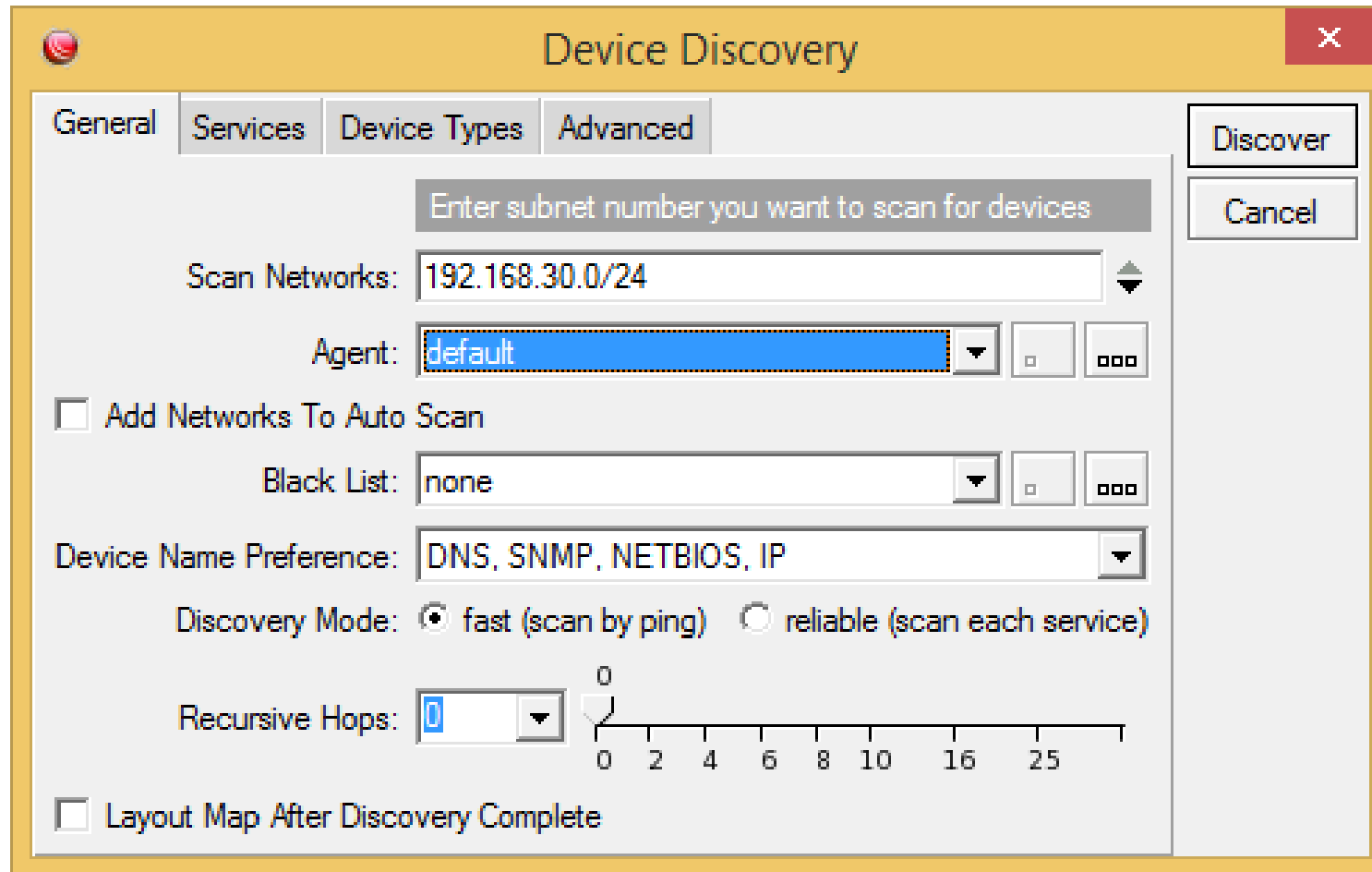


# How to implement the dude to monitoring your network

MUM Thailand in Sep 5, 2016

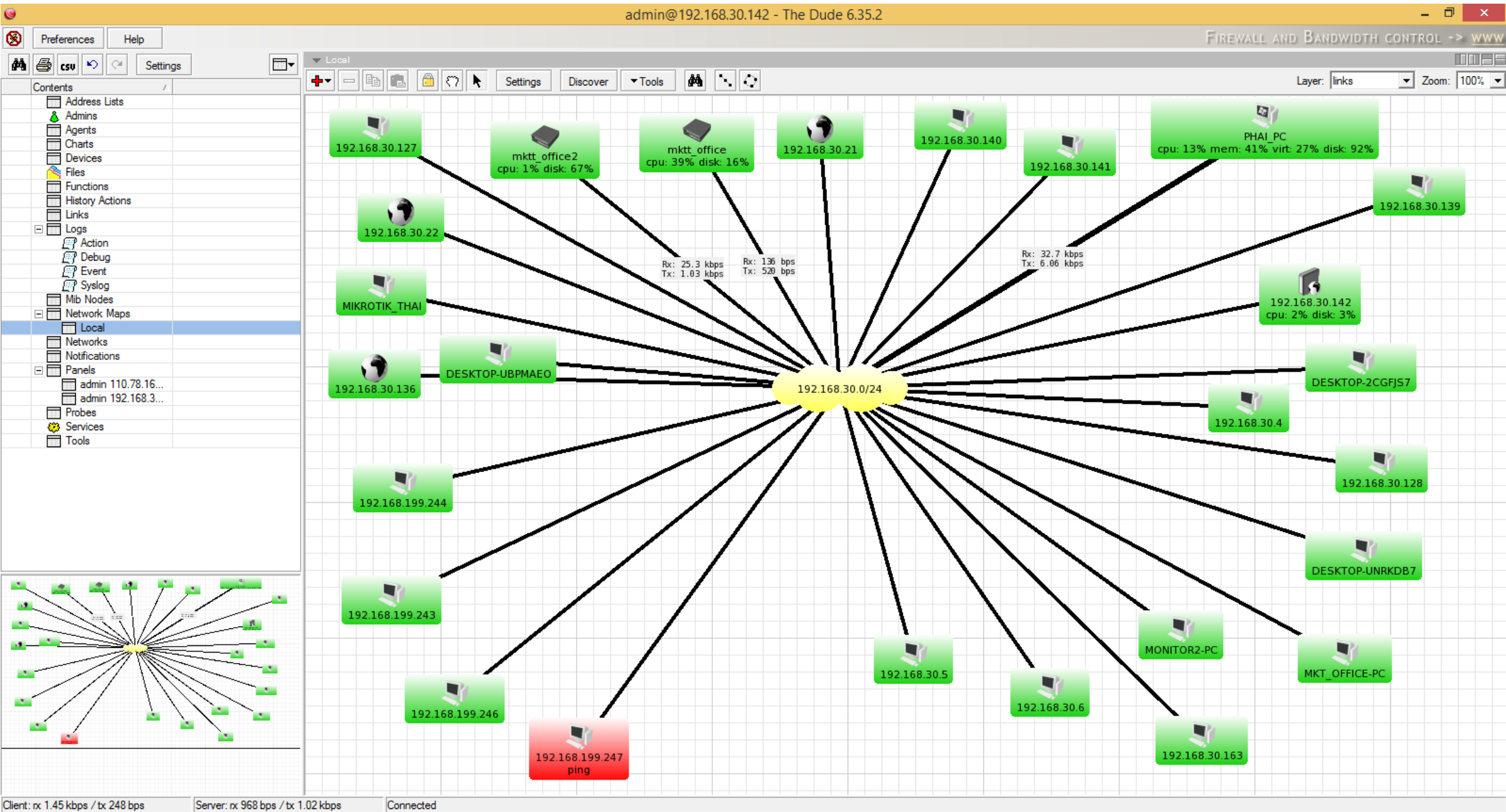
**The Dude គឺ?**

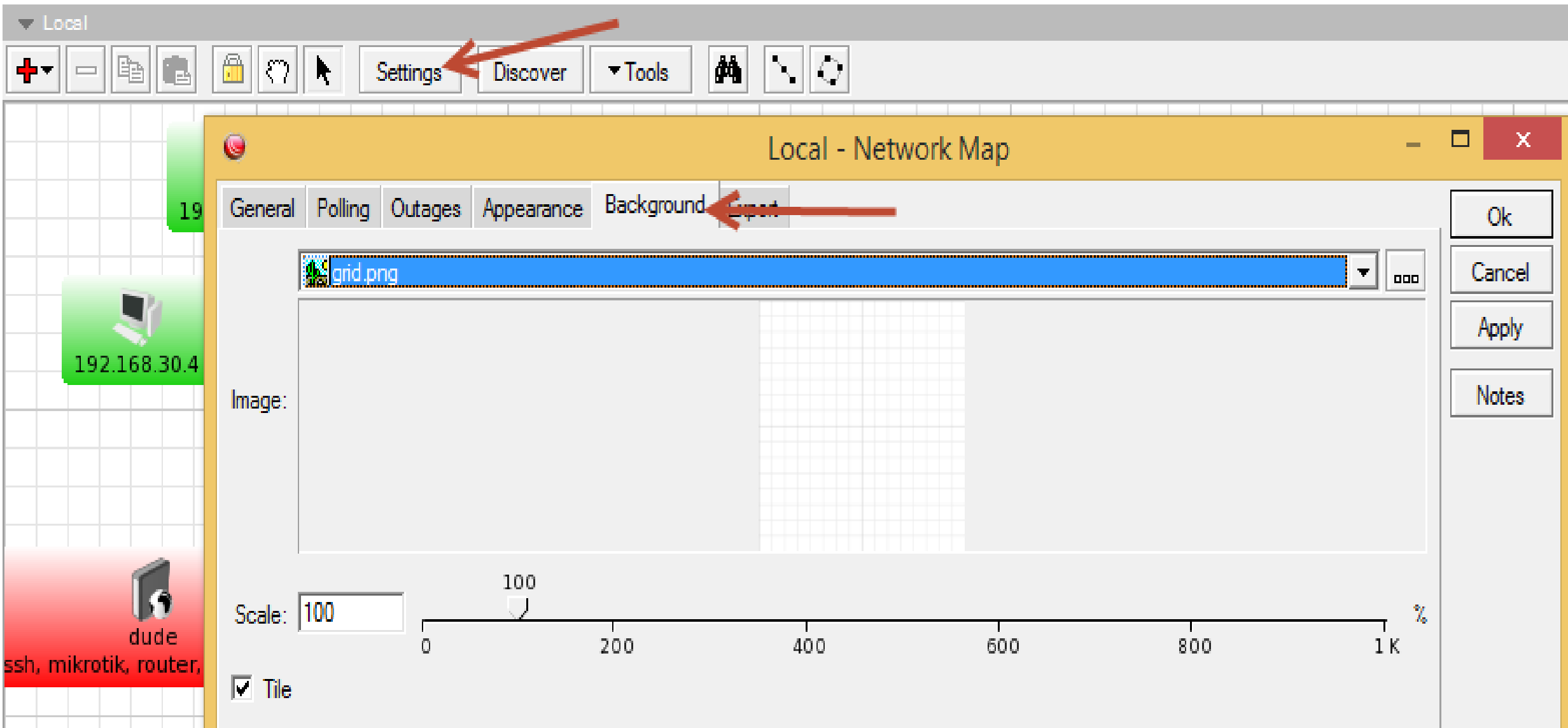
# ความสามารถของ The Dude

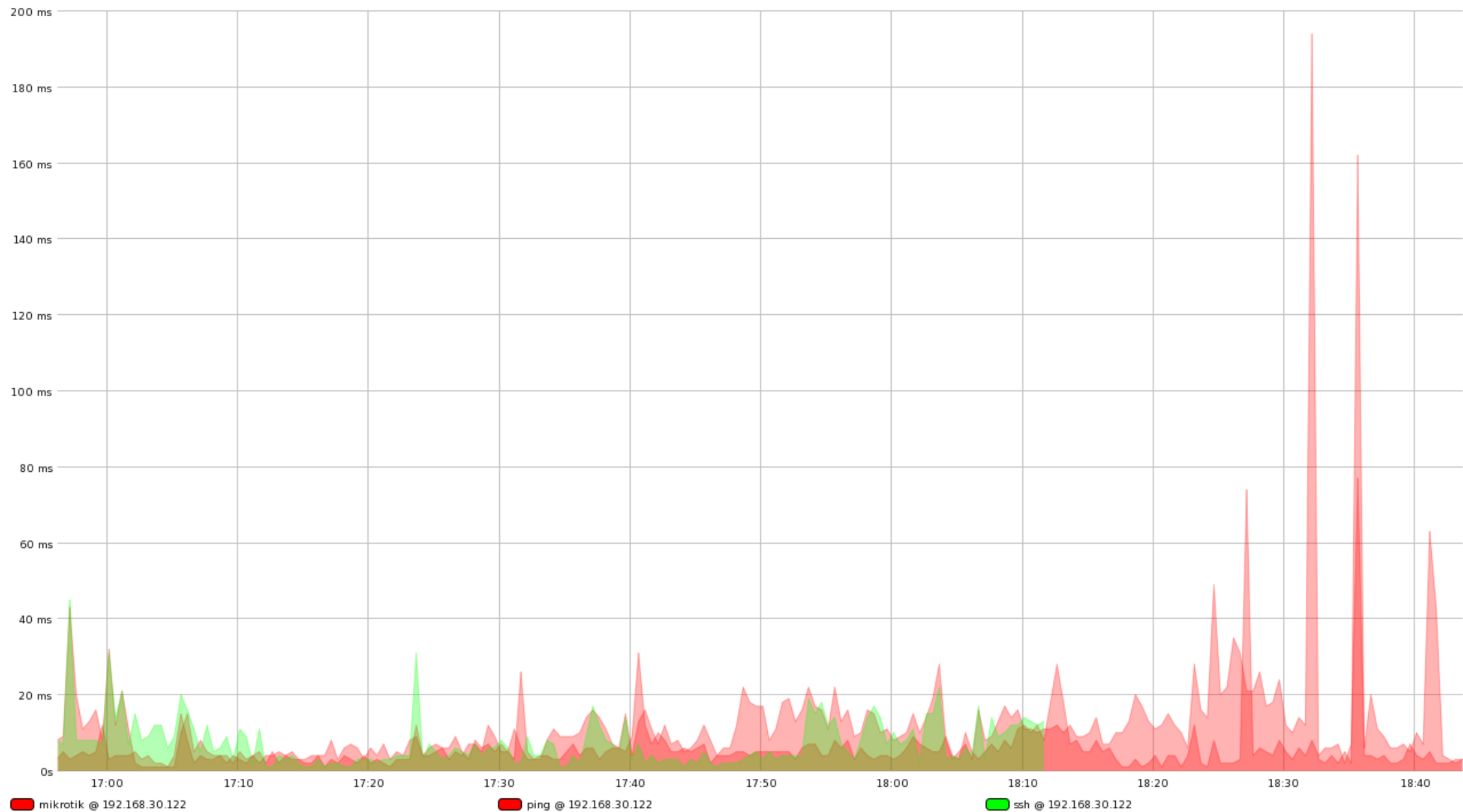


The screenshot shows the 'Device Discovery' window with the following settings:

- General Tab:**
  - Enter subnet number you want to scan for devices: (Instructional text)
  - 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 (with a slider from 0 to 25)
  - ☐ Layout Map After Discovery Complete
- Buttons:** Discover, Cancel



