



Category:Netdev

Category:Netdev



Contents

1. Category:Netdev	3
2. Network tools	5
3. Networking overview	17



A quality version of this page, approved on *17 June 2020*, was based off this revision.

This category groups together all articles and subcategories related to the Linux[®] **netdevice** software frameworks such as: ethernet, WLAN, CAN, and so on.

It is recommended to first read the [Networking overview](#) article.

Linux[®] is a registered trademark of Linus Torvalds.

Controller Area Network (robust bus mainly used for automotive applications)



Subcategories

This category has the following 3 subcategories, out of 3 total.

- CAN (4 P)
- Ethernet (5 P)
- WLAN (5 P)



Pages in category "Netdev"

The following 2 pages are in this category, out of 2 total.

- [Network tools](#)
- [Networking overview](#)

Stable: 04.02.2020 - 07:47 / Revision: 04.02.2020 - 07:37

A quality version of this page, approved on *4 February 2020*, was based off this revision.

Contents

1 ping	6
2 ifconfig	7
3 route	8
4 traceroute	9
5 netstat	10
6 ip	11
7 ethtool	12
8 iw	13
9 wpa_supplicant	14
10 brctl	15
11 iptables	16
12 gatttool	17



1 ping

Man Page at [ping\(8\)](#)

ping uses the ICMP protocol's mandatory ECHO_REQUEST datagram to elicit an ICMP ECHO_RESPONSE from a host or gateway. ECHO_REQUEST datagrams have an IP and ICMP header, followed by a struct `timeval` and then an arbitrary number of *pad* bytes used to fill out the packet.



2 ifconfig

Please refer to the dedicated page [ifconfig](#)



3 route

Man page at [route\(8\)](#)

route command is used to show/manipulate the IP routing table. It is primarily used to setup static routes to specific host or networks via an interface.



4 **traceroute**

Man page at [traceroute\(8\)](#)

traceroute is a built-in tool for displaying the route and measuring the delay of packets across a network.



5 netstat

Please refer to the dedicated page [netstat](#)



6 **ip**

Please refer to the dedicated page [ip](#)



7 **ethtool**

Man page at [ethtool\(8\)](#)

ethtool utility is used to view and change the ethernet device parameters.



8 iw

Man page at [iw\(8\)](#)

iw utility is used to view and change the wireless device parameters.



9 wpa_supplicant

Man page at [wpa_supplicant](#)

wpa_supplicant is a WPA Supplicant for Linux, BSD, Mac OS X, and Windows with support for WPA and WPA2 (IEEE 802.11i / RSN). It is suitable for both desktop/laptop computers and embedded systems. Supplicant is the IEEE 802.1X/WPA component that is used in the client stations. It implements key negotiation with a WPA Authenticator and it controls the roaming as well as IEEE 802.11 authentication/association of the wlan driver.



10 **brctl**

Man page at [brctl\(8\)](#)

brctl is used to set up, maintain, and inspect the ethernet bridge configuration in the linux kernel. An ethernet bridge is a device commonly used to connect different physical Ethernet networks together, so that these physical networks appear as one unified network to the users.



11 iptables

Man page at [iptables\(8\)](#)

iptables is an administration tool for IPv4 packet filtering and NAT.

It is used to set up, maintain, and inspect the tables of IP packet filter rules in the Linux kernel. Several different tables may be defined. Each table contains a number of built-in chains and may also contain user-defined chains.

Each chain is a list of rules which can match a set of packets. Each rule specifies what to do with a packet that matches. This is called a 'target', which may be a jump to a user-defined chain in the same table.



12 gatttool

Man page at [1]

Linux[®] is a registered trademark of Linus Torvalds.

Operating System

Stable: 19.10.2020 - 12:26 / Revision: 19.10.2020 - 12:25

A quality version of this page, approved on *19 October 2020*, was based off this revision.

