The Dude 4

Documentation

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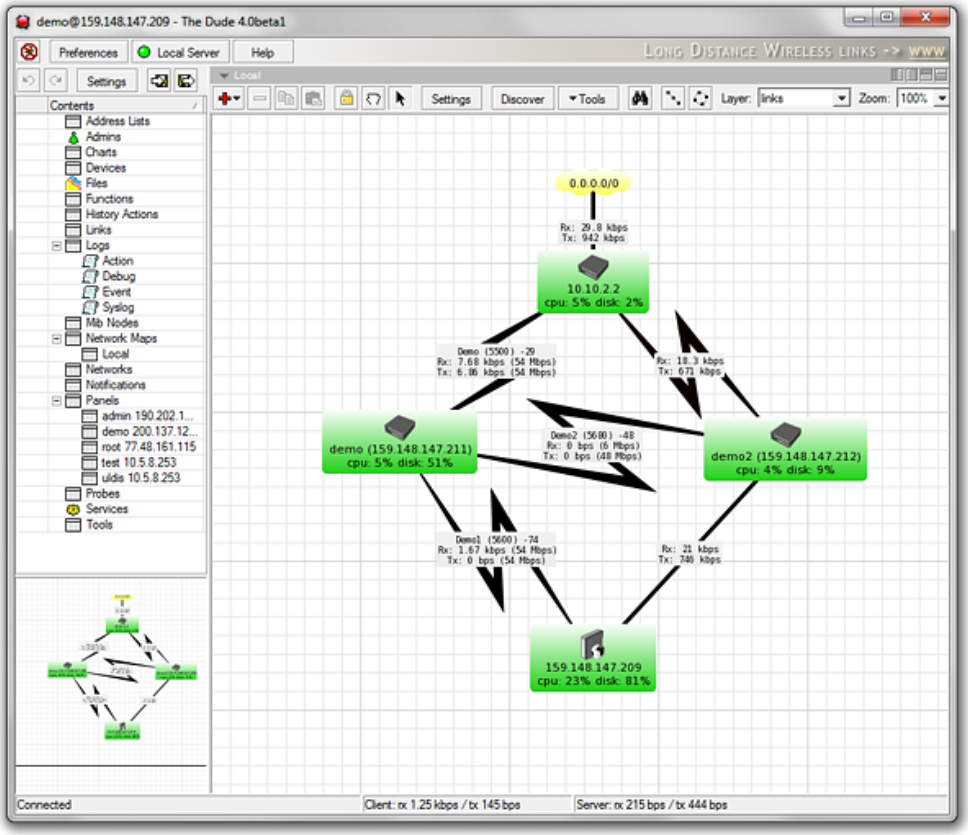
Introduction

Manual:The Dude

The Dude [1] 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 state changes.

Not only can you monitor your devices, you can also manage them. Mass upgrade RouterOS [2] devices, configure them right from within the Dude interface, run network monitoring tools etc.



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References

[1] http://www.mikrotik.com/thedude.php
[2] http://www.mikrotik.com/software.html

The Interface

Manual:The Dude/Installation

The Dude is free software, no purchase is necessary. You can download The Dude from the MikroTik webpage, in the Software section. On the Dude page, you will see **Stable** and **Beta** versions of the Dude, as well as special **NPK files** for The Dude support inside RouterOS.

Note: Generally Beta versions include more features, but could contain yet undiscovered issues. Stable versions are recommended for critical installations.

- The Dude changelog provides information about feature changes and bug fixes between versions.
- The Dude license provides legal information regarding the use of The Dude

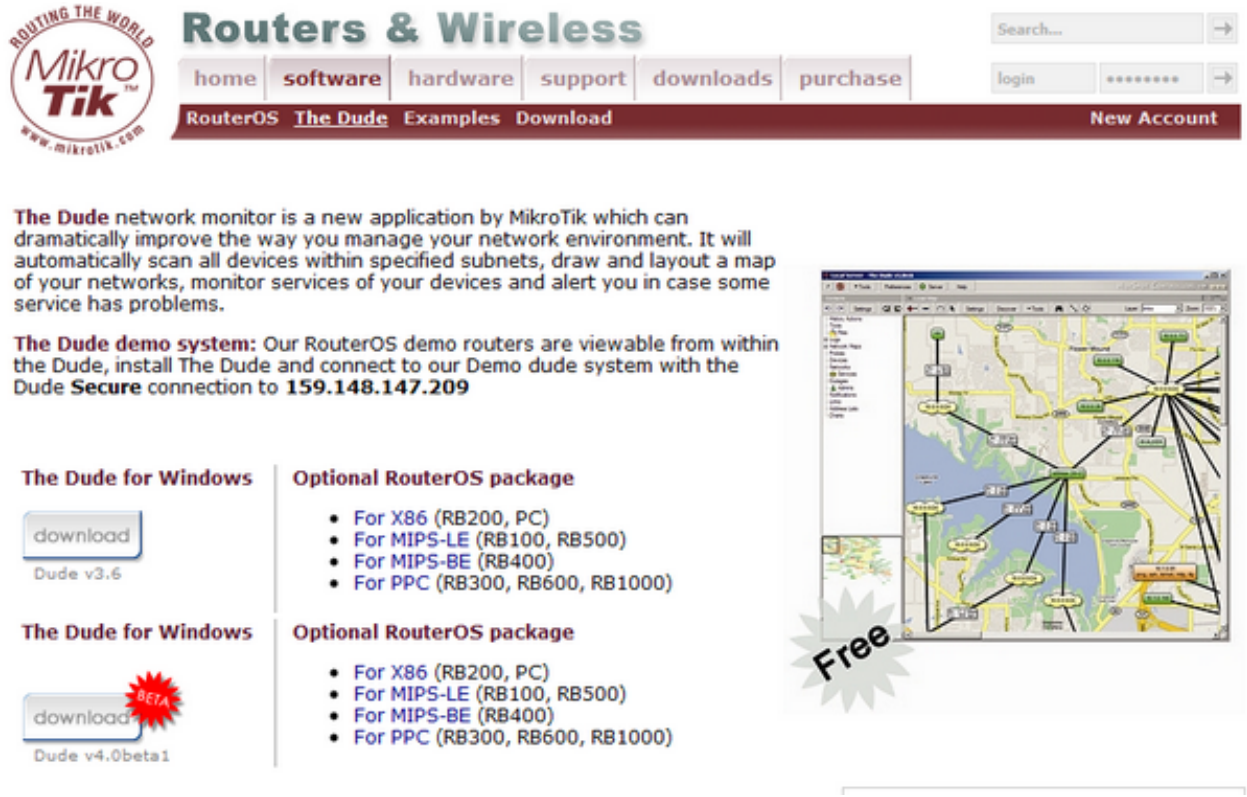
System requirements

The Dude runs on most versions of Microsoft Windows. It is recommended to use Windows 2000 or newer. We have successfully used The Dude even on very low power machines, so generally, any system which can acceptably run Windows 2000 or Windows XP will be able to run The Dude.

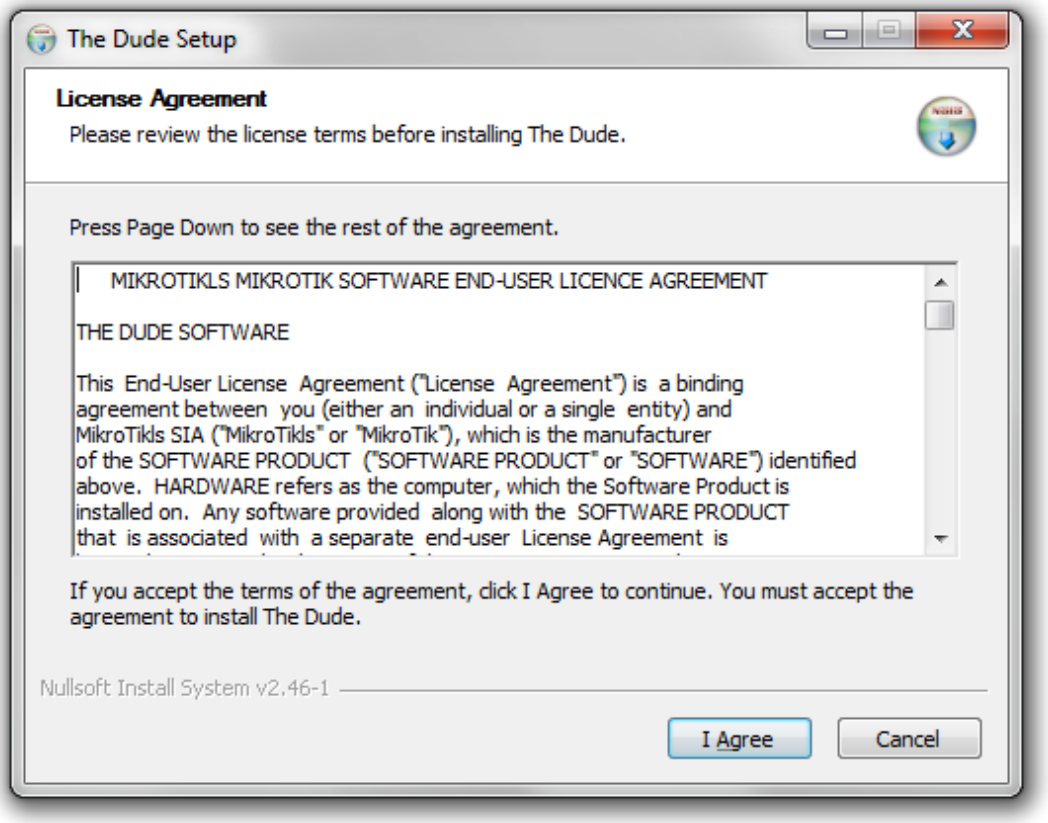
The program can also be used on Linux and MacOS if using Wine [1] or Darwine [2] respectively.

Installation process

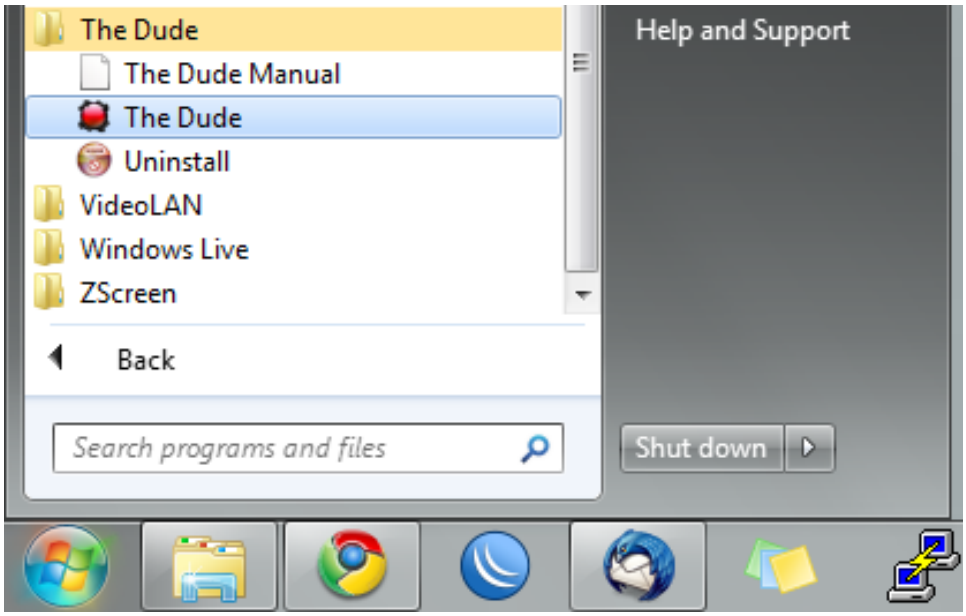
- Download The Dude installation file



- After downloading the Dude installation file, run it to start the installation.



- After the installation process is complete, The Dude start menu item group will be created, and The Dude will be ready to use



Read more

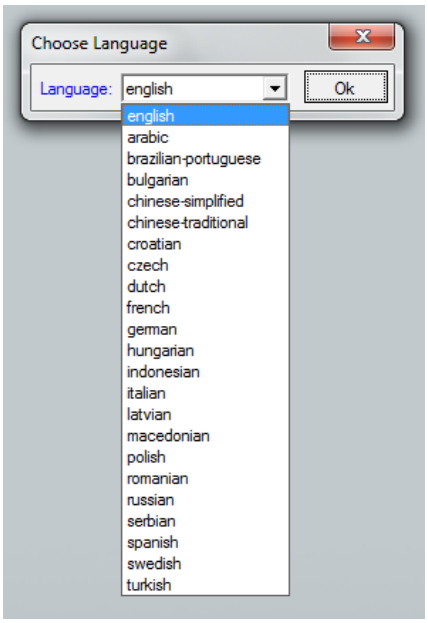
- The Dude/First use

References

[1] http://www.winehq.org/
[2] http://winebottler.kronenberg.org/

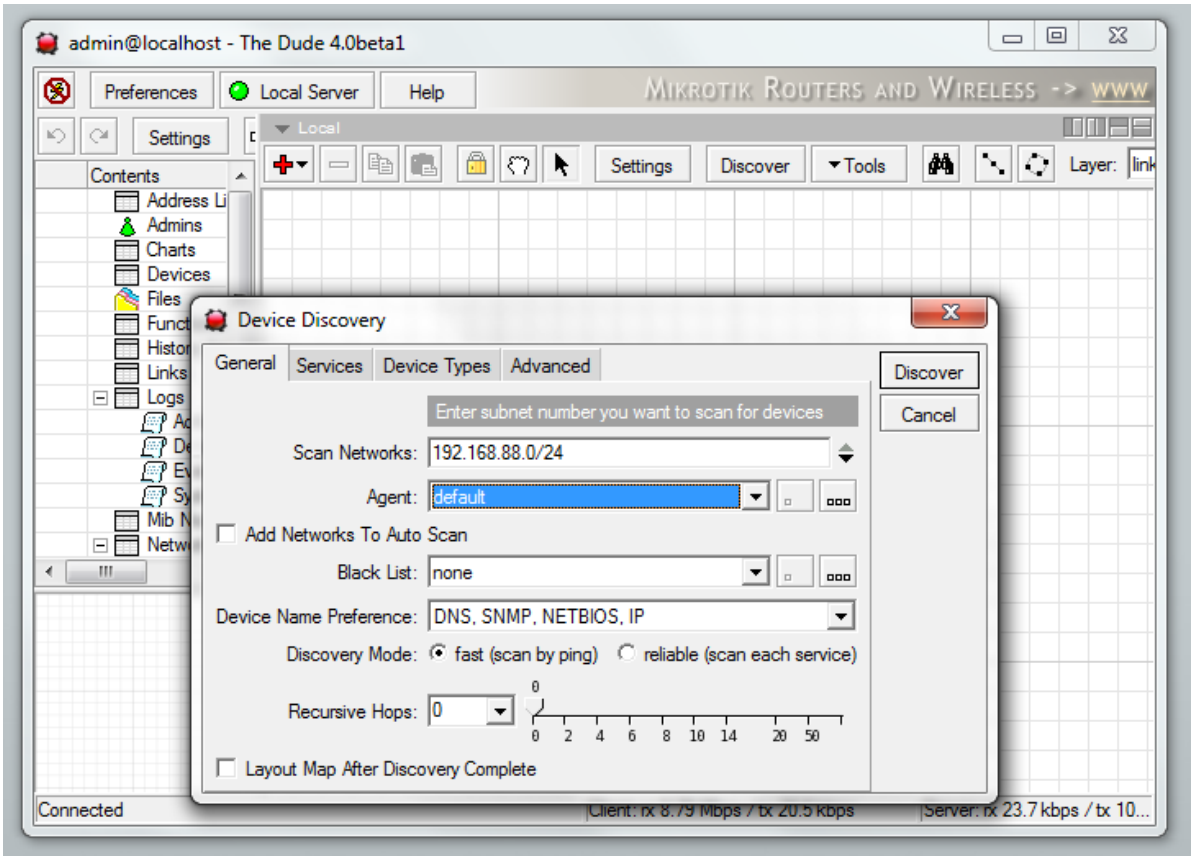
Manual:The Dude/First use

When first launching The Dude, you will be given the choice of the program language. Language translations are provided by other users of the program.



Note: You can also create and submit your own language translation, more instructions are avialable here.

After selecting the desired language, the Dude program will open, will automatically connect to the Localhost service, and will present you the Discovery window



Read more

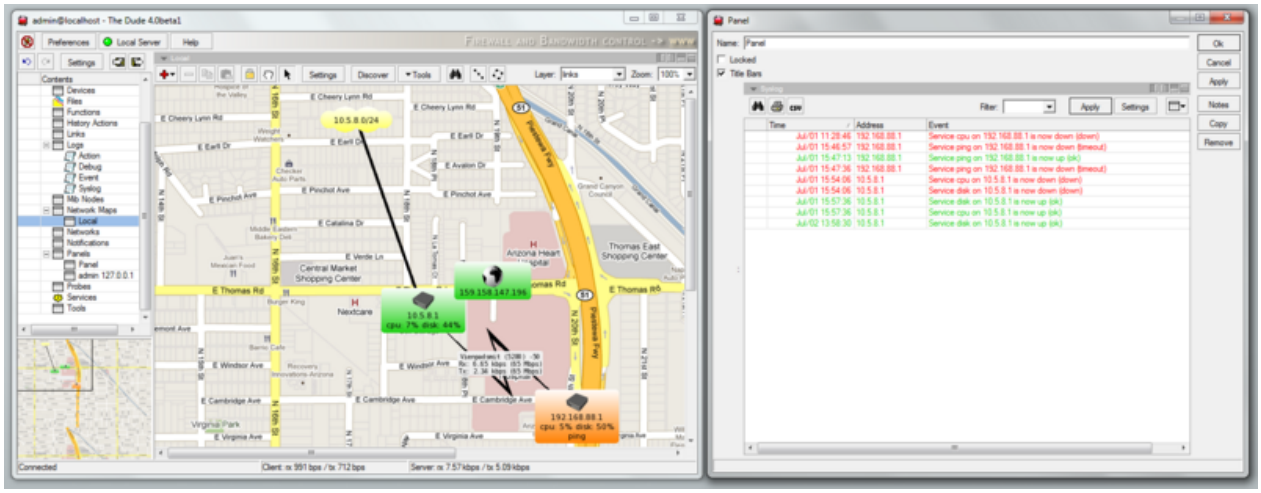
- The Dude/Interface
- The Dude/Device discovery

Manual:The Dude/Interface

Nomenclature

- **Panel** - Dude window, there can be several Panels open side by side.
- **Pane** - Contents of the open Panel. Can be selected from dropdown or from left-hand menu

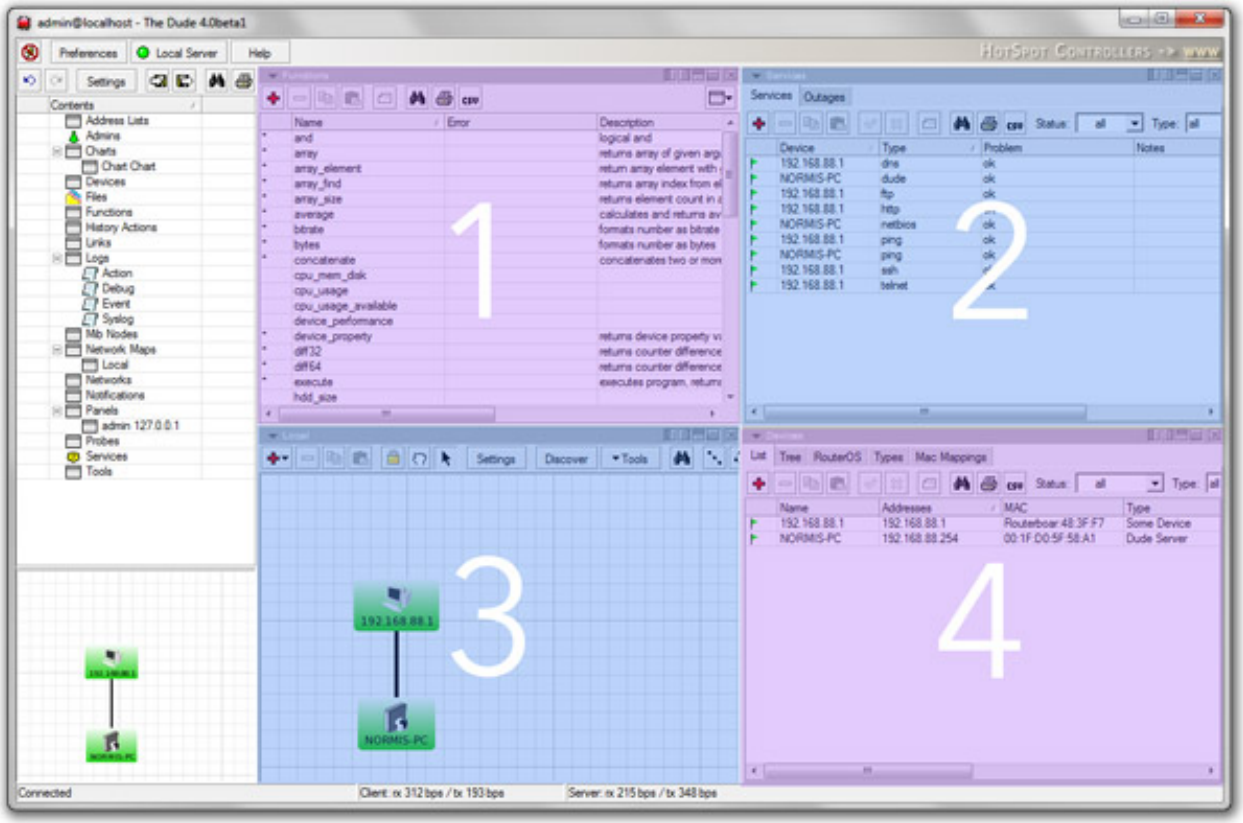
Image shows two open Panels, one contains the Map pane, one contains the Logs pane.



Panes

The main Dude window is split into sections, called Panes. When first opening The Dude you will see the main Window frame with Server setting buttons, the Menu pane and the Main pane, which is occupied by the Device map by default. The Main pane can be either split into parts, or replaced by any other pane.

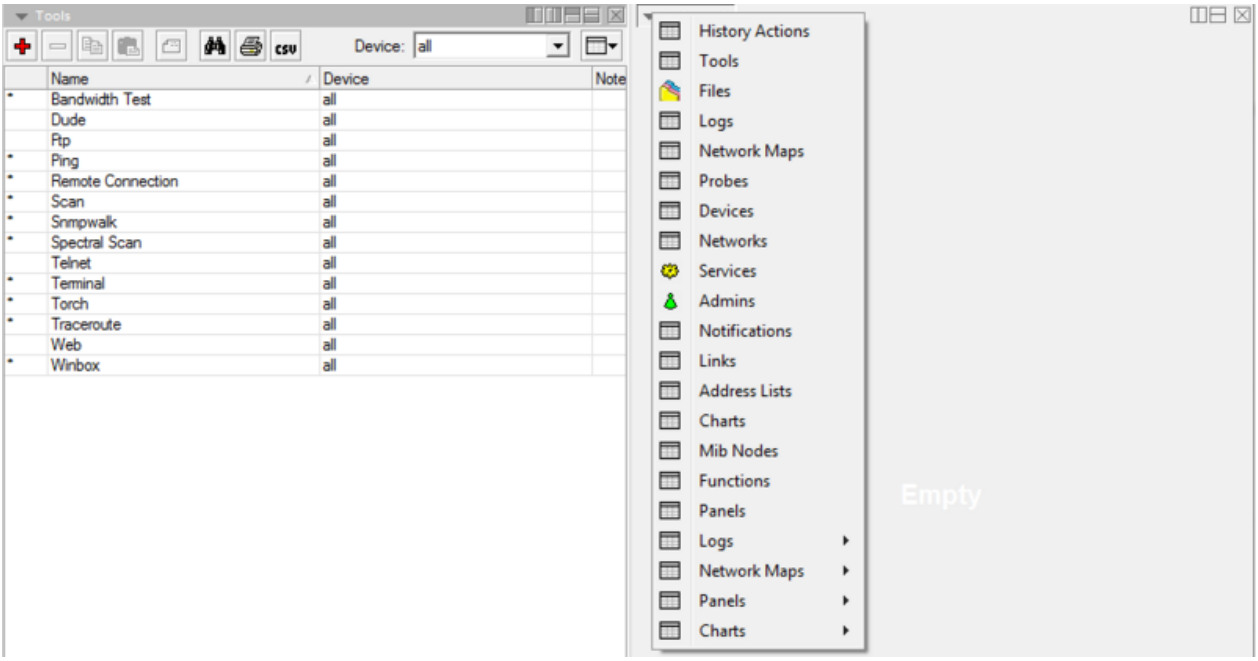
For example, the following image shows the Dude interface with the main pane split into four panes. Each pane can contain any item from the menu pane on the left:



The simplest way to open another pane instead of the map, is to click one of the items in the **Menu pane**. It is also possible to use the Dropdown menu in each panes top left corner.

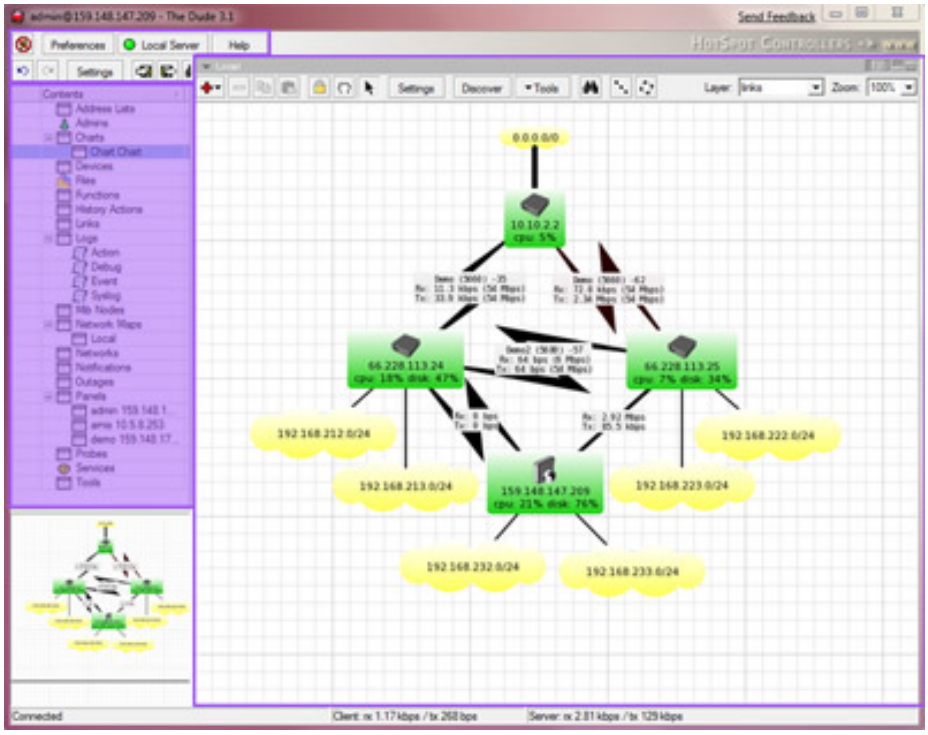
Each window pane can be split either horizontally or vertically, and each split section can then be populated by any of the possible Menu pane items. The bar on the top of each frame contains a dropdown list of possible pane contents, and buttons to split the pane into sections:

It is also possible to drag items from the Menu pane onto one of the open Panes on the right.

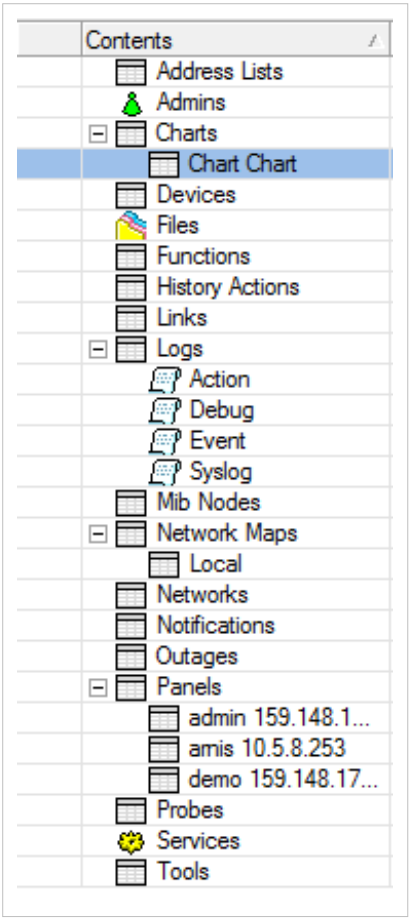


If your system has multiple monitors connected, you can even separate the Panes from the main Dude window, and float them on other screens. This can be done in the **Panels** window, in the **Menu pane**.

Menu pane



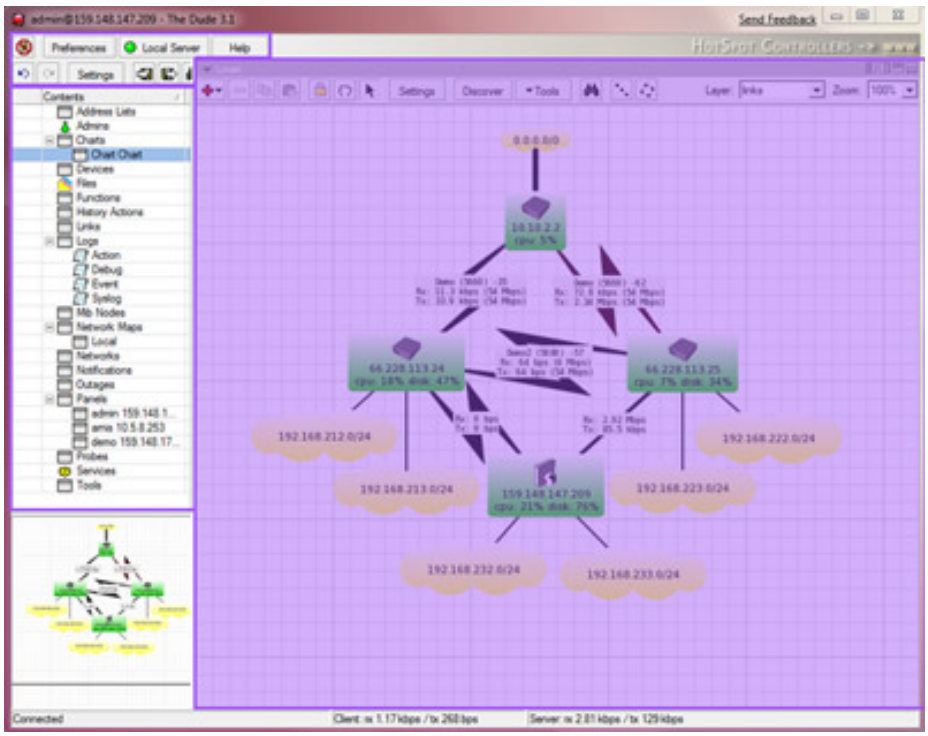
The menu pane in the left side of the Dude interface provides access to various panes. You can either double click a menu item to open it in the default pane on the right, or if you have multiple panes open, you can also drag an item from the menu pane to one of the open panes.



- **Address lists** - Lists of IP addresses to be used in Blocklist and other places
- **Admins** - Users who can access this particular Dude server
- **Charts** - Configure graphs based on any data source in the map
- **Devices** - List of all the devices drawn on any of the network maps
- **Files** - List of the files uploaded to the server, like images for network map backgrounds and sounds
- **Functions** - Functions that can be used, includes scripts and advanced queries
- **History Actions** - History of tasks performed by the admin, like adding or removing devices. Admin log.
- **Links** - List of all links in all maps.
- **Logs** - Logs of device statuses. Dude also includes a Syslog server, and can receive Logs from other devices.
- **MIB nodes** - Information about MIBs
- **Network maps** - All maps
- **Networks** - List of all network segments places on the map
- **Notifications** - Different ways to alert the admin of
- **Panels** - Allows to configure separate dude window entities for use on multiple monitors or otherwise
- **Probes** - Probes are responsible for polling specific services on the defices
- **Services** - Lists the currently monitored services on all devices

- **Tools** - Configures the tools that can be run on each device (ie. connect with winbox, telnet, ftp etc.)

Main pane

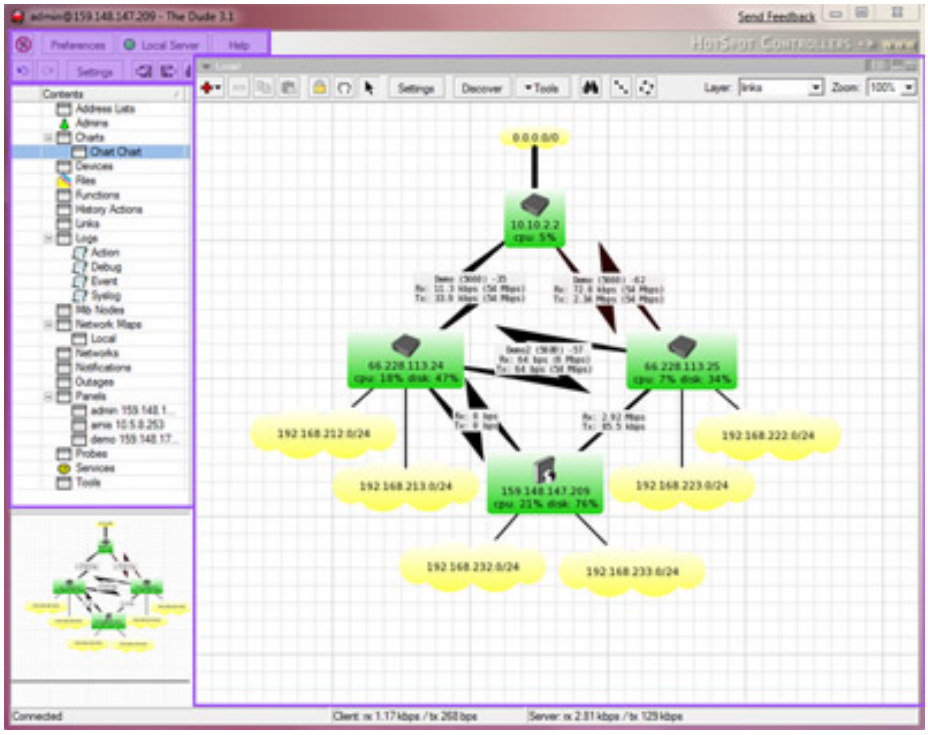


The main pane can contain one or several sections. Double clicking a menu item on the left replaces the active part of the main pane with the selected item. It's also possible to change the contents of the main pane by choosing an item from the dropdown.

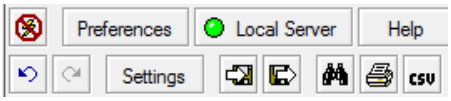
When first opening The Dude, the main pane of the Dude window is occupied by the **device map**. The map shows graphical layout of your network. If you used device discovery earlier, it will already be populated by devices in your network, but it is also possible to add devices one by one, by using the Add button.