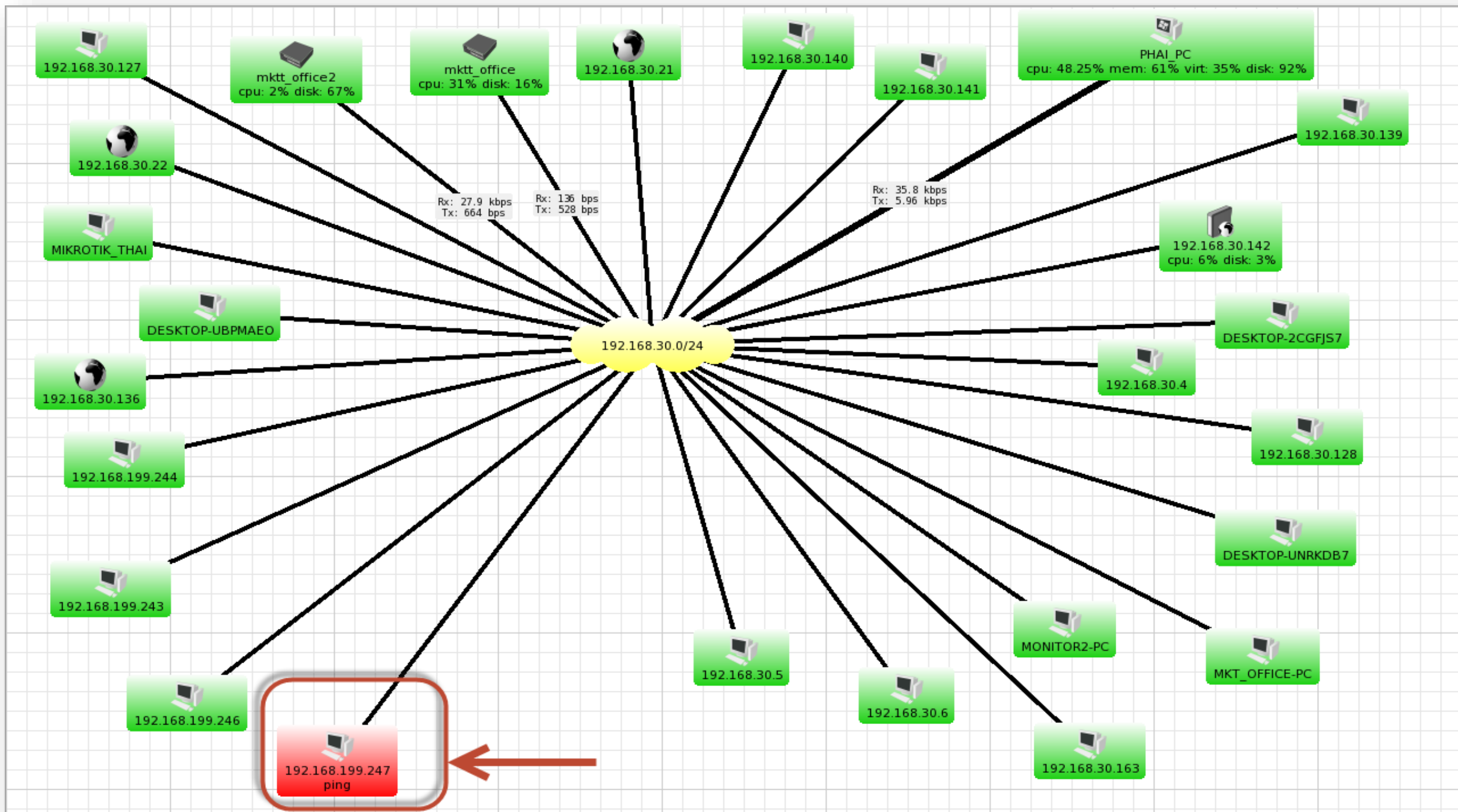




mikrotik @ 192.168.30.122

ping @ 192.168.30.122

ssh @ 192.168.30.122



admin@192.168.30.142 - The Dude 6.35.2

FIREWALL AND BANDWIDTH CONTROL -> WWW

Preferences Help

Contents

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

Syslog

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

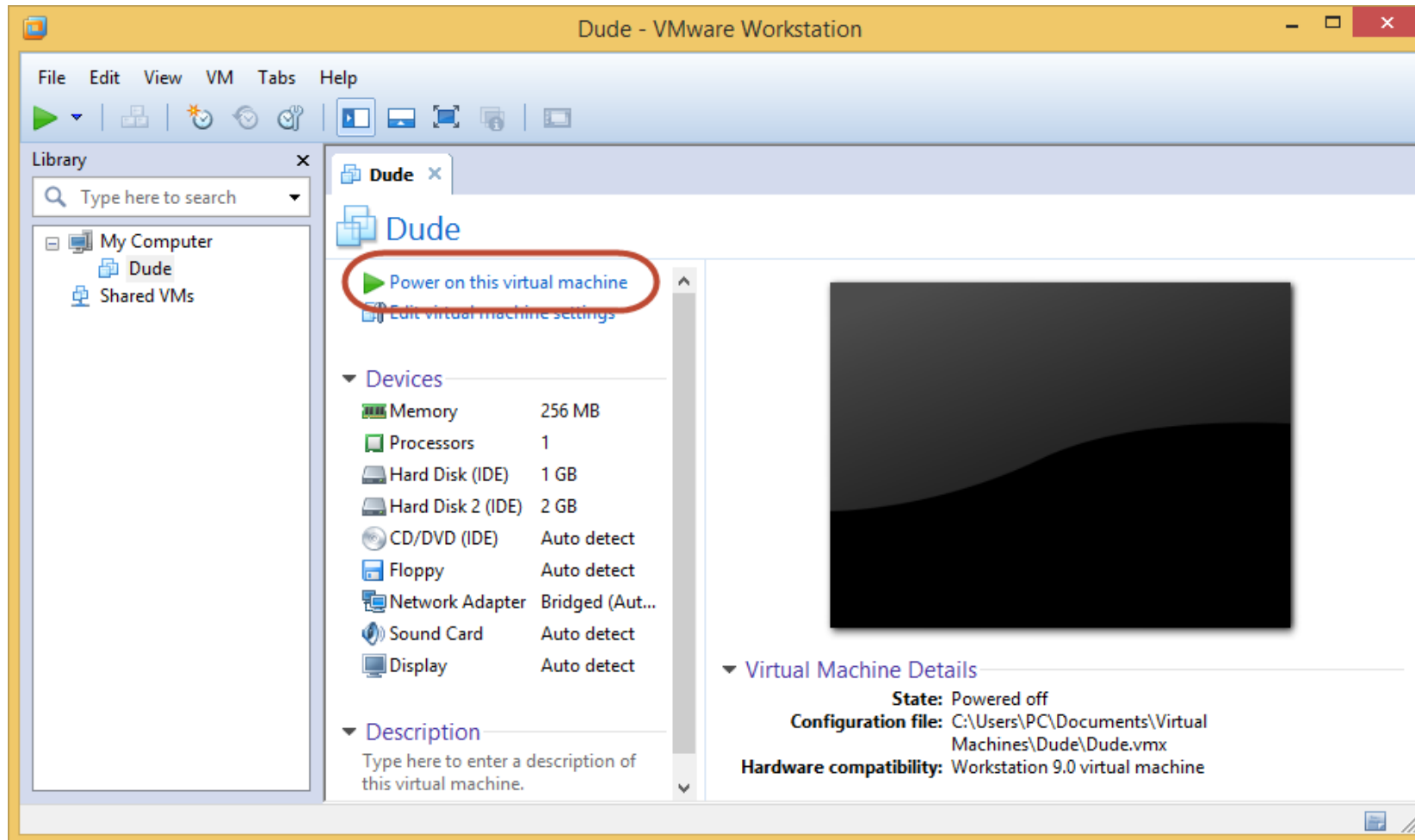
# The dude server (RouterOS CHR environment)

➤ Download ໄຟລ໌ image ຈາກ <http://www.mikrotik.com/download>

Cloud Hosted Router				
	6.32.4 (Bugfix only)	6.35.2 (Current)	5.26 (Legacy)	6.36rc16 (Release candidate)
images	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

