/22/2022	 pull-f5-gcp01.tiktokcdn.com Type: A, Plain DNS	 Blocked service TikTok	 192.168.

Safe Search ??



This site can't be reached

The webpage at <https://pornhub.com/> might be temporarily down or it may have moved permanently to a new web address.

ERR_CERT_COMMON_NAME_INVALID

Still Need to Manual Monitor!!!

Query Log



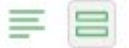
▼ All queries

Time

Request

Response

Client



09:46:18
5/22/2022



www.cracka2zsoft.com
Type: A, Plain DNS



Processed
471 ms



192.168.60.36

09:46:18
5/22/2022



www.cracka2zsoft.com
Type: A, Plain DNS



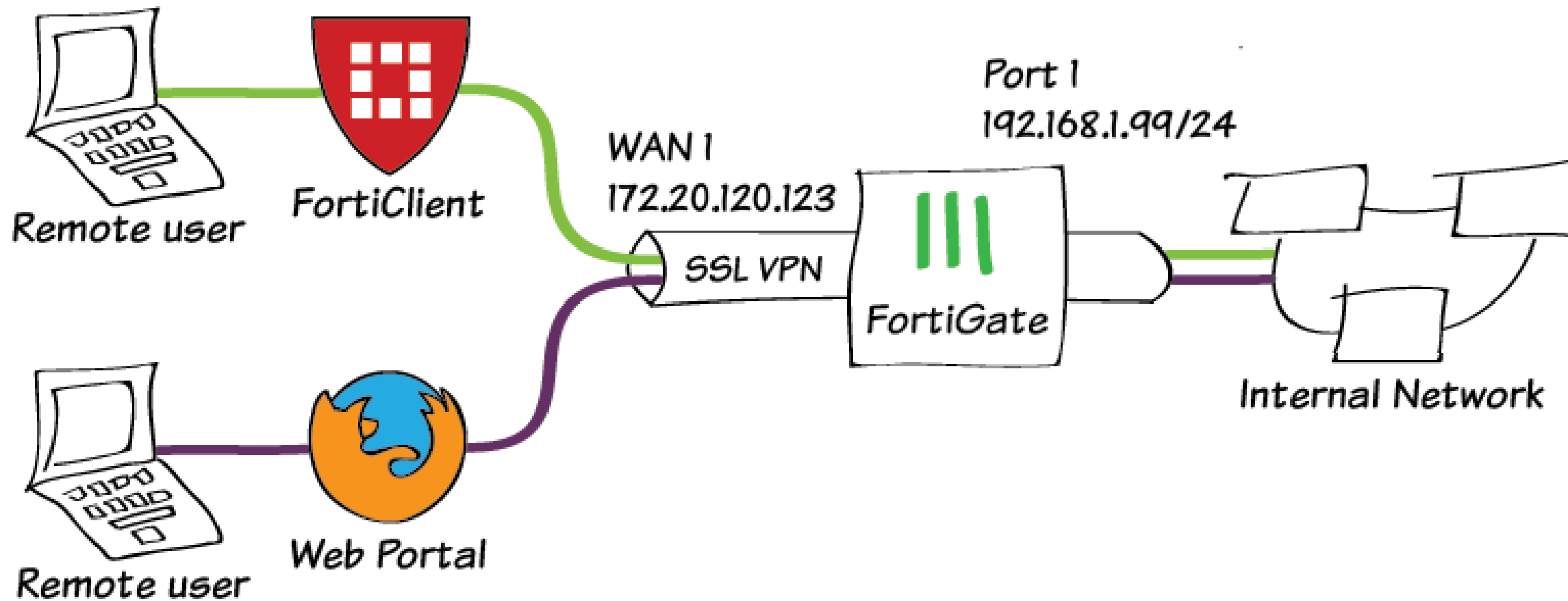
Processed
151 ms



192.168.60.36

Loading...

Fortigate SSL-VPN for Remote Access



Mikrotik for Remote Access

- Multiple VPN Technology Support (PPTP / L2TP with IPSec / SSTP / OpenVPN / IPSec IKEv2 / Wireguard / Zerotier)
- Port Forwarding