- More about the Device map

Server settings

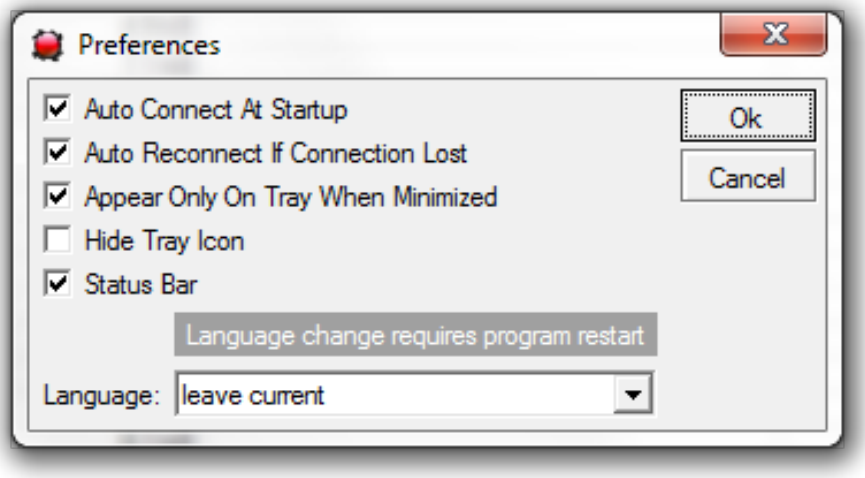


The server settings panel is located in the top-left corner of the Dude interface. It contains the following buttons:



- **Connect/Disconnect** - Connects to a Dude server (including Localhost) or disconnects from it
- **Preferences** - general Dude preferences
- **Local server** - local server settings
- **Help** - link to this webpage
- **Undo/Redo** - allows to undo or redo the last action
- **Settings**' - settings of the currently connected server
- **Export/Import** - allows to save, or load Dude configuration files

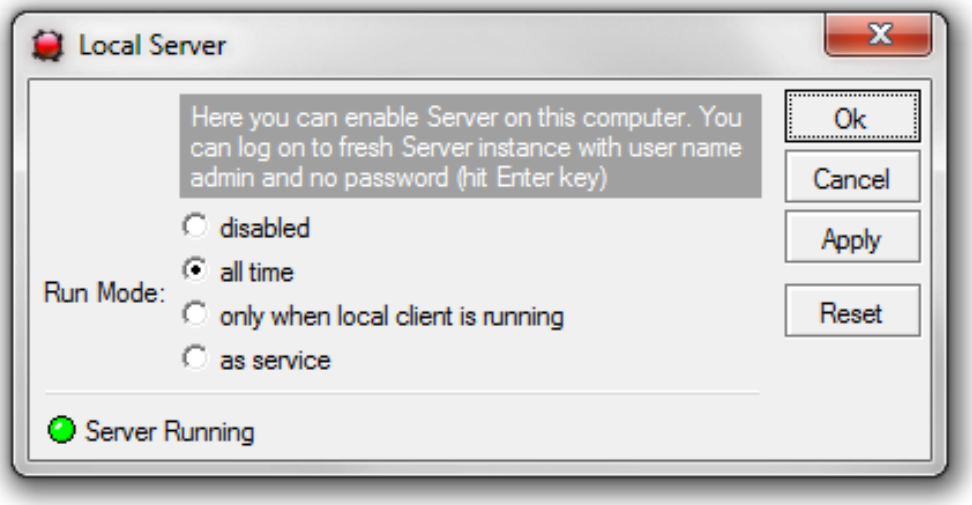
Preferences



- **Auto connect at startup** self explanatory

- **Auto reconnect if connection is lost** - self explanatory
- **Appear only inside tray when minimised** - do not show Dude in Windows task bar
- **Hide tray icon** (deselected by default) - hide Dude from tray
- **Status Bar** - Show bottom status bar
- **Language** - can change language of The Dude interface

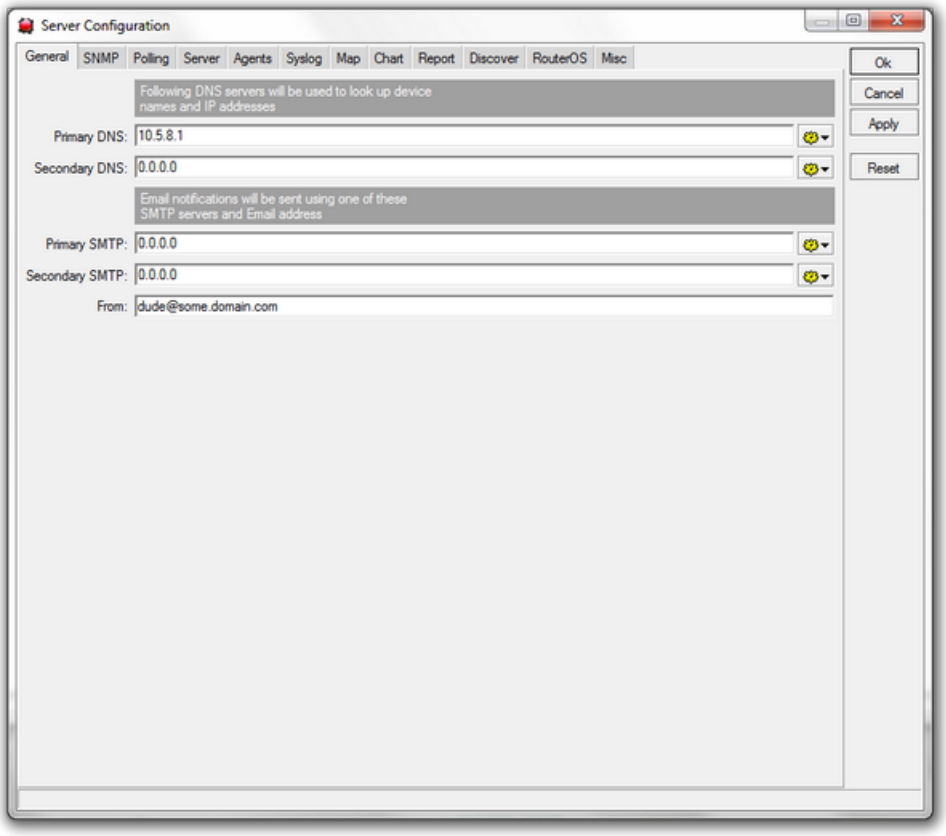
Local server



Local server is the instance on your Windows PC which is used by default when opening the Dude program (It connects to the Localhost server). If you plan to scan and manage devices from another machine, and only use the Dude application to connect to a remote host, you can disable the local server.

- **Disabled** - Local server is disabled at all times
- **All time** - Local server is enabled always
- **Only when local client is running** - self explanatory
- **As service** - run the Dude local server as a windows service

Server settings

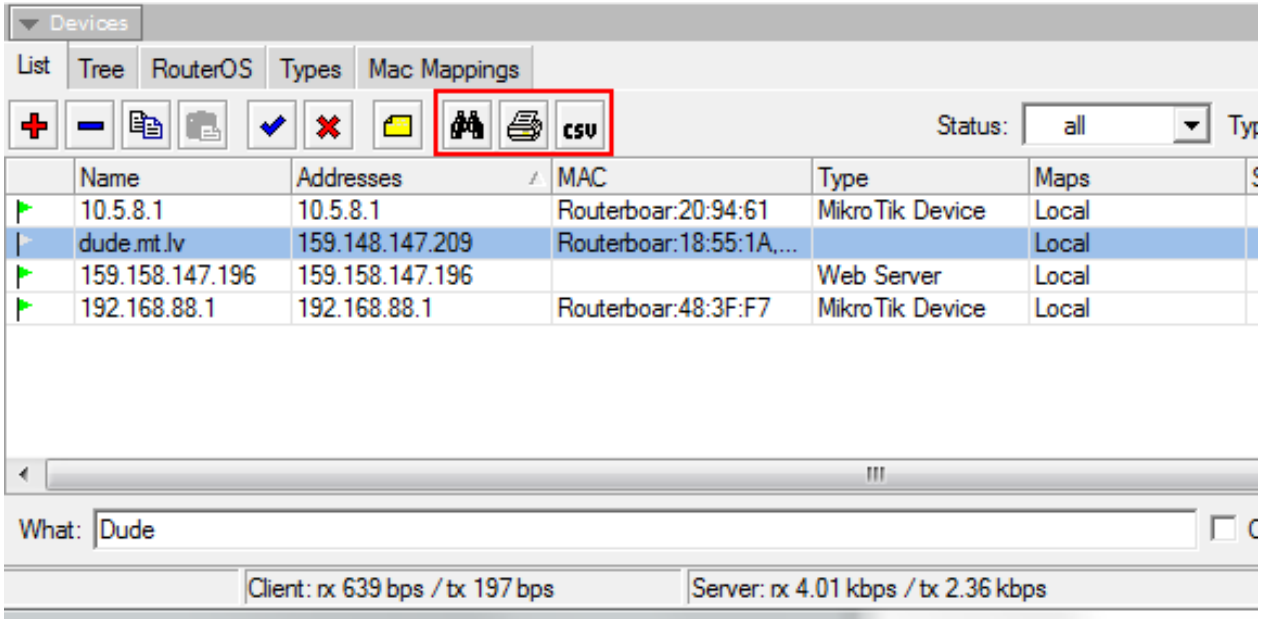


Allows configuration of various aspects of the currently connected server. More specific explanation of all the options in the The Dude/Server Settings article.

Read more

- The Dude/Device discovery

Manual:The Dude/Exporting



In most panes of the Dude you can do the following:

- **Search** - looks for entered text in the currently active Pane
- **Export PDF** - Saves a PDF file of the current Pane. Can change Font in Server settings
- **Export CSV** - Saves contents of the current pane as a **comma separated values** in a text file. Useful for viewing in spreadsheet programs, or importing in other systems

Manual:The Dude/Web interface

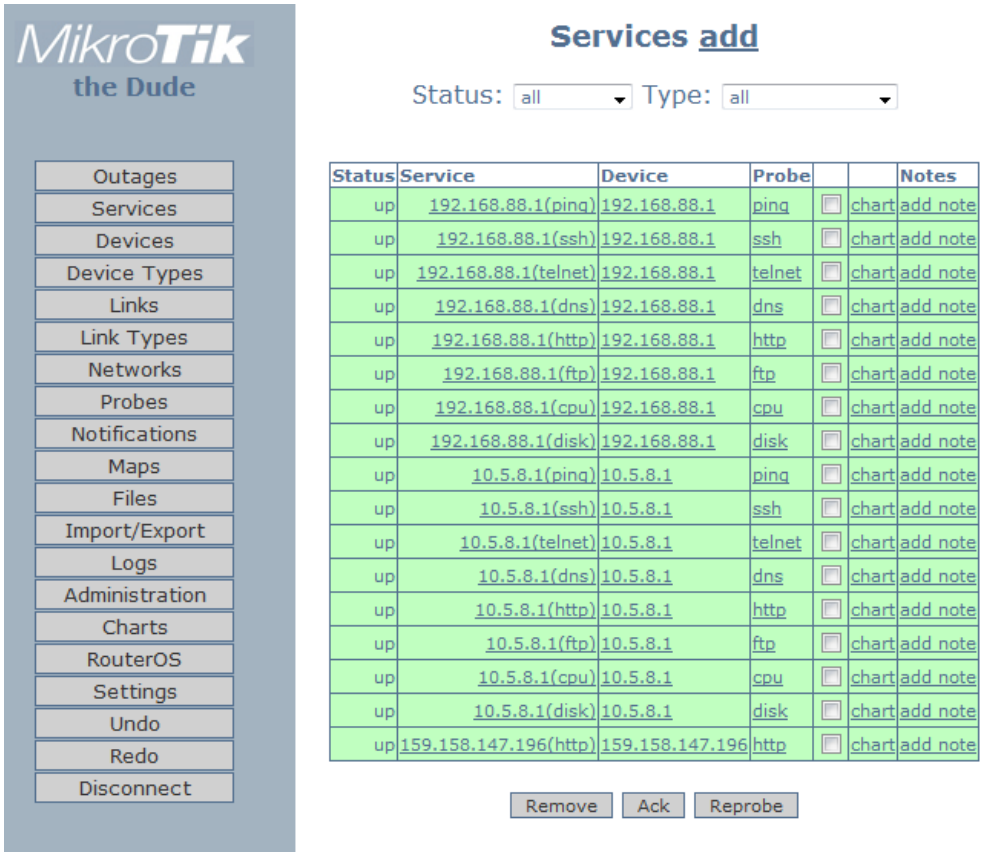
It is possible to connect to the Dude server through a web interface if you do not have the Dude program available on a certain machine. The web access is disabled by default, to enable it, go to the Web server settings.

Note: It is recommended to use a port other than 80, as many machines will have that port occupied (especially RouterOS).

Accessing the web interface

After the server is enabled, you can access the router, by entering http://127.0.0.1:8080"' **in a web browser. In your situation the IP address and port might be different, depending on what you configured in the Web server settings, and what is the IP address of the Dude server.**

Once you have entered your Dude server access credentials, you will see the web interface in your browser:

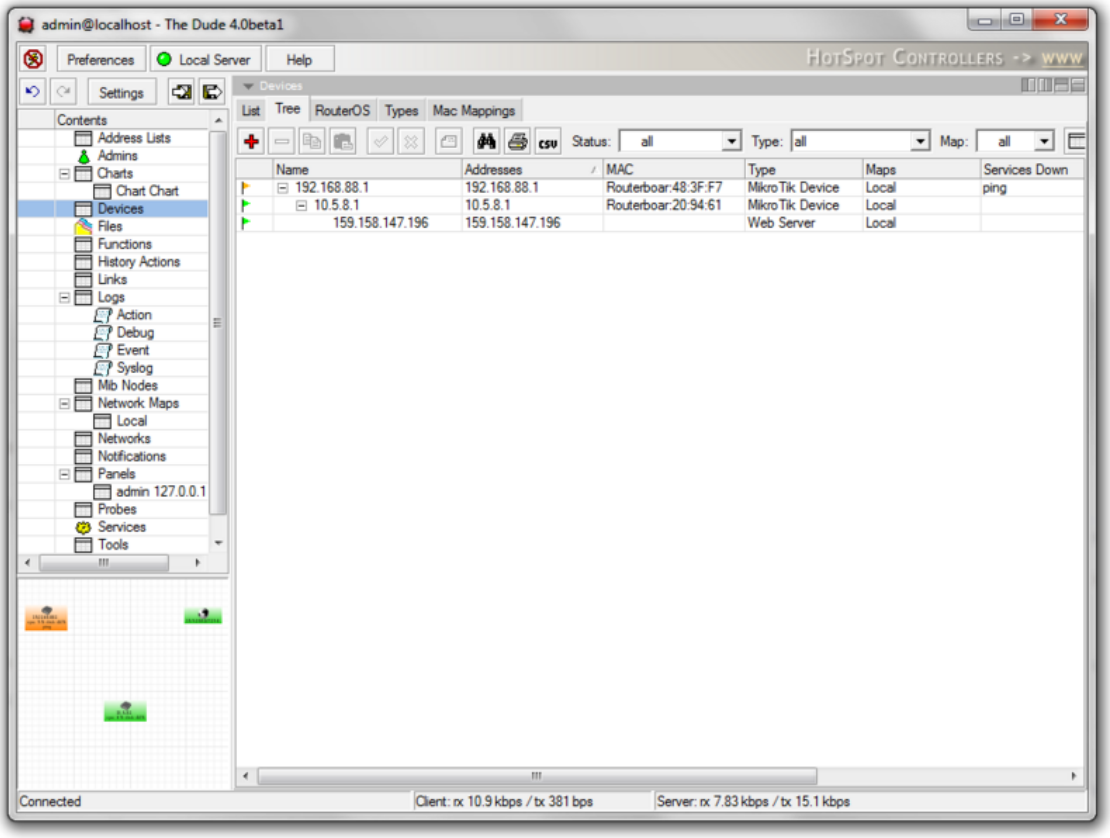


The web interface gives you the ability to use most of the Dude functionality.

Devices

Manual:The Dude/Device list

The device list can be accessed by double clicking on **Devices** in the left hand Menu pane, or selecting Devices from the pane dropdown menu in any of the open panes.

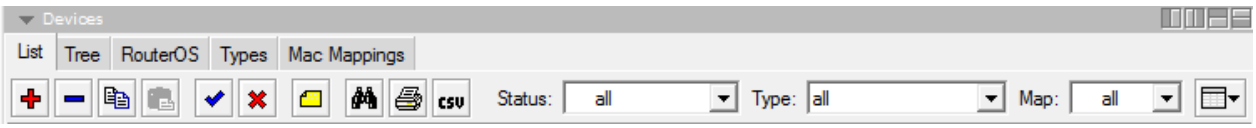


This section lists all devices that this server has knowledge about.

List

The List view displays all the devices sorted by name, address, MAC address, Device type, or Map they are on. It also displays which services are currently down for each device, and their notes.

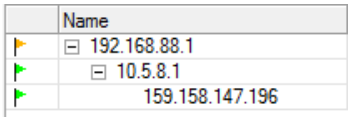
In the list view you are able to **add new** devices, **remove** devices, **copy and paste** them, add **notes**, **disable and enable polling** for them, **print or export** the list, and use **search**.



Also available are filter dropdowns. They allow you to filter by Status, Map and Device Type, which is helpful if you have hundreds of devices on many maps.

Tree

The Tree tab is exactly the same as the List tab, but sorts the devices in threads by their hierarchy dependencies.



RouterOS

The RouterOS tab shows devices that have been marked as RouterOS in the device settings. This tab is organized in the following subsections:

Device

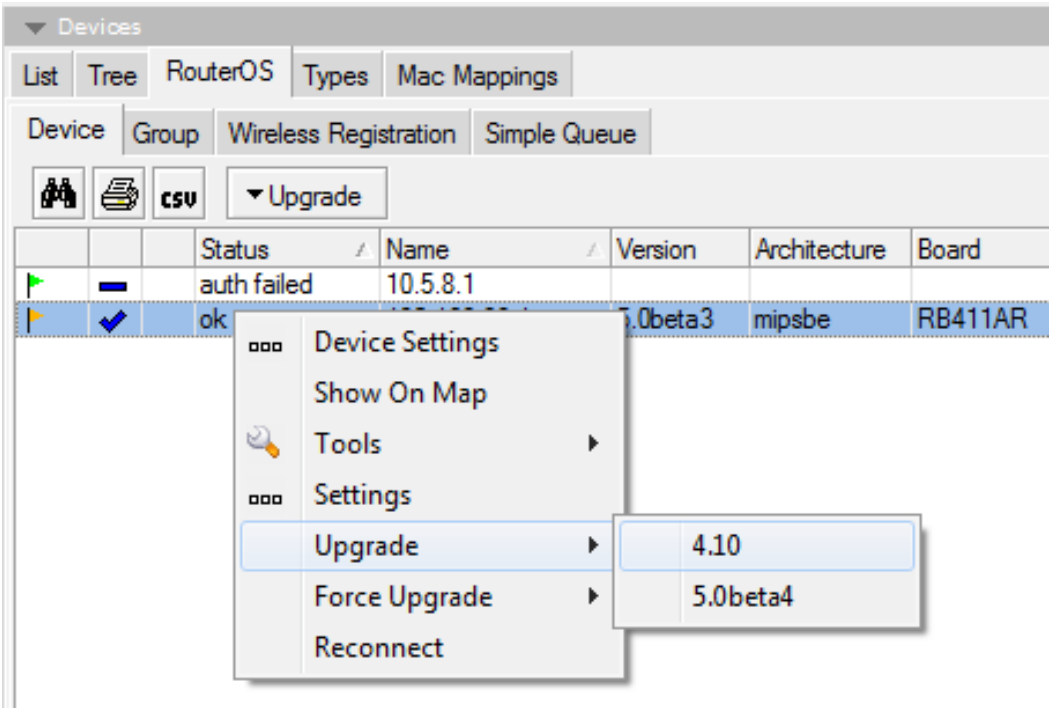
Shows a list of RouterOS devices. The table includes additional information, authentication status, version, architecture, system hardware type, upgrade status and packages.

This pane is optimized for upgrading of RouterOS devices.

Upgrading RouterOS

1. Upload RouterOS packages to the Dude Server. This can be done in the Files pane. Upload any types of packages and versions, The Dude can tell them apart
2. Select the device you like to upgrade, and click the **Upgrade** button, or right-click the device and choose **Upgrade**
3. The Dude will only show appropriate package types and versions in the Upgrade menu. Choose the preferred version to commence upgrade process

Force upgrade can be used if you have several builds of the same version and in which case Dude will think you already have upgraded.



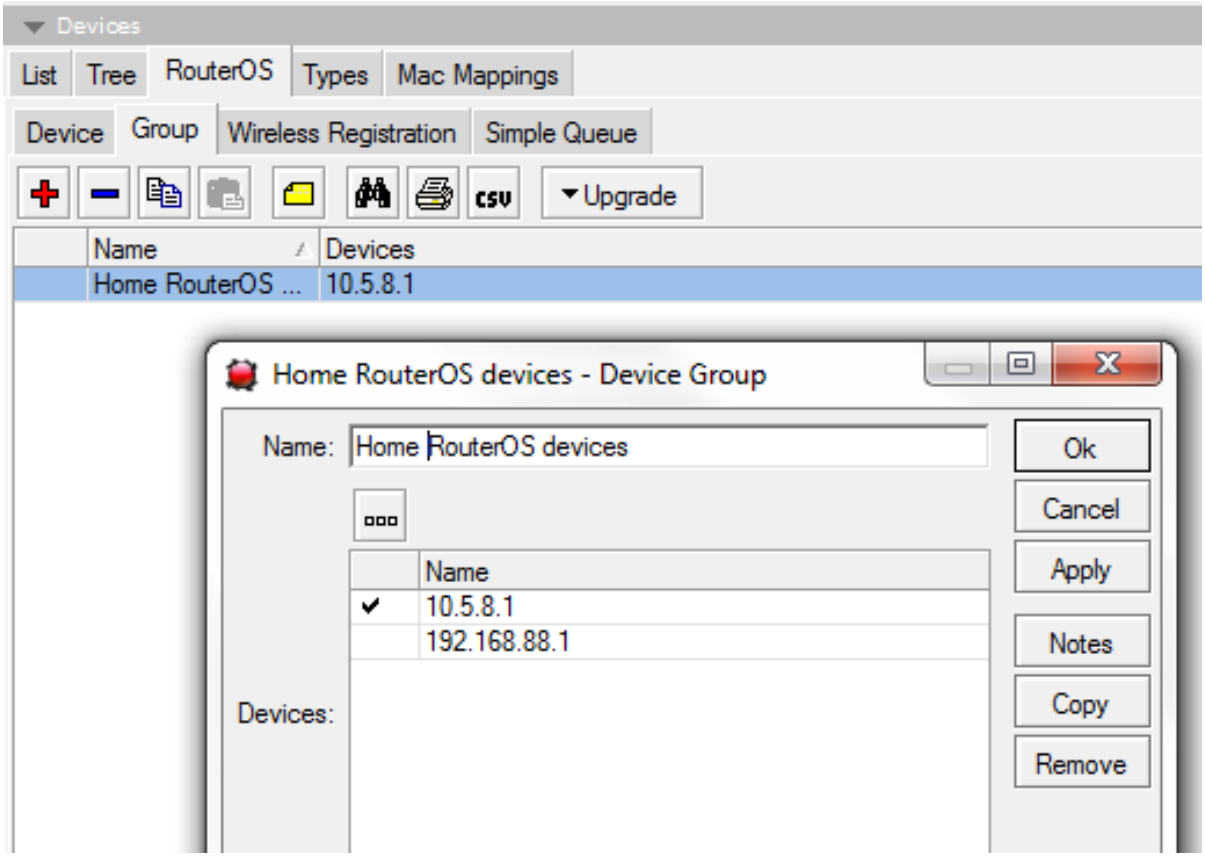
Group

It is possible to create **Groups** of RouterOS devices, to simplify the upgrade process. To avoid interruption of processes while one router is rebooted but others are still getting the package files, it is recommended to group devices by reachability or location.

That way, if uploading packages to 20 routers at the same time, the closest router will not be rebooted because of faster upload time, only to interrupt the rest of the 19 uploads.

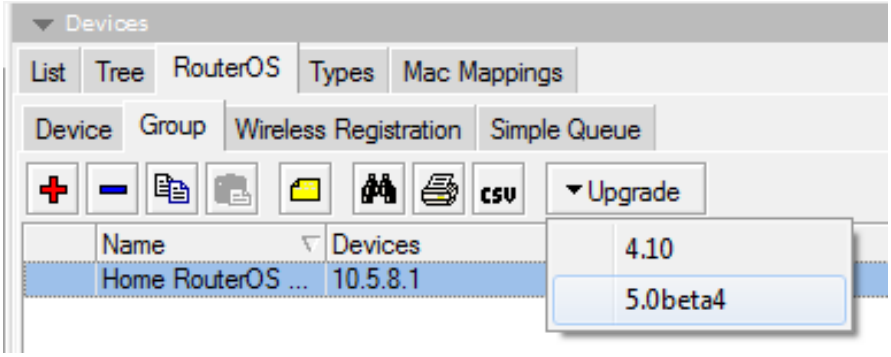
To create a new **RouterOS Device Group**, click on the **add** button and select the RouterOS devices from the provided list.

Note: If there are no devices listed, make sure that your RouterOS devices are marked as **RouterOS** in the device settings dialog



It is also possible to upgrade whole groups of devices by right click, or by selecting the particular group and then clicking the **Upgrade** button.

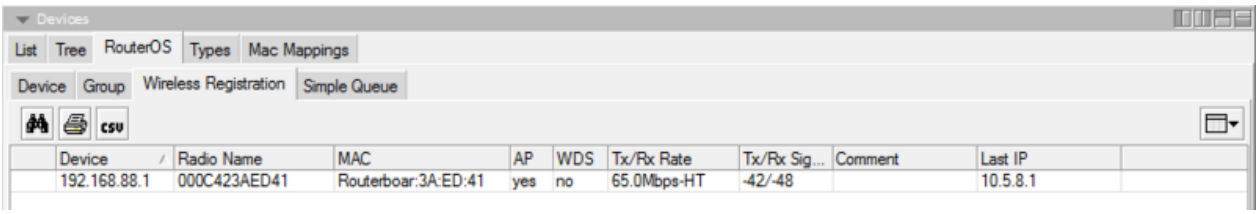
Note that The Dude will automatically choose the needed packages. The packages need to be in the Dude Files list. Of many versions are available, it will be shown as a choice.



Wireless Registration

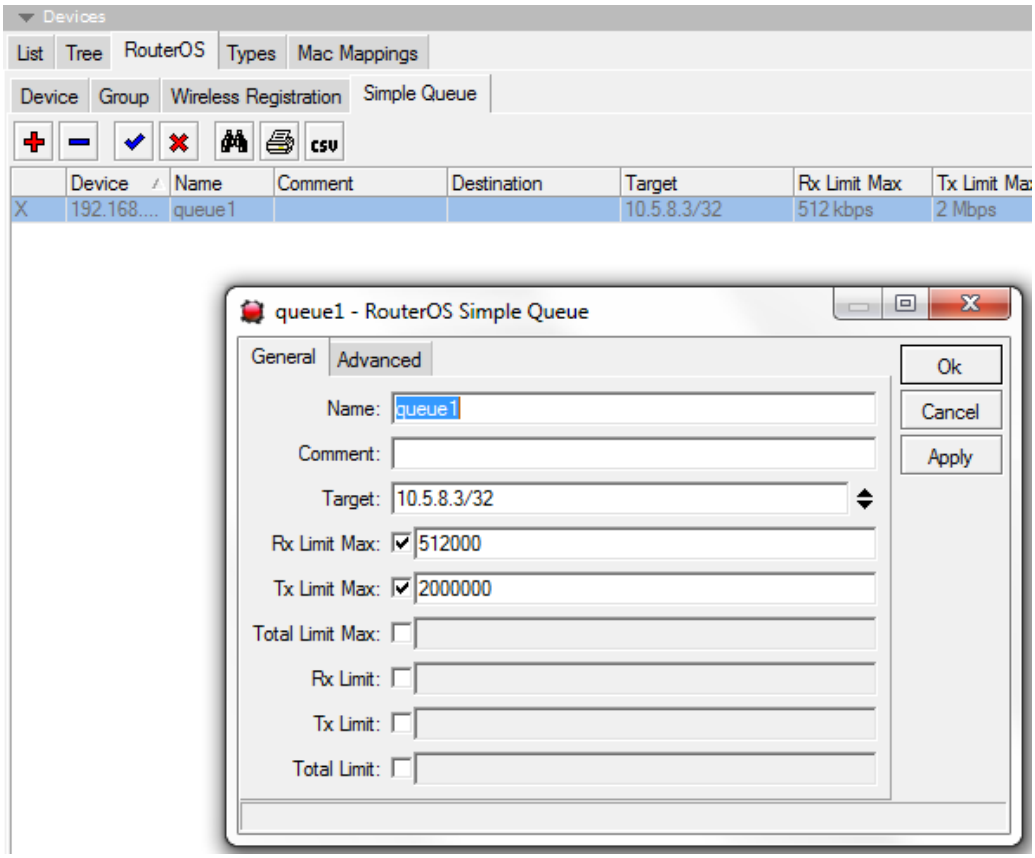
The registration table shows all wireless devices that are connected to your RouterOS devices in a combined interface. The table shows the following information:

- **Device** - which device is the owner of the particular registration table entry
- **Radio name** - the name of the wireless device, as it was set in RouterOS wireless settings
- **MAC** - MAC address of the device that was connected to the particular **Device**
- **AP** - whether this device is a client or an AP
- **WDS** - whether WDS is used in this particular connection
- **TX/RX Rate** - Current datarate of the connection
- **TX/RX Signal** - Signal levels of the connection
- **Comment** - Comment
- **Last IP** - the last IP address which sent a packet to the device. Is not directly related to this entry, or the wireless connection



Simple Queue

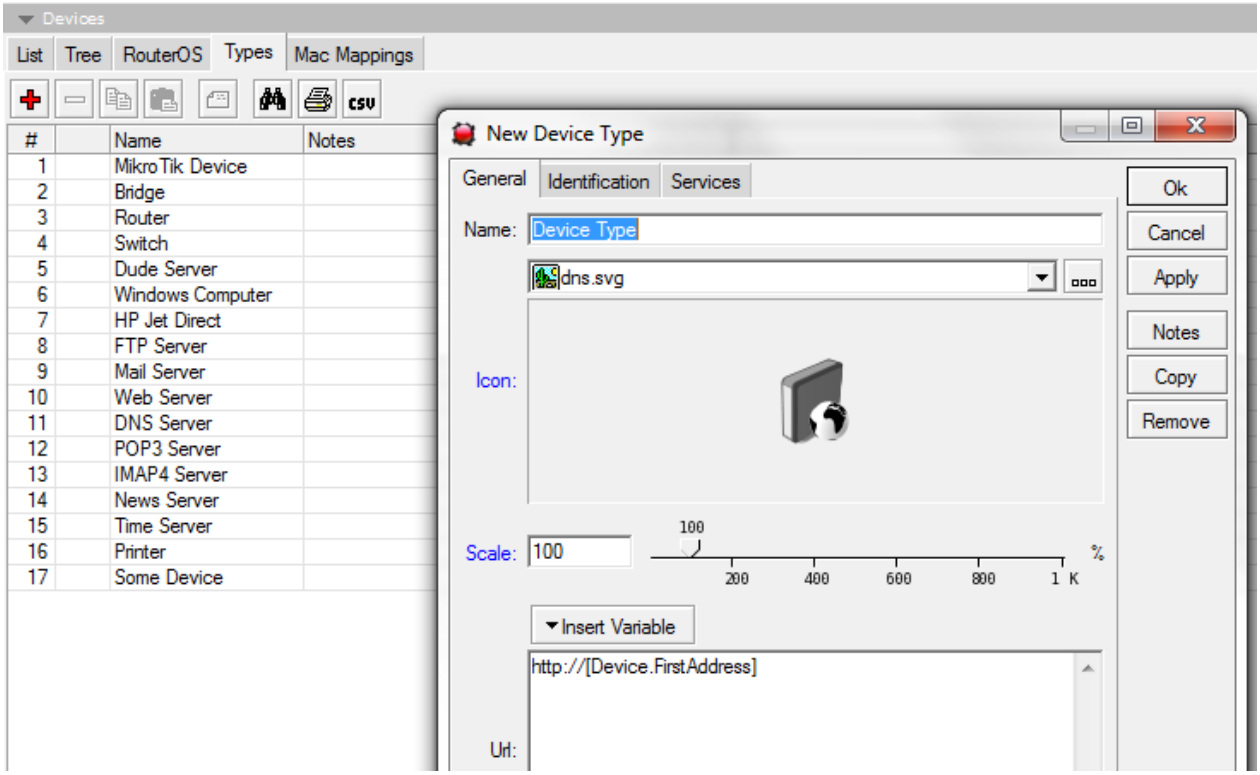
Allows to view and edit simple queues in RouterOS. If your RouterOS devices contain simple queues, they will be displayed in this window. You can double-click a Queue and edit it's basic values as seen in the image above. Clarification of the values can be read in the RouterOS Queues manual.



Types

It is possible to assign icons to your devices, based on the device type. Device types can be configured in this menu.

Each device can have required identification patterns, based on services The Dude discovered running on it. For example the predefined requirement for a "Mail server" device type is a running SMTP service. You can change the required services for existing devices, or add new devices with new requirements. These predefined requirements will be used when using the Device discovery



Adding a new Device Type

By clicking the **add** button in the Types tab of the Devices pane you can add new Device types. The **add dialog** contains the following fields:

- **Name** - the name of the new type
- **Icon** - the image of the device icon. Shows dropdown list from the Files section. Also shows icon preview.
- **Scale** - The icon for this particular type can be defined as smaller or larger than normal. Default value is 100%
- **URL** - The link to the HTTP webpage of this particular device, is used in the **Web** tool in the device right-click Tools menu. This setting allows any attributes and variables to be used, for example:

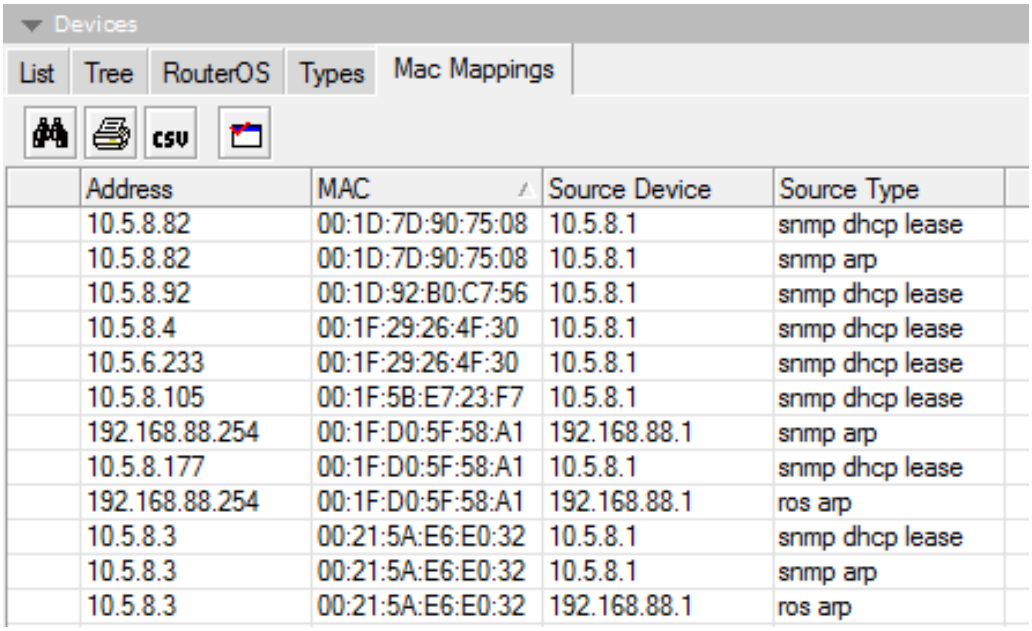
```
http://[Device.FirstAddress]/cfg?user=[Device.UserName]&password=[Device.Password]&process=login
```

In the **Identification** and **Services** tabs, you can set the *Required, Allowed and Ignored* services for this type of device. These settings will be used by default when adding a new device of this type, and when using the Device discovery

The **Tools** tab allows you to define device type specific tools

MAC mappings

This tab shows the MAC address and IP bindings that are learned from all your devices via SNMP and RouterOS ARP.