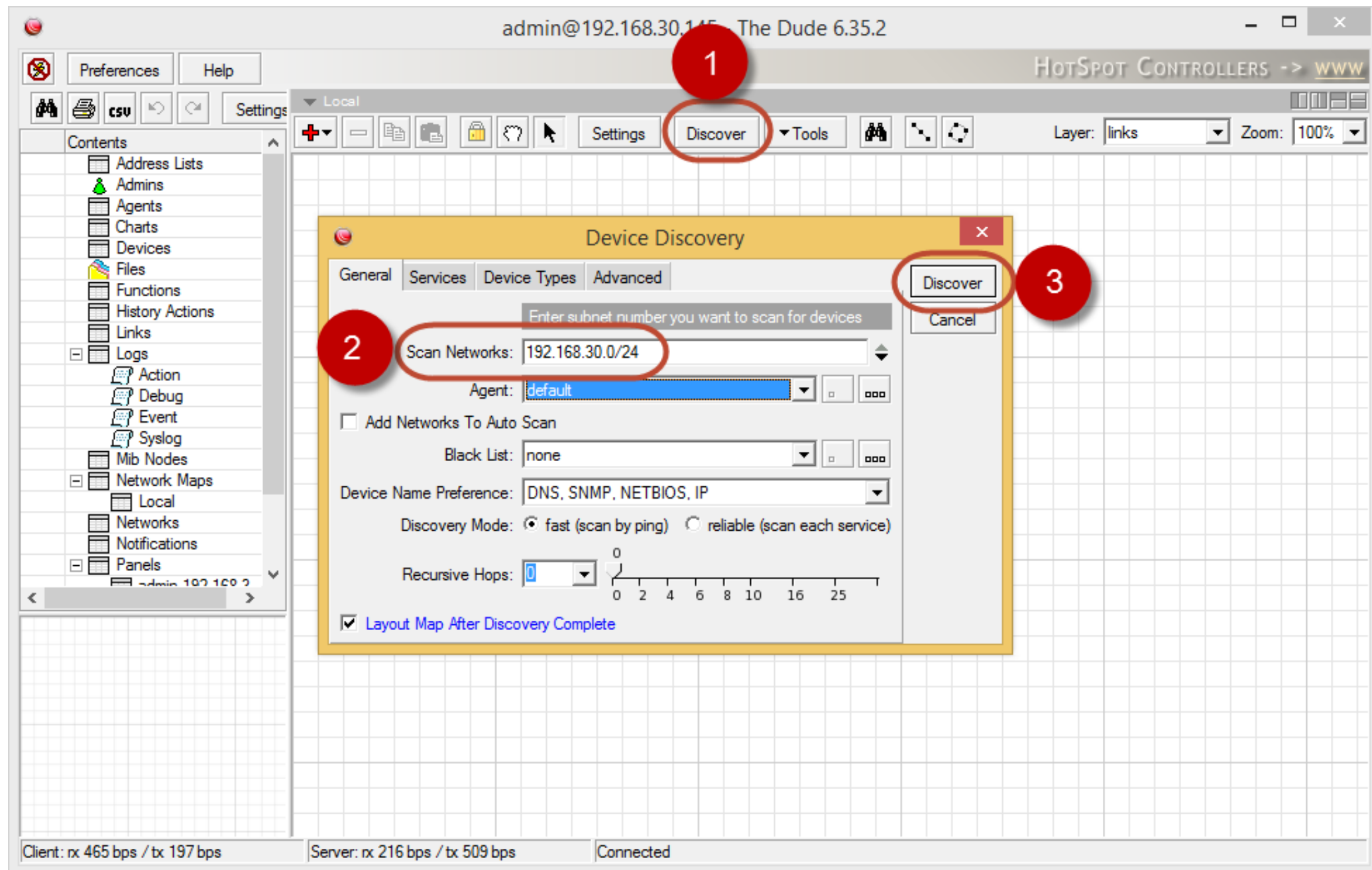


Address

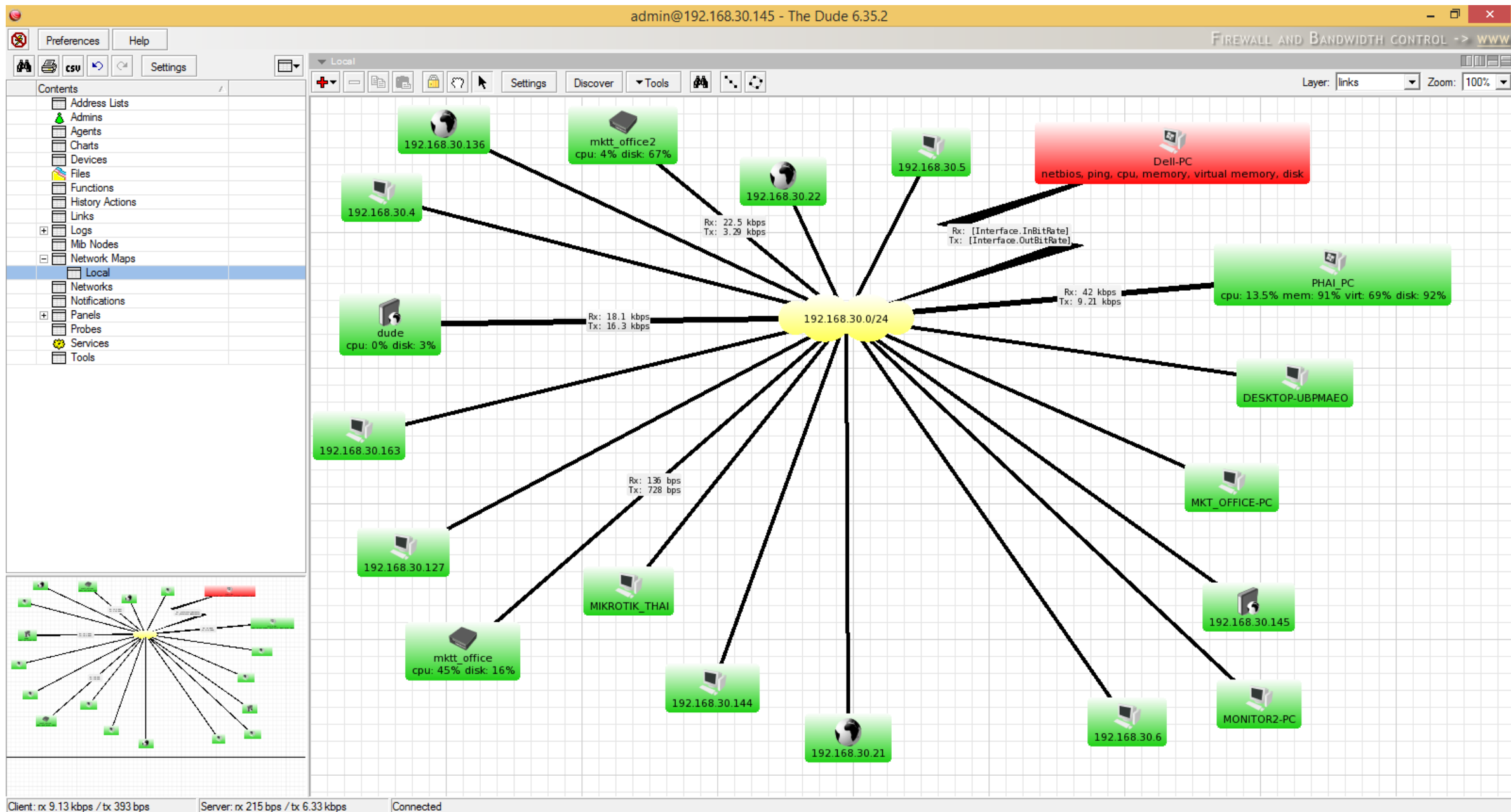
User Name

Client: rx 65 bps / tx 65 bps

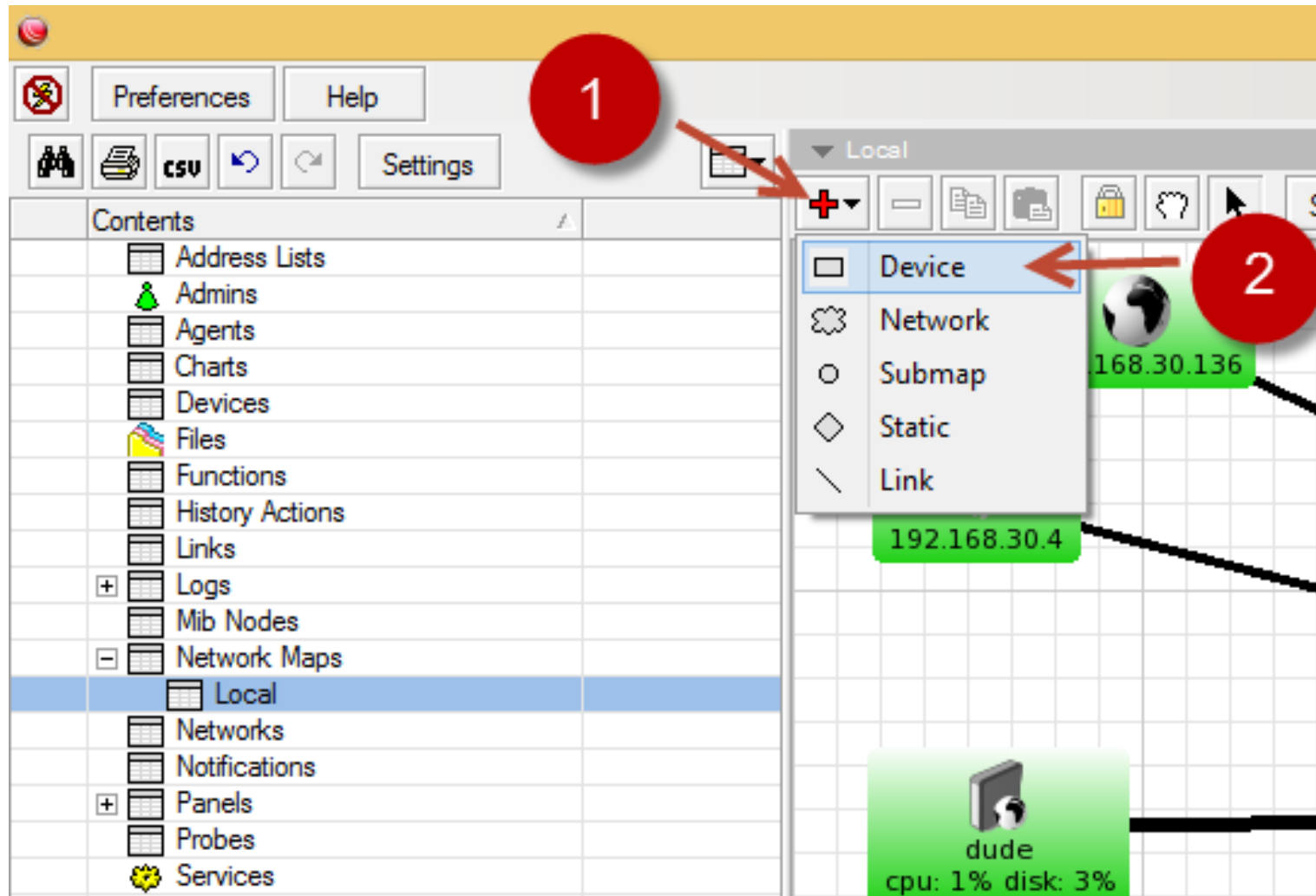
Cannot resolve address







# 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

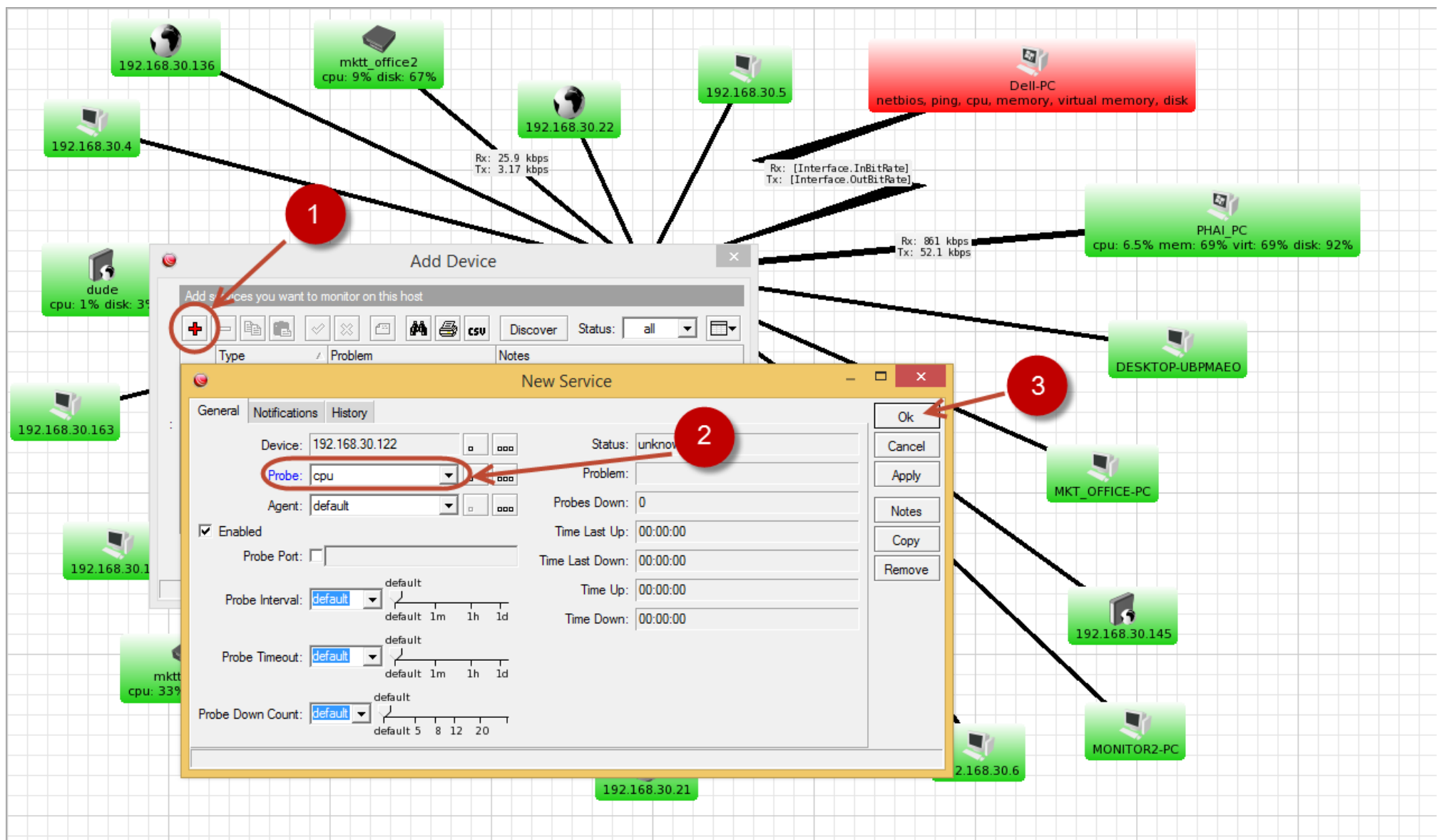
☒ Router OS

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: ☐

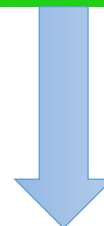
