MikroTik User Meeting

SMS Notification Integration for The Dude Network Monitoring System

Integrate on The Dude Version 6.37.1

Jakarta, 14th October 2016

by
Rizky Agung Pratama
MikrotikIndo.blogspot.com

The Dude MikroTik

KUMPULAN
TUTORIAL MIKROTIK INDONESIA

MikroTik
Indo.blogspot.com

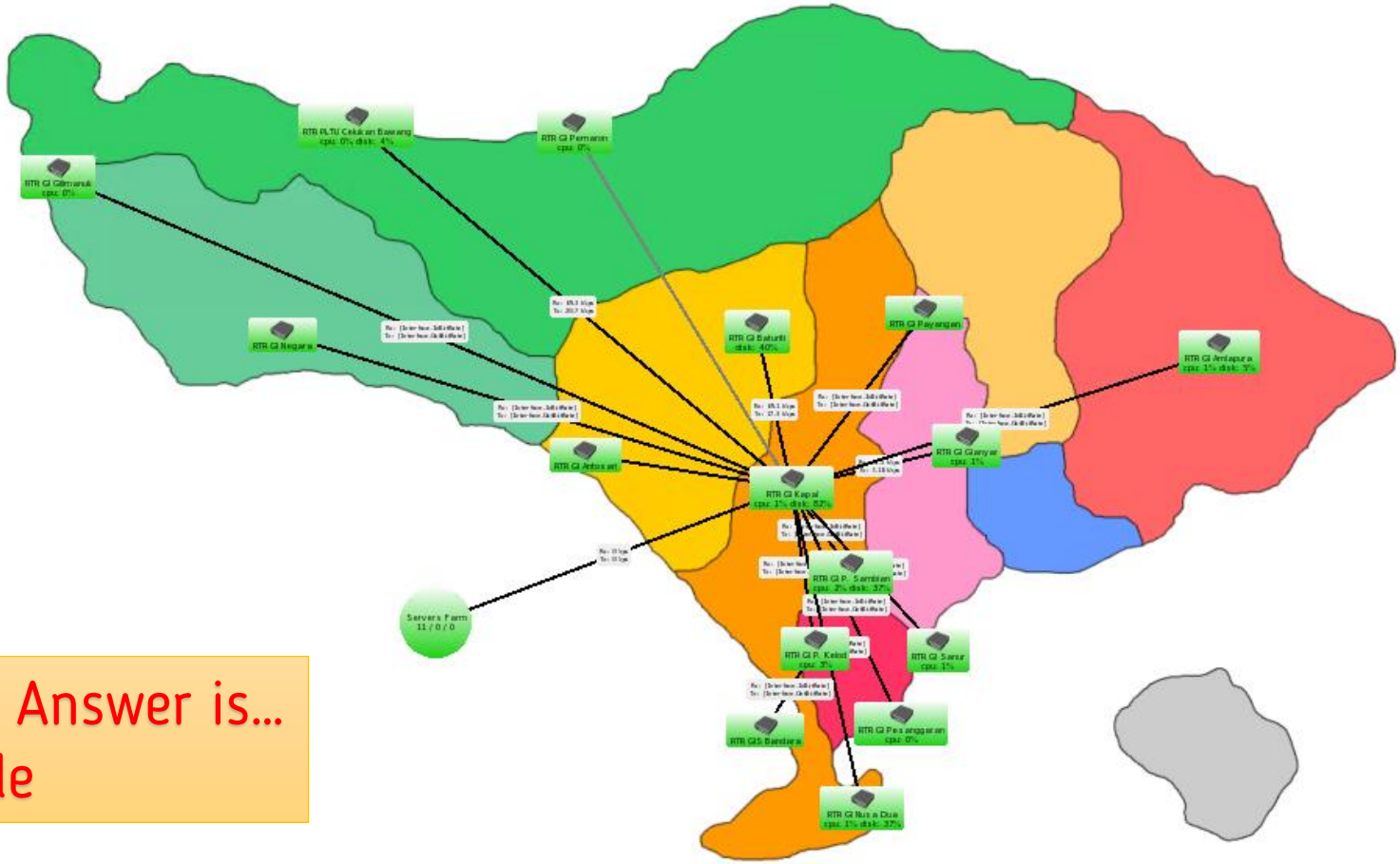
About me

My Name :
Rizky Agung Pratama

- Graduated from Diploma Electrical Engineering, Gadjah Mada University
- Learn Mikrotik since 2012
- Blogger at MikrotikIndo.blogspot.com since 2013
- Work as IT Analyst at Government Corp since 2014

The Background

- I work for electrical company who has a lot of Intelligent Electrical Devices (IED).
- Most of them are connected and monitored via Network (IP Based).
- I need a simple application to monitor the status of those devices and notify about their status changes.



And the Answer is...
The Dude

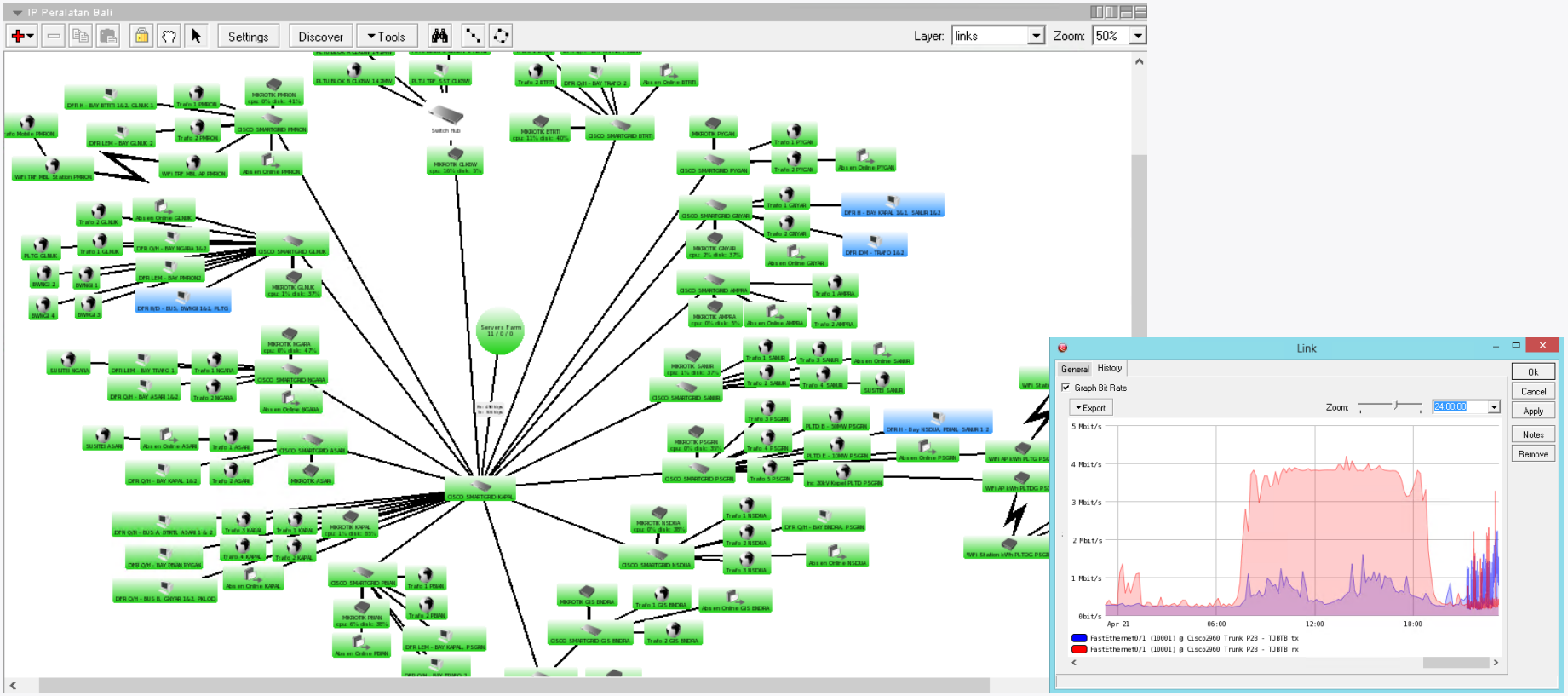
An Introduction

What is The Dude?

The Dude is a free application by MikroTik, which can dramatically improve the way you manage your network environment.

It will automatically scan all devices within specified subnets, draw and layout a map of your networks, monitor services of your devices and execute actions based on device Status changes.

wiki.mikrotik.com



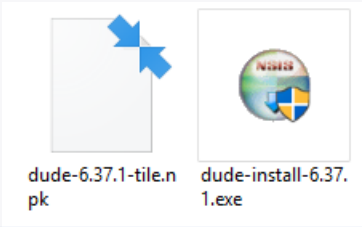
What we Need?

Software & Hardware we need to integrating SMS Notification on The Dude

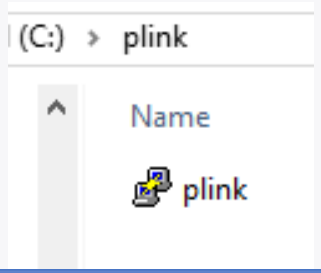
1. Mikrotik device which capable to Install The Dude Server

2. PC as The Dude Client

3. USB Modem (Supported by RouterOS)



4. The Dude Installation file



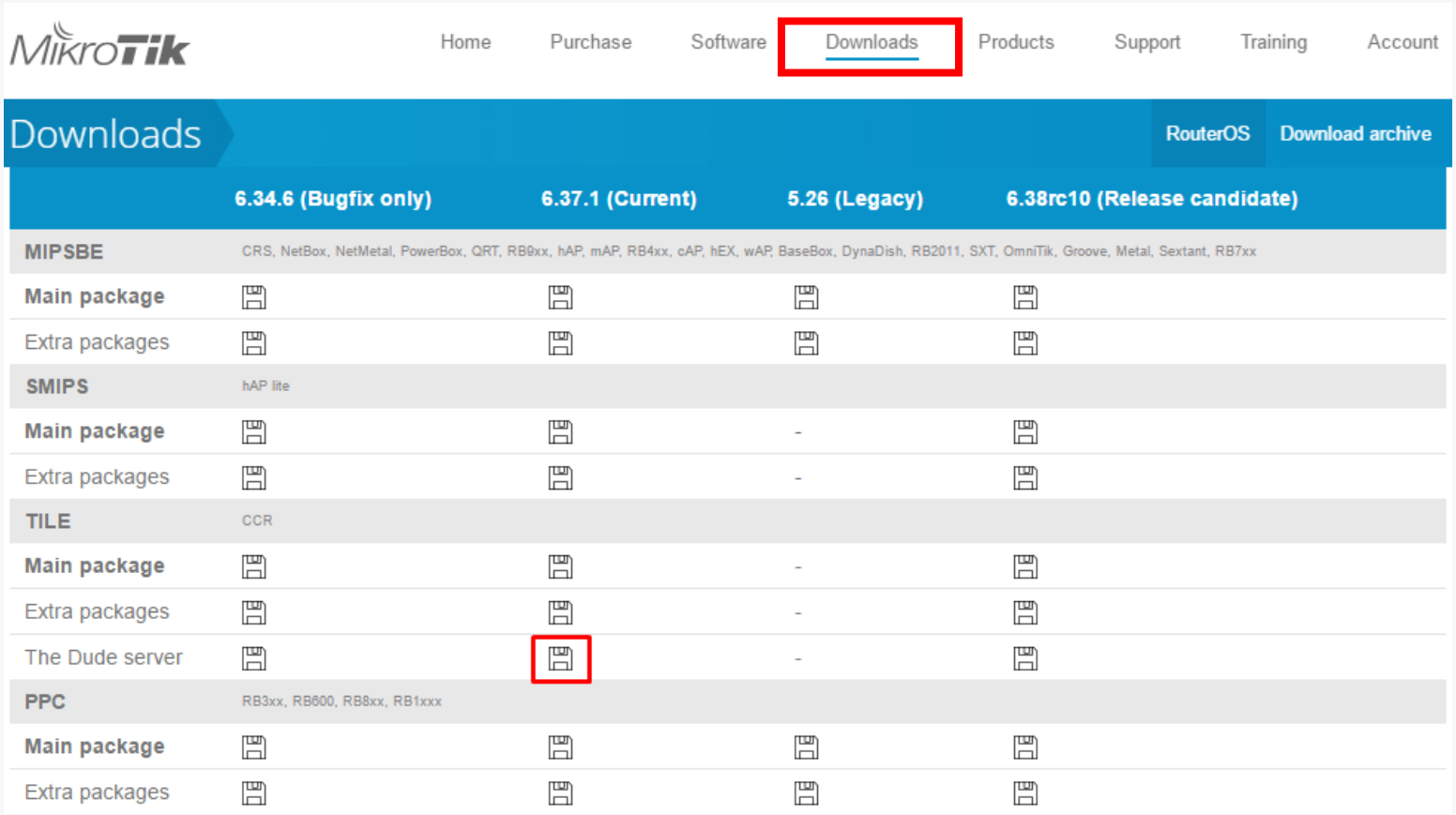
5. Plink SSH Software (Free)

