NetworkManager Survey Results

On March 11, the NetworkManager team prepared a survey to better understand how NetworkManager is used and what are its users' needs.[1]

We received 1318 responses: thanks to anyone who took the time to fill in the survey!

There were a lot of good advice and comments about what could be improved and what features should be added. While we found that many were already tackled in the recent NetworkManager 1.2 release[2], we'll take into account each contribution for the planning and development of the forthcoming NetworkManager versions.

Here some of the most frequent complaints we collected.

- Wi-Fi: the list of available networks is not up-to-date when the client is mobile, when a new Wireless Hotspot has been just activated or when resuming after standby
  *In NetworkManager 1.2 **Wi-Fi scanning has been improved** in order to solve or at least greatly mitigate those issues[3]*

- Support to multiple concurrent VPN connections
  ***Multiple concurrent VPN connections** has been introduced in NetworkManager 1.2![2]*

- Support to VPN profile import/export
  *NetworkManager1.2 support **import and export of the VPN connection** settings for most types of VPNs in their native format[2]*

- Easier VPN setup

- nmcli is hard to use
  *In NetworkManager1.2 nmcli has been improved in order to have a **more user-friendly cli**[4]*

- More information from nmcli output on error

- nmcli is limited in the setup of complex network scenarios
  *"Need a bridge over VLANs or bond bridges together? No problem anymore" with NetworkManager1.2[4] thanks to the introduction of a **more flexible interface stacking**[5]*

- better nmcli documentation / tutorial and more advertising of its features

Finally, we want to share a brief summary of the main outcomes of the Survey. Once again, thanks to each one helped us to understand how improve our beloved NetworkManager.

1 https://blogs.gnome.org/lkundrak/2016/03/11/help-us-understand-how-you-use-networkmanager/
2 https://blogs.gnome.org/lkundrak/2016/04/20/networkmanager-1-2-is-here/
3 https://blogs.gnome.org/dcbw/2016/01/18/networkmanager-1-2-has-better-wi-fi-scanning/
4 https://blogs.gnome.org/lkundrak/2015/08/28/coming-in-networkmanager-1-2-nmcli-improvements/
5 https://blogs.gnome.org/dcbw/2016/04/21/you-and-networkmanager-1-2-can-still-ride-together/

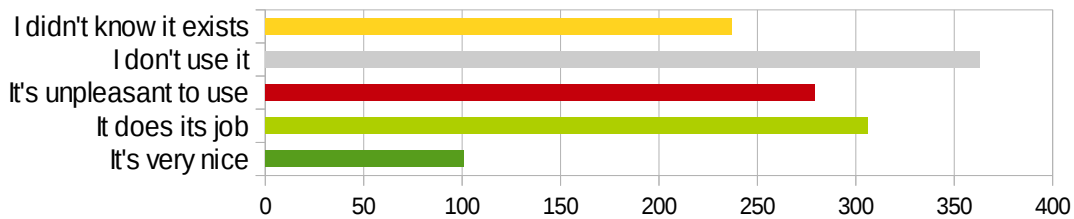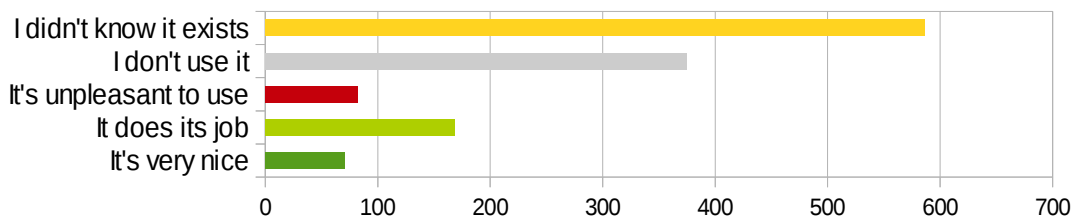# Survey Result Summary

NetworkManager Controls

- GUI: as expected, is the most used and appreciated way of controlling NetworkManager, with GNOME as the preferred desktop environment [Pic.1, Pic.4]

- nmcli: slightly more than 50% used it and 41% of them are not happy with it [Pic. 2]