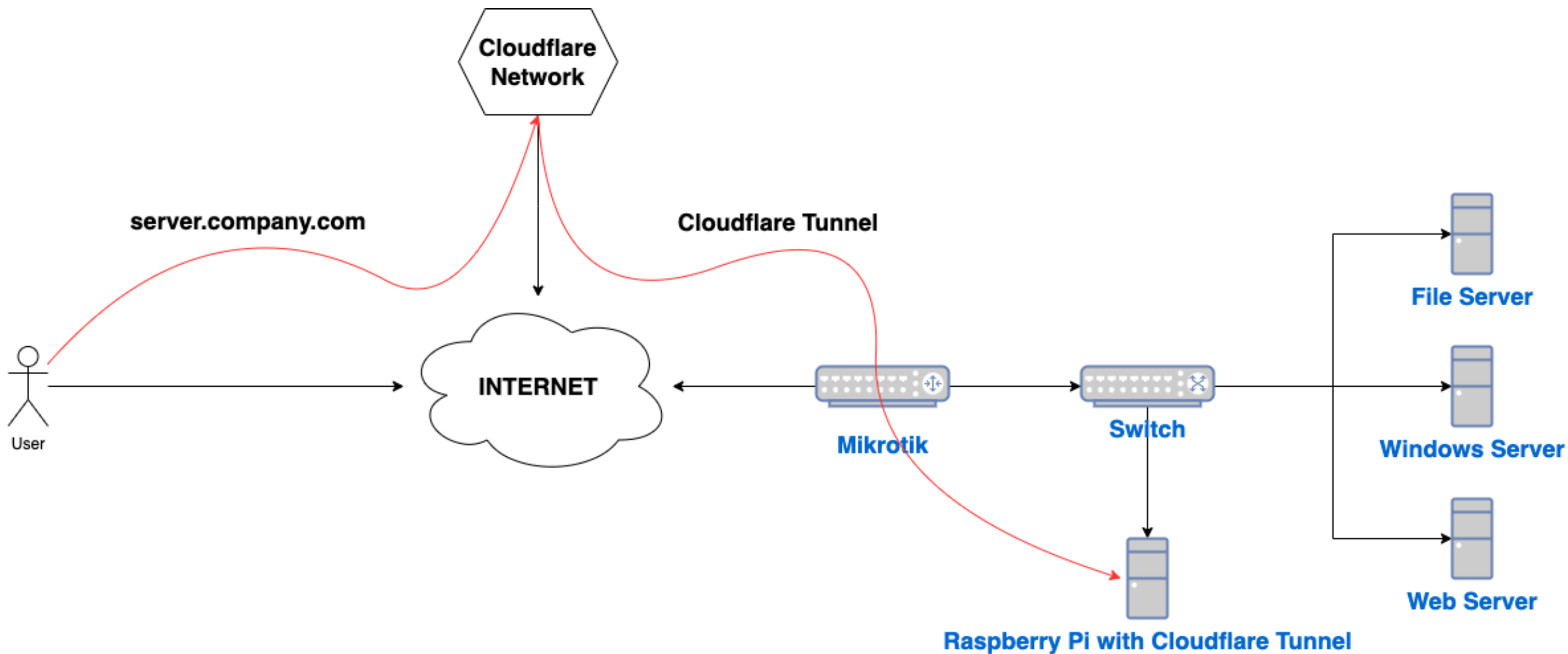


Problem with Port Forwarding

- Require Public IP Address
- WAN IP Address can be exposed for attack
- Remoted Host can be attacked (RDP , VNC , SSH)

