

What: /sys/class/net/<iface>/name_assign_type
Date: July 2014
KernelVersion: 3.17
Contact: netdev@vger.kernel.org
Description: Indicates the name assignment type. Possible values are:
 1: enumerated by the kernel, possibly in an unpredictable way
 2: predictably named by the kernel
 3: named by userspace
 4: renamed

What: /sys/class/net/<iface>/addr_assign_type
Date: July 2010
KernelVersion: 3.2
Contact: netdev@vger.kernel.org
Description: Indicates the address assignment type. Possible values are:
 0: permanent address
 1: randomly generated
 2: stolen from another device
 3: set using dev_set_mac_address

What: /sys/class/net/<iface>/addr_len
Date: April 2005
KernelVersion: 2.6.12
Contact: netdev@vger.kernel.org
Description: Indicates the hardware address size in bytes.
 Values vary based on the lower-level protocol used by the interface (Ethernet, FDDI, ATM, IEEE 802.15.4...). See include/uapi/linux/if_*.h for actual values.

What: /sys/class/net/<iface>/address
Date: April 2005
KernelVersion: 2.6.12
Contact: netdev@vger.kernel.org
Description: Hardware address currently assigned to this interface.
 Format is a string, e.g: 00:11:22:33:44:55 for an Ethernet MAC address.

What: /sys/class/net/<bridge iface>/bridge/group_fwd_mask
Date: January 2012
KernelVersion: 3.2
Contact: netdev@vger.kernel.org
Description: Bitmask to allow forwarding of link local frames with address 01-80-C2-00-00-0X on a bridge device. Only values that set bits not matching BR_GROUPFWD_RESTRICTED in net/bridge/br_private.h allowed.
 Default value 0 does not forward any link local frames.

 Restricted bits:
 0: 01-80-C2-00-00-00 Bridge Group Address used for STP
 1: 01-80-C2-00-00-01 (MAC Control) 802.3 used for MAC PAUSE
 2: 01-80-C2-00-00-02 (Link Aggregation) 802.3ad

 Any values not setting these bits can be used. Take special care when forwarding control frames e.g. 802.1X-PAE or LLDP.

What: /sys/class/net/<iface>/broadcast
Date: April 2005
KernelVersion: 2.6.12
Contact: netdev@vger.kernel.org
Description:

Hardware broadcast address for this interface. Format is a string, e.g: ff:ff:ff:ff:ff:ff for an Ethernet broadcast MAC address.

What: /sys/class/net/<iface>/carrier
 Date: April 2005
 KernelVersion: 2.6.12
 Contact: netdev@vger.kernel.org
 Description:

Indicates the current physical link state of the interface.
 Possible values are:
 0: physical link is down
 1: physical link is up

Note: some special devices, e.g: bonding and team drivers will allow this attribute to be written to force a link state for operating correctly and designating another fallback interface.

What: /sys/class/net/<iface>/dev_id
 Date: April 2008
 KernelVersion: 2.6.26
 Contact: netdev@vger.kernel.org
 Description:

Indicates the device unique identifier. Format is an hexadecimal value. This is used to disambiguate interfaces which might be stacked (e.g: VLAN interfaces) but still have the same MAC address as their parent device.

What: /sys/class/net/<iface>/dev_port
 Date: February 2014
 KernelVersion: 3.15
 Contact: netdev@vger.kernel.org
 Description:

Indicates the port number of this network device, formatted as a decimal value. Some NICs have multiple independent ports on the same PCI bus, device and function. This attribute allows userspace to distinguish the respective interfaces.

Note: some device drivers started to use 'dev_id' for this purpose since long before 3.15 and have not adopted the new attribute ever since. To query the port number, some tools look exclusively at 'dev_port', while others only consult 'dev_id'. If a network device has multiple client adapter ports as described in the previous paragraph and does not set this attribute to its port number, it's a kernel bug.

What: /sys/class/net/<iface>/dormant
 Date: March 2006
 KernelVersion: 2.6.17
 Contact: netdev@vger.kernel.org
 Description:

Indicates whether the interface is in dormant state. Possible values are:
 0: interface is not dormant
 1: interface is dormant

This attribute can be used by supplicant software to signal that the device is not usable unless some supplicant-based authentication is performed (e.g: 802.1x). 'link_mode' attribute will also reflect the dormant state.

What: /sys/class/net/<iface>/testing
 Date: April 2002
 KernelVersion: 5.8
 Contact: netdev@vger.kernel.org
 Description:

Indicates whether the interface is under test. Possible values are:

0: interface is not being tested
1: interface is being tested

When an interface is under test, it cannot be expected to pass packets as normal.

What: /sys/class/net/<iface>/duplex

Date: October 2009

KernelVersion: 2.6.33

Contact: netdev@vger.kernel.org

Description:

Indicates the interface latest or current duplex value. Possible values are:

half: half duplex
full: full duplex

Note: This attribute is only valid for interfaces that implement the `ethtool get_link_ksettings` method (mostly Ethernet).

