

```

>> lsb_release -a

Distributor ID: Ubuntu
Description:    Ubuntu 22.04 LTS
Release:       22.04
Codename:      jammy

>> lsusb

Bus 002 Device 005: ID 07d1:3c0a D-Link System DWA-140 RangeBooster N
Adapter(rev.B2) [Ralink RT3072]
Bus 002 Device 003: ID 05ac:8242 Apple, Inc. Built-in IR Receiver
Bus 002 Device 002: ID 0424:2513 Microchip Technology, Inc. (formerly SMSC) 2.0
Hub
Bus 002 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 004 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub
Bus 001 Device 003: ID 05ac:8509 Apple, Inc. FaceTime HD Camera
Bus 001 Device 005: ID 05ac:0253 Apple, Inc. Internal Keyboard/Trackpad (ISO)
Bus 001 Device 008: ID 05ac:821a Apple, Inc. Bluetooth Host Controller
Bus 001 Device 004: ID 0a5c:4500 Broadcom Corp. BCM2046B1 USB 2.0 Hub (part of
BCM2046 Bluetooth)
Bus 001 Device 002: ID 0424:2513 Microchip Technology, Inc. (formerly SMSC) 2.0
Hub
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 003 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root hub

>> lspci -k -nn | grep -A 3 -i net

02:00.0 Ethernet controller [0200]: Broadcom Inc. and subsidiaries NetXtreme
BCM57765 Gigabit Ethernet PCIe [14e4:16b4] (rev 10)
Subsystem: Broadcom Inc. and subsidiaries NetXtreme BCM57765 Gigabit
Ethernet PCIe [14e4:16b4]
Kernel driver in use: tg3
Kernel modules: tg3
02:00.1 SD Host controller [0805]: Broadcom Inc. and subsidiaries BCM57765/57785
SDXC/MMC Card Reader [14e4:16bc] (rev 10)
--
03:00.0 Network controller [0280]: Broadcom Inc. and subsidiaries BCM4331
802.11a/b/g/n [14e4:4331] (rev 02)
Subsystem: Apple Inc. AirPort Extreme [106b:00d6]
Kernel driver in use: wl
Kernel modules: bcma, wl

>> sudo lshw -C network

*-network
description: Ethernet interface
produit: NetXtreme BCM57765 Gigabit Ethernet PCIe
fabricant: Broadcom Inc. and subsidiaries
identifiant matériel: 0
information bus: pci@0000:02:00.0
nom logique: enp2s0f0
version: 10
numéro de série: 3c:07:54:48:cf:9f
capacité: 1Gbit/s
bits: 64 bits
horloge: 33MHz
fonctionnalités: pm msi msix pciexpress bus_master cap_list ethernet
physical tp 10bt 10bt-fd 100bt 100bt-fd 1000bt 1000bt-fd autonegotiation
configuration : autonegotiation=on broadcast=yes driver=tg3
driverversion=5.15.0-25-generic firmware=57765-v1.37 latency=0 link=no
multicast=yes port=twisted pair
ressources : irq:16 mémoire:a0400000-a040ffff mémoire:a0410000-a041ffff
*-network

```

```

description: Interface réseau sans fil
produit: BCM4331 802.11a/b/g/n
fabricant: Broadcom Inc. and subsidiaries
identifiant matériel: 0
information bus: pci@0000:03:00.0
nom logique: wlp3s0
version: 02
numéro de série: 68:a8:6d:28:c4:0c
bits: 64 bits
horloge: 33MHz
fonctionnalités: pm msi pciexpress bus_master cap_list ethernet physical

```

```

wireless
configuration : broadcast=yes driver=wl0 driverversion=6.30.223.271
(r587334) latency=0 multicast=yes wireless=IEEE 802.11
ressources : irq:17 mémoire:a0600000-a0603fff

```

```
*-network
```

```

description: Interface réseau sans fil
identifiant matériel: 8
information bus: usb@2:1.2
nom logique: wlx340804337a9f
numéro de série: 34:08:04:33:7a:9f
fonctionnalités: ethernet physical wireless
configuration : broadcast=yes driver=rt2800usb driverversion=5.15.0-25-
generic firmware=0.36 link=no multicast=yes wireless=IEEE 802.11

