



The Dude is Back.

Flavio Gomes Figueira Camacho



The Dude is Back
Flávio Gomes Figueira Camacho

Mikrotik User Meeting in Brasil
Belo Horizonte - 25 de Novembro 2016

Autor

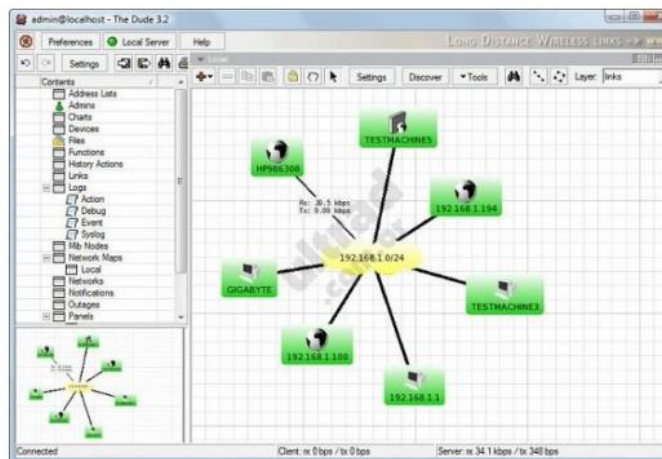
- **Flávio Gomes Figueira Camacho**
- Diretor de TI da Vipnet Baixada Telecomunicações e Informática LTDA, operadora de SCM e STFC.
- M. Sc. em Engenharia de Telecomunicações e professor de Pós-Graduação da Universidade Federal Fluminense.
- **Palestrante em Congressos, Simpósios, Seminários.**
 - MUM 2009 – MUM 2010 – MUM2011 – MUM 2012 - MUM 2013 – MUM 2014 - MUM 2015 .
- Certificações – MTCNA – MTCRE – MTCINE – MTCTCE – MTCWE – MTCUME – Academy Trainer Mikrotik

[MikrotikBrasil]

Routers & Wireless Systems

The Dude “O Cara”

Mini Curso



MUM – Brasil – Novembro de 2009
Eng. Wardner Maia



História do The Dude

- Desenvolvimento parado
- Sem atualizações por vários anos.
- Funcionalidades de RouterOS pararam de funcionar.
- Falhas não eram resolvidas.

O The Dude voltou

- Versão 6.34 do RouterOS

*) dude – The reports of my death have been greatly exaggerated;

Evolução

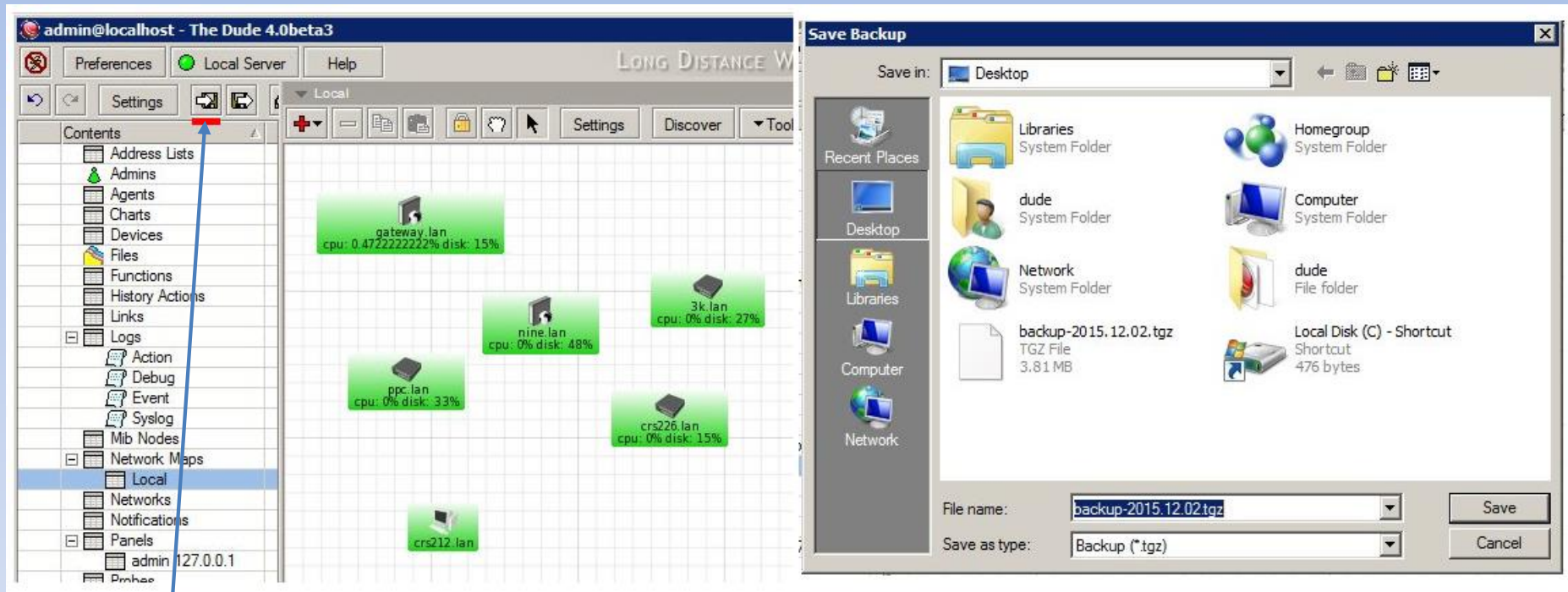
	4.0 Beta3	6.34	6.38
RouterBoards	Todas	CHR, i386, CCR	CHR, i386, CCR, ARM, MMIPS
Servidor Windows	Sim	Não	Não
Linguagem	Várias incluindo Português	Somente Inglês	Somente Inglês
Interface WEB	Sim	Não	Sim

Introdução

- Quem é o The Dude?
- Por que ele é essencial para os provedores?
- Porque monitorar uma rede?
- O que monitorar?

