

jNetMap User Guide

jNetMap was created by rakudave <public@rakudave.ch>
Visit www.rakudave.ch for more information.

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

This document itself is licensed under the Creative Commons "BY-NC-SA" license.
Now that we have the legal mumbo-jumbo out of the way, let's get on with it, shall we?

Table of Contents

1 Introduction	3
2 Getting started	3
3 File	4
3.1 New.....	4
3.2 Open.....	4
3.3 Save.....	4
3.4 Save As.....	4
3.5 Protect.....	4
3.6 Export Image.....	4
3.7 Exit.....	4
4 Edit	5
4.1 Adding devices.....	5
4.2 Removing devices.....	5
4.3 Connecting devices.....	5
4.4 Removing lines.....	5
4.5 Selecting multiple devices.....	6
4.6 Moving devices.....	6
4.7 Settings.....	6
4.8 Undo/Redo.....	6
4.9 Background Images.....	6
4.10 Scan for Devices.....	6
5 View	7
5.1 Grid mode.....	7
5.2 Legend.....	7
5.3 Statistics.....	7
6 Tools	8
6.1 Port Scanner.....	8
6.2 Check now.....	8
6.3 Reset canvas.....	8
6.4 Preferences.....	9
6.4.1 Triggers.....	11
6.4.2 Icons.....	11
7 Shortcuts	12
8 Contact	12
9 Change History	13

1 Introduction

Hi, thanks for checking out jNetMap!

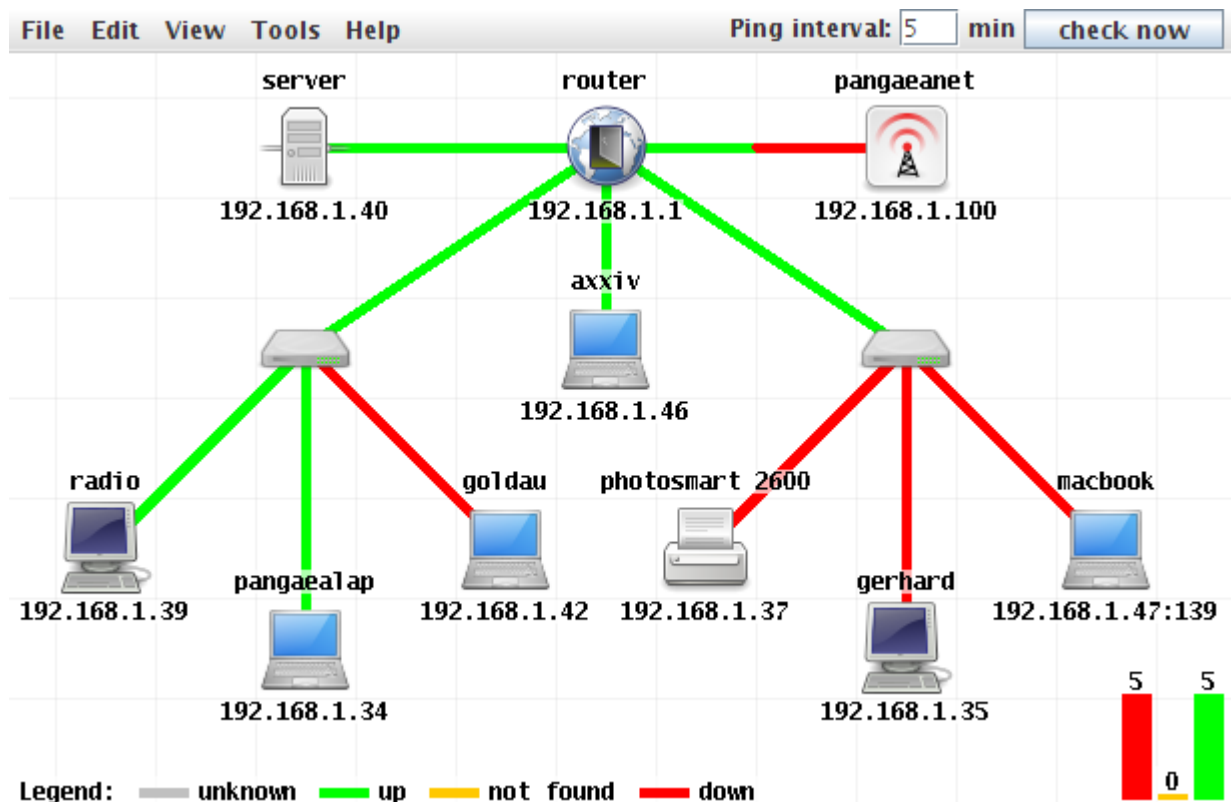
jNetMap is a tool for keeping an eye on all the devices in your network. It can discover all the devices connected to the network and you can also add new ones, such as an external webserver. You will just have to draw the connections between the devices and your netmap is ready to go.