6. Some SMS Package

SMS Notification Integration on The Dude Version 6.37.1

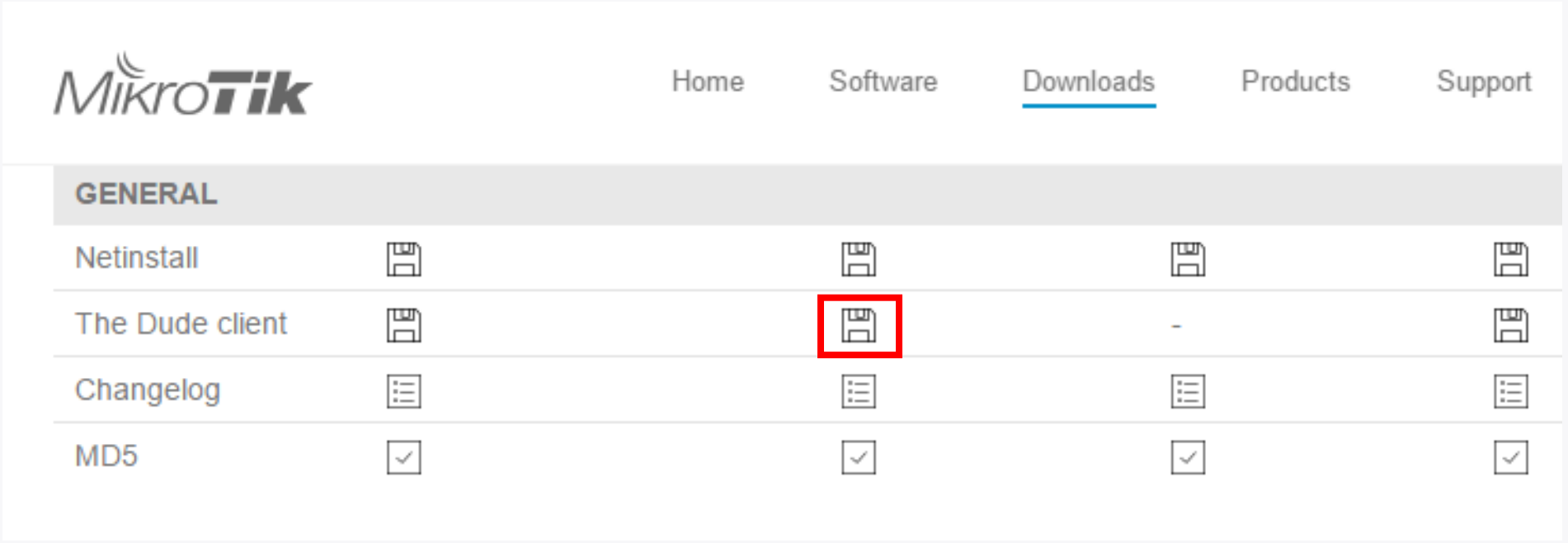
The Dude Server Installation

1. Download The Dude Server package from Mikrotik.com
2. Make sure you download the dude as same version of your RouterOS

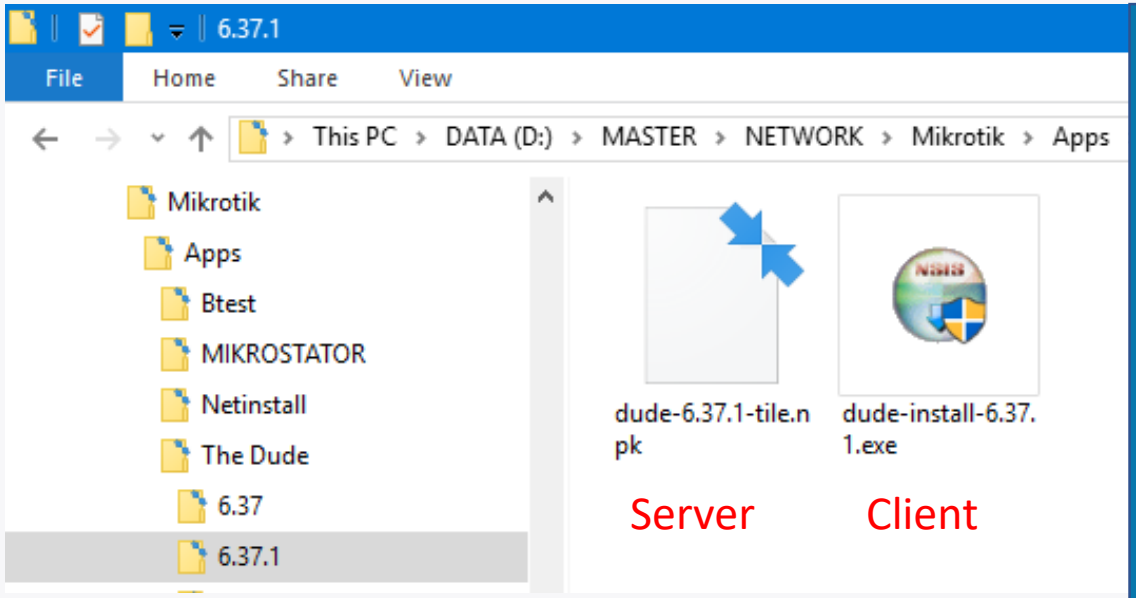


The Dude Client Installation

1. Download The Dude Client installation file from Mikrotik.com
2. Make sure you download The Dude Client as same as The Dude Server version



The Dude Installation Files



System requirements for server package

RouterOS:

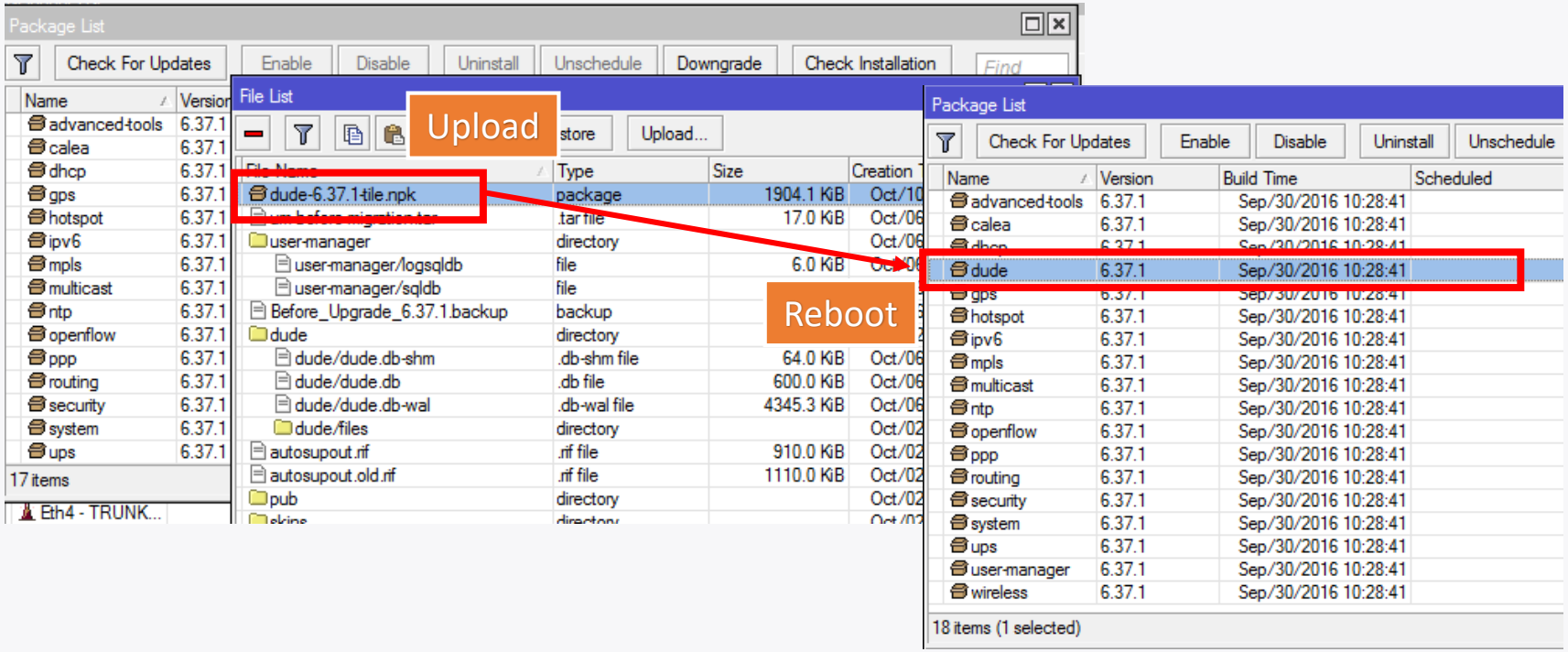
v6.34rc13 or newer

Hardware:

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

The Dude Server Installation

3. Copy the .npk file to Mikrotik Device → Reboot
4. Make Sure The Dude package has installed → open System -> Packages

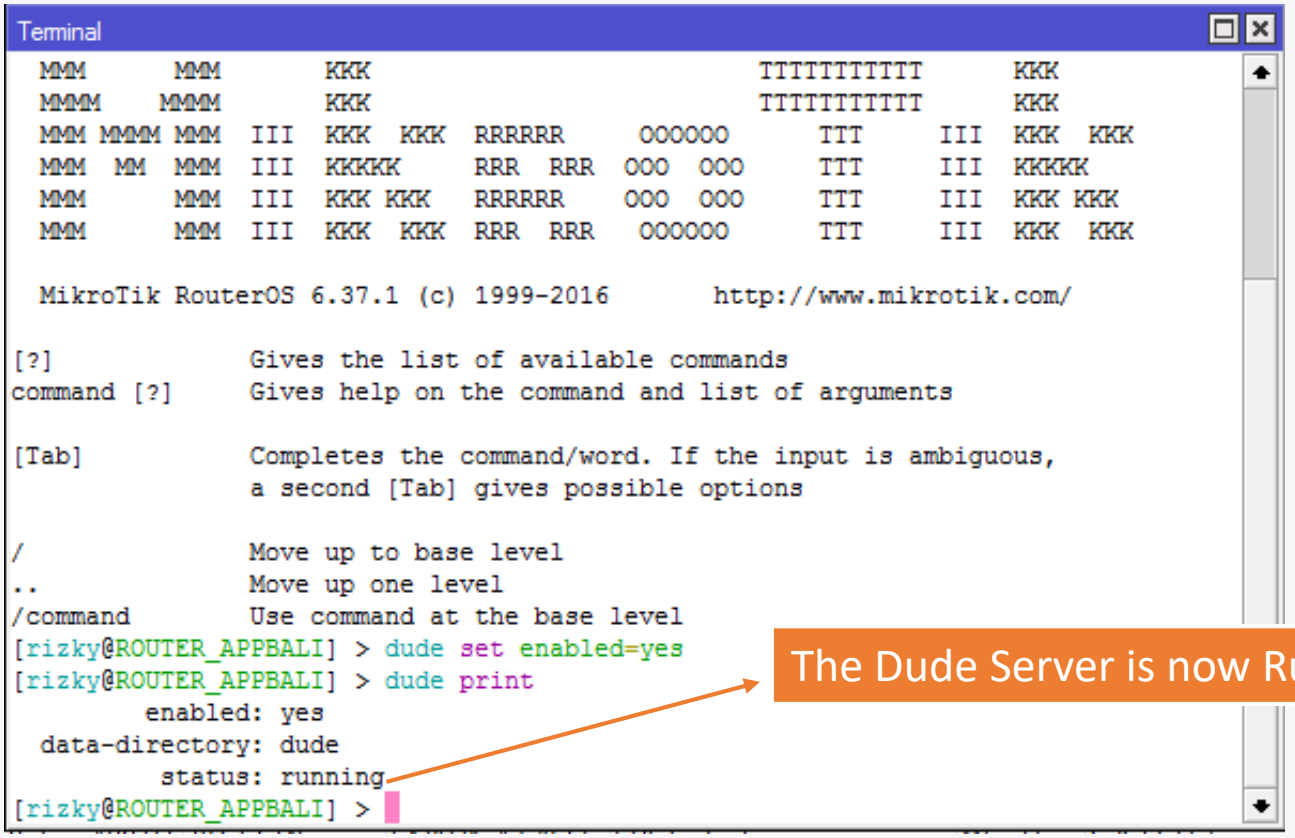


Run The Dude Server

Open the Terminal input the following Command :