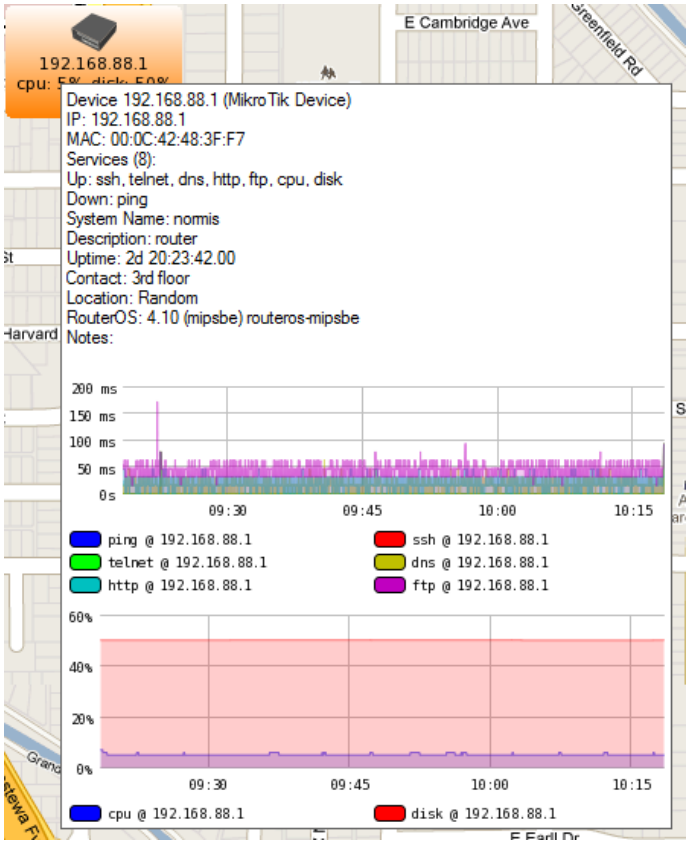
Address	MAC	Source Device	Source Type
10.5.8.82	00:1D:7D:90:75:08	10.5.8.1	snmp dhcp lease
10.5.8.82	00:1D:7D:90:75:08	10.5.8.1	snmp arp
10.5.8.92	00:1D:92:B0:C7:56	10.5.8.1	snmp dhcp lease
10.5.8.4	00:1F:29:26:4F:30	10.5.8.1	snmp dhcp lease
10.5.6.233	00:1F:29:26:4F:30	10.5.8.1	snmp dhcp lease
10.5.8.105	00:1F:5B:E7:23:F7	10.5.8.1	snmp dhcp lease
192.168.88.254	00:1F:D0:5F:58:A1	192.168.88.1	snmp arp
10.5.8.177	00:1F:D0:5F:58:A1	10.5.8.1	snmp dhcp lease
192.168.88.254	00:1F:D0:5F:58:A1	192.168.88.1	ros arp
10.5.8.3	00:21:5A:E6:E0:32	10.5.8.1	snmp dhcp lease
10.5.8.3	00:21:5A:E6:E0:32	10.5.8.1	snmp arp
10.5.8.3	00:21:5A:E6:E0:32	192.168.88.1	ros arp

Manual:The Dude/Device map

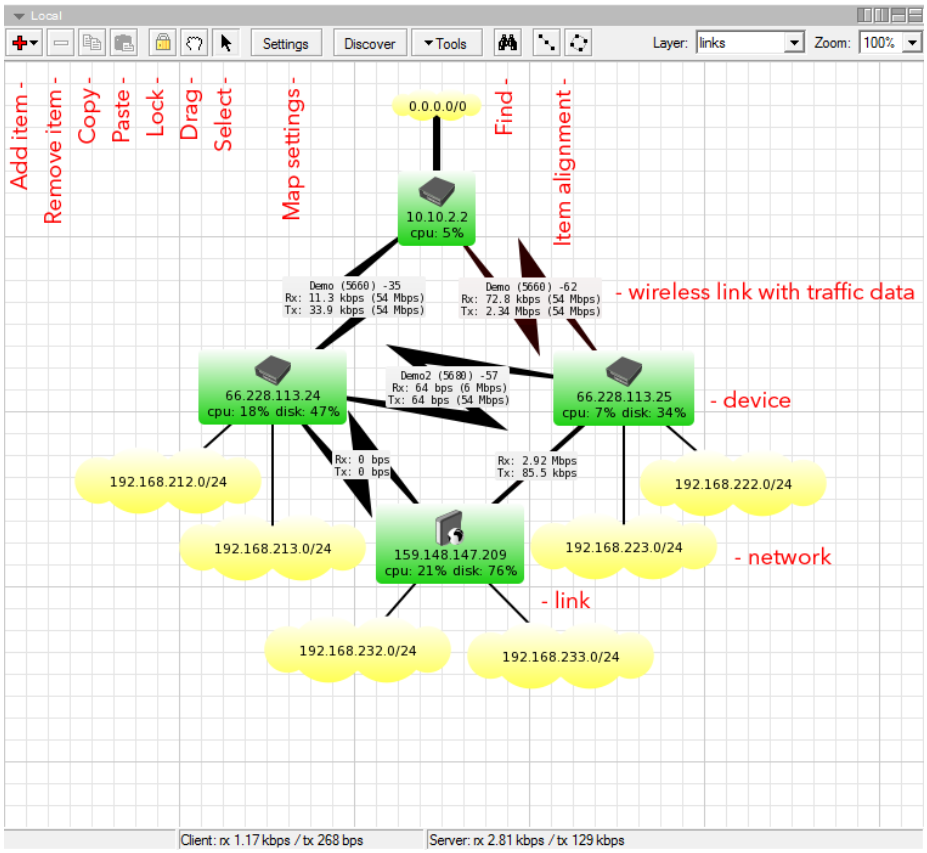
The Device map shows the layout of the device icons in a way that's easier to comprehend. You can arrange icons in any way you like, or use the Layout tool to do it for you. Devices can be added in the Map itself, or in the Device list pane. They can also be automatically discovered with the Discovery interface.

The map contains two **layers**, *device links*, and *device dependencies*. To avoid receiving reports about each device status when a parent device is unreachable, you can configure which device is dependent on which other device.

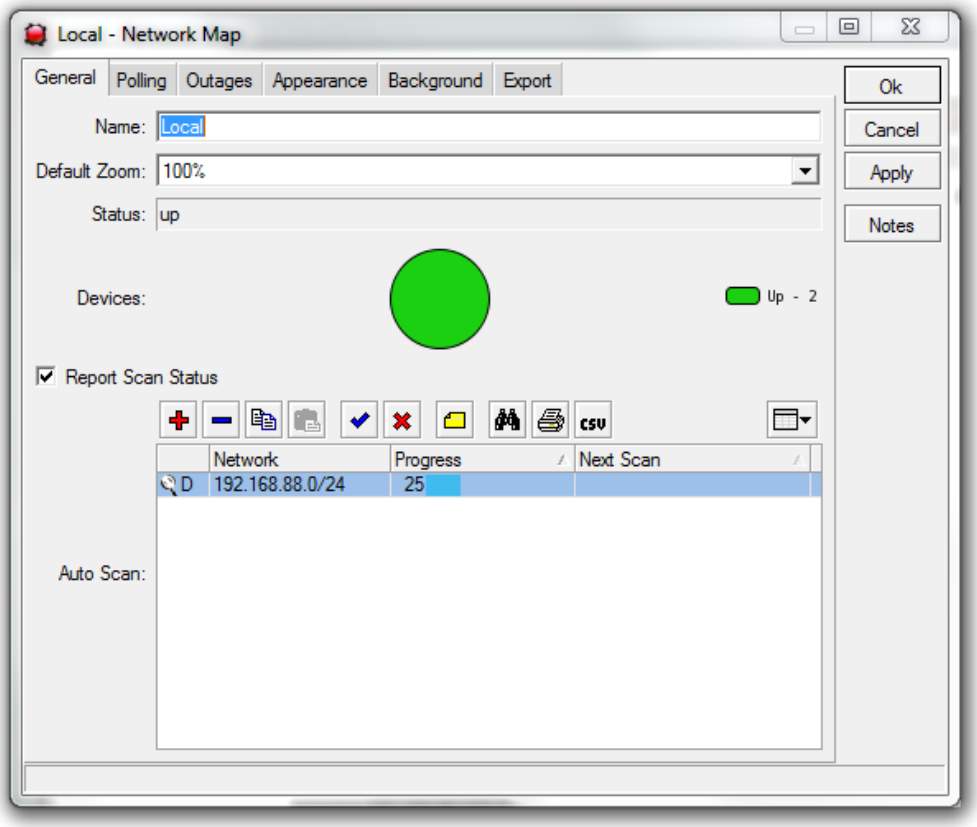
Hovering your mouse cursor over a device item will show you quick graph of the service availability:



- **Add item** - Allows you to manually add a map element, possible choices:
  - Device - Any device that can or cannot be pinged. Devices that can't be monitored can be added for illustrative purposes
  - Network - a network cloud icon to help visually organize the layout
  - Submap - Submaps are shortcut links to other maps, to help you expand the map in several hierarchical layers
  - Static - A generic icon that can represent anything
  - Link - Allows you to link devices together if they are connected.
- **Remove item** - Delete any item from the map
- **Copy and paste** - To be able to copy items to other maps
- **Lock** - Lock helps to avoid accidental moving of items around on he map
- **Drag** - For large maps, drag icon switches to drag mode, from the default select mode
- **Select** - Selection mode for selecting map items
- **Map settings** - Opens current Map settings
- **Discover** - opens Device discovery window
- **Tools**
  - **Layout** - arranges the Map icons in logical arrangements
  - **Export** - saves current view as a raster image
- **Find** - Opens the search window for searching items in the current pane (Map in this case)
- **Item alignment** - Select multiple items, and then choose one of the two alignment icons to organize items in Rows or Circles.

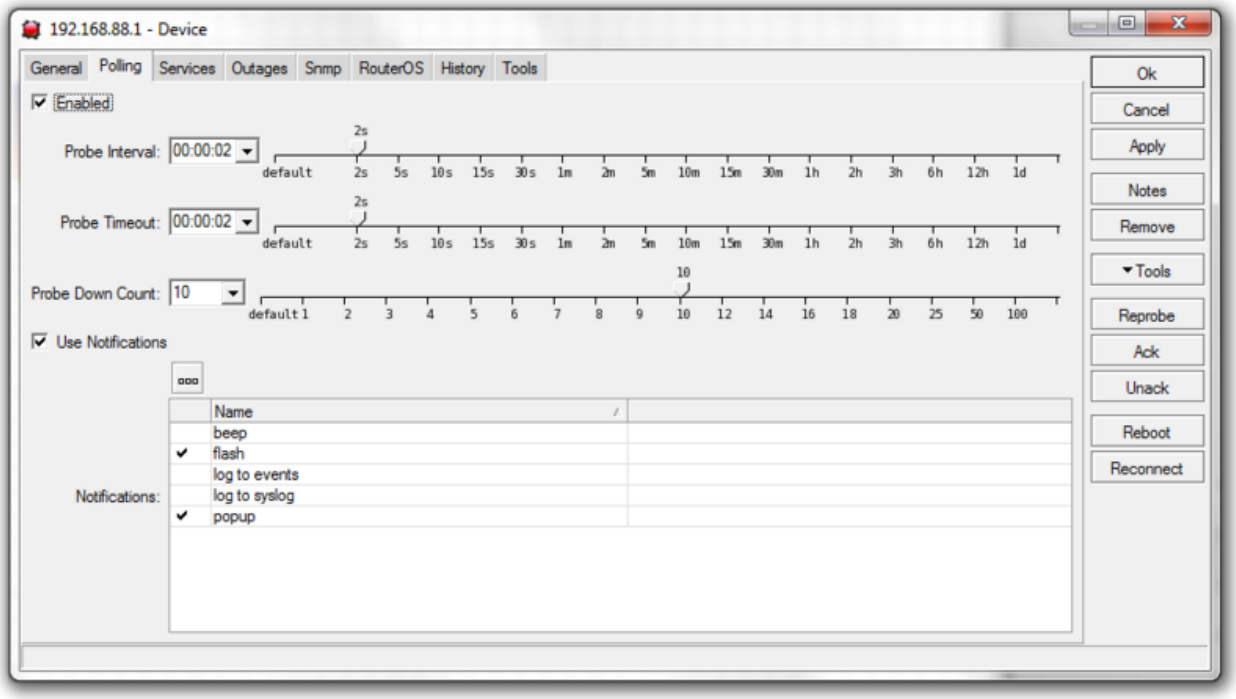

Local
Settings
Discover
Tools
Layer: links
Zoom: 100%
Add item -
Remove item -
Copy -
Paste -
Lock -
Drag -
Select -
Map settings -
Find -
Item alignment -
0.0.0.0/0
10.10.2.2
cpu: 5%
Demo (5660) -35
Rx: 11.3 kbps (54 Mbps)
Tx: 33.9 kbps (54 Mbps)
Demo (5660) -62
Rx: 72.8 kbps (54 Mbps)
Tx: 2.34 Mbps (54 Mbps)
- wireless link with traffic data
66.228.113.24
cpu: 18% disk: 47%
Demo2 (5680) -57
Rx: 64 bps (6 Mbps)
Tx: 64 bps (54 Mbps)
66.228.113.25
cpu: 7% disk: 34%
- device
Rx: 0 bps
Tx: 0 bps
Rx: 2.92 Mbps
Tx: 85.5 kbps
192.168.212.0/24
192.168.222.0/24
192.168.213.0/24
159.148.147.209
cpu: 21% disk: 76%
192.168.223.0/24
- network
- link
192.168.232.0/24
192.168.233.0/24
Client: rx 1.17 kbps / tx 268 bps
Server: rx 2.81 kbps / tx 129 kbps

Settings


Local - Network Map
General
Polling
Outages
Appearance
Background
Export
Ok
Cancel
Apply
Notes
Name:
Local
Default Zoom:
100%
Status:
up
Devices:
Up - 2
Report Scan Status
csv
Network
Progress
Next Scan
D
192.168.88.0/24
25
Auto Scan:

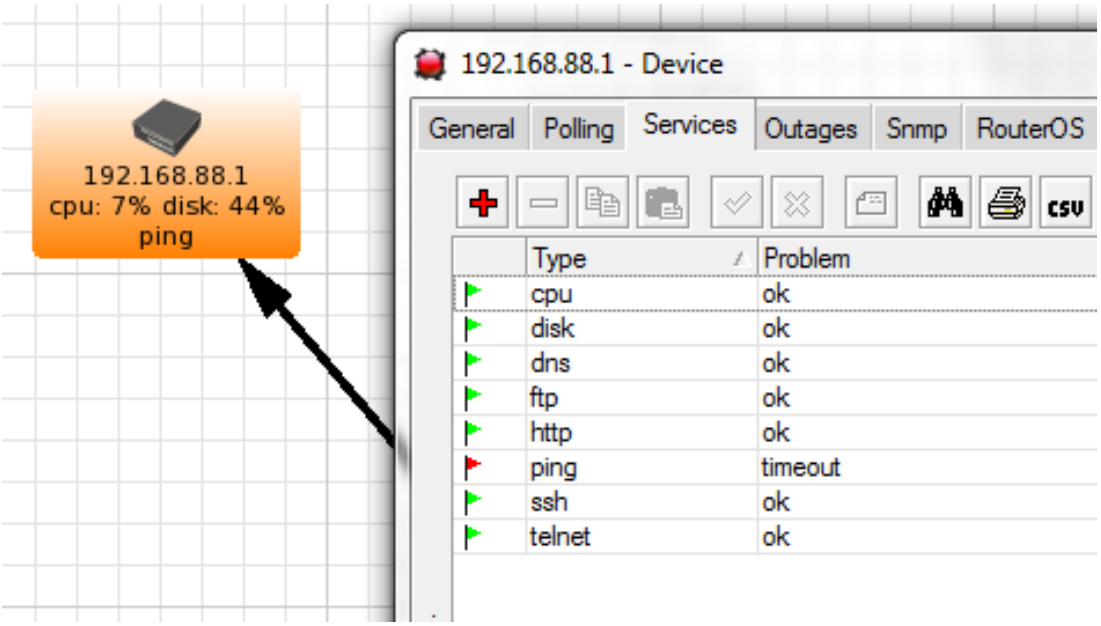
Polling

This tab allows you to configure polling times and timeouts specifically for this map. Map specific settings are always overriding general settings, but device specific settings take preference.



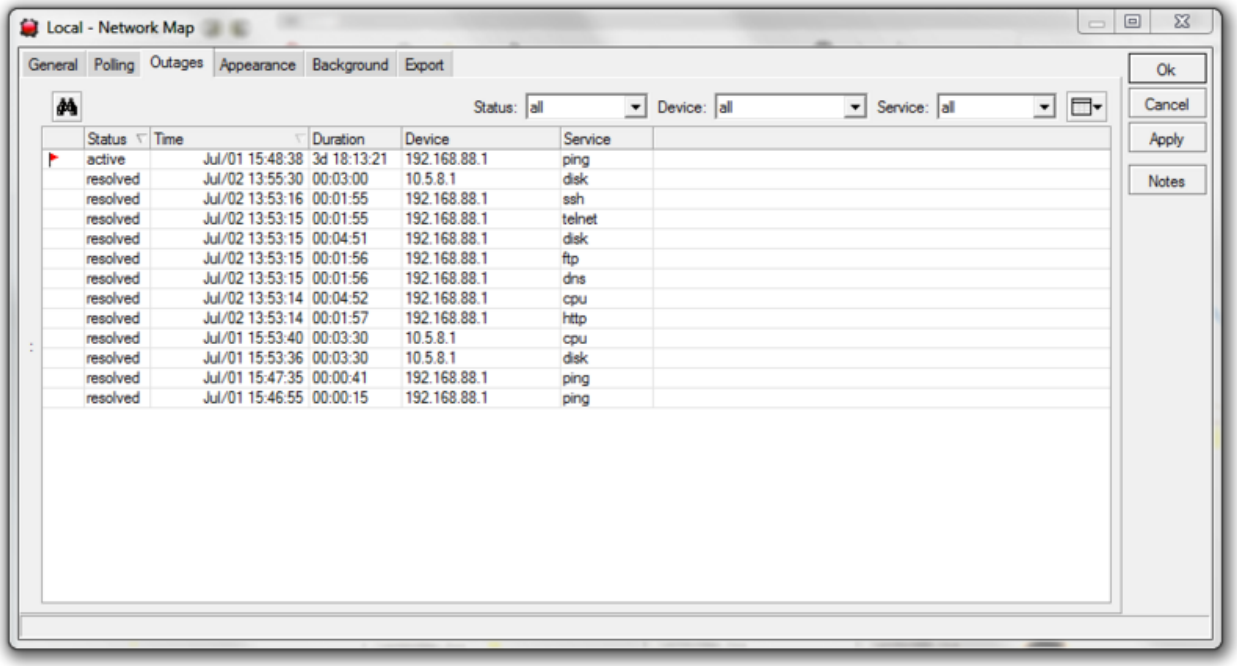
- **Enabled** - Whether to poll any services on this device
- **Probe interval** - How often should the services be polled, in seconds
- **Probe timeout** - how much time should pass from start of a specific poll until the service is considered non responsive (**timeout**). When this state is reached, the device is still *Green*, but the individual *Service* will show *Timeout* and will turn *Orange*
- **Probe down count** - how many times should the poll fail until the service is considered **down**. When this state is reached, the Device icon will turn *Orange*, any specified *Notifications* will be run, and the individual Service will turn *Red*
- **Use notifications** - what action should The Dude take if one of the services reaches **Probe down** state. Notifications can be chosen from the predefined list, new notifications can be created in the **Notifications pane**, which is available in the main Menu pane, or in this same window by clicking the **...** button.

Example: *In this case one service has reached "Probe down" state, as all the required polls ended with timeout. The service has turned red (down) but device icon is Orange, because other services are reachable.*



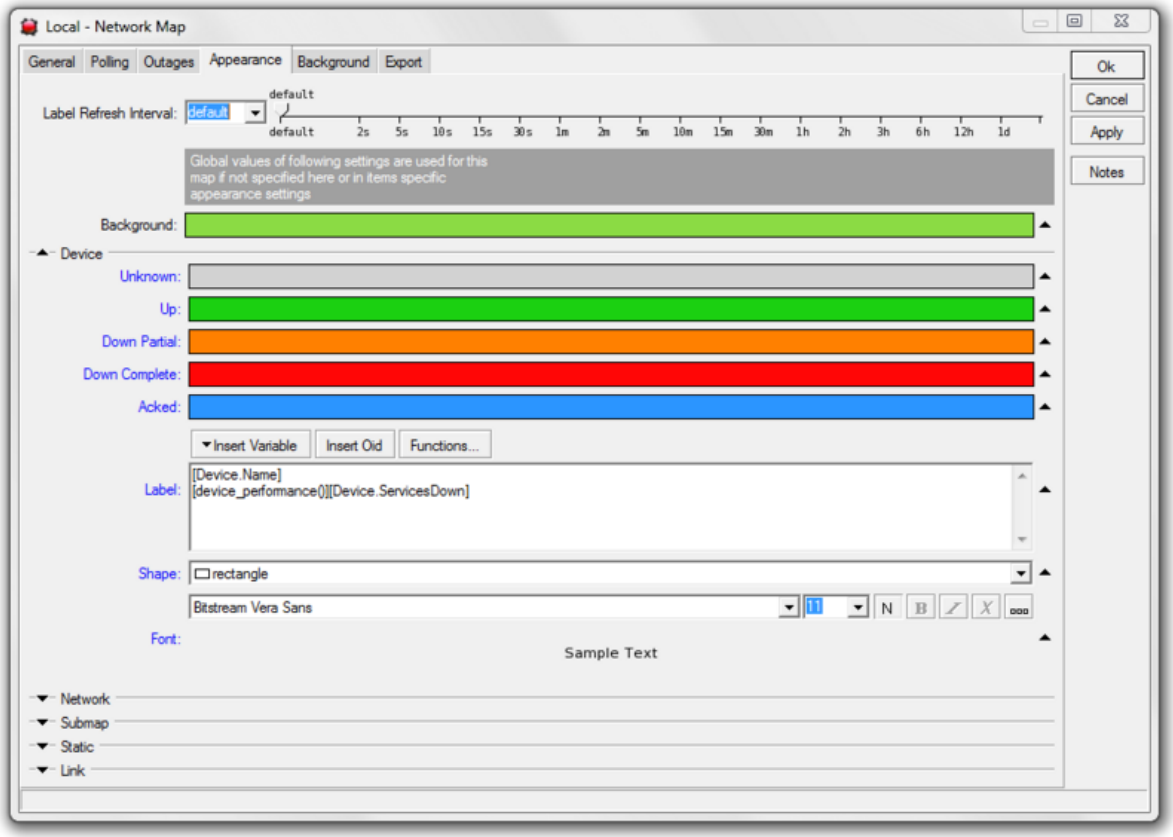
Outages

Shows current and past issues of the specific map. Can filter by Status, Device or Service.



Appearance

In this tab you can configure colors and shapes of the map items, and the map itself.



Map specifics

- **Label refresh interval** - How often should the labels be refreshed. Device settings take preference, if defaults used here, Global settings are used.
- **Background** - Color of the map background of no image is used

Color and shape settings

You can configure the colors of various states for the following items: **Devices**, **Networks**, **Submaps**, **Static items** and **Links**

It's also possible to choose the default shape for icons, and the thickness and type of link lines.

Background

This tab allows you to set an image as the map background. It's possible to use scanned maps or screenshots of online maps for convenience.

It is possible to choose the scale of the image, and whether to repeat the image in x/y axis (tiling).

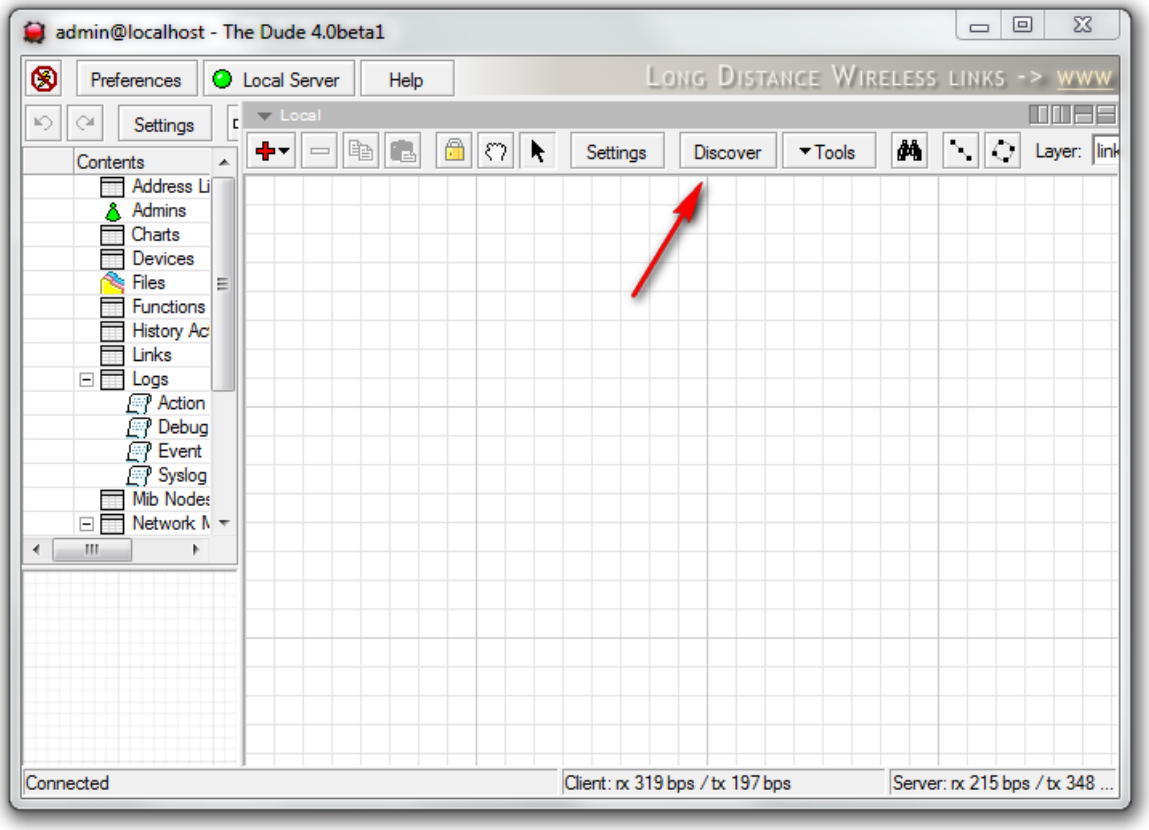
Export

It is possible to configure automatic scheduling of map image export:

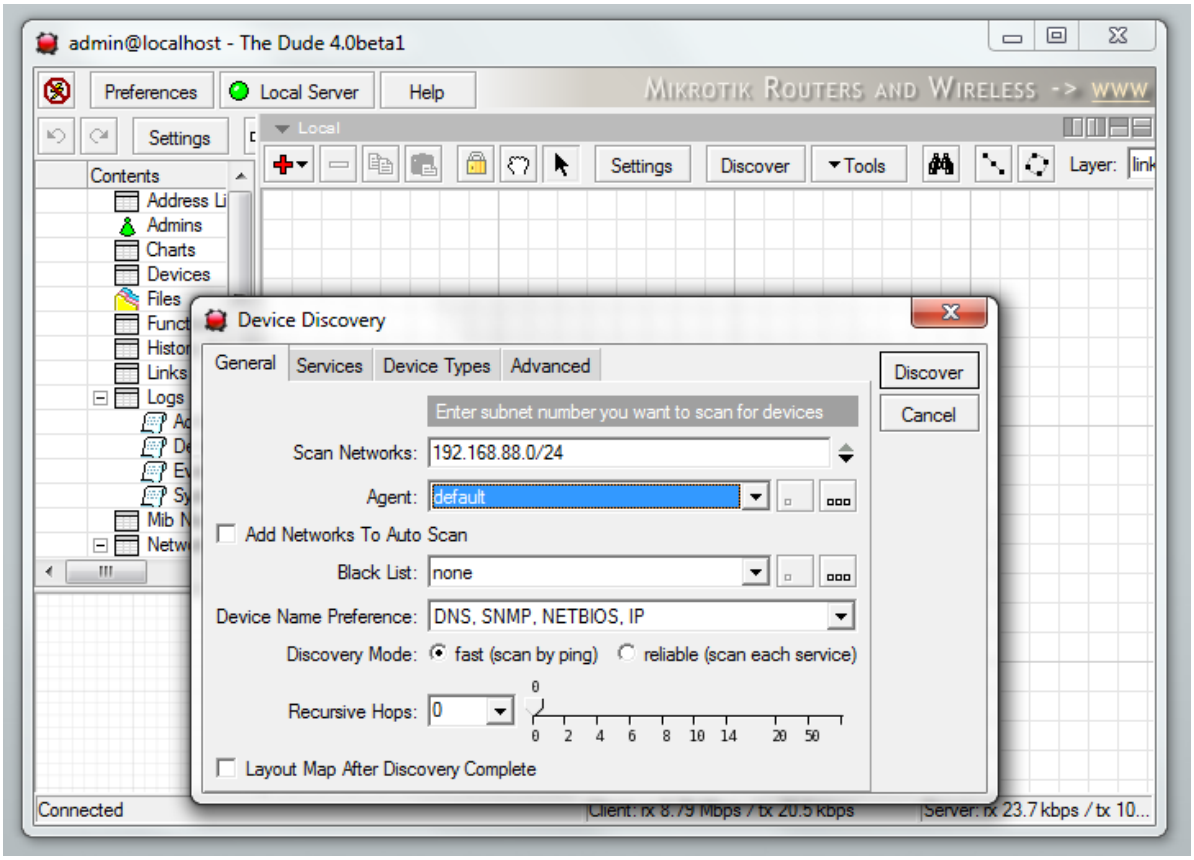
- **Type** - image format to use (bmp, png, ps, jpg, pdf, svg)
- **Interval** - how often to save the map image

Manual:The Dude/Device discovery

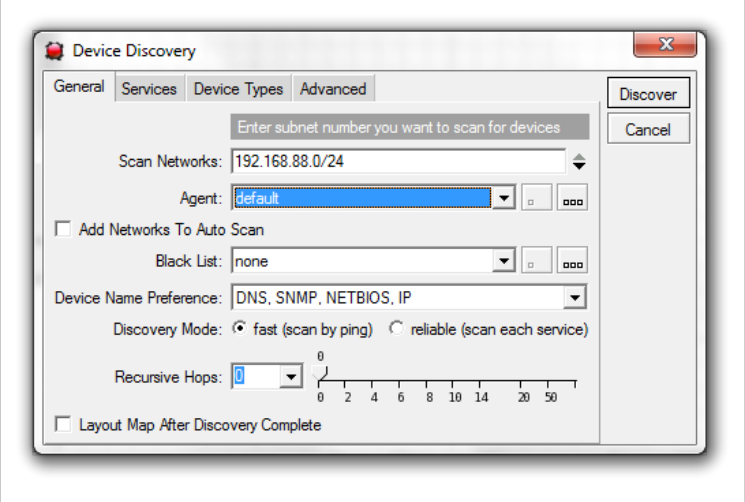
The Dude can automaticall scan ranges of IP addresses to discover active devices on your networks. To do this, you have to use the Discovery interface. Upon first use of the Dude, the discovery window is opened automatically, however, you can also open the discovery interface later, by clicking the Discovery button in the main button panel.



The discovery windows provides you with several options



General



- **Scan networks** - enter the IP networks that you wish The Dude to scan. Click the black "down" arrow to add more networks
- Agent - select another Dude agent for the scan task. The Default agent is selected upon first use, and it's the local server. Click on the **...** icon to browse for other agents or to add new agents.
- **Add networks to auto scan** - when checked, this option will keep updating the map when new devices appear even after the initial scan is finished. The default scan interval is one hour, you can change this in the main Dude **Settings** menu.
- **Black list** - You can select which devices should not be scanned. This is useful if you have printers that react strangely to port scans, or devices that don't like to be pinged. Click the **...** button to create lists of devices to be used in the Blacklist.
- **Device name preference** - decides how to name your devices by default. Can choose between *DNS, SNMP, NETBIOS and IP* or combinations of those. If the field is set to *DNS to SNMP to IP*, then DNS name will be used when available, if it is not, then SNMP-derived name will be used, but if neither of them are detected, then IP address will be used as the device name.
- **Discovery mode** - can choose between **Fast scan by ping** and **Reliable scan** that scans each service. When choosing the fast scan, all devices that can respond to ping will be added to the Map, and then their services will

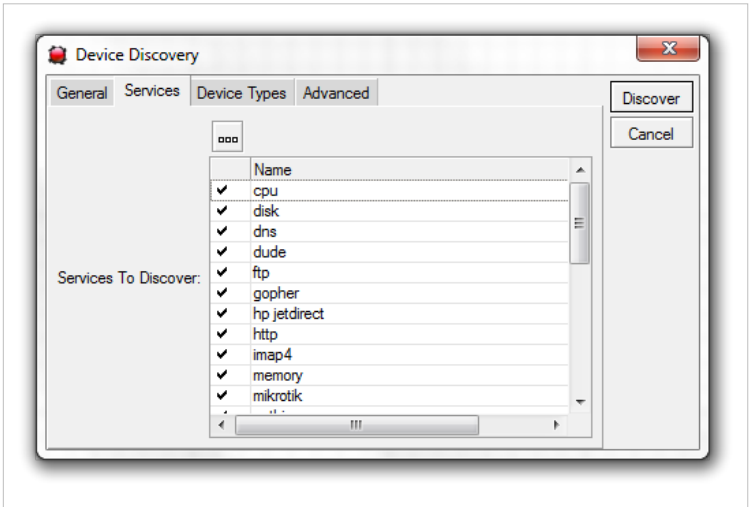
be proofed. However, if you choose Reliable scan, the Dude will look for the specified services even in the devices that couldn't be pinged. This is helpful if you have devices which can't be pinged, or which have the ping blocked.

- **Recursive hops** - whether to scan recursively all the networks found connected to the initially discovered devices. I.e., in case there were some network devices detected which are connected to more than one network, whether to continue scanning also the network these devices are connected to. This parameter is set to the maximal hop (network device) number, which to scan the connected networks from. *Important*! It is not recommended to set more than 1 hop at your initial discovery, and never to set more than 5, as this will most likely scan thousands of devices in all of your local networks, and will take a long time.
- **Layout after discovery is complete** will not only put the devices on the map in sequential rows, but will also attempt to draw a logical map layout. Especially useful if discovering by more than 1 hop.