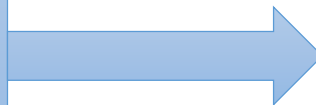
Type: fast ethernet

Finish Cancel

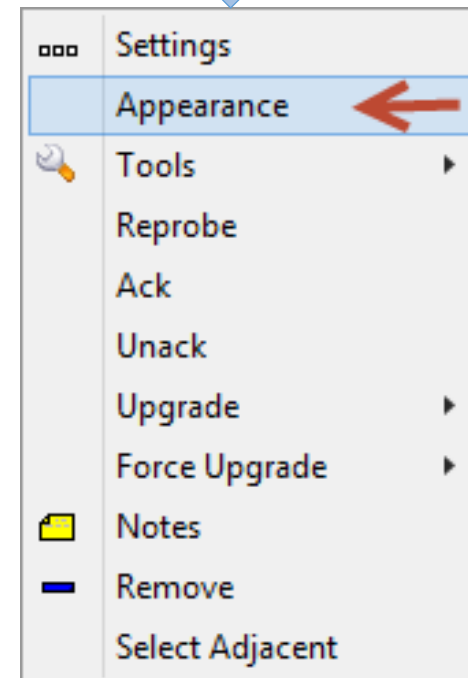
simple  
snmp  
routers

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

แสดงภาพอุปกรณ์ และรายละเอียดต่าง ๆ



right click



[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:

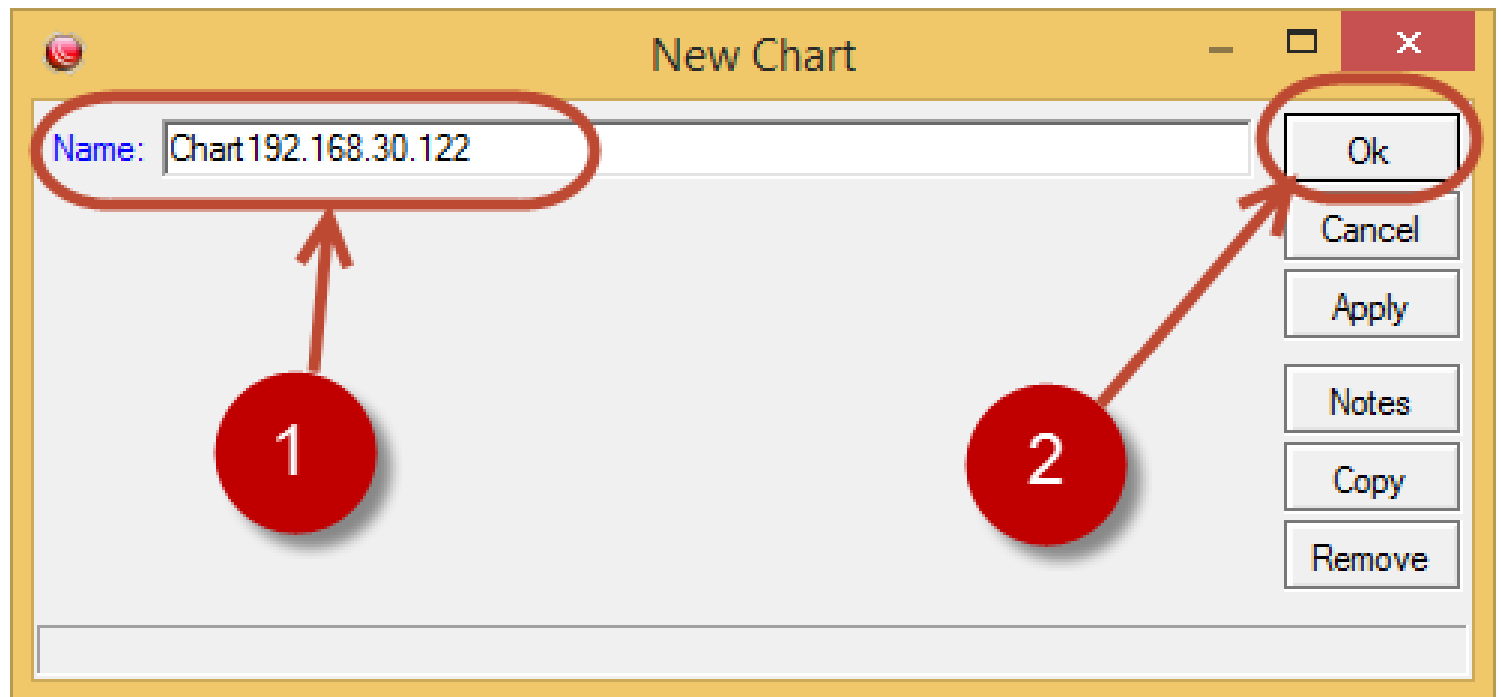
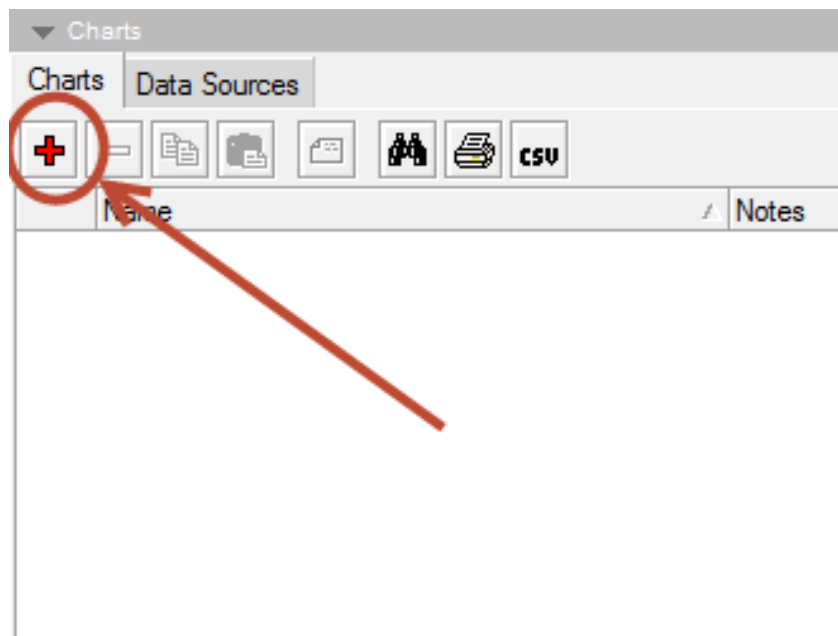
Ok Cancel Apply Remove

