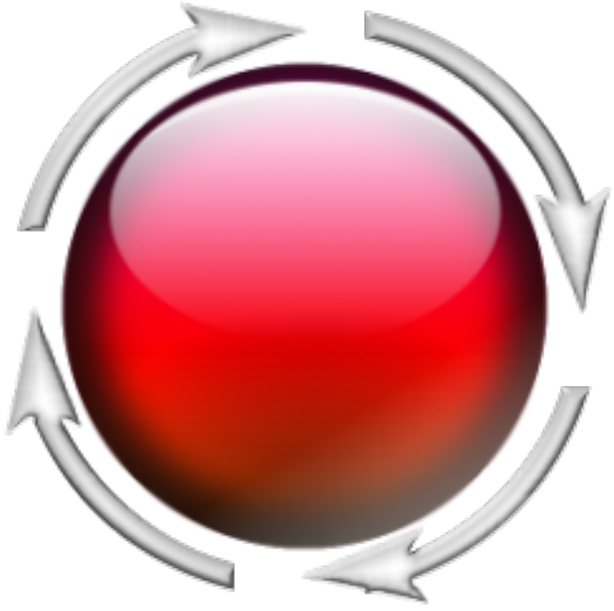
Dude is not dead!

Why is „Dude“ our choice of monitoring?!



David Nölte – MUM UK 2018 - Copyright MiSaxNet

THE WALKING DUDE

„The reports of my death have been greatly exaggerated“

- MikroTik RouterOS Changelog 6.34

MiSaxNet
Enjoy to connect

Who am I?

- Founder and CTO of MiSaxNet
- Working in IT since 2001
- MikroTik enthusiast
- MikroTik Trainer (TR0523)
- Lived and worked in Ireland, USA and Berlin

MiSaxNet
Enjoy to connect

What we do?

- Local WISP
- Wireless solutions
- Licensed / unlicensed backhauls
- Hotspot solutions
- VDSL / fiber / coaxial solutions

MiSaxNet
Enjoy to connect

Objective

- No installation instructions
- No history talk
- No bulls**t about bugs
- Why we chose Dude
- How to extend usage for non-MikroTik equipment
- Slack integration
- Custom functions

MiSaxNet
Enjoy to connect

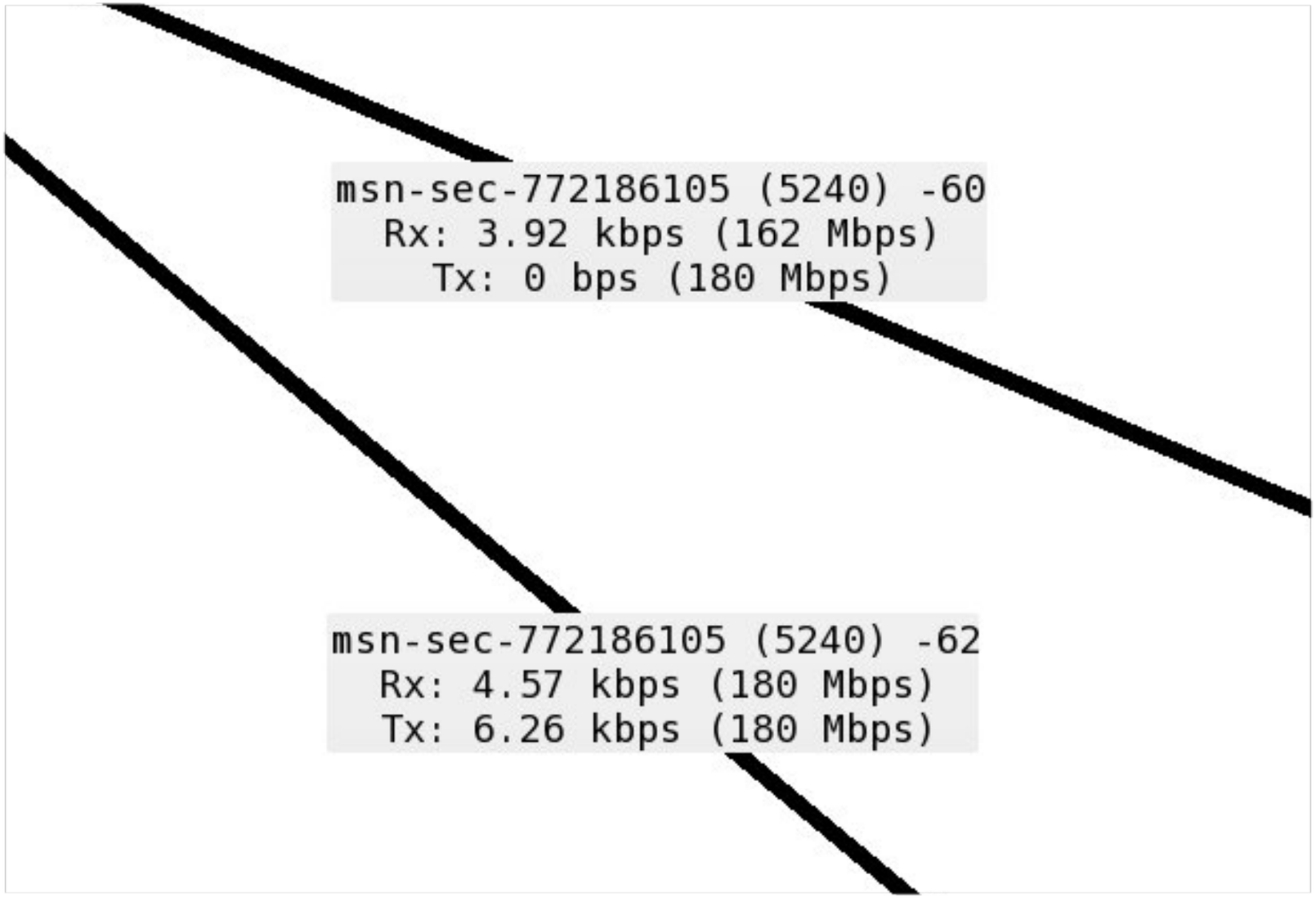
Why we chose Dude

- Fast fnstallation
- Easy configuration (no config files like in nagios)
- Includes graphing (like in Cacti)
- Includes notification/alerts
- Central package management
- Custom functions and probes
- Nice visualization and maps
- Totally free!

