

How To Bridge Private Two LAN

Bridge LANs Over The Internet
Between Main Office and Branch Office

MUM Yangon 2015

Kyaw Ko Ko Thu

Network Engineer

CCNA , MTCNA

kyawkokothu74@gmail.com

How To Bridge Private Two LAN

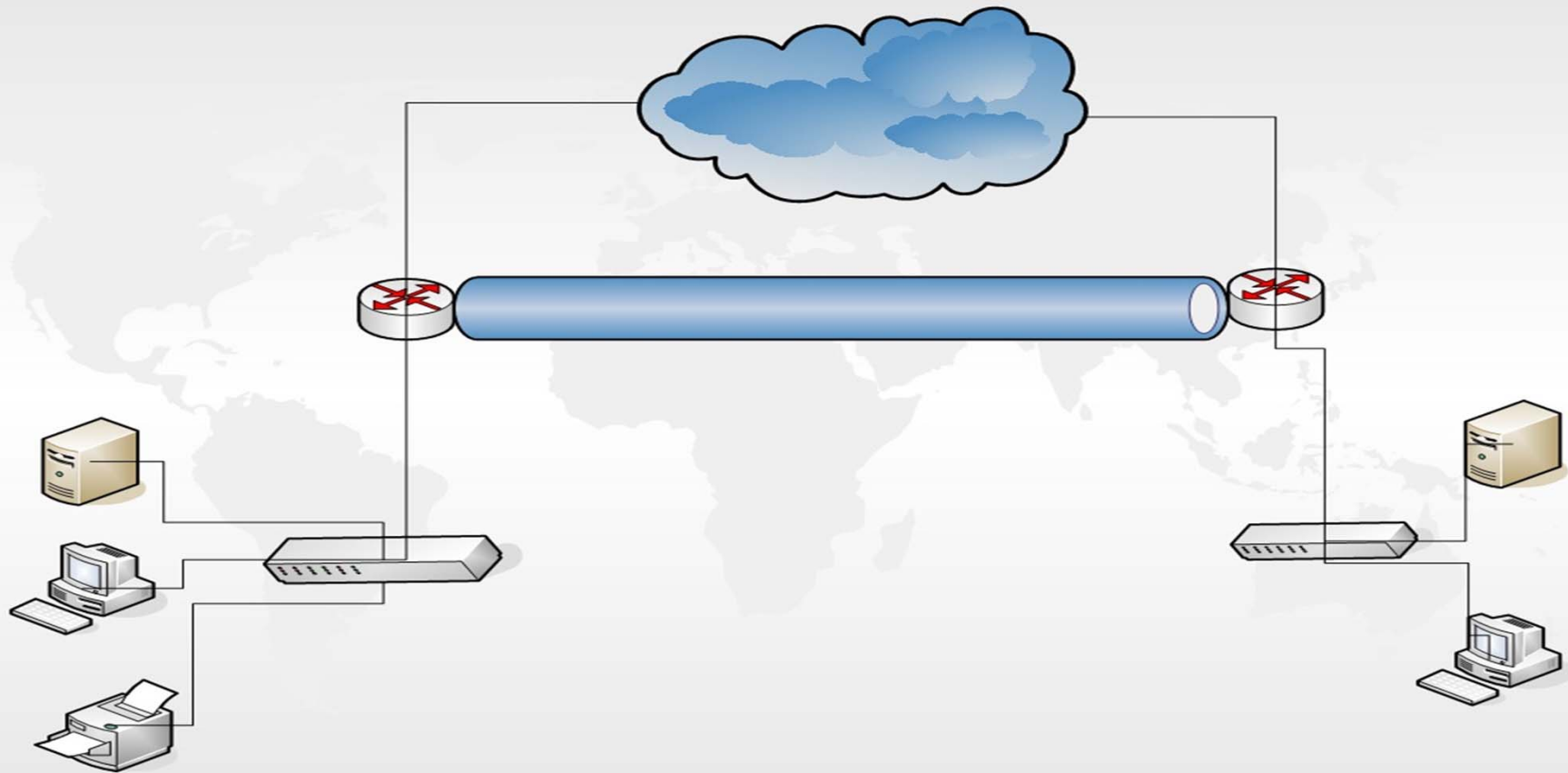
Bridge LANs Over The Internet

Between Main Office and Branch Office Can use EOIP

VPN Tunneling Protocol

- PPTP (Point-to-Point Tunneling Protocol)
- L2TP (Layer 2 Tunnel Protocol)
- SSTP (Secure Socket Tunneling Protocol)
- Open VPN* (OpenVPN is a fairly new open source technology)
- IKEv2 (Internet Key Exchange (version 2))
- Etc.....

VPN (Virtual private network)



MikroTik Router OS support Protocol

- PPTP
- SSTP
- L2TP
- OVPN
- IPsec
- GRE
- EOIP (MikroTik Router OS Proprietary protocol)
- VPLS

EOIP (Ethernet Over IP)

- ❑ MikroTik RouterOS Proprietary protocol
- ❑ That creates an Ethernet tunnel between two routers on top of an IP connection.
- ❑ EoIP tunnel may run over IPIP tunnel, PPTP tunnel or any other connection capable of transporting IP.
- ❑ When the bridging function of the router is enabled, all Ethernet traffic (all Ethernet protocols) will be bridged just as if there were a physical Ethernet interface and cable between the two routers (with bridging enabled).
- ❑ This protocol makes multiple network schemes possible.

IANA has reserved

- Media Access Control number of an interface. The address numeration authority IANA allows the use of **MAC addresses** in the range from **00:00:5E:80:00:00 - 00:00:5E:FF:FF:FF** freely

