

RoMON

Router Management Overlay Network

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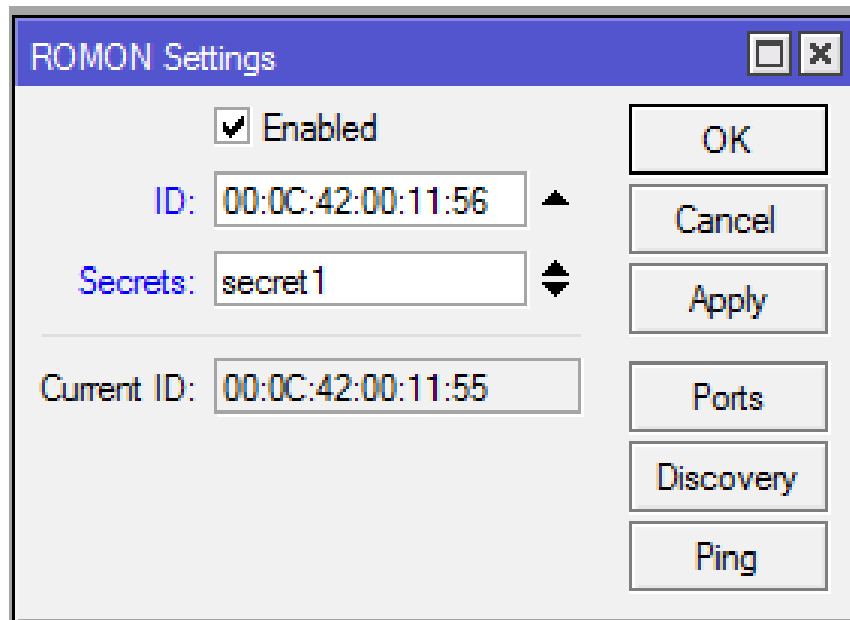
RoMON Features

- Secure Layer2 access to MikroTik devices via:
 - Physical connection
 - Through a Layer2 tunnel
- Discovery and Management of the Mikrotik devices via:
 - Ping
 - SSH
 - Winbox
- Discovery of RoMON devices over multiple hops
- Tunnel Winbox connection to a remote location for management of RoMON enabled devices at the remote location

RoMON connection

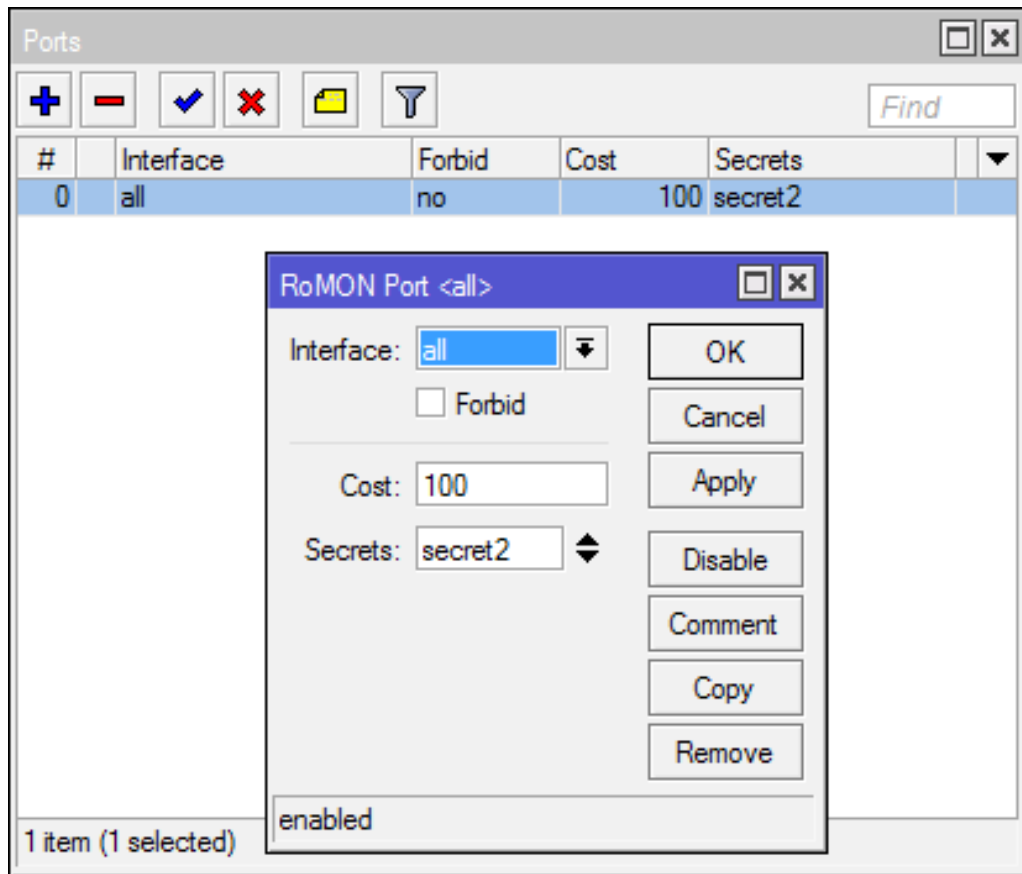
- RoMON enabled devices establishes a independent MAC layer peer discovery and data forwarding protocol
- RoMON network operates independent from L2 or L3 forwarding configuration
- Communication is based on the RoMON ID which is taken from the first MAC address of the board
- Supports only Wireless and Ethernet like interfaces
- MikroTik Proprietary protocol