MiSaxNet
Enjoy to connect

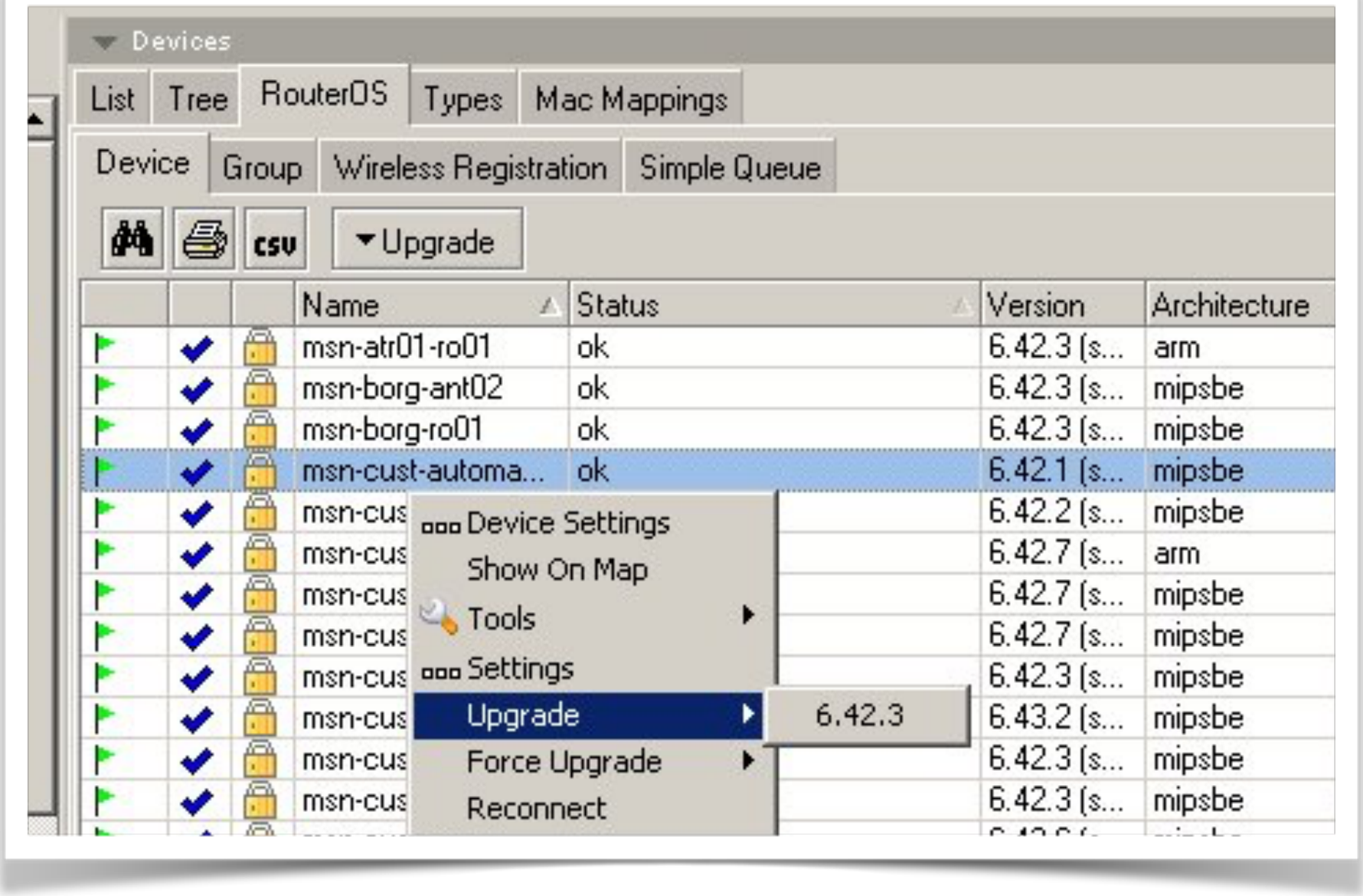
Why we chose Dude

- Simple wireless link overview
  - SNMP must be enabled on device and configured in dude for the device



Why we chose Dude

- Central package management
  - Multiple versions can be managed
  - Packages need to be uploaded to Dude



MiSaxNet
Enjoy to connect

Why we chose Dude

- Central overview for wireless registrations

Devices

List | Tree | RouterOS | Types | Mac Mappings

Device | Group | Wireless Registration | Simple Queue

	Device	Radio Na...	MAC	AP	WDS	Tx/Rx Rate	Tx/Rx Sig...	Last IP
	msn-borg...	CC2DE0...	CC:2D:E0:...	no	no	360Mbps-...	-44/-46	10.255.128.123
	msn-cust...	64D154...	64:D1:54:...	yes	no	180Mbps-...	-55/-60	10.0.0.42
	msn-cust...	CC2DE0...	CC:2D:E0:...	no	no	180Mbps-...	-62/-57	10.0.12.164
	msn-cust...	CC2DE0...	CC:2D:E0:...	no	no	180Mbps-...	-61/-58	10.0.12.163
	msn-cust...	64D154...	64:D1:54:...	yes	no	24Mbps/...	-81	10.0.0.42
	msn-cust...	64D154...	64:D1:54:...	yes	no	180Mbps-...	-57/-62	10.0.0.42
	msn-cust...	6C3B6B...	Routerboa...	yes	no	180Mbps-...	-50/-51	10.0.0.42
	msn-cust...	6C3B6B...	Routerboa...	yes	no	180Mbps-...	-50/-51	10.0.0.42
	msn-cust...	6C3B6B...	Routerboa...	yes	no	162Mbps-...	-34/-51	10.0.0.42
	msn-cust...	64D154...	64:D1:54:...	yes	no	180Mbps-...	-51/-46	10.0.0.42
	msn-cust...	64D154...	64:D1:54:...	yes	no	180Mbps-...	-56/-61	10.0.0.42
	msn-cust...	64D154...	64:D1:54:...	yes	no	180Mbps-...	-58/-61	10.0.0.42
	msn-cust...	64D154...	64:D1:54:...	yes	no	180Mbps-...	-47/-52	10.0.0.42
	msn-cust...	6C3B6B...	Routerboa...	yes	no	15Mbps-4...	-50/-51	10.0.0.42
	msn-cust...	64D154...	64:D1:54:...	yes	no	162Mbps-...	-52/-51	10.0.0.42
	msn-cust...	64D154...	64:D1:54:...	yes	no	180Mbps-...	-51/-49	10.0.0.42

MiSaxNet
Enjoy to connect

Why we chose Dude

- Overview all queues in whole network
- Sort by limits, rates or bytes used

Devices

List | Tree | RouterOS | Types | Mac Mappings

Device | Group | Wireless Registration | Simple Queue

	De...	Name	Rx Limit Max	Tx Limit Max	Rx Bytes	Tx Bytes	Rx Packets	Tx Packets	Rx Avg. Rate	Tx Avg. Rate
	msn-...	queu...	210 Mbps	210 Mbps	15.1 GB	12.7 GB	112168478	93334727	3.04 kbps	4.3 kbps
D	msn-...	<ppp...	50 Mbps	50 Mbps	251.5 GB	319.7 GB	535603254	595849737	346 kbps	65.1 kbps
	msn-...	borg...	30 Mbps	10 Mbps	380.0 GB	51.3 GB	444457111	366123038	22.1 kbps	24 kbps
D	msn-...	<ppp...	16 Mbps	16 Mbps	10.7 GB	40.1 GB	28103256	37626508	376 bps	864 bps
D	msn-...	<ppp...	16 Mbps	16 Mbps	69.0 MB	209.1 MB	362503	364290	3.35 kbps	1.5 kbps
D	msn-...	<ppp...	16 Mbps	16 Mbps	82.4 MB	58.8 MB	291688	225316	1.19 kbps	1.74 kbps
D	msn-...	<ppp...	16 Mbps	16 Mbps	1516.7 kB	1734.2 kB	8398	8672	2.83 kbps	2.75 kbps
	msn-...	queu...	16 Mbps	16 Mbps	267.8 GB	37.5 GB	395451773	226581297	2.42 kbps	2.83 kbps
D	msn-...	<ppp...	10 Mbps	25 Mbps	19.1 GB	231.9 GB	86625585	196043101	392 bps	96 bps
D	msn-...	<ppp...	10 Mbps	50 Mbps	28.5 MB	39.0 MB	117197	113141	752 bps	1.08 kbps
D	msn-...	<ppp...	10 Mbps	50 Mbps	349.6 MB	10.2 GB	4140628	8593044	224 bps	160 bps
D	msn-...	<ppp...	7 Mbps	38 Mbps	167.6 MB	4081.1 MB	1818453	3576295	224 bps	168 bps
D	msn-...	<ppp...	6 Mbps	30 Mbps	64.9 MB	324.3 MB	487325	542363	2.1 kbps	1.34 kbps
D	msn-l...	<ppp...	5 Mbps	25 Mbps	125.7 MB	4356.3 MB	1866899	3315816		
D	msn-l...	<ppp...	5 Mbps	25 Mbps	2768.5 kB	3264.0 kB	7441	7881		120 bps
D	msn-...	<ppp...	5 Mbps	25 Mbps	37.4 GB	6.5 GB	15171350	18201644	1.47 Mbps	27.9 kbps
D	msn-...	<ppp...	5 Mbps	25 Mbps	66.0 MB	2709.3 MB	774912	2148922	208 bps	264 bps
D	msn-...	<ppp...	5 Mbps	25 Mbps	6.1 GB	8.8 GB	11942857	13968089	441 kbps	49.2 kbps