```

```
>> lsmod | sort
```

```

acpi_als                20480  1
aesni_intel             376832  0
ahci                    45056  3
apple_bl                20480  1 apple_gmux
apple_gmux              20480  0
apple_mfi_fastcharge    20480  0
applesmc                20480  0
at24                    24576  0
autofs4                 49152  2
bcm5974                 28672  0
bluetooth               688128  37 btrtl, btintel, btbcm, bnep, btusb, rfcomm
bnep                    28672  2
btbcm                   20480  1 btusb
btintel                 40960  1 btusb
btrtl                   24576  1 btusb
btusb                   57344  0
cec                     61440  2 drm_kms_helper, i915
cfg80211                962560  3 wl, rt2x00lib, mac80211
coretemp                24576  0
cqhci                   40960  1 sdhci_pci
crc32_pclmul            16384  0
crc_itu_t               16384  1 firewire_core
crct10dif_pclmul       16384  1
cryptd                  24576  2 crypto_simd, ghash_clmulni_intel
crypto_simd             16384  1 aesni_intel
drm                     606208  10 drm_kms_helper, i915, ttm
drm_kms_helper          307200  1 i915
ecc                     36864  1 ecdh_generic
ecdh_generic            16384  1 bluetooth
efi_pstore              16384  0
fb_sys_fops             16384  1 drm_kms_helper
firewire_core          77824  1 firewire_ohci
firewire_ohci           49152  0
ghash_clmulni_intel    16384  0
hid                     147456  4 usbhid, hid_apple, hid_generic, hid_appleir
hid_apple               16384  0
hid_appleir            16384  0

```

hid_generic	16384	0	
i2c_algo_bit	16384	1	i915
i2c_i801	36864	0	
i2c_smbus	20480	1	i2c_i801
i915	3059712	13	
industrialio	90112	3	industrialio_triggered_buffer,acpi_als,kfifo_buf
industrialio_triggered_buffer	16384	1	acpi_als
input_leds	16384	0	
intel_cstate	20480	0	
intel_powerclamp	20480	0	
intel_rapl_common	36864	1	intel_rapl_msr
intel_rapl_msr	20480	0	
ipmi_devintf	20480	0	
ipmi_msghandler	122880	1	ipmi_devintf
ip_tables	32768	0	
joydev	32768	0	
kfifo_buf	16384	1	industrialio_triggered_buffer
kvm	1007616	1	kvm_intel
kvm_intel	364544	0	
ledtrig_audio	16384	1	snd_hda_codec_generic
libahci	45056	1	ahci
libarc4	16384	1	mac80211
lp	28672	0	
lpc_ich	28672	0	
mac80211	1232896	3	rt2x00lib,rt2x00usb,rt2800lib
mac_hid	16384	0	
mc	65536	4	
videodev,videobuf2_v4l2,uvcdvideo,videobuf2_common			
mei	135168	3	mei_hdcp,mei_me
mei_hdcp	24576	0	
mei_me	40960	1	
Module	Size	Used by	
msr	16384	0	
nls_iso8859_1	16384	1	
parport	65536	3	parport_pc,lp,ppdev
parport_pc	49152	0	
ppdev	24576	0	
rapl	20480	0	
rc_core	65536	1	cec
rfcomm	81920	16	
rt2800lib	143360	1	rt2800usb
rt2800usb	32768	0	
rt2x00lib	73728	3	rt2800usb,rt2x00usb,rt2800lib
rt2x00usb	24576	1	rt2800usb
sbs	20480	0	
sbsbc	16384	1	sbs
sch_fq_codel	20480	7	
sdhci	81920	1	sdhci_pci
sdhci_pci	65536	0	
snd	102400	16	
snd_hda_codec_generic,snd_seq,snd_seq_device,snd_hda_codec_hdmi,snd_hwdep,snd_hda_intel,snd_hda_codec,snd_timer,snd_pcm,snd_rawmidi			
snd_hda_codec	155648	4	
snd_hda_codec_generic,snd_hda_codec_hdmi,snd_hda_intel,snd_hda_codec_cirrus			
snd_hda_codec_cirrus	20480	1	
snd_hda_codec_generic	102400	1	snd_hda_codec_cirrus
snd_hda_codec_hdmi	73728	1	
snd_hda_core	110592	5	
snd_hda_codec_generic,snd_hda_codec_hdmi,snd_hda_intel,snd_hda_codec,snd_hda_codec_cirrus			
snd_hda_intel	53248	3	
snd_hwdep	16384	1	snd_hda_codec
snd_intel_dspcfg	28672	1	snd_hda_intel
snd_intel_sdw_acpi	20480	1	snd_intel_dspcfg

```

snd_pcm                139264  4
snd_hda_codec_hdmi,snd_hda_intel,snd_hda_codec,snd_hda_core
snd_rawmidi            49152  1 snd_seq_midi
snd_seq                73728  2 snd_seq_midi,snd_seq_midi_event
snd_seq_device        16384  3 snd_seq,snd_seq_midi,snd_rawmidi
snd_seq_midi           20480  0
snd_seq_midi_event    16384  1 snd_seq_midi
snd_timer              40960  2 snd_seq,snd_pcm
soundcore              16384  1 snd
syscopyarea           16384  1 drm_kms_helper
sysfillrect           20480  1 drm_kms_helper
sysimgblt             16384  1 drm_kms_helper
tg3                   192512  0
thunderbolt           311296  0
ttm                   86016  1 i915
usbhid                65536  0
uvcvideo              106496  0
video                 53248  2 apple_gmux,i915
videobuf2_common      77824  4
videobuf2_vmalloc,videobuf2_v4l2,uvcvideo,videobuf2_memops
videobuf2_memops      20480  1 videobuf2_vmalloc
videobuf2_v4l2       32768  1 uvcvideo
videobuf2_vmalloc     20480  1 uvcvideo
videodev               249856  3 videobuf2_v4l2,uvcvideo,videobuf2_common
wl                    6463488  0
x86_pkg_temp_thermal  20480  0
x_tables              53248  1 ip_tables
[/code]
[code]

