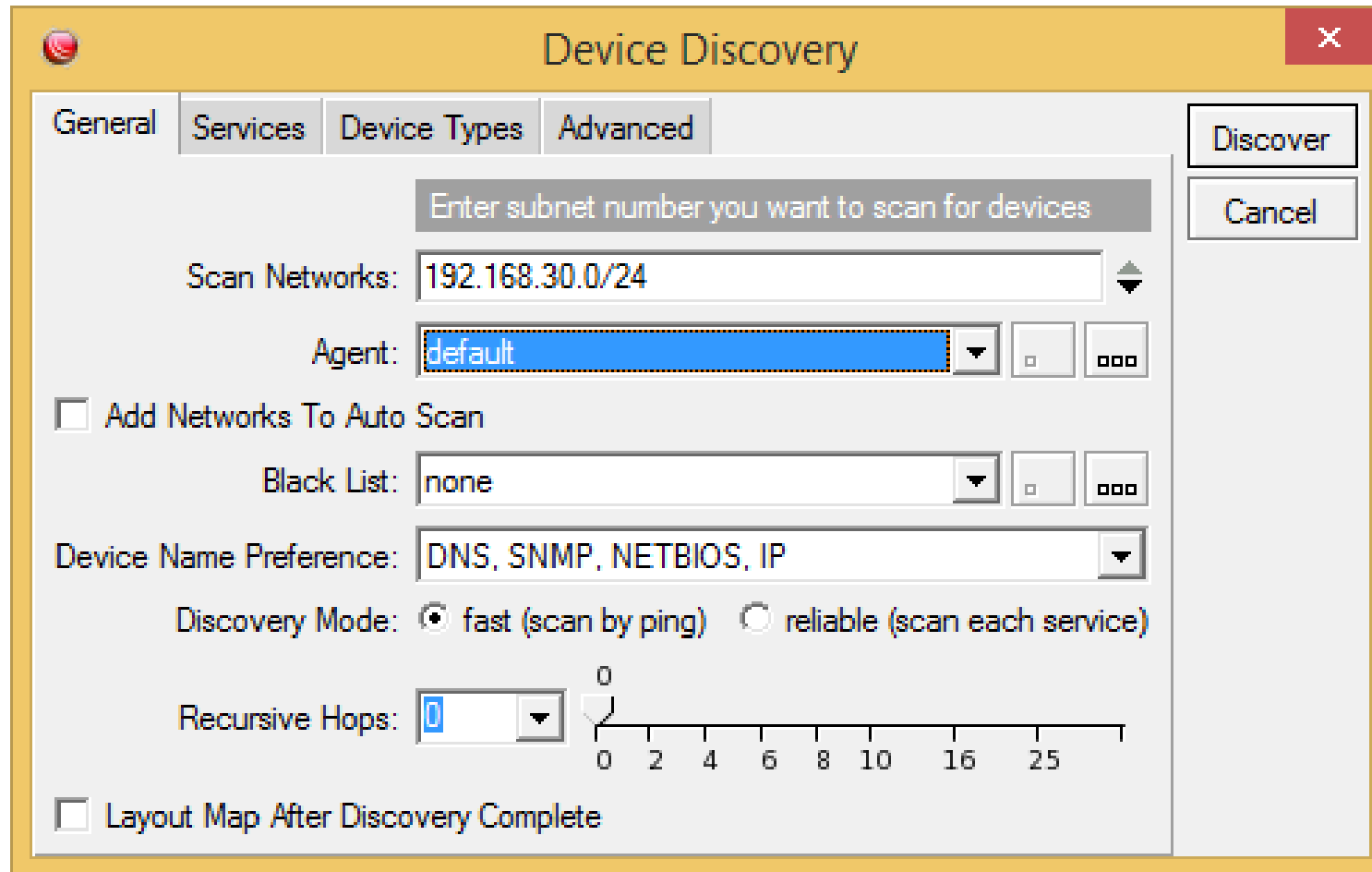


# How to implement the dude to monitoring your network

MUM Thailand in Sep 5, 2016

**The Dude ក៏?**

# ความสามารถของ The Dude



Preferences Help

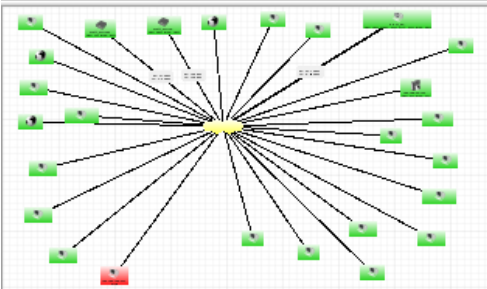
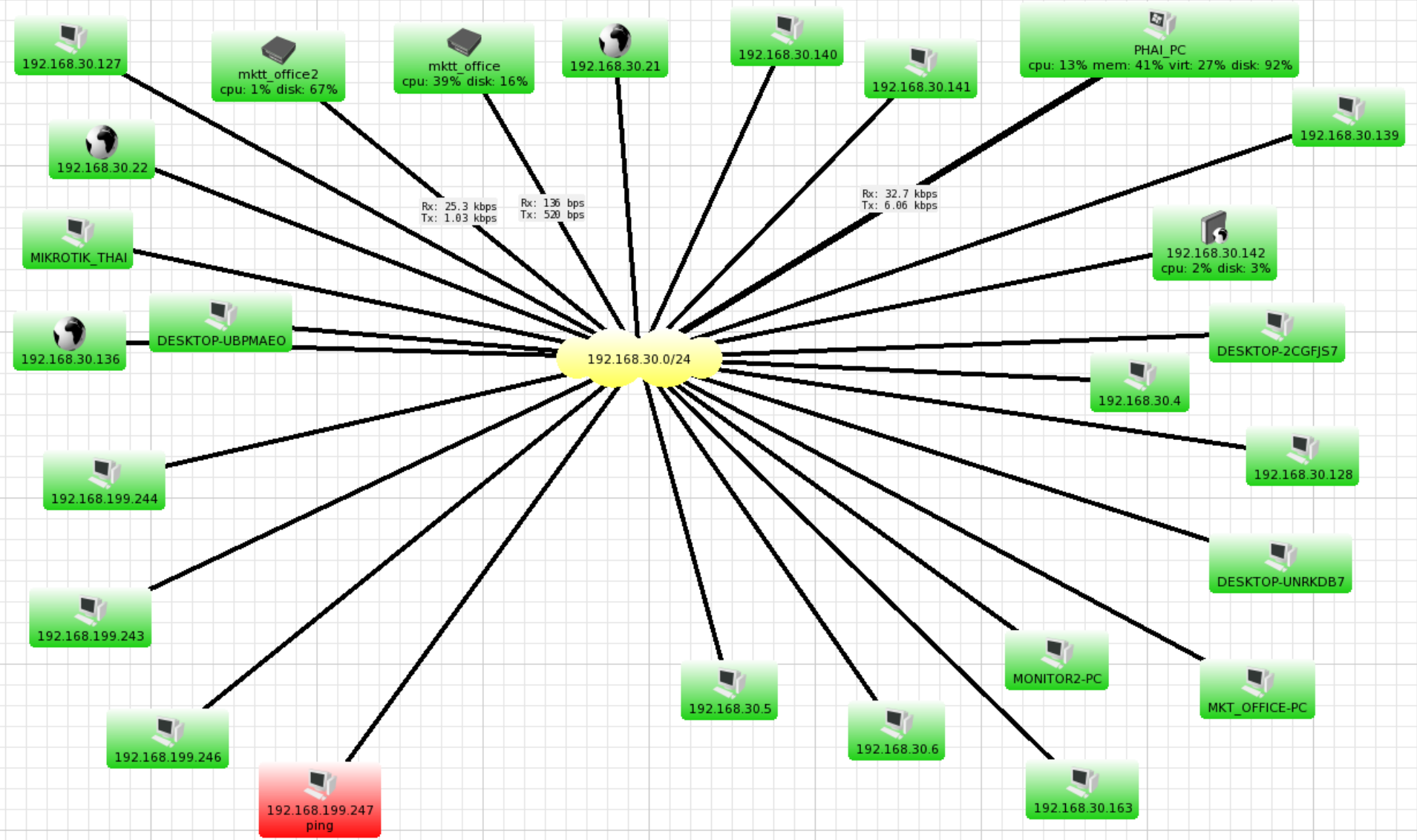
Settings

- Contents
- Address Lists
- Admins
- Agents
- Charts
- Devices
- Files
- Functions
- History Actions
- Links
- Logs
- Network Maps
- Local
- Networks
- Notifications
- Panels
- Probes
- Services
- Tools

Local

Settings Discover Tools

Layer: links Zoom: 100%



Local

Settings Discover Tools

### Local - Network Map

General Polling Outages Appearance Background Export

grid.png

Image:

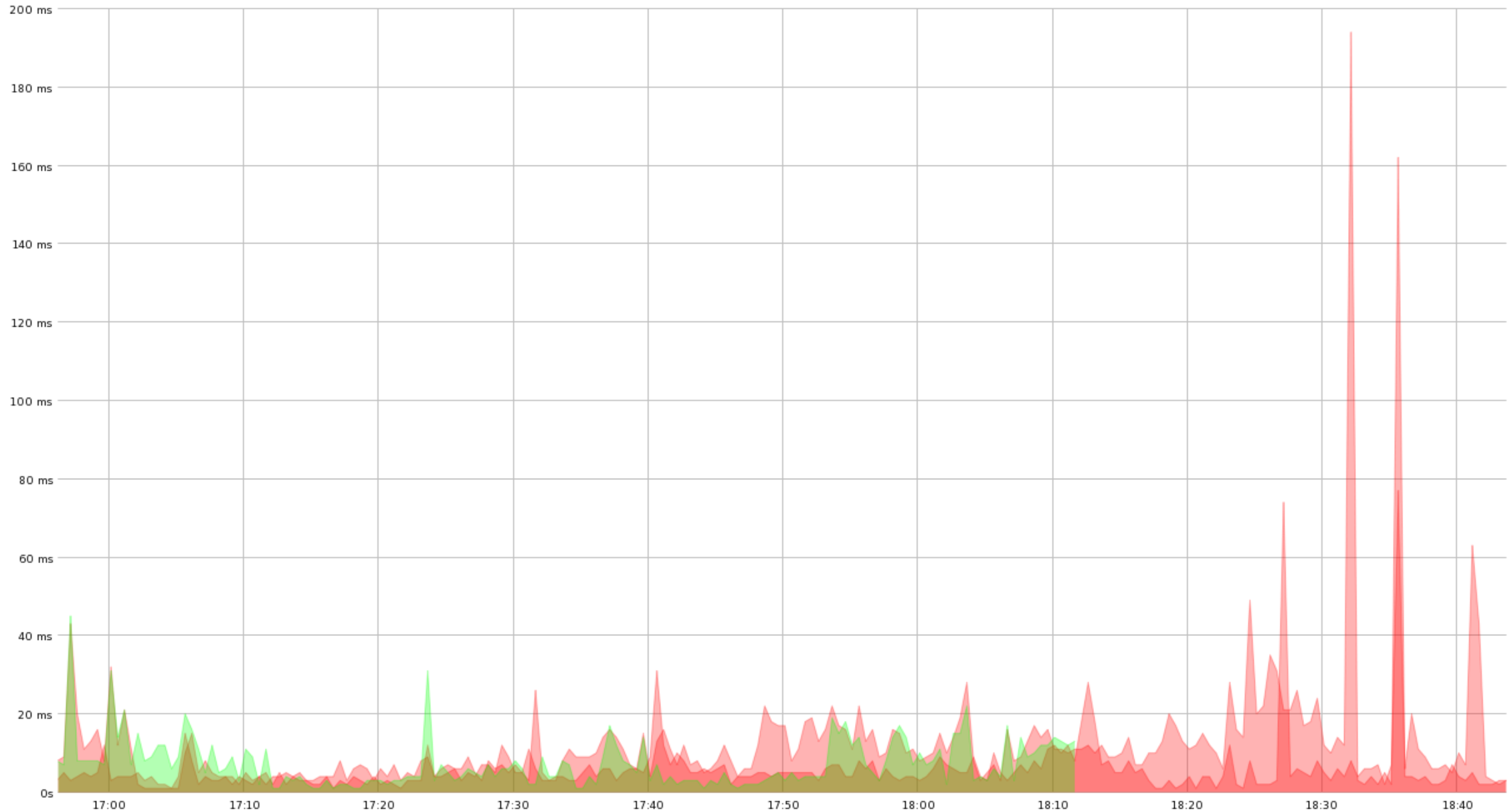
Scale: 100 0 200 400 600 800 1K %

Tile

Ok Cancel Apply Notes

192.168.30.4

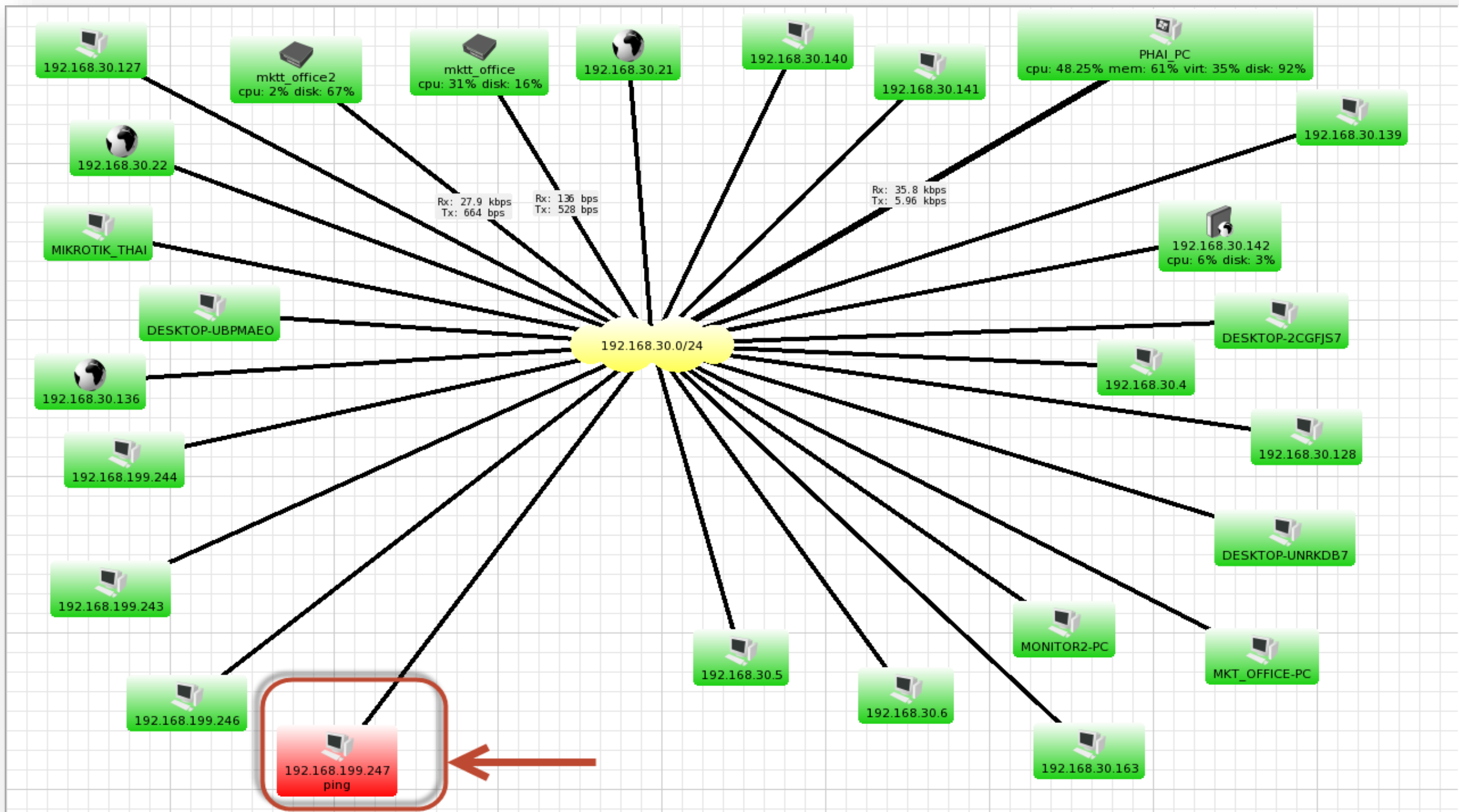
dude ssh, mikrotik, router,



mikrotik @ 192.168.30.122

ping @ 192.168.30.122

ssh @ 192.168.30.122



Preferences Help

CSU Settings

Contents

- Address Lists
- Admins
- Agents
- Charts
- Devices
- Files
- Functions
- History Actions
- Links
- Logs
- Networks
- Network Maps
- Networks
- Notifications
- Panels
- Probes
- Services
- Tools

1

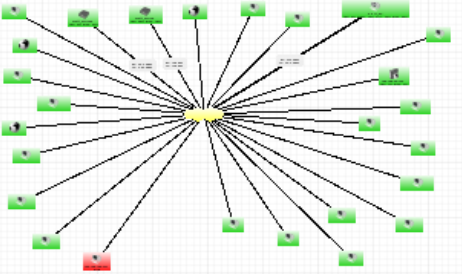
2

Syslog

Filter: [ ] Apply Settings

Time	Address	Event
11:08:45	192.168.199.247	Service ping on 192.168.199.247 is now down (ping reply not received (13))
11:12:15	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
11:14:42	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
11:18:45	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
11:19:42	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
11:22:45	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
11:23:42	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
11:33:12	192.168.199.247	Service ping on 192.168.199.247 is now up (ok)
11:33:15	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
11:33:42	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
11:35:13	192.168.30.139	Service telnet on 192.168.30.139 is now up (ok)
11:35:13	192.168.30.139	Service ssh on 192.168.30.139 is now up (ok)
11:35:13	192.168.30.139	Service ping on 192.168.30.139 is now up (ok)
11:35:14	192.168.30.139	Service ftp on 192.168.30.139 is now up (ok)
11:35:15	192.168.30.139	Service http on 192.168.30.139 is now up (ok)
11:39:45	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
11:40:12	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
11:56:16	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
11:56:43	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
11:56:46	192.168.199.246	Service ping on 192.168.199.246 is now down (ping reply not received (13))
12:06:16	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
12:08:43	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
12:10:14	192.168.199.246	Service ping on 192.168.199.246 is now up (ok)
12:16:16	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
12:17:13	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
12:30:46	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
12:31:13	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
12:35:00	192.168.30.139	Service dns on 192.168.30.139 is now down (timeout)
12:35:46	192.168.199.246	Service ping on 192.168.199.246 is now down (ping reply not received (13))
12:36:16	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
12:36:43	192.168.199.246	Service ping on 192.168.199.246 is now up (ok)
12:38:43	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
12:39:59	192.168.30.139	Service dns on 192.168.30.139 is now up (ok)
12:41:16	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
12:43:13	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
12:46:46	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
12:48:43	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
12:51:46	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
12:53:43	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
13:06:46	192.168.199.247	Service ping on 192.168.199.247 is now down (ICMP error received (6))
13:07:16	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
13:08:15	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
13:17:46	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
13:18:15	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
13:37:46	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
13:38:15	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)
14:05:46	192.168.199.243	Service ping on 192.168.199.243 is now down (ping reply not received (13))
14:06:13	192.168.199.243	Service ping on 192.168.199.243 is now up (ok)

Client: rx 1.03 kbps / tx 497 bps Server: rx 2.35 kbps / tx 4.9 kbps Connected





# เริ่มต้นใช้งาน The Dude

➤ The dude server (RouterOS CHR environment)

## System requirements for server package

### RouterOS:

- v6.34rc13 or newer

### Hardware:

- MikroTik CCR series hardware
- MikroTik RB3011
- RouterOS x86 installations
- RouterOS CHR environment

License	Speed limit	Price
Free	1Mbit	FREE
P1	1Gbit	\$45
P10	10Gbit	\$95
P-Unlimited	Unlimited	\$250