Services

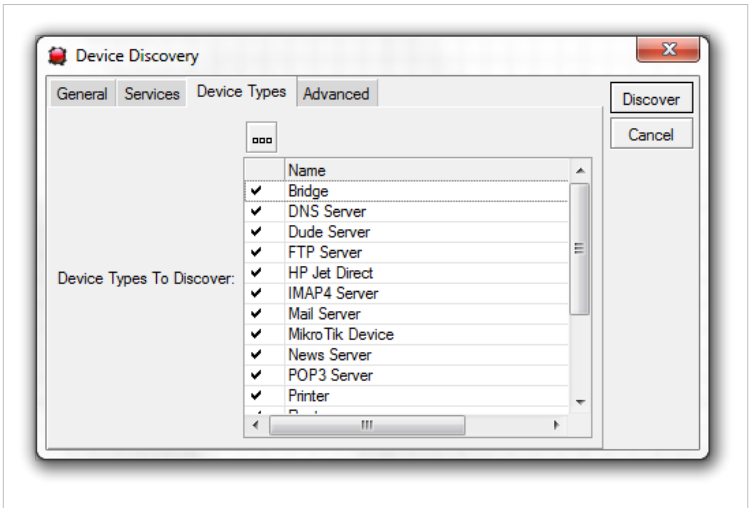
This tab defines which services need to be scanned at the time of discovery. To improve discovery time, you should uncheck the services you are not interested in. This also decides which services to probe at IP addresses that did not respond to ping.

the **...** button allows you to add new probes that will look for other services.



Device Types

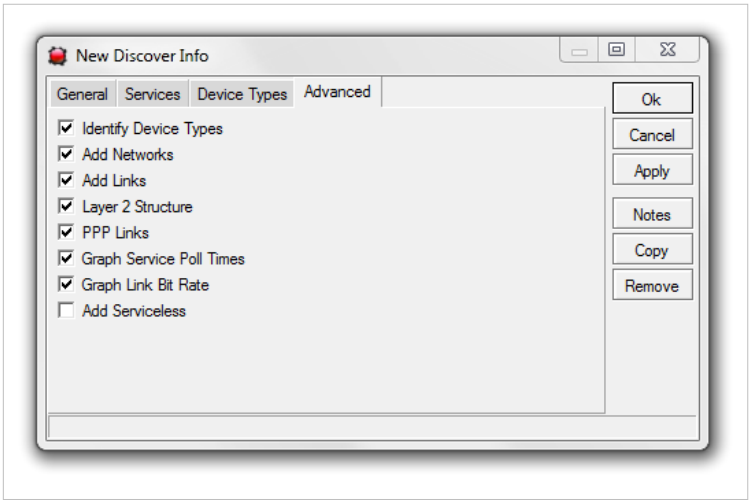
The dude can also automatically *assign icons* to your devices, *based on the device type*. Device types can be configured by clicking the **...** button. Each device can have required identification patterns, based on services The Dude discovered running on it. For example the predefined requirement for a "Mail server" device type is a running SMTP service. You can change the required services for existing devices, or add new devices with new requirements.



Advanced

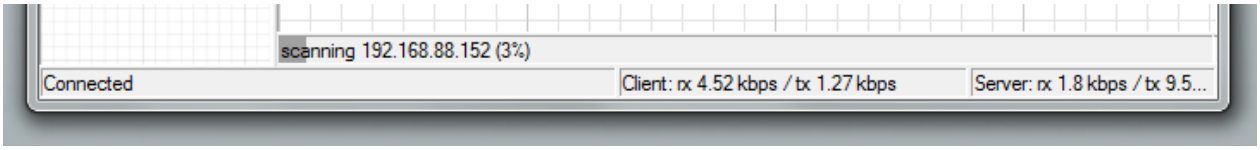
In the Advanced tab of the Discovery window you can deselect certain tasks that you don't want to be done.

- **Identify device types** - follow the rules set in the Device Types menu
- **Add networks** - include icons for networks
- **Add links** - link devices together with lines
- **Layer 2 structure** -
- **PPP links**
- **Graph service poll times**
- **Graph link Bit rate**
- **Add Serviceless** (deselected by default)

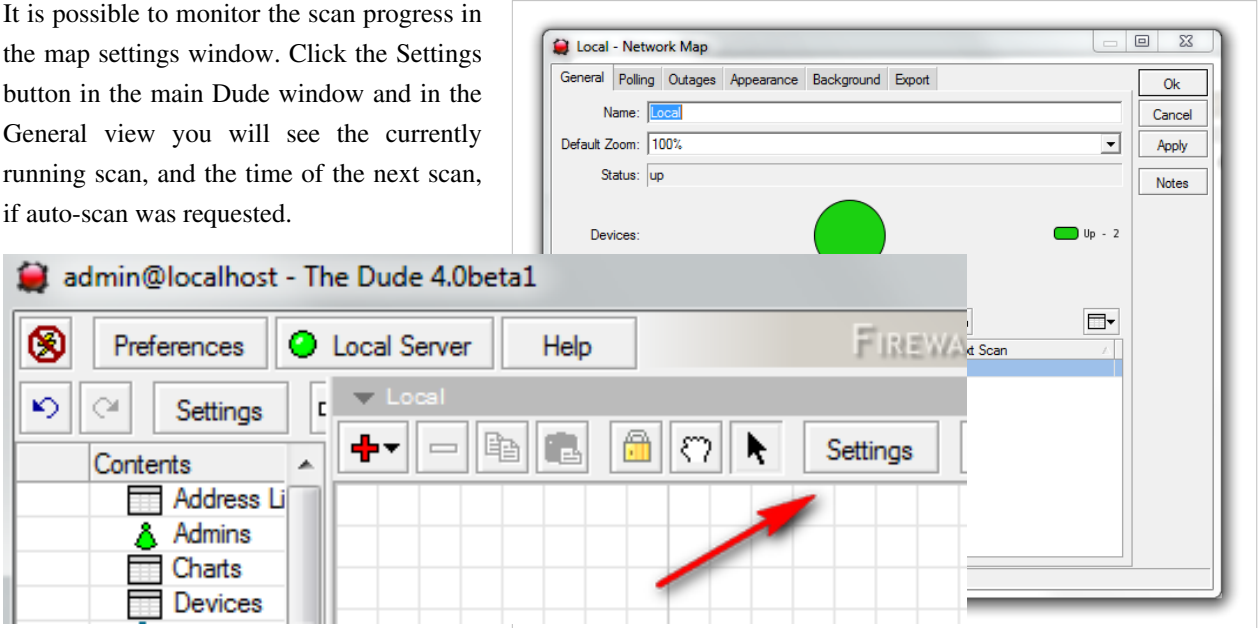


Discovery Process

After you have selected all the options, click on **Discover** and the process will be started. This will be indicated by a **Scanning** information in the bottom edge of the Dude main window



It is possible to monitor the scan progress in the map settings window. Click the Settings button in the main Dude window and in the General view you will see the currently running scan, and the time of the next scan, if auto-scan was requested.



Note: It is possible to stop scanning by selecting the running scan, and clicking on the blue **minus** button.

Read more

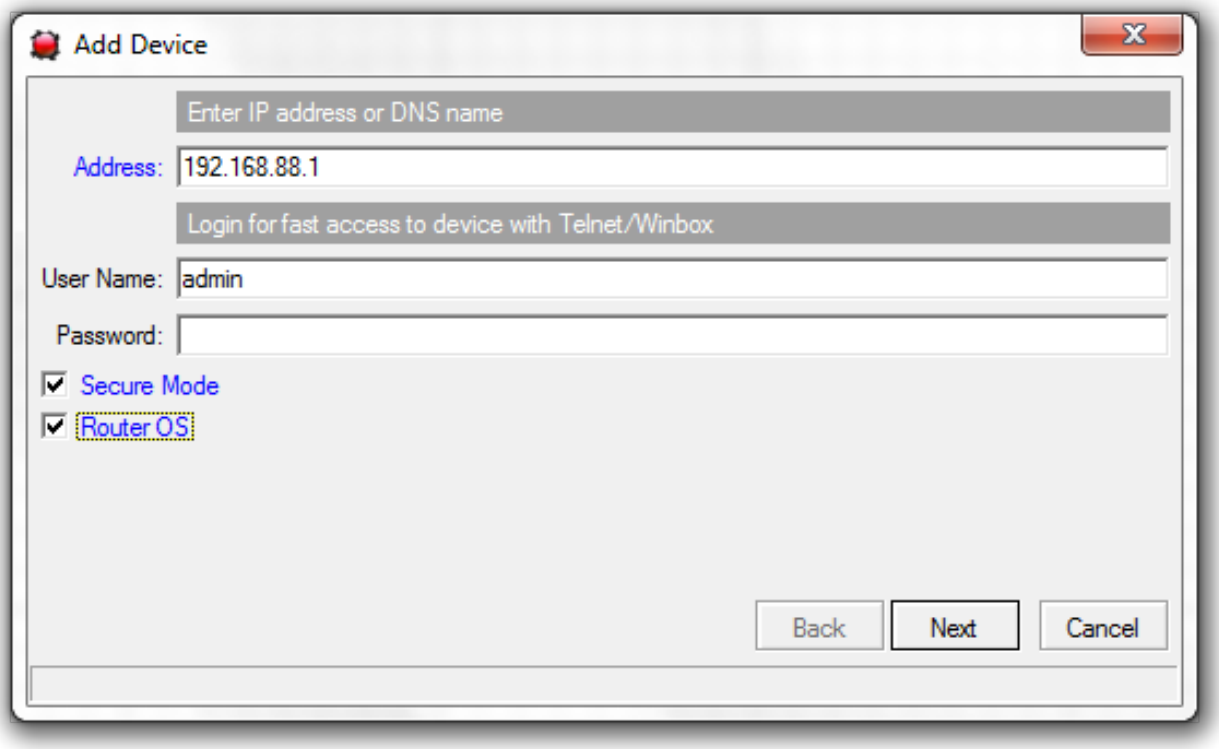
- Adding and editing devices

Manual:The Dude/Device settings

Adding a new device

To add a new device to The Dude, you can either use the Discovery interface, in which case the device will automatically be added with no settings asked from you, or you can add a device manually, by clicking the Add item button above the Map window.

Once you click the Add Item button, you can then add a new device by clicking anywhere on the Map. The New device window will be opened:

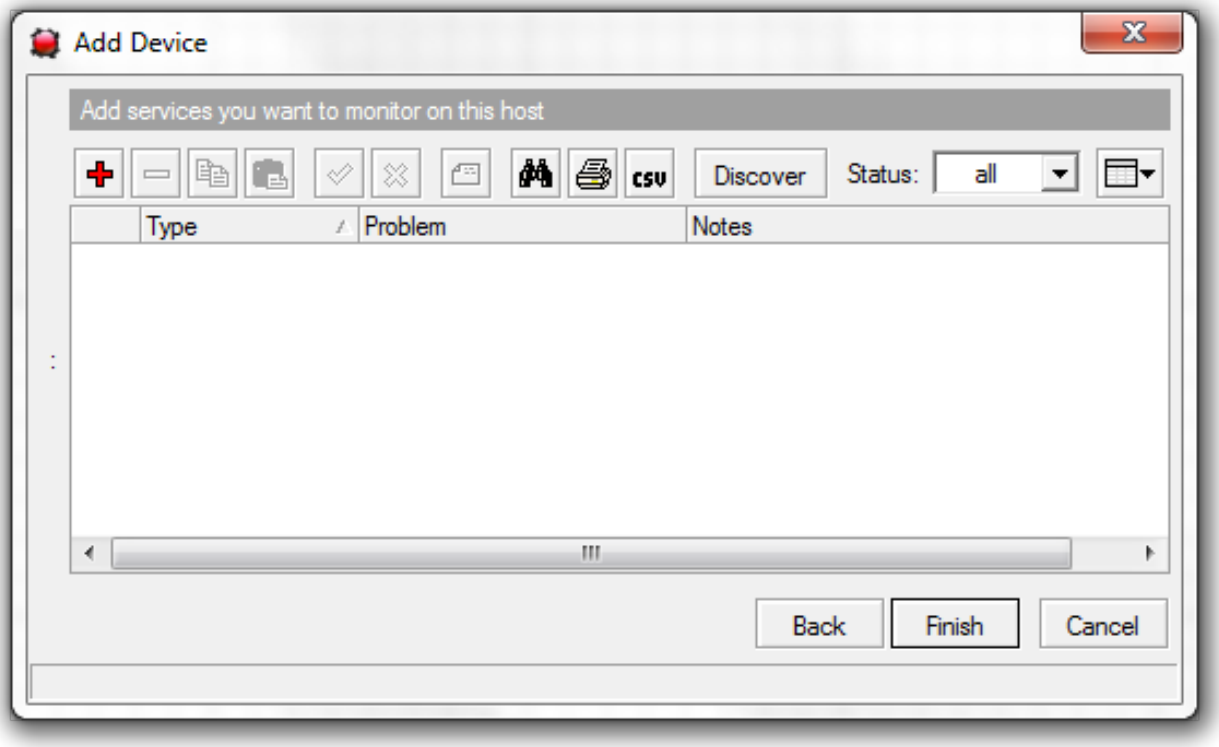


Note: You can also add new devices in the Devices pane, in this case you will be asked to specify the Map onto which you like to add the device

You will then need to provide the following information:

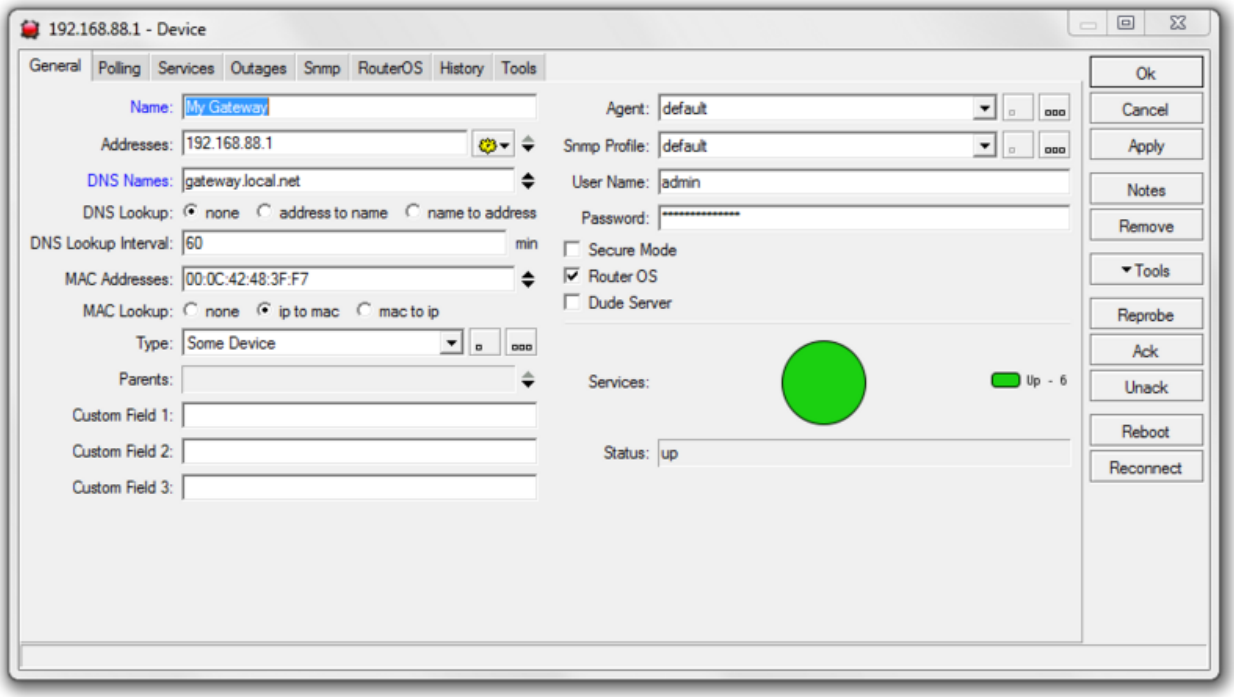
- **Address** - The IP or DNS name of the device you are about to add. Must be reachable from the Dude server
- **Username** - Username for using tools such as Winbox (in case it's RouterOS), FTP, Telnet etc.
- **Password** - Password for the same
- **Secure mode** - Whether to use Secure mode when connecting to a RouterOS device. Uses TLS connection.
- **RouterOS** - Whether this device is running RouterOS. Decides whether to show RouterOS specific configuration options. This option also makes sure that the devices can be grouped in Groups, to allow mass upgrades.

After clicking **Next** you will be asked to select which services you wish to be monitored on the newly created device. It is also possible to scan for services with the **Discover** button



After clicking **Finish**, the device will show up in the Map window and also in the Devices list. You can now double click it to open it's settings. It's also possible to right-click it and select **Settings**.

Device settings

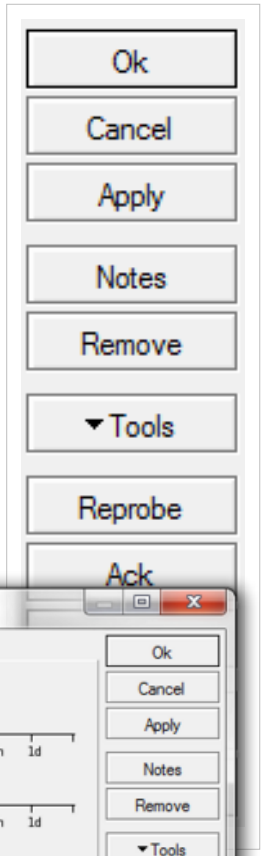


General

This window allows you to configure the most important settings of the device:

- **Name** - any name, for example *Our main E-mail server*
- **Addresses** - the IP addresses of the device. You can enter one, or use the **arrows** to add more fields
- **DNS names** - DNS names of the device, if any
- **DNS lookup** - How to perform automatic DNS lookup if needed
- **DNS lookup interval** - How often to check for DNS name changes
- **MAC addresses** - MAC address of the device
- **MAC lookup** - How to perform MAC address lookup if needed
- **Type** - Device type selects what icon to use on the map. **Some device** (generic) is used by default
- **Parents** - Which device is the hierarchical parent of this one, builds reachability dependencies to avoid multiple notifications in case parent device fails (in which case child devices are also unreachable)
- **Custom Fields** - Any data can be used in the custom fields, like address, coordinates or contact info
- **Agent** - Agent to be used to reach and monitor this particular device. Agents are other Dude servers that have acess to networks the current server can't reach.
- **SNMP profile** - SNMP profile to be used for this device. Default selection between SNMP1 and 2, can add SNMPv3 by opening the Edit window.
- **Username and Password** - How to access the device from within the Tools menu (Winbox, Telnet, etc)
- **Secure mode** - Whether to use TLS secure connection for Winbox
- **RouterOS** - Whether to show RouterOS specific menus
- **Dude server** - If it's another Dude server that could be used as an agent. Devices marked as Dude Servers also have a **Dude tab** in their settings, where you can directly view their maps, without disconnecting from the currently opened server.

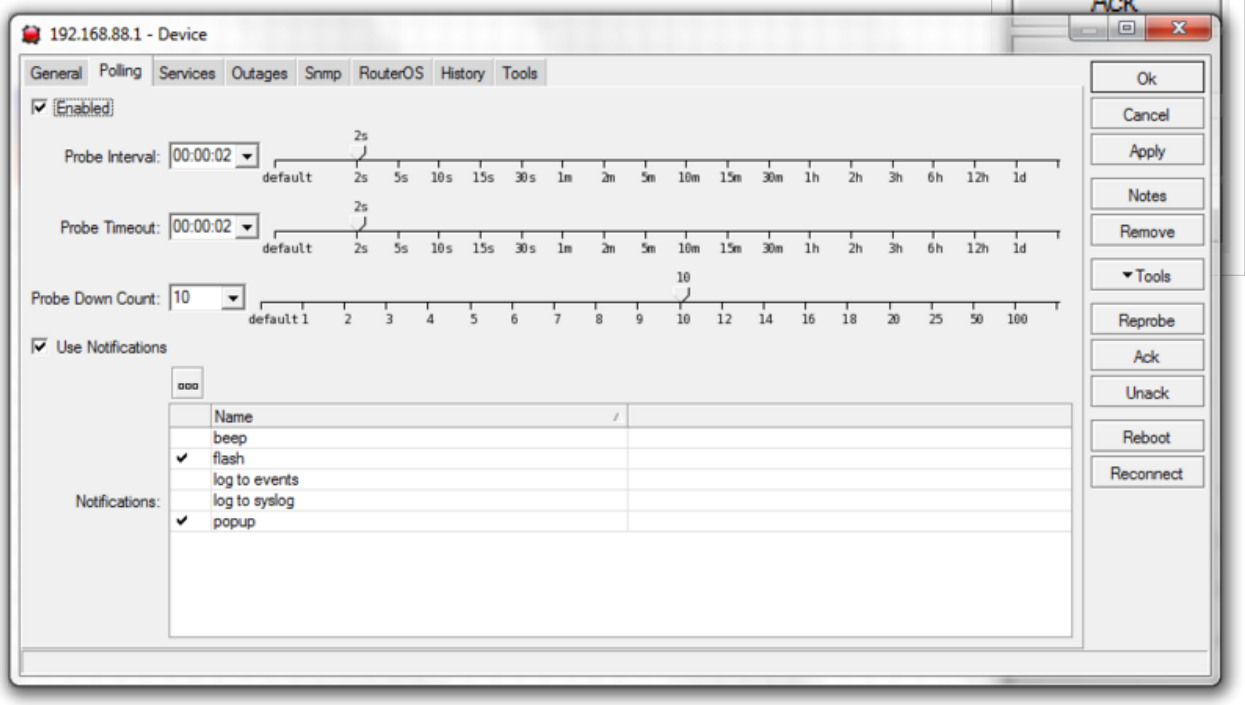
Device specific actions



- **Ack** - This button acknowledges that a problem exists, and an administrator is working on it. This will stop any notifications from being sent. The device icon will turn **Blue**
- **Unack** - This button removes previously set **Ack** and reprobes the device, to check if the solution was effective. If the service is still down, the Device icon will again turn Red.
- **Reprobe** - Manually run poll for all the services sooner than the Probe Interval.
- **Note** - Possibility to add comments about the device
- **Reconnect** - For RouterOS devices, it's possible to reconnect to reload settings
- **Reboot** - restarts the device physically

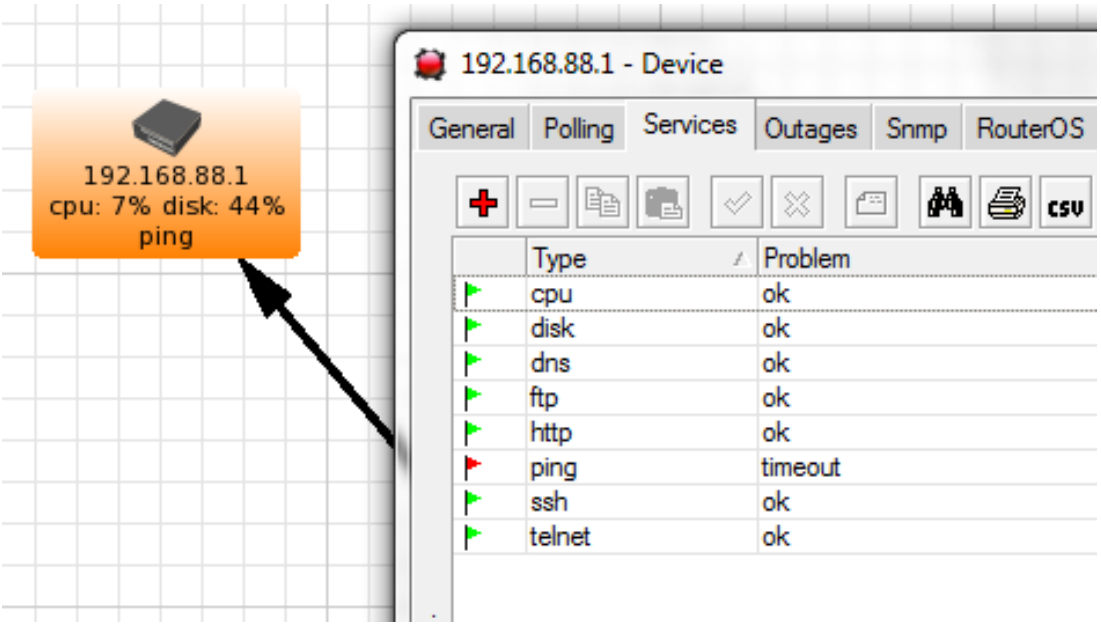
Polling

This tab allows you to configure polling times and timeouts specifically for this device. Device specific settings are always overriding general settings and map settings.



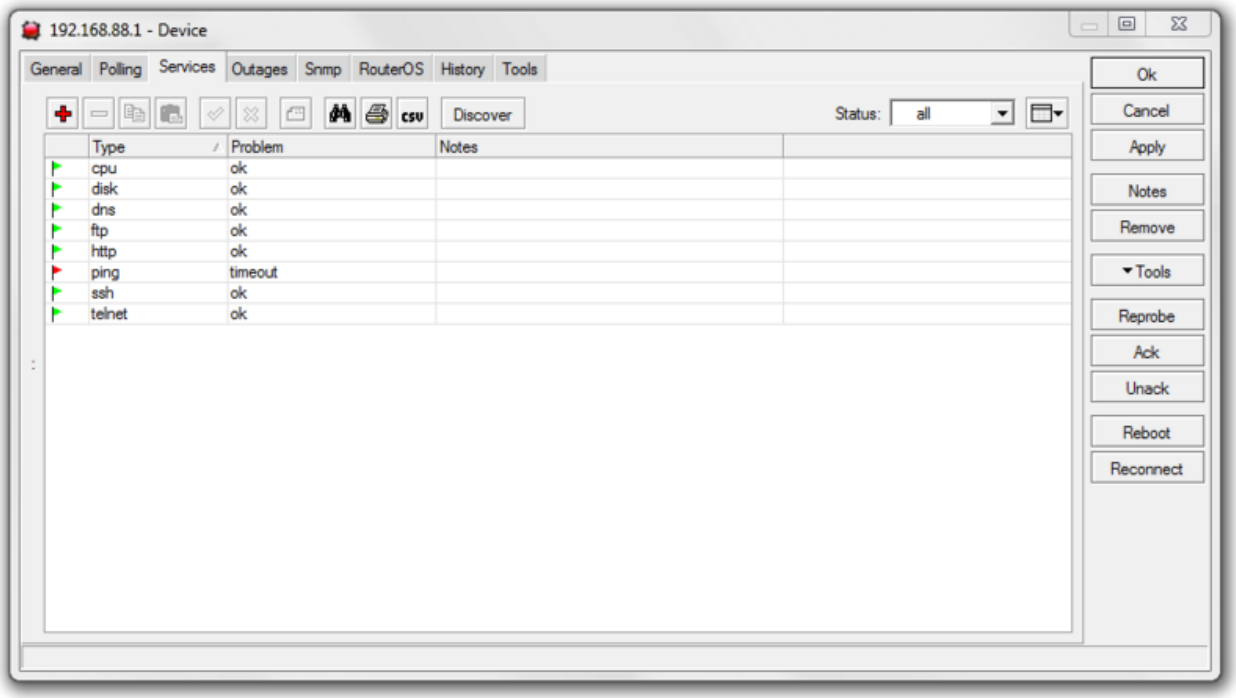
- **Enabled** - Whether to poll any services on this device
- **Probe interval** - How often should the services be polled, in seconds
- **Probe timeout** - how much time should pass from start of a specific poll until the service is considered non responsive (**timeout**). When this state is reached, the device is still *Green*, but the individual *Service* will show *Timeout* and will turn *Orange*
- **Probe down count** - how many times should the poll fail until the service is considered **down**. When this state is reached, the Device icon will turn *Orange*, any specified *Notifications* will be run, and the individual Service will turn *Red*
- **Use notifications** - what action should The Dude take if one of the services reaches **Probe down** state. Notifications can be chosen from the predefined list, new notifications can be created in the **Notifications pane**, which is available in the main Menu pane, or in this same window by clicking the **...** button.

Example: *In this case one service has reached "Probe down" state, as all the required polls ended with timeout. The service has turned red (down) but device icon is Orange, because other services are reachable.*



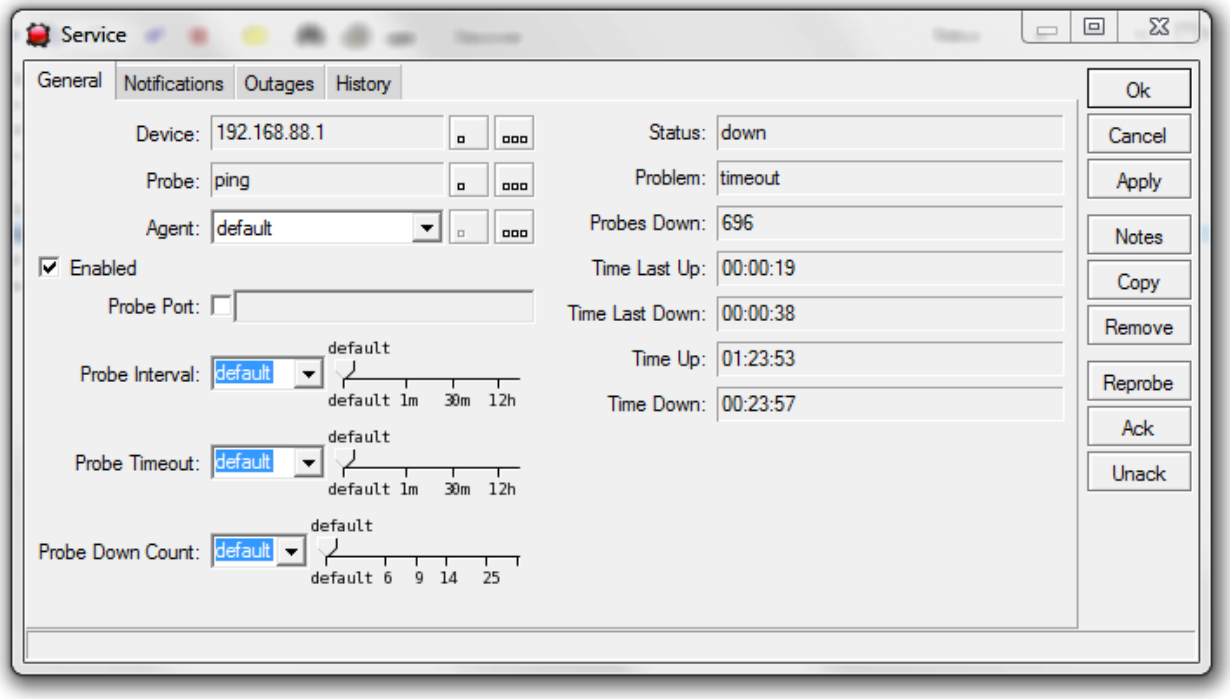
Services

In this tab it is possible to configure services that should be monitored for this specific device. You can also automatically discover available services.



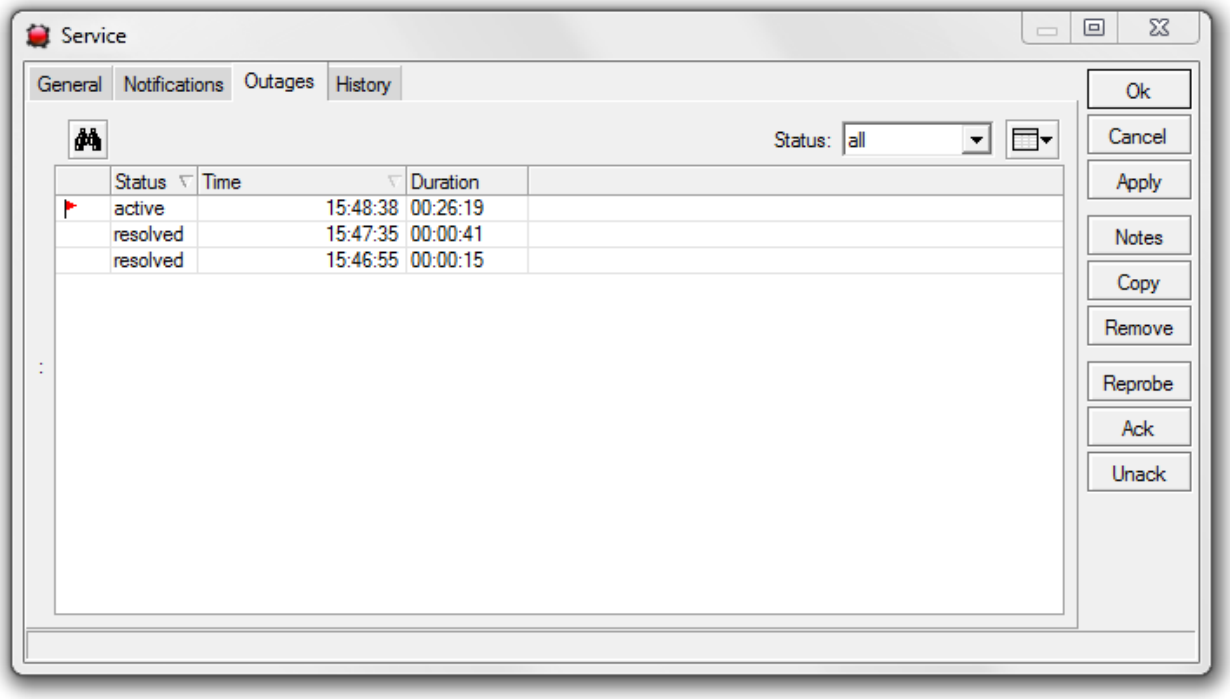
To add a new service, use the **add item** (plus) icon. To discover all services that respond to The Dude, use the **Discover button**.

Each service can have **specific settings**, which override the **device settings**, the **map settings** and the **general settings**. Double click to edit a certain service, or click **Add item** to add new service and set all the settings in the Add dialog.



It is also possible to specifically set notification types for the individual service of the individual device in this window.

In the **Outages tab** you can see current and previous outages, their start times and durations. Note, that if the device is **Acked**, the Outage will still be visible as **Active**

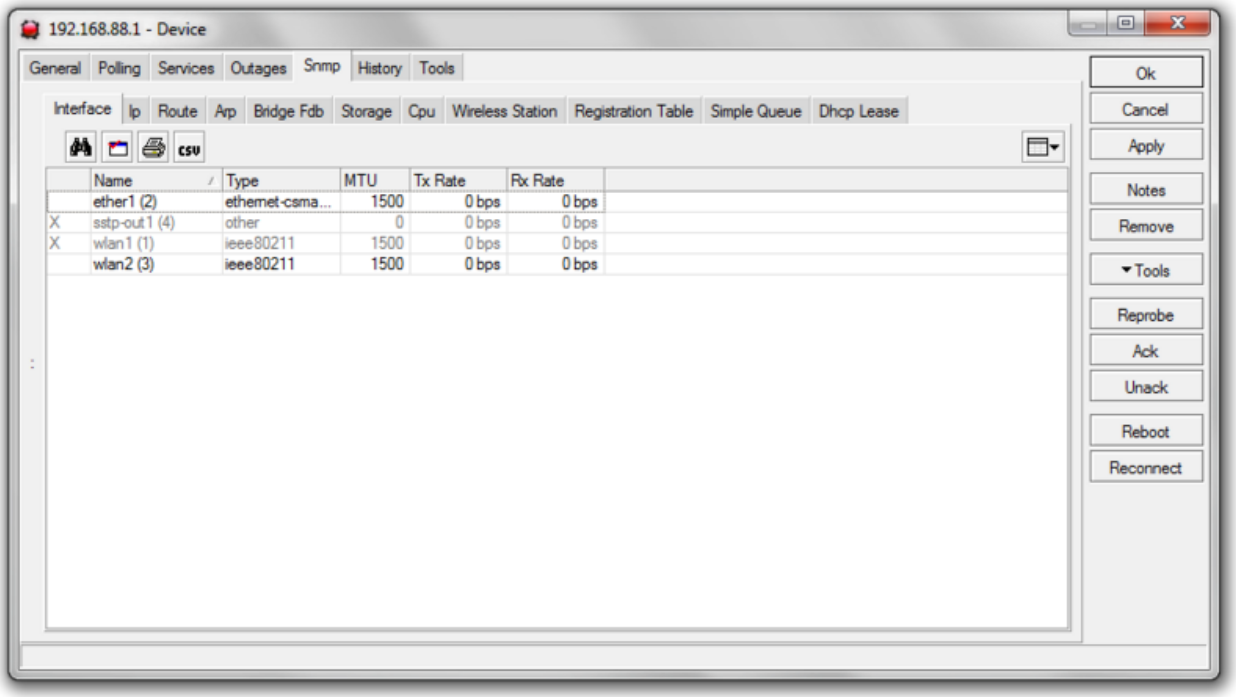


Outages

Shows current and past issues of the specific device.