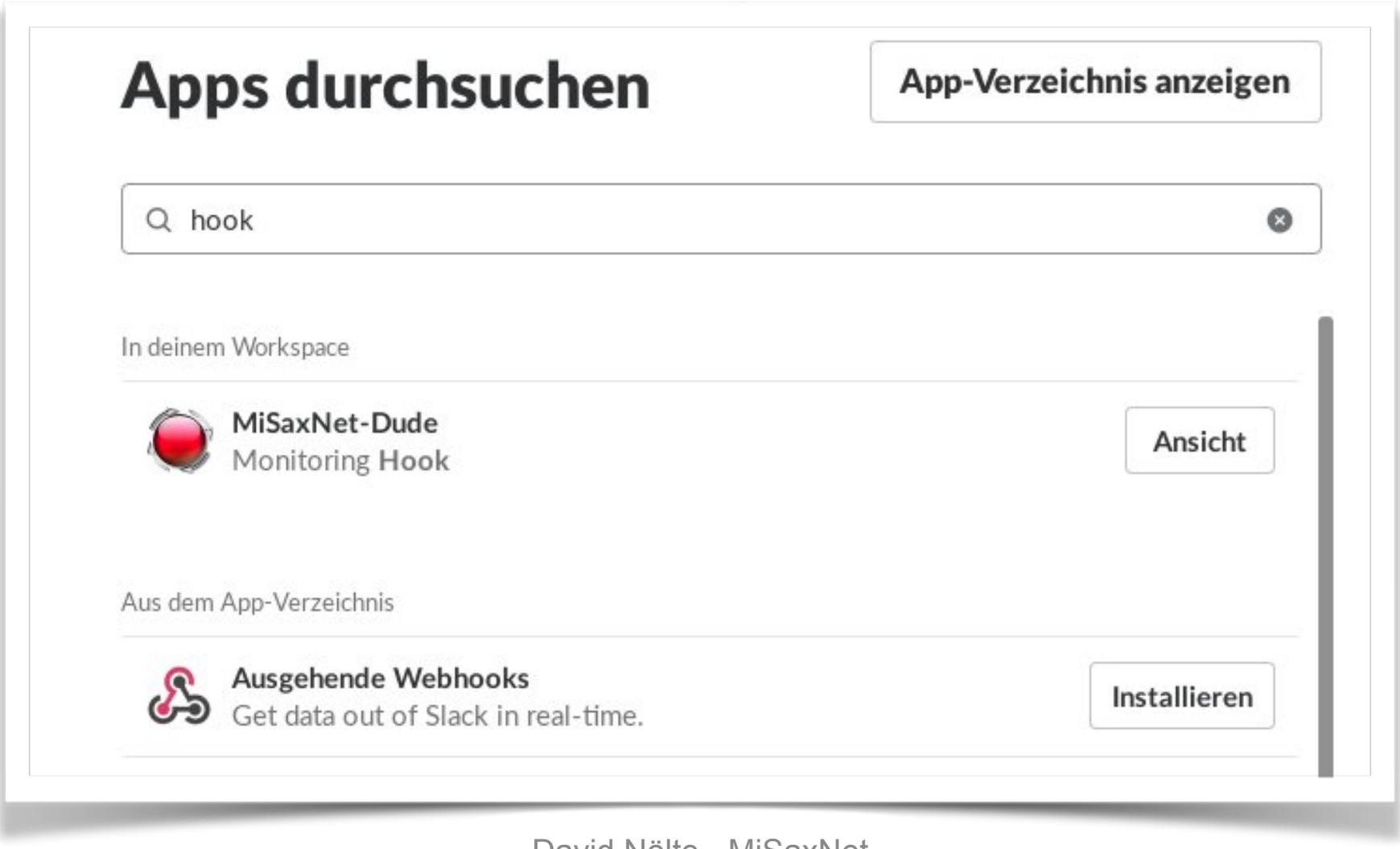
Slack integration

- What is Slack?
  - Team collaboration
  - Used for internal support communications
  - Monitoring notifications
  - Can create reminders and threads from messages

Slack integration

Create Slack outbound hook

Slack integration



Slack integration

Aussagekräftiges Label

Nutze dieses Label, um zusätzlichen Kontext in deiner Liste der Integrationen hinzuzufügen (optional).

Monitoring Hook

Name anpassen

Wähle den Benutzernamen aus, mit dem die Integration Nachrichten posten wird.

MiSaxNet-Dude

MiSaxNet
Enjoy to connect

Slack integration

Integrationseinstellungen

In Channel posten

Nachrichten, die an den eingehenden Webhook gesendet werden, werden hier gepostet.

#monitoring

oder erstelle einen neuen Channel

Webhook-URL

Sende deine JSON-Payloads an diese URL.

Anleitung für die Einrichtung anzeigen

https://hooks.slack.com/services/yourapikey/hastobe/inheretowork

URL kopieren • Erneut generieren

Slack integration

MiSaxNet
Enjoy to connect

Create new notification

Slack integration

Notifications

Name	Type	Notes
beep	beep	
Email Notification...	email	
Slack Notifications	execute on server	
flash	flash	
log to events	log	
log to syslog	log	
popup	popup	

Slack Notifications - Notification

General | Schedule | Advanced

Name: Slack Notifications

Enabled

Type: execute on server

Insert Variable

```
/tool fetch mode=https
url="https://hooks.slack.com/services/yourapikey/hastobe/inheretowork“
 http-method=post  http-data="payload={\"text\": \"Service [Probe.Name] on
[Device.Name] is now [Service.Status] ([Service.ProblemDescription])\"}"
```

Ok | Cancel | Apply | Notes | Copy | Remove | Test

MiSaxNet
Enjoy to connect

Slack integration

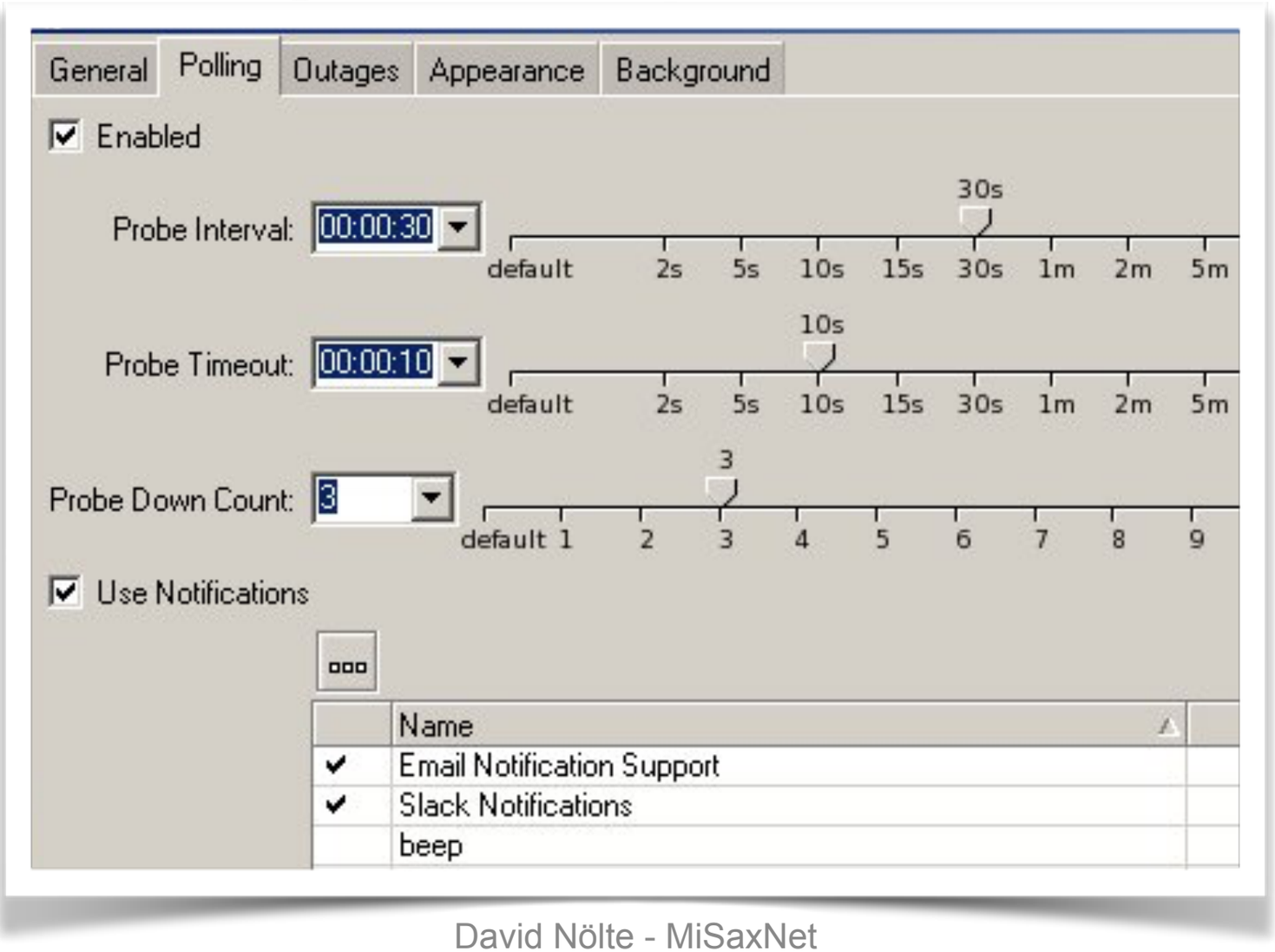
```
/tool fetch mode=https url=„https://hooks.slack.com/services/
yourapikey/hastobe/inheretowork"  http-method=post  http-
data="payload={\"text\": \"Service [Probe.Name] on [Device.Name]
is now [Service.Status] ([Service.ProblemDescription])\"}"
```