Use for those services

❖ Access Branch Office resource from Main Office

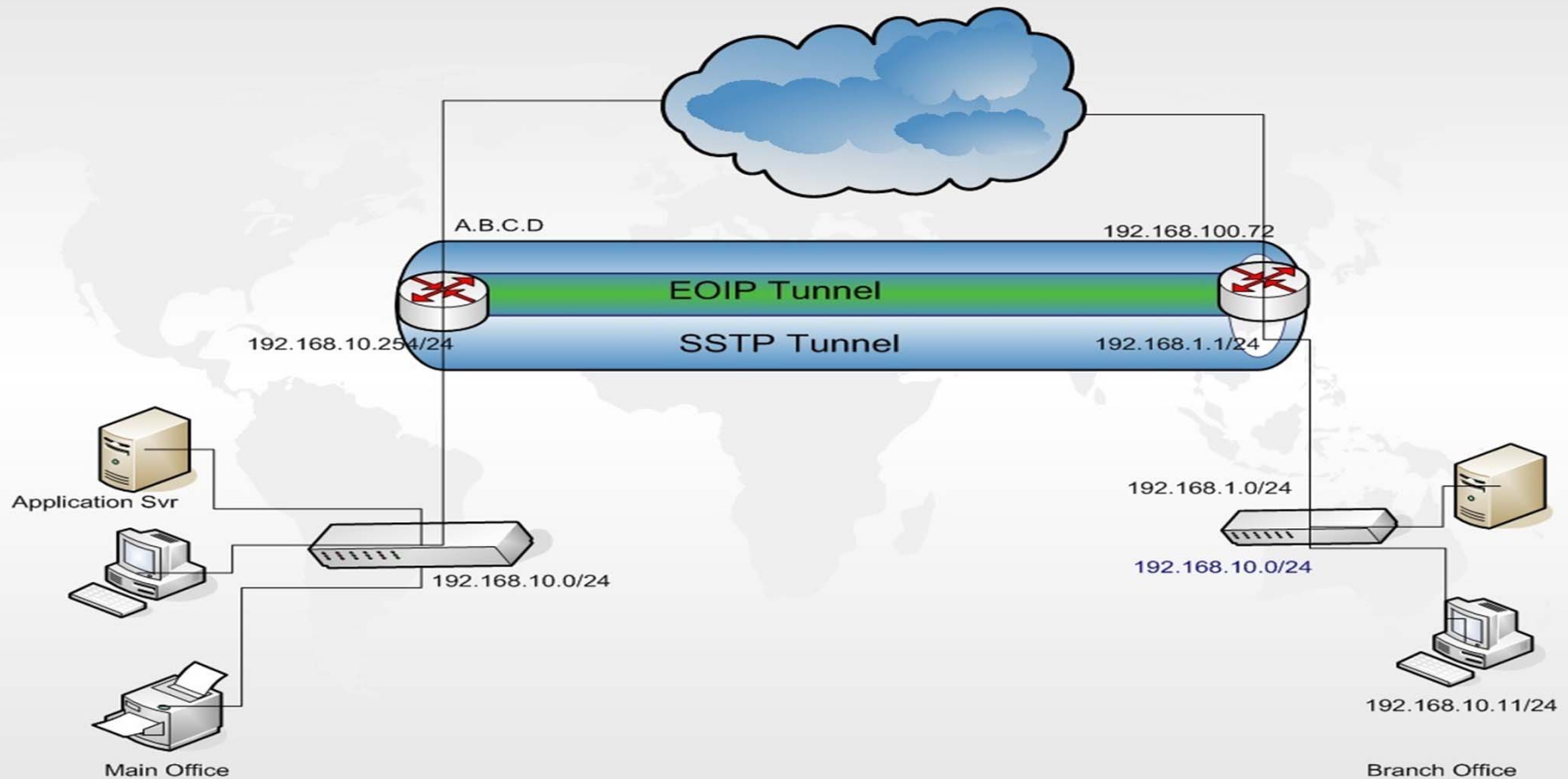
PPPOE

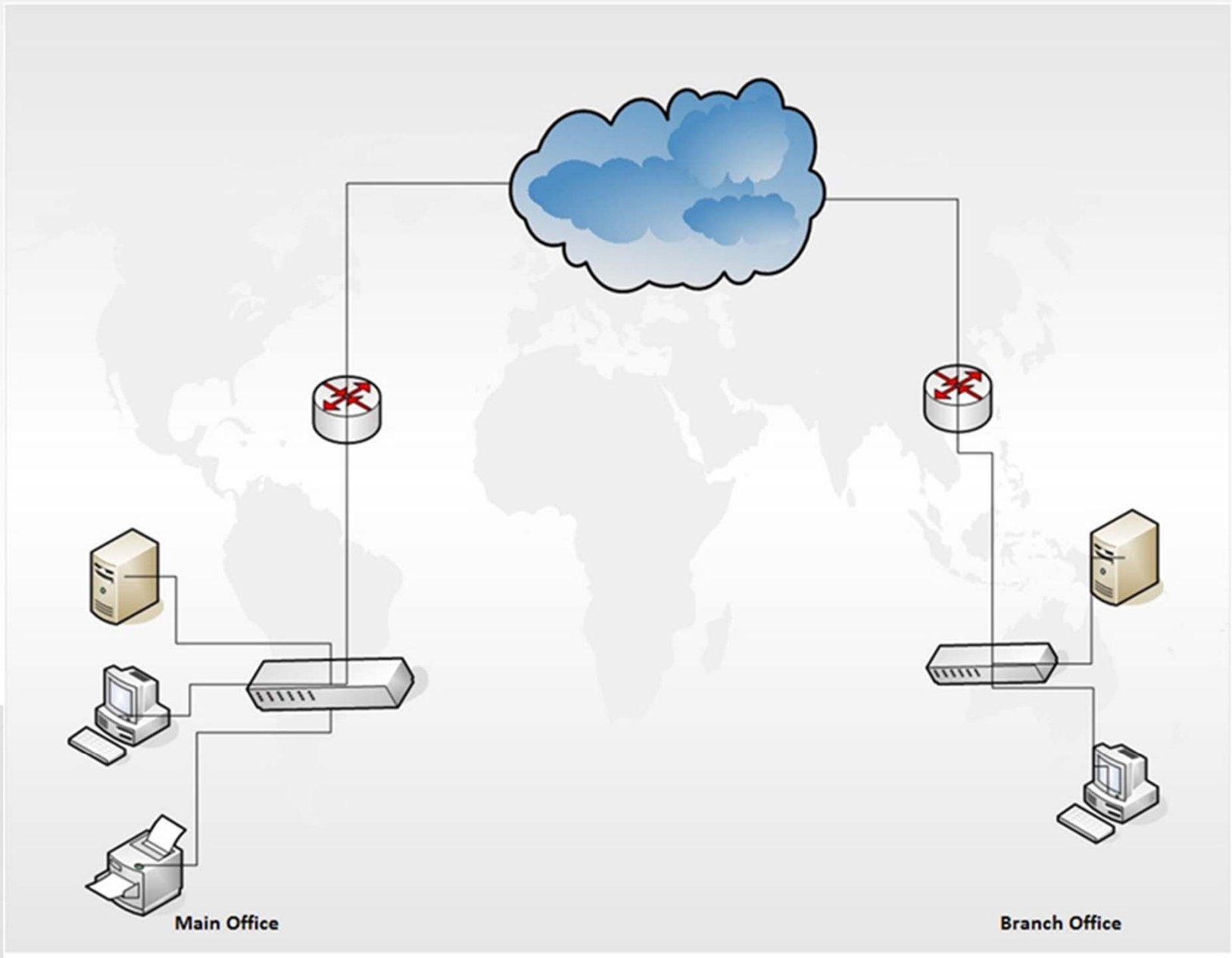
DHCP

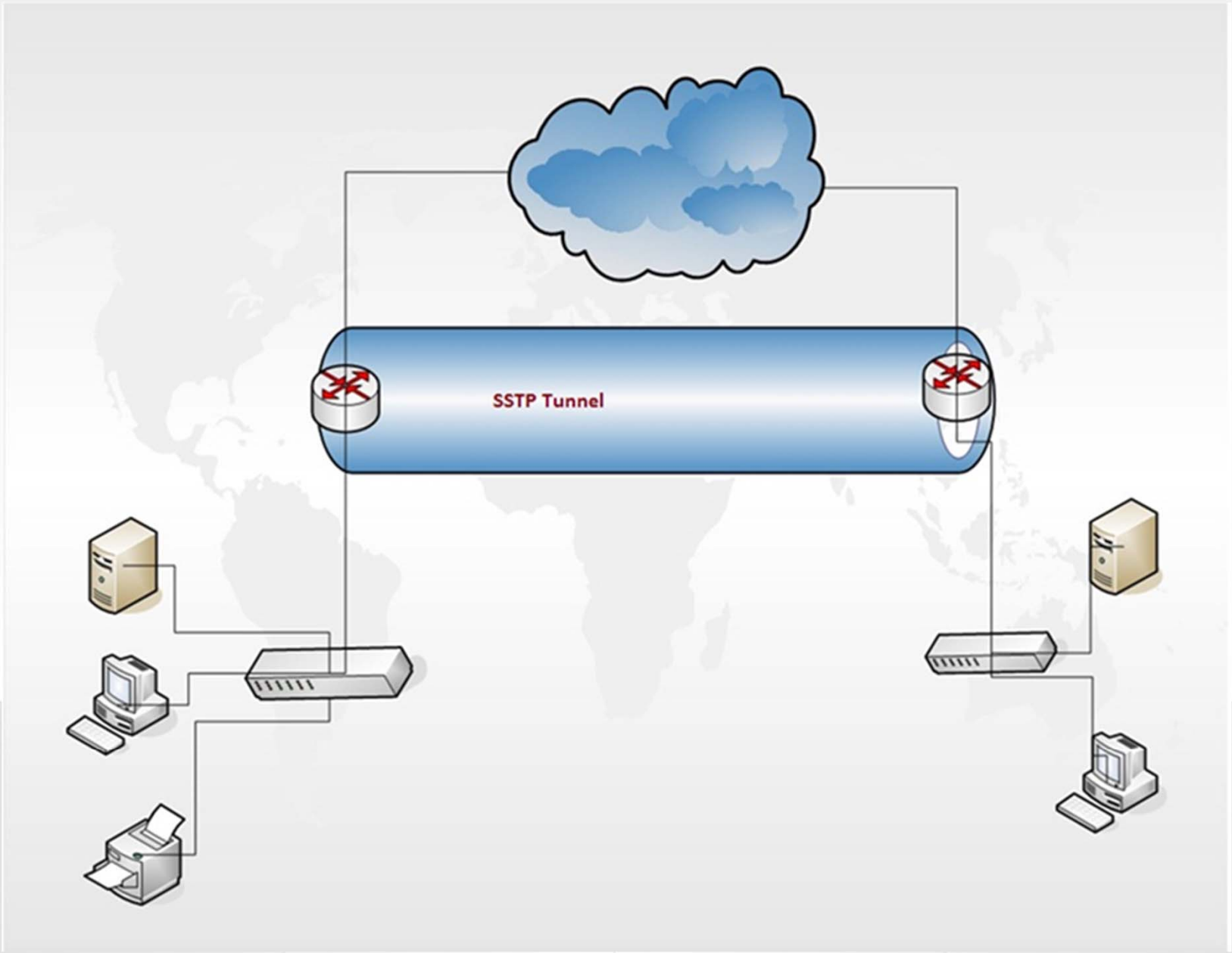
Application Server

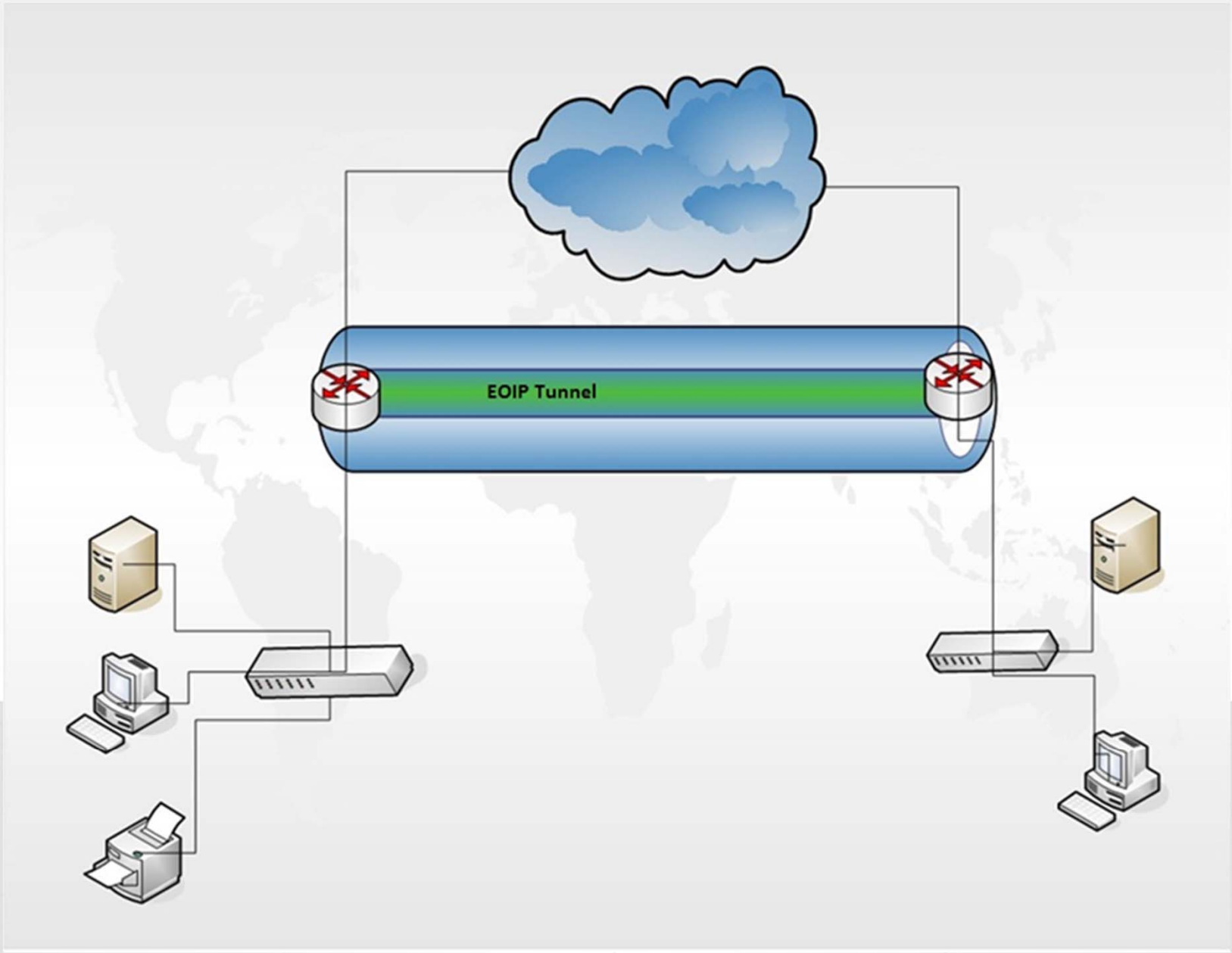
Etc..

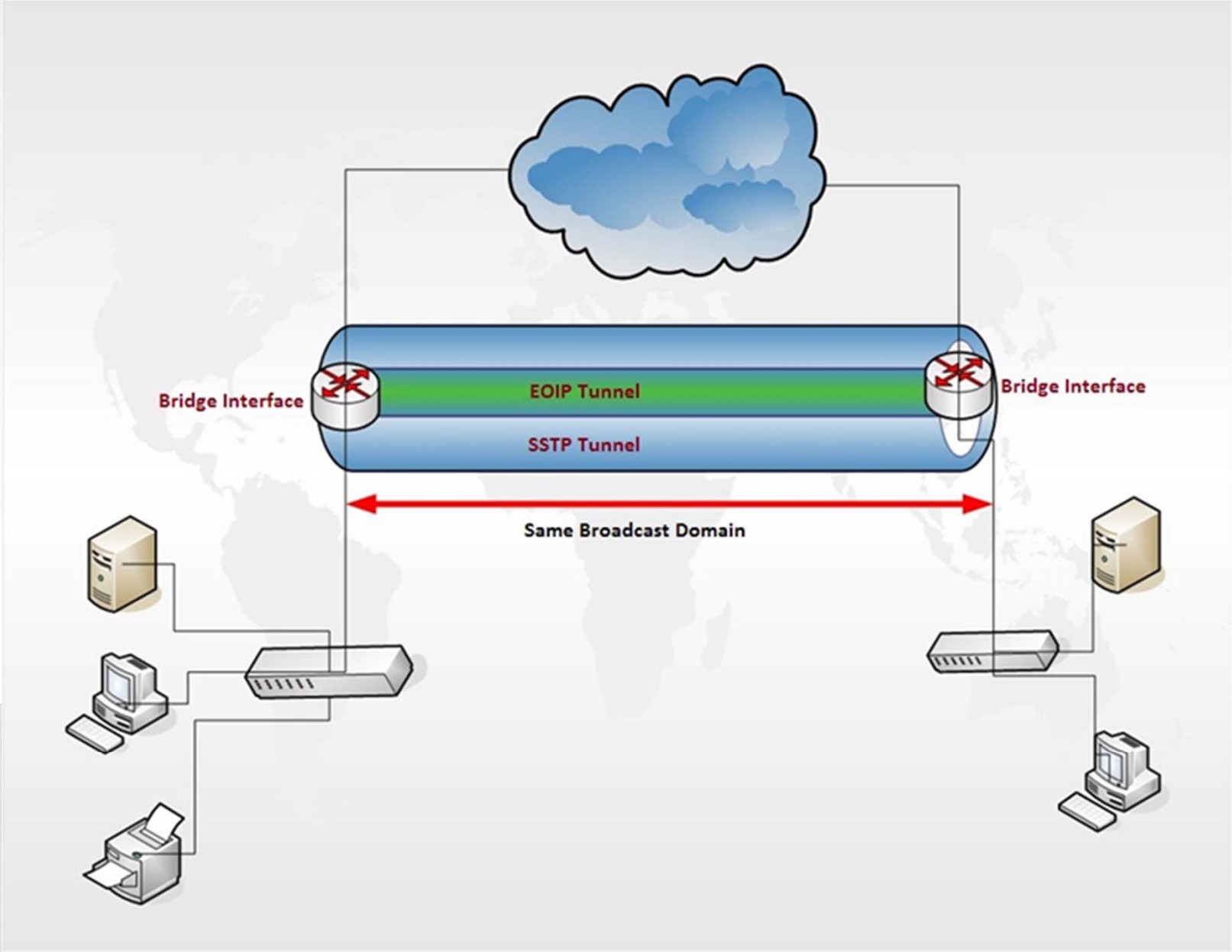
Bridge LANs Over The Internet Between Main Office and Branch Office











SSTP Tunnel(Secure Socket Tunneling Protocol)

- Secure Socket Tunneling Protocol (SSTP) transports a PPP tunnel over a TLS 1.0 channel. The use of TLS over TCP port 443 allows SSTP to pass through virtually all firewalls and proxy servers.