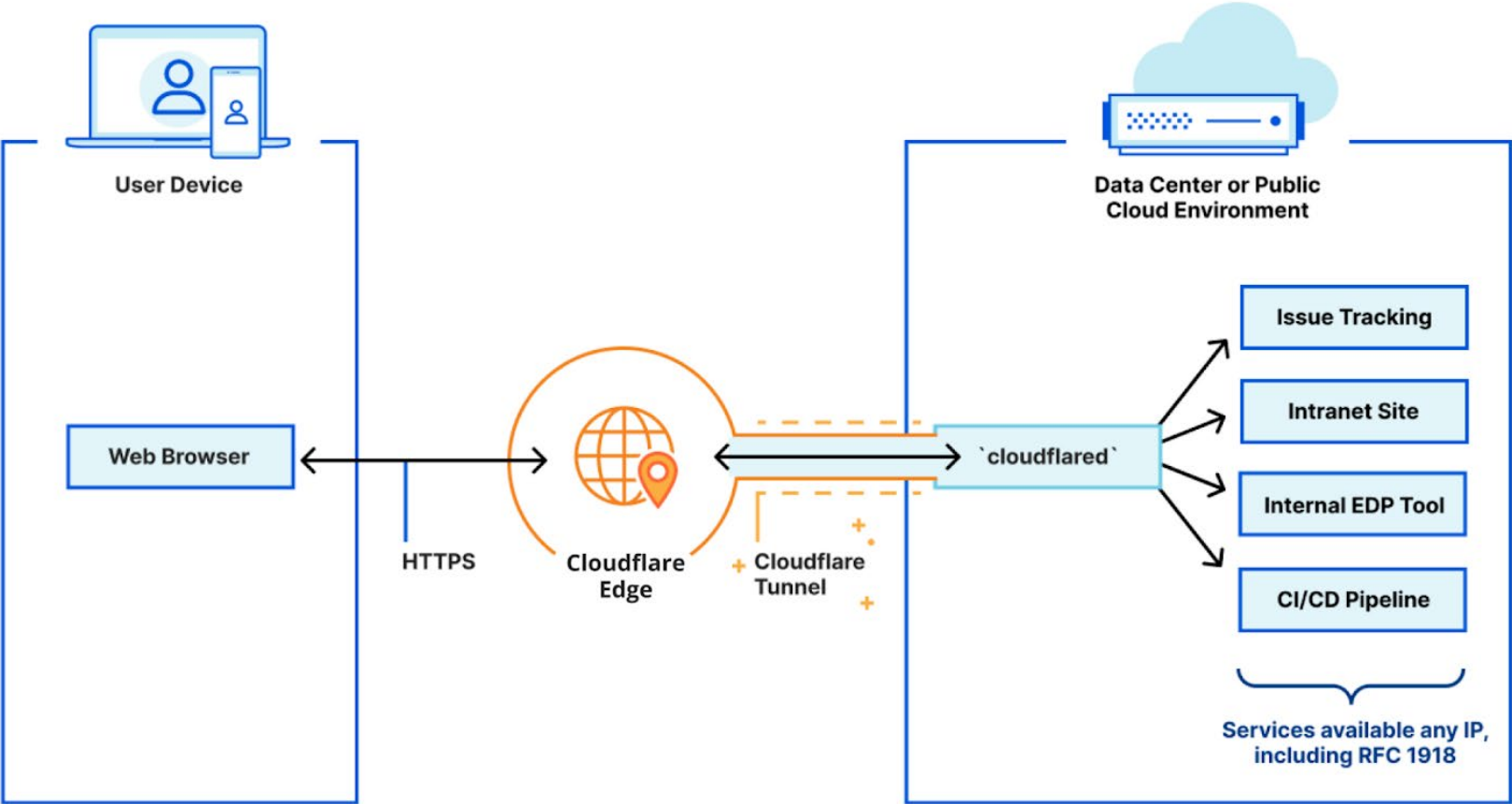


Secure Access with Cloudflare tunnel



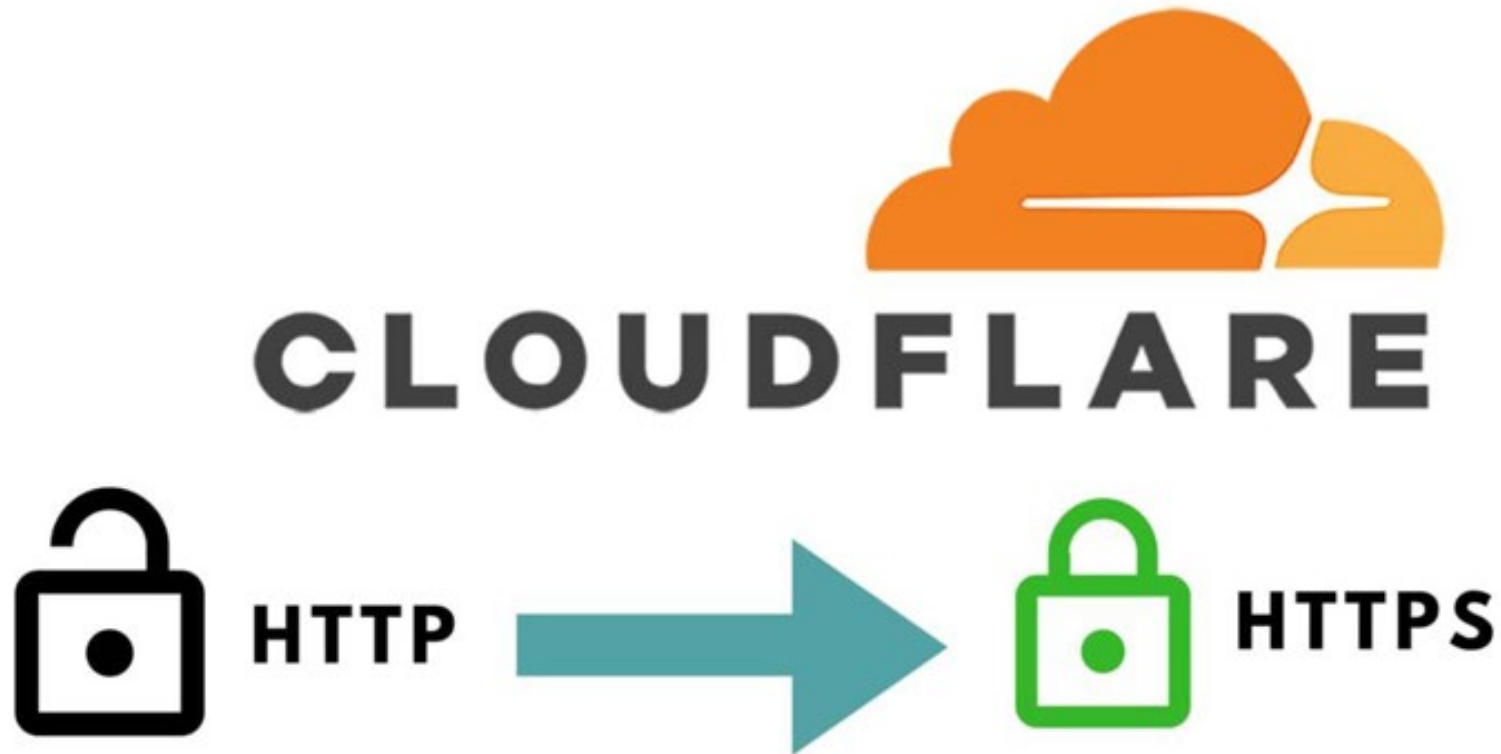
Advantage of Using Cloudflare Tunnel