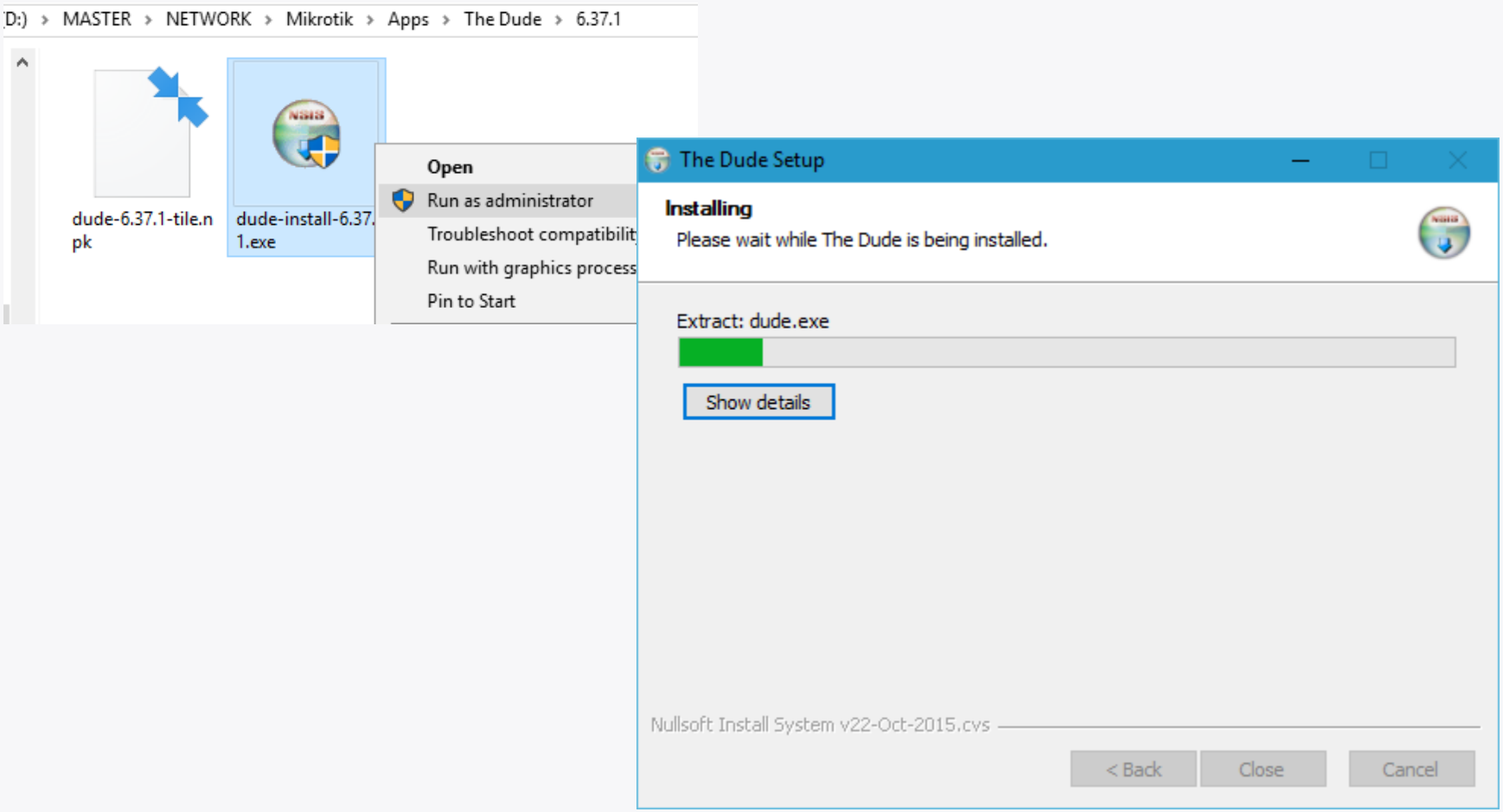
Enable The Dude Server :
dude set enabled=yes