EOIP (Ethernet Over IP) Overhead

SSTP-

- **Note:** EoIP tunnel adds at least **154 byte** overhead (120 byte SSTP + 14 byte Ethernet + 20 byte IP)
- **Note:** RSA Key length must be at least 472 bits if certificate is used by **SSTP**

PPTP-

- **Note:** EoIP tunnel adds at least 42byte overhead (8byte GRE + 14 byte Ethernet + 20 byte IP)

Advantages and Disadvantages

❖ Advantages

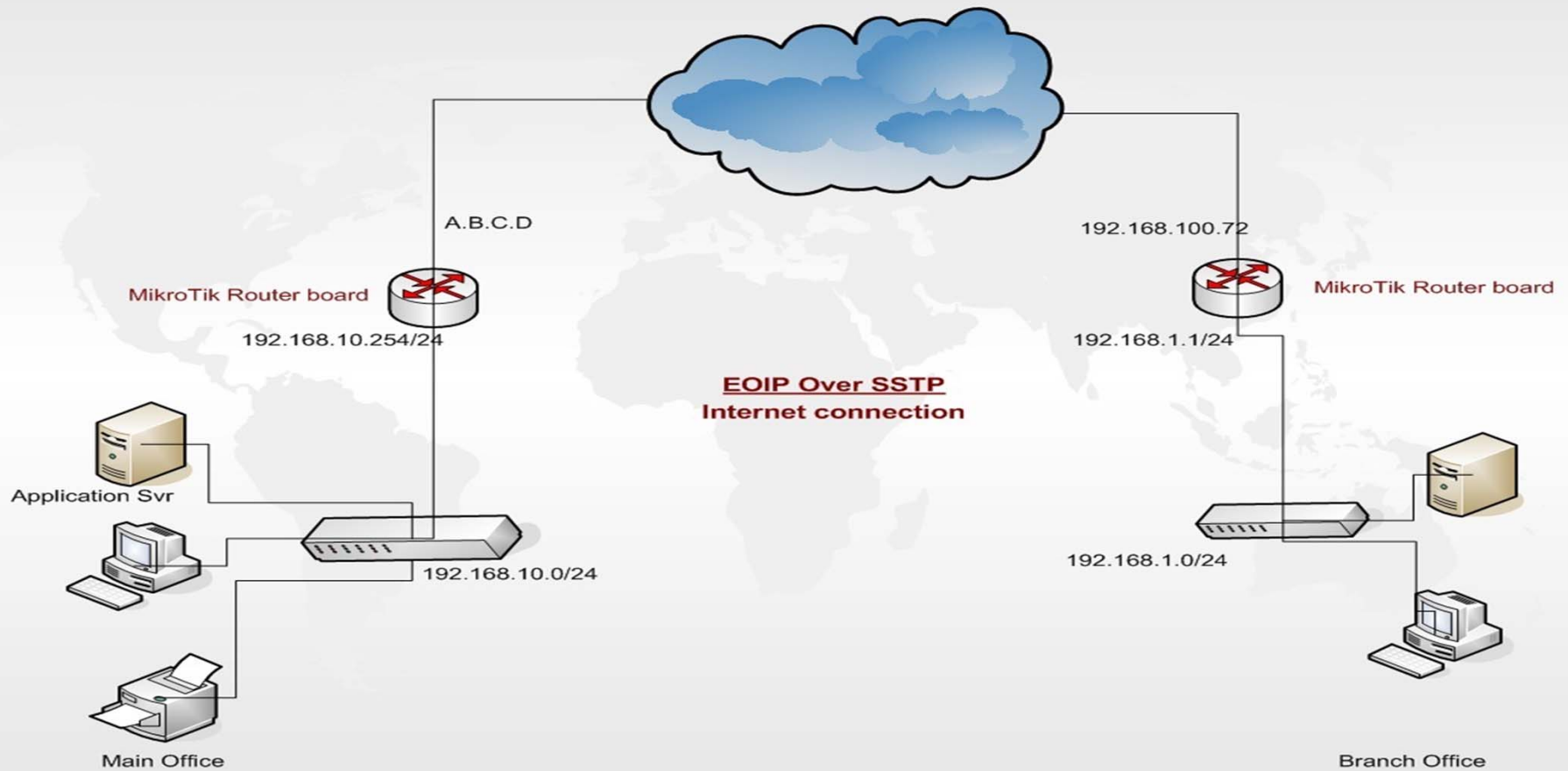
- ❑ ● Easy to setup
- ❑ ● Portability
- ❑ ● Security

❖ Disadvantages

- ❑ ● Only for MikroTik Router OS
- ❑ ● Increase Overhead
- ❑ ● More Bandwidth Requirement

EOIP (Ethernet Over IP) configuration

-create SSTP Tunnel



SSTP Server Enable (Main Office)

admin1@1.1.1.1 (Main_office) - WinBox v5.20 on x86 (x86)

Safe Mode Uptime: 22d 17:41:45 Memory: 1731.9 MiB CPU: 8% Hide Passwords

Interfaces

Interface List

Interface	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE				
Name	Type	L2 MTU	Tx	Rx	Tx Pac...	Rx Pac...	Tx Bytes	Rx Bytes	Tx Drops	Rx Drops	Tx Errors	Rx Errors
DR <<< sstp	SSTP Server		0 bps	0 bps	0	0	87.2 KiB	2581.6 KiB	0	0	0	0
DR <<< sstp-	SSTP Server		175.8 kbps	0 bps	137	0	14.3 MiB	38 B	0	0	0	0
DR <<< sstp	SSTP Server		0 bps	0 bps	0	0	52 B	2418 B	0	0	0	0
DR <<< sstp-	SSTP Server		0 bps	0 bps	0	0	104 B	7.5 KiB	0	0	0	0
DR <<< sstp-	SSTP Server		0 bps	0 bps	0	0	52 B	38 B	0	0	0	0
R <<< eoip-tunnel1	EoIP Tunnel	65535	175.8 kbps	0 bps	137	0	212.2 MiB	19.8 MiB	0	0	0	0
DR <<< <	SSTP Server		37.3 kbps	3.1 kbps	9	5	21.7 MiB	6.9 MiB	0	0	0	0
R <<< bridge1	Bridge	16383	17.5 Mbps	1235.1 kbps	1 609	1 309	23.3 GiB	2807.1 MiB	0	0	0	0
R <<< LAN	Ethernet	16383	17.5 Mbps	1381.7 kbps	1 609	1 309	743.8 GiB	157.0 GiB	0	0	0	0
R <<< WAN	Ethernet		1485.7 kbps	16.4 Mbps	1 080	1 579	139.3 GiB	756.1 GiB	0	76	0	8

PPP

Interface PPPoE Servers Secrets Profiles Active Connections

Name	Type	L2 MTU	Tx	Rx	Tx Pac...	Rx Pac...	Tx Drops	Rx Drops	Tx Errors	Rx Errors
DR <<< sst	SSTP Server		37.3 kbps	3.1 kbps	9	5	0	0	0	0
DR <<< sstp-	SSTP Server		0 bps	0 bps	0	0	0	0	0	0
DR <<< sstp-	SSTP Server		175.8 kbps	0 bps	137	0	0	0	0	0
DR <<< sstp-	SSTP Server		0 bps	0 bps	0	0	0	0	0	0
DR <<< sstp-	SSTP Server		0 bps	0 bps	0	0	0	0	0	0
DR <<< sstp-	SSTP Server		0 bps	0 bps	0	0	0	0	0	0
DR <<< sstp-l	SSTP Server		0 bps	0 bps	0	0	0	0	0	0

6 items out of 10

SSTP Server

Enabled

Port: 443

Max MTU: 1500

Max MRU: 1500

MRRU: []

Keepalive Timeout: 60

Default Profile: default

Authentication

pap chap

mschap1 mschap2

Certificate: none

Verify Client Certificate

Start

11:19 AM 9/28/2015

ADD SSTP User name & password

The screenshot displays the WinBox v5.20 interface for RouterOS. The 'Secrets' tab is active, showing a table of existing secrets. A 'New PPP Secret' dialog box is open, allowing the user to add a new secret. The dialog fields are as follows:

Name	Password	Service	Caller ID	Profile	Local Address	Remote Address
User Name	*****	any		default	1.1.1.5	1.1.1.6

The background table in the 'Secrets' tab contains the following data:

Name	Password	Service	Caller ID	Profile	Local Address	Remote Address
					1.1.1.2	
					1.1.1.4	
					1.1.1.6	
					1.1.1.8	
					1.1.1.10	
					1.1.1.101	

SSTP Client Configuration(Branch Office)

The screenshot displays the RouterOS WinBox interface. The main window shows the configuration for the 'sstp-out1' interface. The 'General' tab is active, showing the following settings:

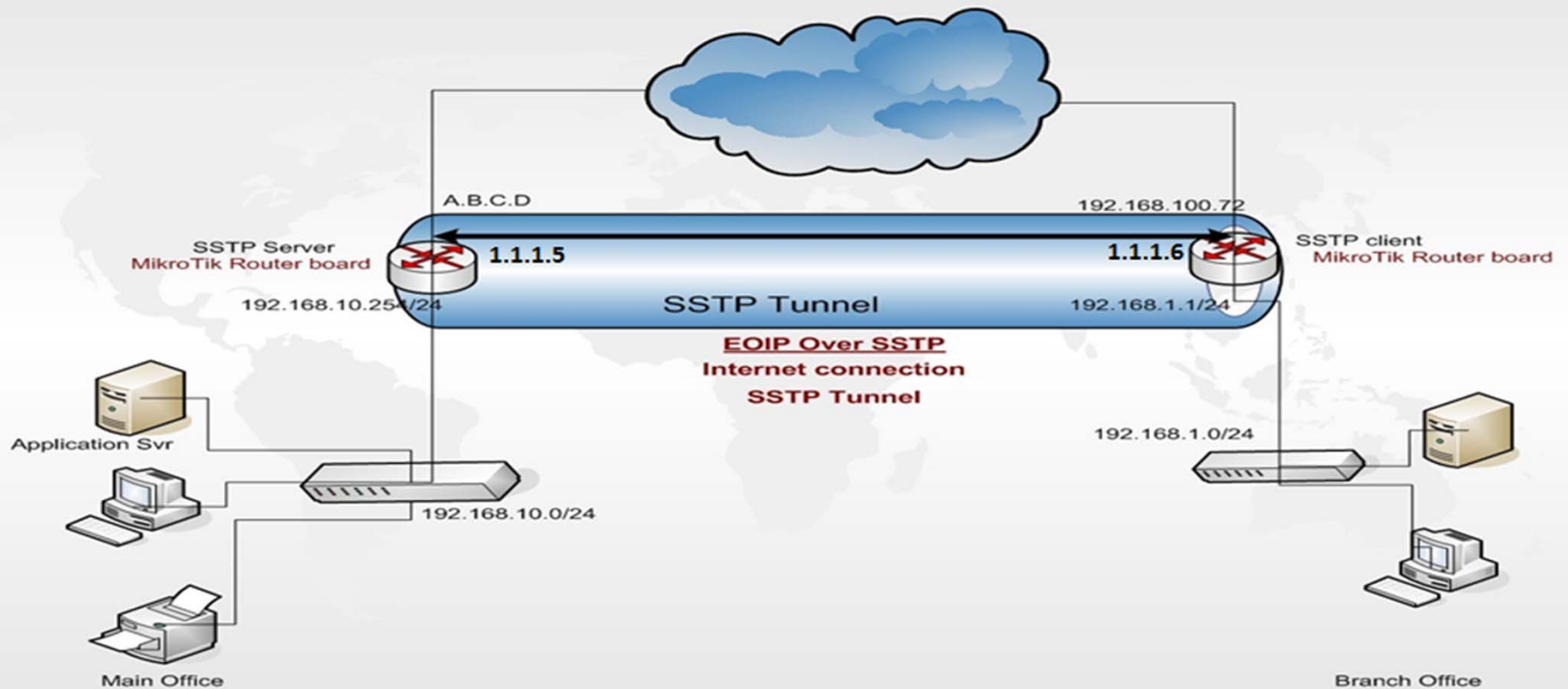
- Connect To: A.B.C.D *
- Port: 443
- Proxy: (empty)
- Proxy Port: 443
- Certificate: none
- Verify Server Certificate
- Verify Server Address From Certificate
- PFS
- User: User Name
- Password: (masked with asterisks)
- Profile: default-encryption
- Keepalive Timeout: 60
- Dial On Demand
- Add Default Route
- Default Route Distance: 1
- Allow: mschap2, mschap1, chap, pap

The interface status is shown as 'enabled', 'running', 'slave', and 'Status: connected'. A table in the background shows the configuration for the 'sstp-out1' interface:

Interface	PPPoE Servers	Secrets	Profiles	Active Conn
R	↔↔ pppoe-out1			
R	↔↔ sstp-out1			

EOIP (Ethernet Over IP) configuration

-Create EOIP Tunnel



EOIP (Ethernet Over IP) configuration

- Create EoIP tunnel On Main Office

New Interface

General Status Traffic

Name:

Type:

MTU:

Actual MTU:

L2 MTU:

MAC Address:

ARP:

Local Address:

Remote Address:

Tunnel ID:

Keepalive:

DSCP:

Dont Fragment:

Clamp TCP MSS

OK
Cancel
Apply
Disable
Comment
Copy
Remove
Torch

enabled running slave

- Enable EOIP tunnel
- Local Address and Remote Address is SSTP Tunnel Ip address

EOIP (Ethernet Over IP) configuration

- Create EoIP tunnel On Branch Office

The screenshot shows the 'New Interface' configuration window with the following settings:

- Name: eoip-tunnel1
- Type: EoIP Tunnel
- MTU: (empty)
- Actual MTU: (empty)
- L2 MTU: (empty)
- MAC Address: aa:bb:cc:11:22:33
- ARP: enabled
- Local Address: 1.1.1.6
- Remote Address: 1.1.1.5
- Tunnel ID: 0
- Keepalive: (empty)
- DSCP: inherit
- Dont Fragment: no
- Clamp TCP MSS

Buttons on the right: OK, Cancel, Apply, Disable, Comment, Copy, Remove, Torch.

Bottom status: enabled | running | slave

- Enable EOIP tunnel
- Local Address and Remote Address is SSTP Tunnel Ip address

EoIP (Ethernet Over IP) configuration

- Create Bridge interface On Both side
- Bridge local interfaces with EoIP tunnel on both side

admin1@1.1.1.1 (Main_office) - WinBox v5.20 on x86 (x86)

Safe Mode Uptime: 22d 18:02:55 Memory: 1732.4 MiB CPU: 8% Hide Passwords

Interface <bridge1>

General STP Status Traffic

Name: bridge1

Type: Bridge

MTU: 1500

L2 MTU: 16383

MAC Address: 02:3B:54:25:E0:1C

ARP: enabled

Admin. MAC Address:

OK Cancel Apply Disable Comment Copy Remove Torch

Tx	Rx	Tx Pac...	Rx Pac...	Tx Bytes	Rx Bytes	Tx Drops	Rx Drops	Tx Errors	Rx Errors
0 bps	0 bps	0	0	87.2 KiB	2584.0 KiB	0	0	0	0
131.9 kbps	0 bps	85	0	30.9 MiB	38 B	0	0	0	0
0 bps	0 bps	0	0	52 B	395 B	0	0	0	0
0 bps	0 bps	0	0	52 B	276 B	0	0	0	0
0 bps	0 bps	0	0	104 B	9.9 KiB	0	0	0	0
0 bps	0 bps	0	0	52 B	38 B	0	0	0	0
131.9 kbps	0 bps	85	0	228.8 MiB	19.8 MiB	0	0	0	0
38.6 kbps	2.8 kbps	7	4	23.1 MiB	7.2 MiB	0	0	0	0
12.9 Mbps	1016.2 kbps	1 259	1 101	25.5 GiB	3011.1 MiB	0	0	0	0
12.9 Mbps	1139.6 kbps	1 259	1 101	746.1 GiB	157.3 GiB	0	0	0	0
1153.8 kbps	11.4 Mbps	909	1 172	139.5 GiB	758.3 GiB	0	76	0	8

Bridge Ports Filters NAT Hosts

Interface	Bridge	Priority (h...	Path Cost	Horizon	Role	Root Pat...
LAN	bridge1	80	10		designated port	
eoip-tunnel1	bridge1	80	10		designated port	