SNMP

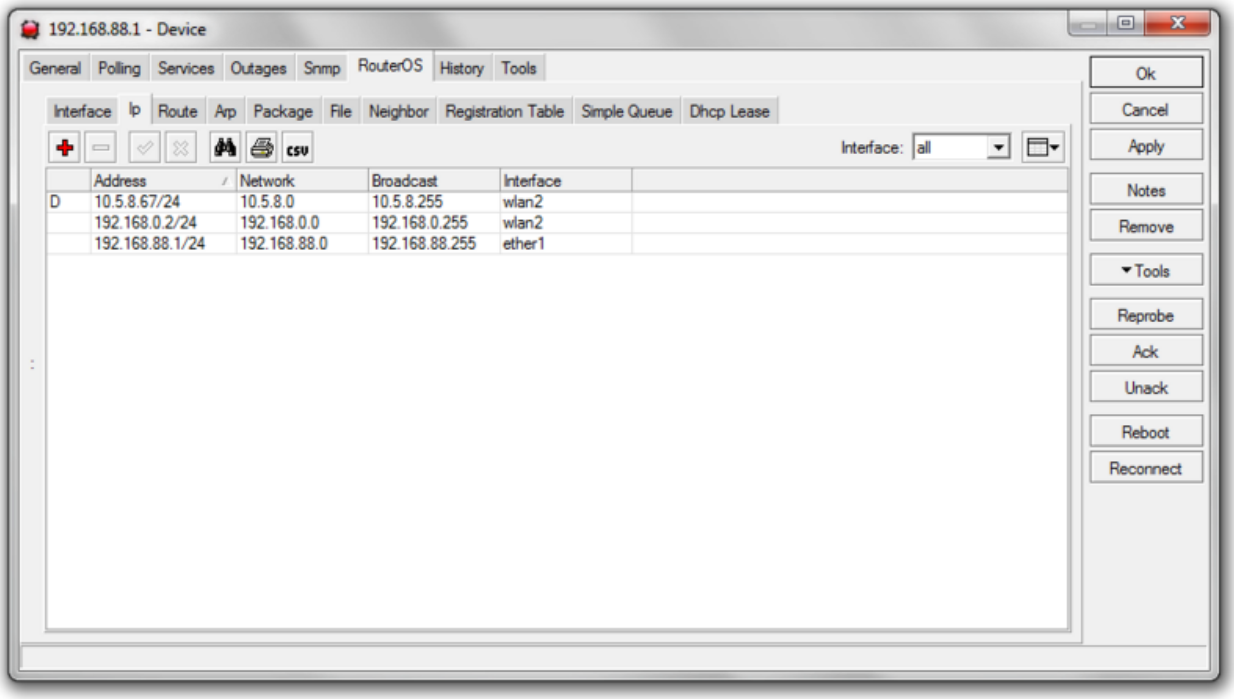
Shows information about device configuration, if this information is available over SNMP. All of these parameters are available from RouterOS. If the device is not RouterOS, it could still provide some of the information, so some tabs would show it, some would be blank. The information is read only.



- Interface
- IP
- Route
- ARP
- Bridge FDB
- Storage
- CPU
- Wireless station
- Registration Table
- Simple queues
- DHCP leases

RouterOS

This Tab is specific to RouterOS devices and allows you to configure RouterOS basic settings. Unlike the SNMP tab, this tab allows editing of settings, if the username and password were correcly provided in the **General** tab. This tab is only available if the device was marked as RouterOS in the **General** tab.



Allows configuration of the following settings:

- Interface
- IP
- Route
- ARP
- Package
- File
- Neighbor
- Registration table
- Simple Queue
- DHCP lease

See the respective RouterOS documentation sections to see how to configure these items. The configuration is just like in Winbox, in some cases more simplified (for example for Simple Queue).

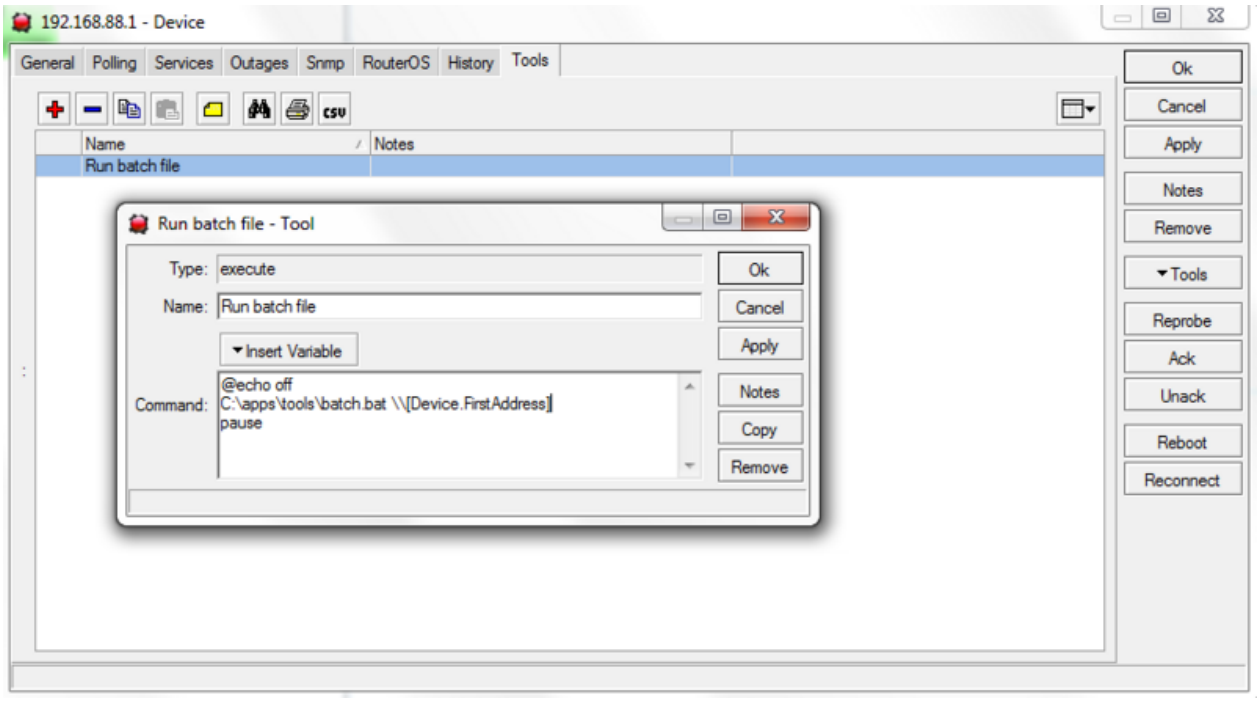
History

Shows response time graphs of the configured services for this device. Image of the graph can be exported to raster image file. Different zoom ranges are available either by the scale switch, or by the dropdown menu (more granular).

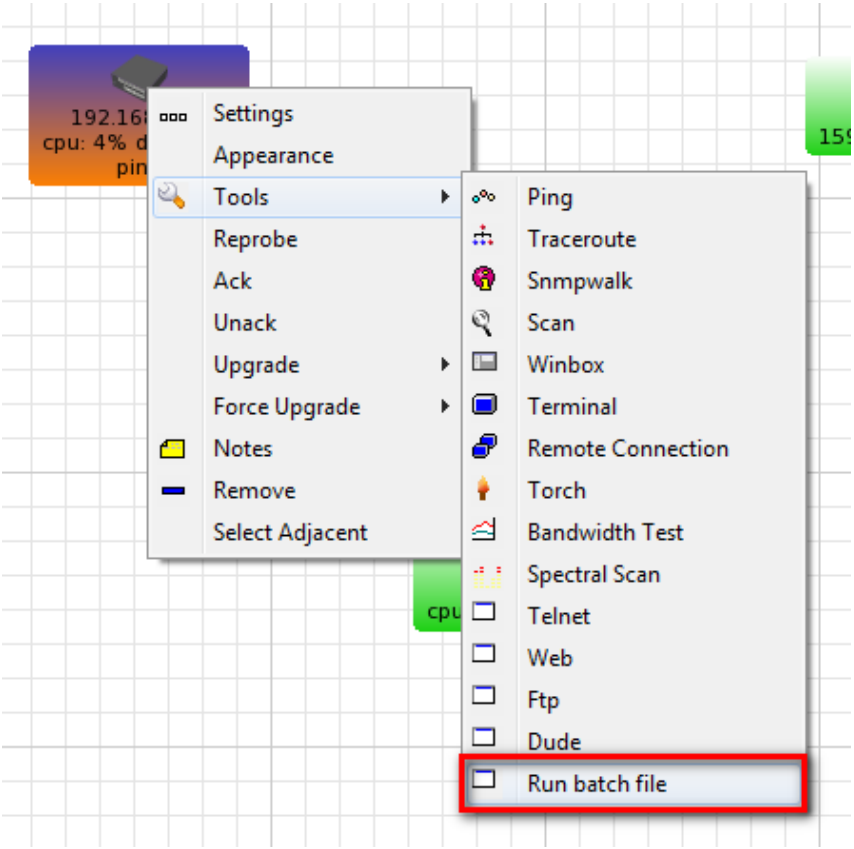
Tools

Allows you to configure specific Tools to be available for this certain device, in addition to the default tools (FTP, Telnet, Winbox etc.) Once configured, the new tools will be available in the Map (Right click device) or by opening the Device settings in the Tools button.

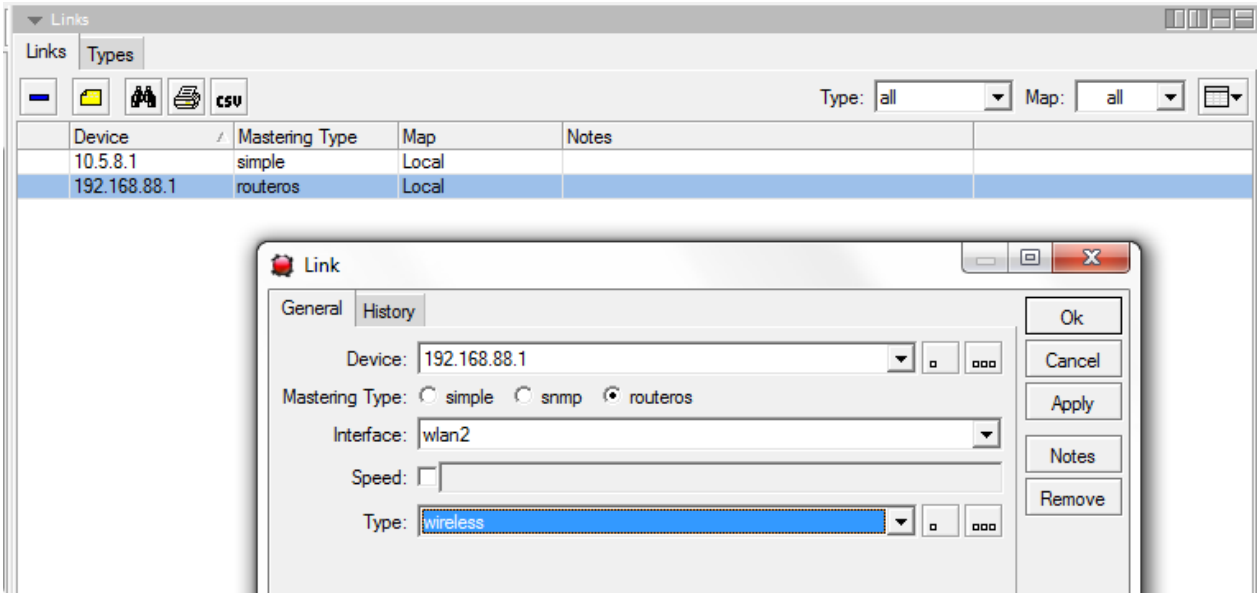
Can be useful for executing custom programs and passing them variables, which can be practically anything the Dude knows about the device.



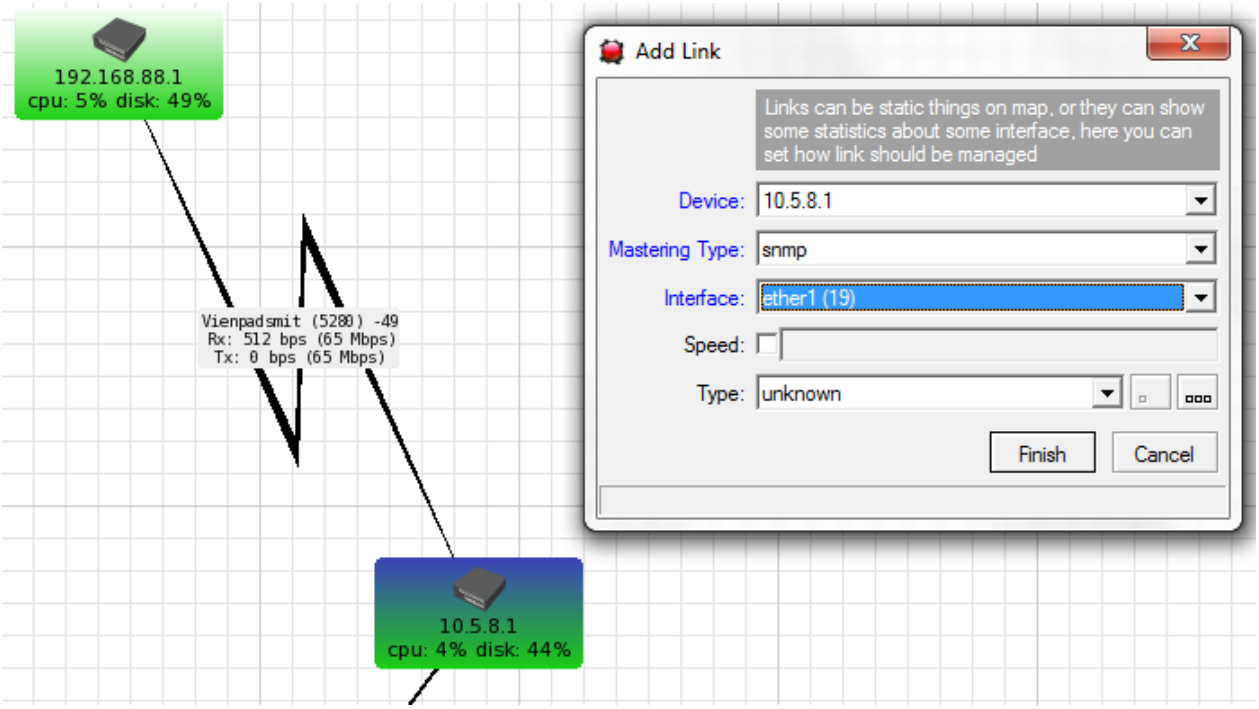
After you have configured the new tool in the Device specific settings window, the new Tool will become available inside the Device settings window "Tools" button, and also upon right click on the device. Only this specific device will have this tool available, if it was added in the device settings window. To add tools available for all devices, use the Tools Pane, available from the Main Menu pane.



Manual:The Dude/Links



The Links pane shows all connections between devices that are shown on the map. New Links can be added on the map by clicking **Add** and then choosing **Link**. When using the Discovery interface, links get added automatically, but can be viewed and edited here.

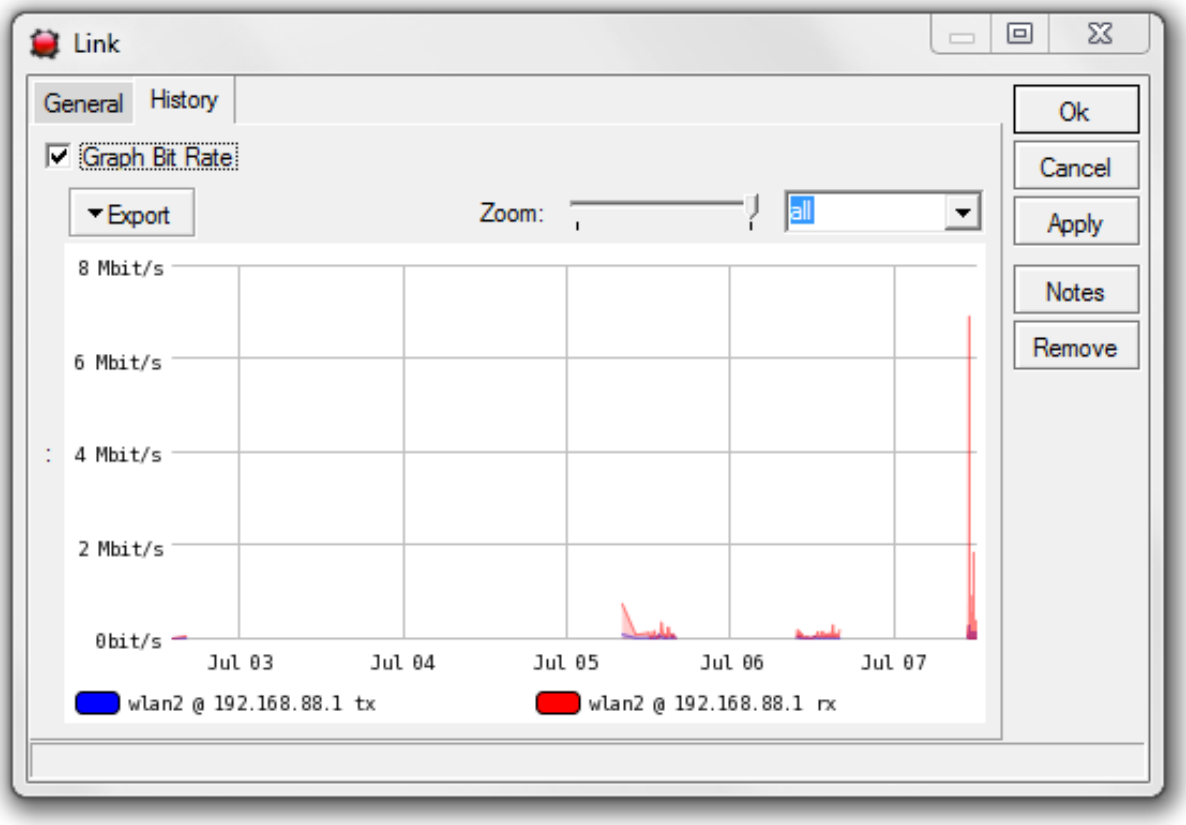


Adding or Editing

- **Device** - IP address of the device that is the master of this link
- **Mastering type** - The way the traffic information will be received
- **Interface** - which interface is the link connected from, used for traffic information
- **Speed** - Maxmum possible speed of link, used in graphs and speed report
- **Type** - Link type, can be selected from predefined list, or add new types. Depending on type, can use different graphical representation on the map

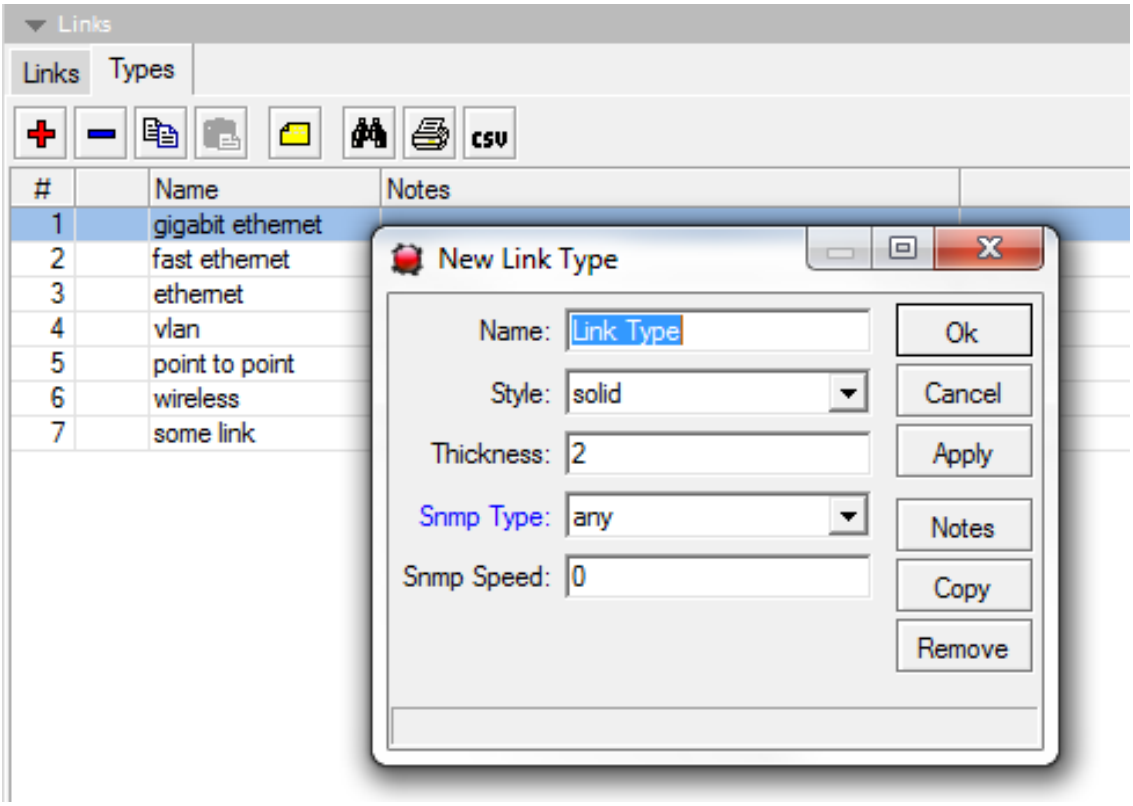
Viewing History

Double clicking on a link, and choosing **History** will show you the speed graphs of this link. It is possible to turn off graphing on a per-link basis here.



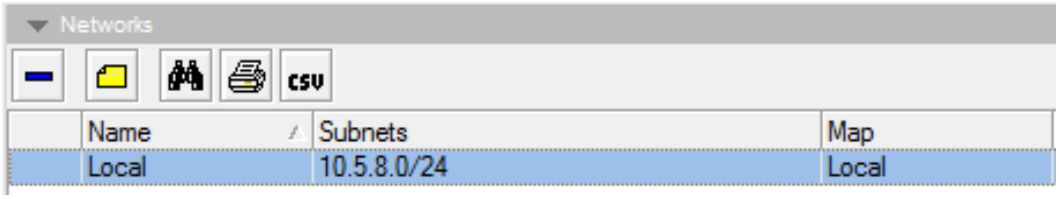
Link types

Several types of links are predefined in The Dude, each with their own Maximum speed and display style. You can make new link types in the Links -> **Types** tab.



Manual:The Dude/Networks

This Pane shows the items with the type **Network** that are added to any of your maps. It allows to edit the network Subnet, add note to it, and remove the items altogether.

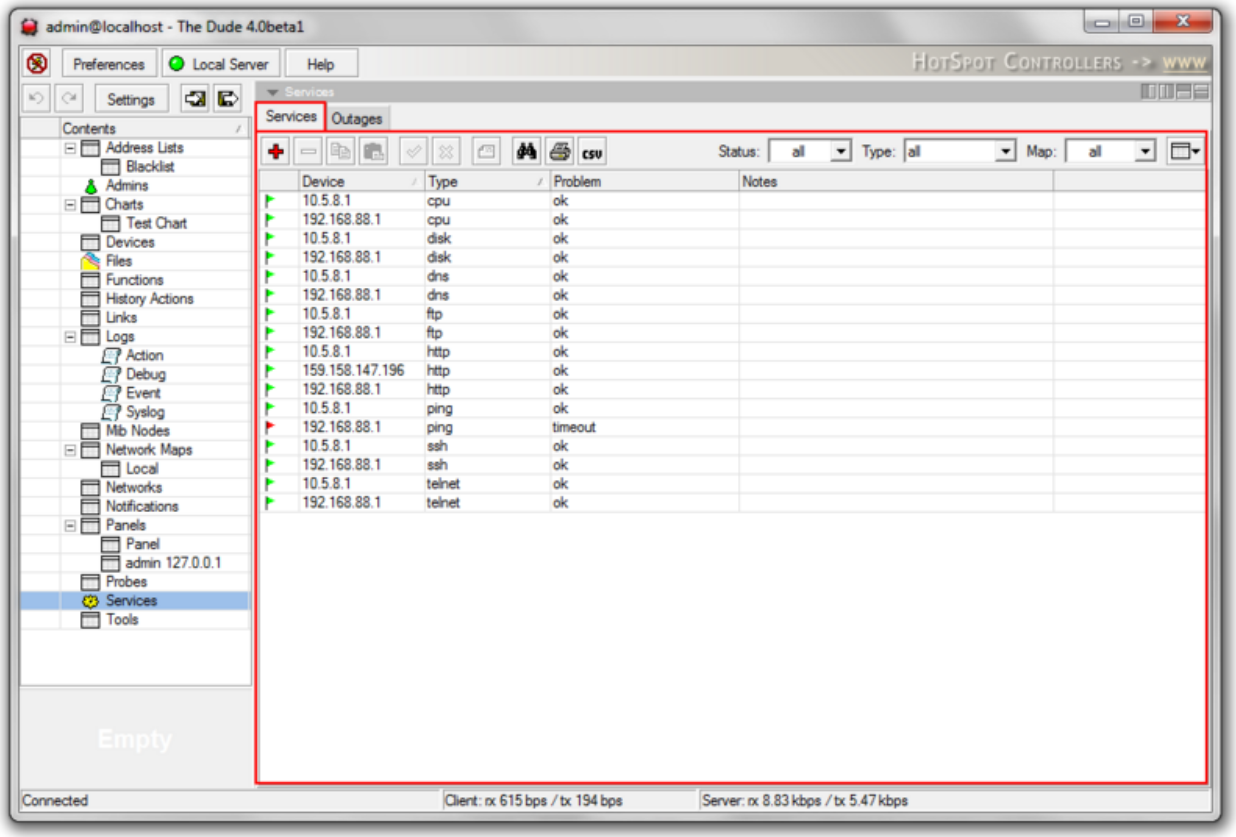


Monitoring

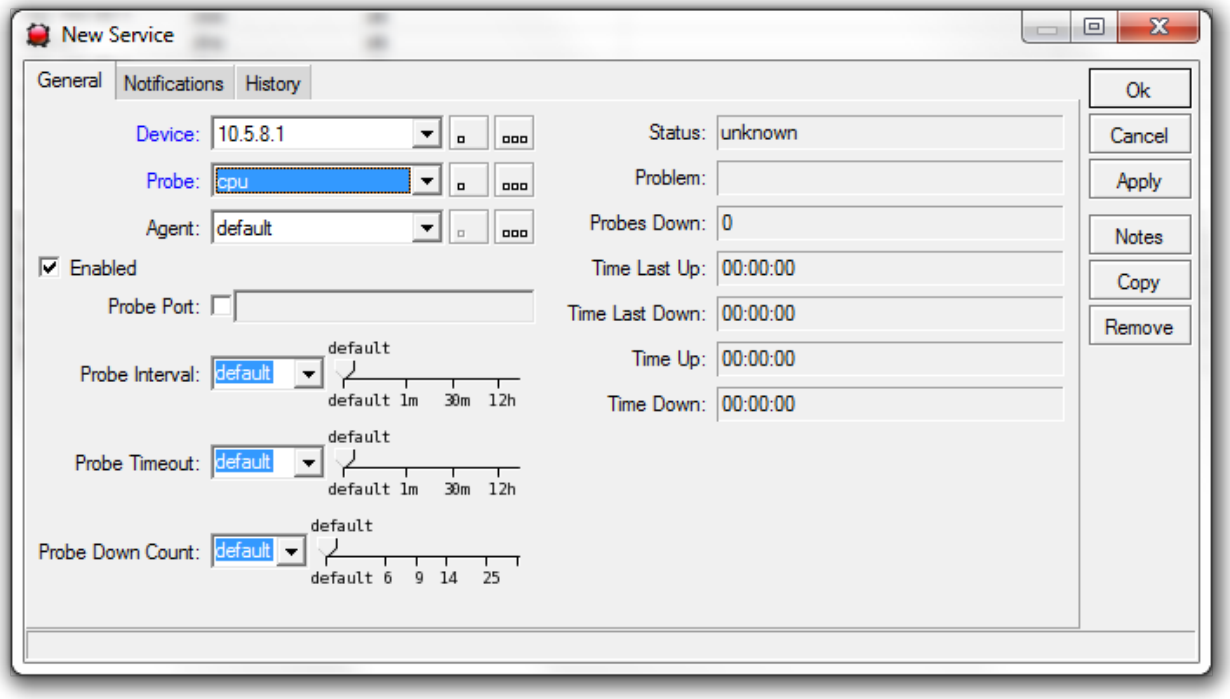
Manual:The Dude/Services

Service overview

The Services pane gives a quick overview of all the currently monitored services and their status. The Services tab shows a table that can be sorted by **Device**, **Type**, **Status** and **Note** and also gives you the ability to filter by **Status**, **Type** and **Map**



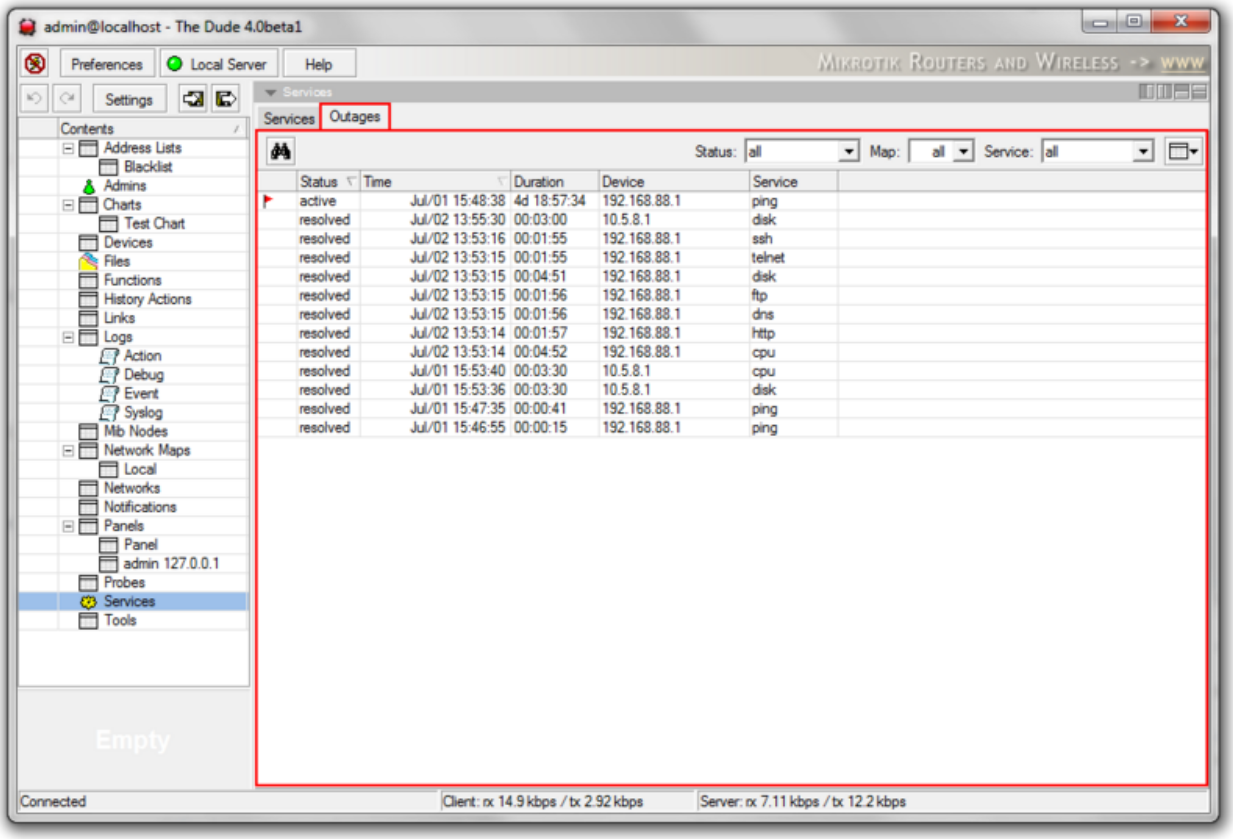
Just like in the Device settings, you can also add new services with the **Add** button:



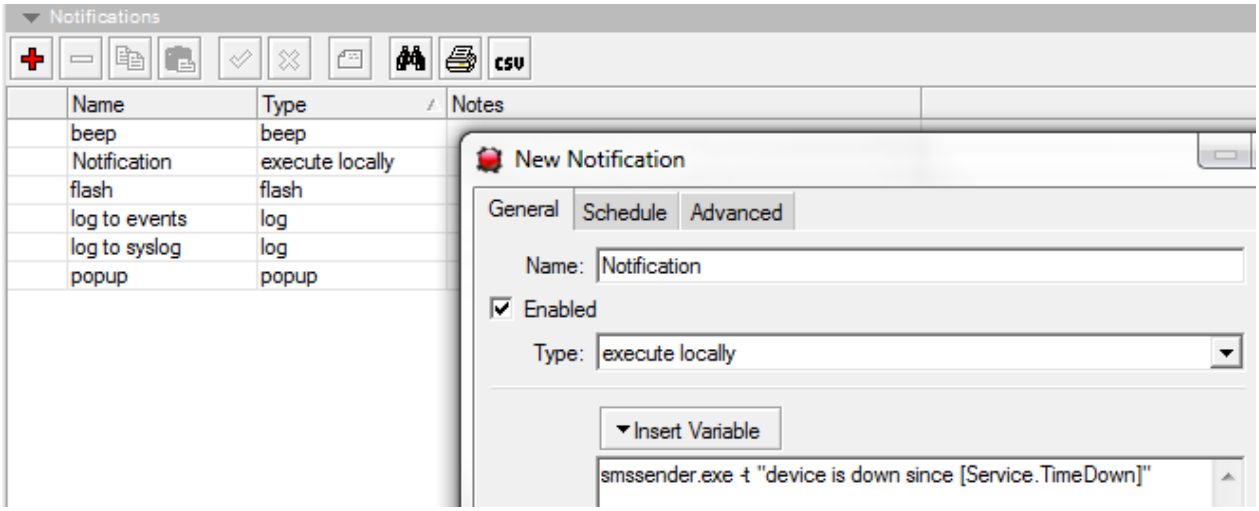
See the Device settings document for more information on how to add a new service.