RoMON configuration



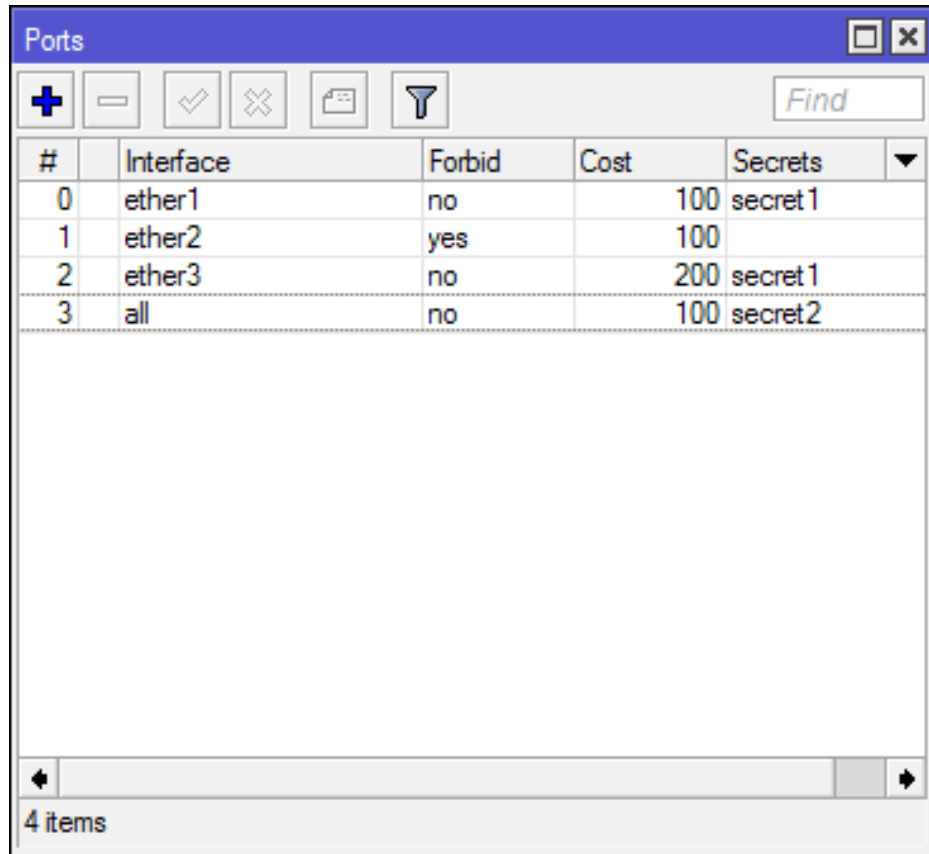
- RoMON device ID can be changed
- Secret – global passphrase for communication to other RoMON devices

RoMON Ports



- Interfaces on which RoMON can do communication
- Different Cost Interfaces
 - Same Cost used for TX/RX
- Override Secret for Interfaces

