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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'ip-neighbour.8' command

$ man ip-neighbour.8

IP-NEIGHBOUR(8) Linux IP-NEIGHBOUR(8)

NAME

ip-neighbour - neighbour/arp tables management.

SYNOPSIS

ip [OPTIONS] neigh { COMMAND | help }

ip neigh { add | del | change | replace } { ADDR [lladdr LLADDR] [

nud STATE] | proxy ADDR } [dev DEV] [router] [use] [

managed] [extern_learn]

ip neigh { show | flush } [proxy] [to PREFIX] [dev DEV] [nud

STATE] [vrf NAME] [nomaster]

ip neigh get ADDR dev DEV

STATE := { permanent | noarp | stale | reachable | none | incomplete |

delay | probe | failed }

DESCRIPTION

The ip neigh command manipulates neighbour objects that establish bind?

ings between protocol addresses and link layer addresses for hosts

sharing the same link. Neighbour entries are organized into tables.

The IPv4 neighbour table is also known by another name - the ARP table.

The corresponding commands display neighbour bindings and their proper?

ties, add new neighbour entries and delete old ones.

ip neighbour add

add a new neighbour entry

ip neighbour change

change an existing entry

ip neighbour replace

add a new entry or change an existing one

These commands create new neighbour records or update existing ones.

to ADDRESS (default)

the protocol address of the neighbour. It is either an IPv4 or IPv6 address.

dev NAME

the interface to which this neighbour is attached.

proxy indicates whether we are proxying for this neighbour en? try

router indicates whether neighbour is a router

use this neigh entry is in "use". This option can be used to indicate to the kernel that a controller is using this dynamic entry. If the entry does not exist, the kernel will resolve it. If it exists, an attempt to refresh the neighbor entry will be triggered.

managed

this neigh entry is "managed". This option can be used to indicate to the kernel that a controller is using this dynamic entry. In contrast to "use", if the entry does not exist, the kernel will resolve it and periodically attempt to auto-refresh the neighbor entry such that it remains in resolved state when possible.

extern_learn

this neigh entry was learned externally. This option can be used to indicate to the kernel that this is a con? troller learnt dynamic entry. Kernel will not gc such an entry.

lladdr LLADDRESS

the link layer address of the neighbour. LLADDRESS can also be null.

nud STATE

the state of the neighbour entry. nud is an abbreviation for 'Neighbour Unreachability Detection'. The state can take one of the following values:

permanent

the neighbour entry is valid forever and can be only be removed administratively.

noarp the neighbour entry is valid. No attempts to vali? date this entry will be made but it can be removed when its lifetime expires.

reachable

the neighbour entry is valid until the reachabil? ity timeout expires.

stale the neighbour entry is valid but suspicious. This option to ip neigh does not change the neighbour state if it was valid and the address is not changed by this command.

none this is a pseudo state used when initially creat? ing a neighbour entry or after trying to remove it before it becomes free to do so.

incomplete

the neighbour entry has not (yet) been vali? dated/resolved.

delay neighbor entry validation is currently delayed.

probe neighbor is being probed.

failed max number of probes exceeded without success, neighbor validation has ultimately failed.

ip neighbour delete

delete a neighbour entry

The arguments are the same as with ip neigh add, except that lladdr and nud are ignored.

Warning: Attempts to delete or manually change a noarp entry created by the kernel may result in unpredictable behaviour.

Particularly, the kernel may try to resolve this address even on a NOARP interface or if the address is multicast or broadcast.

ip neighbour show

list neighbour entries

to ADDRESS (default)

the prefix selecting the neighbours to list.

dev NAME

only list the neighbours attached to this device.

vrf NAME

only list the neighbours for given VRF.

nomaster

only list neighbours attached to an interface with no master.

proxy list neighbour proxies.

unused only list neighbours which are not currently in use.

nud STATE

only list neighbour entries in this state. NUD_STATE takes values listed below or the special value all which means all states. This option may occur more than once. If this option is absent, ip lists all entries except for none and noarp.

ip neighbour flush

flush neighbour entries

This command has the same arguments as show. The differences are that it does not run when no arguments are given, and that the default neighbour states to be flushed do not include perma? nent and noarp.

With the -statistics option, the command becomes verbose. It prints out the number of deleted neighbours and the number of rounds made to flush the neighbour table. If the option is given twice, ip neigh flush also dumps all the deleted neighbours.

ip neigh get

lookup a neighbour entry to a destination given a device

proxy indicates whether we should lookup a proxy neighbour en?

try

to ADDRESS (default)

the prefix selecting the neighbour to query.

dev NAME

get neighbour entry attached to this device.

EXAMPLES

ip neighbour

Shows the current neighbour table in kernel.

ip neigh flush dev eth0

Removes entries in the neighbour table on device eth0.

ip neigh get 10.0.1.10 dev eth0

Performs a neighbour lookup in the kernel and returns a neigh?

bour entry.

SEE ALSO

ip(8)

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