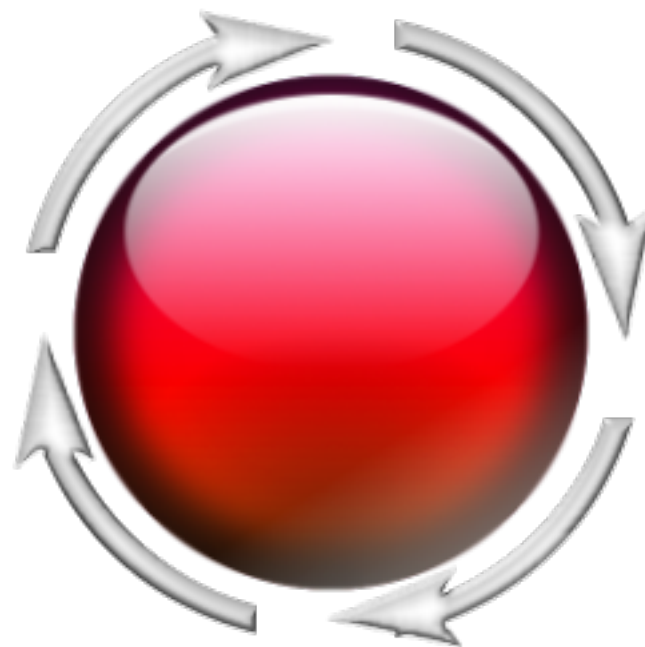
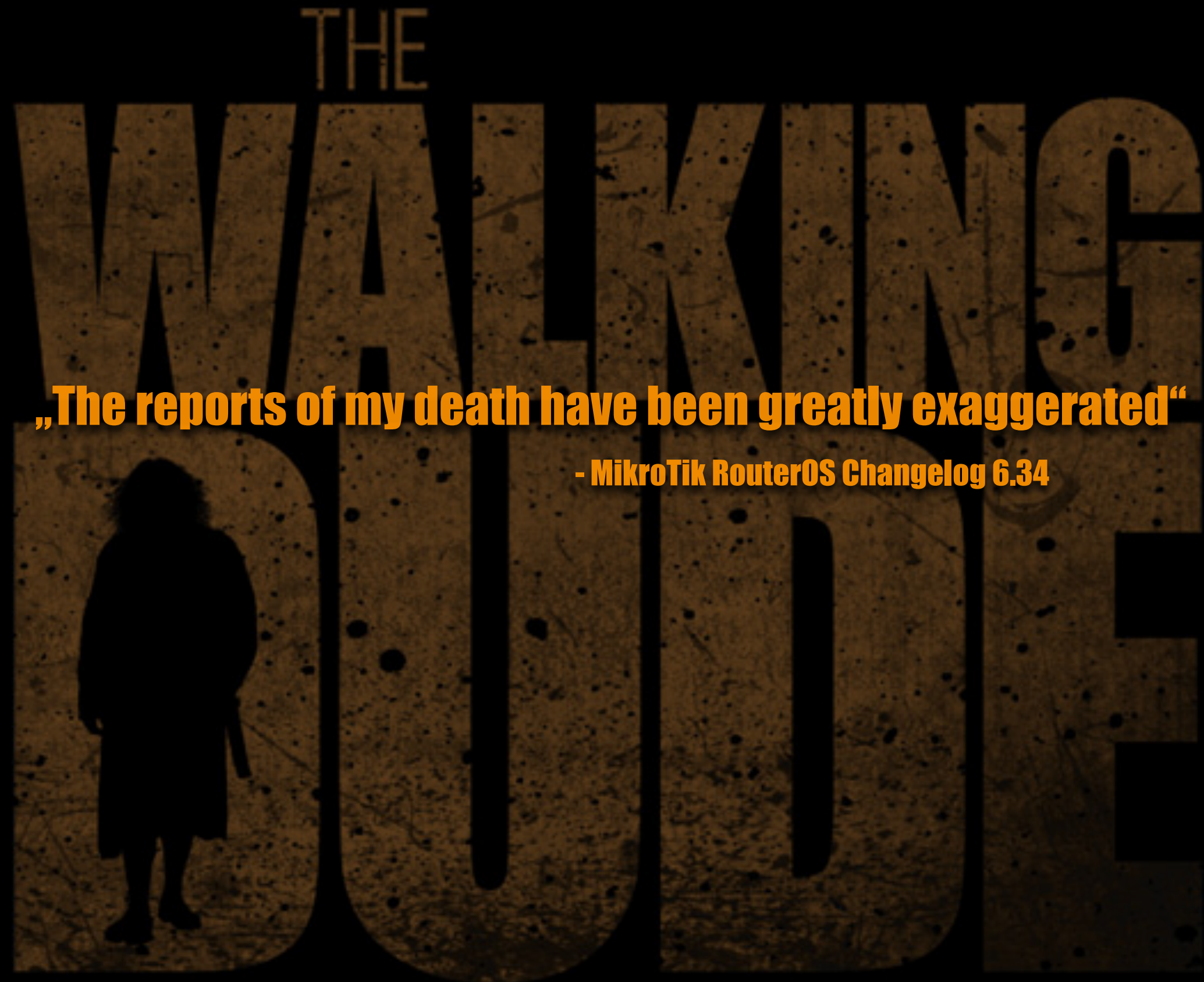


Dude is not dead!

Why is „Dude“ our choice of monitoring?!



David Nölte – MUM UK 2018 - Copyright MiSaxNet



„The reports of my death have been greatly exaggerated“

- MikroTik RouterOS Changelog 6.34

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

What we do?

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

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

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!