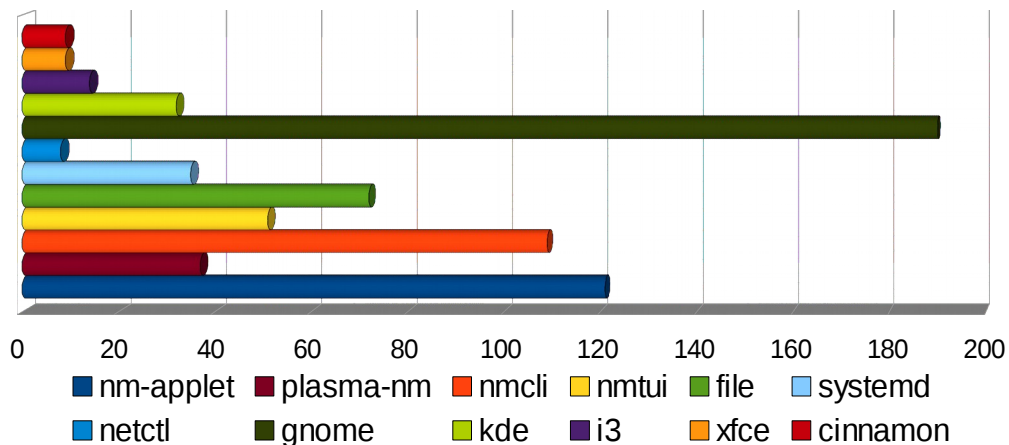- nmtui: almost unknown (44%) but highly appreciated among adopters (75%) [Pic. 3]
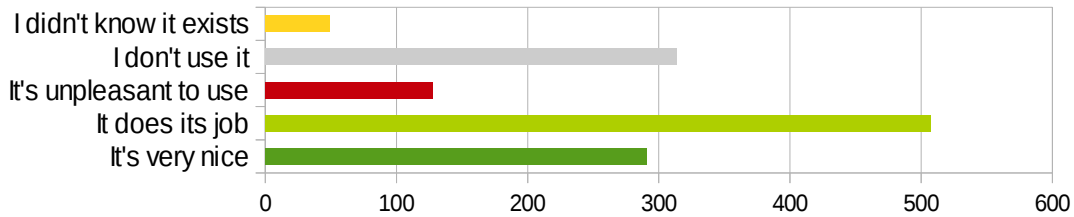
Pic. 1: GNOME


Pic. 2: nmcli

Pic. 3: nmtui

*Pic. 4: How do you control your networking?*

NetworkManager most used functionalities

The most important and used functionality are by far WiFi and VPN [Pic.8].

- WiFi: almost everyone uses NetworkManager to connect to WiFi (98%) and is quite happy with it (97%) [Pic.5]

- VPN: 75% of users need to configure VPNs and 73% of them are quite happy with it [Pic.6]

- Provide Connectivity: only 44% of users use it and 58% of them are pleased with it

- Advanced (bond / bridge / team): less than 1/3 of users needs this and 45% of them are fine with it [Pic.7]
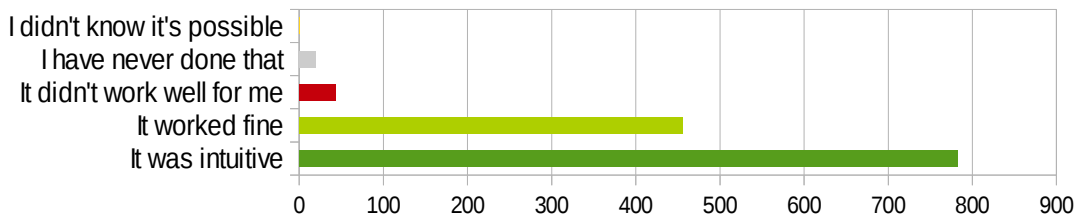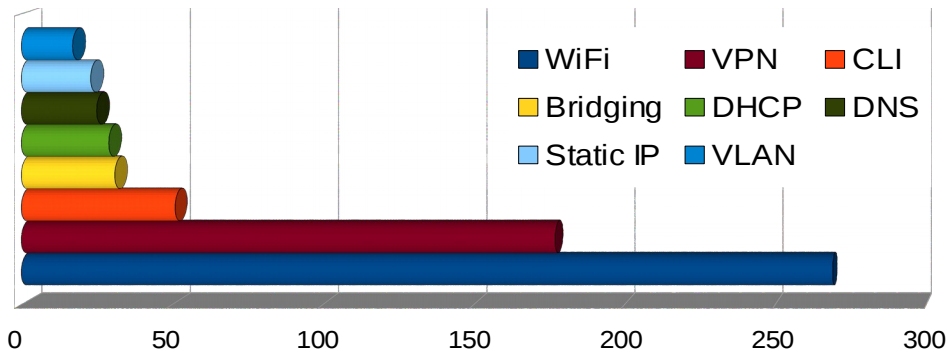