jNetMap will check every 5 minutes if your devices are still running, and you can create alert scripts to notify you if they are not. You can adjust the interval in the upper right corner of the screen.

The color of the lines connecting your devices indicate the availability of said device:

available	not found	not available	unknown
-----------	-----------	---------------	---------

This is what a netmap might look like:



2 Getting started

I assume you have already downloaded the jNetMap executable. If not: www.rakudave.ch/jnetmap

In order to run jNetMap, you will need Java 1.6.0.13 or later. Mac users will have to compile from source, as Apple does not provide the latest Java VM. You can also associate jNetMap with the generated .netmap files in order to open jNetMap when clicking on a .netmap file.

(Open with > Choose > jNetMap or similar)

When you start jNetMap for the first time, it will prompt you to scan your network for available devices. You can also start a new scan by choosing *Edit > Scan for Devices*. If you do not wish to scan your network, an example will be generated.

3 File

As in many other programs, you can *save* your work to a file and *open* that file later. Creating a new file will wipe the entire canvas (and prompt to save the current file first).

You can also *export* the netmap to an image file, for presentations etc...

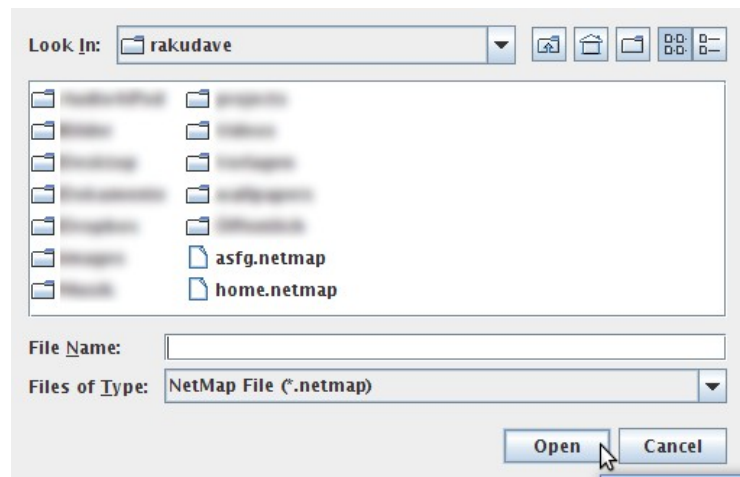
The program will also prompt to save when you quit the application and the current document has been changed. If you wish to disable this feature, you can do so in the *preferences* dialog.

3.1 New

Create a new netmap file. Asks you to save the previous file and wipes the canvas.

3.2 Open

Open a netmap file. Asks you to save the previous file and open a file selection dialog.



3.3 Save

Saves the current file and opens a file selection dialog if you save a file for the first time.

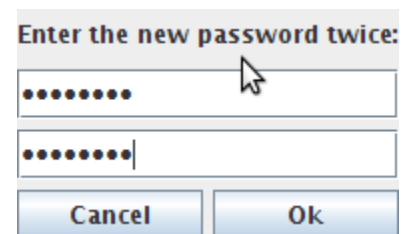
3.4 Save As...