Check Whether The Dude Running or not:
dude print



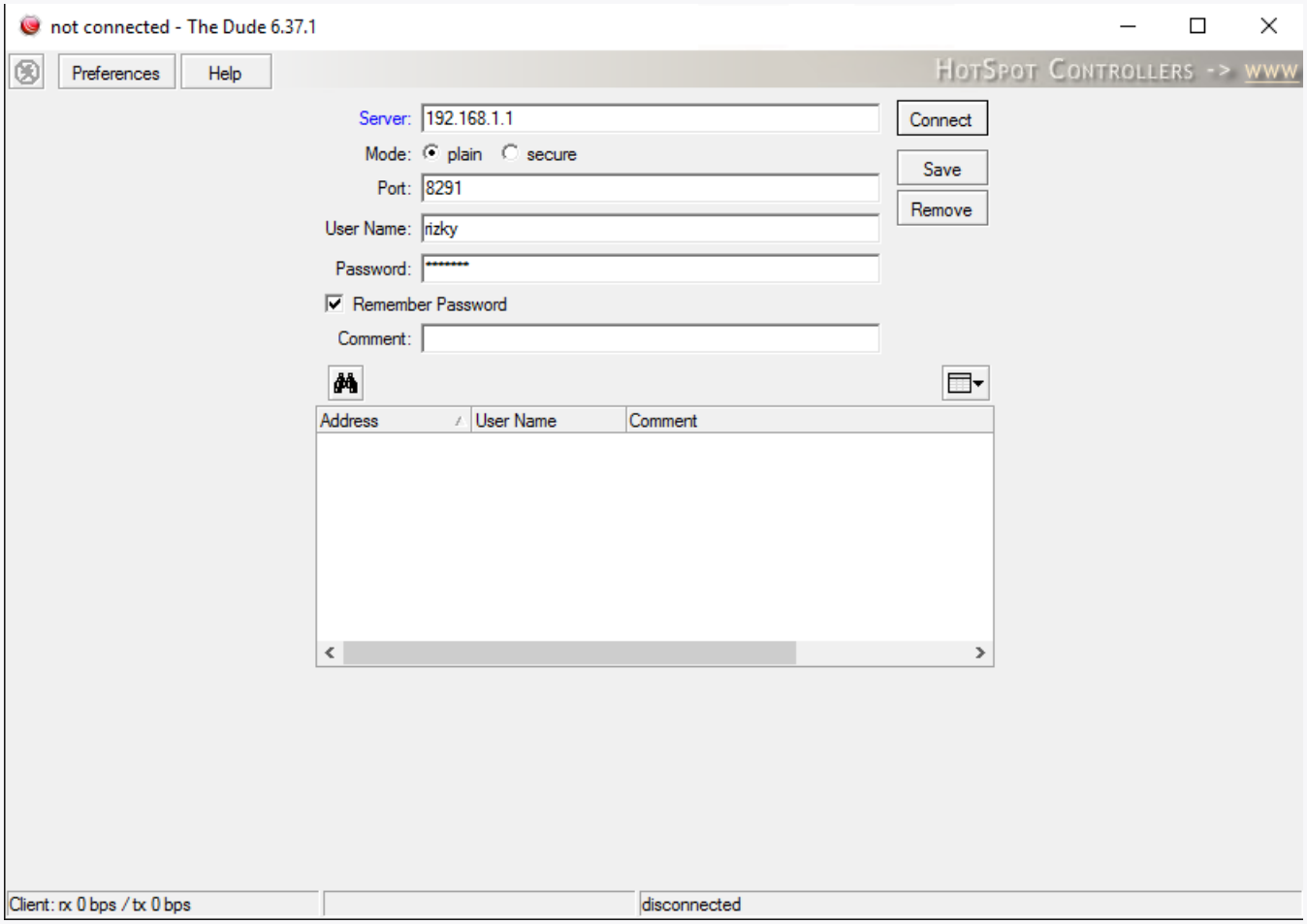
The Dude Client Installation

3. Install the .exe file to your PC



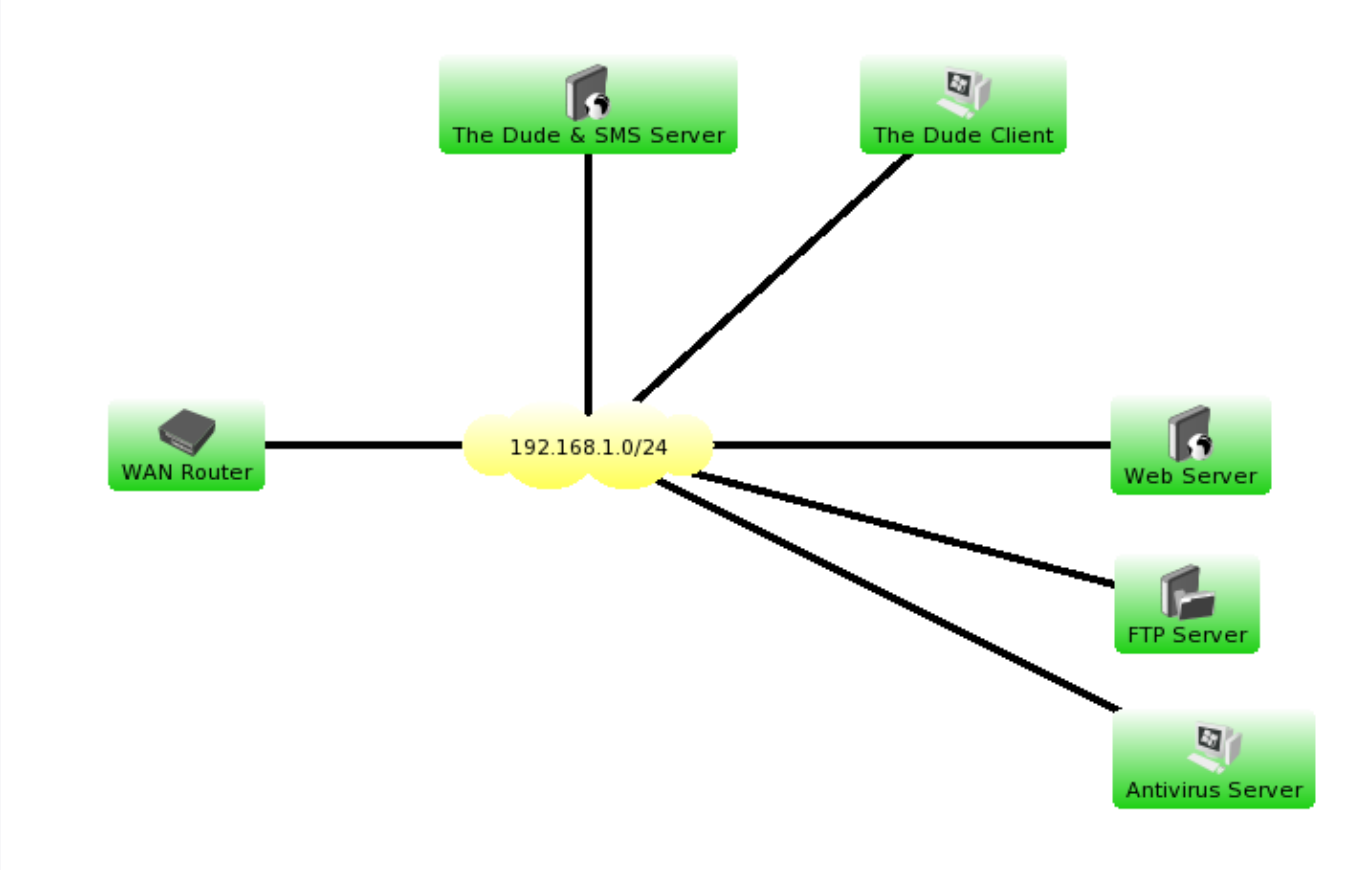
The Dude Client Installation

4. After the installation → Open The Dude Application
5. Fill in The Dude Server IP Address → Click Connect



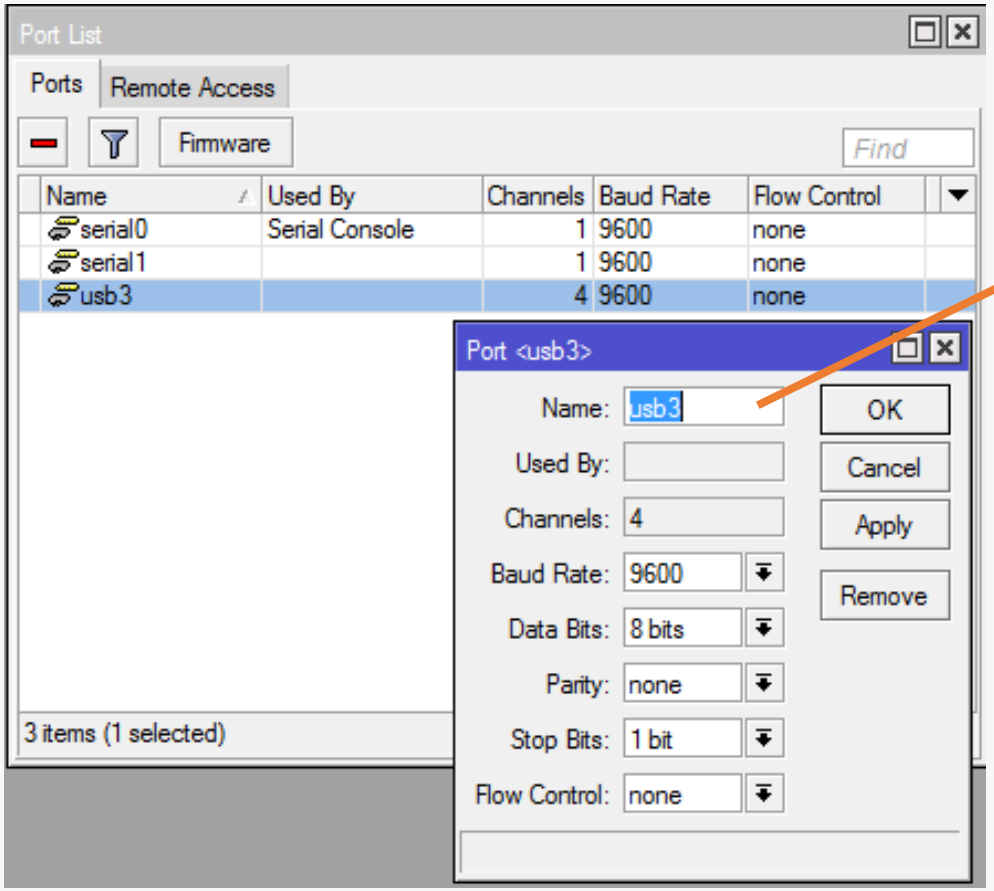
Build Your Own Network Map

1. Once you connected The Dude Client to The Dude Server, Build your own Network Map
2. You can add your devices manually or just scan it using Discover Tool



Set up The USB Modem

1. Plug in your USB Modem to one of the Mikrotik CCR USB Ports
2. Check whether Mikrotik CCR detect your USB Modem or not
3. Go to menu System → Ports

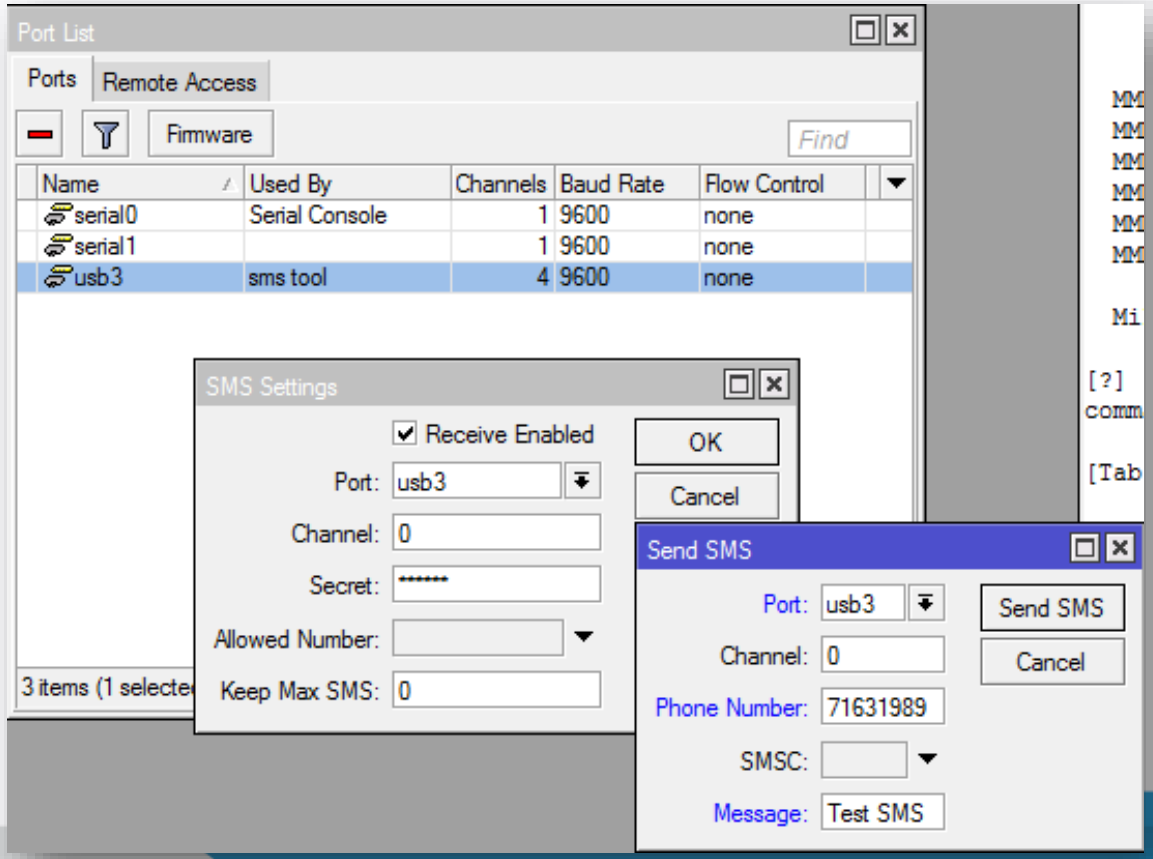


The USB Modem has been Detected and Installed by RouterOS

Set up The SMS

We need to make sure The USB Modem can be used to Send SMS

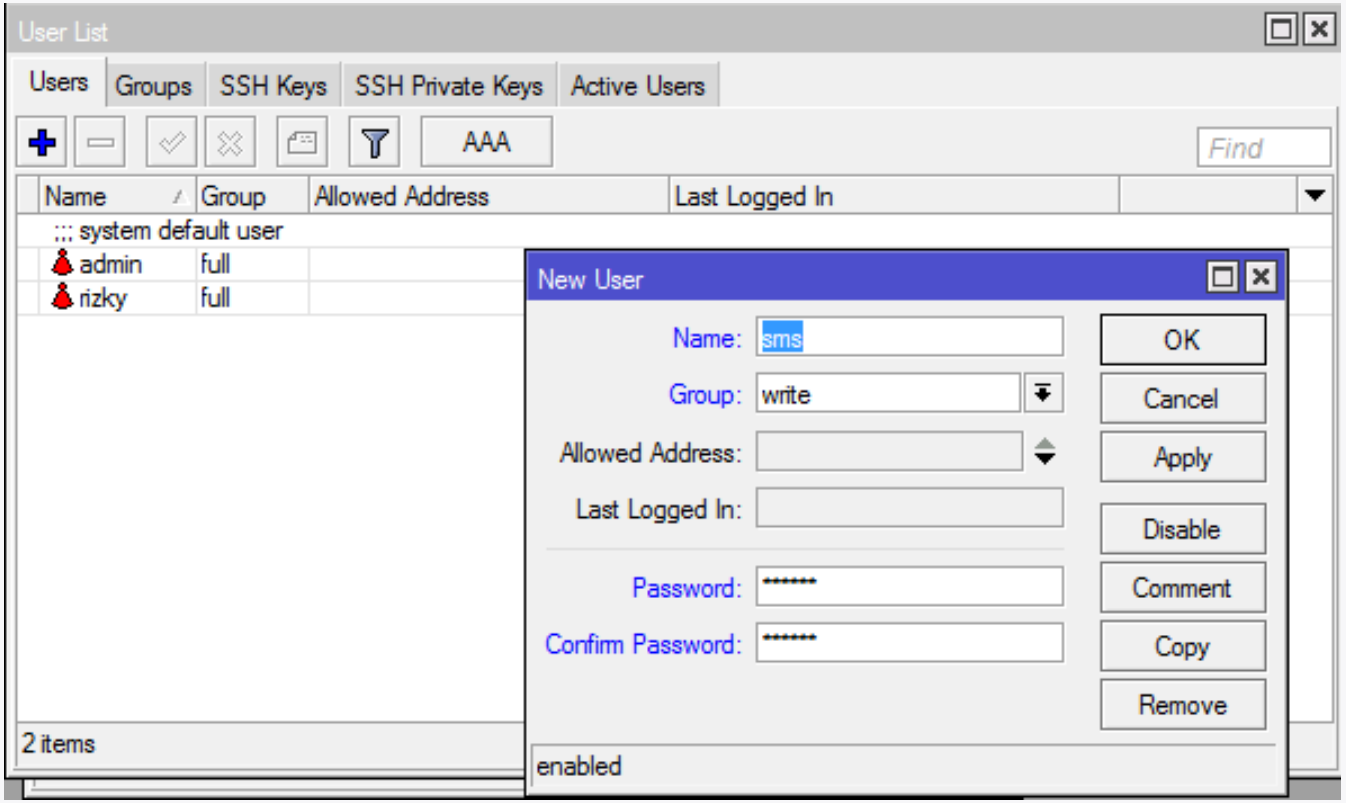
1. Go to menu Tools → SMS → Choose the USB Port used by USB Modem → tick Receive Enabled → Apply
2. Send a SMS Message → Click Send SMS → Choose Port, fill in the phone number you want to send SMS, & fill in the Message → Click Send SMS
3. Check your phone



Add a New User for SMS

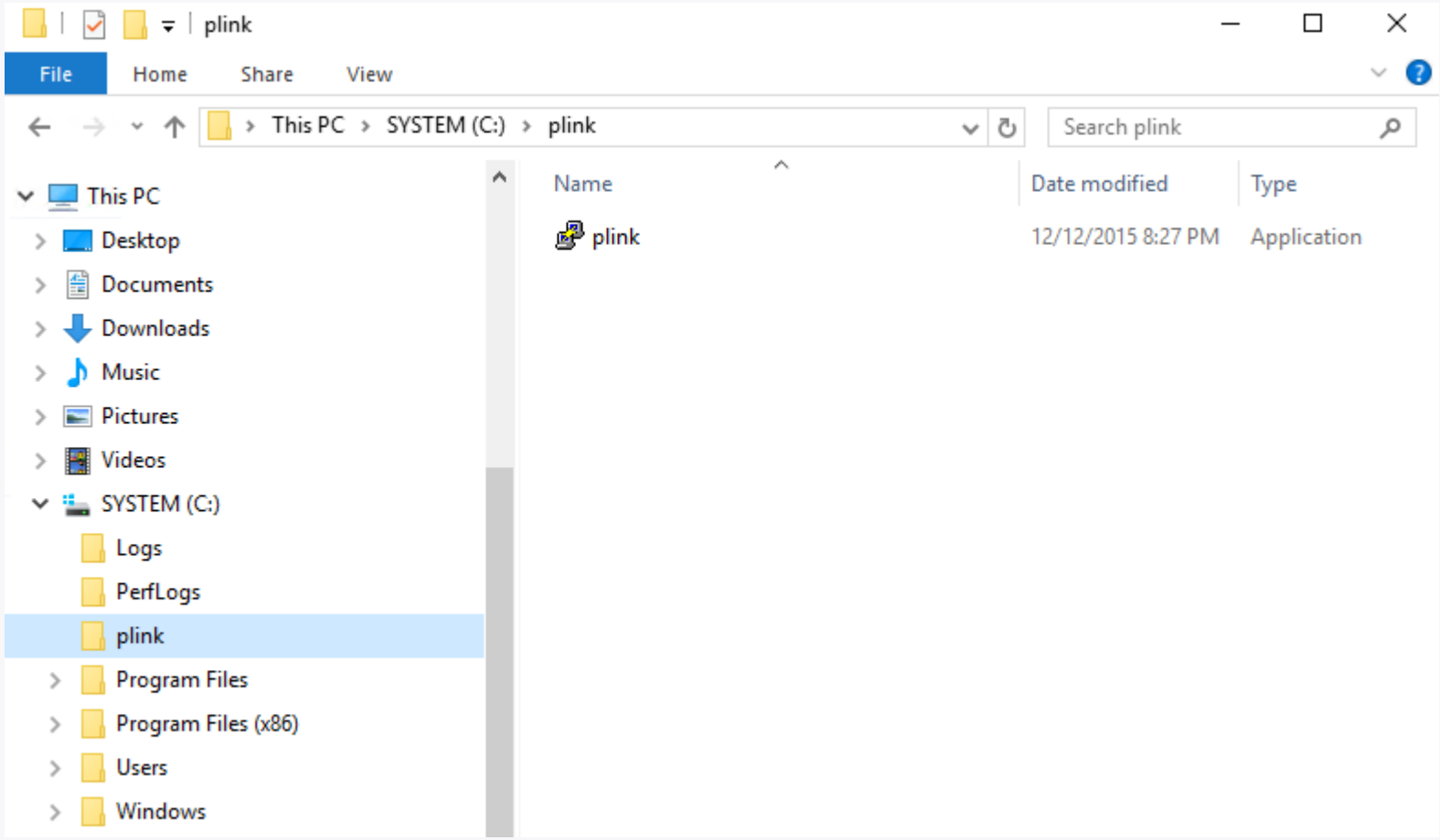
We need to add a dummy user for SSH login to send SMS Message