What: /sys/class/net/<iface>/flags

Date: April 2005

KernelVersion: 2.6.12

Contact: netdev@vger.kernel.org

Description:

Indicates the interface flags as a bitmask in hexadecimal. See `include/uapi/linux/if.h` for a list of all possible values and the flags semantics.

What: /sys/class/net/<iface>/ifalias

Date: September 2008

KernelVersion: 2.6.28

Contact: netdev@vger.kernel.org

Description:

Indicates/stores an interface alias name as a string. This can be used for system management purposes.

What: /sys/class/net/<iface>/ifindex

Date: April 2005

KernelVersion: 2.6.12

Contact: netdev@vger.kernel.org

Description:

Indicates the system-wide interface unique index identifier as a decimal number. This attribute is used for mapping an interface identifier to an interface name. It is used throughout the networking stack for specifying the interface specific requests/events.

What: /sys/class/net/<iface>/iflink

Date: April 2005

KernelVersion: 2.6.12

Contact: netdev@vger.kernel.org

Description:

Indicates the system-wide interface unique index identifier the interface is linked to. Format is decimal. This attribute is used to resolve interfaces chaining, linking and stacking. Physical interfaces have the same 'ifindex' and 'iflink' values.

What: /sys/class/net/<iface>/link_mode

Date: March 2006

KernelVersion: 2.6.17

Contact: netdev@vger.kernel.org

Description:

Indicates the interface link mode, as a decimal number. This attribute should be used in conjunction with 'dormant' attribute

to determine the interface usability. Possible values:

0: default link mode

1: dormant link mode

What: /sys/class/net/<iface>/mtu

Date: April 2005

KernelVersion: 2.6.12

Contact: netdev@vger.kernel.org

Description:

Indicates the interface currently configured MTU value, in bytes, and in decimal format. Specific values depends on the lower-level interface protocol used. Ethernet devices will show a 'mtu' attribute value of 1500 unless changed.

What: /sys/class/net/<iface>/netdev_group

Date: January 2011

KernelVersion: 2.6.39

Contact: netdev@vger.kernel.org

Description:

Indicates the interface network device group, as a decimal integer. Default value is 0 which corresponds to the initial network devices group. The group can be changed to affect routing decisions (see: net/ipv4/fib_rules and net/ipv6/fib6_rules.c).

What: /sys/class/net/<iface>/operstate

Date: March 2006

KernelVersion: 2.6.17

Contact: netdev@vger.kernel.org

Description:

Indicates the interface RFC2863 operational state as a string. Possible values are:
"unknown", "notpresent", "down", "lowerlayerdown", "testing", "dormant", "up".

What: /sys/class/net/<iface>/phys_port_id

Date: July 2013

KernelVersion: 3.12

Contact: netdev@vger.kernel.org

Description:

Indicates the interface unique physical port identifier within the NIC, as a string.

What: /sys/class/net/<iface>/phys_port_name

Date: March 2015

KernelVersion: 4.0

Contact: netdev@vger.kernel.org

Description:

Indicates the interface physical port name within the NIC, as a string.

What: /sys/class/net/<iface>/speed

Date: October 2009

KernelVersion: 2.6.33

Contact: netdev@vger.kernel.org

Description:

Indicates the interface latest or current speed value. Value is an integer representing the link speed in Mbits/sec.

Note: this attribute is only valid for interfaces that implement the ethtool get_link_ksettings method (mostly Ethernet).

What: /sys/class/net/<iface>/tx_queue_len

Date: April 2005

KernelVersion: 2.6.12

Contact: netdev@vger.kernel.org

Description: Indicates the interface transmit queue len in number of packets, as an integer value. Value depend on the type of interface, Ethernet network adapters have a default value of 1000 unless configured otherwise

What: /sys/class/net/<iface>/type
Date: April 2005
KernelVersion: 2.6.12
Contact: netdev@vger.kernel.org
Description: Indicates the interface protocol type as a decimal value. See include/uapi/linux/if_arp.h for all possible values.

What: /sys/class/net/<iface>/phys_switch_id
Date: November 2014
KernelVersion: 3.19
Contact: netdev@vger.kernel.org
Description: Indicates the unique physical switch identifier of a switch this port belongs to, as a string.

What: /sys/class/net/<iface>/phydev
Date: May 2017
KernelVersion: 4.13
Contact: netdev@vger.kernel.org
Description: Symbolic link to the PHY device this network device is attached to.

What: /sys/class/net/<iface>/carrier_changes
Date: Mar 2014
KernelVersion: 3.15
Contact: netdev@vger.kernel.org
Description: 32-bit unsigned integer counting the number of times the link has seen a change from UP to DOWN and vice versa

What: /sys/class/net/<iface>/carrier_up_count
Date: Jan 2018
KernelVersion: 4.16
Contact: netdev@vger.kernel.org
Description: 32-bit unsigned integer counting the number of times the link has been up

What: /sys/class/net/<iface>/carrier_down_count
Date: Jan 2018
KernelVersion: 4.16
Contact: netdev@vger.kernel.org
Description: 32-bit unsigned integer counting the number of times the link has been down