RoMON Ports



#	Interface	Forbid	Cost	Secrets
0	ether1	no	100	secret1
1	ether2	yes	100	
2	ether3	no	200	secret1
3	all	no	100	secret2

- Ports are ordered and processed like in Firewall from top to bottom

RoMON Discovery

Discovery (Running)							
Address	Cost	Hops	Path	L2MTU	Identity	Version	
00:0C:42:00:B1:97	200	1	00:0C:42:00:B1:97	1500	CCR_MT_Main	6.28	
00:0C:42:00:BE:67	400	2	00:0C:42:00:B1:97, 00:0C:42:00:BE:67	1500	HOTSPOT	6.28	
11:22:22:22:22:11	200	1	11:22:22:22:22:11	1500	3C18	6.28	
4C:5E:0C:29:0E:F5	200	1	4C:5E:0C:29:0E:F5	1500	MikroTik	6.28	
4C:5E:0C:4B:7F:87	400	2	00:0C:42:00:B1:97, 4C:5E:0C:4B:7F:87	1500	CCR1009	6.28	
4C:5E:0C:80:25:88	200	1	4C:5E:0C:80:25:88	1500	OUT52	6.28	
D4:CA:6D:19:65:17	400	2	D4:CA:6D:89:50:AB, D4:CA:6D:19:65:17	1500	MikroTik	6.28	
D4:CA:6D:77:2D:8F	200	1	D4:CA:6D:77:2D:8F	1500	CCR16-Uldis-L	6.28	
D4:CA:6D:89:50:AB	200	1	D4:CA:6D:89:50:AB	1500	3C8-S0-Uldis...	6.28	
D4:CA:6D:98:7C:2C	200	1	D4:CA:6D:98:7C:2C	1500	3C17	6.28	
D4:CA:6D:A2:7E:C9	200	1	D4:CA:6D:A2:7E:C9	1500	MikroTik	6.28rc20	
D4:CA:6D:FA:02:A7	200	1	D4:CA:6D:FA:02:A7	1500	MikroTik	6.29rc1	

12 items

- Discovery tool enables continuous RoMON peer discovery process
- Shows Cost, Hop count and Path to the neighbour RoMON ID

RoMON Ping

Discovery (Running)

Address	Cost	Hops	Path	L2MTU	Identity	Version
00:0C:42:00:B1:97	200	1	00:0C:42:00:B1:97	1500	CCR_MT_Main	6.28
00:0C:42:00:BE:67	400	2	00:0C:42:00:B1:97, 00:0C:42:00:BE:67	1500	HOTSPOT	6.28
11:22:22:22:22:11	200	1	11:22:22:22:22:11	1500	3C18-Krisjanis...	6.28
4C:5E:0C:29:0E:F5	200	1	4C:5E:0C:29:0E:F5	1500	Mikro Tik	6.28
4C:5E:0C:4B:7F:87	400	2	00:0C:42:00:B1:97, 4C:5E:0C:4B:7F:87	1500	CCR1009_Se...	6.28
4C:5E:0C:80:25:88					UT52	6.28
D4:CA:6D:19:65:17					Mikro Tik	6.28
D4:CA:6D:89:50:AB					C8-S0-Uldis...	6.28
D4:CA:6D:98:7C:2C					C17-Kristaps...	6.28
D4:CA:6D:A2:7E:C9					Mikro Tik	6.28rc20
D4:CA:6D:FA:02:A7					Mikro Tik	6.29rc1

11 items (1 selected)

RoMON Ping

ID: 4C:5E:0C:4B:7F:87
Start

Packet Size: 32
Stop

Interval: 1.000
Close

Count:
New Window

Seq #	Host	Reply Size	Status
0	4C:5E:0C:4B:7F:87	32	
1	4C:5E:0C:4B:7F:87	32	
2	4C:5E:0C:4B:7F:87	32	
3	4C:5E:0C:4B:7F:87	32	
4	4C:5E:0C:4B:7F:87	32	
5	4C:5E:0C:4B:7F:87	32	
6	4C:5E:0C:4B:7F:87	32	
7	4C:5E:0C:4B:7F:87	32	
8	4C:5E:0C:4B:7F:87	32	

9 items 0% packet loss Min: 0 ms Avg: 0 ms Max: 1 ms

RoMON SSH

The screenshot shows a network discovery tool window titled "Discovery (Running)" with a table of discovered devices. Below it is a terminal window showing the output of a command.