1. Open Menu System → Users
2. Add a New User with **write** group & don't forget to set the password



The Integration Configurations

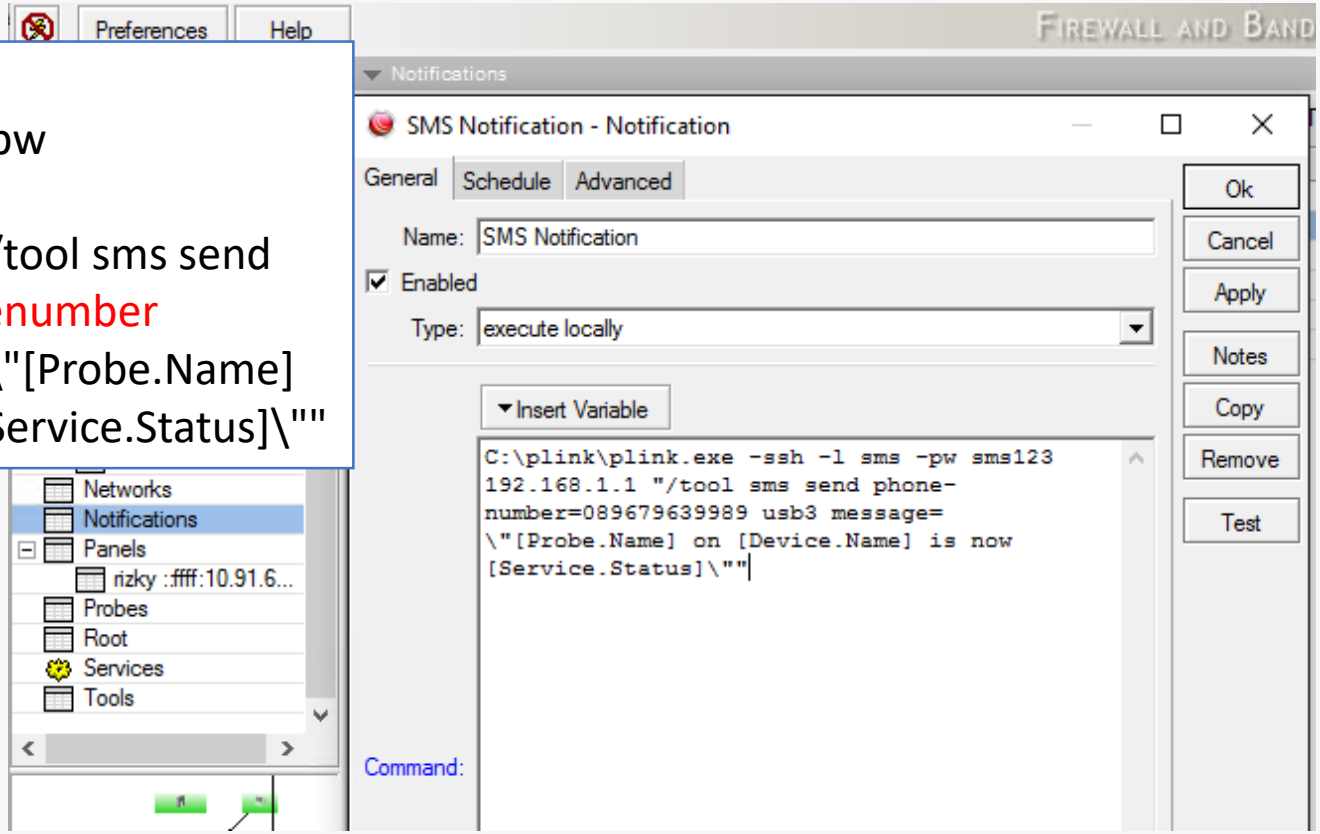
1. Download Plink SSH Application. We can download it here : http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html
2. Copy plink.exe to directory c:\plink



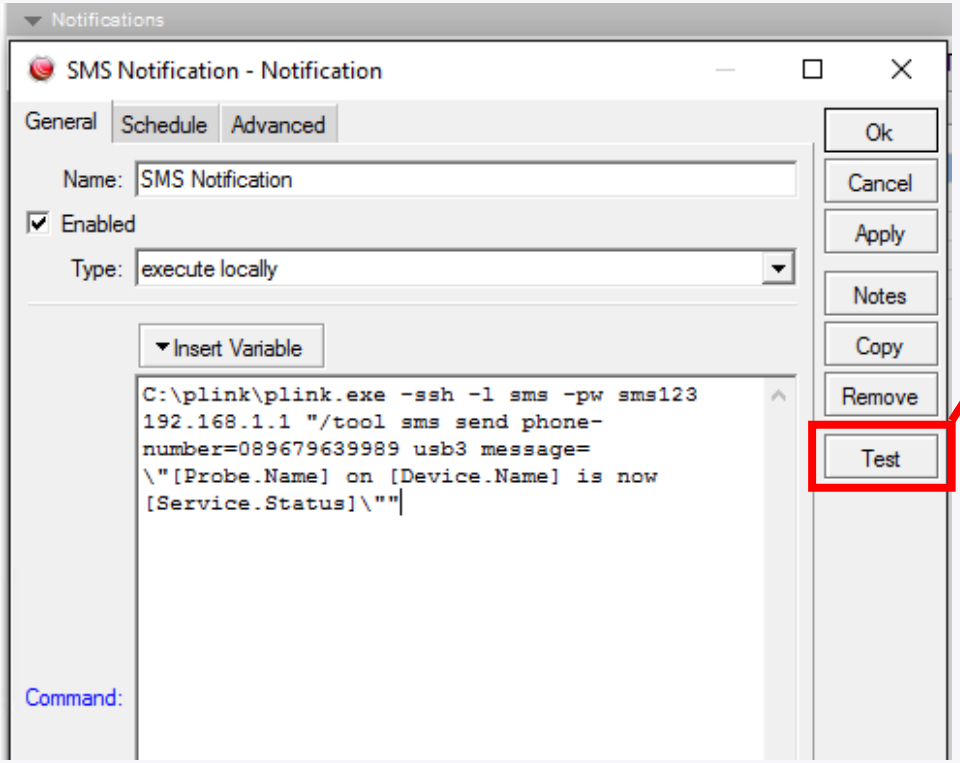
The Integration Configurations

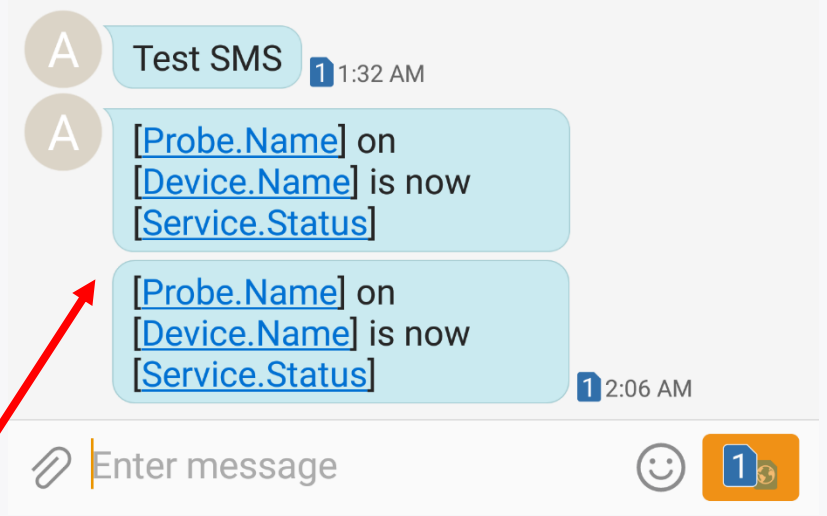
3. Open The Dude → Go to menu Notifications → Add New Notification
4. Fill in the Name → Tick Enabled → Type : execute locally → Fill in the following command :

C:\plink\plink.exe -ssh -l **mikrotik_sms_username** -pw **mikrotik_sms_password** **mikrotik_sms_ipaddress** "/tool sms send phone-number=yourphonenumber usbportnumber message=\"[Probe.Name] on [Device.Name] is now [Service.Status]\""