No Public IP Required



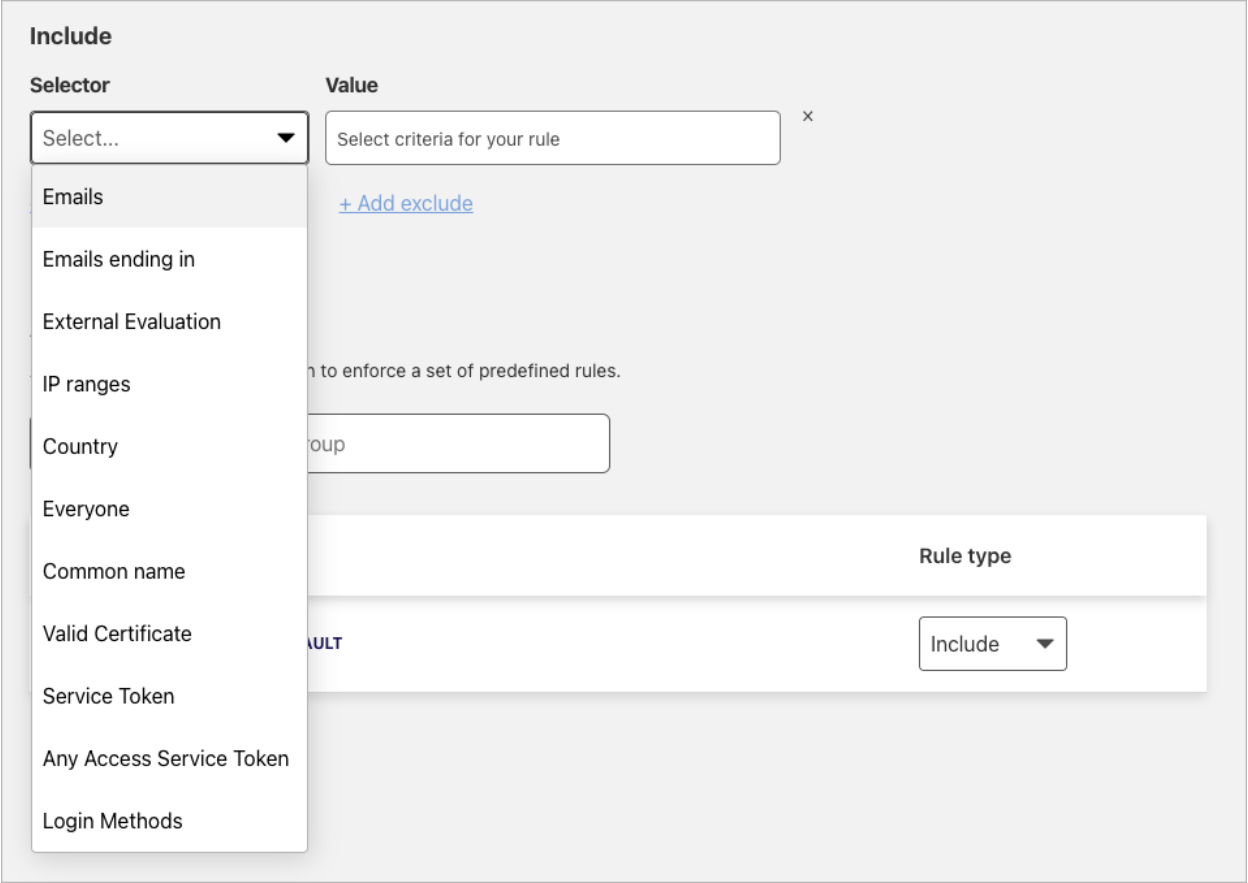
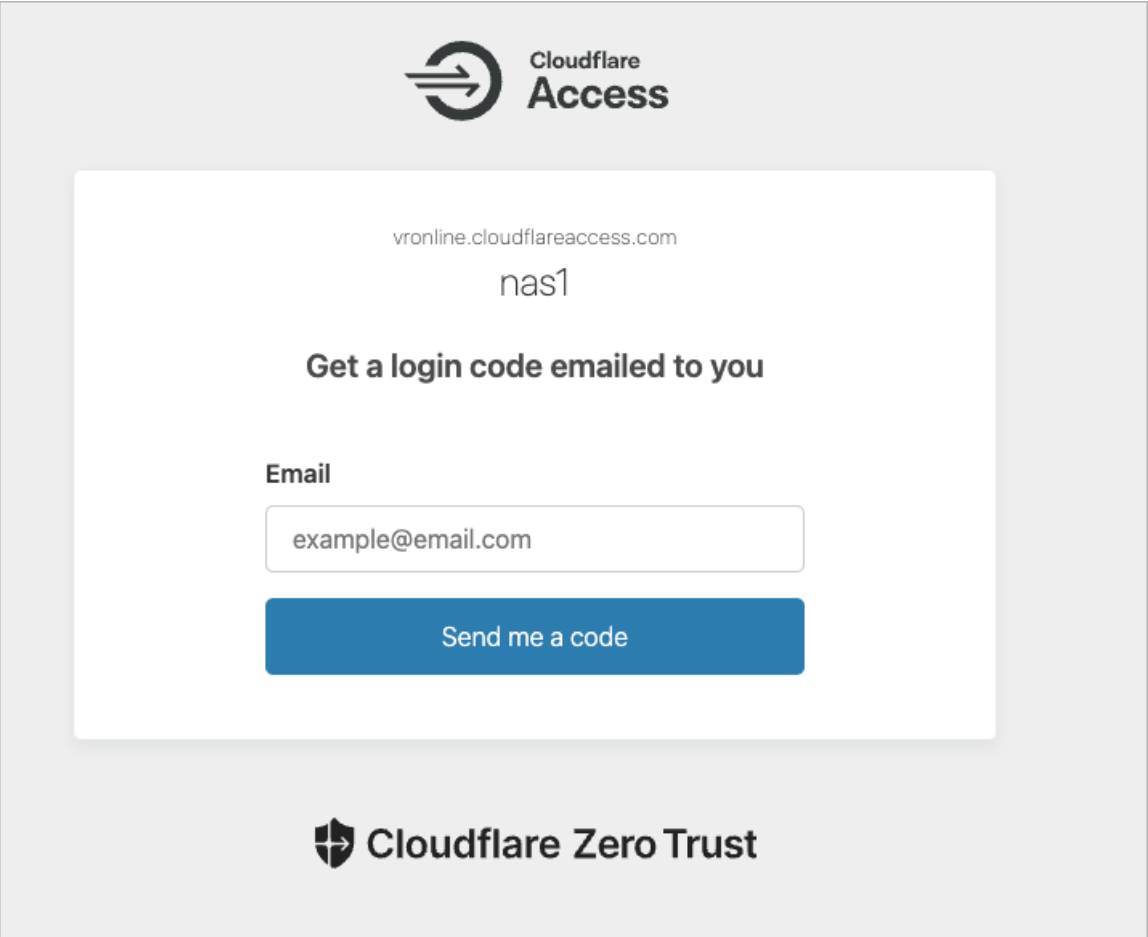
Advantage of Using Cloudflare Tunnel