Slack integration

MiSaxNet
Enjoy to connect

Use new notification

Slack integration

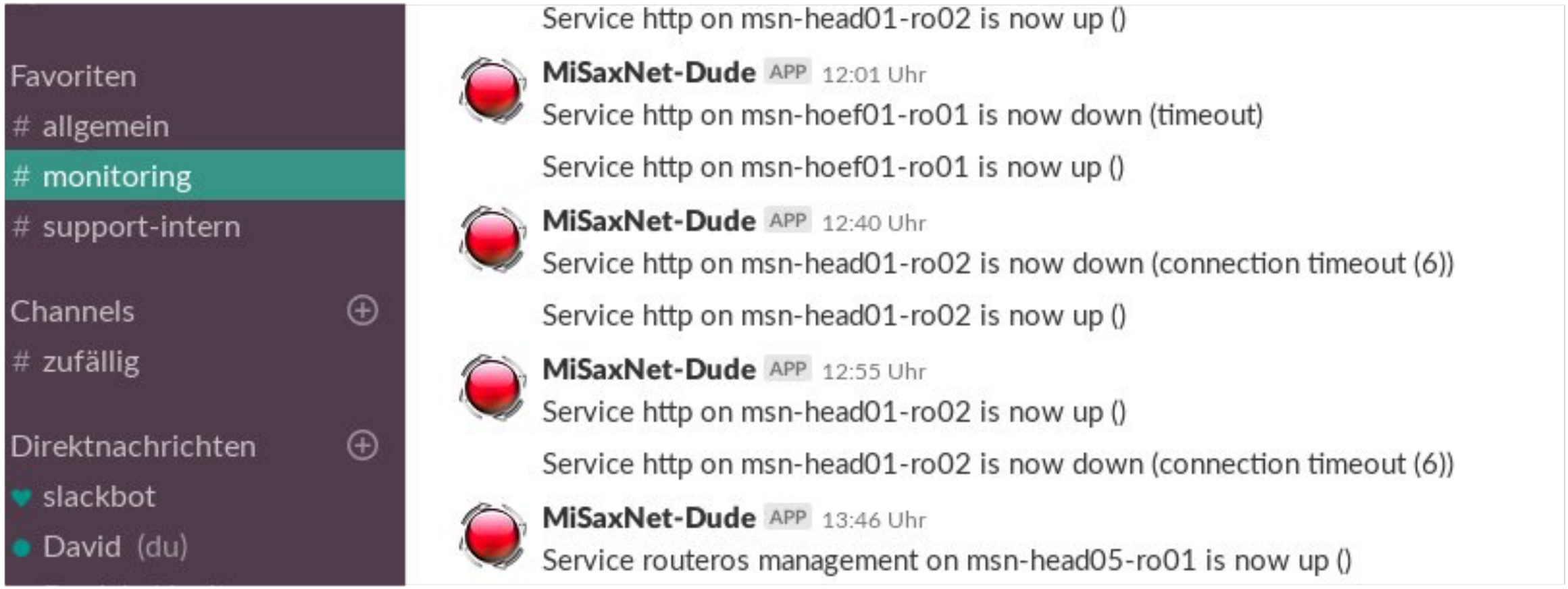


Slack integration

MiSaxNet
Enjoy to connect

Example notifications

Slack integration



MiSaxNet
Enjoy to connect

Custom functions

- Customize link appearance
- Query for custom information
- Pull data from non-MikroTik equipment

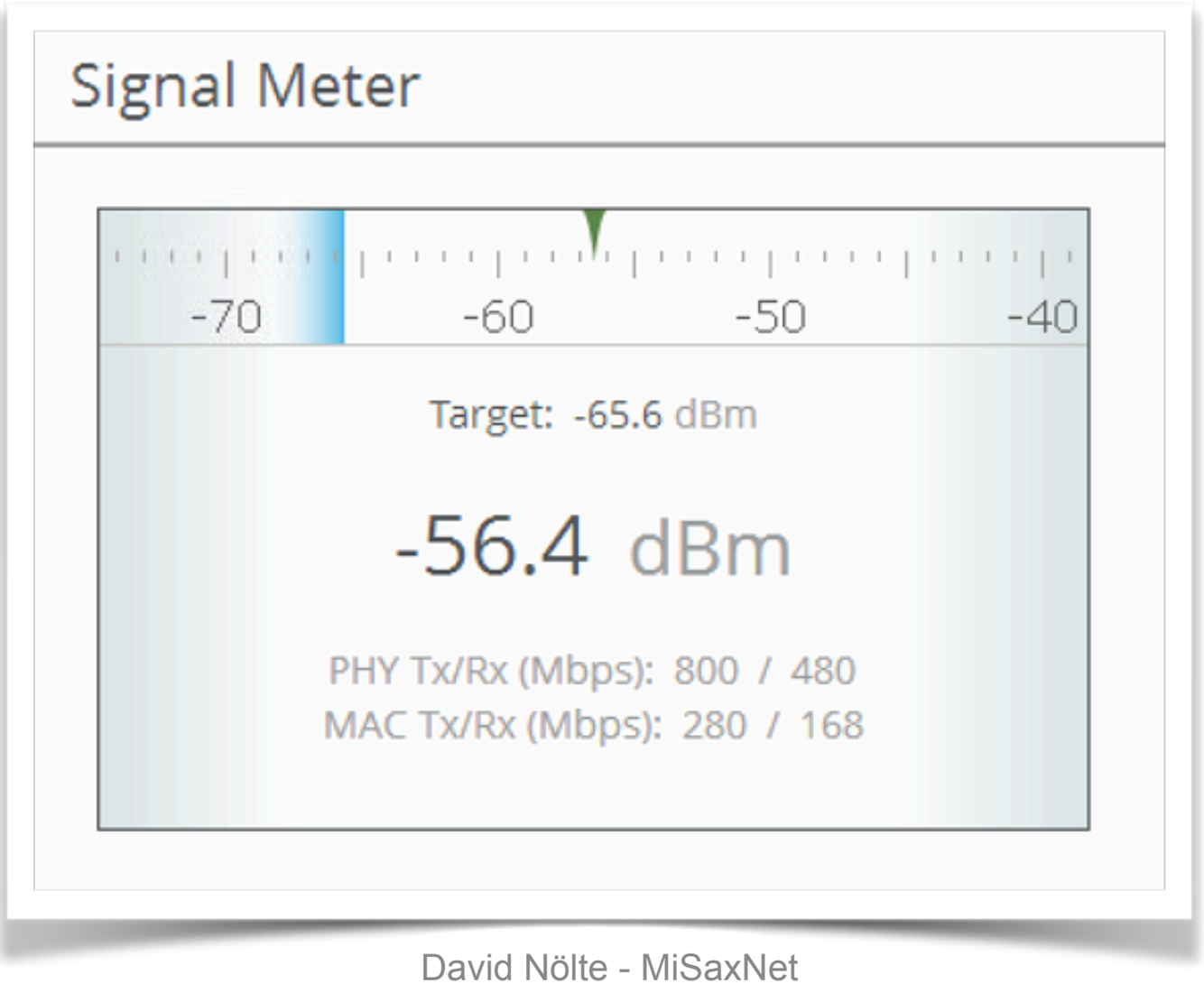
Custom functions

MiSaxNet
Enjoy to connect

Query Mimosa B5/B5C PHY/MAC rates

MiSaxNet
Enjoy to connect

Custom functions



Custom functions

Query PHY RX rate

Custom functions

mimosa_mac_rx_rate		mimosa MAC RX Rate
mimosa_mac_tx_rate		mimosa MAC TX Rate
mimosa_phy_rx_rate		mimosa physical RX Rate
mimosa_phy_tx_rate		mimosa physical TX Rate
min		calculates and returns minimum value of given

mimosa_phy_rx_rate - Function

Name: mimosa_phy_rx_rate

Description: mimosa physical RX Rate

Code:

```
oid("1.3.6.1.4.1.43356.2.1.2.6.2.1.5.1") +
oid("1.3.6.1.4.1.43356.2.1.2.6.2.1.5.2") +
oid("1.3.6.1.4.1.43356.2.1.2.6.2.1.5.3") +
oid("1.3.6.1.4.1.43356.2.1.2.6.2.1.5.4")
```

