

How to Authenticate All Stations using Capsman and user manager?

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Georgia , Tbilisi , MUM 2018

About Me .

- Experienced in IT Field About 17 Years
- Consultor of Mikrotik
- Designer of Network
- Implomentation Network
- Penetration Test
- MTCNA,MTCRE,MTCWE,MTCUME,MTCTCE,MTCI
PV6E,MTCINE
- Mikrotik Certified Trainer
- MCSA,MCP,MCSE
- Microsoft Certified Trainer

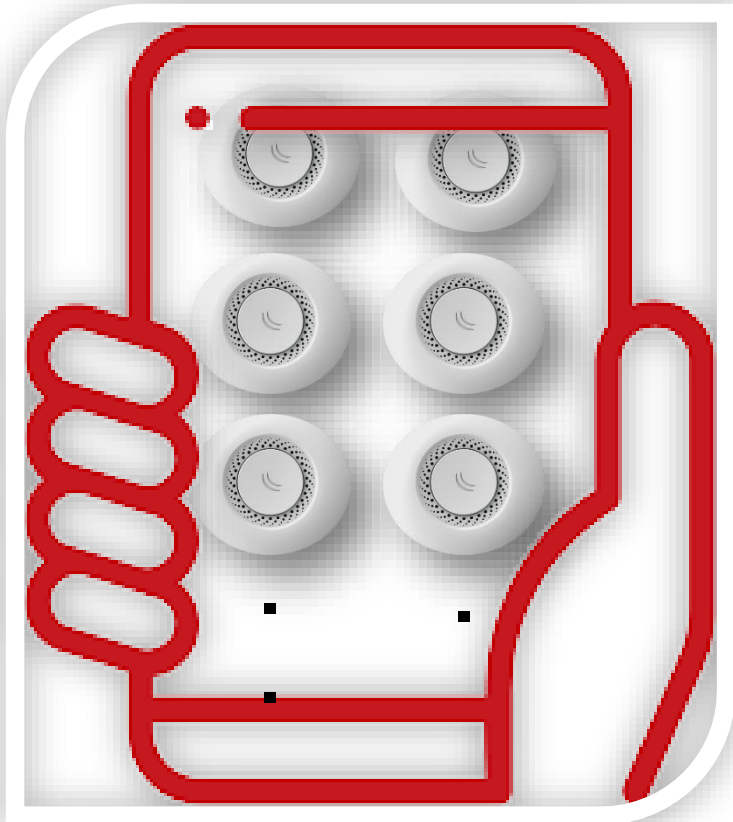


Outline

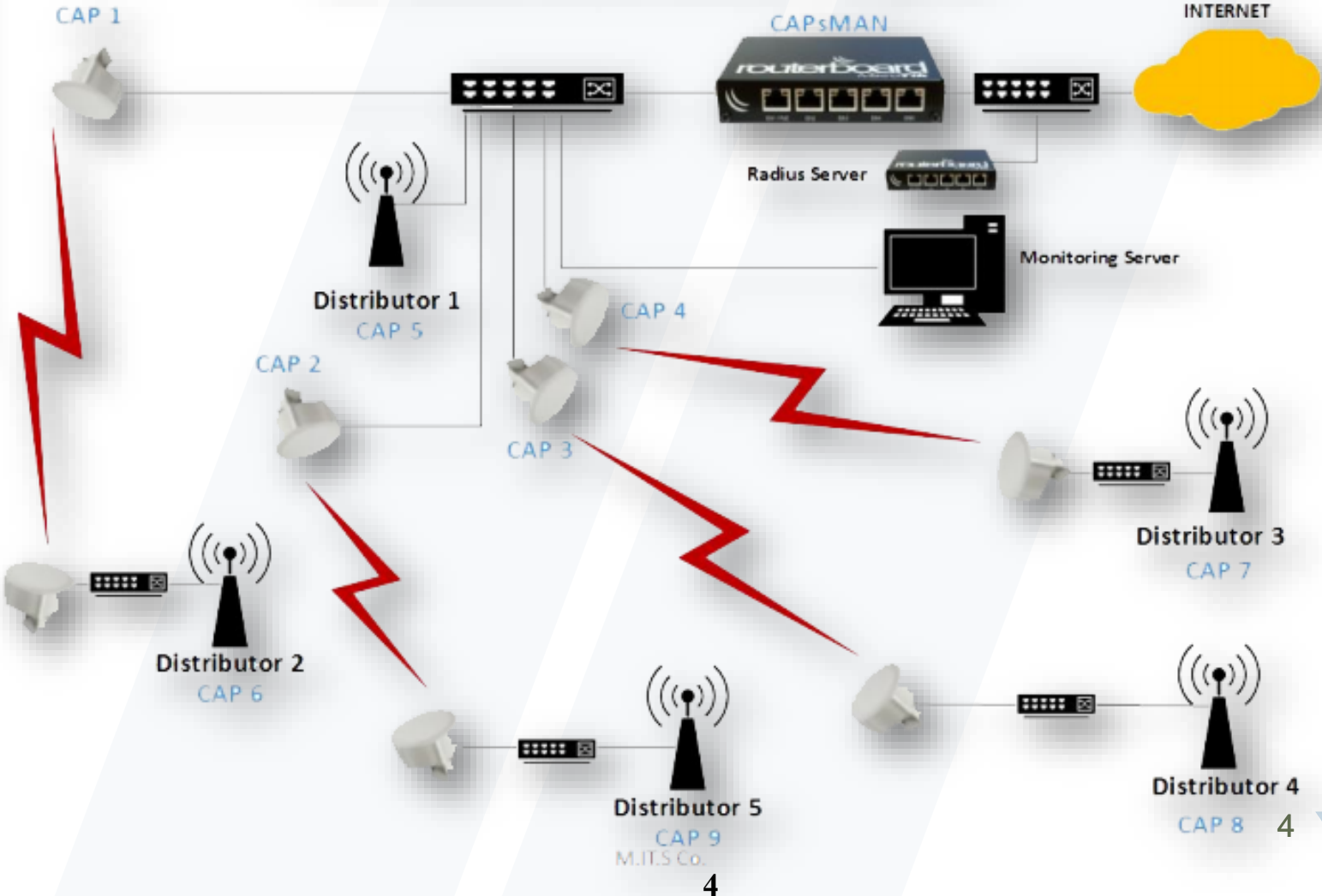
- Capsman
- Certificate
- C.A
- Public Key / Private Key
- Access List
- Capsman Configuration
- Radius Server
- User Manager
- Integration Capsman and User Manager