Free SSL/TLS for your domain



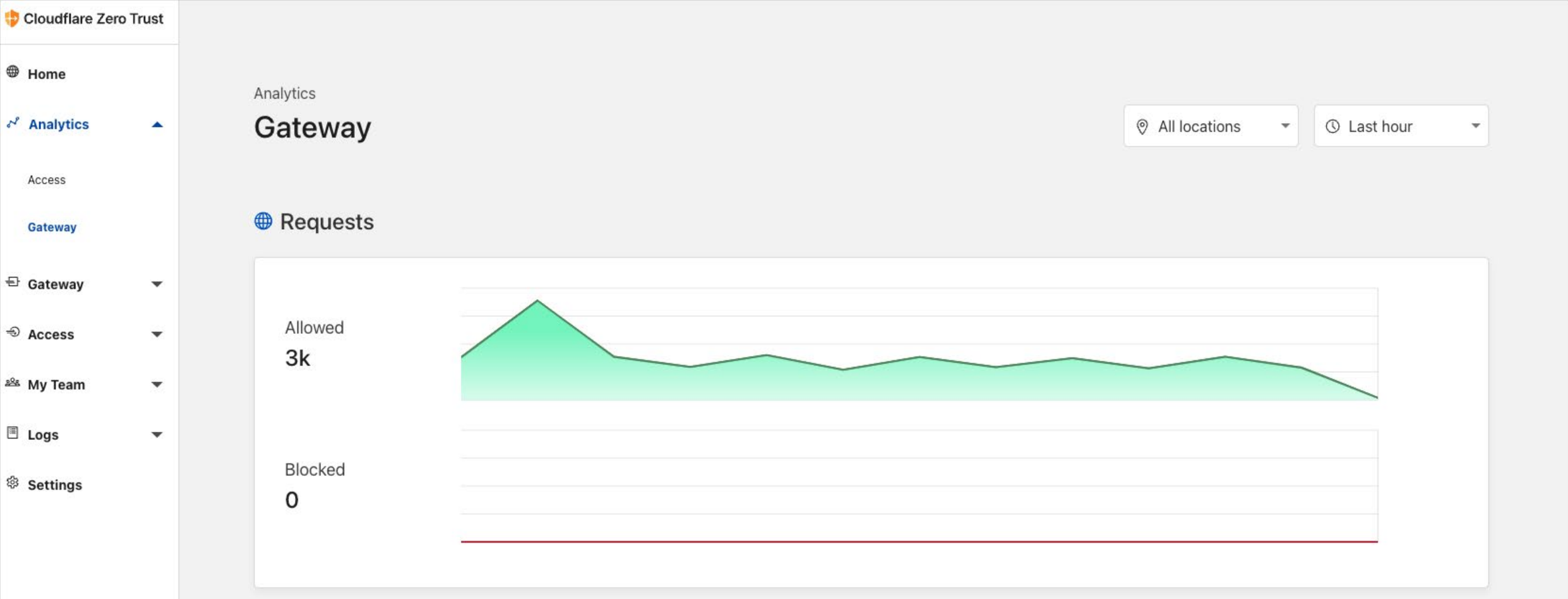
Advantage of Using Cloudflare Tunnel


Additional Login Method



Advantage of Using Cloudflare Tunnel

More with Cloudflare Zero Trust






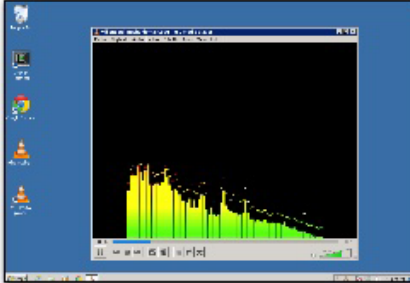
APACHE GUACAMOLE

Guacamole 0.9.4 https://[redacted]#/#/ Logout

RECENT CONNECTIONS



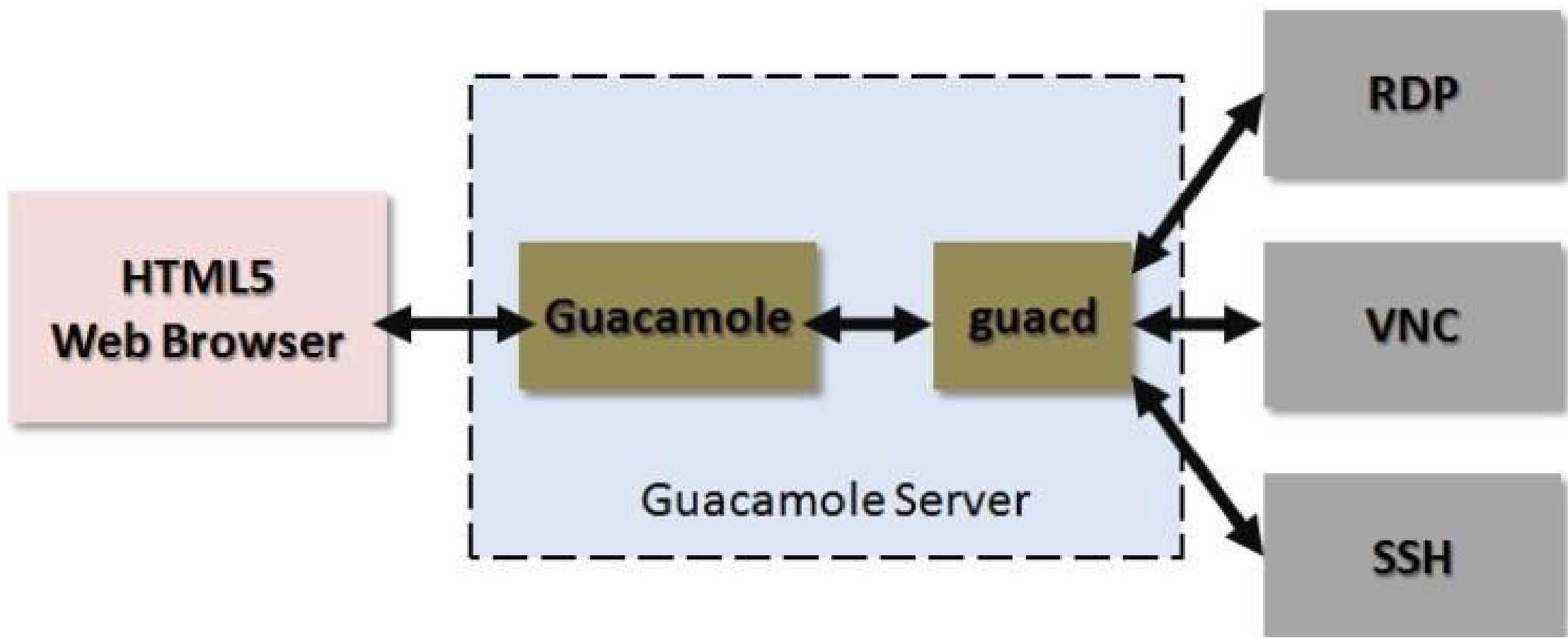
Linux Desktop



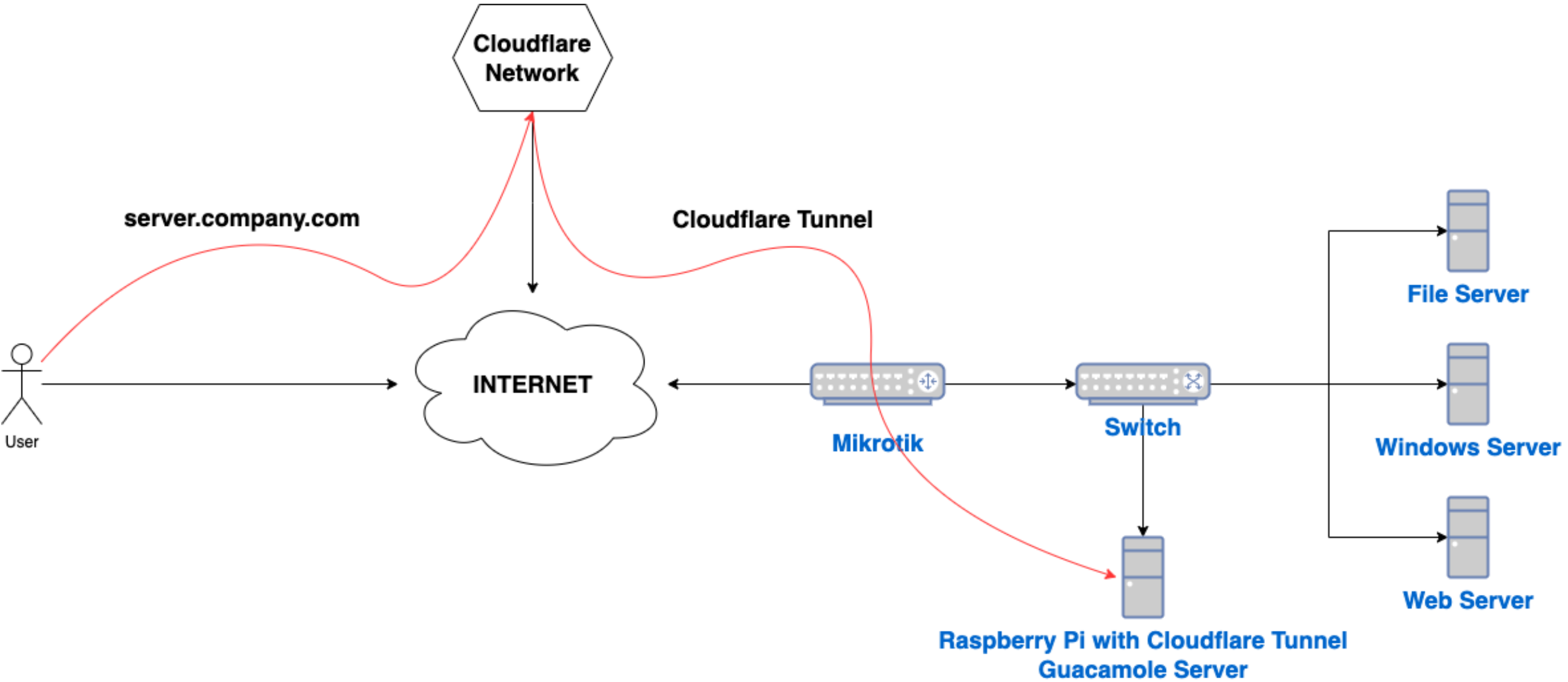
Windows Desktop

ALL CONNECTIONS

- Linux Desktop
- Linux Terminal
- Windows Desktop



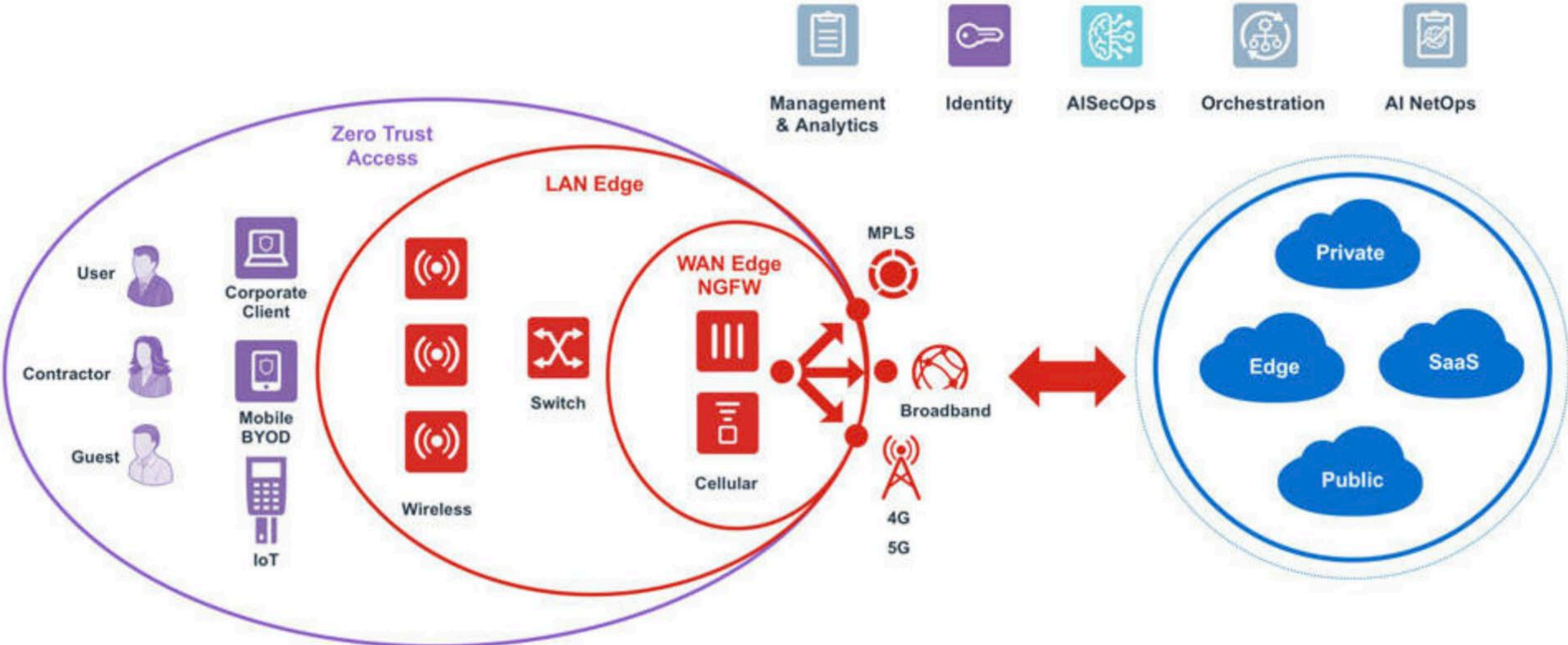
Raspberry Pi + Cloudflare Tunnel + Guacamole = SSL-VPN



Network Access Control (NAC)

FortiNAC Use Cases

Branch have grown in complexity with more devices, including headless IoT devices, getting connected to the network-without a corresponding increase in staff. To maintain visibility, control, and responsiveness in Branch Offices, FortiNAC is part of the Fortinet's Secure SD-Branch Solution. Learn more [here](#).



Mikrotik RouterOS7 – User Manager

User Manager											
Sessions	Routers	Users	User Groups	Profiles	User Profiles	Limitations	Profile Limitations	Attributes	Payment		
Filter	Close Session	Settings	Generate Report								
User	Acct Session ID	NAS IP Address	Calling Station ID	User Address	Started	Ended	Terminate Ca...	Uptime			
2C:16:DB:A3:...	09001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 14:5...	Feb/12/2022 14:5...	User Request	00:02:52			