Pic. 5: Connect to a Wi-Fi
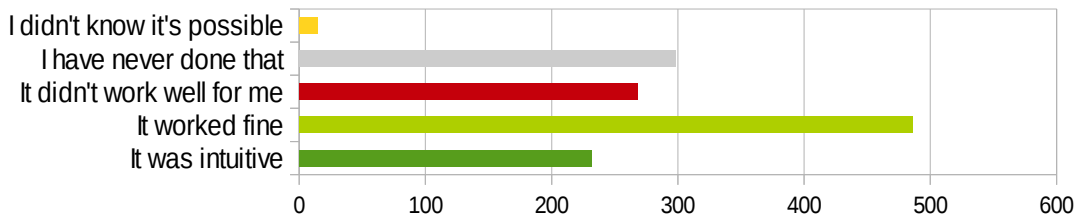
Pic. 6: Use a VPN
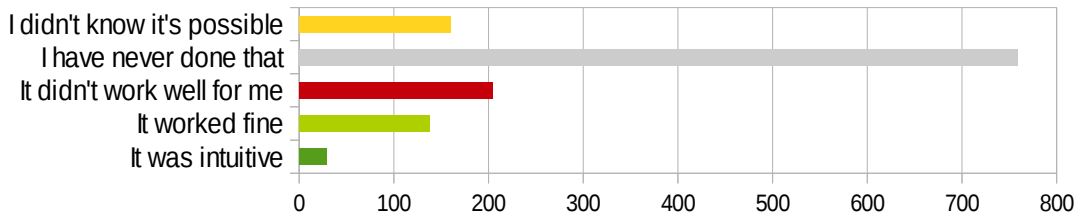
Pic. 7: Advanced

*Pic. 8: What functionality is important to you?*

nmcli

nmcli usage is not much widespread: just ~40% of users use it for trivial tasks (like checking and enabling a connection) [Pic.9]. Their number falls down to 23% for basic tasks, like creating a new connection [Pic.11].

A common complaint is that nmcli is hard to use [Pic.13]. This is in partially evident also comparing the percentage of successful users able to perform certain NetworkManager operations when using nmcli instead of the GUI tools:

- Connect to a WiFi: 70% of nmcli users (GUI 97%) [Pic.9]

- Use a VPN: 59% of nmcli users (GUI 73%) [Pic.10]

- Provide others with connectivity: 49% (GUI 58%)
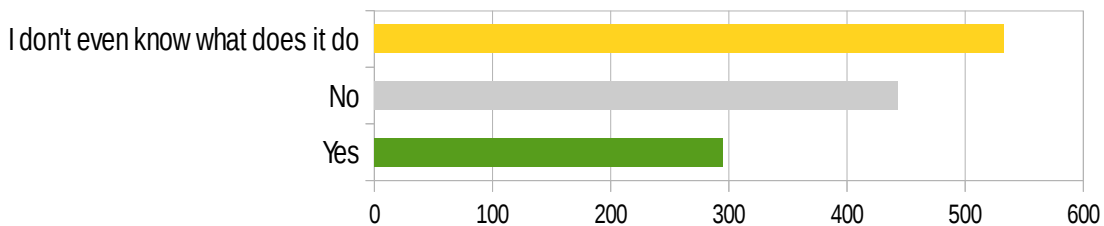
- Advanced (bridge/bond/team): 45% (GUI 45%)