Why we chose Dude

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

msn-sec-772186105 (5240) -60
Rx: 3.92 kbps (162 Mbps)
Tx: 0 bps (180 Mbps)

msn-sec-772186105 (5240) -62
Rx: 4.57 kbps (180 Mbps)
Tx: 6.26 kbps (180 Mbps)

Why we chose Dude

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

▼ Devices

List Tree RouterOS Types Mac Mappings

Device Group Wireless Registration Simple Queue

▼ Upgrade

			Name ▲	Status ▲	Version	Architecture
			msn-atr01-ro01	ok	6.42.3 (s...	arm
			msn-borg-ant02	ok	6.42.3 (s...	mipsbe
			msn-borg-ro01	ok	6.42.3 (s...	mipsbe
			msn-cust-automa...	ok	6.42.1 (s...	mipsbe
			msn-cus		6.42.2 (s...	mipsbe
			msn-cus		6.42.7 (s...	arm
			msn-cus		6.42.7 (s...	mipsbe
			msn-cus		6.42.7 (s...	mipsbe
			msn-cus		6.42.3 (s...	mipsbe
			msn-cus		6.43.2 (s...	mipsbe
			msn-cus		6.42.3 (s...	mipsbe
			msn-cus		6.42.3 (s...	mipsbe

- Device Settings
- Show On Map
- Tools
- Settings
- Upgrade** ▶ 6.42.3
- Force Upgrade
- Reconnect

Why we chose Dude

- Central overview for wireless registrations

▼ 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...	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:...	ves	no	180Mbps-...	-51/-49	10.0.0.42	

Why we chose Dude

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

▼ Devices

ListTreeRouterOSTypesMac Mappings

DeviceGroupWireless RegistrationSimple Queue

<

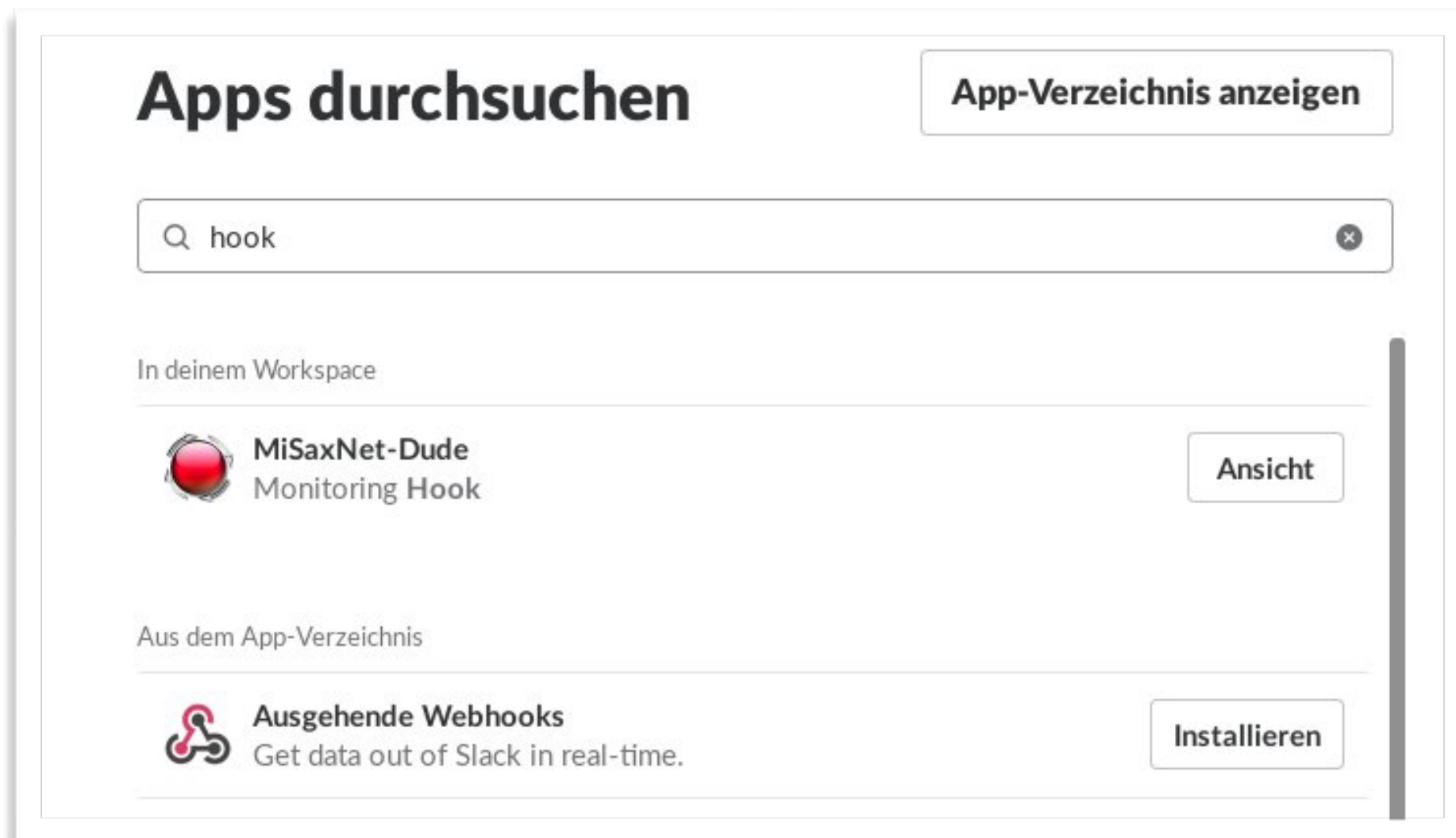
Slack integration

- 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

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](#)