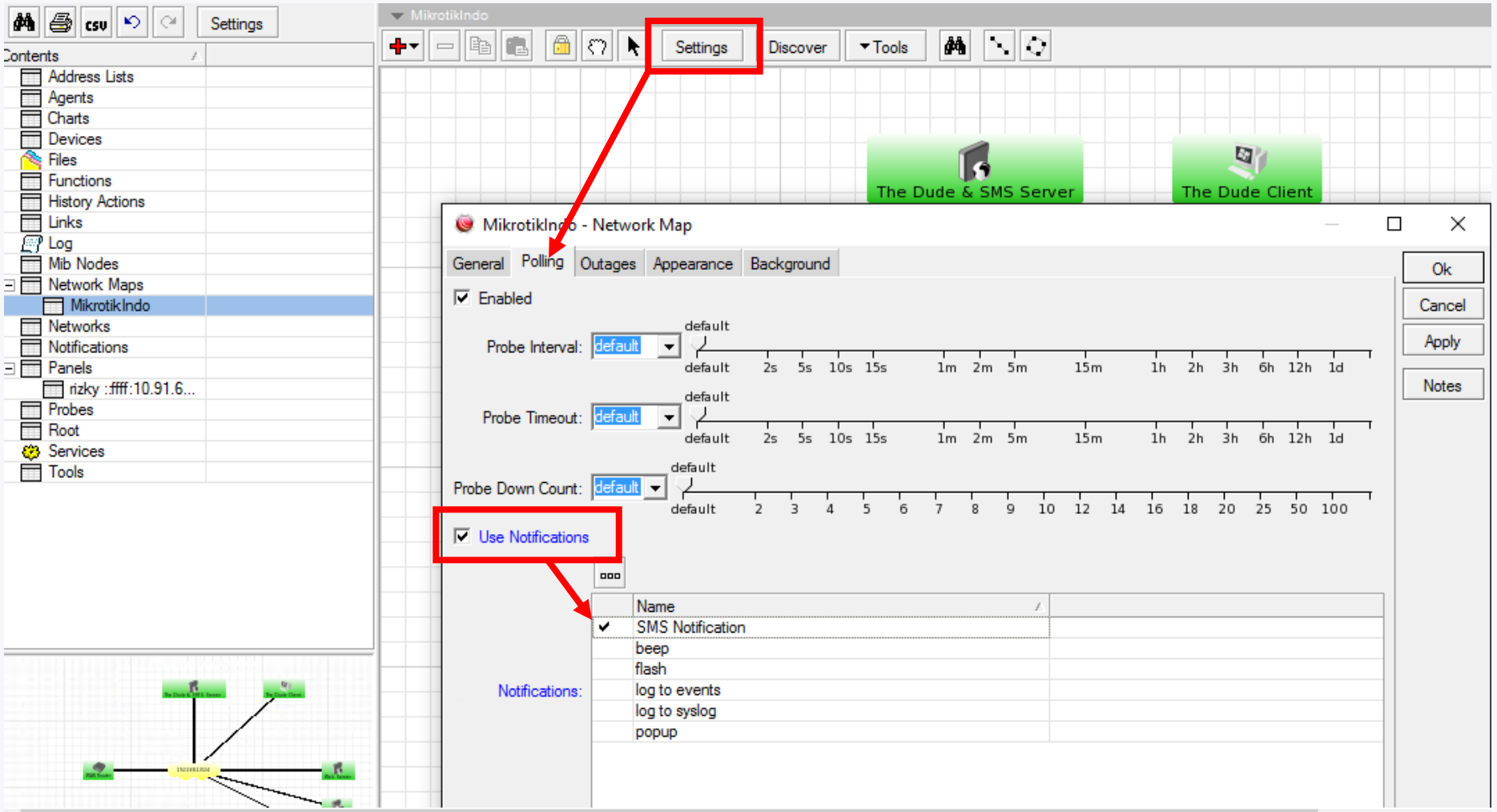


Test SMS from The Dude



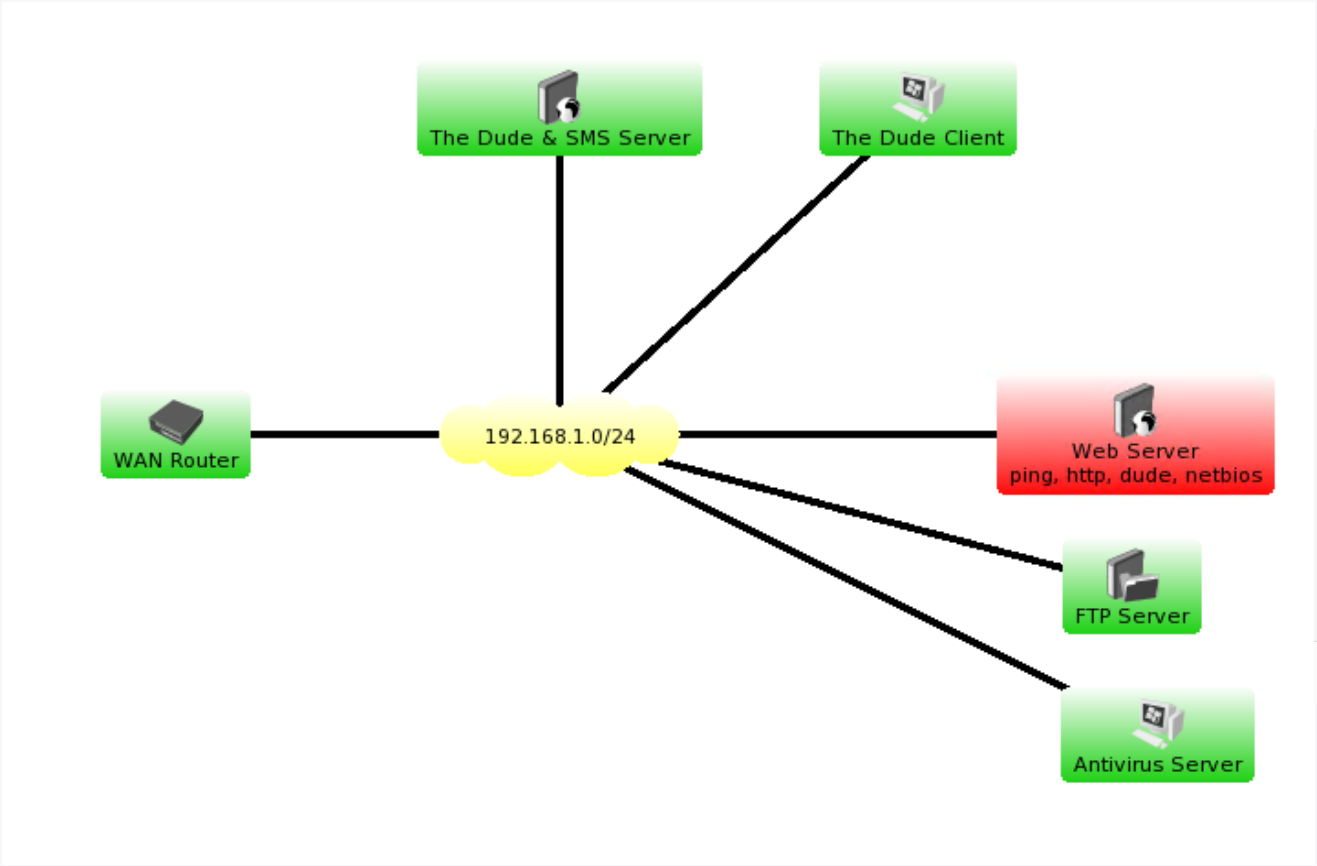


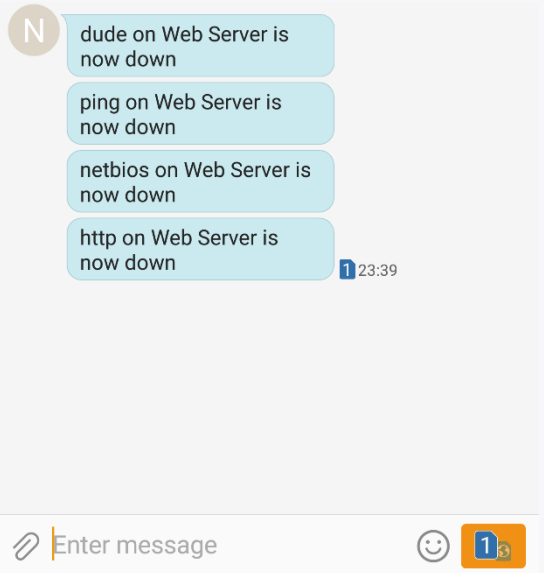
Apply SMS Notification to Network Map



Test The Configuration

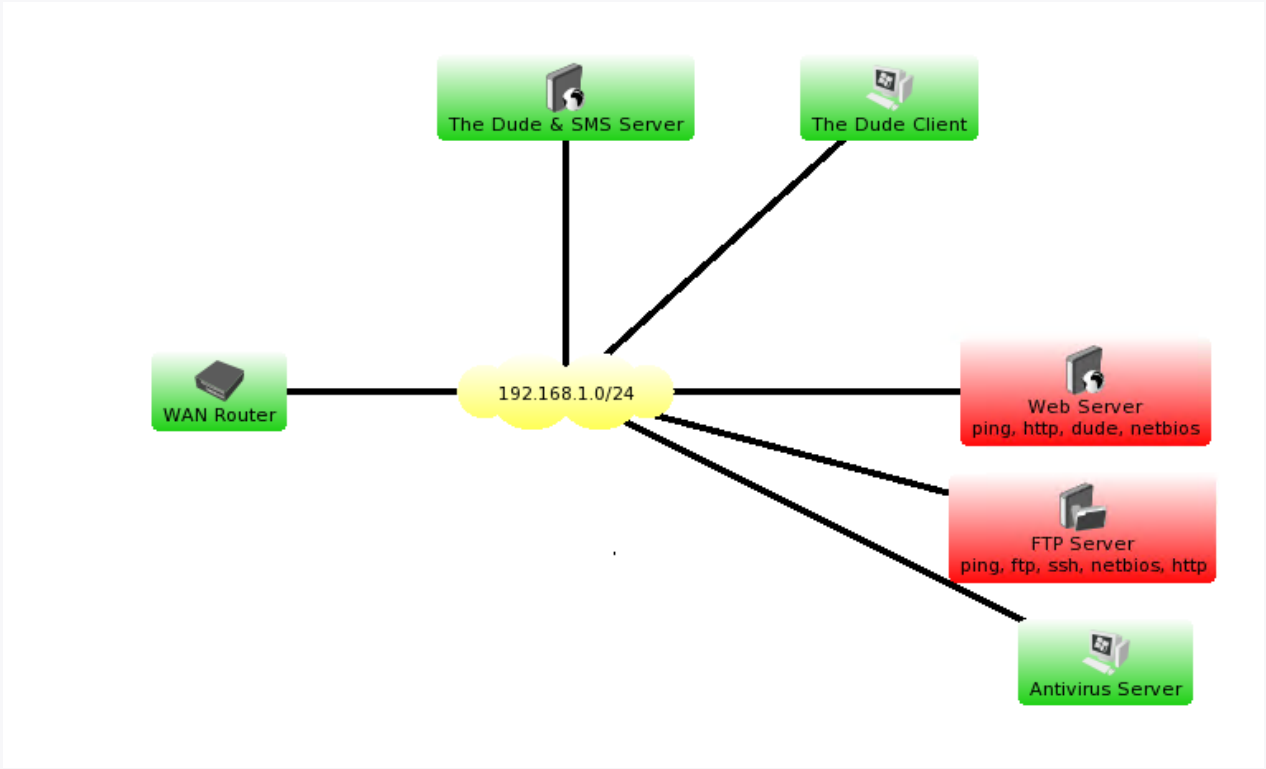
Disconnect one of your monitored devices to test the configuration