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



# การใช้งานเมนูต่าง ๆ

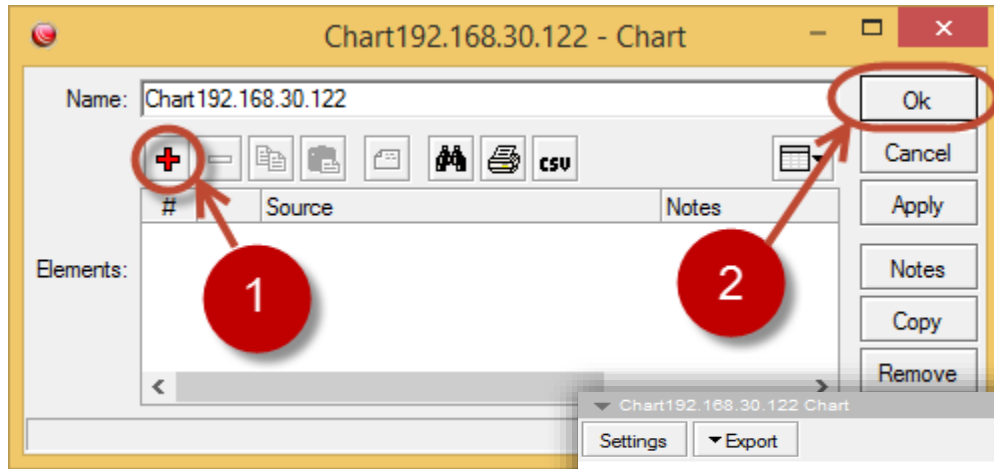
- Admins
- Charts



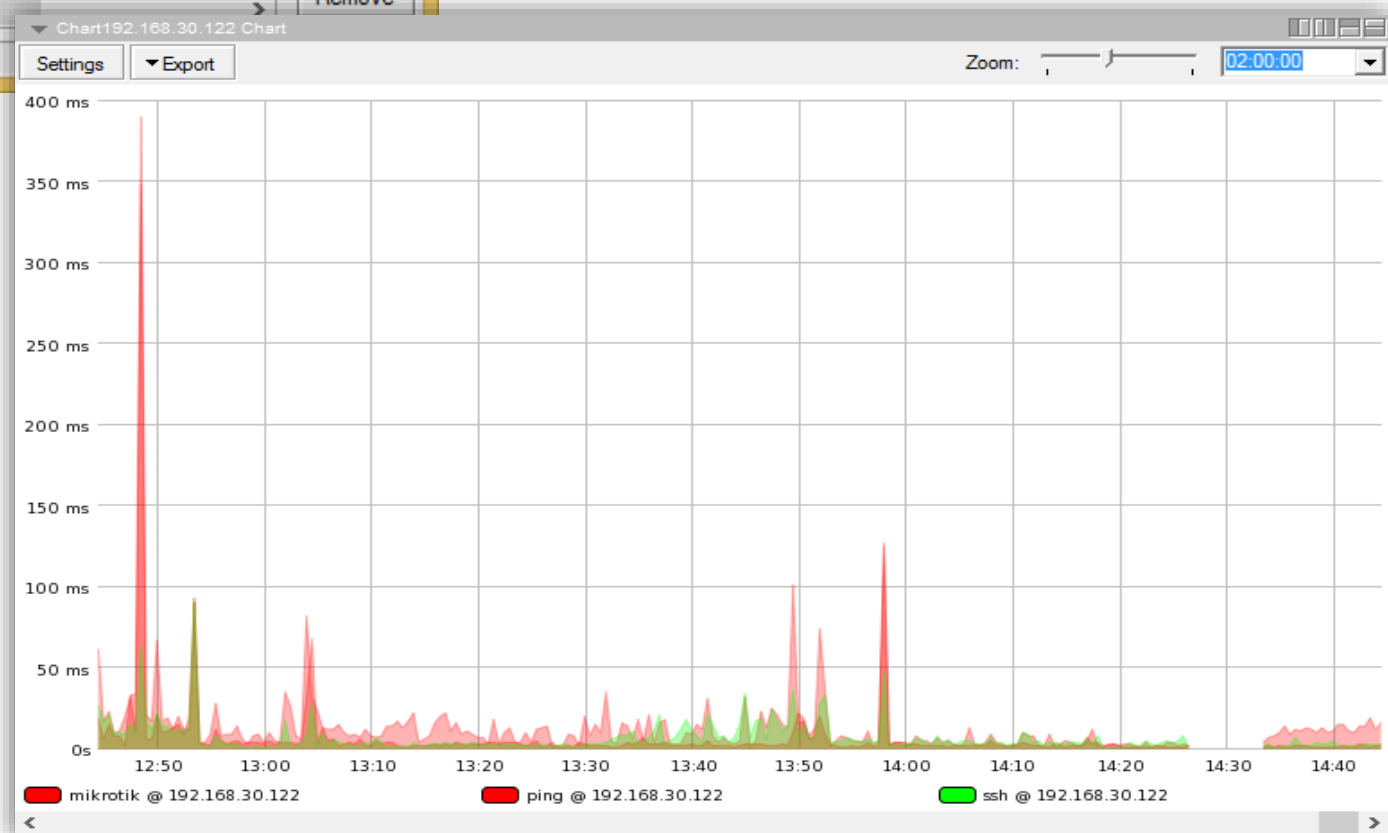


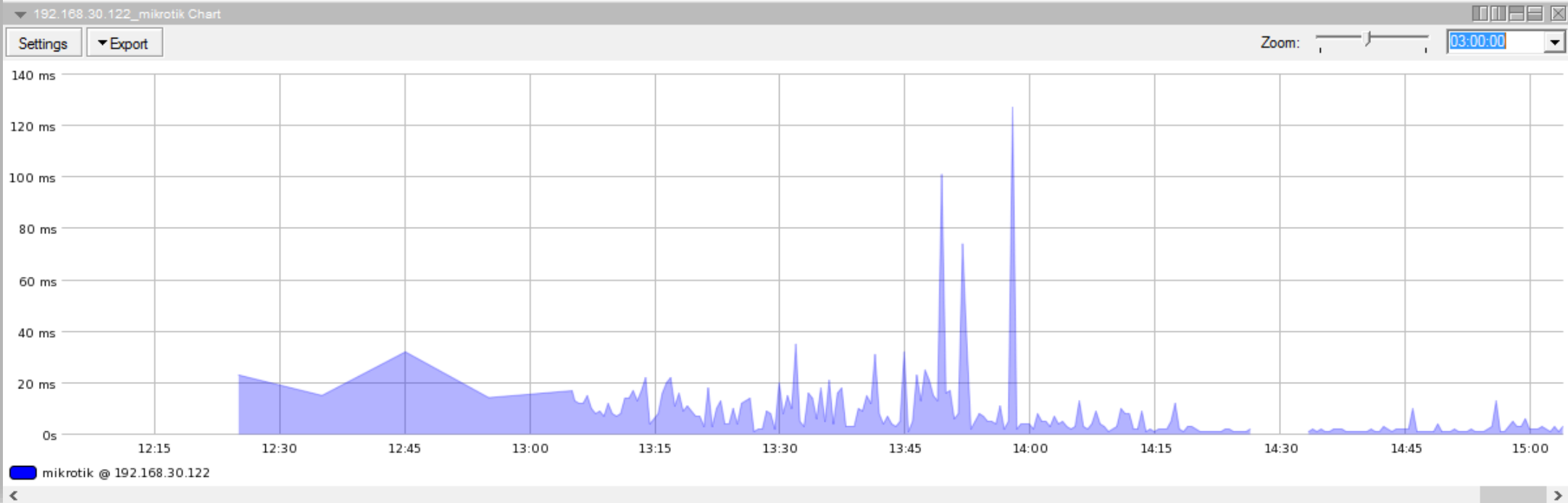
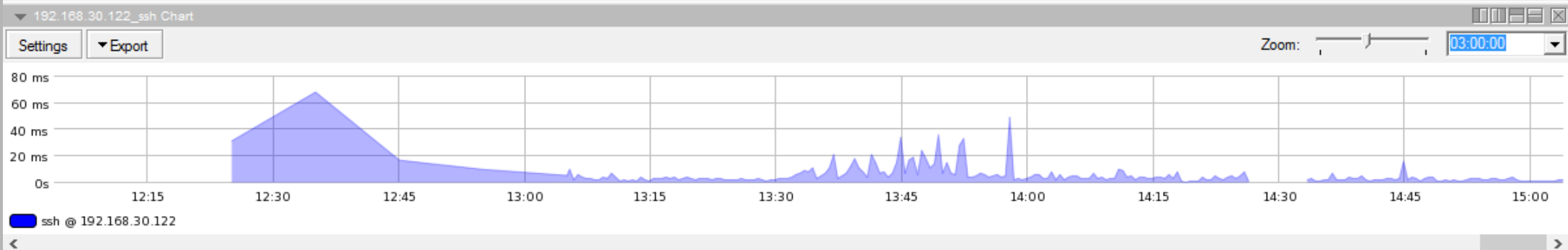
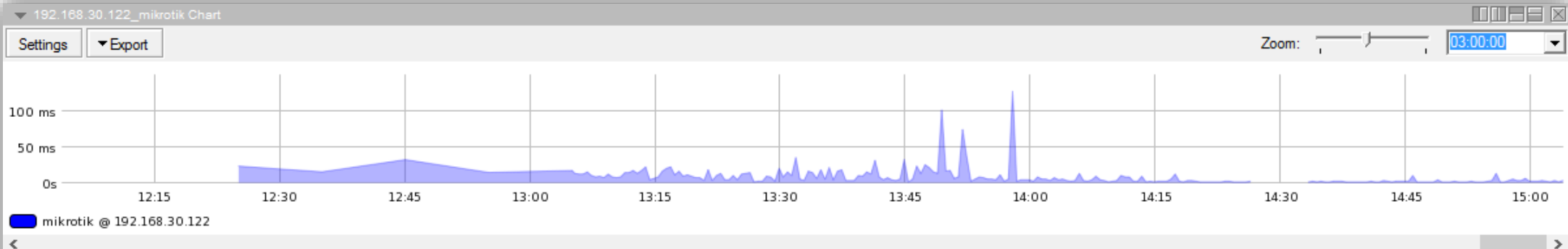
# Charts

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	







# การใช้งานเมนูต่าง ๆ



















## ➤ Devices

Devices

ListTreeRouterOSTypesMac Mappings

DeviceGroupWireless RegistrationSimple Queue

CSVUpgrade

		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 a ROS function editor window titled "Function\_con\_wireless - Function". The window has a toolbar at the top with a red circle '1' pointing to the '+' icon. Below the toolbar is a table with columns: Name, Error, Description, and Notes. The table contains one row with the name "Function\_con\_wireless", an empty error field, a description in Thai, and an empty notes field. Below the table is a form for editing the function. The form has fields for Name, Description, and Code. The Name field contains "Function\_con\_wireless". The Description field contains Thai text. The Code field contains the ROS command: `ros_command("/interface wireless registration-table print count-only")`. A red circle '2' points to the 'Ok' button in the bottom right corner of the form.