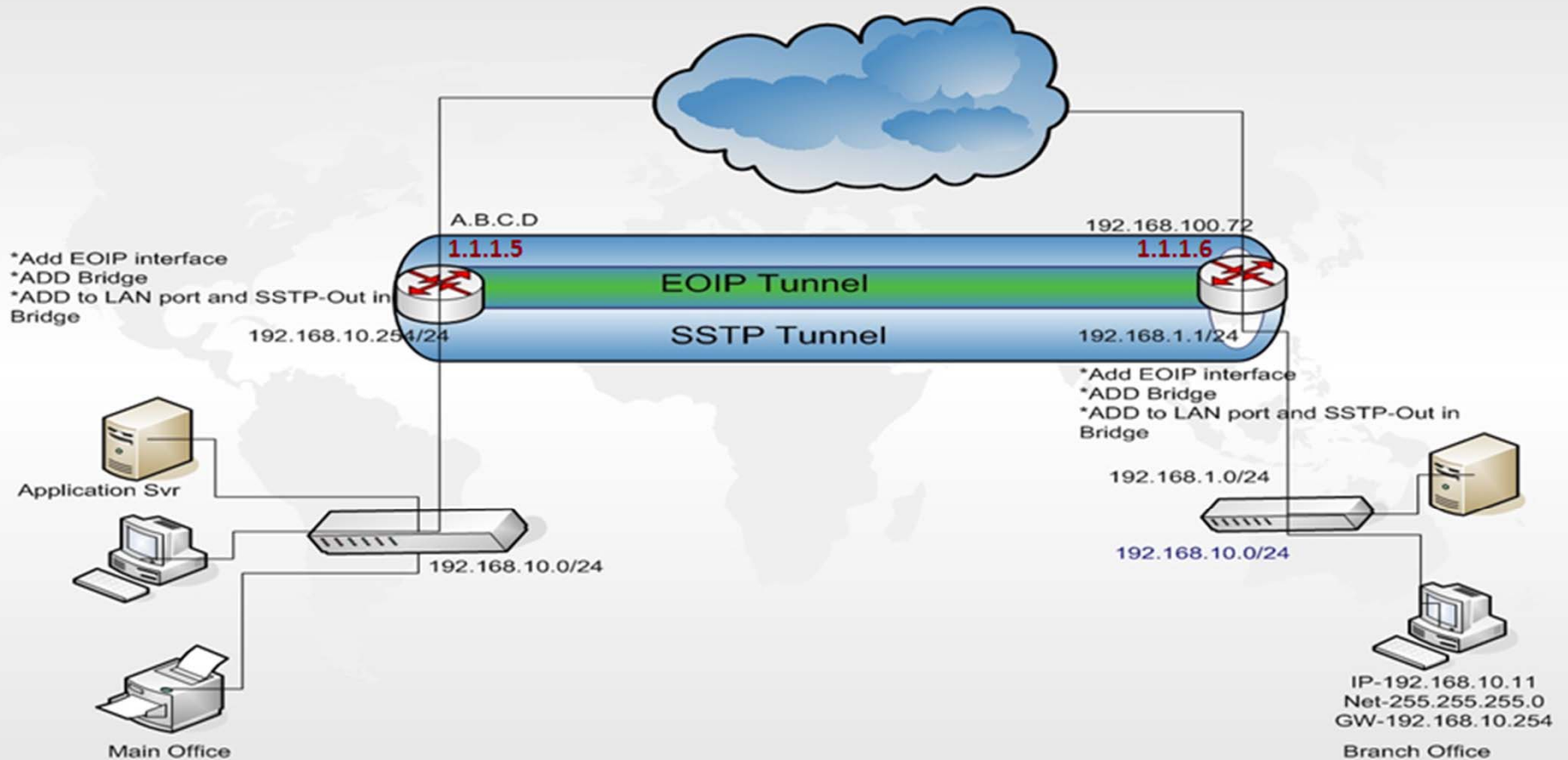
2 items

11 items

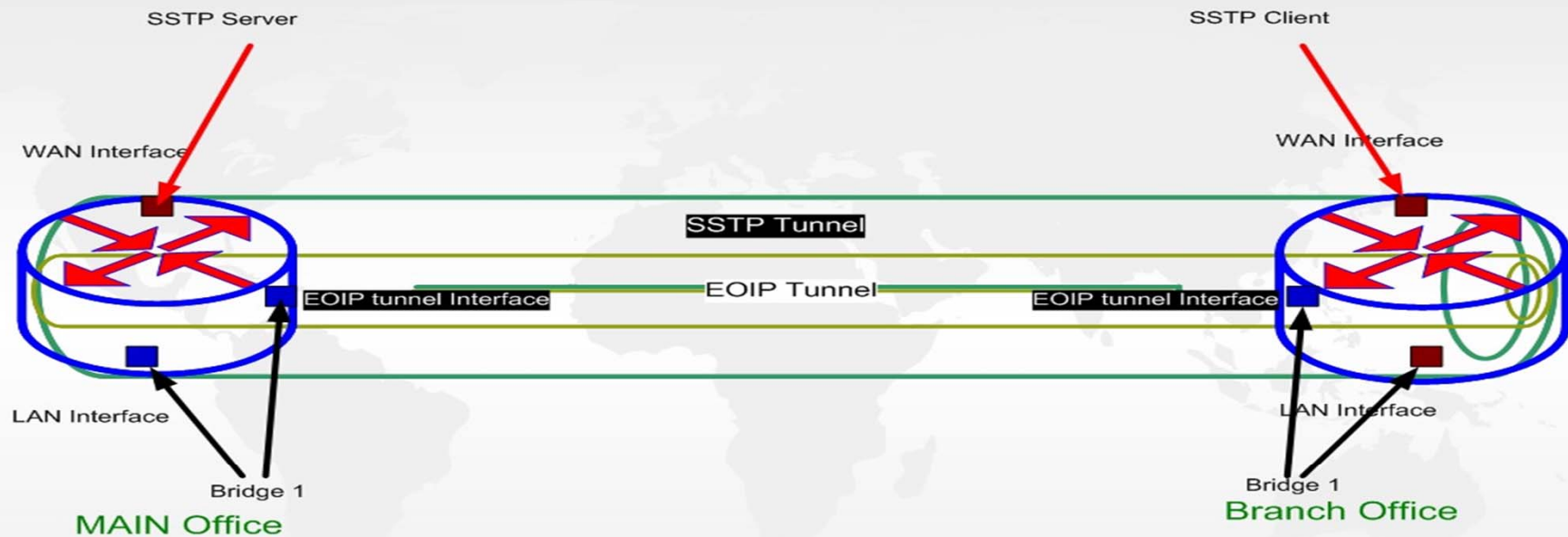
Start 11:40 AM 9/28/2015

EOIP (Ethernet Over IP) configuration

-Now both sites are in the same Layer2 broadcast domain. You can set up IP addresses from the same network on both sites.



EOIP (Ethernet Over IP) configuration



Enable SSTP Server and SSTP Client ,Create SSTP Tunnel
Add to LAN Interface and EOIP Tunnel Interface in Bridge Interface

Check & Test

EOIP (Ethernet Over IP) configuration

- Create SSTP tunnel
- Create EoIP tunnel
- Bridge local interfaces with EoIP tunnel

admin1@192.168.10.254 (Main_office) - WinBox v5.20 on x86 (x86)

Address	Network	Interface
1.1.1.5	1.1.1.6	<sstp>
1.1.1.6	1.1.1.6	<sstp>
192.168.10.254	192.168.10.0	WAN
192.168.10.255	192.168.10.0	LAN

Interface	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE
eoip-tunnel1		EoIP Tunnel						

Name	Type	MTU	L2 MTU	Tx	Rx
eoip-tunnel1	EoIP Tunnel	1500	65535	20.0 kbps	7.4 kbps

Interface	Bridge	Priority (h...)	Path Cost	Horizon	Role
LAN	bridge1	80	10		designated po
eoip-tunnel1	bridge1	80	10		designated po

admin@02:08:84:7F:03:51 (Branch_office) - WinBox v6.32.2 on RB951G-2HnD (mipsbe)

Address	Network	Interface
1.1.1.6	1.1.1.5	ssstp-out1
192.168.1.1/24	192.168.1.0	LAN
192.168.100.72/24	192.168.100.0	WAN

Interface	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE
eoip-tunnel1		EoIP Tunnel						

Name	Type	Actual ...	L2 MTU	Tx	Rx
eoip-tunnel1	EoIP Tunnel	1458	65535		7.4 kbps

Interface	Bridge	Priority (h...)	Path Cost	Horizon	Role
LAN	bridge1	80	10		designated port
eoip-tunnel1	bridge1	80	10		designated port

EOIP (Ethernet Over IP) configuration

-Test DHCP requests over EoIP

The screenshot displays the RouterOS WinBox interface. On the left, a sidebar lists various configuration categories: Quick Set, CAPsMAN, Interfaces, Wireless, Bridge, PPP, Switch, Mesh, IP, MPLS, Routing, System, Queues, Files, Log, Radius, Tools, New Terminal, MetaROUTER, Partition, Make Supout.tif, Manual, and Exit. The main window is divided into several sections:

- Address List:** A table showing IP addresses assigned to interfaces.

Address	Network	Interface
D 1.1.1.6	1.1.1.5	sstp-out1
D 192.168.1.1/24	192.168.1.0	LAN
D 192.168.100.72/24	192.168.100.0	WAN
- Interface List:** A table showing the configuration of the EoIP tunnel.

Interface	Ethemet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE
RS		eoip-tunnel1						
- Bridge:** A table showing bridge configurations.