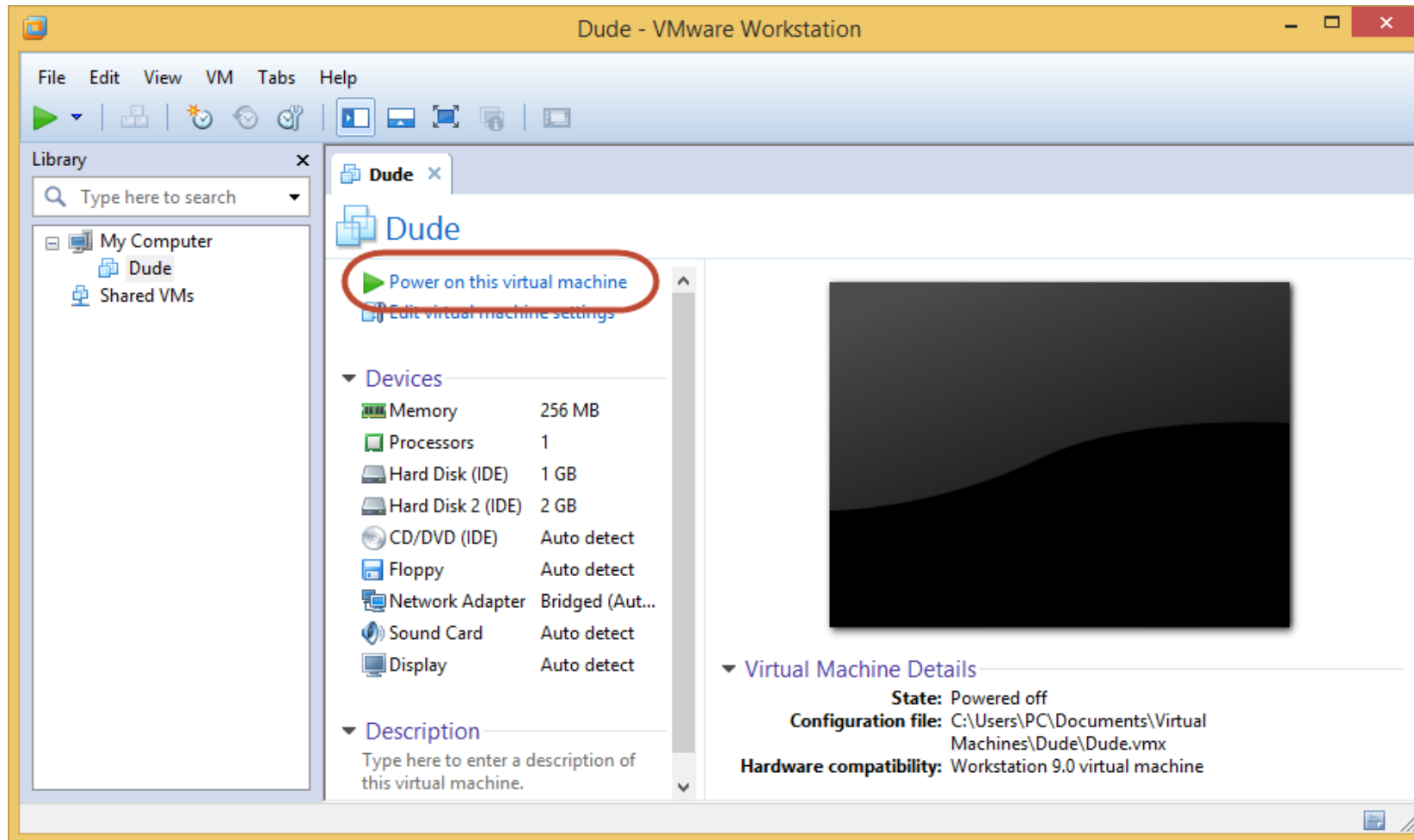
# The dude server (RouterOS CHR environment)

➤ Download ไฟล์ image จาก <http://www.mikrotik.com/download>

Cloud Hosted Router				
	6.32.4 (Bugfix only)	6.35.2 (Current)	5.26 (Legacy)	6.36rc16 (Release candidate)
<b>images</b>	img, vmdk, vhd, vhdx, vdi			
The Dude server	-	↓	-	↓
VMDK image	-	↓	-	↓
VHDX image	-	↓	-	↓
VDI image	-	↓	-	↓
Raw disk image	-	↓	-	↓
Extra packages	-	↓	-	↓
The Dude client	-	↓	-	-
Changelog	-	📄	-	📄
MD5	-	Σ	-	Σ

➤ สร้าง Virtual Machine แล้วติดตั้ง chr-6.35.2

➤ Run Virtual Machine ที่สร้างไว้



## ➤ หลังจากเปิดแล้วให้ตรวจสอบ package the dude

```
[admin@MikroTik] > /system package print
Flags: X - disabled
#  NAME                VERSION          SCHEDULED
0  routeros-x86         6.35.2
1  system               6.35.2
2  X wireless-cm2       6.35.2
3  X ipv6               6.35.2
4  ups                  6.35.2
5  wireless-fp         6.35.2
6  hotspot              6.35.2
7  dhcp                 6.35.2
8  mpls                 6.35.2
9  routing              6.35.2
10 ppp                  6.35.2
11 security            6.35.2
12 advanced-tools     6.35.2
13 dude                6.35.2
[admin@MikroTik] >
```

➤ ใช้คำสั่งตรวจสอบสถานะ dude

```
[admin@MikroTik] > /dude print
        enabled: no
data-directory: dude
        status:
[admin@MikroTik] > _
```

➤ enable the dude พร้อมตรวจสอบ

```
[admin@MikroTik] > /dude set enabled=yes
[admin@MikroTik] > /dude print
        enabled: yes
data-directory: dude
        status: running
[admin@MikroTik] > _
```

# The dude client

➤ Download ไฟล์จาก <http://www.mikrotik.com/download>

Cloud Hosted Router ?

	6.32.4 (Bugfix only)	6.35.2 (Current)	5.26 (Legacy)	6.36rc16 (Release candidate)
<b>images</b>	img, vmdk, vhd, vhdx, vdi			
The Dude server	-	↓	-	↓
VMDK image	-	↓	-	↓
VHDX image	-	↓	-	↓
VDI image	-	↓	-	↓
Raw disk image	-	↓	-	↓
Extra packages	-	↓	-	↓
The Dude client	-	↓	-	-
Changelog	-	📄	-	📄
MD5	-	Σ	-	Σ



not connected - The Dude 6.35.2



Preferences

Help

LONG DISTANCE WIRELESS LINKS -> [WWW](#)

Server: 192.168.30.145

Connect

Mode:  plain  secure

Save

Port: 2210

Remove

User Name: admin

Password:

Remember Password



Address

User Name

Client: rx 65 bps / tx 65 bps

Cannot resolve address

admin@192.168.30.145 The Dude 6.35.2

Preferences Help

Settings Discover Tools

Layer: links Zoom: 100%

Contents

- Address Lists
- Admins
- Agents
- Charts
- Devices
- Files
- Functions
- History Actions
- Links
- Logs
  - Action
  - Debug
  - Event
  - Syslog
- Mib Nodes
- Network Maps
  - Local
- Networks
- Notifications
- Panels

Device Discovery

General Services Device Types Advanced

Enter subnet number you want to scan for devices

Scan Networks: 192.168.30.0/24

Agent: default

Add Networks To Auto Scan

Black List: none

Device Name Preference: DNS, SNMP, NETBIOS, IP

Discovery Mode:  fast (scan by ping)  reliable (scan each service)