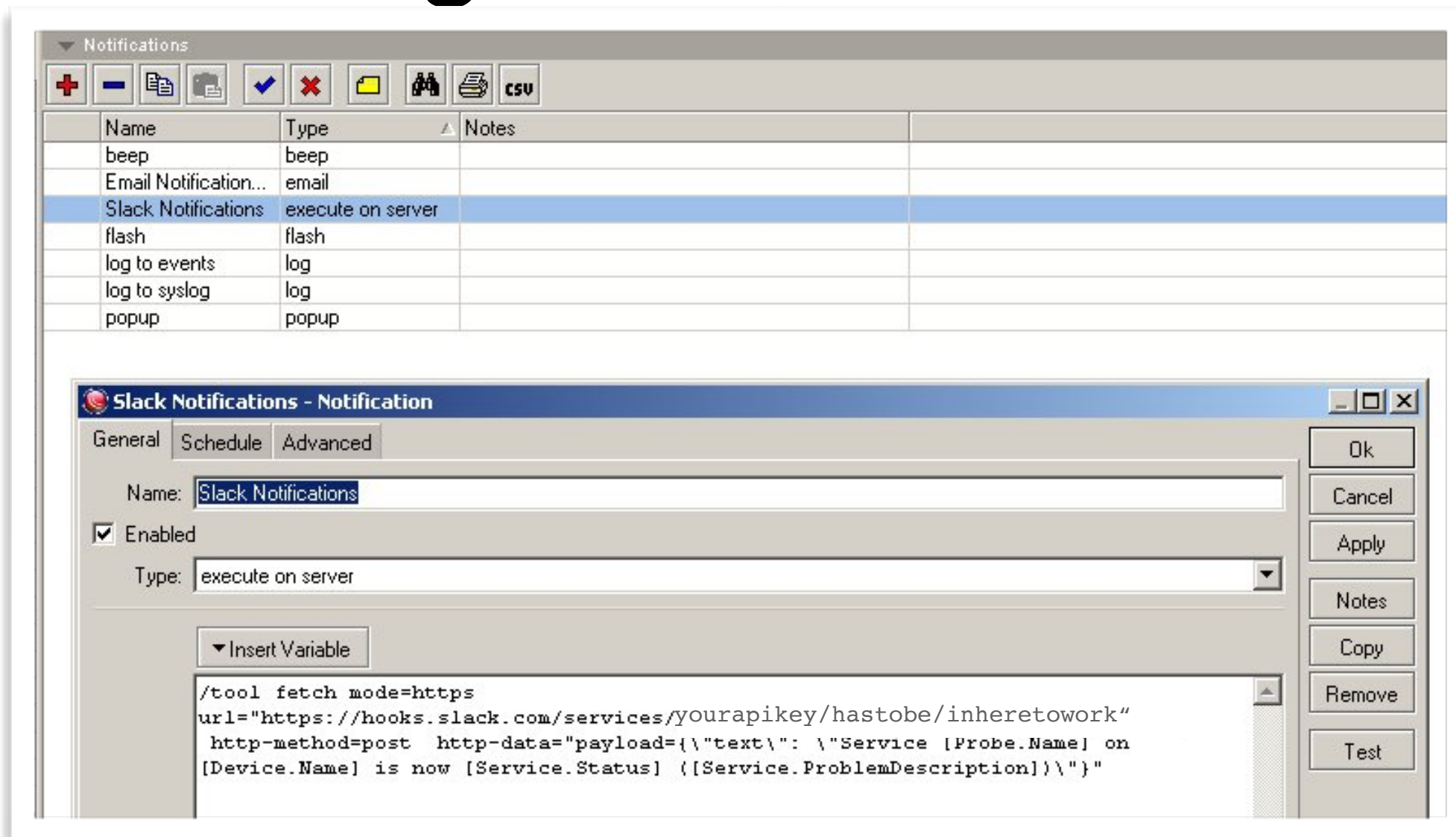
<https://hooks.slack.com/services/yourapikey/hastobe/inheretowork>

[URL kopieren](#) • [Erneut generieren](#)

