

**NAME**

ip-tunnel - tunnel configuration

**SYNOPSIS****ip tunnel help**

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ip [ OPTIONS ] tunnel { add | change | del | show | prl | 6rd } [ NAME ]
    [ mode MODE ] [ remote ADDR ] [ local ADDR ]
    [ [i|o]seq ] [ [i|o]key KEY ] [ [i|o]csum ] ]
    [ encaplimit ELIM ] [ tthoplimit TTL ]
    [ tos TOS ] [ flowlabel FLOWLABEL ]
    [ prl-default ADDR ] [ prl-nodetault ADDR ] [ prl-delete ADDR ]
    [ 6rd-prefix ADDR ] [ 6rd-relay_prefix ADDR ] [ 6rd-reset ]
    [ [no]pmtudisc ] [ [no]ignore-df ] [ [no]allow-localremote ]
    [ dev PHYS_DEV ]

```

*MODE* := { **ipip** | **gre** | **sit** | **isatap** | **vti** | **ip6ip6** | **ipip6** | **ip6gre** | **vti6** | **any** }

*ADDR* := { *IP\_ADDRESS* | **any** }

*TOS* := { *STRING* | 00..ff | **inherit** | **inherit/STRING** | **inherit/00..ff** }

*ELIM* := { **none** | 0..255 }

*TTL* := { 1..255 | **inherit** }

*KEY* := { *DOTTED\_QUAD* | *NUMBER* }

**DESCRIPTION**

**tunnel** objects are tunnels, encapsulating packets in IP packets and then sending them over the IP infrastructure. The encapsulating (or outer) address family is specified by the **-f** option. The default is IPv4.

**ip tunnel add**

add a new tunnel

**ip tunnel change**

change an existing tunnel

**ip tunnel delete**

destroy a tunnel

**name NAME (default)**

select the tunnel device name.

**mode MODE**

set the tunnel mode. Available modes depend on the encapsulating address family.

Modes for IPv4 encapsulation available: **ipip**, **sit**, **isatap**, **vti**, and **gre**.Modes for IPv6 encapsulation available: **ip6ip6**, **ipip6**, **ip6gre**, **vti6**, and **any**.**remote ADDRESS**

set the remote endpoint of the tunnel.

**local ADDRESS**

set the fixed local address for tunneled packets. It must be an address on another interface of this host.

**ttl** *N*

**hoplimit** *N*

set a fixed TTL (IPv4) or hoplimit (IPv6) *N* on tunneled packets. *N* is a number in the range 1--255. 0 is a special value meaning that packets inherit the TTL value. The default value for IPv4 tunnels is: **inherit**. The default value for IPv6 tunnels is: **64**.

**tos** *T*

**dsfield** *T*

**tclass** *T*

set the type of service (IPv4) or traffic class (IPv6) field on tunneled packets, which can be specified as either a two-digit hex value (e.g. c0) or a predefined string (e.g. internet). The value **inherit** causes the field to be copied from the original IP header. The values **inherit/STRING** or **inherit/00..ff** will set the field to *STRING* or *00..ff* when tunneling non-IP packets. The default value is 00.

**dev** *NAME*

bind the tunnel to the device *NAME* so that tunneled packets will only be routed via this device and will not be able to escape to another device when the route to endpoint changes.

**nopmtudisc**

disable Path MTU Discovery on this tunnel. It is enabled by default. Note that a fixed ttl is incompatible with this option: tunneling with a fixed ttl always makes pmtu discovery.

**ignore-df**

enable IPv4 DF suppression on this tunnel. Normally datagrams that exceed the MTU will be fragmented; the presence of the DF flag inhibits this, resulting instead in an ICMP Unreachable (Fragmentation Required) message. Enabling this attribute causes the DF flag to be ignored.

**key** *K*

**ikey** *K*

**okey** *K* ( **only GRE tunnels** ) use keyed GRE with key *K*. *K* is either a number or an IP address-like dotted quad. The **key** parameter sets the key to use in both directions. The **ikey** and **okey** parameters set different keys for input and output.

**csum, icsum, osum**

( **only GRE tunnels** ) generate/require checksums for tunneled packets. The **osum** flag calculates checksums for outgoing packets. The **icsum** flag requires that all input packets have the correct checksum. The **csum** flag is equivalent to the combination **icsum osum**.

**seq, iseq, oseq**

( **only GRE tunnels** ) serialize packets. The **oseq** flag enables sequencing of outgoing packets. The **iseq** flag requires that all input packets are serialized. The **seq** flag is equivalent to the combination **iseq oseq**. **It doesn't work. Don't use it.**

**encaplim** *ELIM*

( **only IPv6 tunnels** ) set a fixed encapsulation limit. Default is 4.

**flowlabel** *FLOWLABEL*

( **only IPv6 tunnels** ) set a fixed flowlabel.

**allow-localremote**

( **only IPv6 tunnels** ) allow remote endpoint on the local host.

**ip tunnel prl**

potential router list (ISATAP only)

**dev** *NAME*

mandatory device name.

**prl-default** *ADDR*

**prl-nodefault** *ADDR*

**prl-delete** *ADDR*

Add or delete **ADDR** as a potential router or default router.

**ip tunnel show**

list tunnels This command has no arguments.

**SEE ALSO**

**ip(8)**

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