Custom functions

MiSaxNet
Enjoy to connect

Calculate MAC RX Rate

Custom functions

mimosa_mac_rx_rate		mimosa MAC RX Rate
mimosa_mac_tx_rate		mimosa MAC TX Rate
mimosa_phy_rx_rate		mimosa physical RX Rate
mimosa_phy_tx_rate		mimosa physical TX Rate
min		calculates and returns minimum value of given array

mimosa_mac_rx_rate - Function

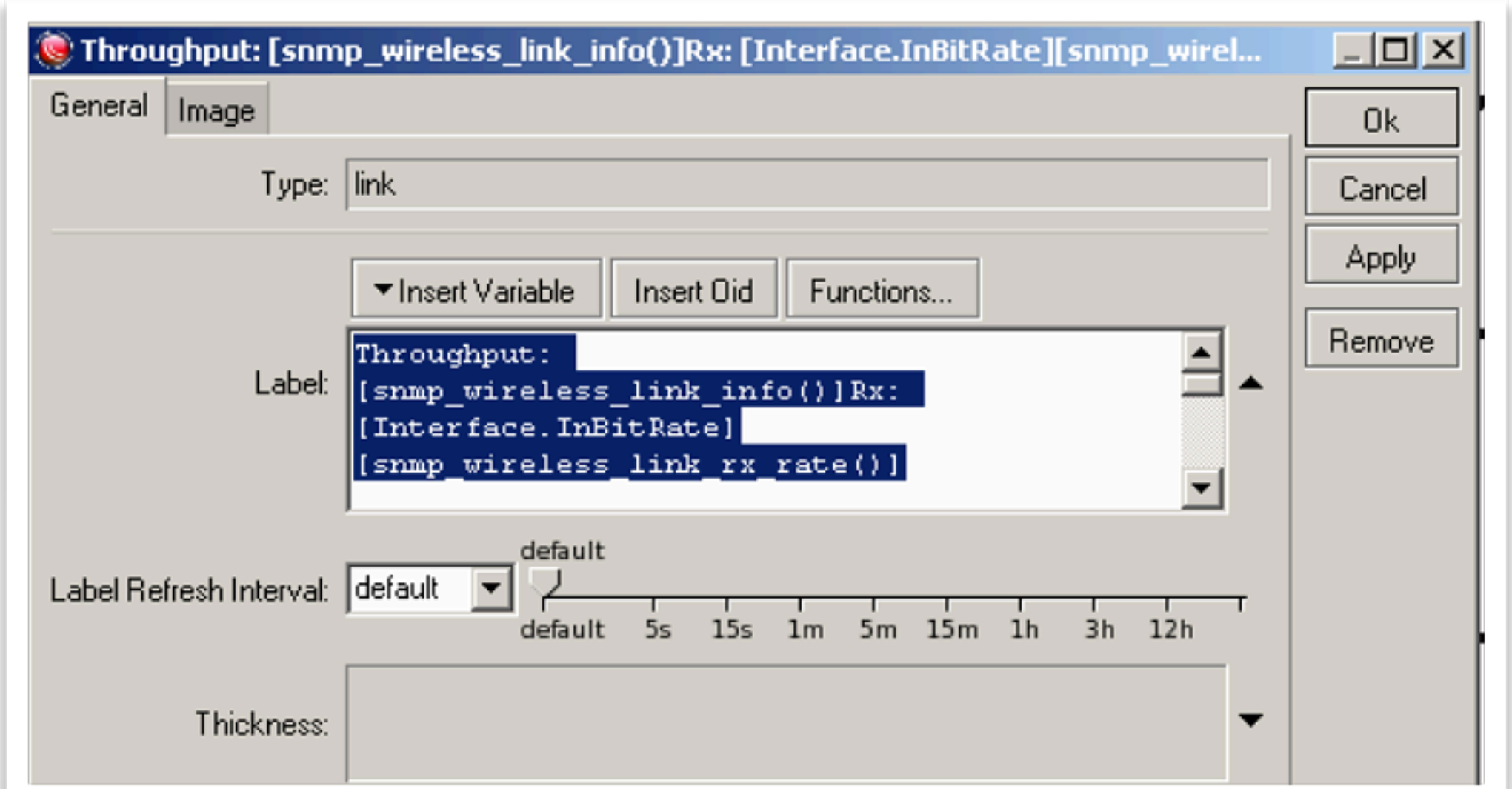
Name: mimosa_mac_rx_rate

Description: mimosa MAC RX Rate

Code:

```
mimosa_phy_rx_rate() * 0.5 * 0.7
```

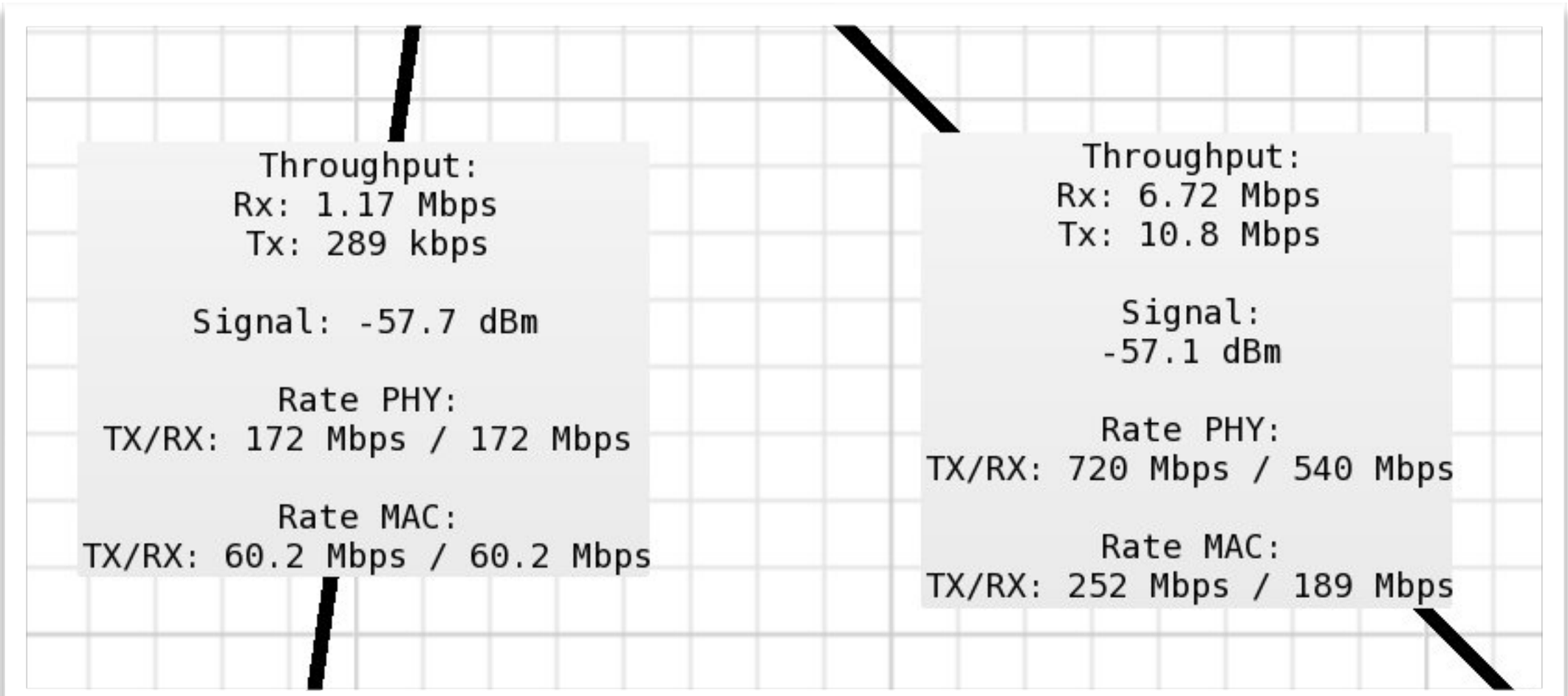
Custom functions



Custom functions

```
Throughput: [snmp_wireless_link_info()]
Rx: [Interface.InBitRate][snmp_wireless_link_rx_rate()]
Tx: [Interface.OutBitRate][snmp_wireless_link_tx_rate()]

Signal: [oid("1.3.6.1.4.1.43356.2.1.2.6.6.0")/10]

Rate PHY:
TX/RX: [mimosa_phy_tx_rate()] Mbps / [mimosa_phy_rx_rate()] Mbps

Rate MAC:
TX/RX: [mimosa_mac_tx_rate()] Mbps / [mimosa_mac_rx_rate()] Mbps
```