Address	Cost	Hops	Path	L2MTU	Identity	Version
00:0C:42:00:B1:97	200	1	00:0C:42:00:B1:97	1500	CCR_MT_Main	6.28
00:0C:42:00:BE:67	400	2	00:0C:42:00:B1:97, 00:0C:42:00:BE:67	1500	HOTSPOT	6.28
11:22:22:22:22:11	200	1	11:22:22:22:22:11	1500	3C18-Krisjanis...	6.28
4C:5E:0C:29:0E:F5	200	1	4C:5E:0C:29:0E:F5	1500	MikroTik	6.28
4C:5E:0C:4B:7F:87	400	2	00:0C:42:00:B1:97, 4C:5E:0C:4B:7F:87	1500	CCR1009_Se...	6.28
4C:5E:0C:80:25:88	200	1	4C:5E:0C:80:25:88	1500	OUT52	6.28
D4:CA:6D:19:65:17	400	2	D4:CA:6D:89:50:AB, D4:CA:6D:19:65:17	1500	MikroTik	6.28


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MikroTik RouterOS 6.28 (c) 1999-2015      http://www.mikrotik.com/

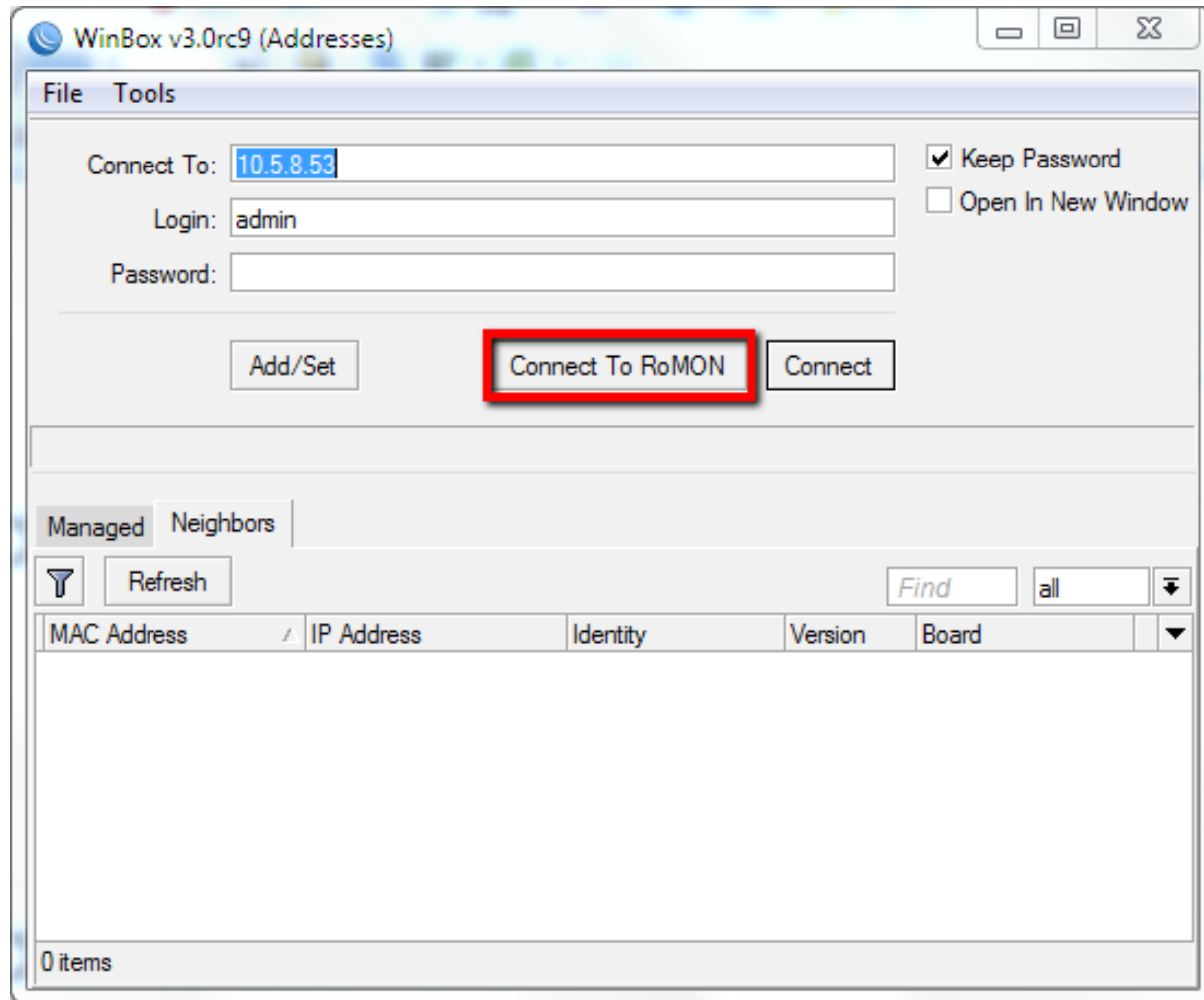
[?]          Gives the list of available commands
command [?]  Gives help on the command and list of arguments