Como atualizar o The dude

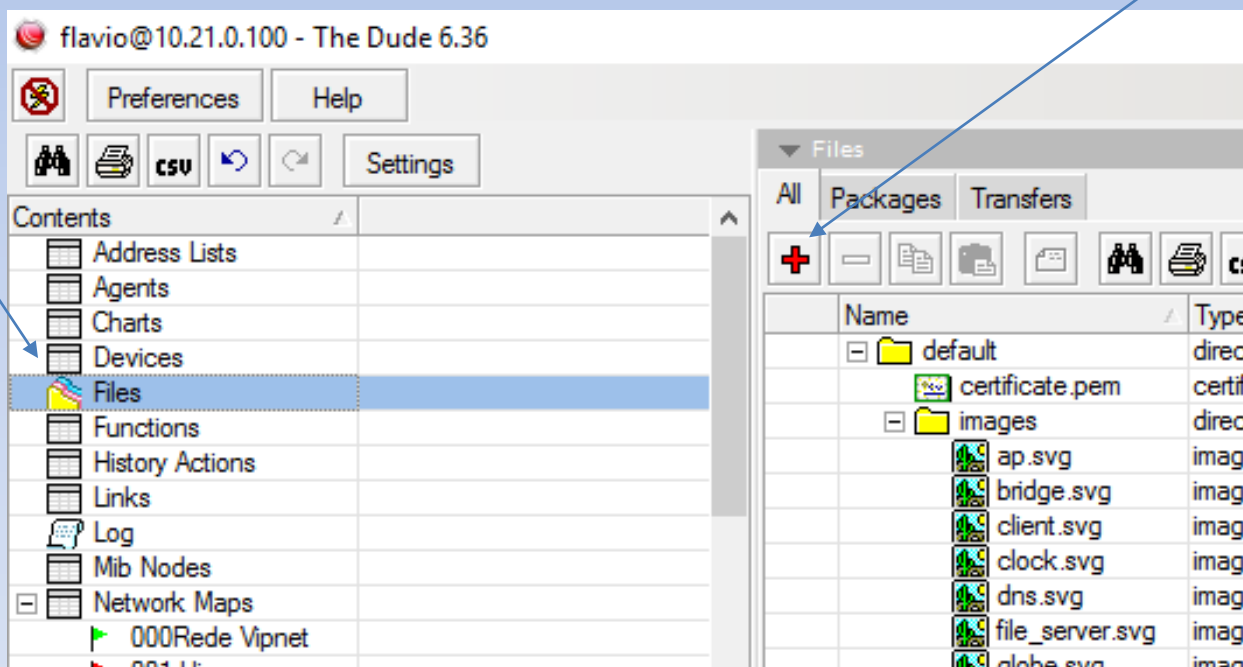
- v3/v4 for v6.xx



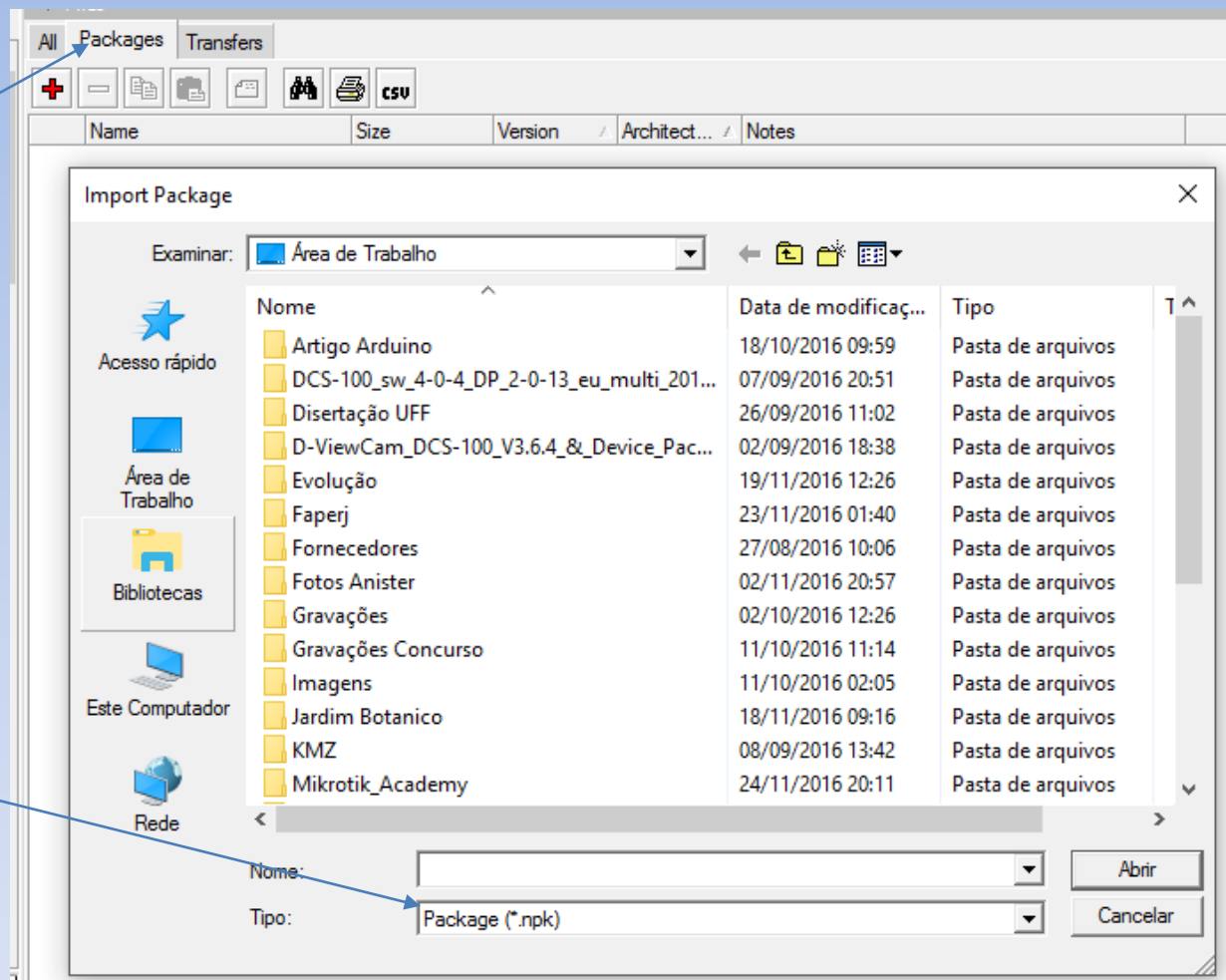
```
/dude set enabled=yes
/dude import-db backup-file=(file_name_path)
```

Como Atualizar o RouterOS Com o The Dude

- Faça o Upload dos pacotes do RouterOS através da aba files.



Como Atualizar o RouterOS Com o The Dude



Como Atualizar o RouterOS Com o The Dude



The screenshot shows the 'Devices' tab in The Dude software. The interface includes tabs for 'List', 'Tree', 'RouterOS', 'Types', and 'Mac Mappings'. Below these are sub-tabs for 'Device', 'Group', 'Wireless Registration', and 'Simple Queue'. A toolbar contains icons for a group of people, a printer, 'CSV', and an 'Upgrade' button. The main area is a table with columns for Status, Name, Version, Architecture, and Board. A context menu is open over the table, showing options: 'Device Settings', 'Show On Map', 'Tools', 'Settings', 'Upgrade', 'Force Upgrade', and 'Reconnect'. The 'Upgrade' option is selected, and a sub-menu shows version options: '6.34rc45', '6.33.5', and '6.32.3'. The table data is as follows:

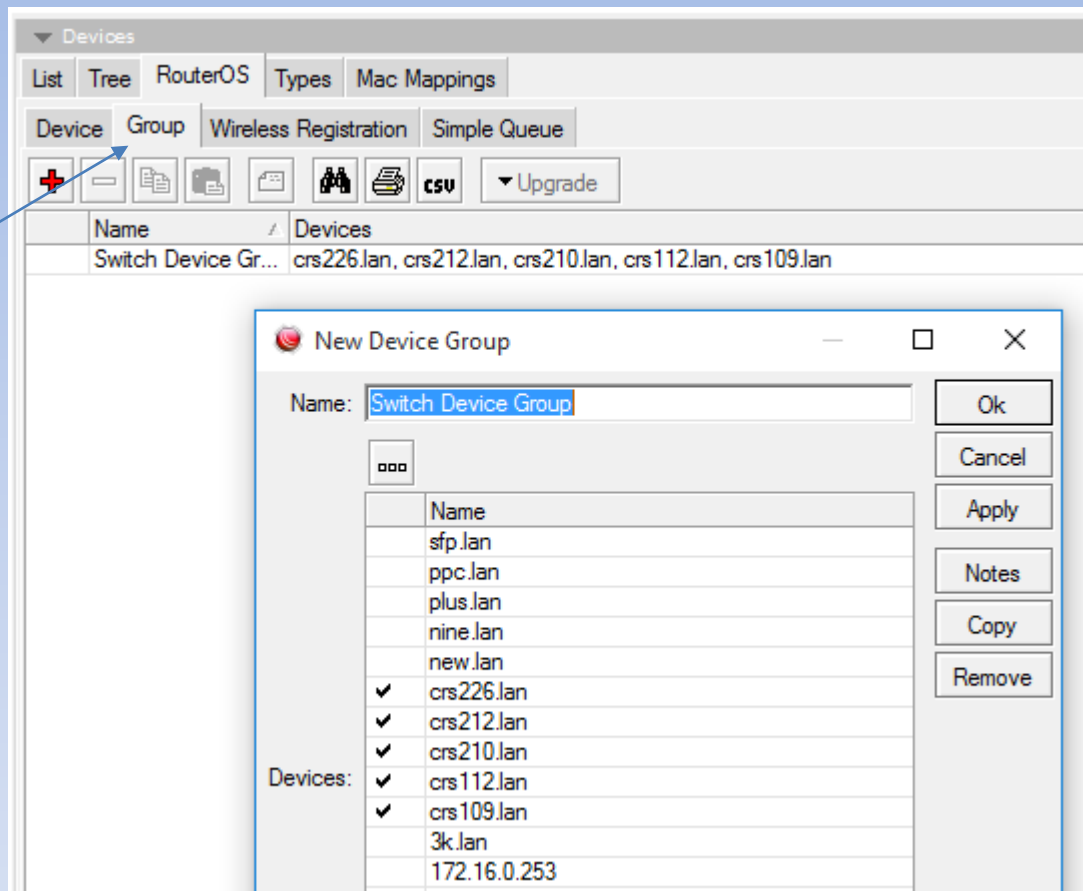
Status	Name	Version	Architecture	Board
failed	10.5.104.83			
failed	172.16.0.253			
ok	10.5.104.50	6.32.3	x86	x86
ok			x86	x86
ok			x86	CHR
ok			x86	CHR
ok			x86	x86
ok			arm	RB3011UiAS
ok			mipsbe	CRS109-8G-1S-2...
ok				-4S
ok				-2S+
ok				-10S...
ok				G-2S+
ok				S
ok	nine.lan	6.34rc41	tile	CCR1009-8G-1S-...



The Dude is Back
Flávio Gomes Figueira Camacho

Mikrotik User Meeting in Brasil
Belo Horizonte - 25 de Novembro 2016

Como Atualizar o RouterOS Com o The Dude





Wireless Registration

▼ Devices

List Tree RouterOS Types Mac Mappings

Device Group Wireless Registration Simple Queue

  CSU

Device	Radio Na...	MAC	AP	WDS	Tx/Rx Rate	Tx/Rx Sig...	Comment	Last IP
crs109.lan		E8:50:8B:1C:95:7D	no	no	52Mbps-2...	0/-49		192.168.20.253

Simple Queue



Devices

List Tree RouterOS Types Mac Mappings

Device Group Wireless Registration Simple Queue

+ - ✓ ✗ [Icons] CSU

	Device	Name	Comment	Destination	Target	Rx Limit Max	Tx Limit Max
D	10.5.104...	hs-<hots...			0.0.0.0/0		
D	10.5.104...	hs-<hots...			0.0.0.0/0		
D	new.lan	hs-<hots...			0.0.0.0/0		
	ppc.lan	client-1-d...			192.168.202.122...	512 kbps	20 Mbps
D	ppc.lan	hs-<hots...			0.0.0.0/0		
	ppc.lan	cleint-1					1 Mbps
	ppc.lan	Client-1					

client-1-dev00 - RouterOS Simple Queue

General Advanced

Name: client-1-dev00

Comment:

Target: 192.168.202.122/32

Rx Limit Max: 512000

Tx Limit Max: 20000000

Total Limit Max:

Rx Limit:

Tx Limit:

Total Limit:

Ok Cancel Apply



The Dude is Back
Flávio Gomes Figueira Camacho

Mikrotik User Meeting in Brasil
Belo Horizonte - 25 de Novembro 2016

Memória

Memoria > 90% - Probe

Name:

Type:

Agent:

Performs custom functions to decide if service is available and up. If up graphs value of another function

Should return true if service is available

Available:

Should return value to graph if up

Value:

Unit:

Ok
Cancel
Apply
Notes
Copy
Remove

HD



Drive C: < 80% - Probe

Name:

Type:

Agent:

Performs custom functions to decide if service is available and up. If up graphs value of another function

Should return true if service is available

Available:

If return string is empty then service is assumed up

Error:

Should return value to graph if up

Value:

Unit:

Ok
Cancel
Apply
Notes
Copy
Remove

Temperatura

Temperatura > 70° - Probe

Name:

Type:

Agent:

This probe will get single SNMP OIDs value and perform specified comparison. Service will be decided as up if valid response for given OID is received and result of comparison yields logical true

Snmp Profile:

Treat service as available only if up

Oid:

Oid Type:

Compare Method:

Integer Value:

Ok
Cancel
Apply
Notes
Copy
Remove

Ping largo

Ping Largo - Probe [Close] [Maximize] [Minimize]

Name:

Type:

Agent:

This probe will send ICMP echo request message (what ping program does)

Packet Size: bytes

TTL:

Retry Count: times

Retry Interval: ms

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

Latencia > 40ms

ALERTA_DE_LATENCIA_DE_REDE - Testador

Nome: ALERTA_DE_LATENCIA_DE_REDE

Tipo: Function

Agente: padrão

Realiza operações pré-determinadas para decidir se o serviço está disponível e Fechado. Se Fechado registrará no gráfico o valor daquela função pré-definida.

