

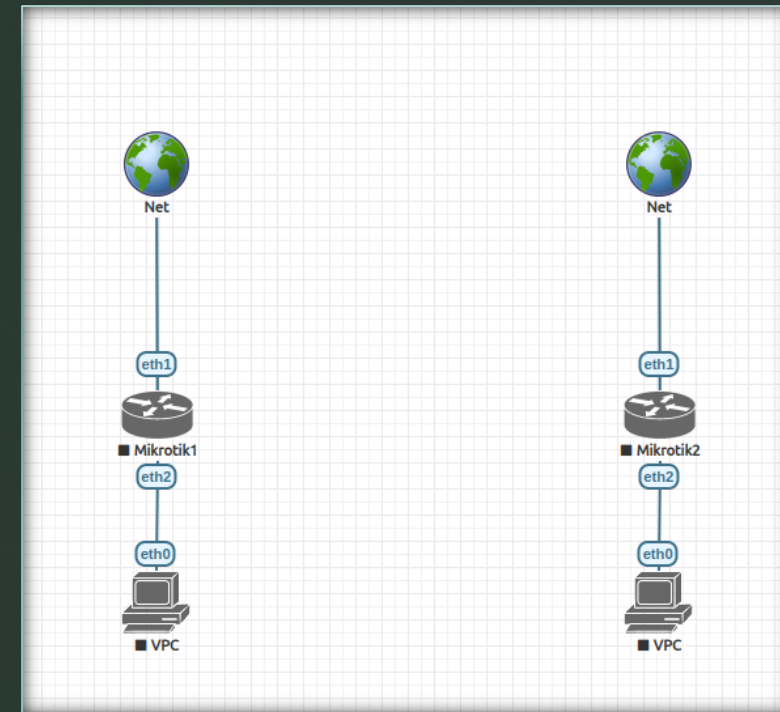
Laboratoare Retelistica



Configurarea tuntelului EoIP

Topologie

- Pentru acest laborator vom folosi o topologie simplă în care avem două zone remote și pe care vrem să le unim prin protocolul EoIP



Configurare MikroTik1

- Acesta va actiona ca gateway atat pentru retea locala cat si pentru cea de la distanta.
- Asa ca trebuie sa setam un server DHCP si nat-ul pe acest router.
- In primul rand facem un bridge unde vom aduce interfetele routerului si pe viitor interfata de EoIP
- In Interfaces -> EoIP adaugam un tunel nou
- Dezactivam "Allow fast Path" daca activam IPSec secret.
- Si punem ip-ul celui de al 2 lea router in Remote Address.
- Dupa ce am facut acest setup adaugam interfata in bridge.

Interface <eoip-tunnel1>

General | Loop Protect | Status | Traffic

Name: eoip-tunnel1

Type: EoIP Tunnel

MTU: []

Actual MTU: 65494

L2 MTU: 65535

MAC Address: 02:BB:44:EA:8E:58

ARP: enabled

ARP Timeout: []

Local Address: []

Remote Address: 192.168.122.103

Tunnel ID: 0

IPsec Secret: *****

Keepalive: 00:00:10, 10

DSCP: inherit

Dont Fragment: no

☒ Clamp TCP MSS

☐ Allow Fast Path

enabled | running | slave | passthrough

OK | Cancel | Apply | Disable | Comment | Copy | Remove | Torch | Reset Traffic Counters

Bridge

Bridge | Ports | Port Extensions | VLANs | MSTIs | Port MST Overrides | Filters | NAT | Hosts | MDB

+ | - | [] | [] | [] | []

#	Interface	Bridge	Horizon	Trusted	Priority (...)	Path Cost	PVID	Role	Root Pat...
0	ether2	bridge1	no	no	80	10	1	designated port	
1	ether3	bridge1	no	no	80	10	1	designated port	
2	ether4	bridge1	no	no	80	10	1	designated port	

Configurare MikroTik2

- Si pe acesta vom face un bridge nou unde vom asigna toate interfetele de lan.
- Dupa care facem o interfata tunel de EoIP
- Unde avem acelasi secret IPsec
- La remote address punem ip-ul routerului 1
- Si aduagam interfata in bridge.