Available documentation looks fine for 70%-75% of the nmcli users [Pic.12].
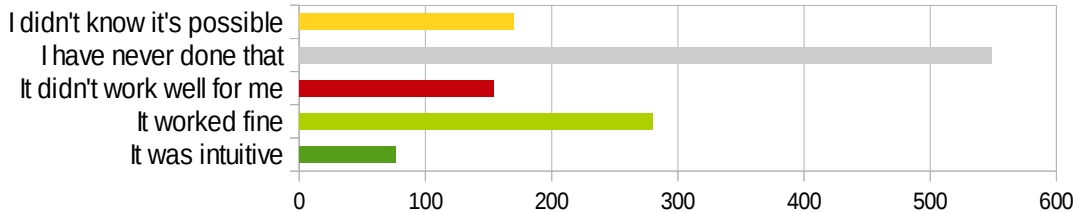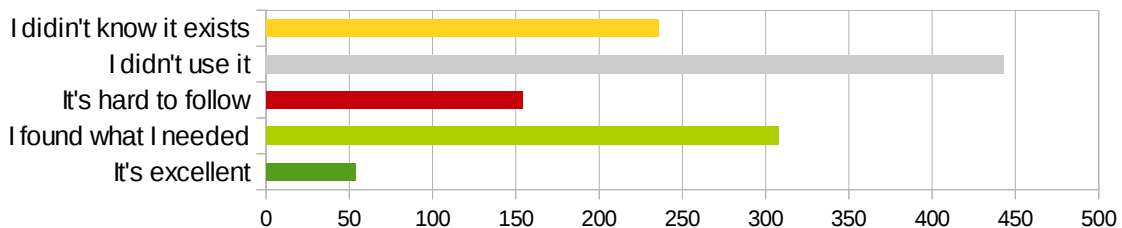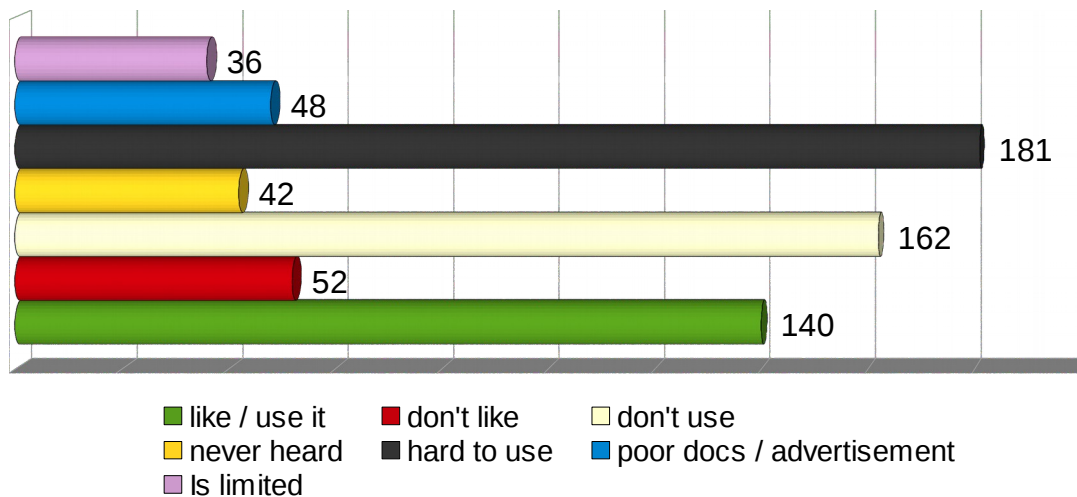
Pic. 9: Connect to a Wi-Fi
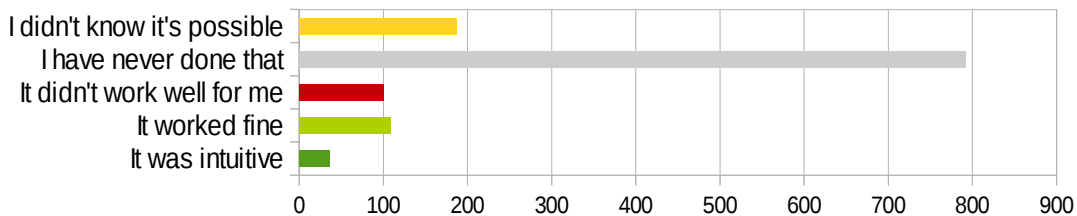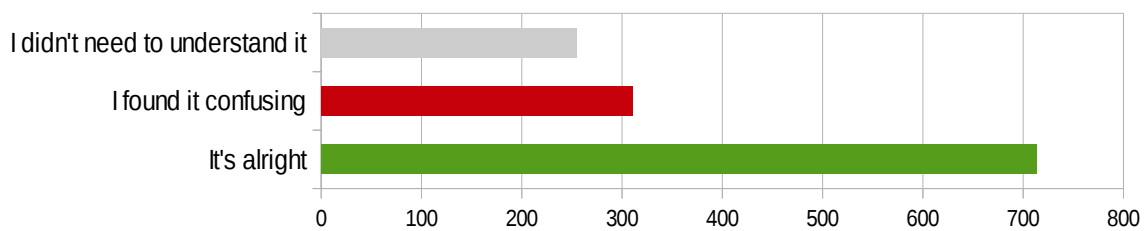
Pic. 10: Use a VPN

Pic. 11: nmcli c add

Pic. 12: Which resources are helpful to you when using nmcli? nmcli(1) manual page
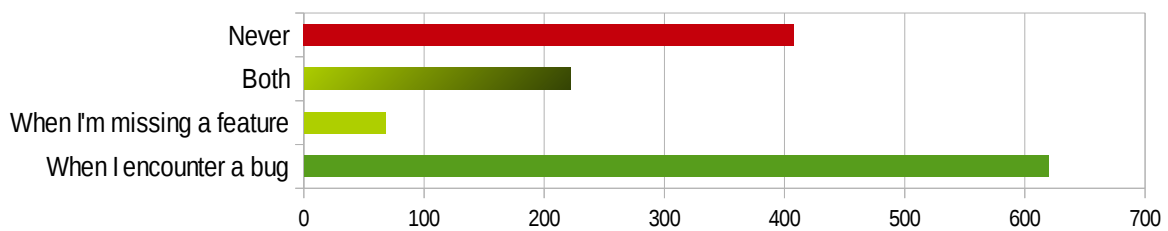
Pic. 13: What are your feelings about nmcli? (60% did not replied)

General information

- The configuration model of NetworkManager is fine for more than an half of the users [Pic.14]

- 69% of the users are ready to submit a bug if needed [Pic.15]

Pic. 14: Network Manager configuration model is easy to understand

Pic. 15: I'm likely to file a Network Manager bug