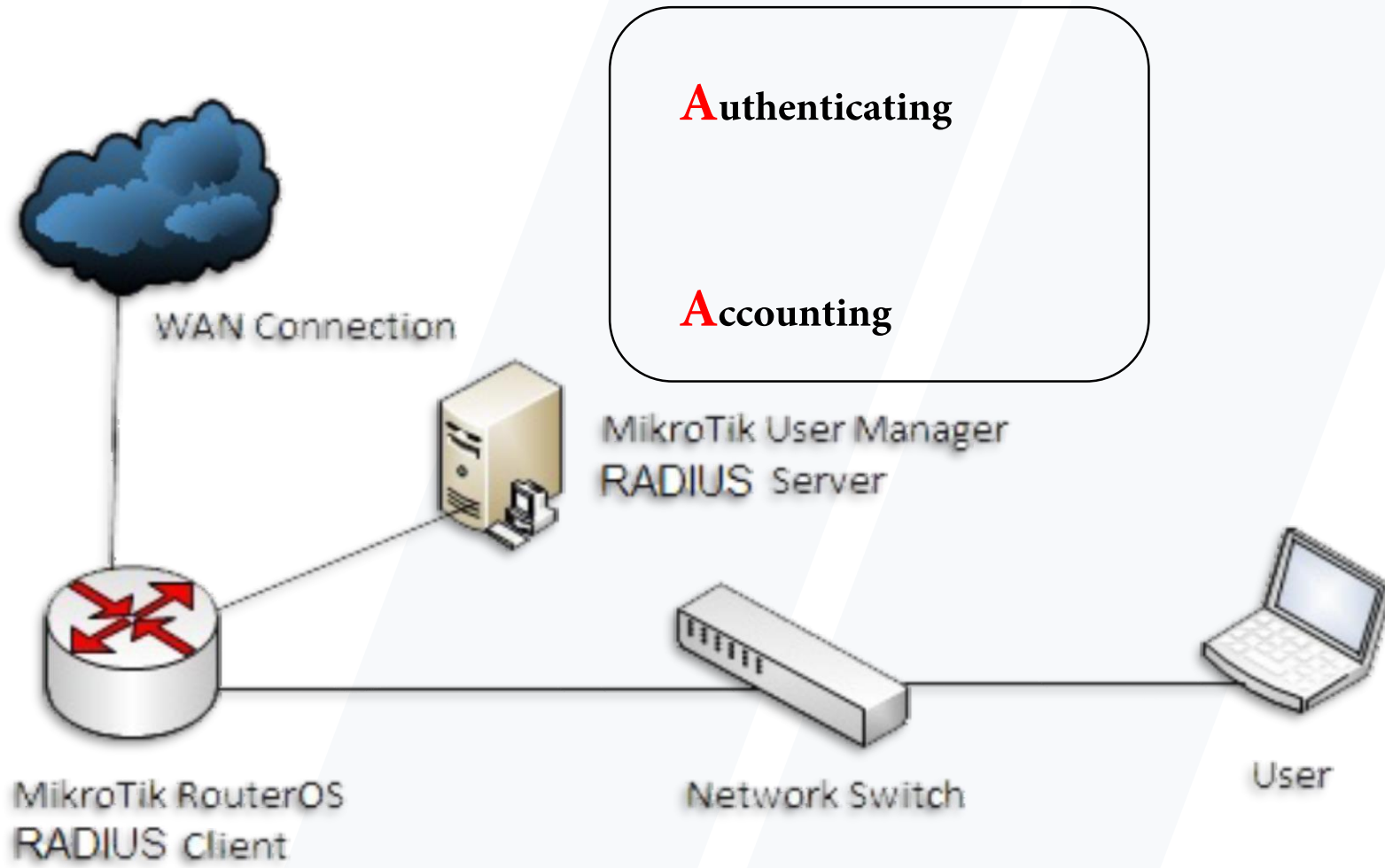


Mikrotik Solution As a Caps Man



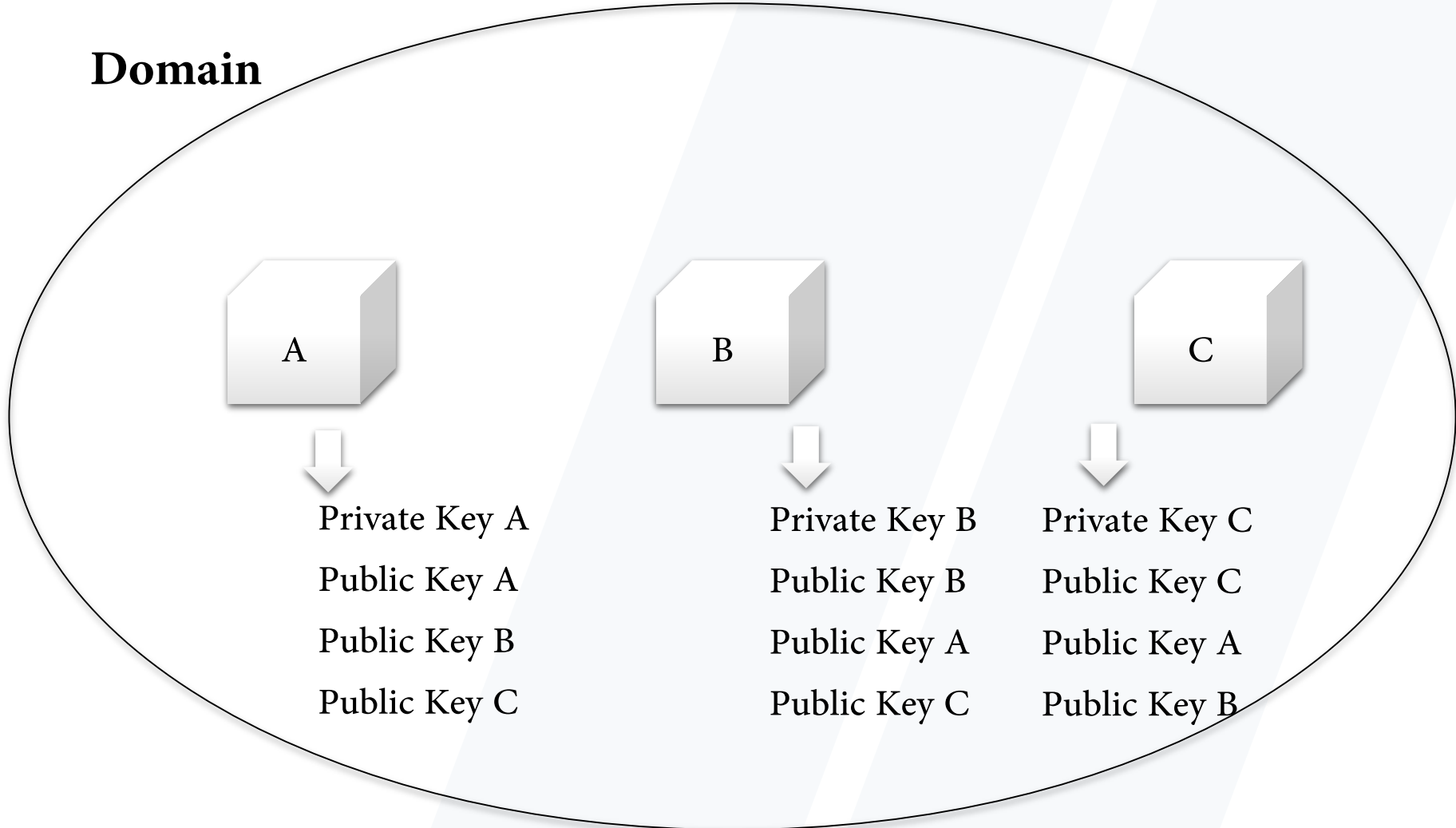
CAP to CAPsMAN Network Diagram



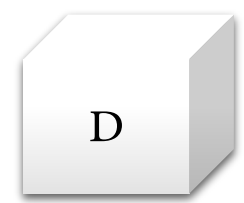


C . A

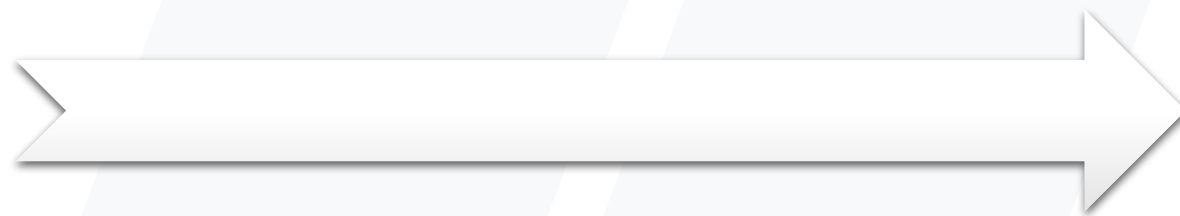
Domain



Hacker

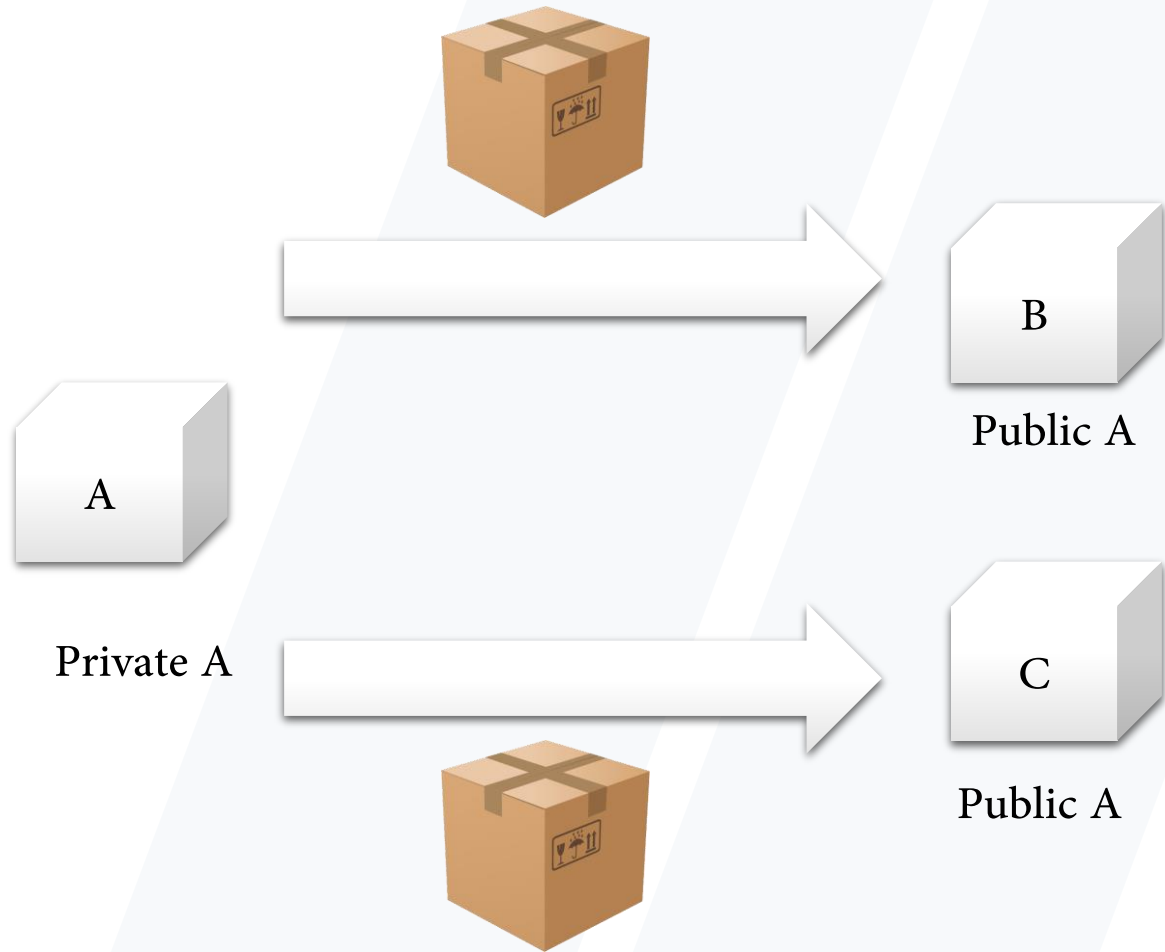


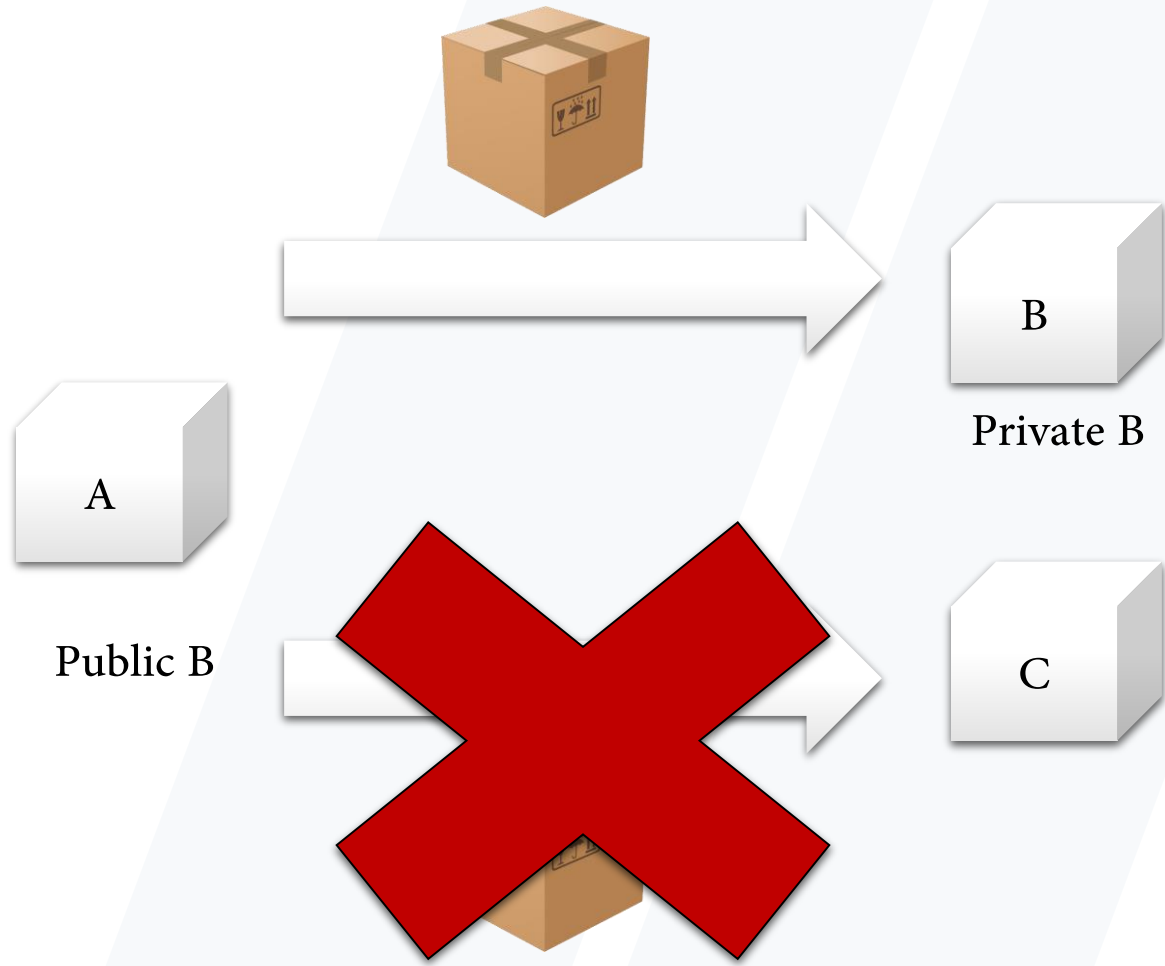
Public



Private







Certificate

on Settings Dashboard

Safe Mode Session: 64:D1:54:3B:03:FD

Quick Set
CAPsMAN
Interfaces
Wireless
Bridge
PPP
Switch
Mesh
IP
IPv6
MPLS
OpenFlow
Routing
System
Queues
Files
Log
Radius
Tools
New Terminal
TR069
LCD
MetaROUTER
Partition
Make Supout.rf
Manual
New WinBox
Exit

1 → Certificates

2 → +

Name	Issuer
cert1	

3 → cert1

4 → Key Size: 2048, Days Valid: 365

5 → Sign

6 → Sign

7 → Export

Select Certificate

Sign

Certificate: cert1 Start Stop Close

CA: CA CRL Host: Progress: done

Export

Certificate: cert1 Type: PEM Export Passphrase: Farkiantech Export Cancel

Export

General Key Usage Status

Name: cert2

Issuer:

Country: GA
State: Tbilisi
Locality: Narikakla
Organization: Farkiantech
Unit:

Common Name:
Subject Alt. Name: IP

Key Size: 2048
Days Valid: 365
Trusted

OK Cancel Apply Copy Remove Sign Sign via SCEP Import Card Reinstall Card Verify Set CA Passphrase Export Revoke