Custom functions

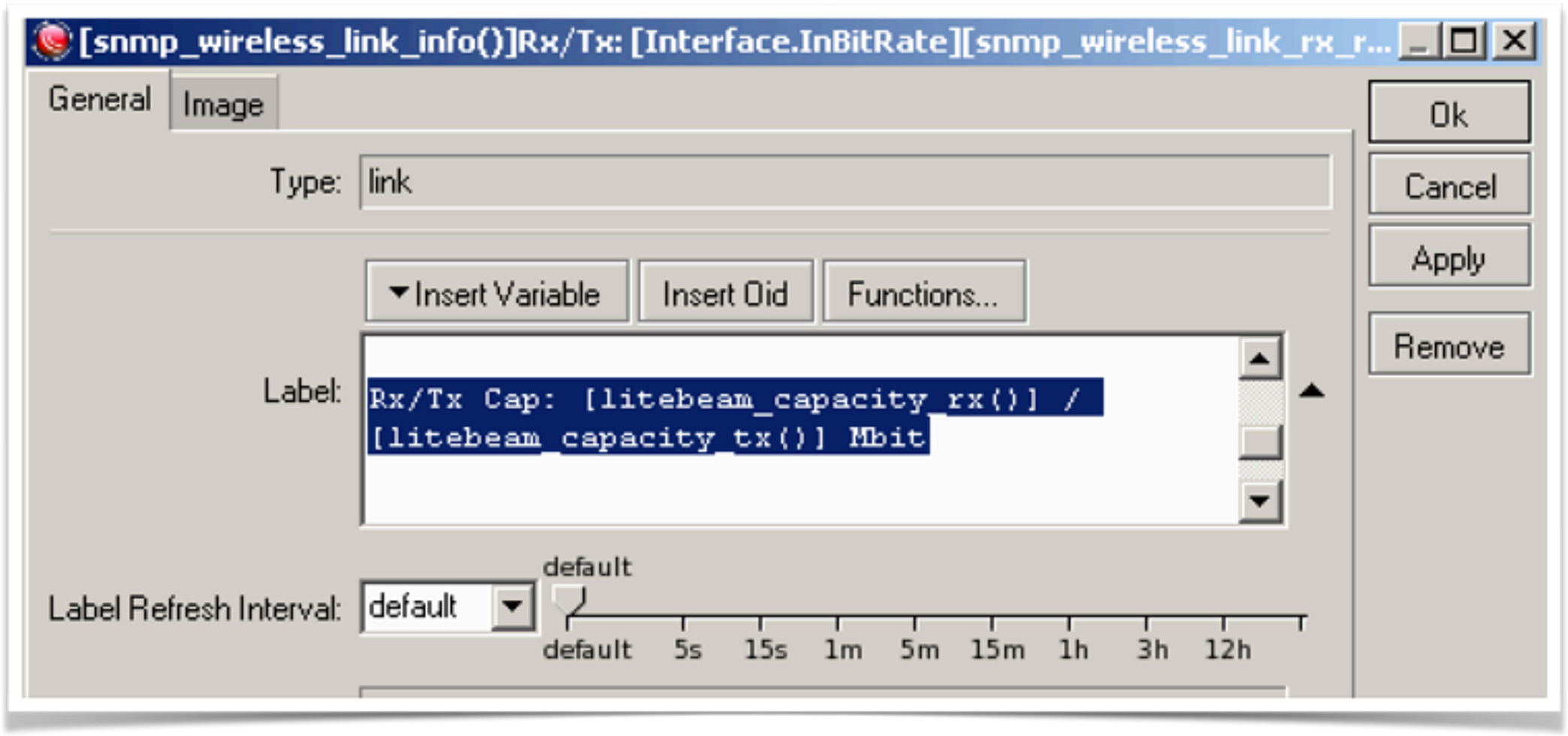


MiSaxNet
Enjoy to connect

Custom functions

- Lets try with Litebeam
- want to know the available throughput

Custom functions



Custom functions

litebeam_capacity_rx - Function

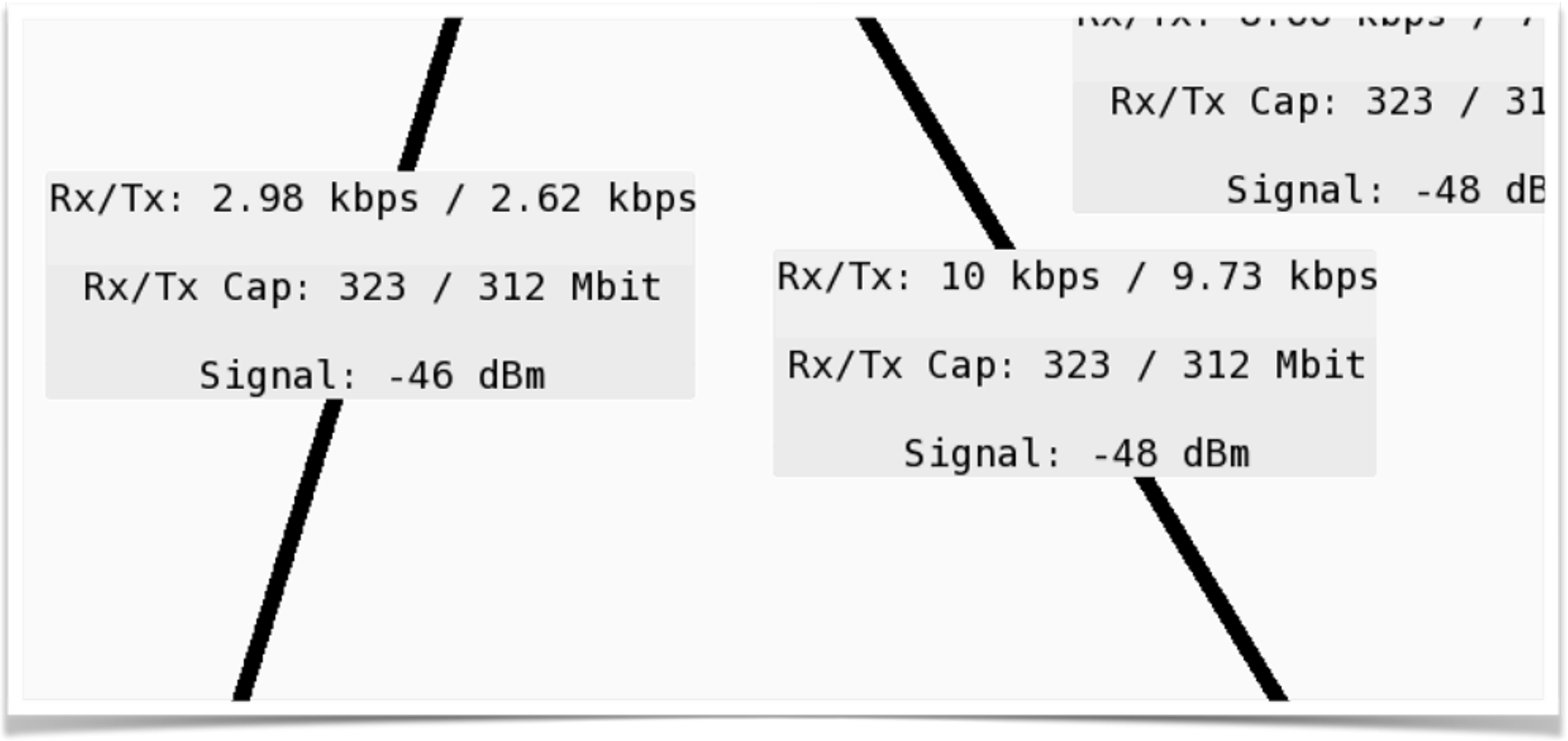
Name: litebeam_capacity_rx

Description:

Code:

```
round(oid("1.3.6.1.4.1.41112.1.4.7.1.18.1.128.42.168.164.172.0") / 1024)
```

Custom functions

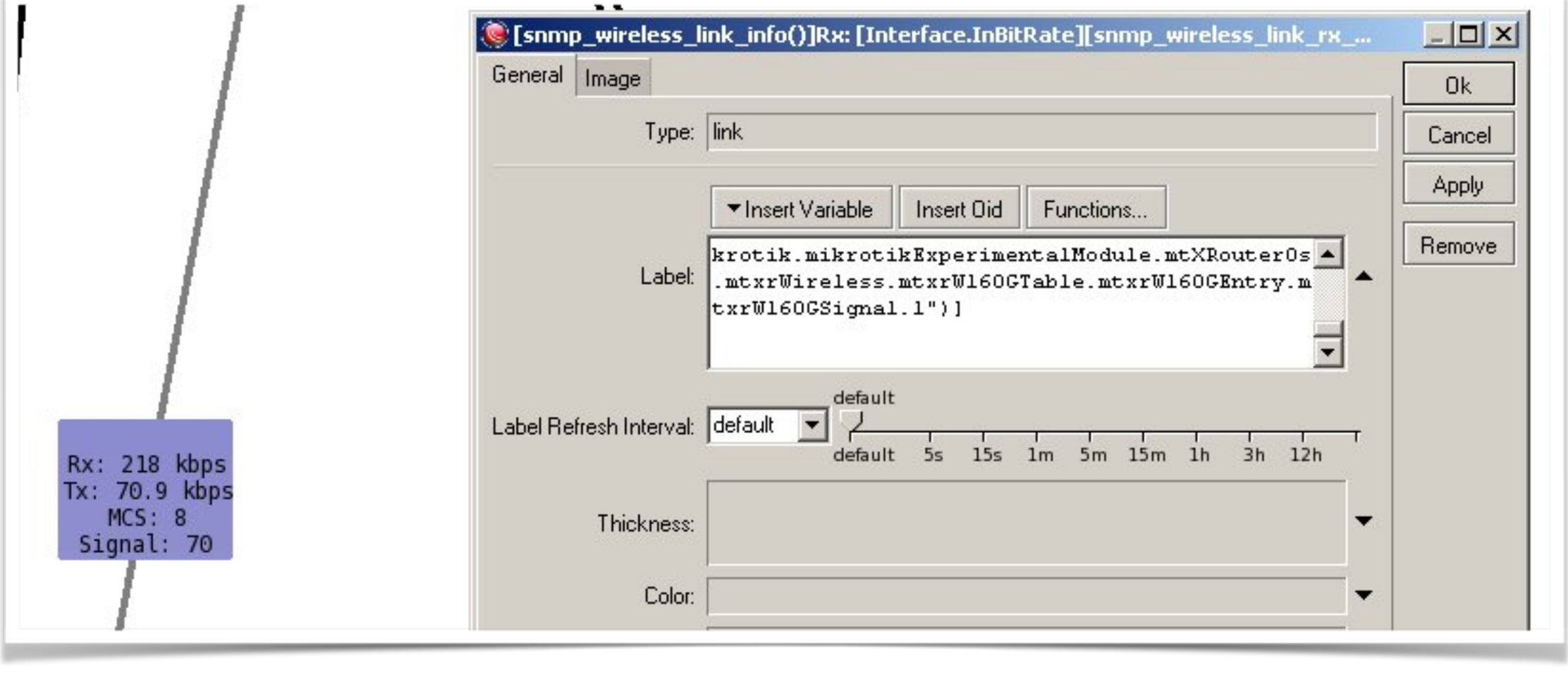


MiSaxNet
Enjoy to connect

Custom functions

- How about the wAP 60G or Wireless Wire Dish?
- MCS and signal level?

Custom functions



MiSaxNet
Enjoy to connect

Custom functions

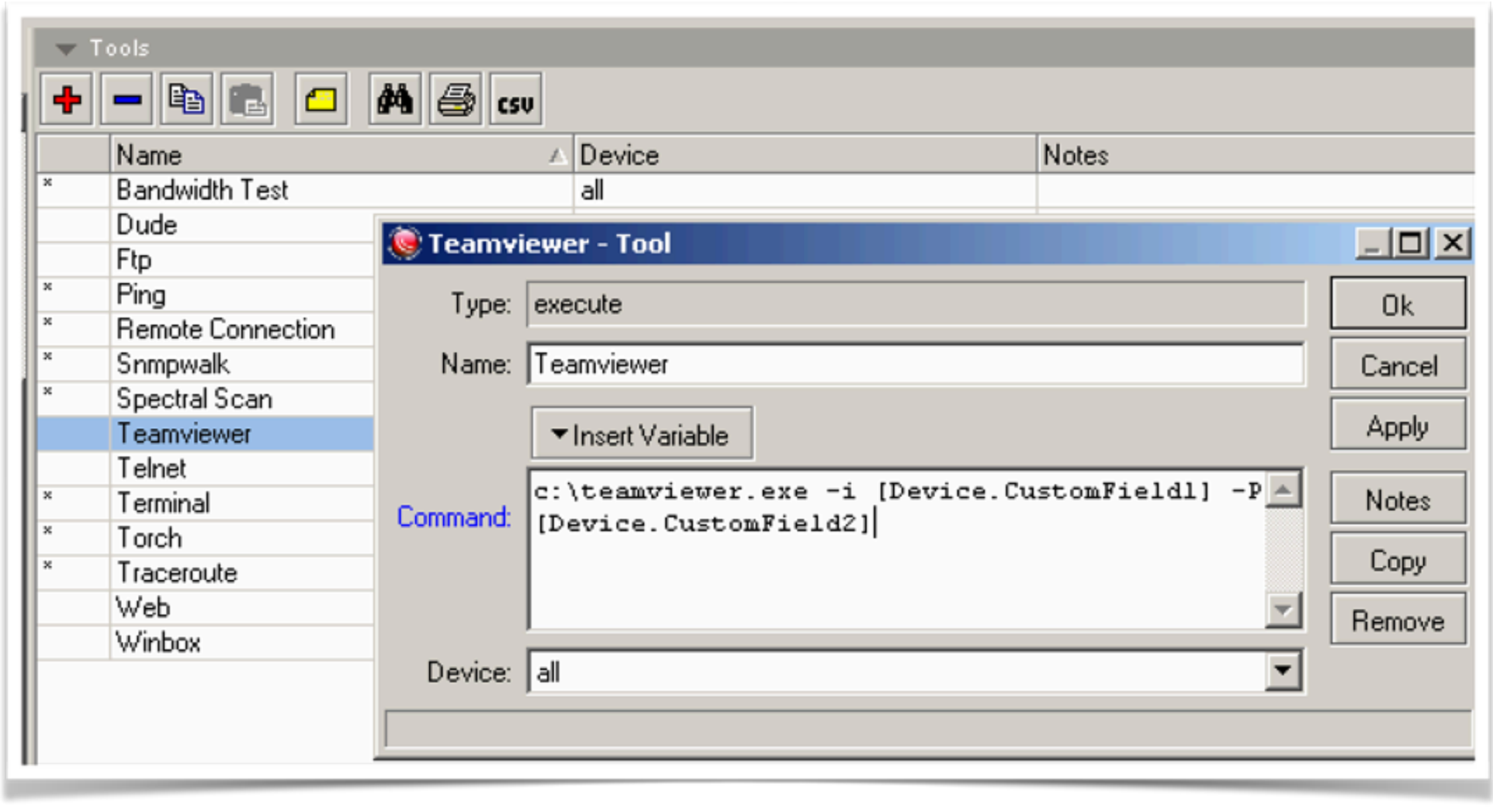
```
Rx: [Interface.InBitRate][snmp_wireless_link_rx_rate()]
Tx: [Interface.OutBitRate][snmp_wireless_link_tx_rate()]

MCS:
[oid("iso.org.dod.internet.private.enterprises.mikrotik.mikrotik
ExperimentalModule.mtXRouterOs.mtxrWireless.mtxrWl60GTable.mtxrW
l60GEntry.mtxrWl60GMcs.1")]

Signal:
[oid("iso.org.dod.internet.private.enterprises.mikrotik.mikrotik
ExperimentalModule.mtXRouterOs.mtxrWireless.mtxrWl60GTable.mtxrW
l60GEntry.mtxrWl60GSignal.1")]
```