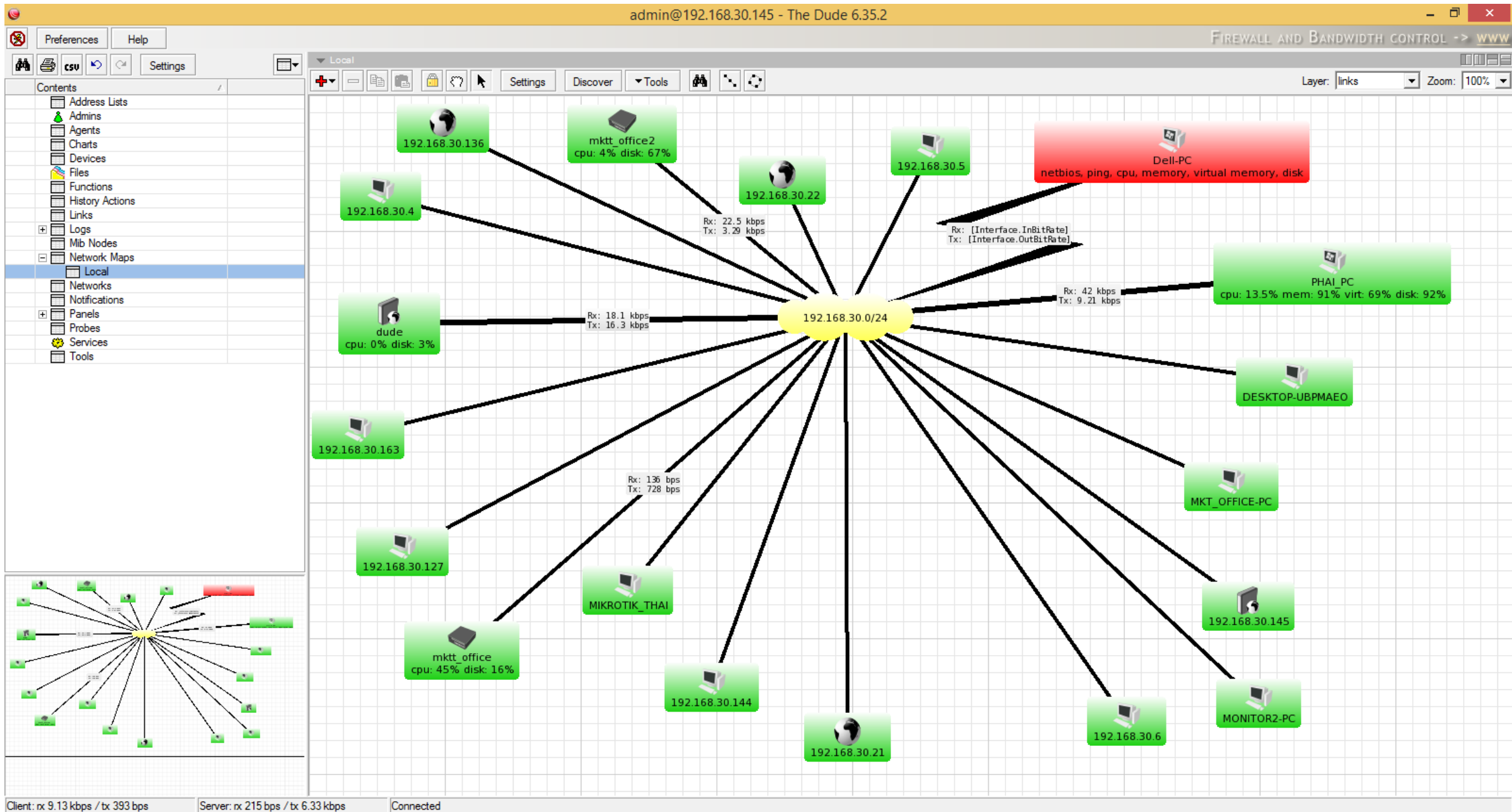
Recursive Hops: 0

Layout Map After Discovery Complete

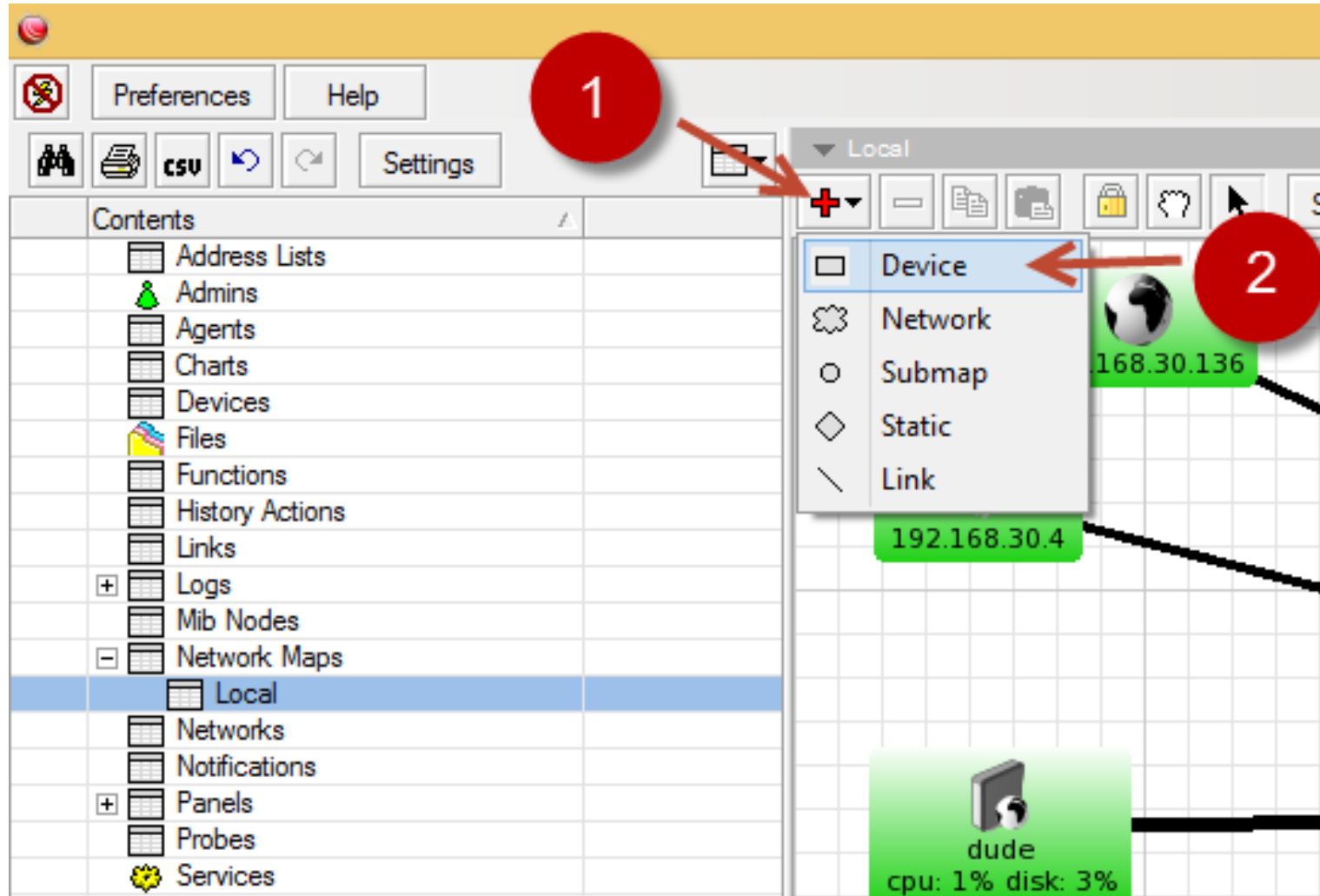
Discover Cancel

Client: rx 465 bps / tx 197 bps Server: rx 216 bps / tx 509 bps Connected





# Add Device



## Add Device



Enter IP address or DNS name

Address: 192.168.30.122

Login for fast access to device with Telnet/Winbox

User Name: admin

Password:

Secure Mode

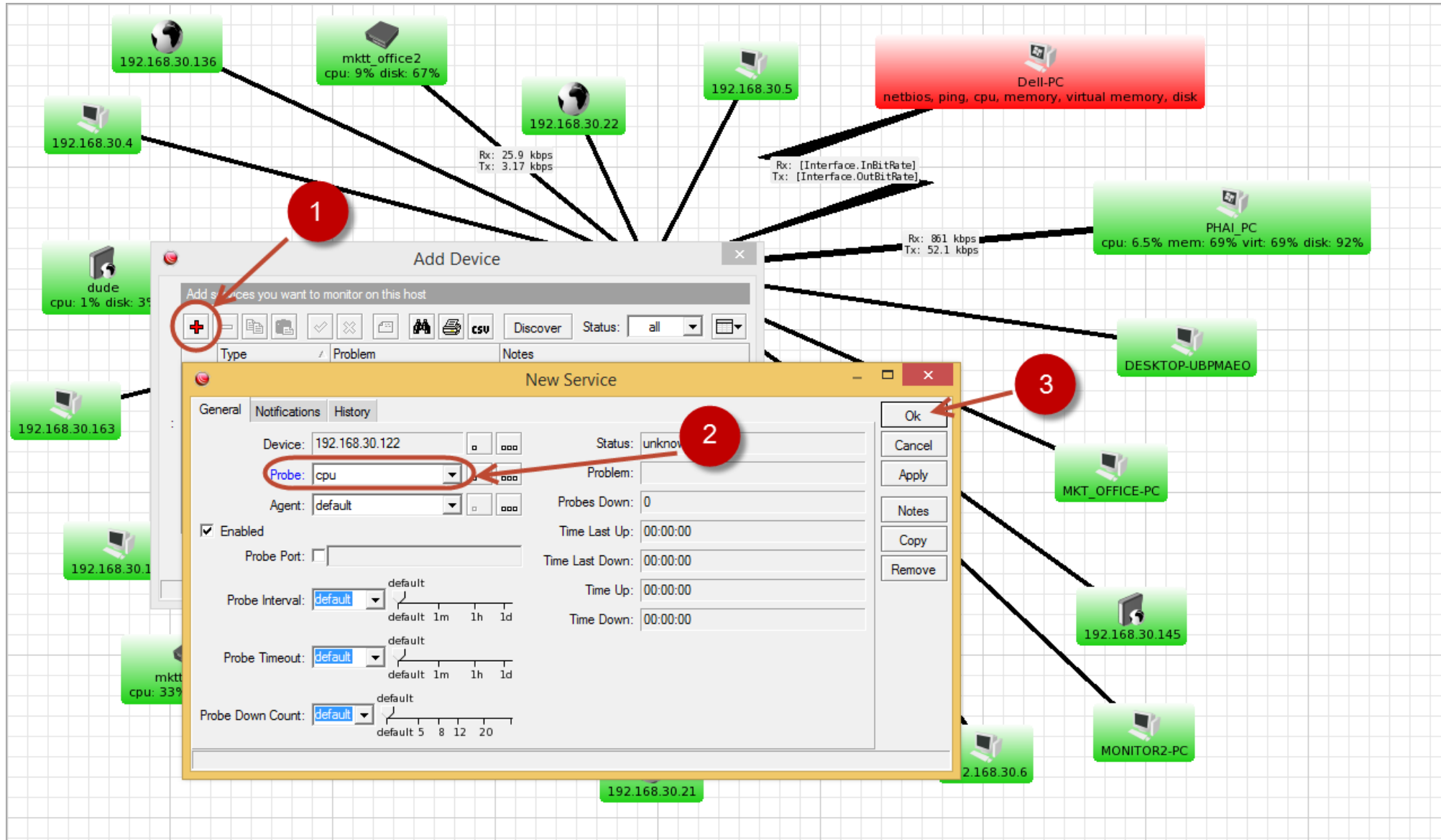
Router OS

Back

Next

Cancel

# Add monitor service



# Link

**Add Link** [X]

Links can be static things on map, or they can show some statistics about some interface, here you can set how link should be managed

Device: 192.168.30.122

Mastering Type: snmp

Interface: ether1 (1)

Speed:

Type: fast ethernet

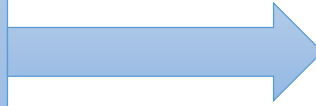
Finish Cancel

**1** **2** **3** **4**

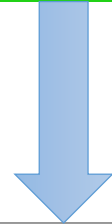
- simple
- snmp
- routeros

- 10g ethernet
- ethernet
- fast ethernet
- gigabit ethernet
- point to point
- some link
- unknown
- vlan
- wireless

แสดงภาพอุปกรณ์ และรายละเอียดต่าง ๆ



192.168.30.122  
cpu: 1% disk: 15%



right click

- Settings
- Appearance ←
- Tools ▶
- Reprobe
- Ack
- Unack
- Upgrade ▶
- Force Upgrade ▶
- Notes
- Remove
- Select Adjacent

[Device.Name][device\_performance()][Device.ServicesDown] - ...

General Image

Type: item

Item Type: device

Map specific values of following settings are used for this item if not specified here

Insert Variable Insert Oid Functions...

Label: [Device.Name]  
[device\_performance ()] [Device.ServicesDown]

Label Refresh Interval: default

Unknown:

Up:

Down Partial:

Down Complete:

Acked:

Shape:

Font:

Ok  
Cancel  
Apply  
Remove

```
[Device.Name]  
[device_performance ()] [Device.ServicesDown]  
[Device.Type]
```