Valor retornado será verdadeiro se o serviço estiver disponível

Disponível: ping(device_property("FirstAddress")) >= 0

Se a sequência retornar vazia então assume-se que o serviço está disponível

Erro: if(array_element(ping(device_property("FirstAddress")), 0) < 40 , "", "Latencia acima de 40ms")

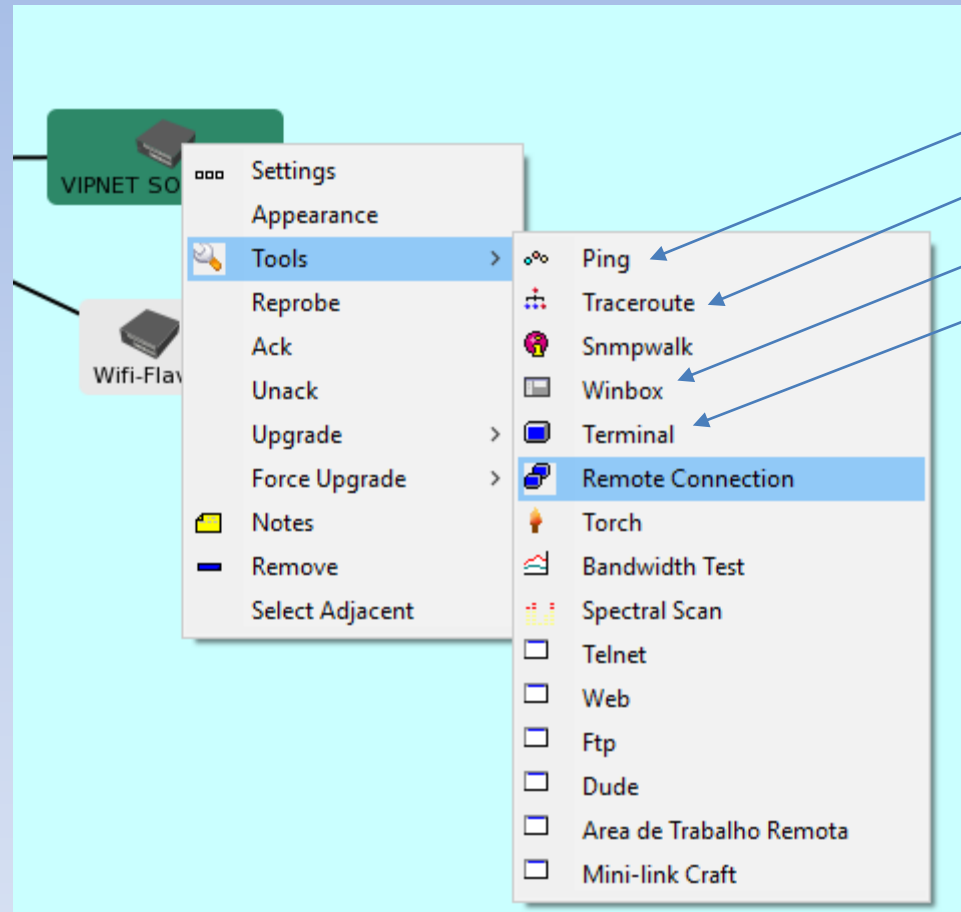
Será retornado valor para o gráfico se Fechado

Valor: ping(device_property("FirstAddress"))

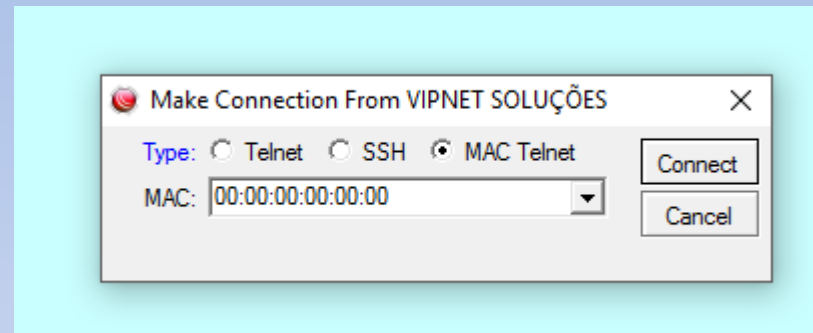
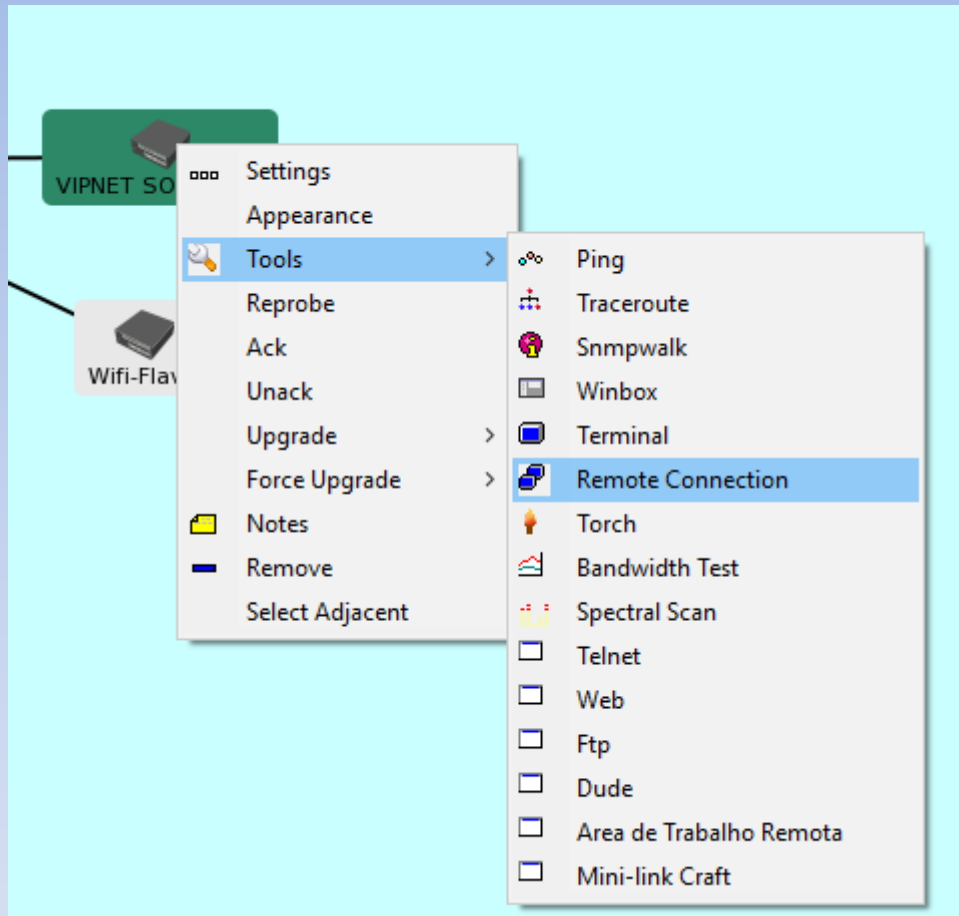
Unidade: ms