MiSaxNet
Enjoy to connect

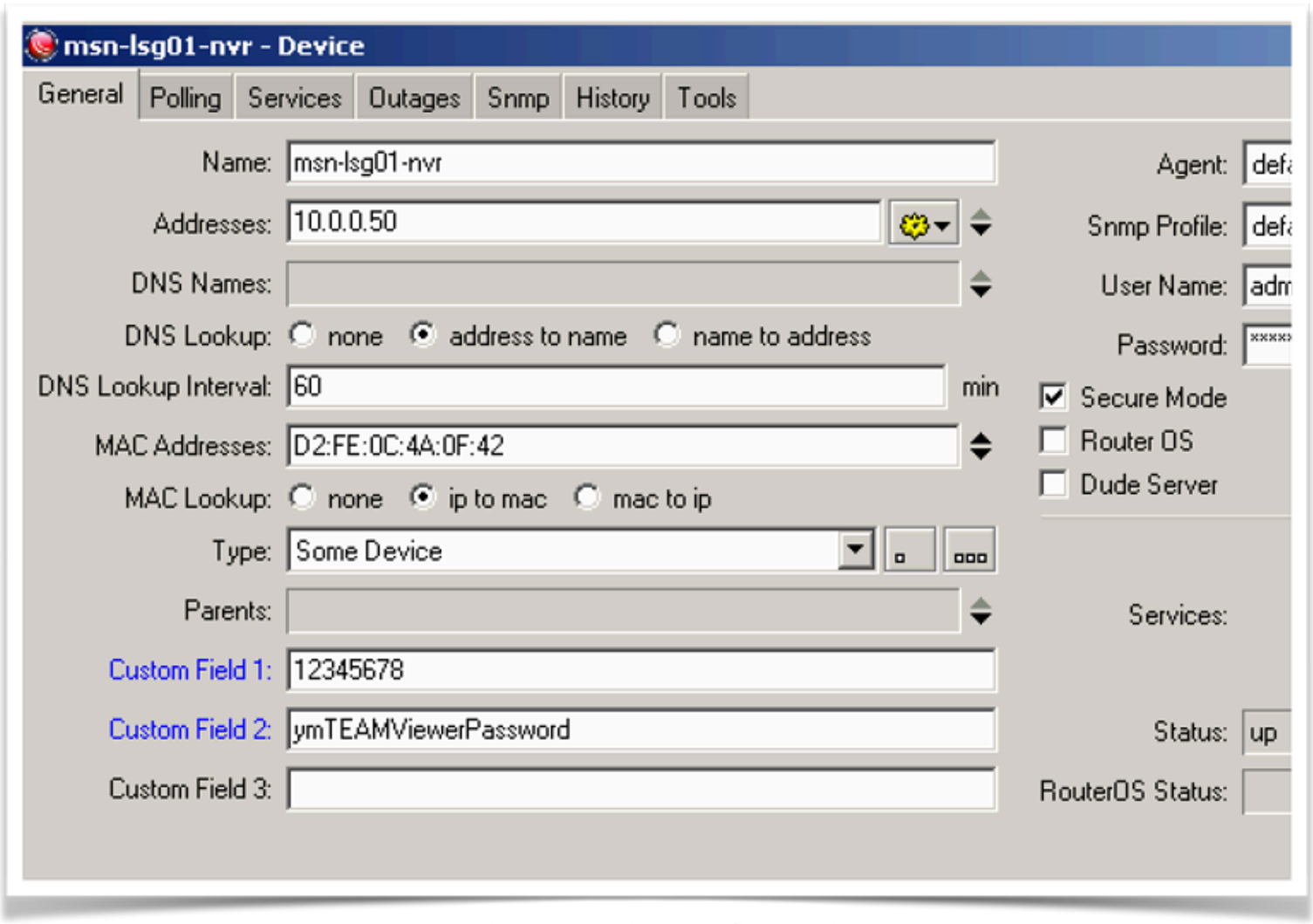
Custom tools

- Managing PC clients?
- On click - TeamViewer - access

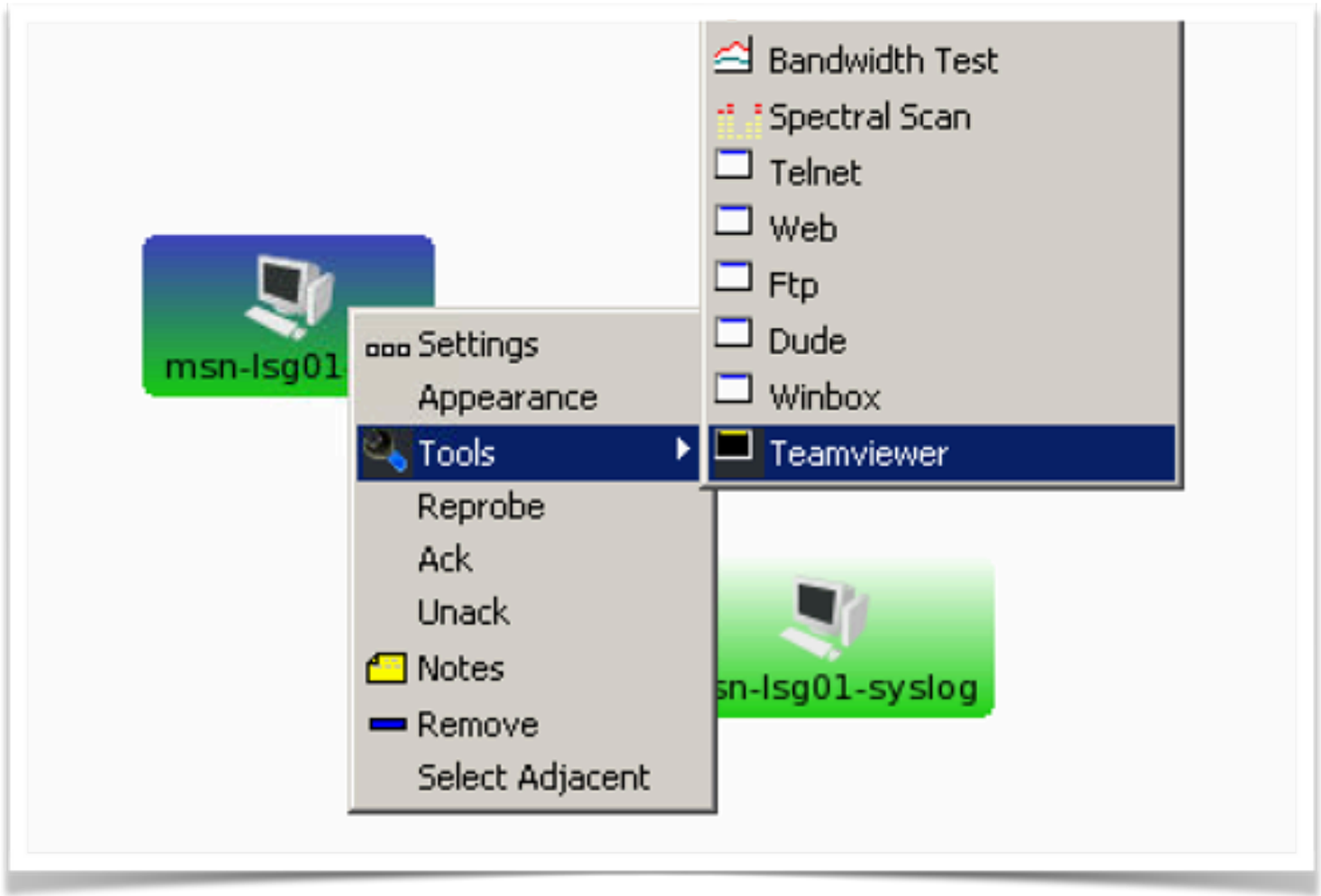
Custom tools



Custom tools



Custom tools



MiSaxNet
Enjoy to connect

Contact

- WWW: www.misaxnet.de
- Twitter: @misaxnet
- Facebook: www.facebook.com/misaxnet
- E-mail: info@misaxnet.de

MiSaxNet
Enjoy to connect

Thanks to

- My wife and kids
- Bootcamp trainers!
- „Two Beers“ and „Scooter Sven“
- MikroTik

Questions?