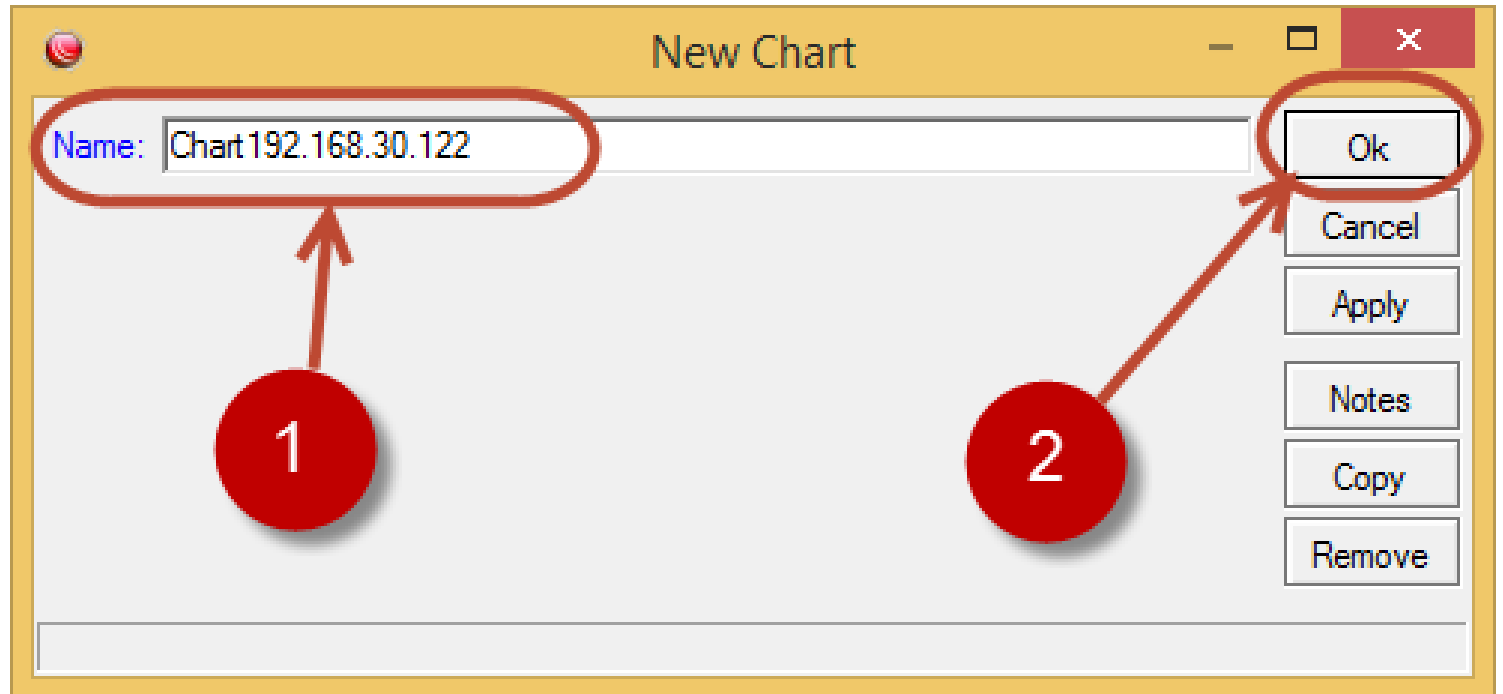
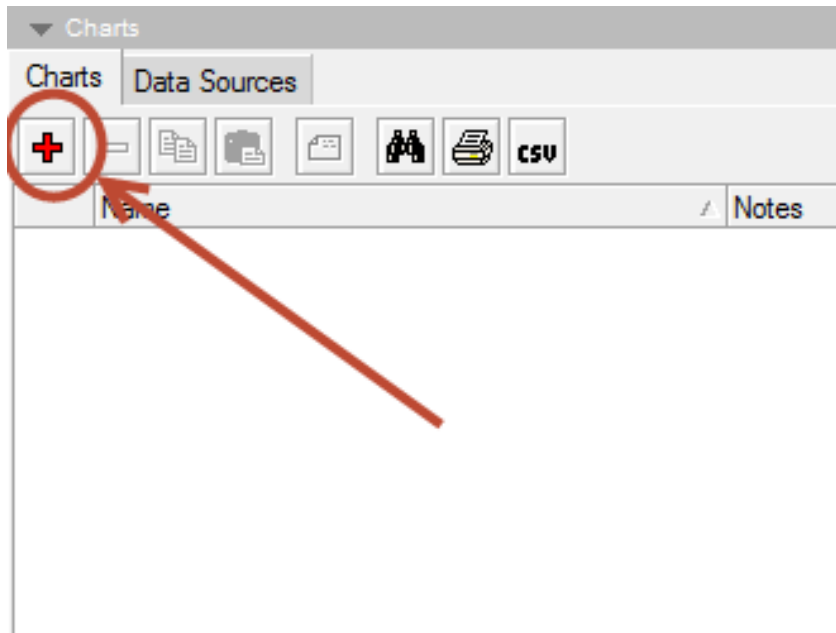


192.168.30.122  
cpu: 1% disk: 15%

MikroTik Device

# การใช้งานเมนูต่าง ๆ

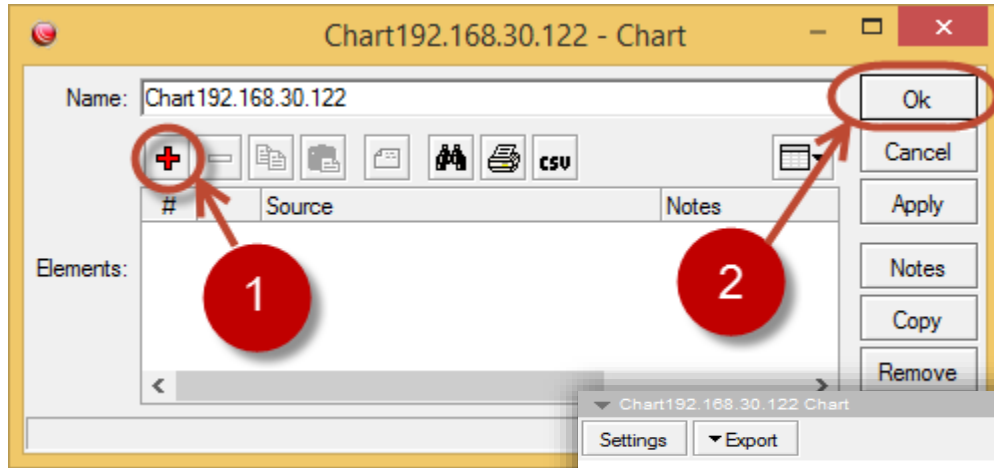
- Admins
- Charts



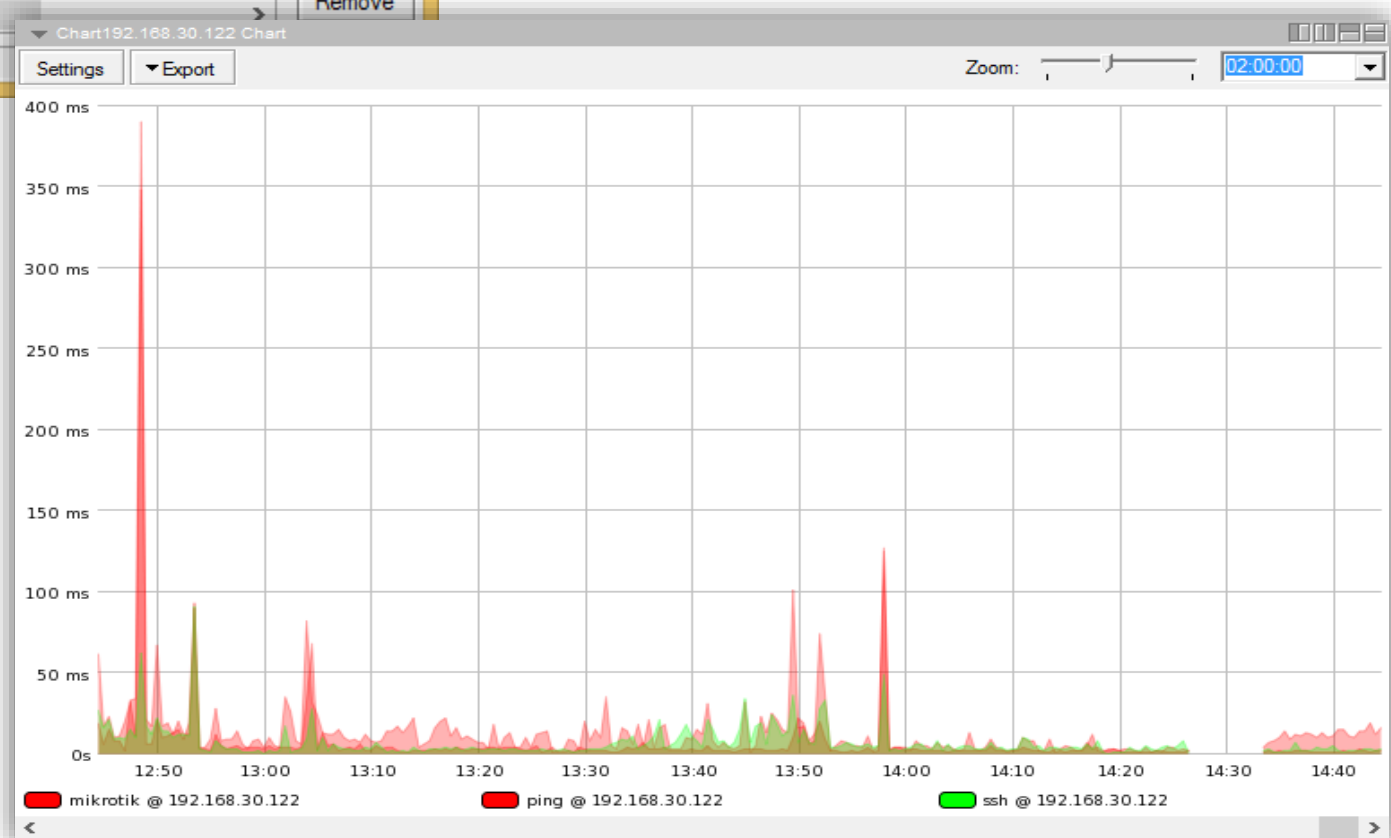


# Charts

ต่อไปก็เพิ่มข้อมูลที่ต้องการ โดยการดับเบิลคลิกที่ charts name ที่ต้องการ



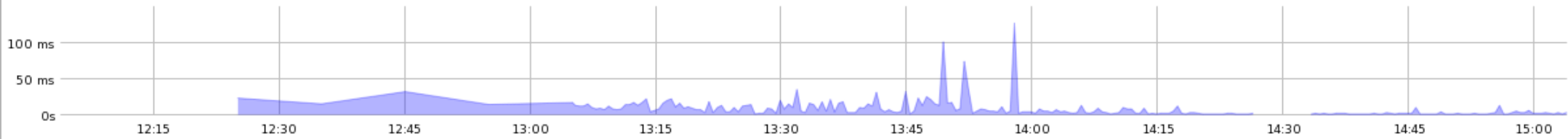
#	Source	Notes
1	ssh @ 192.168.30.122	
2	mikrotik @ 192.168.30.122	
3	ping @ 192.168.30.122	