```

```
>> iwconfig
```

```

wlp3s0 IEEE 802.11 ESSID:off/any
Mode:Managed Access Point: Not-Associated
Retry short limit:7 RTS thr:off Fragment thr:off
Power Management:on

```

```

wlx340804337a9f IEEE 802.11 ESSID:off/any
Mode:Managed Access Point: Not-Associated Tx-Power=20 dBm
Retry short long limit:2 RTS thr:off Fragment thr:off
Power Management:on

```

```
>> ip a
```

```

1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group
default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp2s0f0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state DOWN
group default qlen 1000
    link/ether 3c:07:54:48:cf:9f brd ff:ff:ff:ff:ff:ff
3: wlp3s0: <NO-CARRIER,BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel
state DORMANT group default qlen 1000
    link/ether 68:a8:6d:28:c4:0c brd ff:ff:ff:ff:ff:ff
5: wlx340804337a9f: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc mq state
DOWN group default qlen 1000
    link/ether 34:08:04:33:7a:9f brd ff:ff:ff:ff:ff:ff

```

```
>> sudo iwlist scan
```


5.15.0-25-generic x86_64

>> cat /etc/network/interfaces

```
# interfaces(5) file used by ifup(8) and ifdown(8)
# Include files from /etc/network/interfaces.d:
source /etc/network/interfaces.d/*
```

>> nm-tool

>> nmcli dev wifi

IN-USE	BSSID	SSID	MODE	CHAN	RATE
SIGNAL	BARS SECURITY				
	06:35:3B:A2:67:91	TelenetWiFree	Infra	1	130
Mbit/s	52	WPA2 802.1X			
	36:2C:B4:E5:62:18	TelenetWiFree	Infra	6	130
Mbit/s	52	WPA2 802.1X			
	34:2C:C4:E5:62:18	telenet-3721928	Infra	6	130
Mbit/s	52	WPA2			
	5C:35:3B:A2:67:8E	telenet-26789	Infra	1	130
Mbit/s	42	WPA2			
	06:35:3B:BD:C1:2D	TelenetWiFree	Infra	1	130
Mbit/s	22	WPA2 802.1X			
	30:93:BC:D9:0C:76	Proximus-Home-0C70	Infra	8	130
Mbit/s	22	WPA2			
	56:67:31:DA:9B:0B	TelenetWiFree	Infra	1	130
Mbit/s	19	WPA2 802.1X			
	5C:35:3B:BD:C1:2A	telenet-DC125	Infra	1	130
Mbit/s	19	WPA2			
	54:67:51:DA:9B:0B	telenet-FA9B6	Infra	1	130
Mbit/s	19	WPA2			
	00:31:92:EE:F1:7A	samper-mesh	Infra	4	270
Mbit/s	19	WPA2			
	E8:DE:27:98:0E:00	--	Infra	6	135
Mbit/s	19	WPA2			
	68:02:B8:78:8B:49	telenet-942DA1E	Infra	6	130
Mbit/s	15	WPA2			
	5C:B9:01:32:E6:33	DIRECT-32-HP ENVY 5640 series	Infra	6	65 Mbit/s
15	WPA2				
	1C:64:99:CC:C5:FE	devandenameeles	Infra	11	270
Mbit/s	15	WPA2			
	00:1C:10:09:61:B6	linksys	Infra	11	54 Mbit/s
15	--				
	68:02:B8:3C:A5:23	telenet-F5704	Infra	1	130
Mbit/s	12	WPA2			
	6A:02:B8:3C:A5:23	TelenetWiFree	Infra	1	130
Mbit/s	12	WPA2 802.1X			