Ok
Cancelar
Aplicar
Notas
Copiar
Remover

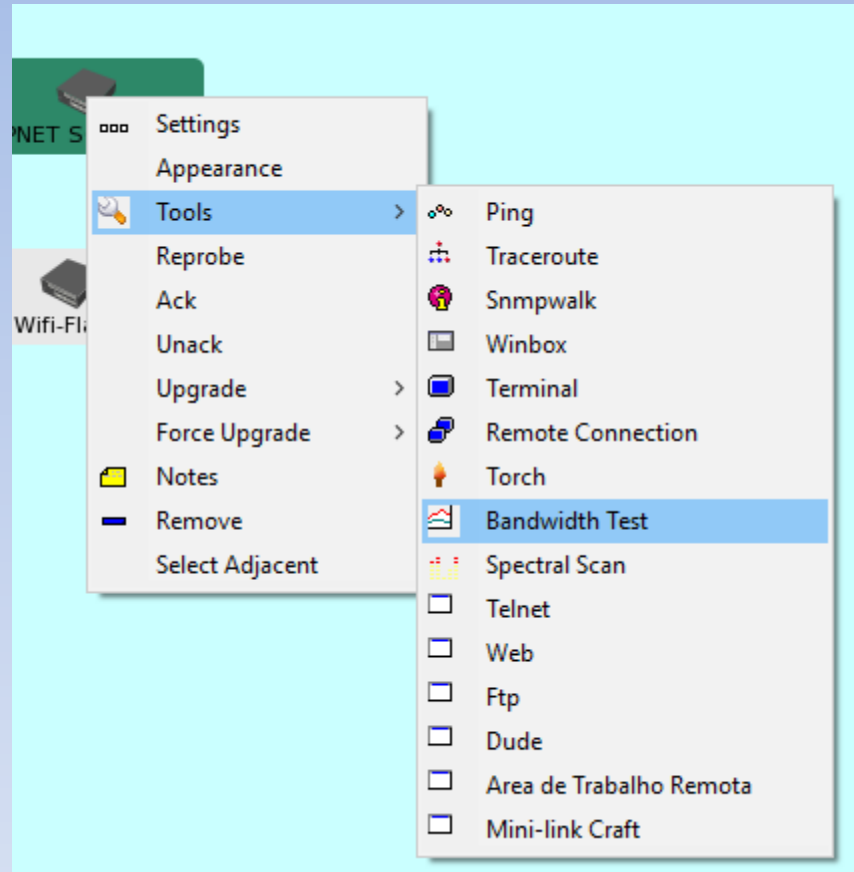
The Dude Tools



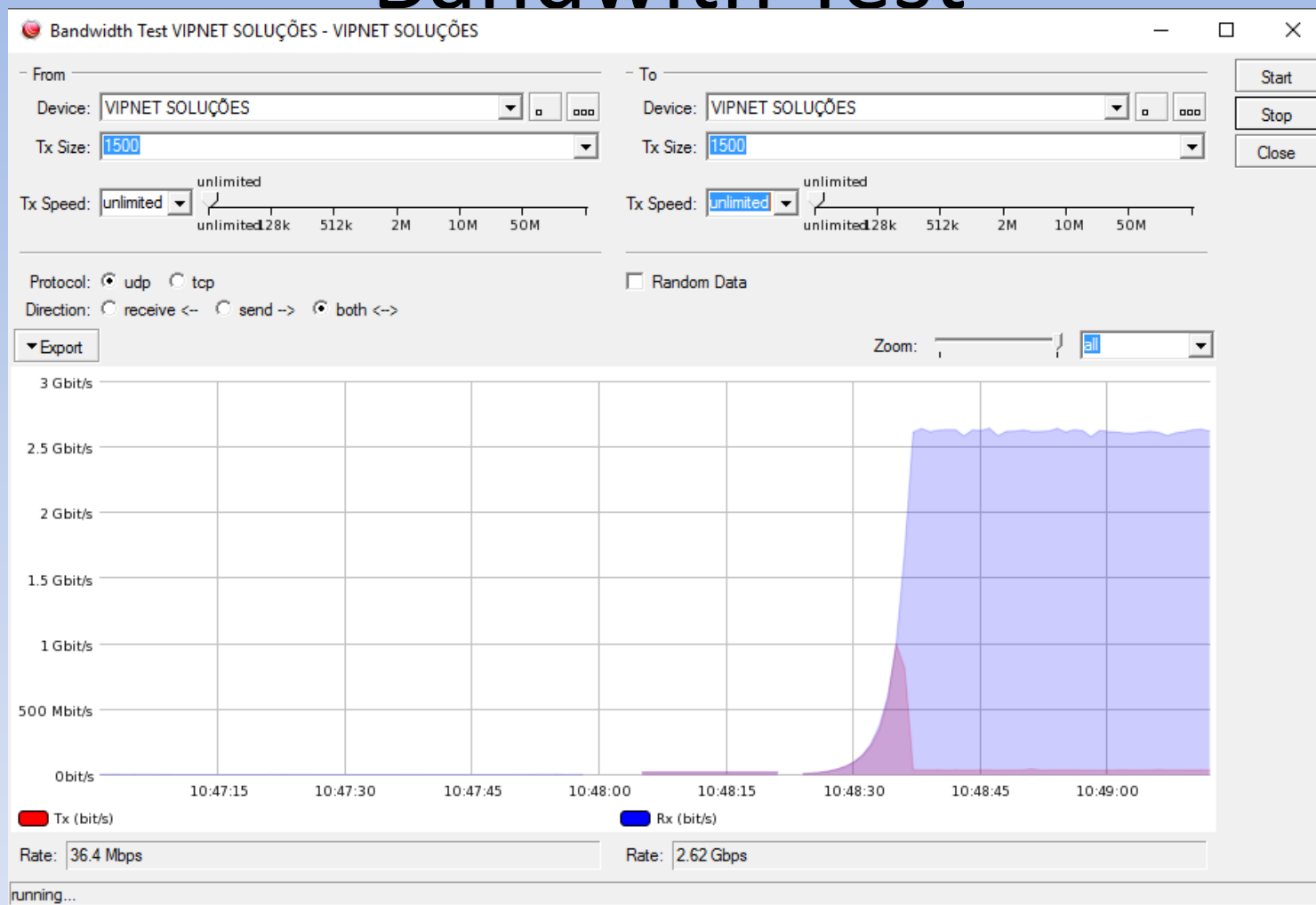
Remote Connection



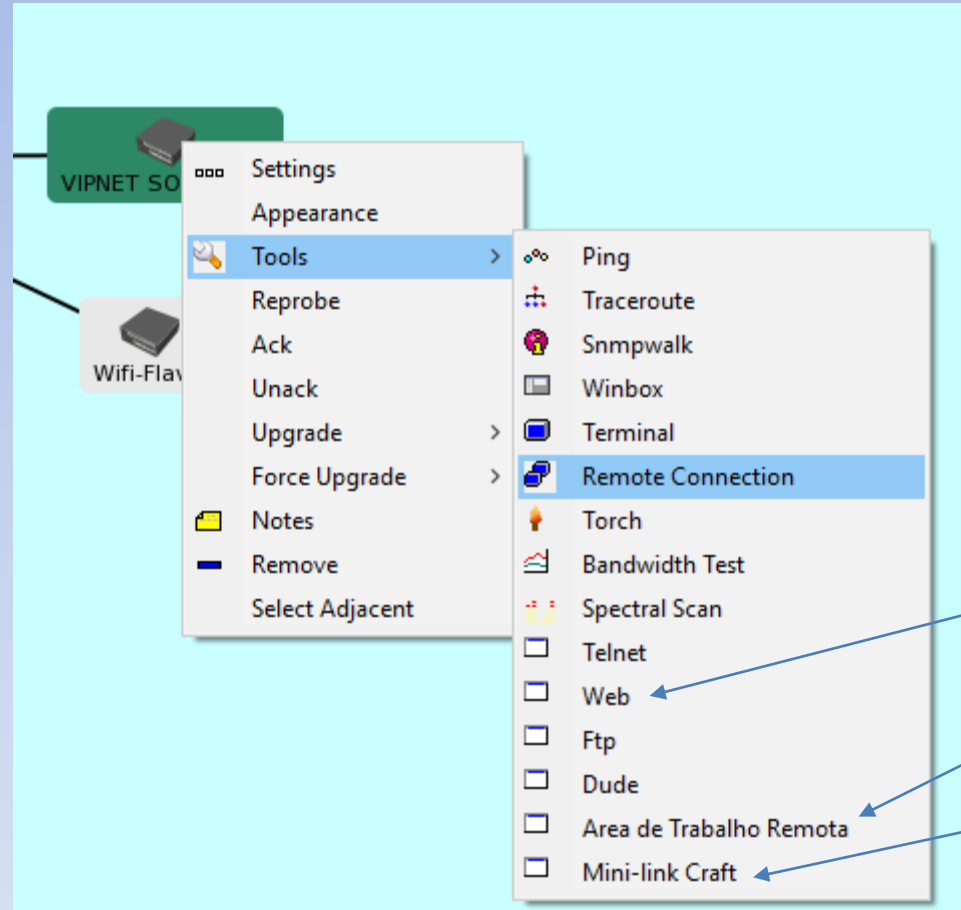
Bandwidth Test



Bandwidth Test



The Dude Tools



Wireless Scan

```
Terminal
FREQ DBM GRAPH
5088 -75 .....
5105 -76 .....
5121 -71 .....
5138 -70 .....
5155 -76 .....
5172 -81 .....
5189 -70 .....
5205 -70 .....
5222 -73 .....
5239 -83 .....
5256 -73 .....
5273 -73 .....
5289 -69 .....
5306 -69 .....
5323 -77 .....
5340 -75 .....
5356 -64 .....
5373 -63 .....
5390 -52 .....
5407 -52 .....
5424 -54 .....
5440 -67 .....
5457 -43 .....
5474 -43 .....
5491 -43 .....
5508 -60 .....
5525 -61 .....
5541 -69 .....
5558 -76 .....
5575 -76 .....
5592 -49 .....
5609 -52 .....
5625 -65 .....
5642 -66 .....
5659 -67 .....
5676 -67 .....
5693 -73 .....
5709 -73 .....
5726 -67 .....
5743 -69 .....
5760 -75 .....
5776 -69 .....
5793 -51 .....
5810 -52 .....
5827 -59 .....
5844 -73 .....
5860 -60 .....
5877 -58 .....
5894 -60 .....
5911 -60 .....
[Q quit|D dump|C-z pause]
```