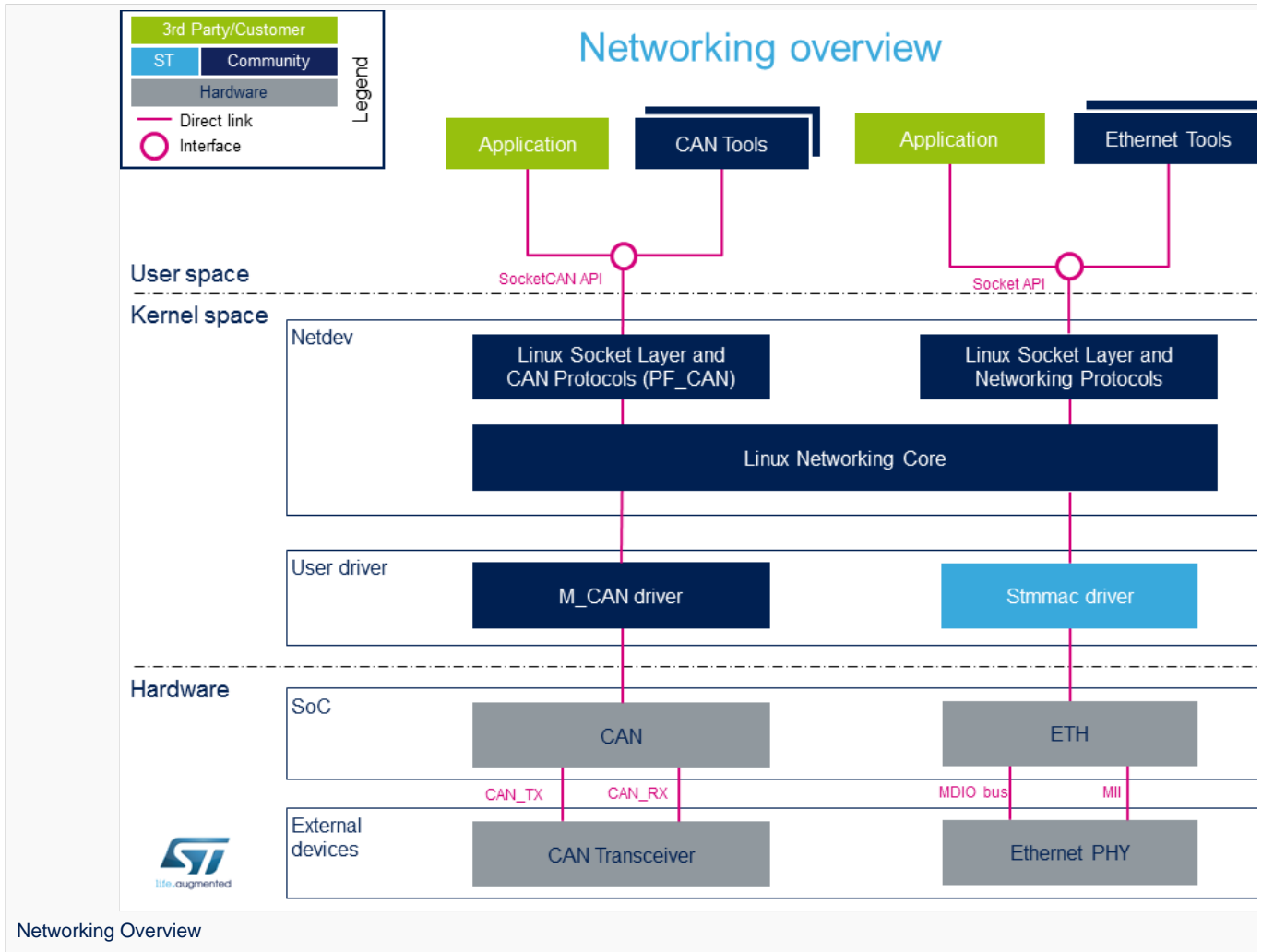
This article explains how net devices are mapped to the Linux[®] kernel netdevice stack.



1 Purpose

This article introduces the Linux[®] kernel netdevice. Its purpose is to provide to newcomers some first insights regarding networking. The other articles referenced in this page provide detailed information about each component connected to netdevice.

2 System overview



On STM32MP1 Series, the netdevice stack is used for two purposes: CAN and Ethernet. A more detailed block diagram of each interface is available in dedicated pages: [CAN](#) and [Ethernet](#).

Linux® community offers several links to help understanding the netdevice stack:

- Kernel networking flow ^[1],
- Kernel networking documentation^[2]



3 References

- [1], Kernel networking flow
- Kernel networking documentation

Linux[®] is a registered trademark of Linus Torvalds.

Controller Area Network (robust bus mainly used for automotive applications)