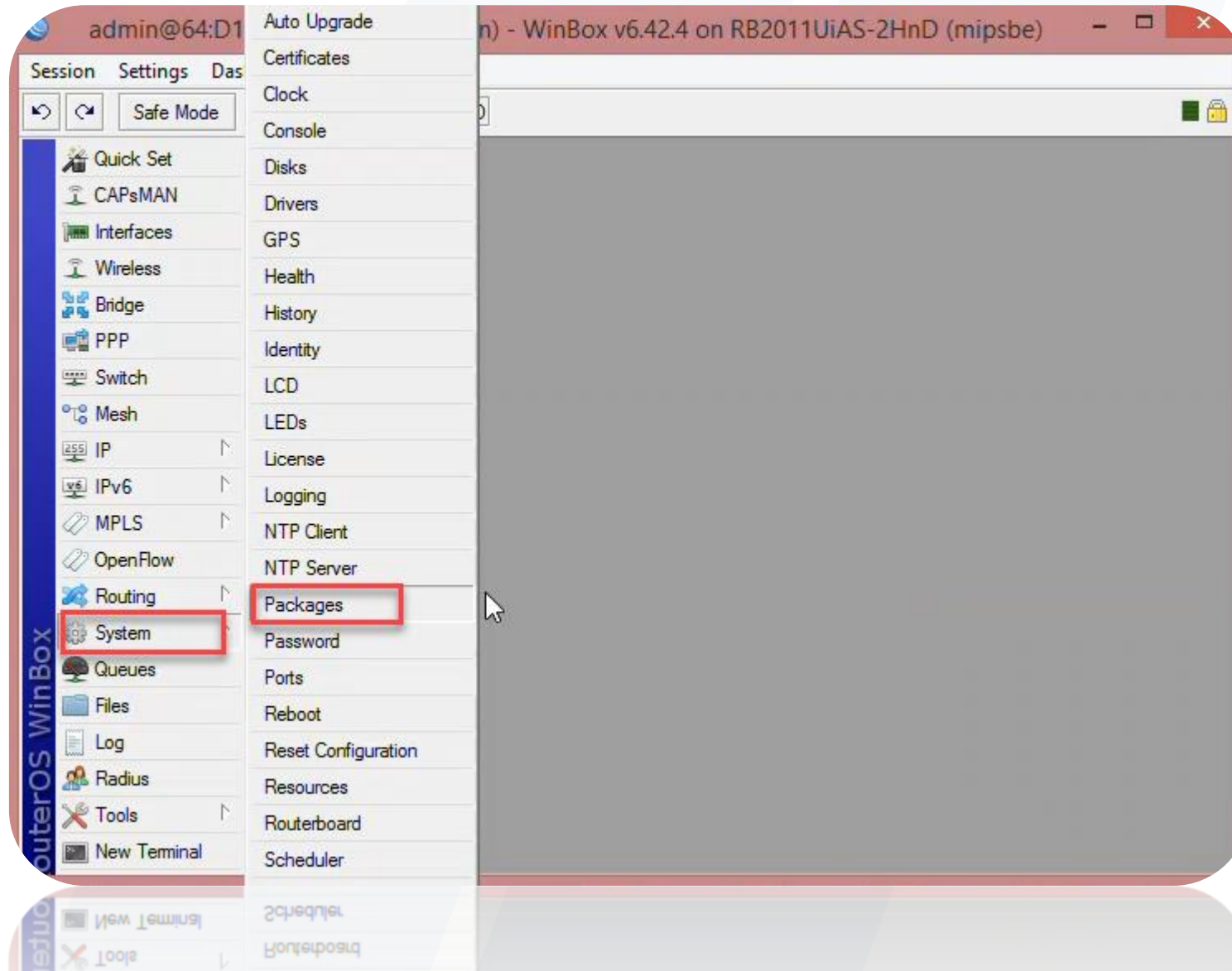
Fingerprint: b4c025f6659...