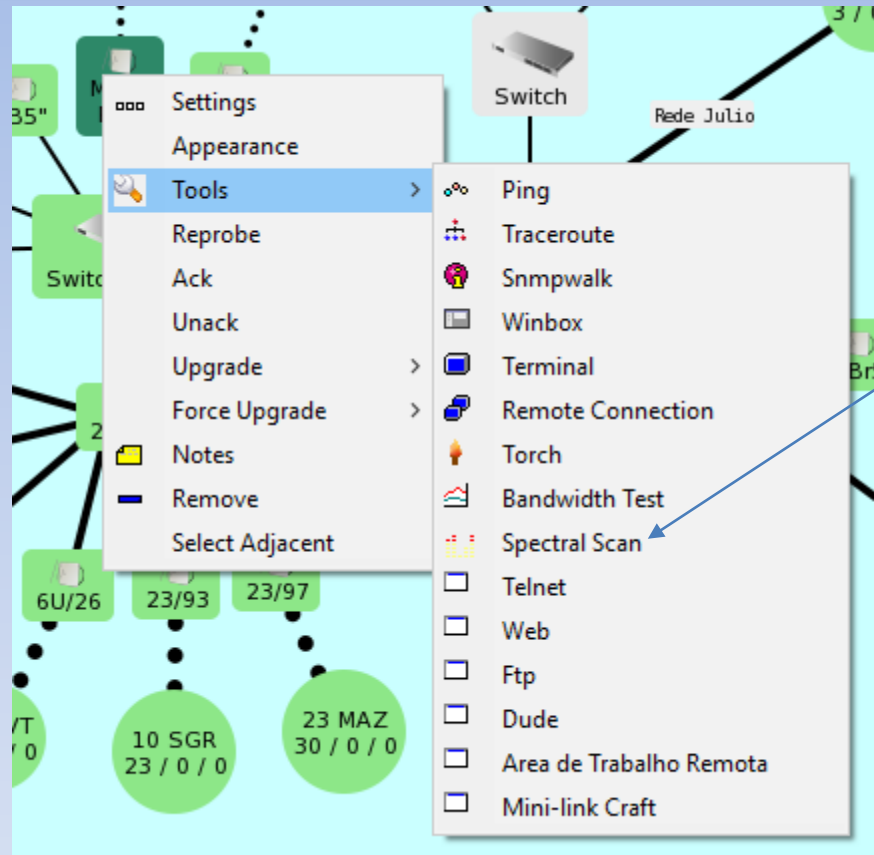
Wireless Frequency Monitor

```
[Vipnet@BB1_PJB_PTR_AP] > interface wireless frequency-monitor
```

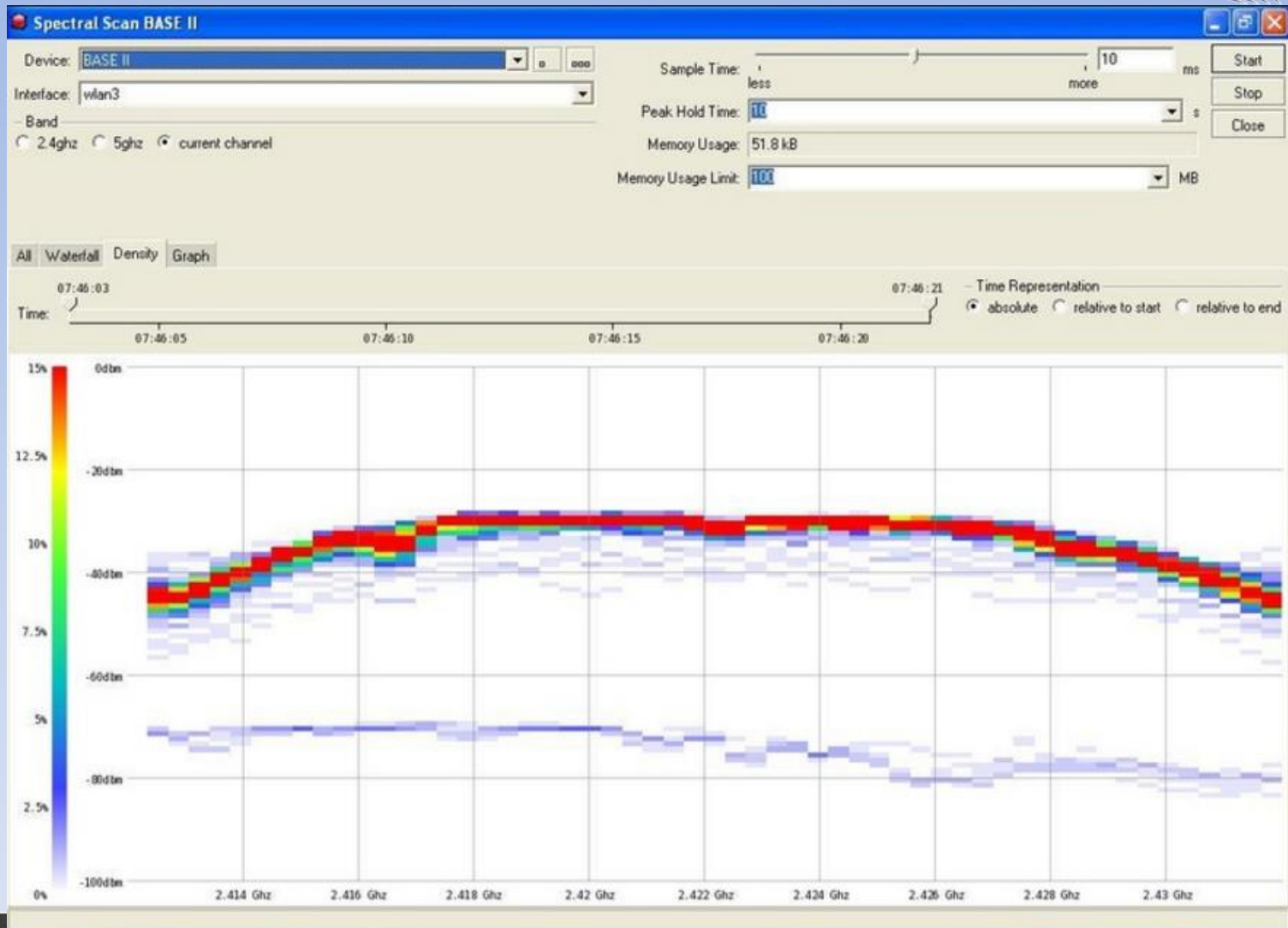
```
number: 0
```

FREQ	USE	NF
5180MHz	5.2%	-128
5200MHz	18.8%	-128
5220MHz	1.8%	-128
5240MHz	2.9%	-128
5260MHz	21.1%	-128
5280MHz	8.2%	-128
5300MHz	0%	-128
5320MHz	3%	-128
5745MHz	0.7%	-128
5765MHz	1%	-128
5785MHz	2.9%	-128
5805MHz	2.8%	-128
5825MHz	4.5%	-128

