

NAME

ip-address - protocol address management

SYNOPSIS

ip [*OPTIONS*] **address** { *COMMAND* | **help** }

ip address{ **add** | **del** } *IFADDR* **dev** *STRING*

ip address{ **show** | **flush** } [**dev** *STRING*] [**scope** *SCOPE-ID*] [**to** *PREFIX*] [*FLAG-LIST*] [**label** *PATTERN*]

IFADDR := *PREFIX* | *ADDR* **peer** *PREFIX* [**broadcast** *ADDR*] [**anycast** *ADDR*] [**label** *STRING*] [**scope** *SCOPE-ID*]

SCOPE-ID := [**host** | **link** | **global** | *NUMBER*]

FLAG-LIST := [*FLAG-LIST*] *FLAG*

FLAG := [**permanent** | **dynamic** | **secondary** | **primary** | **tentative** | **deprecated** | **dad-failed** | **temporary**]

DESCRIPTION

The **address** is a protocol (IP or IPv6) address attached to a network device. Each device must have at least one address to use the corresponding protocol. It is possible to have several different addresses attached to one device. These addresses are not discriminated, so that the term **alias** is not quite appropriate for them and we do not use it in this document.

The **ip address** command displays addresses and their properties, adds new addresses and deletes old ones.

ip address add - add new protocol address.

dev *NAME*

the name of the device to add the address to.

local ADDRESS (default)

the address of the interface. The format of the address depends on the protocol. It is a dotted quad for IP and a sequence of hexadecimal halfwords separated by colons for IPv6. The *ADDRESS* may be followed by a slash and a decimal number which encodes the network prefix length.

peer ADDRESS

the address of the remote endpoint for pointpoint interfaces. Again, the *ADDRESS* may be followed by a slash and a decimal number, encoding the network prefix length. If a peer address is specified, the local address cannot have a prefix length. The network prefix is associated with the peer rather than with the local address.

broadcast ADDRESS

the broadcast address on the interface.

It is possible to use the special symbols '+' and '-' instead of the broadcast address. In this case, the broadcast address is derived by setting/resetting the host bits of the interface prefix.

label NAME

Each address may be tagged with a label string. In order to preserve compatibility with Linux-2.0 net aliases, this string must coincide with the name of the device or must be prefixed with the device name followed by colon.

scope *SCOPE_VALUE*

the scope of the area where this address is valid. The available scopes are listed in file `/etc/iproute2/rt_scopes`. Predefined scope values are:

global - the address is globally valid.

site - (IPv6 only) the address is site local, i.e. it is valid inside this site.

link - the address is link local, i.e. it is valid only on this device.

host - the address is valid only inside this host.

ip address delete - delete protocol address

Arguments: coincide with the arguments of **ip addr add**. The device name is a required argument. The rest are optional. If no arguments are given, the first address is deleted.

ip address show - look at protocol addresses**dev** *NAME* (**default**)

name of device.

scope *SCOPE_VAL*

only list addresses with this scope.

to *PREFIX*

only list addresses matching this prefix.

label *PATTERN*

only list addresses with labels matching the *PATTERN*. *PATTERN* is a usual shell style pattern.

up only list running interfaces.

dynamic and **permanent**

(IPv6 only) only list addresses installed due to stateless address configuration or only list permanent (not dynamic) addresses.

tentative

(IPv6 only) only list addresses which have not yet passed duplicate address detection.

deprecated

(IPv6 only) only list deprecated addresses.

dadfailed

(IPv6 only) only list addresses which have failed duplicate address detection.

temporary

(IPv6 only) only list temporary addresses.

primary and **secondary**

only list primary (or secondary) addresses.

ip address flush - flush protocol addresses

This command flushes the protocol addresses selected by some criteria.

This command has the same arguments as **show**. The difference is that it does not run when no arguments are given.

Warning: This command (and other **flush** commands described below) is pretty dangerous. If

you make a mistake, it will not forgive it, but will cruelly purge all the addresses.

With the **-statistics** option, the command becomes verbose. It prints out the number of deleted addresses and the number of rounds made to flush the address list. If this option is given twice, **ip address flush** also dumps all the deleted addresses in the format described in the previous subsection.

EXAMPLES

```
ip address show dev eth0
```

Shows the addresses assigned to network interface eth0

```
ip addr add 2001:0db8:85a3::0370:7334/64 dev eth1
```

Adds an IPv6 address to network interface eth1

```
ip addr flush dev eth4
```

Removes all addresses from device eth4

SEE ALSO

[ip\(8\)](#)

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