2C:16:DB:A3:...	0a001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 14:5...	Feb/12/2022 14:5...	User Request	00:00:36			
2C:16:DB:A3:...	95001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:3...	Feb/12/2022 15:4...	User Request	00:06:16			
2C:16:DB:A3:...	96001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:4...	Feb/12/2022 15:4...	User Request	00:00:36			
2C:16:DB:A3:...	97001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:4...	Feb/12/2022 15:5...	User Request	00:06:37			
2C:16:DB:A3:...	98001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:5...	Feb/12/2022 15:5...	User Request	00:01:59			
2C:16:DB:A3:...	99001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:5...	Feb/12/2022 15:5...	User Request	00:00:38			
2C:16:DB:A3:...	9a001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:5...	Feb/12/2022 15:5...	User Request	00:03:03			
2C:16:DB:A3:...	9b001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:5...	Feb/12/2022 15:5...	User Request	00:01:20			
2C:16:DB:A3:...	9c001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:5...	Feb/12/2022 16:2...	User Request	00:26:50			
2C:16:DB:A3:...	9d001086	127.0.0.1	2C-16-DB-A3-1B-FC		Mar/22/2022 17:2...	Mar/22/2022 17:2...	User Request	00:00:45			
2C:16:DB:A3:...	9e001086	127.0.0.1	2C-16-DB-A3-1B-FC		Mar/22/2022 17:2...	Mar/22/2022 17:2...	User Request	00:01:03			
2C:16:DB:A3:...	9f001086	127.0.0.1	2C-16-DB-A3-1B-FC		Mar/22/2022 17:2...	Mar/22/2022 17:2...	User Request	00:01:41			