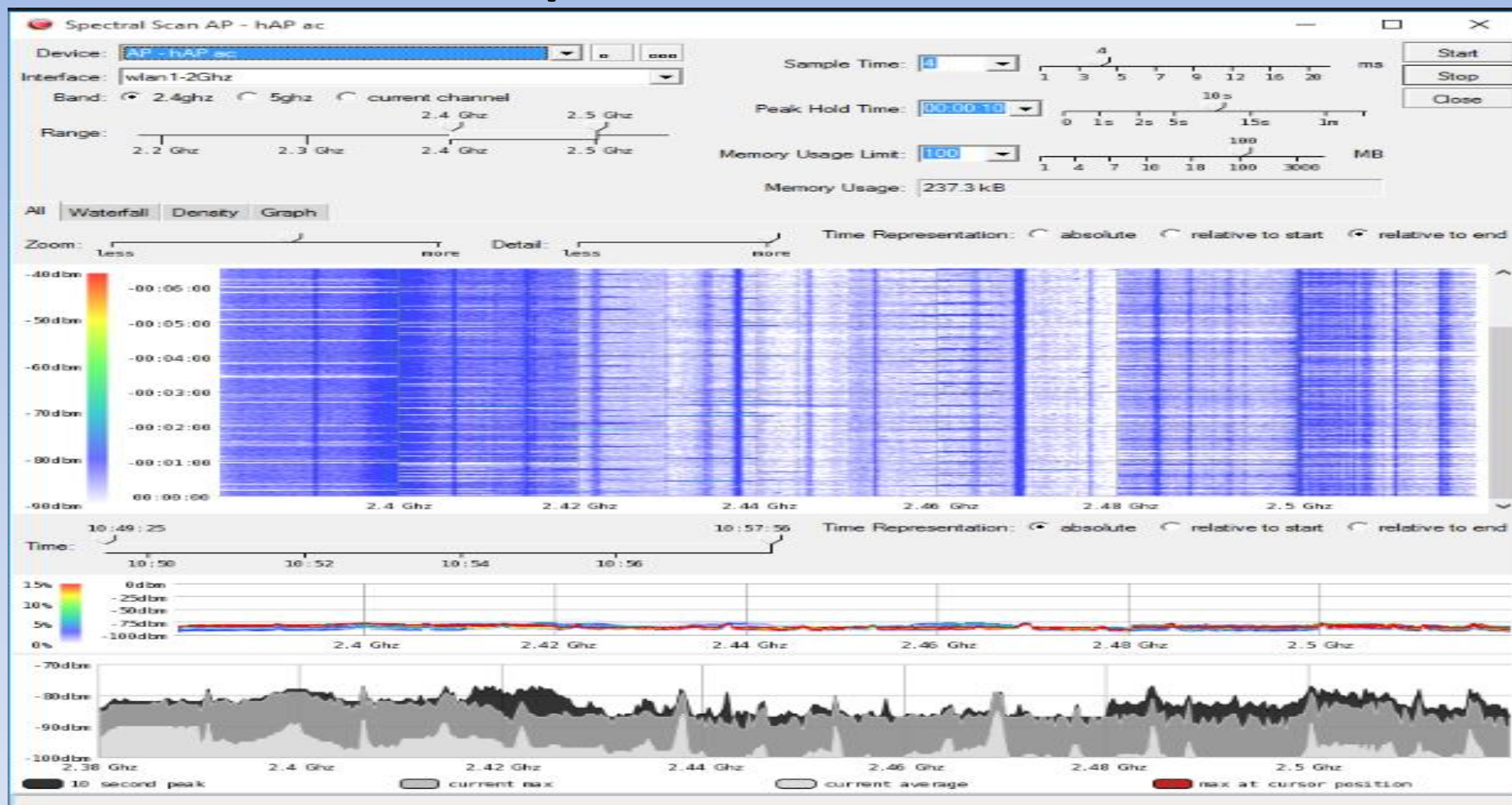
Spectral Scan



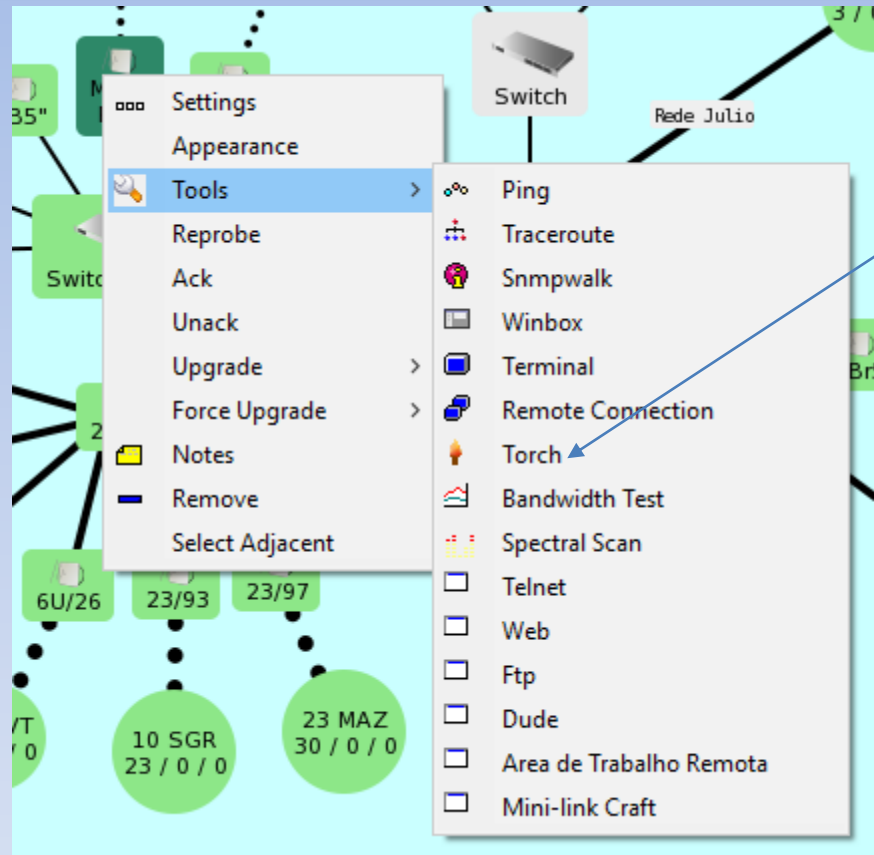
Spectral Scan



Spectral Scan



Torch



The Dude is Back
Flávio Gomes Figueira Camacho

Mikrotik User Meeting in Brasil
Belo Horizonte - 25 de Novembro 2016

Torch

Torch AP Exhibition

General

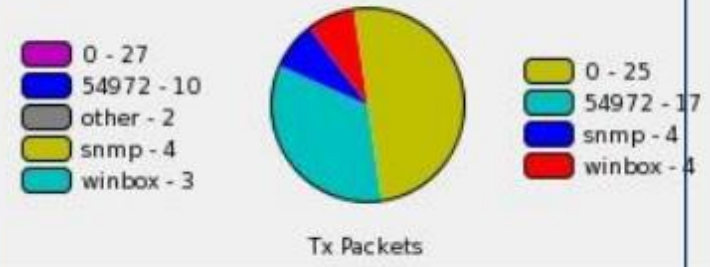
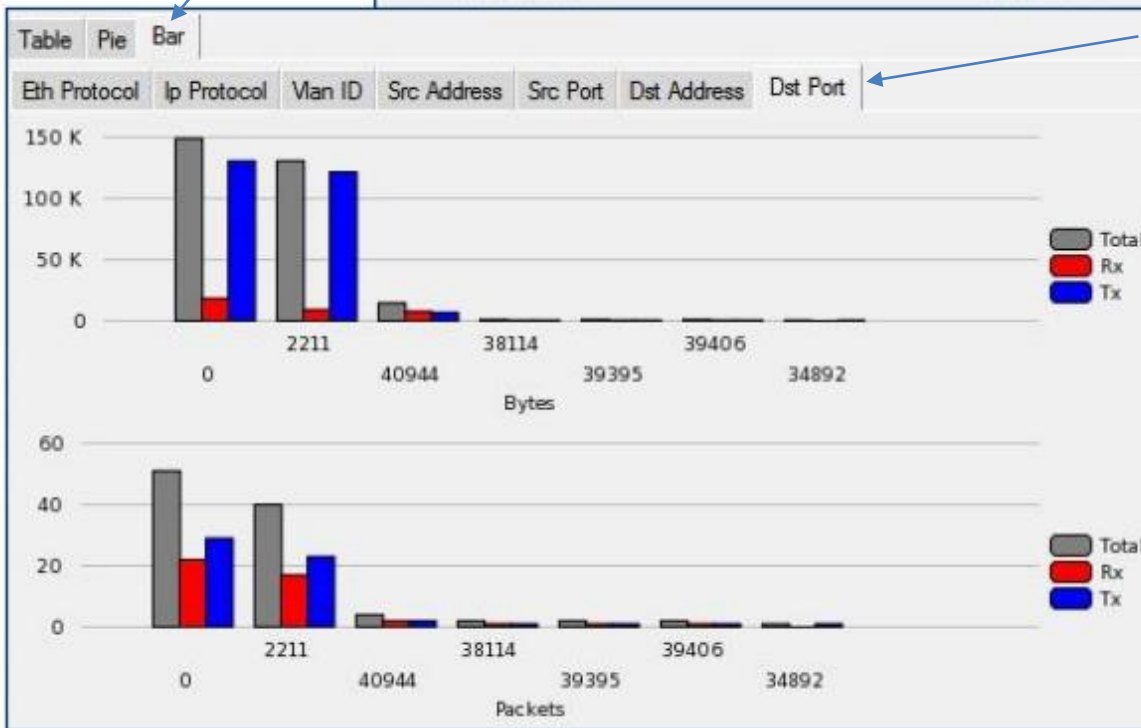
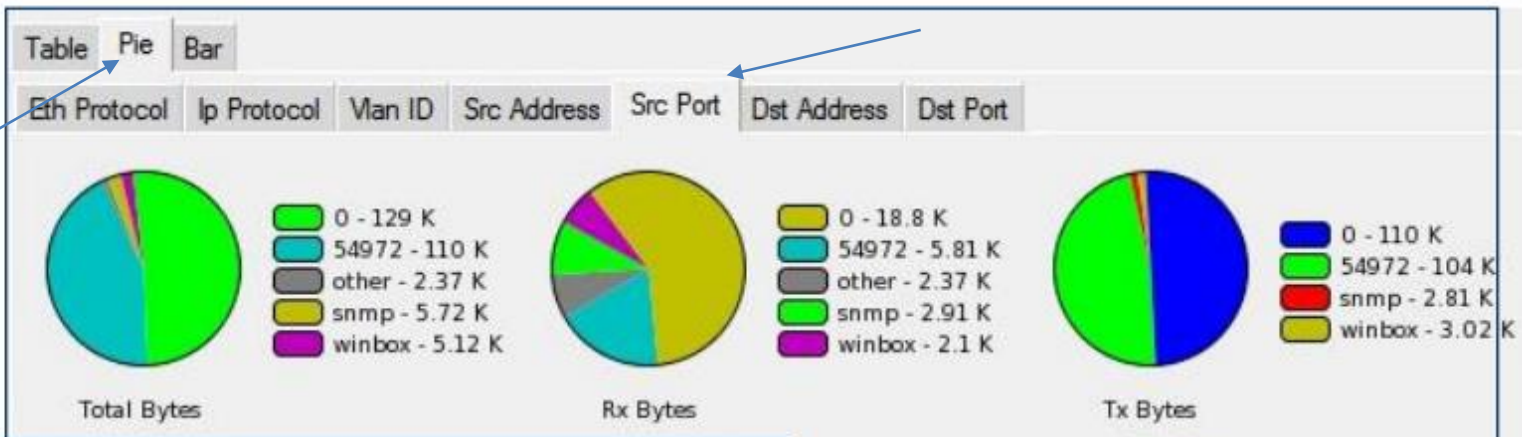
From: AP Exhibition

Interface: 192.168.0.21
192.168.0.249
AP Exhibition

Average: AP Floor 1
AP Floor 2
AP Kitchen
AP Living Room
AP Office 2
AP Office 3
AP Office 3
AP Office EDV