Interface	Bridge	Priority (h...)	Path Cost	Horizon	Role
LAN	bridge1	80	10		designated po
eoip-tunnel1	bridge1	80	10		designated po

Overlaid on the WinBox interface is a Windows command prompt window titled "Administrator: C:\Windows\system32\cmd.exe". It shows the output of the `ipconfig` command, displaying network configuration for both the Ethernet adapter and the Tunnel adapter TereDo Tunneling Pseudo-Interface.

```
C:\Users\Eastern>ipconfig

Windows IP Configuration

Ethernet adapter Local Area Connection 2:

    Connection-specific DNS Suffix  . : 
    IPv4 Address. . . . . : 192.168.10.11
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.10.254

Tunnel adapter TereDo Tunneling Pseudo-Interface:

    Connection-specific DNS Suffix  . : 
    IPv6 Address. . . . . : 2001:0:da5d:fa12:3465:2fdf:3f57:f5f4
    Link-local IPv6 Address . . . . . : fe80::3465:2fdf:3f57:f5f4%16
    Default Gateway . . . . . : ::

Tunnel adapter isatap.{D7B69C8E-7B46-41F6-9016-061E6D2B5F05}:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 
C:\Users\Eastern>
```


EOIP (Ethernet Over IP) configuration

-Test Mikrotik Neighbor discovery software (Winbox)

The screenshot displays the Mikrotik WinBox interface for configuring an EOIP tunnel. The main window shows the 'Interface List' with an 'eoip-tunnel1' interface. A 'Bridge' configuration window is open, showing the 'Ports' tab with 'LAN' and 'eoip-tunnel1' connected to 'bridge1'. A 'Mikrotik WinBox Loader v2.2.18' dialog box is overlaid, showing a list of discovered neighbors.

MAC Address	IP Address	Identity	Version	Board Name
02:08:84:	192.168.1.1	Branch_office	6.32.2	RB951G-2HnD
02:3B:54:	192.168.10.254	Main_office	5.20	x86
D4:CA:6D:	192.168.88.1		1.13	RB260GSP
D4:CA:6D:	192.168.88.4	MikroTik	1.13	RB260GSP



- Quick Set
- Interfaces
- Bridge
- PPP
- Switch
- Mesh
- IP
- System
- Queues
- Files
- Log
- Radius
- Tools
- New Terminal
- MetaROUTER
- Partition
- Make Supout.tif
- Manual
- Exit

Interface List

Interface	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE
R	WIFI_network	Ethernet						
R	bridge1	Bridge						
RS	eoip-tunnel1	EoIP Tunnel	65535	3.7 kbps	122.4 kbps	5	113	
R	ether1	Ethernet	1520	336.0 kbps	3.0 Mbps	330	334	
RS	ether2	Ethernet	1520	678.5 kbps	245.8 kbps	250	116	
R	ether4	Ethernet	1520	1352.6 kbps	23.8 kbps	113	96	
R	ether5	Ethernet	1520	3.8 kbps	4.0 kbps	7	6	
R	pppoe-out1	PPPoE Client		160.6 kbps	559.4 kbps	166	176	
R	sstp-out1	SSTP Client		8.0 kbps	203.1 kbps	14	123	

9 items (1 selected)

RouterOS WinBox



- Quick Set
- Interfaces
- Bridge
- PPP
- Switch
- Mesh
- IP
- System
- Queues
- Files
- Log
- Radius
- Tools
- New Terminal
- MetaROUTER
- Partition
- Make Supout.tif
- Manual
- Exit

Torch (Running)

Basic: Interface: sstp-out1, Entry Timeout: 00:00:03

Collect:

- Src. Address
- Dst. Address
- MAC Protocol
- Protocol
- DSCP
- Src. Address6
- Dst. Address6
- Port
- VLAN Id

Filters:

- Src. Address: 1.1.1.1
- Dst. Address: 1.1.1.2
- Src. Address6: ::/0
- Dst. Address6: ::/0
- MAC Protocol: all
- Protocol: any
- Port: any
- VLAN Id: any
- DSCP: any

Et...	Protocol	Src.	Dst.	VLAN Id	DSCP	Tx Rate	Rx Rate	Tx Pack...	Rx Pack...
800 (ip)		47 1.1.1.1	1.1.1.2			4.9 kbps	116.9 k...	6	110
800 (ip)		6 (tcp) 1.1.1.1:8291 (winbox)	1.1.1.2:64337			2.3 kbps	33.0 kbps	4	4

2 items | Total Tx: 7.3 kbps | Total Rx: 149.9 kbps | Total Tx Packet: 10 | Total Rx Packet: 114



Torch (Running)

- Basic
 Interface: eoip-tunnel1
 Entry Timeout: 00:00:03

- Collect

<input checked="" type="checkbox"/> Src. Address	<input type="checkbox"/> Src. Address6
<input checked="" type="checkbox"/> Dst. Address	<input type="checkbox"/> Dst. Address6
<input type="checkbox"/> MAC Protocol	<input checked="" type="checkbox"/> Port
<input checked="" type="checkbox"/> Protocol	<input type="checkbox"/> VLAN Id
<input checked="" type="checkbox"/> DSCP	

- Filters

Src. Address: 0.0.0.0/0
 Dst. Address: 0.0.0.0/0
 Src. Address6: ::/0
 Dst. Address6: ::/0
 MAC Protocol: all
 Protocol: any
 Port: any
 VLAN Id: any
 DSCP: any

Et...	Prot...	Src.	Dst.	VLAN Id	DSCP	Tx Rate	Rx Rate	Tx Pack...	Rx Pack...
800 (ip)	17 (...)	192.168.1.255:137 (netbio...	192.168.1.66:137 (netbios...			0 bps	0 bps	0	0
86dd...	17 (...)	547	0.0.0.0:546			1320 bps	0 bps	1	0

2 items Total Tx: 1320 bps Total Rx: 0 bps Total Tx Packet: 1 Total Rx Packet: 0

RouterOS WinBox



101258 220.754307000 1.1.1.1 1.1.1.2 GRE 478 Encapsulated 0x6400 (unknown)

```

User Datagram Protocol, Src Port: 37230 (37230), Dst Port: 37008 (37008)
  TZSP: Ethernet:
  Ethernet II, Src: 00:00:00_00:00:00 (00:00:00:00:00:00), Dst: 00:00:00_00:00:00 (00:00:00:00:00:00)
  Internet Protocol Version 4, Src: 192.168.1.254 (192.168.1.254), Dst: 192.168.1.253 (192.168.1.253)
  User Datagram Protocol, Src Port: 37230 (37230), Dst Port: 37008 (37008)
  TZSP: Ethernet:
  Ethernet II, Src: 00:00:00_00:00:00 (00:00:00:00:00:00), Dst: 00:00:00_00:00:00 (00:00:00:00:00:00)
  Internet Protocol Version 4, Src: 1.1.1.1 (1.1.1.1), Dst: 1.1.1.2 (1.1.1.2)
    Version: 4
    Header Length: 20 bytes
    Differentiated Services Field: 0x00 (DSCP 0x00: Default; ECN: 0x00: Not-ECT (Not ECN-Capable Transport))
      0000 00.. = Differentiated Services Codepoint: Default (0x00)
      .... 00.. = Explicit Congestion Notification: Not-ECT (Not ECN-Capable Transport) (0x00)
    Total Length: 88
    Identification: 0x42b8 (17080)
    Flags: 0x00
    Fragment offset: 0
    Time to live: 64
  Protocol: Generic Routing Encapsulation (47)
    Header checksum: 0x33bb [validation disabled]
      [Good: False]
      [Bad: False]
    Source: 1.1.1.1 (1.1.1.1)
    Destination: 1.1.1.2 (1.1.1.2)
    [Source GeoIP: unknown]
    [Destination GeoIP: unknown]
  Generic Routing Encapsulation (0x6400 - unknown)
    Flags and version: 0x2001
      0... .. = Checksum Bit: No
      .0.. .. = Routing Bit: No
      ..1. .... = Key Bit: Yes
      ...0 .... = Sequence Number Bit: No
      .... 0... .. = Strict Source Route Bit: No
      .... .000 .... = Recursion control: 0
      .... .... 0000 0... = Flags (Reserved): 0
      .... .... .001 = Version: Enhanced GRE (1)
    Protocol Type: Unknown (0x6400)
    Key: 0x003c0000
    Data (60 bytes)
      Data: ffffffff0c8bfd30c4b080600010800060400010c8b...
      [Length: 60]