Create a copy of the current file under a new file name.

3.5 Protect

Password protects this file, so it can only be saved with the correct password. Although you can still edit the file and move devices around, the file itself is “read-only”.

If there already exists a password for this file, you will have to enter the old one in order to set a new password.



3.6 Export Image

Export the current file as a PNG file. This is useful when presenting your network in any document.

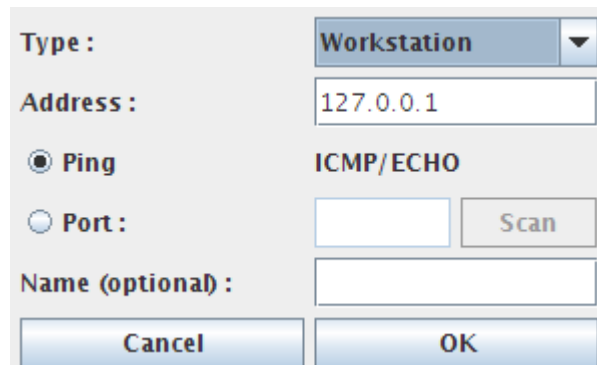
3.7 Exit

Quit this instance of jNetMap. It will ask you to save the current file first.

4 Edit

4.1 Adding devices

You can add devices either by *right-click > Add Device* or in the menu *Edit > Add Device*. This will bring up a dialog where you can set up the new device.



The dialog box contains the following fields and controls:

- Type: Workstation (dropdown menu)
- Address: 127.0.0.1 (text input)
- Ping (radio button)
- ICMP/ECHO (text label)
- Port: (radio button)
- Scan (button)
- Name (optional): (text input)
- Cancel (button)
- OK (button)

As you can see, you can choose between *ping* and *port*. Generally *ping* is the better option, as it is supported by most devices and is slightly faster. In port mode, you have to specify the port you want to check. When using *ports*, I assume you know all about ports and you know which port to choose. If you don't, use the *Scan* button to perform a port scan on the device.

You can also use the *scan* method described above to automatically add devices to your network.

4.2 Removing devices

You can remove a device and any lines connecting said device by selecting the device and pressing *delete*. You can also use the context menu or the main menu and select *Remove*. If you only want to remove all lines connecting the device without removing the device itself, press *backspace* instead or use the context or main menu and select *Disconnect*.

4.3 Connecting devices

Middle-click on a device and then click on another device to connect the two devices. A gray line will indicate where the line will go and will remain gray until the next check is performed. Alternatively, you can also use the context menu of the device (right-click) or the main menu to go into connection mode. You can also press *space* then a device is selected.

You can stop connecting at any time by pressing *Esc*. If you click on an empty space when connecting multiple devices at once, connecting will also be aborted. If there is only one selected item, a "via-point" will be created instead. This enables you to create bent lines. You can also use the context menu of any line to insert such a "via-point".

Lines can also have a label, (e.g. if you want to specify that the cable is 10m/cat5 or similar). To add/edit this label, select *Edit Label* in the context menu.



4.4 Removing lines

Similar to removing devices, you can also remove single lines by clicking on them and pressing *delete*. You can also use the context or the main menu and select *Remove*. When you remove a line containing "via-points", these and all associated lines will be removed as well.

4.5 Selecting multiple devices

Simply draw a rectangle around the devices you want to select by pressing down the left mouse button and keeping it pressed until the rectangle covers the desired area. Releasing the mouse button will select all the devices within that rectangle. You can also select devices that are far apart from each other by selecting one after the other with the right mouse button.

4.6 Moving devices

You can drag one or more selected devices around using the same method used for drawing rectangles, as long as some devices are selected first. You can also move the entire canvas by dragging with the right mouse button. If you have dragged them off the screen by accident, use *Reset canvas* in the tool menu to bring the left-/topmost item to the upper left corner.