192.168.30.122\_mikrotik Chart

Settings Export

Zoom: 03:00:00

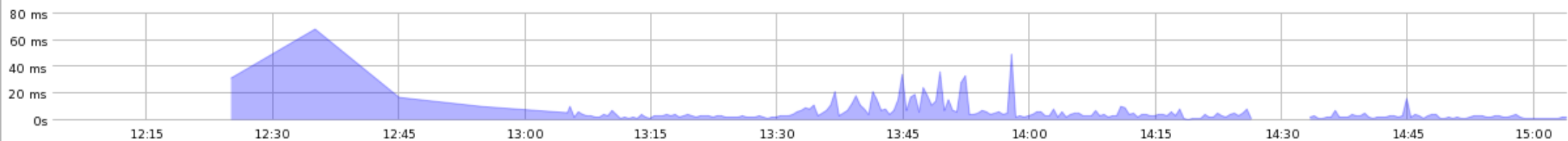


mikrotik @ 192.168.30.122

192.168.30.122\_ssh Chart

Settings Export

Zoom: 03:00:00

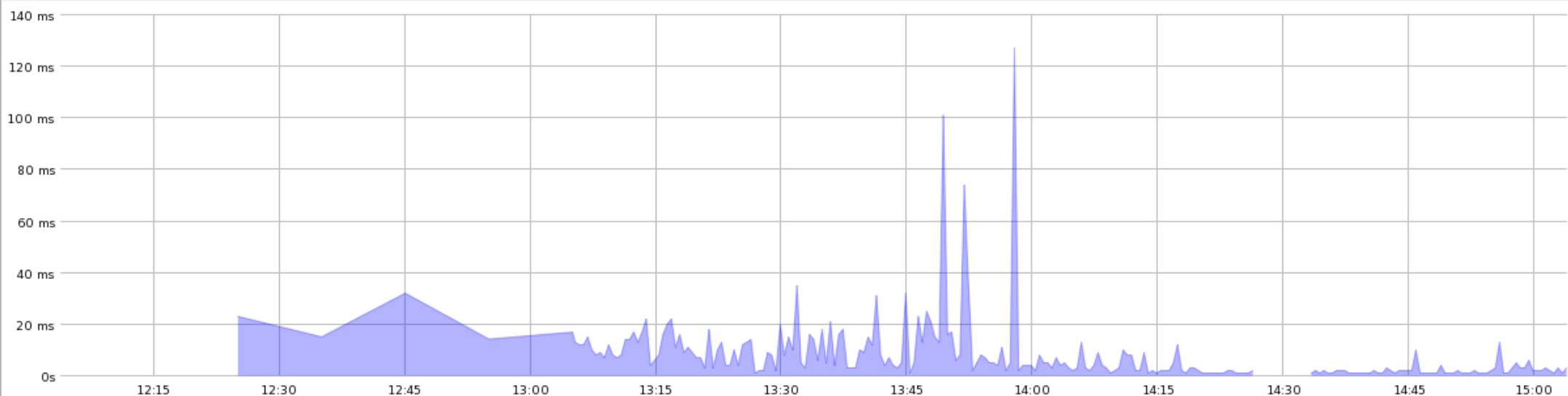


ssh @ 192.168.30.122

192.168.30.122\_mikrotik Chart

Settings Export

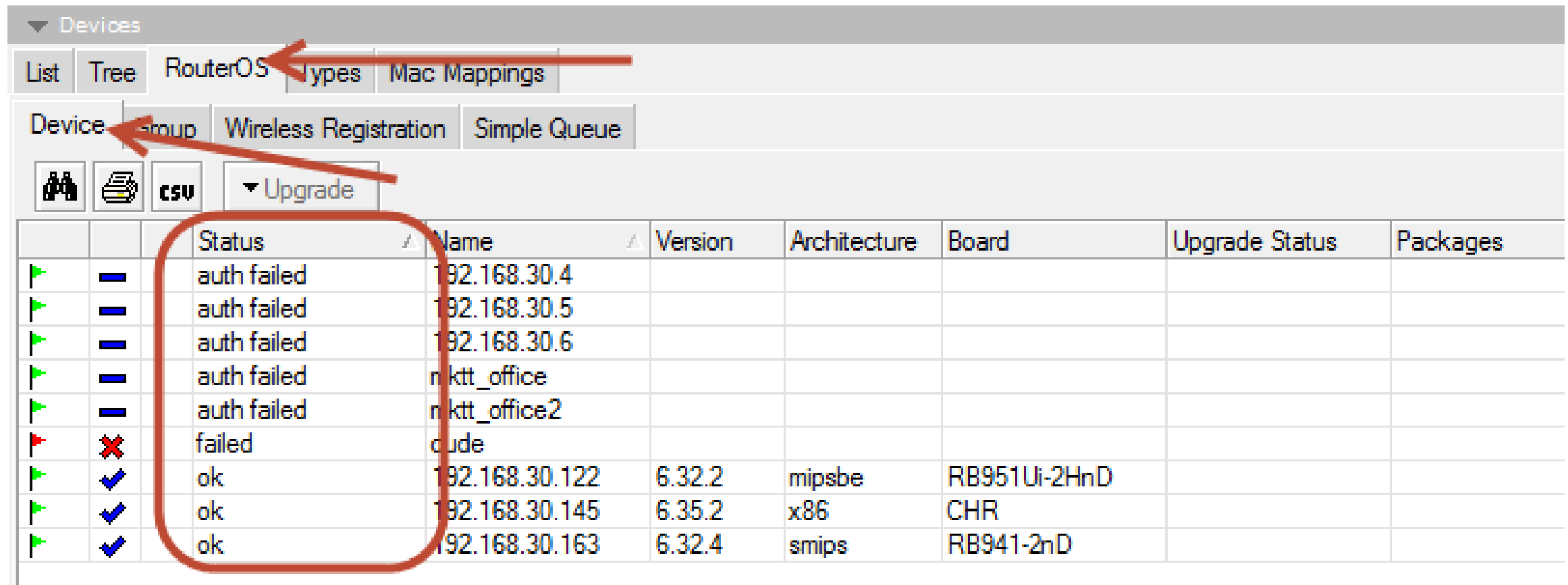
Zoom: 03:00:00



mikrotik @ 192.168.30.122

# การใช้งานเมนูต่าง ๆ

## ➤ Devices



The screenshot shows the Mikrotik WinBox interface for the 'Devices' menu. A red arrow points to the 'RouterOS' tab, and another red arrow points to the 'Device' sub-menu. A red circle highlights the first five rows of the table, which all have a status of 'auth failed'.

		Status	Name	Version	Architecture	Board	Upgrade Status	Packages
▶	■	auth failed	192.168.30.4					
▶	■	auth failed	192.168.30.5					
▶	■	auth failed	192.168.30.6					
▶	■	auth failed	nktt_office					
▶	■	auth failed	nktt_office2					
▶	✗	failed	oude					
▶	✓	ok	192.168.30.122	6.32.2	mipsbe	RB951Ui-2HnD		
▶	✓	ok	192.168.30.145	6.35.2	x86	CHR		
▶	✓	ok	192.168.30.163	6.32.4	smips	RB941-2nD		

# ➤ Functions

ตัวอย่าง ต้องการแสดงจำนวนอุปกรณ์ที่ connect wireless เข้ามา

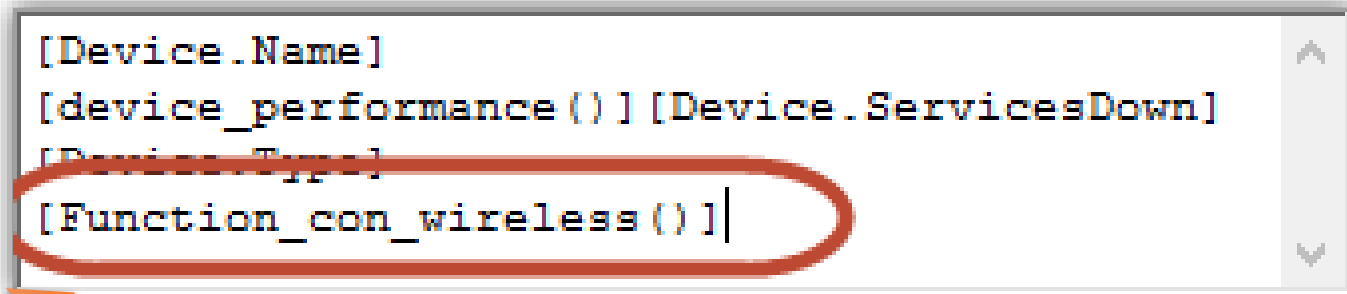
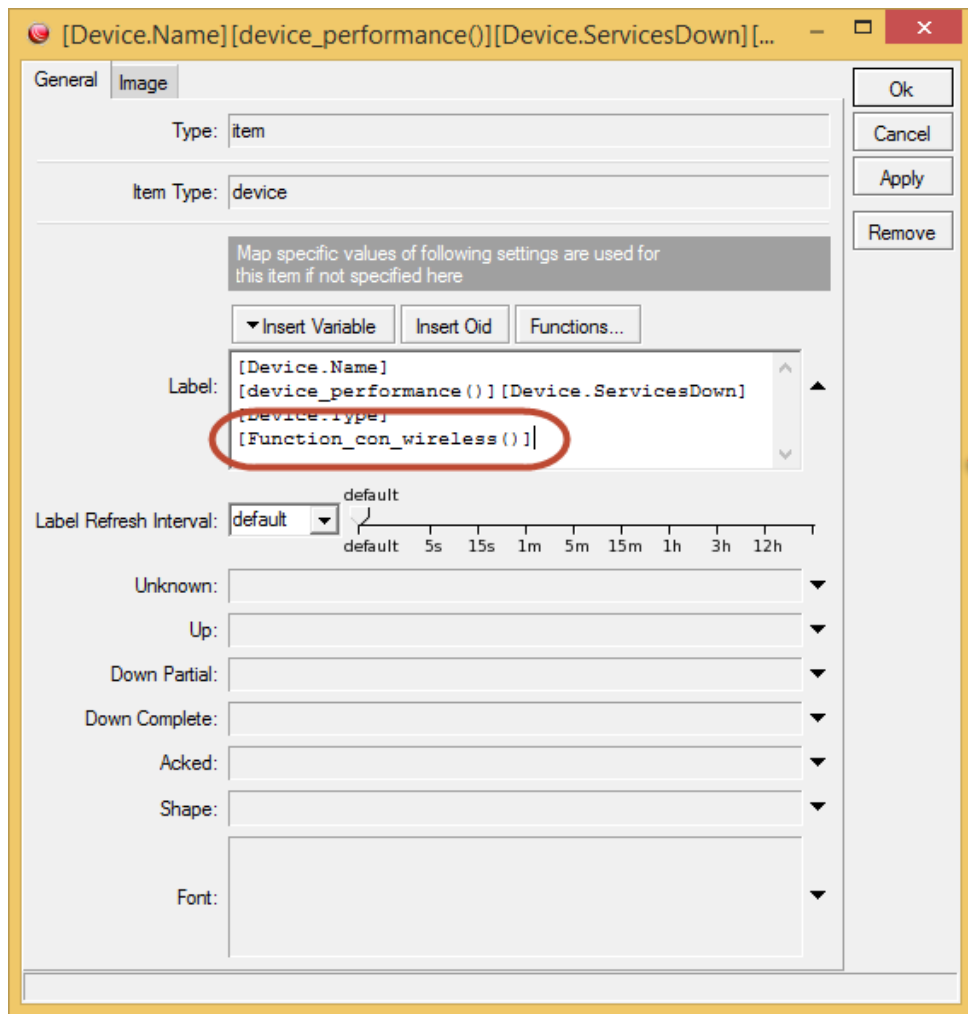
The screenshot shows the ROS Function Editor interface. At the top, a toolbar contains several icons, with a red circle labeled '1' highlighting the '+' icon for adding a new function. Below the toolbar is a table listing functions. The first row is selected and highlighted in blue:

Name	Error	Description	Notes
Function_con_wireless		คืนค่าจำนวนอุปกรณ์ที่เชื่อมต่อ	
and		logical and	

Below the table, a dialog box titled 'Function\_con\_wireless - Function' is open. It contains the following fields:

- Name: Function\_con\_wireless
- Description: คืนค่าจำนวนอุปกรณ์ที่เชื่อมต่อ
- Code: `ros_command("/interface wireless registration-table print count-only")`

The code line is circled in red. On the right side of the dialog, there are several buttons: Ok, Cancel, Apply, Notes, Copy, and Remove. A red circle labeled '2' highlights the 'Ok' button.
























