

How to find network card driver name and version on Linux

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Question: An Ethernet network interface card is attached to my Linux box, and I would like to know which network adapter driver is installed for the NIC hardware. Is there a way to find out the name and version of a network card driver for my network card?

For network interface card (NIC) hardware to operate properly, you need a suitable device driver for the NIC hardware. A NIC device driver implements a hardware-independent common interface between the Linux kernel and the NIC, so that packets can be moved between the kernel and the NIC. While some drivers may be statically built in the kernel, most drivers for modern NICs are dynamically loaded as kernel modules.

When you are troubleshooting a NIC hardware problem, one thing you can do is to check whether a correct network adapter driver is installed properly. In this case, you need to know which kernel module is your NIC driver.

There are several ways to **find the name/version of an Ethernet card driver on Linux**.

Method One

The first method is to check `dmesg` messages. Since the kernel loads necessary hardware drivers during boot, `dmesg` output should tell if an Ethernet card driver is installed.

```
$ dmesg | grep -i ethernet
```

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```
dan@poweredge:~$
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dan@poweredge:~$ dmesg | grep -i ethernet
[ 2.057667] tg3 0000:01:00.0 eth0: attached PHY is 5720C (10/100/1000Base-T Ethernet) (WireSpeed[1], EEE[1])
[ 2.081918] tg3 0000:01:00.1 eth1: attached PHY is 5720C (10/100/1000Base-T Ethernet) (WireSpeed[1], EEE[1])
dan@poweredge:~$
dan@poweredge:~$
dan@poweredge:~$
dan@poweredge:~$ modinfo tg3
filename:       /lib/modules/4.4.0-53-generic/kernel/drivers/net/ethernet/broadcom/tg3.ko
firmware:      tigon/tg3_tso5.bin
firmware:      tigon/tg3_tso.bin
firmware:      tigon/tg3.bin
version:       3.137
license:       GPL
description:   Broadcom Tigon3 ethernet driver
author:        David S. Miller (davem@redhat.com) and Jeff Garzik (jgarzik@pobox.com)
srcversion:    898C3322556542F3AF7AE2C
alias:         pci:v000010CFd000011A2sv*sd*bc*sc*i*
alias:         pci:v0000106Bd00001645sv*sd*bc*sc*i*
```

NIC driver name

NIC driver version

The above output shows that a driver named `tg3` is loaded in the kernel.

If you want to know more detail about this driver (e.g., driver version), you can use `modinfo` command.

```
$ modinfo tg3
```

If `dmesg` does not print any information about Ethernet driver, that means no suitable network device driver is available on your system.

Method Two

The second method is to use the `ethtool` command. To find out the driver name for an interface `eth0`, run the following.

```
$ ethtool -i eth0
```

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```
dan@poweredge:~$  
dan@poweredge:~$  
dan@poweredge:~$ ethtool -i eth0  
driver: tg3  
version: 3.137  
firmware-version: FFV7.10.59 bc 5720-v1.36  
expansion-rom-version:  
bus-info: 0000:01:00.0  
supports-statistics: yes  
supports-test: yes  
supports-eeprom-access: yes  
supports-register-dump: yes  
supports-priv-flags: no  
dan@poweredge:~$
```

Driver name and version

Method Three

Another useful tool for NIC driver information is [lshw](#). Type the following command to get detailed information about available Ethernet card(s) and their driver.

```
$ sudo lshw -class network
```

In the `lshw` output, look for the "capabilities" line, and examine "driver" and "driverversion" in the line.

```
dan@poweredge:~$  
dan@poweredge:~$  
dan@poweredge:~$ sudo lshw -class network  
*-network:0  
  description: Ethernet interface  
  product: NetXtreme BCM5720 Gigabit Ethernet PCIe  
  vendor: Broadcom Corporation  
  physical id: 0  
  bus info: pci@0000:01:00.0  
  logical name: eth0  
  version: 00  
  serial: 20:47:47:7c:57:48  
  size: 100Mbit/s  
  capacity: 1Gbit/s  
  width: 64 bits  
  clock: 33MHz  
  capabilities: pm vpd msi msix pciexpress bus_master cap_list rom ethernet physical tp 10bt  
bt-fd 1000bt 1000bt-fd autonegotiation  
  configuration: autonegotiation=on broadcast=yes driver=tg3 driverversion=3.137 duplex=full  
59 bc 5720-v1.36 latency=0 link=yes multicast=yes port=twisted pair speed=100Mbit/s  
  resources: irq:16 memory:d50a0000-d50affff memory:d50b0000-d50bffff memory:d50c0000-d50cff  
-db03ffff
```

NIC driver name and version

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If no suitable NIC driver is installed on your system, the driver field will remain empty.