4.7 Settings

To adjust the settings of any device, select *settings* in the context or main menu. This will bring up the same dialog used for adding devices. Pressing *Enter* when a device is selected will also bring up the settings dialog.

4.8 Undo/Redo

If you delete or move something by accident, undo and redo is your friend. The default number of undo/redo actions is 10 (to preserve your precious RAM), but you can change this in the preferences as well.

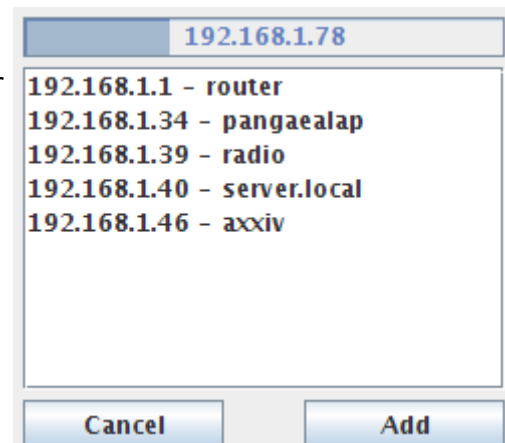
4.9 Background Images

You can add background images like floor plans etc. Selecting "Add Background Image" will bring up a standard file selection dialog. You can move the images by dragging with your scroll wheel and delete individual images by using the context menu. To remove all images, use the menu entry below the add function.

4.10 Scan for Devices

This performs a scan of any IP-range, looking for devices and extracting (if possible) their name to add them to your netmap. Note that you have to specify a timeout for the scan. On Linux and other UNIX systems, 50ms will work fine. On Windows however, devices won't show up below a timeout of 1000ms or more. The devices will also not have their proper names when using Windows. (Just install Linux first :-)

You can remove devices from the list by right-clicking. Existing devices on the map will not be added again, although they show up in the list.



5 View

5.1 Grid mode

Grid mode will display a 50x50 grid and will align the devices to said grid automatically when they are moved. To align the existing devices, select *Align to Grid*. When no devices are selected, all items will be aligned, else only the selected devices will be affected.

The grid position changes if you move the entire canvas.



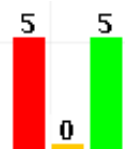
5.2 Legend

The legend sits in the bottom left corner of the canvas and explains the different colors. This is helpful at first, but as you get more and more familiar with jNetMap, you might want to deactivate it. You can do so by ticking/unticking the checkbox "Show Legend" in the context or main menu.

Legend:  unknown  up  not found  down

5.3 Statistics

See at one glance how many devices are reachable and how many are not. These statistics will be updated every time a check is performed. You can hide them the same way you can hide the legend.



6 Tools

6.1 Port Scanner

Scan any device for open ports. You can choose to perform a scan for common ports (faster) or you can scan an entire range of ports (slower, more details). This is the same as in the *Add* dialog.



6.2 Check now

Force an availability check for all devices on the map. Same as the "check now"-button in the upper right corner. This will restart the timer and wait for the full x minutes again. The interval timer will accept floating point numbers, e.g. if you wish to check the network every 30 seconds, enter 0.5 into the textfield.

6.3 Reset canvas

Moves the left-/topmost device to the upper left corner of the screen. This is useful if you have scrolled too far and "lost" your devices.

6.4 Preferences

General

Open last file on startup Remember file history

Ask to scan network on startup Prompt to save on exit

Restore window size Restore window position

Show Tray Icon (requires restart) Maximum undo steps: 10

Timeout

Ping timeout in ms: (default: 3000) 1000

Scan timeout in ms: (UNIX: 50, Win: 1000+) 50

Triggers

Device turns green: /home/rakudave/beep_up.sh


Device turns orange:

Device turns red: /home/rakudave/beep_down.sh

Variables: %n: Name %a: Address %p: Port %t: Type ID

Example: ./emailme.sh %n (%a) is_down

Icons

Workstation	Mediacenter	add edit remove 
Laptop	Gaming console	
Server	Firewall	
Printer	Other	
Wireless		
Router		
Switch		
NAS		

Cancel Save

Most of them are self-explanatory. These preferences are written to a file located in your home directory (.jNetMap.conf) every time you save the preferences or exit the program.