Table Pie Bar

#	Eth ...	IP Pr...	Man ID	Src Address	Src Port
...	ip	tcp		192.168.0.250	lpr
...	ip	tcp		192.168.0.250	http
...	ip	udp		192.168.0.250	netbios-ns
...	ip	icmp		192.168.0.250	0
...	ip	tcp		192.168.0.247	winbox
...	ip	tcp		192.168.0.247	winbox
...	ip	tcp		192.168.0.247	winbox



The Dude is Back
 Flávio Gomes Figueira Camacho

Mikrotik User Meeting in Brasil
 Belo Horizonte - 25 de Novembro 2016

Históricos

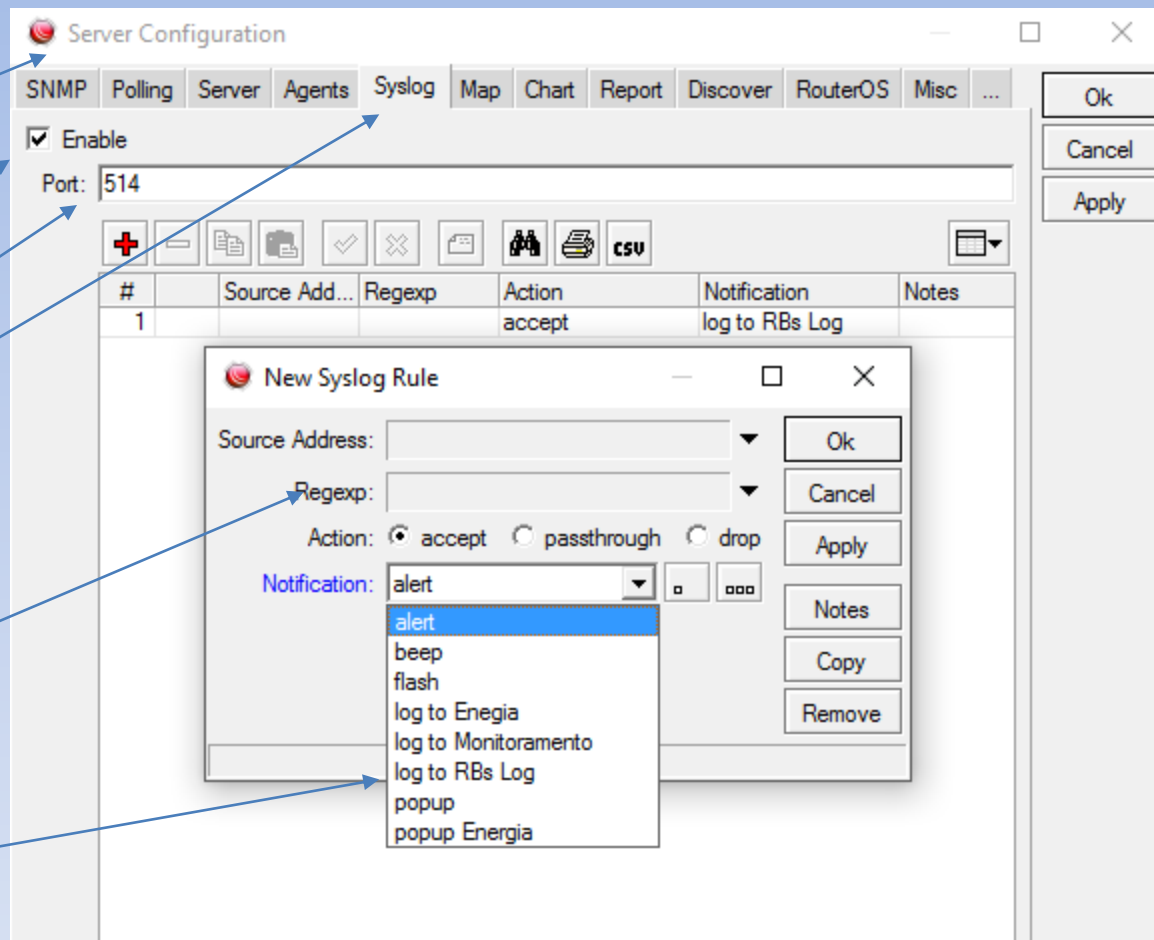


Latência

Consumo de CPU

Número de assinantes

The Dude Syslog



The screenshot shows the Mikrotik 'Server Configuration' window with the 'Syslog' tab selected. The 'Enable' checkbox is checked, and the 'Port' is set to 514. A table below shows a single rule with the following details:

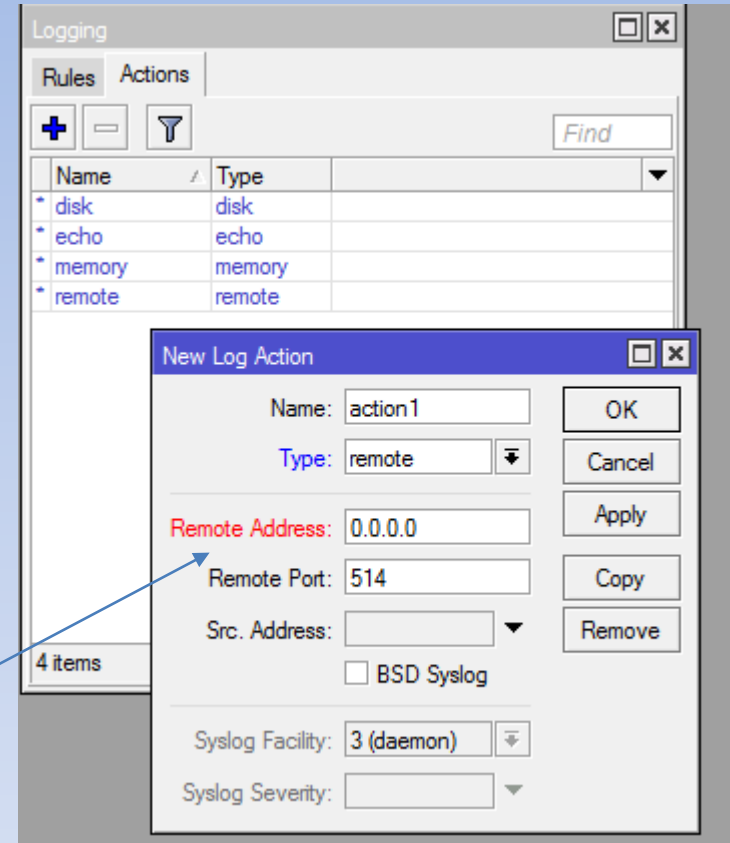
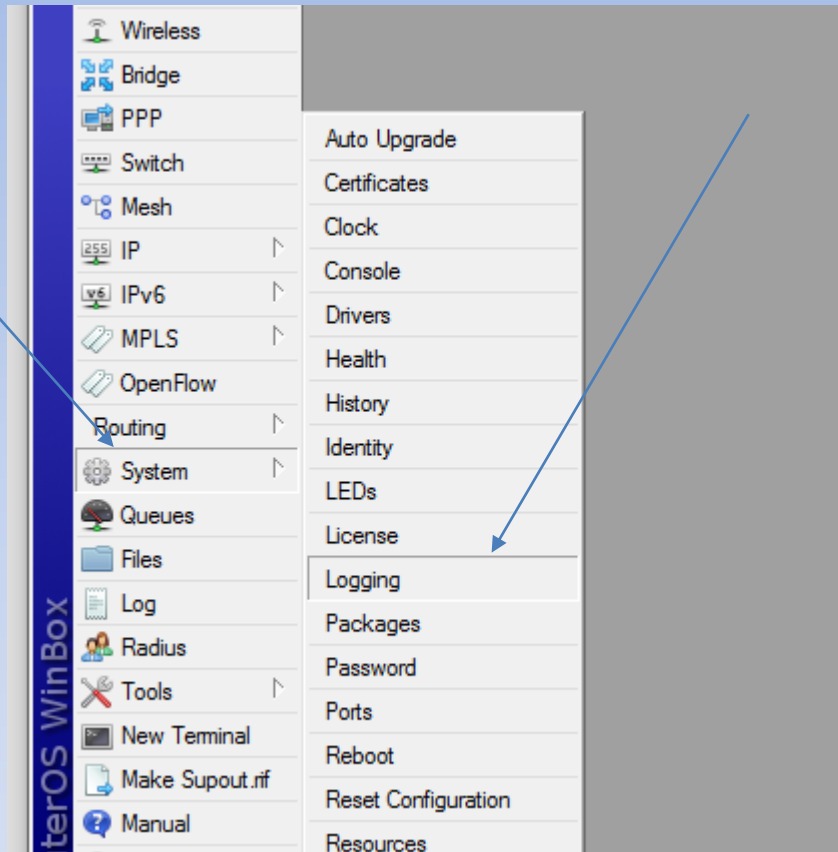
#	Source Add...	Regexp	Action	Notification	Notes
1			accept	log to RBs Log	

A 'New Syslog Rule' dialog box is open, showing the following configuration options:

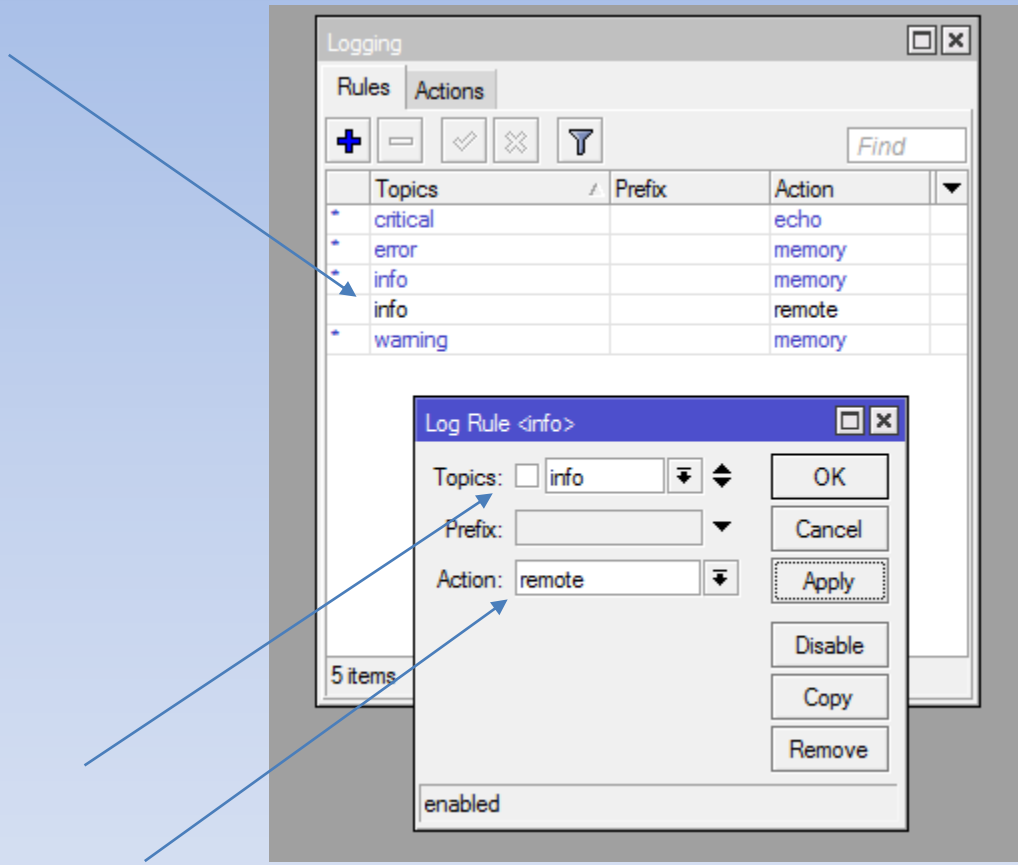
- Source Address: (empty dropdown)
- Regexp: (empty dropdown)
- Action: accept, passthrough, drop
- Notification: alert (selected in dropdown menu)

The dropdown menu for 'Notification' is open, showing the following options: alert, beep, flash, log to Energia, log to Monitoramento, log to RBs Log, popup, and popup Energia.

The Dude Syslog



The Dude Syslog



The screenshot shows the 'Logging' configuration window with the 'Rules' tab selected. A table lists logging rules with columns for Topics, Prefix, and Action. A dialog box 'Log Rule <info>' is open, showing the configuration for the selected 'info' rule. Blue arrows point from the dialog box fields back to the corresponding rows in the table.

Topics	Prefix	Action
critical		echo
error		memory
info		memory
info		remote
warning		memory

The 'Log Rule <info>' dialog box shows the following configuration:

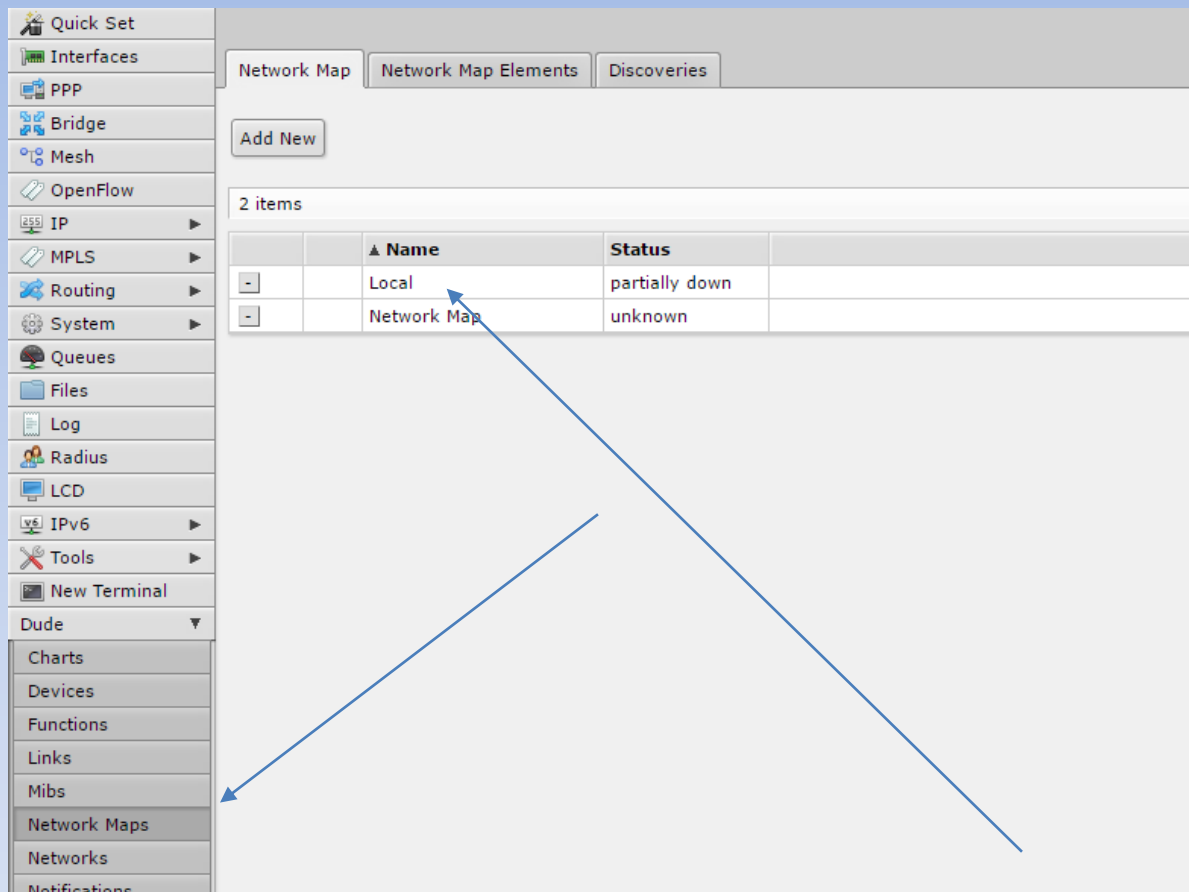
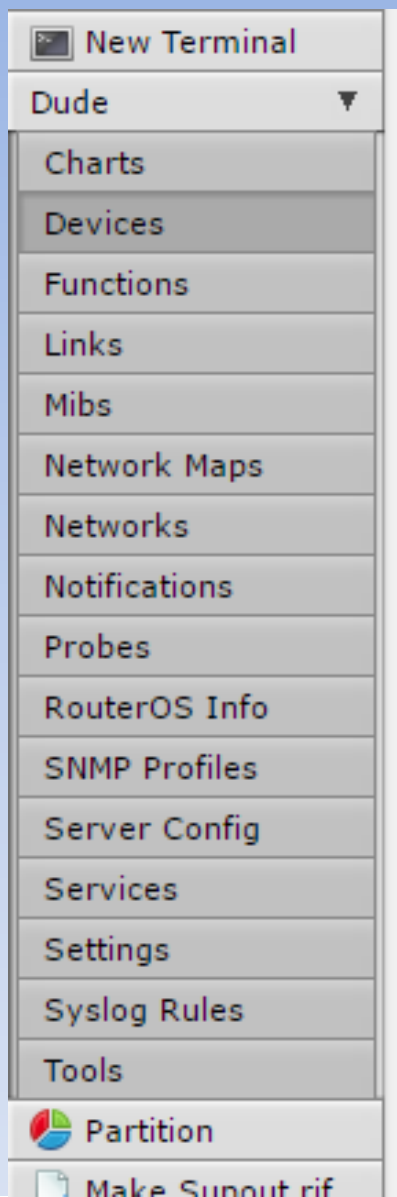
- Topics: info
- Prefix:
- Action: remote

Buttons: OK, Cancel, Apply, Disable, Copy, Remove. Status: enabled.

The Dude Syslog

Jan/02/1970 00:00:44	memory	system, error, critical	router was rebooted without proper shutdown
Jan/02/1970 00:01:05	memory	interface, info	ether2 link up (speed 100M, full duplex)
Jan/02/1970 00:01:46	memory	system, info, account	user admin logged in from 10:1F:74:E7:35:06 via winbox
Jan/02/1970 00:04:45	memory	interface, warning	ether2 excessive broadcasts/multicasts, probably a loop
Jan/02/1970 01:17:22	memory	system, info, account	user admin logged out from 10:1F:74:E7:35:06 via winbox
Jan/02/1970 02:05:44	memory	system, info, account	user admin logged in from 10:1F:74:E7:35:06 via winbox
Jan/02/1970 02:07:29	memory	system, info	log action added by admin
Jan/02/1970 02:07:39	memory	system, info	log rule added by admin

WebFig



Referencias

- MUM 2016 Ljubljana | Patrik Schaub
- MUM 2009 Rio de Janeiro | Wardner Maia
- <http://williansco.blogspot.com.br/2014/03/the-dude-para-monitoramento-de-servicos.html>

Obrigado

Flávio G. F. Camacho

flavio@vipnettelecom.com.br

(21) 3799-8299 / 97959-2225



The Dude is Back
Flávio Gomes Figueira Camacho

Mikrotik User Meeting in Brasil
Belo Horizonte - 25 de Novembro 2016