Interface <eolp-tunnel1>

General Loop Protect Status Traffic

Name: eolp-tunnel1

Type: EoIP Tunnel

MTU: 1416

Actual MTU: 1416

L2 MTU: 65535

MAC Address: 02:15:56:1D:CE:4D

ARP: enabled

ARP Timeout:

Local Address:

Remote Address: 192.168.122.61

Tunnel ID: 0

IPsec Secret: *****

Keepalive: 00:00:10, 10

DSCP: Inherit

Dont Fragment: no

☒ Clamp TCP MSS

☐ Allow Fast Path

enabled running slave passthrough

OK Cancel Apply Disable Comment Copy Remove Torch Reset Traffic Counters

Bridge

Bridge Ports Port Extensions VLANs MSTIs Port MST Overrides Filters NAT Hosts MD8

#	Interface	Bridge	Horizon	Trusted	Priority	Path Cost	PVID	Role	Root Path Cost
0	ether2	bridge1		no	80	10	1	designated port	
1	ether3	bridge1		no	80	10	1	designated port	
2	ether4	bridge1		no	80	10	1	designated port	
3	eolp-tunnel1	bridge1		no	80	10	1	root port	10

Testare

The diagram illustrates a network setup for testing. Two Mikrotik routers, Mikrotik1 and Mikrotik2, are connected to the Internet (Net). Mikrotik1 is connected to the Internet via eth1 and to a VPC via eth2. Mikrotik2 is connected to the Internet via eth1 and to a VPC via eth2. The VPC contains two virtual machines, VPC1 and VPC2, connected to the VPC network via eth0.

VPC1 Configuration:

```
DORA IP 192.168.1.254/24 GW 192.168.1.1
VPCS> show
NAME IP/MASK GATEWAY
VPCS1 192.168.1.254/24 192.168.1.1
fe80::250:79ff:fe66:6803/64
VPCS> ping 192.168.1.253
84 bytes from 192.168.1.253 icmp_seq=1 ttl=64 time=1.302 ms
84 bytes from 192.168.1.253 icmp_seq=2 ttl=64 time=1.667 ms
84 bytes from 192.168.1.253 icmp_seq=3 ttl=64 time=2.125 ms
^C
VPCS>
```

VPC2 Configuration:

```
VPCS> ping 192.168.1.254
84 bytes from 192.168.1.254 icmp_seq=1 ttl=64 time=2.314 ms
84 bytes from 192.168.1.254 icmp_seq=2 ttl=64 time=1.559 ms
84 bytes from 192.168.1.254 icmp_seq=3 ttl=64 time=1.984 ms
84 bytes from 192.168.1.254 icmp_seq=4 ttl=64 time=2.129 ms
84 bytes from 192.168.1.254 icmp_seq=5 ttl=64 time=2.587 ms
^C
VPCS> ping 8.8.8.8
84 bytes from 8.8.8.8 icmp_seq=1 ttl=112 time=21.144 ms
84 bytes from 8.8.8.8 icmp_seq=2 ttl=112 time=25.797 ms
^C
VPCS>
```

Mikrotik1_eth1 Packet Capture:

No.	Time	Source	Destination	Protocol	Length	Info
41	13.599159260	192.168.122.61	8.8.8.8	ICMP	98	Echo (ping) request id=0xf8
42	13.618415403	8.8.8.8	192.168.122.61	ICMP	98	Echo (ping) reply id=0xf8
46	14.621502204	192.168.122.61	8.8.8.8	ICMP	98	Echo (ping) request id=0xf8
47	14.644540395	8.8.8.8	192.168.122.61	ICMP	98	Echo (ping) reply id=0xf8

Frame 41: 98 bytes on wire (784 bits), 98 bytes captured (784 bits) on interface eth0, id 0
Ethernet II, Src: 50:00:00:01:00:00 (50:00:00:01:00:00), Dst: RealtekU_a7:94:8a (52:54:00:a7:94:8a)
Internet Protocol Version 4, Src: 192.168.122.61, Dst: 8.8.8.8
Internet Control Message Protocol

Internet Control Message Protocol: Protocol Packets: 110 · Displayed: 4 (3.6%) Profile: Default