Outages

The **Outages** tab shows current and previous service reachability issues, their start time, duration and status. This list can be sorted and filtered



Manual:The Dude/Notifications

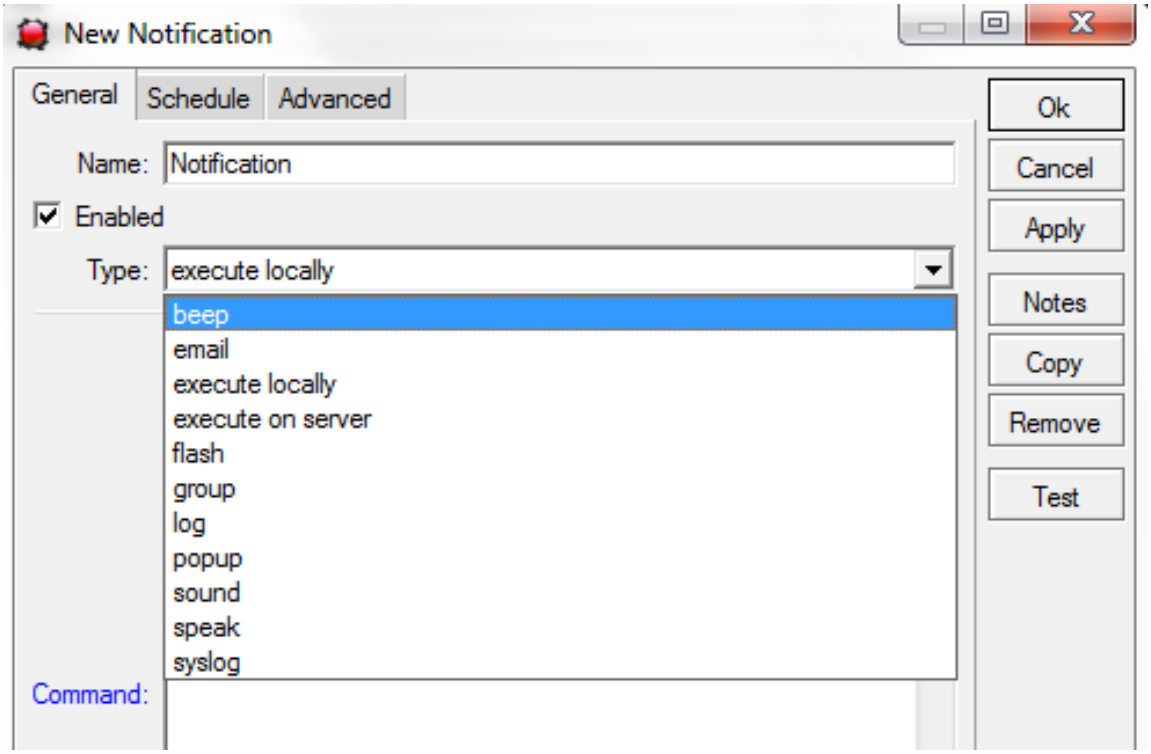


The Notifications pane configures any actions that can be taken when a device status changes. The predefined Notifications are the following:

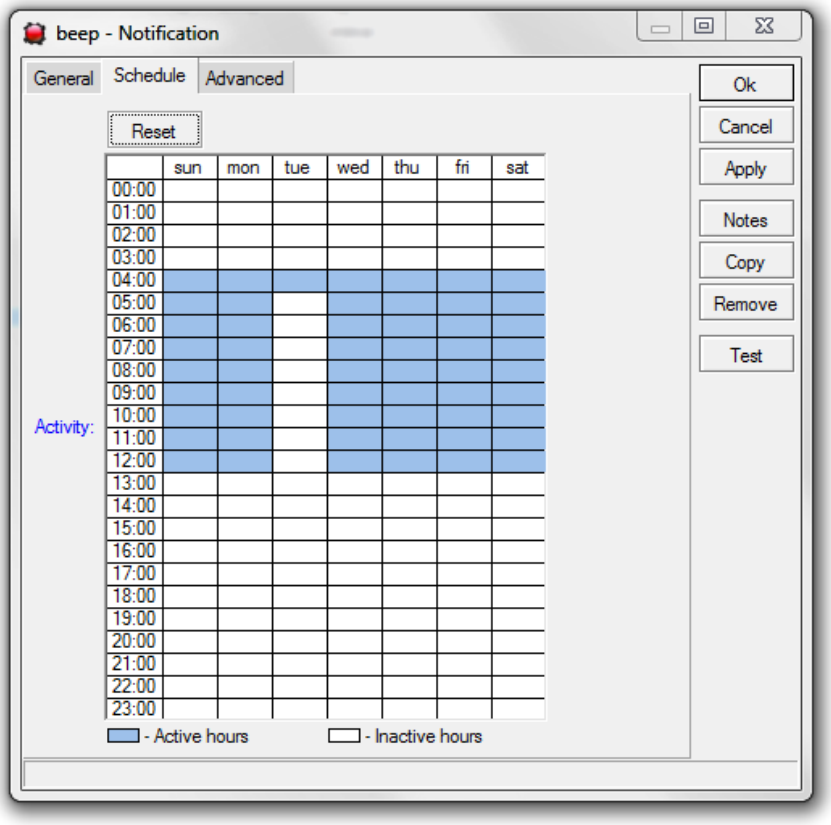
- **Beep** - Makes a beeping sound from the PC speaker of the server PC
- **Flash** - Flashes the Dude taskbar menu
- **Log to Events** - Saves information to local Event log
- **Log to Syslog** - Saves information to Syslog
- **Popup** - Opens a small notification window

You can also add new Notifications, more types are available in the **add** dialog.

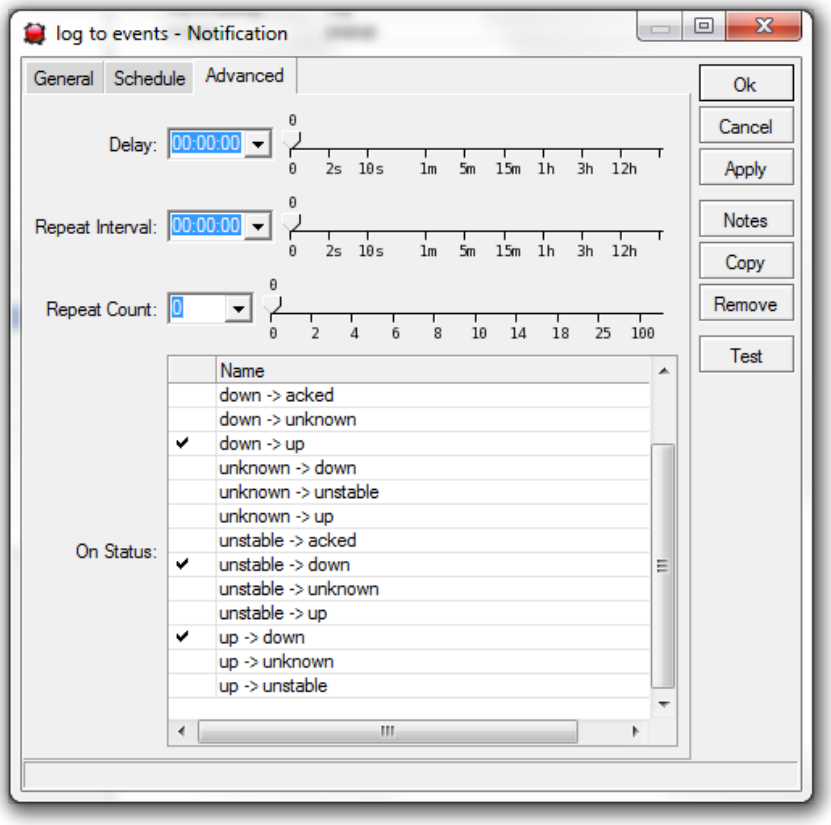
- **Email** - Sends email, need to specify Server address. Authentication not supported.
- **Execute locally** - Run command on the local Windows machine (where Dude viewer runs), can pass variables
- **Execute on server** - Run command on the Dude server machine, can pass variables
- **Sound** - Plays sound. Sound files can be uploaded and chosen here
- **Group** - Executes a group of actions
- **Speak** - Uses Windows speach ability to say the message in a computerised voice
- **Log** - Saves to local Dude Log file
- **Syslog** - Saves to remote Syslog server. Need to specity Syslog address



Each notification can be configured to run only at certain times of day. For example you might not want to play the siren sound at night, if your service is not that critical.



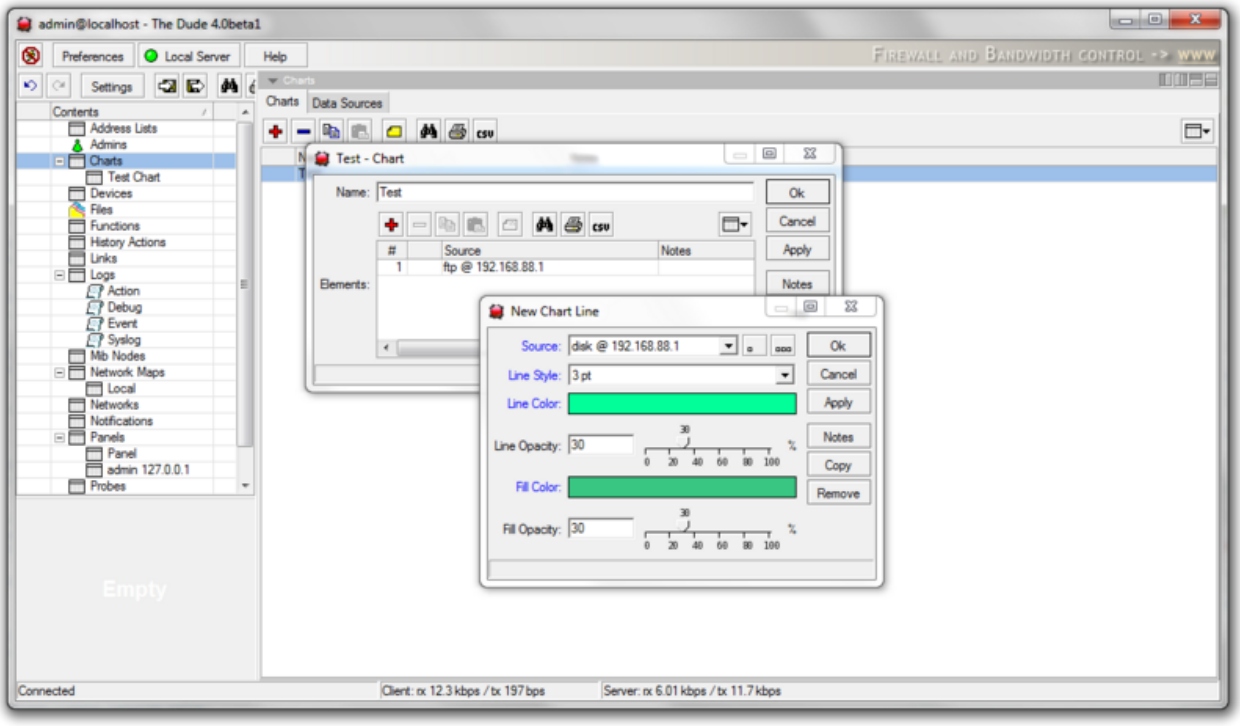
It is also possible to configure how many times a notification should be run, at what intervals and at what specific status changes.



Note: If you would like different notification behaviors for different groups, create different notifications. For example you might have **Siren for Servers** and **Siren for Printers** and one of them would repeat 3 times and the other would only run during daytime

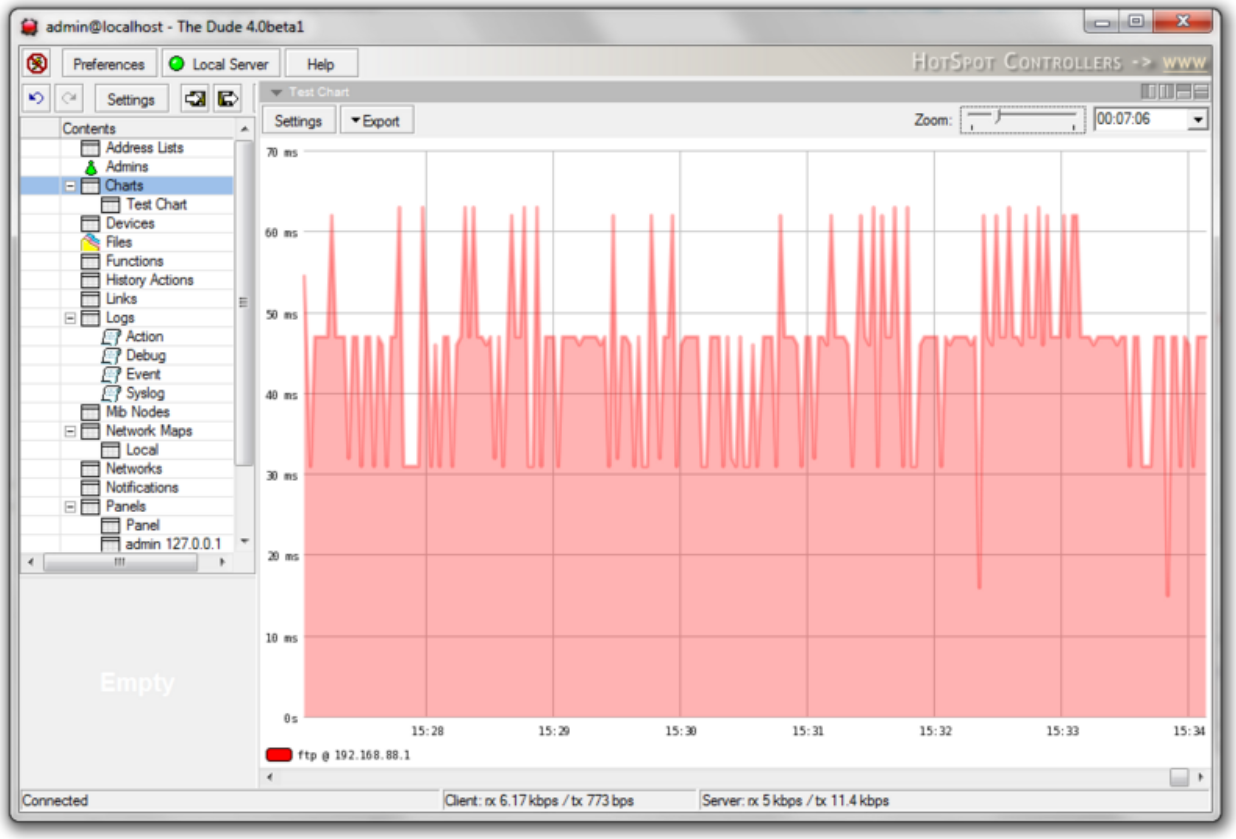
Manual:The Dude/Charts

Adding new charts



The Charts pane allows you to set up visual area charts to represent any data that is available to The Dude. Click on the **Add** button to make a new chart.

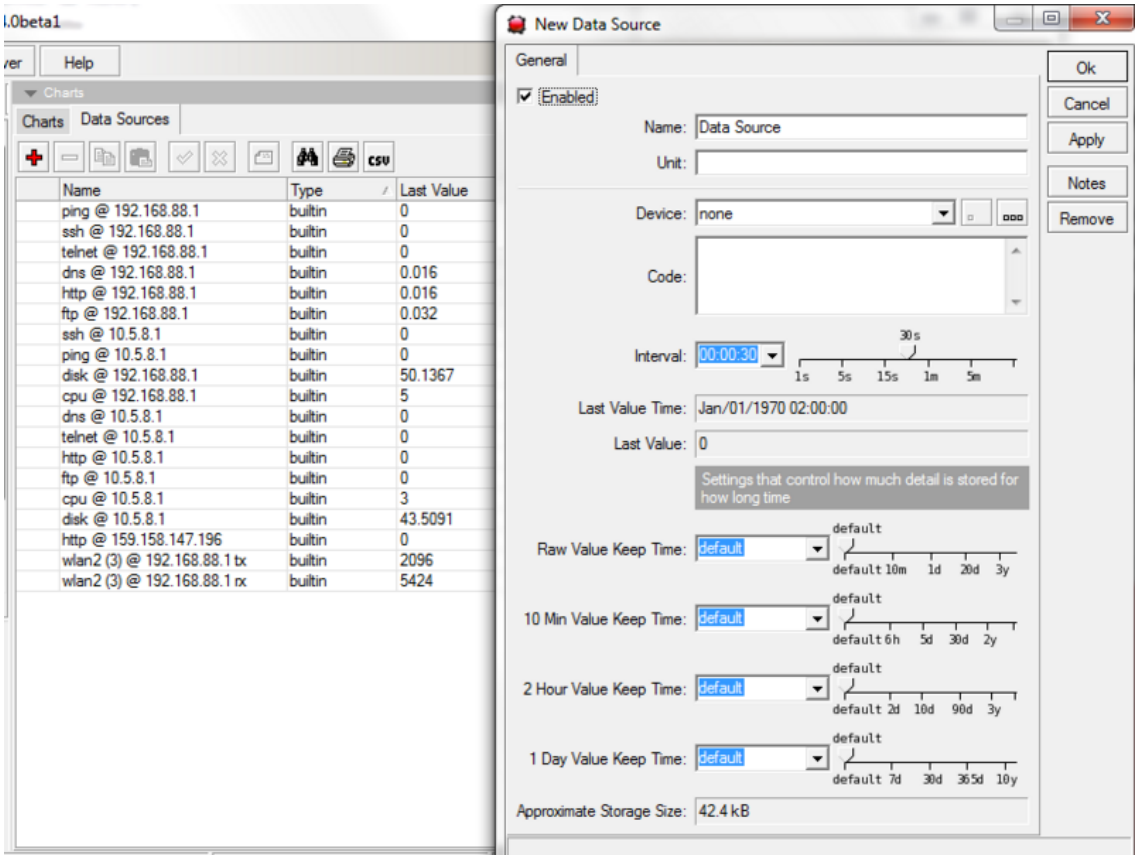
The Dude will automatically offer existing **data sources** that are known from the Devices you have created. Simply choose one or more data sources for your new chart, and click OK to finalize the setup. All created charts will be listed in the Charts pane. You can open any chart for viewing from the lefthand menu or from the list in the Charts pane.



Data sources

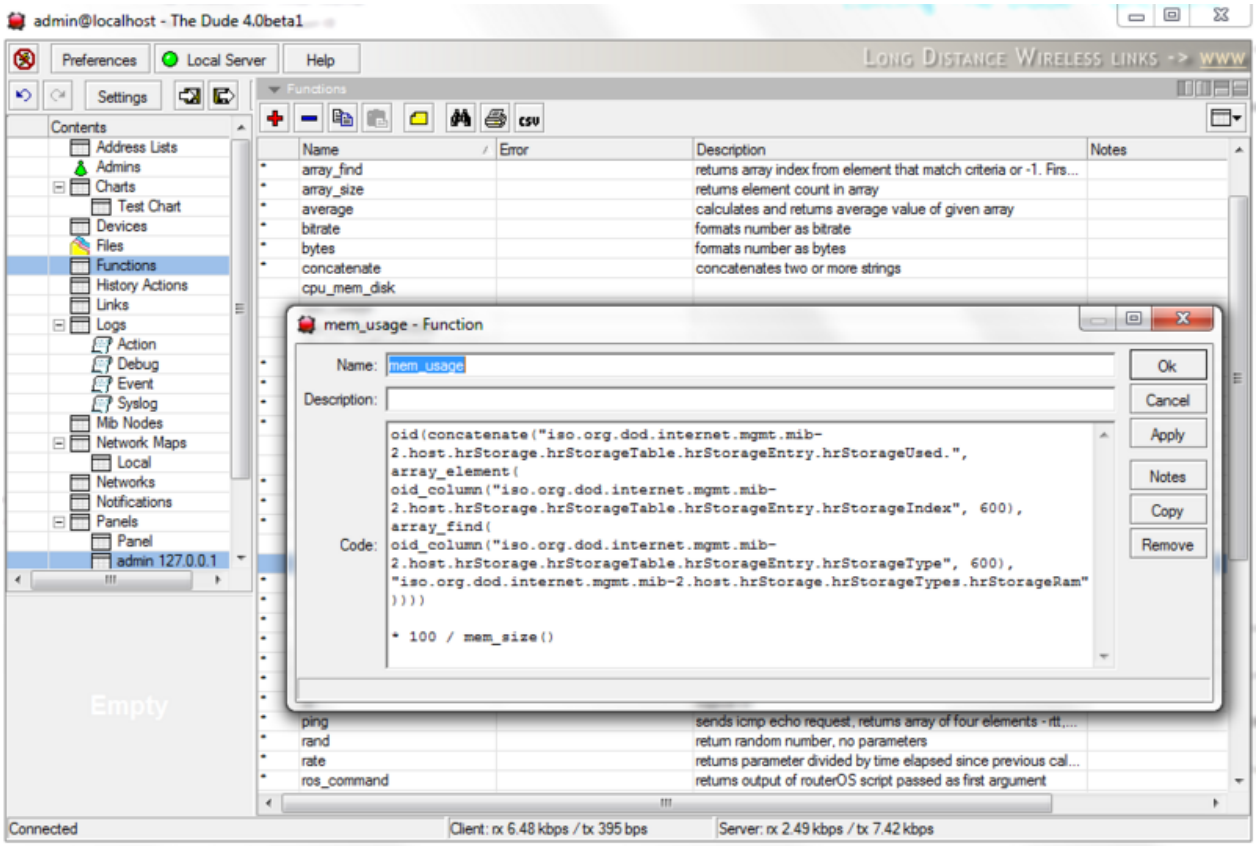
In the **Data sources** tab you can add new sources of Data that have not been previously known from the added device polling mechanisms. You can also specify the amount of time that specific data ranges will be kept in the Dude database. The Dude will show approximate amount of space they will take up.

When adding a new Data Source, you will be asked for **Code**, which is a scripting language of the same kind that is used in the Dude Functions. See examples in the Functions section.


.0beta1
Help
Charts
Charts
Data Sources
csv
Name
Type
Last Value
ping @ 192.168.88.1 builtin 0
ssh @ 192.168.88.1 builtin 0
telnet @ 192.168.88.1 builtin 0
dns @ 192.168.88.1 builtin 0.016
http @ 192.168.88.1 builtin 0.016
ftp @ 192.168.88.1 builtin 0.032
ssh @ 10.5.8.1 builtin 0
ping @ 10.5.8.1 builtin 0
disk @ 192.168.88.1 builtin 50.1367
cpu @ 192.168.88.1 builtin 5
dns @ 10.5.8.1 builtin 0
telnet @ 10.5.8.1 builtin 0
http @ 10.5.8.1 builtin 0
ftp @ 10.5.8.1 builtin 0
cpu @ 10.5.8.1 builtin 3
disk @ 10.5.8.1 builtin 43.5091
http @ 159.158.147.196 builtin 0
wlan2 (3) @ 192.168.88.1 tx builtin 2096
wlan2 (3) @ 192.168.88.1 rx builtin 5424
New Data Source
General
Ok
Cancel
Apply
Notes
Remove
Enabled
Name: Data Source
Unit:
Device: none
Code:
Interval: 00:00:30
30s
1s 5s 15s 1m 5m
Last Value Time: Jan/01/1970 02:00:00
Last Value: 0
Settings that control how much detail is stored for how long time
Raw Value Keep Time: default
default
default 10m 1d 20d 3y
10 Min Value Keep Time: default
default
default 6h 5d 30d 2y
2 Hour Value Keep Time: default
default
default 2d 10d 90d 3y
1 Day Value Keep Time: default
default
default 7d 30d 365d 10y
Approximate Storage Size: 42.4 kB

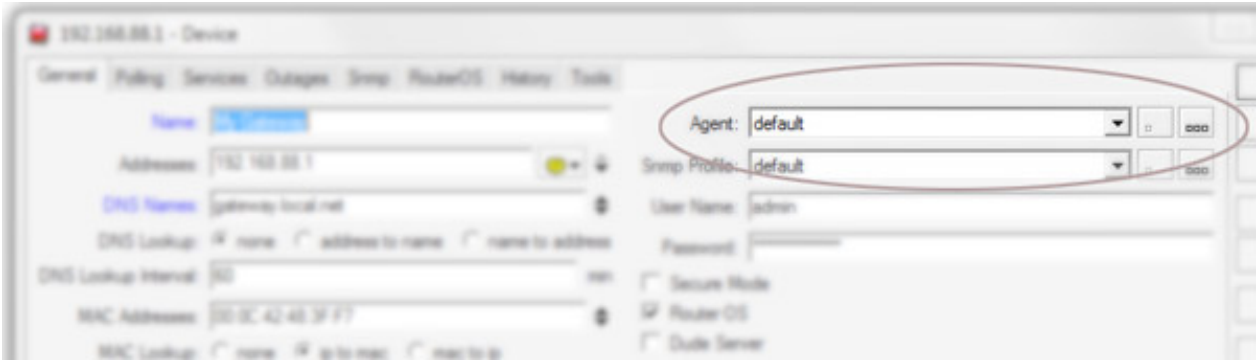
Manual:The Dude/Functions

The **Functions** pane lists all the functions that can be used in the Dude, for example in Charts. You can open up predefined functions so see how they are written. The function language consists of expressions and formulas, similar to Excel spreadsheet formulas. You can use SNMP OIDs and other values when writing a new function.



Manual:The Dude/Agents

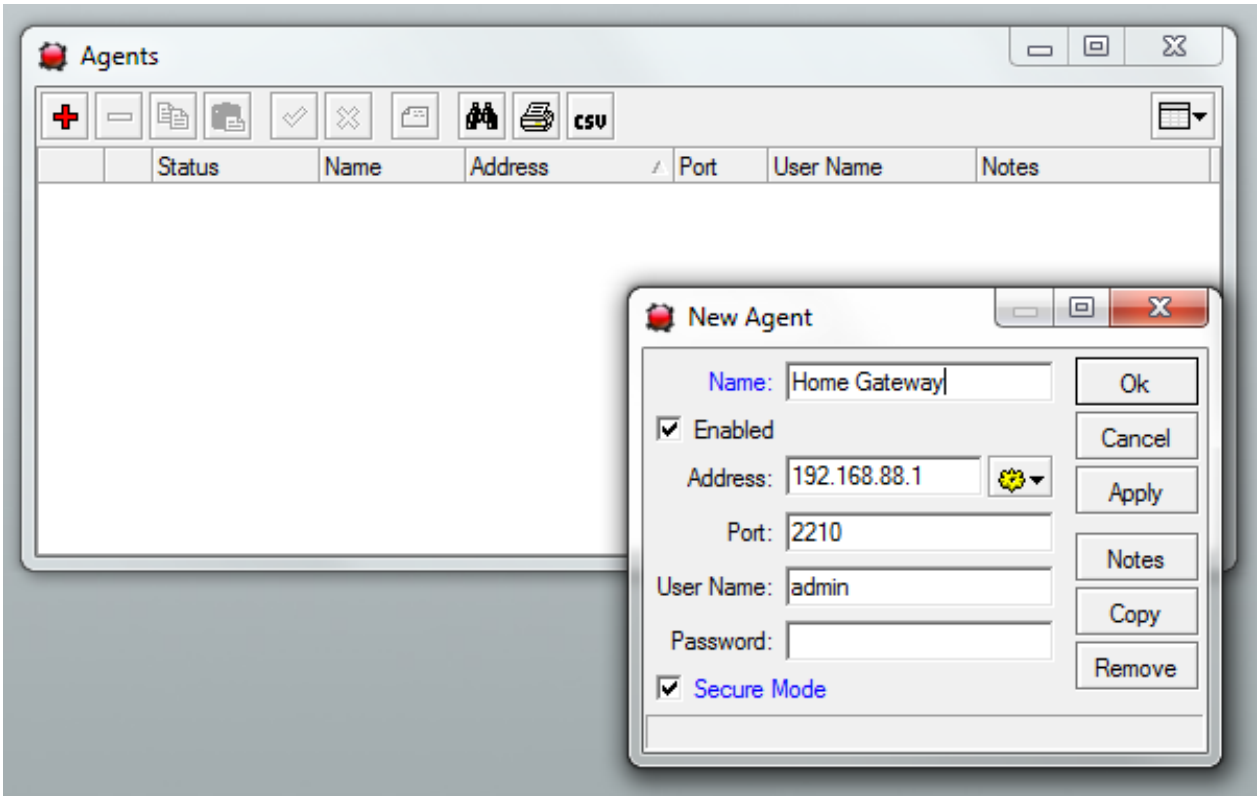
Agents are other **Dude servers** that can be used as intermediaries for device monitoring. They are especially useful if you want to monitor devices within different locations, not all of which are directly reachable.



Note: As the most simple example - you could have a Dude server monitoring your office computers, and when you would want to monitor devices in your branch office, you would install the Dude server package on the branch office Gateway router, and then specify this device as an agent. This agent would then be able to scan and monitor devices behind itself, inside the private network.

You can specify Agents when using the Server settings, Device discovery and also when setting up devices manually.

Clicking the browse button **...** next to the **Agent dropdown** in both of those places allows you to add and edit agents.

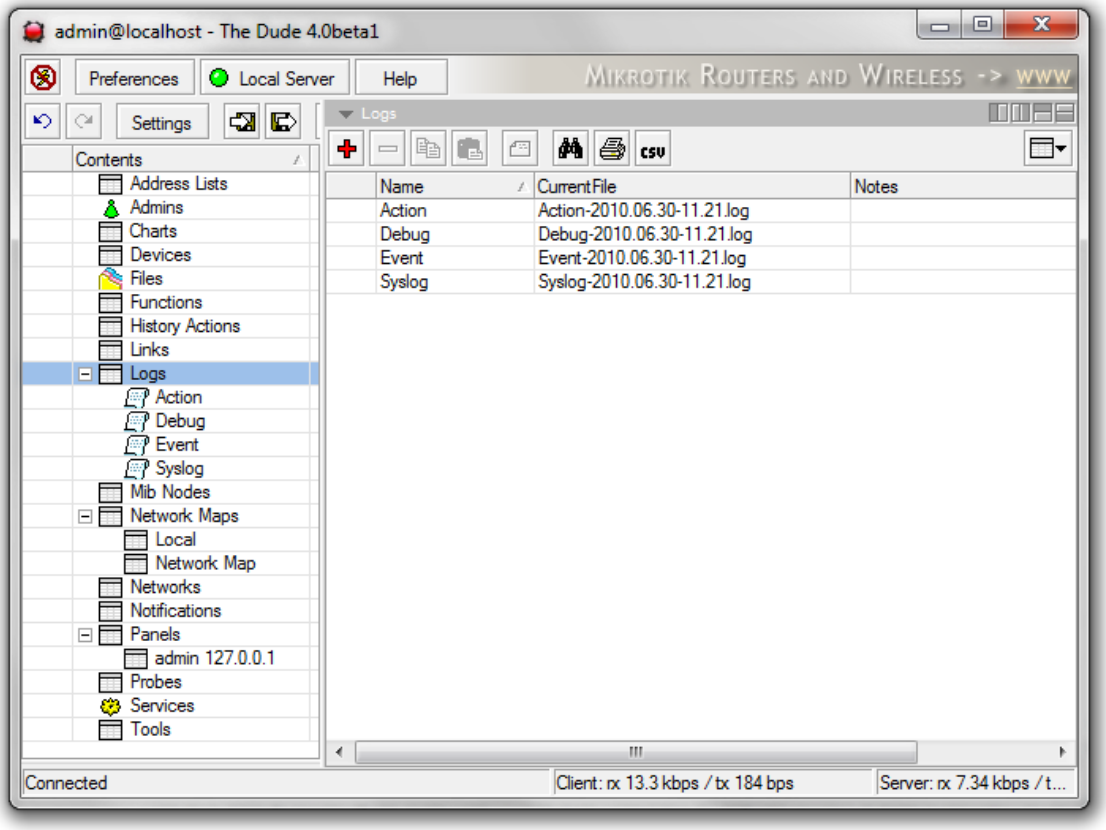


RouterOS as Agent

To use RouterOS as a Dude server or agent, you need to install the Dude package onto RouterOS. Download package from here: http://www.mikrotik.com/thedude.php

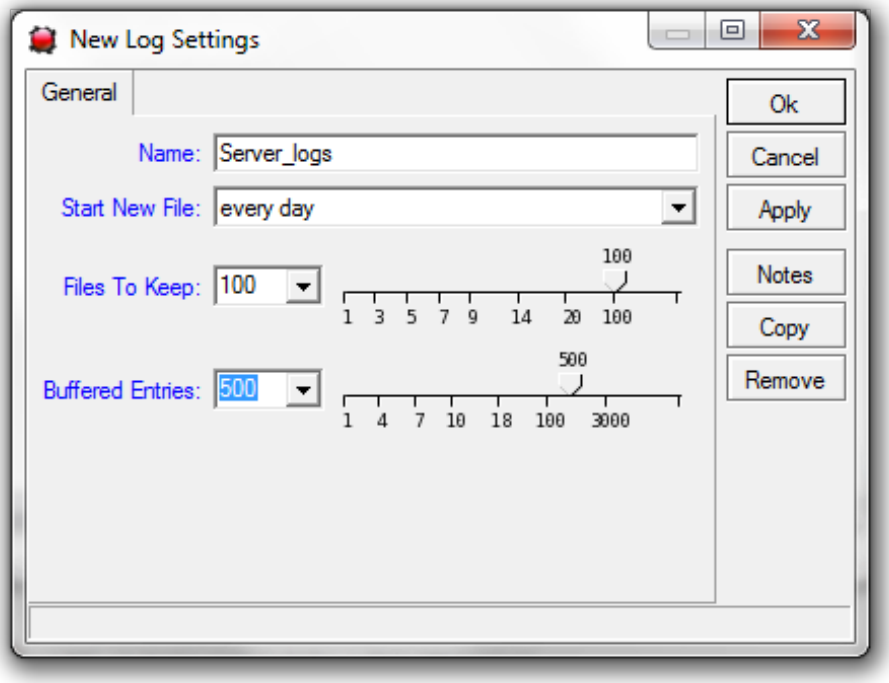
Manual:The Dude/Logs

The Logs Pane allows you to set up new **log**, that can be used for local action logging, and for the built-in Syslog.