Slack integration

Create new notification

Slack integration



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

Use new notification

Slack integration

General Polling Outages Appearance Background

☒ Enabled

Probe Interval: default 2s 5s 10s 15s 30s 1m 2m 5m

Probe Timeout: default 2s 5s 10s 15s 30s 1m 2m 5m

Probe Down Count: default 1 2 3 4 5 6 7 8 9

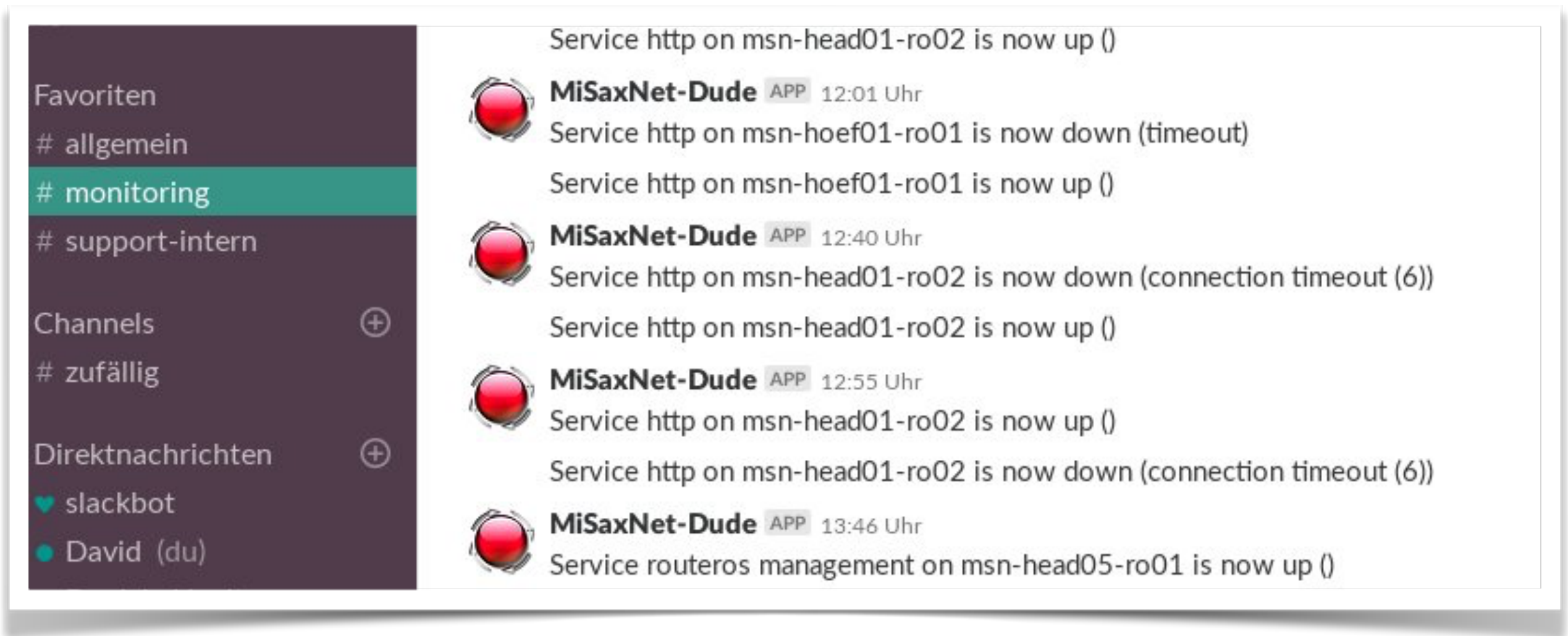
☒ Use Notifications

	Name	
☒	Email Notification Support	
☒	Slack Notifications	
	beep	

Slack integration

Example notifications

Slack integration



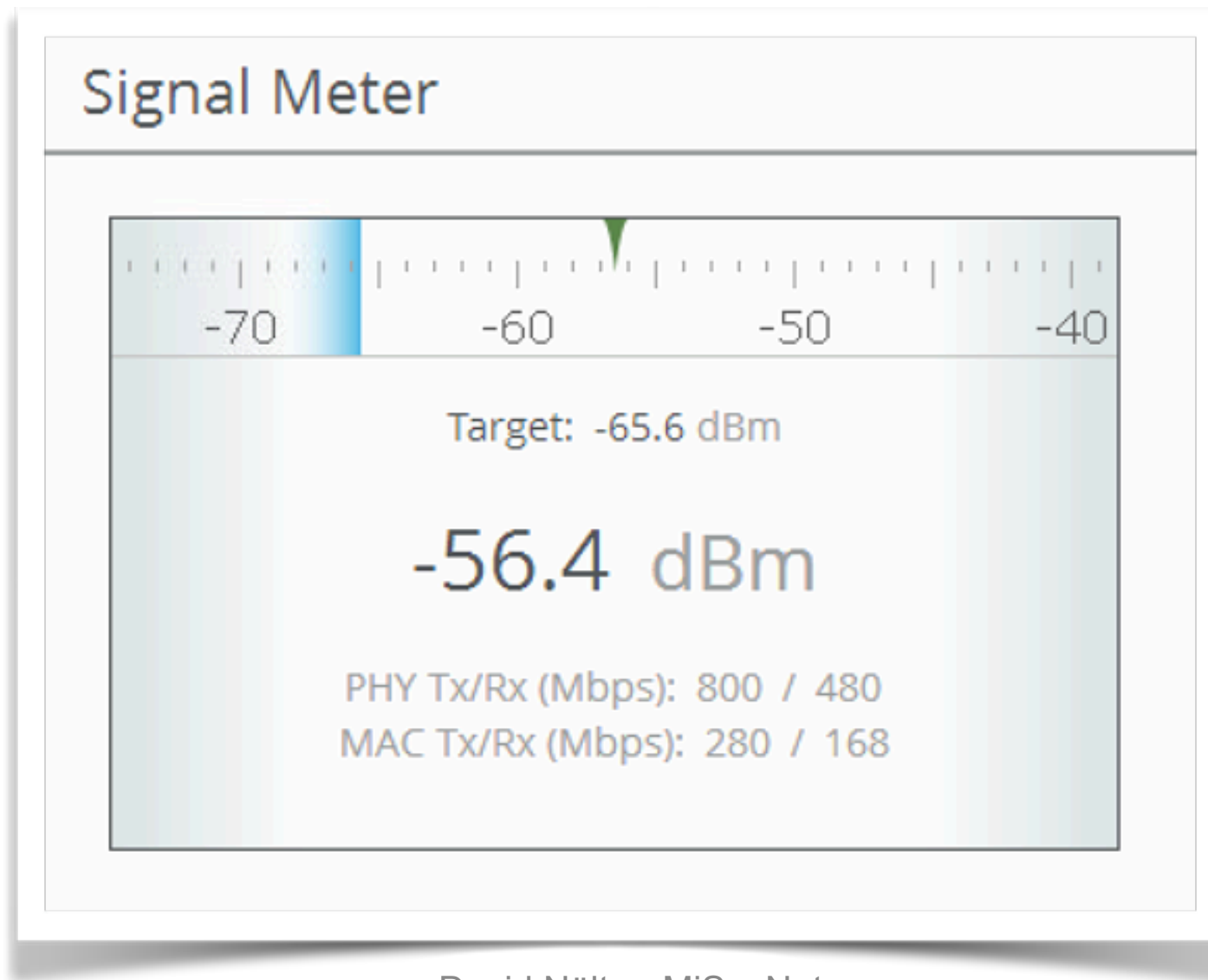
Custom functions

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

Custom functions

Query Mimosa B5/B5C PHY/MAC rates

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:

Description:

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

Calculate MAC RX Rate

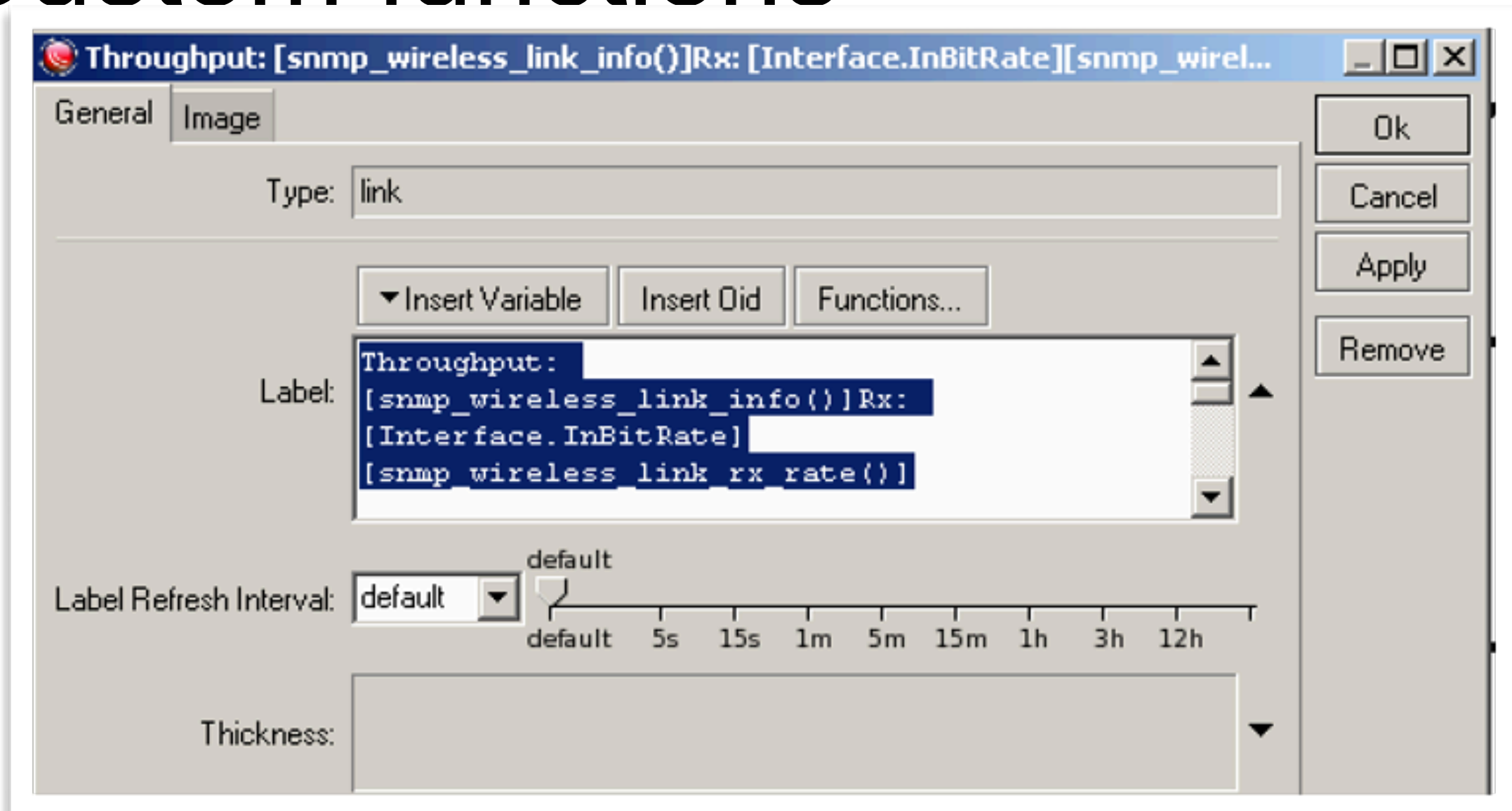
Custom functions

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:	<pre>mimosa_phy_rx_rate() * 0.5 * 0.7</pre>