# การเพิ่มข้อความสามารถใช้ฟังก์ชัน concatenate

```
concatenate(ros_command("/interface wireless registration-table print  
count-only"), "Connect Wireless|")
```



CONNECT WIL61622

# ➤ Log

		Devices
		Files
		Functions
		History Actions
		Links
		Logs
		Action
		Debug
		Event
		Syslog
		Mib Nodes
		Network Maps
		Local
		Networks
		Notifications
		Panels
		Panel_charts
		admin 192.168.30.146
		Probes
		Services
		Tools




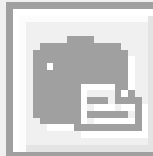



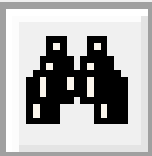


# ➤ Network Maps

Network Maps				
	Name	Devices	Down	Notes
+	Local	20	Dell-PC, dude, 192.168.30.163, 192.168.30.127	



# ➤ Notifications

▼ Notifications

	Name	Type	▲	Notes
	beep	beep		
	flash	flash		
	log to events	log		
	log to syslog	log		
	popup	popup		

# การเปิดใช้งาน

The screenshot shows the 'Local - Network Map' settings dialog box. Five numbered red circles highlight the following steps:

1. Clicking the 'Settings' button in the main application toolbar.
2. Clicking the 'Polling' tab in the settings dialog.
3. Selecting a value on the 'Probe Down Count' slider.
4. Checking the notification options in the table below.
5. Clicking the 'Ok' button to save the settings.

The 'Polling' tab settings include:

- Enabled
- Probe Interval: default (slider from 2s to 1d)
- Probe Timeout: default (slider from 2s to 1d)
- Probe Down Count: default (slider from 2 to 100)
- Use Notifications

	Name
<input checked="" type="checkbox"/>	beep
<input type="checkbox"/>	flash
<input type="checkbox"/>	log to events
<input type="checkbox"/>	log to syslog
<input checked="" type="checkbox"/>	popup

# กรณี POPUP

#	Time	Event
1	12:51:03	Service cpu on 192.168.30.122 is now down (down)
2	12:51:03	Service ssh on 192.168.30.122 is now down (Connect failed: No route to host)
3	12:51:06	Service ping on 192.168.30.122 is now down (ping reply not received (13))
4	12:51:12	Service mikrotik on 192.168.30.122 is now down (timeout)

## ➤ Notifications

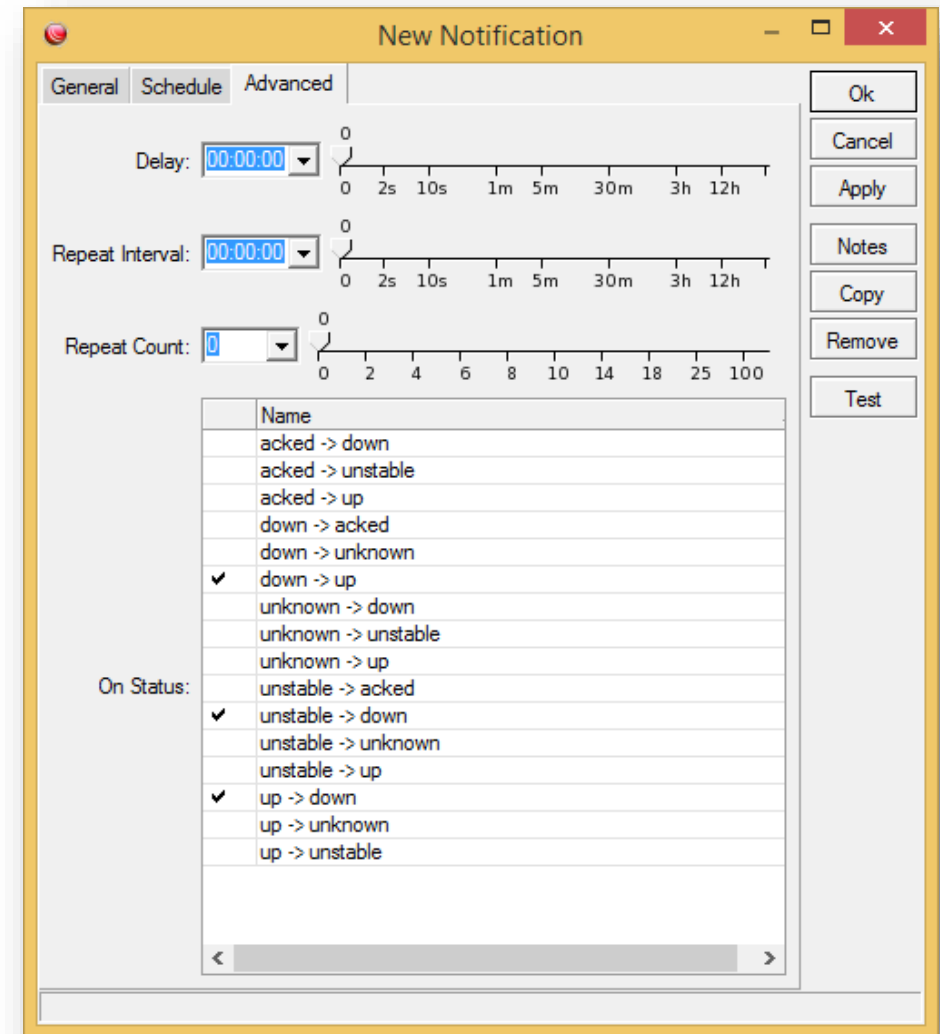
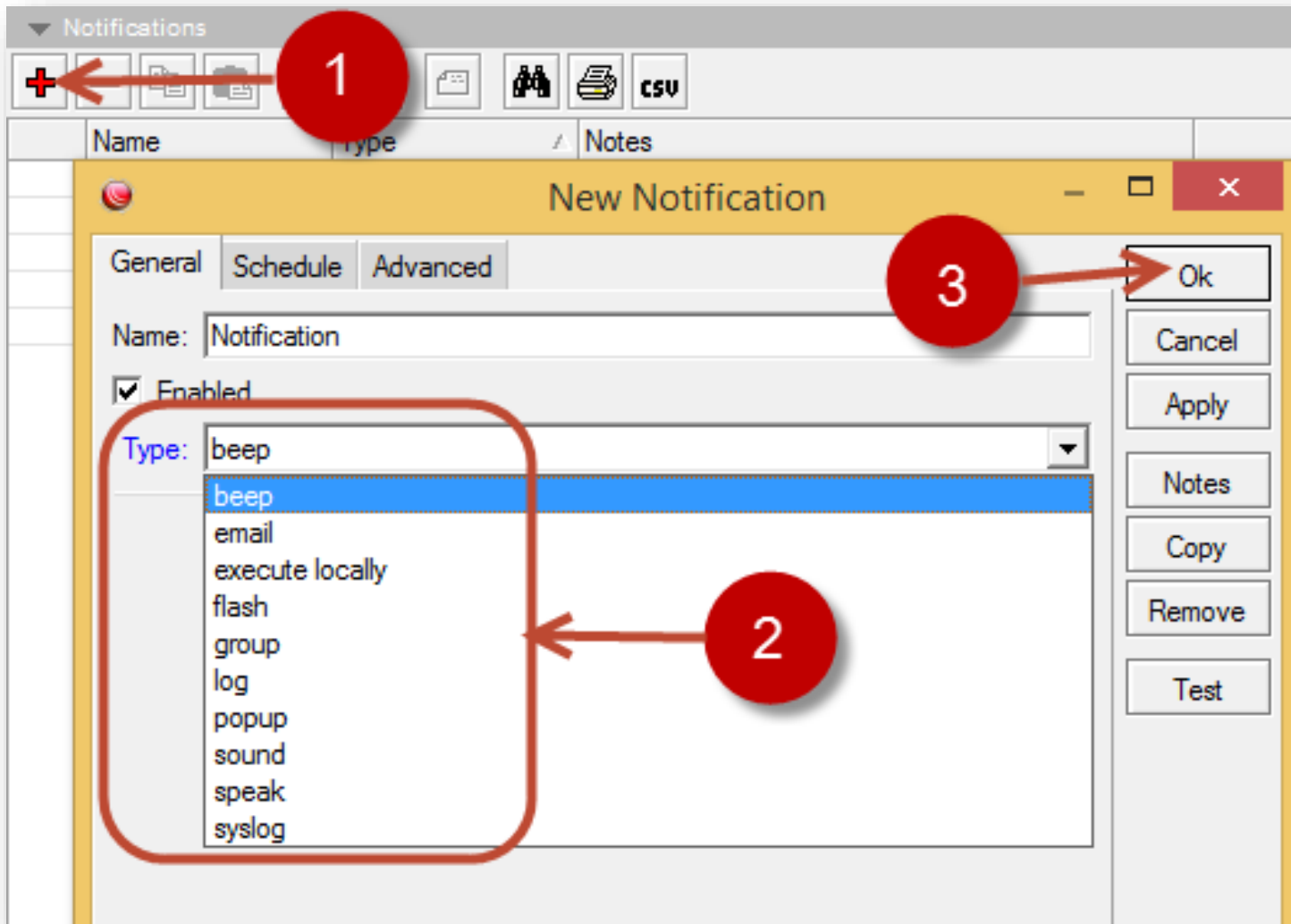
ຮຸປແມບ beep