Name	Error	Description	Notes
Function_con_wireless		คืนค่าจำนวนอุปกรณ์ที่เชื่อมต่อ	

Function\_con\_wireless - Function

Name: Function\_con\_wireless

Description: คืนค่าจำนวนอุปกรณ์ที่เชื่อมต่อ

Code: `ros_command("/interface wireless registration-table print count-only")`

Buttons: Ok, Cancel, Apply, Notes, Copy, Remove

[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 Old Functions...

Label:

[Device.Name]  
[device\_performance()][Device.ServicesDown]  
[Device.Type]  
[Function\_con\_wireless()]

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]  
[Function_con_wireless()]
```
























# การเพิ่มข้อความสามารถใช้ฟังก์ชัน concatenate












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



# ➤ 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	



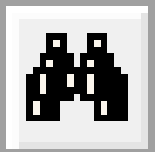



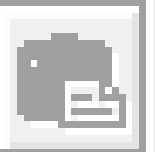



# ➤ Network Maps

▼ Network Maps				
<div><div></div></div>				
	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. The 'General' tab is selected. The 'Enabled' checkbox is checked. The 'Probe Interval' is set to 'default'. The 'Probe Timeout' is set to 'default'. The 'Probe Down Count' is set to 'default'. The 'Use Notifications' checkbox is checked. The notification methods are listed in a table below.