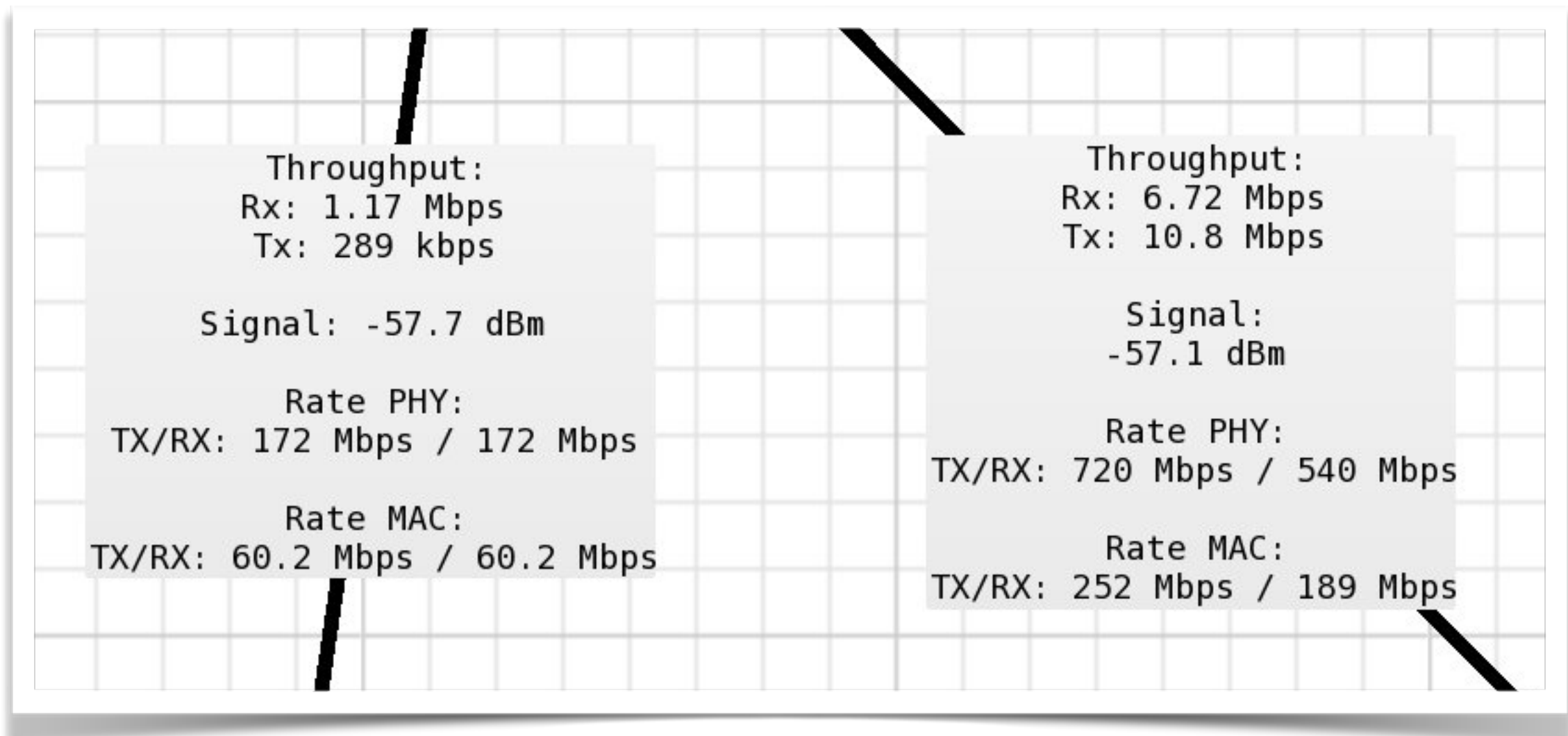
Custom functions



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
```

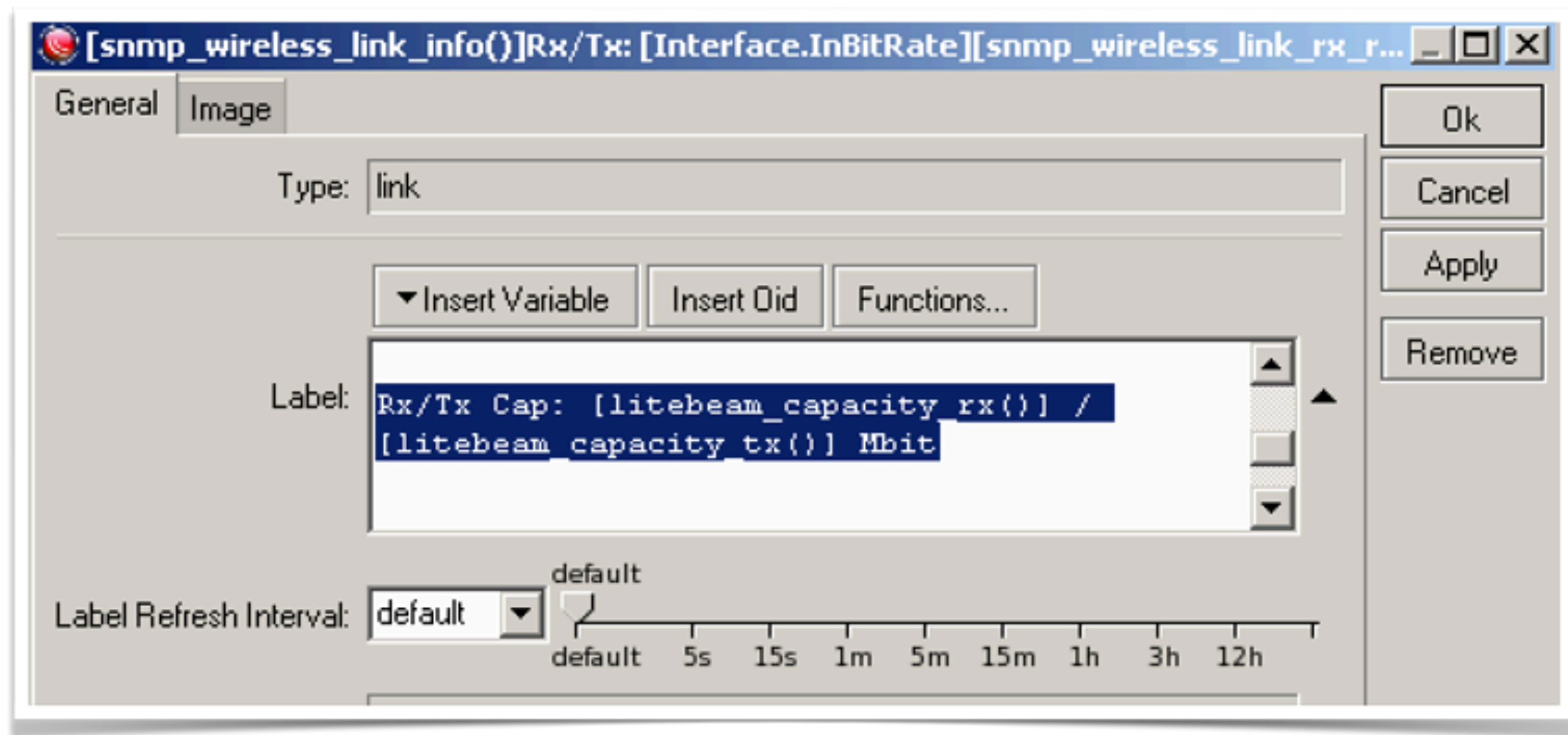
Custom functions



Custom functions

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

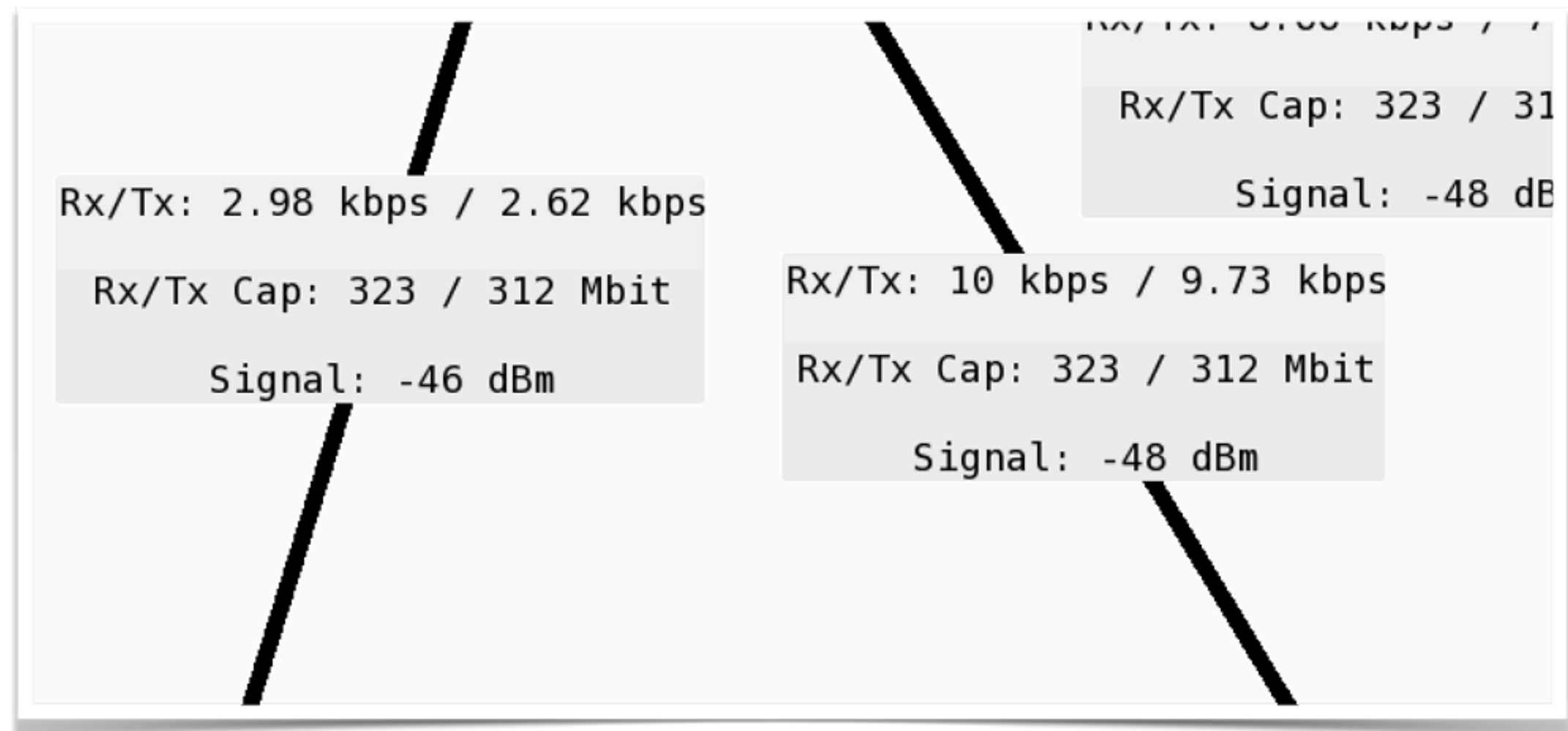
Custom functions



Custom functions

litebeam_capacity_rx - Function	
Name:	litebeam_capacity_rx
Description:	
Code:	<pre>round(oid("1.3.6.1.4.1.41112.1.4.7.1.18.1.128.42.168.164.172.0") / 1024)</pre>

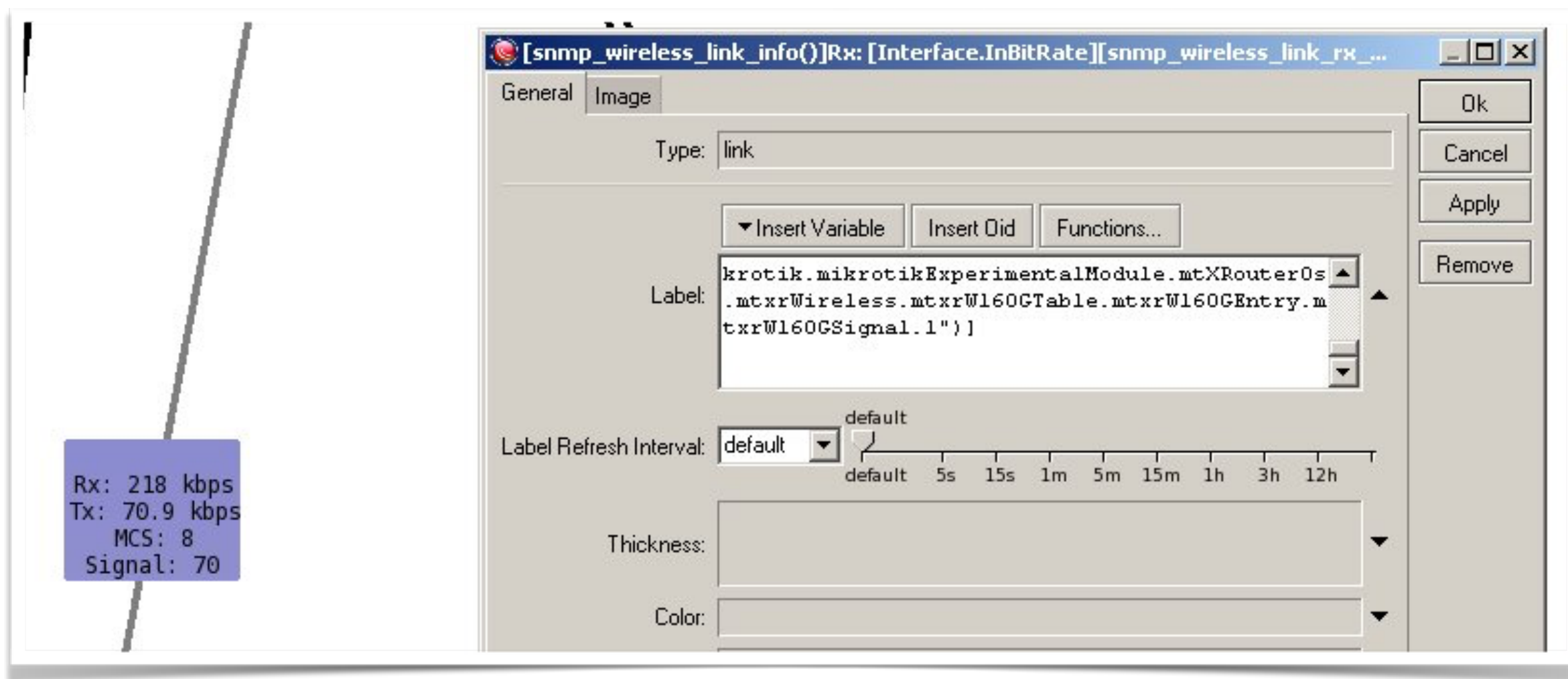
Custom functions



Custom functions

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

Custom functions



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")]
```