private key | cert | authority | expired | smart card key | trusted

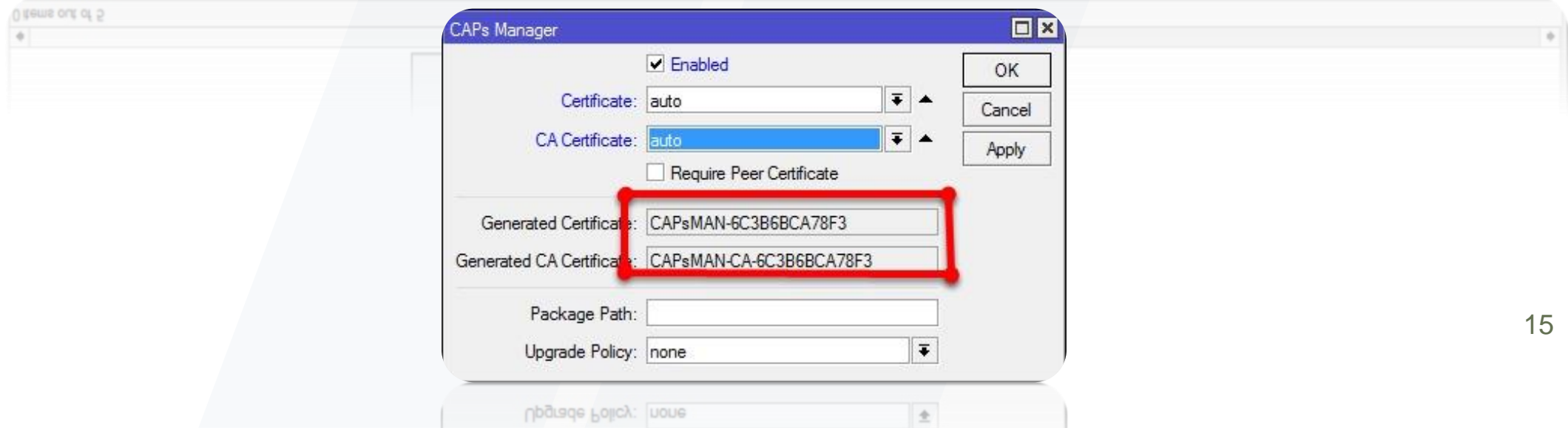
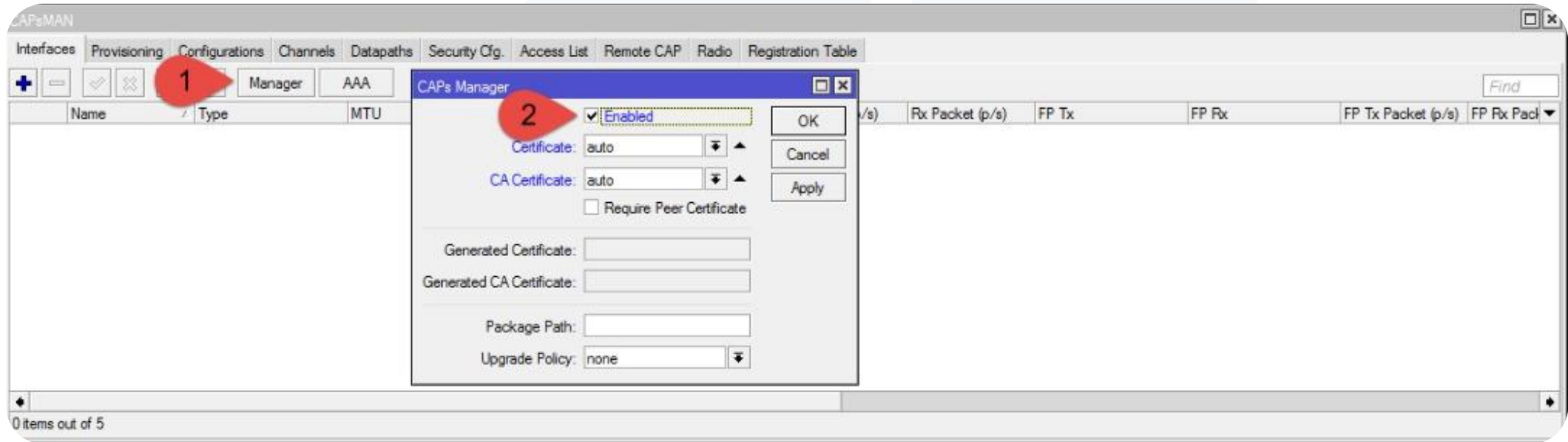
Change Router Name

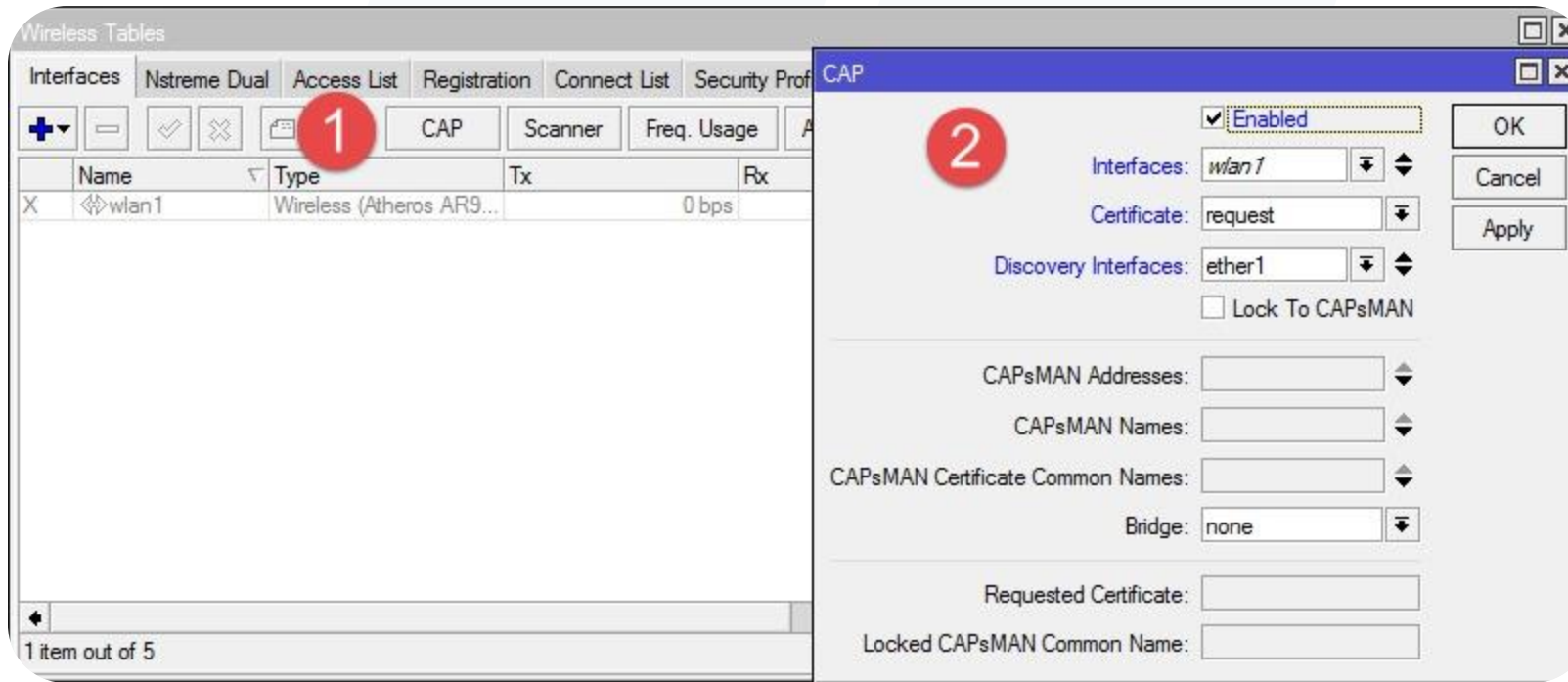


Check the Installation of CapsMan Package



Enable CapsMan





Wireless Tables

Interfaces Nstream Dual Access List Registration Connect List Security Prof

1

2

3

4

CAP

Enabled

OK

Cancel

Apply

Interfaces: wlan1

Certificate: request

Discovery Interfaces: ether1

Lock To CAPsMAN

CAPsMAN Addresses:

CAPsMAN Names:

CAPsMAN Certificate Common Names:

3 Bridge: bridge1

Requested Certificate:

Locked CAPsMAN Common Name:

Name Type Tx Rx

-- managed by CAPsMAN

XS wlan1 Wireless (wlan) AR9... 0 bps

1 item out of 6

CAPsMAN

CAP Interface Provisioning Configurations Channels Datapaths Security Op. Access List Rates Remote CAP Radio Registration Table

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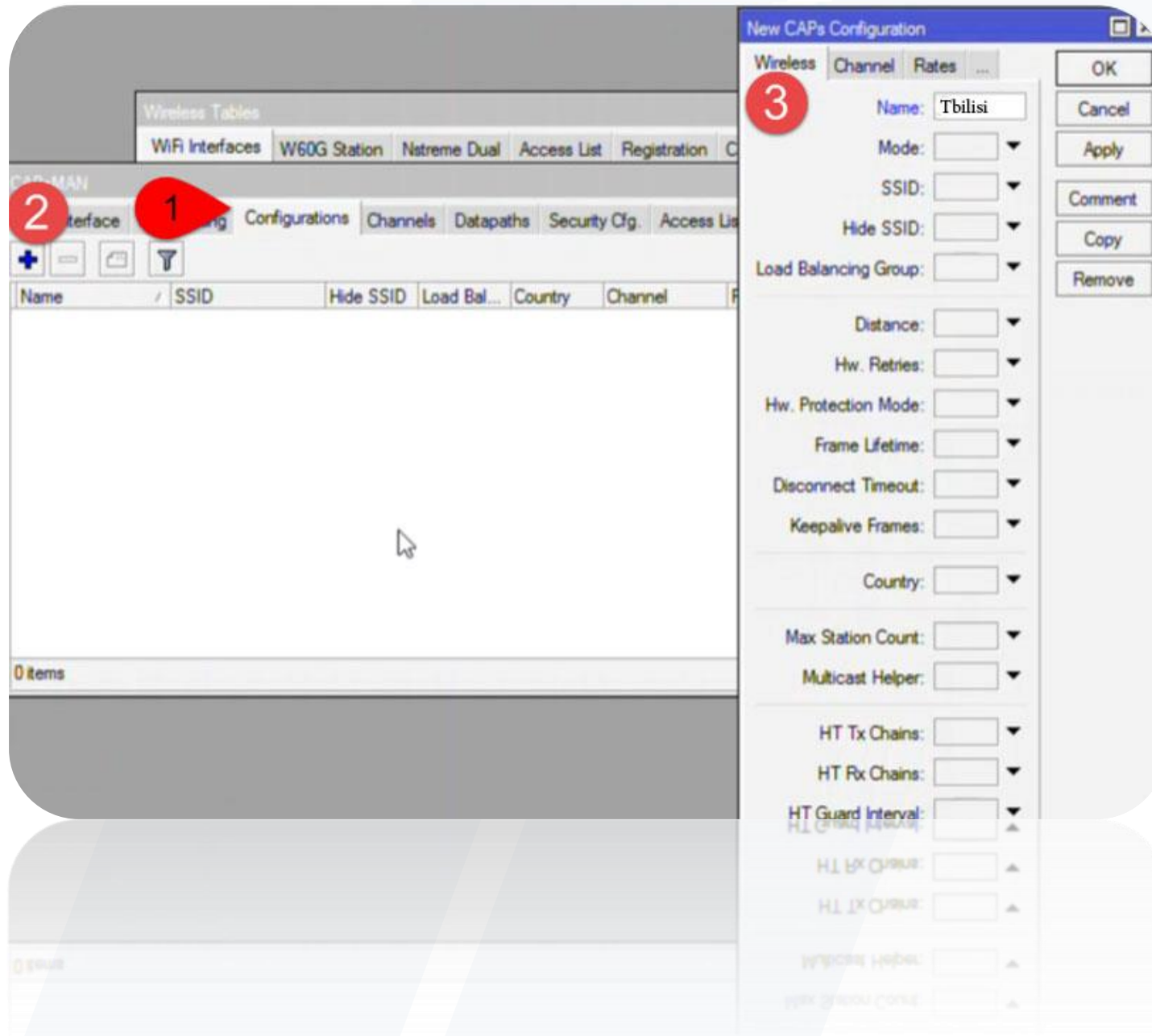
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The image shows a network configuration interface with a 'New CAPs Security Configuration' dialog box open. The dialog box has a blue title bar and contains the following fields and options:

- Name:** security1
- Authentication Type:** WPA PSK WPA2 PSK WPA EAP WPA2 EAP
- Encryption:** aes ccm tkip
- Group Encryption:** aes ccm
- Group Key Update:** (empty field)
- Passphrase:** 123@Farkiantech
- EAP Methods:** (empty field)
- EAP Radius Accounting:** (empty field)
- TLS Mode:** (empty field)
- TLS Certificate:** (empty field)

On the right side of the dialog, there are buttons for OK, Cancel, Apply, Comment, Copy, and Remove. In the background, the main interface has a tab labeled 'Security Cfg.' (marked with a red circle 1) and a '+' button (marked with a red circle 2).

Wireless Tables

WiFi Interfaces W60G Station Nstreme Dual Acc

CAPsMAN

CAP Interface Provisioning Configurations Channels Datapaths

+ - ✓ ✗ 📁 🗑️ Reselect Channel Manager

	Name	Type	MTU	Actual
MB	cap1	CAP Interface	1500	
MB	cap2	CAP Interface	1500	
MB	cap3	CAP Interface	1500	

<cap1>

General Wireless Channel Rates Datapath Security Status Traffic

Configuration: Tbilisi

Mode:

SSID:

Hide SSID:

Load Balancing Group:

Distance:

Hw. Retries:

Hw. Protection Mode:

Frame Lifetime:

Disconnect Timeout:

Keepalive Frames:

Disconnect Timeout:

Frame Lifetime:

Hw. Protection Mode:

OK

Cancel

Apply

Disable

Comment

Copy

Remove

Torch

Scan...