[Tab]        Completes the command/word. If the input is ambiguous,
              a second [Tab] gives possible options

/            Move up to base level
..           Move up one level
/command     Use command at the base level
[admin@RB53] > romon ssh 4C:5E:0C:80:25:88
```

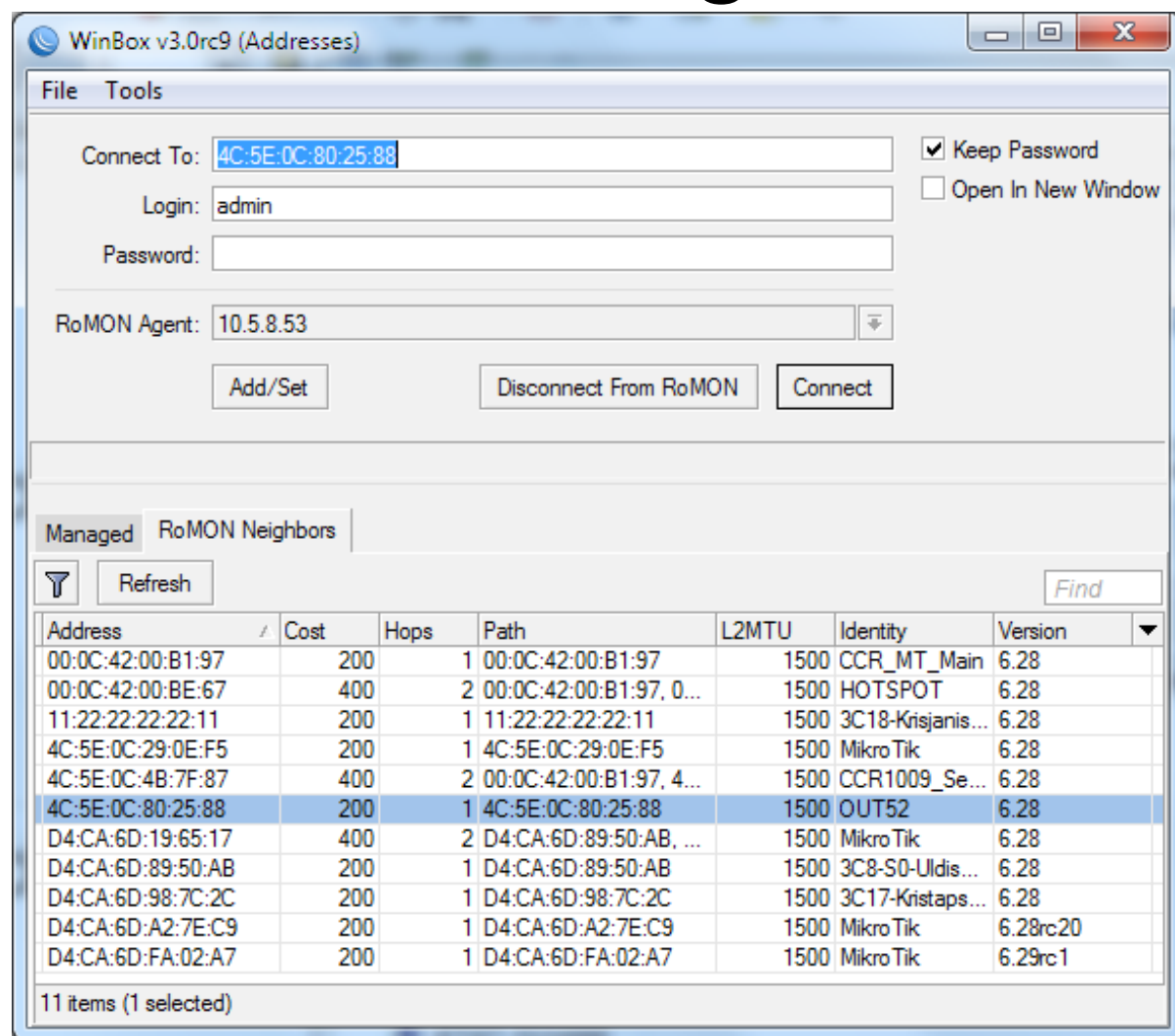
- SSH access to RoMON enabled routers

RoMON using Winbox



- Connect to RoMON enabled router using v3.x Winbox with IP or MAC address