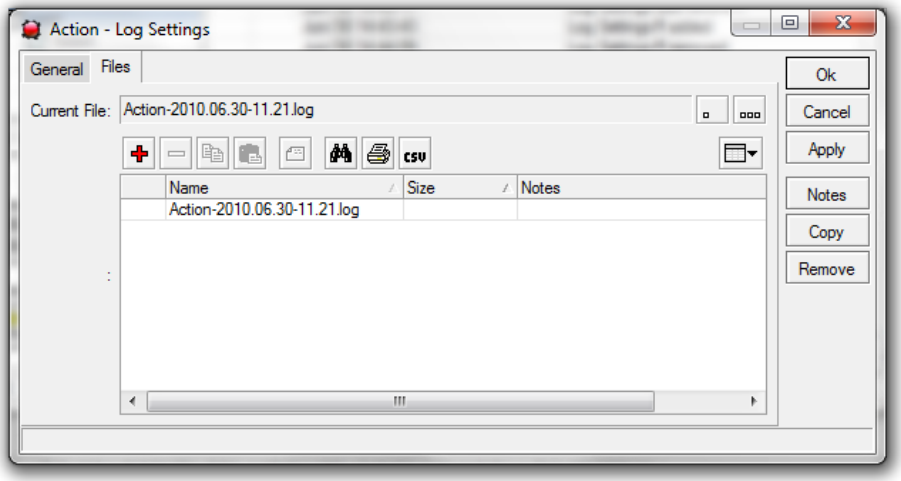


When adding a new log file, you can set the following settings:

- **Name** - The name of your new log
- **Start new file** - How often to start a new file, helps reduce the number of log entries in one file, and organizes logs for quicker navigation
- **Logs to keep** - how many log files shoud the Dude keep before removing old ones
- **Buffered entries** - how many entries to buffer in memory before writing to file



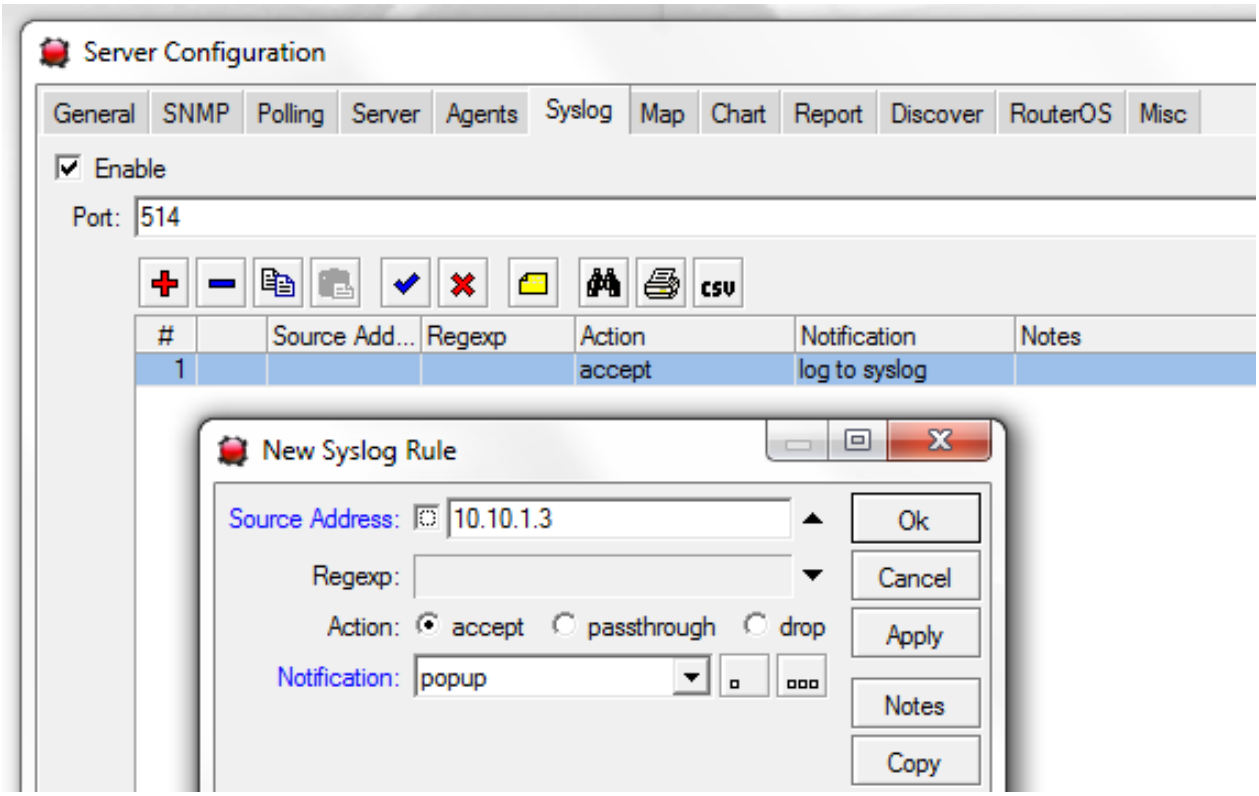
When double-clicking an existing log, you will be able to see the same settings, and in addition - the existing **log files**:



It is also possible to **import a log file** in case you want to combine logs from some previous location with the current Dude logs.

Manual:The Dude/Syslog

The Dude has a built-in standard syslog server, which can be turned on in the Server settings **Syslog** tab. It is also possible to change from the default 514 port, to some other TCP port. The Syslog works very well with the RouterOS Remote logging ability.

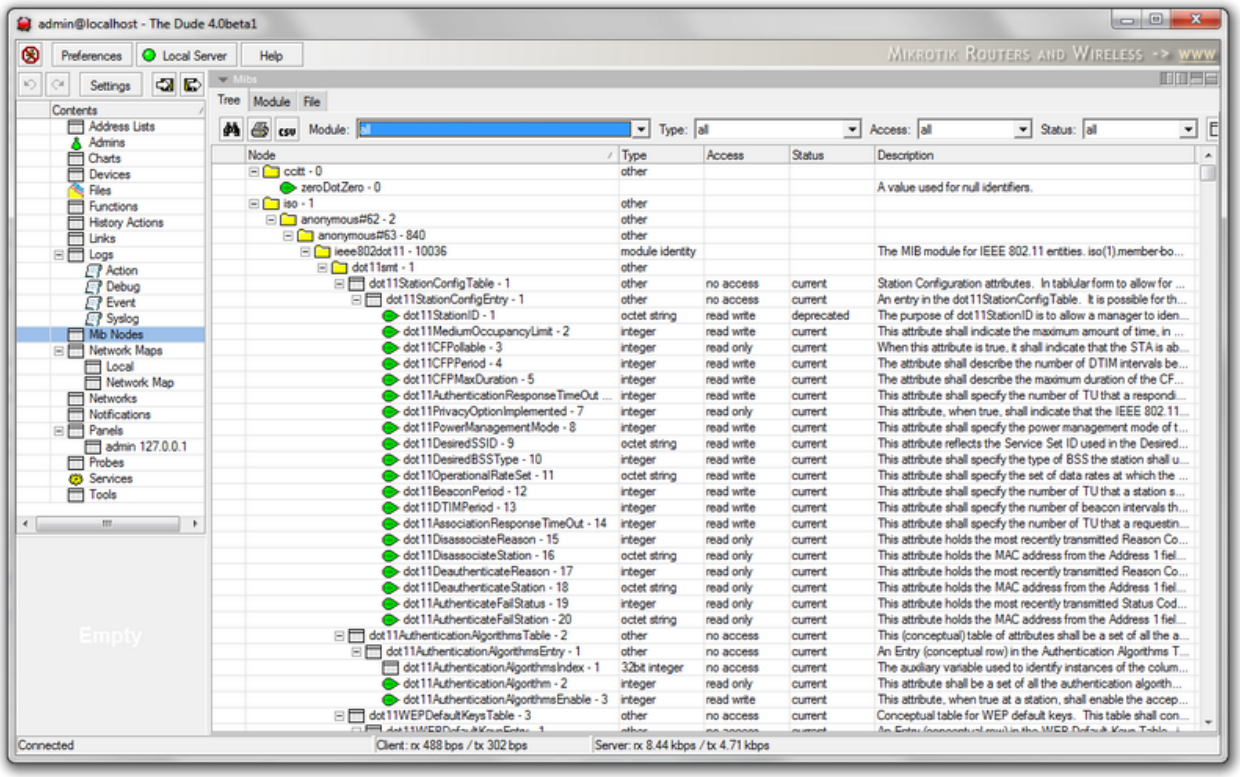


The Syslog settings allows to set up rules based on source address and log line content. This allows you to filter the incoming logs, and send specific ones to specific log files, or ignore certain logs.

Note: By default, the Syslog settings contains one rule - accept all incoming logs, and save them to the Syslog log file. This can be changed

The syslog also allows you to use the standard Dude Notifications for specific incoming logs.

Manual:The Dude/MIB Nodes



The **MIB nodes pane** in The Dude displays the MIB files that are known to the Dude. To add more MIB files to this pane, upload the MIB file in the Files pane and it will appear here automatically.

MIB Files

A **Management Information Base (MIB)** is a map of the hierarchical order of all of the managed objects or MIB variables. Each system in a network (workstation, server, router, bridge, and so on) maintains a MIB that reflects the status of the managed resources at that system.

A MIB file is a database of **OID** values that can be viewed through SNMP. OIDs are arranged in a tree-like structure that begins with a root and expands downwards into branches. Each point in a MIB tree is known as a node.

Note: a MIB file is that it's a kind of dictionary or code book that is used to assemble and interpret SNMP messages.

The value of each OID consists of a sequence of integers. The dotted numeric string representation of an OID separates its subidentifiers with periods; for example, 1.2.3.4.5.6. A MIB variable is referenced by its OID, as well as by its instance identifier, such as INTEGER, STRING, COUNTER, and GAUGE.

Filters

- **Module** - Device type (MIB file)
- **Type** - Type of information (integer, octet string, 32bit integer, counter, gauge etc.)
- **Access** - Data access possibility. Create, Notify, Read only, Read Write, Write only, No access
- **Status** - All, Current, Deprecated, Mandatory, Obsolete

External Links

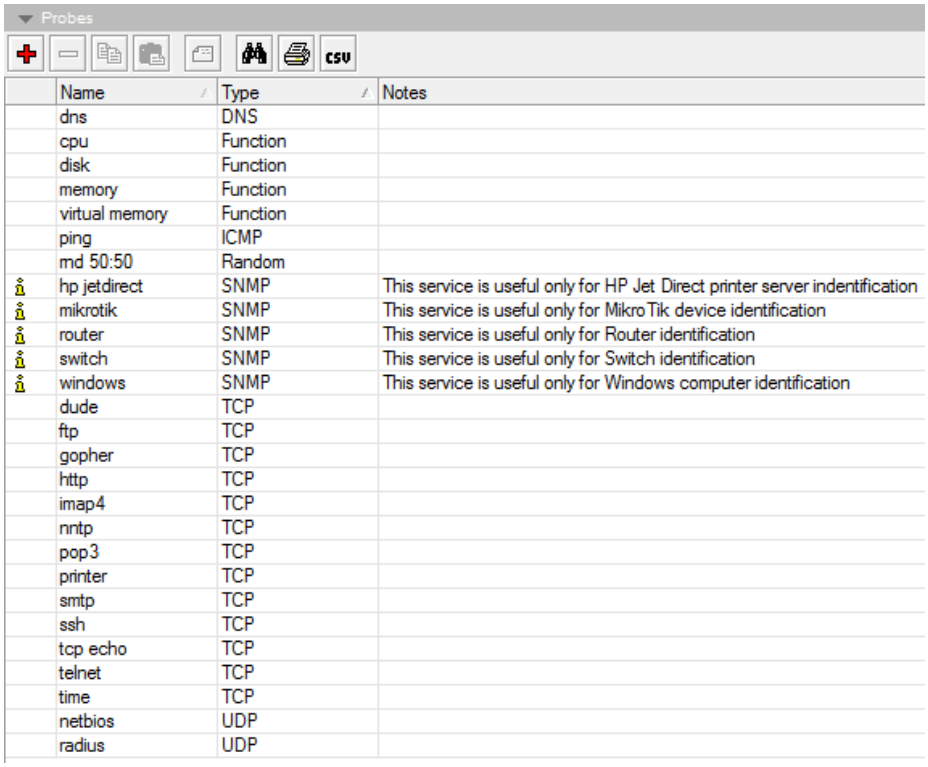
You can read more about MIB files in the following resources:

- http://msdn.microsoft.com/en-us/library/aa909982.aspx
- http://www.dpstele.com/white-papers/snmp-implementation/mib_files.php
- http://en.wikipedia.org/wiki/Management_information_base
- http://www.faqs.org/rfcs/rfc1213.html

Manual:The Dude/Probes

The Probes pane shows the available methods of checking for device services. Probes are used when discovering new devices and when polling existing devices.

There is a wide choice of predefined Probes, and you can also add new ones. Double-click an existing Probe to see how it was set up, or to adjust it's settings.

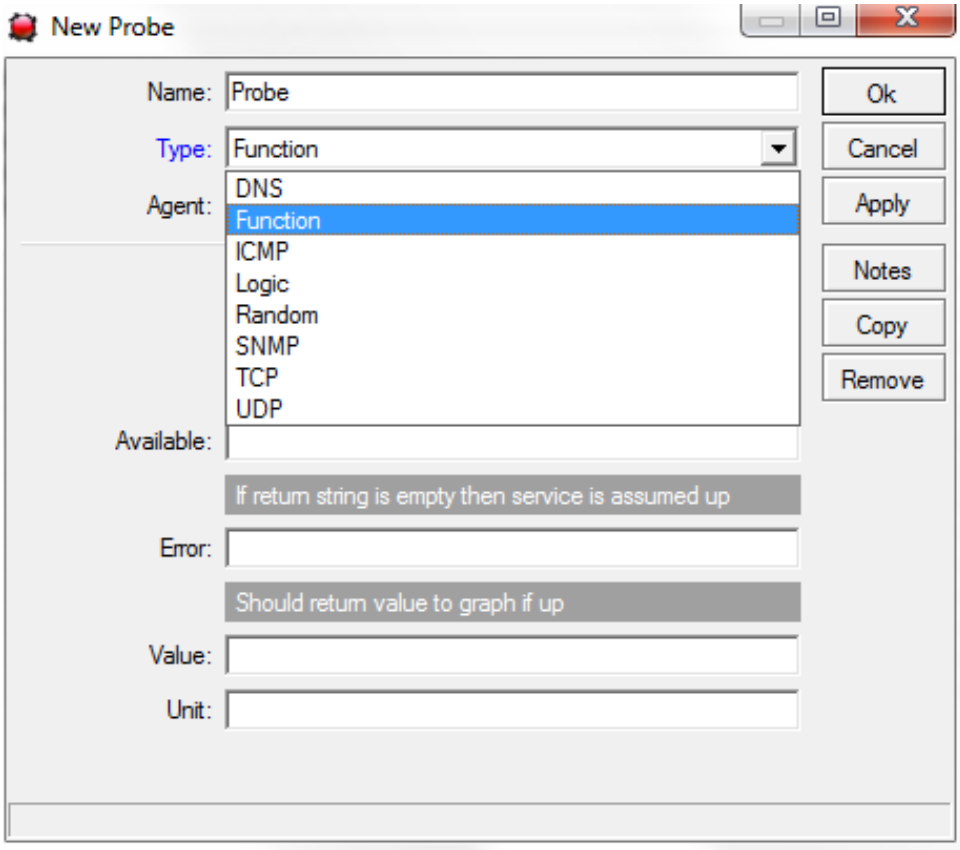


	Name	Type	Notes
	dns	DNS	
	cpu	Function	
	disk	Function	
	memory	Function	
	virtual memory	Function	
	ping	ICMP	
	rnd 50:50	Random	
i	hp jetdirect	SNMP	This service is useful only for HP Jet Direct printer server indentification
i	mikrotik	SNMP	This service is useful only for MikroTik device identification
i	router	SNMP	This service is useful only for Router identification
i	switch	SNMP	This service is useful only for Switch identification
i	windows	SNMP	This service is useful only for Windows computer identification
	dude	TCP	
	ftp	TCP	
	gopher	TCP	
	http	TCP	
	imap4	TCP	
	nntp	TCP	
	pop3	TCP	
	printer	TCP	
	smtp	TCP	
	ssh	TCP	
	tcp echo	TCP	
	telnet	TCP	
	time	TCP	
	netbios	UDP	
	radius	UDP	

Adding new probes

There are several probe types, they are:

- **DNS** - Sends DNS resolve request with specified name to resolve, and optionally checks if response matches the specified IP addresses (at least one of them)
- **Function** - Performs custom functions to decide if service is up. If the device is up, can graph data of another function
- **ICMP** - Sends ICMP echo requests (pings) of specified packet size and TTL. Can try a number of times, and specify retry interval.
- **Logic** - Logic probe invokes other probes and performs logic operations based on results
- **Random** - Randomly decides if service is up, or not. Can specify **up** chance. Useful for testing.
- **SNMP** - Will query specified OID and service will be up, if a response is received and result of comparison is a logical true
- **TCP** - Generic TCP probe, can be used for various protocols. Can send and wait for specific responses
- **UDP** - Generic UDP probe, can be used for various protocols. Can send and wait for specific responses

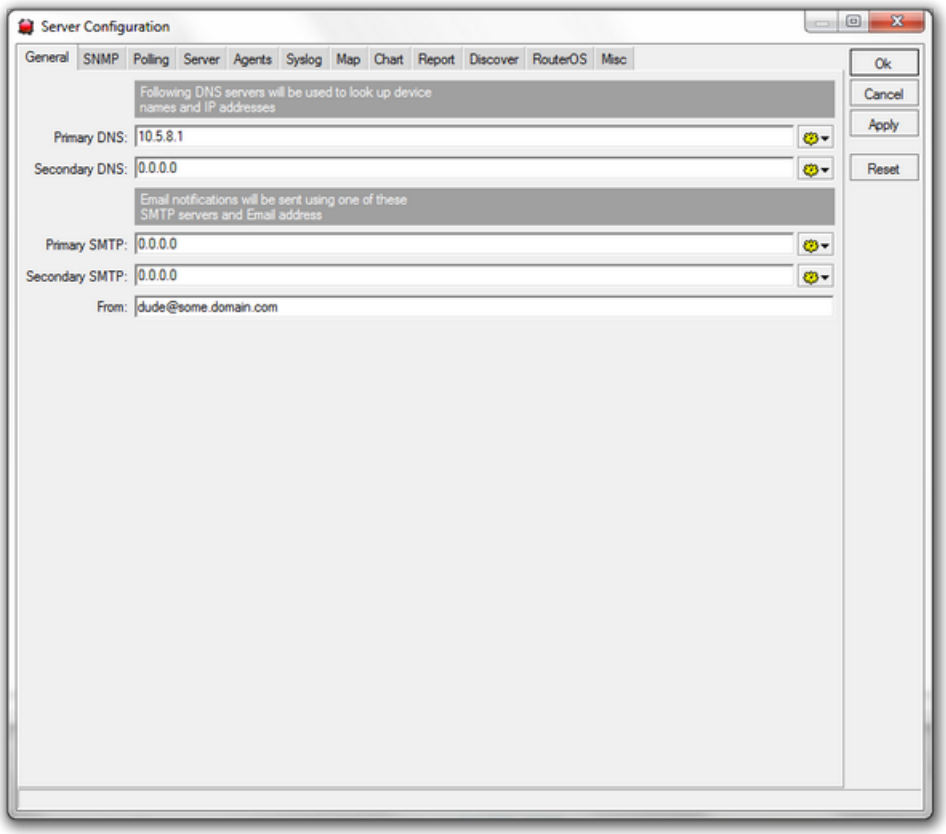


Settings

Manual:The Dude/Server settings

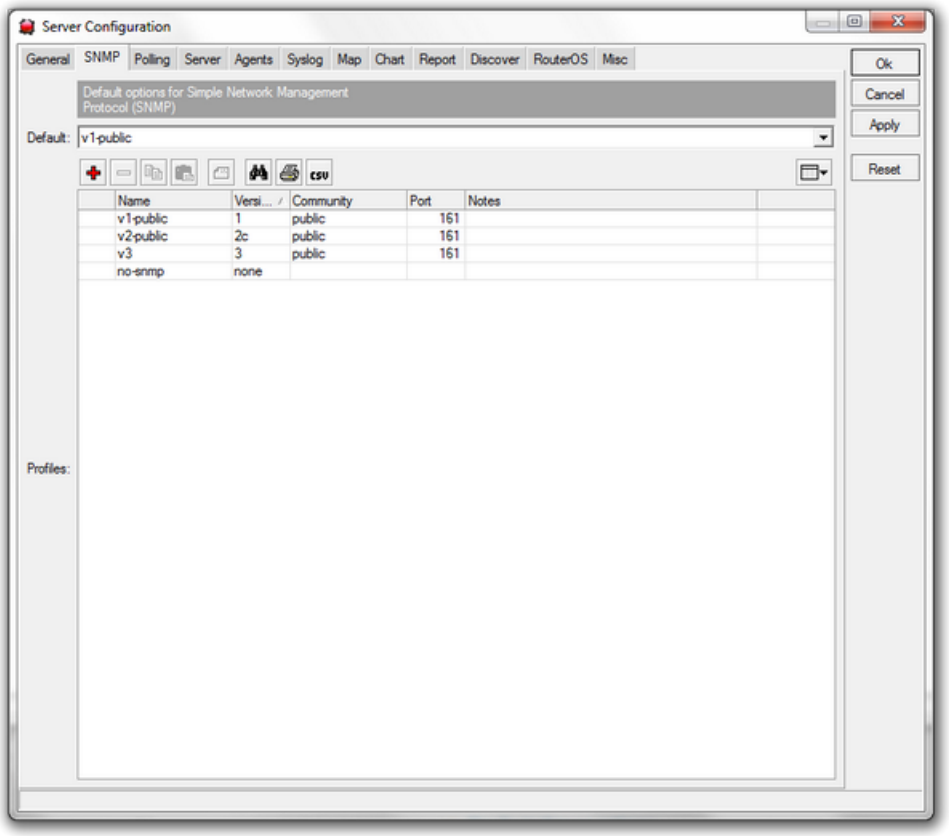
General

Allows to set Primary and Secondary DNS servers to be used for domain name resolving in all Dude settings panels.



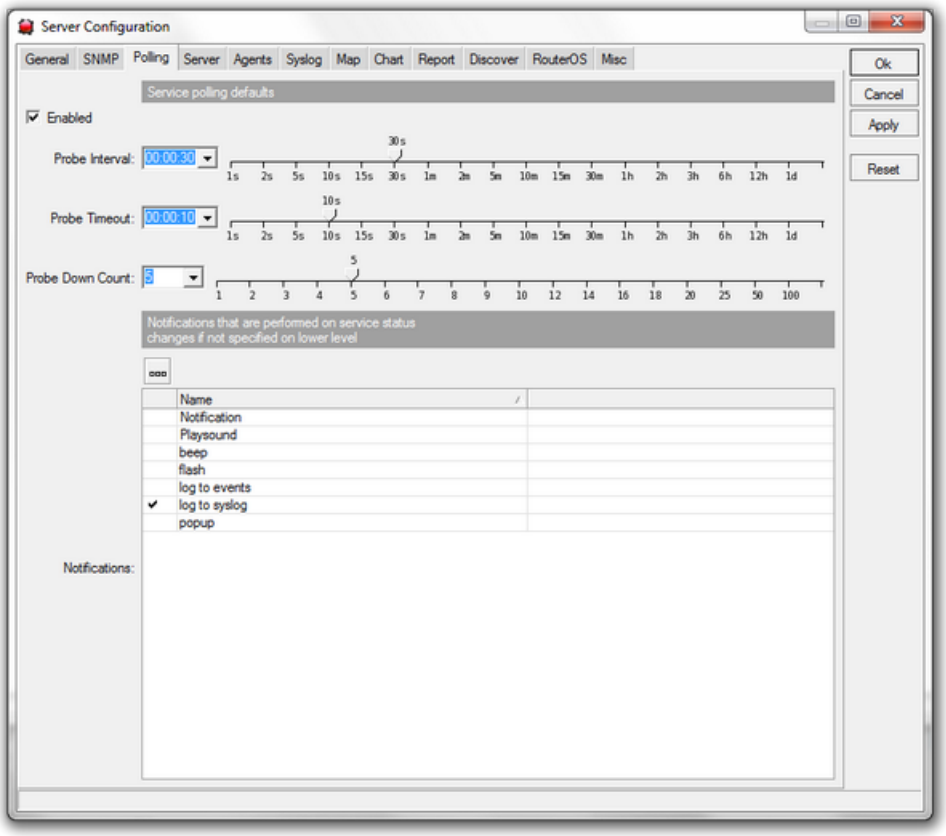
SMMP

Settings for default SNMP access ports and connection timeouts. Allows to add new profiles, based on SNMP v1, v2 or v3.



Polling

Settings for default Service Polling behavior. Options similar to Services and Notifications



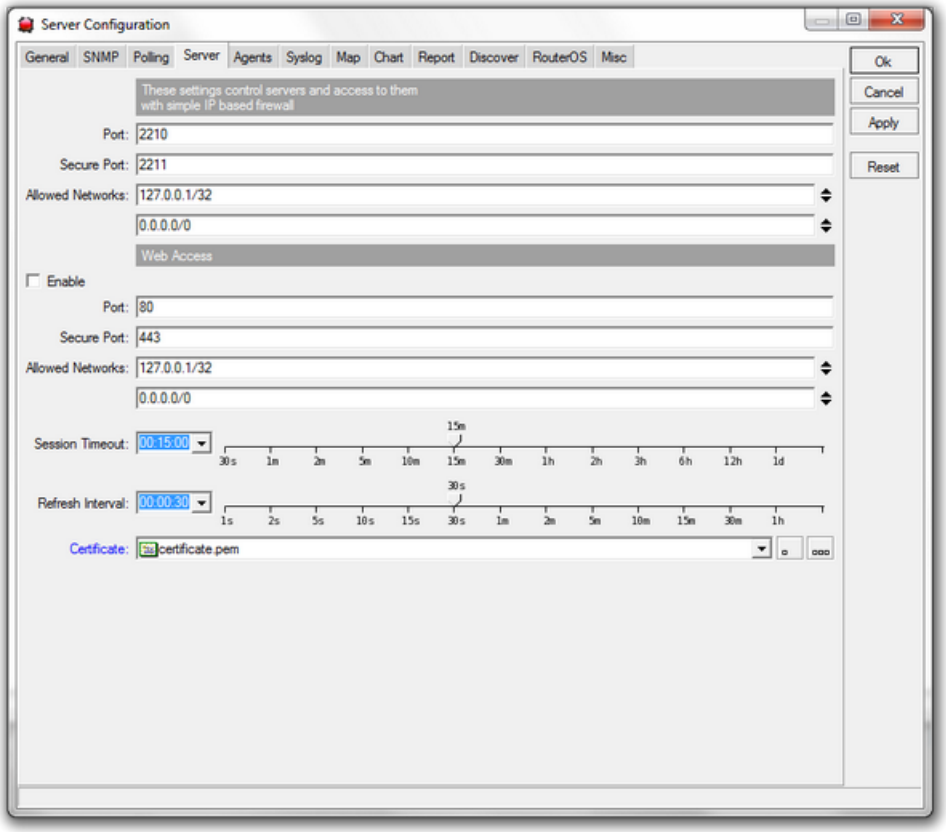
Server

Settings for the Local Dude server. The following options are changable:

- **Port** - access port for remote connections
- **Secure port** - port when using enctrypted (secure) connection
- **Allowed networks** - network ranges that can connect to this Dude server

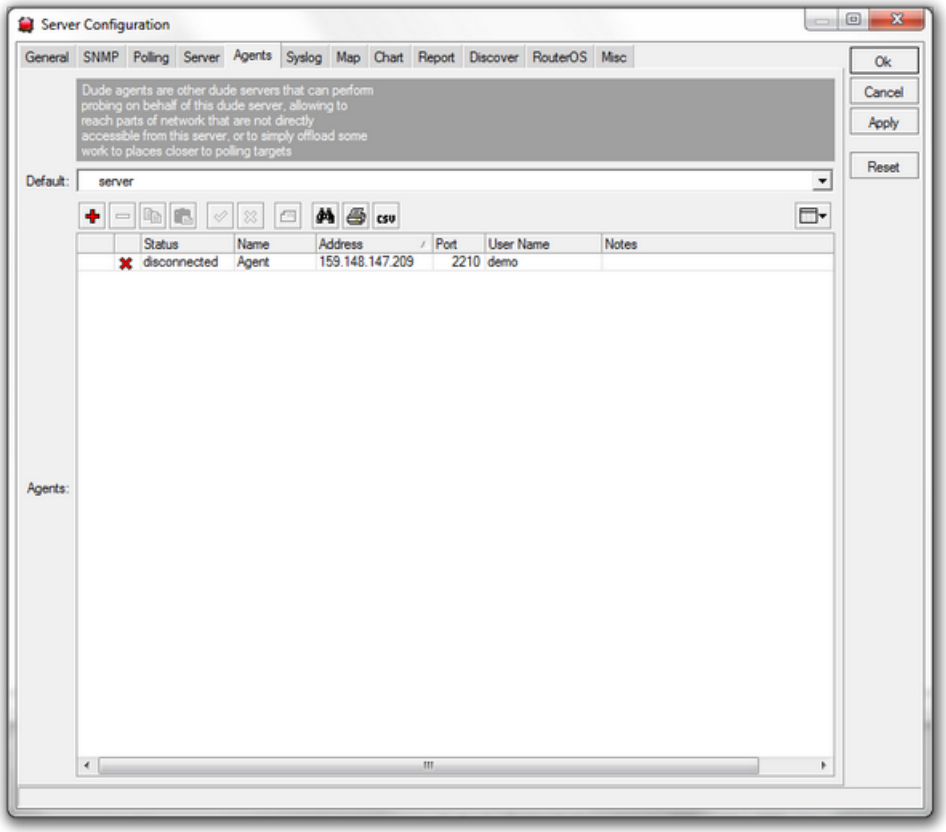
Web access

- **Enable Web access** - Runs The Dude web interface, by default accessible over HTTP on TCP port 80
- **Port** - port of the running web server. Might need to change if something else is running on port 80, or for security reasons
- **Secure port** - port of the secure https interface
- **Allowed networks** - network ranges that can connect to the dude web server interface
- **Session timeout** - After how much inactivity the Dude will consider the session to be ended, and will log you out
- **Refresh interval** - How often to reload the dude web interface, and refresh the map.
- **Certificate** - required for running the secure https dude web interface



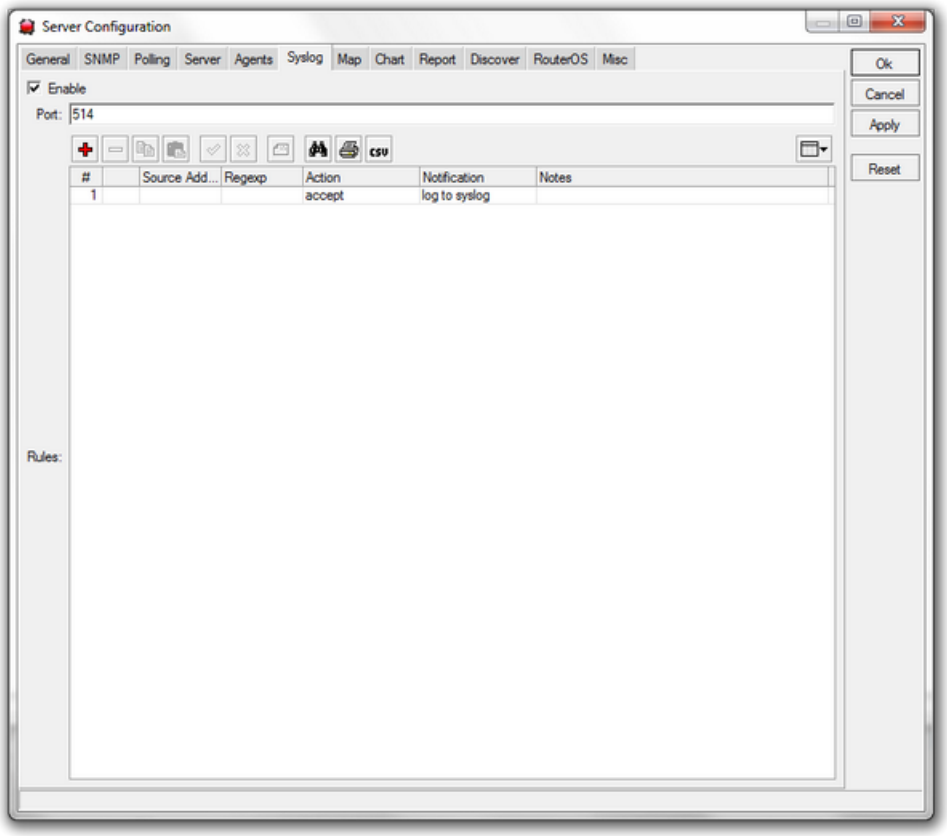
Agents

Configuration of remote Dude agents, as described in the Agents page



Syslog

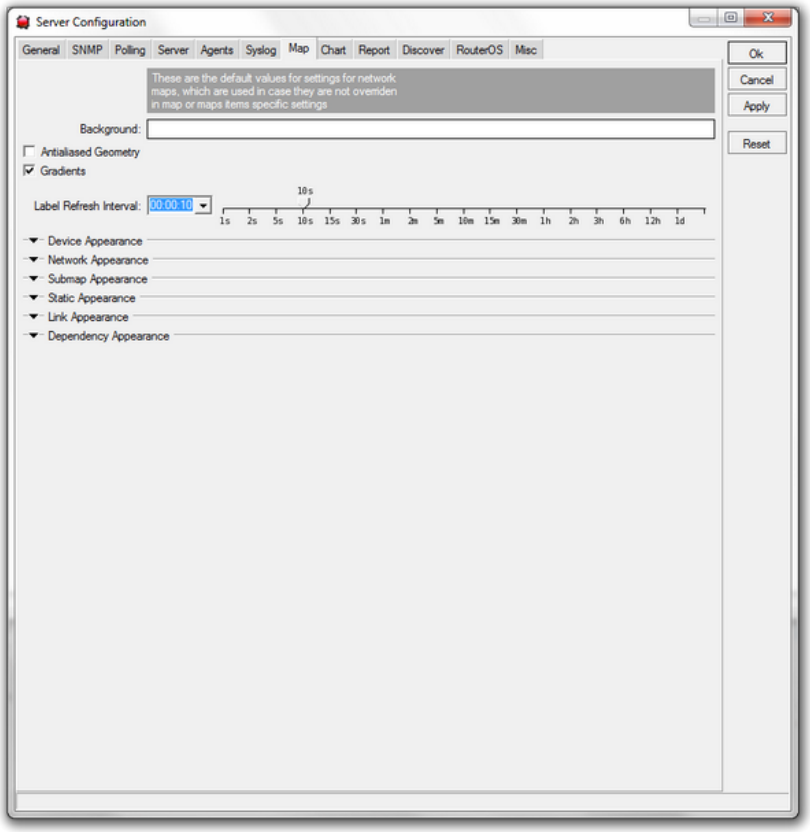
Settings for the built-in Syslog server, as described in the Syslog page



Map

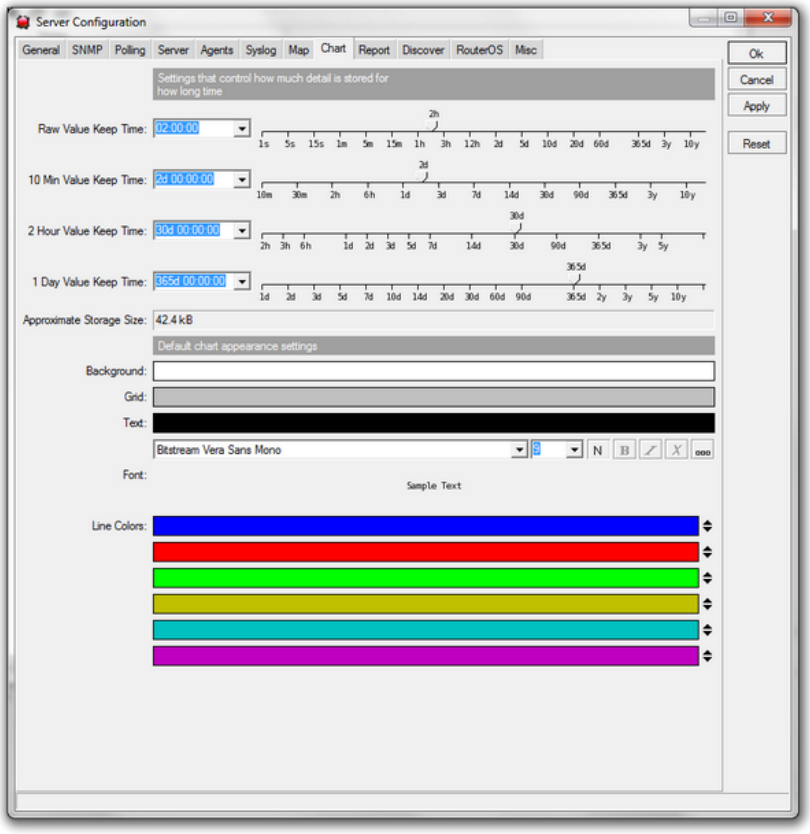
Defaults for Map settings, identical to individual Map settings, except the following options:

- **Antialised Geometry** - Lines are drawn without the jagged edges. Requires more resources and can impact very large and detailed maps, but icons and links appear more smooth and look better.
- **Gradients** - Whether to use solid colors or gradients for icon backgrounds, also affects performance
- **Dependency appearance** - How to show dependency links in the Map Dependency layer.