6.4.1 Triggers

Triggers are a very powerful tool if you know how to use them. The commands will execute every time a device changes its color, e.g. if a device is no longer available, the red trigger will be executed. DO NOT use fancy bash stuff here (>,|,& etc...), as it won't work. Put it into a script and use the %-variables as arguments.

In this example I created a script that will make the internal speaker beep if something changes. You could also use this to send you an email or sms if something goes down.

6.4.2 Icons

You can define your own icons if you need more than the twelve default ones. The optimal size is 48x48 pixels, other sizes will be scaled down. The name will show up in the dropdown menu in the "Add Device"-dialog. You can also edit/remove the non-default icons. If the image you used is no longer there, the default "other"-icon will be used. You can also look at the icons in the preview area located under the "remove" button.

7 Shortcuts

Ctrl + A	Add new device
Ctrl + E	Export image
Ctrl + F	Scan network for devices
Ctrl + G	Align to grid
Ctrl + N	New file
Ctrl + O	Open file
Ctrl + P	Port Scanner
Ctrl + Q	Quit program
Ctrl + R	Reset canvas
Ctrl + S	Save file
Ctrl + Shift + S	Save file as...
Ctrl + X	Check now
Ctrl + Y	redo
Ctrl + Z	undo
Ctrl + ,	Preferences
Backspace	Delete selected line
Delete	Delete selected device(s)
Enter	Open settings of selected device
Escape	Abort connection
Space	Connect selected device with ...
left-click	Selects the device under your mouse or deactivates it when clicking on an empty space.
middle-click	Start drawing a connection from the selected. Click on any other device to finish.
right-click	Open the context menu or select multiple devices in succession.
left-drag	Draws a rectangle. When releasing, all devices within the rectangle will be selected.
middle-drag	Move background images
right-drag	Move the entire canvas. Useful for scrolling large maps on small screens.

8 Contact

If you have a feature request, comment or suggestion, write to public@rakudave.ch with "jNetMap" in the subject line or leave a comment at www.rakudave.ch/jnetmap. To report a bug, write to bugs@rakudave.ch with "jNetMap" in the subject line. Check "[Known Issues](#)" on my website first please. Also, do not use the comments for bug reports. Thanks!

9 Change History

Version 0.3.2

new: Notes (Edit > Add Note)
changed: Switches now support names
fixed: ping intervall didn't save correctly
fixed: ignore triggers didn't save correctly

Version 0.3.1

new: background images (for floor plans etc.)
fixed: line label deleted on switch insert, now transfered to new line
fixed: history item saved although no real change was made (now checks for real changes first)
fixed: clean URLs when using help etc.

Version 0.3

new: automatically checks for and downloads updates (can be turned off)
fixed: triggers won't fire on startup
fixed: alignment didn't always work when the canvas has been moved
fixed: devices were deselected when dragging the canvas
fixed: initial network scan didn't ask for timeout value

Version 0.2.9

new: removing a line will recursively remove all connected via-points as well
fixed: via-points could have more than 2 lines (will now be ignored for connecting if lines >=2)
fixed: connecting to empty space creates new via-point (now only if 1 item is selected)
fixed: via-points were multi-selectable
fixed: invoking port-scanner via tool-menu failed to send IP of the selected device to the scanner

Version 0.2.8

new: via-points (enables bent lines)
changed: line ends rounded (looks better with bends)
fixed: switch coloring not reliable when exclusively connecting two switches
fixed: menu entries disabled incorrectly
fixed: ping-timeout not read correctly