2C:16:DB:A3:...	a0001086	127.0.0.1	2C-16-DB-A3-1B-FC		Mar/22/2022 17:3...	Mar/22/2022 17:3...	User Request	00:00:26			
ripmilla	08001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 14:5...	Feb/12/2022 14:5...	User Request	00:01:50			
ripmilla	11001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:0...	Feb/12/2022 15:0...	Um User Disa...	00:01:00			
ripmilla	8e001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:3...	Feb/12/2022 15:3...	User Request	00:00:19			
ripmilla	8f001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:3...	Feb/12/2022 15:3...	User Request	00:00:32			
ripmilla	90001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:3...	Feb/12/2022 15:3...	User Request	00:00:11			
ripmilla	91001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:3...	Feb/12/2022 15:3...	User Request	00:01:03			
ripmilla	92001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:3...	Feb/12/2022 15:3...	User Request	00:00:46			
ripmilla	93001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:3...	Feb/12/2022 15:3...	User Request	00:02:12			
ripmilla	94001086	127.0.0.1	2C-16-DB-A3-1B-FC		Feb/12/2022 15:3...	Feb/12/2022 15:3...	User Request	00:00:40			

User Manager - Features

- PAP, CHAP, MS-CHAP, MS-CHAPv2, EAP-TLS, EAP-TTLS and EAP-PEAP Support for Authentication
- Each user can see their account statistics and manage available profiles using WEB interface.
- Support Paypal Payment Gateway
- Support additional attributes if necessary