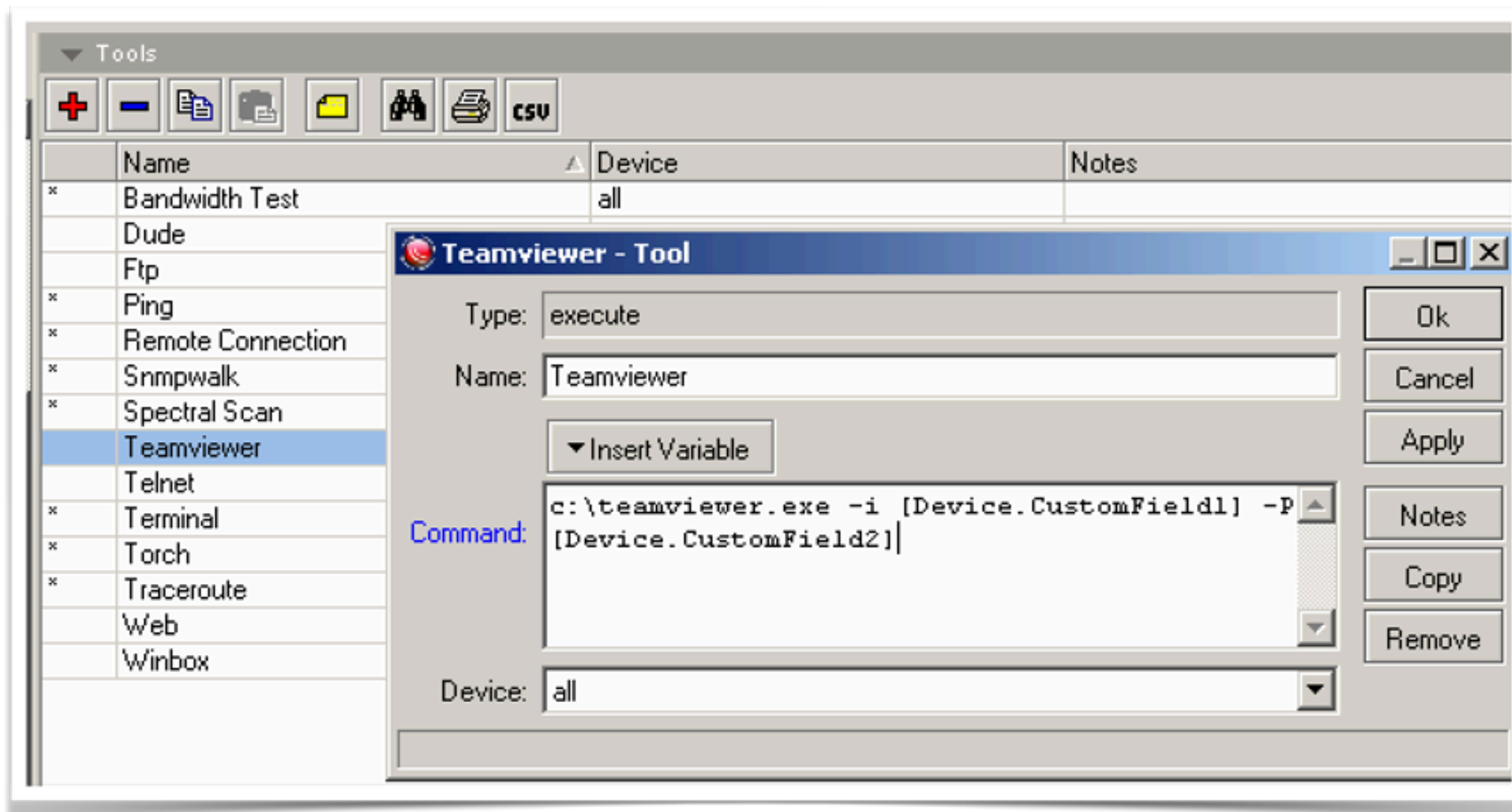
Signal:

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

Custom tools

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

Custom tools



Custom tools

msn-lsg01-nvr - Device

General Polling Services Outages Snmp History Tools

Name:

Addresses: 

DNS Names:

DNS Lookup: ☐ none ☒ address to name ☐ name to address

DNS Lookup Interval: min

MAC Addresses:

MAC Lookup: ☐ none ☒ ip to mac ☐ mac to ip

Type:   

Parents:

Custom Field 1:

Custom Field 2:

Custom Field 3:

Agent:

Snmp Profile:

User Name:

Password:

☒ Secure Mode

☐ Router OS

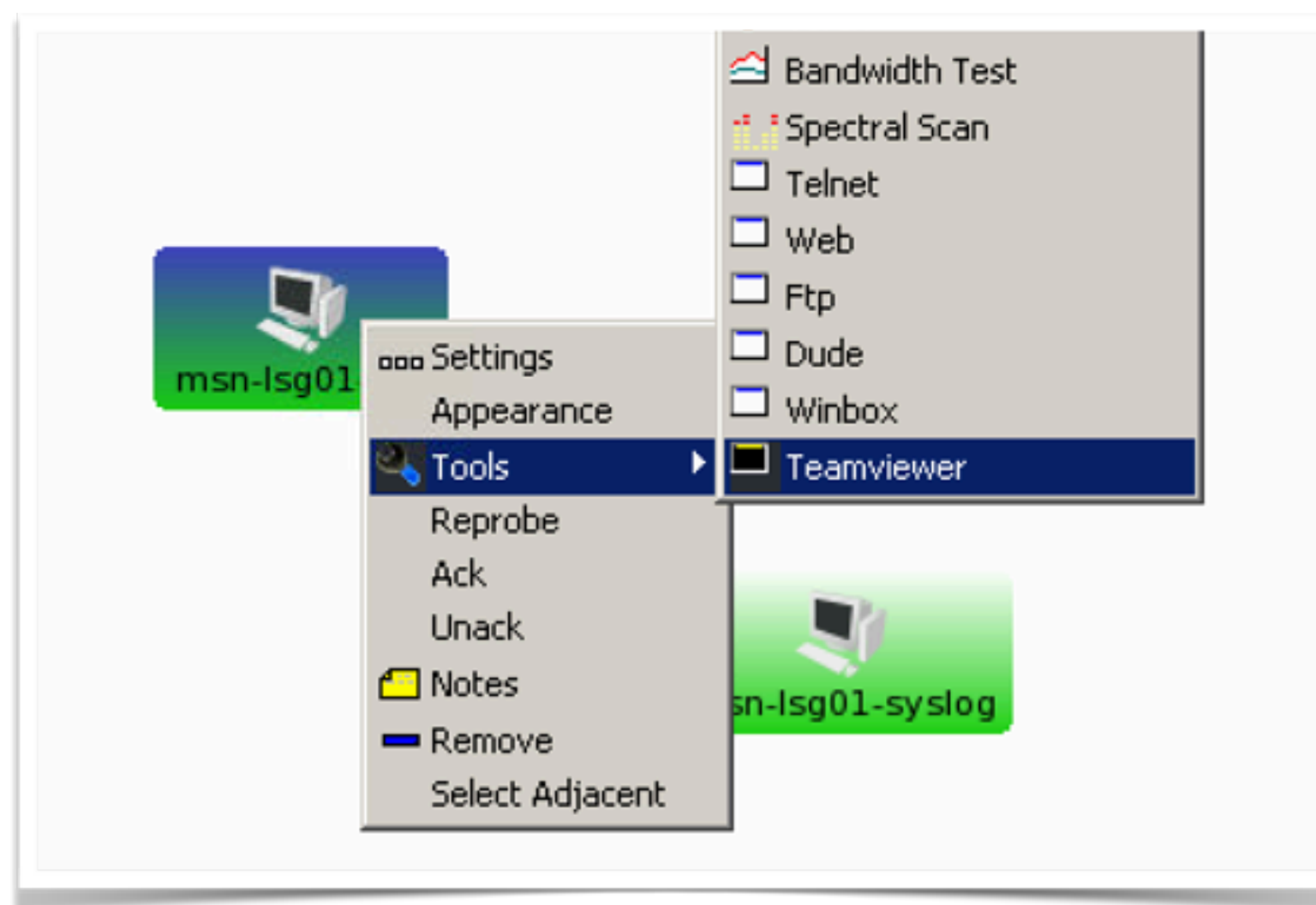
☐ Dude Server

Services:

Status:

RouterOS Status:

Custom tools



Contact

- WWW: www.misaxnet.de
- Twitter: [@misaxnet](https://twitter.com/misaxnet)
- Facebook: www.facebook.com/misaxnet
- E-mail: info@misaxnet.de

Thanks to

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

Questions?