ຮຸປແມບ flash

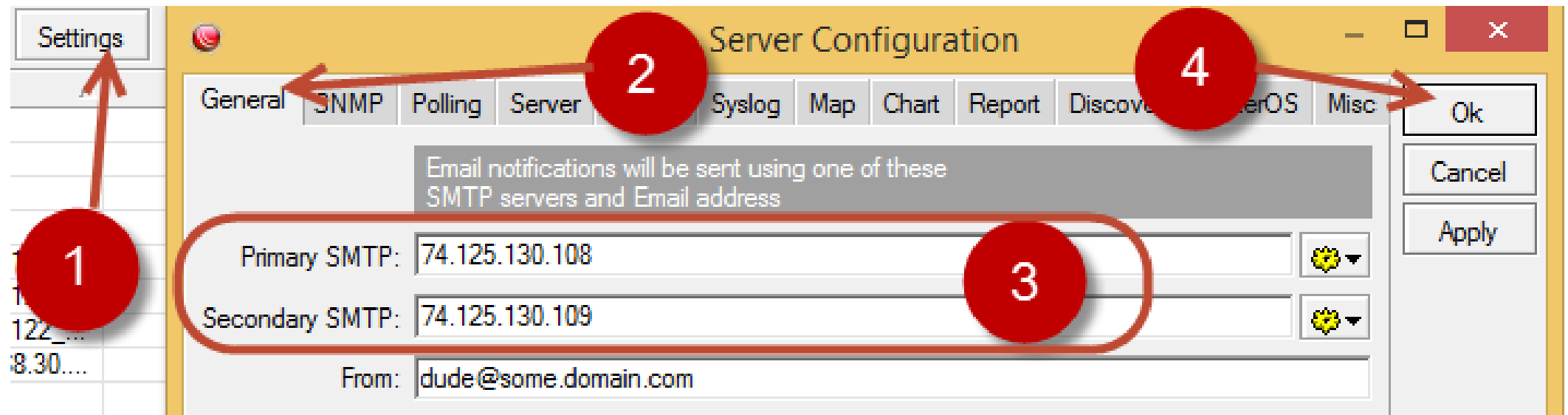
ຮຸປແມບ log to events

ຮຸປແມບ log to syslog

# การเพิ่มรูปแบบการแจ้งเตือน



# ตัวอย่างการเพิ่มรูปแบบ E-mail ตั้งค่า SMTP



```
Non-authoritative answer:  
Name:      gmail-smtp-msa.1.google.com  
Addresses: 2404:6800:4003:c02::6c  
           74.125.130.108  
           74.125.130.109  
Aliases:   smtp.gmail.com
```

Notifications

1

2

3

4

### Email - Notification

General Schedule Advanced

Ok

Cancel

Apply

Notes

Copy

Remove

Test

Name:

Enabled

Type:

Server:

Server Port:  587

User:

Password:

Tls Mode:

To:

Cc:

Subject:

# Notifications

Service [Probe.Name] on [Device.Name] is now [Service.Status]



กล่องจดหมาย X



**prapun009@gmail.com**

ถึง ฉัน ▾

Service [Probe.Name] on [Device.Name] is now [Service.Status] ([Service.ProblemDescription])

Service ssh on 192.168.30.122 is now unstable



กล่องจดหมาย X



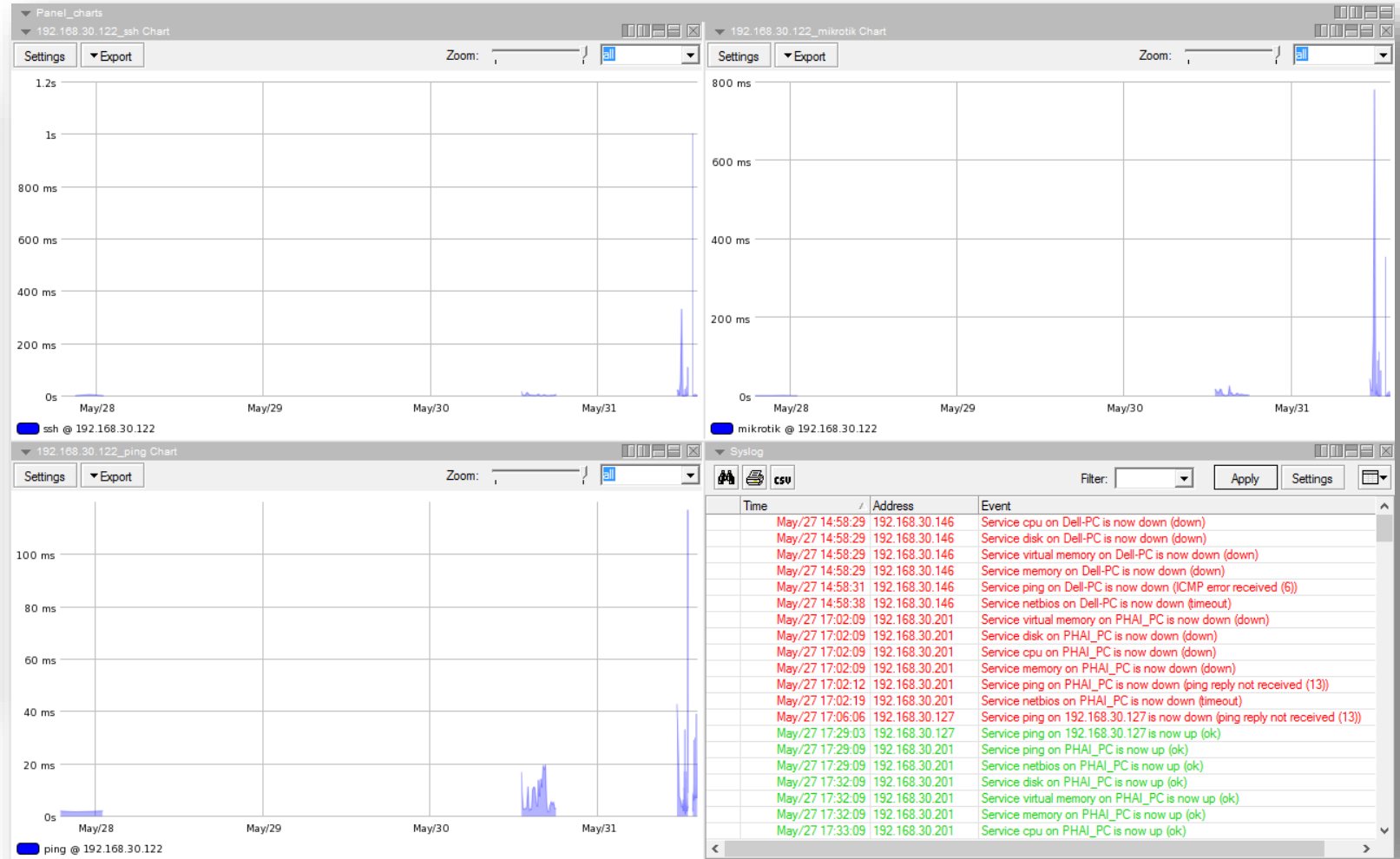
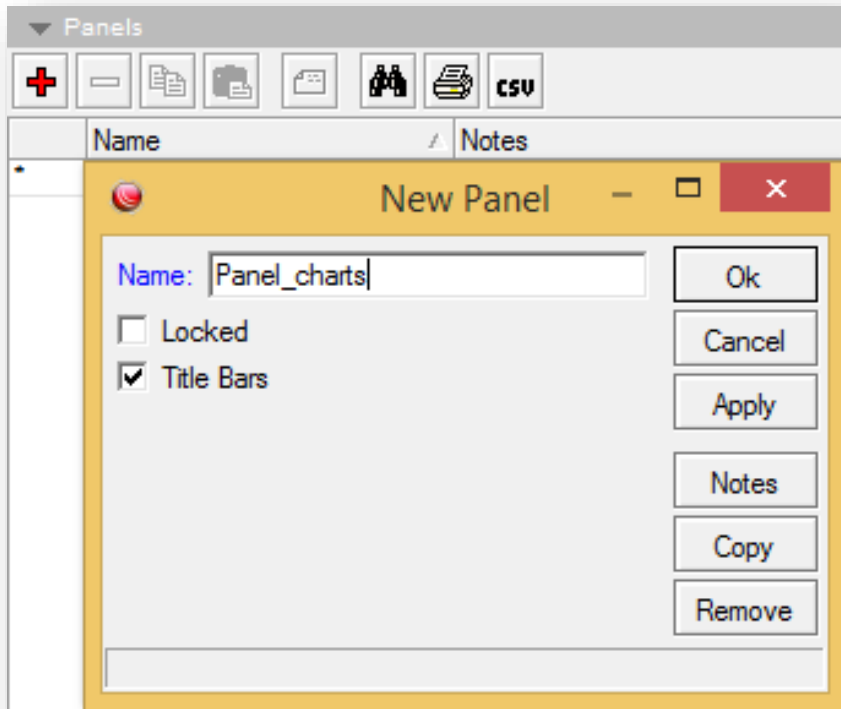
**prapun009@gmail.com**

ถึง ฉัน ▾

Service ssh on 192.168.30.122 is now unstable (Connect failed: Connection refused)



# ➤ Panels



# อ้างอิง

- [http://wiki.mikrotik.com/wiki/Manual:The Dude](http://wiki.mikrotik.com/wiki/Manual:The_Dude)
- <https://www.youtube.com/watch?v=WcIl0VZCeak>
- [http://mum.mikrotik.com/presentations/PH16/presentation 3194\\_1461131824.pdf](http://mum.mikrotik.com/presentations/PH16/presentation_3194_1461131824.pdf)

PRAPUN SIRISIT (MTCNA)

Mikrotikthai Co.,Ltd  
(Chiangmai ,Thailand)  
Tel:(+66)871254500





- 1.สถาบันที่ได้การแต่งตั้งให้เป็นศูนย์อบรมของไมโครติกแห่งแรกของเมืองไทย
- 2.สอนด้วยอาจารย์ระดับมหาวิทยาลัยและทีมงานผู้ชำนาญงานพิเศษระดับ 8 และมีประสบการณ์มากกว่า 20 ปี
- 3.อบรมตามมาตรฐานของไมโครติกพร้อมสอบใบประกาศ
- 4.สามารถเรียนซ้ำได้ไม่จำกัดจำนวนครั้ง
- 5.มีที่ฝึกงานหลังจากเรียนจบพร้อมฝึกจนชำนาญ