1: Settings button in the top toolbar.

2: 'Enabled' checkbox.

3: 'Use Notifications' checkbox.

4: Notification methods table.

5: 'Ok' button.

	Name
✓	beep
	flash
	log to events
	log to syslog
✓	popup

# กรณี POPUP

รูปแบบ POPUP			Attention	
#	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

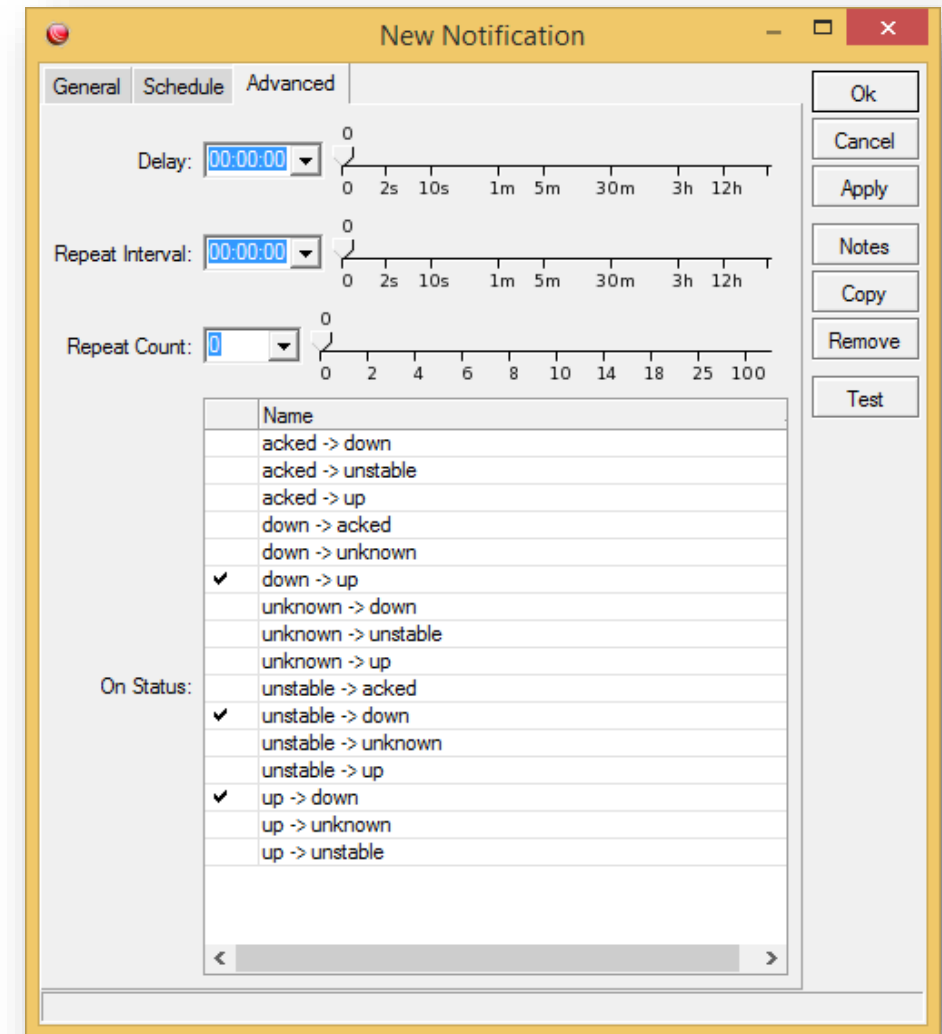
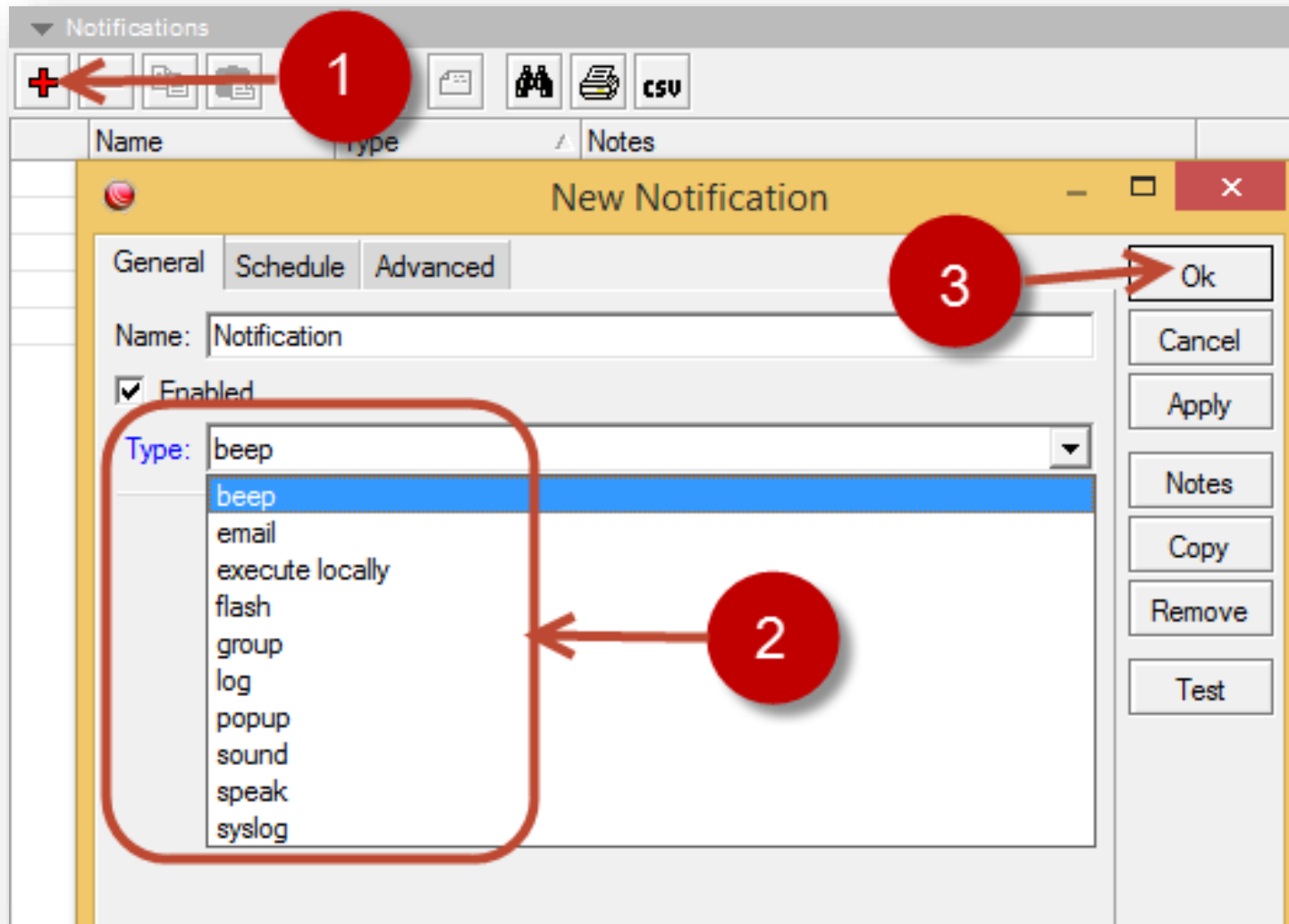
ຮູປແມບ ບີປ

ຮູປແມບ ຟາຊ

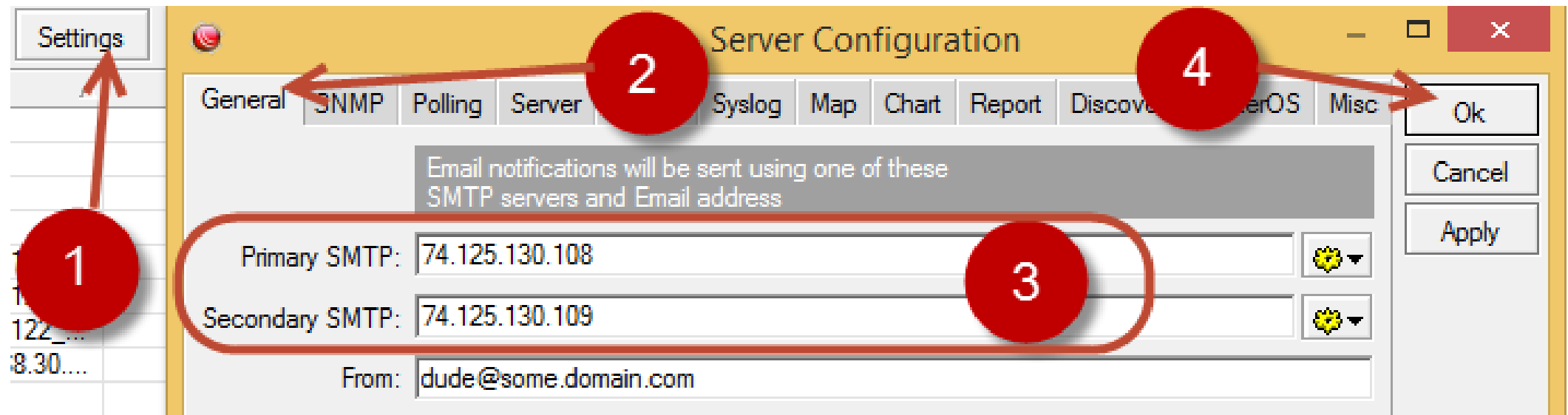
ຮູປແມບ ລອກ ຕໍ ອີເວັນ

ຮູປແມບ ລອກ ຕໍ ສີສລອກ

# 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

Name: Email

☒ Enabled

Type: email

Server: ☐

Server Port: ☒ 587

User: prapun009@gmail.com

Password:

Tls Mode: yes

To: prapun009@gmail.com

Cc:

▼ Insert Variable

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

▼ Insert Variable

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

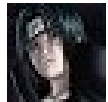
Ok Cancel Apply Notes Copy Remove Test

# 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



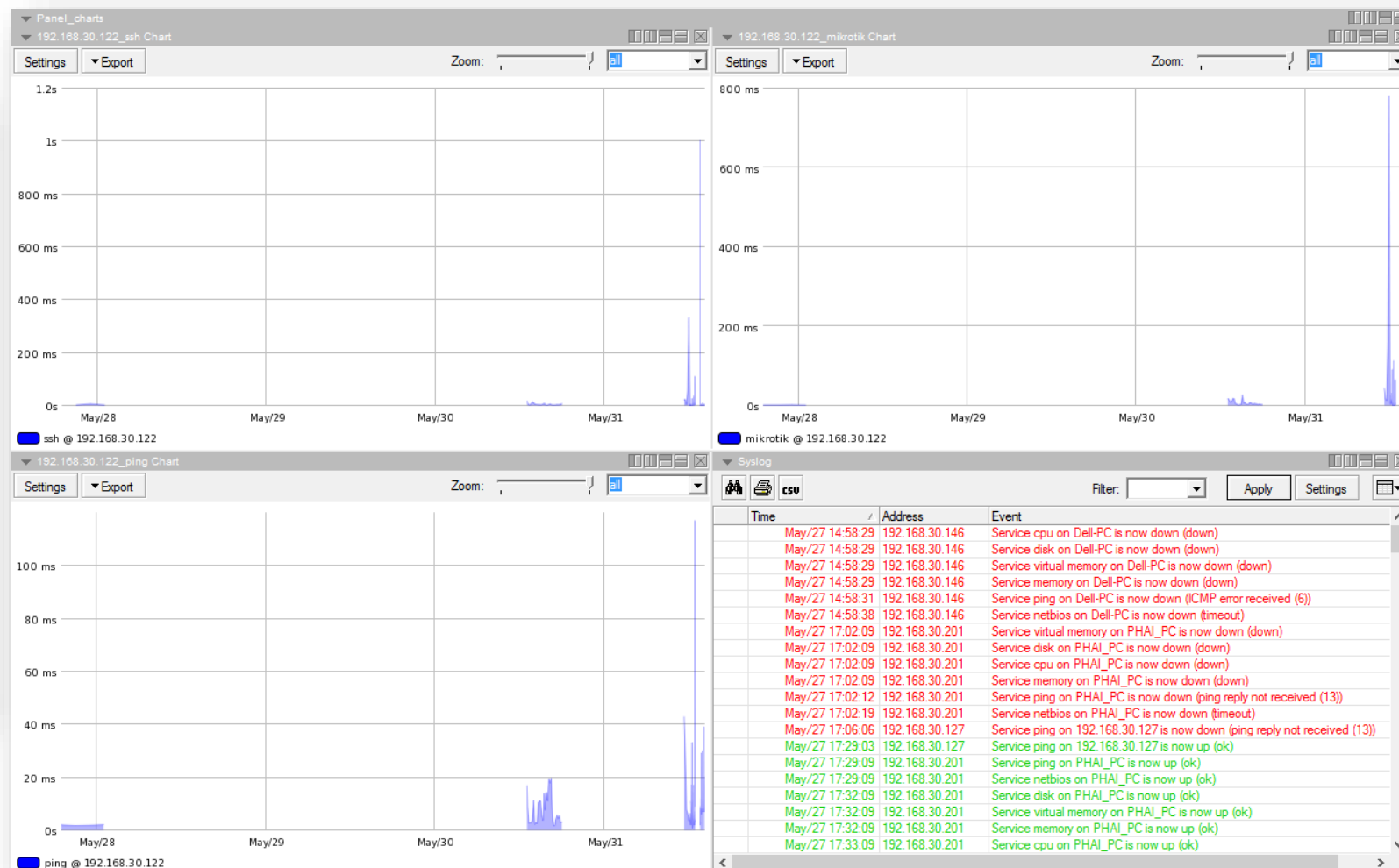
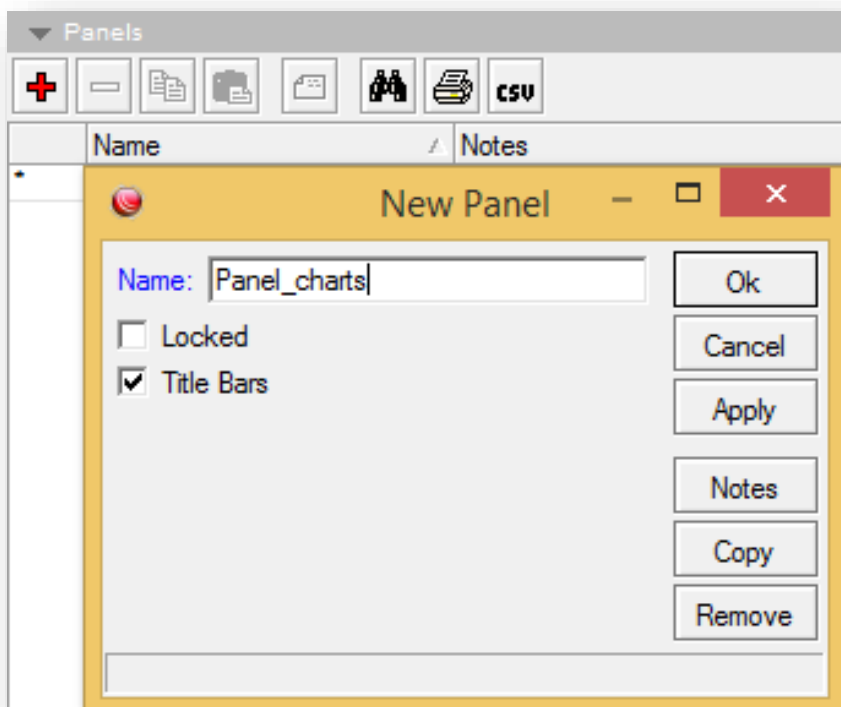
**prapun009@gmail.com**

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.อบรมตามมาตรฐานของไมโครติกพร้อมสอบ ใบประกาศ
- 4.สามารถเรียนซ้ำได้ไม่จำกัดจำนวนครั้ง
- 5.มีที่ฝึกงานหลังจากเรียนจบพร้อมฝึกงานชำนาญ