IN-USE	BSSID	SSID	MODE	CHAN	RATE	SIGNAL
BARS	SECURITY					
	34:2C:C4:E5:62:18	telenet-3721928	Infra	6	130 Mbit/s	50
█	WPA2					
	36:2C:B4:E5:62:18	TelenetWiFree	Infra	6	130 Mbit/s	50
█	WPA2 802.1X					
	5C:35:3B:A2:67:8E	telenet-26789	Infra	1	130 Mbit/s	45
█	WPA2					
	06:35:3B:A2:67:91	TelenetWiFree	Infra	1	130 Mbit/s	45
█	WPA2 802.1X					
	34:2C:C4:E5:61:F5	telenet-3721928	Infra	44	405 Mbit/s	45
█	WPA2					
	36:2C:C4:E5:60:F8	TelenetWiFree	Infra	44	405 Mbit/s	45
█	WPA2 802.1X					

```

    5C:35:3B:A2:67:8F telenet-26789   Infra 36    270 Mbit/s 30
- WPA2
    06:35:3B:A2:67:92 TelenetWiFree   Infra 36    270 Mbit/s 29
- WPA2 802.1X
    1C:64:99:CC:C5:FE devandenameeles Infra 11    270 Mbit/s 24
- WPA2

```

>> nmcli connection list (< 15.04) ou nmcli connection show (>= 15.04)

NAME	UUID	TYPE	
DEVICE			
TelenetWiFree 2	c68961f5-d503-4ace-923b-73bf5ecb7af5	wifi	
wlx340804337a9f			
Connexion filaire 1	394e9056-3a7f-3a8f-83e1-8cc6a6af0f5b	ethernet	--
DIRECT-CF-HP OfficeJet 6950	85336827-f4b2-4817-937e-595363c3873b	wifi	--
macavlt	24f863fe-a250-42e4-90b6-3f10150c2999	wifi	--
macavlt 1	9ca39ac2-af06-4e5c-b99d-dc858eafcfdc	wifi	--
macavlt 2	c505f4fe-f4b8-4fce-a66f-3ff41f71894e	wifi	--
TelenetWiFree	2a15d0f8-c5bf-405c-be59-2e132e0d2778	wifi	--
TelenetWiFree 1	905817ac-7f6d-4104-8818-7aaf09b11e56	wifi	--

>> sudo rfkill list

```

0: phy0: Wireless LAN
   Soft blocked: no
   Hard blocked: no
1: brcmwl-0: Wireless LAN
   Soft blocked: no
   Hard blocked: no
3: hci0: Bluetooth
   Soft blocked: no
   Hard blocked: no
4: phy2: Wireless LAN
   Soft blocked: no
   Hard blocked: no

```

[/code]

```

michelvlt@MBP:~$ echo; dpkg -l | awk '!/^rc/ && / linux-(c|g|h|i|l|m|s|i|t)/ {print $1,$2,$3,$4 | "sort -k3V | column -t"}'; echo -e "\nNoyau courant : $(uname -mr)"

```

```

ii linux-headers-5.15.0-25          5.15.0-25.25 all
ii linux-headers-5.15.0-25-generic 5.15.0-25.25 amd64
ii linux-image-5.15.0-25-generic    5.15.0-25.25 amd64
ii linux-modules-5.15.0-25-generic  5.15.0-25.25 amd64
ii linux-modules-extra-5.15.0-25-generic 5.15.0-25.25 amd64
ii linux-generic                    5.15.0.25.27 amd64
ii linux-headers-generic            5.15.0.25.27 amd64
ii linux-image-generic              5.15.0.25.27 amd64

```

Noyau courant : 5.15.0-25-generic x86_64

michelvlt@MBP:~\$

michelvlt@MBP:~\$

michelvlt@MBP:~\$ dpkg -l | grep -v ^ii

Souhait=inconnU/Installé/suppRimé/Purgé/H=à garder

| État=Non/Installé/fichier-Config/dépaqUeté/échec-conFig/H=semi-installé/W=attend-traitement-déclenchements

/ Err?=(aucune)/besoin Réinstallation (État,Err: majuscule=mauvais)

/ Nom	Version	Architecture	Description
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michelvt@MBP:~\$