```

```

0180 00 00 00 00 08 00 45 00 00 58 42 b8 00 00 40 2f .....E..XB...@
0190 33 bb 01 01 01 01 01 01 01 02 20 01 64 00 00 3c 3..... .d.<
01a0 00 00 ff ff ff ff ff 0c 8b fd f3 0c 4b 08 06 .....K..
01b0 00 01 08 00 06 04 00 01 0c 8b fd f3 0c 4b c0 a8 .....K..
01c0 0b 0c 00 00 00 00 00 00 c0 a8 0a ff 00 00 00 .....
01d0 00 00 00 00 00 00 00 00 00 00 00 00 00 00

```

Applications Places Wed 10:11 AM mtgit

FreeRDP: 192.168.1.253

admin@192.168.1.254 - WinBox v6.28 on RB450G (mipsbe) 10:05 AM 9/30/2015

Safe Mode CPU:22% Memory:226.5 MiB Hide Passwords

Quick Set

- Interfaces
- Bridge
- PPP
- Switch
- Mesh
- IP
- System
- Queues
- Files
- Log
- Radius
- Tools
- New Terminal
- MetaROUTER
- Partition
- Make Supout.rif
- Manual
- Exit

Interface List

Interface	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE
R	WIFI_network	Ethernet						
R	bridge1	Bridge						
RS	eoip-tunnel1	EoIP Tunnel						
R	ether1							
RS	ether2							
R	ether4							
R	ether5							
R	pppoe-out1							
R	ssstp-out1							

```
Administrator: C:\Windows\system32\cmd.exe - ping 192.168.10.200 -t
Microsoft Windows [Version 6.4.2601.3]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Administrator.SERVER>ping 192.168.10.200 -t

Pinging 192.168.10.200 with 32 bytes of data:
Reply from 192.168.10.200: bytes=32 time=3ms TTL=64
Reply from 192.168.10.200: bytes=32 time=38ms TTL=64
Reply from 192.168.10.200: bytes=32 time=2ms TTL=64
Reply from 192.168.10.200: bytes=32 time=33ms TTL=64
Reply from 192.168.10.200: bytes=32 time=43ms TTL=64
Reply from 192.168.10.200: bytes=32 time=2ms TTL=64
Reply from 192.168.10.200: bytes=32 time=2ms TTL=64
Reply from 192.168.10.200: bytes=32 time=2ms TTL=64
Reply from 192.168.10.200: bytes=32 time=4ms TTL=64
Reply from 192.168.10.200: bytes=32 time=2ms TTL=64
Reply from 192.168.10.200: bytes=32 time=43ms TTL=64
Reply from 192.168.10.200: bytes=32 time=3ms TTL=64
Reply from 192.168.10.200: bytes=32 time=2ms TTL=64
Reply from 192.168.10.200: bytes=32 time=37ms TTL=64
Reply from 192.168.10.200: bytes=32 time=38ms TTL=64
```

9 items (1 selected)

[mtgit@mail:~/Desktop] [mtgit@mail:~/Desktop] FreeRDP: 192.168.1.253 [FreeRDP: 192.168.1.200] 1 / 4

Applications Places Tue 9:15 AM mtgit

FreeRDP: 192.168.1.253

Start 9:10 AM 9/29/2015

admin@192.168.1.254 () - WinBox v6.28 on RB450G (mipsbe) CPU:12% Memory:226.9 MiB Hide Passwords

Safe Mode

RouterOS WinBox

- Quick Set
- Interfaces
- Bridge
- PPP
- Switch
- Mesh
- IP
- System
- Queues
- Files
- Log
- Radius
- Tools
- New Terminal
- MetaROUTER
- Partition
- Make Supout.tif
- Manual
- Exit

Interface List

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

Interface	Speed	Tx Packet (p/s)	Rx Packet (p/s)
...	...	5.9 kbps	11
...	...	2.0 Mbps	203
...	...	133.6 kbps	136
...	...	41.5 kbps	88
...	...	512 kbps	2
...	1

Interface <sstp-out1>

General Dial Out Status Traffic

Tx/Rx Rate: 6.7 kbps / 34.0 kbps

Tx/Rx Packet Rate: 9 p/s / 7 p/s

Tx/Rx Bytes: 10.9 MiB / 36.5 MiB

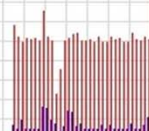
Tx/Rx Packets: 98 488 / 261 898

Tx/Rx Drops: 0 / 0

Tx/Rx Errors: 0 / 0

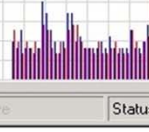
Tx: 6.7 kbps

Rx: 34.0 kbps



Tx Packet: 9 p/s


Rx Packet: 7 p/s



enabled running slave Status: conn...

7 items (1 selected)

192.168.10.200 - Remote Desktop Connection



[remode desktop.odt ~...]
[mtgit@mail:~/Desktop]
[cisco - Google Searc...]
[FreeRDP: 192.168.1....]
mtgit@mail:~/Desktop
FreeRDP: 192.168.1.2... 1 / 4

Applications Places Wed 10:12 AM mtgit

FreeRDP: 192.168.1.253

Start 10:07 AM 9/30/2015

admin@192.168.1.254 - WinBox v6.28 on RB450G (mipsbe) CPU:17% Memory:226.4 MiB Hide Passwords

Safe Mode

RouterOS WinBox

Interface List

Interface	Ethernet	EoIP Tunnel	IP Tunnel	GRE Tunnel	VLAN	VRRP	Bonding	LTE
Name	Type	L2 MTU	Tx	Rx	Tx Packet (p/s)	Rx Packet (p/s)		
R WiFi_network	Ethernet	1520	46.6 kbps	96.2 kbps	17	18		
R bridge1	Ethernet	1520	1734.9 kbps	301.4 kbps	236	264		
RS eoip-tunn1	EoIP Tunnel	65535	62.4 kbps	1863.8 kbps	83	222		
R ether1	Ethernet	1520	525.7 kbps	4.4 Mbps	360	467		
RS ether2	Ethernet	1520	3.7 Mbps	238.9 kbps	439	253		
R ether4	Ethernet	1520	257.3 kbps	51.4 kbps	37	68		
R ether5	Ethernet	1520	1016 bps	0 bps	2	0		
R pppoe-out1	PPPoE Client		450.5 kbps	4.0 Mbps	368	459		
R sstp-out1	SSTP Client		64.5 kbps	1936.6 kbps	84	366		

2 Minutes remaining

Copying 1 item (43.2 MB)

Name: UniFi-installer
 From: **STD Softwares**
 To: Desktop (C:\Users\Administrator.SERVER\Desktop)
 Time remaining: About 2 Minutes
 Items remaining: 1 (39.2 MB)
 Speed: 273 KB/second

9 items (1 selected)

[mtgit@mail:~/Desktop]
[mtgit@mail:~/Desktop]
FreeRDP: 192.168.1.253
[FreeRDP: 192.168.1.200]
1 / 4

Applications Places Wed 10:15 AM mtgit

FreeRDP: 192.168.1.253

Start [Icons] 10:10 AM 9/30/2015

Speedtest.net by Ookla - The... www.speedtest.net

OOKLA SPEEDTEST PINGTEST AWARDS The Global Standard in Internet Metrics

SPEEDTEST

ADVERTISE BECOME A HOST MY RESULTS SUPPORT SETTINGS LOGIN CREATE ACCOUNT

SatSite 2.5G macro BTS

Lightweight, low power base station Software upgrade to 4G LTE

PING
5 ms

DOWNLOAD SPEED
1.16 Mbps

UPLOAD SPEED
1.33 Mbps

SHARE THIS RESULT

SLOW PC PERFORMANCE?

Run a test to identify issues and speed up your PC

START NOW

Are you on Yatanarpon Teleport, Internet Service?

Take our Broadband Internet Survey!

Measure the quality of your connection.

BEGIN TEST

2 Minutes remaining

Copying 1 item (43.2 MB)

Name: UniFi-installer
From: STD Softwares
To: Desktop (C:\Users\Administrator.SERVER\Desktop)
Time remaining: About 2 Minutes
Items remaining: 1 (17.2 MB)
Speed: 140 KB/second

Fewer details Cancel

Satellite Internet

Global Satellite Services - Satellite Internet

Advertise on Speedtest.net

[mtgit@mail:~/Desktop] [mtgit@mail:~/Desktop] FreeRDP: 192.168.1.253 [FreeRDP: 192.168.1.200] [mtgit@mail:~/Desktop] 1 / 4

Thank You

Good Bye



Myanmar MikroTik User Meeting

Welcome To Next Years