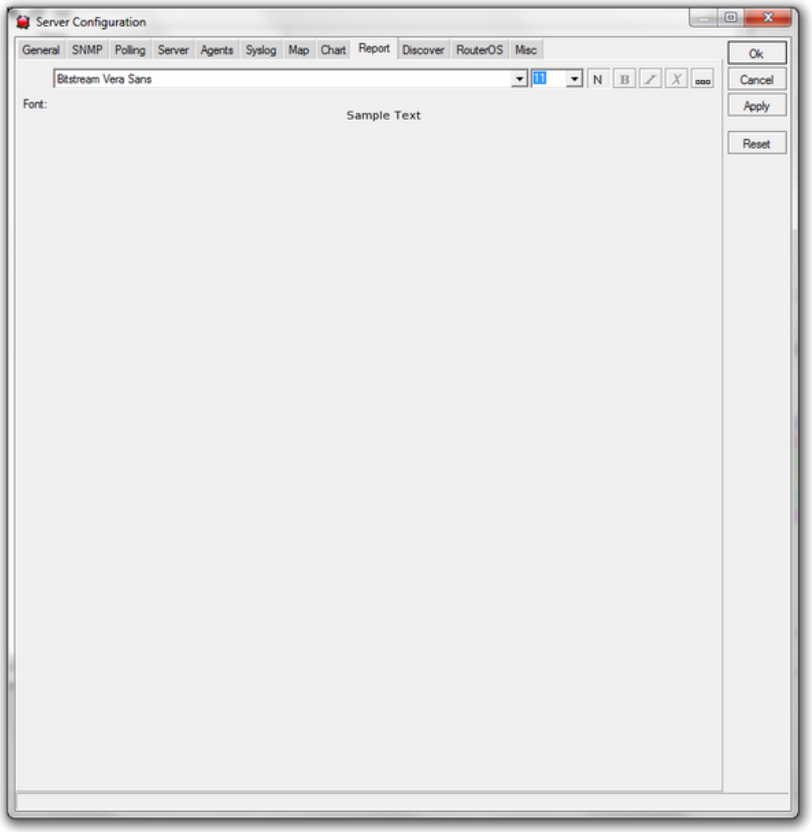
Chart

Settings for default Chart appearance (colors and fonts) and also the Value keep times. Settings similar to Chart settings



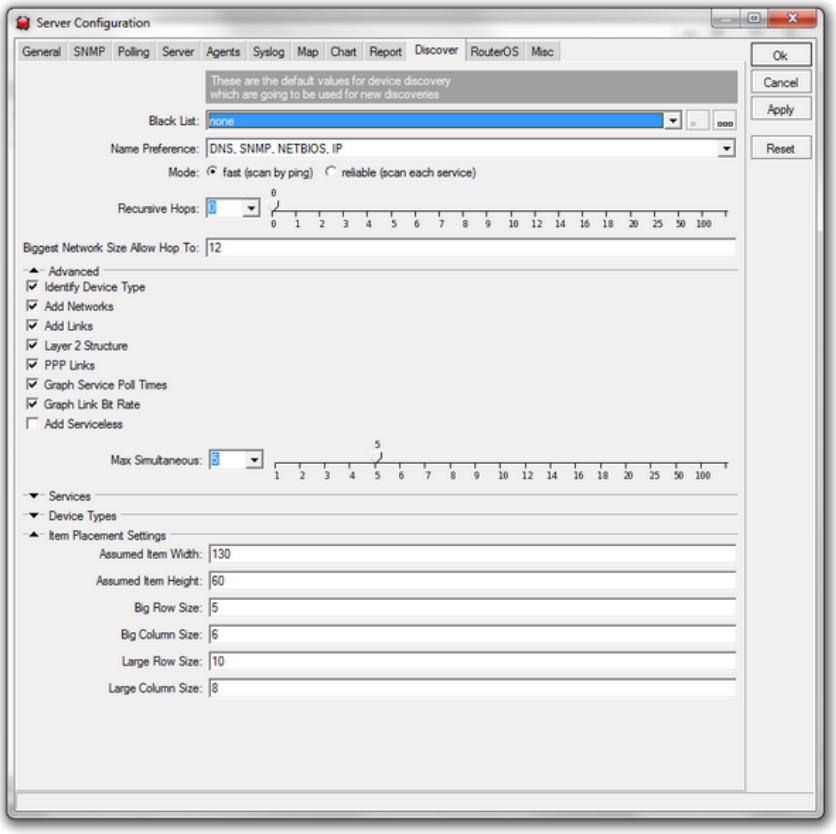
Report

Configures the Font Family and Font Size of the PDF Print feature.



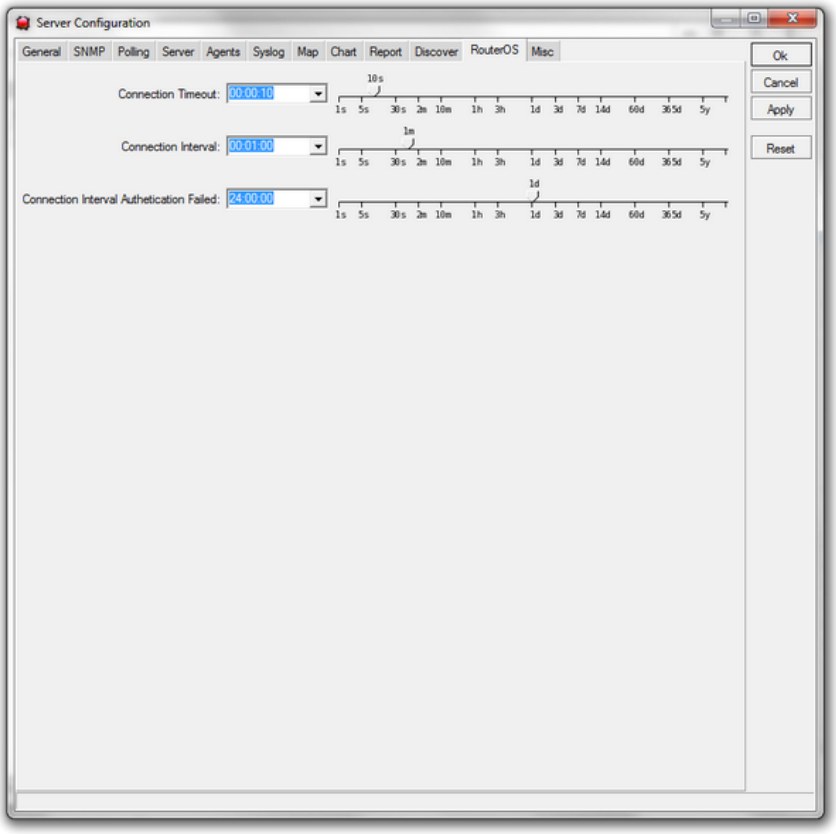
Discover

Default settings of the Discovery process, mostly identical to Device discovery except the **Item placement settings** section, which decides how wide and how far apart should the map elements be made.



RouterOS

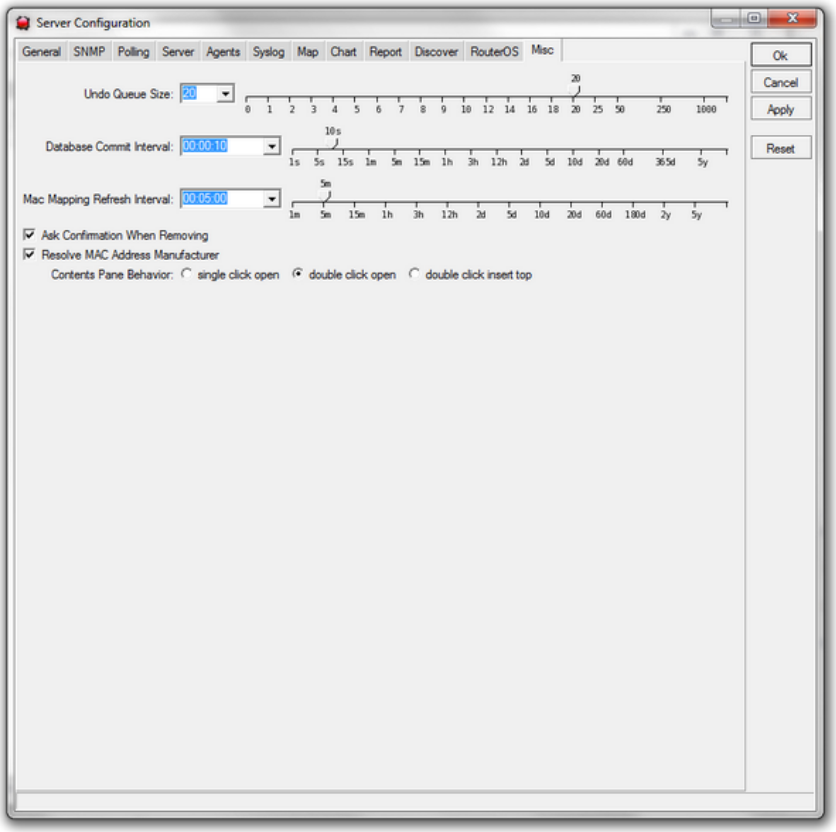
Default connection timeouts and intervals for RouterOS connections



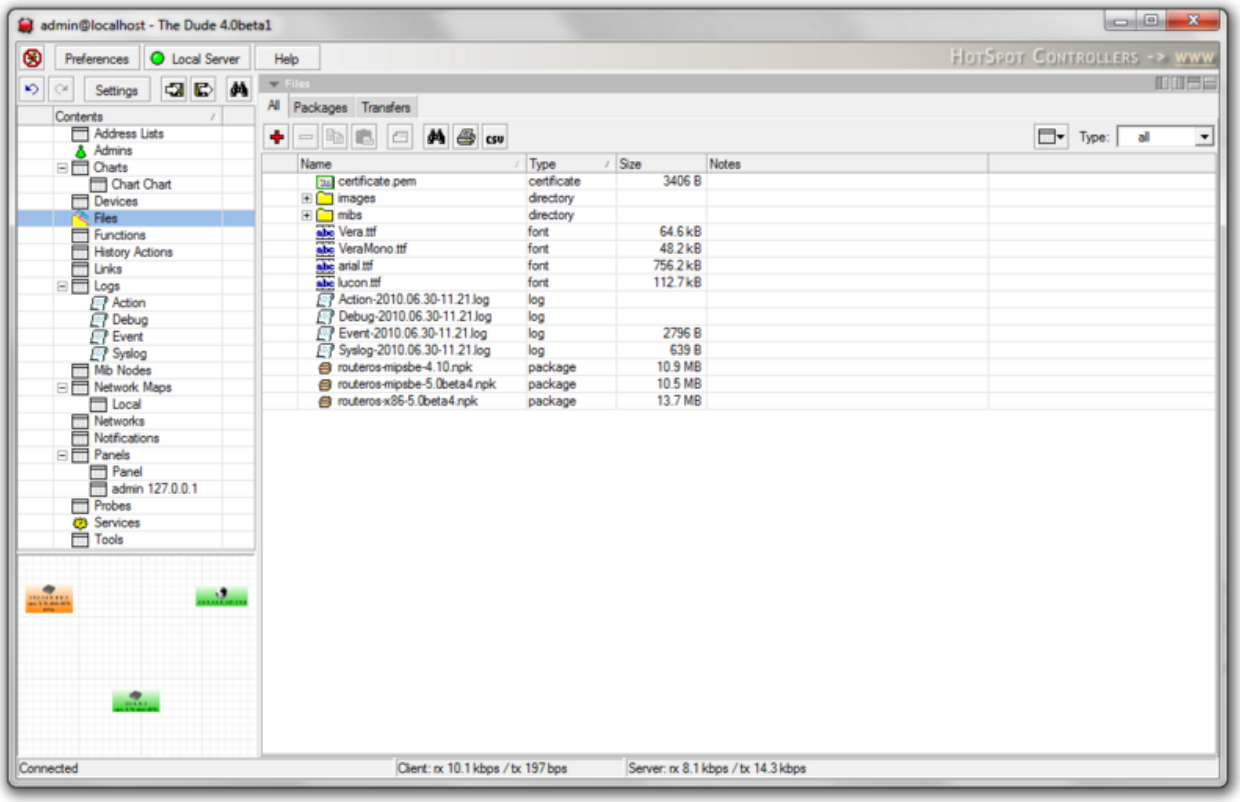
Misc

Settings for the Dude program itself.

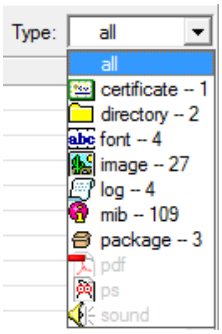
- **Undo queue size** - how many actions should be kept in the Undo memory
- **Database commit interval** - How often should the Dude database be saved
- **Mac Mapping Refresh Interval** - How often to update the MAC mappings
- **Ask confirmation when removing** - whether to show you the confirmation dialogs
- **Resolve MAC address manufacturer** - in Table views, will show device MAC address as **Routerboard:20:94:61** and similar, depending on manufacturer
- **Contents pane behavior** - how to open new panes from the left-hand menu, possible options:
  - Single click open
  - Double click open
  - Double click insert top



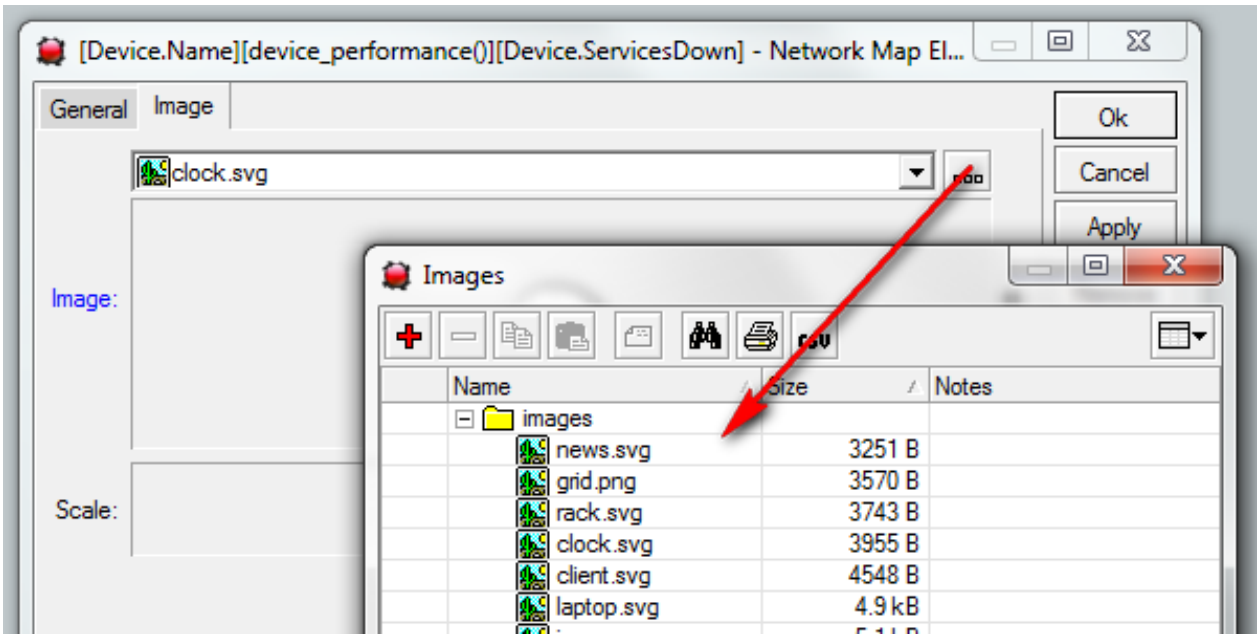
Manual:The Dude/Files



The **Files** pane manages all the files The Dude server can use. This includes Images for icons and backgrounds, fonts, logs, RouterOS packages and certificates.



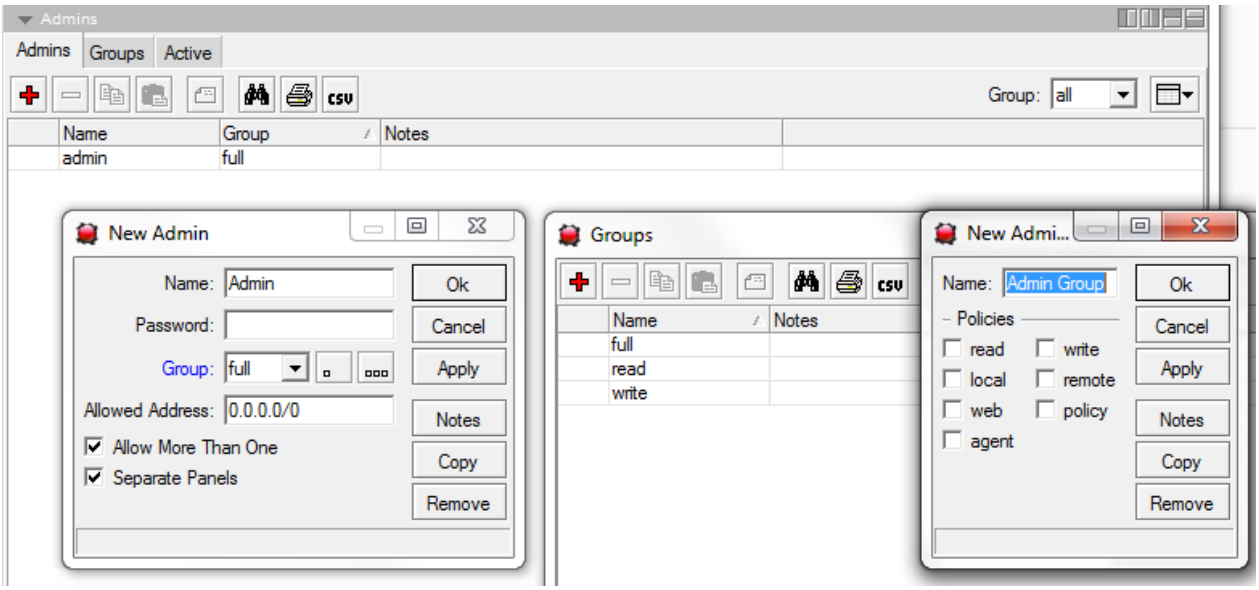
Adding files is possible from this pane via the **Add** button, or from the place where the icon will be used, via the **...** button, like here in the Device Appearance settings:



Separate tabs exist for **RouterOS packages** and active File **Uploads** to the server.

Manual:The Dude/Admins

The admin pane allows you to set up accounts that connect to The Dude server. The accounts can have different kinds of permissions depending on which user group they belong to.



Adding new admin

In the Add dialog you will be asked for the following:

- **Name** - username of the account
- **Password** - password of the account
- **Group** - which usergroup will it belong to, predefined groups are "full", "read" and "write"
- **Allowed address** - from which IP subnet will the account able to connect
- **Allow more than one** - If simultaneous logins are possible
- **Separate panels** - if each user will see their own Panels, and will not affect the other users by changing the layout of the Panes

User Groups

The following groups exist in The Dude by default:

- **Full** - has all rights
- **Read** - can't change settings, only view them (has no **agent**, **policy** and **write** permisions)
- **Write** - can't become Full user or connect as an agent (has no **policy** and **agent** rights)

You can also make new groups, with custom permissions. The following permissions are possible:

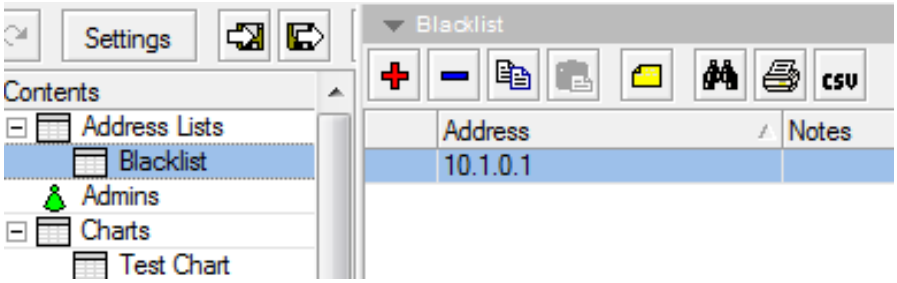
- **Read** - see configuration
- **Write** - save configuration
- **Local** - connect to local server
- **Remote** - connect to remote servers by specifying an address
- **Web** - access to Web service of The Dude
- **Policy** - changing of users and groups
- **Agent** - connecting to remote dude systems as an Agent

Active users

In the **Active** tab you can see currently logged in users for this server.

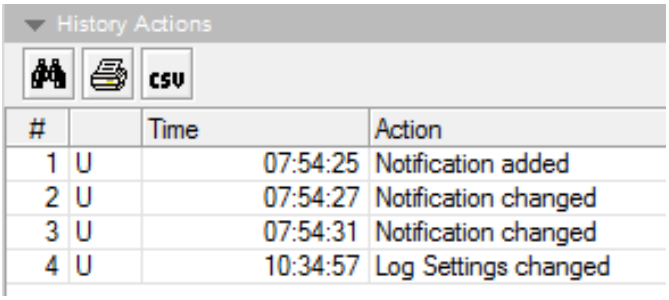
Manual:The Dude/Address lists

Allows creation of Address Lists, that can be used in Device discovery black lists.



Manual:The Dude/History

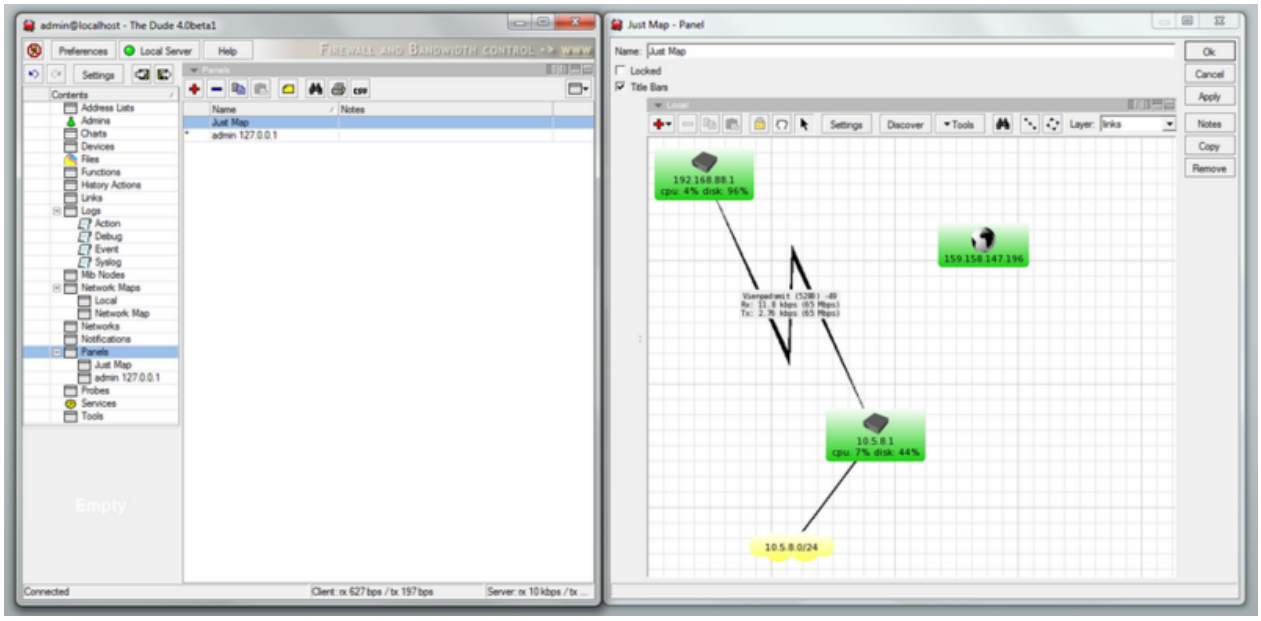
The history Pane shows you the Dude admin interactions with the currently connected server. Unlike the log, which shows device status changes and issues, the History pane shows if an admin added or changed some settings, created a new notification type etc.



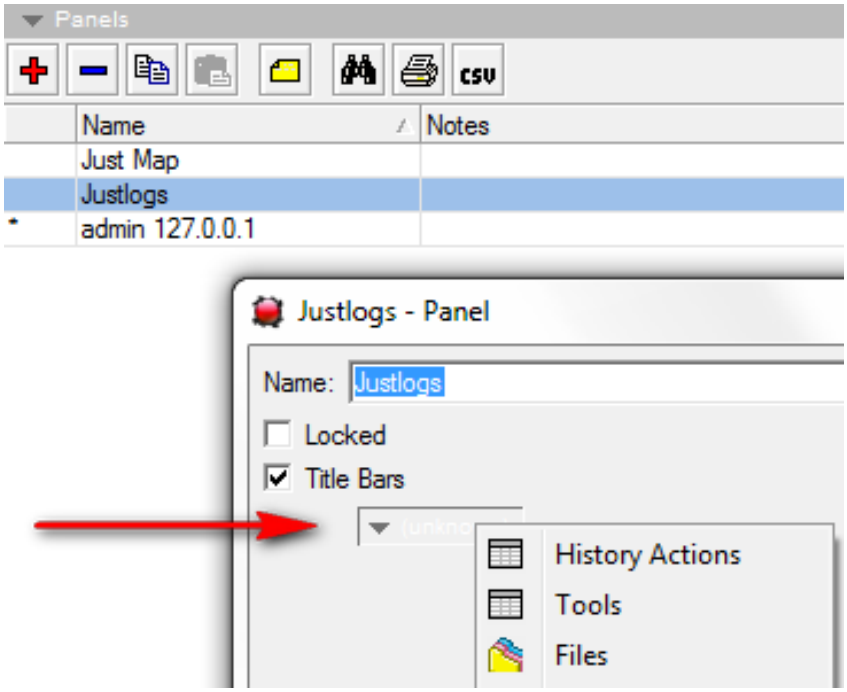
#		Time	Action
1	U	07:54:25	Notification added
2	U	07:54:27	Notification changed
3	U	07:54:31	Notification changed
4	U	10:34:57	Log Settings changed

Manual:The Dude/Panels

The Panels pane allows you to create additional floating windows of the Dude interface. This can be useful for multiple monitors, or simply to save certain layouts for quick access. For example if you want to quickly view charts of your four most important servers, make a new Panel, split it into four sections, and load one chart in each section. Now, this four-pane chart view will be quickly accessible from the left hand menu.



To add a new panel, click the **add** button, and specify a name for it. The new panel will appear in the Panels list. Double click the panel, to open it. By default, it will be void of any panes, so choose a pane from the list:

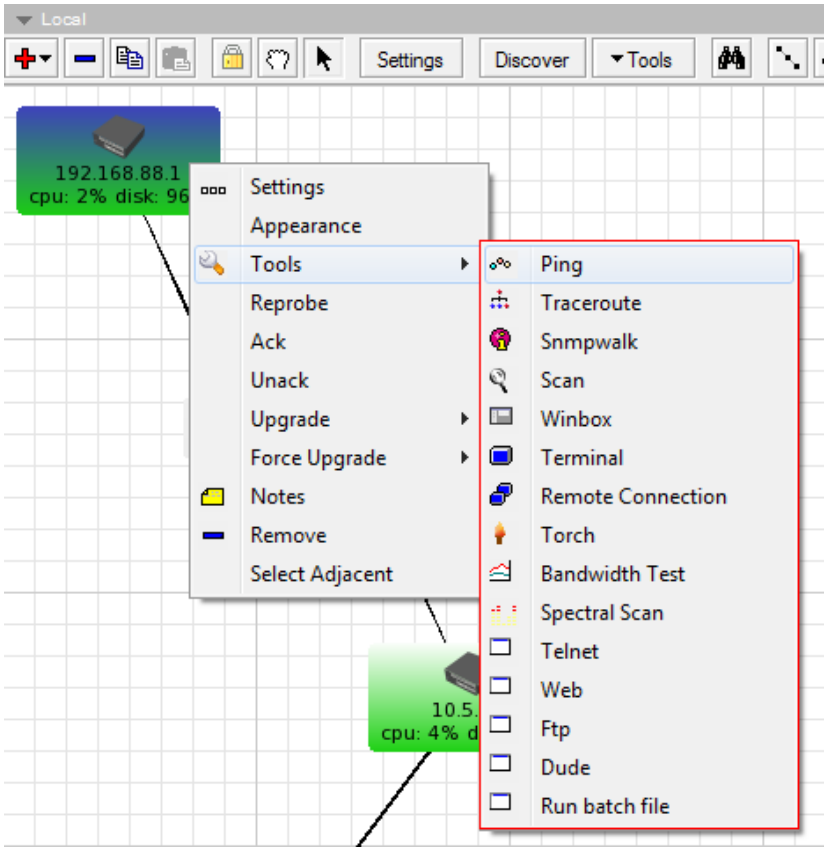


The new panel can be split into sections just like any other one.

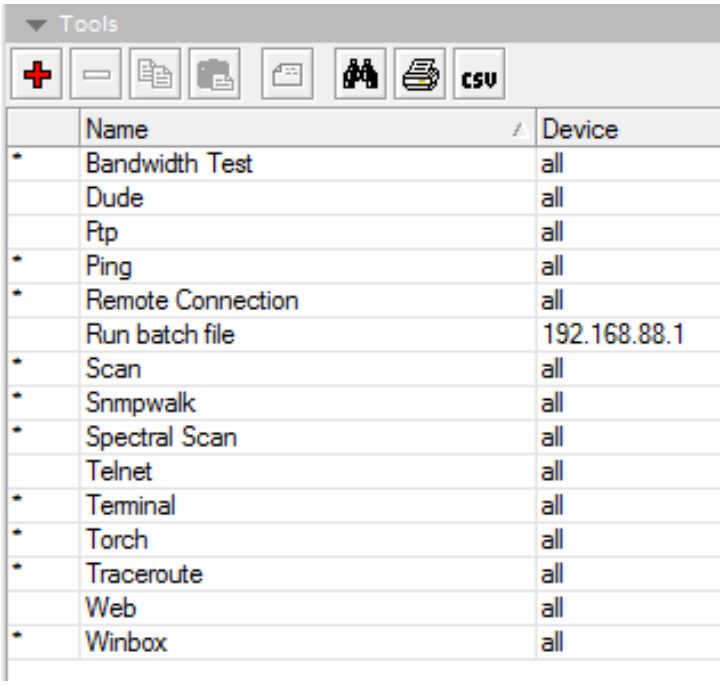
It is also worth noting, that whenever an admin logs into the currently opened server, a new Panel will be assigned to him. You will be able to see the new panel in the Panels view. Double-click it to see whatever the admin is viewing. You can disable this feature in the **Admins** pane by selecting **Separate panels**

Manual:The Dude/Tools

The Tools pane manages the utilities and programs that can be run when right-clicking a device. Tools can be useful for executing custom programs and passing them variables, which can be practically anything the Dude knows about the device.

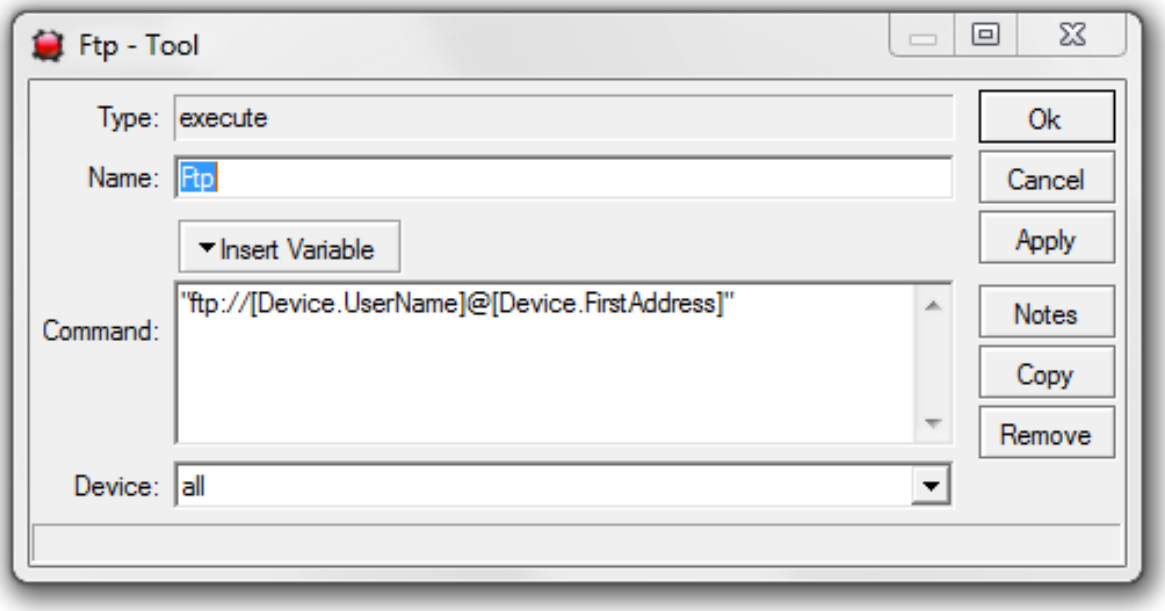


There are predefined tools, that can't be changed, and you can also add new tools.



	Name	Device
*	Bandwidth Test	all
	Dude	all
	Ftp	all
*	Ping	all
*	Remote Connection	all
	Run batch file	192.168.88.1
*	Scan	all
*	Snmpwalk	all
*	Spectral Scan	all
	Telnet	all
*	Terminal	all
*	Torch	all
*	Traceroute	all
	Web	all
*	Winbox	all

It is possible to edit some of the predefined tools to see how the tools are made, so you can easily add your own. For example the FTP tool:



Adding tools

When adding a new tool, you will be prompted for the following settings:

- **Type** - custom tools can only be **Execute**, ie. run external program with given options
- **Name** - whatever you wish to call your new tool
- **Command** - the program that will be called and it's parameters. Can insert OID variables
- **Device** - Which types of devices will have this tool available

Examples

The following **Command** shuts down Windows devices that support Remote Shutdown:

```
c:\windows\system32\shutdown.exe -s -t 30 /m \\[Device.FirstAddress]
```

This calls an ssh connection depending on which operating system you are currently running:

```
cmd /C  (IF NOT EXIST \\dude\tools (start z:\usr\bin\nautilus sftp://[Device.FirstAddress] ))
&& IF EXIST \\dude\tools start  \\dude\tools\WinSCPPortable\WinSCPPortable.exe
%USERNAME%@[Device.FirstAddress]
```

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