Reselect Channel

CAPsMAN

CAP Interface | **1** Profiles | Configurations | Channels | Datapaths | Security Cfg. | Access List | Rates | Remote CAP | Radio | Registration Table

+ - ✓ ✗ 📁 🏠 Reselect Channel **2** AAA

	Name	Type	MTU	Actual MTU	L2 MTU	Tx	Rx	Tx Packet (p/s)
MB	cap1	CAP Interface	1500	1500	1600	0 bps	0 bps	0
MB	cap2	CAP Interface	1500	1500	1600	0 bps	0 bps	0
MB	cap3	CAP Interface	1500	1500	1600	0 bps	0 bps	0

3 AAA

MAC Format: XX:XX:XX:XX:XX:XX

MAC Mode: as username and password

MAC Caching: 00:00:00

Interim Update: 00:00:59

OK Cancel Apply

Interim Update: 00:00:59

Radius

The image shows a Mikrotik WinBox interface. On the left is a navigation tree with 'Radius' highlighted and a red circle '1' next to it. The main window shows the 'CAPsMAN' configuration page with a table of CAP interfaces. A red circle '2' is next to the '+' icon for adding a new interface. The table contains the following data:

Name	Type	MTU	Actual MTU
cap1	CAP Interface	1500	1500
cap2	CAP Interface	1500	1500
cap3	CAP Interface	1500	1500

On the right, the 'New Radius Server' dialog is open, with a red circle '3' next to the title bar. The 'General' tab is active, showing the following configuration:

- Service: ppp, login, hotspot, wireless, dhcp, ipsec
- Called ID: []
- Domain: []
- Address: 127.0.0.1
- Secret: hellohello
- Authentication Port: 1812
- Accounting Port: 1813
- Timeout: 300 ms
- Accounting Backup
- Realm: []
- Src. Address: []

Buttons on the right include OK, Cancel, Apply, Disable, Comment, Copy, Remove, and Reset Status.

User Manager

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Name	Version	Build Time	Scheduled
ipv6	6.42.4	Jun/15/2018 14:14:17	
lcd	6.42.4	Jun/15/2018 14:14:17	
lte	6.42.4	Jun/15/2018 14:14:17	
mpls	6.42.4	Jun/15/2018 14:14:17	
multicast	6.42.4	Jun/15/2018 14:14:17	
ntp	6.42.4	Jun/15/2018 14:14:17	
openflow	6.42.4	Jun/15/2018 14:14:17	
ppp	6.42.4	Jun/15/2018 14:14:17	
routing	6.42.4	Jun/15/2018 14:14:17	
security	6.42.4	Jun/15/2018 14:14:17	
system	6.42.4	Jun/15/2018 14:14:17	
tr069-client	6.42.4	Jun/15/2018 14:14:17	
ups	6.42.4	Jun/15/2018 14:14:17	
user-manager	6.42.4	Jun/15/2018 14:14:17	
wireless	6.42.4	Jun/15/2018 14:14:17	

The screenshot displays the Mikrotik User Manager web interface. The browser address bar shows the URL `192.168.100.1/userman`. The interface includes a sidebar menu with options like Routers, Users, Sessions, Customers, Logs, Payments, Profiles, Settings, Reports, and Logout. A table with columns for Name and IP address is visible. A 'Router details' dialog box is open, showing configuration fields for Name (partially filled with 'Cap'), Owner (admin), IP address (0.0.0.0), Shared secret, Time zone (Parent time zone), and Log events (Authorization failure checked). A red circle with the number '4' highlights the Name field.



The screenshot displays the Mikrotik User Manager web interface. On the left is a navigation menu with options: Routers, Users, Sessions, Customers, Logs, Payments, Profiles (highlighted), Settings, Reports, 0 A sessions, 0 A users, Advanced search, Maintenance, and Logout. The main area shows the configuration for a profile named '1G1M512K'. Fields include: Profile: 1G1M512K, Name: 1G1M512K, Name for users: (empty), Owner: admin, Validity: (empty), Starts: At first logon, Price: 0.00, and Shared users: not used. Below these are 'Save profile' and 'Remove profile' buttons. A section titled 'Unlimited profile' contains an 'Add new limitation' button, which is marked with a red circle containing the number '1'. An 'Add new limitation' dialog box is open on the right, titled 'Limitation details' (marked with a red circle containing the number '2'). This dialog has a 'Main' section with 'Name' and 'Owner' (admin) fields. The 'Limits' section includes 'Download: 0B', 'Upload: 0B', 'Transfer: 102400', and 'Uptime:'. The 'Rate limits' section has a table with columns for 'Rate limit', 'Rx', and 'Tx'. The 'Rate limit' row has '512k' entered in the Rx field. Other rows for 'Burst rate', 'Burst threshold', and 'Burst time' are empty. The 'Min rate' row is also empty. The 'Priority' is set to 'Not specified'. An 'Add' button is at the bottom right of the dialog.

Rate limit	Rx	Tx
Rate limit	512k	512k
Burst rate		
Burst threshold		
Burst time		
Min rate		

The screenshot displays the MikroTik User Manager web interface in a browser window. The address bar shows "Not secure | 192.168.100.1/userman". The interface includes a left sidebar with navigation options: Routers, Users (highlighted with a red circle '1'), Sessions, Customers, Logs, Payments, Profiles, Settings, Reports, 0 A sessions, and 0 A users. The main content area has tabs for "Add", "Edit", and "Generate". Below these tabs is a table with columns for "Username", "Till time", and "Total time left". A "User details" dialog box is open, showing configuration fields for a user. A red circle '2' highlights the "Assign profile" dropdown menu, which is currently set to "1G1M512K". Other fields in the dialog include "Username" and "Password" (both set to "00:0A:0B:BC:A0:12"), a "Disabled" checkbox, and "Owner" set to "admin". There are "Add" and "Cancel" buttons at the bottom of the dialog.



**THANK
YOU!**

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ANY?
QUESTIONS