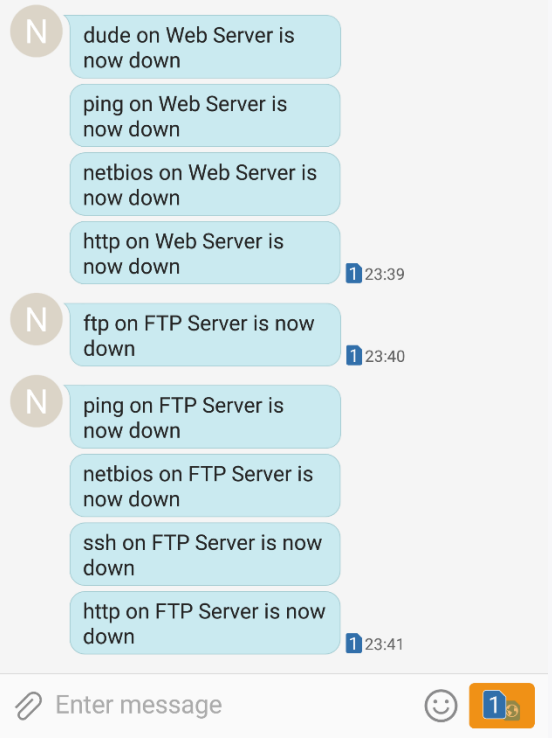




Test The Configuration

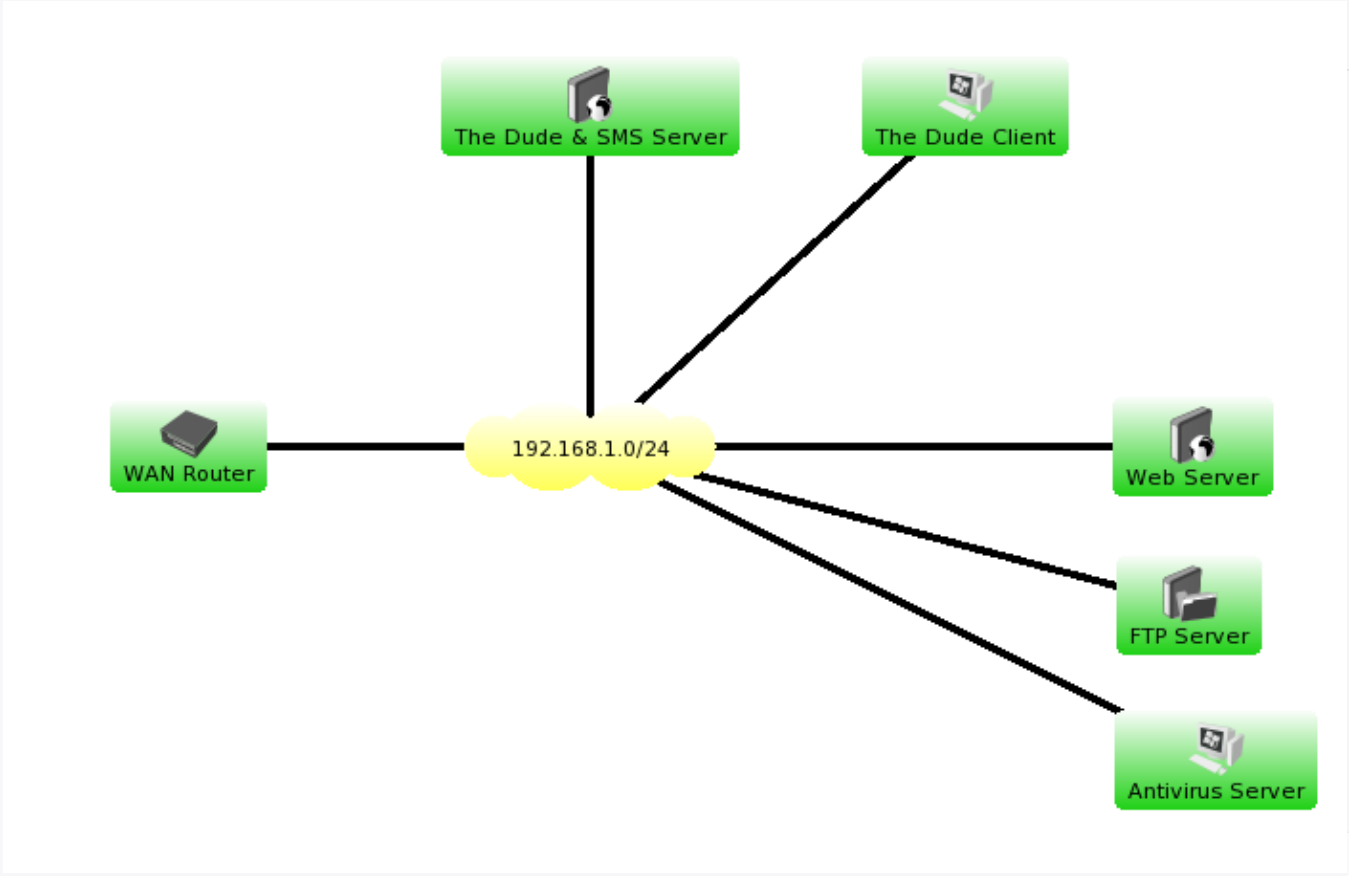
When devices you monitor change their Status to down, SMS Message will sent to your phone number

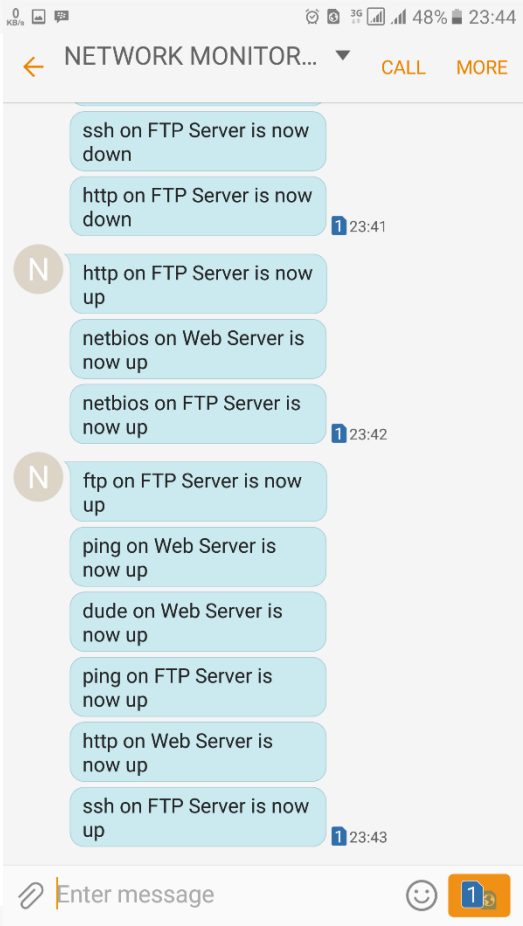




Test The Configuration

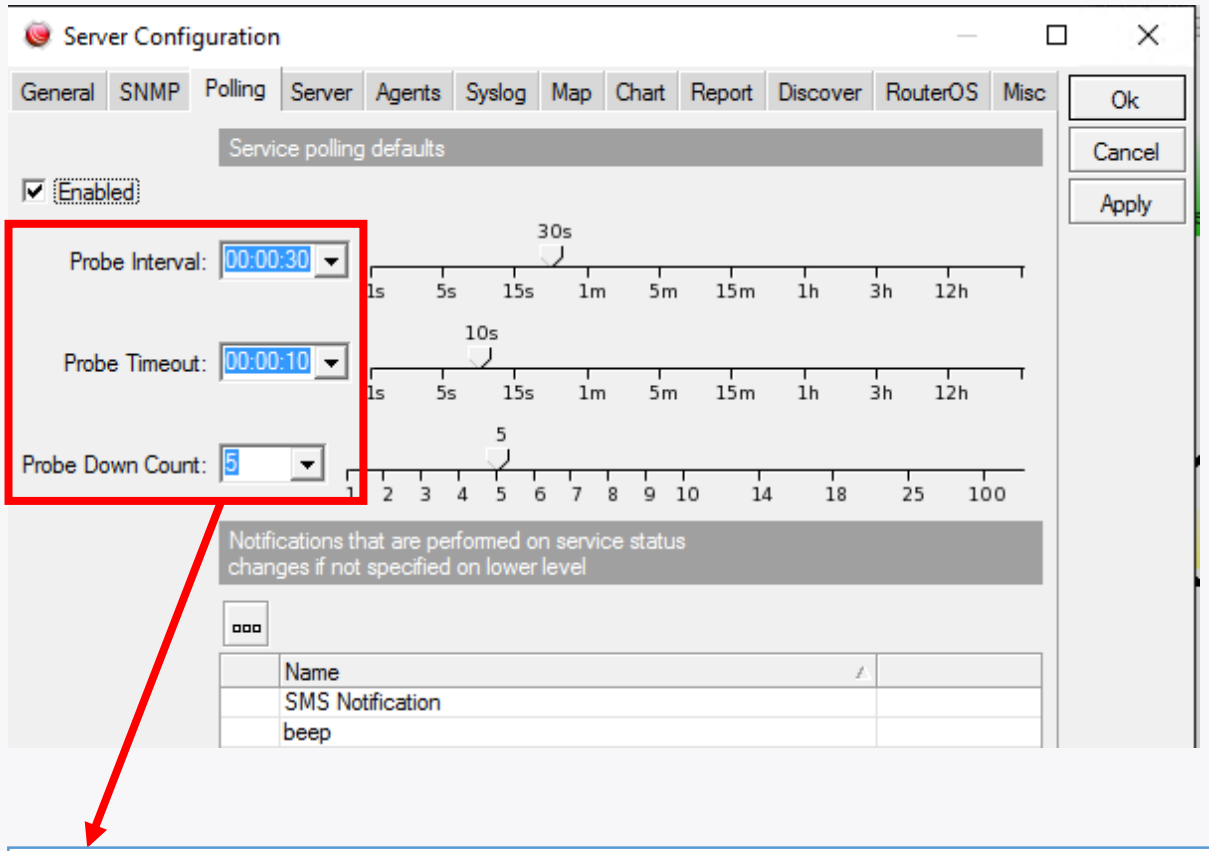
When their Status change to up, SMS Message will sent to your phone number





The Polling Options

How long we have to wait until the device we monitored declared as down?



Probe Interval :
How often does it query (ping) a specific device.

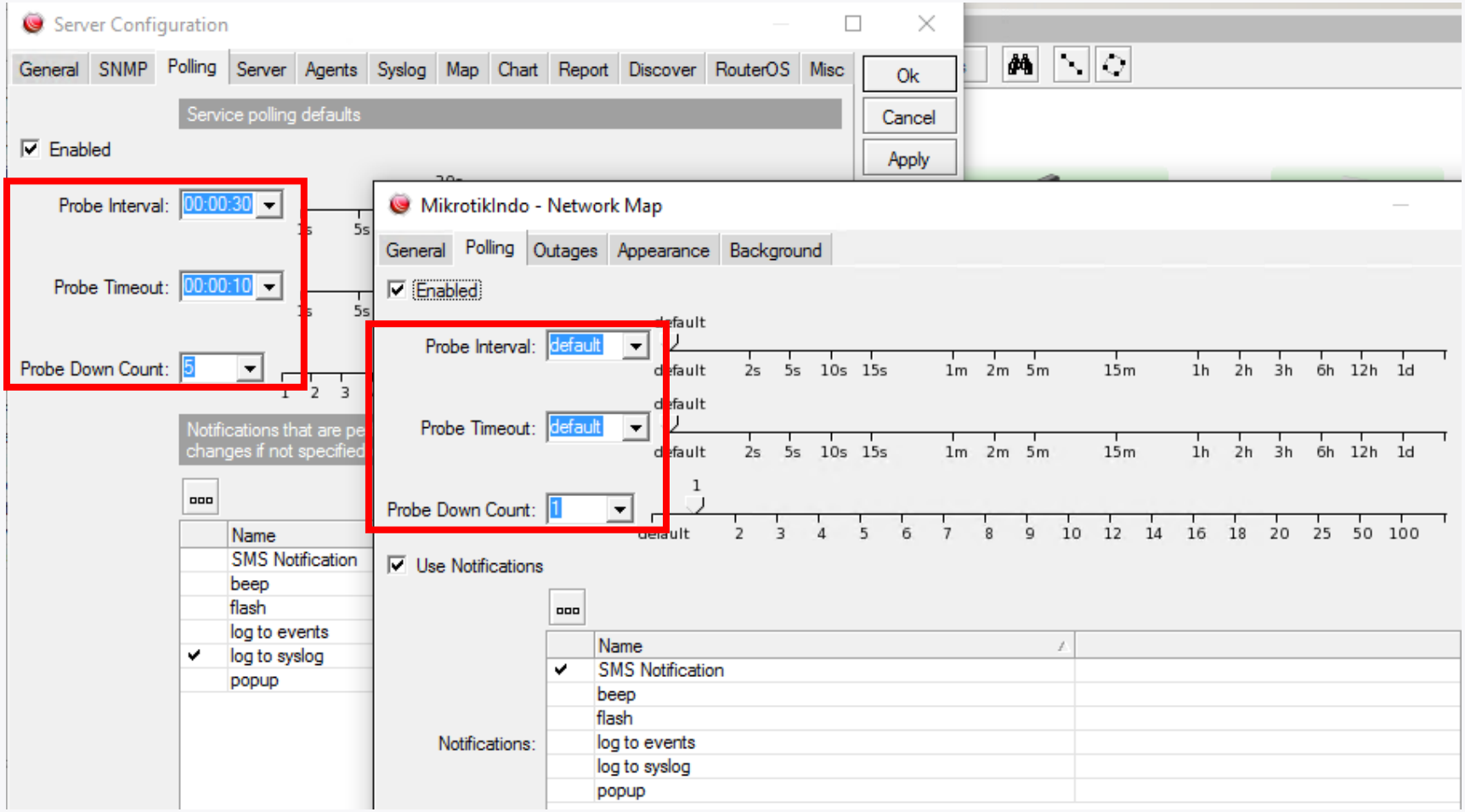
Probe Timeout :
How long The Dude waits for a reply from a ping or check of a telnet, ssh, or http port before considering it a failed response.

Probe Down Count :
How many failed responses are required before The Dude declares the device as a failed device.

Default configuration is 30 second poll interval with 10 seconds timeout and down count of 5. Therefore, you would have 5 polls at 30 second intervals plus 10 seconds would need to be failed before you see a declaration of a failed device (2 minutes and 40 seconds).

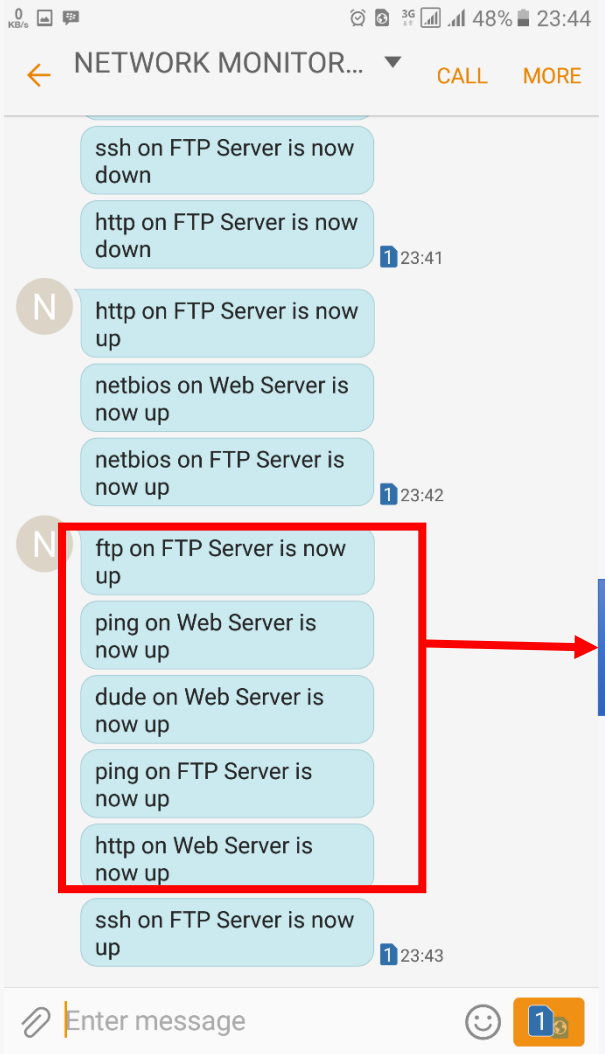
The Polling Options

We can override the Global Server Polling Configuration on Network Map Polling Options or directly on The Device Polling Options.