RoMON using Winbox

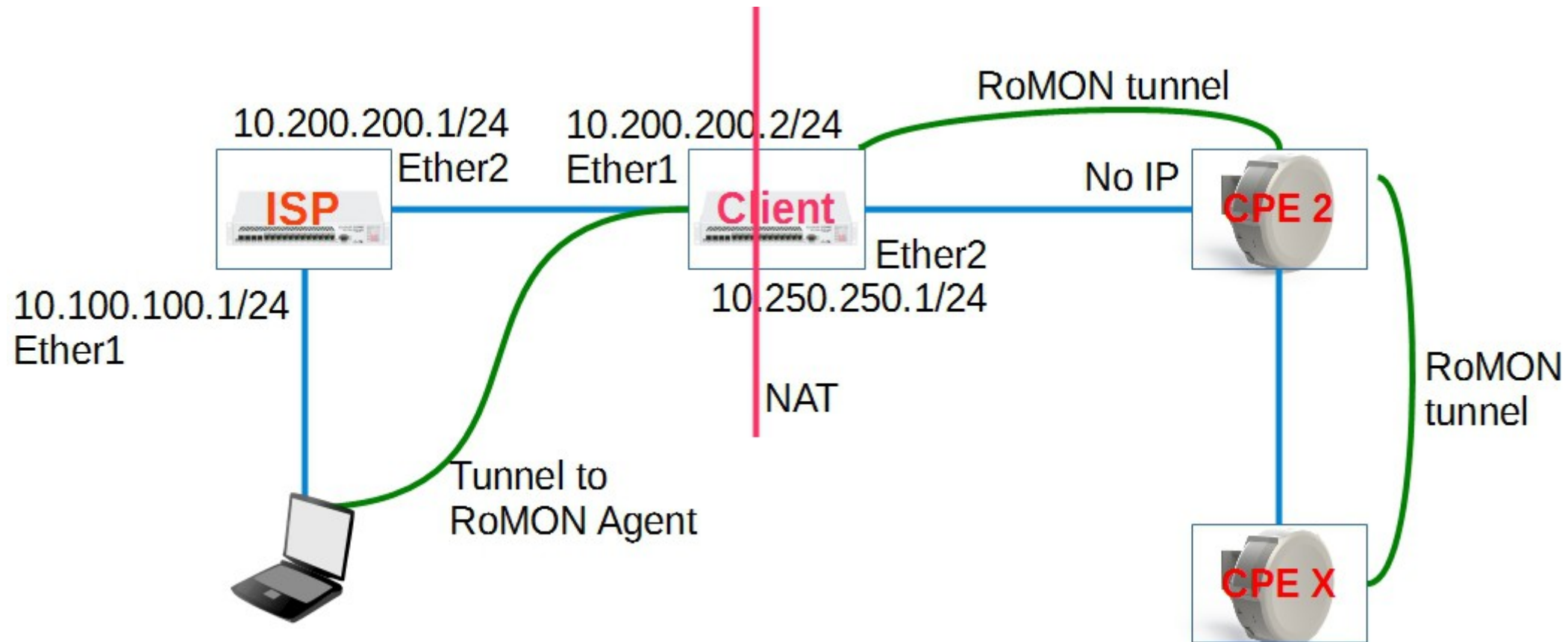


- Select the routers RoMON ID to connect to

RoMON Winbox Features

- Using a RoMON enabled network device connection it is possible to connect to any RoMON enabled device which is reachable from the host device
- Provides easy Winbox management withing remote networks like it would be a local network
- Drag-and-drop supported to upload files to the remote RoMON device

RoMON Setup



Questions?