Mikrotik RouterOS7 – User Manager

User Manager							
Sessions Routers Users User Groups Profiles User Profiles Limitations Profile Limitations Attributes Payment							
+ - Filter							
Name	Vendor ID	Type ID	Value Type	Packet Types	Standard Name		
Delegated-IPv6-Prefix	0 (standa...	123	ip6 prefix	access accept	Delegated-IPv...		
Framed-IP-Address	0 (standa...	8	ip address	access accept	Framed-IP-Ad...		
Framed-IP-Netmask	0 (standa...	9	ip address	access accept	Framed-IP-Ne...		
Framed-IPv6-Address	0 (standa...	168	ip address	access accept	Framed-IPv6-...		
Framed-IPv6-Pool	0 (standa...	100	string	access accept	Framed-IPv6-...		
Framed-IPv6-Prefix	0 (standa...	97	ip6 prefix	access accept	Framed-IPv6-...		
Framed-Pool	0 (standa...	88	string	access accept	Framed-Pool		
Idle-Timeout	0 (standa...	28	uint32	access accept	Idle-Timeout		
Mikrotik-Address-List	14988 (Mi...	19	string	access accept	MT-Address-List		
Mikrotik-Advertise-Interval	14988 (Mi...	13	uint32	access accept	MT-Advertise-...		
Mikrotik-Advertise-URL	14988 (Mi...	12	string	access accept	MT-Advertise-...		
Mikrotik-DHCP-Option-Param-STR1	14988 (Mi...	24	string	access accept	MT-DHCP-Opti...		
Mikrotik-DHCP-Option-Param-STR2	14988 (Mi...	25	string	access accept	MT-DHCP-Opti...		
Mikrotik-DHCP-Option-Set	14988 (Mi...	23	string	access accept	MT-DHCP-Opti...		

Mikrotik RouterOS7 – dot1x

The screenshot displays the Mikrotik WinBox interface for configuring a Dot1X Server. The main window is titled "Dot1X Server <ether6>".

Dot1X Server Configuration:

- Interface: ether6
- Auth. Types: dot1x mac auth
- Accounting
- Interim Update: 00:01:00
- MAC Auth. Mode: mac as username and password
- RADIUS MAC Format: XX:XX:XX:XX:XX:XX
- Auth. Timeout: 30.00 s
- Retrans. Timeout: 30.00 s
- Reauth. Timeout: [empty]
- Reject VLAN ID: [empty]
- Guest VLAN ID: [empty]
- Server Fail VLAN ID: [empty]

Buttons: OK, Cancel, Apply, Enable, Comment, Copy, Remove.

Dot1X Client List:

Client	Server	State	Active
X			
ether6			

1 item (1 selected)


disabled

Mikrotik RouterOS7 – hotspot



Please log in to use the internet hotspot service

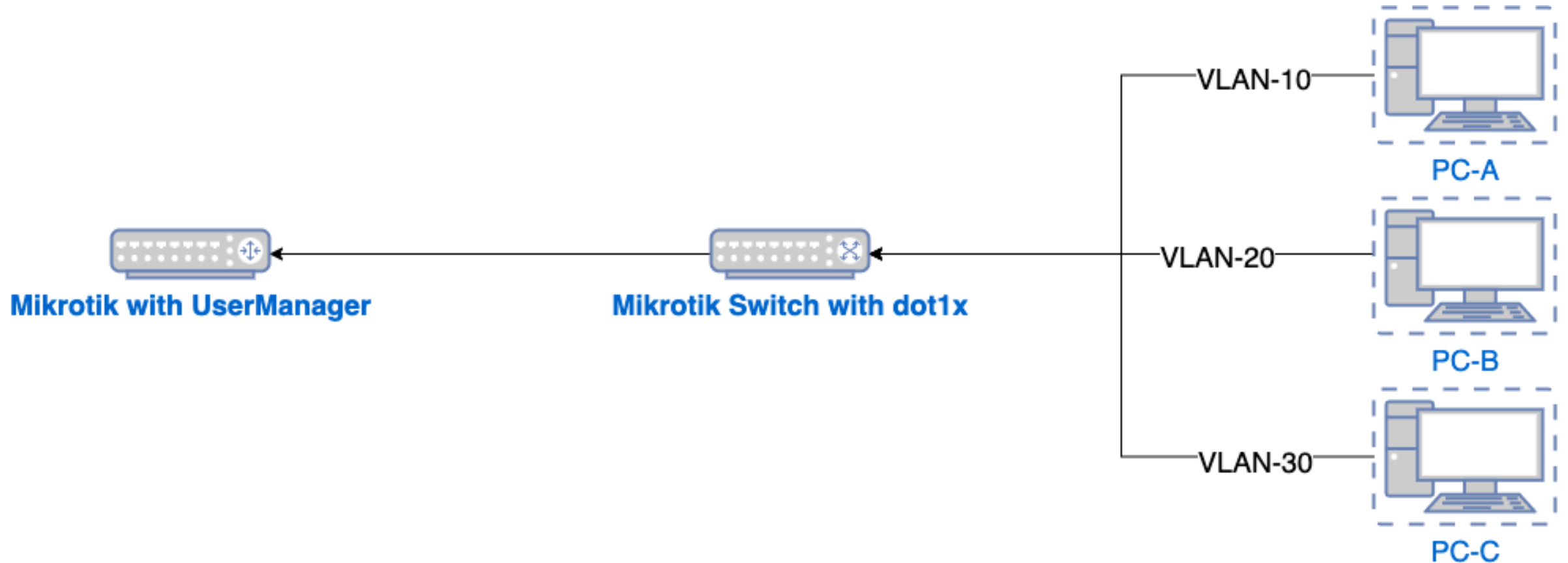
 Username

 Password

Connect

Powered by MikroTik RouterOS

User Manager + dot1x + Hotspot = NAC



But do remember .. Mikrotik is not UTM Anyway...

FORTINET®



 **MIKROTIK**





Question ?