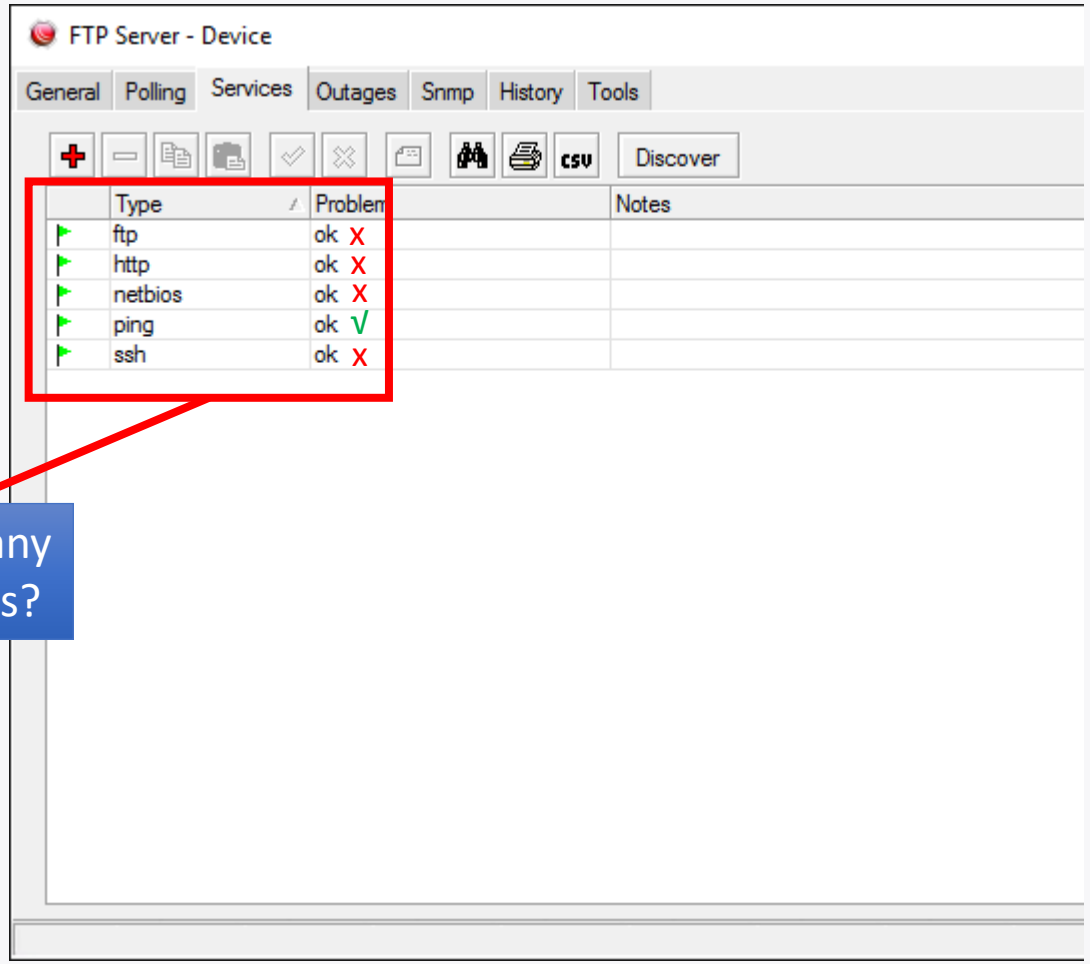


Customization

If you think that Services you monitor are too many, just remove them. Leave the **ping** service alone.



Too many services?



Customization

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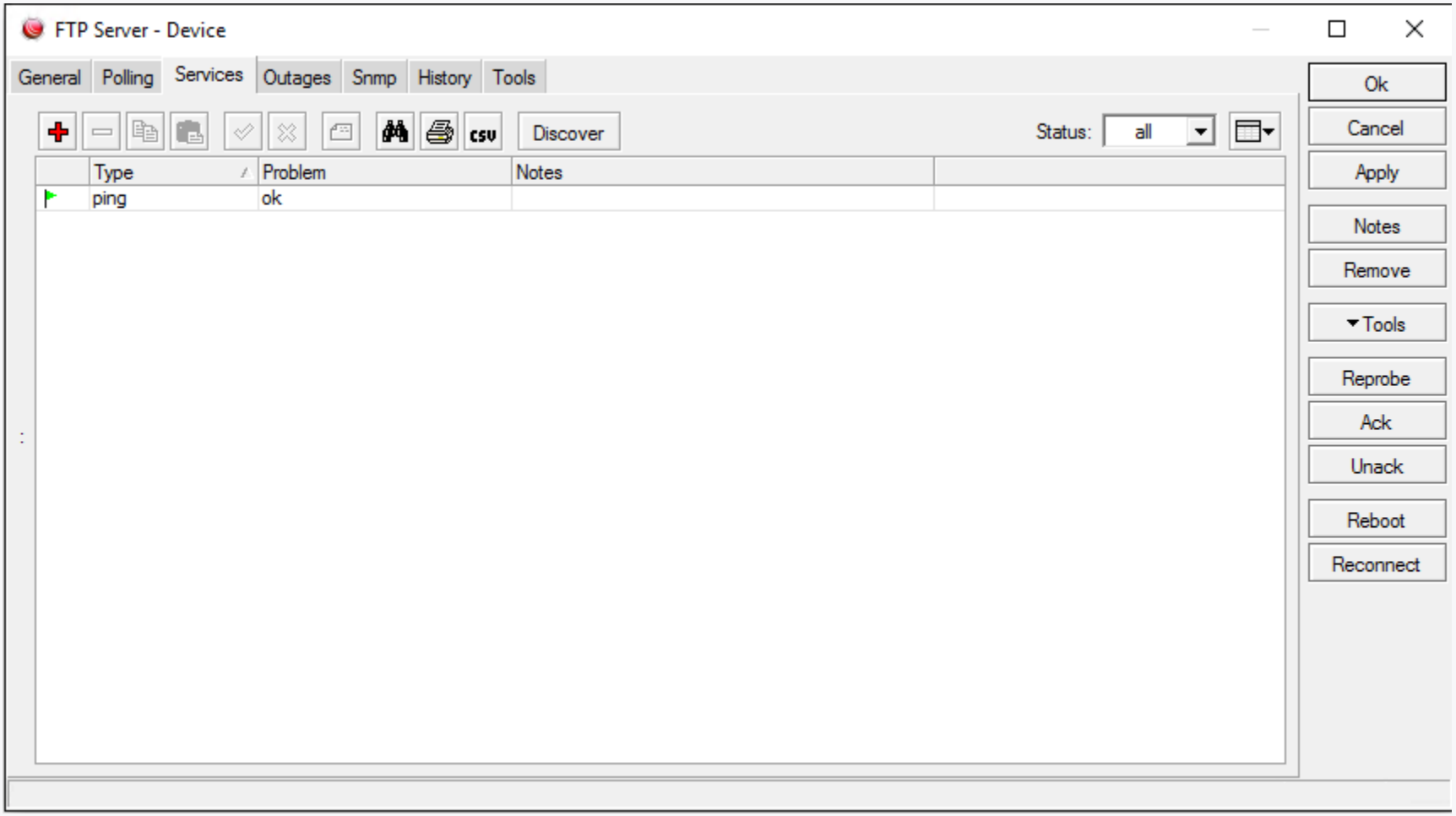
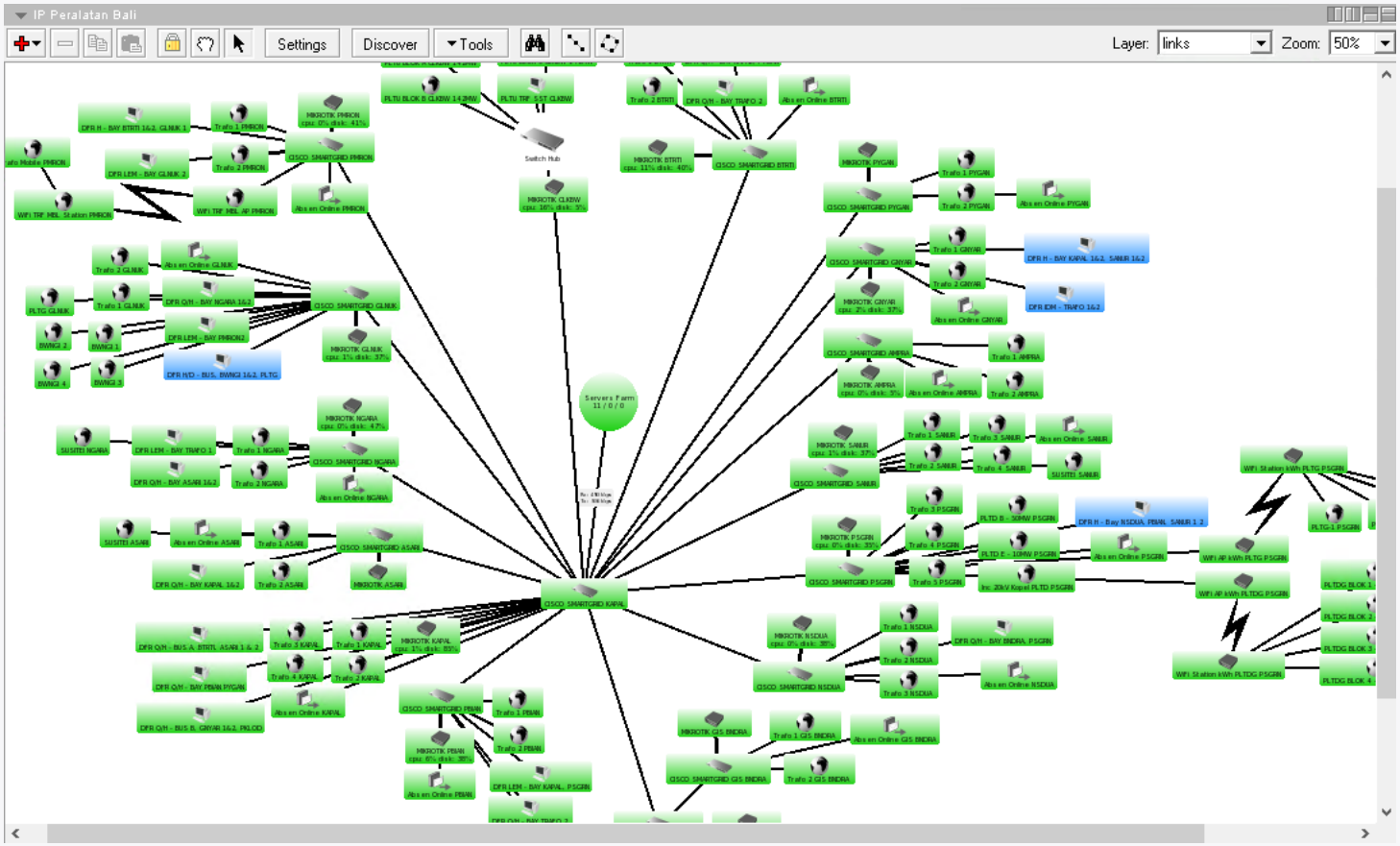


Customization

If you want to monitor a lot of devices, maybe you'll consider to change the SMS Notification with Email Notification



How to do that?? You can find the Tutorial I have wrote here :
http://mikrotikindo.blogspot.co.id/2015/12/cara-membuat-notifikasi-email-thedude-mikrotik.html

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