Version 0.2.7

new: multi-connect
new: remove a password (Protect > enter current password > ok > new? cancel > remove? yes)
changed: Preferences > Max. undo has a up/down control instead of a slider
changed: Documentation updated
changed: Settings window now static
fixed: incorrect passwords would not reprompt
fixed: "See documentation" pointed to main site, now points to download anchor

Version 0.2.6

new: tray icon and menu
new: minimize to tray
new: password protected files (Edit > Protect)
new: option to remember window size/position
new: user manual (pdf, see download section)
fixed: scan would add already added devices (now excluded based on IP)
fixed: proper "free software" disclaimer in both source and "about"-dialog

Version 0.2.5

(massive changes, skipping sub-sub-versions 3 and 4)
new: extensive preferences
new: custom icons
new: images stored as base64 strings

new: middle-click to directly connect devices
changed: removed "switch (managed)" and "UPS (managed)", use "preferences > icons"
changed: major relocation of code (most to the new preferences)
changed: triggers merged with preferences window
fixed: triggers didn't work when pinging
fixed: trigger arguments treated as env.vars
fixed: preference file only written on quit, not on save
fixed: triggers fired on application startup
fixed: missing images resulted in blank icons, now replaced with "other"-icon

Version 0.2.2

new: labels for lines (for additional info about this line, such as "cat5")
new: UPS (managed) icon
new: reset canvas (if you drag the canvas too far and can't find your icons anymore)
new: open any device in your browser (many devices have http config interfaces)
fixed: legacy support for .netmap files above v.0.1.5

Version 0.2.1

new: drag canvas (right mouse button, made for viewing large maps on small screens)
new: appropriate cursor icons
new: switch (managed) with configurable IP
new: adjustable scan timeout (way faster now)
fixed: negative ping intervals caused infinite ping loop (use 0 or less to stop timed scanning)
fixed: grid align algo failed after dragging the canvas
fixed: main window would show up after asking to scan
fixed: exception caused by non integer inputs
Maintenance release 0.2.1.1 (07.06.09)
fixed: failed to store settings in .jar file
new: settings stored in home folder (so you don't have to re-enter them every release)

Version 0.2

new: scan network for devices
new: undo/redo
new: keyboard shortcuts
new: recent files
new: remembers window size, current file and file history
new: asks to scan or load example on first launch
fixed: settings/add not disabled in menu when multiple devices were selected
fixed: remove/connect/disconnect/settings not disabled when nothing was selected
fixed: check-boxes in main menu out of sync with the actual state
fixed: displayed frame before settings were applied, flickered
fixed: background of statistics too high, blocked vie

Version 0.1.9

new: real PING using ICMP/ECHO
fixed: remembers ping interval as well
fixed: multi-select with right-click disabled settings/add

Version 0.1.8

new: triggers (execute commands when device changes its state)
(still a bit unstable, refrain from using "<>&|" ; etc., use scripts with parameters)
new: remembers settings (legend, stats, grid, triggers)
new: statistics
fixed: multi-select triggered when clicking on a device while another device was active
changed: reorganized some menus

Version 0.1.7

new: multi-select
new: multi-remove/disconnect/move/align
fixed: settings dialog now centered
fixed: align to grid no longer aligns to top-left
fixed: example file now hard-coded

Version 0.1.6

new: image export (thanks [Hak5](#) for the inspiration)
new: save as...
fixed: better coloring mechanism
fixed: connecting three switches in a row resulted in gray middle switch

Version 0.1.5:

new: lines are selectable
new: remove single lines
new: insert switch into a line

Version 0.1.4

new: progress-bar tooltip indicates which IP is being pinged
fixed: "right-click -> add" positions the new device at the current mouse position
changed: renamed from "NetMap" to "jNetMap"

Version 0.1.3

new: progressbar
new: name for devices
fixed: gui hanged when pinging
fixed: centered text

Version 0.1.2

new: align to grid
new: menu replaces buttons
fixed: line to switch always gray

Version 0.1.1

new: grid mode
new: legend
new: lines between non-switches are colored half/half

Version 0.1

first public release